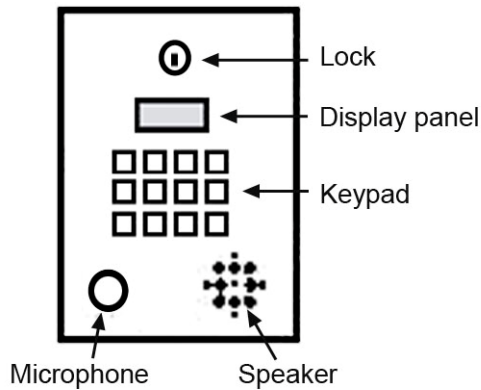# INSTALLATION MANUAL

V20160710

Before install this equipment, please read this full manual.

Ensure that there is good gsm network reception at the location where it will be installed

FRONT PANEL DESCRIPTION:

- Input the house number and press # to start calling
- Press * to cancel the calling
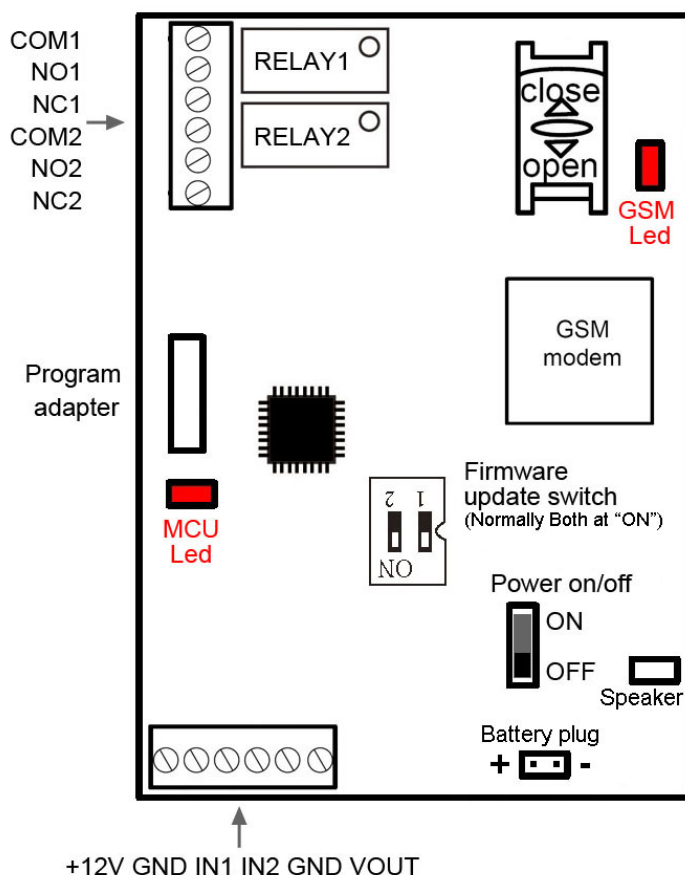- Insert the key,Turn Left and Pull to open the box, Push into the panel and Turn Right to lock the front panel

When power on, the Dot numbers displyed on the front panel indicates the level of the GSM signal from 1 to 5 (1 is weak signal, 5 is excellent signal)

WIRING:

GSM Led: Short flashing indicates that the GSM module is ON, but it is not yet connected on the GSM network. After connection, Red led is flashing with short pulse ON and a long pulse OFF.

MCU Led: Always flashing during working

Firmware update switch: Kept in the ON postion for running and Switch to Number side for firmware update

1) Insert the key, turn left and pull out the front panel.

2) Connect the DC12V Power supply properly

3) Carefully slide the SIM holder in the OPEN direction, insert the SIM, and slide in the CLOSED direction to lock it in place.

4) Switch the on-board Power switch to "ON" position and allow 20-30 seconds for the unit to boot up and detect the network. Once successful connection has been made, the display panel will show the "- - - - -" at each LED panel.if the GSM network reception is weak,then will only show two to three Dash lines.

5) To confirm the SIM card is working properly and you can use your mobile phone to call the Device number, the box will reject the calling to confirm that is working properly.

6) Maintaining the internal wiring clean, reliable,especially the GSM antenna should be along the side or use the double-sided tape to stick the antenna at the top of the box

ABOUT THE RELAY OUTPUT

GSM-APARTMENT Board has two relay outputs.

Both relay can be controlled for momentary and latching operation.

Only Relay output1 can be controlled with authorized number calling in to trigger the output

Both relay can be controlled with SMS command

Both relay can be controlled during intercom talking with phone keypad numbers pressing

CONFIGURE THE SYSTEM PASSWORD

Programming is carried out by sending SMS texts to the unit.

Each SMS must start with the PASS code, default 123456, in the following format #PWD123456#, followed immediately by a command

#PWD *Password***.**

This command must always come first 6 digits as a password.

The standard default one, when the device comes from the factory, is 123456.

In all the following examples we will use 123456 as an example of password.

#CAP *Change Password***.**

Use this command to change the password with a new one that you will chose for your device (don't forget it or you will have to send the unit back to us to reset it, and this has a cost)

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 to 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

● QUICK START FOR INTERCOM:

Program the numbers you wish the unit to dial when the house number is input and "#" is pressed to dial in sequence

Up to a maximum of 2 numbers for each house number.

For example you want to program the telephone number 0987654322 and 0987654333 for house number **"20106"**,then enter the following SMS:

#PWD123456#20106:DIAL01=00720987654322

#PWD123456#20106:DIAL02=00720987654333

Here the "0072" is the country code (you need to change the country code according to your country)

If you program the House number with DIAL01 or DIAL02 to number "0000",then that means the number will be deleted.

#PWD123456#20106:DIAL02=0000

If you want to delete all Numbers you have programmed,then use the command:

#PWD123456#DIAL=RESET

If you want to read all Numbers you have programmed in the memory   **(Only working with PC)**

#PWD123456#DIAL=ALL?

During talking, Can press the "1" or "2" on the mobile phone keypad to control the separate relay output

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● HOW TO USE PASSWORD ON THE KEYPAD TO WORK:

#KEYCODE keyword to input on the panel to trigger the different relay output   (PC$PHONE)

#PWD123456#KEYCODE1=112233

#PWD123456#KEYCODE2=556677

KEYCODE1 and KEYCODE2 is for relay1 and relay2, only 6 digital number can be used

Device will reply: KEYCODE1=112233 OKAY

> Then you can press the "*" on the Front panel to start and then input the Keycode Number "112233", and then press the "#" to confirm,then the RELAY1 output will be triggered

● BUILT-IN GSM-KEY SMS COMMAND LIST:

#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=0000000

(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 working with PC)

Acknowledge **:**

WHL01 IS XXX

WHL03 IS XXX

WHL08 IS XXX

……

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

#PWD123456#WHL0001?

Acknowledge **: WHL01 IS 61143815 OK**

• To erase a number:

#PWD123456#WHL01=0000

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

• To erase all WHL numbers
#PWD123456#WHL=RESET

#QUERY *Query the phone number in the WHL list.* **(PC$PHONE)**
Query the phone number in the position of the WHL list,Special phone list or Alarm phone list
#PWD123456#QUERY=143535353   (PC$PHONE)
Acknowledge**:   QUERY RESULT: 143535353 AT WHL004**

#ACM *Safety control or free control mode setting.*   **(PC$PHONE)**
#PWD123456#ACM=ON
#PWD123456#ACM=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.*   **(PC$PHONE)(Only for NO.1 Relay)**
When setup the GOT Timer,first you also need to setup the timer multiplier at millisecond or second or minutes.
#PWD123456#GOT5000:MILLISECOND
#PWD123456#GOT500:SECOND
#PWD123456#GOT500:MINUTE
This command is useful in case you need to keep the Relay output working longer. The standard time is 5 seconds (5000 ms). You can change it with the GOT command.
With the above command the delay time has been set to 5000 ms (5 seconds).
You can check what the current relay output delay time is with the command
#PWD123456#GOT?   (PC$PHONE) (Only for NO.1 Relay)
Acknowledge**: DELAY TIME IS 05000 MS**

#ALARM Alarm setup
In GSM-KEY V2015,that 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
(1)You can setup the alarm phone number when have the alarm information input
#PWD123456#ALARM01=13818120592   (PC$PHONE)
Where 01 is the position in the list
Acknowledge**: ALARM01 SET TO 61143815 OK**
When the number is seted to 000000,that means delete the number in this position
(2) check which is the number in a place of the alarm phone list:
#PWD123456#ALARM01?   (PC$PHONE)
Acknowledge**: ALARM01 IS 61143815 OK**
(3) List all numbers in the alarm phone list:
#PWD123456#ALARM=ALL?   (PC$PHONE)
Acknowledge**: ALARM IS XXXXX:XXXX:XXXXXXX:0000:0000**
(Will show total five numbers, if no effective number,that will be replaced with 0000)

(4) Alarm mode setup   **(PC$PHONE)**
There are two alarm input ,you can set at PHONE or SMS

#PWD123456#ALARM-IN1=ON:PHONE:10,ALARM-IN2=OFF （**PC$PHONE**）
Acknowledge**: ALARM_IN1=ON:PHONE:10,ALARM_IN2=OFF OKAY**
#PWD123456#ALARM-IN1=ON:SMS:300,ALARM-IN2=ON:PHONE:10 （**PC$PHONE**）
Acknowledge**: ALARM_IN1=ON:SMS:300, ALARM_IN2=ON:PHONE:10**

If at phone mode: when receive the alarm input,then will phone the number in the alarm phone list until you reject the phone call or that will continue to phone the number again after the minutes setted.

If at SMS mode: When receive the alarm input,then will send the SMS to the number in the alarm phone list until you send the SMS to PAUSE the alarm .

(5) Config the SMS TEXT :   **(PC)**
#PWD123456#UDI1:XXXXXX, UDI2:XXXXXX
Acknowledge**: UDI1:XXXXXX, DI2:XXXXXX OKAY**
(When the Alarm input is triggered,then will send the
SMS you already setted with this UDI command)
Check the text   set
#PWD123456#UDI?
Acknowledge: **UDI1:ABC1, UDI2:ABC2**

#CSQ *Check GSM signal quality.*   **(PC$PHONE)**
This command is useful to see what is the GSM network
signal level your GSM-KEY is receiving. It ranges from 0 to 32 (if it is 0 we doubt it will ever answer...). 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, or eventually even change operator with another that serves your area better.
#PWD123456#CSQ?
Acknowledge: CSQ IS 26

#MODE Relay Operation Mode SETUP   (PC$PHONE)
#PWD123456#MODE0
Acknowledge**:   RELAY SET TO MODE0**
#PWD123456#MODE1
Acknowledge**:   RELAY SET TO MODE1**
If set to MODE0,that is Momentary pulse and If Config to MODE1,that is Ratchet relay
#STATUS Check the config information of the terminal   (PC$PHONE)
#PWD123456#STATUS?
You will receive a Acknowledge with:
ALARM1=ON:SMS:040960,ALARM2=OFF:SMS:4352,GOT=05S,WHL=01,ALARM1=HIGH,ALARM2=HIGH,BCPW=00,CSQ=10,RELAY1=ON,RELAY2=OFF

#OUT Control the Relay Output on or off   (PC$PHONE)
#PWD123456#OUT1=ON or OFF
#PWD123456#OUT2=ON or OFF   (If has the second relay output on board)

Customized output control command TEXT:　　(PC$PHONE)

With these command you can customize the command to control your output.then would be easy for you to understand the command

#PWD123456#OPEN1-TEXT#XXXX

#PWD123456#CLOSE1-TEXT#XXXX

#PWD123456#RLY-TEXT1#XXXX

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#XXX

Check the Customized command text:

#PWD123456#OUT1-TEXT?

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

#PWD123456#OUT2-TEXT?

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

For example,you send the command:

#PWD123456#OPEN1-TEXT#GATE1 OPEN

Then you can use the simple SMS: GATE1 OPEN to switch on the output1 relay

#PWD123456#CLOSE1-TEXT#GATE1 CLOSE

Then you can use the simple SMS: GATE1 CLOSE to switch off the output1 relay

#PWD123456#RLY-TEXT1#GATE1 DIAN

Then you can use the simple SMS: GATE1 DIAN=5 to trigger the output1 relay for 5 second

#PWD123456#OPEN2-TEXT#GATE2 OPEN

Then you can use the simple SMS: GATE1 OPEN to switch on the output1 relay

#PWD123456#CLOSE2-TEXT#GATE2 CLOSE

Then you can use the simple SMS: GATE1 CLOSE to switch off the output1 relay

#PWD123456#RLY-TEXT2#GATE2 DIAN

Then you can use the simple SMS: GATE1 DIAN=5 to trigger the output1 relay for 5 second

TROUBLESHOOTING GUIDE

Q. The unit will not power up. No LEDs on.

A. Check power supply voltage at intercom is within DC12v-18v DC. and connect it with the correct polarity.

Q. The unit powers up but is not showing network reception on the front panel

A. This means the unit is not able to detect the network for some reason.

-Power off the unit, remove the SIM and check it in a mobile phone to verify it can make a call and has calling credit.

-Disable any PIN code request if active on the SIM card.

-Check the SIM is a standard voice 2G capable SIM. If you are unsure, contact your SIM card provider to verify. Frequency of operation should be any one of international quad band standards, 850 / 900 / 1800 / 1900 MHz.

-Check the reception is good. Poor reception is not sufficient.

-Power off, remove the SIM, use fine sand paper to lightly sand the SIM pads and contacts on the GSM unit, lightly bend the contacts upwards so that they make better contact with the SIM and try again.

Q. There is no audio on the phone, but the person can hear the voice from the phone

A. This can be due to low reception or excessively long power cables.

This may also be caused by a defective microphone, water on a microphone from a sprinkler for example, or dirt blocking the microphone hole. If reception is optimum and the problem persists, contact your supplier or installer.

Q. The audio quality that can be heard on the remote telephone is poor or humming (buzzing).

A. A small amount of GSM buzz can be considered normal on GSM intercoms, but not so much that causes inability to hear the person speaking. This can be caused by the GSM antenna being mounted too close to the speech panel or not mounted high enough, or poor power cables being too long or thin.

-Try to use double-sided tape to stick the antenna to the top of the box

-This is also a symptom of poor reception. Try above steps on checking and improving reception.

Q. The keys do not work when the intercom calls a phone.

A. Check if you can hear the relay clicking at the gate when the keys are pressed during a call. If it can be heard, then the system is working, check wiring between the relay and the lock or gate panel. If the relays do not make a clicking sound, then check this feature on a different mobile cell phone or landline. If it works on a different phone, check if this number is in the authorized number list.

If the number is also in the authorized number list, then check the GOT time, this is cause by the user accidentally setup a very short timer for relay working. Send the intercom the following #PWD123456#STATUS? The intercom should reply with a message detailing the relay status to check if the GOT Timer is too short to trigger the relay

Q. The unit no longer calls out to phones but I can make a call to it from my phone.

A – Check there is balance on the SIM card.

A – Switch off the power, remove the SIM, put it into a phone, and check that a call can be made from a phone. This will verify if the SIM is still working and in service.