

TelecomFM GSMRoute Bri



Unmanaged Programming Guide

Version 5 – September 2007

Document Control

Date	Document Version	Change
April 2003	1	Release of document
July 2005	1	1. GSM call home added. 2. Dual MSN. 3. Independent routing on network 7 (for version 1.10 onwards)
Jan 2006	2	Notices added
April 2007	3	Remote Trace & Configuration over GSM, Advanced Routing options, (for versions 1.17 onwards)
August 2007	4	Remote firmware download over GSM (version 2.0 onwards)
September 2007	5	Modified for new version of Unmanaged Programmer

Notices:

TelecomFM shall accept no liability for any error or damages of any kind resulting from the use of this document or the equipment it relates to.

The wording in this document may change from time to time. Please refer to the TelecomFM web site www.telecomfm.co.uk for the latest release.

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2 Hardware & Software Requirements

Windows NT, 2000, XP (Latest Service Packs where applicable).

PC Hardware as required for operating system.

9 pin RS232 COM Port

300MB Hard Drive Space

3 Installation of Programmer

From CD

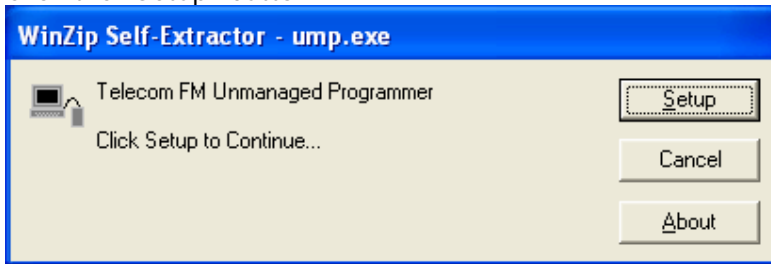
1. From CD

Insert the CD – the CD will autorun and the menu is displayed (if the menu is not displayed then double-click on “My Computer”, double-click on your CD Drive letter and then double-click the “autorun.exe” file). Click on “Install Unmanaged Programmer” to start the installation.

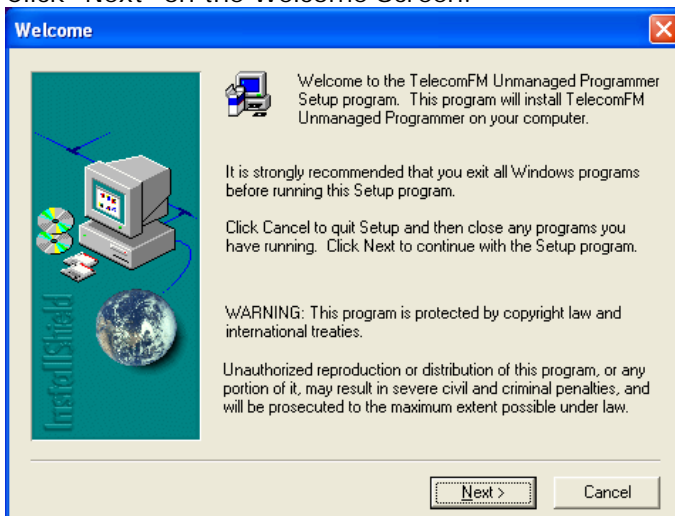
Or From Download

Browse to the folder that you downloaded the Unmanaged Programmer to and double-click the “ump.exe” file to start the installation.

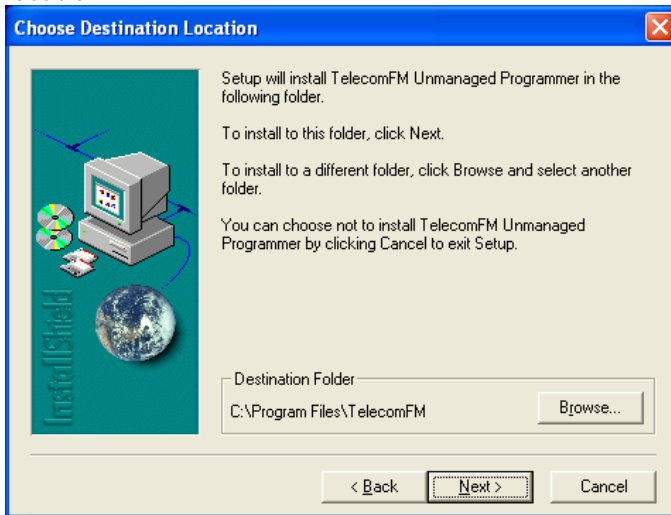
2. Click the “Setup” button:



3. Click “Next” on the Welcome Screen:



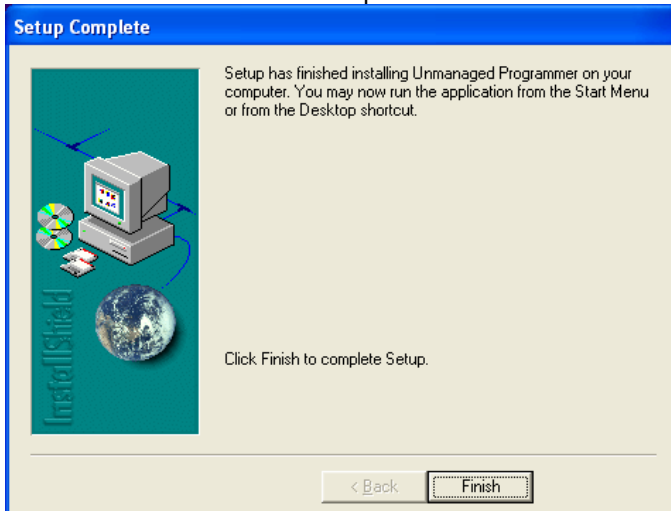
- Click "Next" to install to the Default location or click the Browse button to choose a different location:



- Click "Next" to begin the installation:



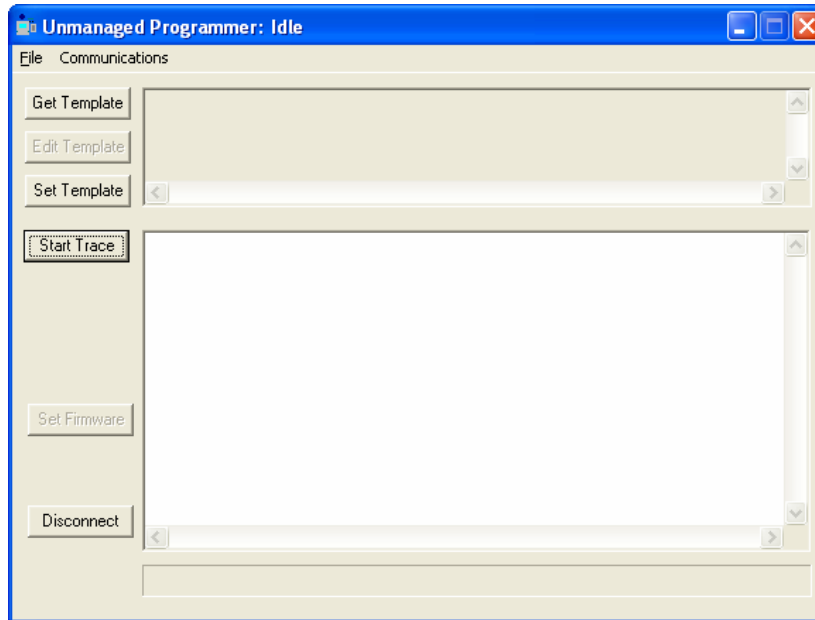
- When the files have been copied click the "Finish" button to exit the installer:



4 Starting the Programmer

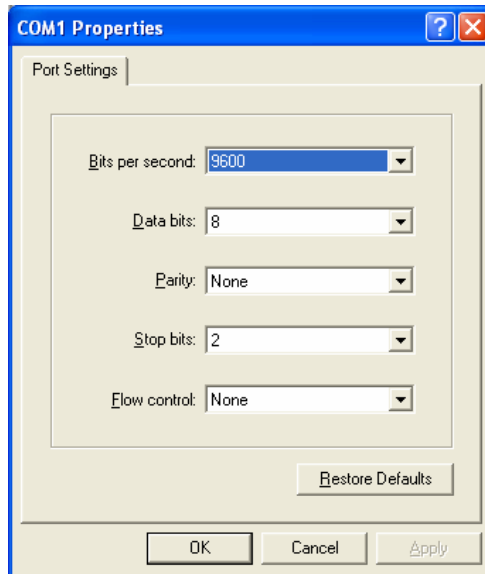
1. Click on the **Start** Menu, **Programs** (or **All Programs**), **TelecomFM, Unmanaged Programmer**

The following screen will be displayed:



2. Connect the mains power cable to the GSM Route Bri and wait for the GSM Route Bri to initialise.
3. Connect the RS232 cable to the Right hand Bus Port connection on the GSM Route Bri (See Fig 2 of the Installation & User Guide) and the other end into the serial port of the Laptop or P.C.

- Click on the Communications menu and select the COM port that the GSMRoute is connected to (if the PC has only 1 serial port it is normally COM1). Select properties and adjust the port settings as in the diagram below:



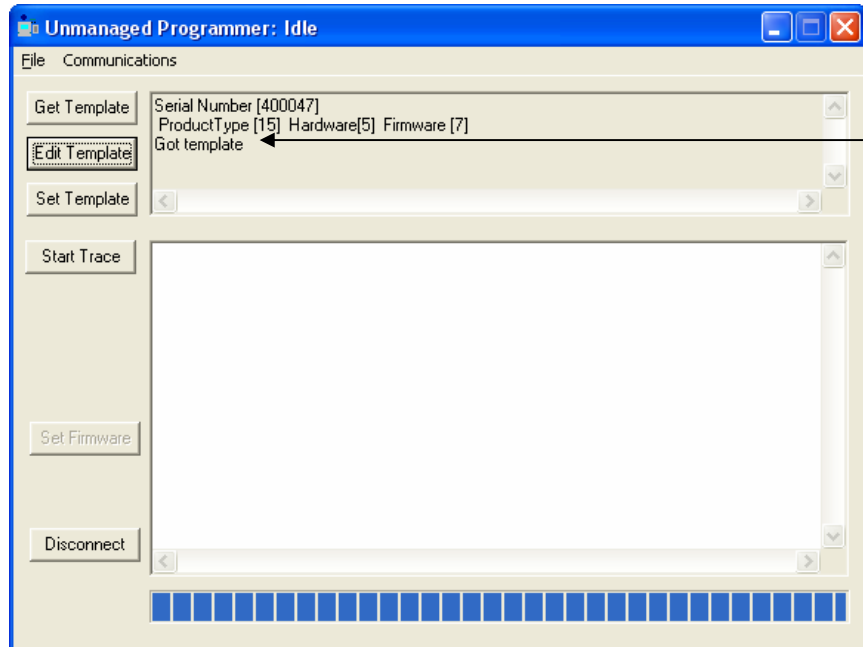
Bits per second: 9600
Data bits: 8
Parity: None
Stop bits: 2
Flow control: None

- The Unmanaged Programmer software is now ready for use.

5 Getting Template

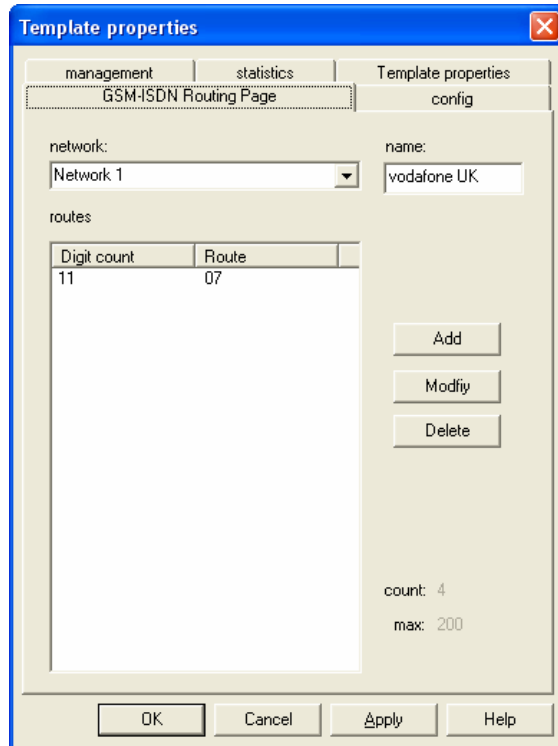
Click on the "Get Template" button. The Programmer will now retrieve the Dialler Image from the unit. The IDENTITY of the product should be displayed giving detail of the Product Type, Serial Number, Firmware, Hardware.

The display will show Got template if successful.



6 Edit Template

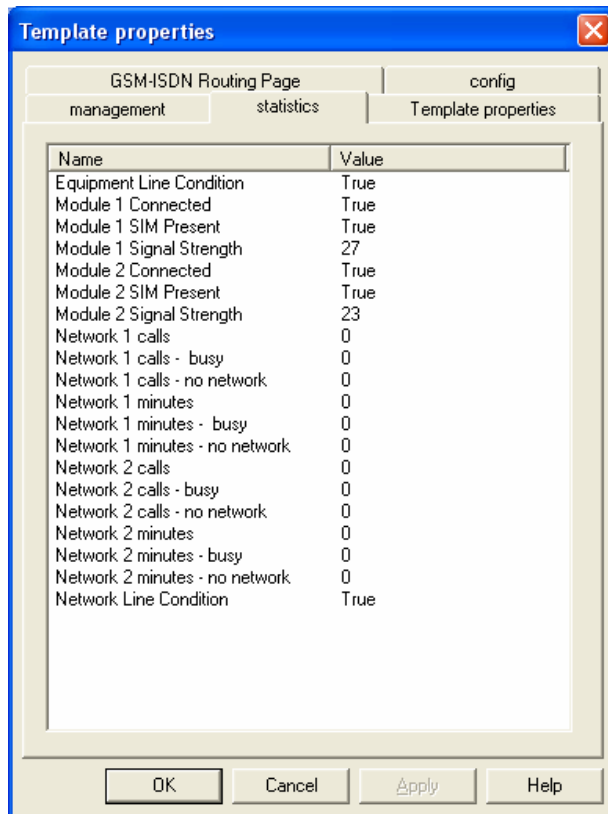
Click on the “Edit Template” Button and the Template Properties screen will appear:

The screenshot shows a dialog box titled "Template properties" with a close button (X) in the top right corner. The dialog has five tabs at the top: "management", "statistics", "Template properties", "GSM-ISDN Routing Page", and "config". The "GSM-ISDN Routing Page" tab is selected. Below the tabs, there are two input fields: "network:" with a dropdown menu showing "Network 1", and "name:" with a text box containing "vodafone UK". Below these is a table with the heading "routes". The table has two columns: "Digit count" and "Route". It contains one row with the values "11" and "07". To the right of the table are three buttons: "Add", "Modfiy", and "Delete". Below the table, it says "count: 4" and "max: 200". At the bottom of the dialog are four buttons: "OK", "Cancel", "Apply", and "Help".

Digit count	Route
11	07

There are 5 tabs available by clicking on the headings on the top of the screen – GSM-ISDN Routing, config, management, statistics and Template properties. These options are described on the following pages:

6.1 Statistics Tab



Name	Value
Equipment Line Condition	True
Module 1 Connected	True
Module 1 SIM Present	True
Module 1 Signal Strength	27
Module 2 Connected	True
Module 2 SIM Present	True
Module 2 Signal Strength	23
Network 1 calls	0
Network 1 calls - busy	0
Network 1 calls - no network	0
Network 1 minutes	0
Network 1 minutes - busy	0
Network 1 minutes - no network	0
Network 2 calls	0
Network 2 calls - busy	0
Network 2 calls - no network	0
Network 2 minutes	0
Network 2 minutes - busy	0
Network 2 minutes - no network	0
Network Line Condition	True

The Statistics screen displays the configuration of the GSM-Route Bri as in the diagram above. A summary of the above screen for the GSM-Route Bri that is being analysed in this example is as follows:-

Equipment line condition shows True if detection of terminal equipment is present, and False if not detected.

Module 1 and Module 2 will show True if the Siemens module is detected, and false if not detected.

Module 1 SIM detected and Module 2 SIM detected – A TRUE value indicates that a SIM Card is inserted in the corresponding module SIM holder. (In the example above the value is True therefore SIM Cards have been detected).

Module 1 signal strength and Module 2 signal strength – This value indicates the signal strength measured by each of the GSM modules. (A value of 10 or more is acceptable).

Network 1 calls and Network 2 calls show the amount of calls made over the chosen network.

Network 1 calls-busy and Network 2 calls-busy, show the amount of calls that went over the PTT due to the Modules being busy.

Network 1 calls-No network and Network 2 calls-No network show the amount of calls due to no network coverage.

Network 1 minutes and network 2 minutes show the amount of minutes routed over the chosen network.

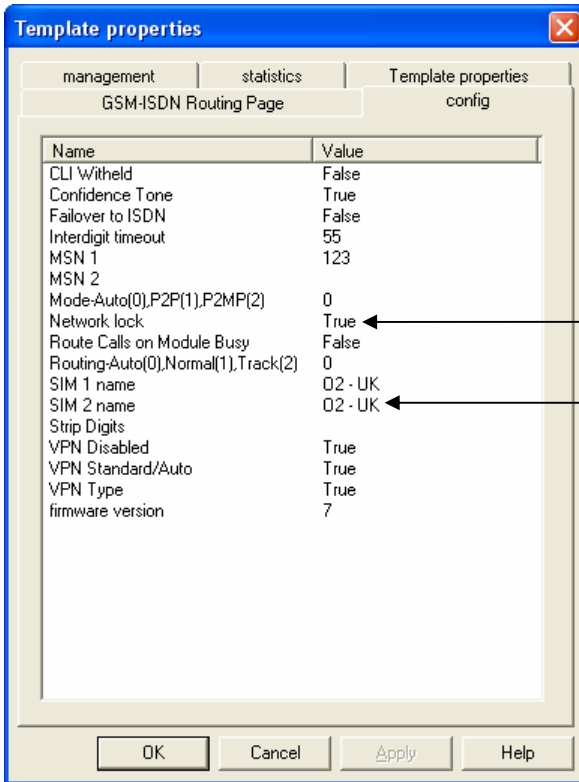
Network 1 minutes-busy and Network 2 minutes show the minutes lost due to the modules being busy on other calls.

Network 1 minutes-No network and Network 2 minutes-No network show the minutes lost due to no network coverage.

Network line condition shows True if detection of ISDN, and False if not detected.

6.2 Config Tab

This screen allows changes to be made to the configuration of the unit.



NOTE
Set to TRUE for
network Lock

"If Network Lock is set to True"
you are required to insert
Network names in Routing Page
(See Page 15)

CLI Withheld- TRUE or FALSE allows the user to stop the CLI being presented when making a GSM call. (TRUE=CLI not sent, FALSE=CLI sent)

Confidence Tone- When set to TRUE the user will hear a confidence tone indicating that the call is being routed over the GSM network. When set to FALSE no confidence tone will be heard.

Failover to ISDN- The product can be configured to allow calls that would normally be routed to the GSM network to be re-routed back to the ISDN network if the GSM call fails

Interdigit timeout- allows time between digits dialled before call is made. The scale is 50mS Slots. A value of 50 will = 2.5 seconds.

MSN 1 & 2- The product can be configured to allow single numbering or dual numbering MSNs.

Mode selection- Sets the GSM-Route Bri to allow for ISDN protocols.

Auto (0) automatically detects if the ISDN connected is P2P or P2MP.

P2P (1) forces the GSM-Route Bri to configure for Point to Point.

P2MP (2) forces the GSM-Route Bri to configure for Point to Multi Point.

Network Lock- This feature allows for the modules to recognise only the Network SIM installed if set to TRUE.

Route calls on module busy- The product can be configured to allow calls that would normally be routed to the GSM network to be re-routed back to the ISDN network, if the GSM modules associated with that route are all busy.

Routing- Sets the GSM-Route Bri to allow for ISDN recognition.

Auto (0) automatically detects if the ISDN is connected. If no ISDN is detected the GSM-Route Bri will automatically configure for TRACK Mode.

Normal Mode (1) forces the GSM-Route Bri to configure for ISDN connection.

Track Mode (2) forces the GSM-Route Bri to configure for No ISDN connection.

Simple Routing (3) When set the GSM-Route Bri routes all calls to GSM depending on the "B" channel specified by the PBX. "B1" is routed to module 1 and "B2" is routed to module 2. In this mode the routing table is ignored.

SIM 1 name (Network Name) -
SIM 2 name (Network Name) -

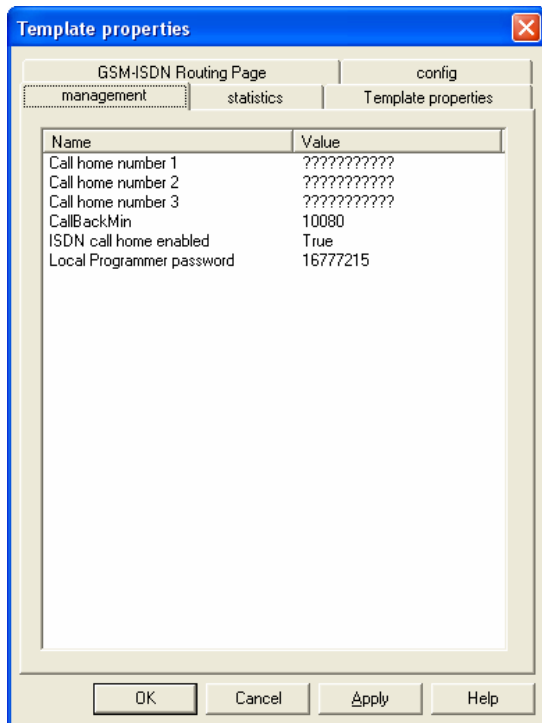
SIM Name is designed to work with Network Lock allowing only the correct network SIM to be installed

Strip Digits- The product can be configured to strip upto 4 digits that the PBX may have Programmed. This is also known as 'Least cost Routing'

VPN Disable Default TRUE -
VPN Standard/Auto Default TRUE -
VPN Type Default TRUE -

VPN operation is designed to operate with special features on GSM networks to provide their customers with a Virtual Private Network

6.3 Management Tab



The default settings are as follows:

Call home number 1 to 3- You can configure the unit for upto 3 different call home numbers if managed by a Digital Management Centre. It should have no number entered if not managed.

Call-Back Min- Should have no value entered if not managed by a Digital management Centre

ISDN call home enabled- This can be set True if an ISDN number is set in the Call home number 1 to 3, or set to false if the number is a Mobile number. This setting will have no effect if no call home numbers have been entered.

Local Programmer password- Allows for a password number to be used ranging from 0 to 1677215. Note- If the password is lost, you will need to contact your supplier for support and pricing.

6.4 GSM-ISDN Routing Tab

This screen allows changes to be made to the GSM-Route Bri Routing tables

Management Number – This is not required for Locally Programmed Units.

GSM Network 1 to 5 – This is where you enter the GSM-Route Bri Routing codes for networks you have chosen.

Network 6 is not used.

Network 7 is used for Module Independent allowing two different network operators to follow the same routing pattern.

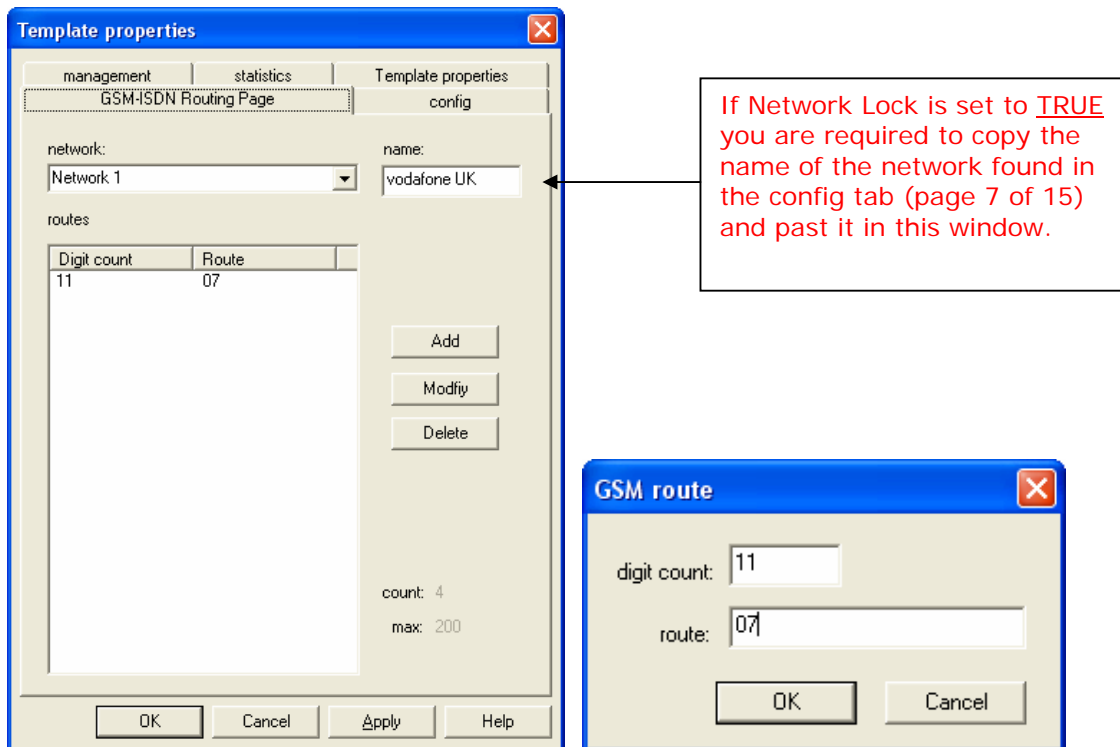
Name – This is the name of the network Sims you have chosen

To enter the GSM-Route Bri Routing Codes select Network 1 . Click on the add button and a second box appears (see below). Enter the length of digit string into the digit count field. (i.e. if an example of a mobile number was 07770123536 then this value would be 11).

Now enter the mobile operators prefix codes (i.e. in the example below this would be 07 (Up to max 6 digits). Continue entering all the GSM codes for the Network Operator being used.

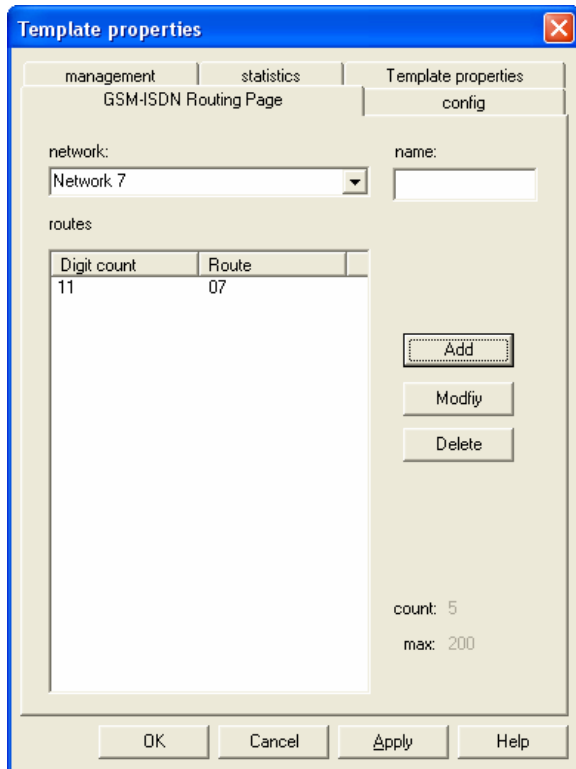
Follow the above procedures for Network 2 to 5 if different Networks SIMS are to be Installed

Once completed click on the "OK" button to save your settings.



Module Independent using Network 7.

Allows two different network operators to follow the same routing pattern.

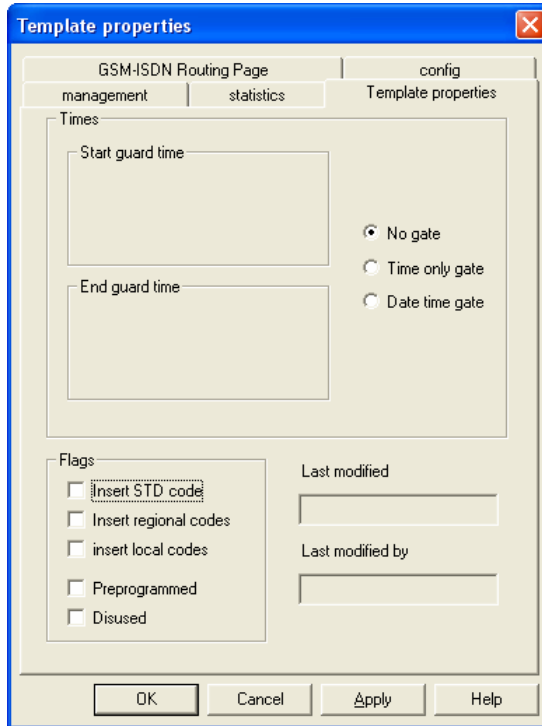


Follow the same procedures on page 15 for setting up the routing but this time select network 7 and enter your routing.

If you require Network Lock, then set network lock to TRUE in the config tab (see page 12) then copy and past the Network names in the name windows of Network 1 and Network 2.

6.5 Template Properties

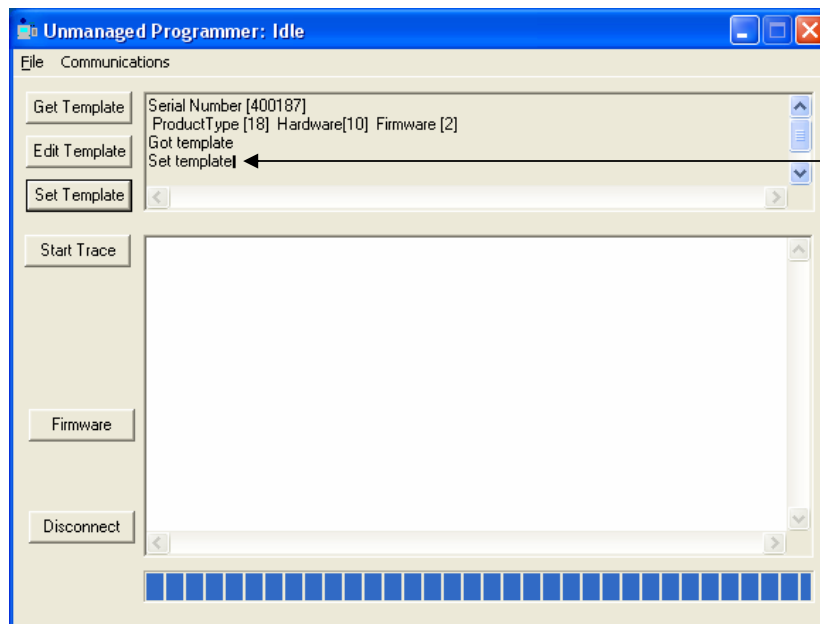
Template properties are only used when the unit is managed via an Digital management Centre.

The screenshot shows a dialog box titled "Template properties" with a blue title bar and a close button (X) in the top right corner. The dialog is divided into several sections. At the top, there are tabs for "GSM-ISDN Routing Page", "management", "statistics", and "config". The "config" tab is selected, and within it, the "Template properties" sub-tab is active. The main area is titled "Times" and contains two text input fields: "Start guard time" and "End guard time". To the right of these fields are three radio button options: "No gate" (which is selected), "Time only gate", and "Date time gate". Below the "Times" section is a "Flags" section containing five checkboxes: "insert STD code" (checked), "Insert regional codes", "insert local codes", "Preprogrammed", and "Disused". To the right of the flags are two text input fields labeled "Last modified" and "Last modified by". At the bottom of the dialog are four buttons: "OK", "Cancel", "Apply", and "Help".

7 Set Template

NOTE: Before you Implement any changes, make sure you have read and understood the settings you are about to change in the GSMRoute.

When all the adjustments to the dialler image have been made, click on the Set Template button. On completion of a successful download, the status screen will display: Set template



8 Testing the unit

Go off hook on the telephone and access one of the trunks connected. Dial one of the GSM prefixes that have been set in the Routing table.

If correct at this stage you will receive a confidence tone when the digit count has recognised a match.

9 Remote Trace and Configuration Over GSM

Available in version 2.0 and higher ONLY

The remote access over GSM allows the user to remotely access the configuration of the GSM-Route Bri and to capture all ISDN messages and Hayes commands to GSM modules.

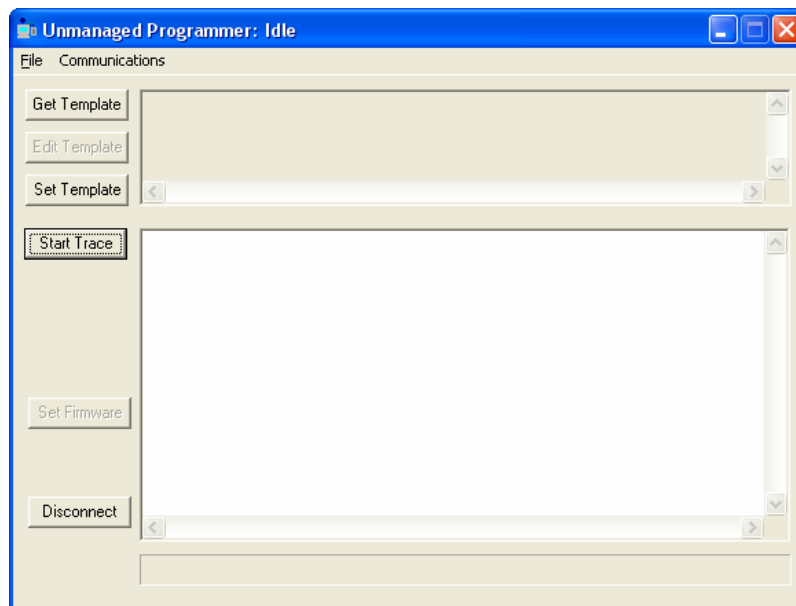
To gain access to GSM-Route Bri remotely you will need a Data enabled SIM in the remote GSM-Route Bri and have access to the data number.

Tools required Locally:

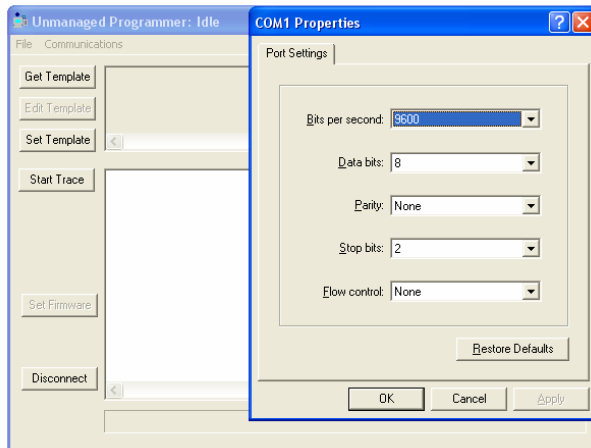
Internal or External Modem that supports the standard AT command set (for example, the TelecomFM CellRoute-GPRS) installed under Windows Phone and Modem Options.

Open the Unmanaged Programmer on your Laptop or P.C. by double-clicking the shortcut on your desktop or in your Start Menu

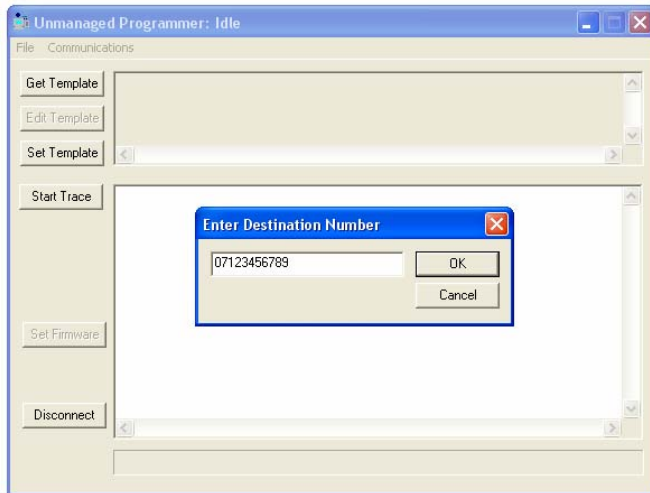
You should now see the following



Select the Modem that is to be used under the Communications tab and set the COM port properties as shown here (9600-8-N-2-N)



Select either Get Template or Start Trace that will open Enter Destination Number box. Enter the Data SIM number of the remote GSM-Route Bri and press OK.



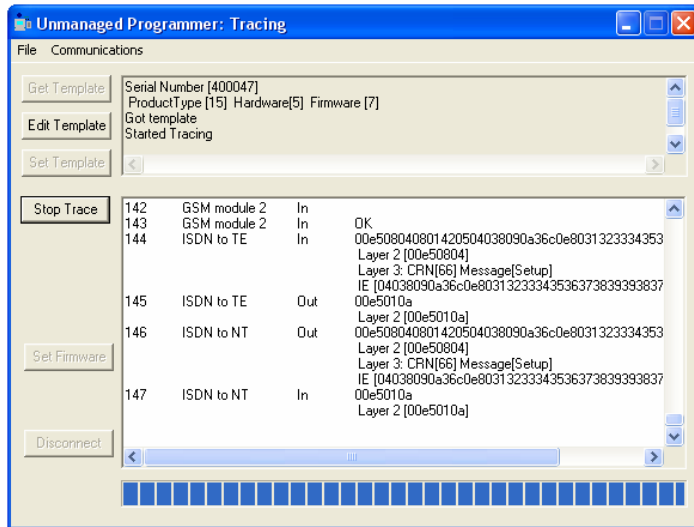
Once connected the Unmanaged Programmer will either Get Template or Start Trace subject to what was required before the enter destination number box appeared.

If Get Template was requested you will have access to the same set of facilities you would normally get when using the Unmanaged Programmer locally. Refer to pages 6 to 12.

Note: You will find due to the Data being passed over the GSM network it takes a little longer to upload and download templates.

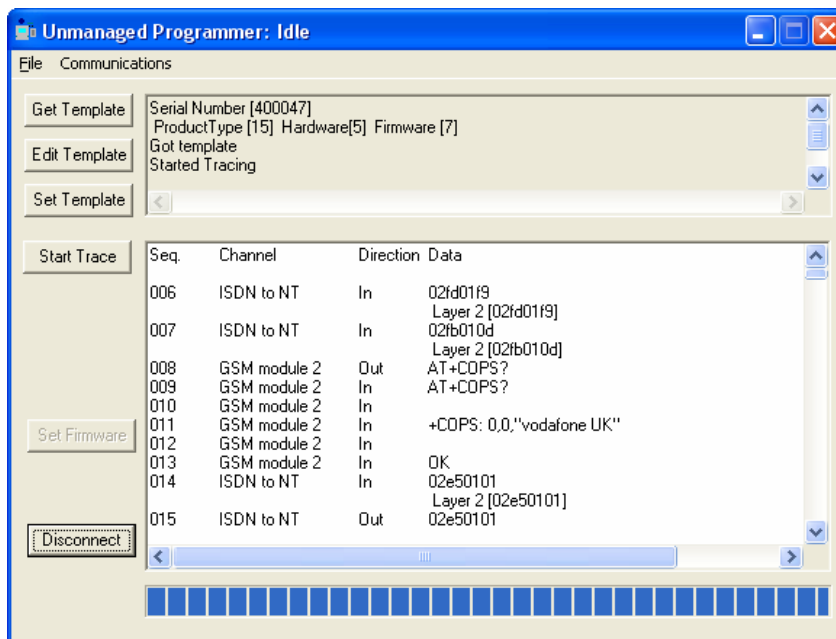
If Start Trace was selected you will have access full ISDN messages and Hayes commands to GSM modules.

At any stage you have the option to Stop the Trace and Get template or Set templates.



To capture the Trace to file. Select File and click save that will give you the option to save in your preferred location.

When you wish to close remote access you are required to press Disconnect that will close down the remote access.



Note: You must click the Disconnect button to end the data call – remember that data calls are usually more expensive than voice calls!

10 Remote Firmware download Over GSM

Available in version 2.0 and higher ONLY

The remote Firmware download over GSM allows the user to remotely upgrade the BRI without the need of engineering personnel.

The firmware is controlled by TelecomFM and will only be available via its partners or if given access via the TelecomFM web site.

To gain access to GSM-Route Bri remotely you will need a Data enabled SIM in the remote GSM-Route Bri and have access to the data number.

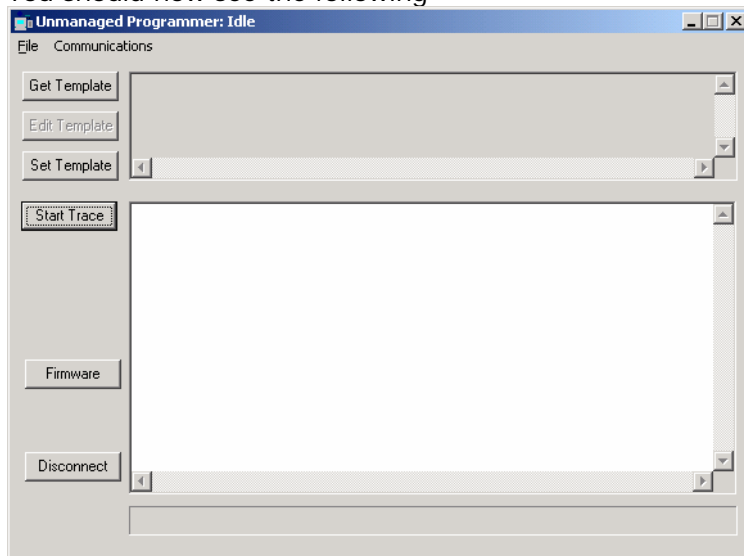
Note: While in Firmware download the BRI cannot make or receive calls.

Tools required Locally:

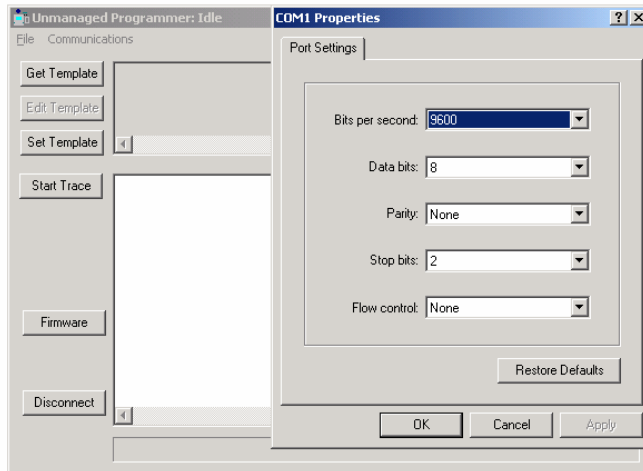
Internal or External Modem that supports the standard AT command set (for example, the TelecomFM CellRoute-GPRS) installed under Windows Phone and Modem Options.

Open the Unmanaged Programmer on your Laptop or P.C. by double-clicking the shortcut on your desktop or in your Start Menu

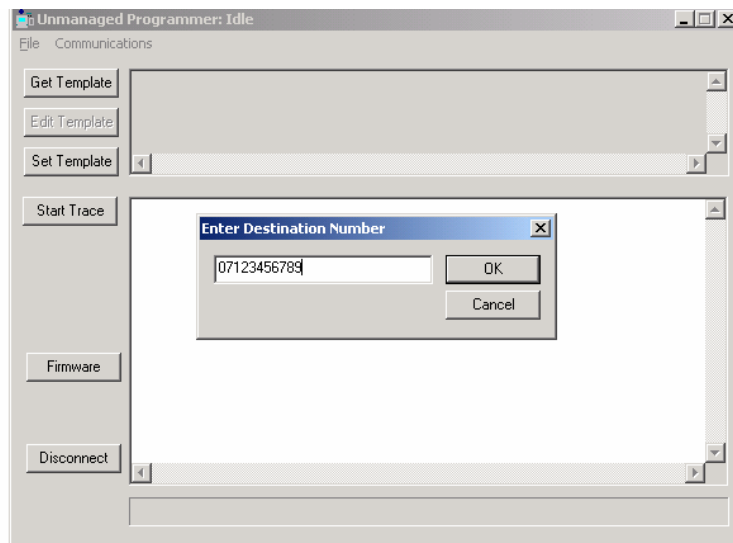
You should now see the following



Select the Modem that is to be used under the Communications tab and set the COM port properties as shown here (9600-8-N-2-N)



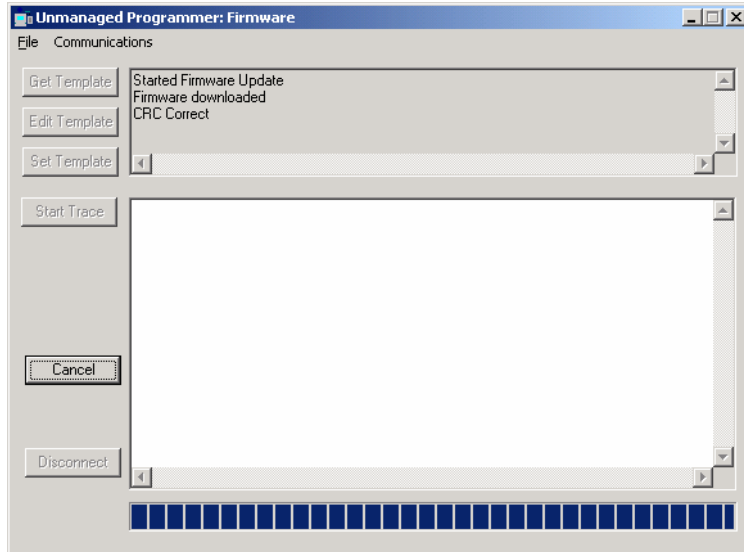
Select Firmware tab and locate the Firmware file to be downloaded into the BRI. Once the file as been opened you will see the Enter Destination Number box appear. Enter the Data SIM number of the remote GSM-Route Bri and press OK.



Once connected to the remote BRI the Unmanaged Programmer will change from Idle to Firmware and will start to download. The firmware progression can be monitored by the blue bars from left to right. This may take several minutes to complete subject to the speed of the network supplier.

Note: If for any reasons the download fails the BRI will revert to its original firmware.

Once completed you should see the following.



When the Firmware download is complete the connection will disconnect and you will see firmware downloaded shown in the screen shot above.

Note: – remember that data calls are usually more expensive than voice calls!