# Installation Manual

## PC2585

Software Version 1.1R
DLS-1 V6.2KR and up

• 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.

DSC™
Security Products

# 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:

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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.

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, barbeques, 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 waming 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.

# TABLE OF CONTENTS

# SPECIFICATIONS

## Control Panel Specifications

**12 zones including:**

- 8 fully programmable supervised zones (EOL resistors) including Fire Zone capability
- 1 auxiliary normally open zone
- 3 keypad activated zones

**Audible alarm output:**

- Bell output
- 700 mA, fused at 5 Amps, 12 VDC
- Steady or pulsed output
- Normal or inverted output

**EEPROM memory:**

- Does not lose codes or system status on complete AC and battery failure

**4 Programmable outputs:**

- Transistor switch sinks 50 mA to ground. Operation controllable through program options
- Powerful 1.5 amp regulated power supply:
- 400 mA auxiliary supply, 12 VDC
- Separately fused for battery, keypad/auxiliary supply and bell output
- Supervision for loss of AC power, low battery
- Internal clock locked to AC power frequency

**Switched Smoke Detector Supply Output:**

- Controlled from keypad [✱][4] command

**Battery required:**

- 12 volt 4 Ah minimum rechargeable gel-cell or sealed lead-acid battery

**Transformer required:**

- 16.5 VAC, 40VA

**Dimensions:**

- 11" × 11.8" × 3.3" deep (279 × 300 × 84 mm)

**Weight:**

- 6.5 lbs (3 kg)

## Remote Keypad Specifications (PC2550RK)

- Four wire (QUAD) hook-up
- Nominal current draw: 60 mA
- Up to 3 keypads per system (recommended). Maximum 5 keypads per system; refer to Keypad and Fire Circuit Wiring Information
- Built-in piezoelectric buzzer
- Full annunciation of zones and system status
- Dimensions 5.5" × 4.5" × 1" deep (140 × 114 × 25 mm)

## Output Voltage Specification

Typically, with normal AC in and a fully charged battery, the output voltage will be 13.8 VDC. With AC off and a discharged battery, the voltage will go to 10 volts. Devices that require power from the control panel should be capable of normal operation over the voltage range of 10 to 14 VDC.

## Digital Communicator Specifications

- 92 reporting codes
- Transmits all 10 BPS and 20 BPS single line and extended formats
- Radionics Rounds and Radionics Parity formats
- DTMF fast slot format
- 4/3 DTMF with Parity
- Pager Format
- Sescoa Superspeed formats
- Private Line format
- 3/1, 4/2 and hexadecimal numbers
- DTMF and Pulse dialing
- DPDT line seizure
- True dial tone detection
- Anti-jam feature
- 3 telephone numbers and 3 account codes
- Split reporting of selected transmissions to each telephone number

# FEATURES

## Keypad Programming

The PC2585 comes with a default program so it is operational with a minimum of programming. It is completely programmable from the keypad. The panel uses EEPROM memory so that all information is retained even if the panel loses both AC and battery power.

## Multiple Level Static/Lightning Protection

The PC2585 has been carefully designed and tested to provide reliable service. It is built to take static and lightning induced surges and keep on working. Multiple level surge filters are on all zone inputs, the power supply, the keypad connections, the bell output, the auxiliary power supply and the telephone interface. A special "ZAP-TRAC" circuit board configuration catches high voltage impulses right at the wiring terminals. Protective ground planes surround sensitive areas preventing the spread of damaging voltage surges. Metal Oxide Varistors (MOV's) are placed in all the critical areas to further reduce impulses to safe levels.

## "Watchdog Monitor" Circuit

Even when all precautions are taken so that voltage surges do not cause damage to the control panel, it is possible to cause temporary disruption to the operation of the microprocessor causing it to lose track of the program sequence. The PC2585 is equipped with an external "Watchdog Monitor" circuit which continually checks the microprocessor program execution.

## System Supervision Features

The PC2585 continuously monitors a number of possible trouble conditions including:

- Double end-of-line resistor zone supervision to allow for both tamper and alarm detection
- An active battery supervision circuit that periodically tests the battery under load.
- Keypad Tamper Supervision (with LED625T or LCD600T keypads)
- A loss of the AC power supply.
- A supervised circuit trouble condition.
- A telephone line monitoring circuit.
- A bell circuit failure indicates open circuit or fuse failure.
- A test code feature which transmits a communicator test code to the monitoring station at a selected time during the day. The test code can be sent at intervals from 1 to 99 days. It can also be sent every hour on the hour, or every 15 minutes.
- A bell/siren/communicator test feature which can be activated from the keypad.
- Telephone Line Monitoring (TLM) restoral transmission.
- 128-event Event Buffer

## Zones Bypassed During Programming

- After entering the Installer's Programming Mode, all zones will be bypassed until an Access Code is entered. This feature allows all zone wiring to be completed before the zones are activated.

## Advanced Features

The PC2585 has many advanced features. Features which provide the security system design flexibility and selling advantage necessary to win those demanding jobs and make them profitable.

**Some of these features include:**

- EEPROM memory retains all data even on complete AC and battery failure. Panel powers up in last armed or disarmed state before power loss.
- All programmable zones may be selected as one of 10 different types including; delay, auxiliary delay, instant, interior, interior delay, interior with Home Away, delay with Home Away, and 3 types of 24-hour emergency and supervisory circuits.
- Keypad programming of up to 17 Access Codes.
- Zone bypassing from the keypad.
- Individual zone and system function indicators on keypad.
- 2 keypad activated utility output functions for operating lights, door openers, cameras or other devices.
- Optional keypad LED status timeout as an energy saver.

Although the PC2585 has many features, it is not difficult to use. All keypad commands are similar and are assisted by audible and visual cues.

# INSTALLATION

## Bench Testing

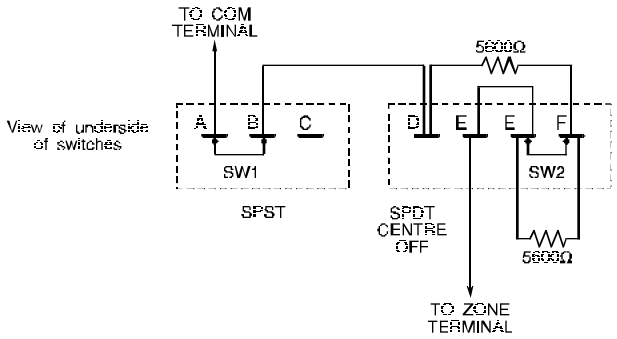
The PC2585 contains a factory default program. Any additional programming required can be done through the keypad. For many applications all that will be required is to enter the telephone number and alarm codes with keypad entries that are as straight forward as dialing a telephone number. If you need help talk to your DSC equipment distributor.

The following items are required for bench testing:

- 1 Single Pole Single Throw (SPST) switch,
- 1 Single Pole Double Throw Centre-off (SPDT) switch
- 2 5600Ω resistors.

### Bench Testing Set-up

- One of the outer leads (A) of the SPST switch is connected to the "COM" terminal closest to the zone you are working on.
- The common lead of the SPST (B) is shorted to the outer lead (D) of the SPDT switch.
- One 5600Ω resistor is connected between the two outer leads of the SPDT switch (D to F).
- The other 5600Ω resistor is connected from the common lead to the outer lead of the SPDT (E to F).
- The common lead of the SPDT switch (E) goes to the zone terminal you are working on.




The normal condition exists when the SPST switch is shorting leads A to B and the SPDT switch is shorting leads E to F. These are the zone status conditions and switch settings:

- Switch 1 on AB and switch 2 on EF is a restoral condition (5600 Ohms).
- Switch 1 on AB and switch 2 on EE is an Alarm condition (11200 Ohms).
- Switch 1 on BC is a Tamper condition (open).
- Switch 2 on DE is a Tamper condition (short).

## Zone Connections for Bench Testing

Connect the four keypad wires to the control panel as shown in the Hook-up Diagram in the back of this manual.

To completely test the PC2585 including the communicator data, it is necessary to connect the panel to a digital receiver through a telephone line connection or by connecting the telephone terminals on the PC2585 to a digital communicator test set such as the DSC DTS-1. The DSC DTS-1 digital communicator test set is an inexpensive unit which can simulate the telephone system dial tone and the receiver hand shake and kiss-off tones as well as display the data sent out by a digital communicator. Also, the DTS-1 has a "listen-in" feature which makes it ideal for monitoring the transmission between communicator and receiver when the PC2585 is connected to the telephone line.

If you are using a DTS-1, connect the red and green telephone clips to the "A" and "B" terminals and connect the red and black power clips to the "AUX [+]" and "AUX [-]" terminals on the PC2585. When power is applied to the panel press the red local-line button on the DTS-1 and observe the display window area. The "local-line" indicator should be in the local position.

For testing purposes, so that the sound level is not too loud, connect a small buzzer to the "BELL [+]" and "BELL [-]" terminals to indicate when the panel is in alarm.

Connect a 16.5 VAC, 40 VA transformer to the "AC" terminals. Before plugging in the transformer be sure the circuit board is not resting on anything metallic which may cause a short.

***NOTE: THE PC2585 WILL NOT START UP IF "AC" IS OFF.***

When the transformer is plugged in there should be lights on the keypad and the buzzer connected to the bell terminals may go ON for a few seconds. The “Armed” light may be ON or OFF the first time the panel is powered. The last armed/disarmed condition is stored in the EEPROM memory so the panel will always power up in the last armed/disarmed state. If the “Armed” light is ON, enter the default Master Code [1234] to disarm the panel. If the keypad is not active, check for the presence of AC power at the “AC” terminals, check the keypad connections and check the panel fuses.

If all the zones are properly connected with double end of line resistors all of the Zone Lights will be OFF. Note that the panel will arm only if all zones are properly connected with double end of line resistors so that the “Ready” light is ON. **NOTE:** The Fire Zone only requires a single end-of-line resistor. The keypad should beep several times to indicate acceptance of the Master Code. Enter the Master Code to arm or disarm the panel.

Read the “Keypad Functions” section of this manual or the “End User’s Manual” and enter commands on the keypad to become familiar with the different commands.

Turn to the “Programming Guide” in this manual and enter a sample program into the panel through the keypad to become familiar with the programming commands.

## *Mounting the Panel*

Select a dry location close to an unswitched AC source, close to a ground connection and close to the telephone connection.

Remove printed circuit board, mounting hardware and keypad from cardboard retainer inside panel. Before attaching cabinet to wall, press the five white nylon printed circuit board mounting studs and the ground connection screw into cabinet from the back.

Pull all cables into cabinet and prepare them for connection before mounting the circuit board to the back of the cabinet. Press circuit board down onto mounting studs.

## *Hook-up Procedure*

DO NOT connect transformer or battery until all other wiring has been connected. See power-up procedure.

Connect a ground cable from the cabinet ground connection by the shortest and most direct route to a grounding rod.

Connect zone cables to zone inputs and put double end of line resistors on any unused zones. Connect power wires for motion detectors to the auxiliary supply.

Install keypads and connect wires to keypad terminals on panel. Connect RJ31-X cord to telephone terminals. Do not insert plug into RJ31-X jack.

Connect bell or siren to “BELL [+]” and “BELL [-]” terminals. Observe correct polarity for sirens and polarized bells. Connect 1000Ω ½W resistor across terminals to eliminate trouble condition if bell circuit is not being used.

## *Terminal Connections*

### AC Power Terminals

Use a 16.5 VAC transformer with a minimum 40 VA rating to supply AC power to the PC2585. The transformer should not be connected to an outlet that is controlled by a switch. If AC failure occurs it is displayed as a trouble on the keypad (see “Keypad Functions, [✱][2] Trouble Conditions”). It can also be transmitted to the monitoring station as a trouble condition (see “Programming Guide [✱][8]” sections [16] and [17] for alarm and restoral codes and Section [19] for AC transmission delay).

### Auxiliary Power Terminals: AUX+ and AUX-

Two “AUX” terminals are provided to ease wiring congestion at these terminals. The auxiliary power supply can be used to power motion detectors and other devices requiring 12 VDC. 400mA 12 VDC is available from the “AUX+” (positive) and “AUX-” (negative) terminals when the PC2585 is used with one keypad. For each additional keypad the auxiliary supply rating must be reduced by 60mA. The auxiliary supply is fused with the keypad supply at 1 amp. Auxiliary fuse failure can be transmitted (see [✱][8] sections [16] and [17]).

### Switched Auxiliary Power Terminals: SW AUX and AUX-

The switched auxiliary supply can be switched off momentarily from the keypad (see “Keypad Functions [✱][4]”). The “SW AUX” terminal is positive and the “AUX-” terminal negative. The 400 mA auxiliary supply rating must be reduced by any current taken from the switched auxiliary supply. The switched supply shares the same fuse as the auxiliary supply.

### Bell/Siren Terminals BELL [+] and BELL [-]

These terminals are for powering bells or other devices requiring a steady output voltage on alarm. The bell output is fused for 5 amps. When connecting sirens (speakers with siren driver already built-in), be sure to observe the correct polarity. Connect the positive lead to the BELL [+] terminal and the negative lead to the BELL [-] terminal.

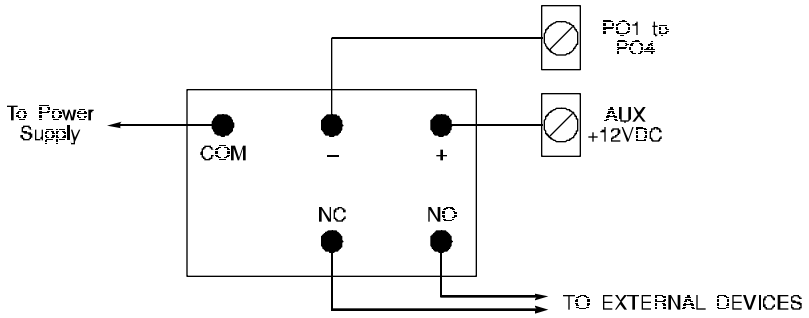
If no siren or bell is used, connect a 1000Ω resistor between BELL [+] to BELL [-]. The bell/siren alarm output is pulsed (1 second ON 1 second OFF) when an alarm is created by the [F] keypad zone, by the FIRE zone, or when the Bell Pulse option is enabled in Section [21] Zone Light 6. The Bell output can also be programmed to be inverted; refer to Programming Section [21] Zone Light 7.

### Keypad Terminals: RED, BLK, YEL and GRN

Connect the four colored wires from the keypads to these terminals. When connecting more than one keypad, connect in parallel across the keypad terminals at the control panel (i.e. all reds together, all blacks together, all yellows together and all greens together). The keypad red and black power supply terminals are fused through the auxiliary fuse.

### Programmable Outputs: PO1, PO2, PO3 and PO4

The PC2585 provides 4 programmable outputs. The operation of PO1 and PO2 depends upon which option is selected in the programming table. See the Programming Section [31]. PO3 and PO4 can be programmed for different operations in the "Third System Option Code" Section [22]. Terminals PO1 to PO4 are 50mA maximum switches to ground. A 100 Ohm current limiting resistor is connected in series. A small relay, a buzzer or other DC operated device may be connected between the 12VDC "AUX+" (positive) terminal and any one of the "PO" (switched negative) terminal on the main board.




### Auxiliary Input Terminal: AUX IN (also Key Arming)

The "AUX IN" input terminal is a normally open 24-hour zone. It can be programmed from the keypad to be silent or audible. There is no display on the keypad for the "AUX IN" input. An alarm on this input is created by applying a positive voltage or by closing a contact between the "AUX IN" terminal and the positive auxiliary supply. See "Programming Guide [✱][8]" Section [15] for programming the alarm and restoral codes.

The "AUX IN" terminal can also be used as a momentary key arming/disarming input. See "Programming Guide" Section [31] for a list of options for the "AUX IN" terminal.

### Zone Input Terminals Z1 to Z8

Zone inputs Z1 to Z8 are supervised Double End Of Line resistor circuits. Double E.O.L resistor circuits give zones the capability to detect tamper conditions. A tamper condition can be either a short or open on a zone. The normal condition is 5600 Ohms. The Alarm condition is 11200 Ohms. The tamper resistor is placed between the tamper contact and the alarm contact. This configuration will allow the panel to detect zone tampers (zone open or shorted), zones in alarm (alarm condition of 11200 Ohms), and restored zones (normal condition of 5600 Ohms). See the Hook-up Diagram for normally closed and normally open contact connections.

### Telephone Terminals: A, B, C, D, and EGND

The wires from the RJ31-X telephone jack are connected to these terminals in the following way.

| | | |
|---|---|---|
| A | Red wire from RJ31-X cord | Incoming line from telephone company |
| B | Green wire from RJ31-X cord | |
| C | Grey wire from RJ31-X cord | Outgoing line to house telephone(s) |
| D | Brown wire from RJ31-X cord | |

### Battery Connections

Do not connect the battery or the transformer until the wiring is complete. Connect the red battery lead to the positive battery terminal and the black lead to the negative battery terminal. If the connection is made in reverse the battery fuse will blow. The battery charging voltage is factory set and normally needs no adjustment.

## Keypad Installation

Mount the keypads near the exit-entry doors. The PC2550RK keypad has a red, a black, a green and a yellow wire on the back. Connect these four wires to the four keypad terminals on the control panel using four conductor (quad) telephone wire. Up to three keypads may be connected to one PC2585. Connect all green wires from the keypads to the “GRN” terminal on the panel. Connect all yellow wires from the keypads to the “YEL” terminal on the panel. Connect all red wires from the keypads to the “RED” terminal. Connect all black wires from the keypads to the “BLK” terminal.

The following DSC keypads are also compatible with the PC2585:

- LED625
- LED625T
- LCD600
- LCD600T

Consult your DSC dealer for information regarding these keypads and required software versions.

## Power-up Procedure

If the keypads are located a distance from the panel, install an extra keypad temporarily at the panel during power up testing. An extra keypad with a short length of cable and alligator clips attached is helpful for testing and programming PC2585 systems.

Connect the transformer and wait approximately 5 seconds.

Enter a few keypad commands and open a zone to be sure that the panel and keypad are responding to signals. If the keypad does not respond and there are no indicators ON, check for AC voltage at the “AC” terminals. If there is 16 VAC present, check that the keypad wiring is correct and check the keypad/auxiliary supply fuse. If the keypad/ auxiliary supply fuse is blown check for a short between the keypad red and black wires before replacing the fuse.

If the keypad is responding normally, connect the battery. The red battery lead attaches to the positive battery post and the black battery lead attaches to the negative battery post.

***NOTE: THE PC2585 WILL NOT START UP IF ‘AC’ IS OFF.***

## Testing The System

See Installer’s test, [✱][6][Master Code][0], or do the following. Contact the monitoring station to request a transmission test. Plug the telephone cord into the RJ31-X jack. If a DTS-1 is being used to monitor communicator transmissions, connect as described in “Bench Testing” section and place the DTS-1 in the line mode by pressing the red “LINE/ LOCAL” button. Arm the panel, wait for the exit delay to expire and trip a detector on an instant circuit. Wait for the communication to complete. Disarm panel and check with the monitoring station to confirm the transmission. Perform additional transmissions required by the monitoring station.

Check the “Trouble” light; if it is ON, press [✱] then [2] to determine if there is a system trouble. The “Trouble Display” section in “Keypad Commands” gives a description of the different trouble conditions.

## Instructing End-User

Fill out the system reference guide in the PC2585 End User’s manual. Check off sections in the manual which apply to the user’s system and make additional notes if necessary.

Describe the system to an authorised user. Describe arming and disarming procedures. Describe the basic keypad functions. Assist the user in working through examples of each type of command.

Provide the user(s) with the instruction manual and instruct them to read the manual to become familiar with the system operation.

Instruct the user to test the system on a regular basis as described in the user manual. The Master Code should be changed from the default setting and recorded in the End User Manual.

# GUIDELINES FOR LOCATING SMOKE DETECTORS

Experience has shown that all hostile fires in family living units generate smoke to a greater or lesser extent. Experiments using typical fires in family living units indicate that detectable quantities of smoke precede detectable levels of heat in most cases. For these reasons, smoke detectors should be installed outside of each sleeping area and on each additional story of the family unit.

The following information is for general guidance only and it is recommended that the smoke detector manufacturer's literature be used for detailed installation instructions.

It is recommended that additional smoke detectors beyond those required be installed for increased protection. The added areas include: basement, bedrooms, dining rooms, furnace room, utility room and hallways not protected by the required detectors.

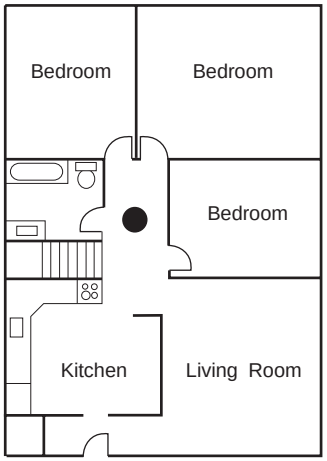



***Figure 1: A smoke detector should be located between the sleeping area and the rest of the family unit.***

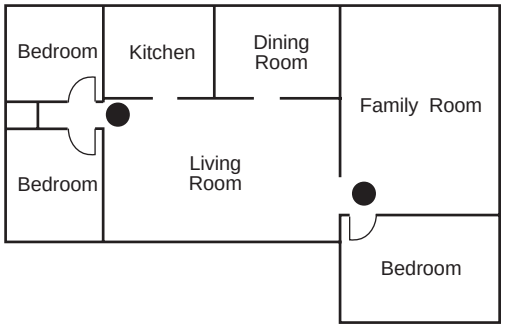



***Figure 2: In family living units with more than one sleeping area, a smoke detector should be located to protect each sleeping area.***

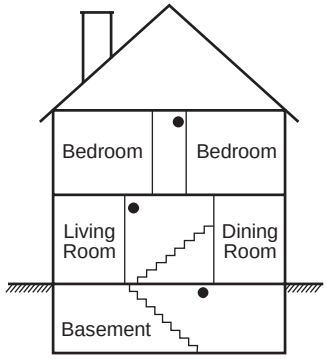
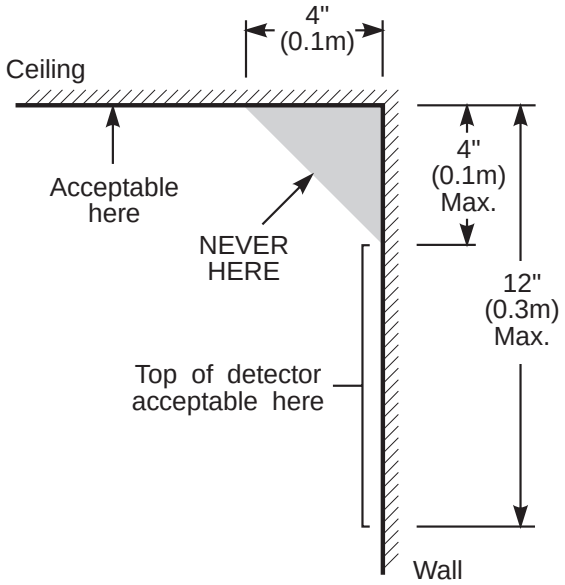



***Figure 3: A smoke detector should be located on each story of the living unit.***




NOTE: Measurements shown are to the closest edge of the detector.

***Figure 4: Smoke Detector mounting and "Dead" Air Space. The smoke from a fire generally rises to the ceiling, spreads out across the ceiling surface and begins to bank down from the ceiling. The corner where the ceiling and wall meet is an air space into which the smoke may have difficulty penetrating. In most fires, this "dead" air space measures about 4 in. (0.1m) along the ceiling from the corner and about 4 in. (0.1m) down the wall as shown in Figure 4. Detectors should not be placed in the "dead" air space.***

# KEYPAD FUNCTIONS

## Introduction

The PC2550RK remote keypad provides complete information and control of the PC2585 control panel. The panel can be fully programmed from the keypad. The 8 Zone Lights and the "Fire" light provide alarm and status indication for the alarm circuits. The 6 function lights guide the user in operating the system. The built-in buzzer lets the user hear correct key entries and other alert signals. The 12 digit keypad is used for code entry and other programming functions. All keypad entries are made by pressing one key at a time.

The keypad is normally resting in the arm-disarm mode. In this condition the Zone Lights are indicating the opening and closing of zones. The Ready LIGHT comes ON when all zones are closed. The system can be directed to perform other functions such as zone bypassing, displaying trouble conditions, displaying alarm memory and programming by entering one of the various [✱] commands described below. Pressing the [#] key or not making any key entry for 2 minutes returns the keypad to the arm-disarm mode.

## Master Code

A default Master Code "1234" is programmed into the PC2585 at the factory. The Master Code is used for arming and disarming the control panel, for programming up to fifteen additional Access Codes using the [✱][5] command and for entering other user functions using the [✱][6] command. The Master Code can be reprogrammed by the user if the installer programs it that way (Section [23] Zone Light 5). The PC2585 uses EEPROM memory and the codes and other data are retained even after complete AC and battery failure.

## Second Master Code

A second Master Code can be programmed into the PC2585; in the default setting, the Second Master Code is not programmed. This code can be changed by the installer only. The Second Master Code is useful where there are multiple panels in a complex, where the code can be used as a "master key". Note that the same Closing and Opening Codes are transmitted for both the Second Master Code and the regular Master Code.

## Installer's Programming Code

A default installer's programming code "2585" is programmed into the PC2585. This code is used with the [✱][8] command by the installer to gain access to the system in order to enter panel or communicator program information. The installer's program code may be changed by the installer.

## Arming

Check to see if the "Trouble" or "Bypass" light is ON before arming the PC2585. Close all protected doors and windows and stop movement in areas covered by motion detectors. Check to see that the "Ready" light is ON (all zones are closed). The system cannot be armed unless the "Ready" light is ON. Enter a [4 Digit Access Code]. As each digit is entered the keypad buzzer will beep. If the Access Code was entered incorrectly, the sounder will beep steadily for 2 seconds. If the code was entered correctly but the "Ready" light was not ON, the keypad will beep quickly followed by a steady tone. When the correct code is entered, the "Armed" light will come ON and the keypad buzzer will beep quickly. Exit the premises through the designated exit-entry door. At the end of the allowed exit time all lights on the keypad will go out except the "Armed" light. See Programming Section [19] for instructions on how to change the exit time. Also see "Quick-Arm" and "At Home Arming".

## Disarming

Enter the premises through the designated exit-entry door; the keypad buzzer will be sounding a steady tone. Go to the keypad and enter the [4 digit Access Code]. If an error is made entering the code, press the [#] key and enter the code again. The "Armed" light will go out and the keypad sounder will stop. The correct Access Code must be entered before the allowed entry time expires. To change the entry time, refer to the Programming Guide. If an alarm occurred while the panel was armed, the "Memory" light and the Zone Light which caused the alarm will start to FLASH and continue flashing for 2 minutes when the panel is disarmed. Pressing the [#] key returns the panel to the normal arm-disarm mode.

## Auto Bypass/Home Away Arming

If a correct Access Code is entered, and you do not exit the premises, the system will, at the end of the Exit delay time, arm with interior zones automatically bypassed if those interior zones have been programmed as "Home Away" zones. The "Bypass" light will come ON immediately following the arming code being entered until a delay zone is tripped or [✱][1] is entered to reactivate bypassed Home Away zones (see Programming Section [18] Zone Definitions for programming zones as "Home Away").

This is a convenience feature for the user who wishes to remain at home with the system armed. The user does not have to manually bypass the Home Away zones. To reactivate the Home Away zones that have been automatically bypassed, press [✱][1]. The "Bypass" light will go out. This command is a quick method of fully arming the system before retiring for the night.

## *Bypass Zones: [✱]+[1]*

A bypassed zone will not cause an alarm; note that Tamper Alarms cannot be bypassed. If a zone is bypassed, the system may be armed ("Ready" light will be ON) even if the zone is open. Use zone bypassing when access is needed to part of the protected area.

To bypass zones, enter [✱][1] and the zone number(s) to be bypassed. Press [#] to return to "Ready" (arm-disarm mode). When bypassing zones, one digit must be entered for each zone number(s) to be bypassed (for example, [✱][1][1 to 8]). To remove all bypasses, enter [✱][1][0][#]. The Zone Lights which are ON while the "Bypass" light is flashing indicate the bypassed zones. Remember that if no keypad entry is made for more than 2 minutes the keypad will return to the arm-disarm mode. Then, in order to bypass a zone the complete command must be re-entered. Once the bypass command is entered, pressing [9] recalls the last zone or group of zones which was bypassed. If the same group of zones is bypassed each time, this bypass recall feature can be used instead of having to bypass zones individually.

When the PC2585 is programmed, the ability to bypass certain zones may be eliminated. In this case, the Zone Lights for those zones will not come ON in response to the bypass command. Refer to Programming Section [36] for instructions on programming the Bypass Mask. If the "Bypass" light is ON before arming the system, the [✱][1] command should be used to see which zones are bypassed so that zones are not unintentionally bypassed. Zone bypasses are automatically cancelled when the panel is disarmed.

If Zone Light 4 in Section [23] is ON then a code must be entered with [✱][1] to bypass zones. Only the zones assigned to the same side of the system as the Access Code can be bypassed. The ability to bypass using certain Access Codes can be eliminated. See the "Access Bypass Mask" instructions in Programming Sections [37] and [38].

**NOTE:** At no time can any armed zone be bypassed.

## *Display Trouble Conditions: [✱]+[2]*

The PC2585 continuously monitors a number of possible trouble conditions. If one of these conditions occurs, the "Trouble" light will come ON and the audible indication will sound (two short beeps every 10 seconds). When the [#] key is pressed the audible indication will stop but the "Trouble" light will remain ON until the trouble is cleared. Trouble conditions can also be transmitted to the monitoring station (see Programming Sections [16] and [17] for alarm and restoral trouble codes). Press the [✱] then [2] keys to display the type of trouble. The Zone Lights indicate the type of trouble condition:

**1** Low standby battery
**2** AC power failure
**3** Keypad Tamper trouble
**4** Telephone line trouble
**5** Unsuccessful communication attempt with monitoring station
**6** Bell circuit failure
**7** Smoke detector zone trouble
**8** Loss of time on internal clock

*Press [#] to return to "Ready".*

**1 Low Battery:** A battery trouble will be displayed and can be reported if the battery is weak, disconnected or the battery fuse is blown. The low battery trouble display is latching and can only be cleared by correcting the low battery condition and then entering an Access Code.

**2 AC Power Failure:** There is no audible annunciation on AC power failure. The system "Trouble" light will come ON but the audible indication will not sound until there is a low battery condition. An AC Failure Transmission Delay can be programmed for 1 to 255 minutes. See "Programming Guide" Section [19].

**3 Keypad Tamper Trouble:** The Keypad Tamper function is enabled in Section [26] with Zone Light 4. If the LED625T or LCD600T keypads are removed from their wall mounts, a keypad tamper will be annunciated and displayed on the keypad, and the LCD600T will display the message "Service Required Call Installer". If programmed in Section [16], a Keypad Tamper Reporting Code will be transmitted. When a keypad tamper trouble is initiated, the system may be disarmed but not armed. The "Ready" light will remain OFF until all keypads are returned to their mounting plates and the [Q][8][Installer's Code][#] command is entered to reset the system. Keypad Tampers will be indicated with Zone Light 3, but Keypad Tampers will not be stored in the Trouble Memory. **NOTE:** The bell and keypad sounder will not sound for Keypad Tampers.

**4 Telephone Line Trouble:** A telephone line trouble is generated when the line voltage drops below 3 volts for more than 30 seconds. It generates a keypad trouble when the system is disarmed and rings a local alarm when the panel is armed. See Section [21] for options.

5 **Unsuccessful Communication:** If the digital communicator is unsuccessful communicating with the monitoring station after the maximum number of attempts to each telephone number that is to be tried, a trouble is generated. If a later attempt to communicate is successful the trouble is cleared. This trouble can also be cleared by pressing the [#] key to exit the trouble view mode. In Section [22] Zone Light 5, the trouble can be programmed to be audible (bell will sound) or silent (bell will not sound)

6 **Bell Circuit Failure:** If the bell fuse is blown or the bell circuit is open, a keypad trouble and a trouble transmission are generated.

7 **Smoke Detector Zone Trouble:** If a FIRE zone is open circuit, a keypad trouble and a trouble transmission are generated. A trouble on the FIRE zone will unconditionally initiate an audible indication on the keypad. This means that even if any other previous trouble has been silenced, a FIRE zone trouble will restart the keypad buzzer.

8 **Loss of Internal Time:** When the PC2585 is powered up or reset, the internal time of day clock needs to be set to the correct time. This trouble is cleared when the trouble display is viewed and exited or when an attempt is made to reset the internal time of day clock. See "[✱][6] User's Function Commands" for resetting time of day clock.

If [9] is pressed while in the trouble display mode the most recent trouble will be displayed on the Zone Lights. This trouble memory feature is useful as a diagnostic aid when installing and servicing the PC2585.

## *Alarm Memory Display: [✱]+[3]*

Press [✱] then [3] to enter the alarm memory mode. The "Memory" light will FLASH and any alarm caused during the last armed period will be displayed on the Zone Lights. In addition to the last alarm memory there are 2 history levels. After entering the memory mode (pressing [✱] then [3]), pressing [9] will cause the keypad to display the two other levels of alarm history. Each time [9] is pressed the keypad will beep 1, 2 or 3 times to indicate which level of history is being viewed. When the panel is armed, the last alarm memory is cleared and the contents moves to the first history level. The "Memory" light will only be ON when there was an alarm during the last armed period. Press [#] to return to "Ready".

## *Switched Auxiliary Supply Control: [✱]+[Hold Down 4]*

To interrupt the switched auxiliary power supply press [✱] then hold down [4] for the desired interrupt time. When the [4] is released the system returns to the ready mode and the switched auxiliary supply is restored.

## *User Programming Command: [✱]+[5]+[Master Code]*

The [✱][5] user's programming commands are used to program additional Access Codes. Up to 16 user arm-disarm codes may be programmed. The first code is the Master Code (factory default [1234]). The 16th code is optionally a "One Time Use". The 16th code may be changed from a "One Time Use" code to a regular code using an installer's programming command (Section [23] Zone Light 6). Remember if no keypad entry is made for more than 2 minutes the keypad will return to the normal arm-disarm display and the complete command will have to be re-entered to program a new Access Code.

### Programming Additional Access Codes

1 Press the [✱] and [5] keys then enter the Master code (default [1234]) to enter the additional code programming mode. The "Program" light and Zone Light 1 will be ON to show that the first code (the Master Code) is already programmed with the factory default code [1234]. The Master Code may be changed but do not try to erase the Master Code. The installer can disable user changing of the Master Code by turning Zone Light 5 in Section [23] ON.

2 Seven additional codes may be programmed. The Zone Lights are used to indicate which of these codes are already programmed (zone ON steady) and the one which is currently being programmed (Zone Light is flashing).

3 To program the second code, press [2] and Zone Light 2 will FLASH. Then enter a 4 digit code and the buzzer will beep three times and Zone Light 2 will come ON steady indicating a programmed code.

4 To remove the second code, press [2] - the buzzer will beep three times and Zone Light 2 will FLASH. Enter [✱✱✱✱], the buzzer will beep three times and Zone Light 2 will go out to show that the code has been removed.

5 Follow the instructions in 3 or 4 for programming or removing any of the other additional codes from 2 to 8.

6 To program Access Codes 9 to 16, press 9 to toggle into the upper code region. Zone Lights 1 to 8 now represent Access Codes 9 to 16 (Zone Light 1 is code 9, Zone Light 8 is code 16). The ready and armed LED's should flash to indicate that the user is in the upper programming region. Program or remove Access Codes 9 to 16 as stated in 3 and 4 above. Press 9 again to toggle back down to the lower region (Access Codes 1 to 8).

**7** Do not try to remove the Master Code (first code). The Master Code may be changed but it must not be removed. When changing the Master Code be sure to enter a valid 4 digit number (use only number keys 0 to 9). Do not enter [#] or [✱] as one of the digits. If the Master Code is forgotten and the panel is left disarmed, program a new Master Code using the [✱][8][Installer's Code][33] command. If the Master Code is forgotten and the panel is left armed, then the entire programming can be reset to factory default by using the Hardware Reset method described in Programming Section [99].

**8** To successfully program or remove additional codes, the panel must be put into the code program mode by following step 1 followed by steps 3 or 4. Note that if no key entry is made for 2 minutes the panel will go back to the normal arm/disarm mode, after which step 1 must be repeated to get back into the code program mode.

**9** To exit the Access Code programming mode, press [#].

### Programming a new Access Code:

[✱][5][Master Code][1 to 8][4 digit code]

***or*** [✱][5][Master Code][9][1 to 8][4 digit code]

### Eliminating an existing Access Code:

[✱][5][Master Code][2 to 8][✱✱✱✱]

***or*** [✱][5][Master Code][9][1 to 8][✱✱✱✱].

**NOTE:** The Access Code numbers must be entered as one digit, that is, as [2], [3], [4], and so on.

## *User Functions Command: [✱]+[6]+[Master Code]*

This command is used to set the system clock time and date, and to set the Auto-Arm and Auto-Disarm times. It is also used to turn ON and OFF a number of system functions. The command is used by entering [✱][6][Master Code] then a number from the following list to select the item to be changed:

**[0]** Installer's test

**[1]** System 24-hour clock (enter HH:MM and DD/MM/YY)

**[2]** Auto-Arming time (enter HH:MM)

**[3]** Auto Disarm Time (HH:MM)

**[4]** Quick-Arm enable/disable

**[5]** Auto-Arm enable/disable

**[6]** Door Chime

**[7]** Arm / Disarm Memory

**[8]** System Test

**[9]** User Initiated Call-up

**NOTE:** Enter the time in the 24-hour clock format. Enter 00 to 23 for the hour, and 00 to 59 for the minute. For the date, enter 01 to 31 for the day, 01 to 12 for the month, and 00 to 99 for the year. .

Items [1], [2] and [3] are time setting functions. Enter 4 digits representing the time in hours and minutes (HH:MM) in the 24-hour clock format. Always enter a leading zero where only one digit is required, 8:05 am would be entered as 0805, 1:30 pm would be entered as 1330. Items [0], [4], [5] and [6] turn ON and OFF various features. When the item key is pressed, the feature is turned ON if the keypad beeps quickly 3 times. The feature is turned OFF if the keypad sounds one long beep. Pressing item [8] gives a 2 second bell and keypad light test. Pressing [9] makes the panel call the Downloading computer if the User Initiated Call-Up Feature is enabled in Section [44].

### Installer's Test: [✱]+[6]+[Master Code]+[0]

This feature is designed to assist the installer in testing the system. In this mode, the bell or siren will operate for 2 seconds each time a device indicates an alarm condition. If the device indicates a tamper condition, the keypad sounder will be activated for 2 seconds. In both cases, the event will be recorded in the first level of memory. The feature is automatically disabled when the panel is armed and disarmed, or if the [✱][6][Master Code][0] command is entered again. Each time a zone is tripped or restored in this mode, a signal, if programmed, will be transmitted to the monitoring station. If this is not desired, it is possible to disable the communicator during the test (see Section [20] "First System Option Code"). A printer, if attached, will not function if the communicator is disabled.

***NOTE: Do not use the PC16OUT module during the installer's test.***
***Do not use the installer's test when the panel is partially armed.***

### Setting the Clock: [✱]+[6]+[Master Code]+[1]

Setting the "System 24-hour Clock" (item [1]) tells the system the correct time of day. If the system is without battery and AC power it cannot continue to keep time. Therefore when the panel is first powered up or when it has been without AC power long enough to completely discharge the standby battery, the "System 24-hour Clock" must be reset. If the time needs to be reset, a Trouble condition will be indicated with Zone Light 8 (see [✱][2] "System Trouble Command"). Setting the clock must include the day, month and year (e.g. HH : MM : DD : MM : YY).

### Auto-Arm Time of Day: [✱]+[6]+[Master Code]+[2]

The PC2585 can be programmed to arm at the same time each day. Programming item [2] sets this time and the feature must be enabled as shown in item [5] (see Auto-Arm Enable below).

The keypad will sound for one minute before the system auto-arms. At the end of the one-minute warning period, the system will be armed; note that there will be no Exit Delay. Auto-Arming may be cancelled using the following methods:

- Auto-Arm Abort: Any one key can be pressed to abort the Auto-Arm sequence and silence the keypad during the one minute pre-alert (this is the default condition). If Section [23] Zone Light 3 is ON, then a valid 4 digit Access Code is required to abort the Auto-Arm sequence. The Auto-Arm will be attempted at the same time the following day.
- Auto-Arm Abort with Transmission: Any time an Auto-Arm is aborted using one of the above methods, the Auto-Arm abort reporting code programmed in Section [12] will be transmitted to the central station.

When the panel does arm by Auto-Arming, any open zones will be "Force-armed". If Zone Light 2 in Section [23] is ON, the panel will send a partial closing code to let the central station know zones were bypassed. If Section [23] Zone Light 1 is ON, the zones that were bypassed will be identified by transmitting their alarm code along with the partial closing code.

### Auto Disarm Time of Day: [✱]+[6]+[Master Code]+[3]

The PC2585 can be programmed to disarm at the same time each day. In order for the panel to automatically disarm at the time entered, program a valid time. To disable Auto Disarming, program an invalid time such as "9999".

### Quick-Arm: [✱]+[6]+[Master Code]+[4]

The "Quick-Arm" feature is enabled by pressing the [4] key while in the "User's Function Commands" section. When enabled (enabled 3 beeps....disabled one long beep) the panel can be armed by entering [✱][0]. The closing code transmitted for "Quick-Arm" is the same as the code which is programmed for the Master Code.

### Auto-Arm Enable: [✱]+[6]+[Master Code]+[5]

Entering [✱][6][Master Code][5] will enable/disable the Auto-Arming feature. When the feature is being Enabled, the keypad buzzer will sound 3 beeps and when being Disabled the buzzer will sound one long beep.

### Door Chime: [✱]+[6]+[Master Code]+[6]

The "Door Chime" feature is enabled by pressing the [6] key while in the "User's Function Commands" section. When enabled the keypad buzzer will beep quickly 5 times each time any zone programmed as a Door Chime type in Section [18] opens or closes. The "Door Chime" feature does not operate on other zone definitions. Zone bypass may be used to eliminate "beeping" on doors where it is not wanted. This feature operates only while the panel is disarmed.

### Arm / Disarm Memory: [✱]+[6]+[Master Code]+[7]

The Arm / Disarm Memory command displays the last Access Code to arm or disarm the system. When the command is entered, the Access Codes are displayed on the Zone Lights. If more than one Zone Light is ON, add the zone numbers to determine the Access Code (for example, if Zone Lights 2 and 8 are ON, Access Code 10 is indicated).

**If Split Arming is disabled:** the zone lights will display the last Access Code used to disarm the system. Press [9] to display the last Access Code used to arm the system.

**If Split Arming is enabled:** the zone lights will display the last Access Code entered on the keypad. Press [9] to display the second last Access Code entered on the keypad.

### System Test: [✱]+[6]+[Master Code]+[8]

The system test feature sounds the bell or siren, lights the keypad indicators and beeps the keypad buzzer for 2 seconds. If a Test Transmission Reporting Code is programmed in Section [17], it will be transmitted during the System Test.

### User Call-up: [✱]+[6]+[Master Code]+[9]

This function is enabled in Section [44]. When activated, the panel will call the downloading computer. The downloading computer must be waiting for the panel to call before downloading can be performed.

### Utility Output Command: [✱]+[7]+[1 or 2]+[Access Code]

The PC2585 can control two utility outputs (PO1 and PO2) from the keypad. These outputs can be used for operating other devices such as; garage door openers, special lighting or door strikes. The programmable outputs must be selected for keypad utility using the [✱][8][Installer's Code][31] command and programming a [1].

To enable PO1, enter [✱][7][1][Access Code]; to enable PO2, enter [✱][7][2][Access Code]. When the command is entered, the keypad sounder and the programmable output are activated for 5 seconds.

## *Installer's Programming Command: [✱]+[8]+[Installer's Code]*

The PC2585 is completely programmable from the keypad by using commands in the [✱][8] section. The commands are described in detail in the Programming Section of this manual.

## *At-Home Arming: [✱]+[9]+[Access Code]*

Entering [✱][9] before the arming code, arms the panel without any entry delay on the delay zones and bypasses zones that are defined as "Home Away". This command is used for arming the system while at home. When the panel is armed using [✱][9], the "Armed" light will FLASH and the "Bypass" light will be ON to indicate that the "Home Away" zones are bypassed. Once the panel is Armed in this mode, using [✱][1] will remove the bypass from those zones defined as "Home Away" if they have not been manually bypassed. The [✱][1] command used here, only removes the bypass from zones that have been Automatically bypassed with the [✱][9] command.

## *Quick-Arm Command: [✱]+[0]*

Entering [✱][0] is accepted as a valid arming code when the "Quick-Arm" feature is activated. This command is often used when individuals are only required to ARM the system. These individuals will not be able to disarm the system. This could be used with home visitors in the case of a residential alarm or junior employees and maintenance staff in the case of a commercial alarm. See instructions in the "[✱][6] User's Function Commands" section for activating the "Quick-Arm" feature. This feature should not be enabled if the One Time Use Code is enabled. The One Time Use Code must be used for arming before it is erased.

## *Quick Exit Command: [✱]+[0] When Armed*

Entering [✱][0] when the system is fully armed will allow the user 2 minutes to exit the premises through any delay zone without altering the status of the system if the quick exit feature is enabled. The quick exit feature can be enabled by turning ON Zone Light 7 in Section [23]. After [✱][0] is entered into an armed system, one and only one delay zone may be tripped. Any additional activity on any other active zone will cause that zone to begin its alarm sequence.

[✱][0] for Quick Exit on a partially armed system is not supported.

Quick Exit must not be used when auxiliary delay zones are force armed. Turn Zone Light 4 in Section [24] OFF to ensure proper operation.

## *Keypad Zones*

***IMPORTANT NOTE: While the Installer's Programming Mode is active, the [F], [A] and [P] keys will be bypassed until the Programming Mode is exited and an Access Code is entered.***

There are three zones which can be activated from the keypad. The alarm and restoral codes for keypad zones are programmed using the [✱][8] command.

Pressing the [F] key or the [1] and [3] keys for 2 seconds activates a fire alarm. The fire alarm sounds the siren/bell in a pulsed mode and is annunciated as a memory condition. The Fire key can be turned OFF in Section [24].

Pressing the [A] key or the [4] and [6] keys for 2 seconds activates an auxiliary keypad zone. If a reporting attempt is made to an alarm receiver and it is successful the PC2585 will acknowledge the transmission with a short series of beeps from the keypad.

Pressing the [P] key or the [✱] and [#] keys for 2 seconds activates the Police (or Panic) alarm. The panic alarm can be programmed for audible or silent operation (see Programming Section [24]).

There is no light annunciation from the keypad for the last two keypad zones, however, the keypad buzzer beeps 3 times to confirm activation on any of the keypad zones.

See Section [15] for alarm and restoral codes for all three keypad zones.

***NOTE: Pressing two keys simultaneously to activate a keypad zone will only function with the PC2550RK keypad. This function will not work on other keypad models.***

# PRINTER SET-UP

The PC2585 software is capable of sending data to a local printer. The printer must be capable of serial (RS-232) communication. The PC2585 should work with most serial printers, however the printers on the following list are strongly recommended:

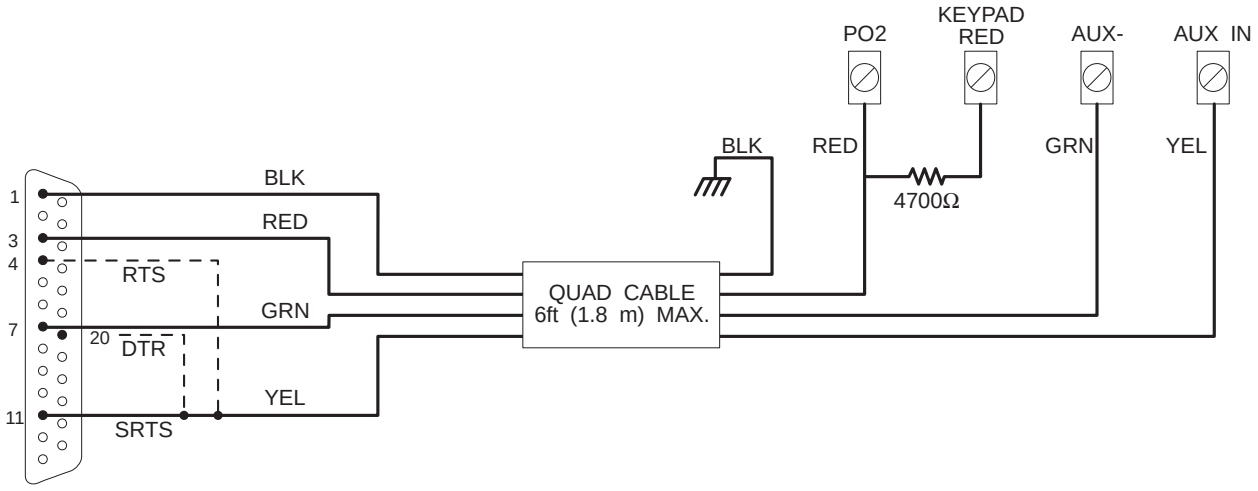
## Compatible Printers

1 Brother M-1109
2 Brother M-1809
3 Star DP 40
4 Epson EP 40
5 C - Itoh model 8510 B
6 Citizen 120-D with serial card
7 Citizen 180-D with serial card
8 Roland DG PR 1112 with serial card
9 Panasonic KX P1091 I with serial card
10 Mannesman Tally MT81 with serial card
11 Raven 9101 with serial card

## Configuring the Printer

1 Serial interface
2 Baud rate = 1200 (other baud rates may be used but Section [49] must be changed accordingly)
3 Parity = None
4 Character length = 8 bits
5 Auto line feed = Off
6 American/Canadian character set

To hook up the printer, start by fully powering down the panel and the printer. Using A DB-25 connector, connect the printer to the panel as shown below. The maximum cable length should be 6 feet.




***NOTE: If SRTS is not available, turn ON Zone Light 6 in Section [49] and attach yellow to 4 (RTS) or 20 (DTR).***

## *Programming the Panel for Use with a Printer*

Sections [31] and [49] must be programmed to enable the printer function. Power up the panel and program it as described below.

Enter the Installer's Programming Section and edit the following sections.

| ***Section*** | ***Printer Only*** | ***Monitored and Printer*** |
|---|---|---|
| [01] | Do not program | Program normally |
| [02] | Program normally | Program normally |
| [03] | Do not program | Program normally |
| [04] | Program normally | Program normally |
| [05] | Do not program | Program (see Section [49] Zone Light 5) |
| [06] | Do not program | Program normally |
| [07] to [17] | Program everything you wish printed | Program everything you wish printed |
| [18] to [29] | Program normally | Program normally |
| [30] | Program all locations as "1" | Program normally |
| [31] | Program with "XX00" | Program with "XX00" |
| [32] to [48] | Program normally | Program normally |
| [49] | Printer setup | Printer setup |
| [50] | Select Language | Select Language |
| [90] and [91] | Program normally | Program normally |

**NOTES**

- The time of day, date, month and year must be programmed into the panel using the [Q][6][Master Code][1] command.
- Do not program Private Line Format in Section [29] when the printer is enabled.

Plug in the printer, insert paper and put the printer on-line. The printer is now ready to use.

The following is a sample of a printout:

```
07:33 04\01\95 STATION 2 ACC. # 5678
CLOSING ACCESS 1
12:57 04\01\95 STATION 1 ACC. # 1234
ALARM ZONE 2
ALARM ZONE 12
13:01 04\01\95 STATION 1 ACC. # 1234
RESTORE ZONE 2
RESTORE ZONE 12
18:01 04\01\95 STATION 2 ACC. # 5678
OPENING AFTER ALARM
OPENING ACCESS 1
```

**NOTE:**

**Station 0 is for a local-only printer.**

**Station 1 is Communications Buffer 1.**

**Station 2 is Communications Buffer 2.**

# DOWNLOADING

The PC2585 supports DSC's DLS-1 Downloading Software. Refer to the downloading software manual for complete downloading instructions. The following Programming Sections must be programmed before attempting to download.

### Section [16]: Lead-In Code

When the system calls the downloading computer during User Initiated Call-up or Callback functions, the Lead-In Code will be transmitted to the monitoring station before the downloading computer is called.

### Section [16]: Lead-Out Code

When the system hangs up the line to the downloading computer, the Lead-Out Code will be transmitted to the monitoring station.

### Section [21]: User DLS Window

The User DLS Window feature is enabled by turning ON Zone Light 8 in Section [21]. When enabled, pressing and holding the [9] key for approximately three seconds will cause the system to wait for 60 minutes for the downloading computer to call.

### Section [22]: Downloading Annunciation

Downloading Annunciation is enabled by turning ON Zone Light 6 in Section [22]. When enabled, the keypad will beep eight times every ten seconds after downloading has been completed, or after a failed attempt at downloading. The downloading annunciation tone may be silenced by pressing any key on the keypad.

### Section [44]: Number of Rings Before Answer and Downloading Configuration

Zone Lights [1] to [4] are programmed to set the number of rings the panel will look for before it answers a call from the downloading computer.

Zone Light [5] is programmed to enable or disable the control panel for downloading. If downloading is disabled, all other Programming Sections relating to downloading need not be programmed.

Zone Light [6] enables or disables User Initiated Call-up to the downloading computer.

Zone Light [7] enables or disables the answering machine override option. (Double Call)

Zone Light [8] enables or disables the Call-Back option

### Section [46]: Panel Identification Code

A four digit code must be programmed into this section to allow the downloading computer to identify the control panel. Every system should have a unique Panel Identification Code.

### Section [47]: Downloading Access Code

A 4-digit code must be programmed into this section to allow access to the control panel by the downloading computer.

### Section [48]: Downloading Computer Telephone Number

If Callback or User-Initiated Call-up is enabled in Section [44], then this section must be programmed with the telephone number of the downloading computer.

### Downloading and Answering Machine

The PC2585 software provides a means to handle downloading when an answering machine is also connected to the telephone line. In Section [44], if Zone Light 7 is OFF, it is assumed that there is no answering machine connected to the telephone line and the panel will capture the line after the set number of rings.

If Zone Light 7 is OFF and an answering machine is connected and it is set to answer before the panel, the panel will be unable to receive a call from a downloading computer. If the panel is set to answer before the answering machine, the answering machine will be unable to receive incoming messages.

If Zone Light 7 is ON and the panel is called for 1 or 2 rings only and then called again within a variable time of 1 to 255 seconds (set in Section [45]), the panel will then answer the second call on the first ring (Double Call).

Once the panel is connected to a downloading computer, no [✱] functions can be performed. If the [✱] key is pressed while the panel is connected to a downloading computer, the keypad buzzer will sound one long tone to indicate an error.

Zone Light [8] is programmed to enable or disable callback. If callback is disabled, the downloading computer will have immediate access to the control panel. The disabled mode is useful if there are multiple downloading computers (at different telephone numbers). If callback is enabled the downloading computer will call, request access then hang up and wait for the control panel to call. After the control panel has called back and the downloading computer and the control panel accept each other as valid, downloading operations are enabled.

### Section [45]: Answering Machine Double Call Timer

This timer sets the amount of time that can be taken between calls when using the answering machine over-ride (see Section [44] Zone Light 7). Valid entries are from 001 to 255 seconds, with the default being 060.

# PROGRAMMING GUIDE

## Introduction

The PC2585 is fully keypad-programmable, and also supports downloading programming functions. The system's EEPROM memory can be reprogrammed thousands of times and will not lose program data even after total loss of power. This section of the manual describes how to program the PC2585 using the system's keypad.

## Programming

With the system disarmed, enter [✱][8][Installer's Code]; note that the system can only be programmed while it is disarmed. The default Installer's Code is 2585; the Installer's Code should always be changed once programming is complete. Be sure to record the new Installer's Code for future reference! If the Installer's Code is forgotten, the system's factory programming may be restored; refer to Programming Section [99] Factory Default.

When the Installer's Programming Command is entered, the "Armed" light will come ON and the "Program" light will FLASH to indicate that the system is ready for programming. If no keys are pressed for two minutes, the system will return to the "Ready" mode. Enter the Installer's Programming Command to re-enter the Programming Mode.

With the "Armed" light ON, enter 2 digits for the Section to be programmed. Note that Section [00] is reserved for binary programming and is normally only entered on instruction from factory technical personnel. When the section to be programmed is entered, the "Armed" light will be OFF, the "Ready" light will come ON, and the keypad will beep 3 times. The system is now ready to accept program data.

For sections containing 2- and 3-digit numbers, Zone Lights 1 through 4 will indicate, in binary format, the value of the first digit in the section. Refer to "Binary Data Display" for instructions on reading the binary display.

To change the first digit, enter the new digit from the keypad. To leave the first digit unchanged, enter the same number or press the [F] key to skip the digit. Once the first digit has been entered or skipped, Zone Lights 1 through 4 will display the value of the second digit. When all digits in a number have been programmed, the keypad will beep twice and display the value of the first digit in the next number.

When all required data for a section is entered, the keypad will beep several times and the "Armed" light will come ON. Enter the number of the next Section to be programmed.

It is not necessary to program all 2-digit numbers in a section. After entering a section, use the [F] key to skip to the desired data; program the data, the press [#] to return to the Programming Mode. For 2-digit and 3-digit numbers, all digits must be programmed before pressing the [#] key. Only data entered before pressing [#] will be changed.

***AFTER EXITING THE INSTALLER'S PROGRAMMING MODE, THE SYSTEM MUST BE ARMED AND THEN DISARMED TO ENSURE PROPER OPERATION.***

## Reviewing Programmed Data

- Enter the section to be programmed by entering the 2-digit section number.
- Zone Lights 1 through 4 will represent the value, in binary format, of the first digit in the section.
- Press the [F] key to advance the display to the next digit.
- At the end of the section, the keypad will beep several times and then return to the Program Mode so that another section can be selected for review or programming.

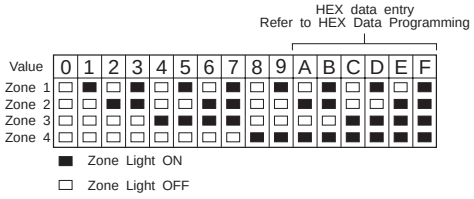
## Sections [20] through [26], [44] and [49]

These sections allow system options to be selected. Refer to the Programming Worksheets for information on which options are represented by the Zone Lights in each section.

These sections are programmed by turning the Zone Lights ON and OFF. To turn a light ON or OFF, press a number from 1 to 8. All lights in a section may be turned OFF at once by pressing [0]. When all programming selections have been made, press [#] to save the changes and return to the program mode.

## Binary Data Display

Zone Lights 1 through 4 are used to display the value, in binary format, of the data at each digit as shown in the table shown here.




## HEX Data Programming

Certain Programming Sections may require the entry of data in HEX (hexadecimal, or base 16) format. HEX numbering uses the numbers 0 through 9 and the letters A through F.

The letters A through F are represented by the number keys 1 through 6. To enter data in HEX format, first press the [✱] key; the "Ready" light will FLASH. Enter the HEX value, then press the [✱] key again to return to the normal entry mode; the "Ready" light will stop flashing.

To enter HEX numbers:

| | | | |
|---|---|---|---|
| A | Enter [✱][1][✱] | D | Enter [✱][4][✱] |
| B | Enter [✱][2][✱] | E | Enter [✱][5][✱] |
| C | Enter [✱][3][✱] | F | Enter [✱][6][✱] |

Enter [✱] before and after each digit. Note that the last digit in each section does not require the final asterisk ([✱]) to be entered.

## *[00] Binary Programming*

This section is normally used upon instruction from factory technical personnel for specialised programming not covered by the standard programming instructions.

## *[01] First Telephone Number*

This is the first telephone to which the communicator will dial. **The First Telephone Number is assigned to Communications Buffer 1;** refer to Section [29] Communication Formats for information on transmission formats, and Section [30] Communicator Call Direction Options for information on directing transmissions. Enter the telephone number the way it would be dialed on a telephone. Press [#] after the last digit to complete the telephone number programming.

Enter [✱2✱] to dial a '✱' (Hex B)

Enter [✱3✱] for a 4 second pause (Hex C)

Enter [✱4✱] for additional dial tone search (Hex D)

Enter [✱5✱] to dial a '#' (Hex E)

The total number of digits including dial tone searches and pauses must not exceed 17. Remember to press [#] after entering the last digit of the telephone number. Press [02] to program the next section, enter another section number or press [#] a second time to return to the arm/disarm mode.

## *[02] First Account Code*

The first account code is always transmitted to the first telephone number to identify the alarm customer. After entering the section number [02], enter a 4 digit number. If "HEX" digits A to F are required; enter [✱][1] to [6] and [✱] again to return keys to normal decimal entry. Where a zero digit in the account code is required use "HEX A" ([✱][1][✱]) to transmit 10 pulses. The receiver at the monitoring station interprets 10 pulses for a digit as a zero. If a three digit code is required as in 3/1 formats, enter [0] as the last digit. [0] represents a null digit where no pulses are transmitted.

## *[03] Second Telephone Number*

See Section [01] First Telephone Number for programming instructions. **The Second Telephone Number is for use with alternate dialing only.** When alternate dialing is enabled, the system will alternately call the First and Second Telephone Numbers until communications are completed. The Second Telephone Number is assigned to Communication Buffer 1; refer to Section [30] for information.

## *[04] Second Account Code*

The second account code is always transmitted to the second telephone number. See Section [02] First Account Code for programming instructions.

## *[05] Third Telephone Number*

Refer to Section [01] First Telephone Number for programming instructions. **The Third Telephone Number is assigned to Communication Buffer 2;** refer to Section [30] for information.

## *[06] Third Account Code*

Refer to Section [02] First Account Code for programming instructions. Note that the Third Account Code is always transmitted to the Third Telephone Number.

## *[07] to [17] Reporting Code Explanation*

Sections [07] to [17] are used to program the communicator reporting codes. A reporting code is transmitted along with the account code with each transmission. If the reporting codes are not programmed, no transmission will be sent when an event (e.g. alarm, tamper, restoral, opening/closing, trouble, etc.) occurs. To prevent a transmission from being sent for any event in the following sections leave it unprogrammed or enter [00] as the reporting code.

Between 8 to 9 reporting codes are programmed in each section. Once the section number is entered, the keypad expects 8 to 9 two-digit numbers to be entered for the number of reporting codes in that section. The keypad beeps twice and the "Armed" light FLASHES after each 2-digit number is entered. After the last code is entered, programming of the current section is complete. The keypad will beep 5 times, the "Ready" light will go OFF and the "Armed" light will come ON. The keypad is then ready to accept the next section number for programming.

When changing the reporting codes in a section, only code entries up to the one which is being changed need to be entered. Press [#] to exit from the programming sequence. Only codes up to the last one entered will be changed.

## *[07] Alarm Reporting Codes, Zones 1 - 8*

Enter eight 2-digit reporting codes in this section. These codes are used by the communicator when there has been an alarm on zones 1 to 8. Listed below are several examples of programming and transmissions using different formats for the reporting codes. Obtaining different formats requires entering data correctly in the Account Code sections, the Reporting Codes sections, and the Communication Format Options section.

### 3/1 Format: Single Line or Non-extended Reporting

***Required:***

- 3 digit account code in Sections [02], [04] or [06]
  i.e. enter [1230] for account code 123
- Format code [00], [01], [02], [03], [04] depending on receiver type selected in Section [29]
- Single digit alarm reporting code in Section [07]
  i.e. enter [30] for single digit code 3 (0 is null digit i.e. no pulses transmitted)

**Transmission sent:** 123 3

### 4/2 Format: Single Line Reporting

***Required:***

- 4 digit account code in Sections [02], [04] or [06]
  i.e. enter [1234] for account code 1234
- Format code [00], [01], [02], [03], [04] depending on receiver type selected in Section [29]
- Two digit alarm reporting code in Section [07]
  i.e. enter [31] for two digit code 31

**Transmission sent:** 1234 31

### 3/1 Format: Extended Reporting

***Required:***

- 3 digit account code in Sections [02], [04] or [06]
  i.e. enter [1230] for account code 123
- Format code [06], [07], [08], [09], [10] depending on receiver type selected in Section [29]
- Two digit alarm reporting code in Section [07]
  i.e. enter [31]

**Transmission sent:** First round: 123 3
Second round: 333 1

If a transmission is not wanted for a particular reporting code, then enter 00 to disable that reporting code.

### Slot Format

The slot format is a DTMF transmission consisting of a 4-digit Account Code, eight 1-digit reporting channels, and one 1-digit status channel.

**Slot Format Channels:**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| a | a | a | a | x | x | x | x | x | x | x | x | i |
| **Account Code** | | | | **Event Code** | | | | | | | **Status Code** | |

Slot Format Programming Codes

| | | |
|---|---|---|
| Zone 1 | **x** | **y** |
| Zone 2 | **x** | **y** |
| Zone 3 | **x** | **y** |
| Zone 4 | **x** | **y** |
| Zone 5 | **x** | **y** |
| Zone 6 | **x** | **y** |
| Zone 7 | **x** | **y** |
| Zone 8 | **x** | **y** |

**x** represents Transmissions Channels 1 through 8. This number determines to which channel the zone will report

**y** represents the Event Identifier (1 to 9 and A to F). This number describes the type of event

**i** represents the status of the zone. 6 indicates a Trouble; 7 indicates an Alarm; 8 indicates a Low Battery and Restoral; 9 indicates a Test Transmission.

For example, if Zone 3 is programmed as 31, an alarm on Zone 3 would report as:

a a a a 5 5 1 5 5 5 5 5 7

If a transmission is not wanted for a particular reporting code, then enter '00' or 'FF' to disable that reporting code.

## *[08] Restoral Reporting Codes, Zones 1 - 8*

These reporting codes are used by the communicator to transmit a zone restoral for zones 1 to 8. Use instructions in Section [07] as a guide for programming.

## *[09] Tamper Alarm Reporting Codes, Zones 1 - 8*

Program eight 2-digit Tamper Alarm Reporting Codes in this section.

**While the system is armed,** the BELL output will be activated and the Tamper Alarm Reporting Code for a zone will be transmitted when a tamper alarm occurs.

**While the system is disarmed,** the Tamper Alarm Reporting Code for a zone will be transmitted when a tamper alarm occurs. The system may be programmed to activate either the BELL output or the keypad sounder when a tamper alarm occurs while the system is disarmed; refer to Programming Section [25], Light 5.

**NOTE:** When Zone 7 is programmed as a Fire Zone (Section [26] Zone Light 1 ON), the Tamper Reporting Code for Zone 7 is transmitted to report a Fire Alarm.

***Note that Tamper Alarms may not be bypassed with the [✱][1] command.*** To bypass Tamper Alarms, enter the Installer's Programming Mode. To re-activate the zones, enter an Access Code.

## *[10] Tamper Restoral Reporting Codes, Zones 1 - 8*

Program eight 2-digit Tamper Restoral Reporting Codes in this section. These reporting codes are only transmitted when tamper conditions on zones 1 through 8 are restored.

**NOTE:** When Zone 7 is programmed as a Fire Zone (Section [26] Zone Light 1 ON), the Tamper Restoral Code for Zone 7 is transmitted to report a Fire Alarm Restoral.

## *[11] Closing Reporting Codes, Access Codes 1 - 8*

The reporting codes in Sections [11] through [14] are used to identify Openings and Closings (disarming and arming of the system) by Access Code.

Program nine 2-digit Closing Reporting Codes in this section. The nine reporting codes correspond to the first eight Access Codes and the Partial Closing Code. When the system is armed using one of the Access Codes, the corresponding reporting code will be transmitted.

When transmitting in any of the extended formats, (see examples in Section [07]), closing codes would be programmed as follows: [C1], [C2], [C3], [C4], [C5], [C6], [C7], [C8]. Refer to Section [29] Communications Formats for more information.

The first digit, HEX C, is used to represent a closing signal (this could be another number depending on what is used at the monitoring station), while the second digit represents the Access Code used to arm the system.

The closing code transmission takes place after the exit delay time. Therefore, if the system is armed and disarmed before the expiry of the exit time, no transmission will take place.

Remember that the first Access Code is the Master Code and that the last code may be the One-Time Use Code. The last Access Code can be converted to a normal code by turning Zone Light 6 OFF in Section [23].

When the system has been armed using the Quick-Arm or Auto-Arm functions, the first reporting code (for the Master Code) will be transmitted. The Master Code is required to enable or disable these functions.

When the system is armed with one or more zones bypassed, the Partial Closing Code will be transmitted. Note that the Partial Closing Code is sent with the regular closing code to identify it as a partial closing condition. If Section[23] Zone Light 1 is ON, then the bypassed zones will be identified between the Partial Closing Code and the Closing Code.

## *[12] Closing Reporting Codes, Access Codes 9 - 16*

Program nine 2-digit Closing Reporting Codes in this section. The Auto-Arm Cancellation Code is transmitted when Auto-Arming is cancelled; refer to Keypad Functions for information on the Auto-Arm function.

## *[13] Opening Reporting Codes, Access Codes 1 - 8*

Program eight 2-digit Opening Reporting Codes in this section. When the system is disarmed using one of the Access Codes, the corresponding reporting code in this section is transmitted.

## *[14] Opening Reporting Codes, Access Codes 9 - 16*

If the After Alarm Code is programmed, that code will be transmitted to the monitoring station on opening if an alarm occurred during the previous armed period. This feature is useful for installations where openings and closings are not normally reported but it is desired to report on opening that an alarm did occur during the previous armed period. This feature also allows the monitoring station to know when the user is on the premises.

## *[15] Priority Alarm and Restoral Reporting Codes*

These reporting codes are used by the communicator to transmit the following list of alarm and restoral conditions. Use instructions in Section [07] as a guide for programming.

Refer to the Terminal Connections section of this manual for information on the Auxiliary Input Zone operation; Section [31] contains options for the Auxiliary Input Zone.

The Cross Zoning Code will be transmitted when two different alarms occur during the same armed or disarmed period. The Cross Zoning Code will only be transmitted once during each armed or disarmed period. **NOTE:** The Cross Zoning Code will not be affected by the Transmission Delay. If another alarm occurs during a Transmission Delay, the delay will be terminated and all events will be transmitted immediately.

Reporting Codes are programmed for the following events:

- Auxiliary Input Zone Alarm / Closing
- [P] Key Alarm
- [F] Key Alarm
- [A] Key Alarm
- Auxiliary Input Restore / Opening
- [P] Key Restoral
- [F] Key Restoral
- [A] Key Restoral
- Cross Zoning Code

## *[16] Maintenance Alarm Reporting Codes*

Program eight 2-digit reporting codes for the following events:

- Low Battery Alarm: transmitted when the battery voltage drops below 11.3 volts. This reporting code will also be transmitted to report a battery fuse failure. The battery is tested under load every 10 seconds or 4 minutes, depending on the option selected in Section [26].
- Mains (AC) Failure Alarm: transmitted to report an AC power failure after the delay time programmed in Section [19]. The delay time prevents transmissions during temporary power failures.
- Bell Fuse Trouble Alarm: transmitted when the bell circuit is open or if the bell fuse has failed.
- Fire Trouble Alarm: transmitted if the fire zone goes open (end-of-line resistor is disconnected).
- AUX Supply Trouble Alarm: transmitted when the auxiliary power supply fuse fails.
- Downloading Lead-in
- Downloading Lead-out: Refer to the Downloading section of this manual for information on the Downloading Lead-in and Lead-out codes.
- Keypad Tamper Trouble: Keypad Tamper Troubles apply to systems using the DSC LED625T or LCD600T keypads. These keypads feature tamper switches which are activated when the keypad is removed from its backplate. Keypad Tamper Trouble is enabled in Section [26]; refer to "Displaying Trouble Conditions: [✱]+[2]" in the Keypad Functions section of this manual for information on how keypad tamper troubles are indicated and reported.

Refer to [✱][2] Trouble Command for additional information on trouble codes and transmissions.

## *[17] Maintenance Restoral Reporting Codes*

Program eight 2-digit restoral codes for the event described in Section [16]. The Telephone Line Monitoring Restoral, Test Transmission and Lockout Reporting Codes are also programming in this section.

The Telephone Line Monitoring Restoral Code is transmitted after the telephone line has been restored for at least 20 seconds. Refer to TLM Options in Section [21], Zone Light 1 and 2.

The Test Transmission Code can be sent immediately by entering [✱][6][Master Code][8]; refer to System Test in the User Function Command section of this manual. If Section [22] Zone Light 3 is OFF, the test transmission will be sent at the day interval programmed in Section [19] and at the time programmed in Section [32]. If Hourly Test Transmission is enabled (Section [22] Zone Light 3 ON), test transmissions will be sent every hour on the hour. If Test Transmission Every 15 minutes is selected (Section [22] Zone Light 4 ON), a test transmission will be received every 15 minutes. ***NOTE: This test transmission is only sent when the system is armed.***

"Test Transmission Every 15 Minutes" takes precedence over "Hourly Test Transmission" if both are enabled.

The Keypad Lockout Code is transmitted when the maximum number of attempts to enter an Access Code is reached. Refer to Section [39] Keypad Lockout Options for more information on the Keypad Lockout Function.

## *[18] Zone Definitions*

***Note that all zones will be bypassed while the Installer's Programming Mode is active. To re-activate the zones, enter an Access Code.***

Enter eight 2-digit numbers to determine how each zone will operate:

| ***First Digit*** | ***Second Digit*** | |
|---|---|---|
| 0 = Audible | 0 = Standard Delay | 4 = 24-hour Bell |
| 1 = Silent | 1 = Instant | 5 = 24-hour Bell/Buzzer |
| 2 = Chime Audible | 2 = Interior | 6 = 24-hour Buzzer |
| 3 = Chime Silent | 3 = Home Away | 7 = Auxiliary Delay |
| | | 8 = Interior Delay |

The First Digit determines whether the zone will cause a silent alarm or an audible alarm. Note that Tamper Alarms are always audible. Any zone can be assigned the Door Chime feature by programming the first digit as [2] or [3]. For the Door Chime to be active, the Door Chime feature must be enabled using the [✱][6][Master Code][6] command.

Zone response time is programmed in Section [19] and can be set from 400ms to 2.55s; the default time is 500ms.

The Second Digit determines the zone type, [0] through [8], as described below.

***NOTE: To define Zone 7 as a Fire Zone, turn ON Zone Light 1 in Section [26]. When Section [26] Zone Light 1 is ON, the zone definition programmed in Section [18] for Zone 7 will be ignored.***

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

The default times for this type of zone are a 30 second entry delay and a 45 second exit delay. The entry and exit delays may be independently programmed in Section [19] for periods from 1 to 255 seconds. All zones programmed as type [0] will have the entry and exit delays as programmed in Section [19] or the default times if Section [19] is not programmed.

**[1] Instant Zone** is normally used for door and window contacts and has the standard exit delay but is instant when opened after the exit delay expires. The exit delay will be the default time of 45 seconds or the time as established in Programming Section [19].

**[2] Interior Zone** is normally used with interior motion detectors and has the standard exit delay time. The zone also has the standard entry delay time provided that a Delay Zone has been activated first. If the premises are entered without coming through a Delay Zone and an Interior Zone is activated, an immediate alarm will be generated.

**[3] Home Away Zone** operates the same as the type [2] zone with the following exception. If the system is armed and a Delay Zone is NOT activated during the Exit Delay, the type [3] zones will be automatically bypassed.

When Section [24] Zone Light 5 is ON, Home Away zones can be assigned both the standard Entry and Exit Delays. The Entry Delay will be assigned to all Home Away zones when the system is armed and the Home Away zones are not manually or automatically bypassed. When the Home Away zones are automatically bypassed (for example, by arming and not leaving the premises or by arming with the [✱][9] command), enter [✱][1] to apply the Exit Delay to all Home Away Zones before activating.

**[4] 24-hour Bell Zone** is active at all times and will create an alarm with the system armed or disarmed. This zone will always activate the bell/siren output.

**[5] 24-hour Bell/Buzzer** operates as the type [4] except the bell/siren output is activated only when the panel is armed and only the keypad buzzer is activated while the panel is disarmed.

**[6] 24-hour Buzzer** operates as the type [4] except only the buzzer will be activated in the armed or disarmed mode.

**[7] Auxiliary Delay Zone** operates the same as the type [0] zone except the entry/exit times can be independently set in Section [19]. This zone type is useful when a zone with an entry and/or exit time is required that is different from the standard times as established for type [0] zones in Section [19]. If Section [24] Light 4 is ON, it will allow the system to be armed even if the auxiliary delay zone is open. Also, the system can be armed with the aux delay zone closed and then it can be opened before the aux exit delay has expired. In both cases the aux delay zone will not become active until both the aux exit delay has expired and the zone is closed.

**[8] Interior Delay Zone** Interior Delay Zones feature a standard exit delay. If the system is armed and the premises are vacated, the zone will behave as an Interior Zone. If the system is armed with the [✱][9] command or if the system is armed and the premises are not vacated, the Interior Delay Zone will be assigned the standard entry delay.

## *[19] System Times*

Enter eight 3-digit numbers in this section. The valid range for entries in this section is 001 to 255. System Times are entered in the following order:

- Entry delay time (seconds)
- Exit delay time (seconds)
- Auxiliary entry delay time (seconds)
- Auxiliary exit delay time (seconds)
- Bell Time-out (Enter a time from 001 to 255 minutes)
- AC failure reporting delay (minutes)
- Zone loop response time × 10ms (The default loop response is 500 ms; vaild entries are from 010 to 255)
- Test Transmission Interval (days)

Up to a 255 minute delay may be programmed before the AC Failure reporting code is transmitted. The Reporting code for AC Failure Trouble is programmed in Sections [16] and [17].

For the aux. delay times to be effective on a loop, the loop must be set as type [7] in Section [18] Zone Definitions. The entry default time is 45 seconds and may be changed to any time from 001 to 255 seconds. The exit default time is 60 seconds and may be changed to any time from 001 to 255 seconds.

The loop response time is the length of time that an alarm condition must be present on a loop before it is detected. This time is programmable in increments of 10ms. The normal entry would be 050 for a 500ms loop response time. Program a time from 010 to 255; if a time shorter than 100 ms is entered, the system will set the time at 100 ms.

A test transmission is sent to the monitoring station on a regular basis to confirm that the communication link to the system is intact. The test transmission cycle time is how often (in days) the test transmission is sent. This applies only if the Hourly or Every 15 Minutes test transmissions are not enabled (Section [22]).

The reporting code for the test transmission is programmed in Section [17]. The time of day that the test transmission is sent is programmed in Section [32].

## *[20] First System Option Code*

The First System Option Code is set using the Zone Lights to indicate which options in the list are active. Press the corresponding number key to turn an option ON or OFF; press [0] to turn all options OFF.

| | | |
|---|---|---|
| Zone Light 1 | • OFF = | Communicator enabled |
| | ON = | Communicator disabled |
| Zone Light 2 | • OFF = | Standard dialing |
| | ON = | Alternate dialing. After each dialing attempt, the communicator switches between First Telephone Number and the Second Telephone Number. |
| Zone Light 3 | • OFF = | Pulse dialing (rotary dialing) |
| | ON = | DTMF dialing (touch tone dialing) |
| Zone Light 4 | • OFF = | Pulse dialing Make/Break ratio: 33 / 67 |
| | ON = | Pulse dialing Make/Break ratio: 40 / 60 |
| Zone Light 5 | • OFF = | 2300Hz Radionics handshake |
| | ON = | 1400Hz Radionics handshake |
| Zone Light 6 | • OFF = | ***Not Used*** |
| Zone Light 7 | OFF = | Busy/Congestion tone detection disabled |
| | • ON = | Busy/Congestion tone detection enabled. If these tones are detected, the communicator will disengage the phone line and try to place the call again one minute later. |
| Zone Light 8 | • OFF = | Force dialing disabled |
| | ON = | Force dialing enabled. The system will dial out after 6 seconds of dial tone search if the dial tone was not detected. |

• = Default setting

## *[21] Second System Option Code*

Refer to Programming Section [20] for programming instructions.

Zone Light 1
- OFF = Telephone Line Monitoring (TLM) enabled
- ON = TLM disabled

Zone Light 2
- OFF = TLM trouble emits keypad beeps only
- ON = TLM trouble sounds bell while armed

Zone Light 3
- OFF = Restorals follow zones
- ON = Restorals sent on bell time-out: if the zone is restored the restoral will not be sent until the bell times out.

Zone Light 4
- OFF = Swinger shutdown resets on arming
- ON = Swinger shutdown resets at midnight

Zone Light 5
- OFF = Bell shutdown disabled
- ON = Bell shutdown enabled: if a zone is in swinger shutdown, the bell will not be reinitiated with activity on this zone until swinger is reset.

Zone Light 6
- OFF = Bell output follows zone type
- ON = Bell output is always pulsed

Zone Light 7
- OFF = Bell output normal
- ON = Bell output inverted

  **If Zone Light 7 is ON:** when a Bell Trouble occurs, the bell or siren will sound, but the trouble will not be indicated on the keypad or transmitted to the monitoring station

Zone Light 8
- OFF = User DLS window disabled
- ON = User DLS window enabled. Downloading must be enabled; pressing and holding the [9] key for about 3 seconds will make the system wait 60 minutes for computer to call. Calls received after the 60 minute time will not be answered.

• = Default setting

## *[22] Third System Option Code*

Refer to Programming Section [20] for programming instructions.

Zone Light 1
- OFF = PO3 as Strobe Output ***Refer to Section [31] for Output Option descriptions.***
- ON = PO3 as FTC Output

Zone Light 2
- OFF = PO4 as System Status Output
- ON = PO4 as TLM and Alarm Output

Zone Light 3
- OFF = Test Transmission according to time in Section [19] and [32]
- ON = Hourly Test Transmission; every hour on the hour

Zone Light 4
- OFF = Normal Test Transmission
- ON = Test Transmission every 15 minutes: only when armed

Zone Light 5
- OFF = Bell sounds when an FTC trouble occurs
- ON = No audible bell when an FTC trouble occurs

Zone Light 6
- OFF = Downloading Annunciation disabled
- ON = Downloading Annunciation enabled. When enabled, the keypad will beep eight times every ten seconds after downloading has been completed, or after a failed attempt at downloading. The downloading annunciation tone may be silenced by pressing any key on the keypad.

Zone Light 7
- OFF = ID Tone / Panel Answer Acknowledge disabled
- ON = ID Tone / Panel Answer Acknowledge enabled

Zone Light 8
- OFF = 1300Hz ID Tone / Panel Answer Acknowledge Tone
- ON = 2100Hz ID Tone / Panel Answer Acknowledge Tone

• = Default setting

## *[23] Fourth System Option Code*

Refer to Programming Section [20] for programming instructions.

Zone Light 1
- OFF = Partial Closings not identified
- ON = Send Identified Partial Closings: manually bypassed or force armed zones (auto arming) will be identified with their alarm transmissions between the partial closing code and the closing code.

Zone Light 2
- OFF = Auto-Arm does not send Partial Closing Code
- ON = Auto-Arm sends Partial Closing Code: for zones that are manually bypassed or force armed.

Zone Light 3
- OFF = Any keypress cancels Auto-Arming
- ON = Access code needed to cancel Auto-Arming

Zone Light 4
- OFF = No access code needed to bypass zones
- ON = Access code needed to bypass zones: use [✱][1][Access code] for zone bypassing

Zone Light 5
- OFF = Master Access code can be programmed by the user
- ON = Master Access code cannot be programmed by the user

Zone Light 6
- OFF = One Time Use Code disable
- ON = 16th code becomes One Time Use Code. The One Time Use Code may be used to arm the system only once. After the code is used to arm the system, it will be automatically erased and must be reprogrammed.

Zone Light 7
- OFF = Quick exit disabled
- ON = Quick exit enabled

Zone Light 8
- OFF = Sensor Reset on Arming disabled
- ON = Sensor Reset on Arming enabled. **When Zone Light 8 is ON:** the SW AUX output will reset for 5 seconds when the system is armed. This function is used to reset latching smoke detectors on the Fire Zone (Zone 7).

• = Default setting

## *[24] Fifth System Option Code*

Refer to Programming Section [20] for programming instructions.

Zone Light 1
- OFF = Zones use Double End-of-Line zone loops
- ON = Zones use Normally Closed zone loops

Zone Light 2
- OFF = Zones follow setting of Section [24] Light 1
- ON = Zonee use Single End-of-Line zone loops

Zone Light 3
- OFF = Zones active on power-up
- ON = Zones bypassed for 120s on power-up

Zone Light 4
- OFF = No force arm for Auxiliary delay zones
- ON = Force arm for Auxiliary delay zones

Zone Light 5
- OFF = Home Away zones act as Interior zones when active
- ON = Home Away zones act as Delay zones when active (see zone type 3 Section [18])

Zone Light 6
- OFF = Bell is silent when keypad Panic [P] is activated
- ON = Bell is audible when keypad Panic [P] is activated

Zone Light 7
- OFF = Keypad is silent when keypad Panic [P] is activated
- ON = Keypad emits 3 beeps when keypad Panic [P] is activated

Zone Light 8
- OFF = Keypad Fire [F] key is enabled
- ON = Keypad Fire [F] key is disabled

• = Default setting

## *[25] Sixth System Option Code*

Refer to Programming Section [20] for programming instructions.

Zone Light 1
- • OFF = No Force Arming
- ON = Force Arming on Zone Types 0, 1, 2 and 3. **NOTE:** If the system is armed and an exit is made through a Delay Zone that may be force armed, the Home-Away zones will remain automatically bypassed. To completely arm the system, enter an Access Code then [✱][1]. Leave the premises through any Delay Zone that may be force armed. The system will then be completely armed at the end of the Exit Delay.

Zone Light 2
- OFF = Standard Entry and Exit delay indications
- • ON = Audible Urgency applied to Entry and Exit delay. See notes below.

Zone Light 3
- • OFF = System will arm with either AC or DC present
- ON = Power Loss Inhibits Arming: both AC and DC power ***must*** be present in order to arm system

Zone Light 4
- • OFF = PC16OUT Module disabled
- ON = PC16OUT Module on PO1 enabled (module provides 16 voltage outputs to indicate panel conditions. See your distributor for details)

Zone Light 5
- • OFF = 24Hr. Bell / Buzzer on Tamper: On a tamper condition the Bell will sound if system is armed and the Buzzer will sound if the system is disarmed.
- ON = 24Hr. Bell Always on Tamper: On a tamper condition the Bell will always sound.

Zone Light 6
- • OFF = Tamper follows restore
- ON = Installer Tamper reset: If a tamper condition occurs then Installer's mode must be entered ([✱][8][Installers Code]) for the system to arm again.

Zone Light 7
- • OFF = Zone 8 behaves as configured in Section [18]
- ON = Zone 8 as an audible 24Hr.Tamper zone: When tripped, zone can only be reset by entering Installer's mode ([✱][8][Installers Code]), then initialized by arming the panel.

Zone Light 8
- • OFF = Engineer Reset disabled
- ON = Engineer Reset enabled: If an alarm occurs, the panel will not rearm until Installer's mode is entered. ***All zones will behave as configured in Section [18] Zone Definitions. Engineer Reset does not apply to the AUX INPUT zone.***

• = Default setting

### Entry and Exit Delay Urgency

**When the urgency option is selected,** the keypad will sound a steady tone during the Entry Delay and a pulsing tone during the Exit Delay. During the last 10 seconds of the Entry Delay, the keypad will sound a pulsing tone to warn that the Entry Delay is about to expire. During the last 10 seconds of the Exit Delay, the pulsing tone will quicken to warn that the Exit Delay is about to expire. **When the urgency option is not selected,** the keypad will be silent for the Exit Delay, and will sound a steady tone for the Entry Delay.

## *[26] Seventh System Option Code*

Refer to Programming Section [20] for programming instructions.

Zone Light 1
- • OFF = Zone 7 is a normal zone
- ON = Zone 7 is a Fire Zone. **When ON, the Zone Defintion programmed in Section [18] for Zone 7 will be ignored. Refer to Fire Zone Operation on Page 27.**

Zone Light 2
- • OFF = ***Not Used***

Zone Light 3
- • OFF = Keypad Lights always ON
- ON = Keypad Lights turn OFF after 2 minutes of last key entry. Any alarm, entry delay, or keypresses will reactivate the keypad lights. ***This feature must be OFF when LCD keypads are used with the PC2585.***

Zone Light 4
- • OFF = Keypad Tamper Disabled. Keypad tamper conditions will not be reported or indicated. Disable Keypad Tamper if LED625T or LCD600T keypads are not being used.
- ON = Keypad Tamper Enabled. The Keypad Trouble function, described in "Display Trouble Conditions [✱]+[2]" in the Keypad Functions section of the manual, will be enabled.

Zone Light 5
- • OFF = Battery Test Every 4 Minutes. The system will perform a battery test every 4 minutes.
- ON = Battery Test Every 10 Seconds and Battery Test on Arming. The system will perform battery test every 10 seconds and when the system is armed.

Zone Light 6
- • OFF = AC Trouble Reported. When OFF, AC troubles will be reported.
- ON = AC Trouble Not Reported. When ON, AC troubles will not be reported. ***Do not use this feature with the "Power Loss Inhibits Arming" feature (Section [25], Zone Light 3 ON)***

Zone Light 7
- • OFF = AC supply: 50Hz
- ON = AC supply: 60Hz

Zone Light 8
- • OFF = ***Not Used***

• = Default setting

### Battery Test Function

Battery Test Every 10 Seconds (Zone Light 5 ON). When an Access Code is entered to arm the system, there will be a 5 second delay before the arming sequence begins. During the delay, a battery test is performed.

- If Power Loss Inhibits Arming is enabled (Section [25] Zone Light 3 ON) the system will not arm if a low battery condition is present
- If there is a Low Battery Trouble when an Access Code is entered to arm the system, and Power Loss Inhibits Arming is disabled (Section [25] Zone Light 3 OFF), the system will arm without the 5 second delay for the Battery Test
- If the system is communicating when an Access Code is entered to arm the system, the Battery Test will not be performed
- During the 5 second Battery Test delay, all keypresses on the keypad will be ignored. If an alarm is generated during the delay, the bell or siren will sound after the delay. Transmissions are not delayed during the Battery Test delay

### Fire Zone Operation

***If Section [26] Zone Light 1 is ON, Zone 7 will be defined as a Fire Zone.***

The Fire Zone is a 24-hour (normally-open alarm initiating contact) end-of-line resistor zone designed for latching four-wire smoke detectors. On alarm, the Bell output will pulse to indicate that the Fire Zone has been activated. Alarm memory and transmission of the alarm are delayed for 30 seconds. If the alarm is acknowledged by pressing any key before the 30 second delay expires, the bell will silence and the transmission will be cancelled.

After the alarm has been acknowledged, the bell output will be activated again if the smoke detector is not restored to normal within 90 seconds. The user then has 30 seconds again to silence the bell and abort the transmission before the bell latches and the communication is initiated. ***NOTE: Do not program fire zones as silent and do not use Double EOL resistors with this zone type.***

For an open on the Fire Zone, the "Trouble" light will come ON and the keypad sounder will beep every 10 seconds, regardless of whether the system is armed or disarmed. The trouble condition will be reported if a reporting code is programmed in Section [16]. The "Trouble" light will only be shut OFF when all of the Fire Zone troubles are corrected.

## *[27] Maximum Dialing Attempts per Buffer*

Enter three 2-digit numbers in this section to determine the maximum number of dialing attempts for each communications buffer and the Downloading Telephone Number. Valid entries are in the range of 01 to 99; the default setting for all numbers is 03. Communications Buffer 1 affects the First and Second Telephone Numbers, and Communication Buffer 2 affects the Third Telephone Number.

## *[28] Swinger Shutdown and Transmission Delay / Bell Delay*

Swinger Shutdown determines how many alarms a zone may initiate and report before additional alarms are no longer reported. ***Note that the Fire Zone cannot be shut down; Fire Zone alarms will always be transmitted.***

Program a 2-digit number from "00" to "99"; the default setting is "03". With the default setting of "03", a zone may generate and report three alarms; any alarms after this will not be reported to the monitoring station until the Swinger Shutdown counter is reset. The Swinger Shutdown counter may be reset at 12:00 am or when the system is armed; refer to Section [21] Second System Option Code Zone Light 4.

Transmission Delay determines the delay, in seconds, before an event is transmitted. Note that if the system is disarmed before the Transmission Delay expires, no transmission will be initiated.

Bell Delay determines the delay, in minutes, before the bell is activated. Note that if the system is disarmed before the Bell Delay expires, no bell output will be initiated. Valid entries for the Bell Delay range from 01 to 99 minutes; the default setting is 00.

***The Transmission and Bell Delays are only applied to burglary zones; 24-hour and Fire Zones will not be delayed.***

## *[29] Communications Format*

This Section sets the type of format in which Communication Buffers 1 and 2 will communicate. For each communication buffer, enter two digits from the list below. The selection for each buffer is determined by the type of receiver being called. Enter the format number for the first communication buffer first. It is necessary to program both format numbers even if the first communication buffer is the only one being used.

| | ***Handshake*** | ***Formats*** |
|---|---|---|
| [00] SILENT KNIGHT / ADEMCO SLOW 10 BPS | 1400 Hz | 3/1, 3/2, 4/1 and 4/2 non-extended |
| [01] SESCOA, FRANKLIN, DCI, VERTEX 20 BPS | 2300 Hz | 3/1, 3/2, 4/1 and 4/2 non-extended |
| [02] SILENT KNIGHT FAST 20 BPS | 1400 Hz handshake | 3/1, 3/2, 4/1 and 4/2 non- extended |
| [03] RADIONICS | 2300/1400 Hz* | 3/1, 4/2 non-extended |
| [04] RADIONICS | 2300/1400 Hz* | 3/1, 4/2 non-extended with parity |
| [05] SESCOA super speed | | |
| [06] SILENT KNIGHT, ADEMCO SLOW 10 BPS | 1400 Hz | 3/1 extended |
| [07] SESCOA, FRANKLIN, DCI, VERTEX 20 BPS | 2300 Hz | 3/1 extended |
| [08] SILENT KNIGHT FAST 20 BPS | 1400 Hz | 3/1 extended |
| [09] RADIONICS | 2300 / 1400 Hz* | 3/1 extended |
| [10] RADIONICS | 2300 / 1400 Hz* | 3/1 extended with parity |
| [11] Sescoa super speed (with identified openings/closings) | | |
| [12] DTMF Fast, Slot Programming Method | | |
| [13] Sur-Gard 4/3 DTMF with Parity<br>***This format will respond to 2300Hz handshakes only.*** | 2300Hz | |
| [14] Semadigit DTMF Pager Format | | |
| [15] Semaphone Pager | | |
| [16] Private Line | | |

* See Section [20] for Radionics handshake option.

### 10 BPS and 20 BPS Formats

10 BPS is the standard slow format used on Silent Knight / Ademco receivers.
DATA = 1900 Hz; KISS-OFF = 1400 Hz; SPEED = 10 baud

20 BPS is the standard fast format used on the DCI / Franklin / Sescoa and Vertex receivers.
DATA = 1800 Hz; KISS-OFF = 2300 Hz; SPEED = 20 baud

### Radionics Format

For conventional Radionics 3/1 format, the communications mode should be set on either Radionics rounds (format [09]) or Radionics parity (format [10]). The extended version of the Radionics format is normally used. The following guidelines are provided to help in configuring the PC2585 for Radionics format.

1 The customer account code must be only 3 digits with a zero making up the fourth digit (i.e. Enter 1230 to program an account code of 123).

2 The zone alarm reporting codes must all be single digit numerical codes with no extended second round being sent (i.e. Zone 1 = 10, Zone 2 = 20... Zone 6 = 60). The zero in the second digit position tells the PC2585 not to send an extended round.

3 All other non-alarm reporting codes must be set up to send an extended second round. The first digit of the reporting code is used to identify the event while the second or extended digit is used to associate the event with a particular item (i.e. A reporting code of E3 means restore zone 3. E = restore, 3 = zone 3).

4 The following is a list of first digit identifiers that should be used with the Radionics format.

- Restorals “E”. For example, E3 = restore zone 3
- Openings “B”. For example, B2 = opening by user 2
- Closings “C”. For example, C4 = closing by user 4
- Troubles “F”. For example, F5 = trouble from source 5
- Miscellaneous “D”. For example, D1 = partial closing

### Sescoa Super Speed Format

The Sescoa Super Speed Format must be programmed exactly as follows in order to function correctly.

1 The account code must be four decimal digits in length and in the range of 0001 to 3374.

2 The reporting codes must be 2 digits in length and programmed as follows:

| | |
|---|---|
| Alarms Zones 1 - 8 (Section [07] and [09]) | A1 to A8 |
| Restorals Zones 1 - 8 (Section [08] and [10]) | A1 to A8 |
| All Opening Codes (Sections [13] and [14]) | BA |
| All Closing Codes (Sections [11] and [12]) | CA |
| Partial Closing (Section [11]) | C1 |
| Low Battery (Section [16]) | E1 |
| Battery Restorals (Section [17]) | E1 |
| AC Failure (Section [16]) | E1 |
| AC Restoral (Section [17]) | E1 |
| Bell circuit Trouble (Section [16]) | F1 |
| Bell circuit Restoral (Section [17]) | F1 |
| Troubles (Sections [16] and [17]) | AA |
| Priority Alarms (Section [15]) | A1 to 99 |
| Test Code (Section [17]) | 1C or DC |
| Opening After Alarm (Section [14]) | B1 |
| Auto-arm Abort Code (Section [12]) | C8 |

### Slot Format

Refer to Section [07] Alarm Reporting Codes, Zones 1 - 8 on page 19 for information on using the Slot Format.

### 4/3 DTMF Format

The 4/3 DTMF format features the advantage of rapid transmission in cases where a large number of reporting codes need to be transmitted. The 4/3 DTMF Format is compatible with most Sur-Gard digital receivers. ***Note that this format will respond to 2300Hz handshake tones only.***

The 4/3 DTMF Format transmits 8 DTMF digits for each event. Each round is transmitted as follows:

**AAAA XCC P**

| | | |
|---|---|---|
| ***Where:*** | **AAAA** | is the Account Code |
| | **X** | is a pre-programmed Event Identifier |
| | **CC** | is the 2-digit Reporting Code |
| | **P** | is the checksum parity. |

The following Event Identifiers are pre-programmed and will be transmitted before each Reporting Code:

| ***Identifier*** | ***Event*** | ***Identifier*** | ***Event*** |
|---|---|---|---|
| 0 | Test Transmission | 6 | Troubles / Tamper Alarms |
| 1 | Fire Alarm | 7 | Medical Alarm |
| 2 | Panic Alarm | 9 | Burglary / Tamper / Trouble / Priority Restorals |
| 3 | Burglary Alarm | D | Partial Closing |
| 4 | Closing | F | Auto-Arm Cancel / Keypad Lockout / DLS Lead-in and Lead-out Codes / Opening After Alarm / Keypad Tamper |
| 5 | Opening | | |

### Semadigit DTMF Pager Format

The Semadigit DTMF Pager Format transmits 7 DTMF digits for each event. Each round is transmitted as follows:

**AAAA XX C**

| | | |
|---|---|---|
| ***Where:*** | **AAAA** | is the Account Code |
| | **XX** | is the 2-digit Reporting Code |
| | **C** | is the DTMF character "#" |

This format requires an initial handshake of 440Hz, and a kissoff handshake of 1400Hz.

### Semaphone Pager Format

This format communicates no data. The system will call the phone number programmed in Section [30] once for each event that occurs. This format is intended for use with a pager but can also be used to call a private residence. If ID Tone is enabled in Section [22], the system will sound a "beep" on the line every 2 seconds after dialing the telephone number. Although the event is not identified, the recipient of the call is made aware of the alarm.

### Private Line Format

***Do not use this format with the Printer enabled.***

This format will only transmit zone alarms. When a zone goes into alarm, the system will dial the first telephone number programmed. When the call is answered, the system will sound a double "beep" on the line. The listener receiving the call will then know that an alarm system is making a call. Pressing 3, 6, 9 or # on a touch-tone (DTMF) telephone will have the system transmit the zone or zones that are in alarm.

The system will indicate which zone is in alarm by sounding a number of beeps. One beep will sound for zone 1, two beeps for zone 2, 3 beeps for zone 3, and so on.

When the system has sounded the tones to indicate which zone is in alarm, it will wait for approximately 5 seconds for the listener to send a closing handshake. Pressing 3, 6, 9 or # will send a closing handshake to the system. When the system receives the handshake, it will either hang up, or will sound tones to indicate the next zone in alarm.

## *[30] Communicator Call Direction Options*

This section determines which communications buffer is used when sending transmissions. **Communications Buffer 1 consists of the First and Second Telephone Numbers.** The Second Telephone Number is only used when alternate dialing is enabled. The dialer will alternate between the First and Second Telephone Numbers only. **Communication Buffer 2 consists of the Third Telephone Number only.**

There are four dialer call direction options:

[0] No transmissions for this group
[1] Use Communications Buffer 1 only
[2] Use Communications Buffer 2 only
[3] Use both Communications Buffers

After entering the section number, enter [0], [1], [2] or [3] for each of the following reporting code groups in the order given (total of six digits).

- Zone Group A Alarms, Tampers and Restorals
- Zone Group B Alarms, Tampers and Restorals
- Access Codes Group A Openings and Closings
- Access Codes Group B Openings and Closings
- Priority Alarms and Restorals
- Maintenance Alarms and Restorals

**All six digits must be entered for the system to record the new call directions. If the [#] key is pressed before all six digits are entered, any new entries will be ignored.**

**NOTE:** When enabled, alternate dialing will only occur for groups using Communication Buffer 1. For example, if Group A is programmed to use both buffers, the dialer will alternate between the First and Second Telephone Numbers (Communication Buffer 1) before calling the Third Telephone Number (Communication Buffer 2).

Where all reporting codes are to be sent using one communication buffer, enter [1] for all of the above groups.

## *[31] PO1, PO2 and AUX-IN Input Options*

The Auxiliary Input Zone, PO1, and PO2 outputs have options which are programmed in this section. Program four digits in this section. The first digit configures PO1, the second digit configures PO2, and the last 2 digits configure the Auxiliary Input Zone.

- PO1 can control the PC16OUT Module or any Programmable output option described below.
- PO2 can control a Printer or any Programmable output option described below.

### Programmable Options for PO1 and PO2

**[0] Ground Start Pulse:** This option provides a 2-second switch to ground before dialling begins to obtain the dial tone on Ground Start telephone equipment.

**[1] Utility Output, any Access Code:** This output can be activated from the keypad by the user. When activated, the PO output will switch to ground for 5 seconds and the keypad buzzer will sound.

To activate a utility output on PO1, enter [✱][7][1][any Access Code]

To activate a utility output on PO2, enter [✱][7][2][any Access Code]

**[2] Strobe Output (Latched alarm output):** The PO terminal switches to ground after an alarm and remains switched ON until the system is disarmed.

**[3] 20-minute Latched Alarm Output:** The PO terminal latches ON for 20 minutes on a zone alarm. Entering any valid Access Code will reset the output.

**[4] System Status (Arm/Disarm) Output:** The PO terminal switches to ground when the system is armed. The PO terminal will be opened when the system is disarmed.

**[5] Keypad Buzzer Follow Mode:** The PO terminal switches to ground when the keypad sounder is ON. The PO terminal will remain switched for as long as the keypad sounder is ON.

**[6] Courtesy Pulse:** The PO terminal switches to ground during the Entry and Exit Delay times. This function could be used to operate a light or other device near the entry/exit door for the duration of the Entry and Exit times.

**[7] Entry Delay Follower:** The PO terminal switches to ground for the duration of the Entry Delay.

**[8] Exit Delay Follower:** The PO terminal switches to ground for the duration of the Exit Delay.

**[9] PO Flashes during Exit Delay / PO ON if in Alarm:** This option causes the PO terminal to pulse for the duration of the Exit delay. Once fully armed the PO will deactivate. If an alarm occurs, the PO will activate steadily. The output is deactivated on disarming. Note that only Burglary, Fire and [F] Key zones will activate the PO.

**[A] PO Flashes during armed period:** While the system is armed, the PO will flash steadily. Upon disarming the PO will deactivate.

**[B] Kiss-off Output:** The PO terminal switches to ground after the kiss-off has been received to complete a successful communication to the central station. The terminal will switch to ground for 2 seconds.

**[C] Failure to Communicate Output:** The PO terminal switches to ground if the system fails to communicate with the monitoring station after the maximum number of attempts is reached. The output remains switched to ground until a successful communication takes place or until the failure to communicate trouble indication is cleared from the keypad. This option may be used to tie two systems together; one system can then be made to report a communication failure for the other.

**[D] Telephone Line Monitor (TLM) and Alarm:** The PO terminal switches to ground if the system has a TLM fault and any alarm condition while fully armed. The output will be switched for the duration of the Bell Time-out time.

**[E] Line Seizure Output:** The PO terminal switches to ground when the system seizes the telephone line during communication. The output remains switched for the duration of the communications.

**[F] Remote Operation:** The PO terminal can be switched remotely through the DLS-1 Downloading Software. If communications with the downloading computer are interrupted, the PO terminal will remain activated until the downloading computer deactivates the output at a later time.

### Auxiliary Input Options (Last 2 digits)

**[00] Printer Connected to PO2 Enabled**

**[01] Silent 24-hour Zone**

**[02] Audible 24-hour Zone**

**[03] Momentary Keyswitch Arming**

**[04] Blockschloss**

**[05] Push to Set**

**[06] Not Used**

**[07] Forced Answer**

See Auxiliary Input Terminal in the Terminal Connections section of this manual for details on the Auxiliary Input. If a printer is attached to the panel, [00] must be selected. When option [03] is selected, a momentary key closure between the Auxiliary Input and the Positive Auxiliary Power Supply will alternately arm and disarm the system. The reporting codes for the Auxiliary Input (Section [15] ) can be used as opening and closing codes for key arming.

**Blockschloss** (option 04) is a special door lock used with maintained keyswitch operation. Do not use this option in split system applications. When this option is selected, PO4 will switch to ground whenever the system is ready to be armed, regardless what is selected for the PO option. When the system is armed, PO4 will be deactivated.

**Push to Set** is used to cancel the Exit Delay after entering an Access Code to arm the system. If the Push to Set input is activated during the Exit Delay, the standard Exit Delay will be cancelled and the system will be fully armed. ***This feature will be automatically disabled if Split Arming is enabled, or if Home-Away Zones are programmed.***

## *[32] System Clock Times*

Program three 4-digit times in this section.

- Automatic arming time of day (HH:MM)
- Auto Disarm Time (HH:MM)
- Test transmission time of day (HH:MM)

Times are entered in the 24-hour clock (military time) format. Valid entries are 00 to 23 for HH (hours), and 00 to 59 for MM (minutes). ***If invalid times are entered, the functions will not work.***

## *[33] Master Code*

Program a 4-digit code in this Section. Only use digits 0 through 9 as numbers in the code; do not press the [✱] or [#] keys. If an error is made entering the code, complete entry of the 4 digits then enter the section number again to enter the correct code. Do not press [✱] or [#] while entering the code.

## *[34] Second Master Code*

Program a 4-digit code in this Section. Refer to Section [33] for programming instructions.

## *[35] Installer's Code*

Program a 4-digit code in this Section. Refer to Section [33] for programming instructions.

### *[36] Bypass Mask, Zones 1 - 8*

In this section, if a zone LED is ON, then that zone can be bypassed using the [✱][1] command. In the default setting, Zone Lights 1 through 8 are ON.

### *[37] Access Code Bypass Mask, Access Codes 1 - 8*

This section is used to determine whether or not Access Codes 1 to 8 are able to bypass zones. When a Zone Light is ON, the code indicated is able to bypass zones. In the default setting, all Zone Lights are ON.

***If an Access Code is not required to bypass zones, programming in this section will not affect system operation. The Access Code Required for Bypass Option is programmed in Section [23] Zone Light 4.***

### *[38] Access Code Bypass Mask, Access Codes 9 -16*

This section is used to determine whether or not Access Codes 9 to 16 are able to bypass zones. When a Zone Light is ON, the code indicated is able to bypass zones. In the default setting, Zone Lights 1 to 8 are ON.

### *[39] Keypad Lockout Options*

Keypad Lockout is a useful feature to stop users from trying to guess system access codes. The number of attempts to enter a valid code before the keypad locks out is programmable as well as the duration of keypad lockout. Entering “00” for the first two digits will disable this feature.

When the keypad locks out, the bell will sound for approximately 10 seconds. The keypad will beep 3 times every 10 seconds for the duration of the lockout time. Pressing the [#] key will not suppress the beeps. If a reporting code is programmed, the system will transmit a reporting code to indicate that the keypad has been locked out.

### *[40] - [43] Split Arming*

The Split Arming feature allows a single control panel to act as two independent alarm systems, each with their own opening and closing schedules, zone assignments and Access Codes.

Zone and Access Code assignments are programmed in Section [40] through [43]. Typically, zones and Access Codes are assigned to either Group A or Group B; however, the system may be programmed so that some zones and Access Codes are common to both Groups.

Sections [40] through [43] are programmed in the same manner as Programming Section [20]; refer to Section [20] for programming instructions.

### *[40] Group A Zone Assignment*

This section is used to assign zones to Group or Side A in a split-armed application. In the default setting, all Zone Lights are ON.

### *[41] Group B Zone Assignment*

This section is used to assign zones to Group or Side B in a split-armed application. In the default setting, all Zone Lights are ON.

### *[42] Group A Access Code Assignment*

If a Zone Light is ON, that Access Code is assigned to group A. Note that Access Codes 9 through 16 are permanently assigned to Group A. If a Zone Light is ON in both Section [42] and [43], the code is common to both sides and will arm or disarm the entire system. In the default setting, all Zone Lights are ON. ***The Master Code (Access Code 1) must be assigned to both Group A and Group B in order for split arming to function properly.***

### *[43] Group B Access Code Assignment*

If a Zone Light is ON, that Access Code is assigned to group B. If a Zone Light is ON in both Section [42] and [43], the code is common to both sides and will arm or disarm the entire system. In the default setting, all Zone Lights are ON. Note that codes 9 to 16 cannot be assigned to Group B. ***The Master Code (Access Code 1) must be assigned to both Group A and Group B in order for split arming to function properly.***

**Notes On Split Armimg:**

**Common Zones:** If a zone is assigned to both Group A and Group B, then both Group A and Group B must be armed for that zone to be armed.

**Common Access Code:** If an Access Code (1 through 8 only) is assigned to Group A and Group B, then that Access Code will arm and disarm the entire panel.

**Armed Status Indications:** When only one group of a split armed system (either Group A or Group B) is armed, the "Armed" indicator will FLASH and the zone indicators for the armed group will FLASH. If both Group A and Group B are armed, the "Armed" indicator will be ON steadily and the Zone Lights will not flash.

**Zone Bypassing:** When the system is set up for split arming, the [✱][1] bypass command should be set so that bypassing requires the use of an Access Code (see Section [23], Zone Light 4).

**Communicator:** When set up for split arming and both Group A and Group B are reporting to the same telephone number with different account codes, Group A burglar alarms and restorals are programmed as [1] in Section [30] to use the first Communications Buffer only. Group B burglar alarms and restorals are programmed with a [2] in Section [30] to use the second Communications Buffer only. It is necessary to program both the First and Third Telephone Numbers with the same telephone number.

**Split Arming Restrictions:** The following restrictions apply to split arming applications:

- The Master Code must be assigned to both Group A and Group B
- All codes and zones must be assigned even if not used.
- Transmission delay must not be used.
- Bell Delay must not be used.
- Home-Away zones must not be used.
- Blockschloss (see Section [31]) must not be used.
- PO Option 9, D, and "Quick Exit" will only work in a fully armed system.
- The Engineer Reset feature must not be used.
- "Zone 8 as Tamper Zone" must not be used.

## *[44] Number of Rings Before Answer and Downloading Configuration*

This section is used to enable the Downloading function. If Downloading is enabled then the Downloading Access Code must be entered (Section [47]), and the Panel Identification Code must be entered (Section [46]). If Callback is enabled the downloading computer's telephone number must be entered (Section [48]).

This section is used to set the number of rings that the panel must see before it will answer a call from the downloading computer. The number of rings is the sum of the binary digits as represented by Zone Lights 1 through 4.

| | | |
|---|---|---|
| Zone Light 1 | OFF = 0<br>• ON = 1 | Example: Light 1 = OFF = 0<br>Light 2 = ON = 2<br>Light 3 = OFF = 0<br>Light 4 = ON = 8<br>Number of Rings: 10 |
| Zone Light 2 | OFF = 0<br>• ON = 2 | |
| Zone Light 3 | OFF = 0<br>• ON = 4 | |
| Zone Light 4 | OFF = 0<br>• ON = 8 | |
| Zone Light 5 | • OFF = Downloading disabled<br>ON = Downloading enabled (See Downloading section of this manual) | |
| Zone Light 6 | • OFF = No user initiated call up<br>ON = User initiated call up enabled (See [✱][6][Master Code][9]) | |
| Zone Light 7 | • OFF = No answering machine connected<br>ON = Answering machine connected | |
| Zone Light 8 | • OFF = Call back disabled<br>ON = Call back enabled | |

• = Default setting

## *[45] Double Call Timer*

This timer determines the length of time that can be taken between calls when using the answering machine over-ride function. Valid entries are from 001 to 255 seconds; the default setting is 060.

## *[46] Panel Identification Code*

This 4 digit code allows the downloading computer to confirm the identity of the control panel. The factory default code is [2581]. Do not make any of these codes the same.

## *[47] Downloading Access Code*

This 4 digit code allows the system to confirm that it is communicating with a valid downloading computer. The factory default code is [2505].

## *[48] Downloading Telephone Number*

This is the telephone number that the panel would use to call the downloading computer if the Callback feature (Section [44]) is enabled or if a user initiated call up is performed with the [✱][6][Master Code][9] command.

## *[49] Printer Configuration*

| | | |
|---|---|---|
| Zone Light 1 | • | OFF = Not 110 baud<br>ON = 110 baud |
| Zone Light 2 | • | OFF = Not 300 baud<br>ON = 300 baud |
| Zone Light 3 | • | OFF = Not 1200 baud<br>ON = 1200 baud |
| Zone Light 4 | • | OFF = Printer and normal communication<br>ON = Printer only |
| Zone Light 5 | • | OFF = Printer and normal communication<br>ON = See notes below |
| Zone Light 6 | • | OFF = SRTS on pin 11<br>ON = RTS on pin 4 or DTR on pin 20 |
| Zone Light 7 | • | OFF = For Future Use<br>ON = For Future Use |
| Zone Light 8 | • | OFF = For Future Use<br>ON = For Future Use |

• = Default setting

**PRINTER CONFIGURATION NOTES:**

**If Zone Light 5 is ON and Zone Light 4 is OFF:** All items whose reporting codes are programmed for Communications Buffer 1 will be communicated to the monitoring station AND printed on the printer. All items whose reporting codes are programmed for Communications Buffer 2 will NOT be communicated to the monitoring station but will be printed on the printer.

**If Zone Lights 4 and 5 are OFF:** All items whose reporting codes are programmed for Communications Buffer 1 or 2 will be printed on the printer and communicated to the monitoring station.

**If Zone Light 4 is ON:** All items whose reporting codes are programmed for Communications Buffer 1 or 2 will be printed on the printer but will not be communicated to the monitoring station. In this case it is assumed that telephone lines are not connected. DO NOT disable the communicator. The First System Option Code, Zone Light [1] must be OFF. To avoid TLM trouble, program Second System Option Code Zone Light [1] to be ON.

## *[50] Printer Language Option*

Enter a 2-digit number to select the language to be used with the serial printer. The default setting is 03 for German.

**Enter:** 00 for English
01 for French
02 for Dutch
03 for German

Refer to Printer Set-up for instructions on connecting a printer to the control panel, and for instructions on programming the control panel for use with a printer.

## *[89] Print Event Buffer*

If a serial printer is connected to the system, entering [✱][8][Installer's Code][89] will print the 128 events in the event buffer. Events, along with the time and date of each event, are printed with the most recent event first, and the oldest event printed last. The keypad will sound a tone to indicate when the system has finished printing all of the events in the event buffer, or if the printer is not connected properly.

**NOTE:** Refer to Printer Setup for instructions on connecting a local printer to the control panel.

## *[90] Installer Lockout Enable*

When this feature is enabled, performing a hardware or software reset to restore the system's factory programming will not reset the Installer's Code or the Downloading Access Code.

To enable this feature, enter Section [90]. After entering Section [90], enter the [Installer's Code] to confirm activation of this feature. If the Installer's Code is not entered correctly, the keypad will sound a single long tone to indicate the error and the feature will not be enabled.

A system that has this feature enabled will provide an audible indication upon power-up by clicking the telephone line relay 10 times. When applying power to the system when performing a hardware reset (see Section [99]), the telephone line relay will sound the 10-click indication twice.

***Ensure that the new Installer's Code has been entered correctly before enabling this feature as there is no way of re-entering the Programming Mode without the new Installer's Code.***

## *[91] Installer Lockout Disable*

Entering [91][Installer's Code] while in the Installer's Programming Mode will disable the Installer Lockout feature described in Section [90]. If the Installer's Code is not entered correctly, the keypad will sound a single long tone to indicate the error and the Installer's Lockout will not be disabled.

**NOTE:** Control panels returned to DSC with the Installer Lockout feature enabled and no other apparent problems will be subject to an additional service charge.

## *[99] Factory Default*

This section is used to reset the EEPROM memory to the original factory default values. After entering Section [99], enter the [Installer's Code] to confirm activation of this feature. If the Installer's Code is not entered correctly, the keypad will sound a single long tone to indicate the error and the factory default will not be performed.

### Hardware Reset of EEPROM Memory to Factory Defaults

If the Installer's code is lost through inadvertent programming, the only means of reprogramming the system is via a hardware reset. If the installer's lockout is enabled, there is no way to reprogram the system without entering the correct installer's code. Follow the sequence outlined below to reset the panel to factory default conditions.

1. Power unit down by removing both AC and battery power.
2. Using a jumper, short the PO1 and Zone 1 terminals together.
3. Apply power to the PC2585.
4. Wait for 10 seconds then remove the connection between the PO1 and Zone 1 terminals.
5. The system will have reloaded the EEPROM with the factory default codes.

# *FOR THE RECORD*

**Customer** _____

**Address** _____

_____

**Phone** _____ Installation Date _____

CONTACTS:

#1 Name _____ Phone _____

#2 Name _____ Phone _____

#3 Name _____ Phone _____

Installer's Code _____

ZONES

| **Zone** | **Type** | **Protected Area** |
|---|---|---|
| 1 | _____ | _____ |
| 2 | _____ | _____ |
| 3 | _____ | _____ |
| 4 | _____ | _____ |
| 5 | _____ | _____ |
| 6 | _____ | _____ |
| 7 | _____ | _____ |
| 8 | _____ | _____ |

Entry Time _____ Exit Time _____

Bell Cutoff _____

KEYPAD ZONES

| | | | | | |
|---|---|---|---|---|---|
| [F] Key | ☐ ON | ☐ OFF | Quick-Arm | ☐ ON | ☐ OFF |
| [A] Key | ☐ ON | ☐ OFF | Quick-Exit | ☐ ON | ☐ OFF |
| [P] Key | ☐ ON | ☐ OFF | Installers Lockout | ☐ ON | ☐ OFF |

Installer's Name: _____

NOTES

***NOTE: In Sections [01] through [17], do not enter data in Sections that are not used.***

***AFTER EXITING THE INSTALLER'S PROGRAMMING MODE, ARM AND THEN DISARM THE SYSTEM TO RETURN THE ZONES AND THE [F], [A] AND [P] KEYS TO NORMAL OPERATION.***

## [01] First Telephone Number **Page 18**

└┴┴┴┴┴┴┴┴┴┴┴┴┴┴┴┴┘

Enter [0] for the digit "0" (zero) in the telephone number. Enter [#] to end the telephone number entry. When using Pulse Dialing, do not enter [✱] or [#] in the Telephone Numbers.

## [02] First Account Code **Page 18**

└┴┴┴┘

For 3-digit Account Codes, enter [0] for the last digit. Where "0" (zero) is required in the Account Code, enter HEX A ([✱][1][✱]).

## [03] Second Telephone Number **Page 18**

└┴┴┴┴┴┴┴┴┴┴┴┴┴┴┴┴┘

## [04] Second Account Code **Page 18**

└┴┴┴┴┘

## [05] Third Telephone Number **Page 18**

└┴┴┴┴┴┴┴┴┴┴┴┴┴┴┴┴┘

## [06] Third Account Code **Page 18**

└┴┴┴┴┘

## [07] Alarm Reporting Codes, Zones 1 - 8 **Page 19**

For single-digit reporting codes, enter [0] as the second digit. Enter [✱][1][✱] (hex A) to transmit a "0" (zero).

└┴┘ Zone 1 Alarm
└┴┘ Zone 2 Alarm
└┴┘ Zone 3 Alarm
└┴┘ Zone 4 Alarm
└┴┘ Zone 5 Alarm
└┴┘ Zone 6 Alarm
└┴┘ Zone 7 Alarm
└┴┘ Zone 8 Alarm

## [08] Restoral Reporting Codes, Zones 1 - 8 **Page 20**

└┴┘ Zone 1 Restoral
└┴┘ Zone 2 Restoral
└┴┘ Zone 3 Restoral
└┴┘ Zone 4 Restoral
└┴┘ Zone 5 Restoral
└┴┘ Zone 6 Restoral
└┴┘ Zone 7 Restoral
└┴┘ Zone 8 Restoral

## [09] Tamper Alarm Reporting Codes, Zones 1 - 8 Page 20

**NOTE:** Tamper Alarms cannot be bypassed with the [✱][1] command. Tamper Alarms will only be bypassed while the Installer's Programming Mode is active. Reactivate the Tamper Alarms by arming and then disarming the system after exiting the Installer's Programming Mode.

- ⌊__⌋ Tamper Alarm 1
- ⌊__⌋ Tamper Alarm 2
- ⌊__⌋ Tamper Alarm 3
- ⌊__⌋ Tamper Alarm 4
- ⌊__⌋ Tamper Alarm 5
- ⌊__⌋ Tamper Alarm 6
- ⌊__⌋ Tamper Alarm 7 / Fire Alarm
- ⌊__⌋ Tamper Alarm 8

## [10] Tamper Restoral Reporting Codes, Zones 1 - 8 Page 20

- ⌊__⌋ Tamper Restore 1
- ⌊__⌋ Tamper Restore 2
- ⌊__⌋ Tamper Restore 3
- ⌊__⌋ Tamper Restore 4
- ⌊__⌋ Tamper Restore 5
- ⌊__⌋ Tamper Restore 6
- ⌊__⌋ Tamper Restore 7 / Fire Restore
- ⌊__⌋ Tamper Restore 8

## [11] Closing Reporting Codes, Access Codes 1 - 8 Page 20

- ⌊__⌋ Access Code 1 Closing
- ⌊__⌋ Access Code 2 Closing
- ⌊__⌋ Access Code 3 Closing
- ⌊__⌋ Access Code 4 Closing
- ⌊__⌋ Access Code 5 Closing
- ⌊__⌋ Access Code 6 Closing
- ⌊__⌋ Access Code 7 Closing
- ⌊__⌋ Access Code 8 Closing
- ⌊__⌋ Partial Closing Code

## [12] Closing Reporting Codes, Access Codes 9 -16 Page 20

- ⌊__⌋ Access Code 9 Closing
- ⌊__⌋ Access Code 10 Closing
- ⌊__⌋ Access Code 11 Closing
- ⌊__⌋ Access Code 12 Closing
- ⌊__⌋ Access Code 13 Closing
- ⌊__⌋ Access Code 14 Closing
- ⌊__⌋ Access Code 15 Closing
- ⌊__⌋ Access Code 16 Closing
- ⌊__⌋ Auto-Arm Cancellation Code

## *[13] Opening Reporting Codes, Access Codes 1 - 8* **Page 20**

- ⌊__⌋⌊__⌋ Access Code 1 Opening
- ⌊__⌋⌊__⌋ Access Code 2 Opening
- ⌊__⌋⌊__⌋ Access Code 3 Opening
- ⌊__⌋⌊__⌋ Access Code 4 Opening
- ⌊__⌋⌊__⌋ Access Code 5 Opening
- ⌊__⌋⌊__⌋ Access Code 6 Opening
- ⌊__⌋⌊__⌋ Access Code 7 Opening
- ⌊__⌋⌊__⌋ Access Code 8 Opening

## *[14] Opening Reporting Codes, Access Codes 9 -16* **Page 20**

- ⌊__⌋⌊__⌋ Access Code 9 Opening
- ⌊__⌋⌊__⌋ Access Code 10 Opening
- ⌊__⌋⌊__⌋ Access Code 11 Opening
- ⌊__⌋⌊__⌋ Access Code 12 Opening
- ⌊__⌋⌊__⌋ Access Code 13 Opening
- ⌊__⌋⌊__⌋ Access Code 14 Opening
- ⌊__⌋⌊__⌋ Access Code 15 Opening
- ⌊__⌋⌊__⌋ Access Code 16 Opening
- ⌊__⌋⌊__⌋ After Alarm Code

## *[15] Priority Alarm and Restoral Reporting Codes* **Page 21**

- ⌊__⌋⌊__⌋ AUX Input Alarm / Closing
- ⌊__⌋⌊__⌋ [P] Key Alarm
- ⌊__⌋⌊__⌋ [F] Key Alarm
- ⌊__⌋⌊__⌋ [A] Key Alarm
- ⌊__⌋⌊__⌋ AUX Input Restore / Opening
- ⌊__⌋⌊__⌋ [P] Key Restore
- ⌊__⌋⌊__⌋ [F] Key Restore
- ⌊__⌋⌊__⌋ [A] Key Restore
- ⌊__⌋⌊__⌋ Cross Zoning Code

## *[16] Maintenance Alarm Reporting Codes* **Page 21**

- ⌊__⌋⌊__⌋ Low Battery Alarm
- ⌊__⌋⌊__⌋ AC Failure Alarm
- ⌊__⌋⌊__⌋ Bell Fuse Trouble Alarm
- ⌊__⌋⌊__⌋ Fire Trouble Alarm
- ⌊__⌋⌊__⌋ AUX Supply Trouble Alarm
- ⌊__⌋⌊__⌋ Downloading Lead-in
- ⌊__⌋⌊__⌋ Downloading Lead-out
- ⌊__⌋⌊__⌋ Keypad Tamper Trouble

## [17] Maintenance Restoral Reporting Codes **Page 21**

| | |
|---|---|
| ___ | Low Battery Restore |
| ___ | AC Failure Restore |
| ___ | Bell Fuse Trouble Restore |
| ___ | Fire Trouble Restore |
| ___ | AUX Supply Trouble Restore |
| ___ | Telephone Line Monitor Trouble Restoral |
| ___ | Keypad Lockout Code |
| ___ | Test Transmission Code |

## [18] Zone Definitions **Page 22**

**NOTE:** When defining zones, assign delay zones first to Zones 1, 2, 3 and so on. Then, assign the other zone types to the remaining zones in any order desired.

Note that Tamper Alarms are always audible; refer to Section [25] Light 5.

▼ When Section [26] Zone Light 1 is ON, Zone 7 will be a Fire Zone and the Zone Definition programmed in Section [18] for Zone 7 will be ignored.

| *Default* | | |
|---|---|---|
| 0 0 | ___ | Zone 1 |
| 0 1 | ___ | Zone 2 |
| 0 1 | ___ | Zone 3 |
| 0 1 | ___ | Zone 4 |
| 0 1 | ___ | Zone 5 |
| 0 1 | ___ | Zone 6 |
| 0 1 | ___ | Zone 7▼ |
| 0 1 | ___ | Zone 8 |

| *First Digit* | *Second Digit* |
|---|---|
| 0 = Audible | 0 = Delay |
| 1 = Silent | 1 = Instant |
| 2 = Chime Audible | 2 = Interior |
| 3 = Chime Silent | 3 = Home Away |
| | 4 = 24-hour Bell |
| | 5 = 24-hour Bell/Buzzer |
| | 6 = 24-hour Buzzer |
| | 7 = Auxiliary Delay |
| | 8 = Interior Delay |

## [19] System Times **Page 23**

| *Default* | | |
|---|---|---|
| 0 3 0 | ____ | Entry Delay (seconds) |
| 0 4 5 | ____ | Exit Delay (seconds) |
| 0 4 5 | ____ | Auxiliary Entry Delay (seconds) |
| 0 6 0 | ____ | Auxiliary Exit Delay (seconds) |
| 0 0 3 | ____ | Bell Time-out (Valid entries are from 001 to 255 minutes) |
| 0 3 0 | ____ | AC Failure Reporting Delay (minutes) |
| 0 5 0 | ____ | Zone Loop Response Time (× 10 ms. Valid entries are from 010 to 255) |
| 0 3 0 | ____ | Test Transmission Interval (days) |

## [20] First System Option Code **Page 23**

| *Default* | | | *Zone Light ON* | *Zone Light OFF* |
|---|---|---|---|---|
| OFF | ___ | Zone Light 1 | Communicator disabled | Communicator enabled |
| OFF | ___ | Zone Light 2 | Alternate dialing | Standard dialing |
| OFF | ___ | Zone Light 3 | DTMF dialing | Pulse dialing |
| OFF | ___ | Zone Light 4 | Pulse Dialing Make/Break Ratio: 40/60 | Pulse Dialing Make/Break Ratio: 33/67 |
| OFF | ___ | Zone Light 5 | 1400Hz Radionics handshake | 2300Hz Radionics handshake |
| OFF | ___ | Zone Light 6 | ***Not Used*** | |
| ON | ___ | Zone Light 7 | Busy tone detection enabled | Busy tone detection disabled |
| OFF | ___ | Zone Light 8 | Force Dialing enabled | Force Dialing disabled |

## [21] Second System Option Code Page 24

| Default | | | Zone Light ON | Zone Light OFF |
|---|---|---|---|---|
| OFF | ____ | Zone Light 1 | TLM disabled | TLM enabled |
| OFF | ____ | Zone Light 2 | TLM trouble sounds bell when armed | TLM silent |
| OFF | ____ | Zone Light 3 | Alarms restore on bell time-out | Alarms restoral follows zone restoral |
| OFF | ____ | Zone Light 4 | Swinger Shutdown resets at 12:00 am | Swinger Shutdown resets on arming |
| ON | ____ | Zone Light 5 | Bell shutdown enabled | Bell shutdown disabled |
| OFF | ____ | Zone Light 6 | Bell output always pulsed | Bell output follows zone type |
| OFF | ____ | Zone Light 7 | Bell output inverted | Bell output normal |
| OFF | ____ | Zone Light 8 | User DLS window enabled | User DLS window disabled |

## [22] Third System Option Code Page 24

| Default | | | Zone Light ON | Zone Light OFF |
|---|---|---|---|---|
| OFF | ____ | Zone Light 1 | PO3: FTC output | PO3: Strobe output |
| OFF | ____ | Zone Light 2 | PO4: TLM and Alarm output | PO4: System Status output |
| OFF | ____ | Zone Light 3 | Hourly Test Transmission | Test Transmission as per times in [19] & [32] |
| OFF | ____ | Zone Light 4 | Test Transmission every 15 minutes | Normal Test Transmission |
| ON | ____ | Zone Light 5 | Bell silent for FTC | Bell sounds for FTC |
| ON | ____ | Zone Light 6 | Downloading Annunciation enabled | Downloading Annunciation disabled |
| ON | ____ | Zone Light 7 | ID Tone/Panel Answer Ack. enabled | ID Tone/Panel Answer Ack. disabled |
| OFF | ____ | Zone Light 8 | 2100Hz ID/Panel Answer Ack. Tone | 1300Hz ID/Panel Answer Ack. Tone |

## [23] Fourth System Option Code Page 25

| Default | | | Zone Light ON | Zone Light OFF |
|---|---|---|---|---|
| OFF | ____ | Zone Light 1 | Send Identified Partial Closings | Partial Closings not identified |
| OFF | ____ | Zone Light 2 | Auto-Arm sends Partial Closing Code | Auto-Arm does not send Partial Closing Code |
| ON | ____ | Zone Light 3 | Access Code needed to cancel Auto-Arm | Any keypress cancels Auto-Arm |
| ON | ____ | Zone Light 4 | Access Code needed to bypass zones | Access Code not required to bypass zones |
| OFF | ____ | Zone Light 5 | Master Code not user-programmable | Master Code user-programmable |
| OFF | ____ | Zone Light 6 | One-Time Use Code enabled | One-Time Use Code disabled |
| OFF | ____ | Zone Light 7 | Quick-Exit enabled | Quick-Exit disabled |
| OFF | ____ | Zone Light 8 | SW AUX resets for 5s on Arming | SW AUX does not reset on Arming |

## [24] Fifth System Option Code Page 25

| Default | | | Zone Light ON | Zone Light OFF |
|---|---|---|---|---|
| OFF | ____ | Zone Light 1 | Normally Closed zone loops | Double End-of-Line Resistor zone loops |
| OFF | ____ | Zone Light 2 | Single End-of-Line Resistor Zones | Zones use setting in Section [24] Light 1 |
| OFF | ____ | Zone Light 3 | Zones bypassed for 120s on power-up | Zones active on power-up |
| OFF | ____ | Zone Light 4 | Force Arm with AUX zones | No Force Arm with AUX zones |
| OFF | ____ | Zone Light 5 | Home Away Zones have Entry/Exit Delays | No Delays for Home Away Zones |
| OFF | ____ | Zone Light 6 | Bell sounds for [P] Key alarms | Bell Silent for [P] Key alarms |
| ON | ____ | Zone Light 7 | Keypad sounds for [P] Key alarms | Keypad silent for [P] Key alarms |
| OFF | ____ | Zone Light 8 | [F] Key disabled | [F] Key enabled |

## *[25] Sixth System Option Code* ***Page 26***

| *Default* | | *Zone Light ON* | *Zone Light OFF* |
|---|---|---|---|
| OFF | Zone Light 1 | Force Arming on Zone Types 0, 1, 2 and 3 | No Force Arming |
| ON | Zone Light 2 | Entry/Exit sounder enabled | Entry/Exit sounder disabled |
| OFF | Zone Light 3 | Arming Inhibit enabled | Arming Inhibit disabled |
| OFF | Zone Light 4 | PC16OUT Module on PO1 enabled | PC16OUT Module disabled |
| OFF | Zone Light 5 | Bell Always on Tamper | 24-Hour Bell/Buzzer on Tamper |
| OFF | Zone Light 6 | Installer Tamper Reset | Tamper follows restore |
| OFF | Zone Light 7 | Tamper Zone 8 enabled | Tamper Zone 8 disabled |
| OFF | Zone Light 8 | Engineer Reset enabled | Engineer Reset disabled |

## *[26] Seventh System Option Code* ***Page 27***

| *Default* | | *Zone Light ON* | *Zone Light OFF* |
|---|---|---|---|
| OFF | Zone Light 1 | Zone 7: Fire Zone▼ | Zone 7: Normal Zone |
| OFF | Zone Light 2 | ***Not Used*** | |
| OFF | Zone Light 3 | 2-minute keypad timeout | No keypad timeout |
| OFF | Zone Light 4 | Keypad Tamper Enabled | Keypad Tamper Disabled |
| OFF | Zone Light 5 | Battery test every 10s | Battery test every 4 minutes |
| OFF | Zone Light 6 | AC Trouble Not Reported | AC Trouble Reported |
| OFF | Zone Light 7 | AC supply: 60Hz | AC supply: 50Hz |
| OFF | Zone Light 8 | ***Not Used*** | |

▼ When Zone Light 1 is ON, the Zone Definition programmed in Section [18] for Zone 7 will be ignored.

## *[27] Maximum Dialing Attempts per Buffer* ***Page 27***

| *Default* | | |
|---|---|---|
| 0 3 | | Communications Buffer 1 |
| 0 3 | | Communications Buffer 2 |
| 0 3 | | Downloading Telephone Number |

## *[28] Swinger Shutdown and Transmission Delay/Bell Delay* ***Page 28***

| *Default* | | |
|---|---|---|
| 0 3 | | Swinger Shutdown |
| 0 0 | | Transmission Delay (seconds) |
| 0 0 | | Bell Delay (minutes) |

**Swinger Shutdown:** Enter a number from "01" to "99"; "00" provides unlimited transmissions per zone. Note that the Fire Zone will always transmit.

**Transmission Delay / Bell Delay:** The Transmission Delay is counted in seconds; the Bell Delay is counted in minutes.

***The Transmission and Bell Delays are applied to Burglary Zones only.***

## [29] Communications Format **Page 28**

**Default**

1 3 Communications Buffer 1

1 3 Communications Buffer 2

[00] Silent Knight / Ademco Slow, 10 BPS, 1400 Hz handshake
[01] Sescoa, Franklin, DCI, Vertex, 20 BPS, 2300 Hz handshake
[02] Silent Knight Fast, 20 BPS, 1400 Hz handshake
[03] Radionics, 40 BPS, 2300/1400 Hz handshake
[04] Radionics, 40 BPS, 2300/1400Hz handshake with parity
[05] Sescoa Super Speed
[06] Silent Knight / Ademco Slow, 10 BPS, 1400 Hz handshake, extended
[07] Sescoa, Franklin, DCI, Vertex, 20 BPS, 2300 Hz handshake, extended
[08] Silent Knight Fast, 20 BPS, 1400 Hz handshake, extended
[09] Radionics, 40 BPS, 2300/1400 Hz handshake, extended
[10] Radionics, 40 BPS, 2300/1400 Hz handshake, with parity, extended
[11] Sescoa Super Speed with identified openings and closings
[12] DTMF Fast, slot programming method
[13] Sur-Gard 4/3 DTMF with parity (2300Hz)
[14] Semadigit DTMF Pager Format
[15] Semaphone Pager
[16] Private Line

## [30] Communicator Call Direction Options **Page 31**

**Default**

1 Group A Zone Alarms, Tampers and Restorals
1 Group B Zone Alarms, Tampers and Restorals
1 Group A Access Codes: Openings and Closings
1 Group B Access Codes: Openings and Closings
1 Priority Alarms and Restorals
1 Maintenance Alarms and Restorals

***Enter:***

[0] No transmissions for this group
[1] Use Communications Buffer 1 only
[2] Use Communications Buffer 2 only
[3] Use both Communications Buffers

## [31] PO1, PO2 and AUX-IN Input Options **Page 31**

**Default**

1 PO1 Output PO1 can control the PC16OUT Module or all PO options described below
9 PO2 Output PO2 can control a Printer or all PO options described below

***PO Options***

0 Ground Start Pulse
1 Utility Output: [✱][7][1 or 2] with Access Code
2 Strobe Output (Latched Alarm)
3 20-minute Latched Alarm
4 System Status
5 Keypad Buzzer Follow Mode
6 Courtesy Pulse
7 Entry Delay Follower
8 Exit Delay Follower
9 PO Flashes During Exit Delay / PO ON if in Alarm
A PO Flashes During Armed Period
B Kiss-off Output
C Failure to Communicate
D Telephone Line Monitor with Alarm
E Line Seizure Output
F Remote Operation

***AUX-IN Input Options***

**Default**

0 2 AUX Input

00 Printer Connected to PO2 Enabled
01 Silent 24-hour Zone
02 Audible 24-hour Zone
03 Momentary Contact Arming
04 Blockschloss
05 Push to Set
06 Not Used
07 Forced Answer (for use with Downloading)

## [32] System Clock Times **Page 32**

**Default**

| | | |
|---|---|---|
| 9 9 9 9 | _ _ _ _ | Automatic Arming Time of Day |
| 9 9 9 9 | _ _ _ _ | Automatic Disarming Time of Day |
| 9 9 9 9 | _ _ _ _ | Test Transmission Time of Day |

Enter 4 digits: 00 to 23 hours, 00 to 59 minutes. If a function is not used, leave at the factory default settings.

## [33] Master Code **Page 32**

**Default**

1 2 3 4 _ _ _ _

## [34] Second Master Code **Page 32**

**Default**

A A A A _ _ _ _

## [35] Installer's Code **Page 32**

**Default**

2 5 8 5 _ _ _ _

## [36] Bypass Mask, Zones 1 - 8 **Page 33**

If a Zone Light is ON, that zone may be bypassed using the [✱][1] Bypass command.

**Default**

| | | |
|---|---|---|
| ON | _ | Zone 1 |
| ON | _ | Zone 2 |
| ON | _ | Zone 3 |
| ON | _ | Zone 4 |
| ON | _ | Zone 5 |
| ON | _ | Zone 6 |
| ON | _ | Zone 7 |
| ON | _ | Zone 8 |

## [37] Access Code Bypass Mask, Access Codes 1 - 8 **Page 33**

If a light is ON, then that Access Code may be used to bypass zones. ***If an Access Code is not required to bypass zones, programming in this section will not affect system operation. The Access Code Required for Bypass option is programmed in Section [23] Zone Light 4.***

**Default**

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

## [38] Access Code Bypass Mask, Access Codes 9 - 16 Page 33

If a light is ON, then that Access Code may be used to bypass zones. ***If an Access Code is not required to bypass zones, programming in this section will not affect system operation. The Access Code Required for Bypass option is programmed in Section [23] Zone Light 4.***

***Default***

| | | |
|---|---|---|
| ON | ___ | Access Code 9 |
| ON | ___ | Access Code 10 |
| ON | ___ | Access Code 11 |
| ON | ___ | Access Code 12 |
| ON | ___ | Access Code 13 |
| ON | ___ | Access Code 14 |
| ON | ___ | Access Code 15 |
| ON | ___ | Access Code 16 |

## [39] Keypad Lockout Options Page 33

***Default***

| | | |
|---|---|---|
| 0 0 | ___ | Number of attempts to enter a valid code before keypad locks out. Enter “00” to disable this feature. |
| 1 5 | ___ | Keypad Lockout Duration (in minutes) |

## [40] Group A Zone Assignment Page 33

If a Zone Light is ON, then that Zone is assigned to Group A

***Default***

| | | |
|---|---|---|
| ON | ___ | Zone 1 |
| ON | ___ | Zone 2 |
| ON | ___ | Zone 3 |
| ON | ___ | Zone 4 |
| ON | ___ | Zone 5 |
| ON | ___ | Zone 6 |
| ON | ___ | Zone 7 |
| ON | ___ | Zone 8 |

## [41] Group B Zone Assignment Page 33

If a Zone Light is ON, then that Zone is assigned to Group B

***Default***

| | | |
|---|---|---|
| ON | ___ | Zone 1 |
| ON | ___ | Zone 2 |
| ON | ___ | Zone 3 |
| ON | ___ | Zone 4 |
| ON | ___ | Zone 5 |
| ON | ___ | Zone 6 |
| ON | ___ | Zone 7 |
| ON | ___ | Zone 8 |

## [42] Group A Access Code Assignment *Page 33*

If a Zone Light is ON, then that Access Code is assigned to Group A. ***The Master Code (Access Code 1) must be assigned to both Group A and Group B in order for split arming to function properly.***

***Access Codes 9 through 16 are permanently assigned to Group A.***

| *Default* | | |
|---|---|---|
| ON | ____ | Access Code 1 |
| ON | ____ | Access Code 2 |
| ON | ____ | Access Code 3 |
| ON | ____ | Access Code 4 |
| ON | ____ | Access Code 5 |
| ON | ____ | Access Code 6 |
| ON | ____ | Access Code 7 |
| ON | ____ | Access Code 8 |

## [43] Group B Access Code Assignment *Page 33*

If a Zone Light is ON, then that Access Code is assigned to Group B. ***The Master Code (Access Code 1) must be assigned to both Group A and Group B in order for split arming to function properly.***

***Access Codes 9 through 16 cannot be assigned to Group B.***

| *Default* | | |
|---|---|---|
| ON | ____ | Access Code 1 |
| ON | ____ | Access Code 2 |
| ON | ____ | Access Code 3 |
| ON | ____ | Access Code 4 |
| ON | ____ | Access Code 5 |
| ON | ____ | Access Code 6 |
| ON | ____ | Access Code 7 |
| ON | ____ | Access Code 8 |

## [44] Number of Rings Before Answer and Downloading Configuration *Page 34*

This section configures the system for downloading functions. Program the number of rings to be allowed before the system will answer an incoming call from the downloading computer with Zone Lights 1 through 4. To turn a Zone Light ON or OFF, press its corresponding number key. If the light is OFF when the key is pressed, the light will come ON; if the light is ON when the key is pressed, the light will be shut OFF.

The default setting for the number of rings is **15**. The minimum number of rings is 1; at least one light must be ON. The maximum number of rings is 15 (all lights ON).

| | ***Number of Rings*** | | | | | | | | | | | | | | ***Default*** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | **15** |
| Zone Light 1 | On | Off | On | Off | On | Off | On | Off | On | Off | On | Off | On | Off | On |
| Zone Light 2 | Off | On | On | Off | Off | On | On | Off | Off | On | On | Off | Off | On | On |
| Zone Light 3 | Off | Off | Off | On | On | On | On | Off | Off | Off | Off | On | On | On | On |
| Zone Light 4 | Off | Off | Off | Off | Off | Off | Off | On | On | On | On | On | On | On | On |

| *Default* | | | *Zone Light ON* | *Zone Light OFF* |
|---|---|---|---|---|
| ON | ____ | Zone Light 1 | Set light patterns for number of rings as described in table above. | |
| ON | ____ | Zone Light 2 | Minimum number = 1 | |
| ON | ____ | Zone Light 3 | Maximum number = 15 (all lights on) | |
| ON | ____ | Zone Light 4 | At least one light must be on. | |
| OFF | ____ | Zone Light 5 | Downloading enabled | Downloading disabled |
| OFF | ____ | Zone Light 6 | User initiated call up | No user initiated call up |
| OFF | ____ | Zone Light 7 | Answering machine connected | No answering machine |
| OFF | ____ | Zone Light 8 | Call back enabled | Call back disabled |

## *[45] Double Call Timer* **Page 34**

***Default***

0 6 0 _ _ _ Enter a 3-digit time, in seconds, from 0 to 255.

## *[46] Panel Identification Code* **Page 34**

***Default***

2 5 8 1 _ _ _ _

## *[47] Downloading Access Code* **Page 34**

***Default***

2 5 0 5 _ _ _ _

## *[48] Downloading Telephone Number* **Page 35**

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

## *[49] Printer Configuration* **Page 35**

| ***Default*** | | | ***Zone Light ON*** | ***Zone Light OFF*** |
|---|---|---|---|---|
| OFF | _ | Zone Light 1 | 110 baud | Not 110 baud |
| OFF | _ | Zone Light 2 | 300 baud | Not 300 baud |
| ON | _ | Zone Light 3 | 1200 baud | Not 1200 baud |
| OFF | _ | Zone Light 4 | Printer only | Printer and normal communication |
| OFF | _ | Zone Light 5 | See note | Printer and normal communication |
| OFF | _ | Zone Light 6 | RTS: PIN 4 or DTR: PIN 20 | SRTS: PIN 11 |
| OFF | _ | Zone Light 7 | ***For future use*** | ***For future use*** |
| OFF | _ | Zone Light 8 | ***For future use*** | ***For future use*** |

***NOTES:***

**If Zone Light 5 is ON and Zone Light 4 is OFF:** All items whose reporting codes are programmed for Communications Buffer 1 will be communicated to the monitoring station AND printed on the printer. All items whose reporting codes are programmed for Communications Buffer 2 will NOT be communicated to the monitoring station but will be printed on the printer.

**If Zone Lights 4 and 5 are OFF:** All items whose reporting codes are programmed for Communications Buffer 1 or 2 will be printed on the printer and communicated to the monitoring station.

**If Zone Light 4 is ON:** All items whose reporting codes are programmed for Communications Buffer 1 or 2 will be printed on the printer but will not be communicated to the monitoring station. In this case it is assumed that telephone lines are not connected. DO NOT disable the communicator. The First System Option Code, Zone Light [1] must be OFF. To avoid TLM trouble, program Second System Option Code Zone Light [1] to be ON.

**NOTE:** In order to properly program the baud rate, only ***one*** zone light - either 1, 2 or 3 - should be ON.

## *[50] Printer Language Option* **Page 35**

***Default***

0 3 _ _ Enter: 00 for English
01 for French
02 for Dutch
03 for German

## *[89] Print Event Buffer* **Page 35**

## *[90] Installer Lockout Enable* **Page 36**

Enter: [90][Installer's Code]

## *[91] Installer Lockout Disable* **Page 36**

Enter: [91][Installer's Code]

## *[99] Factory Default* **Page 36**

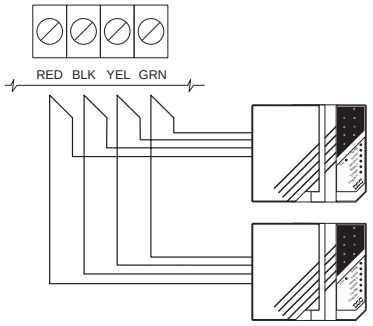
Enter: [99][Installer's Code]

# KEYPAD AND FIRE CIRCUIT WIRING INFORMATION

## Keypad Hook-up Diagram and Wiring Chart

1. Each keypad has four coloured leads: red (RED), black (BLK), yellow (YEL) and green (GRN). Connect the leads to the corresponding terminals on the control panel.
2. Up to 5 keypads may be connected in parallel. Do not connect multiple keypads on the same loop.
3. The wiring chart provides the maximum wire run for various wire gauges. Wire run lengths are calculated for the keypad's maximum current draw (when all keypad lights are ON).
4. For stand-by loading purposes, it is recommended that a current draw of 20mA per keypad be used. 20mA represents the control panel in the disarmed state with two zones in alarm. ***NOTE: If more that three keypads are connected, subtract 60mA from the maximum AUX supply for each keypad in excess of three.***

**NOTE:** If two wires of the same gauge are paralleled, the run length may be doubled. For example, if eight 22AWG wires (2 RED, 2 BLK, 2 YEL and 2 GRN) are run to the keypad, the run length may be doubled from 540 feet (164.5 m) to 1080 feet (329 m).




**KEYPAD WIRING CHART**

| Wire Gauge | Maximum Run Length Keypad to Panel (feet/metres) |
|---|---|
| AWG24 | 330 / 100 |
| AWG22 | 540 / 164 |
| AWG20 | 850 / 259 |
| AWG19 | 1000 / 305 |
| AWG18 | 1360 / 414 |

## Fire and Bell Circuit Wiring Charts

**BELL LOOP WIRING CHART**

| Loop Current mA | AWG 14 | AWG 16 | AWG 18 | AWG 19 | AWG 22 |
|---|---|---|---|---|---|
| | Maximum Run to EOL Resistor (ft/m) | | | | |
| 50 | 2750/838 | 1740/530 | 1090/332 | 869/264 | 433/131 |
| 100 | 1375/419 | 870/265 | 545/166 | 435/132 | 217/66 |
| 200 | 690/210 | 435/132 | 270/82 | 217/66 | 144/44 |
| 300 | 460/140 | 290/88 | 180/55 | 144/44 | 108/33 |
| 400 | 345/105 | 215/65 | 135/41 | 108/33 | 54/16 |
| 500 | 275/83 | 170/52 | 105/32 | 86/26 | 43/13 |
| 600 | 230/70 | 140/43 | 90/27 | 72/22 | 36/11 |
| 700 | 195/59 | 125/38 | 80/24 | 62/19 | 30/9 |

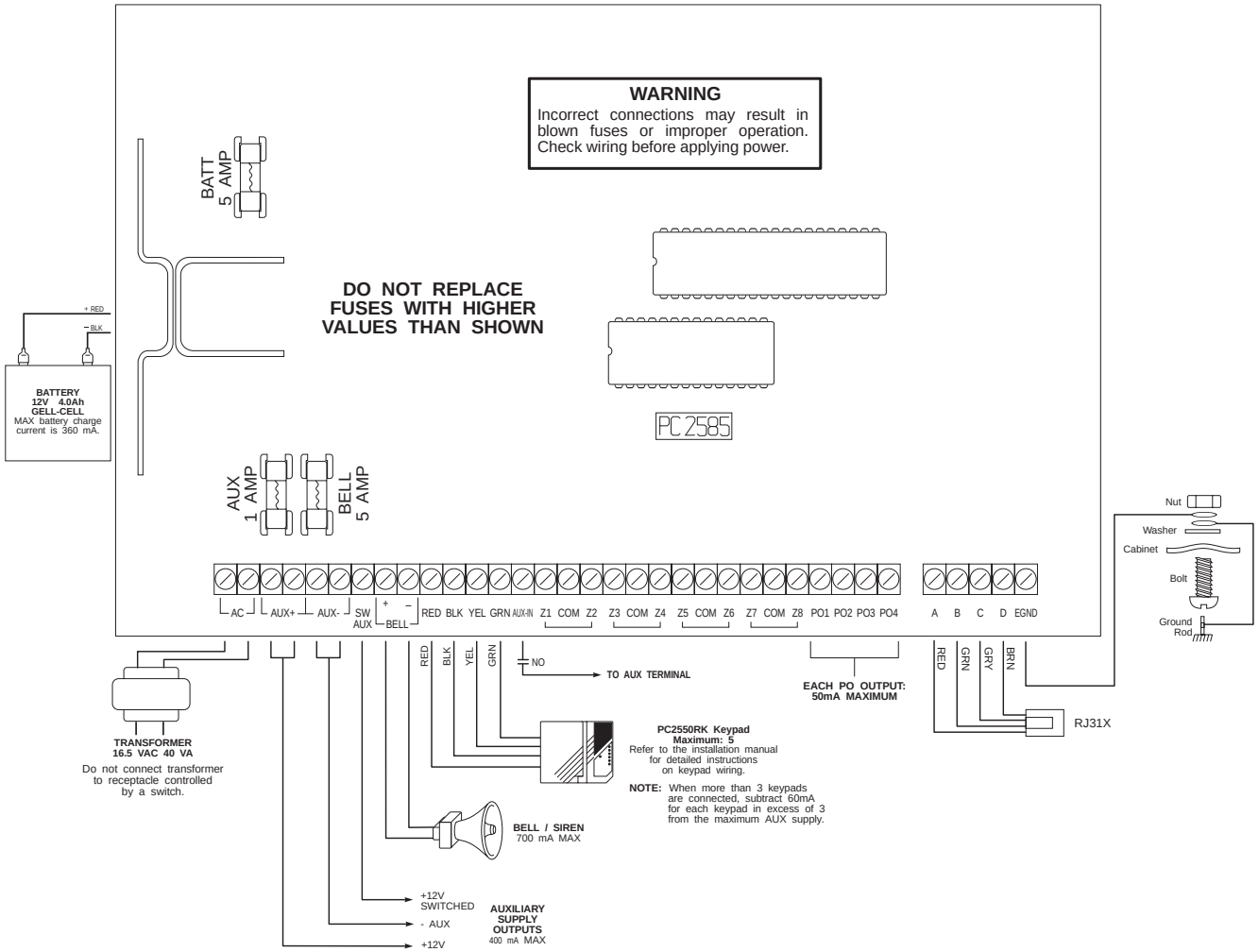
**ALARM INITIATING LOOP WIRING CHART**

| Wire Gauge | Maximum Run to End of Line Resistor (feet/metres) |
|---|---|
| AWG14 | 15500 / 4724 |
| AWG16 | 9740 / 2968 |
| AWG18 | 6120 / 1865 |
| AWG19 | 4860 / 1481 |
| AWG20 | 3840 / 1170 |
| AWG21 | 3060 / 932 |
| AWG22 | 2420 / 737 |

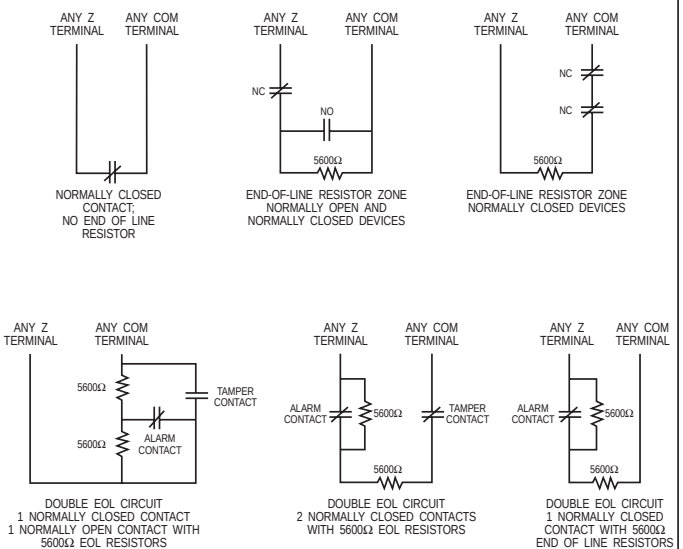
**SMOKE DETECTOR POWER LOOP WIRING CHART**

| Loop Current mA | AWG 14 | AWG 16 | AWG 18 | AWG 19 | AWG 22 |
|---|---|---|---|---|---|
| | Maximum Run to End of Line Relay (feet/metres) | | | | |
| 50 | 4750/1448 | 3000/914 | 1880/573 | 1500/457 | 750/229 |
| 100 | 2375/724 | 1500/457 | 940/287 | 750/229 | 370/113 |
| 200 | 1190/363 | 750/229 | 470/143 | 370/113 | 185/56 |
| 300 | 790/241 | 500/152 | 310/94 | 250/76 | 120/37 |
| 400 | 595/181 | 375/114 | 235/72 | 185/56 | 90/27 |

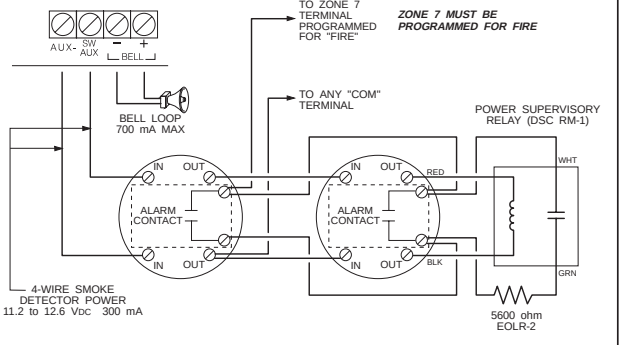
# HOOK-UP DIAGRAM




## TYPICAL ZONE CIRCUITS



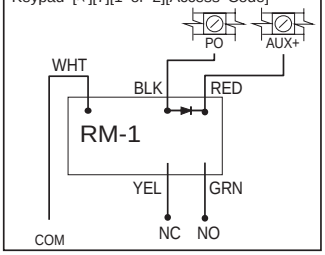

## SMOKE DETECTOR CONNECTIONS



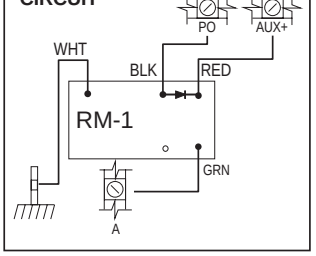

Smoke Detector must be latching type (such as ESL Model 445C).
To reset smoke detectors, press [✻] then hold down [4] for 3 seconds.

## UTILITY OUTPUT RELAY

Keypad [✶][7][1 or 2][Access Code]




## GROUND START CIRCUIT




**All voltage outputs are rated 12VDC unregulated**
**Temperature Range:** 0˚C-49˚C (32˚F-120˚F)
**Maximum Humidity:** 85% R.H.

1645 Flint Road, Downsview, Ontario, Canada M3J 2J6
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Printed in Canada 29002617 R0

# Installation Manual

## PC2585

Software Version 1.1R
DLS-1 V6.2KR and up

• 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.

DSC™
Security Products

# 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, barbeques, 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 waming 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.

# TABLE OF CONTENTS