

Voyager - 200

Integrated Mobile Entry Intercom with Keypad

(VIME-IK)

2G/3G

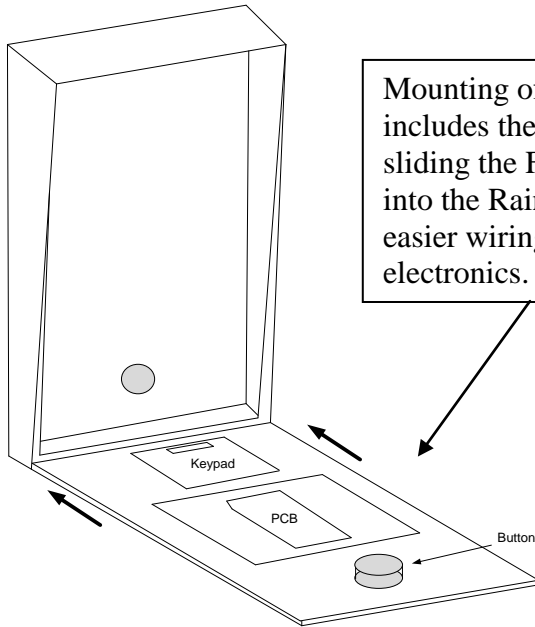
Installer Manual

Device Telephone Number: _____

Device Security Code: _____ 8531 _____

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Mounting of Intercom includes the option of sliding the Front Panel into the Rain Hood for easier wiring of the electronics.

Installation Steps

- 1. Unscrew the front panel from the body of the intercom.**
There are four security screws holding the front panel to the body of the intercom. The tool for opening these screws is in the box. Please leave the plastic protection on the Intercom body until your installation is complete to protect the surface from scratches.
- 2. Use the body of the intercom to mark the wall or pillar for mounting the intercom.** There are four screw holes for mounting the intercom to the wall.
- 3. Decide how to run the power supply cable and the antenna cable,** as these must enter the intercom through the biggest hole in the back of the Intercom body.
- 4. Mount the body of the intercom to the wall.**
- 5. Once the intercom body is screwed to the wall, slide the front panel into the base of the intercom as shown below.**
Be careful not to scrape the front panel when doing this. Make sure the front panel is put in, the correct way around. With the button closest to you when standing in front of the intercom.

6. Now wire the Power Supply and relay output to the terminals on the PCB as described on the wiring diagram. This is on a separate sheet with the documents in the box.

7. If there is a SIM installed in the GSM device skip to step 9.

8. If there is no SIM installed then you will have to

A) Obtain a SIM with credit. This device is a 2G/3G device so all available SIM cards should work without a problem.

B) **When obtaining the SIM ask that voice mail is turned off.**

C) Vodafone and O2 PAYG SIM cards don't have a PIN number on the SIM. But other operators still put a security PIN on their SIM cards. This must be removed before using the SIM on the GSM device.

D) Place the SIM into the SIM card slot on the GSM device. See the wiring diagram for this device, to see how the SIM is entered.

9. Wire up the GSM device as shown on the wiring diagram.

The GSM device is powered by a +12V, 2 Amp power supply. For correct operation the power supply supplied with the system must be used to power the system.

10. Apply power to the GSM unit.

Initially the Register light will be on constant and as the unit registers on the network, will start to flash every 1 second.

11. Give the Unit about 2 minutes to register when first turned on.

When the Signal Strength light is on constantly or flashing the unit has signal from the network. If the signal strength light fails to light at all you may have to change the position of the device to pick up a GSM signal. It may also be an option to use a SIM from a different network. With low 3G signal levels the Signal Strength light may not flash but the unit may operate correctly. On some occasions it may be necessary to use a high gain antenna, please contact your supplier for this.

Test Operation - Place a Telephone Call to the Device

12. Call the GSM device from your mobile or from a landline telephone. The GSM unit defaults to open access so with no programmed Open Telephone numbers any caller can open the gate or door. The GSM device sees the incoming call and hangs up the call. The GSM unit will pulse the Relay. This is a no cost call.

Important Notes – SIM Credit & Bill Pay SIM.

Note:

Some functions of this GSM device, like Keypad Codes, are dependent on the GSM device having the correct date and time of day. The GSM device gets this by sending itself an SMS text after power up. To do this the SIM must have credit and without this, many of the features of Keypad Codes will be absent or fail to operate.

For this and other reasons we strongly recommend the use of a Bill Pay contract SIM with this intercom. Please contact your distributor or 2T Technology at sales@2t-tec.com to get details on our cost competitive Bill Pay SIM.

RED LED (front panel) as a System Health Status Indicator

Normally the red led is off. But by pressing the bell button on the keypad 4 times the red led will indicate the health status for the device. The device sequences through the states below 1,2,3,4 on power up. For a properly operating system, about 2 minutes after power up the Red Led should be as per step 4 below. The green Led is a 1 second heartbeat.

Step	Red LED	System State	Solution.
1	On constantly	Normal Start up state	Wait for the device to leave this state.
2	Flashing every second.	The device is not registered on the Network	Make sure the SIM has credit and has been topped up in the last 2 months. (The SIM must be topped up regularly or it will be deregistered from the Network)
3	Flashing every 2 seconds	SIM has no credit to send an SMS text.	1. Add credit to the SIM. 2. Place the SIM in a mobile phone and confirm the phone can make calls and send SMS texts.
4	Flashing every 4 seconds	Normal All Good State	<u>This is the Normal State.</u> The Red LED skips every two flashes of the Green LED.

Intercom Setup App



All of the GSM Intercom setup functions can be completed by sending simple English SMS Text commands to the device.

However, there is also a Setup App for this Intercom. There are also setup apps for all of 2T-Technology's products.

For a download link, for the App, go to our website at

<http://2t-tec.com/download/>

On this page go to the heading "Engineer Setup Apps" and then look for "Voyager Mobile Entry Intercom"

These Apps are very easy to use, we won't go into further details to explain here. But you may want to see the Setup App Video detailed here:

Setup App Video

To watch a video which shows some basic details on using these Apps see:

https://youtu.be/yxI3Qq_Bh5A

There is a link to this video on the same web page given above for downloading the App. **[Voyager Mobile Entry Intercom Setup video](#)**

The Device Makes a Telephone Call

13. Programming Phone Numbers into the GSM device.

Now program the phone list, with the phone numbers that the GSM device will dial once the intercom button is pressed. For initial testing this is best if it's your own number. It can be changed later using the same text command.

Send this text.

phone 1 xxxxxxxxxxx

Receive This Text Response

Phone number xxxxxxxx
Programmed.

*xxxxxx represents your mobile number eg:0872376605

** There should be NO Spaces in the Telephone Number

*** But there are spaces between each word "Phone number
xxxxxxx"

*** Do not hit return when typing the command to move to the
next line of the mobile phone screen.

Four more numbers can be programmed into the phone list of the GSM device. These numbers will be called in sequence until a response is received (either * or #)

14. To test calling operation and audio quality you will need a second person either at the intercom or at the mobile phone.

- Move the mobile phone away from the intercom.
- Press the intercom button to place a call from the GSM device. The GSM device will call the number at location for phone 1.
- Answer the call and test that audio can be heard by speaking normally at both ends.
- Press * **to grant access** (this will pulse the relay).
- For a user who **doesn't want to grant access terminate the call with #.**
- When the end user is called by the GSM device, just hanging up the phone isn't sufficient. If further numbers are programmed then these will be called in a follow on call. When not granting access, terminate the call by pressing #.

Programming Phone and Open Telephone Numbers

15. The number programmed in the last section for phone 1 can be used to call into the device to open the gate or door.

Make a call from the number programmed into location Phone 1. The relay should pulse and the gate or door should open.

16. Programming Telephone numbers into OPEN number locations.

Note: It is important to understand that programming Phone numbers (numbers the device uses to place calls to) into the device does not affect the Open Access status of the device for Open Numbers (Numbers that can call into the device to open the gate or Door). However programming specific Open numbers will terminate the Open Access mode of operation so that only programmed Open numbers can call into the device.

Telephone numbers that can call into the GSM device are called Open Numbers. They act to open the gate or door.

Numbers can be programmed per location or just put into any empty location.

Send this text.

Open 1 xxxxxxxxxx

Receive This Text Response

Open number xxxxxxxx
Programmed.

Note 1: xxxxxxxxxxxx is the telephone number of the person you want to be able to open the gate or door.

Note 2: Make sure there are no spaces in the telephone number text. Also make sure the response received is valid and has the correct number you programmed.

Up to 200 numbers can be programmed into the open list of the GSM Unit. Use the following Text commands:

open 2 xxxxxxxxxxxx

open 3 xxxxxxxxxxxx

.....

17. Programming phone numbers into free locations.

To program a number into any free location send the following command

Send this text.

Open xxxxxxxxxx

Receive This Text Response

Open number xxxxxxxx
Programmed.

18. Removing Phone Numbers.

Send this text.

Remove xxxxxxxxxx

Receive This Text Response

Phone removed.

Note 1: xxxxxxxxxxxx is the telephone number of the person you want to remove from being able to open the gate or door.

Note 2: If a telephone number is stored more than once in the device then this command will only remove the first occurrence it finds. Other occurrences will remain.

19. To Check Numbers in the Phone List.

For example to check what number is programmed into the first phone number in the list.

Send this text.

Send phone 1

Receive This Text Response

phone 1 xxxxxxxxxx

20. To Check Numbers in the Open List.

For example to check what number is programmed into the first phone number in the list.

Send this text.

Send open 1

Receive This Text Response

open 1 xxxxxxxxxx

See the Details on page 6 on the “Get Y” Text command which gets 10 open numbers at a time.

21. Open the gate or door from a minute to many hours.

For example to open the gate or door for 20 minutes

Send this text.

Gate Open 20

or

Door open 20

Receive This Text Response

Text received.

The gate will open and then close after 20 minutes.

Note: For this mode of operation to function; when the Pulse Relay is latched the gate or door controller must hold the gate open. This is dependent on the configuration of the main controller.

Door Mode

22. Configuring the GSM Device to operate with a Magnetic lock or Door Controller.

To allow this GSM Intercom to act as a door controller for electrically activated locking mechanisms we have created a command to change the Normally Open (NO) relay contacts to Normally Closed (NC). This command is included in all of our Voyager products.

To put the GSM device into this mode simply text the following command to the device.

Send this text

Door Mode On

Receive this

Door Mode On

To turn off this mode of operation use this command.

Send this text

Door Mode Off

Receive this text

Door Mode Off

The relay will latch and remain latched until the device receives a call or a text command to open the door.

When the device is power cycled this new mode is retained in the memory of the device and as soon as the device is powered up again the relay will switch back into this mode of operation immediately.

Warning: This will put this device into fail safe open when the device loses power.

Keypad Operation and Programming Codes

There are a number of different types of Keypad Codes. From the basic, always active code, to the temporary code that has a limited lifetime. Then there is a code that is active 8.00 to 18.00 Monday to Friday (Office hours), but not functional outside of these times, or at all on Saturday and Sunday. This device stores 10 Keypad Codes in total.

23.1 Programming an always active (24/7) Keypad Code

Setting a new code is simple just send the word Key and any six digit number to set it as a code.

Send this text.

Key XXXX

Receive This Text Response

Code Set

Note: XXXX is the 4 digits for the code. Example 2345

23.2 Programming an always active (24/7), Limited lifetime Keypad Code.

This type of code is always active but after a set number of days it no longer gets access.

Send this text.

Key XXXX TT

Receive This Text Response

Code Set

Note: TT is the number of days(1 to 99) the code will be valid for:

23.3 Programming a Day limited Keypad Code

Send this text.

Key XXXX DDD

Receive This Text Response

Code Set

Note: DDD is the specification of the valid days. Eg: MT for Mon & Tue. See the table that follows for codes for days of the week.

Note: Many of the functions of Keypad Codes are dependent on the GSM device having the correct date and the time of day. The GSM device gets this by sending itself an SMS text after power up. To do this the SIM must have credit and without this, many of the features of Keypad Codes will be absent or fail to operate.

Codes for days	
M	Monday
T	Tuesday
W	Wednesday
TH	Thursday
F	Friday
S	Saturday
SU	Sunday

23.4 Programming a Day limited and Time limited Keypad Code

Send this text.

Key XXXX DDD HHMM HHMM

Receive This Response

Code Set

Note: HHMM is the time in 24Hr format. Example 800 1800 (8.0am to 6pm)

23.5 Remove a Keypad code

Send this text.

Key del XXXX

Receive This Text Response

That Keypad Code has been Removed

23.6 Remove all Keypad codes

Send this text.

Key del all

Receive This Text Response

All Codes cleared

23.7 List all Keypad Codes

Getting details on the codes programming into the GSM device is done with the key list SMS Text command.

Send this text.

Key List

Receive This Text Response

Keypad Codes

- 1.
- 2.
- 3.
- .
- .

For details on the settings for each code, for

- the number of active days
- the active days of the week
- the active times in each day

Use the following command:

Send this text.

Key details

Receive This Text Response

Keypad Details

- 1.
- 2.

23.8 Setup New Keypad Code SMS Text Command; Examples:

Key 1234	Always active Keypad code
Key 2346 10	Always active Keypad code BUT not operational 10 days after it is setup.
Key 2346 MTWTHF 800 1730	Code only active Mon to Friday and between 8am and 5.30pm
Key 1114 MSSU	Code active all day on Mon, Sat and Sun

23.9 Set Keypad Code to be 6 digits

To increase the code security 6 digits can be used instead of 4.

Send this text.

Six Keys on

Receive This Text Response

Six Digits on

Note: To go back to 4 digits send the text command "Six Keys off".

Time of Day & Daylight Savings Time

The GSM device keeps the date and time of day, to allow for the correct operation of timed keypad codes and other time sensitive aspects of the device. The GSM device gets this by sending itself an SMS text after power up. To do this the SIM must have credit and without this, many of the features of Keypad Codes will be absent or fail to operate.

For this and other reasons we strongly recommend the use of a Bill Pay contract SIM with this intercom. Please contact your distributor or 2T Technology at sales@2t-tec.com to get details on our cost competitive Bill Pay SIM.

24 Daylight Savings Time

For countries that operate with daylight savings time the GSM device will need to correct its time when the change occurs. This can be done quite simple by sending the following text to the device.

Send this text.

Test

Receive This Text Response

GSM Access unit test Call

Note: The GSM device will take the time and date from any received text and will automatically adjust its internal clock to use this new time and date. For a GSM device that receives regular text, the adjustment for daylight savings time may happen without sending the text above.

25. The table below lists additional SMS Text commands that can be used to control the GSM device.

Text to Send	Response	Result
Gate open <i>Door open</i>	text received	Open the gate or door permanently
Gate close <i>Door close</i>	text received	Close the gate or door.
Gate open XX <i>Door open XX</i>	text received	Open the gate or door for XXX minutes. This command can work for 5 minutes or many hours such as 8, 12 or 16 hours
Test	GSM Access unit test Call	This text can confirm the device is on the network and has credit to send an SMS Text response.
Pulse time XX	Pulse time XX	Change Pulse Switch, pulse time to XX seconds. The default is 3 seconds. Use this if the Gate Controller requires a different pulse time. <u>Power Cycle for this to take effect.</u>
Default	Restored to Factory Settings.	Return the GSM device to the factory default settings. Caution: All Telephone numbers will be cleared.
Gate Lock on <i>Door lock on</i>	Access point Lock on	This function locks access from people ringing into the device.
Gate Lock off <i>Door Lock off</i>	Access point Lock off	This function allows access to people ringing into the device.
Set Y XXXXXXXXX XXXXXXXXX XXXXXXXXX	Open Numbers from Y Programmed	A number of Open telephone numbers can be set. Up to a maximum of ten numbers. The location of the first number to set is given(Y) followed by the phone numbers to set(XXXXXXXXX..XXXXXXXXX...
Get Y	Open Number 1 872730901 2 872730902	10 Open numbers can be requested from the device, starting with location Y. For example: Get 1 will get the first 10 Open Numbers. Get 40 will get Open Numbers 40 to 50.

Options for Security Settings

If extra security is required when using the GSM Unit it is possible to enable a requirement for a security code when configuring the unit. When the security code is on, then all text messages sent to the GSM device must be followed by the four-digit security code. The default four-digit code is 8531 The security code is OFF by default when the Unit leaves the factory. It can be turned on as follows:

26. To Turn on the Requirement for a Security Code.

Send this text.

Receive This TxT Response

code on 8531

Security code on

Note: The command to turn off the code is “code off 8531”

27. Changing the Security Code.

Send this text.

Receive This TxT Response

Change XXXX YYYY

Security Code Changed

XXXX is the New Security Code, YYYY is the old Security Code.

Example: Change 1234 8531

Program the Control Phone.

The Control phone can be programmed to allow someone other than the person programmed as phone 1 to receive important messages from the system. This may be necessary should the installer have responsibility for maintaining the system.

Send this text.

Receive This TxT Response

Control phone
XXXXXXXXXX

Control phone
XXXXXXXXXXXX
programmed.

Configure Input 1 and Input 2 for Open & Close Status.

28. Input 1 is configured to work as follows.

Wiring a set of contacts as shown in the wiring diagram, into input 1 will allow for the following text command to be sent to determine the gate or door status.

Send this text.

Gate status

or

Door status

Receive This Txt Response

Status open

OR

Status Closed

Note 1: If contacts are not fitted to the gate or door and wired to the input then this message will always return “Status Open”

Input 2 can be configured to send an SMS text on all gate or door openings and closings.

Wire a set of contacts or a limit switch, to Input 2 as shown on the wiring diagram and mount on the gate or door so that they separate when it opens

The message will go to the number programmed in phone 1, unless the Control Phone is programmed. In which case the message will go to the Control Phone.

Now when the gate or door is opened the number will receive the “Access open” SMS Text automatically.

When the gate or door is closed the number programmed above will receive “Access closed” SMS Text automatically.

Ring and Talk Timers

29. The device is configured with two timers. The first controls the ring time, i.e. how long the phone being called, will ring for, while the second controls how long the person answering at the phone being called, can talk for.

The defaults for these times are:

Ring Time: 20 seconds

Talk Time: 40 seconds

To change these times:

The following text commands will allow the installer to change the ringing time and the talking time.

Send this text

Ring time xx

Receive this response

Ring Timer set to xx seconds

*Where xx is in seconds from 00 to 99.

Send this text

talk time xx

Receive this response

talk time xx

*Where xx is in seconds from 00 to 99.

Avoiding Voice Mail or Answering Machines

On occasion, it may be that an answering machine or voice mail can be heard at the speaker of the GSM intercom. This can be avoided by reducing the Ring time of the GSM Intercom. For example the command shown next will reduce the ring time to 15 seconds from a default of 20 seconds.

Send this text

Receive this response

Ring time 15

Ring Timer set to 15 seconds

Note 1: The installer needs to be careful when reducing the ring time that he is allowing sufficient time for the person answering the call to get to his phone and answer the call. Alternatively, It may be necessary to change the number of rings before the voice mail or answering machine activates. This can be done at the answering machine or through the GSM network operator.

Note 2: In all cases a positive indication is required from the person answering the call from the GSM unit to stop it calling additional telephone numbers. So the person answering the call must grant access with * or terminate the call with #. Not granting access, and simply hanging up the called phone will result in further numbers being dialled by the GSM Intercom, if they are programmed.

Note 3: Care needs to be taken when extending the available talk time as this will extend the time the device remains in the call. The end user should be made aware that the GSM Intercom will stay online and only timeout after this time, even if they hang up the call at their end, when talking on a landline. The call will terminate if the user grants access with "*" but if not granting access they should terminate the call by pressing "#" and then hang up. This will also minimise credit usage, per call, from the GSM Intercom.

Ensuring Best Intercom Audio Quality

This product is capable of operating on 2G or 3G networks. Typically the device will initially register on a 3G network if available. However if a 3G network is unavailable or if signal levels on the available 3G network are too low the device will operate on the available 2G network. On 2G networks, because of the technology used, you may hear some GSM hum coming through. This can be minimised by following the correct install procedure detailed in the next section.

2T-Technology have gone to great lengths to ensure that the audio quality from your Mobile Entry and Intercom system is the best possible. However the system must be installed following these basic guidelines to ensure you obtain the best quality.

- Keep the GSM antenna away from the Intercom. Interference from the antenna can have a very bad effect on audio quality.
- Ensure you test the quality of audio communication before finishing the installation. This will require two people, one at the Intercom and one with a mobile phone some distance from the installed Mobile Entry system.
- Do not test the installed system using a mobile phone while standing beside the intercom. Feedback and interference will make it impossible for the system to operate correctly. Move away from the intercom with a mobile phone with which it is communicating.

3G Only Operation

Audio quality is better on 3G networks due to the technology used. On occasions then, it may prove necessary to force the device to remain on the 3G network even if signal levels are low.

Send this text.

stick on

Receive This Text Response

GSM Stick on 3G ON

To turn off this mode of operation and to allow the device to switch back to 2G if necessary send “stick off”

Power cycle the device to allow this new mode to operate
If not at the device then to make this new mode active send an SMS text of “reset” to the device.

Send this text.

Reset

Once the device reboots this mode will be operational.

Setting Speaker and Microphone levels

Speaker and Microphone levels have been factory set to an optimum level. However it may be necessary in noisy environments to adjust these settings

30. Speaker settings go from 0 to 10.

The factory (default) setting is 3

Below is an example of setting the speaker level higher than the default setting.

Send this text.

speaker 5

Receive This Text Response

Speaker level 5

31. Microphone settings go from 0 to 10.

The factory (default) setting is 5

Below is an example of setting the microphone level lower than the default setting.

Send this text.

mic 4

Receive This Text Response

Microphone level 4

Get Remaining Credit on the SIM

32. The GSM device can be used with bill pay or pre pay SIM cards. For pre pay cards the ability for the user to get an indication when credit is falling low is useful and allows the user to add credit when required.

Send this text

Gate Credit

Receive this response

The text response sent from the network is forwarded to the user.

OR:

Send this text

Door Credit

Receive this response

The text response sent from the network is forwarded to the user.

Note 1:

The request for credit can only be sent once in a 2 minute period. If sent more often than this it will be ignored.

Note 2: The message passed back to the user is exactly how the network responded to the request. If it doesn't give the required details then you should contact your network provider for the details.

Automatic Credit Check Messages

33. The GSM device is configured to automatically pass a credit check message to the user set as phone 1.

This check occurs regularly and its occurrence is set as the number of calls made by the GSM device. Default is 20 calls. If this number is reduced then the credit message will come out more often.

Send this text.

Credit calls xx

Receive This Text Response

Calls Number is xx

The operation of automatic credit check can be turned off if required.

Send this text.

Credit Alarm off

Receive This Text Response

Credit Alarm off

This feature can be enabled by sending the text " Credit Alarm on"

34. The GSM device is pre configured to handle a number of different SIMs to obtain the credit text response from the network. However it may be necessary to configure it to use your particular SIM.

Send this text

Receive this response

Credit Code *174#

Credit Number Set

There are different codes for different networks. This table gives a list of those that can be used. A number of them work automatically and do not have to be programmed into the GSM device.

Network	Ireland	UK & NI
Vodafone	Not Operational	*#1345#
O2	*100#	*#10#
Meteor	*#100#	
3	*100#	
Tesco	*100#	

Note : Items in bold are known by the system and will work automatically. Items not in bold will have to be programmed, for the credit check feature to function correctly.

Credit Top Up Warning Messages

35. The GSM device is configured to automatically send a credit top up request to the user programmed in phone 1. If the Control phone is set then these text messages will go to it instead.

These messages are very important for these reasons:

A) They warn the end user to top up the system regularly. Without this top-up the SIM will be de activated by the mobile operator.

Remember it is not enough to have credit on a pay as you go SIM. The SIM must be topped up regularly.

B) They use credit on the SIM. Without using credit on the SIM, the SIM will be de activated by the mobile operator.

C) It indicates that the device is healthy and on the network.

By default these messages are sent every 75 days. To reduce the period between these messages to 30 days, send this text.

Send this text.

Receive This Text Response

credit expiry 30

Credit expiry every 30 Days

The Number of days can be set from 1 to 200

To disable the sending of this credit top up text:

Send this text.

Receive This Text Response

Credit Alarm off

Credit Alarm off

This feature can be enabled by sending the text " Credit Alarm on"

Note 1: We must advise strongly against turning off this feature. Failing to add credit to a PAYG SIM will result in the SIM being deactivated.

Diagnostics

36. The table below lists the SMS Text commands that can be used to diagnose problems with an installed GSM device.

Text to Send	Response received	Result
Diag stored	This returns the stored values recorded over the last 5 days.	Features such as the Signal Strength, ability to register etc. are recorded over the last 5 days, and returned. Also a system health report is calculated and returned.
Diag Live	These are the current values, not yet stored.	

A typical response to these commands is as follows:

VME-IK 1 NV: SS too low: 5 Not checking SS: 0 Cant register: 0 OS Problem: 0 State stuck: 1 Health Metric: Good

The Details of this response is given as follows:

Returned Text	Meaning
VIME-IK 1 NV:	Product Code, Software Version, 1 = 1.0 and NV means non volatile or stored.
SS too low:	Number of times Signal strength below an acceptable threshold.
Not checking SS	Network issue not giving a response to the request for Signal Level. Device may reset.
Cant register:	Network issue not allowing the SIM or the device to register on its Network. Device will not function.
OS Problem	Internal device problem. Device may reset.
State stuck	Internal device problem. Device may reset.
Health Metric	A combination of the numbers above providing a word in English as a measure of the health of the device, Can be 'Good', 'Bad' and 'Very Bad'

Trouble Shooting Guide

Question: I have powered up the unit. How will I know when it is ready to operate?

Answer:

1. The first time the unit powers up it will make a “Beep-Beep” noise when it has registered on the network.
2. The Registered LED will flash every second. Hopefully also the Signal Strength LED will be flashing, or on constantly.
3. Send a text to configure the unit using your mobile phone. Once the text is received the unit will make a Beep-Beep sound.
4. The red Led on the front of the unit will be flashing every 4 seconds (See the table 2 pages on for details on the front panel red Led.)

Question: I have powered up the unit. The Registered LED is flashing every second but the signal strength LED is not lighting at all

Answer:

1. With low 3G signal levels the Signal Strength light may not flash but the unit may operate correctly.
2. If there are problems with the unit due to low signal levels then re locate the GSM unit and antenna so that better signal level is achieved, or change the SIM in the device for another network, so that better signal level is achieved.

Question: I am sending a text messages to the GSM unit but I’m not getting any response.

Answer: Check the following

1. Confirm the unit has power and is registered on the network by checking the ‘Registered’ LED is flashing every second.
2. You know the device is receiving your Text, because once the text is received the unit will make a Beep-Beep sound.
3. Confirm the SIM in the device has credit and has been topped up in the last 2 months. Having credit on the SIM is not enough. A PAYG SIM must be topped up regularly.

4. Check the spelling and the format of the text, matches that described in this manual. Do not use return to move to the next line when creating the text command.

Question: I have entered a number into phone 1 position but the GSM unit will not place a call to the number.

Answer:

1. Please check steps 1. and 3. In the last answer.
2. Check the devices response Text when you programmed Phone 1. It will list the number it programmed. This number must be correct.
3. Ask the device to return Phone 1 with the Text command “send phone 1” the device should respond with the number it has programmed in Phone 1 position.
4. On occasion the mobile phone the device must call has very weak signal level or is turned off and the network is unable to place a call to it. Wait until the remote phone is in a different location and confirm it is turned on, and try again.

Question: The GSM unit is operating but it always calls Phone 2 and Phone 3, even if phone 1 is answered.

Answer: The remote phone answering the call must give a response of * (meaning open Gate or Door) or # (Meaning Terminate call, Do not open Gate or Door). Just hanging up the call will cause other numbers to be called.

Question: When I send a text for ‘gate credit’ I get

- (A) No response
- (B) A response saying I have 0.00 credit

Answer:

- (A) If you get No Response then there may be no credit on the SIM in the GSM unit. Or you may have to set the code for this SIM, see the section on "Automatic Credit Check". It is also possible that the network sent no response when the GSM unit requested the credit amount.

(B) Getting a response saying you have 0.00 credit happens with some Network operators that operate bundle credit schemes where you're top up buys you calls and text that you work down over time. You have x number of calls and text pre purchased but your credit balance remains at 0.00.

Question: The GSM unit is not operating. What details can I get from the Green and Red LEDs on the front panel?

Answer:

1. The Green LED simply gives system heartbeat and flashes every second.
2. The Red LED gives the health of the system. This should be flashing every 4 seconds. So it skips two flashes of the green LED and then flashes. If it is not flashing in this sequence, once the device has been running for more than a couple of minutes, please refer to the next table that explains the different states that this LED is flashing in, and explains what this state means for this GSM device.

Question: What are the most common problems you find with your GSM devices?

Answer:

The most common problem we find with our GSM devices, in technical support is that:

- a) A Pay As You Go SIM is used and has no credit and is unable to send text responses to text commands. This GSM device is also unable to send itself a text to ensure correct Time of day is available for system operation.
- b) A Pay As You Go SIM is used and may have credit but has not been topped up within the required top up period of the network operator. This leads to the SIM being de registered from the network with a gradual removal of its capabilities.

RED LED - System Health Status Indicator

Normally the Red led is off. But by pressing the bell button on the keypad 4 times the red led will indicate the health status for the device.

Red LED	System State	Solution.
RED LED on constantly	Normal Start up state from Power Cycle	Wait for the device to leave this state. If it doesn't leave this state there is a serious technical fault. Contact Technical Support
RED LED Flashing every second. RED LED may be off for a few seconds, then on constant and then flashing every second (this is at the same frequency as the green led).	The problem if the device remains in this State. The device is not registered on the Network	<ol style="list-style-type: none"> 1. Check SIM is inserted correctly 2. Make sure the SIM has credit and has been topped up in the last 2 months. <u>(Remember it is not enough to have credit on the SIM it must be topped up regularly or it will be deregistered from the Network)</u> 3. The device may be struggling to get enough signal strength to register. In this case check the Register and Signal Strength LEDs on the main PCB. Signal Strength LED should be flashing or On constantly. The Register LED must be flashing every second. 4. If the device is failing to register or if the Signal Led is not flashing or on constantly (a) Put the antenna higher (b) Change the SIM for one from another operator. (c) Get a high gain antenna from your supplier.
RED LED Flashing every 2 seconds	Problem if remains in this State. SIM has no credit to send an SMS text.	<ol style="list-style-type: none"> 3. Follow 1. and 2. from above and confirm ok 4. Add credit to the SIM. 5. Place the SIM in a mobile phone and confirm the phone can make calls and send SMS texts.
RED LED Flashing every 4 seconds	Normal All Good State	<u>This is the Normal State.</u> The Red LED skips every two flashes of the Green LED and then flashes.

Register of Telephone Numbers Programmed into the GSM Device.

Phone 1	
Phone 2	
Phone 3	
Phone 4	
Phone 5	

Open 1	
Open 2	
Open 3	
Open 4	
Open 5	
Open 6	
Open 7	
Open 8	
Open 9	
Open 10	
Open 11	
Open 12	
Open 13	
Open 14	
Open 15	
Open 16	
Open 17	
Open 18	
Open 19	
Open 20	
Open 21	
Open 22	
.....	
	This list can go to 200 numbers

Control Phone	
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Register of Keypad codes Programmed into the GSM Device.

	Keypad Code	Valid for X days or Permanent	Days Valid or all days	Times valid between
Key code 1				
Key code 2				
Key code 3				
Key code 4				
Key code 5				
Key code 6				
Key code 7				
Key code 8				
Key code 9				
Key code 10				

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