



MEDI-LINK CELLULAR



INSTALLATION MANUAL

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2. Equipment List

- Medi-Link Cellular Unit **(NB: Sim Card not included)**
- Antenna
- Waterproof Pendant (Wristwatch & Neck Chain included)
- 17V AC 300mA Plug Pack (with integral earth)
- Installation Manual

3. Overview

The Medi-Link Cellular unit uses a Cellular Module to report using the mobile network. The Cellular Module requires a SIM to connect to a particular network. The SIM itself has various attributes that can be set by the network provider.

Some of these options are available for Medi-Link Cellular use, some can only be viewed and some only the network provider can access. The Medi-Link Cellular unit connects up to the mobile network so some aspects are similar to your everyday mobile phone.

4. Medi-Link Cellular SIM

NB: Sim Card not included in the Medi-Link Cellular unit. Caution should be taken when purchasing SIM cards so that they have the desired network features available for Medi-Link Cellular unit to function correctly.

The Medi-Link Cellular unit requires a SIM card (just like any mobile phone) from a service provider.

Likewise, Medi-Link Cellular unit has 'Program **10. CELLULAR-> SIM Identity**' to view the unique international mobile equipment identity (IMEI) number.

The SIM itself is a small memory card that stores information about usage, account, and network. When the Medi-Link Cellular unit is powered the cellular module uses the information from the SIM to determine the type of communication the network provider has allowed for the particular SIM. As a result some features may not be available due to network restrictions.

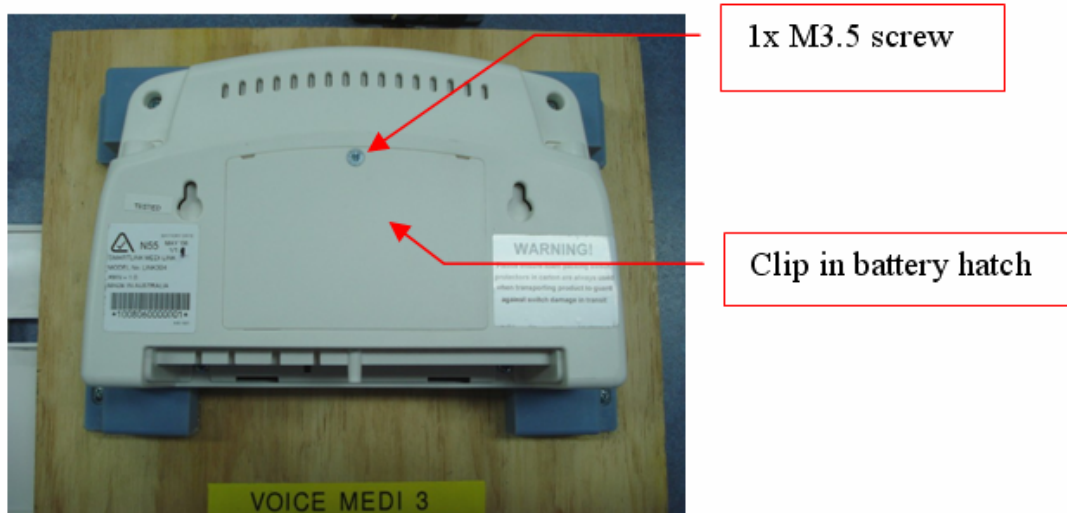
The mobile network offers specific channels designed to efficiently communicate in a particular manner.

The most common of these is the 'Voice channel'. This channel assumes the communication is voice in nature and thus processes the signal by sampling, slicing into packets and compressing before transmitting,... and on the other side uncompressing, joining the packets back together and converting back to some sort of analogue voice signal. This is ideal for voice as once it has been processed the voice can not deteriorate in the transmission process. However this can process out the fine detail that is transmitted in the modem signal.

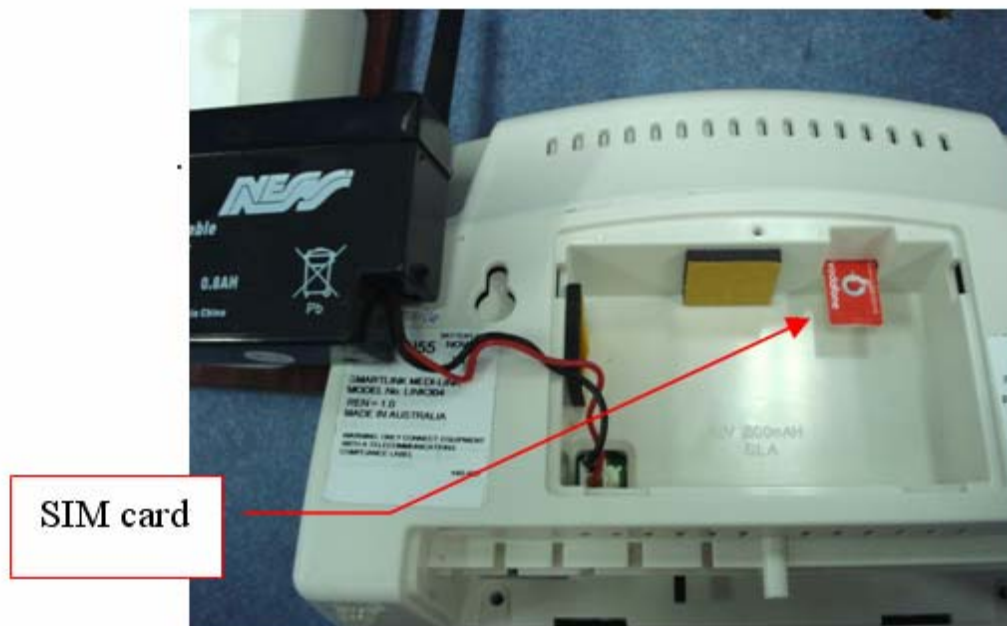
For this reason the service providers have introduced the 'Data channel' where data can be transmitted without the voice processing. When the Medi-Link Cellular unit reports, it generates DTMFs through the voice channels. Again the network processes affects these signals, as such Medi-Link Cellular unit uses network generated DTMFs on alternate reports. Some networks may attempt to recognise DTMF on voice channel and convert the signal to network generated DTMFs.

5. Medi-Link Cellular SIM Installation

The Medi-Link Cellular unit has a SIM socket which is located in the Battery compartment. To access, undo the screw and remove the Battery Hatch.



The SIM socket is located beside the battery so remove the Battery first. The SIM socket is a push-push type which is very easy to use. The SIM card needs to be placed contact-side down with the notched corner toward the socket (shown in the diagram below) then pushed in until it clicks into place. When correctly inserted, the edge of the SIM card will not extend into the battery compartment. Upon a second push the SIM card will click out of the SIM socket ready for removal.



When the SIM card is correctly inserted, sufficient room is available for the Battery. Replace the Battery. Care must be taken with the Battery Leads, so that they are tucked away neatly before placing the Battery Hatch.



Clip the Battery Hatch into place and tighten the screw. The Medi-Link Cellular unit is now ready for use. Power the Medi-Link Cellular unit by connecting the AC power supply and switching the Battery Switch to ON. At this stage the Medi-Link Cellular unit is attempting to initiate communication with the GSM mobile towers which may take several seconds before the Medi-Link Cellular unit has established a link. To ensure the Medi-Link Cellular unit has the best GSM communication use ... **'10. CELLULAR->Signal Quality->'** feature and place the Medi-Link Cellular unit where signal quality is at it's highest. The remaining setup required is as per Medi-Link unit (standard).

6. Quick Setup Guide

1. Insert the SIM Card into the Medi-Link Cellular Unit (refer to Section 5).
2. Supply Power to the Medi-Link Cellular Unit by:
 - Connecting the AC Plug Pack to a Power outlet and connect the Plug to "POWER" underside the Medi-Link Cellular Unit.
 - Sliding the Battery ON/OFF Switch to the ON position underside the Medi-Link Cellular Unit.
3. While in Program Mode, enter the 4 digits Client Account Code and the Primary Phone Numbers.
4. After exiting Program Mode, set the Time & Date by following the instructions found on Page 25 (Medi-Call Installation Manual).

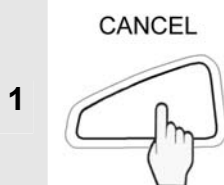
ATTENTION:

The correct Time and Date MUST be SET in order for the Medi-Link Cellular Unit to function to its full potential and specifications. This can be done either via the Red and Green Buttons or via the UpDownload Programmer Software after exiting Program Mode.

7. Programming Modes (Default = Ademco)

Programming Rules

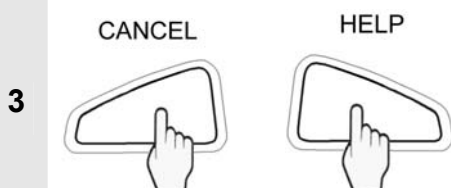
The easiest way to program the Medi-Link Cellular unit is to use the large **CANCEL (Green) Button** and the **HELP (Red) Button** on the Medi-Link Cellular unit.



Press the **CANCEL (Green) Button** on the Medi-Link Cellular unit to **scroll through** the Main Menu Options or the Sub Menu Options.



Press the **HELP (Red) Button** on the Medi-Link Cellular unit to **view the programmed value** for that option. The values will be displayed flashing. To step through values, press the HELP (Red) Button again.



To **store an option** selected, press the **CANCEL (Green) and HELP (Red) Buttons** at the same time. The Medi-Link Cellular unit will beep twice while flashing the display to acknowledge that the option has been selected.

To Enter Programming Options (Default = Ademco)

1. Slide the Battery ON/OFF Switch to the ON position & plug the AC Plug Pack to a Power Outlet.
2. The Medi-Link Cellular unit will Chime, Beep once and then display the **Product Type** and **Version Number** to indicate that it is in Programming Options. Now refer to the Medi-Link Installation Manual.



NB: If NO Buttons on the Medi-Link Cellular unit or the Radio Key Pendants have been pressed within 5 minutes, the Medi-Link Cellular unit will revert back to Normal Operation Mode (NB: A Client Account No. and at least one Phone No. must be programmed in for the Medi-Link Cellular unit to Exit Program Mode and enter Normal Operation Mode).

To Change Product Type Programming

NB: The Product Type is programmed by entering the Special Code on the Medi-Link Cellular unit. This will reset all Programming Options and will have to be completely reprogrammed again in the new mode. If the code is unknown then the Medi-Link unit will default to the previous Product Type and it's Option Programming will be maintained. The Medi-Link unit will remain in this Mode for only 5 minutes if the code hasn't been entered.

1. Hold down the **CANCEL (Green) and HELP (Red) Buttons** and Power up the Medi-Link Cellular unit.
2. The Medi-Link Cellular unit will Chime and then Beep Once while **PRODUCT TYPE** is displayed to indicate that it is in Product Programming.
3. **Using the CANCEL (Green) and HELP (Red) Buttons, a Code may be entered as follows:**
 - a. **MEDI-LINK CELLULAR "ADEMCO"** - Press **CANCEL, CANCEL, CANCEL, HELP**
 - b. **MEDI-LINK CELLULAR "BRITISH DTMF"** - Press **HELP, HELP, CANCEL, HELP**
 - c. **MEDI-LINK CELLULAR "CONTACT ID"** - Press **CANCEL, HELP, CANCEL, HELP**
4. Press the **CANCEL (Green) and HELP (Red) Buttons at the same time** to acknowledge end of Product Programming. The Medi-Link Cellular unit will Beep Once to indicate that it is now in Options Programming.

8. Program Medi-Link Cellular Module

The Medi-Link Cellular unit provides some programmable options to identify and fine tune the Cellular Module in the field.

These are found in the Program Mode **"10. CELLULAR"**.

'Program **10. CELLULAR->Identity**' and 'Program **10. CELLULAR->Type**' describe the Cellular Module. These options can not be changed but are there for reference only.

'Program **10. CELLULAR->Signal Quality**' is an installation tool. Ideally the Medi-Link Cellular unit should be placed where the signal strength is at its highest.

NB: The other Program Options should not be changed as they are fine tune to a particular environment.

The Medi-Link Cellular unit settings have been defaulted to what is ideal for most common environments. Details of these Program Options are available in the product specification (see table below).

10. Program CELLULAR

Option	Descriptions:
ADEMCO 1.0 10. CELLULAR	“10. CELLULAR” is displayed. Press the HELP Button.
10. CELLULAR ↑↓ Identity	“Identity” is displayed. Press the HELP Button. The Medi-Link Cellular unit displays the Identity Module numbers & cannot be changed but are there for your reference only. Press the CANCEL Button to move to the next Program Option.
10. CELLULAR ↑↓ Type	“Type” is displayed. Press the HELP Button. The Medi-Link Cellular unit displays the Module Type eg. SIEMENS MC55i & cannot be changed but are there for your reference only. Press the CANCEL Button to move to the next Program Option.
10. CELLULAR ↑↓ Sim Identity	“SIM Identity” is displayed. Press the HELP Button. The Medi-Link Cellular unit displays the SIM Module numbers & cannot be changed but are there for your reference only. Press the CANCEL Button to move to the next Program Option.
10. CELLULAR ↑↓ Mode	Mode (default = 5) NB: Do not adjust, refer to SmartLink if required.
10. CELLULAR ↑↓ In Level	In Level (default = 0) NB: Do not adjust, refer to SmartLink if required.
10. CELLULAR ↑↓ In Attenuate	In Attenuate (default = 255) NB: Do not adjust, refer to SmartLink if required.
10. CELLULAR ↑↓ Out Level	Out Level (default = 0) NB: Do not adjust, refer to SmartLink if required.
10. CELLULAR ↑↓ Out Attenuate	Out Attenuate (default = 127) NB: Do not adjust, refer to SmartLink if required.
10. CELLULAR ↑↓ Sidetone Gain	Sidetone Gain (default = 3) NB: Do not adjust, refer to SmartLink if required.
10. CELLULAR ↑↓ Network AMR	Network AMR (default = Disable) NB: Do not adjust, refer to SmartLink if required.
10. CELLULAR ↑↓ Network Rate	Network Rate (default = 1) NB: Do not adjust, refer to SmartLink if required.
10. CELLULAR ↑↓ Signal Quality	“Signal Quality” is displayed. Press the HELP Button. The Medi-Link Cellular unit displays the Cellular Signal Quality eg. 25 (2 to 32 & 99 No Connection) and cannot be changed but are there for your reference only. Press the CANCEL Button to move to the next Program Option.
10. CELLULAR ↑↓ Default	Default – Default all the PREFERENCES Programming Options Press the CANCEL and HELP Buttons at the same time. The Medi-Link Cellular unit will beep 3 times to acknowledge that ALL the Cellular Programming Options has been Defaulted. Press the CANCEL Button to move to the next Program Option.

9. UpDownload Programmer Software

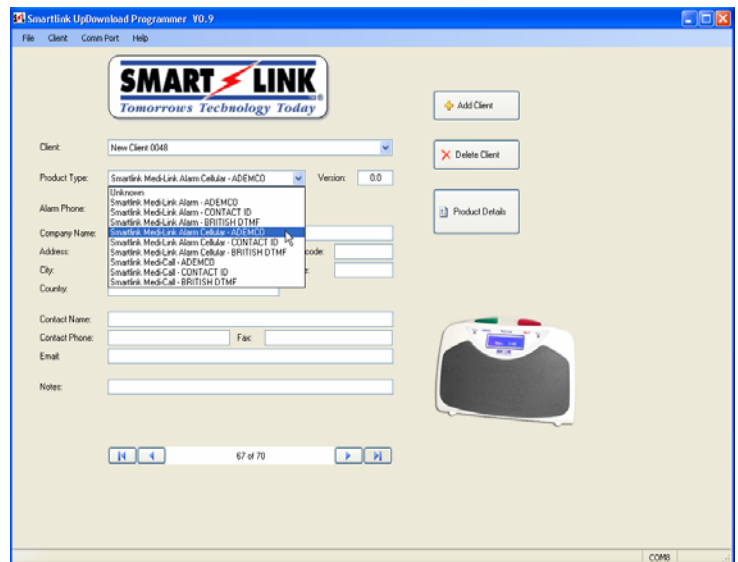
NB: To use the UpDownload Programmer Software, the SmartLink Medi-Link Cellular unit can either be programmed via the External Modem or Direct DB9 Programming Lead (Part No. 450-185). For more information, refer to the SmartLink UpDownload Programmer Installation Manual.



a. Using the Direct Programming Lead (Part No. 450-185):

b. External Modem (Fax Defeat) – ensure that the PSTN (Land Line) connected to the External Modem has the **Caller ID Enabled**. The Medi-Link Cellular unit will Call Back to established the link for the UpDownload Programmer.

Medi-Link Cellular ADEMCO
Medi-Link Cellular CONTACT ID
Medi-Link Cellular BRITISH DTMF



10. Technical Information Reference

1. The Medi-Link Cellular Unit will enter Sleep Mode after a period of time to conserve battery life. If an alarm is activated there will be a slight delay to transmit message while system wakes and scans the airways.
2. The 1st signal sent through during an alarm will be in normal fast DTMF transmission mode. If the Medi-Link Cellular Unit cannot get through on the 1st attempt it will automatically switch to Network Generated DTMF and toggle between the two until the alarm has gone through or all dialler attempts are exhausted. The reason for the Network Generated DTMF is for redundancy and to stay ahead of any current and future mobile network updates. In most instances control room receivers will have to be updated and timings adjusted to be able to receive Network generated DTMF in the future as it is a slower but precise transmission mode. In most instances control rooms will be able to monitor these Medi-Link Cellular Units on existing receivers quite happily but this should possibly be looked at in the normal course of control room development within the next couple of years to keep ahead of network developments.



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To the best of our knowledge, the information contained in this manual is correct at the time of print. SmartLink International Pty Ltd reserve the right to make changes to the features and specifications at any time without prior notice in the course of product development.