

## Followit Trouble Shooting Guide V2.9

(For versions 1.13 or later)

The Followit range of locator tracking units are very reliable. Usually the wrong phone No. or initialise command has been used or simply the sim card has run out of credit. Please follow this step by step guide:

### Step 1: Check you have enough credit on the sim card

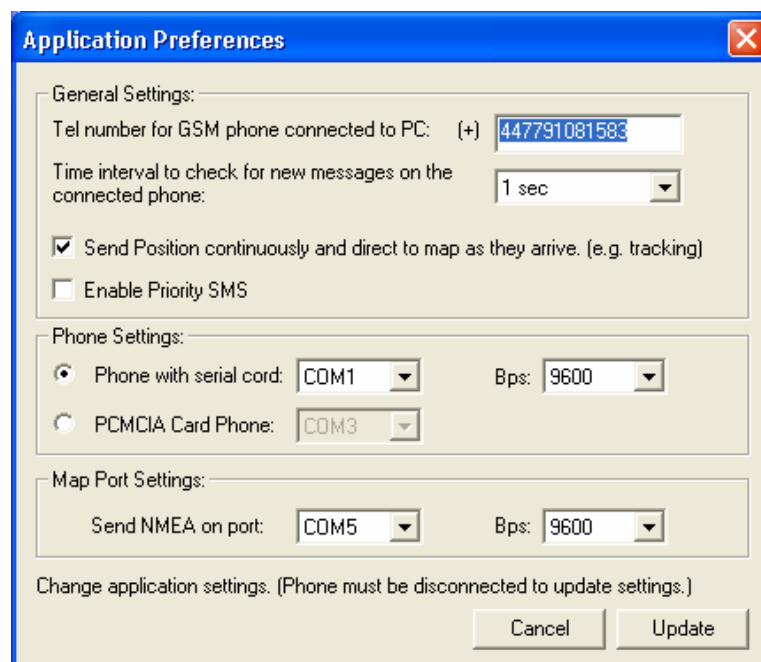
Please check the sim card has enough calling credit especially if it is a prepay sim card. Examples of how to do this for Vodafone and Orange are as follows:

- Vodafone: this can be checked on the internet, if you have already registered the sim card.
- Orange: this can be check either by calling customer services on tel: 07973 100 451 or topping up using a pre-registered sim card using another Orange phone. At the end of a successful top up your new balance will be mentioned.

### Step 2 Check the correct PC phone No. has been used

If the phone No. entered in Setup/Preferences for 'Tel number for GSM phone connected to PC' is even one digit wrong, the locator unit will still send a MODE SET OK reply to commands, but the position data will not be received because it will be sent to the wrong tel No.

The Initialise command is used to program the locators (tracking units) with basic information such as the number of the telephone connected to the PC. Click on Setup/Preferences and check the 'Tel No. for GSM phone connected to PC'. Please ensure the international telephone format has been used for the No. ie it should begin with 44..... The 'Tel No. for GSM phone connected to PC' programmed in preferences will be automatically used in the Initialise command, but can be overwritten when sending an Initialise message.



**Step 3 Check the correct tel No. has been used for the Followit Locator (tracking unit).**

If you see the following error message when you try and send a message, it means one of the following:



- a) you have typed the phone No. for the tracking unit incorrectly. There may be one digit missing or too many.
- b) you have not included the international dialling code (44 for the UK) at the beginning of the phone No.
- c) If using a PC card such as GC79 or GC75, the modem software has not been opened.
- d) If using a phone connected by cable the cable has become disconnected
- e) no credit on the sim card in the phone.

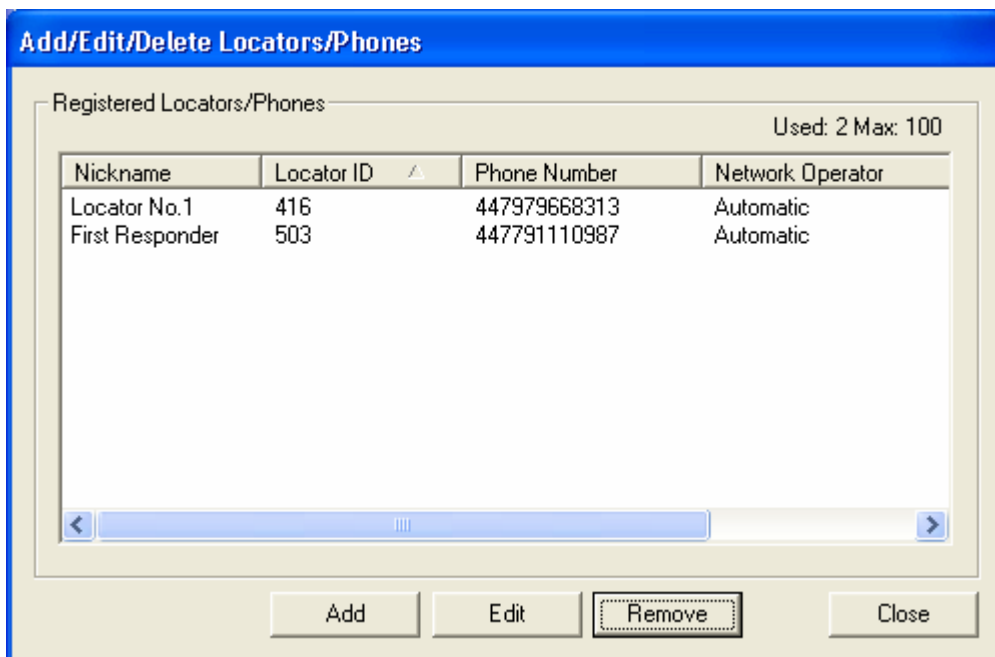
If none of the above do not fix the problem restart your PC.

For issues a) or b) perform the following:

Click on Setup, then Add/Edit/Delete Locators/Phones.

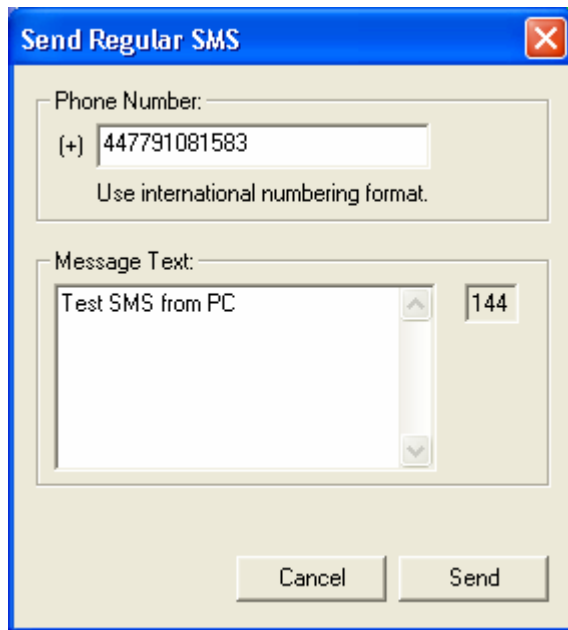
Check the 3 digit ID No. for the Locator is correct

Check the telephone No. for the Vanguard tracking unit begins with 44 and is correct.



**Step 4 Send a test SMS message from your PC**

- Connect your GSM phone (Nokia 6310 or Sony Ericsson T series) to the PC's RS232 port using the data cable supplied
- Click on the SMS button in the main control panel.
- Enter another GSM phone No. starting with the international prefix 44.
- Write a test message in the message text window
- Click send.



**Step 5. Check the amber light is flashing on the Locator (tracking unit).**

On one side of the unit there are two small holes. An amber light should be flashing every 2 seconds from one of these. This will confirm the unit is in contact with the GSM network (e.g. Vodafone or other operator's network).

If the amber light is on all the time, this means the unit has not established contact with the GSM network. Please check the following:

- a) you may be operating in an area of weak GSM signal strength e.g. you are in a building or countryside
- b) the GSM antenna is not properly connected. Check the GSM antenna connector is firmly pushed in. Check the centre pin of the GSM connector is not damaged. Please avoid connecting and disconnecting the GSM antenna many times as the GSM connector centre pin can become damaged or the connector inside the locator can become broken off from its PCB mounting.
- c) The sim card is not making a good contact in the sim card holder. Remove the sim card, check the gold contacts on the sim card are clean and put it back in the sim card holder.

If no amber light is shown at all, this means:

d) no power is connected

or for units with a Followit Power Supply Battery:

e) the battery is flat or

f) you have programmed the unit into sleep mode with a wake up period defined in the initialise command/ SMS check interval. If you have access to a unit, you can wake it up by removing the Power supply battery unit and then reconnecting it. The unit will wake up for 3minutes during which time you should send a new Initialise command if you want to change the state to Active.

### **Step 6 For Battery powered units**

If the battery unit is totally flat, it needs to be recharged separately from the tracking unit. Split the black unit into its two halves ie separate the Power supply battery apart from the GSM/GPS locator (tracking unit) with the sim card. Charge up the battery unit separately until the red light goes out. Then reassemble the battery unit and the tracking unit.

The battery unit will be totally flattened if it is left permanently connected to the GSM/GPS tracking unit and with the GPS unit active the whole time for >12 hours with the battery exhausted. (GPS unit is set to active or standby in the Initialise command). When the battery unit is totally flat it needs to be recharged slowly with a low current. If the GSM/GPS unit is still connected it will take all this 'low current' and the battery will not charge properly. Separate the battery unit and recharge it using the mains charger or other 12V supply.

### **Step 7 Explanation of Err1 message**

If the tracking unit returns an ERR1 message to the PC, this is caused by the tracking unit being set up under Add/Edit/Delete Locators with the wrong Locator (firmware) version. The system defaults to version 1.13, but if version 1.01 is selected, initialise commands will be replied to with an Err1 message.

### **Step 8 Check the sim card in the tracking unit is not full of SMS or MMS messages**

Sim cards can typically store a maximum of 15 SMS messages, although certain sim cards can store more. If one doesn't delete the SMS messages a sim card can fill up and will then not accept any new SMS messages. If one tries to use a sim card which is 'full' in a tracking unit, the tracking unit will not be able to receive any new commands. The only solution for this is to remove the sim card from the tracking unit, place it in a phone and delete preferably all the stored messages. Messages sent to the sim card whilst in the tracking unit will be deleted automatically.

Please also delete any MMS messages on the sim card before using in the locator.

### **Step 9 The unit returns a position which is not accurate.**

a) Each time the locator (tracking unit) is powered up it must first download a data base called the Almanac. Until this is complete the GPS will not be able to give a position. Ideally the GPS receiver should have a good view of the sky for 15 minutes immediately after power up e.g. it is at the end of a garden away from large buildings with the Sarantel antenna pointed straight up or with the standard GPS antenna flat. With a good view of the sky the unit should be ready to give the first position after 4 or 5 minutes with the standard GPS antenna (Followit-Automotive) and 15-20minutes



with the Sarantel GPS antenna (Followit Surveillance, Personal Safety), but this can take longer if the sky view is restricted. In the worst case the unit cannot download the database and will only report back the last valid position (ie completely out of date) from its flash memory. If possible move the tracking unit somewhere with a clear view of the sky. Disconnect and then reconnect the battery pack (or external power in case of non battery powered units), wait 5 minutes (Followit Automotive units) or 15-20minutes (Personal Safety or Surveillance units) and try again with a 'Find it' or 'Track command'. After the unit has downloaded the almanac it will be able to report positions in more difficult environments e.g. with a restricted view of the sky or the GPS antenna pointing in a less than ideal direction. In fact the tracking unit is extremely sensitive providing it has a strong first fix.

b) The tracking unit has been powered up for sometime and previously given good fixes but is now reporting positions with large errors. If possible check (i) how good the view of the sky is for the GPS unit and (ii) for portable units the orientation of the GPS antenna.

**View of the Sky:** as an example if the tracking device has been placed under the dashboard of a car and the car is then placed right next to and facing a tall building, the GPS unit will have an extremely restricted view of the sky. In these circumstances the unit may pick up reflections of GPS signals which have a longer path length from the satellite and the tracking unit will report a position with a large error.

**Orientation of the GPS antenna:** for portable units such as the Personal Safety and Surveillance units, please check the orientation of the Sarantel GPS antenna. This gives best performance if pointed vertically up and worst performance if pointed vertically down. For permanently mounted Followit Automotive units, please note if the standard GPS antenna is placed horizontal, but right next to a large vertical sheet of metal (for example the back door of a van), this will also produce poor results.

**Step 10 Please check the phone/GSM PC card connected to the PC.**

The following phones/PC cards have been checked and work with the Tel Trak tracking software.

GSM phones connected to an RS232 port on the PC via a data cable  
Nokia6310i, Sony Ericsson T610,T300,T68i, T65, T39,T28, R520m

GSM PC cards for laptops

Windows XP, 2000,ME

Sony Ericsson GC79/GC75 PC cards

Windows 98,ME,2000

Nokia Card phone 2.0

Other phone/PC combinations may not work with the tracking software because each GSM phone manufacturer uses slightly different AT commands.

**Step 11 Position replies from the tracking sometimes take several minutes**

Please check if you are using sim cards from different operators for the tracking unit and the phone connected to the PC. Communication to/from the tracking units is fastest if the sim card in the tracking unit is with the same operator as the sim card used for the PC phone: for example if they both use Vodafone sim cards.

**Step 12 The tracking unit (locator) does not respond to commands and no amber light is flashing on the unit.**

One of the following is the case:

- a) dc power has been disconnected (for units fitted with a Power supply and no battery).
- b) the battery is flat and no dc power is connected (for units with a power supply battery)
- c) the tracking unit has been place in sleep mode with a previous Initialise command. The tracking unit will wake up after a time period hhmmss, specified by you as the SMS check interval (hhmmss hh= hours, mm= minutes, ss= seconds) in the last Initialise command sent to the tracking unit. The amber light which confirms communication with a GSM basestation will not flash in sleep mode until the unit wakes up. It wakes up at the specified time interval for approximately 1 minute and appears completely dead in the intervening interval. If you have access to the unit one can remove the battery pack and then reconnect it. This will wake the unit up for approximately 10 minutes, so one could send a new command to it during this period, after which it will go back to sleep and wake up for 1 minute after the time interval specified in the last initialise command. Please remember the PC is not connected in real time to the tracking unit, so although the Initialise command on the PC defaults to GPS condition = Active mode the tracking unit will be programmed with the settings of the last Initialise message you sent it.

**Step 13 All the replies from the unit show LV position which are out of date**

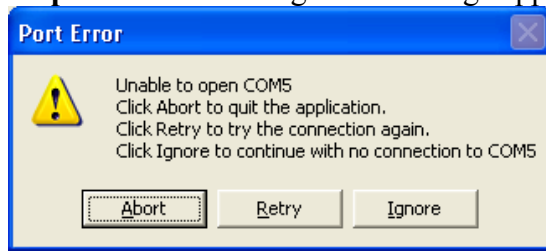
If possible check the following

- a) has the unit only been powered up. If yes ensure the unit is in an area with a wide view of the sky middle of an open air car park and wait 5 minutes for Followit-Automotive and 15 minutes in case of a Sarantel antenna.
- b) is the unit inside a building or in a place with a restricted view of the sky. If yes wait until it moves to somewhere with better visibility of the sky.
- c) Check the GPS connector is not damaged, and that there are no sharp bends in the RF cable. Take the GPS connector off the locator and check if the centre pin in the RF cable has not been bent or broken off entirely.
- d) The Sarantel GPS antenna may have been damaged by ESD. The Sarantel antenna includes an RF amplifier. These are susceptible to ESD (electrostatic discharge). Avoid touching the RF antenna especially if you are standing on manmade carpet or you are wearing any clothes made of manmade material e.g. polyester. These produce high voltage ESD which can destroy the RF amplifier. Avoid removing the black domed shaped plastic cover over the actual antenna. This exposes the GPS antenna which leads directly to the most sensitive part of the RF amplifier.

**Step 14. The phone No.s and locator ID No. have been entered correctly, the amber light is flashing on the unit but it doesn't respond. Taking the sim card out and putting it in a phone shows the command messages have been received but not executed. There is credit on the sim card.**

Take the sim card out of the locator and place it in a GSM phone and check there are no old SMS messages in the inbox or outbox. Delete all SMS messages sent/unsent read/unread. Then replace the sim card in the locator and retry.

**Step 15.** The following error message appears when you open ConnectorPC Gold:



This error message means the comport has not been set up using the VSPD driver. Click on Start/All Programs/VSPD XP/Configure. In the control panel select Com5 and com6. Click the Add and then Apply buttons. Close ConnectorPC Gold and the map and then reopen.

**Step 16** The com ports in the VSPD have been set up correctly and match the com ports selected in ConnectorPC Gold for the map port setting and also in Route66 for the GPS com port setting, but still positions are not transferred to the map.

Check that a program such as Bluetooth has not grabbed the com ports used by the VSPD driver.

WinXP: look under Start/Control Panel/System/Hardware/Device Manager/ports and check that Bluetooth is not occupying the com ports selected in the VSPD.

**Step 17 I cannot see messages to/from the tracking device (locator)**

Check you have not selected another tracking device in the 'Active locator unit' window. If you select a particular tracking device in the Active locator window then only messages to/from that locator will be shown in the message window. To see messages to/from all tracking devices uncheck the check box in the bottom left had of the screen.

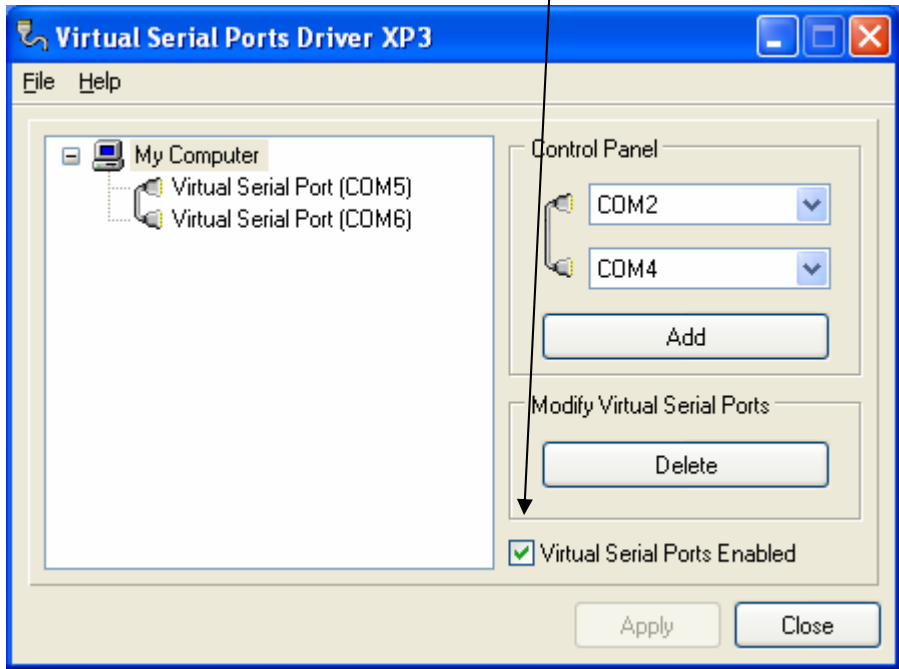
**Step 18 Check the type of sim card you are using.**

Problems may occur with the following sim cards:

- O2 prepay sim cards. These report the credit balance back to the mobile phone display after each SMS message is sent. Do not use these sim cards in the tracking units (locators) because the locator cannot handle the pin No. request. These sim cards can also cause problems in Nokia6310i phones connected to the ConnectorPC Gold program. Received SMS messages will not be transferred to the computer.
- Sim cards which request a pin No. when turned on. Some non UK sim cards always ask the user to enter a pin No. when the phone is turned on. The tracking devices (locators) do not handle this procedure. However if you place the sim card in a mobile phone such as a Sony Ericsson T68 this sim card function can be disabled. Disable the pin request function. Turn the phone off and on to verify that a pin No. is no longer requested when the phone is turned on. Then replace the sim card back in the tracking device (locator)

**Step 19 When ConnectorPC Gold is opened an error message appears relating to the VSPD com ports.**

- a) Check the VSPD com ports are enabled. Click on Start/All programs/VSPD XP/Configure.



- b) If using Win2000 or Win98 restart the PC if the VSPD ports have just been added. This should not be necessary for WinXP PCs.
- c) If you have any software for a P900 Sony Ericsson mobile phone, uninstall all of this and restart the PC. It totally interferes with com ports set up and used by other applications.
- d) If you have installed the VSPD twice the com ports may not work and the com ports available for selection in MS Autoroute may be reduced. Uninstall the VSPD driver by clicking on Start/All programs/VSPD XP and select Uninstall. When uninstall is complete, restart the PC and load the ConnectorPC Gold CD and reinstall both ConnectorPC Gold and the VSPD driver (this is the second part of the install). For Win98/ME machines after the reinstall please restart the PC yet again.

**Step 20 Call your local distributor or Tel Trak (07791081583) and ask for help!**

**Note we will just talk you through these steps, one at a time.....**

Please have the following information to hand:

Nickname for Locator:	
Sim card Tel No.	
Locator ID No. (3 or 4 digits)	
Tel No. of GSM phone where position messages should be sent ( ie tel. No. of GSM phone connected to PC)	