

# Business/Home GSM Alarm System

Installation and Users' Guide

(99 wireless zones)



## Brief Introduction:

- ◆ GSM 850/900/1800/1900 bands, can be used in most parts of the world
- ◆ Full duplex communication with the host
- ◆ Monitor the scene environment
- ◆ Phone SMS alarm at the same
- ◆ Voice and message alert
- ◆ Set alarm ON or OFF by remote controller
- ◆ Can set Home Arm and Out Arm mode
- ◆ Call in to set alarm ON, OFF, Monitor, Output, Intercom.
- ◆ Send SMS to set alarm ON, OFF, Monitor, Output
- ◆ 5 group phone
- ◆ Can program of alarm messages
- ◆ 5 zones for wired detector
- ◆ 99 zones for wireless detector
- ◆ 2 outputs (can be set), can be used with external circuit to control home appliance
- ◆ 1 relay output linkage
- ◆ Easily set ON or OFF for every wired or wireless detector
- ◆ SMS inform if external power failure or recovery
- ◆ SMS, Arm & Disarm report
- ◆ Language Settings
- ◆ 6-bit password protection
- ◆ Wireless siren can be accessed

## Basic Kit contains:

- Alarm system (control unit) 1 pc.
- Wireless PIR detector 1 pc.
- Wireless door (gap) sensor 1 pc.
- Remote controller 2 pc.
- Antenna 1 pc.
- Mini wired siren 110dB/0.3m 1 pc.
- Power supply with back-up 1 pc.
- Installation/user manual 1 pc.

## Installation guide:

### 1. Insert SIM in alarm unit.

Press the yellow point on top of the main unit with a pencil tip or other tools, SIM tray will come out. Put the SIM card carefully into the tray, and make sure the metal contacts of the SIM to be down.

**Note:** Before inserting SIM card into alarm unit, using a regular mobile phone to do the following steps:

- Set PIN code request to off.
- Delete all stored numbers.

### 2. Connect the antenna.

Screw the antenna to the connection on top of the main unit. Take care not to over-tight the nut or let it loose!

### 3. Insert the power supply.

Connect the host with the adaptor. The host needs 9V-12V DC, must be over 1000mA current.

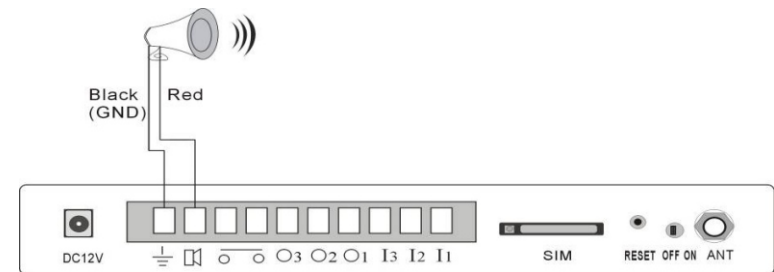
The signal status LED on the main unit panel will turn to red and last for 20 seconds, this is code learning mode, system is waiting for wireless detectors to be coded into the host;

After 20 seconds, the signal status LED will turn to orange, and begin to flash, indicating system is checking SIM card and search for GSM network;

After main unit finish checking the host, if the signal status LED turns to green and flashes slowly, it shows alarm phone number have been saved in the host, and the host is in arm status. If the signal status LED keeps on in green, it shows phone numbers have not been saved in the host, and the host is in disarm status. You can dial in the host or send SMS to program the phone number.

### 4. Connect the siren to alarm system.

Connect the black wire to GND port and red wire to siren port.



### 5. Connect wired sensors.

Three inputs are available to connect wired sensors. Inputs are independent, and are not coded as different zones.

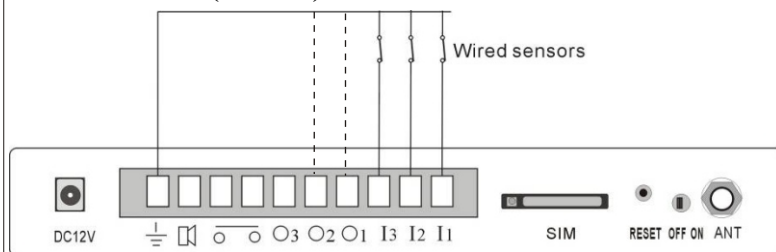
Sensors must be NC (normally closed) type.

More than 1 sensor can be applied at one input, connecting their alarm contacts serial.

The inputs can be connected with any number of wired sensors, as long as total resistance is under 220 ohms.

When these sensors are triggered, the alarming message will be:

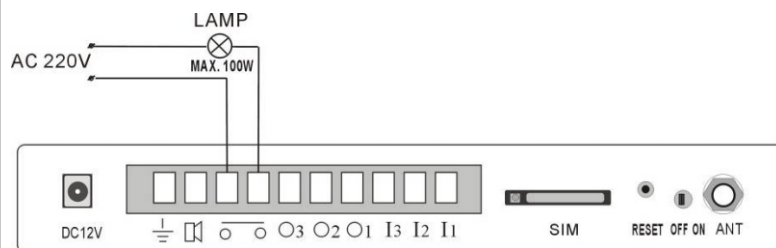
**Wired Activated(101~105).**



## 6. Connecting switched output devices (Home-appliance Control)

Three open outputs (O1, O2) and one internal relay controlled by telephone are available.

Internal onboard relay is activated when an alarm occurs and can be deactivated / reactivated through telephone commands or SMS text message. It can be used, for example, to command an external light.



Open outputs can be used directly if your equipment can operate a relay. Do connect an anti-parallel diode with relay coil. These outputs can be operated only by telephone or SMS text message commands.

### Wiring Explanation: For home-appliance control (for special order)

The controller box has four wires:

1. Two-yellow AC 220 wires to be connected with Home appliance.
2. GND, +12V DC wires to be connected with a 12V DC (Power supply)

### Configuration of the host

There are 10 connector ports on top of the host:

**GND; SIREN; RELAY1; RELAY2; SPEAKER(O3); O2; O1; I3; I2; I1**

I1; I2; I3: These 3 ports for input, every port can be connected with ground or open to make alarm out.

O1; O2: These 2 ports for output, you can call in or send SMS to set it. If output of these ports goes high, the light of OUT 1 or OUT 2 will light on the panel. **(NOTE: these ports must be connected with external circuit, un-professionals should use with caution !!!)**

SPEAKER(O3): This port is for voice output, it can be connected to the speaker. The other port of the speaker is connected to ground. You can control it by call in or send the SMS. If this function is available, the light of OUT 3 will light on the panel.

RELAY1; RELAY2: These two ports will be closed for 3 minutes when an alarm happens. You can use these two ports to start the power supply of the camera when an alarm happens. This function can be disabled by set command: 16#1#. You can also make this relay close or open anytime by sending SMS or phone calls (94#1# or 94#0#).

SIREN: This port outputs siren tone alarm, it is to be connected with the siren. The other port of siren to be connected to ground.

GND: power ground.

How to setup the alarm phone numbers and SMS

1. You can send SMS or call command to the host to setup 5 groups of alarm phone numbers.

The format is:

### **Password #operation code#content#**

123456#51#13907550001#. save first group alarm phone number into host.

123456#52#13907550002#. save second group alarm phone number into the host.

123456#53#13907550003#. save third group alarm phone number into host.

123456#54#13907550004#. save fourth group alarm phone number into host.

123456#55#13907550005#. save fifth group alarm phone number into host.

2. There are 7 kinds of alarm messages in the host: The first five messages are for wireless detectors of zone 1-5; the sixth message is for wireless detectors of zone 6-16; the seventh message is for wired port I1, I2, I3.

If the first wireless detector is triggered, the alarm message is: Wireless Activated (01)

If the second wireless detector is triggered, the alarm message is: Wireless Activated (02)

If the third wireless detector is triggered, the alarm message is: Wireless Activated (03)

If the fourth wireless detector is triggered, the alarm message is: Wireless Activated (04)

If the fifth wireless detector is triggered, the alarm message is: Wireless Activated (05)

If the sixth to sixteen wireless detector is triggered, the alarm message is: Wireless Activated (i); i=6-99

If the wired detector is triggered, the alarm message is: Wired Activated (i); i=101-105, for port 1 to 5 alarm

3. Users can send SMS command to the host to change these 7 kinds of alarm messages. The alarm message cannot be more than 24 English characters.

123456#81#Front door open#: save first group message into the host as first wireless detector is triggered

123456#82#Middle door open#: save second group message into the host as second wireless detector is triggered.

123456#83#Back door open#: save third group message into the host as third wireless detector is triggered.

123456#84#Front window open#: save fourth group message into the host as fourth wireless detector is triggered.

123456#85#Back window open#: save fifth group message into the host as fifth wireless detector is triggered.

123456#86#Middle window open#: save sixth group message into the host as port 6 to 99 wireless detector is triggered.

123456#87#Kitchen opened#: save seventh group message into the host as port 1 to 5 wired detector is triggered

### How to operate when the host is alarming

In normal usage, if the host is in disarm status, the signal LED keeps on in green. You can use remote controller to change the host into arm status, or you may send SMS or call command (123456#1#1#) to the host to change the host into arm status, the signal LED will flash in green in arm status.

1. Under arm status, any port of input (I1, I2, I3) touches ground or let it open, or wireless detectors activated, or press of alarm key of the controller, the alarm system will send alarm information by SMS, and dial out stored telephone numbers.

2. The system will send preset alarm message before dialing alarm phone numbers. If the SMS has been closed or limited, it will only dial out the alarm telephone numbers.

3. When there is alarm, you can answer the phone (no need to input password) for listen-in, remote control. Press 3#1# to sound the siren and press 3#0# to stop it, press 4#1# to start to listen-in and press 4#0# to stop it, press 93#1# to start to talk to the host and press 93#0# to stop it.

4. After picking up alarming calls, if you do not need the host dial next phone number programmed in the host, just press 1#1# or 1#2# to return the host to arm status.

5. When there is alarm, users can also use the controller to disarm the host if they are nearby.

6. In normal usage, with inside recharge battery on, you will receive the message "external power failure" or "external power recovery" when external power supply lost or recovered.

### How to SMS or Call control the host

1. Sending message to the host phone number (SIM Card number)

Send the message to the host: enter password 123456#, add the following command to set the host;

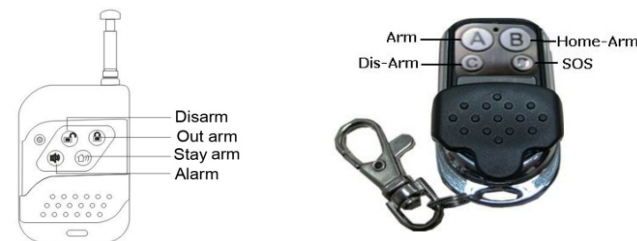
2. Calling the host phone number (SIM Card number)

Call in the host and enter password 123456#, then input the following command to set the host:

Com	Function			Com	Function		
1#1#	Outdoor arm (all detectors work)			1#2#	Indoor arm (part detectors work)		
1#0#	Disarm *(all detectors not work)			0##	Language queries		
3#1#	Sounding immediately			3#0#	Stop sounding		
4#1#	Open listen-in (use phone key )*			4#0#	Closed listen-in (use phone key )		
11#1#	Need siren sound when alarming *			11#0#	No siren sound when alarming		
12#1#	Sending SMS when alarming *			12#0#	No SMS when alarming		
15#1#	Dial phone number when alarming *			15#0#	Just alarm and no dialing		
16#1#	Disable Relay close 3 Min when alarming			16#0#*	Set Relay close 3 Min when alarm*		
30##	show the arm and disarm status of every zone			13#1#	Arm & Disarm report:On		
31#--#	Change password. Enter a new password (1-6 bit).			13#0#*	Arm & Disarm report:Off*		
38#--#	Set up alarm of zone (wireless zone: 1-99; wire zone: 101-105) (NOTE: arm of single defense zone)						
39#--#	Turn off alarm of zone (wireless zone: 1-99; wire zone: 101-105) (NOTE: disarm of single defense zone)						
50##	show preset phone number in the host						
51#--#	First group phone number(0-15bit)			52#--#	Second group phone number(0-15bit)		
53#--#	Third group phone number(0-15bit)			54#--#	fourth group phone number(0-15bit)		
55#--#	Fifth group phone number(0-15bit)			0#0#*	English*		
80##	show preset SMS in the host						
81#--#	First group Message(0-24bit)			82#--#	Second group Message(0-24bit)		
83#--#	Third group Message(0-24bit)			84#--#	Fourth group Message(0-24bit)		
85#--#	Fifth group Message(0-24bit)			86#--#	Sixth group Message(0-24bit)		
87#--#	Seventh group Message(0-24bit)			0#1#	Chinese		
90##	Show Output status in the host						
91#1#	Set Output 1 change to high			91#0#	Set Output 1 change to low		
92#1#	Set Output 2 change to high			92#0#	Set Output 2 change to low		
93#1#	Set talk to the host available (Output 3)SPEAKER			93#0#	Set talk to the host unavailable (Output 3)		
94#1#	Set Relay to be connected			94#0#	Set Relay to be disconnected		
95#1#	Set alarm when line input 1 open			95#0#	Set alarm when line input 1 connect to Gnd*		
96#1#	Set alarm when line input 2 open			96#0#	Set alarm when line input 2connect to Gnd*		
97#1#	Set alarm when line input 3 open			97#0#	Set alarm when line input 3connect to Gnd*		
98#1#	Set line input 4 open	98#0#	Set 4 connect to Gnd*	99#1#	Set line input 5 open	99#0#	Set 5 connect to Gnd*
61#1#	Set port O1 as input	61#0#	Set port O1 as Output*	62#1#	Set port O2 as input	62#1#	Set port O2 as Output*

1. Above table, ' \* ' stands for default setting.
2. In the above phone operation, one beep shows the number your input is successful, a long beep shows the sentence you input is successful, two short beeps show sentence you input is failed, you should try again.
3. In the above SMS operation, you will receive a reply message for confirmation after sending message command to the host. Such as:  
**DisArm, Sms:ON, Phone:ON, Siren:ON, Arm & Disarm report: Off, Alarm-linked Relay: On**  
 If the replied message is about the current status of the host, you may have sent wrong command.
4. You can also send inquiry command to check out the present status of the host.
5. When the external power is cut off, the system will send SMS “ Power changer off” to inform. When the external power resumed, the system will send SMS “Power changer on” to inform.

## How to use remote controllers



There are four buttons on the remote controller:

**Out Arm** key. Press this button, the signal LED flash slowly in orange for 30 seconds, system is in arm wait status. 30 seconds later, the signal LED flash slowly in green, system is in out arm status now. You can set out arm mode when no one is at home, all the detectors at home will be in working mode.

**Home Arm** key. Press this button, the signal LED flash slowly in orange for 30 seconds, system is in arm wait status. 30 seconds later, the signal LED will flash quickly in green, system is in home arm status now. You can set home arm mode when there is some one at home, sensors in inner defense zone will be invalid, but sensors in other defense zones still work normally.

**Disarm** key. Press this button, all the detectors are disarmed, the light on panel will keep on in green. (Arm+Alarm Quick Arm )

**Alarm** key. Press this button, the light on panel will flash in red; the system will be alarming, and the host will send the SMS and dial out.

## How to add more detectors

You can add more sensors and detectors, such as wireless door sensors, PIR sensors, gas and smoke detectors into the host.

### 1) Add sensors ready to work when you set both **Out Arm and Home Arm**:

When the GSM host begins to be powered on, the status LED light on panel will be red for 20 seconds, this is code learning mode. You can trigger the sensors or detectors, and the red LED will flash to show it is coded successfully into the host.

The coding mode ends 20 seconds later automatically, and system enters into working mode, status LED light on panel will change to yellow, then to green.

### 2) Add sensors into inner defense zone. (Detectors in this zone are ready to work when you set **Out Arm**, and will not work when you set **Home Arm**)

When the GSM host begins to be powered on, the status LED light on panel will be red. Push the reset button for one second, the status LED light will light up in orange for 20 seconds. This is code learning mode of inner defense zone. You can trigger the sensors or detectors, the LED will flash in red to show it is coded successfully into inner defense zone.

For above operation, the host will exit code learning mode 20 seconds later automatically, and enters into working mode, the light on panel changes to orange to search for GSM network, then to green.

**Note:** If there were 4 wireless sensors in the host, stand for zone 1 to zone 4, then the new added sensor will be 5th zone in the host.

## How to cancel the lost detectors?

In case some of the coded detectors are lost, you can cancel the coded information of this detector so that it can not control your alarm system. Follow the below operation to reset the alarm system:

Keep pressing the reset button, then power on the system. Siren beeps once or LED flashes once, it shows reset is successful. All registered detectors have been deleted. You can register them again with the above mentioned process. System reset will not change SMS message.

## SOME NOTES:

### 1) About (SIGNAL) light

(SIGNAL) light keeps on red in 20 seconds after the host is powered on, wireless detectors can be coded into the host this time. The light flash in red if coded successfully. 20 seconds later, (SIGNAL) light flash in orange to show it starts to search for GSM network. If (SIGNAL) light still flashes

in orange, it shows SIM card is fixed incorrectly or GSM network is poor. If (SIGNAL) light still on in green, it shows no name or phone numbers in SIM card. If everything is ok, (SIGNAL) light will flash slowly in green (out arm mode) or flash quickly in green (home arm mode), or keeps on in green (disarm mode). If alarm happened, (SIGNAL) light will flash in red and start to dial out and send SMS.

### 2) About (OUTPUT) light

If host O1 output high (+5V), the OUT 1 light will be on; If host O2 output high (+5V), the OUT 2 light will be on;

### 3) About (TALK) light (OUTPUT 3)

If the host speaker is in working mode, the output 3 will be on, showing you can talk or speak to scene.

### 4) About (RELAY) light

If 2 outputs of the relay on the host is connected, the relay light will be on; otherwise will be off.

### 5) About (SIREN) light

If the host siren is sounding, the siren light will be on.

### 6) About (MONITOR) light

If the monitor function is opened, the monitor light will be on. If the monitor function is closed, the monitor light will be off.

## Standard components and optional available components

### The following sensors can be optional:

### Additional wireless products



PIR Detectors



Smoke Detectors



Panic Buttons



Door / Window gap sensors



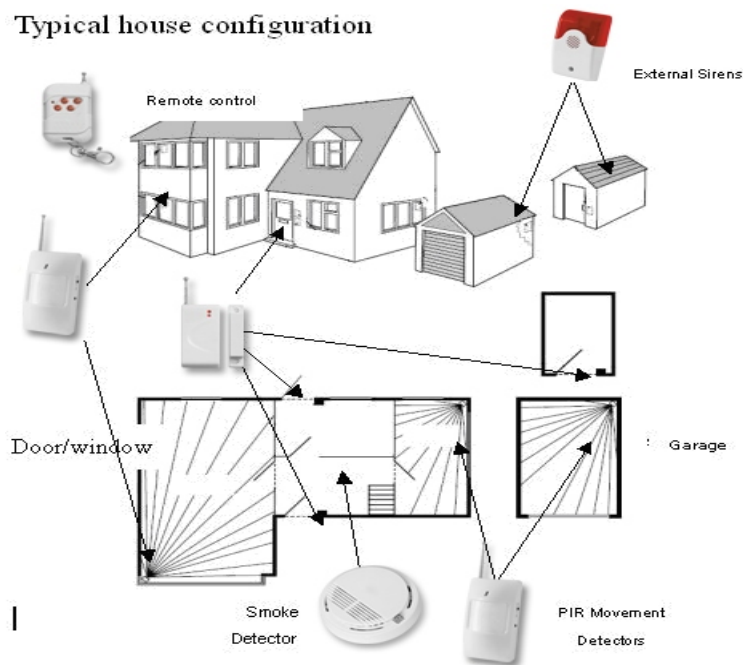
Remote Controls



LPG Gas Detectors

Optional sensors/detectors are packed separately. It includes remote control, wireless PIR, wireless gap sensor, wireless gas detector, wireless smoke detector, panic button, baluster, etc. You may purchase according to your specific requirements

### Typical house configuration



### SOME TECHNIQUE PARAMETER

- 1) Static current: 20mA
- 2) Power: 9V-12VDC
- 3) Working temperature: -20℃ - +85℃
- 4) GSM 850/900/1800/1900MHz band
- 5) Receiving code: ASK
- 6) Frequency: 315/433/868/915MHz
- 7) wireless distance: 100M
- 8) wireless detectors: 99
- 9) wired detectors: 5

### Outer Alarm Siren

Volume: 110 dB

Working Condition: Temperature 10℃ + 40℃

Humidity = 90%rh

### Wireless Gap Detector (Door / Window Contact)

Power Supply: DC12V (inner 12V battery)

Static Current: =20mA

Transmission Current: =15mA

Transmission Frequency: 315/433MHz ± 0.5MHz

Transmission Distance: No obstacle 80m

Internal Distance: 15mm

Working Condition: Temperature 10℃ + 40℃

Humidity = 90%rh

### Wireless P.I.R Detector

Power Supply: DC9V (inner 9V battery)

Static Current: =100mA

Transmission Current: =20mA

Transmission Frequency: 315/433MHz ± 0.5MHz

Transmission Distance: No obstacle 80m

Detective Speed: 0.3 - 3m/s

Detective Distance: 5 - 12m

Detective Range: Horizontal 110° Vertical 60°

Working Condition: Temperature 10℃ + 40℃

Humidity = 90rh

### Remote Control

Power Supply: DC12V (inner DC12V battery)

Transmission Current: =15mA

Transmission Frequency: 315/433MHz ± 0.5MHz

Transmission Distance: No obstacle 80m