

## 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:

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- 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.

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### 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

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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.

## PC5102-433EU v1.0 Installation Manual

If you are intending to use DLS-3 software with this product, a new DLS-3 driver must be downloaded from the DSC web site at <http://www.dscsec.com/dls3drivers.htm>. Install this driver on your computer in the same directory as your DLS-3 software.

### Section 1: Introduction

This manual describes how to install, program and maintain the PC5102-433. Before you install the PC5102-433 module, you should complete the following steps in your system installation:

1. Plan the installation and wiring of the security system (see the system Installation Manual)
2. Install the control panel, install and enroll at least one keypad to use for programming

Program the PC5102-433 from a system keypad or using DLS-3 v1.3 with the PC5102-433 v1.0 Driver Pack. Read your system Installation Manual for more information.

The PC5102-433 EU allows connection of up to 8 wireless key devices (WLS909 and/or WLS919) to a compatible DSC alarm system. The PC5102-433 EU allows connection of different equipment intended to be controlled via the alarm system (e.g. garage door, Powerflash modules that control the lighting within a designated area, etc.). The receiver is powered from a Limited Power output of the used Control panel (Alarm Controller). The PC5102-433 EU module must be used within an environment with a pollution degree max 2 and over-voltages category II - NONHAZARDOUS LOCATIONS, indoor only; it must be installed by SERVICE PERSONNEL or equivalent ONLY. (e.g., persons having appropriate technical training and experience necessary to be aware of hazards to which they are exposed in performing that task.)

**NOTE:** The marking related information is provided on the printed circuit board located within the equipment.

### 1.1 How to Use this Manual

Read this manual before you begin installing the PC5102-433. To install and set up the PC5102-433 and wireless keys, follow these steps. Refer to the sections listed below.

1. Temporarily mount and wire the PC5102-433 module (see Section 2).
2. Enroll and program wireless keys (see Section 3).
3. Complete PGM and other programming on the system (see Section 4).
4. Test the placement of all the wireless keys (see Section 5).
5. Permanently mount the PC5102-433 receiver (see Section 5).

For additional information on trouble conditions and battery replacement, see Section 6. For help with troubleshooting, see Section 7.

### 1.2 Specifications and Features

- Current Draw: 50mA (standby) 200mA maximum (both outputs active)
- Frequency: 433 MHz
- Receiver can receive signals from up to 8 wireless keys
- Antenna - internal. Installation not required
- Location - the PC5102-433 may be wired up to 230m from the main panel with AWG 22 gauge wires. The wiring used in this circuit connection shall be insulated with PVC, TFE, PTFE, FEP neoprene or polyimide (for longer wire runs, thicker gauge wire must be used)
- Connects to the Keypad
- Compatibility: The PC5102-433 v1.X can be connected to the following panels: PC501X, PC5020, PC1565, PC5008, PC585

Internal wiring shall be routed in a manner that prevents:

- Excessive strain on wire and terminal connections
- Loosening of terminal connections
- Damage of conductor insulation

**WARNING:** This manual contains information on limitations regarding product use and function and information on the limitations as to liability of the manufacturer.



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Please refer to the instruction sheets of the following keys for more information.

- WLS909-433 Wireless Key
- WLS919-433 Wireless Key

- ## Section 2: PC5102-433 Set Up & Wiring

## 2.1 Choose a Mounting Location for the PC5102-433

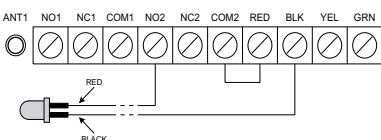
Find a place that is:

- When mounting the PC5102-433 in a basement, place the module as high and as close to the underside of the first floor as possible. The range of the module will be reduced if the unit is mounted below ground level.

NO1 NC1 COM1 NO2 NC2 COM2 RED BLK YEL GRN

**RED-** Keybus Power +12V  
**BLK-** Keybus Ground  
**YEL-** Keybus Clock  
**GRN-** Keybus Data

The LED can be used to indicate whether the system is armed or disarmed. If the output is programmed as an armed status output, the red LED will turn on when the system is armed and will turn off when the system is disarmed.



Motion detectors can only detect motion within the designated areas as shown in their respective installation instructions. They cannot discriminate between

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.

The complete R & TTE Declaration of Conformity can be found at [www.dsc.com/intl/rttedirect.htm](http://www.dsc.com/intl/rttedirect.htm).



## PC5102 Output Options

Entry	Description	Entry	Description
00	Null (No Operation)	08	PC5208 PGM8
01	Main Panel PGM1	09	PC5208 PGM9
02	Main Panel PGM2	10	PC5208 PGM10
03	PC5208 PGM3	11	PC5204 PGM11
04	PC5208 PGM4	12	PC5204 PGM12
05	PC5208 PGM5	13	PC5204 PGM13
06	PC5208 PGM6	14	PC5204 PGM14
07	PC5208 PGM7	15	PC5102 PGM Pulse (local)
		16	PC5102 PGM Toggle (local)

### [92] PC5102 PGM1 Output Option

**Default 01**

PGM1 Output Option   

### [93] PC5102 PGM2 Output Option

**Default 02**

PGM2 Output Option   

### [94] PC5102 - PGM1 Output Activation Time

**Default 00**

PGM1 Output Activation Time (Minutes)   

**Default 05**

PGM1 Output Activation Time (Seconds)   

### [95] PC5102 - PGM2 Output Activation Time

**Default 00**

PGM2 Output Activation Time (Minutes)   

**Default 05**

PGM2 Output Activation Time (Seconds)   

**NOTE:** Sections [94] and [95] have a valid minimum programmable value of 00 minutes 01 seconds, and a valid maximum programmable value of 99 minutes 99 seconds.

## FCC COMPLIANCE STATEMENT

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

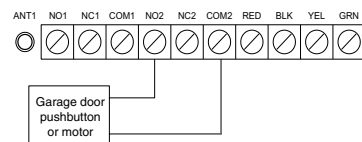
This equipment generates and uses radio frequency energy and if not installed and used properly, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for Class B device in accordance with the specifications in Subpart "B" of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in any residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to television or radio 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
- Relocate the alarm control with respect to the receiver
- Move the alarm control away from the receiver
- Connect the alarm control into a different outlet so that alarm control and receiver are on different circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the FCC helpful: "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.

This Class B digital apparatus meets all requirements of the Canadian interference-causing equipment regulations.

## 2.5 Connecting a Garage Door to the PC5102-433



Connect an output of the PC5102-433 across the wall-mounted push button or directly at the motor of the garage door opener (please consult the garage door opener instructions for proper connections). Set up the system and wireless key so that it is programmed to pulse an output for a short duration (5 seconds) so that every time the programmed key is pressed the garage door is opened or closed. The system can also be set up so that

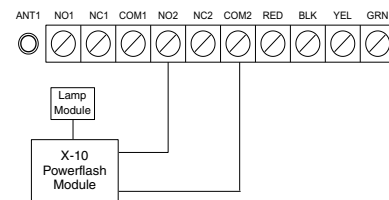
an output on the PC5102-433 will follow a main panel output that is programmed as a command output and is set up on the wireless key as such. Doing this will also activate an output on the PC5102-433 for 5 seconds (please refer to the control panel manual for a listing of available output types and their functions). PGM 1 and/or PGM 2 on the PC5102-433 can be set up to open a garage door (please refer to Section 4.1).

## 2.6 Connecting an X-10 Powerflash Module to the PC5102-433

When connecting an X-10 Powerflash module to the PC5102-433, different lights within or outside the home can be controlled, such as table lamps, or porch and driveway lights that illuminate the entry / exit paths.

This can be done by setting up the system and wireless key in one of several ways:

- The wireless key can toggle an output ON/OFF, triggering the X-10 Powerflash module, providing direct control of lighting.
- The wireless key can turn on an output for a programmable amount of time (5 seconds to 99 minutes and 99 seconds), turning on lights for the amount of time the homeowner requires.
- The PC5102 output can be programmed to follow a main panel output which can turn on lights when the panel is armed and turn them off when disarmed, turn on lights when an alarm occurs and turn them off when disarmed, etc. Please refer to the control panel *Installation Manual* for a listing of available output types and their function. PGM 1 and/or PGM 2 on the PC5102-433 can be set up for this operation (see Section 4.1).



## Section 3: Enrolling Wireless Keys

*This section describes how to enroll wireless keys. For more information on these keys, read the instruction sheet included with each key.*

### 3.1 A Note about Electronic Serial Numbers

An electronic serial number (ESN) is printed on the back of each wireless key. ESNs are used to enroll the wireless keys with the PC5102-433 receiver.

In order to reduce the occurrence of wireless keys with the same serial number, 6-digit serial numbers are now printed on the back of each wireless key. The 6-digit serial numbers include hexadecimal digits. For instructions on programming hexadecimal numbers, see your system Installation Manual, Section 4: How to Program.

**NOTE:** 6-digit serial numbers are only supported on the following control panels: PC5020, PC501X v2.0 and higher, PC5008, PC585.

The WLS909-433 and WLS919-433 keys have both a 5-digit and a 6-digit serial number printed on them. When connecting the PC5102-433 to a PC5010 v1.x, enter 5-digit serial numbers only. When connecting the PC5102-433 to a PC5020, PC5015 v2.x and higher, PC5010 v2.0 and higher, PC5008 or PC585 panel, enter the 6-digit serial number.

### 3.2 Enroll & Program Wireless Keys

For wireless keys to work on the system, you need to enroll them and then program the function buttons, if the default values are not the functions desired. Wireless keys are not assigned to zones and require no zone programming. You can enroll up to 8 wireless keys on the system.

#### Enroll Wireless keys

1. At a system keypad, enter [\*][8][Installer's Code] to go to the installer's programming section.
2. Enter programming section [804].
3. Enter a 2-digit number [41]-[48] to program the wireless key serial number. These numbers correspond to wireless key numbers 01- 08.
4. Enter the key's ESN. The entry must be six digits. If an older key with a 5-digit ESN is being enrolled, add the digit [0] to the beginning of the ESN (e.g., ESN=61234, enter 061234).
5. The key is now enrolled on the system. Record the serial number and the assigned slot number in the programming worksheets in the back of this manual.
6. Repeat steps 3 - 5 until all wireless keys have been enrolled.
7. (PC5020/PC501X only) By default, all wireless keys are assigned to Partition 1. To assign keys to Partition 2, enable the appropriate options in programming section [91].

**NOTE:** A wireless key can only be assigned to one partition.

8. To exit press [#].

#### Program the WLS909-433 or WLS919-433 Function Buttons

WLS909-433 and WLS919-433 wireless keys have four programmable function buttons. Default functions have been assigned, but you may program other functions if desired. After the functions are programmed, when you press and hold one of the four buttons for one second, the system will execute the programmed function.

For systems using partitions (PC5020/PC501X): All wireless keys assigned to Partition 1 will have the four functions programmed in section [61]. All wireless keys assigned to Partition 2-8 will have the four functions programmed in section [62-68]. For example, if function button 1 in Section [61] is programmed for Stay arming, then pressing the first button on wireless keys assigned to Partition 1 will Stay arm Partition 1.

**NOTE:** Wireless keys will not work when the partition they are assigned to is being accessed for zone bypassing or programming.

1. At a system keypad, enter [\*][8][Installer's Code].
2. Enter programming section [804].
3. Enter programming section [61] to [68] for partitions 1 to 8.
4. For each of the 4 function buttons, enter the 2-digit number of the function you want to select. See the programming worksheets in the back of this manual for a list of function key options.
5. Record your programming choices in the worksheets in the back of the manual.
6. To exit press [#].

### 3.3 Identified Wireless Keys

Reporting by the system of openings/closings by individual wireless keys and command output [\*][7] activation by wireless key buttons may be supported on certain control panels. To do this, the system will reserve access codes 17 – 24 for wireless keys 01-08 respectively. You must program one access code for each wireless key (using [\*][5] access code programming) for this feature to work correctly.

**NOTE:** Program these access codes on the system after you have connected the PC5102-433 to the Keybus (see section 2.4).

Refer to your system Installation Manual for information on access code programming.

#### Opening/Closing By Wireless Key Reporting

**NOTE:** The Identified Wireless Key Closing option is only available with the PC5020, PC501X v2.0 and higher, PC1565, PC5008, PC585 v2.0 and higher, by turning section [015] option 4 off.

## PROGRAMMING WORKSHEETS

### Wireless Key Options

#### Partition 1 Wireless Key Options

[61]	Function Key 1	03	___	Function Key 3	27	___
	Function Key 2	04	___	Function Key 4	30	___

#### Partition 2 Wireless Key Options

[62]	Function Key 1	03	___	Function Key 3	27	___
	Function Key 2	04	___	Function Key 4	30	___

#### Partition 3 Wireless Key Options

[63]	Function Key 1	03	___	Function Key 3	27	___
	Function Key 2	04	___	Function Key 4	30	___

#### Partition 4 Wireless Key Options

[64]	Function Key 1	03	___	Function Key 3	27	___
	Function Key 2	04	___	Function Key 4	30	___

#### Partition 5 Wireless Key Options

[65]	Function Key 1	03	___	Function Key 3	27	___
	Function Key 2	04	___	Function Key 4	30	___

#### Partition 6 Wireless Key Options

[66]	Function Key 1	03	___	Function Key 3	27	___
	Function Key 2	04	___	Function Key 4	30	___

#### Partition 7 Wireless Key Options

[67]	Function Key 1	03	___	Function Key 3	27	___
	Function Key 2	04	___	Function Key 4	30	___

#### Partition 8 Wireless Key Options

[68]	Function Key 1	03	___	Function Key 3	27	___
	Function Key 2	04	___	Function Key 4	30	___

### [91] Wireless Keys (1-8) Partition Assignments

Default = 01

Wireless Key 01	___	Wireless Key 05	___
Wireless Key 02	___	Wireless Key 06	___
Wireless Key 03	___	Wireless Key 07	___
Wireless Key 04	___	Wireless Key 08	___

### 3. When I press the wireless key function buttons, I see no results.

Check the following (see sections 5.1 and 5.2 for more information on testing devices):

- Verify that you are testing the correct zone.
- Verify that the correct ESN was entered when the device was enrolled.
- Verify that the device is in range of the PC5102. Try testing the device in the same room as the receiver.
- Confirm that the PC5102-433 is properly connected to the Keybus (see section 2 for PC5102-433 setup and wiring instructions).
- Check that you are testing the wireless key correctly (see sections 5.1 and 5.2 for testing instructions).
- Check that the batteries are working and installed correctly.
- Look for large metal objects that may be preventing the signal from reaching the PC5102.
- Ensure that all wireless keys operate correctly throughout.

## Section 8: Programming Worksheets

### [804] 5102-433 Wireless Expansion Programming

- 6-digit entry is required. See Section 3.1 “A note on Electronic Serial Numbers” for details on programming 6-digit serial numbers.

#### Wireless Key Serial Numbers

Default = 000000

[41] Key 01	<input type="text"/>	[45] Key 05	<input type="text"/>
[42] Key 02	<input type="text"/>	[46] Key 06	<input type="text"/>
[43] Key 03	<input type="text"/>	[47] Key 07	<input type="text"/>
[44] Key 04	<input type="text"/>	[48] Key 08	<input type="text"/>

#### Wireless Key Options

Entry	Key Description	Entry	Key Description
00	Null Key	17	[*][1] Reactivate Stay/Aways
01-02	For Future Use	18	For Future Use
03	Stay Arm	19	[*][7][3] Command Output #3
04	Away Arm	20	For Future Use
05	[*][9] No-Entry Arm	21	[*][7][4] Command Output #4
06	[*][4] Chime ON/OFF	22-26	For Future Use
07	[*][6][ ][4] System Test	27	Disarm (OFF)
08-12	For Future Use	28	Fire Alarm
13	[*][7][1] Command Output #1	29	Auxiliary Alarm
14	[*][7][2] Command Output #2 / Sensor Reset	30	Panic Alarm
15	For Future Use	31	PC5102 PGM1 Pulse
16	[*][0] Quick Exit	32	PC5102 PGM2 Pulse

To enable the reporting of openings and closings by identified wireless keys:

- Make sure the control panel is v2.0 or higher
- Program a valid access code for each key
- Program a closing and opening reporting code for each key's access code
- Turn off the Quick Arm option in section [015] option [4] of the control panel programming

To ensure that an unidentified wireless key cannot disarm the system, turn off section [017], option [1] (in the control panel programming). This option is available in control panels with software version 2.1 or higher.

#### Command Output Activation

**NOTE:** The Identified Wireless Key Command Output Activation feature is only available with the PC5020, PC501X, PC1565, PC5008, PC585 v2.0 and higher.

To enable command output activation by wireless keys, ensure that:

- The control panel is v2.0 or higher
- Program a valid access code for each key
- Enable the PGM output attribute Requires Access Code for each PGM output programmed as [\*][7][1-4] in sections [141] to [154].

Now that you have enrolled all the wireless keys, you will need to program the system to work properly with the keys. See section 4 for more information.

## Section 4: Other Programming

### 4.1 PC5102 PGM Outputs

The PC5102-433 has two on-board Form C relay PGM outputs. Each of these can be individually programmed to:

1. Follow main panel PGM outputs 1 to 14.

**NOTE:** Please refer to your System Installation Manual for available PGM outputs.

**NOTE:** If the PC5102-433 is connected to the PC585/PC1565 (all versions), PC1565-2P or PC5010 v1.x, the PC5102 PGM outputs cannot be programmed to follow main panel PGM outputs 1 or 2.

2. Activate for a programmable amount of time when a signal is received from a wireless key programmed with output option 31 or 32 (PC5102 PGM pulse) and the PGM output programming section [92] or [93] is programmed with option 15 (PC5102 PGM pulse). The amount of time that the PGM outputs can be programmed to remain on is programmed in sections [94] and/or [95]. The default activation time is 5 seconds.
3. Toggle state when a signal is received from a wireless key programmed with option 31 or 32 and the PGM output programming section [92] or [93] is programmed with option 16 (PC5102 PGM toggle).

### 4.2 Enable PC5102-433 Supervision

The control panel will supervise the PC5102-433 receiver via the Keybus after at least one key has been enrolled on the module (see section 3.2 "Enrolling Wireless Keys").

To activate module supervision, after you enroll the first key(s):

1. Exit and then re-enter installer's programming.
2. Enter programming section [902]. Wait approximately one minute.
3. To exit press [#].

The system will generate a General System Supervisory trouble if the module is removed from the Keybus. If you need to remove the PC5102-433 module from an existing system, you will have to disable supervision of the PC5102-433.

**NOTE:** Deleting all wireless keys from the PC5102-433 or defaulting the PC5102-433 will cause a supervisory fault.

#### To disable PC5102-433 supervision:

1. Disconnect the PC5102-433 from the Keybus
2. Enter [\*][8][Installer's Code].

3. Enter [902]. The control panel will clear all supervision and re-scan the system for connected modules. The scan will take approximately one minute.
4. To exit press [#].

To review which modules the control panel is currently supervising:

1. Enter [\*][8][Installer's Code]
2. Enter [903] to display all modules. On LED keypads, light [17] will indicate that the PC5102-433 is present on the system. On LCD keypads, scroll until the module name PC5132 appears on the display.
3. To exit press [#].

If the PC5102-433 module does not show on the keypad, one of the following conditions may be present:

- the module is not connected properly to the Keybus
- there is a problem with the Keybus wiring run
- the module does not have enough power
- no keys have been enrolled on the PC5102

**NOTE:** The PC5102-433 will be supervised and displayed as a PC5132.

#### 4.3 PC5102-433 Software Default

Returning the PC5102-433 programming to factory default settings is a quick way to remove all the enrolled wireless keys from the system and reset all the programming in section [804].

**NOTE:** Performing this procedure will not change any programming sections except [804]. Resetting the control panel to factory default settings will not return the PC5102-433 module to factory default settings.

To restore the PC5102-433 programming to the factory default settings:

1. Enter [\*][8] [Installer's Code].
2. Enter programming section [996].
3. Enter the Installer's Code, followed by [996] again. The programming for the PC5102-433 will be restored to its factory default settings.
4. To continue programming the unit, exit installer's programming by pressing [#] and then re-enter installer's programming by entering [\*][8] [Installer's Code].

For instructions on restoring the default programming of the control panel or any other connected module, see your system Installation Manual.

#### 4.4 Deleting Wireless Keys

To remove a wireless key from the system, follow the guideline for enrolling a wireless key (see section 3.2). Program the ESN as [000000]. The wireless key will then be removed from the system. Now that you have completed all PC5102-433 related programming, you can test and mount the receiver. See Section 5 for more information.

## Section 5: Testing & Mounting

### 5.1 Test the Reception of Wireless Keys

It is very important to test each wireless key. Following these steps will test the signal strength between the PC5102-433 and the wireless key.

#### Testing Individual Wireless Keys

To ensure that the PC5102-433 receiver is receiving transmissions from these devices, use the function keys on the WLS909-433/WLS919-433 at several different locations in the installation.

### 5.2 Mount the PC5102-433

When you have tested reception of the PC5102-433 with all the wireless devices (see section 5.1) and you have a good mounting location, mount the PC5102:

1. Pull the Keybus wires through the hole at the bottom of the back part of the cabinet.
2. Mount the cabinet securely to the wall using the two 'ears' of the cabinet or using the two mounting holes inside the cabinet. To use holes inside the cabinet, the PCB must first be removed. To remove the PCB, release it from the two tabs at the bottom of the PCB and then lift it out.

**Caution: Do not touch the antenna or the coils as this could damage the unit and will result in improper operation.**

**NOTE:** If you are not using the 'ears' to mount the cabinet, you can break these off.

Now that your PC5102-433 and wireless devices are mounted and working properly, read Section 6 for information on potential wireless trouble conditions and battery replacement. Section 6: Additional Notes

## Section 6: Additional Notes

### 6.1 Trouble Conditions

The control panel always watches for possible trouble conditions. If a trouble condition occurs, the keypad "Trouble" light will turn on and the keypad will beep. Press [\*][2] to display the trouble conditions.

The following trouble conditions apply to the PC5102-433 and/or any enrolled wireless keys.

**General System Supervisory** - This trouble will be generated if the panel loses communication with any module connected to the Keybus. The event buffer will log a detailed description of the event.

**Device Low Battery** - This trouble is generated when a wireless device exhibits a low battery condition. Press [7] one, two, or three times to view which devices are experiencing battery failure. An LED keypad will indicate battery failure using zone lights 1 to 8.

### 6.2 Wireless Zone Low Battery Transmission

Within any transmission, the device will indicate the status of the battery. If a battery is low, the system will indicate a Device Low Battery trouble.

The system will delay reporting the event to the central station for the number of days programmed for **Zone Low Battery Transmission Delay** in section [370]. This will prevent unnecessary reporting of the event if the user has been instructed on how to replace batteries.

#### Replacing Batteries in Wireless Devices

1. Remove the cover of the device from its back plate.
2. Refer to the battery installation instructions on the installation sheet of each component. Be sure to note the proper orientation of the batteries as you install them.
3. When the fresh batteries are in place, re-attach the cover to the back plate. The battery trouble will clear when any button is pressed after the installation of the new batteries and the device should function normally.

**NOTE:** When batteries in one device need to be replaced, the batteries in all devices may need to be replaced at the same time.

## Section 7: Troubleshooting

### 1. When I enter Sections [41] - [48] to add a wireless key, the keypad sounds a long beep.

You cannot enter ESNs unless a PC5102-433 wireless receiver is connected to the Keybus. See section 2 for instructions on setting up and wiring the PC5102-433 module.

### 2. I have entered the ESN for the wireless key but when I press the function keys, the panel does not perform the desired function.

Check the following:

- Ensure the ESN has been entered correctly.
- Ensure that the function keys have been programmed for the requested function.
- Ensure that the wireless key is enabled for the partition (if partition programming is used).