GSM/GPS

SMS/GPRS Car Tracking Alarm

CAT-6

USER MANUAL

Ver: 2.0

CONTENTS

INTRODUCTION

Functions and Features

Application: to protect all type of cars, trucks, taxi, jeeps as well as other automobiles.

Locating and tracking

◆ Dual location:
   locate your vehicle through both GPS positioning and GSM base station

◆ Qurery locating information by telephone/ computer or via website

◆ Real-time or pre-set time tracking by SMS/GPRS;

◆ Global Track Web-based center with Google-earth or Google-Map support.

Anti-theft functions:

◆ Door open/ Acc on/car vibration/car moving /power down Alert

◆ Alert report to the preset phone by auto-dial and SMS.

◆ Remote stop engine by phone/SMS

Anti-robbery functions

◆ Emergency Alert(SOS) button built-in

◆ Remote monitoring the sound in the car

Simple operation

◆ Setting up by sms and USB software.

◆ Voice system(Local language support) and SMS remote-operation, status query.

◆ Remote start engine by phone/SMS

◆ Remote start air-condition by phone/SMS

◆ Remote arm(lock)/unarm(unlock)
   Locking door and closing windows automatically when Arming / Unlock when disarming

Other useful functions

◆ With backup battery: after Power Failure Alert, it will supply power

◆ Auto-arming function

◆ Shock sensor sensitivity adjustment available

◆ Light flash and sound reminder

Technical Specification

> GSM Work Frequency：850(Optional) /900 /1800 /1900MHz

> GPS(SiRFstarIII chipset) : Frequency：L1, 1575.42 MHz.

   Minimum signal tracked: -159dBm

> Temperature: Working Temp -20℃ ~ +60℃

> Humidity: 20—95%

> GSM Antenna   Cable type: Gain:3dBi   cable-length:3-5meters   connector :SMA

   Portable antenna: Gain:2dBi   height: 5cm   connector: SMA

> GPS Antenna: Voltage:3V   cable-length: 3-5 meters   connector: SMA

> Remote control: Working frequency: 315Hz/433MHz.

   Code: 1527/2240 study

   Working Voltage: 12V   (27A 12V dry battery)

   Control Distance: 20-100M

> Mainframe Power supply: 12 or 24V DC (different model)

> Backup battery: Poly-Li battery,   600mAh   3.7V

> Mainframe Dimension: 125x108x26mm

> Weight: G.W.:1.45Kg/set （including accessories）

        Package dimension：285*250*90cm

        Export carton dimension：520*295*480cm（10PCS）

Safety Instructions

> Please do not use the device in the areas where wireless device uses are prohibited.

> Please use the accessories in the package, such as the antennas and relay.

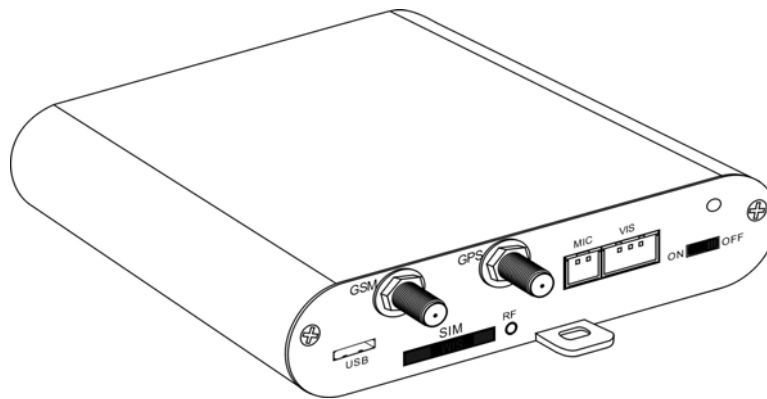> Please go to a professional car shop or car factory to install the system.

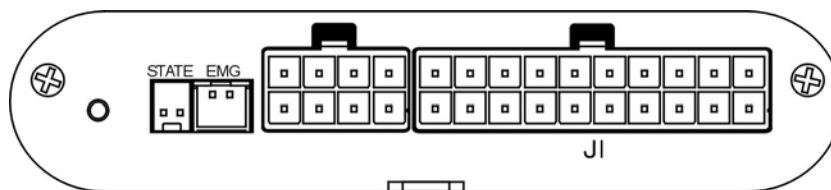# INSTALLATION

Accessories

User necessaries

1. 1-3 mobile phones   (Note: with SMS functions.)

2. A valid GSM SIM card for the devices
   (with Caller ID & SMS functions and enough balance);

1.   Main Unit

SIM: SIM Card Slot   **GSM**: GSM Antenna   **GPS**: GPS Antenna   **RF**: RF-Antenna   **MIC**: Monitor
VIS: Vibration Sensor VIS: **BAT(ON/OFF)**: Backup Battery Switch   **USB:** Testing and setting-up port

EMG: SOS Button   **STATE:** LED Light   **J1:** 20Pin Connection wire socket   **J2:** 8Pin data wires

2. Remote controller : Maximum 3pcs

'▣' Armed/lock door/ close window

'◩' Unarm/ unlock

'◁' a) Press the key only: turn off siren, alarm and lock your car

   b) Press it and the ◩: turn off siren, unarm and unlock the car.

   c) Interrupt siren ring when there is a wrong alert.

'◁' Press the key on the remote controller to activate car lights and siren to search for your car. the light will flash and the siren will ring over 5 seconds.

3. GSM antenna

4. GPS antenna

5. Vibration sensor
(adjustable sensitivity)

6. Microphone (Monitor)

7. Siren

8. 20 PIN connection wire

9. LED indicator

10. Stop Relay(314-B-12-s)

11. SOS button

12. Remote-start wires(3relays+ 8pin)

Installation Process

1. Central lock to 20 PIN connection wire

1.1 Choose different installation according to different car central locks

Fig1: Basic

Fig2: Negative Trigger
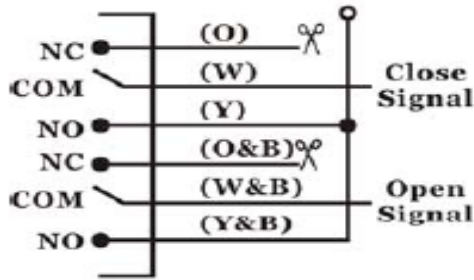
Fig3: Positive Trigger

Fig4: Negative & Positive Trigger

1.2 Connect to wires

(1) 20+8 PIN

Jumper for Electric/Air Lock
-Connection for Electronic Lock
-Cut off for Air Lock
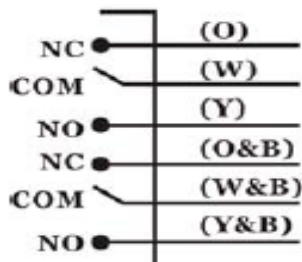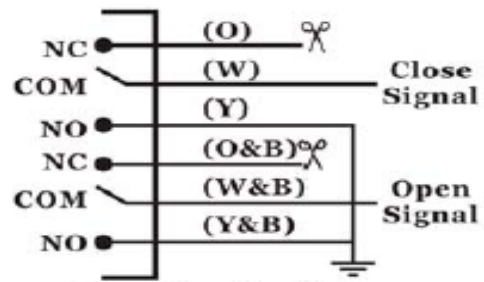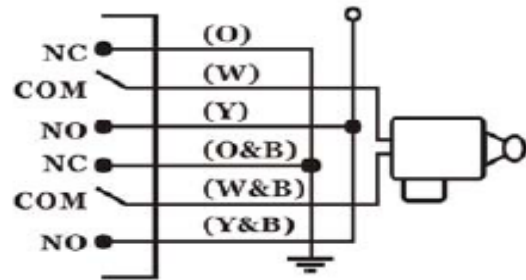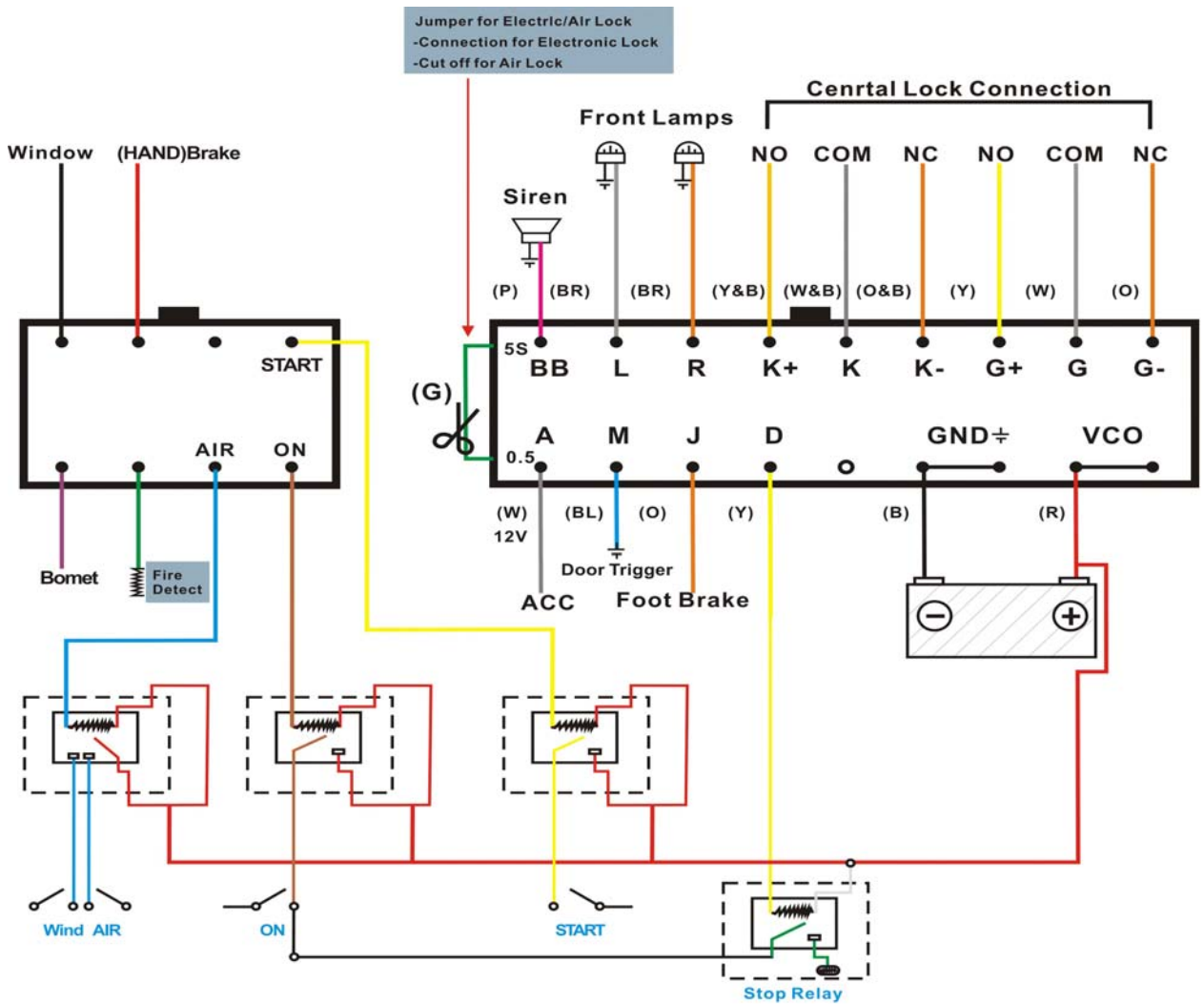
Cenrtal Lock Connection

Front Lamps

Window   (HAND)Brake

Siren

(B):   Black   (BL): Blue   (BR): Brown   (O): Orange
(P):   Pink   (R): Red   (W): White   (Y): Yellow

① G,K----Central lock:（Max: 6PIN）
② R,L（1PIN each）---Left/Right front lamps wires
③ BB ---Siren
④ VCC and GND --- Power supply
⑤ Green wire---- (spare)
⑥ D---The yellow wire of stop Relay(314-B-12-S)
    Connect the white wire to 12V power supply.
    Two green wires: Cut-off Start wire and fuel wire and connect them in.
⑦ J---Foot brake wire
⑧ M---Door trigger wire
⑨ A---ACC (Igniting wire)

(2) Start-relays wires connection(for remote-start engine and air-condition only)

① Relay 1(314-A-12-S) Brown wire-------ON line of the switch
② Relay 2 (314-A-12-S) Yellow wire-------Start line of the switch
③ Relay 3 (314-U-12-S) Blue wires-------one to air-condition switch; one to wind switch.
④ Red wire-------VCC (Battery)

(3) 8PIN (J2) Contrlling wires:

① Black wire--- -------connect to: window up trigger
② Purple wire---------connect to: bonnet open trigger
③ Red wire------------connect to: Handbrake detecting
④ Green wire --------connect to: ignition coil detect:: from one of motor-start line
    Ignaition coil detect:one of the ignition cables will be circled around 18-22 laps, fixed the wire well, and then connect the wire to the Green wire.
⑤ Blue wire----------air-condition contril line
⑥ Yellow wire------- engine start line
⑦ Brown wire--------ON switch line
⑧ white wire----------spare

2. SIM Card Installation
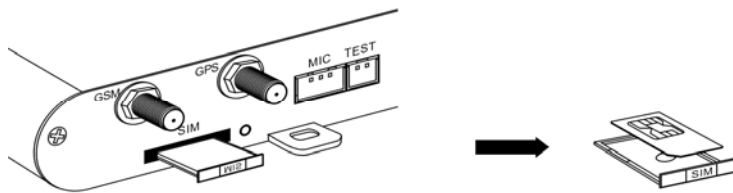
3. GSM---GSM Antenna Installation
4. GPS--- GPS Antenna Installation
5. MIC--- Microphone installation
6. EMG--- Connect SOS button wire
7. VIS--- Connect Vibrator sensor
8. STATE---Connect the LED wire
9. Plug the 20PIN into J1, the "WORK" light starts flashing.
10. Slide the battery switch to be "ON". check all the wires to be connected well, and the light works status. then fix them firmly.

Instructions Before Use

1. After installation and power on, the system shows the following status:
   GSM LED: Flashing slowly indicate the GSM works.
   Flashing quickly indicate the GSM register unsuccessfully.

   Statuse LED: Flashing slowly (0.8secs) indicate armed status.
   LED off: indicate unarmed status.
   Flashing qucdkly (0.2secs): when downloading via USB port.

2. Factory default: Recipient: Non
   User Password(UPWD): 1234
   Status: unarmed
   Shake Alert: Off

3. Battery: Auto-charging when it connects to power
4. GSM/GPS ant: locate the antennas in suitable area to get signal well.

OPERATIONS

SMS OPERATIONS

SMS format: *[User PASSWORD]*[COMMAND]#.

Note: > User Password is 4 digits or letters in SMS
> The user Password below is abbreviated to: UPWD
> Sending commands by any mobile phone via UPWD

1. Set up

1.1 Set up recipient A, B and C

Send: *UPWD*AXXXXXXXXX*BXXXXXXXXXXX*CXXXXXXXXXXX#

Reply: Armed/Unarmed;A:XXXXXXX B:XXXXXXC:XXXXXXXXX

Change or Cancel Recipients： re-set with new Recipient numbers.

Note: ① A,B,C indicates the recipients A,B,C.
xxxxx…indicates the recipients mobile phone number. Max: 20 digits.

② "+country code"should be added when SMS format requires
SMS Format: + Country Code + mobile phone number.

③ Recipient number shows blank if you do not set up it.

Exp: Recipient A,C setup：*1234 *A+8613666504824*B*C+8613666502528＃
（+86 refers to China code; 136xxxxxxrefers to Recipients mobile number）

1.2 Set up Time-zone

Send the SMS to the device: *UPWD * GMT+/-xxxx#

Setup OK, the reply SMS: GMT+/-xxxx SETUP OK！

Note: '+' is east zone; '-' is west zone
Exp: Setting up East 8 zone(GMT+08:00),   the SMS is   *1234*GMT+0800#
West 3:30 zone(GMT-3:30),   the SMS is   *1111* GMT-0330#

2. Basic Operations

2.1 Arm the system: locking door and closing windows automatically when Arming the system.

A：Armed by remote-controller:

> Press '◼' key on the remote control, the siren sounds once.

> Press '◁ᵪ' key, the device turns into armed Mode. Siren turns off.

B: Auto-Armed: In unarmed status, the door is closed and the engine is off, after 25 seconds it will be into armed status automatically and the doors will be locked and window closed .

Note: Auto-armed function is invalid for the first time arming

C. Armed by SMS：

Send: ＿*UPWD*S#＿

Reply: Armed/Unarmer;Engine:on/off;Door:close/open;

D. Armed by Voice Operations：（Please refer to the **voice operations**）

Note: >> When the door open or engine turn on , you will not be able to arm the devise.

>> On armed status, the engine can not be started.

2.2 Disarm the Device: unlocking door when disarming

A. Disarmed by remote-controller: Press '◼▀' key on the remote control. After disarming the device, the siren sounds twice.

B. SMS disarmed：

Send: *UPWD*C#＿

Reply: Unarmed/Armed;Engine:on/of;Door:close/open;

C. Disarm by Voice Operations(refer to part **Voice operations**)

Note： >On Unarmed Mode, if door is open, the rear lights flashes periodically.

>when engine-on , you press the brake to lock the door.

2.3 Modify PASSWORD

A. By SMS：

Send the SMS : *UPWD* EXXXX#

Successfully, replies : Password has been changed!

Note: >> XXXX refers new user password. It is constituted by 4 ASCII codes.

>> Factory default:1234.

B. By Voice Operations：(Please refer to: 'Voice Operations')

2.4 Shake Alert ON/OFF

Switch Off:

Send the SMS to the device: *UPWD*N#＿   Successfully, Reply: Shake alert off!

Switch On:

Send the SMS to the device: *UPWD*H#   Successfully, Reply: Shake alert on!

2.5 Move Alert on/off

Move Alert：On armed Mode, car moving happen and over a certain range, the device will send a 'Move alert' SMS to recipients.

Move Alert on:

  Send the SMS to the device: *UPWD *MOVExxx#   SMS reply: MOVExxx Alert On!

Note: xxx: 300～999.   It indicates the alert range is a circle which center is the parking position and radius is xxx metre.

Move Alert off :

        Send the SMS to the device: *UPWD *MOVE000#   SMS reply: MOVE Alert Off !

2.6 Enforced power (fuel) off / relieve

2.6.1   Immobilize/Relieve the car by SMS

A. STOP command valid after sending 20secs

      Send the SMS in emergency: *UPWD*STOP#

           Successfully, it replies: Engine will be turned off !

Note: > After sending "stop" command, the R-L lights flash and siren rings **for 20secs**, and the relay cut off, then the car is stopped.
      > To restart your engine, you will have to Relieve 'STOP' command.

B.   Delay to stop the car

   Only by sending SMS: *UPWD*STOPD#

   Successfully, it replies: Engine will be turned off !

Note: **>** When the command is sent, the car will not stop immediately or after 20secs, the car can not be restarted again after ACC off.
     > To restart your engine, you will have to send Re-energize SMS command to the device.

C.   Re-energize (Relieve) By SMS:

    Send the SMS to the device: *UPWD*K#l

          Successful, it replies: Relieve 'STOP' & Unarmed!

2.6.2. Immobilize/Relieve the car by phone: (refer to **Voice Operations**)

A. Immobilize the car: valid after 20secs R-L lights flashing and siren-ringing prompt.

B. **Re-energize (Relieve) By phone:** (refer to Voice Operations)

2.7 Remote-start Engine: (for A only)

A. By SMS：

      Send: *UPWD*engine start xx#

      Reply: Armed/Unarmed; the engine will shut down after xx minutes

Note: >>XX is the time of engine on. The value : 10,20,30mins

       >> During engine on, the driver start the engine by key, the time invalid

B. By phone :(Please refer to '**Voice Operations' ; start successfully phone voice reply to A.**)

C. Remote-start fail: only SMS without voice reply: Engine start failing!

2.8 Remote-start air-condition and wind (for A only)

A. By SMS：

Send: *UPWD*air start xx#

Reply: Armed/Unarmed; the air-condition will shut down after XX minutes

B. By phone :(Please refer to '**Voice Operations' , start successfully phone voice reply to A.**)

C. Remote-start fail: Only SMS (without voice) reply: Engine start failing!

2.9 Resume to Factory Default

A. By SMS：

Send: *UPWD*V#

Reply: Factory Default Restored!

B. By phone :(Please refer to '**Voice Operations'**)

2.10 Wrong Message

In case SMS command invalid, you will receive the prompt SMS:

Invalid command, please confirm!

2.11 Restart the device:

Press and hold '◼◻'key on the remote control for 20 seconds to restart the system.

3. Query

3.1 Recipients Query

SMS: *UPWD*Y#

Reply: Armed/Unarmed;A:XXXXXXX B:XXXXXXC:XXXXXXXXX

3.2 Status Query

A. By SMS：

◼ GPS is available, reply SMS
  SMS: *UPWD* X#
  Reply: Armed/UnArmed;Engine:on/off;Door:close/open;Power:on/off; LAC:XXXXX;CID:XXXXX;
        Time:xx-xx-xx xx:xx:xxSpeed:xxxkm/h;S/N:xxdxxmxxs W/E:xxxdxxmxxs

◼ GPS fails to position
        Armed/UnArmed;Engine:on/off;Door:close/open;Power:on/off; LAC:XXXXX;CID:XXXXX;NO GPS

B. Query by voice operations:(Please refer to '**Voice Operations'**)

The voice information: Power status; Alarm/Unarmed; Engine On/Off ; Door lock/unlock

3.3 GPS Data Query

A. GPS Data Query：（Format：Degree/ Minute/Second）

Send the SMS: *UPWD*GPSM#
SMS reply: Time:xx-xx-xx xx:xx:xx Speed:xxxkm/h S/N:xxdxxmxxs W/E:xxxdxxmxxs

B. GPS Data Query: (Format: Degree)

Send the SMS: *UPWD*GPSD#
SMS reply: Time:xx-xx-xx xx:xx:xx Speed:xxxkm/h S/N:xx.xxxx W/E:xxx.xxxx

C. GPS Data Query：（GPS Standard Format）
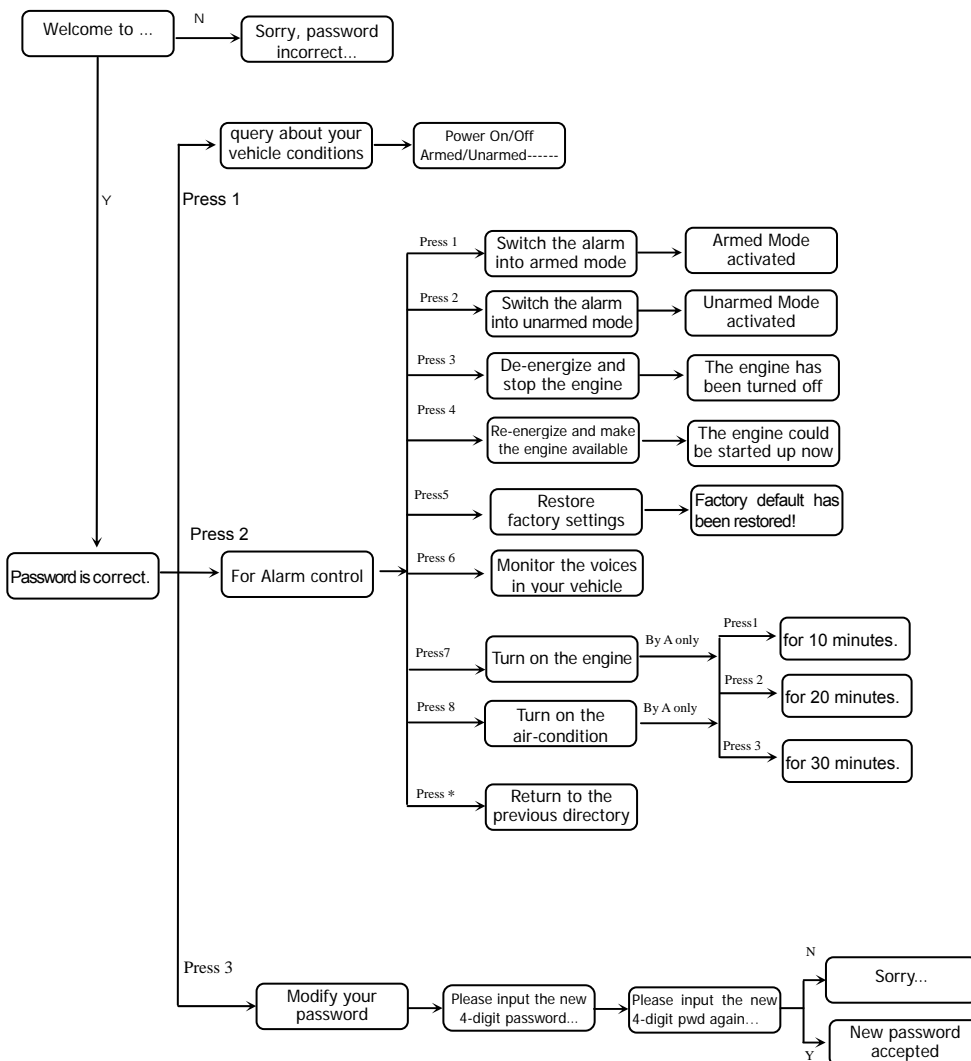
Send the SMS: *UPWD*GPS#
SMS reply: $GPRMCxxxxxxxx

Note: GPS fails to position, SMS reply: NO GPS

VOICE OPERATIONS

Dial to the device, after 4 rings, you can operate according to the voice prompt.

(**Note:** The PASSWORD is the same as UPWD or GPWD)

ALERT MANAGEMENT

1. Alert type

Armed mode: Shake Alert

                Door –open Aert

                Bonnet open Alert

                Engine-On Alert

                Move alert

Armed or Unarmed mode: Highjack Alert (SOS)

                             Power-Off Alert

2. Alert Report Mode

Spot response: The GSM LED starts flashing rapidly to indicate alerts.

                 The car light will be glint and the siren will ring.

SMS report: Recipients will receive alert SMS.

Voice report: The device will auto-call the recipient A to report alert.

Monitoring: during alert phone to recipients(5 times), press "#" key of your mobil-phone, can monitor
              the state in the car.

3. Alert Report

3.1 Shake Alert:

On Armed Mode, if the car vibrates, there will active Shake Alert. Recipient **A** will receive SMS, car lights will be glint and the siren will ring to scare at each vibration.

Spot :   Armed Mode: voice and light caution

         Mute Armed: light caution

SMS to **A**: <u>Shake Alert !</u>

    Note：> Continuous vibrates send alert 30s each time.

           > The sensitivity of the vibration sensor could be adjusted.

3.2 Door-open Alert：

On Armed Mode, if the door is opened, the Alert will be activated.

     Spot :   Siren and light caution 5～6 sec

      SMS to A,B,C : <u>Door-open Alert !</u>   Phone to A: <u>Door-open Alert !</u>

3.3 Bonnet open Alert

On Armed Mode, if the bonnet is opened, the Alert will be activated.

     Spot :   Siren and light caution 5～6 sec

      SMS to A,B,C : <u>Bonnet open Alert!</u>   Phone to A: <u>Bonnet open Alert!</u>

3.4 Engine On Alert:

On Armed Mode, if the engine is turned on, the Alert will be activated.

     Spot :   Siren and light caution 5～6 sec

      SMS to A,B,C : <u>Engine on Alert !</u>   Phone to A: <u>Engine on Alert !</u>

3.5 Power-off Alert:

SMS to A,B,C : Power-off Alert !   Phone to A: Power-off Alert !

3.6 Emergency Alert (SOS)

In emergency situation, you can press the hidden SOS button easily, then the SOS alert is sent directly to the recipients.

SMS to A, B, C   Highjack Alert!

Phone to B,C: Highjack Alert!

3.7 Move Alert:

On Armed Mode, it takes effect when someone moves the vehicle away from park exceed setted range:

SMS to A,B,C: Move Alert!   Phone to A: Move Alert!

4. Alert Management

4.1 Interrupt Alert: Press ▪◻ key on the remote controller to cancel alert.

4.2 Monitor Alarm: In Alert status, after the device sends alert SMS to recipients, it will call automatically to recipients,   having connected and **press "#"** to monitor car.

4.3 Immobilize car remotely: When the burglar drives your vehicle away, stop the vehicle by SMS or phone.

APPENDIX

1. PROBLEMS AND SOLUTIONS

PROBLEMS	Cause	SOLUTIONS
Remotes are locked or don't work	the 27A battery and code	> Replace with new battery > Re-code the remote·
Password lost		>Get from the Carrier
SIM card can not be accessed to network:	> No balance in SIM card. > Install unsuccessfully >Confirm GSM network frequency .	>Install SIMcard well > Keep balance
Weak GSM signal		> Increase sensitivity of antennas >Check the GSM antenna connection. > Put it at suitable position
No GPS signal	>Probably caused by location and weather	>Check your antenna connection. > Put it at suitable position
No SMS received	> Network is busy (especially when GPRS is working.). > SMS is delayed	
Alert is not reported	>Confirm the power supply(12/24V) of the vehicle >Temperature is too low	>The device and power must be matching > Work Temp over -20℃

2. User SMS Operation Command

Function	Command	Reply
Recipient A.B.C	*PWD*Axxxxxxxxxx*Bxxxxxxxxx*Cxxxxxxxx#	Armed(UnArmed);A:xxxxxxxxB:xxxxxxxxxC:xxxxxxxx
Time Zone	*UPWD * GMT+/-xxxx#	GMT+/-xxxx SETUP OK !

New PWD	*UPWD*Exxxx#	Password has been changed!
Armed	*UPWD*S#	Armed;Engine:on/off;Door:close/open;
Unarmed	*UPWD*C#	Unarmed;Engine:on/off;Door: close/open;
Factory Setup	*UPWD*V#	Master reset ok!
Recipients Query	*UPWD*Y#	Armed(UnArmed);A:xxxxxxB:xxxxxxC:xxxxx
Car status Query	*UPWD*X#	Cut-off /Armed/UnArmed;Engine:on/off;Door:close/open;
Shake alert on/off	ON: *UPWD*H# OFF: *UPWD*N#	Shake alert on! / Shake alert off !
STOP	*UPWD *stop#	Engine will be turned off !
Relieve STOP	*UPWD *k#	Relieve 'STOP' & Unarmed!
Remote-start	*UPWD*engine start xx#	Armed/Unarmed; the engine will shut down after xx minutes
Remote-air	*UPWD*air start xx#	the air-condition will shut down after XX minutes
Shake alert		SMS to A: **Shake Alert!**
Door Open alert		SMS to:A.B.C and Phone call A : **Door open Alert!**
Bonnet open alert		SMS to:A.B.C and Phone call A : **Bonnet open Alert!**
Engine On alert		SMS to:A.B.C and Phone call A : **Engine on Alert!**
Power Off alert		SMS to:A.B.C and Phone call A: **Power Off Alert!**
Highjack Alert		SMS to:A, B.C and Phone call B,C: **Highjack Alert!**
MOVE Alert		SMS to:A, B.C and Phone call A : **MOVE Alert**

3. Remote Control RF code Setup

Install the device well, pull out 20pin wire from J1 and battery switch off
↓
Press and hold SOS button
↓
Turn on power (plug into J1). A beep will be heard
↓
Press any key of the remote control
↓
A beep will be heard. Then release the SOS button
↓
Turn off power again. (pull out 20pin wire)
↓
Power on (20pin wires plug into J1), the device works again
↓
test the remote controller