

GSM Module **AVG07**

**Integrated GSM module for Access
Control**

Installation and Operation Manual

Version 1.01.2 (Oct 2012)

Edition II

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

www.av-gad.com

Item: 4738_07



Av-Gad Systems Ltd. Panorama House
84, Ben Zvi Road, Tel-Aviv 68 104, Israel
P.O.B. 49 080, Tel-Aviv 61 490, Israel
www.av-gad.com
Tel: 972-3-681 6767. Fax: 972-3-683 5505

AVG07 Description

The AVG07 is a compact Quad Bands GSM gate and access control; unit is designed for cellular access control for homes, electric strike activator and parking lots. The AVG07 is housed in small ABS case. Each phone number that is stored in the AVG-07 is identified; when such phone number calls the AVG-07 the relay is activated. The AVG-07 is unable to be activated when calling from hidden number phones.

The AVG07 contains a build-in relay, the relay is remote controlled and is applicable for activation of most access control controller. For applications that require power back-up few options are available.

Support few GSM bands (see the technical specifications).

AVG07 standard pack contains: GSM unit, Zero dB GSM antenna, Installation Manual. Power supply is not included.

Programming and parameters setting is SMS, PC programming is not possible.

SIM card parameters. SMS enabled, without voice message service, without charges limits (not must), caller ID is enabled and unlocked, Pin Code disabled. See sample fig.

AVG07 SIM and Location



Prior to placing the unit check the receiving radio level is good and stable. Don't locate the unit in metal or deep ground places. Locate in dry and cool location.

1. Connections:
Gently insert SIM card to **SIM** slot, located on the PCB, as shown at figure 1.
Connect GSM antenna to **ANT** connector
2. Notice LEDs location as shown in figure 1

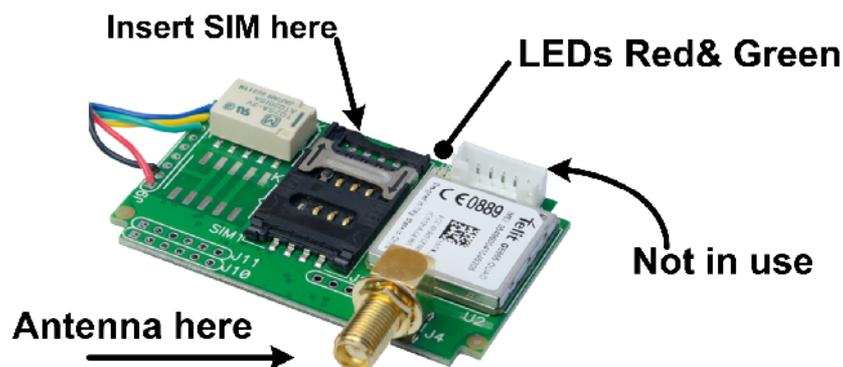


Figure 1: AVG07 SIM card placing and LEDs

Starting and Wiring

Before setting the AVG07, you need a GSM phone, SIM card to insert into the AVG07 and 12V power supply. The SIM and GSM phone should be SMS and ID numbers enabled. The GSM phone is your programmer, make sure the phone number is disclosed. Every SMS sent to the AVG07 and correctly received, will be acknowledged by a SMS confirmation to the programming phone. Make sure the AVG-07 SIM can send SMS.

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 AVG-07 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 dated/time limited numbers. Each registered number activates the relay; 3 seconds pulse, times/modes are programmable at "Gate Delay" parameter. Relay drive 1A maximum.

Power Supply: Use a DC power supply, well filtered at 12-24V 1.2A or higher. Optional power supplies by Av-Gad: AV-20, AV-21, AV-21B or AV-40.

Signal name	Wires Color	Description
Relay	Yellow	Common Relay (30V 1A max)
Relay	Green	Normally open Relay (30V 1A max)
-Vin	Black	Power Supply -V
+Vin	Red	Power Supply +V

* Yellow wire – (If exist) not in use

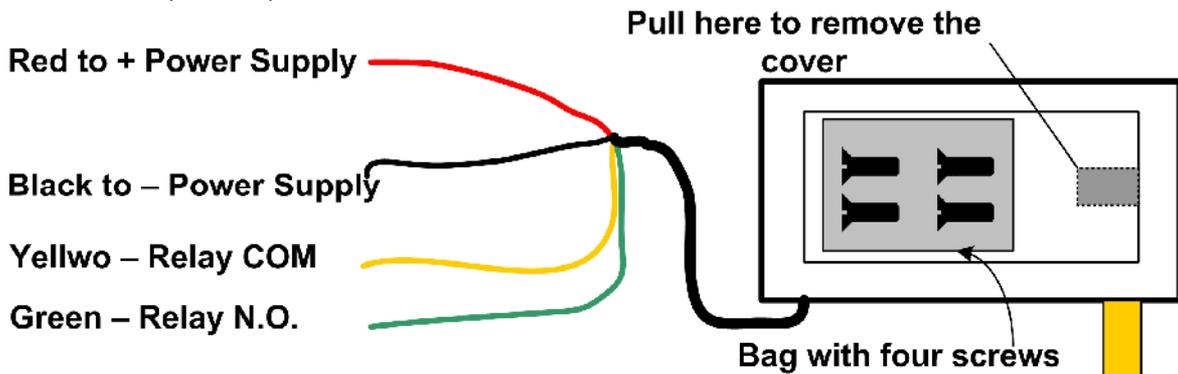


Figure 2: Wiring diagram

After powering up wait for GSM registration about 120 seconds and follow the LEDs status:

Red LED displays the Network 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

Green LED displays the Operating status	Device Status
Permanently ON	Unit active
Fast interrupt sequence (period 1s, Ton 1s)	Error: Net search / Not registered
OFF for 1s and then ON	Unit get phone call
Permanently OFF	Device off

Table 2: Red and Green LEDs Status

Note: At standby (ready for activation) mode, the Green LED is permanently ON, the Red LED is ON every 3 seconds

1. AVG07 SMS control commands

Software Version: 01.0.1.2

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. AVG-07 stores the last 8 digits to save memory space.

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.

When sending SMS commands make sure your phone is not in UNICODE writing mode, must be in TEXT mode, English characters (none upper fonts or Chinese, Hebrew, S. Korea fonts).

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 Open everyone

Example: **P.1234open.0, open the gate by memory numbers**

Example: **P.1234open.1, open the gate to any number**

1.10 Get Unit Information

INFO

Return the amount of numbers in the phone list and in the special list

Example: **P.1234INFO**

1.11 Unit Reset

RESET

Reset the unit from remote

Example: **P.1234RESET**

1.12 Unit Format

Erase all phone numbers. Note: This action takes 90 seconds, wait for SMS confirmation.

Example: **P.1234FORMAT**

2. Trouble shooting

Problem	Solution
The GSM gate opener is not sending me SMS after programmed	Check the SIM card you used with unit. Try to send SMS with the same SIM from your mobile phone. <ul style="list-style-type: none"> - Try to replace the antenna - Check if power supply is 12 to 24V DC. AC power supply do not fit and cause instability
The gate open is not activated by my phone	<ul style="list-style-type: none"> - Call the AVG-07 SIM number; you should hear 1-2 rings tone than busy/disconnected. Check if answering service is activated, or you call the wrong number - You are calling from a none disclosed number, set your phone to disclose the number during outgoing calls
The AVG-07 is used to work fine, after a while not responding, or messagethe number is not available now.....	<ul style="list-style-type: none"> - The SIM in the AVG-07 provider has poor radio coverage in the region. Change the antenna location or try other provider (with better GSM coverage) SIM card. Send INFO command to get the RF level. - Other option is to use high gain GSM antenna. - Check that electricity was not down during this time
I replaced the SIM in the AVG-07 and notice unstable unit	New SIM in most cases must be activated by the SI< provider and load with some money (For sending SMS) in order to work properly. Call the SIM provider or check the SIM in your working mobile phone if can call and send SMS
I need to setup fast entry via this gate, what to do?	Program the AVG-07 to be activated by any call. You give the AVG-07 to your accounts, they call the AVG-07 to open the gate. See programming command 1.9
I am using a heavy gate that need high current to command OPEN	Use the AVG-07 relay to drive a relay module with high current capability, like AV-01 that can drive up to 10 amperes
In large parking lot I need to program 1000 users phone numbers, how?	You need to purchase our GSM modem. Get the phone numbers in Excel file. Purchase Av-Gad GSM modem and software pack for transferring the numbers fast via GSM network
I am trying to send programming commands form my phone but nothing works for me	If you are using a phone with upper fonts or new smart phone the SMS command includes none visible spaces or signs, try to do the same from other phone

3. AVG07 Specifications

Electrical Specifications	
GSM module	Telit GE863 QUAD PY
Frequency and GSM bands	Quad band: GSM 850/900/1800/1900 MHz GSM-850, E-GSM-900, DCS-1800, PCS-1900
Power Supply	Filtered 12-24 V DC, 1.2A. Max ripple 120 mV
Standby Current Consumption	30 mA
Communication Current Consumption	Idle: 120 mA. At power up: 1.1 Ampere
Relay output	1A max @ 30V. Output COM & N.O.
Antenna Socket	SMA connector (female) for GSM antenna
SIM Socket	Build-in, spring type
Indications	Solid state LEDs, Red and Green
Mechanical Specifications	
Dimensions (max) L x W x H	86mm x 48m x 24m
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	ABS with UV additive UL94 HB
RoHS, WEEE	Components comply with the EU RoHS and WEEE Directives

AV-GAD LIMITED WARRANTY

Av-Gad Systems Ltd. (Av-Gad) warrants its 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.

WARRANTY

This warranty shall 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 shall 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.