



LCD55O1Z
version 2.1

Installation Instructions

Instructions d'Installation

Instrucciones de Instalacion

WARNING: Please refer to the System Installation Manual for information on limitations regarding product use and function and information on the limitations as to liability of the manufacturer.

ATTENTION: Ce manuel contient des informations sur les restrictions concernant le fonctionnement et l'utilisation du produit et des informations sur les restrictions en ce qui concerne la responsabilité du fabricant. La totalité du manuel doit être lu attentivement.

ADVERTENCIA: Este manual, contiene información sobre restricciones acerca del uso y funcionamiento del producto e información sobre las limitaciones, tal como, la responsabilidad del fabricante. Todo el manual se debe leer cuidadosamente.

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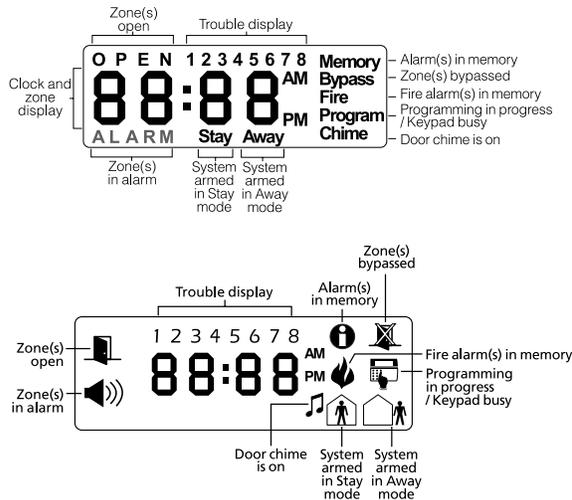
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Introduction



The LCD5501Z keypad presents system status using an LCD display along with fixed words/icons and numbers. The keypad can be used on security systems with up to 64 zones. The LCD5501Z is compatible with the following DSC security systems:

- PC580/PC585
- PC5008
- PC1555/PC1565
- PC50XX
- PC1555MX

Specifications

- Connects to control panel via 4-wire Keybus
- One keypad zone input/PGM output
- Current draw: 35mA (standby) / 125mA (maximum)
- Voltage rating: 12VDC nominal
- Optional tamper version
- Five programmable function keys
- Ready (green), Armed (red) and Trouble (yellow) status lights

Installation

Unpacking

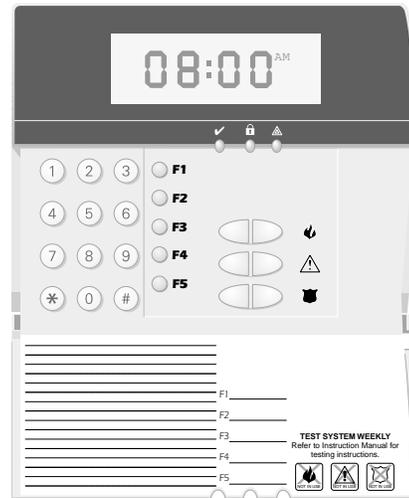
The LCD5501Z package includes the following parts:

- One LCD5501Z keypad
- Four mounting screws
- One keypad inner door label
- One set of Fire, Auxiliary and Panic key labels

Mounting

You should mount the keypad where it is accessible to designated points of entry

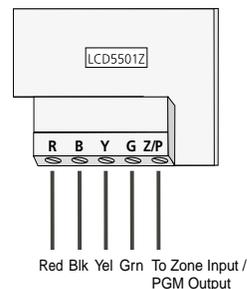
and exit. Once you have selected a dry and secure location, perform the following steps to mount the keypad.



1. Remove the keypad backplate by loosening the screw located at the base of the unit.
2. Secure the keypad backplate to the wall in the desired location. Use the screws provided.
3. Before attaching the keypad to its backplate, complete the keypad wiring as described in the next section.

Wiring

1. Before beginning to wire the unit, ensure that all power (AC transformer and battery) is disconnected from the control panel.
2. Connect the four Keybus wires from the control panel (red, black, yellow and green) to the keypad terminals (R B Y G). Consult the diagram below:



3. If programmed as an input, you can connect a device - such as a door contact - to the 'Z/P' terminal of the LCD5501Z. This eliminates the need to run wires back to the control panel for the device. To connect the zone, run one wire from the device to the 'Z/P' terminal and the other wire from the device to the B (black) terminal. For

powered devices, run the red wire to the R (positive) terminal and the black wire to the B (negative) terminal. When using end of line supervision, connect the zone according to one of the configurations outlined in your system's Installation Manual.

4. If the 'Z/P' terminal is programmed as an output, the output follows the PGM programmed in Section [8]. A small relay, buzzer or other DC operated device may be connected between the positive supply voltage and the 'Z/P' terminal (maximum load is 50mA).

Applying Power

Once all wiring is complete, apply power to the control panel:

1. Connect the battery leads to the battery.
2. Connect the AC transformer.

For more information on control panel power specifications, see the control panel Installation Manual.

NOTE: Do not connect the power until all wiring is complete.

Enrolling the Keypad

Once all wiring is complete, you will need to enter a 2-digit number that tells the system the partition and slot assignment of the keypad.

If your system has partitions, you will need to also assign the keypad to a partition (1st digit).

The slot assignment (2nd digit) tells the panel which keypad slots are occupied. The panel can then generate a fault when a keypad supervisory signal is not present. There are eight available slots for keypads. LCD5501Z keypads are always assigned to slot 1 by default. You will need to assign each keypad to its own slot (1 to 8).

Enter the following at each keypad installed on the system:

1. Enter Installer Programming by pressing [*][8][Installer's Code]
2. Press [000] for Keypad Programming
3. Press [0] for Partition and Slot Assignment
4. Enter a two digit number to specify the partition and slot assignment.

NOTE: If your system does not have partitions, enter [1] for the first digit.

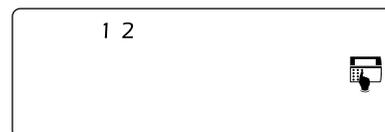
- 1st digit Enter [0] for Global Keypad
Enter [1] for Partition 1 Keypad
Enter [2] for Partition 2 Keypad
Enter [3] for Partition 3 Keypad
Enter [4] for Partition 4 Keypad
Enter [5] for Partition 5 Keypad
Enter [6] for Partition 6 Keypad
Enter [7] for Partition 7 Keypad
Enter [8] for Partition 8 Keypad
- 2nd digit Enter [1] to [8] for Slot Assignment
5. Press the [#] key twice to exit programming.
 6. After assigning all keypads, perform a supervisory reset by entering [*][8][Installer's Code][902]. The panel will now supervise all assigned keypads and enrolled modules on the system.

Programming the Keypad

There are several programming options available for the LCD5501Z keypad. These are described below. Record all your programming choices in the programming worksheets included in this manual.

Programming the LCD5501Z is similar to programming the rest of the system. When you are in the LCD5501Z programming sections, the keypad will display which options are turned on along the top of the display. To turn an option on or off, press the number corresponding to the option on the number pad. The numbers of the options that are currently turned ON will be displayed.

For example, if options 1 and 2 are on, the display will look like:



For information on programming the rest of your security system, please refer to your system's Installation Manual.

Function Key Options

The function keys are programmed in sections [1] to [5]. By default, the 5 function keys on the keypad are programmed as Stay Arm (03), Away Arm (04), Chime

(06), Sensor Reset (14) and Quick Exit (16). You can change the function of each key on every keypad. Please see your system's Installation Manual for instructions on programming the keys, and a complete list of all the function key options available for your system.

Clock Options

The LCD5501Z will display the current time after 35 seconds of no key presses. To set the correct time and date for the system, please refer to your system's Instruction Manual. You can change how the keypad displays the time with the following options. To change the clock options:

1. Enter [*][8][Installer's code]
2. Enter [000] to go to keypad programming
3. Enter section [6] to go to clock options.
4. To turn any of the options on or off, press [1], [2], or [3]:

NOTE: If the Time does not display on keypad option is selected, make sure that the Keypad displays time when zones are open option is also selected.

[1]ON =Time displays on keypad

OFF =Time does not display on keypad

[2]ON = Clock display is in AM/PM format

(e.g. 08:00 AM)

OFF =Clock display is in 24-hour format
(e.g. 20:00)

[3]ON =Keypad does not display time when zones are open

OFF =Keypad displays time when zones are open

5. When you are finished programming the clock options, press [#] to exit.

Alarms Displayed While Armed Option

You can disable the display of alarms on the keypad when the system is armed. The display of alarms is enabled by default. To disable the display of alarms when the system is armed, turn off section [6], option [5]:

1. Enter [*][8][Installer's code]
2. Enter [000] to go to keypad programming
3. To turn the display of alarms on or off, enter section [6].

4. Turn option [5] on or off:

[5]ON = Alarms not displayed while system is armed

OFF = Alarms are always displayed while system is armed

5. When you are finished, press [#] to exit.

Emergency Key Options (Fire, Auxiliary, Panic)

You can enable or disable the Fire, Auxiliary and Panic keys at each keypad. These keys are enabled by default. Please see your system's Installation Manual for more information on these keys and their options. To turn any of the emergency keys on or off on the keypad:

1. Enter [*][8][Installer's code]
2. Enter [000] to go to keypad programming
3. Enter section [7].
4. To turn the emergency key options on or off, press [1], [2], or [3]:

[1]ON = Fire key enabled

OFF = Fire key disabled

[2]ON = Auxiliary key enabled

OFF = Auxiliary key disabled

[3]ON = Panic key enabled

OFF = Panic key disabled

5. When you are finished, press [#] to exit.

Door Chime Options

You can program the LCD5501Z keypad to sound a tone when any zone is opened or closed. There are two parts to the LCD5501Z door chime programming:

- Program if the LCD5501Z will chime when zones are opened and/or closed.
- Program the type of sound the LCD5501Z will make when an individual zone is opened or closed.

For the door chime feature to work, you will also need to turn on the Door Chime attribute for each zone that will trigger the chime. This programming is done in the control panel software. Refer to your control panel's Installation Manual for more information.

Door Chime on Zone Openings/Closings

You can program each LCD5501Z keypad to sound a door chime when zones

are opened and/or when they are closed. By default, LCD5501Z keypads are programmed to sound door chimes on both zone openings and closings.

To change the door chime opening/closing settings, at each LCD5501Z keypad:

1. Enter [*][8][Installer's code]
2. Enter [000] to go to keypad programming
3. Enter section [6].
4. To turn the options on or off, press [6] or [7]:
[6] ON =Door Chime Enabled for Zone Openings
OFF =Door Chime Disabled for Zone Openings
[7] ON =Door Chime Enabled for Zone Closings
OFF =Door Chime Disabled for Zone Closings
5. When you are finished, press [#] to exit.

Door Chime Sounds

You can program the LCD5501Z keypad to make different door chime sounds for individual zones, or groups of zones. Each LCD5501Z keypad can make any of four door chime sounds for each zone that triggers the door chime:

- 4 quick beeps (default sound)
- 'Bing – Bing' tone
- 'Ding – Dong' tone
- 'Alarm' tone

NOTE: For a zone to be able to trigger the door chime sound, the Door Chime zone attribute must also be enabled in the control panel programming. Please see your control panel Installation Manual.

To change the door chime sounds:

1. Enter [*][8][Installer's code].
2. Enter [*] to go to door chime sound programming.
3. Enter a 2-digit number for the zone you want to program [01] - [64].
4. Turn one of the following options on by pressing [1], [2], [3], or [4]:
[1]4 quick beeps (default sound)
[2]'Bing – Bing' tone
[3]'Ding – Dong' tone
[4]'Alarm' tone

NOTE: Make sure that only one of the above options is turned on. If more than one is on, the keypad will sound the first option that is enabled. If none of the options are selected, the keypad will not make any sound when the zone is opened or closed.

5. To program the door chime sound for another zone, repeat steps 3 and 4.
6. When you are finished programming the door chime sounds, press [#] to exit.

Zone Input/PGM Output Option

The LCD5501Z 'Z/P' terminal can be programmed to support one zone input (default) or one PGM output. To change this option:

1. Enter [*][8] [Installer Code].
2. Enter [000] to go to Keypad Programming.
3. Enter section [6].
4. Turn the option on or off by pressing [8].

If Option 8 is ON, the 'Z/P' terminal is an output.

If Option 8 is OFF, the 'Z/P' terminal is an input.

Programming the PGM Number

In order to assign a PGM output to the "Z/P" terminal, a PGM number must be entered. This number has to be one of the PGM outputs that can be programmed in the panel.

1. Enter [*][8] [Installer Code].
2. Enter [000] to go to Keypad Programming.
3. Enter Section [8].
4. Enter the 2-digit PGM number (Do Not enter the PGM Output Option).

Programming Worksheets

[000] Keypad Programming

1. Enter [*][8][Installer's code]
2. Enter [000] to go to keypad programming

[0] Keypad Enrollment

Valid entries are 01-18; e.g. enter [11] for partition 1, slot 1. Default = 11

- 1st digit Enter 0 for Global Keypad
 Enter [1] for Partition 1 Keypad

- Enter [2] for Partition 2 Keypad
 Enter [3] for Partition 3 Keypad
 Enter [4] for Partition 4 Keypad
 Enter [5] for Partition 5 Keypad
 Enter [6] for Partition 6 Keypad
 Enter [7] for Partition 7 Keypad
 Enter [8] for Partition 8 Keypad
 2nd digit Enter 1 to 8 for Slot Assignment
 Slot:

[1]-[5] Function Key Assignments

	[1] Key 1	[2] Key 2	[3] Key 3	[4] Key 4	[5] Key 5
Defaults:	03	04	06	14	16
	Stay	Away	Chime	Reset	Exit
	<u> </u>				

[6] LCD5501Z Keypad Options

Default	Option	
ON <u> </u>	1	ON = Local clock display enabled OFF = Local clock display disabled
ON <u> </u>	2	ON = Local clock displays AM/PM OFF = Local clock displays 24 hour time
OFF <u> </u>	3	ON = Open zones override clock display OFF = Open zones do not override clock display
OFF <u> </u>	4	For Future Use
OFF <u> </u>	5	ON = Alarms not displayed while armed OFF = Alarms always displayed while armed
ON <u> </u>	6	ON = Door chime enabled for zone openings OFF = Door chime disabled for zone openings
ON <u> </u>	7	ON = Door chime enabled for zone closings OFF = Door chime disabled for zone closings
OFF <u> </u>	8	ON = "Z/P" terminal is an output OFF = "Z/P" terminal is an input

[7] Emergency Key Options

Default	Option	ON	OFF
ON <u> </u>	1	[F] key enabled	[F] key disabled
ON <u> </u>	2	[A] key enabled	[A] key disabled
ON <u> </u>	3	[P] key enabled	[P] key disabled
OFF <u> </u>	4-8	For Future Use	

[8] PGM Terminal

Default

01 PGM Number

[★] Door Chime Sound Programming

1. Enter [*][8][Installer's code][*]
2. Enter 2-digit zone number [01] - [64], then select door chime sound option [1] - [4]. Repeat for each zone that is to sound a chime.

Zone	Location	Options:	[1] 4 beeps (default)	[2] "bing- bing"	[3] "ding- ding"	[4] Alarm Tone
[01]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
[02]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
[03]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
[04]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
[05]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
[06]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
[07]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
[08]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
[09]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
[10]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
[11]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
[12]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
[13]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
[14]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
[15]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
[16]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
[17]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
[18]	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

[19]	_____				
[20]	_____				
[21]	_____				
[22]	_____				
[23]	_____				
[24]	_____				
[25]	_____				
[26]	_____				
[27]	_____				
[28]	_____				
[29]	_____				
[30]	_____				
[31]	_____				
[32]	_____				
[33]	_____				
[34]	_____				
[35]	_____				
[36]	_____				
[37]	_____				
[38]	_____				
[39]	_____				
[40]	_____				
[41]	_____				
[42]	_____				
[43]	_____				
[44]	_____				

[45]	_____	_	_	_	_
[46]	_____	_	_	_	_
[47]	_____	_	_	_	_
[48]	_____	_	_	_	_
[49]	_____	_	_	_	_
[50]	_____	_	_	_	_
[51]	_____	_	_	_	_
[52]	_____	_	_	_	_
[53]	_____	_	_	_	_
[54]	_____	_	_	_	_
[55]	_____	_	_	_	_
[56]	_____	_	_	_	_
[57]	_____	_	_	_	_
[58]	_____	_	_	_	_
[59]	_____	_	_	_	_
[60]	_____	_	_	_	_
[61]	_____	_	_	_	_
[62]	_____	_	_	_	_
[63]	_____	_	_	_	_
[64]	_____	_	_	_	_

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 purchaser 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. There is absolutely no warranty on software and all software products are sold as a user license under the terms of the software license agreement included with the product. The Customer assumes all responsibility for the proper selection, installation, operation and maintenance of any products purchased from DSC. Custom products are only warranted to the extent that they do not function upon delivery. In such cases, DSC can replace or credit at its option.

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.

Items Not Covered by Warranty

In addition to the items which void the Warranty, the following items shall not be covered by Warranty: (i) freight cost to the repair centre; (ii) products which are not identified with DSC's product label and lot number or serial number; (iii) products disassembled or repaired in such a manner as to adversely affect performance or prevent adequate inspection or testing to verify any warranty claim. Access cards or

tags returned for replacement under warranty will be credited or replaced at DSC's option. Products not covered by this warranty, or otherwise out of warranty due to age, misuse, or damage shall be evaluated, and a repair estimate shall be provided. No repair work will be performed until a valid purchase order is received from the Customer and a Return Merchandise Authorisation number (RMA) is issued by DSC's Customer Service.

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. The laws of some jurisdictions limit or do not allow the disclaimer of consequential damages. If the laws of such a jurisdiction apply to any claim by or against DSC, the limitations and disclaimers contained here shall be to the greatest extent permitted by law. Some states do not allow the exclusion or limitation of incidental or consequential damages, so that the above may not apply.

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 responsibility for 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.

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.

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.