# TABLE OF CONTENTS

1. INTRODUCTION .................................................. 3
2. SPECIFICATIONS ............................................... 3
  2.1 General Data ................................................ 3
  2.2 RF Section .................................................. 3
  2.3 Electrical Data ............................................. 3
  2.4 Communication ............................................. 4
  2.5 Physical Properties ........................................ 4
3. INSTALLATION .................................................. 4
  3.1 Unpacking the Equipment ................................. 4
  3.2 Supplying Power to the Unit .............................. 4
  3.3 System Planning & Programming ......................... 4
  3.4 Mounting ................................................... 5
  3.5 Wiring ....................................................... 5
  3.6 Backup Battery Insertion .................................. 6
  3.7 Optional GSM Module Mounting ......................... 7
  3.8 Power Cable Connection ................................... 7
  3.9 Control Panel Final Closure ............................ 7
4. PROGRAMMING .................................................. 8
  4.1 INTRODUCTION ............................................. 8
  4.1.1 General Guidance ....................................... 8
  4.1.2 Entering an Invalid Installer Code ................... 8
  4.1.3 Installer’s Menu ......................................... 8
  4.1.4 Setting a New Installer Code ......................... 8
  4.1.5 Setting a New Installer Code in PowerMaxExpress that has 2 Installer Codes .... 8
  4.2 ENROLLING WIRELESS DEVICES AND KEYFOB TRANSMITTERS ......................... 9
    4.2.1 General Guidance ..................................... 9
    4.2.2 Enrolling Type ......................................... 9
    4.2.3 Enroll/Delete Sensors ................................ 9
    4.2.4 Enroll/Delete Keyfob Transmitters .................. 9
    4.2.5 Enroll/Delete Wireless Commander ................. 9
    4.2.6 Enroll/Delete 2-Way Keypad ........................ 9
    4.2.7 Enroll/Delete Wireless Siren ......................... 9
  4.3 DEFINING ZONE TYPES, NAMES, CHIME ZONES & PARTITION ...................... 11
  4.4 DEFINING CONTROL PANEL PARAMETERS .................. 12
    4.4.1 Preliminary Guidance ................................ 12
    4.4.2 Entry Delays 1&2 ..................................... 12
    4.4.3 Exit Delay ............................................ 12
    4.4.4 Bell Time ............................................. 12
    4.4.5 Abort Time ............................................ 12
    4.4.6 Alarm Cancel .......................................... 13
    4.4.7 Quick Arm ............................................. 13
    4.4.8 Bypass ............................................... 13
    4.4.9 Exit Mode ............................................. 13
    4.4.10 Piezo Beeps ......................................... 13
    4.4.11 Trouble Beeps ....................................... 13
    4.4.12 Panic Alarm .......................................... 13
    4.4.13 Swinger Stop ........................................ 13
    4.4.14 Cross Zoning ........................................ 13
    4.4.15 Supervision .......................................... 13
    4.4.16 NOT READY ........................................... 13
    4.4.17 AUX Button A ........................................ 14
    4.4.18 AUX Button B 2-W-KF ................................. 14
  4.4.19 Jam Detect ............................................ 14
  4.4.20 Latchkey .............................................. 14
  4.4.21 “Not Active” ......................................... 14
  4.4.22 Back Light (Optional) ............................... 14
  4.4.23 Duress ............................................... 14
  4.4.24 Piezo Siren .......................................... 14
  4.4.25 Reset Option .......................................... 14
  4.4.26 Tamper Option ........................................ 14
  4.4.27 Siren On Line ......................................... 14
  4.4.28 Memory Prompt ........................................ 14
  4.4.29 Disarm Option ......................................... 14
  4.4.30 Bell/Rep. Option ..................................... 15
  4.4.31 Low-Bat Ack ........................................... 15
  4.4.32 Screen Saver .......................................... 15
  4.4.33 Confirm Alarm ......................................... 15
  4.4.34 AC FAIL REP .......................................... 15
  4.4.35 User Permission ....................................... 15
  4.4.39 Key Zones Options (Optional) ....................... 15
  4.4.41 Cancel Announcement ................................. 15
  4.4.42 Abort Announcement .................................. 15
  4.4.43 CP-01 ................................................ 15
  4.5 DEFINING COMMUNICATION PARAMETERS .................. 17
    Preliminary Guidance ...................................... 17
    4.5.1 PSTN / GSM (Fig. 4.5 Detail A) .................... 17
    4.5.2 GPRS / BB [Fig. 4.5 Detail B] ...................... 17
    4.5.3 C.S. Reporting (Fig. 4.5 Detail C) ............... 18
    4.5.4 Private Report (Fig. 4.5 Detail D) ............... 20
  4.6 GSM Auto Detection ...................................... 24
  4.7 Broadband Module Auto Detection ..................... 24
  4.9 DEFINE CUSTOM .......................................... 25
  4.10 DIAGNOSTIC TEST ....................................... 25
    4.10.1 GPRS Communication Test ......................... 25
    4.10.2 LAN Connection Test ................................ 25
  4.11 USER FUNCTIONS ......................................... 26
  4.12 RETRIEVING FACTORY DEFUALTS ...................... 26
  4.13 SERIAL NUMBER .......................................... 27
  4.14 CALLING UPLOAD/DOWNLOAD SERVER ................... 27
  4.15 ENABLING/DISABLING PARTITIONS ...................... 27
  4.16 WALK-TEST ............................................... 28
  5. TESTING PROCEDURES ...................................... 28
    5.1 Preparations ............................................ 28
    5.2 Diagnostic Test ......................................... 28
    5.3 Keyfob Transmitter Test ............................... 28
    5.4 Emergency Transmitter Test ........................... 28
  6. MAINTENANCE ................................................. 28
    6.1 Dismounting the Control Panel ....................... 28
    6.2 Replacing the Backup Battery ......................... 28
    6.3 Fuse Replacement ....................................... 28
    6.4 Replacing/Relocating Detectors ....................... 28
  7. READING THE EVENT LOG .................................... 28
APPENDIX A. Detector Deployment & Transmitter
MESSAGE TO THE INSTALLER

The PowerMaxExpress control panel is supplied with 2 instruction manuals:

- Installer Guide (this manual - for your exclusive use)
- User's Guide (for your use during installation only - Must be handed over to the master user after testing the system).

Appendices A.1 and A.2 will help you prepare an installation plan. Please take time to fill out the forms - your job will become much easier and confusion will be prevented. Filling out the forms will also help you create a list of detectors and transmitters that must be obtained for the particular application. Compatible detectors and transmitters are listed and described briefly in Appendix D.

Remember - it is advisable to power up the control panel temporarily after unpacking and program it on the work bench, in accordance with the installation plan.

The programming flow charts in the programming section show all options available for each parameter. Factory defaults are marked with a dark box to their right, and other options (that can be selected instead) are marked by clear boxes. This method allows you to put a checkmark in the appropriate clear box whenever you deviate from the factory defaults.

Most of the programming section paragraph numbers correlate with the programming menu numbers. For example, paragraph 4.4.19 describes the "Jam detect", that exists in menu 4 (define panel), sub-menu 19 (Jam detect).

Although setting the correct time and date is one of the user tasks, we recommend that you set the time and date in the course of programming. Access to the "User Settings" for the installer is possible through item 10 on the installer's menu or through the user menu (see User's manual section 7).

After programming, proceed to install the system as detailed in the Installation Instructions, from paragraph 3.4 onward.

The installer should verify line seizure. Be aware of other phone line services such as DSL. If DSL service is present on the phone line, you must install a filter. It is suggested to use the DSL alarm filter model Z-A431PJ31X manufactured by Excelsus Technologies, or equivalent. This filter simply plugs into the RJ-31X jack and allows alarm reporting without breaking the internet connection.
1. INTRODUCTION

The PowerMaxExpress is a user and installer-friendly, 29-zone fully-supervised wireless control system.

IMPORTANT NOTE: Partitioning refers only to purchased control panels that support the partitioning feature.

The PowerMaxExpress includes an optional partition feature. Partitioning allows you to have up to four independently controllable areas with different user codes assigned to each partition. A partition can be armed or disarmed regardless of the status of the other partitions within the system. For example, you can define the garage as partition 1, the basement as partition 2, the house as partition 3 and a safe as partition 4. Since each partition is independent of other partitions, you can arm or disarm each partition as desired without altering the states of the other partitions. Therefore, while arming or disarming your home this will not interfere with the safe that you desire to arm most of the time.

The system is designed to function in an appealing way to the user and also offers features that make installers’ life easier than ever before:

EASY TO MAINTAIN
- Alarm memory and trouble data are displayed upon request.
- Diagnostic test provides visual and audible indication of the signal level of each detector.
- Remote control from distant telephones.
- Event log stores and displays information.
- Upload / download from distant computer via telephone line or cellular modem.

QUICK PROGRAMMING
- Simple programming logic, fully menu driven.
- Multiple-choice selection of options for each parameter.
- Unequivocal visual prompts.
- Installer access to the user menu.

2. SPECIFICATIONS

2.1 General Data

Zones Number: 28 wireless zones, 1 hardwired input.

Hardwired Zone Requirements: 2.2 kΩ E.O.L. resistance (max. resistance of wires 220 Ω).

Zone Types: Interior follower, interior, perimeter, perimeter follower, delay 1, delay 2, 24hr silent, 24hr audible, fire, non-alarm, emergency, gas, flood, temperature and home/delay.

User Codes: 8 codes, 4 digits each (9999 different combinations), Code 0000 is not allowed.

Control Facilities:
- Integral keypad
- One way / two way keypads.
- SMS commands via optional GSM/GPRS module.
- Remote control by telephone.

Note: For SIA CP-01 compliance, when using MCT-234 an external siren must also be used.

Display: Single line, backlit 16-character LCD.

Arming Modes: AWAY, HOME, AWAY-INSTANT, HOME-INSTANT, LATCHKEY, FORCED, BYPASS.

Alarm inhibited during a single arming period (swinger stop) after: 1, 2, 3, alarm/tamper/fault, or not inhibited (programmable / selectable).

Note: To comply with EN requirements, the swinger stop should be set to 3.

Alarm Types: Silent alarm, siren alarm (future option) or sounder (internal) alarm, in accordance with zone attributes.

Siren Signals: Continuous (intrusion / 24 hours / panic); triple pulse - pause - triple pulse..., (fire).

Siren (bell) Timeout: Programmable (4 min. by default).

Internal Sounder Output: At least 85 dBA at 10 ft (3 m).

Supervision: Programmable time frame for inactivity alert

Special Functions:
- Chime zones
- Diagnostic test and event log.
- Local and Remote Programming over Telephone, GSM /GPRS connections.
- Calling for help by using an emergency transmitter.
- Tracking inactivity of elderly, physically handicapped and infirm people.

Data Retrieval: Alarm memory, trouble, event log.

Real Time Clock (RTC): The control panel keeps and displays time and date. This feature is also used for the log file by providing the date and time of each event.

Compliance with U.S. Standards:
- USA: (FCC) CFR 47 part 15 and part 88, UL 1023, UL 985, UL 1635, UL 1637, SIA CP-01
- Canada: RSS 210, ULC S545-02, ULC C1023,CSA C22.2#205
- 120VAC 60Hz input, 9VAC 1000mA output.

According to the European standard EN50082-1, the Powermax Express security grading is 2 – “low to medium risk” and environmental classification is II – “indoor general” and the power supply type is A.

Compliance with European CE Standards:
- The Powermax Express has been certified to EN 50082-1, EN301489-3,7, EN61000-4-6, EN60950, EN300220, EN50130-4, EN50130-5, EN50131-3, EN50131-6 tested by the Dutch testing and certification body Telefication B.V.


GSM standards:
- Europe: Complies with CE standards 3GPP TS 51.010-1, EN 301 511, EN301489-7
- USA: FCC 47 Part 22 (GSM850) and Part 24 (GSM 1900).
- 3GPP TS 51.010-1, EN50131-1, the Powermax Express security grading is 2 – “low to medium risk” and environmental classification is II – “indoor general” and the power supply type is A.

2.2 RF Section

Operating Frequencies (MHz): 315 (in USA & Canada), 433.92, 868.95 or other UHF channel per local requirement in the country of use.

Receiver Type: Super-heterodyne, fixed frequency

Receiver Range: 600 ft (180 m) in open space

Antenna Type: Spatial diversity

Coding: PowerCode and/or CodeSecure™

2.3 Electrical Data

External AC/DC adapter:
- Europe: 230VAC 50Hz input, 9VAC 700mA output.
- USA: 120VAC 60Hz input, 9VAC 1000mA output.
Current Drain: Approx. 70 mA standby, 1600 mA peak at full load.

Minimum battery voltage: 4.8V

Note: For CE compliance the battery backup period shall exceed 12 hours.

Backup Battery Pack: 4.8V 1300 mAh, rechargeable NiMH battery pack, p/n GP130AAM4YMX, manufactured by GP or equivalent.

Note: For compliance with UL standards the battery backup period shall exceed 24 hours.

Backup Battery Pack: 4.8V 2200 mAh, rechargeable NiMH battery pack, p/n GP230AHC4YMX, manufactured by GP.

Battery Test: Once every 10 seconds.

2.4 Communication

Built-in Modem: 300 baud, Bell 103 protocol

Data Transfer to Local Computer: Via RS232 serial port

Report Destinations: 2 central stations, 4 private telephones.

Reporting Format Options: SIA, Pulse 4/2 1900/1400 Hz, Pulse 4/2 1800/2300 Hz, Contact ID, Scancom.

Pulse Rate: 10, 20, 33 and 40 pps - programmable

Message to Private Phones: Tone

Ring Detection: The unit does not support ring detection without DC voltage present on the telephone lines.

2.5 Physical Properties

Operating Temp. Range: 14°F to 120°F (-10°C to 49°C)

Storage Temp. Range: -4°F to 140°F (-20°C to 60°C)

Humidity: 85% relative humidity, @ 30°C (86°F)

Size: 193 x 178 x 50 mm (7-5/8 x 7 x 2 in.)

Weight: 658g (23 Oz) (with battery)

Color: White

3. INSTALLATION

Note: This system must be checked by a qualified technician at least once every three (3) years.

This equipment is designed to be connected to the telephone network using RJ11 connector which complies with Part 68 rules and requirements adopted by ACTA and properly installed RJ31X connector. See drawing below for details.

Customer Premises Equipment and Wiring

Network Service Provider's Facilities

Telephone Line

Network Demarcation Point

Alarm Dialing Equipment

Unused RJ-11 Jack

Computer

Fax Machine

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Tel
Gather up all transmitters and detectors used in the system and mark each one in accordance with your deployment plan.

Program the system now as instructed in the programming section.

3.4 Mounting
Required tool: Philips screwdriver #2.
PowerMaxExpress mounting process is shown in figure 3.1 - 3.8.

3.5 Wiring
Required tools: Cutter and slotted screwdriver - 3 mm blade.
PowerMaxExpress wiring is shown in figure 3.2.

Figure 3.1 – Back Unit Mounting

CABLES ROUTING GUIDE

1. Remove the left or right side cables entry knockout(s) and enter the required cable(s).

2. Remove and use as cable clamp(s)

D-302017 5
PHONE WIRING
Connect telephone cable to SET connector and telephone line cable to LINE connector (through the desired wiring cable entry).

PHONE WIRING IN NORTH AMERICA

ZONE WIRING

Note: Do not use mains cable other than that supplied by the manufacturer (3 m long).

WARNING! When plugging SIREN & ZONE terminals back into place, be sure to align them carefully with the pins on the PCB. Misaligned or reverse insertion of terminals may damage internal PowerMaxExpress circuits!

3.6 Backup Battery Insertion
Connect battery pack as shown in the next drawing.
3.7 Optional GSM Module Mounting

**Note:** The GSM module is used with an internal antenna. Optional external antenna can be used.

**Caution:** Do not install or remove the GSM module when the system is powered by AC power or backup battery.

1. Plug in the GSM Module and fasten it as follows:

   - Slide top cover
   - Open cover
   - Align SIM card in cover (note cover orientation)
   - Slide SIM card into cover
   - Rotate cover to close
   - Lock cover to close

   **Figure 3.4 - Optional GSM Module Mounting**

2. Insert the SIM card into the GSM module

3.8 Power Cable Connection

Connect the power cable and close the control panel as shown below. Electrical socket-outlet shall be installed near the equipment and shall be easily accessible.

**WARNING! DO NOT USE AN OUTLET CONTROLLED BY A WALL SWITCH.**

**Note:** This equipment should be installed in accordance with Chapter 2 of the National Fire Alarm Code, ANSI/NFPA 72, (National Fire Protection Association).

3.9 Control Panel Final Closure

Control panel final closure is shown below.
4. PROGRAMMING

4.1 INTRODUCTION

4.1.1 General Guidance
We recommend to program the PowerMaxExpress on the work bench before actual installation. Operating power may be obtained from the backup battery or from the AC power supply.

The installer’s menu is accessible only to those who know the installer’s 4-digit code, which is 9999 by factory default. **Note**: Access to the installer menu, in PowerMaxExpress that has "User Permission" enabled (for example in UK) is accessible only at the end of the user menu. This option can be changed if necessary (see par. 4.4.36).

For PowerMaxExpress that has 2 installer codes (not applicable in UK), the default INSTALLER code is 8888 and the default MASTER INSTALLER code is 9999.

The following actions can be done only by using the master installer code:

- Changing master installer code.
- Resetting the PowerMaxExpress parameters to the default parameters,
- Defining specific communication parameters, as detailed in a note in figure 4.5C.

Obviously, you are expected to use this code only once for gaining initial access, and replace it with a secret code known only to yourself.

You will mainly use 5 control pushbuttons during the entire programming process:

- to move one step forward in a menu.
- to move one step backward in a menu.
- to enter the relevant menu or confirm data.
- to move one level up in a menu.
- to return to the "OK TO EXIT" state.

The sounds you will hear while programming are:

- Single beep, heard whenever a key is pressed.
- Double beep, indicates automatic return to the normal operating mode (by timeout).
- Happy Melody (- - - - -), indicates successful completion of an operation.
- Sad Melody (----), indicates a wrong move or rejection.

4.1.2 Entering an Invalid Installer Code
If you enter an invalid installer code 5 times, the keypad will be automatically disabled for 90 seconds and the message WRONG PASSWORD will be displayed.

4.1.3 Installer’s Menu
The installer’s menu is shown in figure 4.1a. The text in rectangles represents the current PowerMaxExpress display.

4.1.4 Setting a New Installer Code
To set an installer code, perform the actions that are presented in figure 4.1b. When you are instructed to enter code, enter a 4-digit code.

4.1.5 Setting a New Installer Code in PowerMaxExpress that has 2 Installer Codes
For PowerMaxExpress with 2 installer codes, INSTALLER code (default 8888) and MASTER INSTALLER code (default 9999), set new codes as shown in figure 4.1c.

For details regarding the different authorization levels when logging in with installer code and master installer code, refer to the note inside figure 4.5C (DEFINE COMM).

By using the master installer code, the menu enables changing both master installer code and installer code. By using the installer code, the menu enables changing the installer code only.

---

**Figure 4.1a - Installer’s Menu**

---

**Figure 4.1b - Setting a New Installer Code (see note)**
4.2 ENROLLING WIRELESS DEVICES AND KEYFOB TRANSMITTERS

4.2.1 General Guidance
The ENROLLING mode has the following sub-modes:
• ENROLLING TYPE (wireless devices)
• ENROLL SENSORS (including wireless repeater MCX-610).
• ENROLL KEYFOB (multi-button CodeSecure transmitters)
• ENROLL WL 1WAY KP (wireless commander MCM-140+)
• ENROLL WL 2WAY KP (wireless 2-way keypad MKP-150/ MKP-151)
• ENROLL WL SIREN (wireless siren)

Before beginning, gather all the devices that you intend to enroll and make sure they all have batteries installed.

Your control panel must recognize the unique identification code (ID) of each such device in order to supervise them, receive their signals and respond accordingly.

Attention! CodeSecure transmitters are mainly used for arming/disarming and cannot be enrolled to zones. In order to enroll to zones, use only non-CodeSecure wireless devices.

4.2.2 Enrolling Type
Here you determine whether to enroll a wireless device by normal transmission or by device Tamper function (opening its cover). Options: normal, or by tamper.

4.2.3 Enroll/Delete Sensors
Wired detector can be enrolled in zone 29 and wireless detectors can be enrolled in zones 01-28.

STOP
• Before enrolling, the lens at the front of PIR and dual-technology sensors should be masked to prevent inadvertent transmission.
• Make sure that magnetic contact transmitter is together with its magnet, to prevent it from sending alarm transmission.

To enroll / delete wired / wireless sensors, refer to Fig. 4.2.

4.2.4 Enroll/Delete Keyfob Transmitters
Keyfob transmitters are multi-button wireless CodeSecure™ transmitters. Eight system users use them for better, quicker and safer control over various system functions. To enroll / delete 1-way or 2-way keyfob transmitters, refer to figure 4.2.

4.2.5 Enroll/Delete Wireless Commander
The Wireless Commander (MCM-140+) is a remote control unit that enables the user to remotely control the system. To enroll / delete up to 8 wireless commanders, refer to figure 4.2 (Enroll WL 1-way KP).

4.2.6 Enroll/Delete 2-Way Keypad
The 2-way keypad, type MKP-150/MKP-151, enables the user to remotely control the system and also to receive data from the system (alarm and trouble data). To enroll up to two 2-way keypads, refer to figure 4.2.

4.2.7 Enroll/Delete Wireless Siren
The wireless siren is a remote siren that is activated upon predefined events by the PowerMaxExpress system. To enroll / delete up to 2 wireless sirens, refer to figure 4.2.

Note: Installer Code should never be programmed as ‘0000’. Doing so will lock the user out of the installer menu!
Figure 4.2 - Enrolling / Deleting Wireless Devices / Keyfobs / Wireless Commanders / Wireless Sirens

* Keyfob enrolling can be performed by the installer or by the user (via USER SETTINGS menu).
** A black box in the display means that a device is enrolled (the system has learned its ID). No black box indicates that the device is not enrolled.
*** Initiate either normal transmission or the device tamper function (see ENROLLING TYPE, Par. 4.2.2).
**** Select "higher" sensitivity for far wireless device, "lower" for near devices.
***** MKP-150/151 is not compatible for use when partition is enabled.
4.3 DEFINING ZONE TYPES, NAMES, CHIME ZONES & PARTITION

This mode allows you to assign one of 15 zone types to each of the system's 29 (wireless & wired) zones. In addition, it also allows you to assign a name to each zone and determine whether the zone will operate as a chime zone (only while the system is in the disarmed or Home arming state). When a chime zone is triggered, chime melody or zone name is heard (there are 2 selectable chime modes - Melody chime or Chime Off).

A list of factory defaults is printed in table 1. You may fill out the blank columns even before you start and proceed to program according to your own list.

**Remember!**
A delay zone is also a perimeter zone by definition.
Zone types are fully explained in Appendix C.

### Selectable Zone Names
- Attic
- Dining room
- Hall
- Utility room
- Back door
- Downstairs
- Kitchen
- Yard
- Basement
- Emergency
- Laundry room
- Custom 1
- Bathroom
- Fire
- Living room
- Custom 2
- Bedroom
- Front door
- Master bath
- Custom 3
- Child room
- Garage
- Master bdrm
- Custom 4
- Den
- Garage door
- Office
- Custom 5
- Guest room
- Upstairs
- Attic
- Back door
- Basement
- Bathroom
- Bedroom
- Child room
- Closet
- (see list above)
- Attic
- Back door
- Basement
- Bathroom
- Bedroom
- Child room
- Closet
- (see note)
- Melody-chime
- Chime off
- (see note)
- Partition 1
- Partition 2
- Partition 3
- Partition 4
- Partition 1
- Partition 2
- Partition 3
- Partition 4

### Table 1 - DEFAULT AND PROGRAMMED ZONE DEFINITIONS

<table>
<thead>
<tr>
<th>Zone No.</th>
<th>Zone Type</th>
<th>Zone Name</th>
<th>Chime (melody) Zone Name or Off (*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Delay 1</td>
<td>Front Door</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Delay 1</td>
<td>Garage</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Delay 2</td>
<td>Garage Door</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Perimeter</td>
<td>Back Door</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Perimeter</td>
<td>Child Room</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Interior</td>
<td>Office</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Interior</td>
<td>Dining Room</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Perimeter</td>
<td>Dining Room</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Perimeter</td>
<td>Kitchen</td>
<td></td>
</tr>
</tbody>
</table>
### 4.4 DEFINING CONTROL PANEL PARAMETERS

#### 4.4.1 Preliminary Guidance

This mode allows you to customize the control panel and adapt its characteristics and behavior to the requirements of the particular user. An illustrated process is shown in Figure 4.4. In this illustration, each selected option is displayed with a dark box at the right side. To review the options, repeatedly click [ ] or [ ] button, until the desired option is displayed, then click SHOW/OK button.

#### 4.4.2 Entry Delays 1&2

(Fig. 4.4, location 01, 02). Two different entry delays allow the user to enter the protected site (while the system is in the armed state) via 2 specific doors and routes without causing an alarm. Following entry, the user must disarm the control panel before the entry delay expires. Slow-rate warning beeps start sounding once the door is opened, until the last 10 seconds of the delay, during which the beeping rate increases. Locations No. 1 (entry delay 1) and 2 (entry delay 2) allow you to program the length of these delays. Available options for each delay are: 00s, 15s, 30s, 45s, 60s, 3m and 4m.

Note: To comply with CP-01 requirements, "00s" and "15s" options are not available.

Note: To comply with EN requirements, the entry delay must not exceed 120 sec.

Note: To comply with UL requirements, the entry delay must not exceed 45 sec.

#### 4.4.3 Exit Delay

(Fig. 4.4 location 03). An exit delay allows the user to arm the system and leave the protected site via specific doors and routes without causing an alarm. Slow-rate warning beeps start sounding once the arming command has been given, until the last 10 seconds of the delay, during which the beeping rate increases. Location No. 3 allows programming of the exit delay length. Available options are: 30s, 60s, 90s, 120s, 3m, and 4m.

Note: To comply with CP-01 requirements, "30s" option is not available.

Note: To comply with UL requirements, the exit delay must not exceed 120 sec.

Note: To comply with EN requirements, the Bell Time should be set to 15 min. max.

#### 4.4.4 Bell Time

(Fig. 4.4, location 04). Here you select the length of time the bell (or siren) is allowed to function upon alarm. The bell time starts upon activation of the siren. Once the bell time expires, the siren is automatically shut down. Available options are: 1, 3, 4, 8, 10, 15 and 20 minutes.

Note: Bell Time is defined for the entire alarm system.

Note: When disarming any partition (in a PowerMaxExpress Partition system) the siren ceases to sound.

Note: To comply with EN requirements, the Bell Time should be set to 15 min. max.

#### 4.4.5 Abort Time

(Fig. 4.4 location 05). Here you select the length of time the system to abort an alarm (not applicable to alarms from FIRE, 24H SILENT, EMERGENCY, GAS, FLOOD and TEMPERATURE zones). The PowerMaxExpress is programmed to provide an “abort interval” that starts upon detection of an event. During this interval, the buzzer sounds a warning but the siren remains inactive and the alarm is not reported. If the user disarms the system within the allowed abort interval, the alarm is aborted. Available options are: 00s, 15s, 30s, 45s, 60s, 2m, 3m and 4m.

Note: To comply with CP-01 requirements, "60s", "3m" and "4m" options are not available.

Note: To comply with UL requirements, the abort time must not exceed 45 sec.
4.4.6 Alarm Cancel
(Fig. 4.4, location 06). Here you determine the "cancel alarm" period that starts upon reporting an alarm to the central station. If the user disarms the system within that time period, a "cancel alarm" message is sent to the central station.
Available options are: 1, 5, 15, 60 minutes, 4 hours and also cancel inactive.
Note: To comply with CP-01 requirements, "1 minute" option is not available.

4.4.7 Quick Arm
(Fig. 4.4, location 07). Here you determine whether the user will be allowed to perform quick arming or not. Once quick arming is permitted, the control panel does not request a user code before it arms the system.
The two options are: quick arm ON and quick arm OFF.

4.4.8 Bypass
(Fig. 4.4, location 08). Here you permit either manual bypassing of individual zones (through the USER SETTINGS menu), or allow the system to "force arm" (perform automatic bypassing) of open zones during the exit delay. If desired, press the arming key again if you want to eliminate the protest tone that sounds during forced arming. If a zone is open and forced arming is not permitted, "NOT READY" is displayed and the system does not arm (the "Sad Melody" will sound). If "no bypass" is selected, neither manual bypassing nor force arming is allowed.
Options: manual bypass, force arm and no bypass.
Note: To comply with EN requirements, "manual bypass" or "force arm" must be selected.

4.4.9 Exit Mode
(Fig. 4.4, location 09). Here you determine exit mode options. Three types of exit modes are available:
Restart Exit - Exit delay restarts when the door is reopened during exit delay. The restart occurs once only. Restarting the exit delay is helpful if the user re-enters the premises too early.
Restart + Arm Home - Exit delay restarts when the door is opened during exit delay. In the case that no door was opened during exit delay "AWAY", the control panel will be armed "HOME".
Off by door - When the door is closed, the exit delay is automatically terminated (even if the defined exit delay was not completed).
Normal - The exit delay is exactly as defined, regardless of whether the door is open or closed.
Options: enable beeps, off when home and disable beeps.

4.4.10 Piezo Beeps
(Fig. 4.4, location 10). Here you determine whether warning beeps will sound or muted during exit and entry delays. An additional option is to mute the warning beeps only when the system is armed "HOME".
Options: enable beeps, off when home and disable beeps.

4.4.11 Trouble Beeps
(Fig. 4.4, location 11). Under trouble conditions, the sounder emits a series of 3 short beeps once per minute. Here you determine whether this special beeping sequence will be active, inactive, or just inactive at night (the range of "night" hours is defined in the factory). The 3 options are: enable beeps, off at night (8 PM through 7 AM) and disable beeps.

4.4.12 Panic Alarm
(Fig. 4.4, location 12). Here you determine whether the user will be allowed to initiate a panic alarm by simultaneous pressing either the two panic buttons (on the keypad / wireless commander) or away + home (on a keyfob transmitter). Audible panic activates the siren and simultaneously transmits a message via telephone. Silent panic only transmits a message via telephone. The options are: silent panic, audible panic and disable panic.

4.4.13 Swinger Stop
(Fig. 4.4, location 13). Here you determine the number of times each zone is allowed to initiate an alarm within a single arming/disarming period (including tamper & power failure events of detectors, PowerMaxExpress, wireless siren, etc.). If the alarms number from a specific zone exceeds the programmed number, the control panel automatically bypasses the zone to prevent recurrent siren noise and nuisance reporting to the central station. The zone will be reactivated upon disarming, or 48 hours after having been bypassed (if the system remains armed).
Available options are: shut after 1, shut after 2, shut after 3 and no shutdown.
Note: Swinger Stop is defined for the entire alarm system and not per partition (in a PowerMaxExpress Partition system).

4.4.14 Cross Zoning
(Fig. 4.4, location 14). Here you determine whether cross zoning will be active or inactive. Cross zoning is a method used to counteract false alarms - an alarm will not be initiated unless two adjacent zones are violated within a 30-second time limit.
This feature is active only when arming AWAY and only with zone couples from zone No. 18 to 27 (18 and 19, 20 and 21, etc.). You may use any one of these zone couples to create a "cross-zoned" area.
Options: manual bypass, force arm and no bypass.
Note: To comply with EN requirements, "manual bypass" or "force arm" must be selected.

4.4.15 Supervision
(Fig. 4.4, location 15). Here you determine the time limit for reception of supervision reports from various supervised wireless devices. If any device does not report at least once within the selected time limit, an "INACTIVITY" alert is initiated.
The options are: 1, 2, 4, 8, 12 hours and disable.
Note: To comply with EN requirements, 1 or 2 hours must be selected.

4.4.16 NOT READY
(Fig. 4.4, location 16). Here you determine if the system will be in NOT READY status when there is a supervision failure. In the "in supervision" mode, the system will be in NOT READY status if during the last 20 minutes a supervision message was not received. Options: normal and in supervision.
Note: NOT READY operates only per partition (in a PowerMaxExpress Partition system).
Note: To comply with EN requirements, "in supervision" must be selected.
4.4.17 AUX Button A
(Fig. 4.4, location 17). Here you select the function of the AUX button/ on keyfob transmitters MCT-234, MCT-237 and wireless commanders MCM-140+. Two options are offered for each AUX button:

**Instant**: Pressing the AUX button while the exit delay is in progress will cause the system to arm “instant” (the entry delay is canceled).

**Skip exit delay**: Pressing the AUX button will immediately cause the system to arm immediately.

4.4.18 AUX Button B 2-W-KF
(Fig. 4.4, loc. 18). Applicable only for 2-way keyfob MCT-237. Same as 4.4.17 but for AUX button B.

4.4.19 Jam Detect
(Fig. 4.4, location 19). Here you determine whether jamming (interfering transmissions, on the radio channel used by the system) will be detected and reported or not. If a jam detection option is selected, the system does not allow arming under the relevant jamming conditions.

**Jam Detection Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Detection and Reporting when</th>
</tr>
</thead>
<tbody>
<tr>
<td>UL (20/20)</td>
<td>There is continuous 20 seconds of jamming</td>
</tr>
<tr>
<td>EN (30/60) (Europe standard)</td>
<td>There is an accumulated 30 seconds of jamming within 60 sec.</td>
</tr>
<tr>
<td>Class 6 (30/60) (British standard)</td>
<td>Like EN (30/60) but the event will be reported only if the jamming duration exceeds 5 minutes.</td>
</tr>
<tr>
<td>Disabled</td>
<td>No jamming detection and reporting.</td>
</tr>
</tbody>
</table>

4.4.20 Latchkey
(Fig. 4.4, location 20). Here you determine whether the system can be armed in the latchkey mode. If the system is armed this way, a “latchkey” message will be sent to specific telephones upon disarming by a “latchkey user” (users 5-8 or keyfob transmitters 5-8). This mode is useful when parents at work want to be informed of a child’s return from school. The options are: Latchkey ON and Latchkey OFF.

4.4.21 “Not Active”
(Fig. 4.4, location 21). Here you determine the time limit for reception of signals from sensors used to monitor the activity of sick, elderly or disabled people. If no sensor detects and reports movement at least once within the defined time limit, a “not-active” alert is initiated. Options: 3, 6, 12, 24, 48, 72 hours and no act disable.

**Note**: The Not Active timer is defined for the entire alarm system for the above hour options and not per partition (in a PowerMaxExpress Partition system). Subsequently, a dedicated timer is assigned to each partition.

4.4.22 Back Light (Optional)
(Fig. 4.4, location 22). Here you determine whether the keypad back lighting will remain on at all times or will turn on when a key is pressed and turn off within 10 seconds if no further keystrokes are sensed.

The two options are: **always on** and **off after 10 s**.

**Note**: Back Light can be used only if this option is available on the purchased control panel.

4.4.23 Duress
(Fig. 4.4, loc. 23). A duress alarm (ambush) message can be sent to the central station if the user is forced to disarm the system under violence or menace. To initiate a duress message, the user must disarm the system with the duress code (2580 by default). Here you can change the code digits or enter “0000” to disable the duress feature. The system does not allow the user to program the duress code saved in this memory location as an existing user code.

4.4.24 Piezo Siren
(Fig. 4.4, location 24). Here you determine whether the internal siren will sound or remain silent upon alarm (according to the user preference). Options: piezo siren on, piezo siren off.

4.4.25 Reset Option
(Fig. 4.4, location 25). (Not applicable in the USA)
Here you determine whether the system can be rearmed (after an event) by the user or only by the installer.
Options: **user reset** or **engineer reset**.
If Engineer Reset is selected, the system can be rearmed only by the installer; by entering and exiting the installer menu, by entering and exiting the event log (see section 7), or by remote telephone. To perform Engineer Reset via the telephone, establish communication with the PowerMaxExpress (see user guide, par. 6.3A, steps 1-5) and continue as follows:

a. 
[*], [installer code], [#]

b. Wait for 2 beeps

c. 
[*], [1], [#]

d. 
[*], [99], [#]

**Note**: This menu is not available when partition is enabled.

4.4.26 Tamper Option
(Fig. 4.4, location 26). Here you determine whether zone tamper will be reported or ignored. Available options are: zone tamper ON and zone tamper OFF.

**Note**: To comply with EN requirements, “zone tamper ON” must be selected.

4.4.27 Siren On Line
(Fig. 4.4, location 27). Here you determine whether the siren will be activated or not when the telephone line fails during system armed state. Available options are: enable on fail, disable on fail.

4.4.28 Memory Prompt
(Fig. 4.4, location 28). Here you determine whether the user will receive indication that an alarm has been activated. Available options are: enable and disable.

4.4.29 Disarm Option
(Fig. 4.4, location 29). Here you determine when it is possible to disarm the system:
A. Any time.
B. In AWAY mode, during entry delay, by using the PowerMaxExpress keypad or wireless sensor (keyfob).
C. In AWAY mode, during entry delay, by using a wireless device (keyfob) only (this is set as a default in UK to comply with DD243).
D. During entry delay, or by using the PowerMaxExpress keypad in AWAY mode.

Options: any time, on entry all, on entry wireless, or entry + away kp.

4.4.30 Bell/Rep. Option
(Fig. 4.4, location 30). Here you determine whether an alarm will be initiated (siren / report) when there is a supervision / jamming failure during AWAY arming state. Available options are: EN standard and other. When “EN standard” is selected, if there is supervision / jamming failure during AWAY arming, the siren is activated and the events are reported as tamper events. When “Other” is selected, there is no such activity during AWAY arming.
4.4.31 Low-Bat Ack
(Fig. 4.4, location 31). Here you determine whether the user will hear or will not hear low battery sound when he tries to disarm the system with a keyfob whose battery voltage is low. Available options are: keyfob L-B on (the user has to acknowledge the keyfob low battery message) or keyfob L-B off (the user does not have to acknowledge the keyfob low battery message).

4.4.32 Screen Saver
(Fig. 4.4, location 32). Here you can determine that if no key is pressed during more than 30 seconds, the display will read “PowerMax” (to prevent possible intruder of knowing the system status). You can determine that normal display will return after pressing the button followed by entering user code (Refresh by Code) or after pressing any key (Refresh by Key).

If Refresh by Key is selected, the first pressing of any key (except Fire and Emergency) will cause normal display return and the second press will perform the key function. Regarding the Fire and Emergency keys, the first key press will cause normal display return and also will perform the Fire/Emergency function.

Options: scrn saver OFF, refresh by code, refresh by key.

Note: To comply with EN requirements, “refresh by code” must be selected.

4.4.33 Confirm Alarm
(Fig. 4.4, location 33). Here you determine that if 2 successive alarms will occur during a specific period, the second alarm will be considered as a confirmed alarm (for confirmed alarm reporting, see par. 4.5.3).

Options: disable 30 min., 45 min., 60 min., or 90 min.

4.4.34 AC FAIL REP
(Fig. 4.4, location 34). Here you determine the time interval between AC power failure occurrence and the failure reporting. Options: 5 minutes, 30 minutes, 60 minutes or 180 minutes.

Note: To comply with EN requirements, set to 60 min. max.

4.4.36 User Permission
(Fig. 4.4, location 36). Here you determine whether the access to the INSTALLER MODE requires user permission. If you select ENABLE, the installer mode will be accessible only through the user menu after entering the user code.

Options: Enable, Disable.

Note: This menu is not available when partition is enabled.

Note: To comply with EN requirements, “Enable” must be selected.

4.4.39 Key Zones Options (Optional)
(Fig. 4.4, location 39). Here you determine whether or not the system can be armed and disarmed by zones 21-28, 29 or 21-29, provided that for these zones “non-alarm type” and “z-key enable” was predefined (see par. 4.3). Key zones can be wireless or wired zones.

When using wireless key zones, only the MCT-100 and MCT-102 transmitters are used. The right pushbutton on the MCT-102 transmitter or input 2 of the MCT-100 transmitter is used for arming in AWAY mode. The left pushbutton on the MCT-102 transmitter or input 1 of the MCT-100 transmitter is used for disarming.

When using wired key zones, the control panel toggles between AWAY mode and Disarm.

Note: In “Singapore” versions of the PowerMaxExpress, an open circuit arms the alarm system in AWAY mode and a closed circuit changes the state of the alarm system from AWAY mode to Disarm.

IMPORTANT! Enrolment of the MCT-100 or MCT-102 transmitter must be performed via the right pushbutton on the MCT-102 transmitter or input 2 of the MCT-100 transmitter.

Note: Key Zones does not comply with Belgium TO14A and EN 50131-5-3.

Options: disable option, z. 21-28 enable, z. 29 enable, or z. 21-29 enable.

4.4.41 Cancel Announcement
(Fig. 4.4, location 41). Here you determine whether a special beep will sound when an alarm cancel event is sent to the central station.

Options: Enable, Disable.

4.4.42 Abort Announcement
(Fig. 4.4, location 42). Here you determine that when the user disarms the system within the allowed abort interval a special beep will sound to indicate “no alarm transmission”.

Options: Enable, Disable.

4.4.43 CP-01
(Fig. 4.4, location 43) Here you determine whether to enable or disable some of the CP-01 standard requirements.

Options: Enable, Disable.
4.5 DEFINING COMMUNICATION PARAMETERS

Preliminary Guidance

This mode allows you to adapt the telephone communication parameters to the local requirements.

Compatible central station receivers are:
Osborne-Hoffman model 2000, Ademco Model 685,

IMPORTANT: In telephone / pager number locations and account number locations, you may be required to enter hexadecimal digits. In telephone number locations, these digits are used as codes to control the dialer.

Here you prevent the GSM service provider from disconnecting the GSM line if the user has not initiated any outgoing telephone calls during the last 28 days.

The options are: disable and enable.

Here you determine whether the alarm system will report events to the central station via the GSM voice channel.

The options are: disable and enable.

Here you determine whether the alarm system will report events to the central station via the SMS channel.

The options are: disable and enable.

Here you determine whether the alarm system will report events to the central station via the SMS channel.

Here you enter the number that is used as a prefix to telephone numbers.

Here you enter the system tel. area code (up to 4 digits).

Here you enter the password of the APN used for GPRS communications (up to 30 digits).

Here you enter the username of the APN used for GPRS communications (up to 16 digits).

The following table provides a list of the keys used by the PowerMaxExpress editor for the GPRS APN, GPRS Username, GPRS Password menus and Custom Zone Name option.

4.5.1 PSTN / GSM (Fig. 4.5 Detail A)

Area Code [Fig 4.5.1(1)]

Here you enter the system tel. area code (up to 4 digits).

Line Prefix [Fig 4.5.1(2)]

Here you enter the number that is used as a prefix to access an outside telephone line (if exists).

Dial Method [Fig 4.5.1(3)]

Here you determine the dialing method used by the automatic dialer built into the PowerMaxExpress control panel.

The options are: Pulse and tone (dtmf).

GSM Keep Alive [Fig 4.5.1(4)]

Here you prevent the GSM service provider from disconnecting the GSM line if the user has not initiated any outgoing telephone calls during the last 28 days.

The options are: disable and every 28 days.

4.5.2 GPRS / BB [Fig. 4.5 Detail B]

The GSM/GPRS module is capable of communicating with the Central Station receiver by GPRS, GSM Voice and SMS channels. Each of the channels can be separately enabled or disabled in order to allow or prohibit the module from using it for the event reporting. If all channels are enabled, the GSM/GPRS module will always try GPRS first. If fails, it will try GSM Voice. If fails, it will try any other possible method (PSTN, Broadband) and only then it will try SMS. This is due to the fact that SMS is the most unreliable option of communication. Disabling any of the GSM Module channels will cause the module to use a different sequence than the one described above.

GPRS Report [Fig 4.5.2(1)]

Here you determine whether the alarm system will report events to the central station via the GPRS channel.

The options are: disable and enable.

GSM Report [Fig 4.5.2(2)]

Here you determine whether the alarm system will report events to the central station via the GSM voice channel.

The options are: disable and enable.

SMS Report [Fig 4.5.2(3)]

Here you determine whether the alarm system will report events to the central station via the SMS channel.

The options are: disable and enable.

GPRS APN [Fig 4.5.2(4)]

Here you enter the name of the APN (Access Point) used for the internet settings for the GPRS (up to 40 digits).

GPRS Username [Fig 4.5.2(5)]

Here you enter the username of the APN used for GPRS communications (up to 30 digits).

GPRS Password [Fig 4.5.2(6)]

Here you enter the password of the APN used for GPRS communications (up to 16 digits).

The following table provides a list of the keys used by the PowerMaxExpress editor for the GPRS APN, GPRS Username, GPRS Password menus and Custom Zone Name option.

Key Functionality

- Moves the cursor from right to left.
- Moves the cursor from left to right.
- Scrolls upward the sequence of inserted digits.
- Scrolls downward the sequence of inserted digits.
- Places cursor to extreme right position of edit string and shows the last 16 digits of edit string.
- Reverts to previous or top menu without saving the edit string.
- Saves and reverts to previous menu.
- Selects between uppercase or lowercase digits.

PIN Code [Fig 4.5.2(7)]

Enter PIN code of the SIM card installed in the PowerMaxExpress unit (up to 16 digits).

Force Home Network [Fig 4.5.2(8)]

Here you determine whether to force the SIM card to use the home network only and not to select another network in case the home network cannot be found.

The options are: disable and enable.

LAN Settings [Fig 4.5.2(9)]

Note: The LAN Settings menu appears only if a Broadband Module exists in the PowerMaxExpress alarm system.
Enable DHCP [Fig 4.5.2(9a)]
Here you determine whether to obtain an IP address automatically using a DHCP server or to enter an IP address manually.

Toggles between DHCP enable and DHCP disable.

Note: When DHCP is enabled, the last IP number will be changed to 200. In other words, it will take the form xxx.xxx.xxx.200.

Manual IP [Fig 4.5.2(9b)]
Here you manually enter LAN parameters.

IP address – the IP address of the Broadband Module.
Subnet mask – the subnet mask used with the IP address.
Default GW – the default gateway of the Broadband Module.

Note: If DHCP is set to enabled the above entries will be ignored.

Transport Protocol [Fig 4.5.2(10)]
Here you select the type of protocol used by the control panel to transfer data over the internet.

The options are: TCP and UDP.

Session Timeout [Fig 4.5.2(11)]
Here you determine whether the control panel will stay continuously connected via GPRS communication, or, temporarily connected to receive event reports only.

The options are: off on timeout and always ON.

4.5.3 C.S. Reporting (Fig. 4.5 Detail C)

Report Events [Fig 4.5.3(1)] – see note in Fig. 4.5 Detail C
Here you determine which types of event will be reported to central stations. Due to lack of space in the display, abbreviations are used: alarm is "alarm", alert is "alert" and open/close is "o/c". The asterisk (*) is a separator between events reported to central station 1 and events reported to central station 2.

Messages are divided by type into four groups:

<table>
<thead>
<tr>
<th>No.</th>
<th>Group</th>
<th>Events Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Alarms</td>
<td>Fire, Burglary, Panic, Tamper</td>
</tr>
<tr>
<td>2</td>
<td>Open/close</td>
<td>Arming AWAY, Arming HOME, Disarming</td>
</tr>
<tr>
<td>3</td>
<td>Alerts</td>
<td>No-activity, Emergency, Latchkey, Gas, Flood, Temperature</td>
</tr>
<tr>
<td>4</td>
<td>Maintenance</td>
<td>Low-battery AC failure</td>
</tr>
</tbody>
</table>

*Alarm* group has the highest priority and *Alert* group has the lowest priority.

The selectable options are as follows:

<table>
<thead>
<tr>
<th>Plan name</th>
<th>Sent to center 1</th>
<th>Sent to center 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>all -o/c</td>
<td>1 backup</td>
<td>All but open/close if center 1 doesn't respond</td>
</tr>
<tr>
<td>all - all</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>all -o/c</td>
<td>all -o/c</td>
<td>All but open/close</td>
</tr>
<tr>
<td>all -o/c</td>
<td>all -o/c</td>
<td>All but open/close</td>
</tr>
<tr>
<td>all -o/c</td>
<td>all -o/c</td>
<td>All but open/close</td>
</tr>
<tr>
<td>all -o/c</td>
<td>all -o/c</td>
<td>All but open/close</td>
</tr>
</tbody>
</table>

Note: “All” means that all 4 groups are reported and also trouble messages - sensor / system low battery, sensor inactivity, power failure, jamming, communication failure etc.

1st Report Method [Fig 4.5.3(2)]
Here you define the 1st priority of method used to report events. The options are: disable, broadband, cellular and PSTN.

2nd Report Method [Fig 4.5.3(3)]
Here you define the 2nd priority of method used to report events. If the method defined to report events in the 1st priority fails, the control panel will attempt to report using the method defined in the 2nd priority (see notes in 1st Report Method).

The options are: disable, broadband, cellular and PSTN.

3rd Report Method [Fig 4.5.3(4)]
Here you define the 3rd priority of method used to report events. If the method defined to report events in the 2nd priority fails, the control panel will attempt to report using the method defined in the 3rd priority (see notes in 1st Report Method).

The options are: disable, broadband, cellular and PSTN.

Dual Reporting [Fig 4.5.3(5)]
Here you determine whether to report events using PSTN and cellular at the same time instead of waiting for the 1st method to fail before trying the 2nd method.

The options are: disable and PSTN & cellular, PSTN & broadband and broadband & cellular.

Receiver 1 Account No. [Fig 4.5.3(6)] - see note in Fig. 4.5 Detail C
Here you enter the number that will identify your specific alarm control system to the 1st central station. The number consists of 6 hexadecimal digits.

Receiver 2 Account No. [Fig 4.5.3(7)] - see note in Fig. 4.5 Detail C
Here you enter the number that will identify your system to the 2nd central station. The account number consists of 6 hexadecimal digits.

PSTN/GSM RCVR1 [Fig 4.5.3(8)] - see note in Fig. 4.5 Detail C
Here you program telephone number of the 1st central station (including area code, 16 digit max) to which the system will report the event groups defined in Report Events.

PSTN/GSM RCVR2 [Fig 4.5.3(9)] - see note in Fig. 4.5 Detail C
Here you program telephone number of the 2nd central station (including area code, 16 digit max) to which the system will report the event groups defined in Report Events.

IP RCVR 1 [Fig 4.5.3(10)]
Here you enter the IP address of the IP receiver that is located in the 1st central station.

IP RCVR 2 [Fig 4.5.3(11)]
Here you enter the IP address of the IP receiver that is located in the 2nd central station.

SMS RCVR 1 [Fig 4.5.3(12)]
Here you enter the telephone number of the SMS receiver that is located in the 1st central station.

SMS RCVR 2 [Fig 4.5.3(13)]
Here you enter the telephone number of the SMS receiver that is located in the 2nd central station.

PSTN Report Format [Fig 4.5.3(14)] - see note in Fig. 4.5 Detail C
Here you select the reporting format used by the control panel to report events to central stations.

The options are: SIA text, Contact-ID, SIA 4/2 1900/1400, 4/2 1800/2300, Scancom (see Appendix B - code lists).

4/2 Pulse Rate [Fig 4.5.3(15)] - see note in Fig. 4.5 Detail C
Here you select the pulse rate at which data will be sent to central stations if any one of the 4/2 formats has been selected in PSTN Report Format.

The options are: 10, 20, 33 and 40 pps.
PSTN Report Retry [Fig 4.5.3(16)] - see note in Fig. 4.5 Detail C
Here you determine the number of times the communicator will dial the central station’s number via PSTN.
The options are: 2, 4, 8, 12 and 16 attempts.
Note: To comply with UL requirements, the unit shall make no less than five attempts and no more than ten attempts to contact the central station.

GSM Report Retry [Fig 4.5.3(17)] - see note in Fig. 4.5 Detail C
Here you determine the number of times the communicator will try to report via a cellular group (GPRS, GSM and SMS) to the central station.
The options are: 2, 4, 8, 12 and 16 attempts.

LAN Report Retry [Fig 4.5.3(18)] - see note in Fig. 4.5 Detail C
Here you determine the number of times the communicator will try to report via the Broadband Module communication to the central station.
The options are: 2, 4, 8, 12 and 16 attempts.

Auto Test Time [Fig 4.5.3(19)]
Here you determine the time at which the telephone line will be tested and reported to the central station.

Auto Test Cycle [Fig 4.5.3(20)]
Here you determine the time interval between consecutive telephone line test messages sent to the central station. The control panel performs this at regular intervals to verify proper communications.
The options are: test every 5 hours, test every 1, 2, 5, 7, 14, 30 days and test OFF.

Call Waiting OFF [Fig 4.5.3(21)]
Here you enter a code to cancel “call waiting” when calling the central station.

Line Fail Report [Fig 4.5.3(22)]
PSTN [Fig 4.5.3(22a)]
Here you determine if the PSTN telephone line disconnection will be reported or not and determine the delay between detection of line disconnection and failure reporting. If the telephone line is disconnected, the event "tel line fail" will be stored in the event log.
The options are: don't report, immediately, 5 minutes, 30 minutes, 60 minutes or 180 minutes.
Note: To comply with EN requirements, “immediately” must be selected.

GSM/GPRS [Fig 4.5.3(22b)]
Here you determine if the GSM/GPRS line disconnection will be reported or not and determine the delay between detection of line disconnection and report failure. If the telephone line is disconnected, the event "GSM line fail" will be stored in the event log.
The options are: don't report, 2 minutes, 5 minutes, 15 minutes, or 30 minutes.

Broadband [Fig 4.5.3(22c)]
Here you determine if the Broadband Module line disconnection will be reported or not and determine the delay between detection of line disconnection and report failure. If the telephone line is disconnected, the event "BBA line fail" will be stored in the event log.
The options are: don't report, 2 minutes, 5 minutes, 15 minutes, or 30 minutes.

PSTN Up / Down [Fig 4.5.3(23)]
Remote Access [Fig 4.5.3(23a)]
Here you give or deny permission to access the system and exercise control from a remote telephone.
The options are: rem. access ON and rem. access OFF.

Mast. Downl Code [Fig 4.5.3(23b)]
Here you determine the master installer 4-digit password for downloading/uploading data into/from the PowerMaxExpress memory.
Attention! If "0000" is used, it will not enable connection of the PowerMaxExpress to the PC for upload/download purpose.

Inst. Downl Code [Fig 4.5.3(23c)]
Here you determine the installer 4-digit password for downloading data into the PowerMaxExpress memory.

Upload Option [Fig 4.5.3(23d)]
Here you determine whether the PowerMaxExpress data can be uploaded into a computer while the system is in disarm state or at any time (in HOME/AWAY arming & disarm state).
The options are: when system OFF and any time
Up Download Tel# [Fig 4.5.3(23e)]
Here you enter the telephone number (up to 16 digits) of the UL/DL server.
Note: Only for use with control panels monitored by compatible central stations. Leave empty if not used.

GPRS Up / Down [Fig 4.5.3(24)]

My SIM Tel. # [Fig 4.5.3(24a)]
Here you enter the PowerMax SIM card telephone number. The control panel dials this number when it needs to connect to the PowerMaxExpress for uploading / downloading data.

1st Caller ID# [Fig 4.5.3(24b)]
Here you determine the 1st IPMP receiver telephone number. When the PowerMaxExpress responds to an incoming call from the telephone number defined here, it creates a connection to the IPMP for uploading / downloading data.

2nd Caller ID# [Fig 4.5.3(24c)]
Here you determine the 2nd IPMP receiver telephone number. When the PowerMaxExpress responds to an incoming call from the telephone number defined here, it creates a connection to that IPMP for uploading / downloading data.

Report Cnfrm Alarm [Fig 4.5.3(25)] - see note in Fig. 4.5 Detail C
Here you determine whether the system will report whenever 2 or more events (confirmed alarm) occur during a specific period (see par. 4.4.33).
Available options are: enable report, disable report, enable + bypass (enable reporting and bypassing the detector - applicable to PowerMaxExpress that is compatible with DD243 standard).

Report 24H Zones [Fig 4.5.3(26)]
Here you determine whether 24 hour (silent and audible) zones will function as normal 24 hour zones or as panic zones.
The options are: both original, audible as panic, silent as panic, or both as panic.

Recent Close [Fig 4.5.3(27)]
Here you enable or disable the “recent closing” report, that is sent to the central station if an alarm occurs within 2 minutes from the expiry of the exit delay.
The options are: recent close ON and recent close OFF.
Zone restore [Fig 4.5.3(28)]
Here you determine whether a zone restore will be reported or not.
The options are: report restore and don’t report.

System Inactivity Report [Fig 4.5.3(29)]
Here you determine whether the central station will receive a message if the system is inactive (not armed) during a defined period (days).
The options are: disable, rep. after 7d, rep. after 14d, rep. after 30d, rep. after 90d.

4.5.4 Private Report (Fig. 4.5 Detail D)

Report To Private [Fig 4.5.4(1)]
Here you determine which event groups will be reported to private telephone subscribers.

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>all</td>
<td>All messages</td>
</tr>
<tr>
<td>all (-op/cl)</td>
<td>All messages, except open/close</td>
</tr>
<tr>
<td>all (-alerts)</td>
<td>All messages, except alerts</td>
</tr>
<tr>
<td>alarms</td>
<td>Alarm messages</td>
</tr>
<tr>
<td>alerts</td>
<td>Alert messages</td>
</tr>
<tr>
<td>op/cl</td>
<td>Open/close</td>
</tr>
<tr>
<td>disable report</td>
<td>No message will be reported</td>
</tr>
</tbody>
</table>

Note: “All” means all events including the L. BAT and AC FAIL trouble messages.

Note: All the above options can be reported to private telephone subscribers by SMS. When Voice Report is enabled alarms and alerts only can be reported.

The following siren signal will be sent to private telephone upon event reporting:

FIRE: ON - ON - ON - pause.... (- - - - - - - - - - - -).
BURGLAR: ON continuously (-----)
EMERGENCY/LATCHKEY: 2-tone siren; like an ambulance.

Voice report [Fig 4.5.4(2)]

1st Private Tel# [Fig 4.5.4(2a)]
Here you program the 1st telephone number (including area code, if required) of the private subscriber to which the system will report the event groups defined in Report To Private.

2nd Private Tel# [Fig 4.5.4(2b)]
Here you program the 2nd telephone number (including area code, if required) of the private subscriber to which the system will report the event groups defined in Report To Private.

3rd Private Tel# [Fig 4.5.4(2c)]
Here you program the 3rd telephone number (including area code, if required) of the private subscriber to which the system will report the event groups defined in Report To Private.

4th Private Tel# [Fig 4.5.4(2d)]
Here you program the 4th telephone number (including area code, if required) of the private subscriber to which the system will report the event groups defined in Report To Private.

Redial Attempts [Fig 4.5.4(2e)]
Here you determine the number of times the communicator will dial the called party’s number (private telephone).
The options are: 1, 2, 3 and 4 attempts.

Attention! A maximum of 2 dialing attempts is permitted by the Australian Telecommunication Authority.

Tel. acknowledge [Fig 4.5.4(2f)]
Here you determine whether the system will use the single acknowledge or the all acknowledge mode when reporting to private telephones.

Note: In the single acknowledge mode, receiving an acknowledge signal from a single telephone is sufficient to consider the current event closed and call off the communication session. The remaining telephones serve for backup purposes only. In the all acknowledge mode, an acknowledge signal must be received from each telephone before the current event is considered reported.

The options are: single ack and all ack.

SMS Report Tel# [Fig 4.5.4(3)]

1st SMS Tel# [Fig 4.5.4(3a)]
Here you define the first SMS phone number (including area code, 16 digits maximum) to which pre-selected event types (see par. 4.6.3) will be reported.

2nd SMS Tel# [Fig 4.5.4(3b)]
Here you define the second SMS phone number (including area code, 16 digits maximum) to which pre-selected event types (see par. 4.6.3) will be reported.

3rd SMS Tel# [Fig 4.5.4(3c)]
Here you define the third SMS phone number (including area code, 16 digits maximum) to which pre-selected event types (see par. 4.6.3) will be reported.

4th SMS Tel# [Fig 4.5.4(3d)]
Here you define the fourth SMS phone number (including area code, 16 digits maximum) to which pre-selected event types (see par. 4.6.3) will be reported.

Figure 4.5 – Defining Communications
FIGURE 4.5 - DETAIL A

1: PSTN / GSM

- AREA CODE (Enter tel. area code)
- LINE PREFIX (Enter prefix)
- DIAL METHOD
  - tone (dtmf)
  - pulse
- GSM KEEP ALIVE
  - enable
  - disable every 28 days

FIGURE 4.5 - DETAIL B

2: GPRS/BB

- GPRS REPORT
- GSM REPORT
- SMS REPORT
- GPRS APN
- GPRS USERNAME
- GPRS PASSWORD
- SIM PIN CODE
- FORCE HOME NETW.

- TRANS. PROTOCOL
  - TCP
  - UDP

- SESSION TIMEOUT
  - OFF on timeout
  - always ON

Note:
The currently saved options are displayed with dark box at the right side of the display. To review the options, repeatedly click until the desired option is displayed, then click OK (a dark box will be displayed at the right side).
Note
For Control Panel that has installer code & master installer code, the following functions are available only if the MASTER INSTALLER code is entered:
- PSTN/GSM RCVR1
- PSTN/RPT FORMAT
- REPORT EVENTS
- PSTN/RPT RETRY
- MAST. DL CODE

The currently selected options are displayed with dark box at the right side of the display. To review the options, repeatedly click or until the desired option is displayed, then click OK (a dark box will be displayed at the right side).

Continues in next Figure
4.6 GSM Auto Detection
The GSM modem auto detection feature enables automatic enrollment of the GSM modem into the PowerMaxExpress control panel memory. GSM modem auto detection is activated in one of two ways: after tamper restore and after reset (power-up or after exiting the installer menu). This causes the PowerMaxExpress to automatically scan GSM COM ports for the presence of the GSM modem.

In the event that the GSM modem auto detection fails and the modem was previously enrolled in the PowerMaxExpress control panel, the message "Cel Rmvd Cnfrm" will be displayed. This message will disappear from the display only after the user clicks OK. The modem is then considered as not enrolled and no GSM trouble message will be displayed.

Note: A message is displayed only when the PowerMaxExpress alarm system is disarmed.

4.7 Broadband Module Auto Detection
The Broadband Module modem auto detection feature enables automatic enrollment of the Broadband Module modem into the PowerMaxExpress control panel memory. Broadband Module modem auto detection is activated in one of two ways: after tamper restore and after reset (power-up or after exiting the installer menu). This causes the PowerMaxExpress to automatically scan the Broadband Module COM ports for the presence of the Broadband Module modem.

In the event that the Broadband Module modem auto detection fails and the modem was previously enrolled in the PowerMaxExpress control panel, the message "BBA Rmvd Cnfrm" will be displayed. This message will disappear from the display only after the user clicks OK. The modem is then considered as not enrolled and no Broadband Module trouble message will be displayed.

Notes:
A message is displayed only when the PowerMaxExpress alarm system is disarmed.
In the event of a power failure the Broadband Module will not operate. Power (AC or battery) must be disconnected from the circuit before connecting / disconnecting the Broadband Module.
4.9 DEFINE CUSTOM
This mode allows you to define up to 5 zones names (in addition to the zone names that can be defined in the DEFINE ZONES mode - see par. 4.3).

<table>
<thead>
<tr>
<th>CUST. ZONES NAME</th>
<th>EDIT USER TERM 1</th>
<th>EDIT USER TERM 2</th>
<th>EDIT USER TERM 3</th>
<th>EDIT USER TERM 4</th>
<th>EDIT USER TERM 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To edit User Terms, use the following buttons on the control panel keypad:
- press \( \text{up arrow} \) to scroll backward; press \( \text{down arrow} \) to scroll forward;
- press \( \text{left arrow} \) to change from small caps to big caps; press \( \text{space} \) for space

**Figure 4.9 – Define Custom**

4.10 DIAGNOSTIC TEST
This mode allows you to test the function of all protected area wireless sensors / wireless sirens / wireless keypads / GPRS / LAN connection / options for resetting the Broadband Module and to receive / review information regarding the received signal strength.

The diagnostic test process is shown in figure 4.10.

For WL Sensors / WL Sirens / WL Keypads:
Three reception levels are sensed and reported.

**Received Signal Strength Indication:**

<table>
<thead>
<tr>
<th>Reception</th>
<th>Buzzer Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong</td>
<td>Happy Tune twice ( - - - –––– ) ( - - - –––– )</td>
</tr>
<tr>
<td>Good</td>
<td>Happy Tune ( - - - –––– )</td>
</tr>
<tr>
<td>Poor</td>
<td>Sad tune ( –––––––– )</td>
</tr>
</tbody>
</table>

**IMPORTANT!** Reliable reception must be assured. Therefore, a "poor" signal strength is not acceptable. If you get a "poor" signal from a certain detector, re-locate it and re-test until a "good" or "strong" signal strength is received. This principle should be followed during the initial testing and also throughout subsequent system maintenance.

4.10.1 GPRS Communication Test
The GPRS Communication diagnostic procedure tests GSM/GPRS communication and reports the diagnostic result. In case of communication failure, detailed information of the failure is reported.

The following GSM/ GPRS messages are reported:

<table>
<thead>
<tr>
<th>Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit is OK</td>
<td>GSM / GPRS is functioning correctly.</td>
</tr>
<tr>
<td>GSM comm. loss</td>
<td>The GSM/GPRS module does not communicate with the Panel.</td>
</tr>
<tr>
<td>Pin code fail</td>
<td>Missing or wrong PIN code. (Only if SIM card PIN code is enabled.)</td>
</tr>
<tr>
<td>GSM net. fail</td>
<td>Unit failed with registration to local GSM network.</td>
</tr>
<tr>
<td>SIM card fail</td>
<td>SIM not installed or SIM card failure.</td>
</tr>
<tr>
<td>GSM not detected</td>
<td>GSM auto enroll failed to detect GSM/GPRS module.</td>
</tr>
<tr>
<td>No GPRS service</td>
<td>The SIM card does not have the GPRS service enabled.</td>
</tr>
<tr>
<td>GPRS conn. fail</td>
<td>Local GPRS network is not available or, wrong setting to GPRS APN, user and/or password.</td>
</tr>
<tr>
<td>Srvr unavailable</td>
<td>IPMP Receiver cannot be reached – Check the Server IP.</td>
</tr>
<tr>
<td>IP not defined</td>
<td>Server IP #1 and #2 are not configured.</td>
</tr>
<tr>
<td>APN not defined</td>
<td>APN is not configured.</td>
</tr>
<tr>
<td>SIM card locked</td>
<td>After entering a wrong PIN code 3 consecutive times the SIM is locked. To unlock it enter a PKU number. The</td>
</tr>
</tbody>
</table>

4.10.2 LAN Connection Test
The LAN Connection diagnostic procedure tests Broadband Module communication to the IPMP and reports the diagnostic result. In case of communication failure, detailed information of the failure is reported.

If the Broadband Module is not registered to the PowerMaxExpress, the menu "LAN CONNECT.TEST" will not be displayed.

The following LAN messages are reported:

<table>
<thead>
<tr>
<th>Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit is ok</td>
<td>Broadband Module is functioning correctly.</td>
</tr>
<tr>
<td>Test aborted</td>
<td>The diagnostic test is aborted, as follows:</td>
</tr>
<tr>
<td></td>
<td>• AC failure – Broadband Module is set to OFF mode.</td>
</tr>
<tr>
<td></td>
<td>• Broadband Module has not completed the power-up procedure. In this case, the installer should wait a maximum of 30 seconds before re-testing.</td>
</tr>
<tr>
<td>Comm. loss</td>
<td>The RS-232 serial interface between the Broadband Module and the PowerMaxExpress failed.</td>
</tr>
<tr>
<td>Rcvr ip missing</td>
<td>Receivers IP 1 and 2 settings are missing in the PowerMaxExpress.</td>
</tr>
<tr>
<td>Cable unplugged</td>
<td>The Ethernet cable is not connected to the Broadband Module.</td>
</tr>
<tr>
<td>Check lan config</td>
<td>This message appears in any of the following cases:</td>
</tr>
<tr>
<td></td>
<td>• Incorrect Broadband Module IP has been entered.</td>
</tr>
<tr>
<td></td>
<td>• Incorrect subnet mask has been entered.</td>
</tr>
<tr>
<td></td>
<td>• Incorrect default gateway has been entered.</td>
</tr>
<tr>
<td></td>
<td>• DHCP server failure.</td>
</tr>
<tr>
<td>Rcvr#1 UnReach.</td>
<td>Receiver 1 or 2 is inaccessible, as follows:</td>
</tr>
<tr>
<td>Rcvr#2 UnReach.</td>
<td>• Wrong receiver IP has been entered.</td>
</tr>
<tr>
<td></td>
<td>• Receiver failure.</td>
</tr>
<tr>
<td></td>
<td>• WAN Network failure.</td>
</tr>
<tr>
<td>Rcvr#1 UnReg. Rcvr#2 UnReg.</td>
<td>The PowerMaxExpress unit is not registered to IP receiver 1 or 2.</td>
</tr>
</tbody>
</table>
**Message** | **Description**
--- | ---
Broadband Module timeout err. | Broadband Module does not respond to test result within 70 sec.
Invalid result | Broadband Module responds with a result code that is not recognized by the PowerMaxExpress.

(see figure 4.1a)

### 10. DIAGNOSTICS

<table>
<thead>
<tr>
<th>GPRS CONN. TEST</th>
<th>LAN CONNECT. TEST</th>
<th>LAN RESET OPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLEASE WAIT...</td>
<td>PLEASE WAIT...</td>
<td>REBOOT</td>
</tr>
<tr>
<td>UNIT IS OK</td>
<td>UNIT IS OK</td>
<td>FACTORY DEFIN.</td>
</tr>
</tbody>
</table>

**Figure 4.10** - Diagnostic Test Flow Chart

#### 4.11 USER FUNCTIONS

This mode provides you with a gateway to the user functions through the regular user programming menu. You may:

- Program the 4 (private) telephone numbers
- Program user codes
- Enroll keyfobs
- Set the auto arm option
- Set arming time
- Set the squawk option
- Set the system time and time format
- Set the date and date format

Refer to the User Guide for detailed procedures.

Caution! If after having programmed the user codes the system does not recognize your installer code, this indicates you must have programmed a user code that is identical with your installer code. If so, access the user menu and change the code that is identical with your installer code. This will re-validate your installer code.

#### 4.12 RETRIEVING FACTORY DEFAULTS

If you want to reset the PowerMaxExpress parameters to the factory default parameters, you should enter the installer menu and perform the "FACTORY DEFLT" function, as described in the right side illustration. To get the relevant parameters defaults, contact the PowerMaxExpress dealer.

**Note**: For PowerMaxExpress with 2 installer codes, INSTALLER code and MASTER INSTALLER code, only the master installer code enables to perform factory default function.

Entering to/exit from the FACTORY DEFLT menu is shown in figure 4.1a

- **<OK>** to restore
- **<Inst. code>**
- **ENTER CODE:**
- **PLEASE WAIT...**

This is a brief display after which all the factory defaults are retrieved.
**4.13 SERIAL NUMBER**
The menu “13. SERIAL NUMBER” enables reading the system serial number and panel ID for support purposes only. Panel ID is a unique number of the control panel that is used for registering the PowerMaxExpress to IPMP when using GPRS.

**4.14 CALLING UPLOAD/DOWNLOAD SERVER**
*Note:* This option is only used during the installation of panels monitored by compatible central stations. This option allows the installer to initiate a call to the upload/download server. The server uploads the PowerMaxExpress configuration to its database and can unload predefined parameters to the PowerMaxExpress.

**4.15 ENABLING/DISABLING PARTITIONS**
This mode allows you to enable/disable the partitioning feature (optional). Partitioning allows you to divide the system into a maximum of four independently controllable areas. A different user code is assigned to each partition in order to limit or control access to each area. A partition can also be armed or disarmed regardless of the status of the other partitions within the system.

When the partition feature is disabled, zones, user codes and features will operate the same as in a regular PowerMaxExpress unit. When partition is enabled, menu displays are changed to incorporate the partition feature.
4.16 WALK-TEST
This mode (see Figure 4.1a) provides you with the means to conduct a periodic test, via the walk-test menu, at least once a week and after an alarm event.

5. TESTING PROCEDURES

5.1 Preparations
Make sure all windows and doors are closed. If all zones are secured (undisturbed), the display should read:

\[\text{READY} \quad \text{HH : MM}\]

If the display is "NOT READY", query the control panel by pressing the [OKI] button repeatedly. The source(s) of the problem(s) will be displayed and read aloud. Take the necessary measures to eliminate the problem(s) before testing the system (see next paragraph).

5.2 Diagnostic Test
To verify proper function of all detectors in the system, a comprehensive diagnostic test is required. To perform this test, refer to figure 4.10.

5.3 Keyfob Transmitter Test
Initiate transmission from each transmitter enrolled as a keyfob unit (according to the list in Table A2, Appendix A). Use each transmitter to arm the control panel AWAY and immediately disarm it. Upon pressing the keyfob unit's AWAY key, the ARM indicator should light.

The display should respond as follows:

\[\text{ARMING AWAY} \quad \text{PLEASE EXIT NOW}\]

The exit delay beeps will begin.

Press the keyfob unit's DISARM (\[\text{\(\#\)}\]) key. The ARM indicator should extinguish, the announcement "Disarm, ready to arm" should be heard and the display should revert to:

\[\text{READY} \quad \text{HH : MM}\]

Test the AUX button in each keyfob in accordance with the information noted in Table A.2, Appendix A. Verify that the AUX button performs its duty as programmed.

- If the AUX (\([\text{\(\#\)}\]) button is defined as "INSTANT", press the AWAY button and then the AUX button. The response should be:

\[\text{ARMING INSTANT} \quad \text{(alternating)} \quad \text{PLEASE EXIT NOW}\]

and the exit delay beeps will start. Press the DISARM (\([\text{\(\#\)}\]) key immediately to disarm.

- If the AUX (* button is defined as "skip exit delay", press the AWAY button and while you hear the exit beeps press the AUX button – the exit beeps will be stopped immediately and the system will be armed AWAY. Press the DISARM key (\([\text{\(\#\)}\]) immediately to disarm the system.

5.4 Emergency Transmitter Test
Initiate transmission from each transmitter enrolled to an emergency zone (according to the list in Table A3, Appendix A). For example, upon pressing the transmit button of an emergency transmitter enrolled to zone 22, the display should read:

\[\text{Z22 EMERGENCY} \quad \text{(alternating)} \quad \text{VIOLATED}\]

It is advisable to let the central station know that you are conducting this test, or just disconnect the telephone line from the PowerMaxExpress during the test, to prevent false alarms.

6. MAINTENANCE

6.1 Dismounting the Control Panel
A. Remove the screw that fastens the front unit to the back unit (see figure 3.1H).
B. Remove the 3 screws that fasten the back unit to the mounting surface (see figure 3.1A) and remove the control panel.

6.2 Replacing the Backup Battery
Replacement and first-time insertion of battery pack is similar (see figure 3.1C).

With fresh battery pack, correct insertion and tightened battery compartment lid, the TROUBLE indicator should extinguish. However, the "MEMORY" message will now blink in the display (caused by the "tamper" alarm you triggered when opening the battery compartment lid). Clear it by arming the system and immediately disarming.

6.3 Fuse Replacement
The PowerMaxExpress has an internal fuse that has automatic reset. Therefore, there is no need to replace fuse.

When over current condition occurs, the fuse cuts off the circuit current. Upon fault current being removed for several seconds, the fuse is automatically reset and allows current flow through the circuit again.

6.4 Replacing/Relocating Detectors
Whenever maintenance work involves replacement or re-location of detectors, always perform a full diagnostic test according to par. 4.10.

Remember! A "poor" signal is not acceptable, as stated at the end of the test procedure.

7. READING THE EVENT LOG
Events are stored in the event log. You can access this log and review the events, one by one. If the event log fills up completely, the oldest event is deleted upon registration of each new event.

The date and time of occurrence are memorized for each event.

When reading the event log, events are shown in chronological order - from the newest to the oldest. Access to the event log is provided by clicking the [E] key and not through the installer’s menu. Reading and erasing process of the event log is shown in the next drawing.
While the system is in normal operation mode, click to review the event log.

Event is displayed in 2 parts, for example, "Z13 alarm" then "09/02/00 3:37 P". The two displays will be shown alternately until clicking again to move to the next event or until the end of the event log (4 minutes).

Applicable only if installer code is entered.
## APPENDIX A. Detector Deployment & Transmitter Assignments

### A1. Detector Deployment Plan

<table>
<thead>
<tr>
<th>Zone No.</th>
<th>Zone Type</th>
<th>Sensor Location or Transmitter Assignment (in non-alarm or emergency zones)</th>
<th>Chime (Yes / No)</th>
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</thead>
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<td>30 (*)</td>
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</table>

**Zone Types:**
- 1 = Interior follower
- 2 = Perimeter
- 3 = Perimeter follower
- 4 = Delay 1
- 5 = Delay 2
- 6 = 24 h silent
- 7 = 24 h audible
- 8 = Fire
- 9 = Non-alarm
- 10 = Emergency
- 11 = Gas
- 12 = Flood
- 13 = Interior
- 14 = Temperature
- 15 = Home / delay

**Zone Locations:** Note down the intended location for each detector. When programming, you may select one of 26 available zone names (plus 5 custom zone names that you can add - see Figure 4.3 - Define Zones).

* Zones 29 only is hardwired zones.

### A2. Keyfob Transmitter List

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<th>Transmitter Data</th>
<th>AUX button Assignments</th>
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### A3. Emergency Transmitter List

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<th>Transmitter Type</th>
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<th>Name of holder</th>
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<th>Assignment</th>
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### APPENDIX B. Event Codes

#### Contact ID Event Codes

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<th>Definition</th>
<th>Code</th>
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<td>101</td>
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<td>Telco fault</td>
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<td>120</td>
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<td>381</td>
<td>Loss of supervision</td>
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<td>121</td>
<td>Duress</td>
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<td>Sensor tamper</td>
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<td>LHR by user</td>
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<td>134</td>
<td>Entry/Exit</td>
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<td>Tamper/CP</td>
<td>408</td>
<td>Quick arm</td>
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<td>Door open event</td>
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<td>Flood alarm</td>
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<td>180</td>
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<td>Partial arm</td>
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<td>Engineer reset</td>
<td>602</td>
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<td>Bell</td>
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#### SIA Event Codes

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<td>AC Trouble</td>
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<td>Holdup Alarm (duress)</td>
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<td>Phone Line Restore</td>
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<td>Burglary Trouble / Jamming</td>
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#### 4/2 Event Codes

**Note:** The report to central station is on the following zones: First wireless siren - zone 31, second wireless siren - zone 32, GSM - zone 33, first 2-way keypad (MKP-150/MKP-151) - zone 35, second 2-way keypad (MKP-150/MKP-151) - zone 36.
### Alarms

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### Low Battery

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### Forced Arming – 8 users

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<th>4</th>
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### Zone Bypass

<table>
<thead>
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<th>4</th>
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<tbody>
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### Panic / 24 Hours - 8 users

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### Arm HOME and AWAY (Closing)

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<th>3</th>
<th>4</th>
<th>5</th>
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<th>7</th>
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<th>Panic CP</th>
<th>Duress</th>
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</thead>
<tbody>
<tr>
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### Disarm (Opening)

<table>
<thead>
<tr>
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### Trouble

<table>
<thead>
<tr>
<th>Event</th>
<th>Fuse Fail</th>
<th>Fuse Restore</th>
<th>Jamming</th>
<th>Jamming Restore</th>
<th>AC Failure</th>
<th>AC Restore</th>
<th>CPU Low Battery</th>
<th>CPU Low Battery Restore</th>
<th>CP Tamper</th>
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</tr>
<tr>
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<td>D</td>
<td>E</td>
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<td>2</td>
<td>3</td>
<td>4</td>
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</table>

<table>
<thead>
<tr>
<th>Event</th>
<th>CP Tamper Restore</th>
<th>No Active</th>
<th>COMM. &amp; LINE Restore</th>
<th>Enter Test</th>
<th>Exit Test</th>
<th>Auto Test</th>
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<td>1</td>
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<td>8</td>
<td>A</td>
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<td>F</td>
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</tbody>
</table>
Understanding the Scancom Reporting Protocol Data Format

The Scancom data format consists of 13 decimal digits divided into 4 groups, from left to right, as shown at the right side. Each channel is associated with a specific event as follows:

<table>
<thead>
<tr>
<th>Channel</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st “C”:</td>
<td>Fire</td>
<td>1 - 4</td>
</tr>
<tr>
<td>2nd “C”:</td>
<td>Personal attack</td>
<td>5 - 8</td>
</tr>
<tr>
<td>3rd “C”:</td>
<td>Intruder</td>
<td></td>
</tr>
<tr>
<td>4th “C”:</td>
<td>Open/close</td>
<td>Second alarm</td>
</tr>
</tbody>
</table>

APPENDIX C. Programmable Zone Types

C1. Delay Zones
A delay zone has exit and entry delays set by you in the course of programming the system. Warning beeps will sound throughout these delays, unless you choose to mute them.

- Exit Delay - The exit delay begins once the user arms the system. It allows him to leave via interior zones and a doorway before arming actually takes effect. When the exit delay starts, the buzzer beeps slowly and maintains a slow beeping rate until the last 10 seconds, during which it beeps rapidly. The PowerMaxExpress has two types of delay zones, for which different delay times may be set.

- Entry Delay - The entry delay begins once the user enters the protected area via a specific doorway (his entry is sensed by a delay zone detector). To avoid an alarm, he must reach the keypad via interior zones (which become “follower zones” during the entry delay) and disarm the system before the delay expires. When the entry delay starts, the buzzer beeps slowly until the last 10 seconds, during which it beeps rapidly.

C2. Emergency Zones
You can provide incapacitated, sick or elderly people with a miniature single-button transmitter to be carried on the neck like a pendant or to be worn on the wrist like a watch. In distress situations, they can press the button on their transmitter, causing the PowerMaxExpress to send an emergency call to the central monitoring station or to private telephones designated by the installer. To make this possible, define the required number of zones as emergency zones and enroll a portable transmitter to each one of these zones. When completed, ask the master user to distribute these transmitters to their potential users.

C3. Fire Zones
A fire zone uses smoke detectors and is permanently active (a fire alarm is triggered regardless of whether the system is armed or disarmed). Upon detection of smoke, a pulsating siren sounds immediately and the event is reported via the telephone line.

C4. Flood Zone
A flood zone is permanently active (a flood alarm is triggered regardless of whether the system is armed or disarmed). Upon detection of flood leak, the event is reported via the telephone line.

C5. Gas Zone
A gas zone is permanently active (a gas alarm is triggered regardless of whether the system is armed or disarmed). Upon detection of gas leak, the event is reported via the telephone line.

C6. Interior Zone
Interior zones are zones within the protected premises that have nothing to do with perimeter protection. Their most important feature is that they allow free movement within the protected area without initiating an alarm, provided that the system is armed in the “HOME” mode. People can therefore stay at home and move about freely, as long as they do not disturb a PERIMETER zone.

Once the system is armed in the AWAY mode (all zones are protected), interior zones will initiate an alarm if violated.

C7. Interior Follower Zones
“Interior Follower” zone is a zone that is located between entry/exit zone and the alarm system control panel. This zone is temporarily ignored by the alarm system during entry/exit delay periods, to enable you to walk (without causing an alarm) in front of a motion detector that is associated with the Interior Follower zone, after you enter through an entry zone on the way to the control panel, or when leaving the protected premises after system arming.

C8. Home/Delay Zones
A zone type which functions as a delay zone when the system is armed AWAY and as a perimeter-follower zone when the system is armed AWAY.

C9. Non-Alarm Zones
A non-alarm zone does not directly participate in the alarm system. It can be used for chime or for optional KEY ON-OFF feature (when enabled).

You can define the desired number of non-alarm zones and enroll a portable transmitter or a wireless device (detector) to this type of zone.

C10. Perimeter Zones
Perimeter zones rely on detectors designed to protect doors, windows and walls. An immediate alarm is initiated when such a zone is violated by opening the door/window or by trying to break the wall.

C11. Perimeter Follower Zones
A non-entry/exit zone, typically a perimeter zone located on an entry/exit path, that is treated as an entry/exit zone during an entry/exit time.

C12. Temperature Zone
A temperature zone uses a wireless temperature detector to detect both indoor and outdoor temperatures and is permanently active. The detector monitors room temperature using an internal sensor. For outdoor or refrigerator installations, a waterproof temperature probe (optional) is used. There are a total of four fixed temperature points and the user can enable one or more temperature points.

Upon detection of change in temperature a digital message is transmitted and the event is reported.
C13. 24-Hour Zones

24 hour zones are mainly used for PANIC buttons, perimeter detectors and anti-tamper protection. They therefore trigger an alarm in both armed and disarmed states.

- **24 Hour Zone - Silent.** Upon detection, this zone initiates a silent alarm, meaning that the sirens do not function. Instead the PowerMaxExpress dials telephone numbers and reports the event to central stations and/or to private telephones, as programmed.

- **24 Hour Zone - Audible.** Upon detection, this zone initiates a siren alarm. The PowerMaxExpress also dials telephone numbers and reports the event to central stations and/or to private telephones, as programmed.

C14. Key Zones (Optional)

Key zones are zones that can be used for arming and disarming the system by MCT-100 and MCT-102 PowerCode transmitters that are enrolled to a zone. In addition, the alarm system may be armed / disarmed by a keyswitch when connected to wired zones 29 and 30. Defining a zone as a KEY ZONE includes the following actions:

a. The zone should be defined as non-alarm type zone (see par. 4.3).

b. “Z-KEY ENABLE” should be selected for such a zone (see par. 4.3).

c. According to the zone number, “z. 21-28 enable”, “z.29-30 enable”, or “z. 21-30 enable” should be selected in the DEFINE PANEL menu (see par. 4.4.39).

APPENDIX D. PowerMaxExpress Compatible Devices

D1. PowerMaxExpress Compatible Detectors

Each detector compatible with the PowerMaxExpress system is packed with its own installation instructions. Read them carefully and install as indicated.

A. PIR Motion Detectors

The wireless passive infrared (PIR) motion detectors used in the system are of the PowerCode type. The PowerMaxExpress is capable of “learning” each detector’s identification code and linking it to a specific zone (see par. 4.3 in this Guide). Some units are shown below:

Note: K-940 MCW, Discovery K9-80/MCW and NEXT K9-85 MCW are pet immune units.

In addition to its unique 24-bit identification code, each detector transmits a message, containing status information:

- The detector is in alarm (or not).
- The detector is being tampered with (or not).
- The battery voltage is low (or normal).
- "This is a supervisory message".

If any of these detectors detects motion, it sends out a message to the alarm control panel. If the system is in the armed state, an alarm will be triggered.

B. Magnetic Contact Transmitter

MCT-302 is a PowerCode magnetic-contact transmitter used to detect the opening of a door or a window. The alarm contacts are closed as long as the door or window remains closed.

The unit has an extra alarm input that acts as if it were a separate wireless transmitter. It sends (or does not send) a “restored to normal” message to the alarm system, depending on the setting of an on-board “DIP” switch. The “restore” message informs you, through the control panel’s display, whether the door or window is open or closed.

D2. PowerMaxExpress Compatible Transmitters

The PowerMaxExpress system is compatible with multi-button and single button key-ring and hand-held transmitters that use PowerCode and CodeSecure coding methods.

Multi-button PowerCode transmitters transmit the same code each time the same button is pressed. They can be used for emergency signaling. They can not be used for arming / disarming.

CodeSecure transmitters are of the rolling code type - they transmit a new code each time the same button is pressed. This provides a higher security level, especially in arming / disarming applications, because the code can not be copied ("grabbed") by unauthorized people.

Following are the basic details of several compatible transmitters. The possible applications for each push-button are indicated in each drawing.
A. MCT-234
‘Keyfob’ transmitter. You can program the AUX (auxiliary) button to perform various tasks, in accordance with the user’s needs. Pressing AWAY and HOME together for 2 sec. initiates PANIC alarm. Pressing AWAY for 2 sec. initiates Latchkey arming.

B. MCT-231 / 201*
(N.A. in North America) Single-button pendant units. The MCT-231 (Code-Secure) and the MCT-201 (PowerCode) can be enrolled to perform functions as shown. Both units look alike.

C. MCT-134 / 104*
(N.A. in North America) 4-button hand-held units. MCT-134 (CodeSecure) can replace the MCT-234 keyfob. MCT-104 (PowerCode) can perform emergency and non-alarm functions. Both units look alike.

D. MCT-132 / 102*
(N.A. in North America) 2-button units. MCT-132 (CodeSecure) can perform functions as shown. MCT-102 (PowerCode) can perform emergency and non-alarm tasks. Both units look alike.

E. MCT-131 / 101*
(N.A. in North America) Single-button units. The MCT-131 (CodeSecure) and the MCT-101 (PowerCode) can be enrolled to perform functions as shown. Both units look alike.

F. MCT-211*
Water-proof, wrist-worn Power-Code transmitter. Can be enrolled to perform emergency or non-alarm functions.

* Not UL listed.

D3. PowerMaxExpress Compatible WL Siren
The MCS-710 / MCS-720 / MCS-730 / MCS-730 AC (*) wireless siren can be integrated with the PowerMax Pro in areas in which wiring action is difficult or impossible. The MCS-710 / MCS-720 / MCS-730 is a fully supervised, 2-way communication device (it includes a receiver, to receive activation commands from the alarm system, and a transmitter to periodically transmit its status signal to the alarm system). The MCS-730 AC is powered by an External 9VAC adaptor and non-rechargeable backup battery. When an identifiable activation command is received from the PowerMax Pro, the siren activates its sounder and the flash light (strobe light every 1.5 seconds).

* Not UL listed.

D4. PowerMaxExpress Compatible WL Repeater
The MCX-610 repeater is a mains powered range extender designed to relay digital data between wireless devices and a control panel.

Industry Canada Declaration
This product meets the applicable Industry Canada technical specifications/Le présent materiel est conforme aux specifications techniques appliables d’Industrie Canada.

The Ringer Equivalence Number is an indication of the maximum number of devices allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices does not exceed five/L’indice d’équivalence de la sonnerie (IES) sert à indiquer le nombre maximal de terminaux qui peuvent être raccordés à une interface téléphonique. La terminaison d’une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d’indices d’équivalence de la sonnerie de tous les dispositifs n’excède pas 5.

The Ringer Equivalence Number (REN) for this terminal equipment is 0.3B.
WARRANTY

Visonic Limited (the "Manufacturer") warrants this product only (the "Product") to the original purchaser only (the "Purchaser") against defective workmanship and materials under normal use of the Product for a period of twelve (12) months from the date of shipment by the Manufacturer.

This Warranty is absolutely conditional upon the Product having been properly installed, maintained and operated in accordance with the Manufacturer's installation and operational instructions. The Manufacturer does not represent that the Product will prevent any death and/or personal injury and/or damage to property resulting from burglary, robbery, fire or otherwise, or that the Product will in all cases provide adequate warning or protection. The Product, properly installed and maintained, only reduces the risk of such events without warning and it is not a guarantee or insurance that such events will not occur.

THE MANUFACTURER SHALL HAVE NO LIABILITY FOR ANY DEATH, PERSONAL AND/OR BODILY INJURY AND/OR DAMAGE TO PROPERTY OR OTHER LOSS WHETHER DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR OTHERWISE, BASED ON A CLAIM THAT THE PRODUCT FAILED TO FUNCTION.

Visonic shall have no liability to the Purchaser and/or anyone for any loss or damage arising under this warranty, THE MANUFACTURER'S MAXIMUM LIABILITY (IF ANY) SHALL NOT IN ANY CASE EXCEED THE PURCHASE PRICE OF THE PRODUCT, which shall be held as liquidated damages and not as a penalty, and shall be the complete and exclusive remedy against the Manufacturer.

The Manufacturer shall not be liable for any other reason, according to the Manufacturer's discretion, such as improper installation, failure to follow recommended installation and operational instructions, neglect, willful damage, misuse or vandalism, accidental damage, alteration or tampering, or repair by anyone other than the manufacturer, and are not covered by this Warranty.

The Purchaser agrees to the said conditions of sale and warranty and he recognises having been informed of the same jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so these limitations may not apply under certain circumstances.

The Manufacturer shall be under no liability whatsoever arising out of the corruption and/or malfunctioning of any telecommunication or electronic equipment or any programs. The Manufacturer obligations under this warranty are limited solely to repair and/or replace at the Manufacturer's discretion any Product or part thereof that may prove defective. Any repair and/or replacement shall not extend the original Warranty period. The Manufacturer shall not be responsible for dismantling and/or reinstallation costs. To exercise this Warranty the Product must be returned to the Manufacturer freight pre-paid and insured. All freight and insurance costs are the responsibility of the Purchaser and are not included in this Warranty. The Manufacturer shall be under no liability whatsoever arising out of the corruption and/or malfunctioning of any telecommunication or electronic equipment or any programs.

The Technical documentation as required by the European Conformity Assessment procedure is kept at:
UNIT 6 MADINGLEY COURT CHIPPENHAM DRIVE KINGSTON MILTON KEYSES MK10 0BZ. Telephone number: (0870) 7300800, Fax number: (0870) 7300801

Visonic Limited (the "Manufacturer") warrants this product only (the "Product") to the original purchaser only (the "Purchaser") against defective workmanship and materials under normal use of the Product for a period of twelve (12) months from the date of shipment by the Manufacturer.

The Warranty is absolutely conditional upon the Product having been properly installed, maintained and operated in accordance with the Manufacturer's installation and operational instructions. Products which have become defective for any other reason, according to the Manufacturer's discretion, such as improper installation, failure to follow recommended installation and operational instructions, neglect, willful damage, misuse or vandalism, accidental damage, alteration or tampering, or repair by anyone other than the manufacturer, are not covered by this Warranty.

The Purchaser agrees to the said conditions of sale and warranty and he recognizes having been informed of the same jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so these limitations may not apply under certain circumstances.

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The Manufacturer does not represent that this Product may not be compromised and/or circumvented or that the Product will in all cases provide adequate warning or protection. The Product, properly installed and maintained, only reduces the risk of such events without warning and it is not a guarantee or insurance that such events will not occur.

WARNING: The user must follow the Manufacturer's installation and operational instructions including testing the Product and its whole system at least once a week and to take all necessary precautions for his/her safety and the protection of his/her property.

However, if the Manufacturer is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty, THE MANUFACTURER'S MAXIMUM LIABILITY (IF ANY) SHALL NOT IN ANY CASE EXCEED THE PURCHASE PRICE OF THE PRODUCT, which shall be held as liquidated damages and not as a penalty, and shall be the complete and exclusive remedy against the Manufacturer.

The Manufacturer shall be under no liability whatsoever arising out of the corruption and/or malfunctioning of any telecommunication or electronic equipment or any programs. The Manufacturer obligations under this warranty are limited solely to repair and/or replace at the Manufacturer's discretion any Product or part thereof that may prove defective. Any repair and/or replacement shall not extend the original Warranty period. The Manufacturer shall not be responsible for dismantling and/or reinstallation costs. To exercise this Warranty the Product must be returned to the Manufacturer freight pre-paid and insured. All freight and insurance costs are the responsibility of the Purchaser and are not included in this Warranty. The Manufacturer shall be under no liability whatsoever arising out of the corruption and/or malfunctioning of any telecommunication or electronic equipment or any programs.

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