



Power Wave - 8

8 Zone Alarm Panel

V8.64

Installation Manual

1 October 2002

Crow (Aust) Electronic Engineering Pty Ltd

Corporate Head Office:

**429 Nepean Hwy,
Brighton East,
Vic., 3187
Australia**

Please contact us by Mail, Fax or e-mail.

Fax: +61-(0)3-9596-0888
E-mail: crow@crowaust.com.au
Web: www.crowaust.com.au

This Crow Power Wave-8 (PW-8) alarm control panel has been designed to provide the most requested features for both the installer & the end-user. These features include ease of installation, ease of programming and user friendly operation all in a package which is reliable, functional and attractive. Utilising many years of experience in the security industry and implementing valuable feedback, we are proud to provide you with a new generation of alarm controller. The Crow PW-8 is a product which brings you the quality and features which you deserve at an affordable price. In addition to the the advanced design, only the highest quality components have been used in the production of this Power Wave-8 panel to ensure the highest degree of reliability.

This manual will guide you through the installation and programming of your PW-8 alarm panel. For additional information regarding the operating instructions and options, please refer to the enclosed "Power Wave-8 User's Guide".

Copyright by Crow Electronic Engineering Pty Ltd October 2000 PW-8 V8.54 and above.

To the best of our knowledge the information contained in this manual is correct at the time of printing. Crow Electronic Engineering Pty Ltd reserve the right to make changes to the features and specifications at any time without notice in the course of product development.

Designed & Manufactured to Meet AS/NZS:4301/93 + AS:4268.2

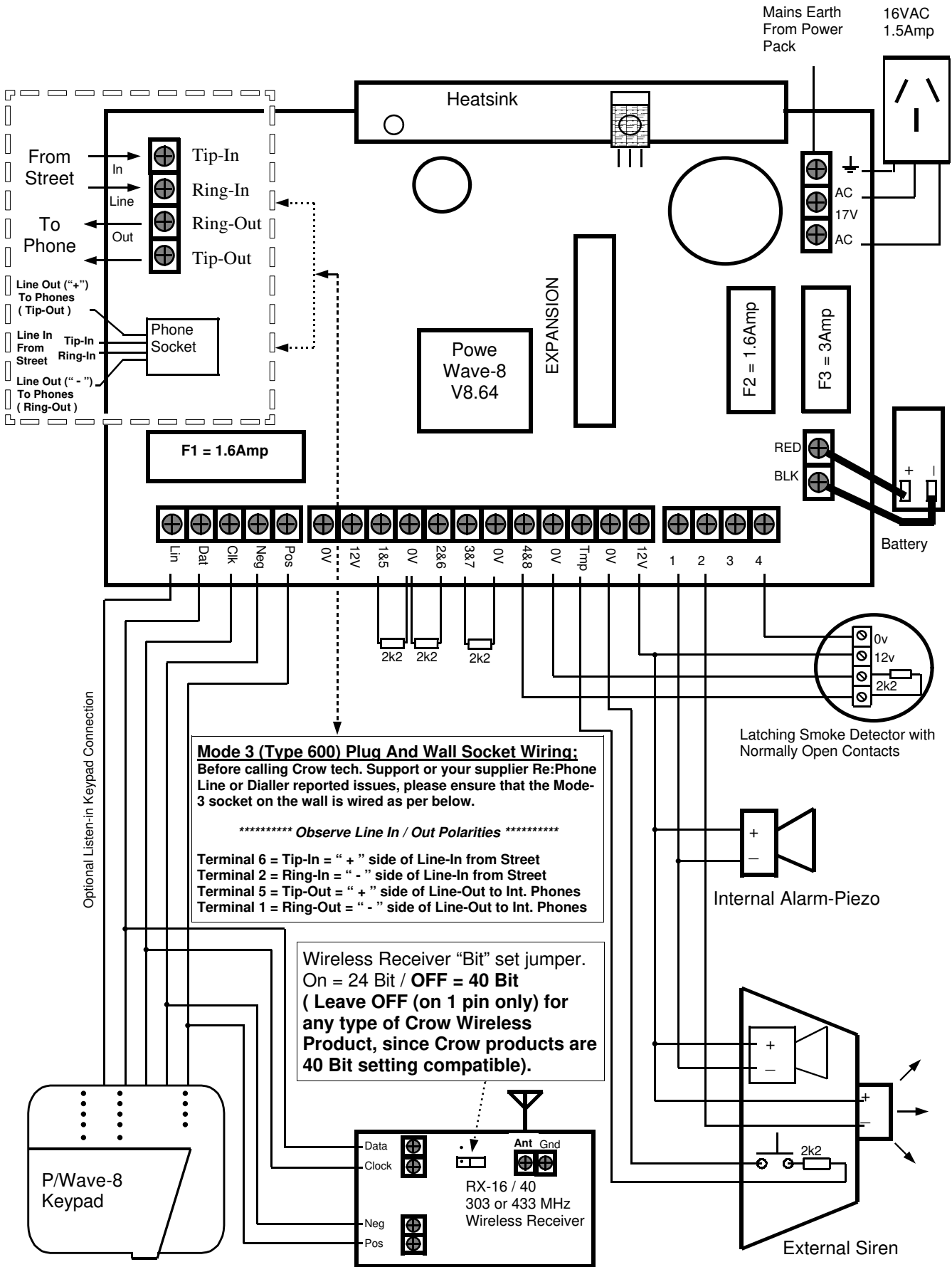


N345 - Product # CRPW8

CONTENTS

ACCESSING & EXITING PROGRAM MODES	12
AREA "A" CHIRPS & FLASHES	22
AREA "A" KEYPAD/KEYSWITCH OPTIONS	20
AREA "B" CHIRPS & FLASHES	23
AREA "B" KEYPAD/KEYSWITCH OPTIONS	21
CHIME MODE TIMER TO KEYPAD BUZZER	23
CONNECTION DIAGRAM	4
DIALLER PROGRAMMING.....	33-39
INPUTS.....	5
INSTALLING RX-40 WIRELESS RECEIVER.....	11
KEYPAD ADDRESS ASSIGNMENT.....	10
KEYPAD FUNCTIONS.....	11
KEYPAD INSTALLATION	10
KEYPAD PROGRAMMING.....	27-28
KEYPADS	8
MEMORY VIEWING MODE.....	9
MISCELLANEOUS.....	40-41
OUTPUT OPTION PROGRAMMING.....	15-19
OUTPUTS.....	6
PROGRAM SUMMARY	42-51
REMOTE CONTROL PROGRAMMING.....	31-32
TELEPHONE CONNECTION	7
TEMPORARY OUTPUT DISABLE.....	18
USER CODE OPTIONS.....	14
USER CODE PROGRAMMING.....	13
WARRANTY	53
WIRELESS DETECTOR PROGRAMMING	29-30
ZONE PROGRAMMING OPTIONS	24-26

CONNECTION DIAGRAM



INPUTS

The PowerWave-8 has 5 separate programmable monitored analogue inputs,

- 4 x Programmable, multi-state detection inputs
- 1 x Programmable tamper input (with optional Key-switch functions)

Each input must be terminated with the appropriate value or combination of end-of-line resistors, even if the input is unused.

ZONE INPUTS - Each of the 4 zone inputs can be assigned one of the following configuration options;

- 1 Short circuit input No-End-of-Line.
- 2 Single-End-of-Line zone with no tamper (4 zones).
- 3 8 Zone Double-End-of-Line (EOL) No Tamper.
- 4 Double-End-of-Line zones with open/short circuit tamper per input (8 zones) .

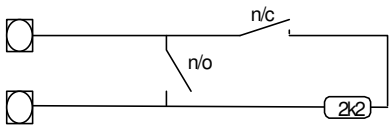
The following table shows end-of-line resistor configurations.

Zone Types	Low Zone Resistor	Hi Zone Resistor	Tamper End-Of-Line
Type 1 (4 Zones) LED's 1-4 OFF, 5-8 OFF	N / A (Short Circuit)	N / A	N / A
Type 2 (4 Zones) LED's 1-4 ON, 5-8 OFF	2k2 (Red, Red, Red, Gold)	None	None
Type 3 (8 Zones) LED's 1-4 OFF, 5-8 ON	4k7 (Yellow, Violet, Red, Gold)	8k2 (Grey, Red, Red, Gold)	N / A
Type 1 (8 Zones) LED's 1-4 ON, 5-8 ON	4k7 (Yellow, Violet, Red, Gold)	8k2 (Grey, Red, Red, Gold)	2k2 (Red, Red, Red, Gold)

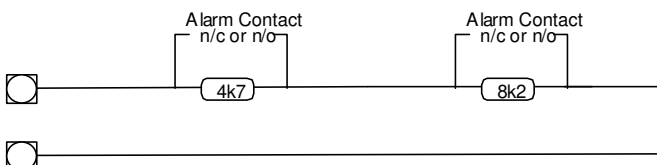
(1) 4 Zones, N/C



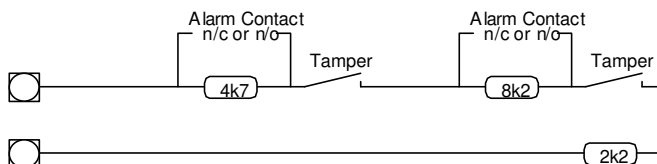
(2) 4 Zones EOL, no tamper



(3) 8 Zones no tamper



(4) 8 Zones with 8 tampers



NOTE:
In all cases where a 4K7 (for a low zone) & 8K2 (for a high zone) EOL Resistor is used (EXCEPT 2K2 Tamper resistors), the EOL Resistor **MUST** be connected **ACROSS** (in Parallel to) the alarm contact (detector relay) and **NOT** in series with it.

LED at Address 130 ↓	Zone Relationship ↓
LED #1	Zone 1 Short or EOL
LED #2	Zone 2 Short or EOL
LED #3	Zone 3 Short or EOL
LED #4	Zone 4 Short or EOL
LED #5	Zone 5 Enabled
LED #6	Zone 6 Enabled
LED #7	Zone 7 Enabled
LED #8	Zone 8 Enabled

INPUTS cont.

TAMPER - A 24Hr tamper circuit is available for monitoring tamper status of detectors, junction boxes, cabinets and satellite sirens etc. This Tamper circuit is programmable with 2 options [Address 170](#) either normally closed loop or 2k2 EOL supervision(the default is 2k2 EOL). The tamper circuit must be terminated with an end-of-line resistor if 2k2 EOL supervision is selected. The activation events and outputs for this tamper circuit are mapped in the same manner as for detection zones 1-8. Using Dual-End-of-Line resistors (Refer to zones on Page 6) the Tamper input can also provided two key-switches. The Low key-switch (4k7 resistor) operates Partition A while the High key-switch (8k2 resistor) operates partition B. In this configuration the 2k2 resistor must still be installed to seal the system Tamper.

In addition to the Analogue monitoring inputs, you will find the following system inputs on your POWERWAVE-8 control PCB;

AC - Connect the two low voltage wires (no polarity) from the transformer to the terminals marked AC on the PowerWave PCB. The POWERWAVE-8 includes a mains transformer rated at 1.4 amps at 17 volts.

EARTH - Always connect the mains earth to the appropriate terminal on the mains terminal block in the control box cabinet. Also connect a lead from this earth point to the terminal marked with the Earth symbol (next to AC terminals) on the POWERWAVE PCB.

BATTERY - Connect a sealed lead acid rechargeable 12V d.c. battery to the red and black battery leads. Be careful to observe correct polarity as damage may occur from incorrect connection. The minimum recommended battery capacity is 7 amp hours. Battery charge current at these terminals is limited to 350mA maximum. The battery connection is fuse protected by fuse F2 (3A). The panel performs a dynamic load test on the battery every 5 seconds and if it fails the test at any time it will flash the system LED (refer to the "View Memory" chart on page 10 for more details).

LINE IN - This pair of terminals is used to connect the PowerWave-8 to the incoming telephone line from the street. The communicator uses this line for reporting.

LINE OUT - This pair of terminals is used to connect telephones and other communication equipment to the incoming phone line via the POWERWAVE-8 controller. The telephone line is passed through the POWERWAVE-8 controller to ensure that the line is available to the controller when it is required.

OUTPUTS

12 VOLT OUTPUTS - There are two 12 volt dc outputs available on the PowerWave-8 PCB. These 12 volt outputs are all regulated and fuse protected. These outputs are marked 12v and 0v, and are supplied by fuses F1. A maximum total load of 1 amp may be drawn from these terminals.

OUTPUTS 1 & 2 - These fully programmable, high current, open collector (high-going-low) type FET outputs are capable of switching up to **1.5A @ 12V d.c.** These 2 outputs are normally set as switched outputs, providing power for 12v sirens or piezos. If required, these outputs can be programmed to be siren outputs designed to drive an 8 ohm 10 watt horn speaker per output. Also if a horn speaker is connected to Output 1 you may select (in programming) the listen-in feature to this output as well so that the dialling sequence can be heard at the speaker.

OUTPUTS 3 & 4 - These are low current, open collector (high-going-low) type outputs capable of switching no more than **100mA**. Like Outputs 1 & 2 they are fully programmable.

NOTE: - *Connecting devices which draw current in excess of 100mA to outputs 3 & 4 will cause permanent damage to the PowerWave controller.*

KEYPAD PORT - The terminals marked *POS, NEG, CLOCK, & DATA* make up the communications port which the keypads and other intelligent field devices use to talk to the POWERWAVE-8 controller. The terminals are connected to corresponding terminals on the remote devices. The "listen" terminal is only used by the keypads and utilises a fifth wire to provide a communicator listen-in facility. This feature is particularly useful when servicing monitoring faults. The keypad 12v output I(*POS,NEG*) is also protected by fuse F1.

EXPANSION PORT - The expansion port is for the connection of the Arrowhead RS232 serial board. The serial board allows for the direct connection of a PC running the Upload/Download software. It is also used for the EEPROM board to allow program back-up and re-instatement using the Data Transfer Unit (DTU).

TELECOM INTERFACE

The communicator facility of this Power Wave-8 controller has been designed to provide optimum flexibility in the way in which alarm events are reported. This flexibility includes options for reporting to a central monitoring station using Ademco Contact ID, a domestic reporting option using alternating siren tones, a format for reporting alarms to a numeric pager and a powerful speech dialler.

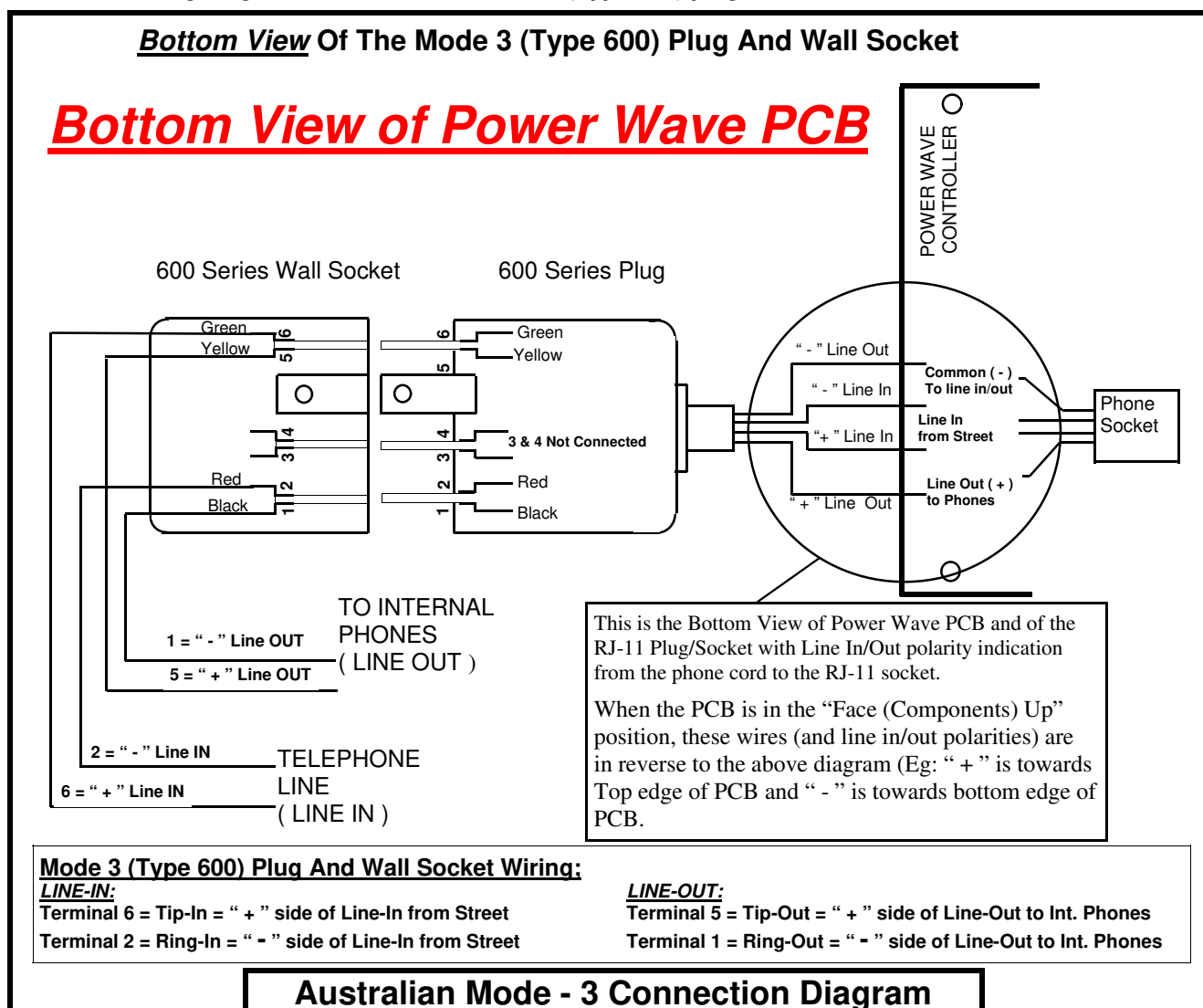
In accordance with statutory requirements of Austel standards, we must bring the following points to your attention;

Connect the Telephone line via a Mode 3 lead (supplied) to the Mode 3 phone socket on the wall (not supplied). Using a Mode 3 socket on the wall, allows the Power Wave-8 to cut off existing telephones or other devices connected to the same phone line and seize the telephone line to ensure the alarm call can be made. The control panel is supplied with an RJ11 socket and/or terminal blocks for connecting the panel to the telephone line. If using the RJ11 phone socket on the PC Board, ensure that the supplied phone lead is used to connect the panel to the telephone line socket on the wall.

All connections must comply with Australian Standards ACA TS008.

If using the (Optional) terminal blocks on the PCB, then the system must be wired in accordance with the diagram below and the lead must comply with Australian Standards ACA TS008.

The following diagram shows how the Mode 3 (Type 600) plug should be wired to the Power Wave-8.



The transmit level from this device is set at a fixed level in accordance with Austel requirements and because of this, there may be circumstances where this device does not give its optimum output level performance. Before reporting such occurrences as faults, please check the line with a standard Austel approved telephone, and do not report a fault unless the telephone performance is impaired.

This automatic dialling equipment shall not be set up to make calls to the " 000 " Emergency Service

PowerWave-8 KEYPADS



PowerWave-16 LED Keypad



PowerWave-16 LCD Keypad

When the PowerWave-8 is displaying codes and address values in program mode it may be necessary to display the 9 and 0 digits. As there are no Zone indicators for 0 and 9 the "A" and "B" indicators are used.

i.e. When displaying values in programming mode
"A" = 0 and "B" = 9

LIGHT\INDICATION ↓ →	OFF	ON STEADY	FLASHING
READY\BYPASS	Zone Unsealed	All Zones Sealed	A Zone is Bypassed
SYSTEM	Normal	System Alarm Reset	New System Alarm
TROUBLE	Normal	Trouble Alarm Active	New Trouble Alarm
PROGRAM	Normal	Master Code Program Mode	Installer Program Mode or Control Function Active
READY\BYPASS & PROGRAM	-	Bypass Mode Active (Zones can be Bypassed)	-
ZONES 1-8	Zone Secure	Zone Violated	Zone in Alarm
Armed A	Partition A Disarmed	Partition A Armed	Partition A Stay Mode
Armed B	Partition B Disarmed	Partition B Armed	Partition B Stay Mode

VIEWING the MEMORY

If the System light is on, but no other Zone lights are—there are no current System alarms. Arming/Disarming or reviewing the Memory will turn it off.

When viewing the memory by pressing the “MEMORY” button, the first thing that will always be displayed are CURRENT SYSTEM FAULTS. Below here are the System fault indications:

Zone LED	System Fault
①	Battery Low
②	Mains Failure
③	Telephone Line Failure
④	Wireless Detector Battery Low
⑤	Remote Control Battery Low
⑥	Wireless Detector Supervision Failure
⑦	Zone Inactivity Timeout
⑧	Dialler failed to get a Kiss-off

Following the display of current system alarms the panel will then sequence through the 127 historical memory events starting at the most recent event.

<u>KEYPAD LED's</u> * = Flashing	<u>EVENT</u>
System + ①	LOW BATTERY—System
System + ②	MAINS FAILURE
System*	KEYPAD PANIC (or Buttons 1&3)
System* + 'A'*	KEYPAD FIRE (Buttons 4&6)
System* + 'B'*	KEYPAD MEDICAL (Buttons 7&9)
System* + ①-⑧*	REMOTE PANIC Buttons 1-8
System + Trouble* + ①-⑧*	WIRELESS DETECTOR SUPERVISION FAILURE
Trouble + ③	TELEPHONE LINE FAILURE
Trouble*	CABINET TAMPER
Trouble* + ①-④	TAMPER - Zones 1-4 Short Circuit
Trouble* + ⑤-⑧	TAMPER - Zones 5-8 Open Circuit
Trouble + ①-⑧*	LOW BATTERY – R/C Buttons 1-8
Trouble + 'A' & 'B'*	DURESS Code
Area 'A'	ARMED Area A
Area 'B'	ARMED Area B
Area 'A'*	STAY Mode Area A
Area 'B'*	STAY Mode Area B
Ready/Bypass + Trouble + ①-⑧	ZONE INACTIVITY ALARM Zones 1-8
Ready/Bypass + ①-⑧	BYPASED Zones 1-8
①-⑧	OPEN Zones 1-8
①-⑧*	LOW BATTERY - Wireless Zones 1-8

KEYPAD INSTALLATION

INSTALLATION

Separate the two keypad halves by **carefully** inserting a small screwdriver into the release slots on the bottom edge of the keypad front half and applying a gentle pressure. This will release the bottom edge of the housing enough for you to unclip the top.

Screw the base to the wall using the mounting holes provided. These holes will match the standard single switch plate spacing. Ensure the base is mounted right side up. It is marked with the word "TOP" to aid orientation. When fixing the base to the wall make sure the top of the screw heads will not touch or short out the underside of the PCB when the top half of the keypad is reinstalled. Bring the cables through the centre of the base.

Connect the 4 or 5 wires to the 5 way terminal block on the rear of the keypad PCB making sure to match the cables up with the terminals as marked on the control panel's keypad port. The 5th wire is connected from the "LIN" terminal of the keypad to the "Listen" terminal of the PowerWave-8 PCB keypad port.

WIRING

The PowerWave keypad connects to the PowerWave Controller via a 4 or 5 wire data security cable. A maximum of 8 LED keypads can be connected, each wired in parallel. A 5th wire may be used to provide a phone line "Listen-in" facility at the keypad when the PowerWave is communicating.

KEYPAD ADDRESS ASSIGNMENT

Each of the 8 possible LED keypads which are able to be connected to your PW-16 panel must be addressed individually to avoid BUS conflicts and other communication problems. As default, each keypad comes addressed as #1.

Use the table below to determine Keypad addressing.

IMPORTANT NOTE: KEYPAD ADDRESS CHANGES ARE ONLY RECOGNISED AT POWER-UP. ALL CHANGES SHOULD BE MADE IN THE POWERED DOWN STATE AND THEN ON POWER-UP THE NEW KEYPAD ADDRESS WILL BE RECOGNISED BY THE PANEL

The maximum recommended cable length using standard 0.2mm security cable is 50m. Cable runs exceeding this distance may require 0.5mm cable. Always use good quality cable. Some installations may require CAT5 data cable to ensure data integrity in noisy sites.

Keypad 1 default

	D	C	B	A
Keypad 1		Off	Off	Off
Keypad 2		Off	Off	On
Keypad 3		Off	On	Off
Keypad 4		Off	On	On
Keypad 5		On	Off	Off
Keypad 6		On	Off	On
Keypad 7		On	On	Off
Keypad 8		On	On	On

Tamper Enable

Tamper Disable

	Switch '1'	Switch '2'	Switch '3'
Keypad 1	Off	Off	Off
Keypad 2	On	Off	Off
Keypad 3	Off	On	Off
Keypad 4	On	On	Off
Keypad 5	Off	Off	On
Keypad 6	On	Off	On
Keypad 7	Off	On	On
Keypad 8	On	On	On

Panel	Switch '5'	Switch '6'	Switch '7'
PW-4	Off	Off	Off
PW-8	On	Off	Off
PW-16	Off	On	Off
PW-64	On	On	Off

	Switch '8'
Disable Tamper	On
Enable Tamper	Off

FUNCTIONS

The PowerWave LED Keypad consists of; an 18 button, backlit silicone rubber keypad, 14 LED indicators and an internal piezo buzzer housed in a modern white plastic housing. The plastic housing has a hinged front lid to cover and protect the rubber buttons when not in use. All the electronics are contained on a single circuit board inside the housing.

Because the keypads communicate with the controller using data, the cable run from panel to keypads is secure against tampering. For this reason there is no tamper switch on the keypad assembly. Access to the keypad electronics will not disarm the panel.

BUTTONS

The 18 silicone rubber buttons are used for the following functions.

In normal operating mode the numeric keys are used for entering Access Codes. In Program Mode the numeric keys are used for entering options & new values.

The buttons with text labels are used as function buttons and select the options indicated by the text and normally precede other button presses, e.g. to enter Bypass Mode press <**BYPASS**> and the numeric key corresponding to the zone number you wish to be excluded.

The **PROGRAM** Key is used to prefix option selections in the program modes e.g. <**PROGRAM**> 4 <**ENTER**> selects User Code 4. The **PROGRAM** key is also used prior to a Master Code to enter user program mode from normal operation mode.

The **ENTER** Key is used to enter access or program codes. It is normally used at the end of a button sequence.

The **CONTROL** button, if enabled, is used to isolate day zone audible alarms if temporarily not required and/or to directly control outputs if programmed.

LED INDICATORS

The LED indicators are used to display system conditions including Zone status, Battery state, Tamper etc. Please refer to the LED table on page 10 for a full explanation of the conditional displays.

INSTALLING RX-40 WIRELESS RECEIVERS

The PowerWave-8 is fully compatible with the new RX-40 Wireless receivers. The addition of this receiver will add wireless capability to your system in the form of wireless PIR detectors, Wireless Remote Controls/Medical Pendants, Wireless Reed Switches and Wireless Smoke Detectors. The Receiver connects to the same communications port as the keypads and can be installed either inside the cabinet, or if preferred, may be installed at a remote location. The Receiver is available in 3 frequencies, 303.875mhz, 433.92mhz or 27mhz. Multiple receivers can be added to the system to gain better reception if needed.

The receiver requires 4 cores and can successfully be run in 0.2mm unscreened cable over a distance of up to 100 metres. Like the keypads the Receiver has 12v connections labelled *POS and NEG* which are wired to the 12v supply and CLK and DATA terminals for connection to the communications bus.

The green LED fitted to the receiver will indicate when the unit is in "Learn" mode (Flashing - see [address 601](#)) or when it is receiving an actual wireless transmission (On Steady)

PROGRAMMING YOUR PowerWave-8

ACCESS TO PROGRAMMING ON POWER UP (INSTALLER MODE)

When power is applied to the controller for the first time, with the panel tamper input open, the panel will inhibit tamper alarms and ready the panel to enter INSTALLER PROGRAM Mode (unless the Installer Lock-out option Address 170 option 2 has previously been enabled). At this point you can go to any keypad which is connected to the panel and press "PROGRAM" "ENTER" which will automatically put that keypad into full Program mode, Program LED Flashing. (NOTE: Only one keypad can be in Program mode at any time)

ACCESS TO PROGRAMMING

Before you can enter Installer Programming, the panel must not be armed.

Press <PROGRAM> - < Installer Code> - <ENTER>

Program light will Flash

Note: Default Installer Code (Code 11) is 000000.

You are now in Installer Programming Mode. Any program addresses may be viewed or changed in this mode.

HOW TO PROGRAM

The programming sequence always follows this pattern;

<PROGRAM> - <1,2 or 3 digit address> - <ENTER>

3 short beeps if OK - 1 long beep if error

The LEDES will display current value or status

Enter the new value or option

<New Value> - <ENTER>

3 short beeps if OK - 1 long beep if error

Access to Installer programming mode can be restricted by having to enter Client Programming mode first. This is done at [Address 169](#) option 3.

USER CODE PROGRAMING BY CLIENT

Press <PROGRAM> - <Master Code> - <ENTER>

Program light On Steady

Note: Default Master Code is 123 ([Address 1](#)) .

You are now in Client Program Mode. Only User Codes 1-10 can be viewed or changed in this mode. Codes may be denied access to Client mode, allowed access to change their code only or allowed access to view & change all user codes.

RESETTING BACK TO FACTORY DEFAULT SETTINGS (From Install Mode Only)

This address allows you to reset the panel back to the factory defaults (Reset All defaults).

e.g.To reset All System defaults including User Codes, go to [Address 620](#)

Press <PROGRAM> - 620 - <ENTER>

3 beeps - Program light flashing

After the system configuration has been reset back to defaults, all values, options & Codes will be set to the values shown in the Program Option Summary as defaults. These value & option selections have been chosen as the most common set-up for the majority of systems.

[Address 621-625](#) allow selective defaults to be set (refer to program summary at the back of the manual for more details).

TO EXIT PROGRAM MODES

To exit program modes when you have finished programming:

Press **<PROGRAM>** - **<ENTER>**
Program light goes out

The panel is now back in Normal Mode, any program changes you have made will have replaced previous values and be in effect.

Note: During programming Tamper and 24 hour alarms are disabled which allows quiet access to the panel, detectors and satellite siren units etc. On exiting program mode, all inputs are scanned and if any tamper or 24Hr alarms are present an activation will occur.

Note: Where there are multiple options at one address, options '0' will turn all options off and '9' will turn all options on.

PROGRAMMING USER CODES

USER CODES - (Address 1 to 10 & 11)

There are 11 codes available in the PowerWave-8, 10 user codes and 1 install code. The user codes are located in addresses 1-10. As default, Code 1 has Master Code access and must be used to enter Client programming mode. The Installer code is stored at address 11 and is used to access *Installer* Programming mode.

Codes 1-10 may be varied in length from 1 to 6 digits. Code 11 must be 3-6 digits.

Below is an example of changing User Code #1 to '4567', and adding User Code #5 as '321'

<PROGRAM> - **< Installer Code or Master Code>** - **<ENTER>**
<PROGRAM> - **<1>** - **<ENTER>**
<4567> - **<ENTER>**
3 beeps - program light flashing

<PROGRAM> - **<5>** - **<ENTER>**
<321> - **<ENTER>**
3 beeps - program light flashing

To replace a code simply enter the new code in the same address as the old code. This will overwrite the previous code but maintain the user access as that of the previous code.

To clear or delete a code simply enter the BYPASS button at the address where the old code is stored.

<PROGRAM> - **<3>** - **<ENTER>** **<BYPASS>** **<ENTER>**
3 beeps - Program light flashing
User Code # 3 is Erased

User Code Access Levels

Addresses 21-30

- Option 1 - Code has Area A access
- Option 2 - Code has Area B access
- Option 3 - Code can Arm Area
- Option 4 - Code can Disarm Area
- Option 5 - Code can turn Stay Mode ON
- Option 6 - Code can turn Stay Mode OFF
- Option 7 - Code can Program their own code
- Option 8 - Code can Program Other Codes

NOTE: Options 3,4, 5 & 6 are used in conjunction with options 1 & 2 whereby options 3,4, 5 & 6 determine the functions and options 1 & 2 determine the area of operation. **If option 8 is on for the user, that user can change the telephone numbers and change the Real Time Clock.**

Installer Code - [Address 11](#)

This code is used to enter Installer Programming mode (Program LED flashing). The default installer code is 000000. To change this code enter your new installer code at the [Address 11](#). The new code will be flashed back to you automatically. The Installer code may vary from 3-6 digits in length

Duress Digit

This address (230) is used to program the duress digit. The duress digit is a number from 1-9 ("0" means the duress function is disabled) .To create a duress alarm the duress digit must be entered before a valid user code (e.g. If the code was "2580" and the duress number was "4", then entering a code of "42580" "Enter" would create a duress alarm).

Address 230 **Duress Digit** - Value 1-9 (Default = 0, Disabled)

LCD KEYPAD PROGRAMMING

LCD Program Mode allows the programming of a customized “System Name” (the name displayed during idle mode at the keypad), Customized “Zone Names” (the text that appears on the keypad when a zone is unsealed) and renaming of the Partitions e.g. the default Partition names are “A” for the first partition and “B” for the second partition but you can rename them “1” and “2” if you wish.

LCD PROGRAM MODE

To enter LCD Program Mode Press <CONTROL> and <ARM> for 2 seconds.
 (NOTE: You must press the “Control” button first and the “Arm” button must be pressed within 2 seconds of pressing the Control button). If you make a mistake press the “Enter” button then repeat the process.
 The display will now show “**Local Mode kb #**” where the # equals the keypad address as set by DIP switches 1-3 on the keypad PCB (refer to information on page 10).

When you have entered “LCD Program Mode” and you have entered one of a program address e.g. <PROG>-<1>-<ENTER>, the display will look like this;



The Cursor will be underneath the first letter to be edited (in this case the “Z”).
 Use the arrow keys to move the cursor backward and forward.

Press the corresponding Alpha-Numeric key to replace the current digit. (Just like making a text message on a mobile phone)

<MEM> toggles between upper and lower case.

<ENTER> saves the text

<A> returns back the last saved text

 returns back the default text

Below are the functions of the Alpha-Numeric keys:

Button #	1st Press	2nd Press	3rd Press	4th Press
1	* (')	# (<)	= (>)	1
2	A (a)	B (b)	C (c)	2
3	D (d)	E (e)	F (f)	3
4	G (g)	H (h)	I (i)	4
5	J (j)	K (k)	L (l)	5
6	M (m)	N (n)	O (o)	6
7	P (p)	Q (q)	R (r)	7
8	S (s)	T (t)	U (u)	8
9	V (v)	W (w)	X (x)	9
0		Y (y)	Z (z)	0

PROGRAMMING ZONE DESCRIPTIONS

- 1 Zone #1 TEXT (maximum 16 characters)
- 2 Zone #2 TEXT
- 3 Zone #3 TEXT
- 4 Zone #4 TEXT
- 5 Zone #5 TEXT
- 6 Zone #6 TEXT
- 7 Zone #7 TEXT
- 8 Zone #8 TEXT

PROGRAMMING AREA CHARACTER

998 Area Character (maximum of 1 per Area)

The keypad allows for up to 16 Areas, hence 16 characters 'A-P' are displayed. In the case of the PW-8, there are only 2 Areas, so the first 2 characters apply.

These characters can be changed to a number eg. to display 'Area 1' if desired.

Zone 1	<A..Z>
Samanthas Room	

PROGRAMMING PANEL NAME

999 Panel Name Display (maximum 16 characters)

ADJUSTING KEYPAD BACKLIGHT LEVEL

Areas	<A..Z>
ABCDEFGHIJKLMN	OP

Backlighting of the Keys and the LCD Display can be adjusted in 16 steps from Fully illuminated to Off.

Increase LCD Backlight - Hold <CONTROL> and press <STAY> repeatedly

Decrease LCD Backlight - Hold <CONTROL> and press <BYPASS> repeatedly

Increase Keypad Backlight - Hold <CONTROL> and press <MEM> repeatedly

Decrease Keypad Backlight - Hold <CONTROL> and press < > repeatedly

ADJUSTING BUZZER TONE

Name	<A..Z>
PowerWave 8	

The Keypad Buzzer tone can be adjusted in 16 steps from fully On to Off.

Increase Volume - hold <CONTROL> and press <A> repeatedly

Decrease Volume - hold <CONTROL> and press repeatedly

PROGRAMMING OPTIONS

Output States

NOTE: With all output programming options we refer to outputs 1-8. Only outputs 1-4 are available as standard, with outputs 5-8 requiring the connection of the optional 4 way output expander unit that connects to the keypad bus (the output expander provides 4 change-over relay contacts).

This block of addresses (31 - 38) are used to map output modifiers to each of the 8 outputs available on the PowerWave.

- Address 31**
- ① Invert output - Default off
 - ② Flash output - Default off
 - ③ Single pulse to output - Default off
 - ④ Lockout output once reset - Default off
 - ⑤ Siren Driver to output - Default off
 - ⑥ "Control" button can operate output - Default off
 - ⑦ Output flashes on a 24 hour zone alarm - Default off
 - ⑧ Day zones linked to pulse timer - Default off

Option ① Invert Output - This option is used to invert the normal state of the output. The Alert uses open collector type transistor switches and the default state of all outputs is off or high. When in alarm the transistor switch is turned on and the output is switched low. The invert option reverses this function.

- Option 2 Flash Output** - This option causes the output to turn on and off at a rate set by the pulse timer for this output (Address 221-228) when in alarm and is normally used to flash a lamp during an activation.
- Option 3 Single Pulse to Output** - This option, when applied, produces a single pulse at the output during an alarm (the pulse time is the value programmed at the output pulse timer address, 221-228).
- Option 4 Lockout Once Reset** - This option is used to limit the output to one operation per arming period.
- Option 5 Siren Driver to Output** - This option causes the output to be a modulated output designed to drive 8 ohm 10 watt horn speakers directly. Outputs 1 & 2 can have the siren driver feature. A different tone is generated at output 1 to that at outputs 2.
NOTE: DO NOT CONNECT A HORN SPEAKER TO OUTPUT 1 or 2 WITHOUT FIRST TURNING THIS OPTION ON OTHERWISE DAMAGE MAY OCCUR TO THE OUTPUT CONCERNED.
- Option 6 "Control" button can operate output** - The "Control" button on the keypad can be used to turn outputs on or off. For this to happen this option must be turned on for the output/s concerned. To turn an output on the operator simply presses the "Control" button at which time the "System" & "Program" LED's will illuminate to indicate that the Control mode is active. If any controllable outputs are currently on, the relevant green zone led (LEDS 1-8) will be on. The operator can now press a button relating to the output/s they wish to control eg pressing the "1" button will turn output 1 on or off, The "2" button for output 2 etc. When an output state is changed the zone LED will indicate the change of state. When finished the operator then presses the "Enter" button to cancel the Control mode and return to normal.
- Option 7 Output Pulses for '24 hour' alarms** - If a 24 hour zone activates the alarm this option will cause the output to flash at a rate equal to the value set for the pulse timer ([Address 221-228](#)).
- Option 8 Chime Zones Linked to Pulse Timer** - Chime Zones programmed to this output will pulse at the pulse timer rate ([Address 221-228](#)) for the duration of the Chime zone to output timer ([Address 211-218](#))
[Address 32 - 38](#) as per [Address 31](#) above for Outputs 2-8

24-Hour Output Options

[Address 41 - 48](#)

In this block of [address 41](#) relates to output #1, [42](#) relates to output #2 etc

- Address 41**
- 1 Remote Control Panic to Output - Default on
 - 2 Keypad Panic to Output - Default on
 - 3 Keypad Fire to Output - Default off
 - 4 Keypad Medical to Output - Default off
 - 5 Cabinet Tamper to Output - Default on
 - 6 Duress Alarm to Output - Default off
 - 7 Mains Fail to Output - Default off
 - 8 Battery Low to Output - Default off

- Option 1 Remote Control Panic to Output** - This option is used to send the operation of the Remote Control panic button to an output i.e. when the Remote Control button is pressed any output with this option enabled will turn on.
- Option 2 Keypad Panic to Output** - This option is used to send the Keypad Panic Button, or the 2 button Panic function to an output. Keypad Panics are generated when a user presses the Panic Button or buttons **1 & 3 Simultaneously** at the keypad.
- Option 3 Keypad Fire to Output** - This option is used to send the manual Keypad Fire alarm function to an output. The keypad Fire alarm is generated when a user presses buttons **4 & 6 Simultaneously** at the keypad.

- Option 4 Keypad Medical to Output** - This option is used to send the manual Keypad Medical alarm function to an output. The keypad Medical alarm is generated when a user presses buttons **7 & 9 Simultaneously** at the keypad.
- Option 5 Cabinet Tamper to Output** - This option is used to send activations of the common Tamper Input to an output. This common tamper input is normally used to Monitor the panel cabinet and satellite tamper switches.
- Option 6 Duress Alarm to Output** - This option will send the Duress Function to an output. Programming of the Duress Digit is at [address 230](#).
- Option 7 Mails Fail To Output** - A mains failure will be indicated at this output when option 7 is enabled at this address. The Alarm Reset Timer must be set to "0" when this option is used.
- Option 8 Low Battery** - A battery Low condition will be indicated at this output when option 8 is enabled at this address. The alarm reset timer must be set to "0" when this option is used.

Address 42 - 48 as per 41 above for Outputs 2-8

‘Armed’ Zone Alarms to Outputs

When a zone is in alarm (during the ARMED state only) this block of addresses allows individual zones to be sent to selected outputs. The default setting is that zones 1-8 will turn on all outputs 1-8 when in alarm.

- 51** Zone Alarms to Output #1. Options=Zones 1-8 (Default=1-8)
- 52** Zone Alarms to Output #2. Options=Zones 1-8 (Default=1-8)
- 53** Zone Alarms to Output #3. Options=Zones 1-8 (Default=1-8)
- 54** Zone Alarms to Output #4. Options=Zones 1-8 (Default=1-8)
- 55** Zone Alarms to Output #5. Options=Zones 1-8 (Default=1-8)
- 56** Zone Alarms to Output #6. Options=Zones 1-8 (Default=1-8)
- 57** Zone Alarms to Output #7. Options=Zones 1-8 (Default=1-8)
- 58** Zone Alarms to Output #8. Options=Zones 1-8 (Default=1-8)

‘STAY’ Mode Zone Alarms to Outputs

When a Stay Mode zone is in alarm (during the Stay state only) this block of addresses allows individual zones to be mapped to selected outputs. The default setting is that zones 1-8 will turn on output 2 only when a Stay mode alarm occurs.

- 61** Stay Mode Zone Alarms to Output #1. Options=Zones 1-8 (Default=None)
- 62** Stay Mode Zone Alarms to Output #2. Options=Zones 1-8 (Default=1-8)
- 63** Stay Mode Zone Alarms to Output #3. Options=Zones 1-8 (Default=None)
- 64** Stay Mode Zone Alarms to Output #4. Options=Zones 1-8 (Default=None)
- 65** Stay Mode Zone Alarms to Output #5. Options=Zones 1-8 (Default=None)
- 66** Stay Mode Zone Alarms to Output #6. Options=Zones 1-8 (Default=None)
- 67** Stay Mode Zone Alarms to Output #7. Options=Zones 1-8 (Default=None)
- 68** Stay Mode Zone Alarms to Output #8. Options=Zones 1-8 (Default=None)

‘24 HOUR’ Zone Alarms to Outputs

When a 24 Hour zone is in alarm this block of addresses allows individual zones to be sent to selected outputs. The default setting is that zones 1-8 will turn on output 2 only when a 24 Hour alarm occurs.

- 71** 24 Hour Zone Alarms to Output #1. Options=Zones 1-8 (Default=None)
- 72** 24 Hour Zone Alarms to Output #2. Options=Zones 1-8 (Default=1-8)
- 73** 24 Hour Zone Alarms to Output #3. Options=Zones 1-8 (Default=None)
- 74** 24 Hour Zone Alarms to Output #4. Options=Zones 1-8 (Default=None)

- 75 24 Hour Zone Alarms to Output #5. Options=Zones 1-8 (Default=None)
- 76 24 Hour Zone Alarms to Output #6. Options=Zones 1-8 (Default=None)
- 77 24 Hour Zone Alarms to Output #7. Options=Zones 1-8 (Default=None)
- 78 24 Hour Zone Alarms to Output #8. Options=Zones 1-8 (Default=None)

‘CHIME’ Zones to Outputs

When a Chime zone is unsealed this block of addresses allows individual zones to be sent to selected outputs. The default setting is that no Chime zones are sent to any of the 8 outputs.

- 81 Chime Zone to Output #1. Options=Zones 1-8 (Default=None)
- 82 Chime Zone to Output #2. Options=Zones 1-8 (Default=None)
- 83 Chime Zone to Output #3. Options=Zones 1-8 (Default=None)
- 84 Chime Zone to Output #4. Options=Zones 1-8 (Default=None)
- 85 Chime Zone to Output #5. Options=Zones 1-8 (Default=None)
- 86 Chime Zone to Output #6. Options=Zones 1-8 (Default=None)
- 87 Chime Zone to Output #7. Options=Zones 1-8 (Default=None)
- 88 Chime Zone to Output #8. Options=Zones 1-8 (Default=None)

Zone Tamperers to Outputs

When a zone input is set for Dual-End-of-Line ([Address 130](#)) the short & open circuit tamperers are automatically enabled for that zone input. This option allows the zone tamper alarms to be mapped through to individual outputs. A zone tamper 1-4 is a short on the input and a zone tamper 5-8 is an open loop.

- 91 Zone Tamper to Output #1. Options= Zone Tamperers 1-8 (Default=1-8)
- 92 Zone Tamper to Output #2. Options= Zone Tamperers 1-8 (Default=1-8)
- 93 Zone Tamper to Output #3. Options= Zone Tamperers 1-8 (Default=1-8)
- 94 Zone Tamper to Output #4. Options= Zone Tamperers 1-8 (Default=1-8)
- 95 Zone Tamper to Output #5. Options= Zone Tamperers 1-8 (Default=1-8)
- 96 Zone Tamper to Output #6. Options= Zone Tamperers 1-8 (Default=1-8)
- 97 Zone Tamper to Output #7. Options= Zone Tamperers 1-8 (Default=1-8)
- 98 Zone Tamper to Output #8. Options= Zone Tamperers 1-8 (Default=1-8)

Remote Control Buttons to Outputs

When a Remote Control Button is to be used to operate a garage door or similar function this block of addresses allows individual Buttons to be sent to selected outputs. The default setting is that none of the 8 Buttons are sent to any outputs.

- 101 Buttons to Output #1. Options=Buttons 1-8 (Default=None)
- 102 Buttons to Output #2. Options=Buttons 1-8 (Default=None)
- 103 Buttons to Output #3. Options=Buttons 1-8 (Default=None)
- 104 Buttons to Output #4. Options=Buttons 1-8 (Default=None)
- 105 Buttons to Output #5. Options=Buttons 1-8 (Default=None)
- 106 Buttons to Output #6. Options=Buttons 1-8 (Default=None)
- 107 Buttons to Output #7. Options=Buttons 1-8 (Default=None)
- 108 Buttons to Output #8. Options=Buttons 1-8 (Default=None)

Temporary Output Disable

This [Address 109](#) allows a technician to select any output/s to be temporarily disabled for one alarm or armed cycle, eg by turning on LEDS 1-4 at 109 then leaving program mode, outputs 1-4 will not turn on following any alarms. The technician is now free to arm the system to test all Staying signals without having all of the internal & external alarms activating. When the alarm is reset or disarmed all outputs will now work normally again.

- 109 Select output # 1-8

Output Timing Options

OUTPUT RESET TIME (0-9999 Seconds)

The output reset time is how long an output will stay on following an alarm condition. A value of "0" means the output will latch until reset by a valid user code.

- 311 Output 1 Alarm Reset Time - (Default = 300 Sec)
- 312 Output 2 Alarm Reset Time - (Default = 0 Sec)
- 313 Output 3 Alarm Reset Time - (Default = 300 Sec)
- 314 Output 4 Alarm Reset Time - (Default = 300 Sec)
- 315 Output 5 Alarm Reset Time - (Default = 0 Sec)
- 316 Output 6 Alarm Reset Time - (Default = 0 Sec)
- 317 Output 7 Alarm Reset Time - (Default = 0 Sec)
- 318 Output 8 Alarm Reset Time - (Default = 0 Sec)

OUTPUT DELAY ON TIME (0-99 Seconds)

The output delay ON time is how long an output will be delayed before turning on following an alarm condition.

- 201 Output 1 Delay On Time - (Default = 0 Sec)
- 202 Output 2 Delay On Time - (Default = 0 Sec)
- 203 Output 3 Delay On Time - (Default = 0 Sec)
- 204 Output 4 Delay On Time - (Default = 0 Sec)
- 205 Output 5 Delay On Time - (Default = 0 Sec)
- 206 Output 6 Delay On Time - (Default = 0 Sec)
- 207 Output 7 Delay On Time - (Default = 0 Sec)
- 208 Output 8 Delay On Time - (Default = 0 Sec)

OUTPUT CHIME MODE TIME (0-99 1/10th Second)

The output Chime mode timer is how long an output will turn on following a Chime zone unsealing. The Chime Mode Timer is in 1/10th Sec intervals e.g. 20=2 Seconds

- 211 Output 1 Chime Mode Time - (Default = 20)
- 212 Output 2 Chime Mode Time - (Default = 20)
- 213 Output 3 Chime Mode Time - (Default = 20)
- 214 Output 4 Chime Mode Time - (Default = 20)
- 215 Output 5 Chime Mode Time - (Default = 20)
- 216 Output 6 Chime Mode Time - (Default = 20)
- 217 Output 7 Chime Mode Time - (Default = 20)
- 218 Output 8 Chime Mode Time - (Default = 20)

OUTPUT PULSE TIMER- (0-99 1/10th Second)

The output pulse timer is how long an output will turn on when the pulse timer is used. The Pulse Timer is in 1/10th Sec intervals eg 20=2 Seconds

- 221 Output 1 Pulse Timer - (Default = 20)
- 222 Output 2 Pulse Timer - (Default = 20)
- 223 Output 3 Pulse Timer - (Default = 20)
- 224 Output 4 Pulse Timer - (Default = 20)
- 225 Output 5 Pulse Timer - (Default = 20)
- 226 Output 6 Pulse Timer - (Default = 20)
- 227 Output 7 Pulse Timer - (Default = 20)
- 228 Output 8 Pulse Timer - (Default = 20)

Keypad/Keyswitch Options-Partition “A”

This address allows modification of how Partition “A” arming, Stay and control keys work at the keypad.

- 110**
- ① “ARM” button before code to set- Default off
 - ② “STAY” button required before code to turn on Stay Mode- Default off
 - ③ Disable “ARM” Button- Default off
 - ④ “ARM” button can disarm system during exit delay- Default on
 - ⑤ “STAY” button can disarm Stay Mode at any time- Default on
 - ⑥ No Exit Beeps to keypads in Stay Mode- Default off
 - ⑦ Key-switch Enabled- Default off
 - ⑧ Key-switch Mode- Default off

Option ① “ARM” button required before code to set - This option determines if the “ARM” button must be pressed before a code is entered to set Area “A”. If a keypad is assigned to both Partitions, this option should be set to allow individual arming of each area. This option disables the Arm button from disarming during the exit delay.

Option ② “STAY” button required before code to set - This option determines if the “STAY” button must be pressed before a code is entered to set Area “A” Stay Mode. If a keypad is assigned to both Partitions, this option should be set to allow individual arming of Stay Mode for each area.

Option ③ If this option is set, the **“ARM” button is disabled** and the panel requires a code to arm as well as disarm.

Option ④ “ARM” button can disarm during exit delay - If this option is on then the “arm” button can disarm Partition “A” during the exit delay time with a single press of the button. If the option is off then the alarm can only be unset by a valid code, even during the exit delay time.

Option ⑤ “STAY” button can disarm Stay Mode - This option allows the “Stay” button to disarm Stay mode at any time (including when Stay Mode is fully set). If the option is off then Stay Mode can only be unset by a valid code. This feature is valid for keypad addresses 1 & 4 by default (4 being the default address for the Night Arm station).

Option ⑥ No Exit Beeps to keypads in Stay Mode - This option stops the exit beeps from occurring at all keypads when Stay Mode is set. Normally used for silent night arming.

Option ⑦ Enable Partition “A” Key-switch - If this option is turned on then the system tamper input (Tmp) becomes a Dual End of Line Input (Refer to Page 6 for wiring details). The low input 4K7 is reserved for Partition “A” key-switch operation. An open circuit will still be seen as a system tamper.

Option ⑧ Key-switch Mode - If this option is On then the key-switch has a toggle function (ie the arm/disarm state will follow the key-switch state). If Off then the key-switch is momentary (ie each single pulse will change the arm/disarm state). The panel tamper input is used to provide the key-switch function.

Keypad/Keyswitch Options-Partition “B”

This address allows modification of how Partition “B” arming, Stay and control keys work at the keypad.

- 120
- ① “ARM” button required before code to set- Default off
 - ② “STAY” button required before code to turn on Stay Mode- Default off
 - ③ Disable “ARM” Button- Default off
 - ④ “ARM” button can disarm system during exit delay- Default on
 - ⑤ “STAY” button can disarm Stay Mode at any time- Default on
 - ⑥ No Exit Beeps to keypads in Stay Mode- Default off
 - ⑦ Key-switch Enabled- Default off
 - ⑧ Key-switch Mode- Default off

- Option ① **“ARM” button required before code to set** - This option determines if the “ARM” button must be pressed before a code is entered to set Area “B”. If a keypad is assigned to both Partitions, this option should be set to allow individual arming of each area. This option disables the Arm button from disarming during the exit delay.
- Option ② **“STAY” button required before code to set** - This option determines if the “STAY” button must be pressed before a code is entered to set Area “B” Stay Mode. If a keypad is assigned to both Partitions, this option should be set to allow individual arming of Stay Mode for each area.
- Option ③ If this option is set, the **“ARM” button is disabled** and the panel requires a code to arm as well as disarm.
- Option ④ **“ARM” button can disarm during exit delay** - If this option is on then the “Arm” button can disarm Partition “B” during the exit delay time with a single press of the button. If the option is off then the alarm can only be unset by a valid code, even during the exit delay time.
- Option ⑤ **“STAY” button can disarm Stay Mode** - This option allows the “Stay” button to disarm Stay mode at any time (including when Stay Mode is fully set). If the option is off then Stay Mode can only be unset by a valid code. This feature is valid for keypad addresses 1 & 4 by default (4 being the default address for the Stay key station).
- Option ⑥ **No Exit Beeps to keypads in Stay Mode** - This option stops the exit beeps from occurring at all keypads when Stay Mode is set. Normally used for silent night arming.
- Option ⑦ **Enable Partition “B” Key-switch** - If this option is turned on then the system tamper input (Tmp) becomes a Dual End of Line Input (Refer to Page 6 for wiring details). The high input 8K2 is reserved for Partition “B” key-switch operation. An open circuit will still be seen as a system tamper.
- Option ⑧ **Key-switch Mode** - If this option is On then the key-switch has a toggle function (ie the arm/disarm state will follow the key-switch state). If Off then the key-switch is momentary (ie each single pulse will change the arm/disarm state). The panel tamper input is used to provide the key-switch function.

Chirps & Flashes-Partition “A”

This block of addresses sets a number of output options which are specific and unique to the operation of partition or Area "A". Activity in Areas "B" will have no direct effect on the options set at these addresses.

- 111
- ① Arm status to output- Default off
 - ② Stay Mode on status to output- Default off
 - ③ Disarm status to output- Default off
 - ④ Remote Control Chirps (2) for Arm to output - Default off
 - ⑤ Remote Control Chirps (2) for Stay Mode On to output - Default off
 - ⑥ Remote Control Chirps (4) for Disarm to output - Default off
 - ⑦ Pulse on Arming to output - Default off
 - ⑧ Pulse on Disarming to output - Default off

Option ① Arm indication to output - This option will turn the output on when Area "A" is armed. The output will turn on at the start of the exit delay and turn off when the Area is disarmed. The output reset time should be set to zero.

Option ② Stay Mode On indication to output - This option will turn the output on when Area "A" Stay Mode is armed. The output will turn on at the start of the exit delay and turn off when Stay Mode is disarmed. The output reset time should be set to zero.

Option ③ Disarm indication to output - This option will turn the output on when Area "A" is Disarmed. The output will turn on when the Area "A" is disarmed and turn off when the Area is Armed or in Stay Mode. The output reset time should be set to zero.

Option ④ Remote Control Chirps for Arm to output - This option will map two short pulses (Chirps) to the output when Area "A" is armed via a Remote Control, (the length of the pulses is set by the pulse timer [Address 221-228](#)).

Option ⑤ Remote Control Chirps for Stay Mode On to output - This option will map two short pulses (Chirps) to the output when Area "A" Stay Mode is set via a Remote Control Button ,(the length of the pulses is set by the pulse timer [Address 221-228](#)).

Option ⑥ Remote Control Chirps for Disarm to output - This option will map four short pulses (Chirps) to the output when Area "A" is Disarmed via a R/C Button, (the length of the pulses is set by the pulse timer [Address 221-228](#)).

Option ⑦ Pulse on Arming to output - This option will send a pulse to the Output each time Area"A" is armed (the length of the pulses is set by the pulse timer [Address 221-228](#)).

Option ⑧ Pulse on Disarming to output - This option will map a pulse to the Output each time Area"A" is disarmed (the length of the pulses is set by the pulse timer [Address 221-228](#)).

Note: 112 through 118 are as above but applied to outputs 2-8

Chirps & Flashes-Partition “B”

This block of addresses sets a number of output options which are specific and unique to the operation of partition or Area "B". Activity in Areas "A" will have no direct effect on the options set at these addresses.

- 121
- ① Arm status to output- Default off
 - ② Stay Mode on status to output- Default off
 - ③ Disarm status to output- Default off
 - ④ Remote Control Chirps (2) for Arm to output - Default off
 - ⑤ Remote Control Chirps (2) for Stay Mode On to output - Default off
 - ⑥ Remote Control Chirps (4) for Disarm to output - Default off
 - ⑦ Pulse on Arming to output - Default off
 - ⑧ Pulse on Disarming to output - Default off

Option ① Arm indication to output - This option will turn the output on when Area "B" is armed. The output will turn on at the start of the exit delay and turn off when the Area is disarmed. The output reset time should be set to zero.

Option ② Stay Mode On indication to output - This option will turn the output on when Area "B" Stay Mode is armed. The output will turn on at the start of the exit delay and turn off when Stay Mode is disarmed. The output reset time should be set to zero.

Option ③ Disarm indication to output - This option will turn the output on when Area "B" is Disarmed. The output will turn on when the Area "B" is disarmed and turn off when the Area is Armed or in Stay Mode. The output reset time should be set to zero.

Option ④ Remote Control Chirps for Arm to output - This option will map two short pulses (Chirps) to the output when Area "B" is armed via a Remote Control, (the length of the pulses is set by the pulse timer [Address 221-228](#)).

Option ⑤ Remote Control Chirps for Stay Mode On to output - This option will map two short pulses (Chirps) to the output when Area "B" Stay Mode is set via a Remote Control Button ,(the length of the pulses is set by the pulse timer [Address 221-228](#)).

Option ⑥ Remote Control Chirps for Disarm to output - This option will map four short pulses (Chirps) to the output when Area "B" is Disarmed via a R/C Button, (the length of the pulses is set by the pulse timer [Address 221-228](#)).

Option ⑦ Pulse on Arming to output - This option will send a pulse to the Output each time Area"B" is armed (the length of the pulses is set by the pulse timer [Address 221-228](#)).

Option ⑧ Pulse on Disarming to output - This option will map a pulse to the Output each time Area"B" is disarmed (the length of the pulses is set by the pulse timer [Address 221-228](#)).

Note: 122 through 128 are as above but applied to outputs 2-8

ZONE PROGRAMMING

Zone Options

- 131 Partition “A” Zones** Zones 1-8. (Default = All 8 zones)
This option allows programming of which zones will be assigned to Partition A. If a zone is in Both A & B then it becomes common to both Areas.
- 132 Partition “B” Zones** Zones 1-8. (Default = No zones)
This option allows programming of which zones will be assigned to Partition B. If a zone is in Both A & B then it becomes common to both Areas.
- 133 Zone is NC or NO** Zones 1-8. (Default =Led Off, All Zones NC, Normally Closed)
This option only applies to a zone that has been doubled at [Address 130](#). In this example, the panel is looking to see a normally closed relay contact across the low (4K7) and high (8K2) resistors in the sealed state. By turning the LED on for zone 1, the panel is now looking for a Normally Open (NO) contact on the low zone (4K7).
- 134 Wireless Detector Zone Input** Zones 1-8. (Default = No zones)
This option allows programming of which zones will be Wireless Detector zones. If a zone is a Wireless zone, the panel ignores the state of the hardwired input for that zone). If the zone input has been set to Zone doubling, the tampers are still active even if both the low & high zones are set for Wireless operation.
- 135 Zones are Excludable** Zones 1-8. (Default = All 8 zones)
This option allows programming of which zones can be manually excluded prior to Arming. If a zone has this option turned off, then that zone cannot be excluded manually). Zones are excluded during the disarm state and normal zones which are excluded become re-included once the alarm has been set then unset. 24 hour zones, however remain excluded until manually re-included again. Every time the alarm is set or unset with zones excluded, the keypad will respond with a long beep instead of the normal 3 short beeps to indicate that excludes are present. When excluding zones, the READY\EXCL & PROGRAM LED's are on to indicate that you have entered exclude mode. After excluding zones the READY\EXCL led will flash when all zones are sealed to indicate that zones are excluded.
- 136 Auto-Isolate Zone** Zones 1-8. (Default = All 8 zones)
This option allows programming of which zones can be automatically isolated at the end of the exit delay if unsealed at that time. If a zone has this option turned off, then that zone will not auto-exclude and will go into alarm if not sealed.
- 137 Handover Zones** Zones 1-8. (Default = No zones)
If a zone is a handover zone then it's entry delay time will apply provided a non-handover zone is triggered before the handover zone. If no other entry delays are active when the handover zone is triggered, the zone will activate immediately.
- 138 Zones with Pulse Count** Zones 1-8. (Default = No zones)
To cause an activation a zone must alarm twice within the Pulse Count time period, ([Address 229](#)), or 2 Pulse Counted zones can alarm once each within the Pulse Count time period before the alarm is generated. If a Pulse Counted zone is unsealed and remains unsealed for a period longer than the Pulse Count time period, an alarm will also be generated.
- 139 Stay Mode Zones** Zones 1-8. (Default = Zone 1)
Only zones programmed at this address will be active when Stay mode is armed.
- 129 24 Hour Fire Zone** Zones 1-8. (Default = No zones)
If programmed as a fire zone, when the zone causes an alarm it will flash any outputs it is programmed to operate at a rate set by the pulse timer ([Address 221-228](#)).

- 140 24 Hour Zones** Zones 1-8. (Default = No zones)
Only zones programmed at this address will be active at all times. If a 24 hour zone has an entry delay assigned to it, the entry delay acts as an abort timer e.g. the zone must be in alarm longer than the entry delay time before the alarm is activated. If the zone is sealed before the entry delay expires, no alarm is generated.
- 141 Non-Latching 24 Hour Zone** Zones 1-8. (Default = No zones)
A Non-Latching 24 Hour Zone will operate as a normal 24 Hour zone except that when the zone re-seals the zone LED and any assigned outputs will reset automatically.
- 142 Swinger Shutdown (1 Shot Siren Lockout) Zones** Zones 1-8. (Default = No zones)
A Lockout Zone will only cause the alarm output to sound once during and armed period. If the lockout function is not programmed then the zone can cause the audible alarms to sound on every zone alarm. In the case of a 24 hour zone, if this option is turned on then the zone will only activate the alarm output/s once and must be reset by a code before another alarm signal can operate the output/s again.
- 143 Chime (Day) Zone when Disarmed** Zones 1-8. (Default = No zones)
A Chime Zone can be used as a door minder in a shop to warn when a customer has entered the premises. A Chime zone works when the alarm is disarmed, but becomes a normal security zone when armed. Chime zones can be temporarily disabled with the "Control" button if programmed to do so.
- 144 Permanent Chime (Day) Zone** Zones 1-8. (Default = No zones)
A Permanent Day Zone can be used as a door minder in a shop to warn when a customer has entered the premises. A Permanent Chime zone will never cause an activation when the alarm is armed). Chime zones can be temporarily disabled with the "Control" button if programmed to do so.
- 145 Force Arm Zones** Zones 1-8. (Default = No zones)
This option allows programming of which zones can be unsealed and still allow the panel to arm. Option 4 at [Address 170](#) must be on before this address has any effect. This option allows setting (Arming) of the panel if low security areas are not sealed at the time of arming.
- 146 Report Excluded Zones to Monitoring Station** Zones 1-8. (Default = All zones)
If this option is on then the zone will report any exclusion (Bypass) of the zone to a Staying Station via Contact ID or 4 + 2.
- 147 Send Multiple Alarms to Monitoring Station** Zones 1-8. (Default = All zones)
If this option is assigned to the zone, the zone can send multiple activation reports to a Staying company during any armed cycle. If off, the zone can only send one activation per armed cycle. In the case of a 24 hour zone, if this option is turned off then the zone will only send one signal via the dialler and must be reset by a code before another signal can be sent.
- 148 Report Zone Tamper to Monitoring Station** Zones 1-8. (Default = All zones)
This option allows the programming of zone tamper to be sent via the dialler to a Staying Station.
- 149 Common Zone Reports Area "B" Account** Zones 1-8. (Default = All zones)
When a zone is in both partitions A&B this address allows the option of specifying which account number a zone alarm will report to. The default is that a common zone will report to area A account code ([Address 332](#)) but if this option is on for a common zone it will report to area B account code ([Address 333](#)).
- 150 Zone Inactivity Timer** Zones 1-8. (Default = None)
This option allows the programming of which zones will be Stayed for inactivity. All zones programmed with this feature ON will be Stayed for activity for the period set below ([Address 240](#)). The inactivity timer only works during the disarmed state and is accumulative, which means that if a zone does not trip at least once during a disarm period the inactivity timer is not reset for that zone and will continue with the balance of the time period left when the panel is next disarmed. The timer for each zone is reset every time a zone unseals.

Zone Doubling & EOL Options

130 Single Zone EOL or dual zone input - This option is used to define the Power Wave-8 as a 4 zone panel with or without EOL (End of Line Resistors) or an 8 zone panel. Options 1-4 relate to zones 1-4 respectively and decide whether the zone input requires an end of line resistor or just a short or open circuit to seal the zone. If the LED's are **OFF** (Type 1 Drawing on Page 5) then a short on the input is all that is needed to seal the input. If the LED's 1-4 are **ON** (Type 2 Drawing on Page 5) then the input requires a 2k2 resistor to seal the zone. Options 5-8 relate to zone inputs 1-4 respectively and allow "Zone Doubling" to be turned on for a particular input. When a zone has been assigned "Zone Doubling" the one input is used for both a low (1-4) and a high (5-8) zone. When zone doubling is turned On, zone 1 input is used for zones 1 & 5, zone 2 input is used for zones 2 & 6, zones 3 input is used for zones 3 & 7 and zone 4 input is used for zones 4 & 8. Zone doubling is assigned on a zone-by-zone basis. Each input can be configured as two zones (Type 3 drawing on page 5) without tamper monitoring or two zones (Type 4 drawing on page 5) with tamper monitoring. To use the Type 3 mode for zones 1 & 5 you must turn LED#1 Off and LED#5 On. To use Type 4 mode for zones 1 & 5 you must turn LED#1 On and LED#5 On. The same applies to the other zone inputs. Refer to the table on Page 5 for more details.

Default =1-4 On

Zone Inactivity Timer

240 Inactivity Timer - 0-255 Hours. **Default =120 Hours**

Entry Delays

- 301 Zone 1 Entry Delay Time** - 0-9999 Seconds (Default = 20 Sec)
- 302 Zone 2 Entry Delay Time** - 0-9999 Seconds (Default = 0 Sec)
- 303 Zone 3 Entry Delay Time** - 0-9999 Seconds (Default = 0 Sec)
- 304 Zone 4 Entry Delay Time** - 0-9999 Seconds (Default = 0 Sec)
- 305 Zone 5 Entry Delay Time** - 0-9999 Seconds (Default = 0 Sec)
- 306 Zone 6 Entry Delay Time** - 0-9999 Seconds (Default = 0 Sec)
- 307 Zone 7 Entry Delay Time** - 0-9999 Seconds (Default = 0 Sec)
- 308 Zone 8 Entry Delay Time** - 0-9999 Seconds (Default = 0 Sec)

Exit Delays

- 219 Partition "A" Exit Delay Time** - 0-255 Seconds (Default = 20 Sec)
- 220 Partition "B" Exit Delay Time** - 0-255 Seconds (Default = 20 Sec)

Pulse Count Timer

229 Pulse Count Timer - 0-255 Seconds (Default = 60 Sec)

KEYPAD PROGRAMMING

Keypad Partition

A keypad must be assigned to a Partition before it can control the Partition (ie to allow Arm/Disarm facilities).

171 **Keypads Assigned to Partition "A"** - Option Keypad 1-8 (Default = All keypads 1-8)

172 **Keypads Assigned to Partition "B"** - Option keypad 1-8 (Default = None)

Keypads with Panic Button enabled

The panic button on all keypads can be set for delayed or instant operation. If you do not want the Panic function enabled at any of the keypads you can disable the operation at this address. This option may be useful where a keypad has to be installed in a public area.

173 **Keypads with the Panic Button Enabled** - Option keypad 1-8 (Default = All keypads 1-8)

Keypads with Buttons 1&3 Panic enabled

An alternative Panic function to the dedicated panic button is to press the keypad buttons 1&3 simultaneously. If you do not want this Panic function enabled at any of the keypads you can disable the operation at this address. This option may be useful where a keypad has to be installed in a public area.

174 **Keypads with the Panic Buttons 1&3 Enabled** - Option keypad 1-8 (Default = None)

Panic Alarm to Keypad Buzzer

The two panic functions at the keypads ([Address 173](#) or [174](#)) can be audible or silent at the keypads. If a silent panic is required the option must be turned off at this address. For an audible Panic Beep at the keypad/s turn this option on.

175 **Panic Alarm to Keypad Buzzer** - Option keypad 1-8 (Default = All keypads 1-8)

Keypads with Buttons 4&6 Fire Enabled

By pressing the buttons 4&6 simultaneously it is possible to create a Fire alarm report to the dialler. If you want this Fire function enabled at any of the keypads you must enable the operation at this address.

176 **Keypads with the Panic Buttons 4&6 Enabled** - Option keypad 1-8 (Default = None)

Fire Alarm to Keypad Buzzer

The two button fire function at the keypads ([Address 176](#)) can be audible or silent at the keypads. If a silent fire alarm is required the option must be turned off at this address. For an audible Panic Beep at the keypad/s turn this option on.

177 **Fire Alarm to Keypad Buzzer** - Option keypad 1-8 (Default = None)

Keypads with Buttons 7&9 Medical Enabled

By pressing the buttons 7&9 simultaneously it is possible to create a Medical alarm report to the dialler. If you want this Medical function enabled at any of the keypads you must enable the operation at this address.

178 **Keypads with the Medical Buttons 7&9 Enabled** - Option keypad 1-8 (Default = None)

Keypad Misc.

This address (169) is used to select the first set of optional panel functions.

- 169 ❶ Turn Off keypad LEDS at the end of exit time - Default off
- ❷ Keypad Panic Button delayed or instant - Default off
- ❸ Installer Code has direct access to Program Mode - Default on

Option ❶ Turn off keypad LEDS at end of exit time - If this option is off (LED 1 Off) then the keypad LEDS remain working at all times. If it is on (LED 1 On), the keypad LEDS will automatically turn off at the end of the exit delay time (NOTE: the backlight LED's on an LED keypad will remain on). The LEDS will turn on again if the alarm is unset, an alarm occurs or any button on the keypad is pressed.

Option ❷ Keypad Panic Button delayed or instant - If this option is off (LED 2 Off) any press of the "Panic" button on the LED keypads will result in an immediate panic alarm. If it is turned on (LED 2 On) there will now be a 2 second delay on the panic button. The button must be held down continuously for 2 seconds to create a panic alarm.

Option ❸ Installer Code has direct access to Program Mode - If this option is off (LED 3 Off) the installer code cannot gain direct access to installation program mode. Access to installation program mode in this case must be via Client program Mode first (the owner must give authorisation to the installer). If the option is on (LED 3 On) then the installer code will allow direct access to Installation program mode provided no areas are armed or in Stay mode.

Medical Alarm Keypad Buzzer

The two button medical function at the keypads (Address 178) can be audible or silent at the keypads. If a silent medical alarm is required the option must be turned off at this address. For an audible Medical Beep at the keypad/s turn this option on.

- 179 **Medical Alarm to Keypad Buzzer** - Option keypad 1-8 (Default = None)

Stay Button can Disarm Stay Mode

The Alarm panel can be set up so that the "Stay" button at the keypad can be a single press to arm Stay Mode. During the Stay Armed state the "Stay" button can also be used to Disarm Stay Mode with a single press provided the keypad concerned has this option turned on. If you do not want single button disarming of Stay mode at any keypads then ensure this option is off for the keypad/s concerned.

- 180 **Stay Button can Disarm Stay Mode** - Option keypad 1-8 (Default = 1&4)

Chime Mode to Keypad Buzzer Timer

These addresses can be programmed to have a value from 0 to 99 but the value is in 1/10 of a second increments. This means the default of 20 at [Addresses 209 & 210](#) is equal to 2 seconds. This gives a much greater control on the duration of the day zone beep to the keypad.

- 209 **Area "A" Chime Mode to Keypad Buzzer Timer** - 0-99 (Default = 20 1/10th sec)
- 210 **Area "B" Chime Mode to Keypad Buzzer Timer** - 0-99 (Default = 20 1/10th sec)

WIRELESS PROGRAMMING

Wireless Detector Learning

To learn a Wireless Detector as a zone input on the panel, press the appropriate address number (eg 604 for Zone 4). The keypad buzzer will beep once a second to indicate learn mode has been initiated and the Led on the RX-40 board will flash. The Wireless detector you wish to load must transmit a signal within 30 seconds of entering learn mode otherwise the panel will time out and no code will be loaded. If a valid code is received within the 30 seconds the keypad will give 3 short beeps and exit learn mode. To remove a loaded Wireless Detector at a single address only, enter in the address you wish to delete the code at eg 604, then without operating the transmitter and before the 30 second timer expires press the "Enter" button.

601	Learn Mode for Zone 1
602	Learn Mode for Zone 2
603	Learn Mode for Zone 3
604	Learn Mode for Zone 4
605	Learn Mode for Zone 5
606	Learn Mode for Zone 6
607	Learn Mode for Zone 7
608	Learn Mode for Zone 8

Wireless Detector Zone Options Default= 0

This block of addresses (231 - 238) are used to select the type of detector to be used on the Wireless zone input and allow functions such as battery low, tamper and normal alarm to be correctly recognized. To make the Wireless zone work you must also tell the zone input that it is a Wireless zone (Address 134 zones 1-8).

231 Zone 1 Options	0	For Unknown Devices - No Low Battery, No Tamper reporting
	1	Crow AE Wireless PIR / Smoke Detector with Battery Low reporting
	2	Crow AE Wireless Reed Switch with Door Open / Close & Low Batt Status Reporting
	3	Crow Merlin Wireless PIR (supervised signal Disabled (Ignored))
	4	Crow Merlin Wireless PIR (supervised signal Enabled (Active))
	5	Crow Freelink Wireless with checksum (supervision signal Disabled (Ignored))
	6	Crow Freelink Wireless with checksum (supervision signal Enabled (Active))
	11	Ness Wireless devices Battery Low
	12	Ness Wireless Reed Switch
	21	Electronics Line 'Cougar' Wireless PIR ("ON" = Switch 1, "OFF" = Switch 2, 3 & 4)
	31	Visonic K900 Wireless PIR
	32	Visonic Powercode Devices (supervised signal ignored)
	33	Visonic Powercode Devices (supervised signal active)

- 1 Crow AE Wireless Series with Battery Low** - If a Crow (AE) Wireless pendant / PIR / Smoke is used on the PowerWave Wireless receiver, setting this bit allows the panel to correctly recognize the battery low signal from Crow devices.
- 2 Crow AE Wireless Series Radio Reed Switch** - If a Crow (AE) Wireless Reed Switch is used on the PowerWave Wireless receiver, setting this bit allows the panel to correctly recognize the battery low signal from this Crow device. This bit also recognizes the Open and Closed signals from the reed switch so the zone LED can follow the correct state of the reed switch (i.e. Door Open or Closed). If No Door Open / Close status reporting is required, then the AE Reed Switch **HAS** to be assigned as a type "1" (AE PIR) and the "Restore" transmissions disabled by removing one of the internal jumpers within the AE reed switch unit.
- 3 Crow Merlin PIR (unsupervised)** - If a Crow Merlin wireless PIR is used on the PowerWave Wireless receiver, setting this bit allows the panel to correctly recognize the alarm, tamper & battery low signal from the device. The automatic supervised signal sent every 40 minutes by the PIR is ignored in this mode.
- 4 Crow Merlin PIR (supervised)** - If a Crow Merlin Wireless PIR is used on the PowerWave wireless receiver, setting this bit allows the panel to correctly recognize the alarm, tamper & battery low signal from the device. Setting this option on also starts a 4 hour timer for the supervised signal. The 4 hour timer is constantly being reset while valid supervised signals are being received every 40 minutes. If no supervised signals are received from the PIR within the 4 hour period, a supervised alarm is generated.

- 5 **Freelink with checksum (supervised signal active)** - If a Crow Freelink Wireless PIR is used on the PowerWave Wireless zone input, setting this bit allows the panel to correctly recognize the alarm, tamper & battery low signal from the device. The automatic supervised signal is sent every 20 minutes.
- 6 **Freelink with checksum (non-supervised)** - If a Crow Freelink Wireless PIR is used on the PowerWave Wireless zone input, setting this bit allows the panel to correctly recognize the alarm, tamper & battery low signal from the device. The automatic supervised signal sent every 20 minutes by the PIR is ignored in this mode.
- 11 **Ness Battery Low** - If a Ness Wireless pendant or PIR is used on the PowerWave Wireless Receiver, setting this bit allows the panel to correctly recognize the battery low signal from Ness devices.
- 12 **Ness Radio Reed Switch** - If a Ness Wireless Reed Switch is used on the PowerWave Wireless Receiver, setting this bit allows the panel to correctly recognize the battery low signal from Ness device. This bit also recognizes the open and closed signals from the reed switch so the zone Led can follow the correct state of the reed switch (ie open or closed)
- 21 **Electronics Line Wireless PIR-** If an Electronics Line Wireless PIR is used on the PowerWave Wireless Receiver, setting this bit allows the panel to correctly recognize the alarm, tamper & battery low signal from E.L. device.

NOTE: If you encounter a situation where the **Electronics Line Wireless PIR** does Not communicate with the panel, this would be due to the version of the transmitter in the PIR. In such cases, you may try setting the wireless zone options to “0” for this device. Please be aware that the “0” option does Not allow for Low Battery or Tamper reporting but at least the **Electronics Line Wireless PIR** will start communicating with the panel. (“ON” = Switch 1, “OFF” = Switch 2, 3 & 4)

- 31 **Visonic Wireless PIR-** If a Visonic K900 radio PIR is used PowerWave Wireless Receiver, setting this bit allows the panel to correctly recognize the alarm, tamper & battery low signal from the device.
- 32 **Visonic Powercode (unsupervised)** - If a Visonic Powercode Wireless device is used on the PowerWave Wireless Receiver, setting this bit allows the panel to correctly recognize the alarm and battery low signal from the device but the supervised signal is ignored.
- 33 **Visonic Powercode (supervised)** - If the Visonic Powercode range of Wireless PIR or reed switch are used on the PowerWave Wireless Receiver, setting this bit allows the panel to correctly recognize the alarm, tamper & battery low signal from the device. Setting this option on also starts a 4 hour timer for the supervised signal. The 4 hour timer is constantly being reset while valid supervised signals are being received every 1-1.5 hours. If no supervised signals are received from the PIR within the 4 hour period, a supervised alarm is generated.

Note: Addresses 232 through 238 are as above but applied to zones 2-8

Wireless Zone Supervision Timer

239 **WIRELESS ZONE SUPERVISED TIMER - Default= 240 Minutes (Value 0-255 Minutes)**

Remote Control Button Learning

To learn a Remote Control Button into the panel, press the appropriate address number (e.g. 614 for Button 4). The keypad buzzer will beep once a second to indicate learn mode has been initiated and the Led on the RX-40 Receiver board will flash. The Remote Button you wish to learn must transmit a signal within 30 seconds of entering learn mode otherwise the panel will time out and nothing will be loaded. If a valid code is received within the 30 seconds the keypad will give 3 short beeps and exit learn mode. To remove a loaded Remote Button at a single address only, enter in the learning address as above e.g. 614, then without operating the transmitter and before the 30 second timer expires press the “Enter” button. This will remove the Button loaded against this address.

- 611 **Learn Button # 1**
- 612 **Learn Button # 2**
- 613 **Learn Button # 3**
- 614 **Learn Button # 4**
- 615 **Learn Button # 5**
- 616 **Learn Button # 6**
- 617 **Learn Button # 7**
- 618 **Learn Button # 8**

Remote Control Arm/Disarm Options

This block of addresses (151 - 158) are used to select the operational settings for each of the 8 Remote Control Buttons. Functions such as arm only, disarm only or both can be selected for each button independently.

- 151-Button #1 Options**
- ① Assigned to Partition "A" - Default on
 - ② Assigned to Partition "B" - Default off
 - ③ Can Arm - Default on
 - ④ Can Disarm - Default on
 - ⑤ Can turn Stay Mode On - Default off
 - ⑥ Can turn Stay Mode Off - Default off
 - ⑦ Spare - Default off
 - ⑧ Disabled if panel is in alarm - Default off

Option ① Assigned to Partition "A" - The R/C Button must be assigned to at least one partition to allow it to perform arm/disarm functions. The Button can be assigned to both partitions if required.

Option ② Assigned to Partition "B" - The R/C Button must be assigned to at least one partition to allow it to perform arm/disarm functions. The Button can be assigned to both partitions if required.

Option ③ Can Arm - This option assigns the Arm function to a Button. The partition/s it will arm have to be selected at options 1 & 2.

Option ④ Can Disarm - This option assigns the Disarm function to a Button. The partition/s it will disarm has to be selected at options 1 & 2.

Option ⑤ Can turn Stay Mode On - This option assigns the Stay Mode Arm function to a Button. The partition/s it will arm has to be selected at options 1 & 2. If Stay Mode arming is to be used for this Button then Options 2 & 3 should be turned off.

Option ⑥ Can turn Stay Mode Off - This option assigns the Stay Mode Disarm function to a Button. The partition/s it will disarm has to be selected at options 1 & 2. If Stay Mode disarming is to be used for this Button then Options 2 & 3 should be turned off.

Option ⑦ Spare

Option ⑧ Disabled if panel is in Alarm - This option stops the Button from working while the panel is in alarm. This feature should only be set if you feel that a Button with disarming functions could be prone to misuse in an alarm condition.

Note: Addresses 152 through 158 are as above but applied to Buttons 2-8

Remote Control Output Options

This block of [addresses \(161 - 168\)](#) are used to select output control and Panic options for each of the 8 R/C Buttons. To prevent confusion, if a Buttons is set to control an output or provide instant Panic, then you should turn off any Arm or Disarm options at addresses 151-158.

- 161-Button #1 Options**
- ① Turn output ON - Default off
 - ② Turn output OFF - Default off
 - ③ Visonic Powercode Battery Low - Default off
 - ④ Spare - Default off
 - ⑤ Hold Down Button Panic will Dial - Default off
 - ⑥ Hold Down Button Immediate Panic Alarm - Default off
 - ⑦ **Hold Down Button** Delayed Panic Alarm (1.5 Seconds) - Default off
 - ⑧ Ness Battery Low - Default off

Option ① Turn Output On - This option allows the Button to turn an output on. The output the Button will turn On is programmed at address 101-108. If the output reset time is set to Latched operation (set to "0") then you must also program Option 2 to allow for turning the output Off.

- Option 2 Turn Output Off** - This option allows the Button to turn an output off. The output the Button will turn Off is programmed at address 101-108. For this option to work, option 1 must also be assigned to the Button to allow the Button to first turn the output on before it can turn it off.
- Option 3 Visonic Powercode Battery Low** - If a Visonic Powercode Transmitter with battery low Staying is used on the PowerWave-8, setting this option will allow the battery signal to be correctly recognised.
- Option 4 Spare**
- Option 5 Report Panic to Dialler**- This option enables a panic alarm from a R/C Button to be sent via the dialler to a Staying Station.
- Option 6 Immediate Panic Alarm** - If this option is on, pressing the Button will produce a panic alarm.
- Option 7 Delayed Panic Alarm**- If this option is on, the Button must be pressed continuously for 1.5 seconds or longer to produce a panic alarm.
- Option 8 Ness Battery Low** - If using a Ness Remote with battery low reporting, this option must be turned on to allow the battery low signal to be recognised properly.,

Note: Addresses 162 through 168 are as above but applied to Buttons 2-8

DIALLER PROGRAMMING SECTION

Dialler Options

- 185**
- 1** Dialler is Enabled - Default off
 - 2** Fax/Answer Machine Defeat (Double Call) - Default off
 - 3** Disable Telephone Line Monitoring - Default off
 - 4** Spare - Default off
 - 5** Spare - Default off
 - 6** Spare - Default off
 - 7** Auto-detect Modem - Default on
 - 8** Bell 103 or V21 - Default off
- Option 1 Dialler is Enabled** - If this option is turned off the dialler will be disabled. The option must be on to allow the dialler to make calls.
 - Option 2 Fax Defeat** - The panel can answer an in-coming call in two ways. The first is to set the auto-answer ring count to a convenient number (Address 249) and let the phone ring until this number is reached at which time the panel will answer the call. The second method is to use fax defeat which entails calling the panel and letting it ring no more than 3 times, hanging up, then ringing back within 45 seconds. The panel will now answer the call on the first ring.
 - Option 3 Disable Telephone line Monitoring** - If the panel is connected to a poor telephone line and the line failure alarm is appearing regularly, by turning this option on the panel will not do the line test.
 - Option 4 Spare**
 - Option 5 Spare**
 - Option 6 Spare**
 - Option 7 Auto-detect Modem** - If this option is on the panel will answer an in-coming call with the V21 acknowledge tone. If the modem does not respond within 5 seconds the panel will then generate the acknowledge tones for Bell 103 format. It will repeat this cycle twice and then hang-up if no communication with a modem is established.
 - Option 8 Bell 103 or V21** - The dial up panel to PC link can be established using either Bell 103 or V21. If the auto-detect function at option 7 does not result in the best format for your modem then you can force the panel to only communicate in one format. If the LED is off the format is Bell 103, LED on means V21.

Upload/Download Panel Code

The upload/download panel code number must be entered if the panel is set for auto-answer as this provides a security access level to the panel. The number can be up to 8 characters in length. Valid characters for this number are 0-9,B-F (refer to the chart on page 38).

505 **Panel Number** - 8 characters

Dialler Reporting Options 1

- 186
- ① Report Duress Alarm - Default on
 - ② Report Mains Fail - Default on
 - ③ Report Battery Low - Default on
 - ④ Report Wireless Battery Low - Default on
 - ⑤ Report System Tamper - Default on
 - ⑥ Report Telephone line Failure - Default on
 - ⑦ Report Supervised Wireless Fault - Default on
 - ⑧ Report Zone Inactivity Alarm - Default on

Option ① Duress Alarm to Central Station - If a duress alarm is created the panel can report the unsetting of the alarm under duress to a Central Station if this option is on.

Option ② Report Mains Fail - If a mains failure is detected the panel will report this alarm to a Central Station if this option is on.

Option ③ Report Battery Low - If a battery low is detected the panel can report this alarm to a Central Station if this option is on.

Option ④ Report Wireless Battery Low - If a Wireless battery low is detected the panel can report this alarm to a Central Station if this option is on.

Option ⑤ Report System Tamper - If a control panel tamper is detected the panel can report this alarm to a Central Station if this option is on.

Option ⑥ Report Line Failure - If a telephone line failure is detected the panel can report this alarm to a Central Station if this option is on.

Option ⑦ Report Supervised Wireless Fault - If a supervised Wireless device fails to report to the panel within a preset time then a Wireless failure is registered. If this option is turned on then the alarm will be reported to the Central Station.

Option ⑧ Report Zone Inactivity Alarm - If a Zone is Monitored for Inactivity ([Address 150](#)) and the inactivity timer for that zone times out ([Address 240](#)) an alarm will be generated. If this option is turned on then the alarm will be reported to the Central Station.

Dialler Reporting Options 2

This address (187) is used to enable or disable various alarm reports to the Dialler.

- 187 ① Keypad Panic Alarms - Default on
- ② Keypad Manual Fire Alarms (4&6) - Default on
- ③ Keypad Manual Medical Alarms (7&9) - Default on
- ④ Spare
- ⑤ Spare
- ⑥ Spare
- ⑦ Spare
- ⑧ Spare

Option ① Keypad Panic Alarms - If the single button “**Panic**” or the 2 button “**1&3**” Panic alarm features are enabled then turning this on option allows the Panic Alarm to be sent via the dialler to a Central Station.

Option ② Keypad Fire Alarm - If the 2 button “**4&6**” Fire alarm feature is enabled then turning this option on allows the Fire Alarm to be sent via the dialler to a Central Station.

Option ③ Keypad Medical Alarm - If the 2 button “**7&9**” Medical alarm feature is enabled then turning this option on allows the Fire Alarm to be sent via the dialler to a Central Station.

Dialler Reporting Options 3

- 188 ① Report Open/Close - Default on
- ② Report Stay Mode Open/Close - Default on
- ③ Report Open after alarm - Default off
- ④ Report Stay Open after alarm - Default off
- ⑤ Report 24 Hour Alarms when set to Domestic/Voice mode - Default off
- ⑥ Send Arm immediately (or after exit delay) - Default off
- ⑦ Send Zone alarms in Stay Mode - Default off
- ⑧ Spare - Default off

Option ① Report Open/Close - If this option is on then all Open/Close signals will be reported to a Central Station if Contact ID is set as the reporting format.

Option ② Report Stay Mode Open/Close - If this option is on then all Stay Mode Arm/Disarm signals will be reported to a Central Station if Contact ID is set as the reporting format.

Option ③ Send Open after alarm - If this option is on, the panel will not normally send an Arm/Disarm signal to the Central Station, however, if a zone alarm occurs then the panel will send a Disarm following the disarming of the panel to show it has been turned off by a valid user.

Option ④ Send Stay Mode unset after activation - If this option is on, the panel will only send a Stay Mode Arm/Disarm signal to the Central Station if a zone alarm occurs. The panel will send a Disarm and group bypass restore following the disarming of the panel to show it has been turned off by a valid user.

Option ⑤ Report 24 Hour Alarms when set to Domestic/Voice mode - When the panel is set to send alarms via domestic or voice mode, NO alarms will normally be sent for 24 hour zones. If 24 hour alarms are required to be reported in Domestic/Voice mode then this option must be turned on.

Option ⑥ Send Arm immediately - If this option is on, the arm report is sent immediately the panel is armed. If the option is turned off, the arm signal will be sent at the expiry of the exit delay timer.

Option ⑦ Send Zone alarms in Stay Mode - If this option is on, any Stay Mode zone alarms will be reported via the dialer. If it is off, no Stay Mode zone alarms will be transmitted via the dialer.

Option ⑧ Spare - Default off

Voice Board Messages

This block of [addresses \(251 - 258\)](#) are used to select a voice message that a Zone/24 Hr Alarm will transmit. For this option to work the optional Voice Board Must be fitted. If a value of "0" or the "Bypass" button is entered at any of these addresses then the zone will not report via the Dialler in either **Voice or Domestic** modes.

- 251 Zone 1 Voice Message Number - (Default = 1)
- 252 Zone 2 Voice Message Number - (Default = 1)
- 253 Zone 3 Voice Message Number - (Default = 1)
- 254 Zone 4 Voice Message Number - (Default = 1)
- 255 Zone 5 Voice Message Number - (Default = 1)
- 256 Zone 6 Voice Message Number - (Default = 1)
- 257 Zone 7 Voice Message Number - (Default = 1)
- 258 Zone 8 Voice Message Number - (Default = 1)
- 259 Panic Alarm Voice Message Number - (Default = 1)
- 260 Fire Alarm Voice Message Number - (Default = 1)
- 261 Medical Alarm Voice Message Number - (Default = 1)
- 262 Battery Low Voice Message Number - (Default = 1)

Start Message Number for DTMF Telephone Control

This [address \(250\)](#) sets the start message for the DTMF Telephone control messages. The control messages are set in a fixed sequence (refer to the addendum sheet supplied with the 90 second voice board for this list). If the voice board is being used to indicate normal alarms using voice messages and DTMF Telephone control, the alarm messages must be recorded first.

- 250 Start of DTMF Telephone Control Messages - (Default = 0)

Voice Board DTMF Telephone Control Codes

This block of [addresses \(334 - 337\)](#) are used to program the 4 digit DTMF Telephone Control Codes. These codes allow a valid user to Set or Unset the alarm, turn outputs On or Off or enable the Microphone input from a remote Telephone. Please refer to the User Operating guide or the sheet supplied with the voice board for the full operational sequence

- 334 DTMF Telephone Control Code for Area "A" - 4 Digits (Default = 0)
- 335 DTMF Telephone Control Code for Area "A" - 4 Digits (Default = 0)
- 336 DTMF Telephone Control Code for Outputs - 4 Digits (Default = 0)
- 337 DTMF Telephone Control Code to turn on Microphone - 4 Digits (Default = 0)

Contact ID Code - Zones

This block of addresses (321 - 328) are used to set the Contact ID code that a Zone will transmit in an alarm. If a value of "0" or the "Bypass" button is entered at any of these addresses then the zone will not report via the Dialler.

- 321 Zone # 1 Contact ID Code - 3 Digit Number (Default = 130)
- 322 Zone # 2 Contact ID Code - 3 Digit Number (Default = 130)
- 323 Zone # 3 Contact ID Code - 3 Digit Number (Default = 130)
- 324 Zone # 4 Contact ID Code - 3 Digit Number (Default = 130)
- 325 Zone # 5 Contact ID Code - 3 Digit Number (Default = 130)
- 326 Zone # 6 Contact ID Code - 3 Digit Number (Default = 130)
- 327 Zone # 7 Contact ID Code - 3 Digit Number (Default = 130)
- 328 Zone # 8 Contact ID Code - 3 Digit Number (Default = 130)

Contact ID Code - Panic

This address (329) is used to set the Contact ID code that a Keypad “Panic” or “1&3” alarm will transmit.

329 Keypad Panic Alarm Contact ID Code - 3 Digit Number (Default = 120)

Contact ID Code - Fire

This address (330) is used to set the Contact ID code that a Keypad Fire “4&6” alarm will transmit.

330 Keypad Fire Alarm Contact ID Code - 3 Digit Number (Default = 110)

Contact ID Code-Medical

This address (331) is used to set the Contact ID code that a Keypad Medical “7&9” alarm will transmit.

331 Keypad Medical Alarm Contact ID Code - 3 Digit Number (Default = 100)

Commonly Used Contact ID Codes

130 = Burglary	115 = Manual Call Point
131 = Perimeter Zone	122 = Silent Panic
133 = 24 Hour Zone	123 = Audible Panic
120 = Panic	159 = Low Temperature
110 = Fire Alarm	152 = Refrigeration Alarm
111 = Smoke Detector	154 = Water Leakage
114 = Heat Detector	151 = Gas Detector
100 = Medical	116 = Duct Detector
101 = Medical Pendant	

Account Numbers

The account code is the 4 digit number that identifies the panel to the Central Station. If send Group numbers is set for Contact ID then the account number used is Partition “A”. (The special characters B,C,D,E & F can be entered at these addresses if required (see the table on page 38 for instructions).

506 Account Code For Partition “A” - Value = 4 character code (Default = 0000)

507 Account Code For Partition “B” - Value = 4 character code (Default = 0000)

Listen-in Options - Keypad

The panel provides the facilities to use the buzzer in the keypad as a speaker to listen to the call being made by the dialler. To use this feature a 5th wire must be connected between the panel and a keypad using the listen-in terminals.

189	1	Listen-in Enabled when dialling only and in Disarmed State - Default on
	2	Listen-in Enabled when dialling only and in Armed State - Default on
	3	Listen-in Enabled when dialling only and in Stay Mode - Default on
	4	Listen-in Enabled through the entire call only in Disarmed state - Default on
	5	Listen-in Enabled through the entire call only in Armed State - Default on
	6	Listen-in Enabled through the entire call only in Stay Mode - Default on
	7	Listen-in Enabled when the panel answers a call - Default on
	8	Listen-in on at All Times - Default off

Listen-in Options - Output 1

The panel provides the facilities to use a horn speaker connected to Output 1 to listen to the call being made by the dialler. To use this feature a horn speaker MUST be connected to Output 1 and the output set for siren Mode (Address 31 Option 5).

KEYPAD BUTTON ↓	FUNCTION TO BE PROGRAMMED	HEX NUMBERS	LED INDICATION
"0"	-	"0 or A"	ARMED A
"PANIC"	"##"	"B"	READY/Bypass
"MEMORY"	"*"	"C"	SYSTEM
"CONTROL"	"2.5 sec Pause"	"D"	TROUBLE
"ARM"	"Wait for 2nd Dial-tone"	"E"	READY/Bypass SYSTEM
"MONITOR"	"5 sec Pause"	"F"	READY/Bypass TROUBLE

- 190
- 1 Listen-in Enabled when dialling only and in Disarmed State - Default off
 - 2 Listen-in Enabled when dialling only and in Armed State - Default off
 - 3 Listen-in Enabled when dialling only and in Stay Mode - Default off
 - 4 Listen-in Enabled through the entire call only in Disarmed state - Default off
 - 5 Listen-in Enabled through the entire call only in Armed State - Default off
 - 6 Listen-in Enabled through the entire call only in Stay Mode - Default off
 - 7 Listen-in Enabled when the panel answers a call - Default off
 - 8 Listen-in on at All Times - Default off

Auto-Answer Ring Count

The auto-answer ring count is the number of rings the panel must count before answering an in-coming call. For Fax defeat to work the auto-answer ring count must be set to a number other than "0". (typically 25 rings)

- 249 **Auto-answer Ring Count** - Value 0-99 (0= Auto-answer disabled) - Default = 25

Mains Fail Reporting Delay

This address (319) is used to set a timer that delays the reporting of Mains Failure to a Central Station. If the mains voltage returns before the timer expires then no report is sent.

- 319 **Mains Failure Report Delay** - Value 0-9999 Seconds (Default = 600)

Test Report Time

This option sets the days of the week and the time when an automatic test report is sent to a Central Station.

- 402 **Automatic Test Report Hour/Minute** - Value 0-2359
 404 **Automatic Test Report Day/s of Week** - Value 1-7 (where 1 = Sunday, 2 = Monday, 3 = Tuesday, etc)

Telephone Numbers

The panel can be programmed with up 4 telephone numbers. The numbers can be up 16 digits long. Dialling modifiers such as Pauses or Hexadecimal digits can be programmed into the number sequence as per the chart above:

- 501 **Telephone # 1** - Value = 1-16 digits
 502 **Telephone # 2** - Value = 1-16 digits
 503 **Telephone # 3** - Value = 1-16 digits
 504 **Telephone # 4** - Value = 1-16 digits

Dialling Protocol

This block of addresses (241 - 244) are used to set the reporting format which will be sent when an alarm occurs for each of the telephone numbers.

- 241-Telephone #1 Options** (Default = 1)
- ① Contact ID
 - ② Domestic Dial
 - ③ Pager
 - ④ Speech Dialler

Option ① Contact ID - If this option is set for the telephone number, the panel will send a Contact ID message to a Central Station.

Option ② Domestic Dial - If this option is set for the telephone number, the panel is expecting to dial a residential telephone number when an alarm occurs. The message sent consists of a siren tone over the phone to alert the person called that an alarm is in progress. The alarm can be cancelled by the person called by pressing any button on a touch tone phone during the quiet period. If the alarm is cancelled by a valid user code the dialler will stop any further calls

Option ③ Pager - Report alarm events using Arrowhead "Pager" format. This format utilises Telstra's pager network to post numeric messages to a compatible pager. (NOTE: The client account number should not start with a "0")

Option ④ Speech Dialer - If the optional speech board is fitted to the panel, then selecting this option for the telephone number will allow voice messages that you record, to be sent via the telephone following an alarm.

Note: 242 through 244 are as above but apply to Telephone # 2-4

Telephone Number Reporting Options

This block of addresses (181 - 184) are used to set the reporting options for each telephone number

- 181-Telephone #1 Options**
- ① Stop if Kissed Off - Default on
 - ② Monitor Call Progress - Default on
 - ③ Blind Dial - Default on
 - ④ Use Group Codes or Multiple Accounts - Default off
 - ⑤ Send Restores - Default on
 - ⑥ Send test Call to Central Station - Default off
 - ⑦ Spare - Default off
 - ⑧ Spare - Default off

Option ① Stop if Kissed Off - If this option is turned on for the telephone number, the dialler will stop sending the alarm if the signal is kissed off and will not proceed with any other telephone numbers for that event. If not kissed off the dialler will continue for the maximum dial re-tries then cease reporting the alarm. If the event is not kissed off and the maximum re-tries limit is reached then the event is marked as unsent and will be added to the next event that causes the dialler to report. If this option is not turned on, the dialler will send the event for the maximum re-tries count or until kissed off but it will then proceed with any other telephone numbers also programmed.

Option ② Monitor Call Progress - Monitor call progress means that the dialler Monitors the status of the dial tone to determine whether the call is valid or not. If the call is not valid, ie Engaged, the panel will know and hang up the call and try again.

Option ③ Blind Dial - When the dialler makes a call it looks for dial tone before making the call. If no dial tone is detected the panel hangs up and attempts another call. The panel will do this 3 times and if dial tone is still not detected it will make the call anyway. If blind dial is on, the panel skips the dial tone detection and dials 2 seconds after looping the line. (used where non standard or low level dial tone exists)

Option ④ Use Separate Accounts or Group Number - When sending an alarm using Contact ID, the panel can either send separate account codes to report the two partitions or, use one account code (Partition A) and use the group number to identify the two partitions.

- Option 5 Send Restores** - When an alarm is generated the panel automatically sends a restore when the alarm is reset. If the Central Station does not want restores they may be turned off with this option.
- Option 7 Spare** - Default off
- Option 8 Spare** - Default off
- Option 6 Send Test call to Central Station** - The automatic daily test call to a Central Station can be disabled if not required by turning off this option.

Note: 182 through 184 are as above but applied to telephone numbers 2-4

Maximum Dial Attempts per Telephone Number

The addresses (245-248) are used to select the maximum number of dial attempts the panel will make for each telephone number

- 245 Maximum Dial Attempts for Ph # 1** - Value 0-99 (Default = 20)
- 246 Maximum Dial Attempts for Ph # 2** - Value 0-99 (Default = 20)
- 247 Maximum Dial Attempts for Ph # 3** - Value 0-99 (Default = 20)
- 248 Maximum Dial Attempts for Ph # 4** - Value 0-99 (Default = 20)

MISCELLANEOUS PANEL OPTIONS

This address (170) is used to select optional miscellaneous panel functions.

- 170**
 - 1** Panel Tamper NC or EOL - Default off
 - 2** Installer Lockout - Default off
 - 3** Disable Mains Fail Test - Default off
 - 4** Zones aren't Force Armable - Default off
 - 5** No audible keypad beep on supervised Wireless fault - Default off
 - 6** No audible keypad beep for zone Inactivity Timeout - Default off
 - 7** "Control" button disables Chime Zones - Default off
 - 8** Silent 24 Hour Alarms (No keypad Buzzer) - Default off

Option 1 Panel Tamper NC or EOL - The Tamper input on the PowerWave control board (Tmp) requires sealing to clear the panel tamper alarm. If option 1 is on the panel must see a 2k2 resistor (EOL) across the Tmp & 0V terminals to ensure the tamper is sealed. If this option is turned off the a simple short circuit (NC) is all that is required to seal the panel tamper.

Option 2 Installer Lockout - Normally, if the panel is unset and powered up with the panel tamper open (in alarm) then the panel will automatically go into installer program mode. If this option is on, the panel will not automatically go into program mode and the only valid method of accessing program mode is via the installer code.

Option 3 Disable Mains Fail Test - If the panel must be run off a DC supply but the supply is too low to be wired into the AC terminals then this option completely disables the mains fail Monitoring so the panel will not give a continuous system alarm.

Option 4 Zones are not Force Armable - If this option is on then the panel can only be armed if all zones are sealed (Bypassing those zones which can be ignored at [Address 145](#))

Option 5 No audible keypad beep on supervised radio fault - If a supervised wireless detector fails to send a test signal within a preset period, an alarm will be generated. A supervised alarm will cause the system LED on the keypad to flash. If this option is off then all keypad buzzers will also sound continuously to warn of the problem. If this option is on, the buzzers will not sound on a supervised alarm but the system LED will still flash.

Option 6 No audible keypad beep on zone inactivity timeout - If a zone is set for inactivity monitoring (Address) and it does not unseal at least once during the timeout period ([Address 240](#)) an alarm will be generated. An inactivity timeout will cause the trouble LED on the keypad to flash and the zone led that failed will be on solid. If this option is off then all keypad buzzers will sound continuously to warn of the problem. If this option is on, the buzzers will not sound, instead the trouble LED will still flash.

Option 7 “CONTROL” function disables Chime zones - This option will disable the Chime zone Monitoring when “Control” is on. It is used to stop Chime zone beeps from occurring at the keypad or operating an output when not needed. To initiate the “Control” function the operator must press The “Control” button followed by the “Program” button. When the “Control” function is On the Program LED will flash.

Option 8 **Silent 24 Hour Alarms (No keypad Buzzer)** - If this option is on then any 24 hour alarms (Address 129,140 or 141) will not cause the keypad buzzer to sound i.e. silent alarm.

Setting Real Time Clock

The Real Time Clock is used to Time & Date stamp the events in the Event Buffer. Ensure this is set correctly at the time of installation so that the events have the proper time and date associated with them. The clock is programmed in 24 hour format (e.g. 00:00-23:59).

- 401 **Real Time Clock Hour/Minute** - Value 0-2359
- 403 **Real Time Clock Day of Week** - Value 1-7 (where 1 = Sunday, 2 = Monday, 3 = Tuesday, etc)
- 405 **Real Time Clock Date** - Value 1-31
- 406 **Real Time Clock Month** - Value 1-12
- 407 **Real Time Clock Year** - Value 0-99

Default Entire Panel

620) **Restore Factory Defaults**

Default Selected Parts of Panel

- 621 **Default User Codes**
- 622 **Default Addresses 20-199**
- 623 **Default Addresses 200-399**
- 624 **Default Addresses 500-599**
- 625 **Default Wireless Detectors & Remote Controls**

Clear Alarm Memory

626 **Clear Alarm Memory Buffer**

Walk Test Mode

This [address \(627\)](#) is used to enable walk-test mode while in installer program mode. When entering this address, the keypad buzzer will beep at 1 second intervals to indicate walk-test mode is active. By walking past all of the detectors connected to the system and activating them, the associated zone light will latch up at the keypad to allow verification that all zones are working properly. By pressing the “Program” or “Enter” buttons, walk-test mode can be terminated and normal programming resumed.

627 **Walk-test Mode**

Write to EEPROM Programming Board

This [address \(628\)](#) is used to copy the panels program configuration to an external EEPROM memory card which can be plugged into the expansion socket on the control board. An onboard Jumper can be removed to stop the re-writing of data.

628 **Write to EEPROM (DTU) Board**

Read from EEPROM Programming Board

This [address \(629\)](#) is used to return the panels program configuration from an external EEPROM memory card which can be plugged into the expansion socket on the control board. An onboard Jumper can be removed to stop the re-writing of data.

629 **Read from EEPROM Programming Board**

PROGRAM SUMMARY GUIDE

(In Numerical Order)

The following program summary is an abbreviated version of all the PowerWave-8 program addresses. This is intended as a quick guide to finding a program address. The program addresses are in numerical order with page references beside them so you can get more detailed information if required.

User Codes

1	User Code # 1 - Default = 123	Page 13
2	User Code # 2	Page 13
3	User Code # 3	Page 13
4	User Code # 4	Page 13
5	User Code # 5	Page 13
6	User Code # 6	Page 13
7	User Code # 7	Page 13
8	User Code # 8	Page 13
9	User Code # 9	Page 13
10	User Code # 10	Page 13
11	User Code # 11 - Installer Code (Default = 000000)	Page 14

User Code Access Levels

21	Options Code # 1 (Default 1-8)	Page 14
22	Options Code # 2 (Default 1-6)	Page 14
23	Options Code # 3 (Default 1-6)	Page 14
24	Options Code # 4 (Default 1-6)	Page 14
25	Options Code # 5 (Default 1-6)	Page 14
26	Options Code # 6 (Default 1-6)	Page 14
27	Options Code # 7 (Default 1-6)	Page 14
28	Options Code # 8 (Default 1-6)	Page 14
29	Options Code # 9 (Default 1-6)	Page 14
30	Options Code # 10 (Default 1-6)	Page 14

1 = Assigned to Area "A"
2 = Assigned to Area "B"
3 = Code can Arm
4 = Code can Disarm
5 = Stay Mode Arm (if code required)
6 = Code can disarm Stay Mode
7 = User can Change their Code
8 = User can Change other Codes

Output States

31	Options for Output # 1 (Default None)	Page 16
32	Options for Output # 2 (Default None)	
33	Options for Output # 3 (Default None)	
34	Options for Output # 4 (Default None)	
35	Options for Output # 5 (Default None)	
36	Options for Output # 6 (Default None)	
37	Options for Output # 7 (Default None)	
38	Options for Output # 8 (Default None)	

1 = Invert
2 = Pulse
3 = Single Pulse
4 = Lockout Once Reset
5 = Horn Speaker Driver to output
6 = "Control" button operates output
7 = Output pulses for '24 Hour' Alarms
8 = Chime zones linked to Pulse Timer

24 Hour Output Options

41	Options for Output # 1 (Default 1,2,5)	Page 17
42	Options for Output # 2 (Default 1,2,5)	
43	Options for Output # 3 (Default 1,2,5)	
44	Options for Output # 4 (Default 1,2,5)	
45	Options for Output # 5 (Default 1,2,5)	
46	Options for Output # 6 (Default 1,2,5)	
47	Options for Output # 7 (Default 1,2,5)	
48	Options for Output # 8 (Default 1,2,5)	

1 = R/C Panic to Output
2 = Keypad Panic to Output
3 = Keypad Fire to Output
4 = Keypad Medical to output
5 = System Tamper to Output
6 = Duress Alarm to Output
7 = Mains Fail to Output
8 = Battery Low to output

'Armed' Zone Alarms To Outputs

51	Armed Zone Alarms 1-8 to Output # 1 (Default= All Zones)	Page 18
52	Armed Zone Alarms 1-8 to Output # 2 (Default= All Zones)	Page 18
53	Armed Zone Alarms 1-8 to Output # 3 (Default= All Zones)	Page 18
54	Armed Zone Alarms 1-8 to Output # 4 (Default= All Zones)	Page 18
55	Armed Zone Alarms 1-8 to Output # 5 (Default= All Zones)	Page 18

56	Armed Zone Alarms 1-8 to Output # 6 (Default= All Zones)	Page 18
57	Armed Zone Alarms 1-8 to Output # 7 (Default= All Zones)	Page 18
58	Armed Zone Alarms 1-8 to Output # 8 (Default= All Zones)	Page 18

Stay Zone Alarms To Outputs

61	Stay Mode Zone Alarms 1-8 to Output # 1 (Default= None)	Page 18
62	Stay Mode Zone Alarms 1-8 to Output # 2 (Default= All Zones)	Page 18
63	Stay Mode Zone Alarms 1-8 to Output # 3 (Default= None)	Page 18
64	Stay Mode Zone Alarms 1-8 to Output # 4 (Default= None)	Page 18
65	Stay Mode Zone Alarms 1-8 to Output # 5 (Default= None)	Page 18
66	Stay Mode Zone Alarms 1-8 to Output # 6 (Default= None)	Page 18
67	Stay Mode Zone Alarms 1-8 to Output # 7 (Default= None)	Page 18
68	Stay Mode Zone Alarms 1-8 to Output # 8 (Default= None)	Page 18

24 Hour Zone Alarms To Outputs

71	24 Hour Zone Alarms 1-8 to Output # 1 (Default= None)	Page 18
72	24 Hour Zone Alarms 1-8 to Output # 2 (Default= All Zones)	Page 18
73	24 Hour Zone Alarms 1-8 to Output # 3 (Default= None)	Page 18
74	24 Hour Zone Alarms 1-8 to Output # 4 (Default= None)	Page 18
75	24 Hour Zone Alarms 1-8 to Output # 5 (Default= None)	Page 18
76	24 Hour Zone Alarms 1-8 to Output # 6 (Default= None)	Page 18
77	24 Hour Zone Alarms 1-8 to Output # 7 (Default= None)	Page 18
78	24 Hour Zone Alarms 1-8 to Output # 8 (Default= None)	Page 18

Chime Zones To Outputs

81	Chime Zones 1-8 to Output # 1 (Default= None)	Page 19
82	Chime Zones 1-8 to Output # 2 (Default= None)	Page 19
83	Chime Zones 1-8 to Output # 3 (Default= None)	Page 19
84	Chime Zones 1-8 to Output # 4 (Default= None)	Page 19
85	Chime Zones 1-8 to Output # 5 (Default= None)	Page 19
86	Chime Zones 1-8 to Output # 6 (Default= None)	Page 19
87	Chime Zones 1-8 to Output # 7 (Default= None)	Page 19
88	Chime Zones 1-8 to Output # 8 (Default= None)	Page 19

Zone Tamper To Outputs

91	Zone Tamper 1-8 to Output # 1 (Default= 1-8)	Page 19
92	Zone Tamper 1-8 to Output # 2 (Default= 1-8)	Page 19
93	Zone Tamper 1-8 to Output # 3 (Default= 1-8)	Page 19
94	Zone Tamper 1-8 to Output # 4 (Default= 1-8)	Page 19
95	Zone Tamper 1-8 to Output # 5 (Default= 1-8)	Page 19
96	Zone Tamper 1-8 to Output # 6 (Default= 1-8)	Page 19
97	Zone Tamper 1-8 to Output # 7 (Default= 1-8)	Page 19
98	Zone Tamper 1-8 to Output # 8 (Default= 1-8)	Page 19

R/C Buttons To Outputs

101	R/C Button 1-8 to Output # 1 (Default= None)	Page 19
102	R/C Button 1-8 to Output # 2 (Default= None)	Page 19
103	R/C Button 1-8 to Output # 3 (Default= None)	Page 19
104	R/C Button 1-8 to Output # 4 (Default= None)	Page 19
105	R/C Button 1-8 to Output # 5 (Default= None)	Page 19
106	R/C Button 1-8 to Output # 6 (Default= None)	Page 19
107	R/C Button 1-8 to Output # 7 (Default= None)	Page 19
108)	R/C Button 1-8 to Output # 8 (Default= None)	Page 19

Temporary Output Disable

109	Temporary Output Disable - Output 1-8	Page 19
-----	---------------------------------------	---------

Keypad/Keyswitch Option Partition “A”

110 Partition “A” Options
(Default= 4 & 5)

110 Options

- ❶ = Arm Button Required Before Code to Set
- ❷ = Stay Button Required Before Code to Set Stay Mode
- ❸ = Code required to Set
- ❹ = Arm Button can disarm during Exit Delay
- ❺ = Stay Button can disarm Stay Mode at any time
- ❻ = No Exit beeps to Keypads in Stay Mode
- ❼ = Enable Key-switch
- ❽ = Key-switch Mode

Page 20

Chirps & Flashes-Partition “A”

111 Area “A” Opt. O/P # 1 (Default= None)

112 Area “A” Opt. O/P # 2 (Default= None)

113 Area “A” Opt. O/P # 3 (Default= None)

114 Area “A” Opt. O/P # 4 (Default= None)

115 Area “A” Opt. O/P # 5 (Default= None)

116 Area “A” Opt. O/P # 6 (Default= None)

117 Area “A” Opt. O/P # 7 (Default= None)

118 Area “A” Opt. O/P # 8 (Default= None)

- ❶ = Arm Status to Output
- ❷ = Stay Arm Status to Output
- ❸ = Disarm Status to Output
- ❹ = R/C Chirps on Arm
- ❺ = R/C Chirps on Stay Mode Arm
- ❻ = R/C Chirps on Disarming
- ❼ = Pulse on Arming to Output
- ❽ = Pulse on Disarming to Output

Page 22

Keypad/Keyswitch Option Partition “B”

120 Partition “B” Options
(Default= 4 & 5)

- ❶ = Arm Button Required Before Code to Set
- ❷ = Stay Button Required Before Code to Set Stay Mode
- ❸ = Code required to Set
- ❹ = Arm Button can disarm during Exit Delay
- ❺ = Stay Button can disarm Stay Mode at any time
- ❻ = No Exit beeps to Keypads in Stay Mode
- ❼ = Enable Key-switch
- ❽ = Key-switch Mode

Page 21

Chirps & Flashes-Partition “B”

121 Area “B” Opt. O/P # 1 (Default= None)

122 Area “B” Opt. O/P # 2 (Default= None)

123 Area “B” Opt. O/P # 3 (Default= None)

124 Area “B” Opt. O/P # 4 (Default= None)

125 Area “B” Opt. O/P # 5 (Default= None)

126 Area “B” Opt. O/P # 6 (Default= None)

127 Area “B” Opt. O/P # 7 (Default= None)

128 Area “B” Opt. O/P # 8 (Default= None)

- ❶ = Arm Status to Output
- ❷ = Stay Arm Status to Output
- ❸ = Disarm Status to Output
- ❹ = R/C Chirps (2) on Arm
- ❺ = R/C Chirps (2) on Stay Mode Arm
- ❻ = R/C Chirps (4)_on Disarming
- ❼ = Pulse on Arming to Output
- ❽ = Pulse on Disarming to Output

Page 23

Programming Zone Doubling & EOL Options

130 Single EOL or Zone Doubling - Value 1-8 (Default = 1-4 On, 4 Zone panel with 2k2 EOL)

Page 26

Programming Zone Options

129 24 Hour Fire Zone

131 Partition “A” Zones

132 Partition “B” Zones

133 Zone is NC or NO

134 Wireless Zones

135 Zone is Bypassable

136 Auto-Isolate Zone

137 Handover Zone

138 Pulse Count on Zone

139 Stay Mode Zone

Zones 1-8 (Default = No zones)

Zones 1-8 (Default = All zones)

Zones 1-8 (Default = No zones)

Zones 1-8 (Default = All zones are NC)

Zones 1-8 (Default = No zones)

Zones 1-8 (Default = All zones)

Zones 1-8 (Default = All zones)

Zones 1-8 (Default = No zones)

Zones 1-8 (Default = No zones)

Zones 1-8 (Default = Zone 1)

Page 24

Page 24

Page 24

Page 24

Page 24

Page 24

Page 24

Page 24

Page 24

Page 24

140	24 Hour Zone	Zones 1-8 (Default = No zones)	Page 24
141	Non-Latching 24 Hour Zone	Zones 1-8 (Default = No zones)	Page 25
142	Swinger Shutdown	Zones 1-8 (Default = No zones)	Page 25
143	Chime Zone (when disarmed)	Zones 1-8 (Default = No zones)	Page 25
144	Permanent Chime Zone	Zones 1-8 (Default = No zones)	Page 25
145	Force Arm Zone	Zones 1-8 (Default = No zones)	Page 25
146	Send Zone Bypasses to C.S.	Zones 1-8 (Default = All zones)	Page 25
147	Send Multiple Alarms to C.S.	Zones 1-8 (Default = All zones)	Page 25
148	Send Zone Tamper to C.S.	Zones 1-8 (Default = All zones)	Page 25
149	Common Zones Report to Area B Account	Zones 1-8 (Default = No zones)	Page 25
150	Zones with Inactivity Timer	Zones 1-8 (Default = No zones)	Page 25

Remote Control Arm/Disarm Options

151	R/C Button # 1 Opt (Default= 1,3,4)		Page 32
152	R/C Button # 2 Opt (Default= 1,3,4)	❶ = Assigned to Area "A"	Page 32
153	R/C Button # 3 Opt (Default= 1,3,4)	❷ = Assigned to Area "B"	Page 32
154	R/C Button # 4 Opt (Default= 1,3,4)	❸ = Can Arm Area	Page 32
155	R/C Button # 5 Opt (Default= 1,3,4)	❹ = Can Disarm Area	Page 32
156	R/C Button # 6 Opt (Default= 1,3,4)	❺ = Can arm Stay Mode	Page 32
157	R/C Button # 7 Opt (Default= 1,3,4)	❻ = Can disarm Stay Mode	Page 32
158	R/C Button # 8 Opt (Default= 1,3,4)	❼ = Spare	Page 32
		❽ = Disabled if Panel is in Alarm	

Remote Control Output Options

161	R/C Button # 1 Options (Default= None)		Page 32
162	R/C Button # 2 Options (Default= None)	❶ = R/C Button Can Turn Output On	Page 32
163	R/C Button # 3 Options (Default= None)	❷ = R/C Button Can Turn Output Off	Page 32
164	R/C Button # 4 Options (Default= None)	❸ = Visonic Powercode Battery Low	Page 32
165	R/C Button # 5 Options (Default= None)	❹ = Spare	Page 32
166	R/C Button # 6 Options (Default= None)	❺ = Send Panic Alarm Through Dialler	Page 32
167	R/C Button # 7 Options (Default= None)	❻ = Causes Immediate Panic	Page 32
168	R/C Button # 8 Options (Default= None)	❼ = Causes Delayed Panic (1.5 Sec)	Page 32
		❽ = Ness Battery Low	

Miscellaneous Panel Options

169	Misc. Panel Options # 1 (Default= 3)		Page 29
		❶ = Turn KP LED's when Armed	
		❷ = Keypad "Panic" Button instant or delayed	
		❸ = Direct access to program mode for the installer code.	
170	Misc. Panel Options # 2 (Default= None)		Page 40
		❶ = Panel Tamper NC or EOL	
		❷ = Installer Lockout	
		❸ = Disable Mains Fail Test	
		❹ = Arm only if Sealed	
		❺ = No audible keypad beep on supervised Wireless fault	
		❻ = No audible keypad beep on Zone Inactivity Timeout	
		❼ = "Control" Button Disables Chime Zones	
		❽ = Silent 24 Hour Zone (No Keypad Beep)	

Keypad Partition

171	Keypads Assigned To Partition "A" - Value Keypad 1-8 (Default= All Keypads)	Page 27
172	Keypads Assigned To Partition "B" - Value Keypad 1-8 (Default= No Keypads)	Page 27

Keypads with Panic Button Enabled

173	Keypads with Panic Button Enabled - Value Keypad 1-8 (Default= All Keypads)	Page 27
-----	---	---------

Keypads with 1&3 Panic Enabled

174	Keypads with 1 & 3 Panic Function Enabled - Value Keypad 1-8 (Default= No Keypads)	Page 27
-----	--	---------

Panic Operates Keypad Buzzer

175 Panic Beep to Keypad Enabled - Value Keypad 1-8 (Default= All Keypads) Page 28

Keypads with 4&6 Fire Enabled

176 Keypads with 4 & 6 Fire Function Enabled - Value Keypad 1-8 (Default= No Keypads) Page 28

Fire Beep to Keypad Enabled

177 Fire Beep to Keypad Enabled - Value Keypad 1-8 (Default= No Keypads) Page 28

Keypads with 7&9 Medical Enabled

178 Keypads with 7 & 9 Medical Function Enabled - Value Keypad 1-8 (Default= No Keypads) Page 28

Medical Beep to Keypad Enabled

179 Medical Beep to Keypad Enabled - Value Keypad 1-8 (Default= No Keypads) Page 29

Stay Button can Disarm when in Stay Mode Enabled

180 Stay Button can Disarm when in Stay Mode - Value Keypad 1-8 (Default 1&4) Page 29

Telephone Number Dialling Options

181	Options for Telephone # 1	(Default =1,2,5)		Page 38
182	Options for Telephone # 2	(Default =1,2,5)	❶ = Stop Dialling if Kissed off	Page 38
183	Options for Telephone # 3	(Default =1,2,5)	❷ = Monitor Call Progress	Page 38
184	Options for Telephone # 4	(Default =1,2,5)	❸ = Blind Dial	Page 38
			❹ = Use Group Numbers for Contact ID	
			❺ = Send Restores	
			❻ = Send Test Calls	
			❼ = Spare	
			❽ = Spare	

Dialler Programming Options

185 Dialler options (Default = 7) Page 33

- ❶ = Dialler ON
- ❷ = Fax Defeat (Double Call)
- ❸ = Disable Telephone Line Monitoring
- ❹ = Spare ❺ = Spare ❻ = Spare
- ❼ = Auto Detect Modem Mode
- ❽ = Bell 103 or V21

Dialler Reporting Options 1

186 Dialler Options 1 (Default = All) Page 34

- ❶ = Report Duress Alarm
- ❷ = Report Mains Fail
- ❸ = Report Battery low
- ❹ = Report Wireless Detector Battery Low
- ❺ = Report System Tamper
- ❻ = Report Line Fail
- ❼ = Report Supervised Wireless Alarm
- ❽ = Report Zone Inactivity Alarm

Dialler Reporting Options 2

187 Dialler Options 2 (Default = All) Page 34

- ❶ = Report Manual Panic Alarm
- ❷ = Report Manual Fire Alarm
- ❸ = Report Manual Medical Alarm

Dialler Reporting Options 3

188 Dialler Options 3

(Default = 1,2)

Page 35

- ① = Report Open/Close
- ② = Report Stay Mode Open Close
- ③ = Report 'Open after Alarm'
- ④ = Report Stay Mode 'Open after Alarm'
- ⑤ = Report 24 Hour Alarms when set to Domestic /voice mode
- ⑥ = Send Open immediate or after exit delay
- ⑦ = Report Zone alarms in Stay Mode
- ⑧ = Spare

Keypad Listen-in Options

189 Keypad Listen-in Options

(Default = 1-7)

Page 37

- ① = Enabled During Dialling in Disarm State only
- ② = Enabled During Dialling in Armed State only
- ③ = Enabled During Dialling in Stay Mode State only
- ④ = Enabled Throughout the call in Disarm State only
- ⑤ = Enabled Throughout the call in Armed State only
- ⑥ = Enabled Throughout the call in Stay Mode State only
- ⑦ = Listen-in Enabled when the panel answers a call
- ⑧ = Enabled at All Times

Output # 1 Listen-in Options

190 Output # 1 Listen-in Options

(Default = None)

Page 38

- ① = Enabled During Dialling in Disarm State only
- ② = Enabled During Dialling in Armed State only
- ③ = Enabled During Dialling in Stay Mode State only
- ④ = Enabled Throughout the call in Disarm State only
- ⑤ = Enabled Throughout the call in Armed State only
- ⑥ = Enabled Throughout the call in Stay Mode State only
- ⑦ = Listen-in Enabled when the panel answers a call
- ⑧ = Enabled at All Times

Output Delay ON time

201	Output 1 Delay ON Time - Value 0-255 Seconds (Default = 0 Sec)	Page 18
202	Output 2 Delay ON Time - Value 0-255 Seconds (Default = 0 Sec)	Page 18
203	Output 3 Delay ON Time - Value 0-255 Seconds (Default = 0 Sec)	Page 18
204	Output 4 Delay ON Time - Value 0-255 Seconds (Default = 0 Sec)	Page 18
205	Output 5 Delay ON Time - Value 0-255 Seconds (Default = 0 Sec)	Page 18
206	Output 6 Delay ON Time - Value 0-255 Seconds (Default = 0 Sec)	Page 18
207	Output 7 Delay ON Time - Value 0-255 Seconds (Default = 0 Sec)	Page 18
208	Output 8 Delay ON Time - Value 0-255 Seconds (Default = 0 Sec)	Page 18

Chime Mode to Keypad Buzzer Timer

209	Partition "A" Chime Mode to KP Buzzer Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 28
210	Partition "B" Chime Mode to KP Buzzer Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 28

Output Chime Mode Time

211	Output 1 Chime Mode ON Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 29
212	Output 2 Chime Mode ON Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 29
213	Output 3 Chime Mode ON Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 29
214	Output 4 Chime Mode ON Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 29
215	Output 5 Chime Mode ON Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 29
216	Output 6 Chime Mode ON Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 29
217	Output 7 Chime Mode ON Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 29
218	Output 8 Chime Mode ON Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 29

Programming Exit Delays

219	Partition "A" Exit Delay Time - Value 0-255 Seconds (Default = 20 Sec)	Page 27
220	Partition "B" Exit Delay Time - Value 0-255 Seconds (Default = 20 Sec)	Page 27

Output Pulse Time

221	Output 1 Pulse Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 19
222	Output 2 Pulse Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 19
223	Output 3 Pulse Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 19
224	Output 4 Pulse Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 19
225	Output 5 Pulse Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 19
226	Output 6 Pulse Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 19
227	Output 7 Pulse Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 19
228	Output 8 Pulse Time - Value 0-99 1/10 Seconds (Default ; 20 =2 Sec)	Page 19

Zone Pulse Count Timer

229	Zone Pulse Count Timer - Value 0-255 Seconds (Default = 60 Sec)	Page 26
-----	--	---------

Duress Digit

230	Duress Digit - Value 1-9 (Default = 0 Duress Function Disabled)	Page 14
-----	--	---------

Wireless Detector Options

231	Options for Zone # 1 (Default= 0)	0 = For Unknown Devices - no low batt or Tmp	Page 29
232	Options for Zone # 2 (Default= 0)	1 = Crow AE Series Battery low	Page 29
233	Options for Zone # 3 (Default= 0)	2 = Crow AE Radio Reed Switch	Page 29
234	Options for Zone # 4 (Default= 0)	3 = Crow Merlin PIR (supervised signal ignored)	Page 29
235	Options for Zone # 5 (Default= 0)	4 = Crow Merlin PIR (supervised signal active)	Page 29
236	Options for Zone # 6 (Default= 0)	11 = Ness Devices battery Low	Page 29
237	Options for Zone # 7 (Default= 0)	12 = Ness Radio Reed Switch	Page 29
238	Options for Zone # 8 (Default= 0)	21 = Electronics Line 'Cougar' Wireless PIR ("ON" = Switch 1, "OFF" = Switch 2, 3 & 4)	Page 29
		31 = Visonic K900 Wireless PIR	Page 29
		32 = Visonic Powercode (supervised signal ignored)	Page 29
		33 = Visonic Powercode (supervised signal active)	

Wireless Detector Supervision Timer

239	Wireless Detector Supervision Timer - 0-255 Minutes (Default = 240 Minutes)	Page 30
-----	--	---------

Zone Inactivity Timer

240	Zone Inactivity Timer - 0-255 Hours (Default = 120 Hours)	Page 22
-----	--	---------

Dialling Protocol

241	Phone # 1 (Default= 1)	① = Contact ID	Page 38
242	Phone # 2 (Default= None)	② = Domestic Dial	Page 38
243	Phone # 3 (Default= None)	③ = Pager	Page 38
244	Phone # 4 (Default= None)	④ = Speech Dialler	Page 38

Maximum Dialling Attempts per Phone Number

245	Maximum re-Tries for PH No. 1 - Value 0-99 (Default = 20)	Page 40
246	Maximum re-Tries for PH No. 2 - Value 0-99 (Default = 20)	Page 40
247	Maximum re-Tries for PH No. 3 - Value 0-99 (Default = 20)	Page 40
248	Maximum re-Tries for PH No. 4 - Value 0-99 (Default = 20)	Page 40

Auto-Answer Ring Count

249	Auto-Answer Ring Count - Value 0-99 (Default = 25)	Page 37
-----	---	---------

Start Message Number for DTMF Telephone Control

250	Start of DTMF Telephone Control Messages - Value 0-99 (Default = 0)	Page 35
-----	--	---------

Programming Voice Board Messages

251	Zone 1 Voice Message Number - (Default = 1)	Page 35
252	Zone 2 Voice Message Number - (Default = 1)	Page 35
253	Zone 3 Voice Message Number - (Default = 1)	Page 35
254	Zone 4 Voice Message Number - (Default = 1)	Page 35
255	Zone 5 Voice Message Number - (Default = 1)	Page 35
256	Zone 6 Voice Message Number - (Default = 1)	Page 35
257	Zone 7 Voice Message Number - (Default = 1)	Page 35
258	Zone 8 Voice Message Number - (Default = 1)	Page 35
259	Panic Alarm Voice Message Number - (Default = 1)	Page 35
260	Fire Alarm Voice Message Number - (Default = 1)	Page 35
261	Medical Alarm Voice Message Number - (Default = 1)	Page 35
262	Battery Low Voice Message Number - (Default = 1)	Page 35

Entry Delays

301	Zone 1 Entry Delay Time - Value 0-255 Seconds (Default = 20 Sec)	Page 26
302	Zone 2 Entry Delay Time - Value 0-255 Seconds (Default = 0 Sec)	Page 26
303	Zone 3 Entry Delay Time - Value 0-255 Seconds (Default = 0 Sec)	Page 26
304	Zone 4 Entry Delay Time - Value 0-255 Seconds (Default = 0 Sec)	Page 26
305	Zone 5 Entry Delay Time - Value 0-255 Seconds (Default = 0 Sec)	Page 26
306	Zone 6 Entry Delay Time - Value 0-255 Seconds (Default = 0 Sec)	Page 26
307	Zone 7 Entry Delay Time - Value 0-255 Seconds (Default = 0 Sec)	Page 26
308	Zone 8 Entry Delay Time - Value 0-255 Seconds (Default = 0 Sec)	Page 26

Output Reset Time

311	Output 1 Reset Time - Value 0-9999 Seconds (Default = 300 Sec = 5 minutes)	Page 19
312	Output 2 Reset Time - Value 0-9999 Seconds (Default = 0 Sec = Latching)	Page 19
313	Output 3 Reset Time - Value 0-9999 Seconds (Default = 300 Sec = 5 minutes)	Page 19
314	Output 4 Reset Time - Value 0-9999 Seconds (Default = 0)	Page 19
315	Output 5 Reset Time - Value 0-9999 Seconds (Default = 0)	Page 19
316	Output 6 Reset Time - Value 0-9999 Seconds (Default = 0)	Page 19
317	Output 7 Reset Time - Value 0-9999 Seconds (Default = 0)	Page 19
318	Output 8 Reset Time - Value 0-9999 Seconds (Default = 0)	Page 19

Mains Fail Reporting Delay

319	Mains Fail Reporting Delay - Value 0-9999 Seconds (Default = 600 Sec)	Page 38
-----	---	---------

Zone Contact ID Reporting Code

321	Contact ID Code for Zone 1 (Default=130)	Page 36
322	Contact ID Code for Zone 2 (Default=130)	Page 36
323	Contact ID Code for Zone 3 (Default=130)	Page 36
324	Contact ID Code for Zone 4 (Default=130)	Page 36
325	Contact ID Code for Zone 5 (Default=130)	Page 36
326	Contact ID Code for Zone 6 (Default=130)	Page 36
327	Contact ID Code for Zone 7 (Default=130)	Page 36
328	Contact ID Code for Zone 8 (Default=130)	Page 36

Keypad Panic Alarm Contact ID Reporting Code

329	Keypad Panic ("Panic" or "1&3") Contact ID Code (Default=120)	Page 36
-----	---	---------

Keypad Fire Alarm Contact ID Reporting Code

330	Keypad Fire (4&6) Contact ID Code (Default=110)	Page 36
-----	---	---------

Keypad Medical Alarm Contact ID Reporting Code

331	Keypad Medical (7&9) Contact ID Code (Default=100)	Page 36
-----	--	---------

Voice Board DTMF Telephone Control Codes

334	DTMF Telephone Control Code for Area "A" - 4 Digits (Default = 0)	Page 36
335	DTMF Telephone Control Code for Area "A" - 4 Digits (Default = 0)	Page 36
336	DTMF Telephone Control Code for Outputs - 4 Digits (Default = 0)	Page 36
337	DTMF Telephone Control Code to turn on Microphone - 4 Digits (Default = 0)	Page 36

Setting Real Time Clock

401	Real Time Hour/Minute - Value 0-2359	
403	Real Time Day of Week - Value 1-7 (1=Sunday, 2=Monday ,etc)	
405	Real Time Clock Date - Value 1-31	
406	Real Time Clock Month - Value 1-12	
407	Real Time Clock Year - Value 0-99	Page 41

Test Call Time of Day

402	Test Call Hour/Minute - Value 0-2359	
404)	Test Call Days of the Week - Value 1-7 (1=Sunday, 2= Monday, etc)	Page 37
405)		

Daylight Saving settings: NOT available in V8.64 panels and above

408	<i>Daylight Saving Start Sunday - Value 0-5 - Default = 1 (0=daylight saving start time disabled)</i>	
409	<i>Daylight Saving Start Month - Value 1-12 - Default = 10</i>	
410	<i>Daylight Saving Start Hour - Value 0-23 - Default = 2</i>	
411	<i>Daylight Saving End Sunday - Value 0-5 - Default = 3 (0=daylight saving end time disabled)</i>	
412	<i>Daylight Saving End Month - Value 1-12 - Default = 3</i>	
413	<i>Daylight Saving End Hour - Value 0-23 - Default = 2</i>	
414	<i>Daylight Saving is Active (If LED #1 is On, Daylight Saving is currently active)</i>	

Telephone Numbers

501	Telephone Number # 1 - Value 1-16 Digits	Page 37
502	Telephone Number # 2 - Value 1-16 Digits	Page 37
503	Telephone Number # 3 - Value 1-16 Digits	Page 37
504	Telephone Number # 4 - Value 1-16 Digits	Page 37

Upload/Download Panel Code

505)	Upload/Download Site Code Number - 8 Characters (Default = None)	Page 33
------	--	---------

Contact ID Account Numbers

506	Contact ID Partition "A" Account Code Number - 4 Digits (Default = 0000)	Page 36
507	Contact ID Partition "B" Account Code Number - 4 Digits (Default = 0000)	Page 36

Wireless Detector Learning

601	Learn Mode for Zone # 1	Page 29
602	Learn Mode for Zone # 2	Page 29
603	Learn Mode for Zone # 3	Page 29
604	Learn Mode for Zone # 4	Page 29
605	Learn Mode for Zone # 5	Page 29
606	Learn Mode for Zone # 6	Page 29
607	Learn Mode for Zone # 7	Page 29
608	Learn Mode for Zone # 8	Page 29

Remote Control Button Learning

611	Learn Mode for Button # 1	Page 31
612	Learn Mode for Button # 2	Page 31
613	Learn Mode for Button # 3	Page 31
614	Learn Mode for Button # 4	Page 31
615	Learn Mode for Button # 5	Page 31
616	Learn Mode for Button # 6	Page 31
617	Learn Mode for Button # 7	Page 31
618	Learn Mode for Button # 8	Page 31

Default Entire Panel

620 Restore All Factory Defaults Page 41

Default Selected Parts of Panel

621	Default User Codes	Page 41
622	Default Addresses 20-199	Page 41
623	Default Addresses 200-399	Page 41
624	Default Addresses 500-599	Page 41
625)	Default Wireless Detectors & Remote Controls	Page 41

Clear Alarm Memory Buffer

626 Clear Alarm Memory Buffer Page 41

Walk Test Mode

627 Walk Test Mode Page 41

Write to EEPROM Board

628 Write to EEPROM Board Page 41

Read from EEPROM Board

629 Read from EEPROM Board Page 41

Contact ID Code Summary

In addition to the programmable Contact ID code assignments defined at Addresses 321-331, there are a number of event codes with extensions pre-defined as listed below. This extensions list is for your reference only and can not be re-assigned.

Event	Code	Extension	Comment
Cabinet Tamper	137	000	Panel & Sat Tamper etc
Zone Tamper - Low (short circuit)	137	001 to 004	Zone Input 1-4
Zone Tamper - High (open circuit)	137	005 to 008	Zone Input 1-4
Keypad Panic (or 1&3)	120		
Keypad Fire (4&6)	110		
Keypad Medical (7&9)	100		
Arm by "ARM" key (Quick Arm)	408	000	
Arm by user code	401	001	User #1
		through to	user #10
Arm by Remote Control Button	407	001	Button 1 (User #1)
		through to	Button 8 (User #8)
Arm by Telephone Control (remote set)	401	090	Telephone Control user
Arm by Keyswitch	409	001	Area "A" Keyswitch Arm/Disarm
	409	002	Area "B" Keyswitch Arm/Disarm
Arm by Up/Download	401	99	Remote User Number
Remote Control Panic	120	001	Remote Control Button #1
		008	Remote Control Button #8
Wireless PIR / Reed Switch Activation	130	001	Zone 1
		through to	Zone 8
System Battery Low	302	000	Control Panel Battery low
Mains Fail	301	000	230v mains to control panel lost
Wireless PIR / Reed Switch Battery Low	384	001	Zone 1
		through to	Zone 8
Wireless PIR Supervised Alarm	381	001	Zone 1
		through to	Zone 8
Zone Inactivity Alarm	391	001	Zone 1
		through to	Zone 8
Remote Control Battery Low	384	021	R/C Button #1
		022	R/C Button #2
		023	R/C Button #3
		028	R/C Button #8
TEST Calls	602	000	24 hour test
Zone Bypasses	570	001	Bypass Zone 1
		through to	Bypass Zone 8
Phone Line Failure	351	000	Reported when line is restored
Stay Mode (part set)	441	000	Arm by "Stay" Button
		001	User 1
		through to	User 10
Duress Alarm	121	001	Duress at Keypad #1
		through to	Duress at keypad #8

Product Warranty

CROW (AUSTRALIA) P/L WARRANTY

(Crow) warrants this product to be free from defects in materials and workmanship under normal use and service for a period of one year from the last day of the week and year whose numbers are printed on the printed circuit board inside his product.

Crow's obligation is limited to repairing or replacing this product, at its option, free of charge for materials or labor, if it is proved to be defective in materials or workmanship under normal use and service. Crow shall have no obligation under this Limited Warranty or otherwise if the product is altered or improperly repaired or serviced by anyone other than Crow.

There are no warranties, expressed or implied, of merchantability or fitness for a particular purpose or otherwise, which extend beyond the description on the face hereof. In no case shall Crow be liable to anyone for any consequential or incidental damages for breach of this or any other warranty, expressed or implied, or upon any other basis of liability whatsoever, even if the loss or damage is caused by Crow's own negligence or fault.

Crow does not represent that this product can not be compromised or circumvented; that this product will prevent any person injury or property loss or damage by burglary, robbery, fire or otherwise; or that this product will in all cases provide adequate warning or protection. Purchaser understands that a properly installed and maintained product can only reduce the risk of burglary, robbery or other events occurring without providing an alarm, but it is not insurance or a guarantee that such will not occur or that there will be no personal injury or property loss or damage as a result. Consequently, Crow shall have no liability for any personal injury, property damage or any other loss based on claim that this product failed to give any warning. However, if Crow is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty or otherwise, regardless of cause or origin, Crow's maximum liability shall not in any case exceed the purchase price of this product, which shall be the COMPLETE AND EXCLUSIVE remedy against Crow.

