
• W A R N I N G •

This manual contains information on limitations regarding product use and function and information on the limitations as to liability of the manufacturer. The entire manual should be carefully read.

WLS920
Wireless Security System

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

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

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment. User should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

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

NOTICE: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Number of all the devices does not exceed 5.

The REN of this unit is 0.25.

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

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

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

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

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

AVIS: L'indice d'équivalence de la sonnerie (IES) assigné à chaque dispositif terminal indique le nombre maximal de terminaux qui peuvent être raccordés à une interface. La terminaison d'une interface téléphonique peut consister en une combinaison de quelques dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas 5.

L'indice d'équivalence de la sonnerie (IES) de ce produit est 0.25.

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Introduction

s e c t i o n 1

1.1 Specifications and Features

WLS920 Wireless Desktop Alarm Control Unit

- Frequency: 922 to 926 MHz, Spread Spectrum
- Zones - receiver can receive signals from up to 8 wireless zones
- Supervisory - programmable supervisory window, 1 to 12 hours
- Easy enrollment process for all wireless devices
Device operating temperature ranges from 0°C to 50°C / 32°F to 122°F
- 9 Access Codes: 8 User, 1 System Master
- 6V, 1.2Ah gel-cell backup battery

Please refer to the Installation Instruction sheets of the following devices for more information.

WLS904 Motion Detector

- Standard alkaline batteries, four 'AAA' batteries, 30 to 36 month life
- Fully supervised for communication integrity
- 12 minute supervisory time
- Tamper condition is monitored
- Walk test LED
- 3 minute 'High Traffic Shutdown' mode

WLS906 Smoke Detector

- Standard alkaline batteries, six 'AA' batteries, 30 to 36 month life
- Fully supervised for communication integrity
- 12 minute supervisory time
- Tamper condition is monitored
- Photoelectric detection technology (Patent pending)
- Internal diagnostic every 40 seconds

WLS907 Universal Transmitter

- Standard alkaline batteries, three 'AAA' batteries, 30 to 36 month life
- Fully supervised for communication integrity
- 12 minute supervisory time
- Tamper condition is monitored
- Built-in reed switch or terminals for external contacts
- Normally open/Normally closed models available

WLS908 Panic Pendant

- 5 year battery life
- Water resistant
- To initiate an alarm, press and hold both colored buttons for two seconds.
- To initiate a test, press and hold the center button for two seconds and release.

WLS909 Wireless Key

- Standard alkaline batteries, three 'A76' batteries, 12 to 24 month life
- Compact, convenient size for pocket or purse
- Easy to use pushbuttons to arm and disarm in Stay / Away modes, or other programmable options

Batteries

The wireless devices are designed to use Eveready Alkaline Energizer batteries (AA: E91; AAA: E92; A76).

How to Program

S e c t i o n 2

2.1 Installer's Programming

Installer's Programming is used to program all communicator and panel options. The **Installer's Code** is [5010] by default but may be changed to prevent unauthorized access to programming.

Installer's programming steps are as follows:

1. Enter [★] [8] [Installer's Code].
The Armed light will turn ON and the System light will flash to indicate that the panel is waiting for the 3-digit programming section number.
2. Enter the 3-digit section number corresponding to the section you wish to program.
The Armed light will turn OFF. The Ready light will turn ON and the System light will flash to indicate that the panel is waiting for the information required to complete programming the selected section. For example, enter [006] to change the Installer's Code. If the 3-digit section number entered is invalid, the control unit will sound a two second error tone.
3. Enter the information required to complete section programming (ie: numbers, HEX data, or ON/OFF options). For example, enter [4 digits] for the new Installer's Code.

If you enter information into a section and make a mistake, press the [#] key to exit the section. Select that section again and re-enter the information correctly.

.....
Installer's Code Section [006]
.....

2.2 Programming Decimal Data

A set number of programming boxes are allotted for each section requiring decimal data (e.g.: codes, telephone numbers). If a digit is entered for each program box, the panel will automatically exit from the selected programming section. The Ready light will turn OFF, the Armed light will turn ON and the System light will continue to flash.

You can also press the [#] key to exit a programming section without entering data for every box. This is handy if you only need to change digits in the first few programming boxes. All other digits in the programming section will remain unchanged.

2.3 Programming HEX Data

On occasion, hexadecimal (HEX) digits may be required. To program a HEX digit press the [★] key. The panel will enter HEX programming and Ready and System lights will begin to flash.

The following are the numbers which should be pressed to enter the appropriate HEX digit:

1 = A 2 = B 3 = C 4 = D 5 = E 6 = F

Once the correct HEX digit has been entered, the Ready light will continue to flash. If another HEX digit is required, press the corresponding number. If a decimal digit is required, press the [★] key again. The Ready light will turn ON, the System light will flash, and the panel will return to regular decimal programming.

Example:

To enter 'C1' for a closing by user 1, you would enter:

[★] [3] [★], [1]:

- [★] to enter Hexadecimal mode (Ready light flashes)
- [3] to enter C
- [★] to return to decimal mode (Ready light is solid)
- [1] to enter digit 1



If Ready light is flashing, any number you enter will be programmed as the HEX equivalent.

If you are using a pulse format, a decimal zero [0] does not transmit. Programming a zero [0] tells the panel not to send any pulses for that digit. Decimal zero [0] is a filler digit. To transmit a zero [0], it must be programmed as a Hexadecimal 'A'.

Example:

For the three digit account number '403', you would enter:

[4], [★] [1] [★] [3], [0]:

- [4] to enter the digit 4
- [★] to enter Hexadecimal mode (Ready light flashes)
- [1] to enter A; [★] to return to decimal mode (Ready light is solid)
- [3] to enter the digit 3
- [0] to enter the digit 0 as a filler digit.

2.4 Programming Toggle (ON/OFF) Option Sections

Some programming sections contain several toggle options. The panel will use zone lights 1 through 8 to indicate if the different options are enabled or disabled. Press the number corresponding to the option to turn it ON or OFF. Once all the toggle options have been selected correctly, press the [#] key to exit the section and save the changes. The Ready light will turn OFF and the Armed light will turn ON.

Refer to Section 5 in this manual to determine what each option represents and whether the light should be ON or OFF for your application.

2.5 Reviewing Programming

Programming sections can be reviewed from the desktop control unit. After you have programmed a section, when that programming section is entered, the control unit will immediately display the first digit of information programmed in that section.

The control unit will display the information using a binary format, where:

Zone Light 1 = 1 Zone Light 2 = 2 Zone Light 3 = 4 Zone Light 4 = 8

Add up the values for the zone lights to determine the digit being displayed (for example, no zone lights = 0, all 4 zone lights = 15 HEX 'F').

To view the next digit without changing the programming, simply enter the same digit as is being displayed (example: control unit displays zone lights 1 and 2, representing the digit 3. Enter 3 and the next digit will be displayed.).

When all the digits in a section have been viewed, the panel will exit the section; the Ready Light will turn OFF and the Armed light will turn ON, waiting for the next two digit programming section number to be entered. Press the [#] key to exit the section.

Installation Steps

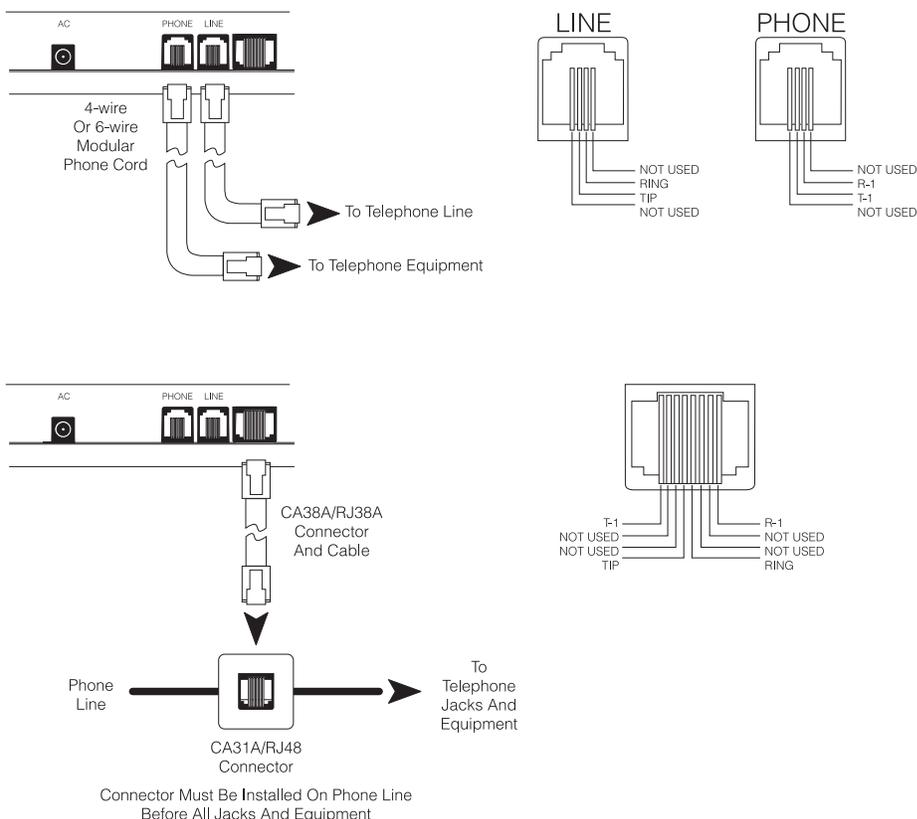
S e c t i o n 3

3.1 Hardwire Connections (Power and Telephone)

There are four jacks located at the back of the unit: one TYPE jack for the AC connector, two telephone jacks (one Telephone In; one Telephone Out) and one RJ-38A jack for a hardwired telephone connection.

To connect the power, plug one end of the AC power adaptor to the round jack at the back of the unit. Plug the other end into a wall. This connection will provide power to the unit.

To connect the telephone line, run a telephone cable from the wall to the Telephone In jack on the unit. To connect a telephone to the unit, run another telephone cable from the Telephone Out jack to the telephone. Consult the connection diagram below for further instruction.



3.2 Adding Wireless Devices

The following is the procedure for adding wireless transmitters:

1. Enter Installer's Programming and enter Section [804]
2. Enter the 2-digit zone number for the device ([01] to [08]).
3. Enter the five digit electronic serial number located on the back of the wireless device.

The device is now added to the panel. Continue with steps 2 and 3 until all of the wireless devices are added. Press [#] twice to exit Installer Programming.

You must also program how the zone will operate. See Section 5.1 "Zone Definitions" for more information.

Adding WLS909 Wireless Keys

Wireless keys are assigned in programming section [804], subsections [41]-[56]. Enroll each wireless key by entering the serial numbers on the back of each unit as indicated in steps 2 and 3 above.

3.3 Deleting Wireless Devices

To remove a wireless device from the panel, follow the guideline for adding a wireless device. Program the serial number as [00000]. The wireless device for the zone will be removed.



You may need to power down the panel to clear troubles caused by deleted zones.

3.4 Module Placement Test

You must test the placement of each wireless device before you permanently mount them. The module placement test will determine whether the location you have selected is Good, Fair or Bad. If you get a Bad result, relocate the device and perform the test again. To test each wireless device, perform the following:

1. Enter Installer's Programming and enter programming section [904].
2. Enter the two digit zone number for the device to be tested
3. Test each device according to their type:
 - Door Contact.** Open and close the contact by moving the magnet or by operating the external device connected to the contact. The control unit will display the test result after the zone is restored.
 - Motion Detectors and Smoke Detectors.** Remove the Detector from its backplate, wait for 5 seconds, then reattach the Detector to its backplate. The control unit will display the test result after the Detector is reattached to its backplate.
4. Verify the results of the test using the following table:

Good	Light 1 On Steady	1 Beep
Fair	Light 2 On Steady	2 Beeps
Bad	Light 3 On Steady	3 Beeps
5. Continue Steps 3 through 5 until each device has been tested.

! Wireless devices can be mounted where results were Good or Fair. No device should be mounted where a Bad test result was indicated. If multiple tests on the same device are performed you must wait at least 10 seconds between tests.

WLS908 Panic Pendant Test

The panic pendant cannot be tested in the module placement test, so follow these steps:

1. Begin testing when your system is in the ready state and the Ready light is ON.
 2. Press and hold the small middle button on the pendant marked "Test" for two seconds. Once the test is complete and if the pendant's battery condition is normal, the Ready light will turn off for four to five seconds.
 3. If the pendant's battery is low, the Trouble light will turn ON and a series of continuous beeps will be heard. This test should also be performed by the user when they perform a weekly system test.
- If a low battery condition is detected, you must immediately replace the unit. Once you have obtained the new unit, perform the following:
1. Enter Installer's Programming and enter programming section [804].
 3. Enter the two digit number for the pendant to be replaced.
 4. Enter serial number [00000].
 5. Enter the two digit number for the pendant being replaced.
 6. Enter the serial number of the new pendant. Press [#] twice to exit Installer Programming.

3.5 Supervision

Wireless zones are supervised so that a trouble is generated when a device ceases to operate or is removed from the system. To enable zone supervision, enter the following:

1. Enter Installer's Programming and enter programming section [804].
2. Enter section [82] to enable or disable wireless zone supervision (see Section 2.4 "Programming Toggle (ON/OFF) Option Sections" for how to program these options).

! The supervisory option for any WLS908 panic pendants enrolled on the system must be OFF.

Communications Programming

s e c t i o n 4

4.1 Dialing

If the **Communicator Disable** option is selected, the panel will not attempt to call central station. If communication is enabled, the panel will attempt to call central station when an event with a valid Reporting Code occurs (See Section 4.4 "Reporting Codes").

The **Communicator Call Direction** Options are used to select which phone number the panel will dial when an event occurs.

If the **DTMF Dialing** option is enabled, the panel will dial using DTMF (touch tone). If the **Switch to Pulse Dial** option is enabled, the panel will switch to pulse dialing on the fifth attempt to call the central station. When this option is disabled, the panel will always dial using DTMF. If **DTMF Dialing** is disabled, the panel will always pulse dial.

The panel will attempt to send a signal to central station eight times before indicating a Failure to Communicate (FTC) trouble condition. The Third Phone Number can be used as a back up for the first number in this situation (see Section 4.3 "Phone Numbers").

.....

DTMF or Pulse Dialing	Section [380], Option [3]
Switch to Pulse Dialing on Fifth Attempt	Section [380], Option [4]
Communicator Enable/Disable	Section [380], Option [1]
Communicator Call Direction Options	Section [361]-[368]

.....

4.2 Account Numbers

The account number is used by the central station to distinguish between panels. There is one account number programmable for the WLS920.

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Account Code (4 digits)	Section [310]
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4.3 Phone Numbers

The panel can use three different phone numbers for communicating with the central station. The **First Phone Number** is the primary number, the **Second Phone Number** is the secondary number and the **Third Phone Number** will back up the First phone number if enabled.

! **The Third Phone Number will NOT back up the Second Phone Number.**

If the **Alternate Dial** option is enabled, the panel will alternate between the first and third phone numbers when attempting to call the central station. If the option is disabled, the panel will only attempt to call the Third phone number after failing to communicate with the first phone number.

! **In order for Alternate Dialing to work properly, the Third Phone Number must be enabled.**

Phone numbers can be up to 32 digits which will allow you to add special digits if required. To program the phone number, enter the numbers 0 through 9 as required. The following is a list of programmable HEX digits and the function they perform:

HEX (B) - simulates the [*] key on a touch tone phone	HEX (E) - forces the panel to pause for 2 seconds
HEX (C) - simulates the [#] key on a touch tone phone	HEX (F) - marks the end of the phone number
HEX (D) - forces the panel to search for dial tone	

.....

First Telephone Number	Section [301]
Second Telephone Number	Section [302]
Third Telephone Number	Section [303]
Third Telephone Number Enable	Section [380], Option [5]
Alternate Dial	Section [380], Option [6]

.....

! **If no Dial Tone Detect (HEX D) is used in the phone number, a 2-second pause (HEX E) should be inserted.**

4.4 Reporting Codes

The panel can be programmed to report an event to the central station by sending the Reporting Code programmed for that event.

Reporting codes can be one or two digits and can use HEX digits (A through F). The following is a description of the different Reporting Codes that can be programmed and when the events will be reported to central station.

Zone Alarm

The panel will transmit the **Zone Alarm** Reporting Code when a zone goes into alarm. 24 hour type zones will go into alarm whether the panel is armed or disarmed and report to the central station. All other types of zones will only go into alarm if the panel is armed.

.....
Zone Alarm Reporting Codes Section [320]
.....

Zone Restoral

If the **Restoral on Bell Time-out** option is selected, the panel will send the **Zone Restoral** Reporting Code for the zone if the bell cut-off time has expired *and* the zone is secured. If the zone is not secured when the alarm output times out, the panel will send the restoral immediately once the zone is secured.

If the **Restoral on Bell Time-out** option is not selected, the panel will immediately send the **Zone Restoral** Reporting Code when the zone is secured, regardless of whether or not the alarm output is active.



24 Hour type zones will report the restoral immediately once the zone is secured.

.....
Zone Restoral Reporting Codes Section [324]
Restoral on Bell Time-out Section [380], Option [2]
.....

Closings (Arming Codes)

The panel will transmit a **Closing** Reporting Code to indicate that the system is armed. A different Reporting Code can be transmitted for each User Code and Master Code to identify who has armed the system.

A **Special Closing** Reporting Code will be transmitted if the system is armed using any of the following methods:

- Quick Arming
- Arming via wireless key

If programmed, a **Partial Closing** Reporting Code will be sent along with the closing reporting code if one or more zones were manually bypassed when the system was armed to warn the monitoring station of a security compromise.

If the **Closing Confirmation** option is enabled, the control unit will sound a series of eight beeps to confirm to the user that the closing code was sent and received by the central station.

.....
Closing (Arming) Reporting Codes Section [339]-[342]
Special Closing Reporting Code Section [343]
Partial Closing Reporting Code Section [343]
Closing Confirmation Section [381], Option [4]
.....

Openings (Disarming Codes)

The panel will transmit an **Opening** Reporting Code to indicate that the system has been disarmed. A different Reporting Code can be transmitted for each User Code and the Master Code to identify who has disarmed the system.

A **Special Opening** reporting code will be transmitted if the system is disarmed using any of the following methods:

- Disarming via keyswitch

If an alarm occurred while the system was armed, an **Opening After Alarm** reporting code will be sent along with an opening reporting code when the user disarms the system.



If Transmission Delay is being used, the Opening After Alarm code must be programmed. See Section 6.5 "Transmission Delay."

.....
Opening (Disarming) Reporting Codes Section [344]-[348]
Opening After Alarm Section [328]
.....

Tampers

The panel will report a **Zone Tamper Alarm** Reporting Code if an open condition is present on any zone. A different Reporting Code can be programmed to identify each zone. The **Zone Tamper Restoral** Reporting Code will be transmitted immediately when the tamper condition is restored.

A **General System Tamper** Reporting Code will be transmitted when the tamper zone on any module is violated. The **General System Tamper Restoral** Reporting Code will be transmitted when the tamper zone on the module is restored.

.....

Tamper Reporting Codes Section [330]
 Tamper Restoral Reporting Codes Section [334]
 General System Tamper and Restoral Section [338]

Priority/Emergency

The panel will transmit a **Keypad Fire Alarm** Reporting Code *and* the **Keypad Fire Restoral** Reporting Code when the Fire Key on any wireless key is pressed for two seconds.

The panel will transmit a **Keypad Auxiliary Alarm** Reporting Code *and* the **Keypad Auxiliary Restoral** Reporting Code when the Auxiliary Key on any wireless key is pressed for two seconds.

The panel will transmit a **Keypad Panic Alarm** Reporting Code *and* the **Keypad Panic Restoral** Reporting Code when the Panic Key on any wireless key is pressed for two seconds.

.....

Priority Alarm and Restoral Reporting Codes Section [329]

Maintenance

The panel will transmit a **Battery Trouble Alarm** Reporting Code when the backup battery charge drops below 5.75 Vdc. The **Battery Trouble Restoral** Reporting Code will not be transmitted until the battery has been charged to over 6.0 Vdc.

To prevent the panel from transmitting an **AC Failure Trouble Alarm** Reporting Code during short power outages, the panel will not send the signal unless AC power is lost for the amount of minutes programmed for the **AC Failure Communication Delay**. The **AC Failure Trouble Restoral** Reporting Code follows the AC failure communication delay as well.

! If AC Failure Communications Delay is programmed as “000,” then the AC failure transmission will be disabled.

A **Fire Trouble Alarm** Reporting Code will be immediately transmitted when an open condition is measured on any Fire type zone (see Section 5.2 – “Zone Definitions”). The **Fire Trouble Restoral** Reporting Code will be transmitted as soon as the problem is corrected.

The **TLM Restoral** Reporting Code will be transmitted within 10 seconds after a telephone line monitoring problem is corrected.

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Maintenance Alarm Reporting Codes Section [349]
 Maintenance Restoral Reporting Codes Section [350]
 AC Failure Communication Delay Section [370]

Test Transmissions

The panel can be programmed to transmit a **Periodic Test Transmission** Reporting Code (see Section 6.4 – “Test Transmissions”), and a **System Test** Reporting Code when the end user performs a system test.

.....

Test Transmission Reporting Codes Section [352]

Wireless Maintenance

The panel will transmit a **General Zone Low Battery Alarm** reporting code if a low battery condition is indicated by a detector. The transmission of the trouble will be delayed by the number of days programmed for **Zone Low Battery Transmission Delay**. The **General Zone Low Battery Restoral** Reporting Code will be transmitted when the problem is corrected. The specific zone that caused the trouble will be recorded in the event buffer.

! The restoral will not be transmitted until all detectors indicate good battery conditions.

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Wireless Maintenance Reporting Codes Section [353]
 Zone Low Battery Transmission Delay Section [370]

Miscellaneous

If the panel fails to transmit information to the central station, it will display a Failure To Communicate (FTC) trouble condition. The panel will transmit a **Phone Number 1 Failure to Communicate** Reporting Code or a **Phone Number 2 Failure to Communicate** Reporting Code the next time it calls the central station. The panel will transmit the old events, followed by the FTC message, followed by the new events. This will allow central station to determine which events are old or new.

.....
Miscellaneous Maintenance Reporting Codes Section [351]
.....



If the Delinquency Transmission Delay is set for one day, there must be 24 hours of no arming or disarming before the Delinquency Code will be sent.
After a Delinquency Code has been transmitted, it will not send again until the system has been armed and disarmed.

4.5

Reporting Formats

Each central station communication phone number can be programmed to report using any one of the 4 formats available. A 20 BPS pulse format is supported in addition to Contact ID, SIA and a Pager format.

.....
Communicator Format Options Section [360]
Communicator Call Directions Section [361] to [368]
.....

The following is a description of each reporting format:

Pulse Formats

Depending on which pulse format is selected, the panel will communicate using the following specifications:

- 3/1, 3/2, 4/1 or 4/2
- 1400 or 2300 Hz handshake
- 20 bits per second
- non-extended

Additional Notes on Pulse Formats

1. The digit '0' will send no pulses and is used as a filler digit.
2. When programming account numbers, enter four digits. When programming a three digit account number, the fourth digit must be programmed as '0'.
 - 3 digit account number [123] - program [1230]
3. If an account number has a '0' in it, substitute a HEX digit 'A' for the '0'. For example:
 - 3 digit account number [502] - program [5A20]
 - 4 digit account number [4079] - program [4A79]
4. Reporting codes are two digits. When programming single-digit Reporting Codes, the second digit must be programmed as a '0'. If a '0' is to be transmitted, substitute HEX digit 'A'. For example:
 - 1 digit Reporting Code [3] - program [30]
 - 2 digit Reporting Code [30] - program [3A]
5. To prevent the panel from reporting an event, the Reporting Code should be programmed as [00] or [FF].

Contact ID

Contact ID is a specialized format that will communicate information using tones rather than pulses. This format allows more information to be sent faster than other formats. For example, in addition to reporting an alarm in zone one, the Contact ID format will also report the type of alarm, such as an Entry/Exit alarm.

To program Contact ID, a two digit number from Appendix A must be entered in order for every event to be transmitted. The two digit number determines the type of alarm. The panel will automatically generate all other information, including the zone number.

Additional Notes on Contact ID

1. Account Numbers must be four digits.
2. All Reporting Codes must be two digits.
3. Substitute the HEX digit 'A' for the '0'.
4. To prevent the panel from reporting an event, the Reporting Code should be programmed as [00] or [FF]. Please refer to Appendix A for a list of Contact ID Identifiers.

SIA

SIA is a specialized format that will communicate information quickly using Frequency Shift Keying (FSK) rather than pulses. The SIA format will automatically generate the type of signal being transmitted, such as Burglary, Fire, Panic etc. The two digit Reporting Code is used to identify the zone or user code number.

System Programming

s e c t i o n 6

6.1 Programming Access Codes

There are 9 access codes programmable by the end user. All codes have the ability to arm and disarm the system. Instructions for programming access codes are located in the WLS920 Instruction Manual.

The user-programmed codes are as follows:

Master Code – Access Code (40)

By default, the Master Code is enabled to perform any keypad function. This code can be used to program all User Codes. This code can also be programmed by the installer in programming section [007]. The Master Code can only be changed by the Installer.

General Access Codes – Access Codes (01) to (08)

General access codes can arm and disarm the system. By selecting the **No Code Required for Bypassing** option, each user can also have the ability to bypass zones without entering an access code. To limit the bypassing ability for a user, disable the bypassing attribute for that user code (see “Programming Access Codes” in the WLS920 Instruction Manual).

The Master code and the Installer’s code are programmed in Installer’s programming.

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No Code Required For Bypassing Section [015], Option [5]

Installer’s Code Section [006]

Master Code Section [007]

.....

6.2 Telephone Line Monitor (TLM)

The panel will supervise the presence of the phone line and will indicate a trouble condition if the phone line is disconnected. If the **TLM Enabled** option is selected, the panel will wait for the **TLM Trouble Delay** time period before indicating the trouble so that a momentary interruption of the phone line will not cause a trouble condition.

If the **TLM Trouble Only When Armed** option is enabled, the panel will indicate a TLM trouble only at the control unit if the system is armed. To activate the bell output in the case of a TLM trouble while the system is armed, the **TLM Audible When Armed** option must be selected.

When the trouble condition is restored, the panel can send a **TLM Restoral** Reporting Code. Any events which occur while the phone line is down will also be communicated.

.....

TLM Enable/Disable Section [015], Option [7]

TLM Trouble Only When Armed or

TLM Audible When Armed Section [015], Option [8]

TLM Trouble Reporting Code Section [349]

TLM Restoral Reporting Code Section [350]

TLM Trouble Delay Section [370]

.....

6.3 Bell Cut-off

The siren will silence after the number of seconds programmed for the **Bell Cut-off** time have passed.

.....

Bell Cut-off Section [005]

.....

6.4 Test Transmission

To ensure that the communication link with the central station is functioning properly, the panel can be programmed to send a test transmission signal on a regular basis.

The panel can send a **Periodic Test Transmission Reporting Code** at the programmed **Test Transmission Time of Day**. The **Test Transmission Cycle** determines the number of days (001 to 255) between tests. If the test transmission cycle being programmed is of a lesser value than the previous value, the system will wait the original period before the next test transmission is sent, and then begin reporting with the new interval.

The end user can generate a communicator test. If the **System Test Reporting Code** is programmed, the panel will send the signal when the System Test command is entered (see the WLS920 Instruction Manual for information on performing a System Test).

.....

Test Transmission Reporting Codes Section [352]

Test Transmission Time of Day Section [371]

Test Transmission Cycle Section [370]

.....

6.5 Transmission Delay

! If Transmission Delay is being used, the Opening After Alarm code must be programmed. See Section 4.4 “Reporting Codes”

If the transmission delay zone attribute is selected for a given zone, the panel will delay reporting an alarm for that zone for the number of seconds programmed for the **Transmission Delay Time**. If the panel is disarmed before the delay time expires, the panel will not report the event.

Transmission Delay Times..... Section [370]

6.6 Arming/Disarming Options

If the **Quick Arm** option is enabled, the panel can be armed without a user code by entering [*] [0] or by pressing the Stay or Away function key.

The **Quick Exit** option, if enabled, will allow someone to leave an armed premises through a Delay type zone without having to disarm and rearm the system.

If the **Arm/Disarm Bell Squawk** option is enabled, the panel will squawk the alarm output once upon arming and twice upon disarming. The **Opening After Alarm Keypad Ringback** option will give you the ability to beep the keypad 10 times rapidly if the panel is disarmed after an alarm occurred. The **Opening After Alarm Bell Squawk** option will give you the ability to squawk the bell output 10 times rapidly if the panel is disarmed after an alarm occurred.

Closing Confirmation, if enabled, will cause the keypad to beep 10 times rapidly after the closing Reporting Code has been transmitted to central station.

If the **Bypass Status Displayed While Armed** is chosen, the System light will be ON while the system is armed to indicate any bypassed zones.

To prevent false alarms on exit, use the built-in feature **Audible Exit Fault**. A fault will be indicated when the user has failed to secure the system once they have exited the premises (see the WLS920 Instruction Manual for a full description of this feature).

Quick Arm Enable Section [015], Option [4]
 Quick Exit Enable Section [015], Option [3]
 Arm/Disarm Bell Squawk Section [014], Option [1]
 Closing Confirmation Section [381], Option [4]
 Opening After Alarm Keypad Ringback Section [381], Option [1]
 Opening After Alarm Bell Ringback Section [381], Option [2]
 Bypass Status Displayed While Armed..... Section [016], Option [7]

6.7 Entry/Exit Delay Options

Two different entrydelays can be programmed: the first entry delay will be enabled for Delay 1 type zones and the second for Delay 2 type zones. Only one exit delay can be programmed.

! Since two Delay zones – and therefore two different Entry Delays – are programmable, when the panel is armed, the Entry Delay will begin when the first delay zone violated.

Upon arming, the panel will begin the exit delay. If the **Audible Exit Delay with Urgency** option is enabled, the control unit will beep at one second intervals until the exit delay expires. The control unit will beep rapidly for the last 10 seconds of exit delay to warn the user that the system is about to arm.

The **Audible Exit Fault** will notify the user if they failed to secure the premises upon arming.

For commercial applications, the **Bell Squawk on Exit Delay** option may be enabled. The panel will squawk the alarm output once every second when the exit delay is initiated and three times per second for the last 10 seconds until the exit delay expires.

Upon entry, if a Delay type zone is violated, the panel will begin the entry delay. The control unit will emit a steady tone. The control unit will pulse the sounder during the last 10 seconds to warn the user the system is about to go into alarm. If there was an alarm during the armed period, the control unit will pulse for the entire entry delay to warn the user of the previous alarm.

For commercial applications **Bell Squawk on Entry Delay** may be enabled. The panel will squawk the alarm output once every second until the entry delay expires or the system is disarmed.

If the **Bell Squawk During Auto Arm** option is enabled, the bell will squawk when the system is auto-armed in order to notify anyone on the premises that the system is being armed.

If the **Exit Delay Termination** option is enabled, the panel will monitor the Delay zones during exit delay. During the exit delay, if a Delay type zone is violated and then secured, the exit delay will be terminated and the panel will be armed immediately.

.....

Entry Delay 1 and 2 (System Times) Section [005]
 Exit Delay (System Times) Section [005]
 Audible Exit Delay with Urgency Section [014], Option [6]
 Bell Squawk Options Section [014]
 Exit Delay Termination Section [014], Option [7]

.....

6.8

Lockout

The panel can be programmed to 'lockout' if a number of incorrect user code entries are made. After the **Number of Invalid Codes Before Lockout** has been reached the panel will lock out the keys for the **Lockout Duration** and log the event to the event buffer. For the duration of the lockout the panel will sound an error tone when any key is pressed.

! Lockout will reset every hour.

To disable Lockout program the **Number of Invalid Codes Before Lockout** as [000].

.....

Number of Invalid Codes Before Lockout Section [012]
 Lockout Duration Section [012]
 Lockout Reporting Code Section [338]

.....

6.9

Swinger Shutdown

The swinger shutdown feature is designed to prevent a "runaway" communicator from tying up the central station. After the panel has communicated the programmed number of transmissions for an event, it will no longer report that event until the swinger shutdown is reset. Different swinger shutdown levels can be set for zone alarms, zone tampers and maintenance signals.

By default, each **Swinger Shutdown** limit is set to [003]. The panel will not send more than three signals for each zone until the swinger shutdown is reset.

Swinger shutdown will be reset every day at midnight or when the panel is armed. Once reset, the panel will again communicate normally.

.....

Swinger Shutdown Section [370]

.....

6.10

International Programming Options

[701] First International Option Code

- 1. **Power Line Frequency:** 50Hz/60Hz
- 2 - 8 **For Future Use**

[702] Second International Option Code

- 1. **International Dialing Parameters:** The pulse dialing Make/Break ratio is 33/67.
North American Dialing Parameters: The pulse dialing Make/Break ratio is 40/60.

! Contact your local telephone company to confirm which setting should be used.

- 2. **Force Dialing Enabled:** If the panel fails to call the monitoring station on the first dialing attempt, on every attempt thereafter the panel will dial out with or without the presence of dial tone.
Force Dialing Disabled: The panel will not dial out if dial tone is not detected.
- 3. **Land Line Test Transmission in Minutes/Days:** This option allows you to select whether the Land Line Test Transmission cycle will be counted in minutes or days. The Test Transmission cycle is programmed in Section [370].
- 4 - 8 **For Future Use**

6.11

[*] Commands

[*]+[1] Zone Bypass/Reactivate Stay/Away Zones

The [*] [1] command can be used to bypass individual zones. It can be used if the user wants to have access to an area while the system is armed or to bypass a defective zone (bad contact, damaged wiring) until service can be provided.

The system can be armed with a bypassed zone. A bypassed zone will not cause an alarm.

If **Code Required for Bypass** is enabled an access code will be required to enter the Bypass mode. Only user codes with the Bypass attribute enabled will be able to bypass zones.

! Zones can only be bypassed when the system is disarmed.

To bypass a zone:

1. Enter [*] [1] (access code if required).
2. The control unit will turn on the zone lights for any zones already bypassed.
3. Enter the 2 digit zone number to bypass the zone.
4. The control unit will turn on the zone light.
5. Press [#].

All zones that were lit when the [#] key was pressed are now bypassed.

To un-bypass a zone:

1. Enter [*] [1] (access code if required).
2. The control unit will turn on the zone lights for any zones already bypassed.
3. Enter the 2 digit zone number to un-bypass the zone.
4. The control unit will turn off the zone light.
5. Press [#].

All zones that were lit when the [#] key was pressed are now bypassed.



When the system is disarmed all manually bypassed zones will be un-bypassed.

Reactivate Interior

If the system is armed in the Stay mode (See Section 6.6 "Arming/Disarming"), the [*] [1] command can be used to reactivate the Stay/Away zones.



Please ensure all force-armed zones are restored before reactivating the Stay/Away zones.

.....
 Code required for bypass - section [015], option [5]

[*]+[2]

Trouble Display

The panel constantly monitors itself for several different trouble conditions. If a trouble condition is present the 'System' light will be on steady and the control unit will beep twice every 10 seconds.



The trouble beep can be silenced by pressing any key on the control unit.

Troubles can only be viewed when the system is in the disarmed state. If a trouble occurs while the system is armed, enter your access code to disarm the system, then follow the procedure outlined below to determine the specific trouble.

To view the type of trouble condition, press [*][2]. The System light will flash and one or more zone lights will turn ON, indicating the various trouble conditions:

Trouble [1] - Low Battery

The main panel backup battery is low. The trouble will be generated if the battery drops below 5.8 volts under load and will restore when the battery charges over 6.1 volts.

Trouble [2] - AC Failure

This trouble indicates that AC power is no longer being supplied to the control unit. If it is required to communicate this to a monitoring station, program reporting codes in sections [349] and [350]. To inhibit reporting of short duration power outages, a delay can be programmed in section [370].

Trouble [3] - Telephone Line Trouble

The telephone connection to the control unit is continuously monitored. If there is a problem with the telephone connection, a trouble will be indicated after the delay programmed in section [370].

Trouble [4] - Failure to Communicate (FTC)

If the communicator fails in an attempt to communicate with any of the programmed telephone numbers, this trouble will be generated. If a later attempt is successful, the FTC reporting code(s) programmed in section [351] will be transmitted along with any other unreported events that occurred while the panel was not able to communicate.

Trouble [5] - Zone Fault (including Fire Zone)

This trouble will be indicated if any zone on the system is in a trouble condition, i.e. it could not provide an alarm to the panel if required to do so. When a trouble condition occurs, the control unit will start to beep. Press [5], while in Trouble mode, to view which zones have a trouble condition.

Trouble [6] - Zone Tamper

This trouble is generated when a tamper condition is present. When a tamper condition occurs, the control unit will start to beep. Press [6], while in Trouble mode, to view which zones have a tamper condition.

Trouble [7] - Zone Low Battery

This trouble is generated when an wireless device reports a low battery condition to the control unit. Press [7] while in Trouble mode to view which zones have a low battery.

Trouble [8] - Loss of System Time

This trouble occurs when the control unit is powered up and the internal clock has not been set. Setting the time with User Function [★][6][Master Code][1] will clear this trouble.

[★] [3] Alarm Memory

The 'System' light will turn on if any alarm occurred during the last armed period or – in the case of 24 hour zones – if an alarm occurred while the panel was disarmed.

To view alarm memory, press [★] [3]. The keypad will flash the System light and light up the zone indicator lights corresponding to the alarm or tamper conditions which occurred during or since the last armed period. To clear the System light, arm and disarm the system.

[★]+[4] Door Chime On/Off

If enabled the control unit will beep 5 times rapidly when a zone is tripped and restored. The panel will only do this for zones with the Door Chime attribute enabled and if the door chime feature is enabled (*See Section 5.2 "Zone Attributes"*).

To turn Door Chime on/off:

1. Press [★] [4].
2. The control unit will beep 3 times rapidly when the Door Chime feature is enabled and one long beep when the feature is disabled.

[★]+[5] Programming Access Codes

Refer to the WLS920 Instruction Manual section "Programming Access Codes" for information on programming access codes.

[★]+[6] Setting the System Date and Time

To set the system time, enter [★] [6] followed by the Master Code. Press [1]. The control unit will now accept 10 consecutive digits:

- Enter the Time in Hours and Minutes using the 24 Hour format (00:00 to 23:59).
- Enter the Date in Months, Days and Years (MM DD YY).

[★]+[9] Arming Without Entry Delay

When the system is armed with the [★][9] command the panel will remove the entry delay. After the exit delay, Delay 1 and Delay 2 type zones will be instant and Stay/Away zones will remain bypassed. (*See Section 5.1 "Zone Definitions"*).

A valid access code must be entered after pressing [★] [9].

[★]+[0] Quick Arm/Quick Exit

Quick Arm

If the Quick Arm Enable option is enabled the panel can be armed by entering [★][0]. This is a useful method of arming the system when someone without a User Code will be required to arm.

Quick Exit

Quick Exit will allow someone to leave an armed premise through a Delay type zone without having to disarm and rearm the system.

When [★][0] is entered, if the Quick Exit Enabled option is enabled, the panel will provide a two minute window to exit. During this time the panel will ignore the first activation of a Delay type zone. When the Delay zone is secured the panel will end the two minute time period.

If a second Delay zone is tripped, or if the zone is not restored after two minutes, the panel will start entry delay.

Code Required for Bypass	Section [015], Option [5]
Master Code Not Changeable option	Section [015], Option [6]
Quick Arm Enable	Section [015], Option [4]
Quick Exit Enable	Section [015], Option [3]

6.12 Wireless Key Programming

The function keys for all wireless keys are programmed in section [804], subsections [65], [66], [67] and [68]. For example, if section [65] is programmed as Stay arming, then pressing the first key on all wireless keys will Stay arm the system.

Function Key Options

The following is a list of Function Key options available. Each option is listed according to their programming code, followed by their corresponding [★] key command.

Programming Worksheets

Basic Programming

Zone Definitions

00 Null Zone	07 - 09 For Future Use
01 Delay 1	10 24 Hour Supervisory Buzzer
02 Delay 2	11 24 Hour Burglary
03 Instant	12 24 Hour Holdup/Panic
04 Interior	13 - 24 For Future Use
05 Interior, Stay/Away	87 For Future Use
06 Delay, Stay/Away	88 Standard 24 Hour Fire

[001] Zone 1-8 Definitions

(Section 5.1 "Zone Definitions")

Default

01 Zone 1
03 Zone 2
03 Zone 3
03 Zone 4

Default

04 Zone 5
04 Zone 6
04 Zone 7
04 Zone 8

[005] System Times

Default [001-255]

030
045
120
004

Entry Delay 1
Entry Delay 2
Exit Delay
Bell Cut-off

[006] Installer's Code

(Section 4.1 "How to Enter Installer Programming")

Default

5010

[007] Master Code

(Section 6.1 "Programming Security Codes")

Default

1234

[012] Lockout Options

(Section 6.8 "Lockout Options")

Default

000

Number of Invalid Codes Before Lockout (001-255 codes)

000

Lockout Duration (001-255 minutes)

[014] First System Option Code

Default	Option	ON	OFF	Section
OFF	<input type="checkbox"/>	1	Arm / Disarm Bell Squawk enabled	Arm / Disarm Bell Squawk disabled 6.6
OFF	<input type="checkbox"/>	2	Bell Squawk During Auto Arm	No Bell Squawk During Auto Arm 6.7
OFF	<input type="checkbox"/>	3	Bell Squawk On Exit Delay	No Bell Squawk On Exit Delay 6.7
OFF	<input type="checkbox"/>	4	Bell Squawk On Entry Delay	No Bell Squawk On Entry Delay 6.7
OFF	<input type="checkbox"/>	5	Bell Squawk On Trouble	No Bell Squawk On Trouble 6.7
ON	<input type="checkbox"/>	6	Audible Exit Beeps	Silent Exit Delay 6.7
OFF	<input type="checkbox"/>	7	Exit Delay Termination Enabled	Exit Delay Termination Disabled 6.7
OFF	<input type="checkbox"/>	8	Fire Bell is continuous	Fire Bell follows Bell Cut-off 6.12

[015] Second System Option Code

Default	Option	ON	OFF	Section
ON	<input type="checkbox"/>	1	For Future Use	
OFF	<input type="checkbox"/>	2	Panic Keys Audible (Bell / Beeps)	Panic Keys Silent 6.12
OFF	<input type="checkbox"/>	3	Quick Exit Enabled	Quick Exit Disabled 6.6
ON*	<input type="checkbox"/>	4	Quick Arming Enabled	Quick Arming Disabled 6.6
OFF	<input type="checkbox"/>	5	Code Required For Bypassing	No Code Required 6.1
ON	<input type="checkbox"/>	6	For Future Use	
ON	<input type="checkbox"/>	7	TLM Enabled	TLM Disabled 6.2
OFF	<input type="checkbox"/>	8	TLM Audible When Armed	TLM Trouble Only When Armed 6.2

*** Option 4 must be ON in order for WLS909 Wireless Key arming to function.**

[016] Third System Option Code

Default	Option	ON	OFF	Section
ON	<input type="checkbox"/>	1	For Future Use	
OFF	<input type="checkbox"/>	2-6	For Future Use	
OFF	<input type="checkbox"/>	7	Bypass Status Displayed While Armed	Bypass Status Not Displayed While Armed 6.6

Communicator Programming

Note: For sections [301] to [352], the contents of every section by default is [F].

[301] First Telephone Number (32 Digits)

(Section 4.3 "Phone Numbers")

[302] Second Telephone Number (32 Digits)

(Section 4.3 "Phone Numbers")

[303] Third Telephone Number (32 Digits)

(Section 4.3 "Phone Numbers")

[310] Account Code

(Section 4.2 "Account Numbers")

[320] Alarm Reporting Codes, Zones 1-8
(Section 4.4 "Reporting Codes")

<input type="text"/> Zone 1	<input type="text"/> Zone 5
<input type="text"/> Zone 2	<input type="text"/> Zone 6
<input type="text"/> Zone 3	<input type="text"/> Zone 7
<input type="text"/> Zone 4	<input type="text"/> Zone 8

[324] Alarm Restoral Reporting Codes, Zones 1-8
(Section 4.4 "Reporting Codes")

<input type="text"/> Zone 1	<input type="text"/> Zone 5
<input type="text"/> Zone 2	<input type="text"/> Zone 6
<input type="text"/> Zone 3	<input type="text"/> Zone 7
<input type="text"/> Zone 4	<input type="text"/> Zone 8

[328] Miscellaneous Alarm Reporting Codes
(Section 4.4 "Reporting Codes")

<input type="text"/> For Future Use	<input type="text"/> For Future Use
<input type="text"/> Opening After Alarm	<input type="text"/> For Future Use
<input type="text"/> Recent Closing	

[329] Priority Alarm and Restoral
(Section 4.4 "Reporting Codes")

<input type="text"/> Keypad Fire Alarm	<input type="text"/> Keypad Fire Restoral
<input type="text"/> Keypad Auxiliary Alarm	<input type="text"/> Keypad Auxiliary Restoral
<input type="text"/> Keypad Panic Alarm	<input type="text"/> Keypad Panic Restoral
<input type="text"/> For Future Use	<input type="text"/> For Future Use

[330] Tamper Reporting Codes, Zones 1-8
(Section 4.4 "Reporting Codes")

<input type="text"/> Zone 1	<input type="text"/> Zone 5
<input type="text"/> Zone 2	<input type="text"/> Zone 6
<input type="text"/> Zone 3	<input type="text"/> Zone 7
<input type="text"/> Zone 4	<input type="text"/> Zone 8

[334] Tamper Restoral Reporting Codes, Zones 1-8
(Section 4.4 "Reporting Codes")

<input type="text"/> Zone 1	<input type="text"/> Zone 5
<input type="text"/> Zone 2	<input type="text"/> Zone 6
<input type="text"/> Zone 3	<input type="text"/> Zone 7
<input type="text"/> Zone 4	<input type="text"/> Zone 8

[338] Miscellaneous Tamper Reporting Codes
(Section 4.4 "Reporting Codes")

<input type="text"/> General System Tamper	
<input type="text"/> General System Tamper Rest.	
<input type="text"/> Keypad Lockout	

[339] Closing (Arming) Reporting Codes, Access Codes 1-8
(Section 4.4 "Reporting Codes")

<input type="text"/> Code 1	<input type="text"/> Code 5
<input type="text"/> Code 2	<input type="text"/> Code 6
<input type="text"/> Code 3	<input type="text"/> Code 7
<input type="text"/> Code 4	<input type="text"/> Code 8

[343] Miscellaneous Closing (Arming) Reporting Codes

(Section 4.4 "Reporting Codes")

- | | | | |
|-------|---------------------------|-------|-----------------|
| _ _ _ | For future use | _ _ _ | For future use |
| _ _ _ | For future use | _ _ _ | Partial Closing |
| _ _ _ | Closing by System Code 40 | _ _ _ | Special Closing |
| _ _ _ | For future use | | |

[344] Opening (Disarming) Reporting Codes, Access Codes 1-8

(Section 4.4 "Reporting Codes")

- | | | | |
|-------|--------|-------|--------|
| _ _ _ | Code 1 | _ _ _ | Code 5 |
| _ _ _ | Code 2 | _ _ _ | Code 6 |
| _ _ _ | Code 3 | _ _ _ | Code 7 |
| _ _ _ | Code 4 | _ _ _ | Code 8 |

[348] Miscellaneous Opening (Disarming) Reporting Codes

(Section 4.4 "Reporting Codes")

- | | | | |
|-------|---------------------------|-------|-----------------------|
| _ _ _ | For future use | _ _ _ | For future use |
| _ _ _ | For future use | _ _ _ | Auto Arm Cancellation |
| _ _ _ | Opening by System Code 40 | _ _ _ | Special Opening |
| _ _ _ | For future use | | |

[349] Maintenance Alarm Reporting Codes

(Section 4.4 "Reporting Codes")

- | | | | |
|-------|----------------------------|-------|----------------|
| _ _ _ | Battery Trouble Alarm | _ _ _ | For Future Use |
| _ _ _ | AC Failure Trouble Alarm | _ _ _ | For Future Use |
| _ _ _ | Bell Circuit Trouble Alarm | _ _ _ | For Future Use |
| _ _ _ | Fire Trouble Alarm | _ _ _ | For Future Use |

[350] Maintenance Restoral Reporting Codes

(Section 4.4 "Reporting Codes")

- | | | | |
|-------|-------------------------------|-------|----------------|
| _ _ _ | Battery Trouble Restoral | _ _ _ | For Future Use |
| _ _ _ | AC Failure Trouble Restoral | _ _ _ | TLM Restoral |
| _ _ _ | Bell Circuit Trouble Restoral | _ _ _ | For Future Use |
| _ _ _ | Fire Trouble Restoral | _ _ _ | For Future Use |

[351] Miscellaneous Maintenance Reporting Codes

(Section 4.4 "Reporting Codes")

- | | |
|-------|---|
| _ _ _ | Phone Number 1 Failure to Communicate Restore |
| _ _ _ | Phone Number 2 Failure to Communicate Restore |
| _ _ _ | For Future Use |
| _ _ _ | For Future Use |
| _ _ _ | For Future Use |
| _ _ _ | General Zone Trouble Alarm |
| _ _ _ | General Zone Trouble Restore |

[352] Test Transmission Reporting Codes

(Section 4.4 "Reporting Codes")

- | | | | |
|-------|----------------------------|-------|----------------|
| _ _ _ | Periodic Test Transmission | _ _ _ | For Future Use |
| _ _ _ | System Test | | |

[353] Wireless Maintenance Reporting Codes

(Section 4.4 "Reporting Codes")

- | | | | |
|-------|--------------------------------|-------|----------------------------------|
| _ _ _ | General Zone Low Battery Alarm | _ _ _ | General Zone Low Battery Restore |
|-------|--------------------------------|-------|----------------------------------|

[360] Communicator Format Options
(Section 4.5 "Reporting Formats")



The Third telephone number follows the format of the First telephone number.

Default

02 1st Phone Number
02 2nd Phone Number

- 01** 20 BPS, 1400 HZ handshake
- 02** 20 BPS, 2300 HZ handshake
- 03** DTMF CONTACT ID
- 04** SIA FSK
- 05** Pager

[361] Alarm/Restore Communicator Call Directions
(Section 4.1 "Dialing")

Default	<input type="checkbox"/>	Option	ON	OFF
ON	<input type="checkbox"/>	1	1st Telephone Number	Disabled
OFF	<input type="checkbox"/>	2	2nd Telephone Number	Disabled

[363] Tamper/Restore Communicator Call Directions
(Section 4.1 "Dialing")

Default	<input type="checkbox"/>	Option	ON	OFF
ON	<input type="checkbox"/>	1	1st Telephone Number	Disabled
OFF	<input type="checkbox"/>	2	2nd Telephone Number	Disabled

[365] Opening/Closing Communicator Call Directions
(Section 4.1 "Dialing")

Default	<input type="checkbox"/>	Option	ON	OFF
ON	<input type="checkbox"/>	1	1st Telephone Number	Disabled
OFF	<input type="checkbox"/>	2	2nd Telephone Number	Disabled

[367] System Maintenance Alarm/Restore Communicator Call Directions
(Section 4.1 "Dialing")

Default	<input type="checkbox"/>	Option	ON	OFF
ON	<input type="checkbox"/>	1	1st Telephone Number	Disabled
OFF	<input type="checkbox"/>	2	2nd Telephone Number	Disabled

[368] System Test Transmissions Communicator Call Directions
(Section 4.1 "Dialing")

Default	<input type="checkbox"/>	Option	ON	OFF
ON	<input type="checkbox"/>	1	1st Telephone Number	Disabled
OFF	<input type="checkbox"/>	2	2nd Telephone Number	Disabled

[370] Communication Variables

Default				Section
003	<input type="text"/> <input type="text"/> <input type="text"/>	Swinger Shutdown (Alarms and Rest)	(001-014 Transmissions, 000=disabled)	6.9
003	<input type="text"/> <input type="text"/> <input type="text"/>	Swinger Shutdown (Tampers and Rest)	(001-014 Transmissions, 000=disabled)	6.9
003	<input type="text"/> <input type="text"/> <input type="text"/>	Swinger Shutdown (Maint and Rest)	(001-014 Transmissions, 000=disabled)	6.9
000	<input type="text"/> <input type="text"/> <input type="text"/>	Transmission Delay	(001-255 seconds)	6.5
030	<input type="text"/> <input type="text"/> <input type="text"/>	AC Failure Communication Delay	(001-255 minutes)	4.4
003	<input type="text"/> <input type="text"/> <input type="text"/>	TLM Trouble Delay	(No. of valid checks required +3 - 000-255 x 10s)	6.2
030	<input type="text"/> <input type="text"/> <input type="text"/>	Test Transmission Cycle (land line)	(001-255 days)	6.4
007	<input type="text"/> <input type="text"/> <input type="text"/>	Zone Low Battery Transmission Delay	(000-255 days)	4.4

NOTE: For AC failure communications delay 000 = Disabled.

[371] Test Transmission Time of Day
(Section 6.4 "Test Transmission")

Default

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

[380] First Communicator Option Code

Default	Option	ON	OFF	Section
ON	<input type="checkbox"/>	1 Communications Enabled	Communications Disabled	4.1
OFF	<input type="checkbox"/>	2 Restorals on Bell Time-out	Restorals Follow Zones	4.4
OFF	<input type="checkbox"/>	3 Pulse Dialing	DTMF Dialing	4.1
ON	<input type="checkbox"/>	4 Switch to Pulse Dialing on 5th Attempt	DTMF Dial For All Attempts	4.1
OFF	<input type="checkbox"/>	5 3rd Phone Number enabled	3rd Phone Number disabled	4.3
OFF	<input type="checkbox"/>	6 Alternate Dial (1st and 3rd)	Call 1st Number, Backup to 3rd	4.3
OFF	<input type="checkbox"/>	7 For Future Use		
OFF	<input type="checkbox"/>	8 For Future Use		

[381] Second Communicator Option Code

Default	Option	ON	OFF	Section
OFF	<input type="checkbox"/>	1 Open After Alarm Kypd Ringback enabled	Open After Alrm Kypd Ringback disabled	6.6
OFF	<input type="checkbox"/>	2 Open After Alarm Bell Ringback enabled	Open After Alrm Bell Ringback disabled	6.6
OFF	<input type="checkbox"/>	3 SIA Sends Programmed Rep. Codes	SIA Sends Automatic Rep. Codes	4.5
OFF	<input type="checkbox"/>	4 Closing Confirmation Enabled	Closing Confirmation Disabled	4.4
OFF	<input type="checkbox"/>	5-8 For Future Use		

International Programming

[701] First International Options Code
(Section 6.10 "International Programming")

Default	Option	ON	OFF
OFF	<input type="checkbox"/>	1 50 Hz AC	60 Hz AC
OFF	<input type="checkbox"/>	2-8 For future use	

[702] Second International Options Code
(Section 6.10 "International Programming")

Default	Option	ON	OFF
OFF	<input type="checkbox"/>	1 Pulse Dialing Make/Break Ratio is 33/67	Pulse Dialing Make/Break Ratio is 40/60
ON	<input type="checkbox"/>	2 Force Dialing enabled	Force Dialing disabled
OFF	<input type="checkbox"/>	3 Land line Test Transmission in minutes	Land line Test Transmission in days
OFF	<input type="checkbox"/>	4-8 For future use	

[804] Wireless Programming
 (Section 3.2 "Adding Wireless Devices")

Zone Serial Numbers

- Default = 00000
- 5 digit decimal entry is required
- First digit represents transmitter type (0, 1, 6-9 are not valid)
 2 = UTX/SLX, 3 = PIR, 4 = SMOKE, 5 = Pendant
- Next 4 digits represent the serial number (valid entries are 0001 to 4094)

<p>[01] Zone 1 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[02] Zone 2 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[03] Zone 3 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[04] Zone 4 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p>	<p>[05] Zone 5 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[06] Zone 6 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[07] Zone 7 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[08] Zone 8 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p>
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Wireless Key Serial Numbers

Default = 00000

<p>[41] Wireless Key 01 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[42] Wireless Key 02 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[43] Wireless Key 03 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[44] Wireless Key 04 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[45] Wireless Key 05 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[46] Wireless Key 06 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[47] Wireless Key 07 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[48] Wireless Key 08 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p>	<p>[49] Wireless Key 09 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[50] Wireless Key 10 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[51] Wireless Key 11 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[52] Wireless Key 12 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[53] Wireless Key 13 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[54] Wireless Key 14 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[55] Wireless Key 15 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p> <p>[56] Wireless Key 16 <u> </u> <u> </u> <u> </u> <u> </u> <u> </u></p>
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Wireless Key Options

- | | | |
|-------------------------------|---------------------------------------|---------------------|
| 00 Null Key (Default setting) | 07 [★] [6] [----] [4] System Test | 28 Fire Alarm* |
| 01-02 Not Used | 08-15 For Future Use | 29 Auxiliary Alarm* |
| 03 Stay Arm | 16 [★] [0] Quick Exit | 30 Panic Alarm* |
| 04 Away Arm | 17 [★] [1] Reactivate Stay/Away Zones | |
| 05 For Future Use | 18-26 For Future Use | |
| 06 [★] [4] Chime ON/OFF | 27 Disarm (OFF)* | |

*These can only be used for wireless key function keys.

Wireless Key Function Keys: (Default = 00)

(Section 6.12 "Wireless Key Programming")

<p>[65] Function Key 1 <u> </u> <u> </u></p> <p>[66] Function Key 2 <u> </u> <u> </u></p>	<p>[67] Function Key 3 <u> </u> <u> </u></p> <p>[68] Function Key 4 <u> </u> <u> </u></p>
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Supervision

[81] Wireless supervisory Window
 Default = 03

RF transmitter supervisory window (hours), valid entries are 01-12.



Panic Transmitters are NOT supervised and must be disabled in the following sections.

[82] Zone Transmitter Supervision Options (1-8)

Default = ON	Option ON	Option OFF
<input type="checkbox"/> Option 1	Zone 01 Supervision enabled	Disabled
<input type="checkbox"/> Option 2	Zone 02 Supervision enabled	Disabled
<input type="checkbox"/> Option 3	Zone 03 Supervision enabled	Disabled
<input type="checkbox"/> Option 4	Zone 04 Supervision enabled	Disabled
<input type="checkbox"/> Option 5	Zone 05 Supervision enabled	Disabled
<input type="checkbox"/> Option 6	Zone 06 Supervision enabled	Disabled
<input type="checkbox"/> Option 7	Zone 07 Supervision enabled	Disabled
<input type="checkbox"/> Option 8	Zone 08 Supervision enabled	Disabled

Special Installer Functions

[904] Wireless Device Placement Test
 (Section 3.4 "Module Placement Test")

- Select the device to be tested (Zones 01-08).
- Press [#] to Cancel.

Placement	Control Unit Lights	Sounder
Good	Light 1 ON Steady	1 Beep
Fair	Light 2 ON Steady	2 Beeps
Bad	Light 3 ON Steady	3 Beeps

[990] Installer Lockout Enable

[991] Installer Lockout Disable

LIMITED WARRANTY

Digital Security Controls Ltd. warrants the original purchaser that for a period of twelve months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use. During the warranty period, Digital Security Controls Ltd. shall, at its option, repair or replace any defective product upon return of the product to its factory, at no charge for labour and materials. Any replacement and/or repaired parts are warranted for the remainder of the original warranty or ninety (90) days, whichever is longer. The original owner must promptly notify Digital Security Controls Ltd. in writing that there is defect in material or workmanship, such written notice to be received in all events prior to expiration of the warranty period.

International Warranty

The warranty for international customers is the same as for any customer within Canada and the United States, with the exception that Digital Security Controls Ltd. shall not be responsible for any customs fees, taxes, or VAT that may be due.

Warranty Procedure

To obtain service under this warranty, please return the item(s) in question to the point of purchase. All authorized distributors and dealers have a warranty program. Anyone returning goods to Digital Security Controls Ltd. must first obtain an authorization number. Digital Security Controls Ltd. will not accept any shipment whatsoever for which prior authorization has not been obtained.

Conditions to Void Warranty

This warranty applies only to defects in parts and workmanship relating to normal use. It does not cover:

- damage incurred in shipping or handling;
- damage caused by disaster such as fire, flood, wind, earthquake or lightning;
- damage due to causes beyond the control of Digital Security Controls Ltd. such as excessive voltage, mechanical shock or water damage;
- damage caused by unauthorized attachment, alterations, modifications or foreign objects;
- damage caused by peripherals (unless such peripherals were supplied by Digital Security Controls Ltd.);
- defects caused by failure to provide a suitable installation environment for the products;
- damage caused by use of the products for purposes other than those for which it was designed;
- damage from improper maintenance;
- damage arising out of any other abuse, mishandling or improper application of the products.

Digital Security Controls Ltd.'s liability for failure to repair the product under this warranty after a reasonable number of attempts will be limited to a replacement of the product, as the exclusive remedy for breach of warranty. Under no circumstances shall Digital Security Controls Ltd. be liable for any special, incidental, or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability, or any other legal theory. Such damages include, but are not limited to, loss of profits, loss of the product or any associated equipment, cost of capital, cost of substitute or replacement equipment, facilities or services, down time, purchaser's time, the claims of third parties, including customers, and injury to property.

Disclaimer of Warranties

This warranty contains the entire warranty and shall be in lieu of any and all other warranties, whether expressed or implied (including all implied warranties of merchantability or fitness for a particular purpose) And of all other obligations or liabilities on the part of Digital Security Controls Ltd. Digital Security Controls Ltd. neither assumes nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product.

This disclaimer of warranties and limited warranty are governed by the laws of the province of Ontario, Canada.

WARNING: Digital Security Controls Ltd. recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

Installer's Lockout

Any products returned to DSC which have the Installer's Lockout option enabled and exhibit no other problems will be subject to a service charge.

Out of Warranty Repairs

Digital Security Controls Ltd. will at its option repair or replace out-of-warranty products which are returned to its factory according to the following conditions. Anyone returning goods to Digital Security Controls Ltd. must first obtain an authorization number. Digital Security Controls Ltd. will not accept any shipment whatsoever for which prior authorization has not been obtained.

Products which Digital Security Controls Ltd. determines to be repairable will be repaired and returned. A set fee which Digital Security Controls Ltd. has predetermined and which may be revised from time to time, will be charged for each unit repaired.

Products which Digital Security Controls Ltd. determines not to be repairable will be replaced by the nearest equivalent product available at that time. The current market price of the replacement product will be charged for each replacement unit.

WARNING Please Read Carefully

Note to Installers

This warning contains vital information. As the only individual in contact with system users, it is your responsibility to bring each item in this warning to the attention of the users of this system.

System Failures

This system has been carefully designed to be as effective as possible. There are circumstances, however, involving fire, burglary, or other types of emergencies where it may not provide protection. Any alarm system of any type may be compromised deliberately or may fail to operate as expected for a variety of reasons. Some but not all of these reasons may be:

■ **Inadequate Installation**

A security system must be installed properly in order to provide adequate protection. Every installation should be evaluated by a security professional to ensure that all access points and areas are covered. Locks and latches on windows and doors must be secure and operate as intended. Windows, doors, walls, ceilings and other building materials must be of sufficient strength and construction to provide the level of protection expected. A reevaluation must be done during and after any construction activity. An evaluation by the fire and/or police department is highly recommended if this service is available.

■ **Criminal Knowledge**

This system contains security features which were known to be effective at the time of manufacture. It is possible for persons with criminal intent to develop techniques which reduce the effectiveness of these features. It is important that a security system be reviewed periodically to ensure that its features remain effective and that it be updated or replaced if it is found that it does not provide the protection expected.

■ **Access by Intruders**

Intruders may enter through an unprotected access point, circumvent a sensing device, evade detection by moving through an area of insufficient coverage, disconnect a warning device, or interfere with or prevent the proper operation of the system.

■ **Power Failure**

Control units, intrusion detectors, smoke detectors and many other security devices require an adequate power supply for proper operation. If a device operates from batteries, it is possible for the batteries to fail. Even if the batteries have not failed, they must be charged, in good condition and installed correctly. If a device operates only by AC power, any interruption, however brief, will render that device inoperative while it does not have power. Power interruptions of any length are often accompanied by voltage fluctuations which may damage electronic equipment such as a security system. After a power interruption has occurred, immediately conduct a complete system test to ensure that the system operates as intended.

■ **Failure of Replaceable Batteries**

This system's wireless transmitters have been designed to provide several years of battery life under normal conditions. The expected battery life is a function of the device environment, usage and type. Ambient conditions such as high humidity, high or low temperatures, or large temperature fluctuations may reduce the expected battery life. While each transmitting device has a low battery monitor which identifies when the batteries need to be replaced, this monitor may fail to operate as expected. Regular testing and maintenance will keep the system in good operating condition.

■ **Compromise of Radio Frequency (Wireless) Devices**

Signals may not reach the receiver under all circumstances which could include metal objects placed on or near the radio path or deliberate jamming or other inadvertent radio signal interference.

■ **System Users**

A user may not be able to operate a panic or emergency switch possibly due to permanent or temporary physical disability, inability to reach the device in time, or unfamiliarity with the correct operation. It is important that all system users be trained in the correct operation of the alarm system and that they know how to respond when the system indicates an alarm.

■ **Smoke Detectors**

Smoke detectors that are a part of this system may not properly alert occupants of a fire for a number of reasons, some of which follow. The smoke detectors may have been improperly installed or positioned. Smoke may not be able to reach the smoke detectors, such as when the fire is in a chimney, walls or roofs, or on the other side of closed doors. Smoke detectors may not detect smoke from fires on another level of the residence or building. Every fire is different in the amount of smoke produced and the rate of burning. Smoke detectors cannot sense all types of fires equally well. Smoke detectors may not provide timely warning of fires caused by carelessness or safety hazards such as smoking in bed, violent explosions, escaping gas, improper storage of flammable materials, overloaded electrical circuits, children playing with matches or arson.

Even if the smoke detector operates as intended, there may be circumstances when there is insufficient warning to allow all occupants to escape in time to avoid injury or death.

■ **Motion Detectors**

Motion detectors can only detect motion within the designated areas as shown in their respective installation instructions. They cannot discriminate between intruders and intended occupants. Motion detectors do not provide volumetric area protection. They have multiple beams of detection and motion can only be detected in unobstructed areas covered by these beams. They cannot detect motion which occurs behind walls, ceilings, floor, closed doors, glass partitions, glass doors or windows. Any type of tampering whether intentional or unintentional such as masking, painting, or spraying of any material on the lenses, mirrors, windows or any other part of the detection system will impair its proper operation.

Passive infrared motion detectors operate by sensing changes in temperature. However their effectiveness can be reduced when the ambient temperature rises near or above body temperature or if there are intentional or unintentional sources of heat in or near the detection area. Some of these heat sources could be heaters, radiators, stoves, barbecues, fireplaces, sunlight, steam vents, lighting and so on.

■ **Warning Devices**

Warning devices such as sirens, bells, horns, or strobes may not warn people or waken someone sleeping if there is an intervening wall or door. If warning devices are located on a different level of the residence or premise, then it is less likely that the occupants will be alerted or awakened. Audible warning devices may be interfered with by other noise sources such as stereos, radios, televisions, air conditioners or other appliances, or passing traffic. Audible warning devices, however loud, may not be heard by a hearing-impaired person.

■ **Telephone Lines**

If telephone lines are used to transmit alarms, they may be out of service or busy for certain periods of time. Also an intruder may cut the telephone line or defeat its operation by more sophisticated means which may be difficult to detect.

■ **Insufficient Time**

There may be circumstances when the system will operate as intended, yet the occupants will not be protected from the emergency due to their inability to respond to the warnings in a timely manner. If the system is monitored, the response may not occur in time to protect the occupants or their belongings.

■ **Component Failure**

Although every effort has been made to make this system as reliable as possible, the system may fail to function as intended due to the failure of a component.

■ **Inadequate Testing**

Most problems that would prevent an alarm system from operating as intended can be found by regular testing and maintenance. The complete system should be tested weekly and immediately after a break-in, an attempted break-in, a fire, a storm, an earthquake, an accident, or any kind of construction activity inside or outside the premises. The testing should include all sensing devices, keypads, consoles, alarm indicating devices and any other operational devices that are part of the system.

■ **Security and Insurance**

Regardless of its capabilities, an alarm system is not a substitute for property or life insurance. An alarm system also is not a substitute for property owners, renters, or other occupants to act prudently to prevent or minimize the harmful effects of an emergency situation.

FCC COMPLIANCE STATEMENT

CAUTION: Changes or modifications not expressly approved by Digital Security Controls Ltd. could void your authority to use this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

The user may find the following booklet prepared by the FCC useful: "How to Identify and Resolve Radio/Television Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402, Stock # 004-000-00345-4.

IMPORTANT INFORMATION

This equipment complies with Part 68 of the FCC Rules. On the side of this equipment is a label that contains, among other information, the FCC registration number of this equipment.

NOTIFICATION TO TELEPHONE COMPANY The customer shall notify the telephone company of the particular line to which the connection will be made, and provide the FCC registration number and the ringer equivalence of the protective circuit.

FCC Registration Number: F53CAN-33159-AL-E

Ringer Equivalence Number: 0.25

USOC Jack: RJ31X

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

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

ADDITIONAL TELEPHONE COMPANY INFORMATION The security control panel must be properly connected to the telephone line with a USOC RJ-31X telephone jack.

The FCC prohibits customer-provided terminal equipment be connected to party lines or to be used in conjunction with coin telephone service. Interconnect rules may vary from state to state.

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

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

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

Digital Security Controls Ltd. 160 Washburn St., Lockport, NY 14094

