GSM Alarm System AK24

AK24 User Manual

Version: 2010 Sep 26th

Dear users,

Thank you for purchasing our products. Please read through this manual before using this product so as to operate the product properly.

The GSM alarm system adopts the newest GSM network and Digital Signal Processing technology, and is widely used in security field. With SMS data transmission and voice platform of GSM network, it really realizes wireless alarm control and remote managements and solves the limitation of wired data transmission in telephone and wired network.

Perfect structure, convenient installation, easy operation with wireless control keyboard are designed for the idea of people-oriented, which will make you feel easy and comfortable while use this system.

"***People is center, technology is first***" is our company's action rule. Customer Satisfaction is our consistent pursuit. Perfect system, excellent services, sincere attitudes will bring you a new enjoyment.

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1. Instruction

The alarm system adopts SMS data transmission and voice platform of GSM network to send control command and receive alarm remotely. The system can be set delayed-arm. When a signal is detected by detectors, the detectors will send alarm signal to host immediately, then the host sends alarm SMS to its preset mobile phone numbers, and meanwhile dials its preset telephone/mobile phone numbers automatically and drive wiretap. In addition, the color LCD can show the time, date and the status of arm, disarm, GSM signal, power, alarm etc. With the LCD, it is very easy for you to operate.

Following are the specific functions,

1. Built-in SIMCOM, double frequency GSM module (SIM300 or SIM340)
2. With color LCD show screen and keyboard on the host.
3. 1 wireless SOS zone, 1 fire alarm zone, 24 wireless guarding zones, 1 external power failure alarm zone, 2 wired alarm zone
4. Send SMS to 3 group mobile numbers and call to 3 preset telephone numbers by turns while alarming.
5. 10 seconds self-recording alarm voice will be sent out when alarming, support monitor and intercom function.
6. Arm/disarm/partial arm/partial disarm by keyboard, remote controller, SMS or remote telephone/mobile phone.(disarm by keyboard need password)

7. Timing control arm/partial arm/disarm.

8. Program the alarm host by keyboard or SMS.

9. Modify the name of 26 wireless guarding zones and inquire the status of alarm host by SMS demand.

10. Define the 26 wireless guarding zones as arm/partial arm by keyboard on the alarm host.

11. with standby rechargeable battery

12. The alarm host automatically stores system status, while its power is off.

13. Connect with the alarm center through GSM network.

Specification

a) GSM

GSM frequency: 900/1800MHz or 850/1900MHz

b) Alarm method: adopts SMS data transmission and voice platform

c)Stand-by power consumption ≤0.6W

b) External power failure alarm

e) Alarm response time

Less than 8s (GSM in normality)

f) The volume of siren

More than 110db

g) Power

Standby battery：DC 8.4V (lithium battery)

Standby battery working hours: more than 15 Hours

h) Working conditions

Operating temperature: -10℃ ~ +55℃

Humidity: ≤ 95% (no condensation)

i**)** Dimension of alarm host

Dimension: 170mm (Long) ×118mm (Wide) ×40mm (High)

Ⅱ.Installation

2.1 Main unit layout

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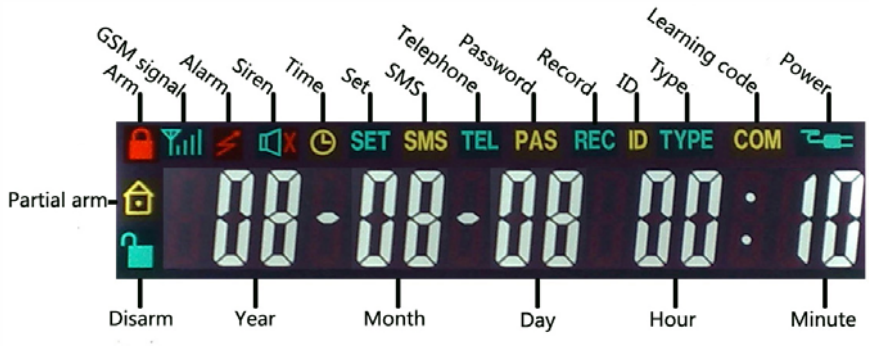
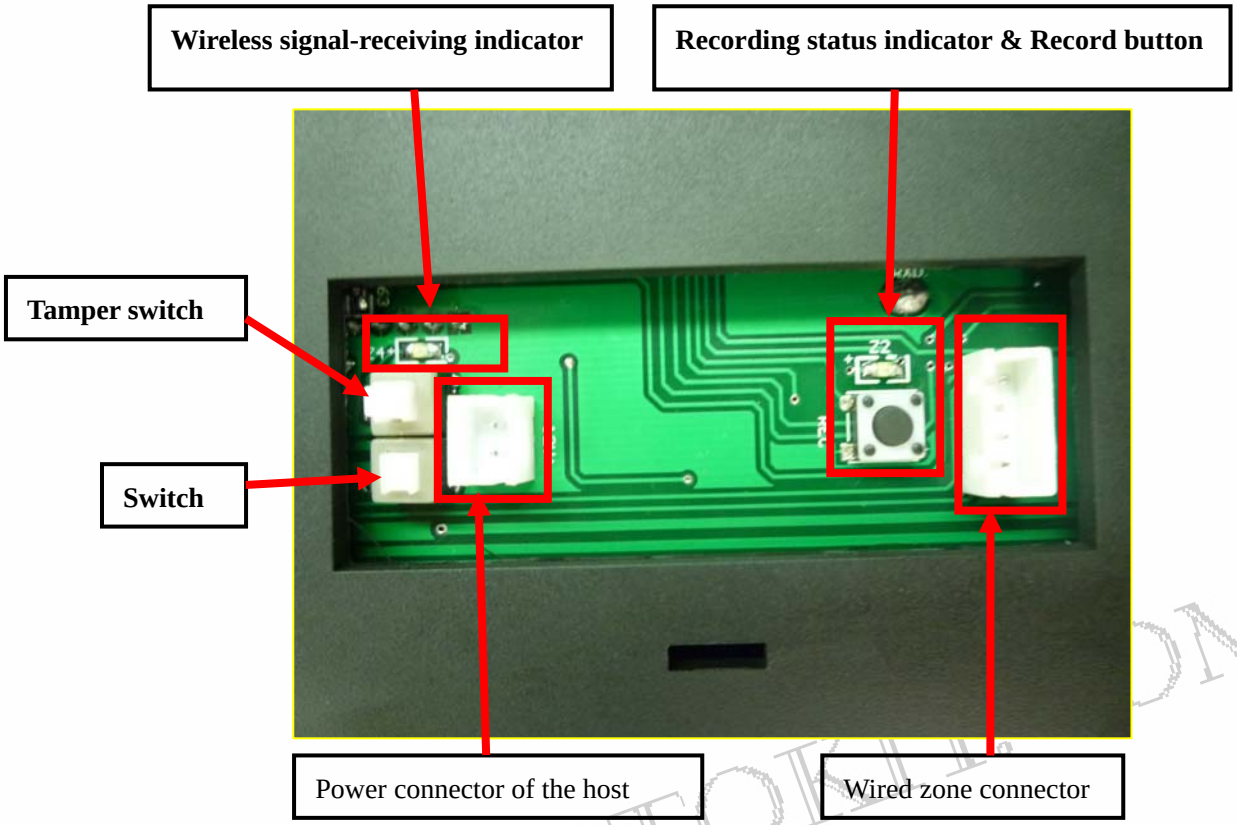
GSM Antenna
LCD
Speaker
Keypad
Disarm
Cover


GSM signal
Arm
Alarm
Siren
Time
Set
SMS
Telephone
Password
Record
ID
Type
Learning code
Power
SET SMS TEL PAS REC ID TYPE COM
Partial arm
08-08-08 00:10
Disarm
Year
Month
Day
Hour
Minute

SPK
ON OFF
POWER
SIREN
MIC/SPEAKER
SIM



2.21 Insert a valid SIM into the alarm host

GSM wireless alarm system adopts SMS and voice data transmission platform of GSM network to send control command and receive alarm remotely.

Before installation, make sure the SIM card is valid and turn off the power, Insert "pin" or similar tools to the hole which near the SIM card slot to eject the SIM card holder and finish the installation after inserting the holder back with SIM card.

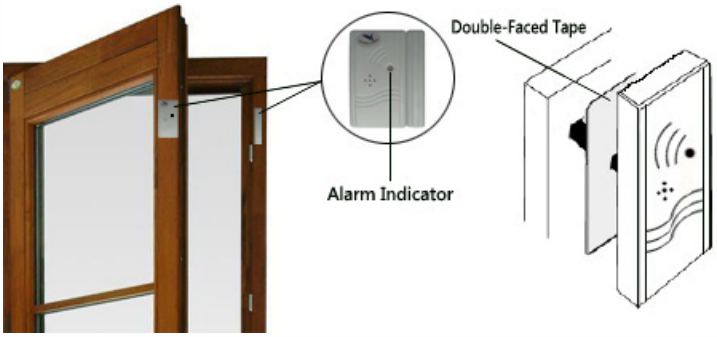
Install accessories

Install the door/window magnetic contact

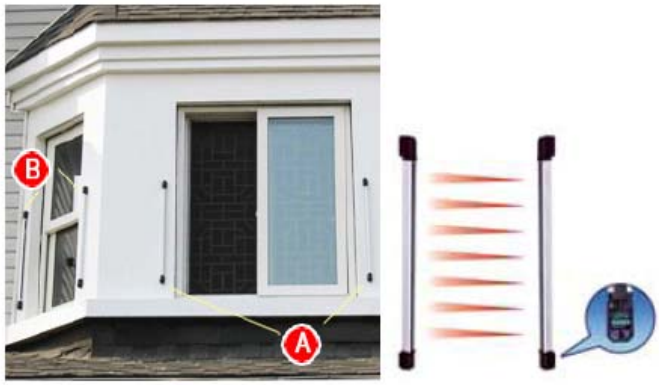
The principle of door/window contact sensor

The door/window magnetic contact includes two parts. The sensor will send the wireless signal to main unit immediately when the two parts depart more than 15-30mm.

The picture of the installation is as follows,



In some circumstances the wired & wireless Infrared Fence detector is more appropriate than magnetic sensors. i.e. veranda, picture window balcony, boundary wall.



Wired or wireless glass break detector can also be used for window (see below)

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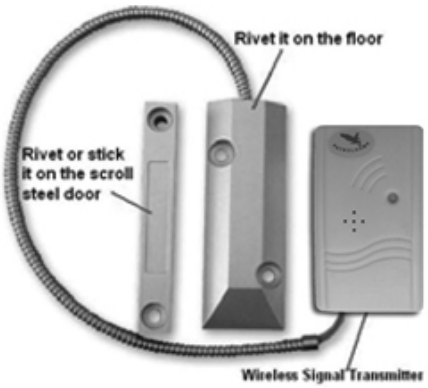
The sensitivity is adjustable

Wireless scroll steel door magnetic sensor for scrolling steel door,

Installation: Please see below picture

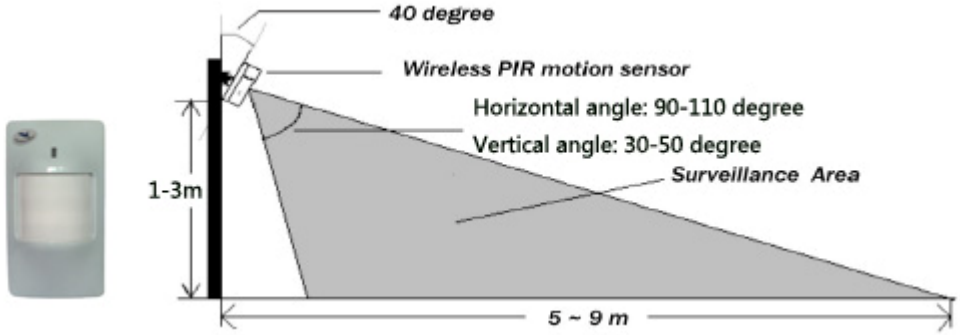
It is triggered when the two parts are separated to 3cm - 5cm.



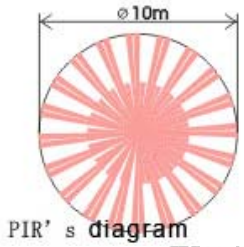
Install PIR motion sensor

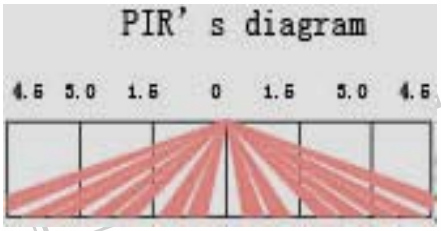
PIR refers to passive Infra-red. A Passive Infra-red Sensor is an electronic device that detects the motion or movement of some person or animal by sensing the heat emitted from the body.

Installation:



The installation of wireless ceiling PIR sensor

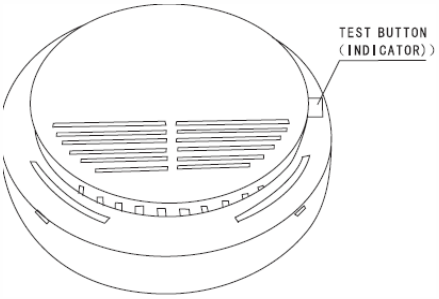




Install smoke/gas detectors

a) Wired or wireless smoke detector

This smoke detector detects smoke by a couple of infrared diodes, which is suitable for detecting the smoke in house, shop, hotel, restaurant, office building, school, bank, library and storehouse etc.



b) Wired or wireless gas detector

The product is ceiling mounted gas detector with high stability. It is used for detecting leaking gas and suitable for the safety of residential house, villas, hotels, boarding house etc.

Detecting the gas heavier than air: installation height from floor: 0.3m ~ 1.0m, semi-diameter to gas sources: ＜ 1.5m; detecting the gas lighter than air: installation height from ceiling 0.3m ~ 1.0m, semi-diameter to gas sources: ＜ 1.5m.

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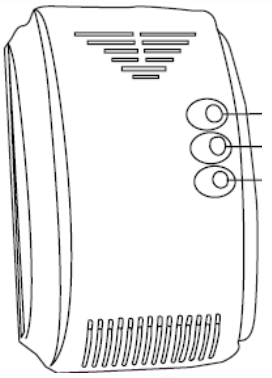

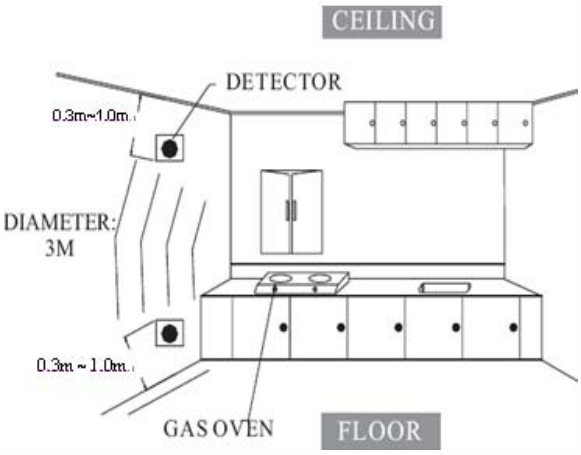

2.22 Wired alarm zones

Alarm host has two wired alarm zones which display 25, 26 on screen (about connection please check main unit layout IN1 IN2). Inserted the 4P cable which in standard package to the wired alarm connector, the neighbour two lines can forms a wired zones. The input alarm signal of the wired zone require contact close (detector alarm output signal should be change from open state alarm to closed state alarm).

2.23 Main host with tamper alarm

Hold down the button of tamper switch, when you want to put the host on the desks or walls. It will alarm when host is moved. (Display 55, alarm ringing and inform master by SMS and remainder)

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2.3 Run

The host will search GSM signal and the signal indicator flash in every 3 second regularly after start-up. After setting the time, the screen will show the time, the strength of the GSM signal, arm or disarm status and "com" blinking. When the host's external power supply is normal, LCD backlight is on. When the host detects there is no external power supply, LCD backlight will be turn off automatically, but for alarm, partial alarm, delay alarm, and keyboard settings, LCD backlight will keeps on.

3. Operation steps

3.1 keyboard setting

Note: When setting by the keyboard, every time you press the button you will hear "di" sound for confirmation. Please press it again if there's no voice. Press "CLS" button before inputting "OK" to cancel the input numbers. If the LCD display shows "FAIL", check and reset it.

3.1.2.1 Set/delete three mobile phone numbers for SMS alarm.

a) Set the mobile phone number

After passing the verification of password, press *"SET" button*, when "SET, SMS" appears on the LCD display, input serial number + mobile phone number + *OK*

Example: Set 1360000000 as the first mobile phone number for SMS alarm. Input: 1+ 1360000000 + *OK*, then you will hear "di, di" sound for confirmation.

According to the method, you can finish the setting of the other two mobile phone numbers.

Note: Serial number can only be 1, 2, 3 and the number "1" is the first mobile phone number. For SMS alarm. The phone No. must be less than/in 20 numbers.

b) Delete the mobile phone number

Input: serial number + "OK", then you can cancel the mobile phone numbers.

3.1.2.2 Check SMS number

In "SMS" state, input 1/2/3 + CHECK

3.1.3.1 Set/delete three phone numbers for auto-dialing alarm

a) After passing the verification of password, press *"SET" button*, when "SET, TEL" appears on the LCD display.

Input: serial number + phone number + *OK*

Example: Set 1360000000 as the first phone number for auto-dialing alarm. Input: 4 + 1360000000 + *OK*, then you will hear "di, di" sound for confirmation.

Note: Serial number can only be 4, 5, 6 and the number "4" is the first phone number for auto-dialing alarm. The phone number can be mobile phone or telephone, but mustn't be more than 20 numbers.

b**)** Delete the phone number

Input: serial number + *OK*, then you can cancel it.

3.1.3.2 Check TEL alarm number

In "TEL" state, input 4/5/6 + CHECK

3.1.4 Change password of the alarm host

After passing the verification of password, press *SET*, when "SET, PAS" appears on the LCD display,

Input: 7 + new password + *OK*,

Example: Set 4321 as the new password.

Input: 7 + 4321 + "OK", then you will hear "di, di" sound for confirmation.

Note: The initial password is 1234 (must be four numbers).

3.1.5.1 Set new ID of the alarm host

After passing the verification of password, press *SET*, when "SET, ID" appears on the LCD display.

Input: 0 + six new ID numbers + *OK*,

Note: the initial ID is 000000.

Example: Set 123456 as the new ID.

Input: 0 + 123456 + "*OK*", then you will hear "di, di" sound for confirmation.

3.1.5.2 Check host's ID

In "ID" state, input CHECK

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3.1.6 Prohibit/allow sending SMS when arm/disarm the system by controller or keyboard

After passing the verification of password, press *SET*, when “SET” appears on LCD display, input 9 + *OK*, then you will hear “di, di” sound for confirmation.

3.1.7 Set NC/NO wired zones alarm

In "ID" state, NC/NO wired alarm shift: "8" +OK

3.1.8 Set wireless zones to partial arm zones (Only for zone 1 to zone 8)

After passing the verification of password, press *SET*, when “SET, TYPE” appears on the LCD display,

Input: # + zone numbers(1-8) (When there is illegal intrusion, the zones will alarm in partial arm mode) + “*OK”*

Example: Set zone 4, 6, 8 as alarm zones in partial arm mode, input # + 4 6 8 + *OK*, then you will hear “di, di” sound for confirmation. When alarming, zone 4, 6, 8 will alarm but other five zones will not alarm in partial arm mode.

That means you can disarm in some zones when you back home and others still keep in arm status

3.1.9 Set time of the alarm host

After passing the verification of password, press *SET*, when “SET,◷” appears on the LCD display,

Input: *0 + year/month/day/hour/minute/second (each with two numbers) + *OK*, then you will hear “di, di” sound for confirmation.

Example: Suppose the present time is 15:43 and the date is 6/8/2010, input "*01008061543"+*OK*.

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3.2.0 Set/cancel the time of arm/disarm/partial arm

a) Timing arm

In arming status, press *SET*, when “SET,◷” appears on the LCD display, then Input: "*" + "1" + time (hour/ minute) + *OK*.

Example: Set 23:43 as the arm time, input * + 12343 + *OK*, then you will hear “di, di” sound for confirmation.

To cancel it, press * + 1+ 9999 + OK in arm mode.

b) Timing partial arm

In partial arm status, press SET, when “SET,◷” appears on the LCD display, then input: * + 2 + time (hour/minute) + *OK*.

Example: Set 00:30 as the partial arm time, input "*20030" + *OK*, then you will hear “di, di” sound for confirmation.

To cancel it, press * + 2 + 9999 + OK in partial arm mode.

c) Timing disarm/partial disarm

In disarming status, press *SET*, when “SET,◷” appears on the LCD display, then input: * + 3 + time (hour/minute) + *OK*.

Example: Set 09:30 as the disarm time, input "*30930" + *OK*, then you will hear “di, di” sound for conformation.

To cancel it, press * + 3 + 9999 + *OK* in disarm mode.

d) Check the the time of timing arm/partial arm:

In "◷" state, input * + CHECK

e)Timing alarm response

After timing alarm setting, "◷" will on and when the time come, timing arm/disarm/partial arm SMS will send.

3.2.1 Exit setting status

In the setting status, the host will exit automatically if there is no response within 15 seconds.

After setting successfully, press *"ESC"* to exit.

3.3 Recording

Holding down "REC", then the light will on and begin 10 second record. When finish the record, release the button, and then the light indicator turn off and quit the recording state.

Ⅳ. SMS control command

4.1 Set three mobile phone numbers for SMS alarm.

Input SMS: 4 numbers for password + DD + serial number + mobile phone number.

Example: Set 1388888888 as the first mobile phone number for SMS alarm. The host's password is 1234.

Send SMS: 1234DD11388888888

Note: The serial number shows alarm sequence (must be 1, 2, and 3).

4.2 Set three phone numbers for auto-dialing alarm

Input SMS: 4 numbers for password + DD + serial number + phone number.

Example: Set 01088888888 as the first phone number for auto-dialing alarm. The host's password is 1234.

Send SMS: 1234DD401088888888

Note: The serial number shows alarm sequence (must be 4, 5, and 6).

4.3 Delete alarm phone numbers

Input SMS: 4 numbers for password +DD + serial number.

Example: The host's password is 1234. If you want to delete the first alarm phone number,

Send SMS: 1234DD1

Note: The serial number shows alarm sequence (must be 1, 2, 3, 4, 5, and 6).

4.4 Change host's password

Input SMS: 4 numbers for password + DD +7 + 4 new numbers for password

Example: The initial password is 1234, if you want to set 5678 as the new password,

Send SMS: 1234DD75678.

4.5 Arm/disarm

SMS for remote arm: 4 numbers for password +A1

SMS for remote disarm: 4 numbers for password +A2

Example: The host's password is 1234. If you want to set the host in arm mode.

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Send SMS: 1234A1

4.6 Change zone's name

Input SMS: 4 numbers for password + DM + zone's code (2 numbers) + changed name

Reply SMS: Changed zone's name

Note: The "zone name zone is 1-6 characters, "zone number is two figures form 01 to 26

Example: The password is 1234. If you want to change zone 06's name to be "PIR *alarm for bedroom"*.

Send SMS: 1234DM06 PIR alarm for bedroom

Note: Changed name should be less than 24 characters.

Zone's code: 01 to 08, each code with two numbers.

4.7 Inquire host's arm/disarm status

Input SMS: 4 numbers for password + W1

Reply SMS: The host's arm/disarm status

4.8 Inquire host's external power status

Input SMS: 4 numbers for password + W2

Reply SMS: The host's external power status

4.9 Open/close 20 seconds delay alarm function

Open delay alarm SMS: 4 numbers for password + SD

Close delay alarm SMS: 4 numbers for password + CD

Factory set to alarm without delay, that means it will alarm immediately when the host received alarm signal from detector; if you want the host alarm after 20 seconds when trigger, then edit the text message sent to the SIM card within the host, the host will have a "tick" "tick" TWO tips respond for successful, no information returned

Ⅴ. Usage

5.1 Arm/disarm by remote controller

a) Arm: Press "🔒" on remote controller, the host will make "di" sound, the LCD display is on, "🔒" is twinkling. 30 seconds later, the host enters into arm mode and the "🔒" is on. If you want to arm the system quickly, please press "⚡".

b) Partial arm: press "🏠", the host will make "di" sound, the LCD display is on. "🏠" is twinkling. 30 seconds later, the host enters into partial arm mode and "🏠" is on. Press the "⚡", the host will enter into partial arm mode immediately.

c) Disarm: Press "🔓" to close the system, the host enters into disarm status after the host makes "di, di" sound and the " 🔓 " is on.

5.11 Disarm by keyboard on the host

In arming status, press "Disarm" button, when "SET,🕒" appears on the LCD display, then Input:

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password + *OK will disarm*

Note: Keypad will become invalid when in alarm state.

5.1.2 Auto detect doors and windows closed properly

It will sound when delay arm or partial arm in a state of alarm from wired zone. LCD will show 1 or 2, means wired zone 1 or wired zone 2 cable input are not normal. (This can use for the wired windows/doors Magnetic Contact to check doors/windows close properly before go out)

5.2 Emergency alarm

When an emergency alarm occurs, press "⚡" and the host will enter into emergency alarm status immediately and the siren will alarm for 90 seconds to inform the neighbors. At the same time, it will automatically dial the preset alarm phone numbers cycled for three times and send SMS of "Emergency alarm"

5.3 External power failure alarm

When the system checks out that there is something wrong with the external power or the external power is off for more than 2 seconds, it will enter into alarm status immediately. At the same time, the system will automatically dial the preset phone numbers cycled for three times and send the SMS of "External power failed".

When the power supply is on, the system will stop alarming immediately and send the SMS of "External power is OK".

5.4 LCD alarm instructions

When alarming, the screen display"⚡, SMS, TEL" and alarm zone number ("OP" means power failure, "OE" means emergency call, "OF" means fire, 01-26 are wireless alarm zones, 55 for the tamper alarm), warning for 90 seconds.

5.5 Alarm and Handle

The siren sounds loudly for 90 seconds to inform the neighbors. At the same time, the system automatically sends SMS alert and auto-dial the preset phone numbers by turn. The user can listen to the pre-recording warming voice and enter monitoring status which supports intercom function. When answer the alarm call, press any phone button can stop the host dialing the next preset alarm number.

The system will auto-dial the next phone number if the phone line is busy or can't put through. It will stop to call the next one when somebody answers the phone. If nobody answers the phone, the system will stop dialing after auto-dialing circularly for three times.

Ⅵ. Operation Cautions

1. **Make sure the equipments have no water.**
2. **Install the system in a hidden place.**
3. **Turn off the power supply before insert/take out the SIM card.**
4. **Connect the power supply firmly and provide good heat dissipation.**
5. **Don't install the system close to the objects which generate strong interference, such as**

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TV set and computer.

6. **Check all the detectors and their battery in time and change them when voltage is low.**
7. **Inspect the GSM alarm system termly.**
8. **This product is designed for the indoor use rather than outdoor use.**

Ⅶ. Encode the wireless detectors and Remote controller

Name		Wireless address code of product (A0 to A7)	A7(8)	D0（13）	D1（12）	D2（11）	D3（10）
Main unit		Label on the backside A0~A6	NC	NC	NC	NC	NC
Wireless keypad		A0~A6: Match with the wireless address code of the alarm host.	NC	NC	NC	NC	NC
PIR sensor, Magnetic contact, Beam detector	Zone 01		0	1	1	1	0
	Zone 02		0	1	0	0	1
	Zone 03		0	0	1	0	1
	Zone 04		0	1	1	0	1
	Zone 05		0	0	0	1	1
	Zone 06		0	1	0	1	1
	Zone 07		0	0	1	1	1
	Zone 08		0	1	1	1	1
	Zone 09		1	1	0	0	0
	Zone 10		1	0	1	0	0
	Zone 11		1	1	1	0	0
	Zone 12		1	0	0	1	0
	Zone 13		1	1	0	1	0
	Zone 14		1	0	1	1	0
	Zone 15		1	1	1	1	0
	Zone 16		1	0	0	0	1
	Zone 17		1	1	0	0	1
	Zone 18		1	0	1	0	1
	Zone 19		1	1	1	0	1
	Zone 20		1	0	0	1	1
	Zone 21		1	1	0	1	1
	Zone 22		1	0	1	1	1
	Zone 23		1	1	1	1	1
	Zone 24		1	0	0	0	0
Smoke detector			0	0	1	1	0
Gas detector			0	0	1	1	0
Emergency button			0	0	0	0	1

Remark: “1”…….Request High level N connect with H
“0”……..Request Low level N connect with L
“2”……..No connect
“NC”…...No request

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Appendix

Operation Guideline

By following steps, you can operate it easily though it is the first time to use this product.

1. Remove the SIM slot cover with screwdriver and insert a valid SIM card into the alarm host. (Please see 2.2).

2. Make sure the power supply is connected; turn on the host power switch. (Please see 2.3).

3. Set the mobile phone/telephone numbers for SMS alarm and auto-dialing alarm. (For details, please see 3.1.2, 3.1.3, 4.1, and 4.2).

4. Set time of the alarm host (for details, please see 3.1.7).

5. As per the operation instruction of page 13, encode the wireless detectors and remote controller to match with the alarm host, and allocate the detectors to wireless zones separately. Please make sure to record the corresponding zone number of each detector.

6. Set zone type (please see 3.1.6 for details.).

8. Change zone's name according to your needing (Please see 4.6 for more details).

9. Change password of the alarm host. (Please see 3.1.4 and 4.4 for more details.).

10. Set time of arm/disarm according to your needing. (Please see 3.1.8 for more details)

For specific operation, please read this manual carefully.

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