

TA Business/Home GSM SMS Alarm system

Installation and User guide



General information

1. 16 wireless zones, 3 wired zones alarm system, suitable for small to medium size offices and homes.
2. The system uses a GSM communication channel, which can be installed in remote areas with GSM coverage.
3. The system supports 900/1800MHz GSM SIM cards. CDMA or other SIM cards cannot be used.
4. You can record your own alarm voice message. Max. 10 seconds alarm message and can be re-recorded.
5. The system can store and dial 5 phone numbers (15 digits max.). If an alarm occurs, the numbers stored will be dialed in order starting with the first phone slot. You can set to dial monitoring center, police, or the administrator.
6. The system can store and SMS 5 phone numbers (15 digits max.). If an alarm occurs, the numbers stored will receive SMS alert message.
7. By using the remote controllers, you can arm, disarm, partial arm, or set off the alarm.
8. You can control the system by calling the system anytime, wherever you are. For security reasons, a PIN code must be used for accessing the system.
9. The system supports all kinds of wireless sensors: PIR detectors, door / window (gap) sensors, gas sensors, smoke sensors, panic buttons, and infrared balusters are available.
10. The system supports wired sensors (NO contacts, different wired sensors are available).
11. The system supports any combination of wired/wireless sensors.
12. The system does not need a land telephone line to operate; it is suitable for cottages, houses, shops, and garages. The system only need a GSM Network.
13. Auto arm or disarm can be set according to your time table.
14. With back-up batteries inside, the system can detect AC power cut-off and send sms alert to the numbers stored.
15. For weak GSM signal area, an external antenna can be used.
16. One onboard relay and one open collector speaker output are available for customer application.
17. You can customize the zone name in order to indicate sensors of which area are triggered.
18. The system can control home electrical appliances (optional switch box is available).

Installation Guide

1. Insert a SIM card in the alarm unit.

Remove the slide-lid of the GSM card slot and insert the SIM card in correct direction and close the lid.

Attention! Metal contacts of the SIM card must face down. Check if it is inserted correctly into the unit. Make sure you slide the card frame until you feel a click.

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

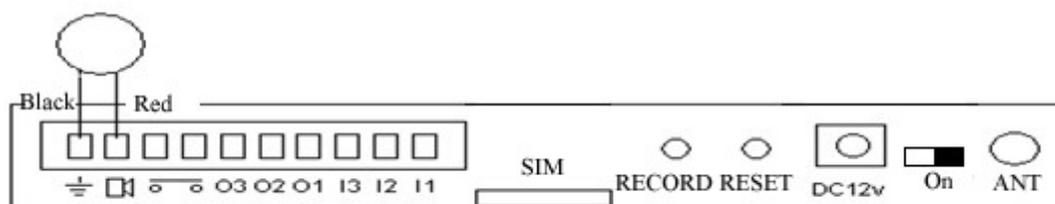
- Set the SIM card PIN code (Password) request to off.
- Delete all stored numbers

2. Connect the antenna.

Attention! Be careful, do not over-tighten the antenna! Connect the antenna before power up the system.

3. Connect the siren to alarm system.

Connect solid black wire to GND port and red (or black-white) wire to SIREN port.

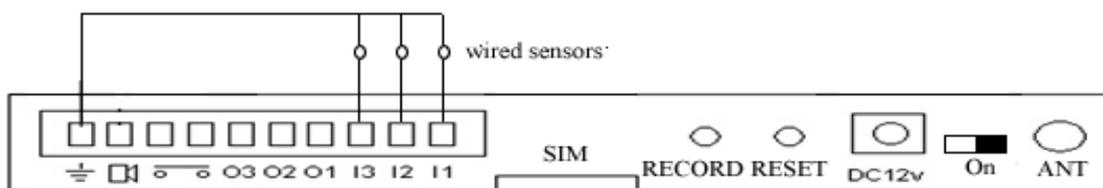


4. Connecting wired sensors.

Three inputs are available to connect wired sensors. Inputs are independent, but they share the same SMS alert message (with zone number indicating which wired zone is triggered at the end of the message). When the alarm is set off via the wired sensors and send out a SMS, it will show **Wired Activated (J)**, (**J = 1~3**). Sensors must be NO (normally open) type.

You can connect more than one sensor at one input by connecting their sensors in parallel.

The system can support any number of wired sensors.



5. Connecting switched output devices (Home-appliance Control).

The system has one internal relay controlled by telephone.

Internal onboard relay is activated for three minutes when an alarm occurs and it can be controlled through telephone commands or SMS text message.

It can be used for example, to turn on a lamp.



6. How to distinguish LEDs on the main panel?



POWER: Power on/off indicator.

STATUS: The Status LED light represents the status of the system. When the power is on, the LED light becomes orange flashing slowly then it begins to search the GSM network and check the status of SIM card. If the alarm system is connected to the GSM network successfully the LED light will turn to green colour.

If the alarm system light turns red and flash quickly, system is on the status of control in long-distance function.

Status LED light

Green light is ON: Disarm status

Green light flash slowly: Arm status

Green light flash quickly: Partial Arm status

Orange light flash slowly: Arm in progress or seaching GSM network during power on

Orange light flash quickly: Partial arm in progress

Red light is ON: Storing phone number or encoding period during power on

Red light flash slowly: Alarm triggered

Red light flash fast: Call/ SMS in long-distance

RECORD: When the light is on, it means message recording is in progress. When the light is off, message recording is off.

SIGNAL: When connected to the GSM network successfully, the LED light will turn to flashing green.

7. More explanation on the rear connection ports:

The first port – GND: Ground line;

The second port – Siren, audio output, wireless siren transmitter;

The third and fourth ports – Inner relay input. It is normally opened. It will keep closed for three minutes when alarming;

The fifth port – Speaker output (reserved);

O1,O2 – Can be used as inputs for NO wired detectors;

I1, I2, and I3 – Inputs for NO wired detectors.

Attention! Backup batteries are built in the main unit. Power is present in the main unit even when power supply is not plugged in AC socket or during power cut-off.

Operating the system

1. Using of remote controller:

1. Arming button – press it to arm system. Siren will have a short ring.
2. Disarm button – press it to disarm system. Siren will have two short rings.
3. Panic button – press it and siren will start to ring continuously, alarming the others.
4. S button – press it to partial arm the system.

Using a telephone, mobile phone, or SMS text message to control the GSM alarm system:

Call the alarm system. After one ring unit will answer and a beep will be heard.

You have to input the code first, (Default password is 123456#.)

NOTICE! This PIN code is for alarm system NOT for SIM card.

System responds with beep (digital voices are available for some areas) and now you can send several commands and change some settings.

Only commands (1) - (6) can be set by phone and SMS. Commands (7) - (14) have to be set by SMS.

2. System Commands:

- (1) Arm/Disarm: 1#1# (Arm) 1#0# (Disarm) 1#2# (Partial Arm)
- (2) Alarm immediately on spot: 2#1# (On) 2#0# (Off)
- (3) Immediate site monitoring: 3#1# (On) 3#0# (Off)
- (4) Immediate site dialogue: 4#1# (On) 4#0# (Off)
- (5) Set the relay : 5#1# (Relay close) 5#0# (Relay open)
- (6) Play recorded message: *
- (7) Edit the five SMS phone numbers: (10 – 14)# Phone number (0~15bit)#
- (8) Edit the five dial phone number: (15 - 19)# Phone number (0~15bit)#
- (9) Change the password: 30#code (0~6 bit)#, Default 123456

Note: It is wise to change PIN code at first login in alarm system.

- (10) Set guard time and disguard time: 31# guard time # disguard time #
- (11) Alarm with siren: 32#1# (On) 32#0# (Off)
- (12) Alarm with relay: 33#1# (On) 33#0# (Off)
- (13) Partial zone arm (wirless zone 00-15): (50 - 65)# off/on/24hr (0/1/2) # zone name
- (14) Partial zone arm (wired zone 16-18): (66 - 68)# (0/1/2) off/on/24hr # zone name # (0/1) open/short circuit triggered

3. How to setup the SMS phone numbers (5 groups) and dial phone numbers (5 groups) ?

1. When alarm is triggered, the system will send SMS alarm message to the stored SMS phone numbers. User can send a SMS to set the SMS phone number as follow:

password#operating code#dial phone number#

As sending a SMS: 123456#10#13905950001#, represents storing NO.1 SMS phone number.

As sending a SMS: 123456#11#13905950002#, represents storing NO.2 SMS phone number.

As sending a SMS: 123456#12#13905950003#, represents storing NO.3 SMS phone number.

As sending a SMS: 123456#13#13905950004#, represents storing NO.4 SMS phone number.

As sending a SMS: 123456#14#13905950005#, represents storing NO.5 SMS phone number.

Send a SMS to delete a stored phone number: 123456#10##, represents deleting the first phone number, other phone numbers can be deleted in the same way but just change the operating code.

2. When alarm is triggered, the system will dial to the stored dial phone numbers. User can send a SMS to set the dial phone number as follow:

password#operating code#dial phone number#

As sending a SMS: 123456#15#13905950001#, represents storing NO.1 dial phone number.

As sending a SMS: 123456#16#13905950002#, represents storing NO.2 dial phone number.

As sending a SMS: 123456#17#13905950003#, represents storing NO.3 dial phone number.

As sending a SMS: 123456#18#13905950004#, represents storing NO.4 dial phone number.

As sending a SMS: 123456#19#13905950005#, represents storing NO.5 dial phone number.

Send a SMS to delete a stored phone number: 123456#15##, represents deleting the first dial phone number, other phone numbers can be deleted in the same way but just change the operating code.

4. How to set partial arm/disarm of individual zone?

User can set partial arm/disarm for each zone independently as follow:

1. Set wireless zone:

password#operating code (50 - 65)#off/on/24hr (0/1/2)#zone name#

As sending a SMS: 123456#50#1#kitchen#, represents: arm wireless zone0, named kitchen.

As sending a SMS: 123456#50#0#kitchen#, represents: disarm wireless zone0, named kitchen.

As sending a SMS: 234567#50#2#kitchen#, represents: arm wireless zone0 24 hr, named kitchen.

Other zone can be set in simliar way but just change the operating code, the operating code 50-56 correspond to zone 00-15.

2. Set wired zone:

password#operating code (66 - 68)#off/on/24hr (0/1/2)#zone name#open/short (0/1) circuit triggered#

As sending a SMS: 123456#66#1#kitchen#1, represents: arm zone16, named kitchen, short circuit triggered.

As sending a SMS: 123456#66#0#kitchen#1, represents: disarm zone16, named kitchen, short circuit triggered.

As sending a SMS: 123456#66#2#kitchen#0, represents: arming zone16 24hr, named kitchen, short circuit triggered.

Other zone can be set in simliar way by changing the code, the code 66-68 correspond to zone 16-18.

5. How to record your own alarm message?

User can record alarm message as follow:

Press the RECORD button and wait for the RECORD light to turn green, then you can start recording your own message (10sec max). When the green light turns off, it means recording is finished.

To re-record the alarm message, just repeat the procedure again.

6. How to set timed guard and timed disguard?

To set system time: send password#31# after system initialization. Sending this command will make the main unit system time synchronize with the SIM card time.

User can set the guard time and disguard time as follow:

password#31#guard time#disguard time#

As sending a SMS: 123456#31#2200#0800#, represents alarm system arms at 22:00 and disarms at 08:00.

Advanced Instructions (Only performed under technical guidance)

1. Resetting the system.

NOTICE! Resetting the system will cause all coded information and messages to be lost.

System will be loaded with basic factory settings. The passwords will be back to the default value 123456. You must code/register all wireless sensors again after reset.

Reset procedure:

- System must be disarmed
- Press and hold the reset button
- Connect a 12Vdc supply to the alarm system
- Release the reset button, the alarm LED will flash once.
- Wait until the status LED changes to green colour.

Now system is reset and back to factory settings. (Default passwords is 123456)

2. How to add the new sensors with the alarm system (Registering wireless sensors with control unit)?

Sensors and remote controls delivered in kit are already coded (registered) in the system by factory. Plug in DC 12V power supply in alarm system.

If the alarm system needs to add the new sensors, such as PIR motion sensors, wireless door sensors, remote controls and so on you can follow the below instructions:

1. For partial arm sensors:

After power on, press and hold the RESET button until the STATUS light turns red. Then press the RESET button again and release. You will see the light turns orange. Within 20 seconds, allow the sensor to emit a signal you want to match to the system. If the main unit picks up this signal, the status LED light will flash twice. After 20 seconds, the alarm system will turn into normal working mode.

2. For full arm sensors:

After power on, press and hold the RESET button until the STATUS light turns red. Within 20 seconds, allow the sensor to emit a signal you want to match to the system. If the main unit picks up this signal, the status LED light will flash twice. After 20 seconds, the system will turn into normal working mode.

Test all sensors and repeat procedure for other sensors. Maximum number of wireless sensors that can be coded by system is 16. But you can register countless wireless sensors by grouping sensors to the same zone (same address code, 8-digit jumper setting in sensors).

3. How to cancel the lost remote controllers in the alarm system

If a remote sensor is lost, the user needs to clear this remote controller. Press the RESET key on the back of the alarm system and then plug in power. The status light flashes once meaning the alarm system reset successfully. All setup come back to the time when it came from the factory. The origin password is 123456. Repeat the add sensor instructions above to match back other sensors and remotes.

4. How to test the alarm system function?

When the power is on and turns into the disarm status, users can arm it through remote controller (arm key) or by sending a SMS (Password#1#1#). When the alarm system is in arm status, the red light flashes slowly if the wired inputs trigger the alarm (I1, I2, I3 touch the GND port) or wireless sensors trigger the alarm.

1. If the SMS alarming function is enabled, the system will send the corresponding SMS based on the trigger port (wired I1, wired I2, wired I3, wireless sensors). It will then call the stored numbers. If the SMS alarming function is disabled, it will just call the stored number directly.

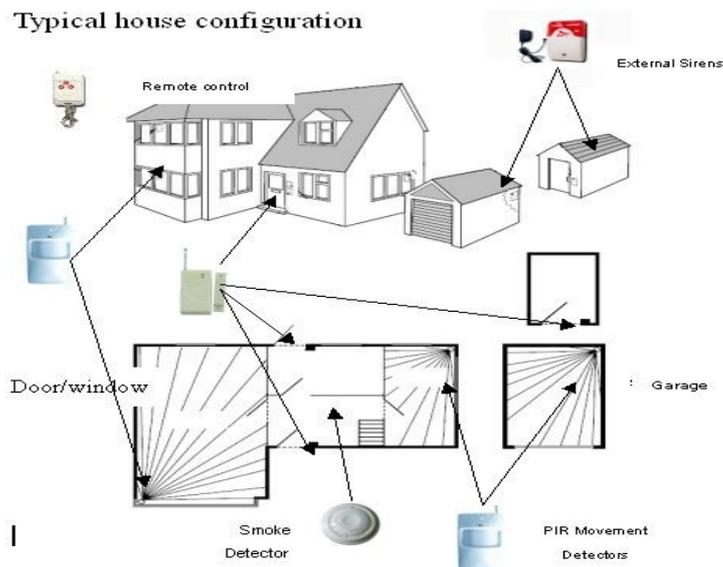
2. After the alarm is set off and the system calls you, **you do not need to input the password again** to control the system.

Standard components and optional available components

Additional wireless products (optional):



Optional sensors/detectors are packed separately. It includes remote controllers, wireless PIR, wireless gap sensor, wireless gas detector, wireless smoke detector, panic button, baluster, wireless sirens, etc.. according your specific needs. Please contact us for full details on all the supported wired / wireless sensors.



Technical Parameters

GSM Alarm Module

Operating voltage: DC12V
 Average power: AC/DC exchanger 1A
 Wireless receiving distance: $\geq 100\text{m}$ open space
 Operating Frequency: 433.92 MHz (315 MHz on request)
 GSM Frequency: 900 / 1800 MHz

Outer Alarm Siren

Volume: 110 dB

Working Condition: Temperature -10 °C to 40 °C

Working Humidity: 10% - 90% rh

Wireless Gap Detector (Door / Window Contact)

Power Supply: DC12V (inner 12V battery)

Static Current: ≤ 20 mA

Transmission Current: ≤ 15 mA

Transmission Frequency: 315 / 433 MHz ± 0.5 MHz

Transmission Distance: No obstacle 80m

Internal Distance: 15mm

Working Condition: Temperature -10 °C to 40 °C

Working Humidity: 10% - 90% rh

Wireless PIR Detector

Power Supply: DC9V (inner 9V battery)

Static Current: ≤ 100 mA

Transmission Current: ≤ 20 mA

Transmission Frequency: 315 / 433 MHz ± 0.5 MHz

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 °C to 40 °C

Working Humidity: 10% - 90% rh

Remote Control

Power Supply: DC12V (inner DC12V battery)

Transmission Current: ≤ 15 mA

Transmission Frequency: 315 / 433 MHz ± 0.5 MHz

Transmission Distance: No obstacle 80m

Troubleshoot Section

GSM Problem - The light keeps flashing orange meaning the GSM network has not been established.

1. The sim card circuit side should face downwards, put in the sim card holder and slot in to the main unit carefully to make sure the card has the contact with the main unit circuit board.
 2. The sim card should be in 900 / 1800 MHz GSM Band and NO password in it. Only use GSM sim card, not CDMA or 3G.
 3. Apply the power with the power adapter we supplied and connected to the mains supply.
 4. Use the antenna, this is for the GSM reception.
 5. If possible try with another unlock sim card (different company)
- If it has established a network, then the status LED should change to green colour.

Sensors / Remotes - The sensor does not trigger the alarm system

1. Check the sensor battery.
2. Re-match the sensor to the system according to adding a new sensor section.