CROW

ELECTRONIC ENGINEERING LTD.

PowerWave-8

8 zone Alarm Control panel Communicator

Users' Operating and

Programming Guide

Version 8.62

NOTES:

Contents

Introduction

Meet the Crow Alarm Control System

Thank you for choosing to protect your premises with a **PowerWave-8** of Crow Electronic Engineering Ltd.

PowerWave of Crow Electronic Engineering Ltd. is a highly advanced, multifunction alarm control system, designed to flawlessly manage your security system at home or at business, protects you against burglary and supports the operation of electronic devices.

Typical Alarm System Configuration

The protected premises can be divided up to 8 zones, as defined by the installation scheme. The protected area can be grouped into 2 separate partitions (A and B). The system can be grouped for User 's convenience to separate, in a business environment, the offices from the warehouse area, or in a private residence, the different rooms of the home, e.g., living room, bedroom, etc.

Each zone can react differently to various events, to generate an alarm or activate a device.

The system can be armed in two different modes:
1) Arm –the protected areas are entirely vacated
2) Stay –people and pets populate the protected areas.

The User who has access to the keypad's control features, can change the settings.

The system can be accessed via multiple keypads (each located at a different site). Up to 8 keypads can be integrated into the system. Access levels and Users' access codes are detailed below.

Keypad Description

The LED Keypad shows all the information required to operate the system . The User communicates with the alarm system via the keypad. The Keypad displays continuous information about the status of the alarm system, and enables the User to operate the system in different modes, change settings and program Users' access codes.

The keypad also collects and records events to be displayed afterward on request, to overview system activities, and to analyze system performance for diagnostics.

Function Keys

These keys are used to arm the system, enter commands to alter system settings, or scroll through the history events.

ARM , STAY , BYPASS , PROGRAM ,CONTROL , MEMORY , PANIC , ENTER
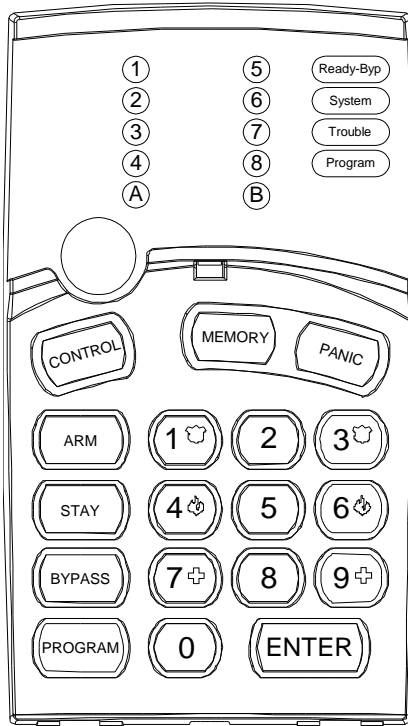
Alphanumeric Keys

These keys are used to enter codes, Initiate Emergency or for programming.

Audible Signals

The keypad emits signals (beeps) in response to User activities. These signals are listed in Table.

Table: List of Audible Signals

Sound	Sequence	Description
Short beep	Once only	A key in the keypad has been pressed
3 short beeps	Once only	Operation carried out successfully
Long beep	Once only	Illegal operation, or wrong key pressed
Slow beeping	Through the Exit or Entry delay time	Exit or entry delay warning when arming the system indicates that you must exit the protected area, also Entry delay warning when entering via the entry zone, to disarm the system.

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Indicators

There are 14 LEDs indicators show the status of the system.
Zone and Status indicators LEDs **1- 8**

Partitions indicators LEDs **A, B**

Ready Byp indicator

System indicator, **Trouble** indicator

Program indicator **.**

Summary of Functions

The system's main functions are listed in table

Function	Keys	Description	Notes
Full or Partition Arm	**C** CODE **C** ENTER	Initiates full arm	
Full Arm	**C** ARM	Initiates full arm	Only if enabled by installer
Disarm during exit	**C** ARM	Disarms the system during exit delay	Only when slow beeping is emitted
Disarm	**C** CODE **C** ENTER	Disarms the system	Stopping Alarms
Arm Stay	**C** STAY **C** CODE **C** ENTER	Initiates partial alarm when the user is home	Only if enabled by installer
Arm Stay	**C** STAY	Initiates partial alarm when the user is home	
Disarm Stay	**C** CODE **C** ENTER	Disarms the system	
Disarm Stay	**C** STAY	Disarms the system	
Bypass	**C** BYPASS **C** Zone # **C** ENTER	Bypasses a zone(s)	Repeats the procedure to un-bypass zones
Initiate Panic	**C** PANIC	Activates panic alert	
Initiate Panic	**C** 1 + 3	Activates emergency alert	Only if enabled by installer

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Function	Keys	Description	Notes
Initiate Medical	**C** 7 + 9	Activates emergency alert	Only if enabled by installer
Initiate Fire Alarm	**C** 4 + 6	Activates emergency alert	Only if enabled by installer
Memory	**C** MEMORY	Initiates display of events from memory. <ENTER> cancels memory readout	Displays events, and automatically scrolls to the next event every 2.5 sec. (Use <MEMORY> key to scroll up manually)
Chime Enable/disable	**C** CONTROL **C** PROGRAM	Enable or disable chime function	Only if enabled by installer
Control	**C** CONTROL **C** Device# **C** ENTER	Activates or deactivates outputs and devices	Press <Control> for 2 seconds
Change or Add Users' code	**C** PROGRAM **C** M CODE **C** ENTER	Activates program mode to add or change Users' codes	For details see page 12

Note: If you started an operation incorrectly, press <**ENTER**> to exit and return to the previous mode.

Operation

How to Arm the System before Exit

- *Preparing the System for Arming*

Verify that the green <Ready Byp> indicator is lit .This indicator is lit only when all zones are closed (all doors, exits and windows are closed and motion in the protected area is restricted or bypassed) , the system is ready to be armed. If the green   <Ready Byp > indicator is not illuminated, the zone LED 1 to 8 is lit displays the open zones .

Close open zones, or bypass them. Bypass any zone you cannot close , the   <Ready Byp> indicator flashes indicating bypassed zone(s) . For details see page 9.

Note: Bypassed zones are not protected.

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- Arming the System

Before leaving premises the system has to be armed.

When the system is Ready , indicator is lit , **enter user code** and then <**ENTER**> to arm the system.

There is a exit delay prior to the system being armed. During this delay time, a slow beeping is heard to indicate that the system is not armed yet and reminds you to leave the protected area.

The **A** indicator lights up to indicate that the system is armed.

(The indicators may go out few seconds after exit delay expired , depending on the installer's setting).

If you must disarm the system during the exit delay, press <**ARM**>.

- Quick Arm   (When enabled by the installer)

When the system is Ready , press <**ARM**> to arm the system.

The **A** indicator lights up to indicate that the system is armed.

During exit delay time, a slow beeping is heard to indicate that the system is not armed yet and reminds you to leave the protected area..

- Disarming the System

Enter **User's code** and press <**ENTER**>. The **A** indicator goes off to indicate that the system is disarmed.

- Stopping Alarms

Enter **User's code** and press <**ENTER**> to stop alarm any time.

How to Arm the System when Staying Home

- Arming the System in Stay Mode

This type of arming is used when people are present within the protected area. At night time, when the family is about to retire , perimeter zones are protected, but not the interior zones. Consequently, interior movements will be ignored by the system.

When the system is Ready, **press <STAY>** , **enter user code,** and then <**ENTER**>.

The **A** indicator flashes to indicate that the system is armed in stay mode .

- Quick Stay
  When enabled by the installer, press <**STAY**> to arm the system.

During exit delay you can leave the premises. If you wish to stay or that no one will enter the protected premises, you may cancel the Entry/exit delay by pressing the <**ENTER**> key. The slow beeping stops and the system is immediately armed.

The **A** indicator flashes to indicate that the system is armed in stay mode .

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(The indicators may go out a few seconds after exit delay expired , depending on the installer's setting).

- Disarming the System

Enter **user's code** and press <**ENTER**>, or press <**STAY**> if enabled by installer.

The **A** indicator goes off to indicate that the system is disarmed.

How to Arm Partitions

The protected area can be grouped into two separate partitions (A and B). The system can be grouped for User 's convenience to separate, in a business environment, the offices from the warehouse area, or in a private residence, the different rooms of the home, e.g., living room, bedroom, etc.

To arm partition A enter user code for partition A

To arm partition B enter user code for partition B,

Note: to arming partition with code see page 7 "How to arm the system before exit"

During exit delay you can leave premises. At the end of the procedure the A indicator or the B indicator lights up to indicate that the partition A or/and B is armed .

(The indicators may go out after a few seconds, depending on the installer's setting).

To disarm partition, see "Disarming the System".

How to Bypass Zones

Bypass any zone that cannot be closed. You can bypass selected zones prior to arming. It is also used to temporarily exclude a faulty zone from service, which requires repair.

To bypass a selected zone, press <**BYPASS**>, the Ready Byp indicator and program indicator lights up to indicate that the system is in bypass mode.

Enter the **zone number** one or more zones ,the zone LED indicators lights up to indicate that the zone is bypassed ,following press <**ENTER**> , the Ready Byp LED flashes to indicate zone(s) bypassed .

To un-bypass, press <**BYPASS**>, enter **zone number,** and <**ENTER**>.

Note: Disarming automatically un-bypasses zones.

How to use Chime (If enable by Installer)

A Chime (Day zone) is a detector that can be part armed while you are at home but working in another part of the building. It can be programmed to operate a buzzer or light to let you know you have a visitor.

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To disable this function, press <**CONTROL**> , Program LED and System LED indicators lights up, press the <**PROGRAM**> , Program LED flashes to indicate that Chime is disabled .

To enable Chime mode press <**CONTROL**> and <**PROGRAM**> again Program LED goes off to indicate that Chime is enabled .

Emergency Alerts

This special key's function is best programmed by your installer to suit your individual situation. Most commonly it is used in a panic situation to sound only the outside siren and perhaps call a monitoring station.

- How to initiate Panic

Press the <**PANIC**> or Press simultaneously <**1**>and <**3**> .

- How to initiate Medical Alarm

Press simultaneously <**7**> and <**9**>.

- How to initiate Fire Alarm

Press simultaneously<**4**> and <**6**>.

Generate Threat or Duress

If you are compelled to disarm the system under threat, you must enter the duress digit before the user's code to activate the automatic dialer. The duress digit shifts up your usual code by one digit. If your code is 345 and 8 is your duress digit, than entering 8345 will modify your code. The modified duress code will disarm the system in a normal way, but at the same time will activate the dialer silently to report a "duress event" without arousing suspicion. (For details ask installer.)

How to Read System Messages

When viewing the memory events at the keypad by pressing the <**MEMORY**>,the first thing that will always be displayed is the system messages.

If the system led turns ON but no other Zone LED's are ON at the same time, this means that there are no current system alarms. If a zone LED and LED's are ON then this indicates system alarms that have not yet cleared. The LED's 1-8 are pre-defined as to what system alarm they will display. These system alarm indications are shown

 in the table below. Following the display of current system alarms the panel will then sequence through the 127 historical memory events starting at the most recent event. The second table shows the alarm events that can be displayed in memory mode and what indicators are used to show them**.**

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LED # 1	Battery Low	LED # 5	Radio Pendant Battery Low
LED # 2	Mains Failure	LED # 6	Supervised Detector Failure
LED # 3	Telephone Line Failure	LED # 7	Zone Inactivity Timeout
LED # 4	Radio Detector Battery Low	LED # 8	Dialer Kiss-off Failure

How to Read Trouble Messages

Any failure or abnormal events that may occur are indicated by trouble messages, and the Trouble indicator is lit. Press <**MEMORY**> to read out messages and other events stored in memory.

How to Display Events from Memory

The system memory stores the last events. Press <**MEMORY**> to display list of events. Following the display of current system alarms the panel will then sequence through

the 127 historical memory events starting at the most recent event. The second table

shows the alarm events that can be displayed in memory mode and what indicators are

used to show them.

The system will display the last event and automatically scroll to the next one every 2.5 seconds, and a beep is emitted. Use the arrow keys to scroll up manually.

Wait until all messages are displayed, or press <**ENTER**> to cancel memory readout.

EVENT TYPE	DEVICE	INDICATOR	STATUS
ACTIVATION	Zones 1-8	LED's 1-8	On Steady
BYPASS	Zones 1-8	Ready Byp LED's 1-8	On Steady On Steady
DETECTOR TAMPER (SHORT CIRCUIT)	Zones 1-4	Trouble LED's 1-4	Flashing On Steady
DETECTOR TAMPER (OPEN CIRCUIT)	Zones 5-8	Trouble LED's 5-8	Flashing On Steady
CABINET TAMPER	Cabinet or Satellite Siren	Trouble	Flashing

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LOW BATTERY	Controller Battery	System	On Steady
		LED 1	On Steady
MAINS FAILURE	Controller Mains Supply	SYSTEM	On Steady
		LED 2	On Steady
RADIO ZONE LOW BATTERY	Radio PIR Zone 1-8	LED's 1-8	Flashing
PENDANT LOW BATTERY	Radio Key User 1-8	Trouble	On Steady
		LED's 1-8	Flashing
PANIC BUTTON (or BUTTONS 1&3 PRESSED TOGETHER)	Keypad Panic	System	Flashing
FIRE ALARM (BUTTONS 4&6 PRESSED TOGETHER)	Keypad Fire	System	Flashing
		AREA A	Flashing
MEDICAL ALARM (BUTTONS 7&9 PRESSED TOGETHER)	Keypad Medical	System	Flashing
		AREA B	Flashing
PENDANT PANIC	Radio Key	System	Flashing
	User 1-8	LED 1-8	Flashing
ARMED A	Area A is Armed	AREA A	On Steady
ARMED B	Area B is Armed	AREA B	On Steady
STAY MODE A	Area A STAY Mode ON	AREA A	Flashing
STAY MODE B	Area B STAY Mode ON	AREA B	Flashing
DURESS ALARM	Duress Alarm	Trouble	On Steady
		AREA A & B	Flashing
SUPERVISED RADIO ALARM	Supervised Radio Passive Infra-Red	System	On Steady
		Trouble	Flashing
		LED's 1-8	Flashing
ZONE INACTIVITY ALARM	Zones 1-8	Ready Byp	On Steady
		Trouble	On Steady
		LED's 1-8	On Steady
TELEPHONE LINE FAILURE	Phone Line Failure	Trouble	On Steady
		LED 3	On Steady

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How to Control Outputs and Devices

The keypad enables control of external devices, such as an air-conditioner or heater. To activate or halt a device, **press** <**CONTROL**> , Program and System LED's lights up steady , press the **number of the device ,** up to 8 different devices can be controlled via the keypad ,then press <**ENTER**> to activate or deactivate the selected device. To check what outputs are ON simply press the <**CONTROL**> key , LED's corresponding to device ON lights up .Press <**ENTER**> to return to normal mode.

How to Change or Add Codes

About Master code and User code

The factory default master code (123) is intended as a preliminary control of the alarm system. After PowerWave is installed and put into service, the code can be changed to any code known to the Master user. The Master user can define up to 9 user codes. To limit access rights, the holder of the Master code can ask the installer to define several User profiles.

Access rights are listed below:

- User code has Area A and/or B permission

- User code can arm and/or disarm arm an area

- User code can arm and/or disarm arm an area in Stay mode

- User code can change its code

- User code can change user's code

How to Change Master Code

Press <**PROGRAM**> enter **Master code** and <**ENTER**>. The **Program** indicator lights up to indicate that the system is User programming mode.

Press <**PROGRAM**> and **1** to change Master code press <ENTER>, the code digit will be flashed back to you . Use the numeric keyboard to enter your new Master code. The code can hold any combination of **1 to 6** digits. It is recommended using a multi-digit code. . Press <**ENTER**> to save your new code , the new code will be flashed to you and 3 short beeps to indicate correct entry or 1 long beep if not accepted. Press <**PROG**> and <**ENTER**> exit user Code Program mode.

How to Add or Change User Code

In Program mode, press <**PROGRAM**> and the **User number** (**2 to 10**) to add or change the code ,press <**ENTER**>. If there is an existing code already, it will be flashed back to you. Use the numeric keyboard to enter the new code. The code can hold any combination of **1 to 6** digits. Entering the new code will delete the old code. Press <**ENTER**> to **save** your new code , the new code will be flashed to you and 3 short beeps.

Repeat the procedure for all users .

Press <**PROG**> and <**ENTER**> to exit Local Program mode.

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How to Delete User Code

In client mode, press <**PROGRAM**> and the **User number** (**2 to 10**) you intend to delete, press <**ENTER**>. The code will be flashed back to you . Press <**BYPASS**> to delete User code. Press <**ENTER**> to **save** the change.

Press <**PROG**> and <**ENTER**> exit program mode.

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 then 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.

Use the table below to record the configuration of your alarm system and keep it in a safe place for future reference.

Keypad User	Name	Output #	Output Device Designation	Zone	Zone Name	Wireless User (Button)	Name (or function)
1		1		1		1	
2		2		2		2	
3		3		3		3	
4		4		4		4	
5		5		5		5	
6		6		6		6	
7		7		7		7	
8		8		8		8	
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