GSM Module
AVG10_G_GUK

Integrated GSM module for Alarm Control

Installation and Operation Manual
(Preliminary Version)

Version 1.00

Edition I

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

www.av-gad.com

AVG10_G Description

This is a preliminary manual, edited before the product is ready.

The AVG10-G is a compact GSM module, housed in a metal case with separated power supply. The AVG10G contains the antenna, power supply and SIM sockets on board.
The AVG10-G includes one dry contacts relay on board. The AVG-10G sends SMS messages for every activation.
The AVG10-G contains a build-in relay, the relay is remote controlled and is applicable for access control for parking lots, home automation and similar.
AVG10-G UK kit contains: GSM unit, Zero dB GSM antenna, SIM inserter, Power cable to fit. Option: Power Supply with UK 220V plug.

Programming and parameters setting is SMS or PC activated (requires AVG software pack).

AVG-10G Wiring

1. AVG10-G unit is designed for cellular remote control and SMS reports
2. Connections:
   Gently insert SIM card to **SIM** slot as shown at figure 1 – Spring Push. Use the small PCB piece as inserter, it's a sensitive socket- don't push hard.
   Connect GSM antenna to **ANT** connector as shown at figure 1.
   Connect Power supply to **POWER** connector as shown at figure 1.
   Connect RJ-11 cable to **AUDIO** connector as shown at figure 1.
   Connect RJ-11 cable second side to remote control as shown at figure 1.
3. Apply DC power to unit, maximum 14V.

Figure 1: AVG10-G wiring

Starting and Wiring

Before setting the AVG10_G, you need a GSM phone and extra SIM card to insert into the AVG10_G. The SIM and GSM phone should be SMS and ID numbers enabled.
The GSM phone is your programmer, so the phone you setup (program) from will be the only one that the AVG10_G will permit to get into setup mode.
In case you are changing the programming phone, you need to hardware reset the unit in order to remove the first phone that was registered into the AVG10_G.
Every SMS sent to the AVG10_G and correctly received, will be acknowledged by a SMS confirmation to the programming phone.

It's recommended to store the commands in your programming phone for future applications. During programming, pay attention to the dot sign (**.**), it's critical.

Relay: The AVG10_G identifies the calling number and activates the supplied relay, so it doesn't count as a call. It's useful for access control. The unit store 1600 regular and 400 special numbers. Each registered number activates the relay; pulse or latch mode, times/modes are programmable.
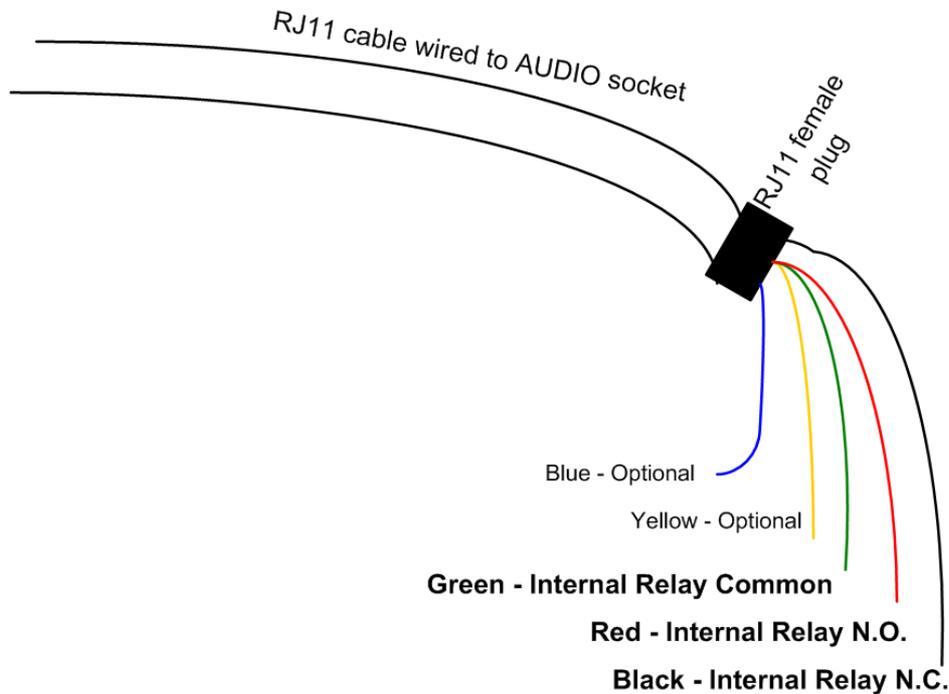

Figure 2: Wiring diagram

After powering up wait for GSM registration and follow the LEDs status:

Red LED Status	Device Status
Permanently on	A call is active
Fast interrupt sequence (period 0,5s, Ton 1s)	Net search / Not registered / turning off
Slow interrupt sequence (period 0,3s, Ton 3s)	Registered full service
Permanently off	Device off

Table 1: RED LED Status

Green LED Status	Device Status
During two min's of power on, initialize.	Light on after 1 min, Light off after 2 min
Blinking	Low reception or no cellular service
Permanently off	Device off

Table 2: Green LED Status

AVG10_G Reset (not final)

When powering-up the unit, wait one to two minutes for GSM registration.
In case things get wrong, send the reset SMS command; this command will re-format the internal software.

> When entering the SMS message make sure <u>not</u> to add a space by mistake, this cause the AVG-10 a faulty message. To add a DOT (**.**) press key "1" in most mobile phones

AVG10_G SMS control commands (not final)

Software Version: 01.01

1.1 Password
Every SMS starts with p: password
Example: **P.1234A.0541122333.0544455666**
The command **P.** > the password is **1234**
The command **A.** is add new phone number **0541122333** and **0544455666**

1.2 Add New Phone Number

A. Phone number, phone number
Add new phone numbers to the phone list
Example: **P.1234A.0547512152.0525874525**
Add **0547512152** and **0525874525** to the phone list; insert a DOT between the phone numbers, all SMS size can be used.

1.3 Add Special New Phone Number

AS. Phone number.1.from time, to time week days
Add one new special phone number to the special list with specific hours during the weekdays.
The "from time" and the "to time" syntax is HHMM (without spaces)
Example 1: **P.1234AS.058126248.1.1130.1540.135**
Phone number 058126248 will be allowed to enter from **11:30** to **15:40** on **Sunday, Tuesday and Thursday** (1234567 weekdays)
Example 2: **P.1234AS.058126248.1.2300.0200.24**
Phone number 058126248 will be allowed to enter from **23:30** to **02:00** on **Monday and Wednesday**.

AS. Phone number.3.Entries amount
Add one new special phone number to the special list with limited entries amount.
Example 1: **P.1234AS.058126248.3.6**
Phone number 058126248 will be allowed to enter **6** times
Example 2: **P.1234AS.058126248.3.11**
Phone number 058126248 will be allowed to enter **11** times

1.4 Delete Phone Number

D. Phone number. phone number
Delete phone numbers from regular phone list
Example: **P.1234D.0542684284.0542358721**
Phone number **0542684284** and **0542358721** deleted from the regular phone list, insert a comma between the phone numbers, can use all SMS size.

1.5 Delete Special Phone Number

DS. Phone number. phone number
Delete phone numbers from special phone list
Example: **P.12345678DS.0542684284.0542358721**
Phone number 0542684284 and 0542358721 deleted from the special phone list, put comma between the phone numbers, can use all SMS size.

1.6 Set Pulse Time

GOD (gate open delay)
Set the time of the pulse when calling to the unit, Maximum 60 seconds.
Example: **P.1234GOD.7**
Set the gate open to 7 second delay

1.7 Clock Update

CU
Clock update; update the unit's clock from the SMS send time
Example: **P.1234CU**

1.8 New Password

NP (new password)
Sets new password to the unit (the CSD password infect also)
Example: **P.1234NP.4321**
Change the password to **4321**

1.9 Get Unit Information

INFO
Return the amount of numbers in the phone list and in the special list
Example: **P.1234INFO**

1.10 Unit Reset

RESET
Reset the unit from remote
Example: **P.1234RESET**

AVG10_G Software

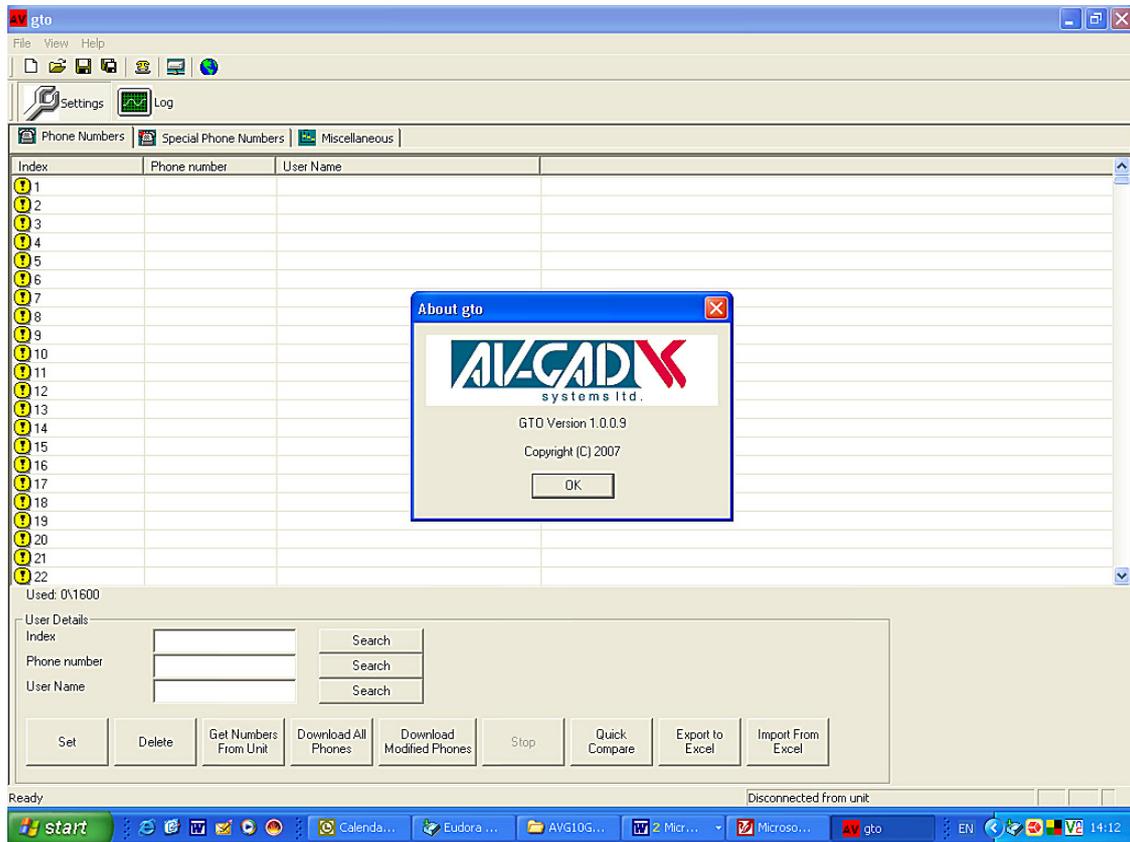The AVG10-G provides control and programming via a PC and GSM modem. Full details supplied with the software pack.

Figure 3: Software main screen

AVG10-G Specifications

Electrical Specifications	
GSM module	Telit GE863 QUAD PY
Frequency bands	Quad band: GSM 850/900/1800/1900MHz
Power Supply	Filtered 12V DC, 1.2A. Max ripple 120 mV
Idle Current Consumption	30 mA
Communication mode Current Consumption	120 mA. At power up 1.1 Ampere
Antenna Socket	SMA connector (female) for GSM antenna
SIM Socket	Build-in, spring type
RS-232 Interface	D9-pin female, Baud rate from 300 to 115.200 bit/s
RS-232 Voltage	-12V to +12V
Audio Plug	6 pole, RJ-11 used for relay wiring
Indications	Solid state LEDs, Red and Green
Mechanical Specifications	
Dimensions (max) L x W x H	82mm X 63 mm x 27mm
Temperature range operation	-20°C to +70°C ambient temperature
Humidity	Up to 85%
Protection class	IP40
Mechanical vibrations Amplitude	7.5mm at 5 - 200Hz sinus
Packing	Carton Box
Casing Material	Aluminum with Anodized plating color
Optional Casing Material	ABS with UV additive
RoHS, WEEE	Components comply with the EU RoHS and WEEE Directives

AV-GAD LIMITED WARRANTY

Av-Gad Systems Ltd. (Av-Gad) warrants it's products to be free from production defects in components, materials used and labor, for the period of twelve months following the date of production. Av-Gad will within the mentioned period, as its option, repair or replace any product failing to proper operation without charge the purchaser.

This warranty shell not apply to any equipment, or any part thereof, which has been repaired by others, installed not proper, used improper, abused, altered damaged, subjected to acts of God or on which the serial and data code altered or removed.

Av-Gad will not be responsible for any dismantling or reinstallation expenses. In order to exercise the warranty, the purchaser must return the product, delivery and transportation costs prepaid and insured to Av-Gad.

After repair or replacement, Av-Gad assumes the cost of returning products under warranty.

There are no warranties, express or implied, which extend beyond the description of the face hereof.

There is no express or implied warranty of merchantability or a warranty of fitness for particular purpose. Additionally, this warranty is in lieu of all other obligations or liabilities on the part of Av-Gad.

Any action for breach of warranty, including but not limited to any implied warranty of merchantability, must be brought within three months following the end of the warranty period. In no case shell Av-Gad be liable to anyone for any consequential or incidental damages for breach of this or any other warranty, express or implied, even if the loss or damage is caused by the seller's own negligence or fault.

Av-Gad is not an insurer of either the property or safety of the user's employees, family, or 3rd part and limits its liability for any loss or damage including incidental or consequential damages to Av-Gad original selling price of the product regardless of the cause of such loss or damage.