

# ***G20E & G20EA***

**GSM ALARM SYSTEM**

**USER MANUAL**

***Ver 0901 2007-09-01***

## *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.

### **Professional designer and manufacturer of GSM Alarm Systems**

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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. With Wavecome double frequency GSM module.
2. With color LCD show screen and keyboard on the host.
3. 10 wireless guarding zones (1 wireless SOS zone, 1 fire alarm zone, and other 8 wireless guarding zones can be defined by user ) and 1 external power failure alarm zone.
4. Send SMS to 3 preset mobile phone numbers automatically while alarming.
5. Call 3 preset phone numbers automatically and monitor at site while alarming.
6. Set the time of arm/partial arm/disarm.
7. Arm/disarm by the keyboard on the host, remote controller or SMS.
8. Program the alarm host by keyboard or SMS.
9. Modify the name of 8 wireless guarding zones and inquire the status of alarm host by SMS demand.
10. Define the 8 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

Consumption: 1W (while sending message)

### b) Working frequency of detectors

315M & 433M (optional)

### c) External power failure alarm

Start-time: less than 2s

### d) Alarm response time

Less than 8s (GSM in normality)

### e) The volume of siren

More than 110db

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**f) Power**

Power requirements: AC 110-220V 50Hz or 60Hz

Working power consumption: less than 3W

Standby battery: DC 8.4V

Standby battery working hours: more than 15 Hours

**g) Working conditions**

Operating temperature: -20℃ ~ 60℃

Humidity: 20% to 95%

**h) Weight of alarm host**

Net weight: 0.5Kg

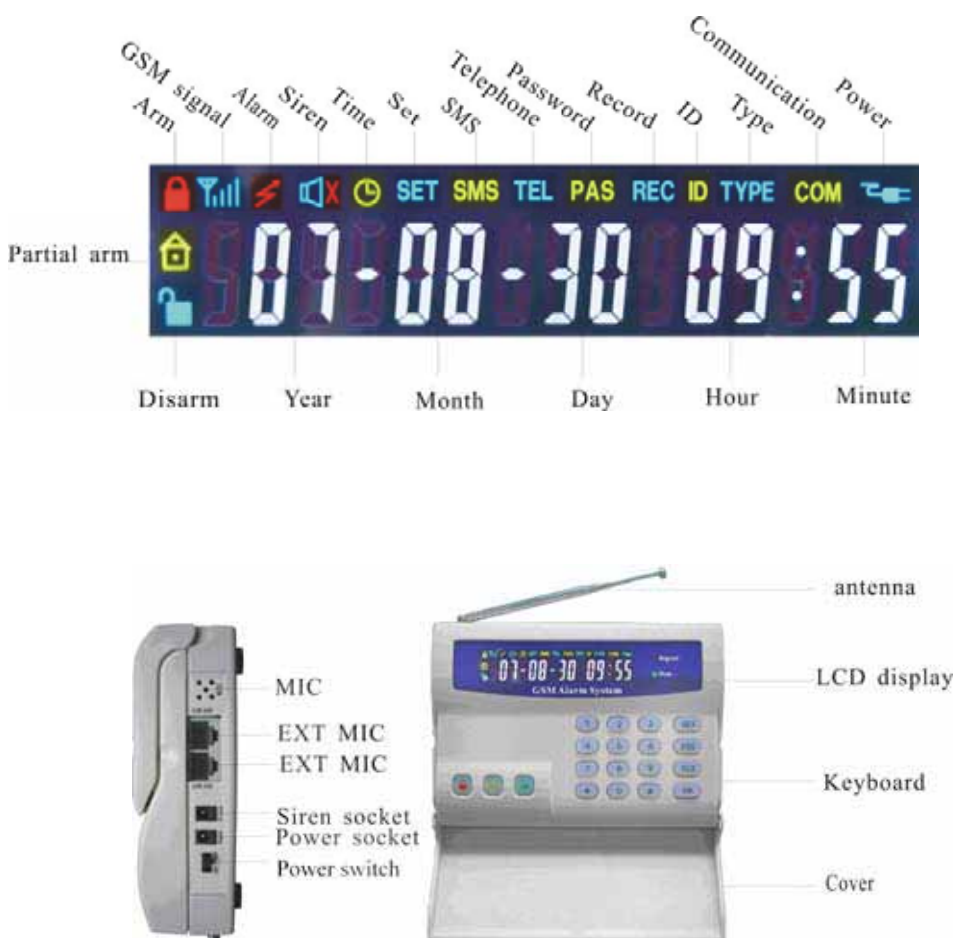
Gross weight: 0.75Kg

**i) Dimension of alarm host**

Dimension: 160mm (Long)×113mm(Wide)×38mm(High)

## **II . Installation**

### **2.1 Alarm Host's section figure**



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## 2.2 Insert a valid SIM into the alarm host

Before installing the host, remove the SIM slot cover with screwdriver and insert SIM card.

## 2.3 Run

Make sure that the power supply is connected correctly, and turn on the host power switch. The alarm host will search the GSM network automatically within 25 seconds after it is started. Then the LCD display turns on and shows the time and the status of arm, disarm, GSM signal etc. The COM is twinkling. When the external power is normal, the LCD display keeps on. If there is no external power, it is off automatically after operation.

## III. Operation steps

**Note:** When setting by the keyboard, every time you press the button you will hear “di” sound for confirmation. If there’s no voice, you can press it again. To cancel the input numbers, please press “CLS” button before inputting “OK”. If the LCD display shows “FAIL”, please check and reset it.

### 3.1 Set by keyboard

#### 3.1.1 Password verification

Press “SET”, input password + OK, then you will hear “di,di” sound for confirmation. While “SET” and “SMS” appear on LCD display, it means that the password is correct.

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

#### 3.1.2 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 1368888888 as the first mobile phone number for SMS alarm. Input: 1+ 1368888888 + 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.

#### 3.1.3 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 1368888888 as the first phone number for auto-dialing alarm. Input: 4 + 1368888888 + 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

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

### 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 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.

### 3.1.6 Set type of 8 wireless guarding zones

After passing the verification of password, press *SET*, when “SET, TYPE”

appears on the LCD display,

Input: # + zone numbers (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.

### 3.1.7 Set time of the alarm host

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

Input: 8 + 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 12:13.05 and the date is 08-01-2007, input 8 + 070108121305+*OK*.

### 3.1.8 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: \* + time (hour/ minute) + *OK*.

**Example:** Set 16:08 as the arm time, input \* + 1608 + *OK*, then you will hear “di, di” sound for confirmation.

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

#### b) Timing partial arm

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

**Example:** Set 16:25 as the partial arm time, input \* + 1625 + *OK*, then you will hear “di, di” sound for confirmation.

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

#### c) Timing disarm

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

**Example:** Set 16:35 as the disarm time, input \* + 1635 + *OK*, then you will hear “di, di” sound for conformation.

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

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### 3.1.9 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.

### 3.1.10 Alarm

When the host alarms, “

### 3.1.11 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.

## 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: 1234DD113888888888

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

### 4.2 Set three phone numbers for auto-dialing alarm

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

**Example:** Set 010888888888 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, 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, 6).

### 4.4 Change password of alarm host

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

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

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

**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

### 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.

#### 5.2 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 Alarm and Handle

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When an alarm occurs, the siren will alarm for 90 seconds to inform the neighbors. At the same time, the system will automatically send SMS to report the guarding zones and dial the preset phone numbers. When any phone is answered, you can monitor the alarm site. If the phone line is busy or can't put through, the system will auto-dial the next phone number circularly till one of them is answered. If nobody answers the phone, the

|      |  |      |      |      |      |
|------|--|------|------|------|------|
| Name | Wireless address code of product (A0 to A7)                        | D0   | D1   | D2   | D3   |
|      | <b>Note:</b> You can see the code (A0-A7) from PCB in the products | (13) | (12) | (11) | (10) |

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 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**

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|  |         |  |    |    |    |    |
|--|---------|--|----|----|----|----|
| Alarm Host   |         | There is a label with wireless address code on the back of alarm host. It is corresponded to A0-A7 from right to left. | NC | NC | NC | NC |
| Remote Controller  |         | A0~A7: The same as the wireless address code of alarm host.  | NC | NC | NC | NC |
| PIR Sensor,<br>Magnetic Door contact,<br>Beam detector, etc.   | Zone 01 |  | 1  | 1  | 1  | 0  |
|  | Zone02  |  | 1  | 0  | 0  | 1  |
|  | Zone03  |  | 0  | 1  | 0  | 1  |
|  | Zone04  |  | 1  | 1  | 0  | 1  |
|  | Zone 05 |  | 0  | 0  | 1  | 1  |
|  | Zone 06 |  | 1  | 0  | 1  | 1  |
|  | Zone 07 |  | 0  | 1  | 1  | 1  |
|  | Zone 08 |  | 1  | 1  | 1  | 1  |
| Smoke detector   |         |  | 0  | 1  | 1  | 0  |
| Gas detector   |         |  | 0  | 1  | 1  | 0  |
| Emergency button   |         |  | 0  | 0  | 0  | 1  |
| Remark: “1”.....Request High level N connect with H<br>“0”.....Request Low level N connect with L<br>“2”.....No connect<br>“NC”.....No request |         |  |    |    |    |    |

## 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, 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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