GSM INTERCOM MANUAL

Version V2.3/2019

Microphone

Unlock   Lock

Lock

Speaker

Call button

AUTOMATIC GATE SOLUTIONS
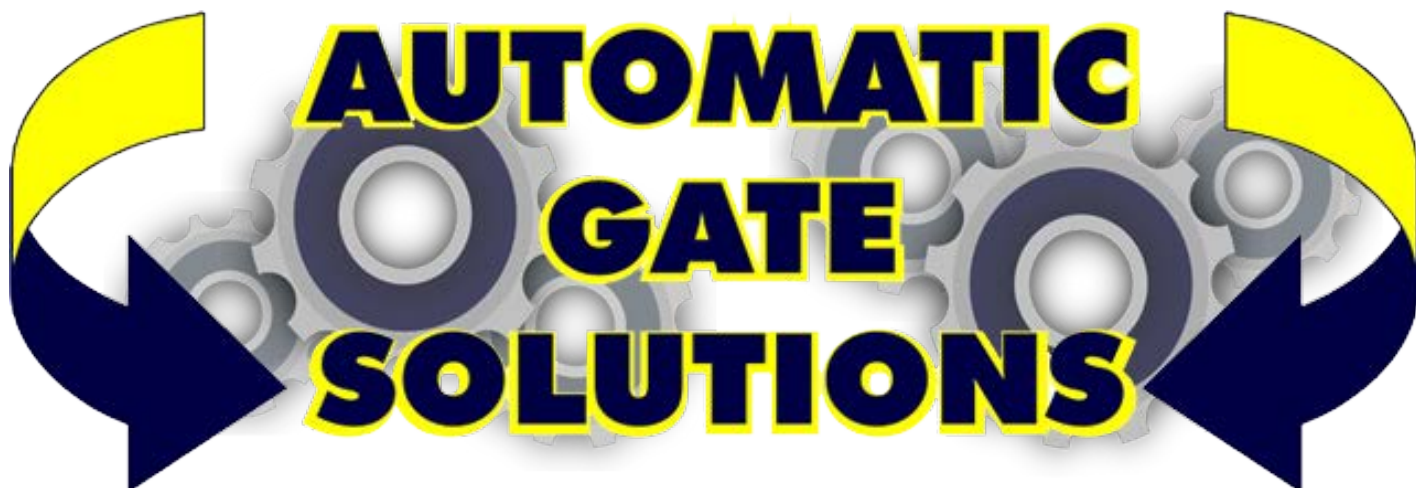
www.automaticgatesolutions.com.au

# GSM INTERCOM OPERATING INSTRUCTIONS

PRODUCT DESCRIPTION

GSM INTERCOM is an anti-vandal GSM intercom with self contained GSM door entry audio intercom system and also built-in the WAFER "GSM-KEY" function.

For the GSM intercom function.the vistor can call the authorization number via the "Call" button to establish a voice connection. Door release is from the phone keypad during the talking..

For the "GSM-KEY" function, the device has a whitelist that allows call control. When the GSM INTERCOM receives a call, it will check if the call number is in the whitelist. If in the list, it will control the relay output on the device while rejecting the call.

It also has two alarm input ports for security detection. And also has a rechargeable backup battery inside to provide continuous work when the power is temporarily suspended.

CONNECTOR DESCRIPTION
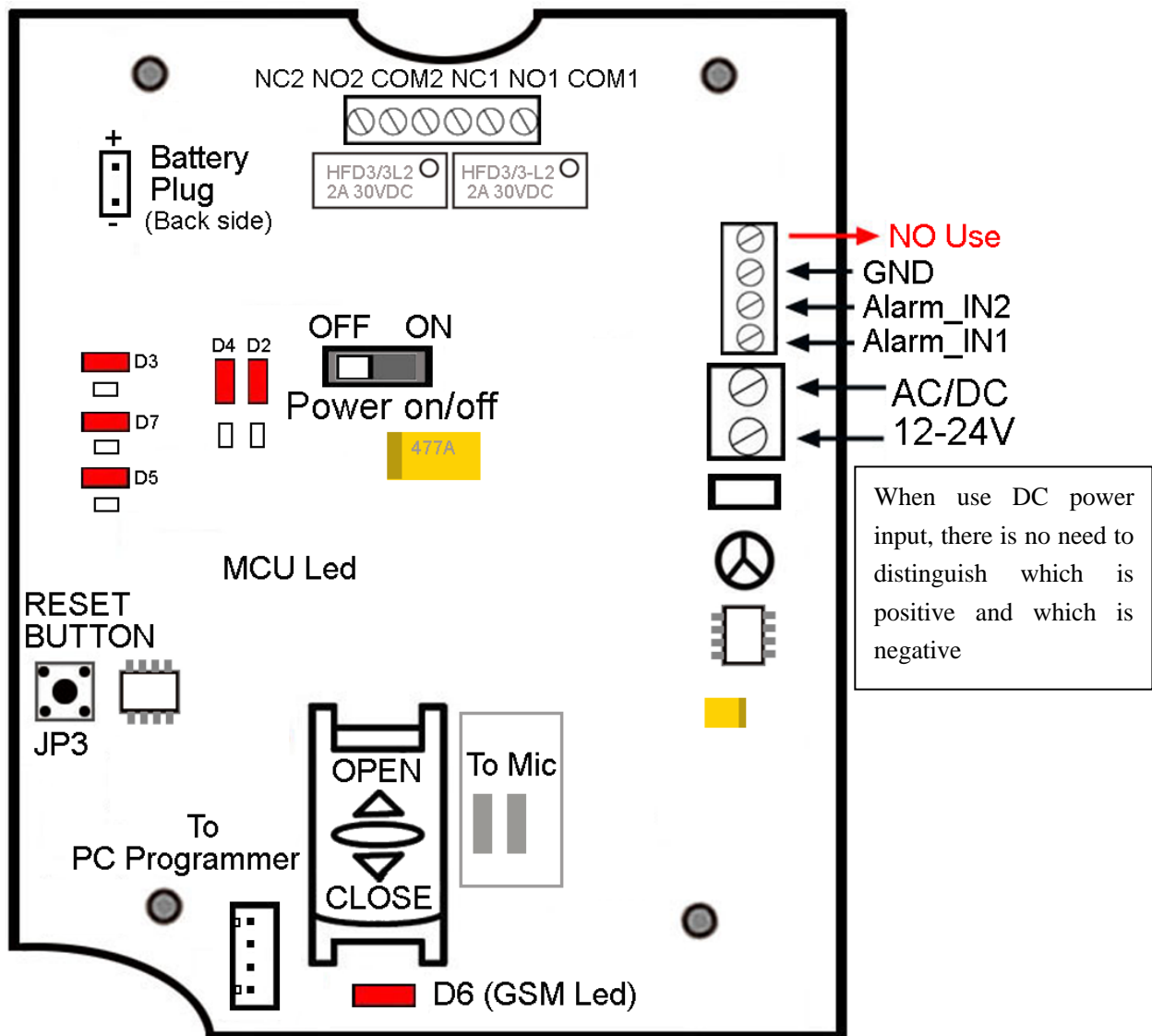
| D2: MCU Led | D6: GSM Led | D3: SMS Receiving Status Led |

INSTALLATION

**Please read this entire manual before installation   !Note!**

- Take EXTREME care with the Power line installation
- In case of fault power connection will cause the default permanently.
- To maximum reception, install the GSM antenna in a prominent elevated position if possible, and vertically mounted.
- The GSM unit requires mounting carefully with the lock for proper operation.

To install the GSM INTERCOM, you need to connect the 2 wires of the relay contact in parallel with the gate opening button. The relay contacts can stand **30V 2A maximum**, this is enough for its operation but **don't try to switch higher voltages or currents**. You should install the GSM INTERCOM in a place with good GSM signal. Check it with a phone before proceeding with the installation. If it is to be installed in a weak signal,consider using the magnetic mount GSM antenna for better signal gain.

You should then insert the SIM Card of the operator you want to use with the right direction according to the following pictures.

!Note! : You must remove the PIN request from the SIM before inserting it in the unit, otherwise the device will not work. In order to do so, insert the SIM in a mobile phone and verify the SIM card to call other phone and send and receive the SMS).

Lock the SIM card in the right direction:
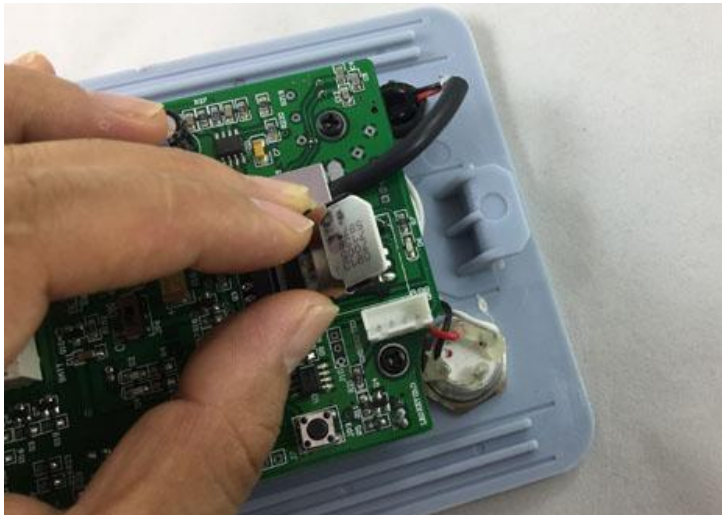
1. Slide back the SIM door and lift it up
2. Slide the SIM Card into the SIM door making sure that the clipped corner of the SIM card lines up with the clipped corner of the SIM holder
3. Close the SIM door
4. Slide the SIM door to lock the SIM card in place

GSM INTERCOM also comes with additional 2 Input.The inputs can be used to generate alarms when triggered. For examples,you can can connect the door or gate saftey beam output to the GSM INTERCOM Alarm1 and Alarm2 input.

Before the following test,Connect the DC12V to the AC/DC power input terminal.

Lock the panel

Insert the key, gently press and turn the key left to pull out the front panel. Gently press the key and turn it to the vertical position to lock the front panel and eject the key.

OPERATION mode:

Visitor mode:
When the visitor pushes the call button,the device initiates a voice call to the configured phone number,if the called person accepts the call,the communication establishes for the configured duration.During the call,the connection can be stopped by pressing the button again.The call is ended automatically when the configured communication time expires or the called party ends the call. The next numbers is called if the previous number doesn't answer.

Controlling the relay output
The DOOR RELEASE (Normally open,NO) relay output can be controlled as follows,depending on the usage:
- ✓ **Controlling during the intercom call:**
  During a call,the user press "111" to open the relay1 and press "222" to open the relay2
- ✓ **Controlling by free call**
  On incoming call,after indentifying the caller ID,the unit reject the call and activates the output,maximum 200 numbers can be configured
- ✓ **Controlling by SMS command or customized command**
Please refer to the following SMS command to control the relay1 and relay2 and also can use the customized SMS command to control

Teach button (Device Reset button)

Press the KEY button to Teach
Press the KEY and hold the button for around 2 second, the LED D4 would be lit,and then use your phone to call the device number. when coming the call, device would reject the calling and D4 would flash two times, then the number is saved. After program, press the button again to quit the teaching. then the LED D4 would be extinguished.
(Fast button only program WHL position from WHL01 to WHL10)
Press the KEY button to Reset
Press the KEY button and hold the button for around 10 seconds,and then the LED would start to flash and then release the button.The device has been reset.the Password would be reset to "123456" and from WHL01 to WHL10 would be cleared.and other parameters such as ACM, REPLY and REPORT will be reset to ACM=OFF,REPLY=ON,REPORT=ON.

Status LEDs

D2: MCU Led	D6: GSM Led	D3: SMS Receiving Status Led

D2:   Keeps flashing to indicate that the device is working.
D6:   The GSM module has just powered on. it flashes around two times every second. After the device is successfully connected, it will flash slowly around once every two seconds.
D3:   As long as the device receives the text message, D3 will flash several times.
Call Button LED: In order to facilitate the customer to observe the device, the LED combines the functions of D3 and D6. After powered on or disconnected from the GSM net, Call button LED will flashes around two times every second. After the device is successfully connected to the GSM net, it will flash slowly around once every two seconds. Also during receive the an SMS message, it will flash several times.

WAFER GSM INTERCOM PROGRAMMING

You can program the GSM INTERCOM with SMS commands using your phone. It is safe to do so because in addition to the fact that other people may not know the number of the SIM inserted in it, we also use a Password that makes it impossible for anybody who doesn't know it to access the system by chance.

Remember that all commands must be CAPITAL LETTERS. Such as PWD not pwd, CAP not Cap etc. Also Don't add spaces or any other character.

Some complicated Instructions,that cann't be programmed by the phone SMS. That would need to use the PC software to program and inquire the status of the terminal.

The following compand is used in the GSM INTERCOM :

#PWD:	Password
#CAP:	Change password
#WHL,SHL,PHL,QHL:	White List (add or remove numbers)
#QUERY:	Query the number
#MODE:	Relay working mode
#GOT:	Gate pulse time
#REPORT:	Report status change
#REPLY:	Reply enable or disable
#ALARM:	Alarm information setting
#CSQ:	Check Signal Quality
#STATUS:	Check status
#DIAL:	Add or remove Intercom Dial numbers
#OUT:	Relay output control

Once an authorized user issue a command with an SMS, user will receive a confirmation SMS with OK

SMS COMMAND LIST:

#PWD *Password.*
This command must always come first 6 digits as a password.
The initial password, when the device comes from the factory, is 123456.
In all the following examples will use 123456 as an example of password.

#CAP *Change Password.*
Use this command to change the password with a new one for your device
The #CAP command must be issued 2 times to be sure you don't digit a wrong one.
OF course it must be preceded by the old password.
For example, to change the password 123456 into the new password 333444 you need to send the following SMS: 　　　#PWD123456#CAP333444#CAP333444
Acknowledge SMS: 　PWD SETUP OK
If you wrote correctly, or an Error message if you made a mistake.
If the old password is error,then conformation would be : Error Old Password
If you input two different new password,then reply would be : Error New Password,Please Check the input again.

#GSM Intercom function and config command

1. Add the phone number for the inter calling

| #PWD123456#DIAL01=180122333 | and | #PWD123456#DIAL02=181323344 |

Reply: DIAL01 SET TO 122333 OK   Reply: DIAL02 SET TO 323344 OK

2. Inquiry the intercom calling number in the memory

#PWD123456#DIAL=ALL?

You will receive a Acknowledge with: DIAL IS 180122333:181323344:0000:0000:0000

3. During talking,user can press phone keypad number "1" or "*" to control the relay output1 and press the number "2" or "#" to control the relay output2

> Through the simple DIAL Command above, then already can use the INTERCOM function. That is, by calling the button to call the set number

The following is the function of GSM-KEY.

#WHL *White List*.

This is the command that you will use most. it is used to add or remove numbers that are enabled to open the gate into the White List. You can add up to 200 numbers in the list. Every position must be indicated in the command and we advise you to keep a list written somewhere to know which numbers are in and in which position.

• To add a number, the syntax of the command is the following:

#PWD123456#WHL01=61143815

Acknowledge would be : WHL01 SET TO 61143815 OK

Where 01 is the position in the list and 61143815 is the number enabled.

Please note that it is possible to program up to a maximum of 10 digits for a number. If it has more digits you should use the rightmost ones. For example, if your number is 33446665555 you should program 3446665555. If your number appears as +85261143815 you should not program the country code (+852). If your number has only 9 digits or less, it is not a problem. The important thing is that you don't exceed 10 digits.

• To check which is the number in a place of the list:

#PWD123456#WHL01?

Acknowledge : WHL01 IS 61143815 OK

• To erase a number:

#PWD123456#WHL01=0000

(or you can write over it another number you wish to add)

Acknowledge : WHL01 SET TO 00000000

List All numbers in the List

#PWD123456#WHL=ALL?   **(Only for PC COMMAND, Cann't use the SMS to read back)**

Acknowledge :

WHL01 IS xxx

WHL03 IS xxx

WHL08 IS xxx

……

#SHL, #PHL, #QHL *Special List*.
Authorize the number by the time of the week

#PWD123456#SHL001=13564121668:1357(8:32-23:59)

Acknowledge :   SHL001 SETUP TO **61143815**:1357(8:32-23:59)

SHL001 number would operate from 8:32 to 23:59 in Mon,Wen,Fri,Sun in every week.
Authorize the number by the date and time

#PWD123456#PHL001=13564121668:100324-101012(8:32-18:26)

Acknowledge :   PHL002 SETUP TO **61143816**: 100324-100812(8:32-18:26)

PHL001 number would operate from 8:32 to 18:26 from Mar.24th to Oct.12
Authorize the number by the times of control

#PWD123456#QHL001=13564121668:12

Acknowledge :   QHL003 SETUP TO **61143817**:12

QHL001 number would operate total 12 times,then would be expired.

• **To check which is the number in a place of the list:**

#PWD123456#SHL0001?

Acknowledge :   SHL01 IS 61143815 OK

Or   #PWD123456#PHL0001?   #PWD123456#QHL0001?

• **To erase a number:**

#PWD123456#WHL01=0000

Or   #PWD123456#PHL01=0000   #PWD123456#QHL01=0000

(or you can write over it another number you wish to add)

List All numbers in the List
#PWD123456#SHL=ALL?   **(Only for PC COMMAND, Cann't use the SMS to read back)**
Acknowledge **:**
SHL01 IS XXX
SHL03 IS XXX
QHL08 IS XXX
……

#QUERY *Query the phone number in the WHL list.*
Query the phone number in the position of the WHL list,Special phone list or Alarm phone list

#PWD123456#QUERY=143535353

Acknowledge**:**   QUERY RESULT: 143535353 AT WHL004

#ACM *Safety control or free control mode setting.*

#PWD123456#ACM=ON

Acknowledge: ACM SET TO ON

#PWD123456#ACM=OFF

Acknowledge: ACM SET TO OFF

ACM=OFF, Then any number can free control the device through the phone calling
ACM=ON, Then only the authorized number can control the device through the phone calling

#GOT *Relay working output delay time.*   (Only for NO.1 Relay)

Setup the timer data with multiplier at millisecond or second or minutes.

#PWD123456#GOT5000:MILLISECOND

Acknowledge:DELAY TIME SET TO 5000 MS

#PWD123456#GOT500:SECOND

Acknowledge:DELAY TIME SET TO 0500 S

#PWD123456#GOT500:MINUTE

Acknowledge:DELAY TIME SET TO 0500 M

This command is useful in case you need to keep the Relay output working longer. The standard time is 5 seconds (5000 ms). You can change it with the GOT command.

With the above command the delay time has been set to 5000 ms (5 seconds).

You can check what the current relay output delay time is with the command

#PWD123456#GOT?

Acknowledge**:**   DELAY TIME IS 05000 MS

#ALARM Alarm setup

The Alarm01 is very important position,not only act as a alarm number,but also working as the REPORT phone number, that means if you enable the REPORT function,then every report event happen,then would send the REPORT SMS to this number

Setup the alarm phone number to receive the alarm SMS

#PWD123456#ALARM01=13818120592

Where 01 is the position in the list

Acknowledge: ALARM01 SET TO 61143815 OK

When the number is seted to 000000,that means delete the number in this position

List all numbers in the alarm phone list:

#PWD123456#ALARM=ALL?

Acknowledge: ALARM IS XXXXX:XXXX:XXXXXXX:0000:0000

(Will show total five numbers, if no effective number,that will be replaced with 0000)

Alarm mode setup:

There are two alarm input ,you can set at PHONE or SMS

#PWD123456#ALARM-IN1=ON:PHONE:10,ALARM-IN2=OFF

Acknowledge:ALARM_IN1=ON:PHONE:10,ALARM_IN2=OFF OKAY

#PWD123456#ALARM-IN1=ON:SMS:300,ALARM-IN2=ON:PHONE:10

Acknowledge: ALARM_IN1=ON:SMS:300, ALARM_IN2=ON:PHONE:10

Phone mode: When an alarm occurs, the preset number will be called
SMS mode: When an alarm occurs, Alarm message will be sent to the preset number.

Set the content of the alarm message for alarm in1 and in2:

#PWD123456#UDI1:XXXXXX, UDI2:xxxxxx

Acknowledge: UDI1:XXXXXX, DI2:xxxxxx OKAY

(When the alarm occurs, the set alarm message will be sent)

Check the text set

> #PWD123456#UDI?

Acknowledge: UDI1:ABC1, UDI2:ABC2

#REPORT *Report the system status change*

When setup to:

> #PWD123456#REPORT=ON

Acknowledge**:**   REPORT SET TO ON

Then any device status change would send the alarm SMS to Alarm01 number

> #PWD123456#REPORT=OFF

Acknowledge**:**   REPORT SET TO OFF

No report for the device status change

> #PWD123456#REPORT?

You will receive the SMS reply: REPORT IS ON   or   REPORT IS OFF

Check the REPORT setting status

#CSQ *Check GSM signal quality.*

This command is useful to see what is the GSM network signal level your GSM-HOUSE is receiving. It ranges from 0 to 32.You should have a signal above 12 to be sure of being able to open the gate in any condition. Better if above 16. You should add an external antenna if this is not the case.

> #PWD123456#CSQ?

Acknowledge: CSQ IS 26

#MODE Relay Operation Mode SETUP

> #PWD123456#MODE0

Acknowledge**:**   RELAY SET TO MODE0

> #PWD123456#MODE1

Acknowledge**:**   RELAY SET TO MODE1

If set to MODE0,that is Momentary pulse and If Config to MODE1,that is Ratchet relay

#STATUS Check the config information of the terminal

> #PWD123456#STATUS?

You will receive a Acknowledge SMS with:

ALARM1=OFF:SMS:12, ALARM2=OFF:SMS:10, GOT=05S, WHL=02, AIN1=HIGH, AIN2=HIGH, BCPW=ON:70:80, CSQ=20, RELAY1=OFF, RELAY2=OFF

(ALARM1 and ALARM2 are the parameters setting, AIN1 and AIN2 are the input status, BCPW is battery working and alarm status, Lower than 70% would alarm and Current has 80% power   )

#OUT Control the Relay Output on or off

> #PWD123456#OUT1=ON   or   #PWD123456#OUT1=OFF

Acknowledge:OUT1 ON OK   or   OUT1 OFF OK

> #PWD123456#OUT2=ON or   #PWD123456#OUT1=OFF

Acknowledge: OUT2 ON OK   or   OUT2 OFF OK

Customized output control command TEXT:

#REPLY SMS reply OFF or ON

> #PWD123456#REPLY=ON

Acknowledge**:** REPLY SET TO ON

When setup to ON,then Device will reply the customized command after Relay is toggled

> #PWD123456#REPLY=OFF

Acknowledge: REPLY SET TO OFF

When setup to OFF,then Device will not reply the customized command after Relay is toggled

(This command is used to save the cost for the users who frequently control via SMS)

With this command, We can customize some simple and understandable Command to control. We can also use some custom commands to allow some users to control SMS, but they don't need to know the management password of the device.

> #PWD123456#OPEN1-TEXT#XXXX

> #PWD123456#CLOSE1-TEXT#XXX

> #PWD123456#RLY-TEXT1#XXX

If have the second output reply,then use the following command to config the second output

> #PWD123456#OPEN2-TEXT#XXXX

> #PWD123456#CLOSE2-TEXT#XXXX

> #PWD123456#RLY-TEXT2#XXXX

Check the Customized command text:

> #PWD123456#OUT1-TEXT?

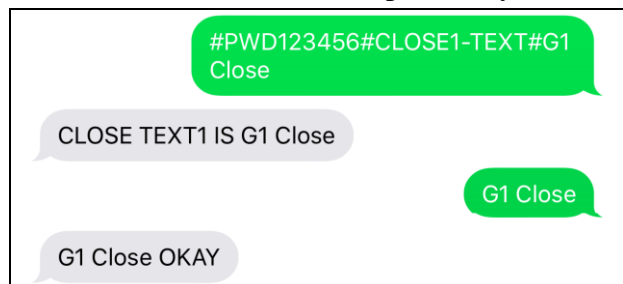Reply: OPEN1-TEXT=OPEN1,CLOSE1-TEXT=CLOSE1,TRIG1-TEXT=DIAN1

#PWD123456#OUT2-TEXT?

Reply: OPEN2-TEXT=OPEN2,CLOSE2-TEXT=CLOSE2,TRIG2-TEXT=DIAN2

For example,user send the command:

> #PWD123456#CLOSE1-TEXT#G1 Close
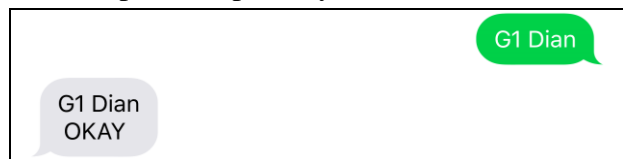
Reply: CLOSE TEXT1 IS G1 Close

Then authorized users can use the simple SMS: "G1 Close" to switch on the output1 relay

> **#PWD123456#RLY-TEXT1#G1 Dian**

Reply: RLY1-TEXT IS G1 Dian OKAY

Then can use the simple SMS: "G1 Dian" to trigger the output1 temporarily for GOT timer

#Battery working and alarm command

(Battery alarm SMS all send to the ALARM phone numbers)

#PWD123456#POWER-CHANGE-ALARM:ON,BCPW-LOW-ALARM:ON:60

POWER-CHANGE-ALARM: ON or OFF to enable or disable the power change alarm

BCPW-LOW-ALARM: When the Remaining battery power is lower than 60%,will send the alarm SMS

You will get the reply SMS:

POWER-CHANGE-ALARM:ON,BCPW-LOW-ALARM:ON:60 OKAY

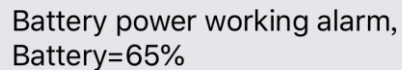If you want to know the setup of the battery alarm,then send the inquiry SMS:

#PWD123456#POWER-CHANGE-ALARM?

You will receive the SMS reply from the unit :
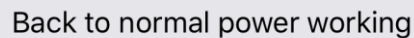
POWER-CHANGE-ALARM:OFF,BCPW-LOW-ALARM:OFF:60

If you want to know the battery remaining power,then you can send the STATUS? command to the unit.

When power off, would delay **some seconds** and then send the alarm SMS.

Battery power working alarm,
Battery=65%

Back to normal power working