Medico

Wireless Medical Alarm Unit

Installation & Programming Guide

Proudly Designed and Manufactured in New Zealand

Arrowhead Alarm Products Ltd

PHONE: (09) 414 0084
FAX: (09) 414 0088
FREEPHONE: 0800 700 123

344B Rosedale Road
Albany
AUCKLAND

PO Box 303-096
AUCKLAND 1330
NEW ZEALAND

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March 2004 "Medico" V1.0 and above.
This manual relates to the Arrowhead "Medico" wireless medical alarm and communicator software version V1.0 and above.

Disclaimer

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

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INTRODUCTION

The Arrowhead “Medico” wireless medical alarm and communicator has been designed to provide a reliable yet flexible medical alert alarm unit.

Utilising many years of experience in electronic design & manufacturing, we are proud to provide you with a new generation of medical alarm.

The “Medico” is a New Zealand designed and built product which brings you the quality and features which you deserve at an affordable price.
In addition to the advanced design, only the highest quality components have been used in the production of this product to ensure the highest degree of reliability.
This manual will guide you through the installation and programming of the Medico alarm

SPECIFICATIONS

POWER:

240 Volts AC input, 15 Volts AC Output Plug Pack. Current: 300ma. (Thermal fuse protected).

MEDICO UNIT:

Standby Battery:	9 Volt Lithium Battery.
Quiescent Current during AC Fail:	9ma.
Battery Low Voltage:	7.8 Volts.
Standby time on battery:	Typically 96 hours (4 days) on fully charged battery
Receiver Frequency:	Available in 303.825mhz or 433.92mhz.
Programming:	Membrane keypad accessible by keypad overlay.
Manual Alarm button:	Embossed Hi-sensitivity Red membrane button.
Manual Cancel button:	Embossed Hi-sensitivity Green membrane button.

TRANSMITTERS

Frequency:	Available in 303.825mhz or 433.92mhz.
Type:	A wide variety of waterproof transmitters are available.

UPLOAD/DOWNLOAD

Modem Connection:	Connection using either BELL103 or V21 formats
Direct Connection:	Via local plug-in Serial board Adaptor (RS232).

LOCAL DATA TRANSFER (DTU)

Local Programming:	Via pre-programmed DTU board using serial socket.

EVENT MEMORY

Number of Events:	Will store 127 Events with time & date stamping.

INSTALLATION

The Medico comes complete with a Mains supply AC plug Pack adaptor, a Telephone lead, a 9V lithium battery and an External Aerial.

Unpack the unit and plug the white 3 way connector of the AC adaptor into the corresponding socket underneath the Medico (see Figure 2 on page 5).
Plug the Telephone lead to the corresponding connector underneath the Medico (see Figure 2 on page 5).
Remove the plastic protective cover from the 9V Lithium battery and plug the battery into the corresponding connectors underneath the Medico, observing the polarity of the battery (see Figure 2 on page 5).
Now plug the Mains AC adaptor into the power socket, plug the telephone lead into the phone wall socket and plug the connector from the telephone into the socket on the back of the lead.

Finally, screw the external aerial into the position shown on figure 1.

MECHANICAL LAYOUT

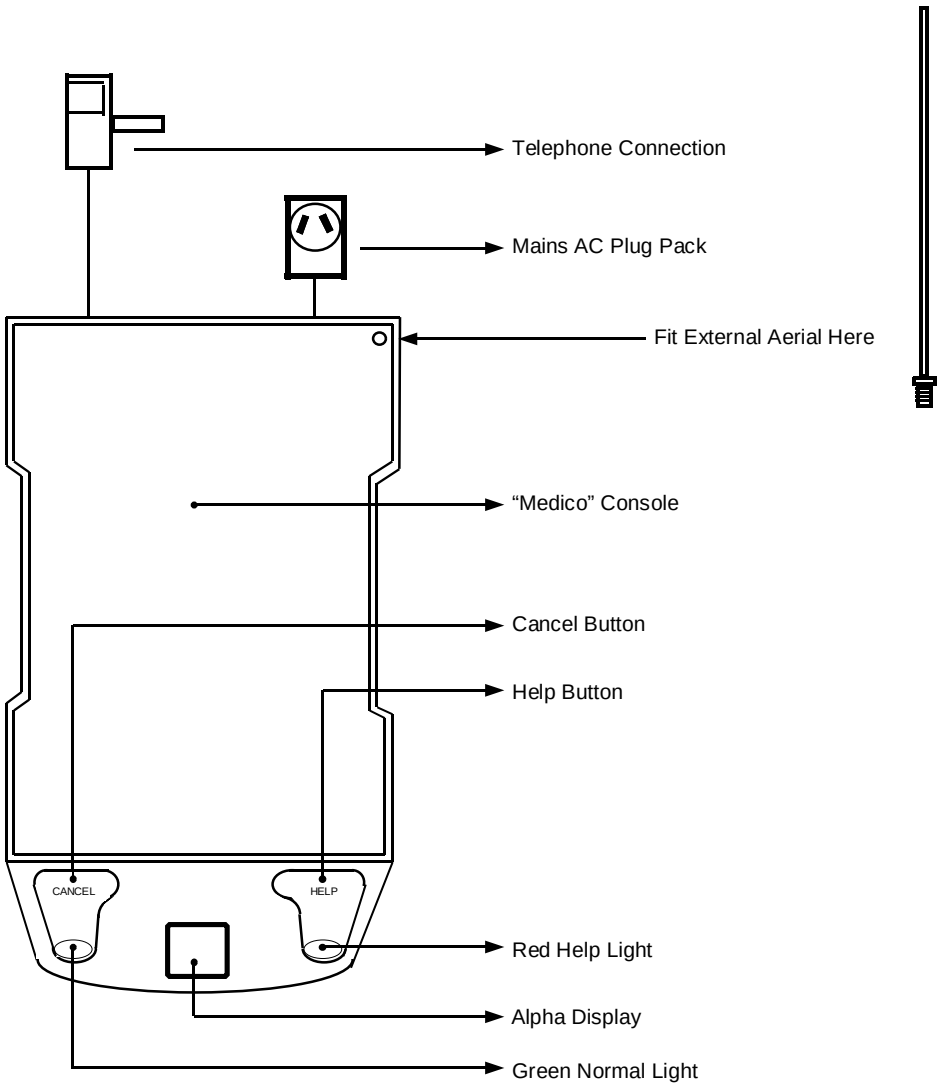


Figure 1

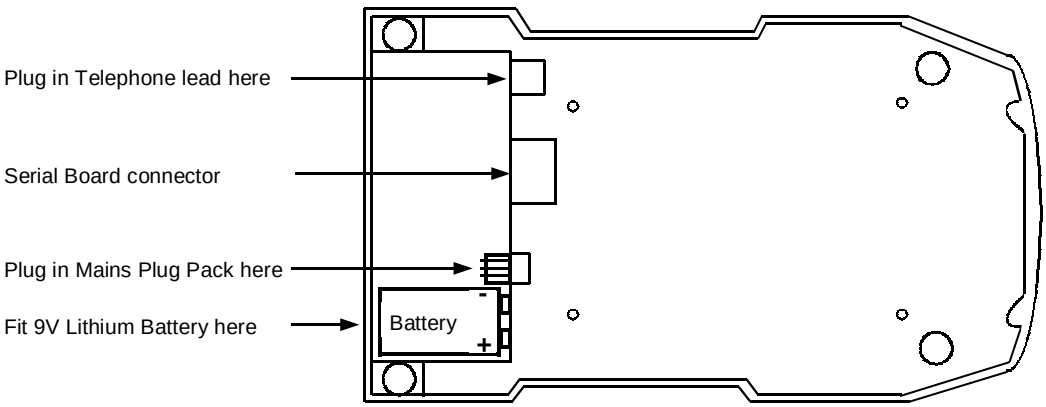
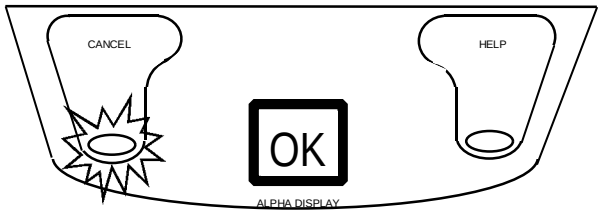


Figure 2

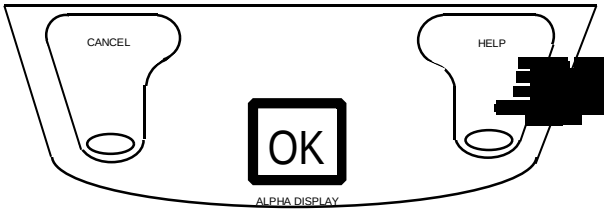
OPERATING THE “MEDICO” ALARM

NORMAL

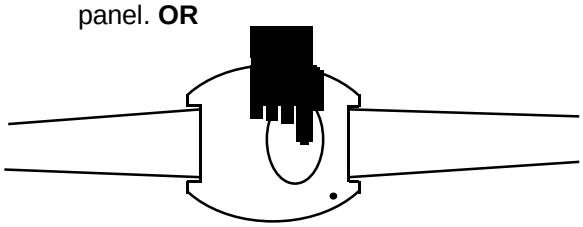


When the MAINS is connected and the Battery Voltage is good, the Green “CANCEL” light will blink every 4 seconds and the Alpha Display will show “OK”.

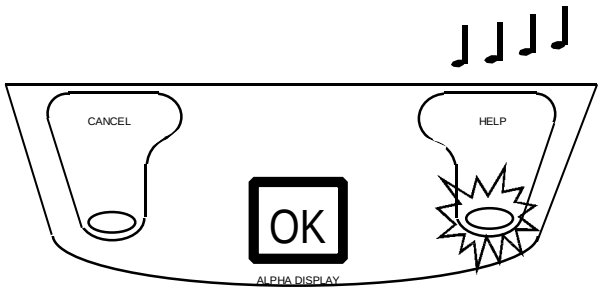
TO CALL FOR HELP



Press the help button on the “Medico” front panel. **OR**

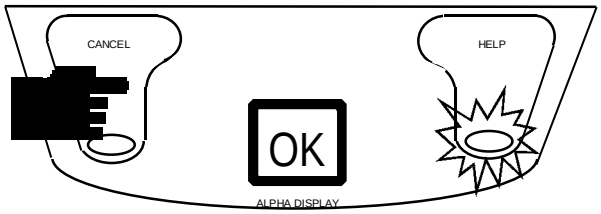


Press the button on the wristwatch transmitter for at least 2 seconds.



The Green “CANCEL” light will stop flashing and the Red “HELP” light will flash rapidly. The internal buzzer will beep once per second for 15 seconds indicating that an alarm is pending. If the “CANCEL” button is pressed within the 15 second period, the alarm will be cancelled and the unit will return to normal state. If the alarm is not cancelled and the timer expires, the buzzer will change to a continuous tone indicating that the alarm is now being sent.

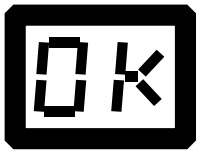
TO CANCEL ALARM



To Cancel an Alarm press the “Cancel” button for 2 seconds. The RED alarm LED will turn off and the Green LED will start to flash one every 4 seconds.

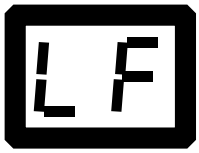
ALPHA DISPLAY INDICATIONS & WHAT THEY MEAN

NORMAL



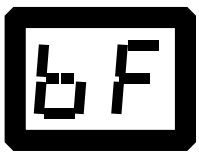
When the display shows “OK”, this means there are no alarms and the mains and battery or good.

LINE FAILURE



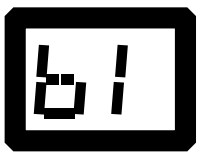
If the unit detects that the telephone line is not operational, the display will show “LF” for line failure. When the line returns the display will go back to showing “OK”.

SYSTEM BATTERY LOW



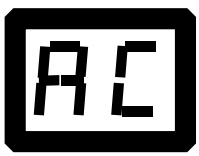
If the internal standby battery voltage is low the display will show “bF” for battery failure. The battery should be replaced with a new 9V lithium battery and then the display will go back to showing “OK”.

PENDANT BATTERY LOW



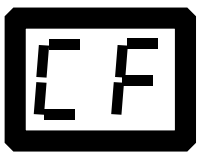
If one of the 8 pendants sends a battery low signal the display will show “b_” (where “_” equals the pendant number, eg the example shows a pendant number 1 low battery). Either the pendant battery should be replaced or a new replacement pendant re-enrolled as pendant 1 and then pressing the pendant button followed by the “Cancel” button will clear the pendant battery low indication.

MAINS (AC) FAILURE



If the external Mains supply is off the display will show “AC” for mains failure. When the mains supply returns the display will go back to showing “OK”.

CALL FAILURE

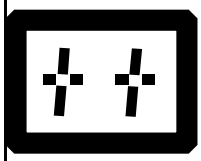


If the internal telephone dialler makes a call to the monitoring centre and the call does not go through for any reason the display will show “CF” for call failure. When the dialler makes a successful call to the monitoring centre supply the display will go back to “OK”.

MEDICAL TIMER

The unit has a built-in medical timer. This timer could be used to reminder someone to take pills or simply to know that the user is still active. If the timer expires a call will be made to the monitoring centre. To cancel the timer, press the cancel button when the dis play shows “MT”. The display will then return to “OK” until the next day when the timer is due to expire again.

MANUAL CALL ANSWER/CALLBACK



If the user presses the “CANCEL” Button 5 times within a 10 second period the display will show “++” and the unit will either,
1-answer the next in-coming call, or
2-make a call to the Callback number..
Once the unit has answered the call or called the callback number (depending upon the programmed options), the display will return to “OK”.

HOW TO PROGRAM

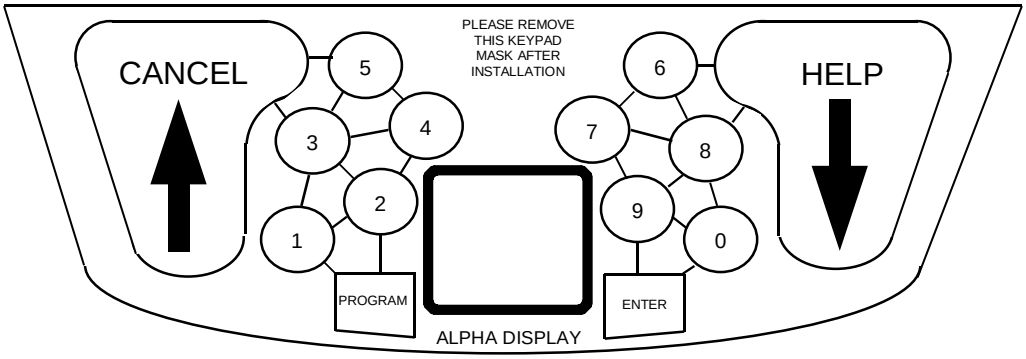


Figure 3

PROGRAMMING OVERLAY

The “Medico” alarm is supplied with a programming keypad label fitted over the main label as shown in “figure 3” above. The programming label shows the location of the hidden numeric keypad used to program the device. Once programming is finished simply peal the transfer off the front of the unit and store it away for re-use at a later time.

ENTERING PROGRAM MODE

By pressing the “1” and “5” buttons simultaneously, or pressing the “program” button followed by the Installer access code then “enter”, you will enter program mode. This is indicated by a “PM” appearing in the Alpha Display window. Prior to entering program mode the internal buzzer will only beep when the “CANCEL” or “HELP” buttons are pressed. While in program mode, the buzzer will beep every time a button is pressed as an indication that the button has been acknowledged.

PROGRAMMING DATA

All programming starts with pressing the “PROGRAM” button, followed by the program address then pressing the “ENTER” button, eg:

“PROGRAM”-”1”-”ENTER” (Account Code Number)

The current programmed data will then be displayed via the Alpha Display. Using the above example, if the Account Code number at address 1 was “1234”, the display will flash out 1,2,3,4 (with a 1 second pause between each digit). To change the Account Code number simply enter in the new number followed by the “ENTER” button. The new number will then be flashed out via the Alpha Display to confirm your programming.

In the program guide we will be referring to “P” as “PROGRAM” and “E” as “ENTER”. For example the account code address will be called;

P1E, which means;

“PROGRAM”-”1”-”ENER”.

EXITING PROGRAMMING MODE

When all programming has been finished, press “PROGRAM” then “ENTER” to leave program mode. At this point the Alpha Display should return to showing the “OK” sign and the internal buzzer will once again only beep if the “CANCEL” or “HELP” buttons are pressed (the programming buttons if accidentally pressed will be silent). If no buttons are pressed for a period of I minute, while in program mode, the unit will automatically exit program mode (Unless the unit is in RSSI mode, see page 11).

Remember to remove the programming transfer when you have finished programming.

PROGRAM SUMMARY

(Default values underlined in brackets)

P1E Account Code ..... ***(0000)***

P2E Telephone Number 1 ..... ***(None)***
P3E Telephone Number 2 ..... ***(None)***
P4E Telephone Number 3 ..... ***(None)***
P5E Telephone Number 4 ..... ***(None)***

P6E Copy Data to DTU Board
P7E Load Data from DTU Board (Enter twice)

P10E Program Mode Installer Code ..... ***(None)***

P11E LEARN Pendant 1
P12E LEARN Pendant 2
P13E LEARN Pendant 3
P14E LEARN Pendant 4
P15E LEARN Pendant 5
P16E LEARN Pendant 6
P17E LEARN Pendant 7
P18E LEARN Pendant 8

NOTE: Remember to set set pendant type at **P90E** (default pendant SX type)

P20E Received Signal Strength Level

P31E Pendant 1 Mode ..... ***(1)***
P32E Pendant 2 Mode ..... ***(1)***
P33E Pendant 3 Mode ..... ***(1)***
P34E Pendant 4 Mode ..... ***(1)***
P35E Pendant 5 Mode ..... ***(1)***
P36E Pendant 6 Mode ..... ***(1)***
P37E Pendant 7 Mode ..... ***(1)***
P38E Pendant 8 Mode ..... ***(1)***
Mode 1 = Alarm Mode 3 = Single button
Mode 2 = Dementia

P40E Alpha Display Mode ..... ***(ON)***

P41E Current Day of the Week (1-7, Sunday = 1)
P42E Time (HHMM)
P43E Date
P44E Month
P45E Year

P46E Test Time Period (1-168 Hours) ..... ***(24)***
P47E Test Start Time (HHMM) ..... ***(00:00)***
P48E Test Start Day (1-7 where Sunday = 1) ..... ***(0)***
P49E Enable Mains (AC) Fail Test ..... ***(ON)***
P50E Pill Timer On/Off ..... ***(OFF)***
P51E Pill Timer Alarm Time ..... ***(00:00)***
P52E Dementia Pendant timer (0-255mins) ..... ***(0)***

P53E "HELP" button Alarm Delay (0-255secs) ..... ***(15)***
P54E Pendant Panic Alarm Delay (0-255secs) ..... ***(15)***
P55E "CANCEL" button Delay (0-255secs) ..... ***(0)***

P56E Enable/Disable Dialler ..... ***(ON)***
P57E Tone (T) or Pulse (P) Dialling ..... ***(T)***
P58E Long DTMF Dialling Tones ..... ***(OFF)***
P59E Normal or Reverse Pulse Dialling ..... ***(OFF)***
P60E Enable Fax Defeat Mode ..... ***(OFF)***

P61E Report Mains (AC) Failure ..... ***(ON)***
P62E Report System Battery Low ..... ***(ON)***
P63E Report Pendant Battery Low ..... ***(ON)***
P64E Report Telephone Line Failure ..... ***(ON)***
P65E Report Dementia Timer Timeout ..... ***(ON)***
P66E Report Restores ..... ***(ON)***
P67E Report Test Calls ..... ***(ON)***
P68E Ring time before re-dialling (1-255secs) ..... ***(45)***
P69E AC Fail Report Delay (1-255mins) ..... ***(30)***
P70E Blink Green Light ..... ***(ON)***
P71E Silent Alarm Mode ..... ***(OFF)***
P72E Display Mains Failure ..... ***(ON)***
P73E Report Pill Timer Alarm ..... ***(OFF)***
P74E Display OK when OK ..... ***(ON)***
P75E Enable Listen-in ..... ***(OFF)***
P76E Auto Detect Modem Format ..... ***(ON)***
P77E Force Modem Format to Bell103/V21 ..... ***(OFF)***
P78E Enable Telephone Line Test ..... ***(ON)***
P80E Stop Dialling if kissed off ..... ***(ON)***
P81E Monitor Call Progress Tones ..... ***(ON)***
P82E Blind Dial ..... ***(OFF)***

P83E Auto-answer/Callback ..... ***(0)***
(press "Cancel" 5 times) Option 0 = Off
Option 1 = Auto-Answer
Option 2 = Call-back

P84E Maximum Dial Attempts ..... ***(15)***

P85E Telephone # 1 Mode ..... ***(1)***
P86E Telephone # 2 Mode ..... ***(1)***
P87E Telephone # 3 Mode ..... ***(1)***
P88E Telephone # 4 Mode ..... ***(1)***
Mode 0 = None Mode 1 = Contact ID
Mode 2 = Domestic Mode 3 = Spare
Mode 4 = Spare Mode 5 = Callback #

P90E Transmitter Type ..... ***(4)***
Type 0 = Generic Type 3 = Ness Stnd
Type 1 = Crow AE Type 4 = Crow SX
Type 2 = Ness PPM Type 5 = Ness 56 Bit

P91E Display Pendant 1 Code
P92E Display Pendant 2 Code
P93E Display Pendant 3 Code
P94E Display Pendant 4 Code
P95E Display Pendant 5 Code
P96E Display Pendant 6 Code
P97E Display Pendant 7 Code
P98E Display Pendant 8 Code

P99E Pill Timer Warning Time ..... ***(20)***

P100E Daylight Saving Start Sunday ..... ***(1)***
P101E Daylight Saving Start Month ..... ***(10)***
P102E Daylight Saving Start Hour ..... ***(2)***
P103E Daylight Saving End Sunday ..... ***(3)***
P104E Daylight Saving End Month ..... ***(3)***
P105E Daylight Saving End Hour ..... ***(2)***

P106E Daylight Savings On/Off

P107E Auto-answer Ring Count ..... ***(25)***

P110E Clear All Stored Pendant Codes (Enter Twice)
P111E Default All Programmed Data (Enter twice)

P112E Display system battery voltage

PROGRAM DESCRIPTIONS

P1E - ACCOUNT CODE

The Account code is the number used by the monitoring station to identify which Medico is sending the alarm message. The account code is a four digit number. If the number you wish to enter is less than four digits, the Medico will add any leading zeros to the number to make it up to four e.g if you enter in an account code number of 1,2,3 the unit will display back, and report, 0,1,2,3.

The account code can be any of the 10 numeric numbers from 0-9 on the keypad but it is also possible to program the letters **"A,B,C,D,E & F"** as any of the 4 digits of the account code (NOTE: an "A" and a "0" are the same and will be sent as a 10) . To do this, after pressing P1E, simply press the number "9" then use the "UP" arrow (cancel button) to move up through the letters A-B-C, etc, or to go back use the "DOWN" arrow (help button) to move down through the letters, e.g. if the display showed "D" and the down arrow was pressed once the display will show "C". When you have selected the desired letter or number pressing one of the numeric buttons 0-9 will allow you to enter the next digit. When finished press "Enter" to save the programmed account number.

The account code also serves as the security password when doing a PC to Medico connection. If the security number at the PC does not match the internally programmed account code number the Medico will terminate the connection in 15 seconds..

P2E - TELEPHONE NUMBER 1
P3E - TELEPHONE NUMBER 2
P4E - TELEPHONE NUMBER 3
P5E - TELEPHONE NUMBER 4

There are up to four 16 digit telephone numbers that can be programmed into the Medico. Normally only telephone number 1 is required (P2E).

If you are using the Callback function for Upload/Download (PC connection), one of these numbers can be programmed as a Callback number that will allow the Medico to dial the number and link it to the installers office PC. Making one of the numbers a Callback number is set at addresses P85E-P88E option 5.
The digits 0,1,2,3,4,5,6,7,8 & 9 can be programmed at these addresses plus 3 special function characters *,# and P (2 second pause). Programming of the 3 special functions is done in the same way as programming the letters in the account code above.

P6E - COPY DATA TO "DTU" BOARD

The Medico can use a DTU Board (Data Transfer Unit) to copy data from one unit to another. The DTU plugs into the serial socket (see figure 2 on page 5). Data from the Medico can be copied by entering in P6E at the keypad (while in program mode) with a DTU board plugged into the serial socket. The unit will give 3 short beeps if the copy was completed satisfactorily and display OK, or one long beep if there was a problem. There is a write protection link on the DTU board that must be on before data can be copied to the DTU board. If the link is off, the write to the DTU will fail and the display will show WP (write protected). Once the programmed data has been successfully copied it is best to remove the write protection link to prevent accidentally over writing the data. The DTU can be removed and later plugged into another unit for downloading of the data.

P7EP7E - LOAD DATA FROM "DTU" BOARD <u>(MUST ENTER TWICE)</u>

To copy data taken from another Medico via a DTU board, simply enter P7E then P7E at the keypad (while in program mode). All data stored on the DTU will be transferred to the Medico. If the transfer was successful, the unit will give three short beeps and the display will show OK, if there was a problem, it will give one long beep.

P10E - PROGRAM MODE INSTALLER CODE

Access to program mode can be by a 1-6 digit code only if desired. By default there is no installer code so access is by pressing 1 & 5 simultaneously.
If a code is programmed at this address, the default access to program mode by pressing “1” & “5” simultaneously will be disabled and access will ONLY be by the code programmed at this address. NOTE: No beeps will be heard while entering in the Installer code until you actually enter program mode.
If an Installer code is programmed, access to program mode is obtained by pressing “PROGRAM”-”Installer Code”-”ENTER”.
The benefit of the access code is to prevent unauthorised personnel from being able to read or change any programmed data. If you forget the access code, you can default the unit by powering it up holding down the “Help” button for 5 seconds.
If you want to remove the Installer code and return back to pressing “1” & “5” to enter program mode simply press the up or down arrow after pressing P10E then press “Enter” to save the change and this will erase the installer code.

.

P11E - LEARN PENDANT 1
P12E - LEARN PENDANT 2
P13E - LEARN PENDANT 3
P14E - LEARN PENDANT 4
P15E - LEARN PENDANT 5
P16E - LEARN PENDANT 6
P17E - LEARN PENDANT 7
P18E - LEARN PENDANT 8

Up to 8 radio pendants can be programmed into the unit, each separately identified at the monitoring station.

To LEARN a new pendant (or to replace an old or lost pendant) press PNNE (where NN is the number relating to the pendant you wish to learn), then within 30 seconds, operate the pendant transmitter you wish to learn into the system. The unit will give three short beeps once a new pendant has been learnt successfully and the code will be displayed.

To REMOVE a pendant from the system, press PNNE (where NN is the number relating to the pendant you wish to remove) and then press the “ENTER” button within 5 seconds of starting learn mode, ensuring that no transmissions occur before you press the enter button.

Generally, each pendant will be used as a wireless medical alarm but, there is a pendant Mode setting at addresses P31E-P38E that can set some special functions.

P20E - RECEIVED SIGNAL STRENGTH INDICATOR (RSSI)

When in program mode, if P20E is entered at the keypad the buzzer will beep for one second when a valid transmission (one that has been programmed into the system) is received and the display will show the RSSI reading on a scale of 1-9. The RSSI reading will remain on the display until the “P” or “E” buttons are pressed or another valid transmission is received at which time the new reading will be displayed. Once the medico has been placed in RSSI mode, all pendants should be tested from every location that the pendants are required to work from to verify full operation. Although a reading of 1 means the unit is still operating, it may be advisable to try installing the Medico in a different position, if possible, and re-test the RSSI readings again. While the Medico is in RSSI mode, the automatic timeout from program mode is disabled.

P31E - PENDANT 1 MODE
P32E - PENDANT 2 MODE
P33E - PENDANT 3 MODE
P34E - PENDANT 4 MODE
P35E - PENDANT 5 MODE
P36E - PENDANT 6 MODE
P37E - PENDANT 7 MODE
P38E - PENDANT 8 MODE

1 = Alarm Mode
2 = Dementia Mode
3 = Single Button Mode

The pendant Mode selection allows for special functions to be set for individual transmitters.

1 = Alarm Mode - This mode allows the transmitter to generate a medical alarm when pressed. In the case of multiple button NESS transmitters, the transmitter may be learnt by pressing any button and all buttons will be treated as a medical alarm from that pendant number.
2 = Dementia Mode - the Medico will be looking to receive a supervisory signal from the transmitter on a regular basis. If the Medico doesn't receive a supervisory signal within the preset timer (set at address P52E), an alarm will be generated. Every time the Medico receives the supervisory signal from the transmitter the Dementia timer will be reset. This feature is designed to monitor patients with dementia who may be prone to wandering away from the premises.
3 = Single Button Mode - In the case of the NESS multi-button transmitters, if this mode is set, only the actual button learnt for this pendant number will provide a medical alarm. This leaves the other un-learnt buttons to be used for other functions.

P40E - ALPHA DISPLAY MODE

If this option is turned ON the alpha display will permanently show "OK" to indicate that everything is working properly. If this option is turned OFF, the display will turn on briefly every 4 seconds in unison with the Green LED.

P41E - DAY of the WEEK (1-7, Sunday = 1)
P42E - TIME (HHMM)
P43E - DATE (1-31)
P44E - MONTH (1-12)
P45E - YEAR (00-99)

The Medico has an internal clock. It is important to set the clock following any full power down of the unit. The clock is used to record all events internally with full time & date stamping plus special functions such as pill timers and dialler tests are linked to the clock.

To set the clock enter in the Current Time in hours and minutes **(P42E).** The time is entered in 24 hour format. If the time is 8:30 am enter in 0830. If it is 5:30 pm enter in 1730.

The Current Date is then entered **(P43E).** Enter in the date with a value from 1-31.

The Current Month is then entered **(P44E).** Enter in the month with a value from 1-12.

The Current Year is then entered **(P45E).** Enter in the year with a value from 00-99. If the year was 2003, enter in 03. The unit will automatically compensate for leap years and daylight saving.

The Current Day number **(P41E)** is a view only address. The Medico will automatically set the correct day number once the above details have been entered. Sunday is day 1, Monday day 2, through to Saturday being day 7.

P46E - TEST TIME PERIOD (1-168 Hours)

So that the monitoring station can be sure the Medico is still functioning properly, the unit sends a periodic test call. The time between tests can be 1 hour intervals to 168 hours (once per week). The default is every 24 hours.

P47E - TEST START TIME (HHMM)

Because it is not desirable for the test call to happen during the daytime, it is possible to set the start time for the first test call. The default is 00:00 (Midnight). For this to happen when is should, the clock MUST be set correctly first.

P48E - TEST START DAY (1-7, Sunday = 1)

If the test time period is left at the default of 24 hours, the test start day should be left as 0 and the test will go through at midnight on the day the system is setup. If the test period was set to 168 hours you may wish to specify when the start day will be, e.g. if the test was to occur every Sunday at 00:00 pm then enter in a value of 1 at this address. The test will then start on the next Sunday. If the test period (P46E) is less that 24 hours, the start day is ignored. ***(NOTE: leave the start day as 0 for 24 hour tests).***

P49E - ENABLE MAINS (AC) FAIL TEST

OF = Ignore Mains (AC) Input Failure
ON = Monitor Mains (AC) Input
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the “Enter” button.
The Medico will normally monitor the Mains (AC) and indicate a problem. If not required, the AC monitoring can be disabled by turning off this option.

P50E - ENABLE PILL TIMER

OF = Pill Timer Disabled
ON = Pill Timer Enabled
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the “Enter” button.
The Medico has a built in timer that can be used to remind the user to take their medication. See P51E, P73E and P99E

P51E - PILL TIMER ALARM (HHMM)

The pill timer is a 24 hour timer that must be reset by the user every day to stop an alarm from being sent to the monitoring station. The time at which the pill timer will expire is set at this address. When the Pill Timer expires the internal buzzer will start beeping as a reminder to take medication. The beeping will continue for the time programmed at P99E. To reset the pill timer, the user must press and hold the “CANCEL” button for 2 seconds. Once reset, the buzzer will be silent until the next day. If not cancelled before the time at address P99E expires, an alarm report will be sent to the monitoring company. See P50E, P73E and P99E

P52E - DEMENTIA PENDANT TIMER (0-255 minutes)

Some pendant transmitters can send a supervisory signal periodically to tell the Medico that the pendant is still operating and within range. The transmitters are commonly called “dementia” or “wandering patient” transmitters. The dementia timer sets a time period where if the Medico has not received any transmissions from the transmitter for that period of time, an alarm will be generated. If the transmitter is seen by the Medico again, a restore of the dementia alarm will be sent to the monitoring station.

P53E - “HELP” BUTTON ALARM DELAY (0-255 seconds)

There is a programmable alarm delay applied to the “HELP” button on the front of the Medico. The default setting is 15 seconds which means the alarm can be cancelled by pressing the “Cancel” button within this time. When the alarm is created, by pressing the “Help” button, the unit will start beeping for this period. If not cancelled within this time the buzzer will change to a continuous tone indicating the alarm will now be sent.

P54E - PENDANT PANIC ALARM DELAY (0-255 seconds)

There is a programmable alarm delay that can be applied to the wireless pendants which is designed to prevent accidental alarms. The default is a 15 second delay and it works in the same way as the “Help” button delay (P53E) described above.

P55E - “CANCEL” BUTTON DELAY (0-255 seconds)

There is a programmable delay applied to the “CANCEL” button on the front of the Medico which is designed to prevent accidental cancelling of an alarm. The default setting is 1 second which means the button MUST be held down for 1 seconds or longer to cancel an alarm. If the person operating the unit has difficulty using the button for any reason the delay can be reduced, or removed completely (setting the delay to “0” makes the operation instantaneous). Alternatively the delay can be increased to further prevent accidental cancelling of alarms.

P56E - ENABLE DIALLER

OF = Dialler is Disabled (will not report)
ON = Dialler is Enabled
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the “Enter” button.

P57E - TONE or PULSE DIALLING

T = Dialler will dial using DTMF TONES format
P = Dialler will dial using PULSE format
At this address, pressing the up or down arrows will toggle the function from tone to pulse. When the desired setting is displayed press the “Enter” button.

P58E - LONG DTMF TONES during DIALLING

OF = Dialler will dial using normal DTMF tones (75ms)
ON = Dialler will dial using long DTMF tones (100ms)
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the “Enter” button.

P59E - NORMAL or REVERSE PULSE DIALLING

OF = Dialler will dial using NORMAL Pulse Dialling

In the table below, the first number is the programmed number and the second is the number of pulses generated by the dialler.
(0=0, 1=1, 2=2, 3=3, 4=4, 5=5, 6=6, 7=7, 8=8, 9=9)

ON = Dialler will dial using REVERSE Pulse Dialling

In the table below, the first number is the programmed number and the second is the number of pulses generated by the dialler.
(0=0, 1=9, 2=8, 3=7, 4=6, 5=5, 6=4, 7=3, 8=2, 9=1)
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the “Enter” button.

P60E - ENABLE FAX DEFEAT MODE

OF = Fax Defeat OFF
ON = Fax Defeat ON
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the “Enter” button.

The unit has the ability to answer in-coming calls if required. This is normally only used by the supplier to connect to the unit from a remote PC to make changes to the programmed data. The unit can answer an in-coming call after a preset number of rings (set at P107E), or use Fax Defeat. Fax defeat is when the unit counts the number of in-coming rings, and if the number of rings is less than or equal to 3, followed by a gap of longer than 10 seconds, and another call comes in within 45 seconds of the last call, the Medico will answer the second call after the first ring. If however the number of rings in the first call was greater than three, or the time before the next ring was greater than 45 seconds, Fax Defeat will not be initiated.

P61E - REPORT MAINS (AC) FAILURE

OF = Don’t Report Mains (AC) Failure
ON = Report Mains (AC) Failure
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the “Enter” button.

P62E - REPORT SYSTEM BATTERY LOW

OF = Don’t Report System Battery Low
ON = Report System Battery Low
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the “Enter” button.

P63E - REPORT PENDANT BATTERY LOW

OF = Don’t Report Pendant Battery Low
ON = Report Pendant Battery Low
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the “Enter” button.

P64E - REPORT TELEPHONE LINE FAILURE

OF = Don’t Report Telephone Line Failure
ON = Report Telephone Line Failure
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the “Enter” button.

P65E - REPORT DEMENTIA TIMER TIMEOUT

OF = Don’t Report Dementia Timer Timeout
ON = Report Dementia Timer Timeout
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the “Enter” button.

P66E - REPORT RESTORES

OF = Don’t Report Alarm Restores
ON = Report Alarm Restores
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the “Enter” button.

P67E - REPORT AUTOMATIC TEST CALL

OF = Don't Report Automatic Test Call
ON = Report Automatic Test Call
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the "Enter" button.

P68E - RING TIMER BEFORE RE-DIALLING (1-255 seconds)

Ring timer before re-dialling the call from 1-255 seconds. The default setting is 45 seconds. If the Medico is un-answered during a call, this timer is how long the Medico will keep trying before hanging up and re-dialling the call.

P69E - MAINS (AC) FAIL REPORTING DELAY (1-255 minutes)

The mains (AC) fail reporting delay is a set period that the mains voltage has to fail before generating a report to the dialler. This delay is designed to prevent mains fail reports for short power outages. The default setting is 30 minutes.

P70E - FLASH GREEN LIGHT

OF = Don't Flash Green Light
ON = Flash Green Light
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the "Enter" button.

If this option is turned ON, the Green Light at the bottom of the Cancel button will give a short flash every 4 seconds to show that everything is OK. If set to OFF the Green LED will always be off.

P71E - SILENT ALARM MODE

OF = Buzzer Beeps when in Alarm
ON = Buzzer is Silent when in Alarm
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the "Enter" button.

If this option is turned ON, the Internal Buzzer will not sound during an alarm for silent panic alarms. If set to OFF the Internal Buzzer will beep during the alarm delay period and sound continuously when in alarm state.

P72E - DISPLAY MAINS (AC) FAILURE ON ALPHA DISPLAY

OF = Don't Display Mains (AC) Failure
ON = Display Mains Failure (AC) on Alpha Display
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the "Enter" button.

P73E - REPORT PILL TIMER

OF = Don't Send Pill Timer Alarm
ON = Send Pill Timer Alarm
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the "Enter" button.

If this option is turned on and the Pill Timer has expired (P99E), a report will be sent to the monitoring company. If off, no report will be sent.

P74E - DISPLAY “OK” MESSAGE

OF = Don’t Display the “OK” Message
ON = Display the “OK” Message on the Alpha Display
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the “Enter” button.

If everything is functioning properly the “OK” message will be displayed if this option is turned on. If this option is turned off the display will only show fault conditions and will normally be off.

P75E - ENABLE LISTEN-IN

OF = Turn off Listen-in
ON = Listen-in is turned on
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the “Enter” button.

Listen-in is a feature that allows the calls to be heard on the internal buzzer. This feature is very useful for testing the Medico through to the monitoring station. It would usually be turned on for testing then turned off for normal operation.

P76E - AUTO DETECT MODEM FORMAT

OF = Don’t Auto-Detect Modem Format (use setting at P77E)
ON = Auto-Detect Modem Format
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the “Enter” button.

If auto-modem detect is turned on the Medico will start off sending the tones for V21 format and if it receives no carrier from the remote modem will then send the BELL103 tones. It will repeat this process twice then if no connection is made it will hang-up.

P77E - MANUALLY SELECT MODEM FORMAT

OF = Force the Modem Format to Bell103
ON = Force the Modem Format to V21
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the “Enter” button.

If auto-detect at P76E is turned off the Medico will only attempt to connect at the format specified above.

P78E - ENABLE TELEPHONE LINE TEST

OF = Disable the telephone line test
ON = A test will be performed on the telephone line
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the “Enter” button.

If the line test is enabled (this option set to on), the Medico will check the telephone line every 30 seconds. If the Medico detects that the line is not functioning it will display “LF” on the alpha display. If disabled (this option turned off) the Medico will not test the telephone line.

P80E - STOP DIALLING if KISSED OFF

OF = Don't Stop if Kissed off. Dial next Telephone Number
ON = Stop Dialling once the Alarm has been Kissed off
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the "Enter" button.

If this option is on, the Medico will call the first telephone number for the maximum number of call attempts (if required) as programmed at address P84E. At any time if the message is successfully reported and the dialler is kissed off, the Medico will stop dialling until another event comes along. If turned off, the Medico will call the first number until kissed of then will move onto any other programmed numbers and report to them as well until kissed of.

P81E - MONITOR CALL PROGRESS TONES

OF = Don't Monitor Call Progress (Ringing/Engaged) Tones
ON = Monitor Call Progress (Ringing/Engaged) Tones
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the "Enter" button.

Call progress tones are the ringing, engaged, wrong number, etc tones that can be heard on the line during dialling. If the Medico has call progress on it is capable of hanging up if it hears an engaged or error tone and re-dial the call. This can save time in getting the alarm report through at peak times.

P82E - BLIND DIAL

OF = Don't Blind Dial (look for dial tone)
ON = Blind Dial (ignore dial tone)
At this address, pressing the up or down arrows will toggle the function from off to on. When the desired setting is displayed press the "Enter" button.

Blind dial is when there is a problem with the dial tone on the telephone line and the Medico has difficulty hearing the tone. Normally Blind dial would be off because the Medico is designed to detect the presence of dial tone prior to dialling.

P83E - ALLOW MANUAL-ANSWER/CALLBACK

0 = Don't Allow Manual-Answer or Callback (Function Disabled)
1 = Enable Manual-Answer
2 = Enable Manual-Callback

If a value of 1 or 2 is programmed the user can press the "CANCEL" button 5 times within 10 seconds to initiate either Manual-Answer (mode 1) or Callback (mode 2). The Alpha Display will show "++" when either auto-answer or callback is active.
If set to option 1; the Medico will now answer the next in-coming call after 1 ring. Once the upload/download has been completed and the Medico has hung-up, the display will return back to "OK". If you wish to cancel the auto-answer function, pressing the cancel button again while the display is showing "++" will cause the unit to return back to normal in 10 seconds time and cancel the auto-answer function.
If set to option 2; the Medico will dial the callback number. The PC end should be set to "Wait for Call" before initiating callback mode. Once the unit has made the call and hung up, the display will revert back to "OK".

P84E - MAXIMUM DIAL ATTEMPTS per ALARM EVENT

The maximum dial attempts is the number of calls the dialler will attempt to make until kissed off. If the maximum number of dial attempts is reached for telephone number one and the message has not been kissed of the unit will start to dial the next programmed number for the same amount of attempts. If all dial attempts have been used and the unit still has not been kissed off the message will be saved and sent the next time the dialler is triggered on a new event.

P85E - TELEPHONE NUMBER 1 MODE
P86E - TELEPHONE NUMBER 2 MODE
P87E - TELEPHONE NUMBER 3 MODE
P88E - TELEPHONE NUMBER 4 MODE

0 = Telephone Number is not used
1 = Telephone Number will Report in Contact ID
2 = Telephone Number will Report using Domestic Mode
3 = Spare
4 = Spare
5 = Telephone Number is a Callback Number

If the Telephone Number Mode is “0”, the panel will not dial that number

If it is “1”, the panel will report to a monitoring station using Contact ID Format

If it is “2”, the panel will report to a Residential Number using Domestic Format. Domestic Format sends an alarm siren tone to indicate that an alarm is happening. The unit will repeat the alarm message four times with a 5 second pause between messages. The person receiving the call can press any button on their telephone during the pause to acknowledge the alarm.
When set to “Domestic Mode” the Medico will only report alarms from pendants or the “Help” button, plus if the system battery is low (9V Lithium battery).

If it is “5”, the panel will dial the Telephone number following Callback mode having been initiated by the user (see P83E above).

P90E - PENDANT TYPE

0 = Generic
1 = Crow AE
2 = Ness PPM
3 = Ness Stnd
4 = Crow SX
5 = Ness 56 Bit

The Medico will accept many different types of transmitters. Because each type is different and most send a transmitter battery low warning to the Medico, it is important to specify the correct type of pendant when configuring the unit. You must set the correct type at this address first before attempting to load a new transmitter otherwise the unit may not recognise the transmitted code correctly. There are currently 5 types.

0 = Generic - A generic transmitter is any unit that works on the Medico’s frequency, has between 12 to 40 bits in the transmitted code, and does not send a battery low signal. This option allows other transmitters to be used on the Medico.

1 = Crow AE - The Crow AE transmitter consists of a neckchain or wristwatch style waterproof transmitter that also sends a battery low warning.

2 = Ness PPM - The Ness PPM transmitter is a special encoding format and comes in various styles. It also sends a battery low warning.

3 = Ness Stnd - The Ness Stnd (Standard) transmitter uses the normal encoding format and comes in various styles. It also sends a battery low warning.

4 = Crow SX - The Crow SX transmitter consists of a neckchain or wristwatch style waterproof transmitter. It also sends a battery low warning.

5 = Ness 56 Bit - The Ness 56 bit transmitter uses the normal encoding format and comes in various styles. It also sends a battery low warning.

P91E - DISPLAY PENDANT 1 CODE
P92E - DISPLAY PENDANT 2 CODE
P93E - DISPLAY PENDANT 3 CODE
P94E - DISPLAY PENDANT 4 CODE
P95E - DISPLAY PENDANT 5 CODE
P96E - DISPLAY PENDANT 6 CODE
P97E - DISPLAY PENDANT 7 CODE
P98E - DISPLAY PENDANT 8 CODE

Entering in one of the values above will allow the unit to display the stored code for any of the programmed pendants.

P99E - PILL TIMER WARNING TIME (0-255 Minutes)

If the Pill timer (P51E) expires, the display will show “MT” and the internal buzzer will start to sound once a second to remind the user to take their medication. At the same time the Pill timer expires, this timer (P99E) starts. The intention of this timer is to set a period of time to allow the alarm to be cancelled, and if not cause a report to be sent (if turned on at address P73E). The Pill timer alarm can only be cancelled while the buzzer is beeping and “MT” is displayed. If the “Cancel” button is pressed before the P99E timer expires, the buzzer will silence, the display will go back to “OK” and no alarm will be sent.

P100E - DAYLIGHT SAVING START SUNDAY (1-5)

If set to 0, daylight savings is disabled

P101E - DAYLIGHT SAVING START MONTH (1-12)
P102E - DAYLIGHT SAVING START HOUR (1-24)

P103E - DAYLIGHT SAVING END SUNDAY (1-5)

If set to 0, daylight savings is disabled

P104E - DAYLIGHT SAVING END MONTH (1-12)
P105E - DAYLIGHT SAVING END HOUR (1-24)

P106E - DAYLIGHT SAVING On or OFF

OF = Daylight Saving is OFF
ON = Daylight Saving is ON
This address can be used to view whether the Medico is currently in daylight savings time or not. If the clock (addresses P42-P45) is reset, the Medico will check the settings at addresses P100-P105 and determine whether daylight savings should be currently active or not. This address is provided as a view only option.

P107E - AUTO-ANSWER RING COUNT (0-99)

This is the number of rings the Medico needs to see before it will answer an in-coming call.

P110E P110E - CLEAR ALL PENDANT CODES <u>(MUST ENTER TWICE)</u>

Entering this command will clear all stored radio pendant codes. As a safety feature to prevent unwanted operation you must enter the address in twice.

P111E P111E - CLEAR ALL PROGRAM DATA <u>(MUST ENTER TWICE)</u>

Entering this command twice will clear all stored program data (including pendant codes) back to the factory default values. As a safety feature to prevent unwanted operation you must enter the address in twice.

P112E - DISPLAY SYSTEM BATTERY VOLTAGE

This command will display the current voltage measured at the 9V Lithium battery. The reading will be two digits, displayed sequentially eg “9”, “4” equals 9.4Volts.

TELECOM INTERFACE

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

The unit has been supplied with a Telecom Approved AC plug pack to power the device from the 230V AC mains voltage supply. Only the approved plug pack supplied with the unit can be used to power the Medico from the mains supply.

In the event of any problem with this device, the Plug pack should be removed from mains power then the supplied Telecom lead removed from the wall socket.

The user is to then arrange with the installer of the device to make the necessary repairs. Should the matter be reported to Telecom as a wiring fault, and the fault be proven to be due to the medical alarm, a call out charge will be incurred.

Should the Medico Unit require relocation the Telecom connection must be disconnected before the power is disconnected. Similarly when reconnecting the dialler, it is necessary to power up the unit from the mains voltage supply first (using the approved plug pack), before connecting the dialler to the Telecom Network.

The transmit level from this device is set at a fixed level and because of this there may be circumstances where this device does not give its optimum performance.

Before reporting such occurrences as faults, please check the line with a standard Telepermitted 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 Telecom "111" Emergency Service

Contact ID Code Summary

There are a number of fixed Contact ID event codes. The fixed event codes are listed in the table below.
Associated with the fixed event codes, there are a number of extension codes, that are also listed below. The event & extension code list is for your reference only and can not be changed in programming.

Event	Code	Extension	Comment
Medical (Help) Alarm	100	000	“HELP” Button on the Medico
Medical Pendant Alarm	100	001 to 008	Pendant number 1-8
Pendant Battery Low	384	001 to 008	Pendant number 1-8 battery low
Pill Timer Alarm	102	000	Pill Timer Timeout
Dementia Alarm	641	001 to 008	Pendant 1-8 Dementia Timeout
System Battery Low	302	000	Medico 9V Lithium Battery low
Mains Fail	301	000	230v mains to Medico is off
TEST Call	602	000	24 hour test
Phone Line Failure	351	000	Reported when line is restored