

***NESS SECURITY PRODUCTS***  
***MEDI - ALARM***  
***INSTALLATION MANUAL***

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## **1. Introduction**

Ness Security Products have developed the Ness Medi-Alarm which provides the sick or elderly, Mum, Dad, friend or patient a simple and instant means of summoning assistance when needed.

And nothing could be easier to use than the feature packed Medi Alarm. It's like having a full time carer that never sleeps.

Simply by pressing a radio pendant that can be worn around the neck, as a wrist watch or on a key ring, assistance can be summoned within seconds. These seconds could make all the difference.

If the transmitter is activated a radio signal is sent to the main unit. The Medi Alarm will then dial one or two pre-programmed telephone numbers and send an alarm message to central monitoring station indicating that 'HELP' is required.

The Ness Medi Alarm is easy to install and very simple to use. It is designed to comply with the Australian Standard AS2999 for such devices.

## **2. Packaging**

The Ness Medi Alarm comes complete with the following items.

1 x Medi Alarm Main unit

1 x Plug Pack for Mains connection

1 x 9 volt Lithium long life battery

1 x Showerproof transmitter pendant with battery

1 x Connection lead for T200 Series telephone

1 x Owners Manual

Optional Mode 5 Adaptor lead

### 3. Installation

The Ness Medi is extremely easy to install and requires no tools. The normal location for the Medi Alarm is at the first telephone installed in the premises. This ensures that the Medi Alarm has priority if it needs to send a message to the central monitoring station. The local telephone sits on top of the Medi Alarm unit to make it as unobtrusive as possible.

Another important aspect of the installation is the location of the Medi Alarm unit to give optimum radio coverage. To give the best all round coverage it is best to have the Medi Alarm installed centrally in the premises. This may not always be possible due to the location of the telephone and mains power but it must still be a consideration. Once a suitable location is found the install can take place.

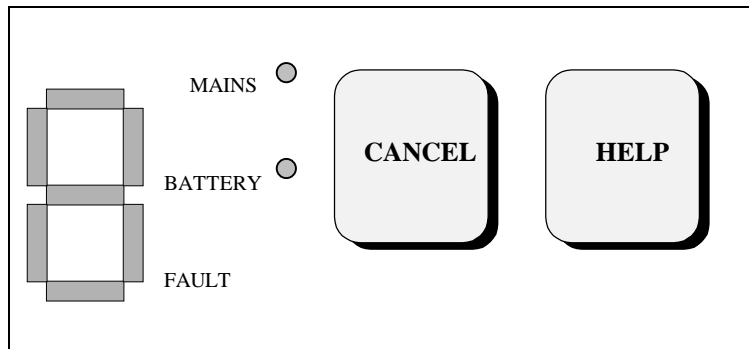
#### INSTALLATION EXAMPLE

This example is based on the common Telstra T200 series telephone.

- 1) Select the best location, taking into consideration the customers requirements and the above criteria.
- 2) Connect the plug pack and 9 volt Lithium battery and enter program mode if necessary by pressing the 'CANCEL' within five seconds of powering up the system. (See programming guide)
- 3) Program in any additional pendants and \ or detection devices and other program parameters as required.
- 4) After which conduct a signal strength check on all devices to ensure correct radio operation.
- 5) Unplug the modular telephone plug on the T200 phone (marked as 'LINE') and plug it into the modular telephone socket marked 'Line In' on the Medi Alarm.
- 6) Using the supplied jumper lead with a modular telephone plug on each end. Plug one end into the socket on the Medi Alarm marked 'Line Out' and the other end into the T200 phone marked 'LINE'.
- 7) Lift the handset on the telephone to check that dial tone is present. This completes the telephone wiring process.
- 8) If the Medi Alarm is in program mode and no further programming is required press the 'CANCEL' button until 'E' is on the display then press the 'HELP' button to leave program mode.

NOTE: It may be worth while to pre-program the system prior to arriving at the customers premises to ensure a smooth install takes place.

## 4. FRONT PANEL INDICATORS



Colour code (AS2999)

RED	help
YELLOW	fault
GREEN	cancel
WHITE	reassurance

RED HELP LIGHT & BUTTON.

GREEN CANCEL LIGHT & BUTTON.

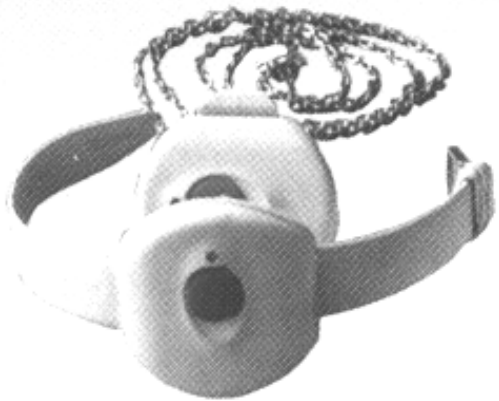
Yellow 7 segment display used for PROGRAM mode and FAULT indication.

Green MAINS FAIL steady = normal, flashing = mains fail

Yellow LOW BATTERY off = normal, flashing = low battery

FAULT off = normal, flashing = fault

## 5. PERSONAL RADIO TRANSMITTERS



### 5.1 WRIST WATCH

The wrist watch is water proof. The wrist watch model is attached to the wearer's wrist by a strap. It may be worn either left or right handed. It has 1 HELP button on the face.

## 6. PROGRAM SUMMARY

Display	Option	Default
1	Transmitter 1 Program	P
2	Transmitter 2 Program	-
3	Transmitter 3 Program	-
4	Transmitter 4 Program	-
5	Transmitter 5 Program	-
6	Transmitter 6 Program	-
7	Transmitter 7 Program	-
8	Transmitter 8 Program	-
C	System Check	-
d	Dial Type (Aus / NZ)	0
N	Primary Phone Number	-
n	Secondary Phone Number	-
A	Client Account Number	-
o	Over Due Timer Enable	0
i	Inactivity Timer	0
t	Test Call Timing	24
F	Time to First Test Call	12
r	Restores Enabled	r
b	Button Operation	A
q	Quiet Operation	0
p	Programming Via modem	1
E	Exit Program Mode	

## 6.1 PROGRAM MODE

To enter PROGRAM mode, turn the Medi Alarm off by unplugging the mains plug and removing the 9 volt battery.

Turn the Medi Alarm on by replacing the 9 volt battery. The Medi Alarm will display the version number for 0.5 seconds, followed by '1', indicating that PENDANT 1 may be programmed.

Within 5 seconds of connecting the battery press the 'CANCEL' button on the Medi-Alarm to enter program mode. The speaker will beep and the display will show '2' on the display.

or

If a pendant is to be programmed as pendant 1, press any button 3 times on an unprogrammed pendant to program. (The pendant must not have been previously programmed). The speaker will beep with each button press and beep twice on the third button press and the status display will show 'P'. Press the 'CANCEL' button and the display will show '2'.

or

If the 'HELP' button on the Medi Alarm is pressed the speaker will beep once and the display will show the status of Transmitter 1 (generally a pendant) where '-' = unprogrammed and P = Programmed.

or

If no buttons are pressed within 5 seconds and Medi Alarm is programmed, the Medi Alarm will return to operation mode.

## 6.2 PROGRAMMING RULES

Program options are displayed steady, the values for each option flash.

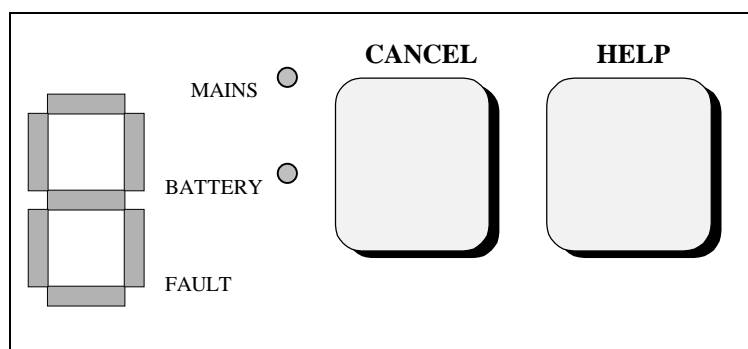
**Press the 'CANCEL' button on the Medi-Alarm to step through the options.(1,2,3,4,5 etc.)**

**Press the 'HELP' button to view the programmed value for that option. The values will be displayed flashing.**

**To step through values press the 'HELP' button.**

**To store a program change press the 'HELP' and 'CANCEL' buttons simultaneously on the Medi Alarm unit.**

**Press the 'CANCEL' button to step to the next option.**



Colour code (AS2999)  
RED help  
YELLOW fault  
GREEN cancel

## 6.3 PROGRAMMING OPTIONS

### Option Description

#### 1 TRANSMITTER 1 PROGRAM

- 1) 1 is on the display
- 2) Press the 'HELP' button to view programmed option.

- <b>unprogrammed</b>	no device has been programmed for transmitter 1
<b>P programmed pendant</b>	a device is programmed for transmitter 1
<b>E erase</b>	remove previously programmed device

To program a new pendant.

- Display must show '-' (unprogrammed)
- Press any button on a new unprogrammed pendant 3 times  
Medi Alarm will Beep with each press and twice on the third press to acknowledge when the key is programmed. The display will show 'P' to indicate that the pendant is programmed.

To program a new detector.

- Display must display '-' (unprogrammed)
- Trigger detector (3 transmissions must be detected)  
Medi Alarm will Beep with each transmission of the detector and twice on the third transmission to acknowledge when the detector is programmed. The display will show 'P' to indicate that the detector is programmed.

#### Erasing Pendants or Detectors

Go to the Transmitter option you wish to erase (1 to 8)

To erase a user pendant or detector, press 'HELP' to select E (ERASE). (not available if unprogrammed)

- Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to erase. Display will show '-' indicating erased.
- 

**Press the 'Cancel' button to move to the next program option.**

#### 2 TRANSMITTER 2 PROGRAM

#### 3 TRANSMITTER 3 PROGRAM

#### 4 TRANSMITTER 4 PROGRAM

#### 5 TRANSMITTER 5 PROGRAM

#### 6 TRANSMITTER 6 PROGRAM

#### 7 TRANSMITTER 7 PROGRAM

#### 8 TRANSMITTER 8 PROGRAM

**All pendants and detectors are programmed in the same manner as Transmitter 1.**

**Press the 'Cancel' button to move to the next program option.**

#### C SYSTEM CHECK: Check radio signal strength of pendants and detectors.

Displays the first pendant or detector's signal strength, 1 being minimum and 9 being maximum. Only one pendant or detector can be tested at a time. The signal level is displayed and also beeped to indicate the level.



**To test the signal strength of a Pendant.**

- 1) C is on the display
- 2) Press the 'Help' button for the Medi-Alarm to accept a signal ('-' is displayed)
- 3) Press the 'SIDE LEVER' to check signal strength of transmitter.

'-' No pendant received  
1-9 Signal strength of pendant

Press the 'Help' button for the Medi-Alarm to accept another signal ('-' is displayed)

**To test the signal strength of a Radio PIR or Reed Switch.**

- 1) C is on the display
- 2) Press the 'Help' button for the Medi-Alarm to accept a signal ('-' is displayed)
- 3) Activate the detector in normal operation location.

Display will show the signal strength of the detector triggered.

'-' No pendant received  
1-9 Signal strength of pendant

Press the 'Help' button for the Medi-Alarm to accept another signal ('-' is displayed)

**Press the 'Cancel' button to move to the next program option.**

**d DIAL TYPE: Determines the dialling type, Australian or NZ. Default 0 (Australia)**

'd' is on the display

Press the 'HELP' button to view the programmed value

Programmed dial type will be flashed on status display. (0 or 1)

Press the 'HELP' button to step through the values. (0 or 1)

Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to program the value.

0 Australia  
1 New Zealand

**Press the 'Cancel' button to move to the next program option.**

## **N PRIMARY PHONE NUMBER** default -

The primary telephone number is the first number that the dialler calls when an event message needs to be sent.

1) 'N' is on the display

2) Press the 'HELP' button to view programmed phone number.

The programmed phone number will be flashed on status display. 'N' will flash after the phone number is flashed out on the display.

If you wish to view the phone number again press the 'HELP' button then the 'CANCEL' button to display the phone number.

3) To program a phone number, press the 'HELP' button to step through the digits.(1,2,3,4,5,6,7,8,9,0,t,H and -)

4) Press the 'SIDE LEVER' button to store each digit.

The display will show the next digit to be programmed.

5) Press the 'HELP' button until the next digit is on the display.

6) Press the 'SIDE LEVEL' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store each digit.

Continue this method until all the numbers are programmed.

7) Press the 'CANCEL' button to display the programmed number. 'N' will flash on the display after the number is displayed.

Up to 14 digits may be programmed.

- Pause

0-9 Digits 0-9

t Star

H Hash

8) Press the 'CANCEL' button. ('N' will be displayed steady)

### **eg. To program the number 762308 follow these steps.**

1) Press the 'HELP' button then the 'CANCEL' button to view the current phone number after which 'N' will flash.

2) Press the 'HELP' button until 7 is displayed, press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store the number. The next digit will flash.

3) Press the 'HELP' button until 6 is displayed, press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store the number. The next digit will flash.

4) Press the 'HELP' button until 2 is displayed, press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store the number. The next digit will flash.

5) Press the 'HELP' button until 3 is displayed, press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store the number. The next digit will flash.

6) Press the 'HELP' button until 0 is displayed, press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store the number. The next digit will flash.

7) Press the 'HELP' button until 8 is displayed, press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store the number. The next digit will flash.

8) Press the 'CANCEL' button to view the programmed number after which 'N' will flash.

9) Press the 'CANCEL' button. ('N' will be displayed steady)

### **Press the 'Cancel' button to move to the next program option.**

## **n SECONDARY PHONE NUMBER** default -

The secondary telephone number is the second number that is called when an event message needs to be sent. The secondary number is used if the primary number is unsuccessful.

1) 'n' is on the display

2) Press the 'HELP' button to view programmed phone number.  
Programmed phone number will be flashed on the display. 'n' will flash after the phone number is flashed out on the display.

If you wish to view the phone number again press the 'HELP' button then the 'CANCEL' button to display the phone number.

3) To program a phone number, press the 'HELP' button to step through the digits.(1,2,3,4,5,6,7,8,9,0,t,H and -)

4) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store each digit.

The display will show the next digit to be programmed.

5) Press the 'HELP' button until the next digit is on the display.

6) Press the 'SIDE LEVEL' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store each digit.

Continue this method until all the numbers are programmed.

7) Press the 'CANCEL' button to display the programmed number. 'n' will be flash after the number is displayed.

Up to 14 digits may be programmed.

-	Pause
0-9	Digits 0-9
t	Star
H	Hash

8) Press the 'CANCEL' button. ('n' will be displayed steady)

**Note: See example of telephone number 1 for more details.**

**Press the 'Cancel' button to move to the next program option.**

## **A CLIENT ACCOUNT NUMBER**

The client account number identifies to the central station which Medi-Alarm is sending the alarm message. (Default 0000)

1) 'A' is steady on the display.

2) Press the 'HELP' button to view the programmed client account number. The programmed client account number will be flashed on display. 0...9 after which the display will flash 'A'.

3) Press the 'HELP' button until the first digit of the client account number is displayed.

4) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store each digit. The display will show the next digit to be programmed.

5) Press the 'HELP' button until the second digit of the client account number is displayed.

6) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store each digit. The display will show the next digit to be programmed

7) Continue this method until all 4 digits are programmed.

8) After the forth digit is stored the display will show the programmed client account number after which the display will flash 'A'. If you wish to view the programmed number again press the 'HELP' button then the 'CANCEL' button to display the number.

9) Press the 'CANCEL' button to display 'A' steady.

Note: All four digits must be programmed.

**Press the 'Cancel' button to move to the next program option.**

**o ENABLE OVER DUE TIMER:**

The Over Due Timer is the time period between 'CANCEL' button presses to restart the over due timer. The over due timer is for local indication purposes only. (no alarm report is sent) 0-255 hours. default = 0, disabled. 1,2 or 3 digits may be programmed with a maximum of 255 hours. If a number greater than 255 is programmed, Medi Alarm will sound a long beep and re display the original value.

- 1) 'o' is steady on the display.
- 2) Press the 'HELP' button and the programmed time will be flashed out in hours. The display will flash 'o'.
- 3) Press the 'HELP' button until the first digit is on the display. (0 to 9)
- 4) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store each digit. ( \_ will flash)
- 5) Press the 'HELP' button until the second digit is on the display. (0 to 9)
- 6) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store each digit. ( \_ will flash)
- 7) Press the 'HELP' button until the third digit is on the display. (0 to 9)
- 8) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store each digit. ( \_ will flash)
- 9) Press the 'CANCEL' to view the programmed time. ('o' will then flash on the display)  
To view the programmed time again press the 'HELP' button then the 'CANCEL' button and the stored value will flash on the display after which 'o' will flash.
- 10) Press the 'CANCEL' button to display 'o' steady.

**Press the 'Cancel' button to move to the next program option.**

**i INACTIVITY TIME.**

The inactivity timer alarm is triggered if the 'CANCEL' button or detector is not triggered in this time. 1-255 hours, default 0. 1,2 or 3 digits may be programmed with a maximum of 255 hours. If a number greater than 255 is programmed, Medi Alarm will sound a long beep and re display the original value.

- 1) 'I' is on the display.
- 2) Press the 'HELP' button and the programmed time will be flashed out in hours. The display will flash 'i'.
- 3) Press the 'HELP' button until the first digit is on the display. (0 to 9)
- 4) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store each digit. ( \_ will flash)
- 5) Press the 'HELP' button until the second digit is on the display. (0 to 9)
- 6) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store each digit. ( \_ will flash)
- 7) Press the 'HELP' button until the third digit is on the display. (0 to 9)
- 8) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store each digit. ( \_ will flash)
- 9) Press the 'CANCEL' to view the programmed time. ('i' will then flash on the display)  
To view the programmed time again press the 'HELP' button then the 'CANCEL' button and the stored value will flash on the display after which 'i' will flash.
- 10) Press the 'CANCEL' button to display 'i' steady.

**Press the 'Cancel' button to move to the next program option.**

**t TEST CALL TIME.**

This option controls to time between the automatic test calls the Medi-Alarm will make. 1,2 or 3 digits may be programmed with a maximum of 255 hours. If a number greater than 255 is programmed, Medi Alarm will sound a long beep and re display the original value. 0 - 255 hours, default = 24 hours. 0 = Disabled.

- 1) 't' is on the display.
- 2) Press the 'HELP' button and the programmed time will be flashed out in hours. The display will flash 't'.
- 3) Press the 'HELP' button until the first digit is on the display. (0 to 9)
- 4) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store each digit. ( \_ will flash)
- 5) Press the 'HELP' button until the second digit is on the display. (0 to 9)
- 6) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store each digit. ( \_ will flash)
- 7) Press the 'HELP' button until the third digit is on the display. (0 to 9)
- 8) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store each digit. ( \_ will flash)
- 9) Press the 'CANCEL' to view the programmed time. ('t' will flash on the display)  
To view the programmed time again press the 'HELP' button then the 'CANCEL' button and the stored value will flash on the display after which 't' will flash.
- 10) Press the 'CANCEL' button to display 't' steady.

**Press the 'Cancel' button to move to the next program option.**

**F TIME TO FIRST TEST CALL.**

The time till first call should be programmed so that the first test call will be made during a low activity period of the monitoring station. eg. midnight. 1,2 or 3 digits may be programmed with a maximum of 255 hours. If a number greater than 255 is programmed, Medi Alarm will sound a long beep and re display the original value.

- 1) 'F' is on the display.
- 2) Press the 'HELP' button and the programmed time will be flashed out in hours. The display will flash 'F'.
- 3) Press the 'HELP' button until the first digit is on the display. (0 to 9)
- 4) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store each digit. ( \_ will flash)
- 5) Press the 'HELP' button until the second digit is on the display. (0 to 9)
- 6) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store each digit. ( \_ will flash)
- 7) Press the 'HELP' button until the third digit is on the display. (0 to 9)
- 8) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store each digit. ( \_ will flash)
- 9) Press the 'CANCEL' to view the programmed time. ('F' will flash on the display)  
To view the programmed time again press the 'HELP' button then the 'CANCEL' button and the stored value will flash on the display after which 'F' will flash.
- 10) Press the 'CANCEL' button to display 'F' steady.

**Press the 'Cancel' button to move to the next program option.**

**r RESTORES ENABLED.**

This option selects whether restore reports are sent to the central station if the alarm restores or the 'CANCEL' button is pressed. default = r

- 1) 'r' is on the display steady.
  - 2) Press the 'HELP' button to view the programmed value (r = restore reports, - = no restores)
  - 3) Press the 'HELP' button to select a value.
  - 4) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store the selected value.
- No restores sent by dialler.
  - r Restores enabled

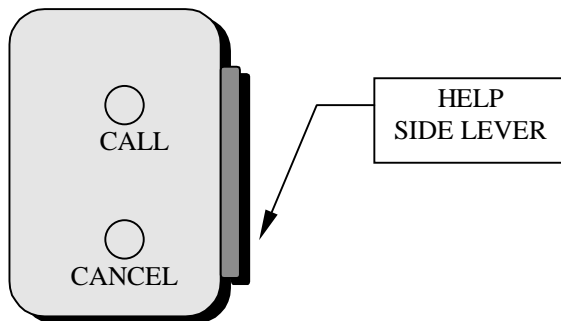
**Press the 'Cancel' button to move to the next program option.**

**b BUTTON OPERATION.**

This option determines the manner in which the radio pendant buttons operate the system. (default H)

- 1) 'b' is on the display steady.
- 2) Press the 'HELP' button to view the programmed value (H = Help, C = Cancel, c = call)
- 3) Press the 'HELP' button to select a value.
- 4) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store the selected value.

- H All buttons generate a 'HELP' alarm.
- C Additional buttons generate a 'CANCEL' to restore 'HELP' alarms. (bottom button)
- c Buttons generate 'CALL', 'HELP' and 'CANCEL'. Diagram below describes the button operation for this option.



**Press the 'Cancel' button to move to the next program option.**

**q QUIET OPERATION: Determines if the internal beeper operates during alarm operation. Default = 0**

- 'q' is on the display
  - Press the 'HELP' button to view the programmed value
  - Programmed dial type will be flashed on status display. (0 or 1)
  - Press the 'HELP' button to step through the values. (0 or 1)
  - Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to program the value.
- 0 Beeps activated
  - 1 Quiet operation

**Press the 'Cancel' button to move to the next program option.**

**p PROGRAMMING VIA MODEM.**

The Medi-Alarm may be remotely programmed via a telephone modem link. Remote programming is enabled in program mode or may be enabled in normal operation mode by setting the program option. (default = 0 enabled in program mode only) **NOTE: Answer type is 'Fax Defeat' regardless of option.**

- 1) 'P' is on the display steady.
- 2) Press the 'HELP' button to view the programmed value (0 = Program mode, 1 = always enabled)
- 3) Press the 'HELP' button to select a value.
- 4) Press the 'SIDE LEVER' button or press the 'HELP' and 'CANCEL' buttons simultaneously to store the selected value.

- |   |                               |
|---|-------------------------------|
| 0 | Enabled only in program mode. |
| 1 | Enabled all the time.         |

**Press the 'Cancel' button to move to the next program option.**

**E Exit Program Mode**

Press 'HELP' to exit program mode or press the 'CANCEL' button to go to option 1.

## **Peripheral Devices.**

### **Radio PIR**

The radio PIR is based on the Ness Quantum \ Ten+ design. It uses a 9 volt lithium battery as its power source, with it's 4 minute sleep time, the battery life should be slightly longer. The PIR uses the Heimann Pyro Electric sensor for reliable stability. The PIR has very strong terminals mounted directly to the circuit board.

#### **Link settings:**

##### **Radio Enable link.**

Having the link 'ON' will allow the radio transmitter to operate. Taking the link 'OFF' will disable the transmitter ( could be handy when programming multiple detectors into the main unit). The LED will indicate detection with the link 'ON' or 'OFF'. Always remember to have the link on so it can communicate with the Medi Alarm.

##### **Test link.**

In Test mode the three minute sleep time is disabled. Test mode is used to check PIR detection coverage. The LED will come on every time the PIR is triggered.

##### **Normal link.**

This link setting is the standard setting for normal operation. This setting gives the PIR maximum battery life as it activates the four minute sleep time.

##### **Program link.**

Program mode should only be needed if a new 16 bit code (random or fixed) needs to be entered.

##### **1\0\R Pins.**

These pins are used to either program a fixed code (multiple devices with the same code) or to generate a random code.

#### **Range link.**

The range link is a means of setting the level of Infra-red energy required to generate a pulse from the detector, this in turn directly affects the range of the detector. The correct setting will depend on the size of the area to cover.

- With the range link 'ON' the detector will detect to the full 12m x 12m.
- With the range link removed the detector will detect to approximately 8m x 8m.

The range link should always be set to the lowest setting which will still provide good coverage.

#### **Pulse Count link.**

At times it may be unavoidable to install the detector in a difficult environment. Pulse count is a means of adjusting the number of pulses received (therefore the number of steps) before an alarm is generated.

- In a normal stable environment the link should be 'ON'. 1 to 2 pulses will cause an alarm.
- In doubtful environments remove the link. 3 to 4 pulses will cause an alarm.

### **6.3.1 Radio Reed Switch**

The Ness radio reed switch is a multipurpose radio device. It has an internal reed switch and has the provision for an external reed switch. It can also function as a radio vibration analyser if a Nessensor (VIB100) is connected to the external device input.

A 9 volt lithium battery powers the reed switch and should last approximately 3 years (@25 activation's per day).

#### **Terminals and Link Settings:**

##### **Two way terminal block (TB1)**

The terminal block is used to connect a normally closed reed switch **or** a Nessensor (VIB100). The cable length to the external switch should be kept to a minimum and no longer than 40 cm.

#### **I\B\E Pins:**

##### **Link in 'I-B' position.**

Only the internal reed switch controls the transmitter. External devices are disabled.

##### **I\B\E Link REMOVED.**

Both the internal reed switch and the external device are connected in series with the transmitter.

##### **Link in 'E-B' position**

Only the External device controls the transmitter. The internal reed switch is disabled.

#### **Program link.**

Program mode should only be needed if a new 16 bit code (random or fixed) needs to be entered. See the setup \ testing section on page ?? to program a fixed code into a reed switch.

#### **I\0\R Pins.**

These pins are used to either program a fixed code (multiple devices with the same code) or to generate a random code.

#### **Radio Enable link.**

Having the link 'ON' will allow the radio transmitter to operate. Taking the link 'OFF' will disable the transmitter ( could be handy when programming multiple detectors into the main unit). The LED will indicate



detection with the link 'ON' or 'OFF'. Always remember to have the link on so it can communicate with the Securityguard.

### **Tamper Button.**

When the plastic housing is lifted a tamper alarm message is sent. A low level warning will sound in disarm or home mode. A full alarm will sound if in armed state.

### **Sensitivity Control (VR1)**

The sensitivity control is used to adjust the sensitivity of the vibration sensor (Nessensor). This control (Low = full anti-clock wise, High = full clock wise) can be used in conjunction with the sensitivity settings on the Nessensor itself. (High, Medium, Low) If a vibration sensor is not used have the sensitivity set to low. (full anti-clock wise)

**Important: Care should be taken when handling the circuit board as the reed switch is quite fragile. Incorrect handling may damage the vacuum seal of the reed and cause short and long term intermittent operation.**

## **7. DIALLER**

The dialler will report alarms to a monitoring center and is also capable of remotely programming the Medi Alarm via a modem link.

### **7.1 REMOTE PROGRAMMING**

The Medi Alarm may be remotely programmed via a telephone modem link. Remote programming is enabled when in Medi Alarm is in program mode and may be enabled in 'NORMAL' mode by setting the program option.

Medi Alarm may be installed in parallel with answering machines, faxes etc. which will all answer the phone. Medi Alarm uses an answering technique called fax defeat. Fax defeat is done by calling the panel, hanging up and calling back. The panel will answer the phone as soon as the call back ring is detected .

All program options may be remotely programmed.

Medi Alarm will remain on line for 4 minutes while communicating with modem. This ensures communication failures will not leave Medi Alarm in program mode.

### **7.2 ALARM REPORTING**

This reporting is used to transmit alarms from a subscriber's site to a monitoring center via the telephone.

There are 2 phone numbers, a primary number 'N' and a secondary number 'n'. Reports are usually sent on the primary number but if the dialler is unsuccessful in connecting, it will dial the secondary number. Telephone numbers 'N' and 'n' must be programmed into the Medi Alarm's memory.

A client account number is allocated by the monitoring company to identify the customer. The client account number must be programmed into the Medi Alarm's memory.

Time till first test call option allows test calls to be sent to monitoring during non peak periods (usually at night.) This time is only used when exiting program mode. The first test call is made in the time specified by program option 'TIME TO FIRST TEST CALL'. All test calls are then made at intervals specified by program option 'TEST CALL TIME'. 'TIME TO FIRST TEST CALL' option should be programmed.

The dialler reports alarms to a central monitoring station in Ademco High Speed format.

New alarms initiate a dial out report. Alarms are deemed to be restored when the 'CANCEL' button on the Medi Alarm is pressed.

### 7.2.1 Alarm Reporting States

Each alarm may be reported as one of the following states:-

- New alarm
- Normal
- Outstanding
- Restore

### 7.2.2 Alarms Reported

The following alarms may be sent on the dialler:-

- Help (pendant or main unit)
- Call Alarm
- Inactivity Alarm
- A.C. fail
- Low battery Medi Alarm
- Low battery pendant
- Test calls
- 

## 7.3 ADEMCO HIGH SPEED EXTENDED REPORTING

This reporting is used to transmit alarms from a subscriber's site to a central monitoring station via the telephone.

The transmission is done using DTMF tones. 14 digits are sent to report an alarm. The format is as follows:

**SSSS QQQQQQQQ T E**

**SSSS** 4 digit subscriber ID

**Q** Event qualifier (8 Channels)  
Channels 1-8 indicate the status of the 8 reporting channels.  
Each channel may have the following values:  
1 - New alarm  
3 - Restore  
5 - Normal  
6 - Previously reported event

**T** Channel 9 indicates the type of event.  
Channel 9 may have the following values:  
1 - Extra Alarms  
5 - Zone Trouble  
6 - System Alarms  
7 - Zone Alarm  
9 - Test

Therefore, channel 9 determine what channels 1-8 mean.

**E** Error check

Alarms sent without 'CALL' button option.

<b>CH 9</b>	<b>1</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>9</b>
<b>CH 1</b>	none	LOW BATT P1	AC POWER	HELP P 1	none
<b>CH 2</b>	none	LOW BATT P2	LOW BATT	HELP P 2	none
<b>CH 3</b>	none	LOW BATT P3	none	HELP P 3	none
<b>CH 4</b>	none	LOW BATT P4	none	HELP P 4	none
<b>CH 5</b>	none	LOW BATT P5	none	HELP P 5	none
<b>CH 6</b>	HELP MAIN	LOW BATT P6	none	HELP P 6	none
<b>CH 7</b>	INACTIVITY	LOW BATT P7	none	HELP P 7	none
<b>CH 8</b>	none	LOW BATT P8	none	HELP P 8	none

Alarms sent with button option 'b' is selected for 'CALL' (c) option.

<b>CH 9</b>	<b>1</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>9</b>
<b>CH 1</b>	HELP P1	LOW BATT P1	AC POWER	CALL P 1	none
<b>CH 2</b>	HELP P2	LOW BATT P2	LOW BATT	CALL P 2	none
<b>CH 3</b>	HELP P3	LOW BATT P3	none	CALL P 3	none
<b>CH 4</b>	HELP P4	LOW BATT P4	none	CALL P 4	none
<b>CH 5</b>	HELP P5	LOW BATT P5	none	CALL P 5	none
<b>CH 6</b>	HELP MAIN	LOW BATT P6	none	none	none
<b>CH 7</b>	INACTIVITY	LOW BATT P7	none	none	none
<b>CH 8</b>	HELP P8	LOW BATT P8	none	CALL P 8	none

## Medi Alarm Specifications

### Plug Pack:

17 - 20 volts AC. 300 mA

### Medi Alarm Main Unit:

Back up Battery	9 volt. Lithium
Average Quiescent Current	Approx. 1 mA
Low Voltage Warning	7.5 volts (Dynamic)
Radio RX Frequency	303.875 MHz

### Radio Pendant

Operating Voltage	8 to 12 Volts
Low Voltage (P display)	10.5 volts
Quiescent Current	0uA
Carrier Frequency	303.875 MHz
RF Power Output	10 uW PEP
Battery Type	12 Volt Alkaline. Vinnic L1028, Duracell MN21 Energiser A23

### Radio PIR Detector

Battery	9 Volt Lithium (Ultralife)
Low Voltage (AL display)	7.5 volts
Quiescent Current	Less than 30uA
Type	Passive Infra-red (Dual element)
No. of Zones (inc. creep)	21
Sensitivity Control	1/2 or 3/4 Pulses
Range Control	High (14M), Low (8M)
RF	(as per Radio Pendant specs)

### Radio Reed Switch

Battery	9 Volt Lithium (Ultralife)
Low Voltage	7.5 Volts
Quiescent Current	4 uA
Transmit Current	10 to 14 mA
R.F.	(as per Radio Pendant specs)

This document is accurate at the time of print however this is subject to specification being revised at any time.