



ELECTRONIC ENGINEERING LTD.

PowerWave-16

16 zone Control panel Communicator

Users' Operating and Programming Guide Version 6.20

Contents

Introduction.....	4
Meet the Crow Alarm Control System.....	4
Typical Alarm System Configuration.....	4
Keypad Description.....	5
Function Keys.....	5
Alphanumeric Keys.....	5
Audible Signals.....	6
Indicators.....	6
Zone and Status indicators LEDs 1- 16.....	6
Partitions indicators LEDs A, B, C.....	6
Armed indicator , Memory indicator , Bypass indicator.....	6
Program indicator , Aux indicator , Mains indicator.....	6
Tamper indicator , Battery indicator , Line indicator , Control indicator.....	6
Summary of Functions.....	6
Operation.....	8
How to Arm the System before Exit.....	8
How to Arm the System when Staying Home.....	9
How to Arm Partitions.....	9
How to Bypass Zones.....	10
How to use Chime (If enable by Installer).....	11
Emergency Alerts.....	10
Generate Threat or Duress.....	11
How to Read System Messages.....	11
How to Read Trouble Messages.....	12

How to Display Events from Memory.....	12
How to Control Outputs and Devices	14
How to Get into to User Program/Client Mode.....	14
How to Change or Add Codes	15
How to Change Master Code.....	15
How to Add or Change User Code.....	15
How to Delete User Code.....	16
How to Add or Change Telephone Numbers.....	16
How to set Time and Date	16
How to operate the access control output	17
How to start Walk test Mode.....	17
Warranty	20

Introduction

Meet the Crow Alarm Control System

Thank you for choosing to protect your premises with a **PowerWave-16 (PW16)** of Crow Electronic Engineering Ltd.

Power Wave 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.

The PW16 has many incredible program options and additional accessories that can enhance the standard features of the panel from simple "Home Automation" to "Wireless control" and Voice Prompted Telephone control". Please ask your installer to find out more about these powerful features.

You can phone your home to check or change the status of any output using the keys on your phone. Arm or disarm the whole house or just one area, all with your own voice confirming your selections.

Imagine turning on the spa before leaving work so it is hot when you get in the door. The under-floor heating has just automatically switched on using the on board timer and you have just opened the rollerdoor and disarmed the garage from your cell phone so the white ware repairman can work on your washer.

The controller will support a 16 LED keypad or the more sophisticated LCD (liquid Crystal Display) keypad.

It also has a comprehensive alarm event memory that stores all of the controller activity with the time and date.

Typical Alarm System Configuration

The protected premises can be divided up to 16 zones, as defined by the installation scheme. The protected area can be grouped into 3 separate partitions (A, B, C). 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 areas in the home, e.g., separate downstairs living area, detached garage, 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

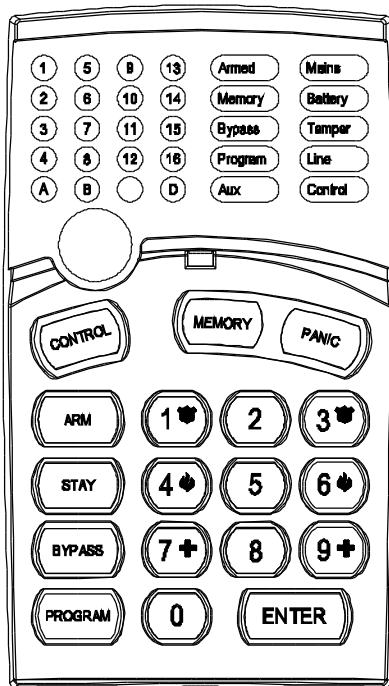
The LED Keypad shows all the information required to operate the system. The User communicates with the alarm system via the keypad. The Keypad displays continuous information about the status of the alarm system, and enables the User to operate the system in different modes, change settings and program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

Indicators

There are 30 LEDs indicators show the status of the system.

Zone and Status indicators LEDs 1- 16

Partitions indicators LEDs A, B, C

Armed indicator, Memory indicator, Bypass indicator

Program indicator, Aux indicator, Mains indicator

Tamper indicator, Battery indicator, Line indicator, Control indicator

Summary of Functions

The system's main functions are listed in table

Function	Keys	Description	Notes
Full or Partition Arm	C C:O:D:E 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 C:O:D:E C ENTER	Disarms the system	Stopping Alarms

Function	Keys	Description	Notes
Arm Stay	C STAY C C:O:D:E 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 C:O:D:E 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
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 all zone indicators are off, 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 one or more zone indicators are illuminated, it displays the open zones.

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

Note: Bypassed zones are not protected.

- Arming the System

Before leaving premises the system has to be armed.

Arming the alarm system will turn on all detectors in the partition /s being armed.

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**, **B** or **C** 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)

Press <ARM> to arm the system.

The **A**, **B** or **C** indicator lights up to indicate that the system is armed.

During exit delay time, a slow beeping is heard reminds you to leave the protected area.

- Disarming the System

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

- Stopping Resetting Alarms

In case of an alarm condition

Enter **User's code** and press <ENTER> to stop alarm any time, and turn off any audible sirens.

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 nighttime, 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.

To arm Stay mode press **<STAY>**, **enter user code**, and then **<ENTER>**.

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

(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, B** or **C** indicator goes off to indicate that the system is disarmed.

How to Arm Partitions

The protected area can be grouped into 3 separate partitions (**A, B, C**). 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 areas in the home, e.g., separate downstairs living area, detached garage, etc.

To arm partition A enter user code for partition A

To arm partition B enter user code for partition B

To arm partition C enter user code for partition C

Note: to arming partition with code see page 8 "How to arm the system before exit"

During exit delay you can leave premises. At the end of the procedure the **A,B** or **C** indicator lights up to indicate that the partition A or/and B or C 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>**, Bypass indicator lights up to indicate that the system is in bypass mode.

Enter the **zone number (e.g. 01, 05, 12)** one or more zones, the zone LED indicators lights up to indicate that the zone is bypassed, following press **<ENTER>**, the Bypass LED flashes to indicate zone(s) bypassed.

While in the Bypass mode it is possible to bypass more than one zone, press **<BYPASS>**, Bypass indicator lights up to indicate that the system is in bypass mode,

Add the **zone number (e.g. 03)** one or more zones, the zone LED indicators lights up to indicate that the zone is bypassed, following press **<ENTER>** , the Bypass LED flashes to indicate zone(s) bypassed .

To un-bypass zones, press **<BYPASS>**, enter **zone number (e.g.07,13)** ,the zone LED indicators goes off to indicate that the zone is un bypassed and **<ENTER>**.

Note: Disarming automatically un-bypasses all zones.

Emergency Alerts

This three special key's function is best programmed by your installer to suit your individual situation. Most commonly it is used in a panic situation.

These are a "**PANIC**", "**FIRE**", and "**MEDICAL**" alarm. When using the LED keypad the Panic alarm can be generated by either the single "Panic" button or by the simultaneous operation of two buttons. Pressing two buttons simultaneously generates the Fire and Medical alarms

- 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>**.

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.

To disable the Day (chime) zone , press <**CONTROL**> and <**PROGRAM**> , Control LED indicator lights up to indicate that Chime is disabled .

To enable Chime mode press <**CONTROL**> and <**PROGRAM**> Control LED goes off to indicate that Chime is active.

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.

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

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 255 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.

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 255 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 1-16	LED's 1-16	On Steady
BYPASS	Zones 1-16	Bypass LED's 1-16	On Steady On Steady
DETECTOR TAMPER (SHORT CIRCUIT)	Zones 1-8	TAMPER LED's 1-8	Flashing On Steady
DETECTOR TAMPER (OPEN CIRCUIT)	Zones 9-16	TAMPER LED's 9-16	Flashing On Steady
WRONG CODE ALARM	Code at Keypad #	TAMPER LED's 1-8	On Steady On Steady
CABINET TAMPER	Cabinet or Siren	TAMPER	Flashing
KEYPAD TAMPER SWITCH	Tamper alarm at keypad	TAMPER LED's 1-8	On Steady On Steady
LOW BATTERY	Controller Battery	BATTERY	Flashing
MAINS FAILURE	Controller Mains Supply	MAINS	Flashing
FUSE FAILURE F1 or F2	Controller on-board Fuses	MAINS	Flashing

WIRELESS ZONE LOW BATTERY	Wireless Zone 1-16	BATTERY LED's 1-16	Flashing On Steady
KEYFOB LOW BATTERY	Wireless Keyfob User 1-20	BATTERY LED's 1-16	Flashing On Steady
PANIC BUTTON (or BUTTONS 1&3 PRESSED TOGETHER)	Keypad Panic At keypad #	LINE LED's 1-8	Flashing Flashing
FIRE ALARM (BUTTONS 4&6 PRESSED TOGETHER)	Keypad Fire	LINE CONTROL	Flashing Flashing
MEDICAL ALARM (BUTTONS 7&9 PRESSED TOGETHER)	Keypad Medical	LINE BYPASS	Flashing Flashing
ARMED A	Area A is Armed	AREA A	On Steady
ARMED B	Area B is Armed	AREA B	On Steady
ARMED C	Area C is Armed	AREA C	On Steady
STAY MODE A	Area A STAY Mode ON	AREA A	Flashing
STAY MODE B	Area B STAY Mode ON	AREA B	Flashing
STAY MODE C	Area C STAY Mode ON	AREA C	Flashing
DURESS ALARM	Duress Alarm At keypad #	TAMPER LINE LED's 1-8	Flashing Flashing On Steady
SUPERVISED WIRELESS ALARM	Supervised Wireless Passive Infra-Red	Bypass TAMPER LED's 1-16	Flashing Flashing On Steady
ZONE INACTIVITY ALARM	Zones 1-16	LED's 1-16 TAMPER CONTROL	On Steady Flashing Flashing
TELEPHONE LINE FAILURE	Phone Line Failure	LINE	On Steady
EXCESSIVE RE-TRIES	Panel Dialler	LINE LED1	On Steady On Steady

FAILURE TO GET A KISSOFF	Panel Dialler	LINE	On Steady
		LED2	On Steady
WALKTEST MODE	Manual walk-test mode	MAINS	On Steady
		BATTERY	On Steady
		LINE	On Steady
		LED's 1-16	On Steady

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>**, Control LED 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 Get into to User Program/Client Mode

There are 2 levels of program mode, **CLIENT** mode and **INSTALLER** mode. Normally the installer will give you access to the **CLIENT** mode so you can add, delete, or change the user codes. If you request it your installer can provide you with access to the **INSTALLER** mode as well. To get into **CLIENT** mode provided the system is NOT armed Press **<PROGRAM>** enter **Master code** and **<ENTER>**. The **Program** indicator lights up to indicate that the system is in User programming mode.

If you get a single long beep at this point and the Program LED doesn't turn on, it means your code cannot access Program mode.

- How to exit program mode

To exit out of program mode press **<PROGRAM>** and **<ENTER>**. The **Program** indicator goes off to indicate that the system is not in User programming 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 49 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 or C access
- 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
- User code can Operate control Functions
- User code can change dialler telephone numbers
- User code can alter the real time clock
- User can answer an incoming call and start up/down load
- User can allow access to installer program mode from client mode.
- Initiate Walk-test mode.

How to Change Master Code

While in **CLIENT** 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

While in **CLIENT** mode, press **<PROGRAM>** and the **User number (2 to 50)** 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.

How to Delete User Code

In client mode, press **<PROGRAM>** and the **User number (2 to 50)** 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.

How to Add or Change Telephone Numbers

Your panel will accept up to 6 phone numbers with a total of 16 digits. Your panel can be programmed to dial all or any of these depending on the event which has occurred. *(The six phone numbers are at program address 331 through to 336).*

While in **CLIENT** mode, key in the following sequence **<PROGRAM> <331> <ENTER>**

(The address for telephone number 1), The existing number will be flashed out at the

Keypad then enter **<NEW TELEPHONE #> <ENTER>** The new numbers will be flashed back to confirm acceptance.

At any time you can enter in the address for the telephone number just to view the currently programmed value then press the **<PROGRAM>** button to move on to another address.

Note: Address 331 = PH # 1, 332 = PH# 2 to 336 = PH# 6.

(Note: on the LED keypad "0" is indicated by LED "A" and "9" by LED "B")

How to set Time and Date

The alarm system has an internal clock that may be used to automatically Arm or Disarm the alarm or turn Outputs On or off. It is also used to identify when events occurred in memory via the LCD keypad. Should you need to change the Time & Date it must be done from **CLIENT** mode.

To change the Time & Date press

Press **<PROGRAM> <823> <ENTER> <1-7> <ENTER>**

Where 1-7 = the current day (1=Sun, 2 = Mon to 7 = Sat)

Press **<PROGRAM> <824> <ENTER> <HHMM> <ENTER>**

Where HH = Hour in 24 Hour Format and MM = Minutes

Press **<PROGRAM> <825> <ENTER> <1-31> <ENTER>**

Where 1-31 = the current date

Press **<PROGRAM> <826> <ENTER> <1-12> <ENTER>**

Where 1-12 = the current month

Press **<PROGRAM> <827> <ENTER> <YY> <ENTER>**

Where YY = current year, e.g. 02=2002

How to operate the access control output

If the alarm system has been set up to allow control of an electric door lock, you can activate the door release function as follows;

Press **<CONTROL>** or Press **<CONTROL> enter CODE then <ENTER>**

The Control LED will light up while the lock is active and turn off as soon as power is removed from the lock.

The Access Control function can either be a single button operation or restricted to requiring a valid User code entry. Both options are shown above. Please consult your installer as to what option may be programmed.

How to start Walk test Mode

While in **CLIENT** mode a User with the proper authority can start walk-test mode. This special mode latches the alarm signals from detectors at the keypad initiating the test so that one person can trigger every detector connected to the alarm then return to the keypad to verify operation. On terminating Walk-test mode the test results are put into the memory buffer so they can be viewed at a later time.

To start Walk-test mode while in **CLIENT** mode press **<PROGRAM> <836> <ENTER>**

The keypad buzzer will beep at 1-second intervals

Next trigger every detector connected to the panel then return to the keypad and all of the zones that were triggered will be displayed at the keypad.

To terminate Walk-test mode press **<ENTER>**

The keypad will stop beeping and automatically exit **CLIENT** mode.

How to Answer an in-coming call

From time to time your installer may need to access the alarm from a remote PC to make changes to your programming and for security reasons they may have configured the alarm so that an authorized person on-site is required to make the alarm system answer the in-coming call. This option is only available in **CLIENT** mode.

To answer an In-coming Call press **<PROGRAM> <835> <ENTER>**

Provided the line connected to the alarm was ringing at the time the panel will now answer the call and allow a remote PC connection.

How Remote Telephone control works

Another powerful feature available from your alarm is Telephone Control. This feature is a remote control facility which allows valid users to access the panel via a standard touch tone telephone and check or change the Arm/Disarm status of each of the areas, operate each of the eight outputs or turn on an optional Microphone.

The Telephone Control feature is only available on panels fitted with a Voice or DTMF board. The Voice board provides voice prompts to guide you through Telephone control operations whereas the DTMF board provides tones (one Long Tone for ON or three short beeps for OFF).

Please talk to your installer to find out if all or any of these options are available on your alarm.

To perform any of the Telephone Control features you must first ring the phone number, which the panel is connected to. The panel may be set up to answer after a specific number of rings or it may be set-up to use a fax defeat option (ring once, hang up and call back within 30sec). Either way, when you ring the phone number and the panel answers the call, the first thing you will hear over the phone is a burst of modem tone for two seconds. After this tone has stopped you must enter the access code, which is associated with the Telephone menu option you wish to access. *Remember, the code you enter will determine which menu option you access.* If you miss the pause, the panel will repeat the modem tone and then again pause for 5 seconds looking for your access code. This process will be repeated 4 times before hanging up if no valid code is received. When entering codes or other information in Telephone Control the "#" key acts as a "Clear" button.

When you have entered the required 4-digit access code the panel will reply with the status message associated with the Telephone Control function you have accessed. For example, let's say we have a code of "2045" to allow Arming & Disarming of Area A. Once the code "2045" has been received the panel checks the current status of Area A and replies with the pre-programmed voice message relating to that status e.g. if Area A is Armed then the Armed message will be sent, if Disarmed then the Disarmed message will be sent. If only the DTMF board is fitted, the voice message is substituted with a long beep if Area A is Armed, and three short beeps if it is disarmed.

Once the status message has informed you of the actual state, you can use the "*" key to toggle the option on & off or Arm and Disarm, e.g. in our example above, code "2045" accesses Area "A" arming or disarming.

Assuming the status message we received was "Area A alarm is Armed" If we press the "*" key, Area "A" will be Disarmed and we would receive a status message "Area A alarm is Disarmed" (or whatever message is programmed by the installer)

While you are on-line with the panel you can move between menu options by entering the code of the option you want to control. Assuming there was a code of "4321" programmed to control outputs. After having used code "2045" to control the Arm/Disarm status of Area A we first press the "#" button to reset all previous entries. Then we can enter the digits "43215" (that is "4321" as the code to control outputs and "5" to select output #5). The current status of output #5 will be given either by the voice message or the appropriate tone and then the status can be changed with the "*" button on the

remote telephone (Note; For output control you must enter in the 4 digit code e.g. 4321 followed by the output number you wish to control, in this case 5).

At any stage, if you enter in an incorrect code you can press the “#” button on the remote telephone to clear all code entries and then start again.

To turn on the optional Microphone (only available if the Voice Board is fitted) you must enter in the appropriate code followed by the “*” button. To turn the Microphone off you simply press the “*” button again.

To end a Telephone Control session simply hangs up the phone. The panel is monitoring the line at all times and 15 seconds after the last key press it will automatically hang up the line. This 15-second timer is active during the whole Telephone control process so a period of 15 seconds without a key press will cause the panel to hang-up.

How Local control works

If a Telephone control code for outputs is programmed and the output/s are allowed to be locally controlled from the keypad, then entering the 4 digit code at a keypad will blank the display and the zone LED's will now indicate the output status e.g. if output 1 is on zone 1 LED will be on. By now pressing the “1” button at the panel keypad, output 1 can be turned off provided it is allowed to be locally controlled. To leave local Telephone control mode simply press the <ENTER> button and the keypad will return to normal operation. This feature works the same way that “Directly Controlling an Output” works (see page 14) only it requires a code to access the function.

Warranty

CROW LIMITED WARRANTY

(Crow) warrants this product to be free from defects in materials and workmanship under normal use and service for a period of three years 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 labour, 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.

Use the following form to record your changes and customisations.

User	Name	Output	Device Designation	Zone	Zone Name
1		1		1	
2		2		2	
3		3		3	
4		4		4	
5		5		5	
6		6		6	
7		7		7	
8		8		8	
9				9	
10				10	
11				11	
12				12	
13				13	
14				14	
15				15	
16				16	
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					

COMMUNICATION OPTIONS:

Monitored Domestic Speech

SERVICING:

Can your system be serviced by another technician? Yes No

If yes, Installer Code _____

INSTALLATION COMPANY DETAILS:

Company _____

Technician _____ Phone _____

Installation Date _____

SERVICING NOTES: