

# ***EasyLoader***

## **AV-4000 GSM**

## **AV-4000 DVR**

**(Fits LED keypads)**

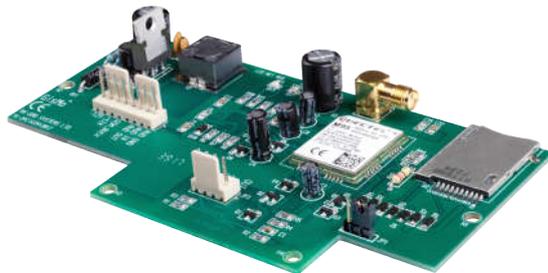
**Integrated Alarm Control Panel &  
Dialer Series 4000**

***GisMo***  
**GSM by AV-Gad**

***Appendix for GSM G95 module***  
**Version 1.06**  
***Edition II***

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This product is subject to continuous  
enhancements and therefore specifications may  
be changed or altered without prior notice



**Item:** 4785E\_GSM (A4BKE)  
**Rev01:** 03-Nov-2019



## **AV-4000 GSM Appendix**

### Introduction

Use this appendix with the AV-4044GSM, AV-4008GSM, AV-4009GSM, AV-4016GSM alarm panels, for installation manual refer to the Series 4000 LED express or full manual.

This manual covers also the AV-4044DVR and AV-4008DVR. All models are supporting alarm sensors and sirens. Verify you have the panel installation manual handy.

The series 4000 GSM & AV-4044DVR, AV-4008DVR GSM are compatible with Av-Gad LED keypads models AV-701 and AV-702.

The AV-4044, 4008 GSM are supplied with the Gismo board that is plugged into the serial RS-232 socket and connected to the integrated GSM modem. The GSM panels are capable to send SMS via GSM and also to dial via GSM and PSTN.

Notice: When system dials via GSM, the receiver party will not hear siren sound in his phone (without siren sound as dial via PSTN).

Report to central station via GSM is not available.

In GSM mode the remote DTMF feature is not active. The SMS texts are not programmable by factory.

In some regions the PSTN network (wired phone line) supports SMS messaging, consider and check if available with your PSTN provider.

### **Main features:**

- Transmits SMS (short text message) via GSM network
- Compatible with LED keypads AV-701, AV702 (not with LCD keypads)
- Dials to regular numbers via GSM (after dial the unit disconnects, no sound or alarm tune is generated, show the number dialed from to receiver)
- Dials to PSTN numbers with alarm sound when the phone picked up
- Reports to central station via PSTN line (not via GSM)
- Do not supports remote DTMF commands
- Do not support voice module like SVM-42 if dial via GSM
- Compatible with 2nd, 3rd (2G and 3G) generation SIM card
- In Australia works and tested with Vodafone SIM card
- Integrates high end four bands GSM modem (Gismo M95)
- Fully integrated with the alarm panel slots and space in Av-Gad box
- Periodical test signal in few modes
- In alarm send SMS with zone number
- System troubles reported by SMS: (low battery, AC fail, etc)
- Programming selection: Reporting close/open (system arming and disarming) to user via SMS
- No mobile App or software required to install on user mobile phone, this fact keep the user phone protected from 3rd party Malware and other potential problems



**Be aware of static electricity; don't touch the printed board directly**

1. Series 4000 SMS format

The alarm panel/dialer sends SMS with time and date stamped, easy to track systems status, alarms and troubles.

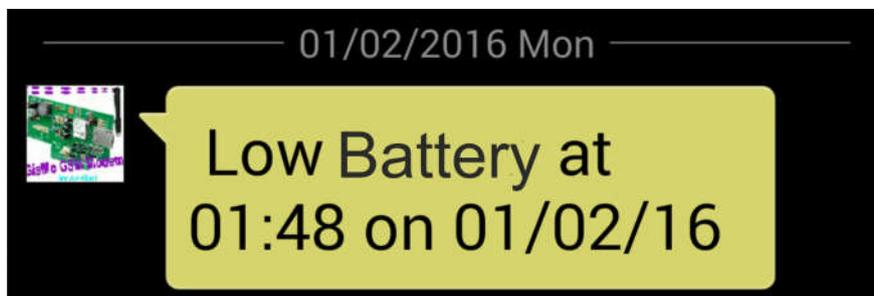


Figure 1: Gismo 95 GSM SMS message sample

## 2. Hardware

The AV-4044, 4008, 4009, 4016 **GSM suffix** are based on the AV-4044, 4008, 4009 & 4016 LED alarm/dialers, it's supplied with the additional hardware to provide full GSM alarm panel and reporting dialer.

To identify the GSM; The Gismo PCB board with antenna plug located at the left-upper side in the main control panel enclosure.

Pack includes GSM RF antenna. Before power up always connect the antenna to prevent damage to the GSM module. Verify the antenna cable is not coiled.

Process wiring with power down; don't insert the SIM card with power on. The Gismo has two indication LEDs, explained later.

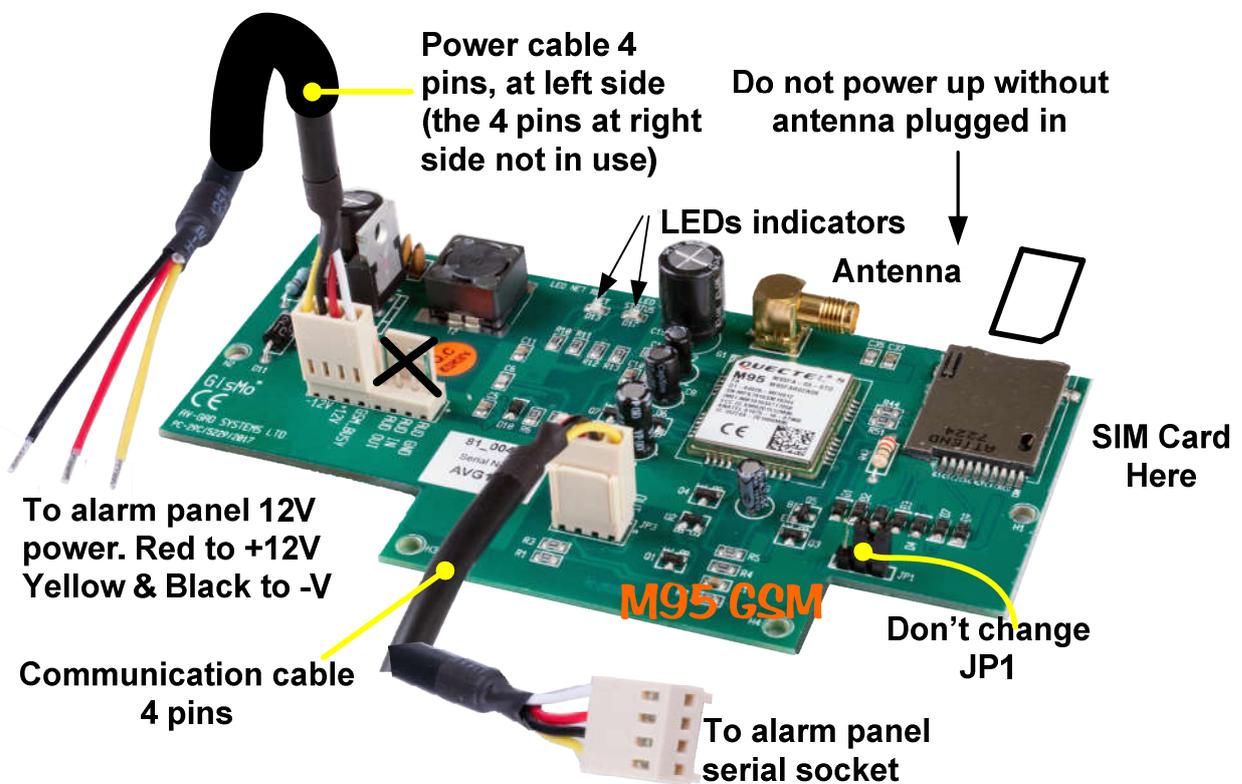


Figure 2: Gismo 95 GSM module description

### **Notice about programming**

Most simple is to program the panel from the keypad, easy and fast. Make sure you have the alarm panel manual.

In case EasyLoad programming applied for alarm with GisMo interfaced proceed as following:

1. When programming with PC unplug the data cable from the alarm panel, notice that some GSM features are not included in the PC program.
2. As programming done plug the data cable from the GisMo to the alarm panel.

GisMo module wired to series 4000 alarm panel & dialer diagram

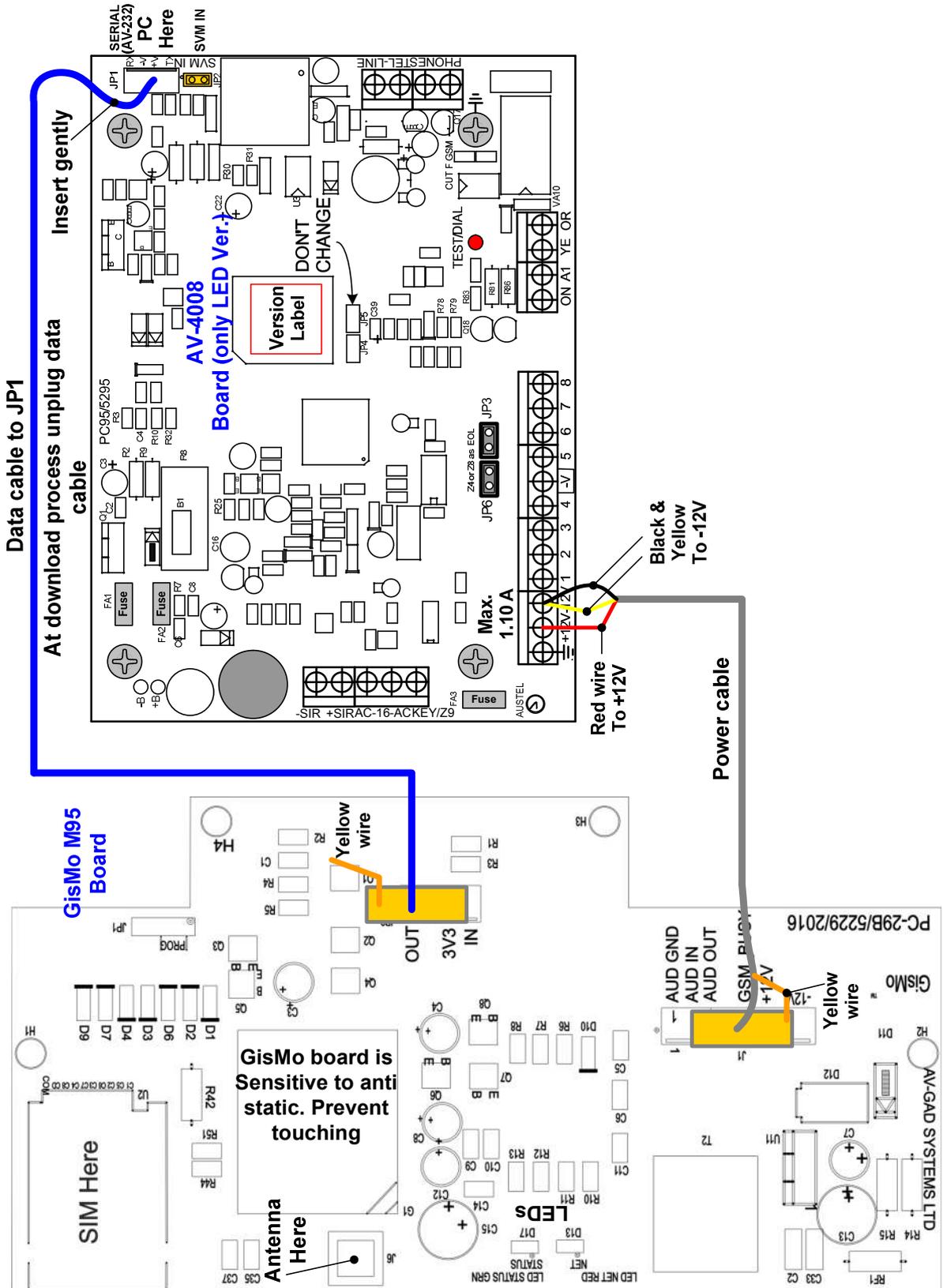


Figure 3: GisMo 95 GSM module wired to main board

### 3. Programming GSM and Dial features

To setup the panel wire the keypad model AV-701 or AV-702 (refer to main installation manual).

With power down insert the SIM card and connect the GSM antenna

Power up with AC (at first power up without battery)

Hold down key 8, enter **1 9 9 4** (programming code), **P** is displayed indicating you are in PROGRAM mode. In programming mode enter 200, then the required function as detailed below.

Series 4000 panels are capable to send SMS via GSM or PSTN also can dial via GSM or PSTN, the modes are programmable.

Programming the SMS mode dial modes:

| <b>Command</b>    | <b>Description</b>   | <b>Keypad display</b>    |
|-------------------|--|--------------------------|
| Press 200 then 10 | To display SMS sending way:<br>Via PSTN or via GSM network | Line = PSTN<br>Cell= GSM |
| Press 200 then 11 | Panel send SMS via PSTN                                    | LINE                     |
| Press 200 then 12 | Panel send SMS via GSM                                     | CELL                     |
| Press 200 then 50 | To display the dial mode                                   | LINE or CELL             |
| Press 200 then 51 | Set panel to dial via PSTN                                 | LINE                     |
| Press 200 then 52 | Set panel to dial via GSM (not ready yet)                  | CELL                     |

Programming the SMS language for the texts:

| <b>Command</b>    | <b>Description</b>                    | <b>Keypad display</b> |
|-------------------|---------------------------------------|-----------------------|
| Press 200 then 20 | To display SMS language               | HE or EN **           |
| Press 200 then 21 | Set SMS language to English (default) | EN                    |
| Press 200 then 22 | Set SMS language to Hebrew            | HE                    |

HE= Hebrew, EN = English

**\*\* SMS texts are restored to defaults when changing SMS language**

Three parameters affecting the SMS texts content for zones events

Address 138 - Using panel's fixed texts describing the event (Default 01 = Yes)

Address 139 - Adding the zone number to SMS (Default 01 = Yes)

Address 140 - Adding the text description of the zone via PC (Default 00 = No)

If all above parameters are set to 0, the panel resets the defaults.

Programming the Dialing and SMS phone numbers:

- To enable sending SMS; in address 003, enter 01 (refer to main manual)
- In GSM mode address 008 is not in use
- Supports six **Dial** telephone numbers, each 16 digits, address 013 to 018
- Supports four **SMS** telephone numbers, each 16 digits. Enter the phone numbers for SMS sending at address 009 to 012
- In phone numbers for GSM SMS/DIAL use digits 0-9 (none others)

#### 4. AV-4044, AV-4008 GSM factory programmed texts

- Zone 1: Burglary at zone 1
- Zone 2: Burglary at zone 2
- Zone 3: Burglary at zone 3
- Zone 4: Burglary at zone 4
- Zone 5: Burglary at zone 5
- Zone 6: Burglary at zone 6
- Zone 7: Burglary at zone 7
- Zone 8: Burglary at zone 8

**Fire**, or **Panic** zone texts change accordingly; the word Burglary replaced by fire or panic. Other languages maybe apply.

We have same hardware that been revised for temperature control alarm/dialer, SMS texts been set accordingly.

Every event via SMS is time and date stamped. For customized texts EasyLoad software is required, texts set at zone description section.

System fail texts displayed via SMS:

AC fail

Low Battery

AC fail restored

Low Battery restored

More events are included.

Refer to below SMS sample.

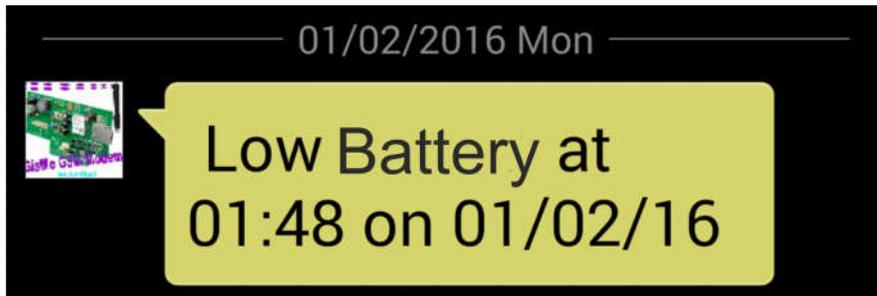


Figure 4: SMS sample

5. Commands 200 in programming mode

| Location          | Function   |
|-------------------|--|
| 200 and 00        | Display control panel type & software version                |
| 200 and 04        | Erase (reset) the events history                             |
| 200 and 05        | Restore all codes to factory default                         |
| 200 and 10 (SMS)  | Displays current setting LInE or Cell (SMS Mode)             |
| 200 and 11 (SMS)  | Sets to PSTN line (displays LInE) (PSTN SMS)                 |
| 200 and 12 (SMS)  | Sets to mode GSM (displays CELL) (GSM mode)                  |
| 200 and 20        | Display current SMS language. En for English                 |
| 200 and 21        | Set English as the SMS language                              |
| 200 and 22        | Set Hebrew as the SMS language                               |
| 200 and 30        | Activate ON output (until disabled)                          |
| 200 and 31        | Deactivate ON output   |
| 200 and 32        | Activate A1 output (until disabled)                          |
| 200 and 33        | Deactivate A1 output   |
| 200 and 44        | Set panel to four (4) zones Mode                             |
| 200 and 48        | Set panel to eight (8) zones Mode                            |
| 200 and 50 (Dial) | Displays current settings LInE or CELL to dial on alarm      |
| 200 and 51        | Set PSTN line for dialing (when answer siren sound is heard) |
| 200 and 52        | Set GSM line for dialing (when answer no siren sound)        |
| 200 and 69        | Restore program to default                                   |
| 200 and 70        | Not valid for LED keypad                                     |
| 200 and 71        | Nor valid for LED keypad                                     |
| 200 and 72        | Download zone description & logo only                        |
| 200 and 77        | Set panel to PC Communicate Mode                             |
| 200 and 78        | Arm panel from programming mode                              |

200 + 10 displays current system setting; Line or Cell (Cell = GSM cellular)  
 200 + 11 sets PSTN LINE (displays Line by keypad display)  
 200 + 12 sets GSM (displays CELL by keypad display)

SMS via GSM Restrictions: Only English SMS even if for LINE Hebrew has been set. Via PSTN LINE can send English or other languages (Hebrew) SMS.

When set to use GSM dialing to Central Station is disabled.  
For LINE (via PSTN) SMS, address 008 (Service Center number) must be programmed.

For SMS via GSM address 008 (SMS center Tel. No.) is not relevant. Address 008 used for SMS via PSTN.

Save the SIM number at your phone:

For fast identify the SMS source create e new Contact in your mobile, apply your favorite name like My GisMo or similar.

### **Last 10 events history send by SMS:**

Hold down key 6 then hold down key 4. System sends the last 10 events with date and time stamp.

### 6. GisMo LEDs indications

Green LED Status - Indicates the GSM processor is operating. Must light  
Red LED Net - Indicated the GSM network status, see modes in the below table, wait while until unit registered to network.

| <b>Red LED status</b>          | <b>Description</b>                             | <b>Note</b>                   |
|--------------------------------|--|-------------------------------|
| Slow blinking every 2 seconds  | GSM is registered and connected to the network | Ready for action              |
| Fast blinking every 0.5 second | Wrong command received                         | Power off, wait then power on |

### Keypad 3 LEDs indications SMS via GSM

|                        |   |
|------------------------|---|
| SMS by GSM in progress | SMS is sent the <b>Shunt</b> LED (Orange) blinks fast for 3 seconds   |
| SMS by GSM succeed     | <b>Armed, Shunt</b> and <b>Fire</b> LEDs light ON steady for 4 seconds status LED (Green) blinks fast for seconds |
| SMS by GSM fail        | <b>Armed</b> and <b>Fire</b> LEDs light ON steady for 4 seconds   |

### 7. Operating

Connect the keypad  
Connect the antenna. Check the GSM signal level (with your mobile)  
Verify the SIM card and antenna are connected  
Power up with AC power  
Notice the Gismo module LEDs are on

Wait 2-3 minutes to allow the GSM registration process.

SMS testing hold down key 6 then hold down key 5 – Send SMS to all subscribers

Dial testing hold down key 6 then hold down key 7 – Dial to all programmed subscribers

### 8. SIM card

The SIM card socket is located on the Gismo board, refer to figure 1.

|   |
|---|
| <p><b><u>SIM card parameters:</u></b> Generation 2 or 3 (not micro type), SMS enabled, without voice message service, without charges limits (not must), caller ID is enabled and unlocked, Pin Code disabled. See sample picture below</p> |
|---|



Figure 4: SIM card that fits

In Australia GisMo works and tested with Vodafone SIM card.

#### 9. AV-4044, AV-4008, AV-4009 DVR (GSM) suffix texts

The AV-4044DVR, 4008DVR models are dedicated to be used with CCTV system that includes DVR or NVR recording device, the DVR may fail from certain faults, the AV-4000 systems supervised the recording device and reports ant fail by sending SMS.

Zone 1: Hard disk fault  
 Zone 2: DVR Ventilator / Temp fail  
 Zone 3: TCP/IP communication fail  
 Zone 4: Recording stop

Zone 5: PTZ control fail  
 Zone 6: High temp alert  
 Zone 7: DVR faulty 1  
 Zone 7: DVR faulty 2

#### 10. News for version 1.05

Periodical signal tests is added, see address 005. The panel dials via PSTN (land line).

In AV-4044, 4008 GSM if phone numbers programmed system dials them via PSTN, when caller answer a siren sound is generated.

Periodic test at address 005:

00 = No test signal  
 01 = Not valid in GSM (test to central station GSM mode)  
 02 = Send SMS for test, works in GSM mode only  
 03 = Send test signal by SMS and to central station (to CS via PSTN)

## 11. Trouble shooting in GSM mode

Notice that most problems are by wrong SIM card and low radio reception.

| <b>Problem</b>  | <b>Solution</b>  |
|---|--|
| <b>The GSM is not sending SMS after programmed</b>                                    | <ul style="list-style-type: none"><li>- Check the SIM card you used with unit.</li><li>Try to send SMS with the same SIM from your mobile phone or other device</li><li>- Try to replace the antenna</li><li>- Check the local GSM signal level</li></ul>  |
| <b>The GSM is used to work fine, after a while not responding and not sending SMS</b> | <ul style="list-style-type: none"><li>- The SIM provider (like Orange, Vodafone) has poor radio coverage in the region.</li><li>- Try other provider (with better GSM coverage) SIM card.</li><li>- Change the antenna location</li><li>- Other option is to use high gain GSM antenna.</li><li>- Check that the SIM card has funds to support SMS sending</li><li>- The GSM modem received thunder hit and requires software and hardware reset, or been damaged. Requires factory repair</li></ul> |
| <b>I replaced the SIM in the GSM and notice unstable unit</b>                         | <p>New SIM in most cases <u>must be activated</u> by the SIM card provider and load with some money (for sending SMS and dial) in order to work properly.</p> <p>Call the SIM provider or check the SIM in your working mobile phone if can call and send SMS</p>  |