

*MINI SIZED GPS/GPRS/SMS
CAR TRACKER*

Model: Mini-ET700



Contents

| | |
|---|----|
| 1. Functionality list..... | 3 |
| 2. General Introduction..... | 4 |
| 3. Applications | 4 |
| 4. Package..... | 4 |
| 5. Operation & installation..... | 5 |
| 6. LED status..... | 16 |
| 7. Configuration..... | 17 |
| 8. System Debug..... | 20 |
| 9. Firmware upgrade..... | 21 |
| 10. Configuration for web based software..... | 22 |
| 11. Technical parameter..... | 25 |

| Functionality | Function Details |
|------------------------|---|
| Configuration | Setting functions of related setting of unit through PC software or mobile phone |
| Types of reporting | <ol style="list-style-type: none"> 1. SMS, 2. GPRS |
| Tracking and alarm | <ul style="list-style-type: none"> - Support TCP/UDP modes - GPS report by unit ID, speed, location, direction, time, vehicle status, mileage, etc - Emergency rescue - Geo-fencing - Lower voltage alert - Main power disconnection alarm - Geofence alarm - Vehicle igniting - Over speeding - Backup battery disconnected alarm - GPS long period no signal warning - GPS receiving problem alarm - Handset phone problem alarm |
| Control | <ul style="list-style-type: none"> - Remote power cut control - Remote open/close GPRS - Remote oil cut control - Remote set speed limit - Remote/on side set Geofence |
| Firmware | Remote firmware upgrade by PC program |
| Optional handset phone | <ol style="list-style-type: none"> 1. Two way messaging dispatch |
| Tracking Software | <ol style="list-style-type: none"> 1. ExtremTrac PC based software through SMS 2. ExtremTrac web based software by GPRS/SMS |

1.General Introduction:

The Mini- ET700 is a small yet dynamic GPS, GSM/GPRS vehicle tracking device, Optional handset phone for 2 way message communications. Built-in 800Mah battery for long lasting operation without external power, built-in memory for data logging of 100,000 waypoints, harsh-weather and shock resistant PCB design, cut relay, one optional input. With its small size, easy hide and installation inside the vehicle.

2. Applications:

1. For vehicles which have 12V or 24V battery power supply.
2. Transmit data either by GPRS/GSM
3. Support TCP/UDP (in big data transfer like image, system switch to UDP transmission automatically)

3.Package and Accessories



Main Unit



GPS/GPRS Antenna



Handset Phone (Optional)



PC Setup & Program Cable



Cut Relay



Main Harness



Handset Phone Cable



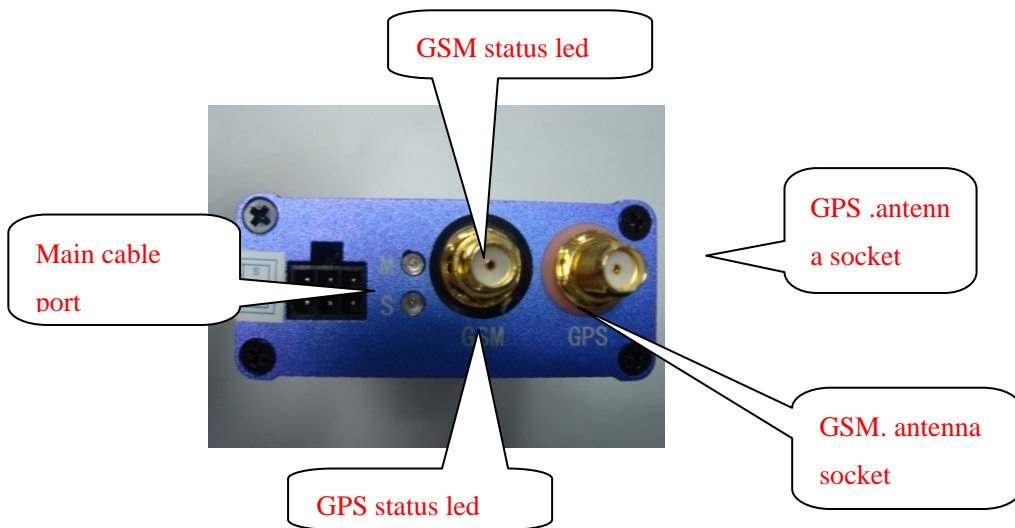
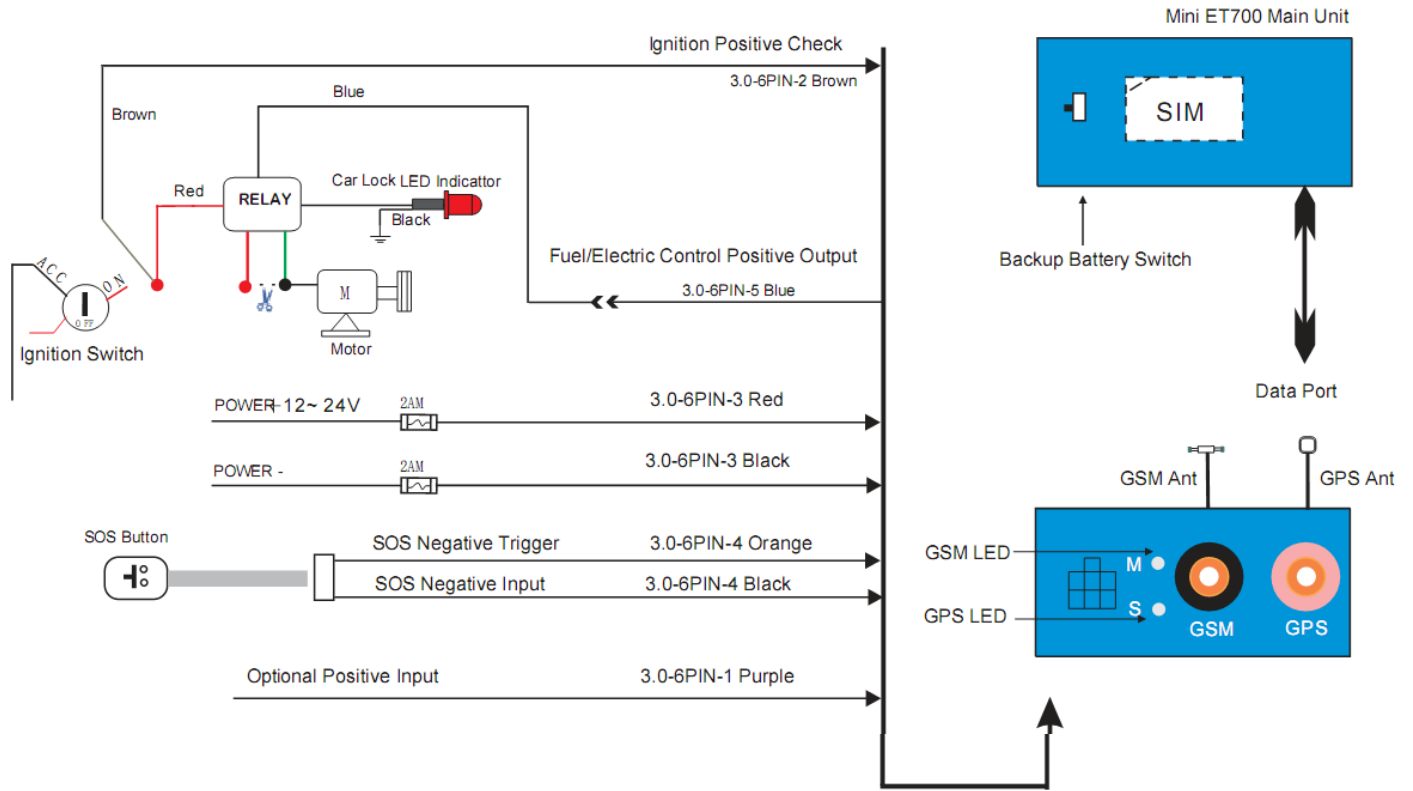
SOS button



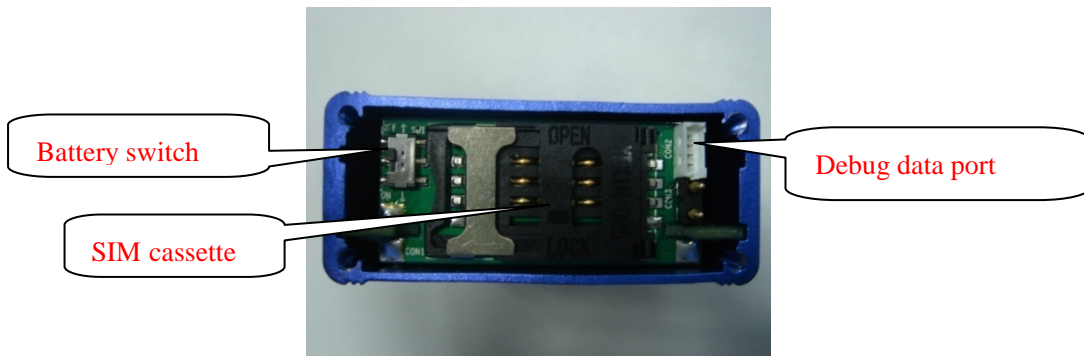
PC Set Up Program & Manual

4. Installation Guide

1. Wire Diagram

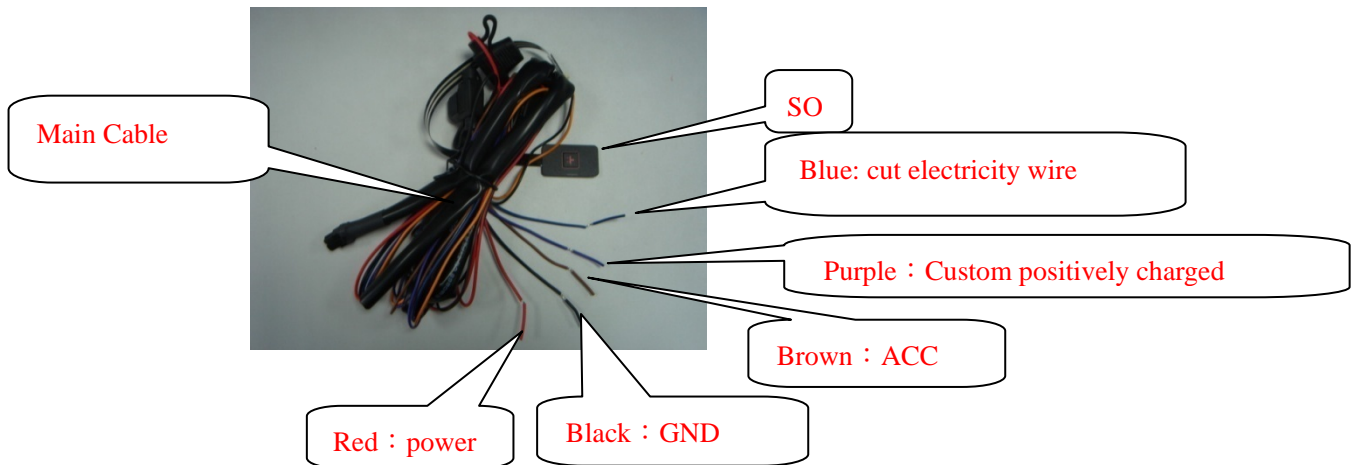


b. Back view

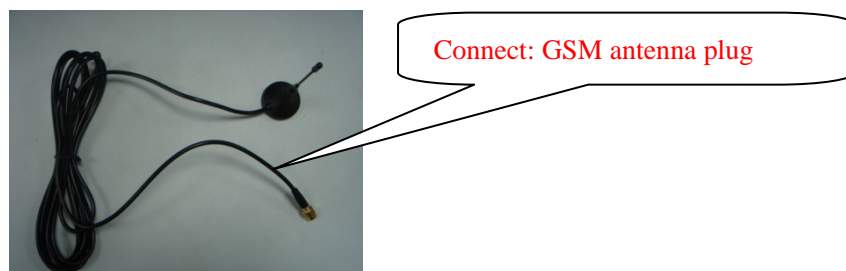


3. Installation Cables

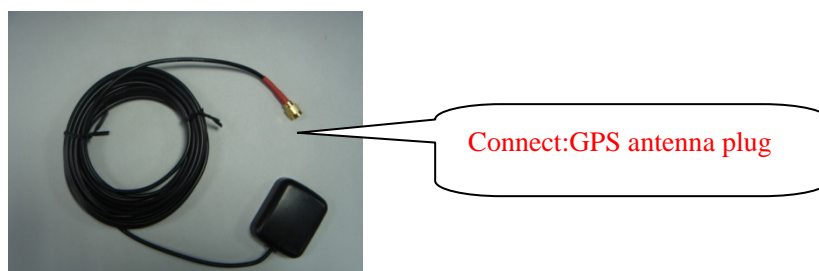
Function: Ignition+ Emergency Button+ Optional Positively Input + Cut Fuel / Electricity



4. GSM Antenna



5. GPS Antenna



6. How To Connect Tracker to Handset

note: handset can debug the device after the device connected with the handset .



2201debug cable

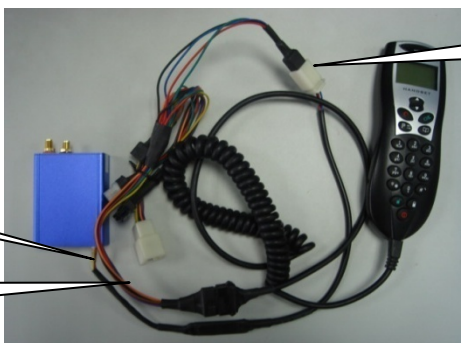


Universal switch wiring



handset

7. How to Connect the Device to Handset Phone



Butt plug

Butt plug

Butt plug

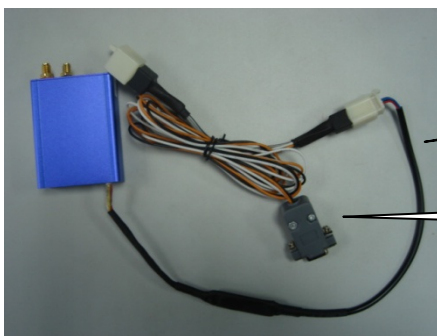
8. How to Connect the Tracker to PC

note: pc can upgrade the program of the device after device connected with pc .



Upload cable

Device connected with pc



2201 debug cable

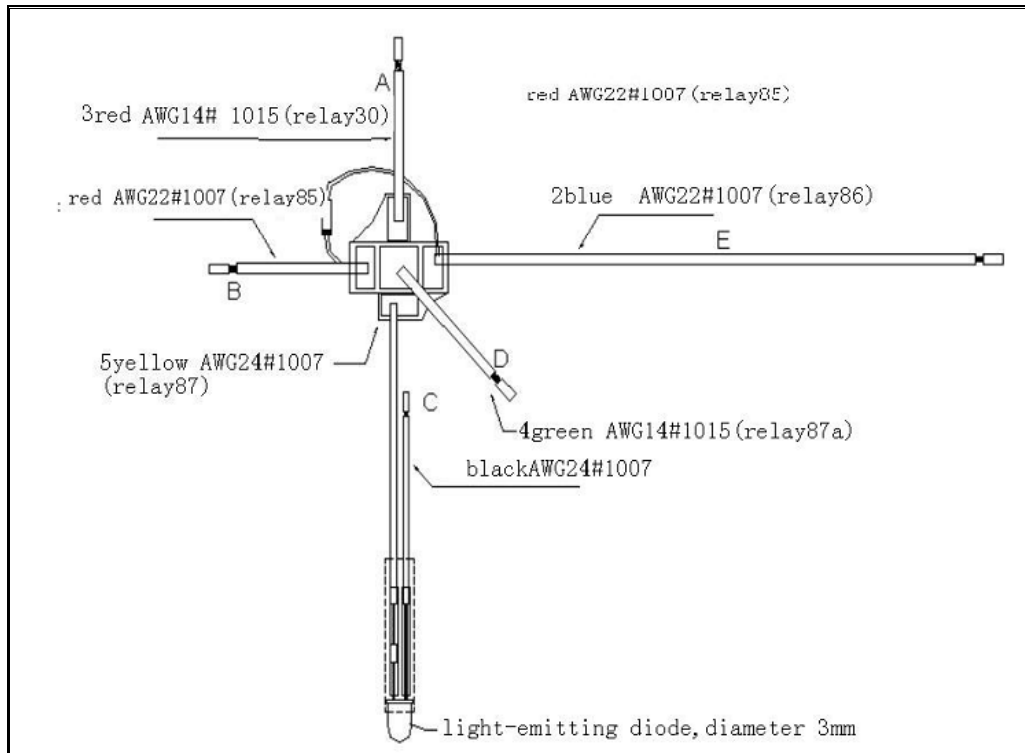
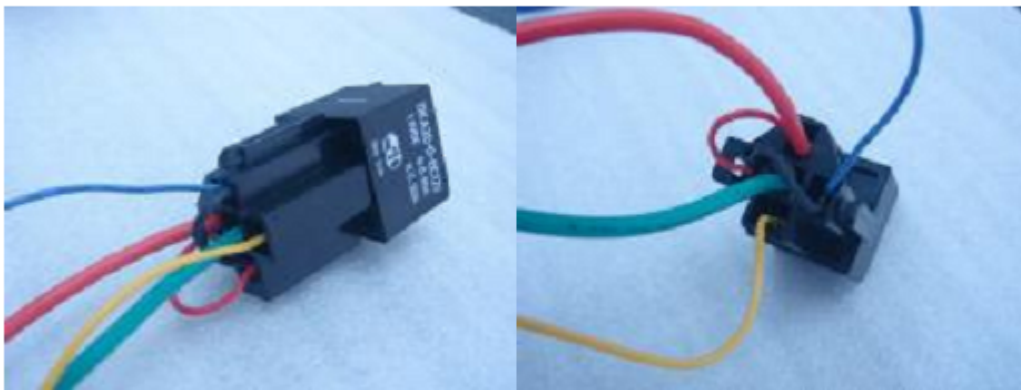
Connect with pc

9. wire installation table

| Item | Color of cable | connection points | Function |
|----------------------|----------------|---------------------------|------------------------------------|
| Main cable (6pin) | Purple 6PIN-1 | Optional input | For optional use, like door status |
| | Brown 6PIN-2 | Positive Ignition Check | Check ACC on/off |
| | Black 6PIN-3 | 12V power + | Emergency alarm signal trigger |
| | Red 6PIN-3 | 12V power - | Emergency alarm signal input |
| | | | |
| | Black 6PIN-4 | Black SOS negative input | SOS alarm |
| | Orange 6PIN-4 | Orange SOS negative input | SOS alarm |
| | Blue 6 PIN-5 | Positive output | Cut fuel |
| Main data cable | 2 pin | | For PC data |
| Relay cable | | | |

Relay:

- A—Red wire (thick) AWG14 # 1015 oil & circuit cutting.
- B—Red wire (thin) AWG22#1007, connects to DV12Vor 24V (positive pole of relay coil)
- C—Black wire (thin): Negative pole of light-emitting diode, connects to earth.
- D—Green wire (thick) AWG14 # 1015: oil & circuit cutting.
- E—Blue wire (thin) oil & circuit cutting; signal controlling.

**Fig.1 Control Output Wires****Fig.1 Control Output Wires (Actual product)**

5. Preparation

1. Make sure that no item in the package contents is missed before you install the GPS vehicle terminal.
2. Prepare a SIM with SMS or GPRS function.
3. Test the basic vehicle situation (such as light, brake, ignition, anti-theft device and all wires related to GPS installation.) before you install the GPS vehicle terminal.
4. Safety Precaution :
 - 4.1 Make sure that the SIM card is valid and inform the control center of SIM card number and necessary customer information.
 - 4.2 Choose a proper position to install the terminal.
 - 4.3 Remove the components of vehicle correctly during installation.
 - 4.4 Lay and bundle the vehicle cables as the original direction.
 - 4.5 Protect the joints with insulating tape.(withstands 600v)

3.2 Installation Position

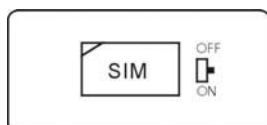
1. The installation should not affect the driver's operation.
2. The installation should not affect the look and basic functions of vehicle (such as removing ,winding up and down the seat)
3. The installation position should be protected from water.
4. The joints should be bundled with insulating tape to avoid crush and short circuit.
5. The installation position should be away from direct sunshine.
6. The terminal should be installed in a concealed place
7. The terminal should be fixed in a position with screw or band.
8. Recommendatory installation position: a place under back seat or the side of trunk.

3.3 Installation of SIM card and Backup Battery 1 .

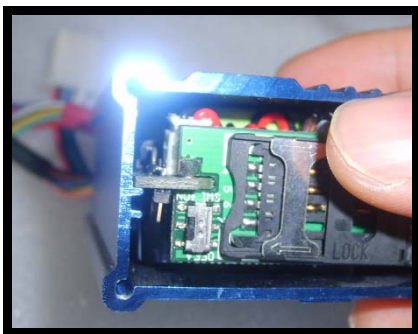
Installation of SIM card :

- 1.1 Open the side panel of the terminal.
- 1.2 Pull out the SIM card holder, insert SIM card and push the SIM card holder back until it click.

Caution: Make sure that the power supply(including backup battery) is turned off when installing SIM card



- a. Screw off the back cover of the MINI-ET700 unit
- b. Insert the SIM card.



3.4.1 · Installation of backup battery :

- 1.1 Open the SIM card panel.
- 1.2 Shift the switch of backup battery to ON position to turn the battery on.(shown as the fig. on top)
- 1.3 Shift the switch of backup battery to ON position to turn the battery off.
- 1.4 The factory status of the backup battery is 70% charged.
- 1.5 When first installation of the terminal is finished, the backup battery will full charge itself automatically.

Caution: Do not use the backup battery before installation or in the situation that the terminal is not used. please insert the SIM card first then power on the tracker.

- a. Connect MINI-ET700 to a 12V external battery, connect GPS/GSM antennas, (the antennas must be placed in open area where there is good GPS/GSM signal). For testing, no need to install in vehicle, just connect 3 connectors: GPS antenna, GSM antenna, power.
- b. Watch the LEDs for 3 minutes, when green LED flashes at every 2 times, and red LED every 3 times, (green LED and red LED flashes simultaneously for 2 times, red LED flashes one more time), that means the tracker now is ready to work, good GPS and GSM signal, now user can start to configure the device:

Each time when power off the tracker, please watch the LED status, only when green LED and red LED flashes simultaneously for 2 times, red LED flashes one more time

3.4.2.Connection of Power Supply

1. Red wire——Positive pole of power supply input; with safety switch, DC 12V&24V.

Black wire—— Negative pole of power supply input

2. Installation Position

The wires should be connected under the dashboard.

3. Wiring

- 4.1 Connect the red wire with positive pole of power supply and and the black wire with negative pole respectively. Make sure the connection is steady and concealed.

- 4.2 Turn on the backup battery.
- 4.3 Wrap the joint with insulating tape. Don't let the joint uncovered.
- 4.4 Keep the power supply of the terminal working normally when the engine is off.

Caution: Avoid short circuit and open circuit when connecting the cables, otherwise the vehicle device and auto system may be damaged.

3.5 Connection of Emergency Button(Orange wire)

1 Function

- 1.1 Call for police by pressing the emergency button in emergency (such as hijacking, sick and vehicle trouble.)
- 1.2 The handset will prompt you with twice tones when calling for police successfully.

2 Installation

2.1 Installation Position

A sound installation position should be easy to reach and concealed; The surface of installation position should be flat and free of wax or dirt.

2.2 Wiring

Connect the socket of emergency button to the plug on the top of the orange wire. Wrap the joint with insulating tape to avoid disconnection.

3.6 Connection of Stolen alarm(purple cable)

3 Function

- 1.3 Any unauthorized entering will trigger stolen alarm.
- 1.4 5-second positive (negative) pole output of anti-theft device is regarded as stolen alarm.(6 times impulse output in 8 seconds is regarded as stolen alarm as well.)

4 Installation

- 2.3 A key point needs to be confirmed first:

The engineer should confirm if the trigger of stolen alarm is negative or positive.e.g. the device output is positive pole or negative pole when it alarms.

2.4 Wiring

- 2.3.1 Testing wire for positive trigger of stolen alarm is purple; If the trigger is negative signal, a signal switch is needed.
 - 2.3.2 Connect the testing wire for output pority of alarm device to the signal port of alarm device.
- Caution:** The testing wire of stolen alarm is compatible with impulse alarm signal of the vehicle. It takes 10 seconds to test.

3.7 Connection of detecting wire (key ON/OFF) (Brown wire)

1. Function

Test the vehicle status: KEY OFF or KEY ON state

2. Installation

2.1 A key point needs to be confirmed first:

2.1.1 Test if the voltage is 12V(or 24V) when the ignition switch is turned to ON position;
Test if the voltage is 0 when the ignition switch is shifted to OFF position.

2.1.2 Test method:

Turn the key to OFF position, a wire detected with electricity is power supply input;

Ignition Switch

Then turn the key to ACC position, the wire detected with 12V voltage output is audio power supply;



Turn the key to ON position, the wire detected with 12V voltage input is the ignition cable.

2.2 Wiring

Connect the brown wire to the ignition wire and wrap the joint with insulating tape.(Caution: the testing cable must be connected to the ON position. Don't connect it to the oil pump or ACC position.)

2.3 Test:

Configure the terminal with control center number and turn off the engine. In automatic arm state (or arm state realized by password), the terminal should cut the oil and circuit.

3.8 Electricity failure alarm for terminal and vehicle battery

Function

1.1 The terminal detects the alarm of abnormal electricity failure (protecting the vehicle from theft and damage)

1.2 If the voltage of vehicle battery is less than DC 10.3V for 30 seconds, the terminal will create low power alarm automatically.

1.3 If the voltage of vehicle battery is less than DC5.0V, the terminal will create electricity failure alarm.

1.4 The built-in battery is designed with high voltage protection and 3-hour standby time.

4 · Installation

- 1.1 The built-in backup battery is required to use before installing this alarm.
 - 1.2 Open the SIM panel and shift the switch of backup battery to ON position.
 - 5 · Test: The handset should be power off if the power of the host is cut;
- Caution: this function is only available for GPS terminal with backup battery.

3.9 Connection of oil and circuit controlling wire

1. Function

Control the oil and circuit of vehicle; disable the vehicle.

2. Installation

2.1 A key point needs to be confirmed first:

The controlling output is blue wire.

2.2 Wiring

Connect the controlling wire with the blue cable of terminal with “1” joint.

2.3 Test:

2.3.1 Oil & circuit cutting test: configure the terminal with control center number. Ignite the engine in arm state, the terminal will cut off the oil & circuit automatically (with LED indication) .The function can be accomplished by remote control.

2.3.2 Oil & circuit resuming test: the terminal will resume oil& circuit in disarm state

3.10 Installation of Handset

- 1 While installing the handset holder with twin adhesive, keep the surface of the holder smooth and free of wax or dirt.
- 2 Connect the socket of the handset to the related plug on the terminal. If the connection is not smooth, adjust the plug. Don't connect them by force. Wrap the joint with insulating tape to avoid disconnection

3.11 Installation of GSM Antenna

- 1. The GSM antenna should be installed close to the windows.(a place with strong signal strength).
- 2. The GSM antenna should be installed in a concealed place to avoid damage.
- 3. The distance between the GSM antenna and metal surface should be 5cm, which is good to signal receiving when the vehicle is driven in a high speed.
- 4. Protect the antenna wire from squeezing, otherwise it may be damaged.
- 5. Check the indication light: It will flick 3 times every 5 seconds if GPRS is connected:
flick 2 times every 5 second if GSM is connected; flick once every 5 seconds if GSM is not connected.

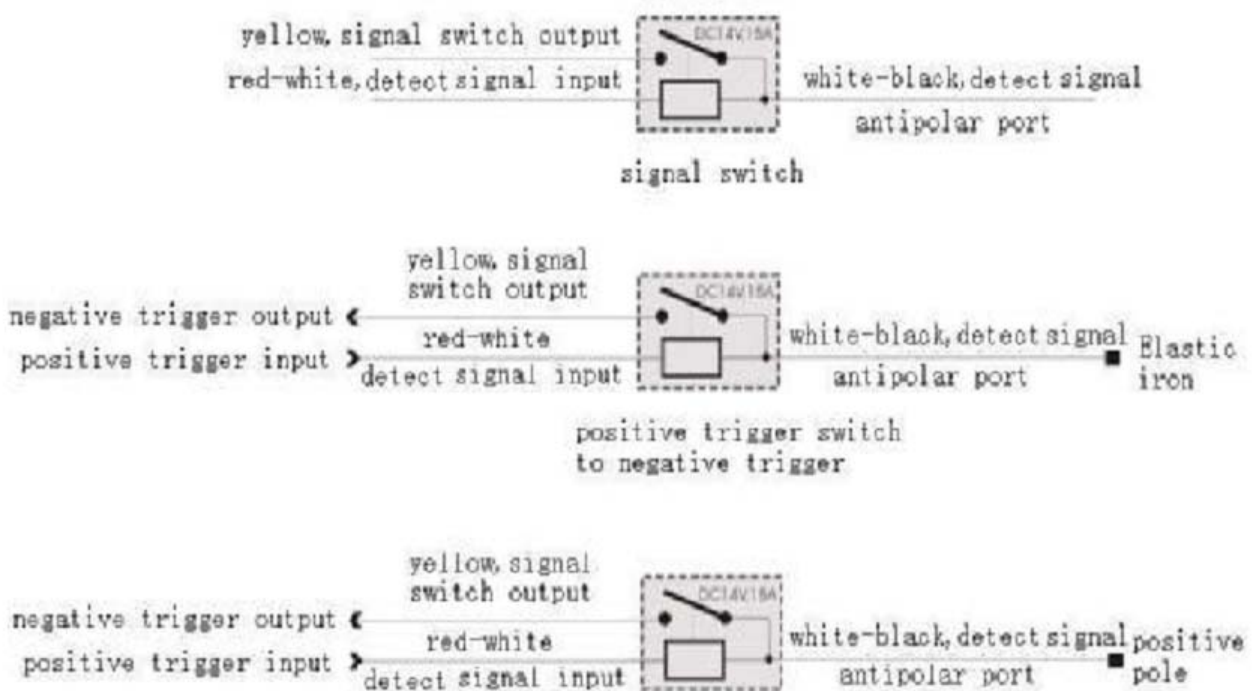
3.12 Installation of GPS Antenna

- 1. Fix the GPS antenna, which should be not covered by any mental objects. The recline angle may not be greater than 15 degree. The antenna should be installed in a proper position such as front and back bumper, top of the vehicle and front windows or under back window (the GPS antenna should not be

installed if there is any rupture risk in the back window).

2. The upside (camber side) of the GPS antenna should face the sky. The GPS antenna should not be covered by any object.
3. The downside (smooth and with letter on it) is magnetic. You may put it on a iron surface or stick it with twin adhesive.
4. Protect the antenna wire from squeezing, otherwise it may be damaged.
5. Check the indication light: It will flick 3 times every 5 seconds if GPS is connected:
flick once every 5 second if GPS is not connected; black off once every 5 seconds if GPS antenna is short circuit.

3.13 Theory and Application of Signal Switch



5. GPS/GPRS LED status:

There are 2 LEDs on the side of the MINI-ET700: "S" means GPS LED, "M" means GSM LED.

A. "S" LED indicates the GPS working status

- "S" LED flash 3 times at every 5 seconds, means MINI-ET700 has valid GPS signal
- "S" LED flash 1 time at every 5 seconds, means MINI-ET700 does not have valid GPS signal
- "S" LED turn off at every 5 seconds, means the MINI-ET700 antenna get short-circuit.
- "S" LED always be on, means the GPS antenna connect is well

B. "M" indicates the GSM working status

'M' LED flashes 3 times at every 5 seconds, GPRS get connected

'M' LED Flashes 2 times at every 5 seconds, has GPRS signal

'M' LED Flashes 1 time at every 5 seconds, GPRS no signal

6.Device Configuration by PC RS232 connection:

This PC based set up software is used to set up and monitor the parameter configuration of the MINI-ET700 tracker.

Please connect MINI-ET700 with PC by the RS232 cable.

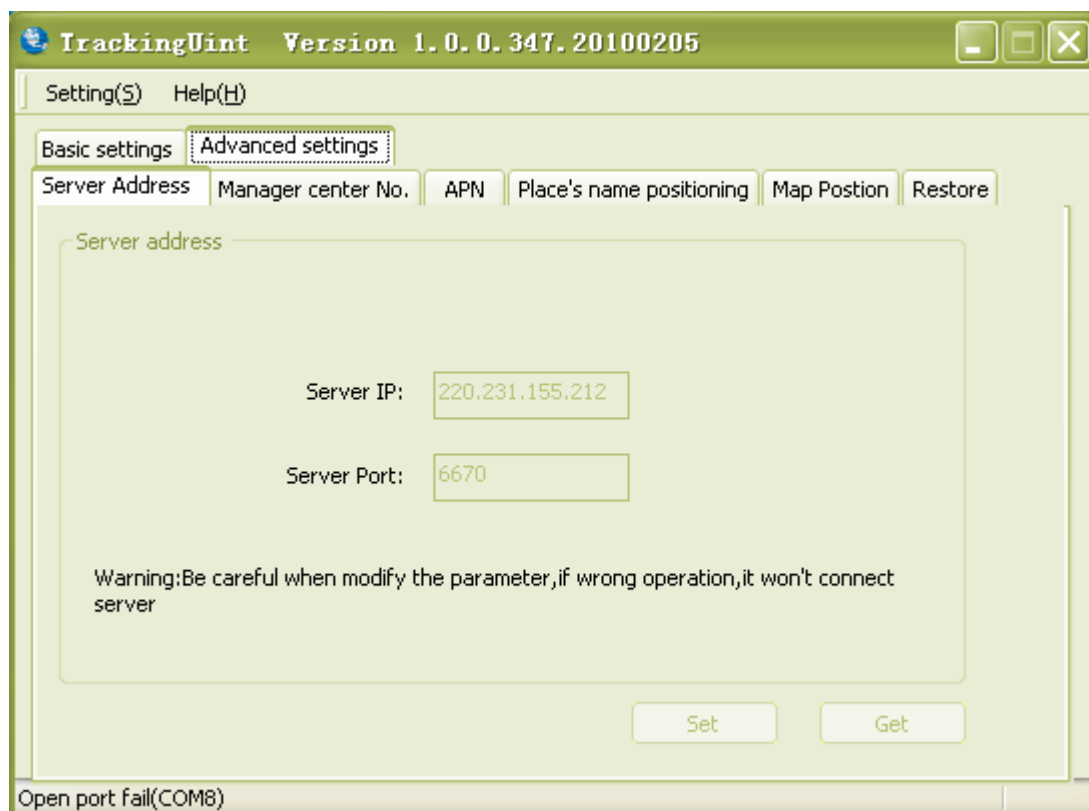
Power on the unit and reset:

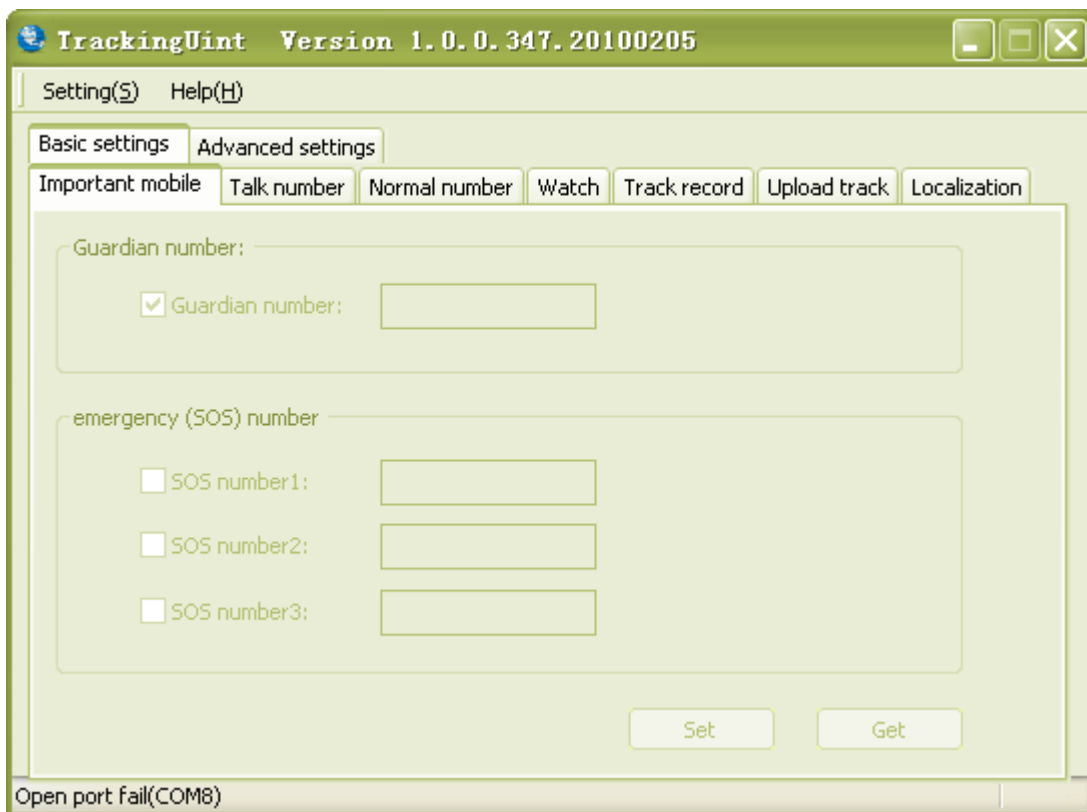
Start software :

Click this button to start the software



GP3000_PC_SET_UP_EN





7. Debug Commands

You can set parameters for the device by handset. The common set commands as follow :

- a. `[[request the information of update time and features of the software firmware]]`

function: request the program of the device

command: `*#3#`

note: you will get a string figures after you sent the command , it means the date of the program edited and the firmware

- b. `[[set/request center number]]`

function: set or request center number

request command: `*#53#`

set command: `*#53*1*center number#`

note: it will reply you the center number which you want to set after sent this command. If right and affirm it.

- c. `[[set GPRS parameters]]`

function: set IP and port

set command: `*#42*192*168*0*12*8002#`

Note: 192*168*0*12 is IP address :192.168.0.12 and port is 8002

- d. `[[set GPRS special line parameters]]`

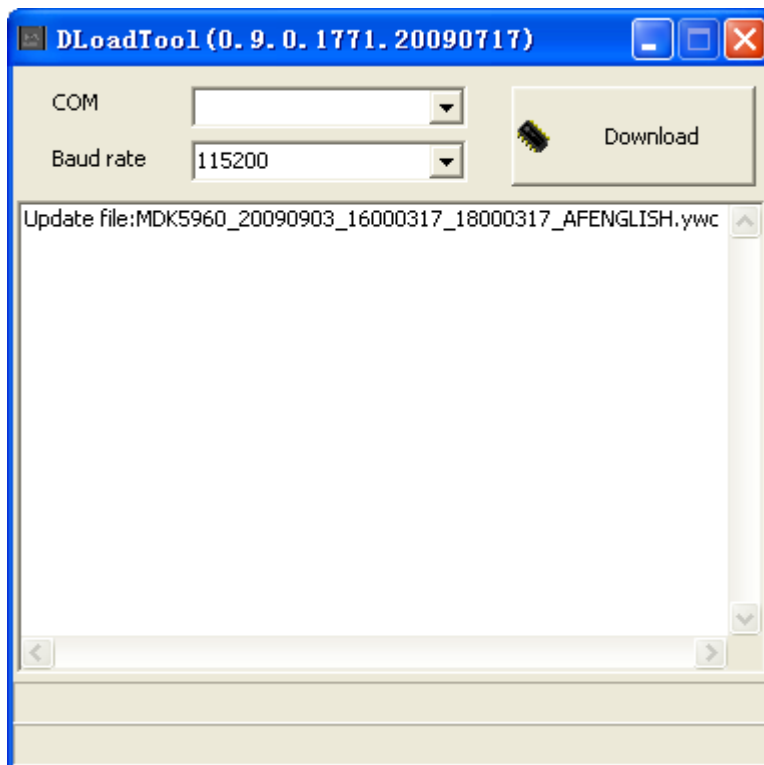
function: set IP and port

center IP address:222.35.61.66 PORT:8000 APN :CMNET

set command: *#42*222*35*61*66*8000*3545463752

8. Firmware upgrade instruction

- 1). Use the RS232 cable to connect the tracker and PC serial port
- 2). Select the right com port, the com port which is the one that RS232 cable connect the PC port but don't select the baud rate
- 3). Click the download and, after you click the Download you can connect Mini-ET700 power



Note: when you click the download, please do not connect the power, either internal or external power, only

after you clicked the chipset icon , then connect the power

Quick Guide to Set Mini-ET700 Online

www.webgpstracking.net

User: *yw*

Password: 9999

User name :

Password :

Password : DEQ6

Login Reset

1) **Set centre number**

Send **“*GP001 centre number,0000”** to the tracker by your mobile and you will get the reply **“CR001,centre number”**

2) **Set ID number**

Send **“*GP004,SIM card number in the tracker ,0000”** to the tracker by your mobile and you will get the reply **“*CR004,SIM card number in the tracker”**

3) **Set IP,Port and APN**

IP:**220.165.9.225**

Port:**2332**

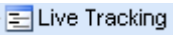
APN: APN of your SIM card in the tracker

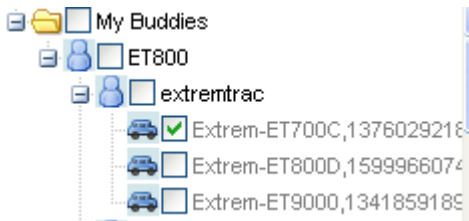
A) By mobile: send **“*GP012,220.165.009.225,2332,APN,0000”**to the tracker, and you will get the reply **“*CR012,220.165.009.225,2332,APN”**

B) By handset :send **“*#42*220*165*009*225*2332#** “and you will get the reply : **“01 220.165.9.225 , 2332 CMNET“**

C) By software



4) **Login your account**

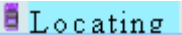
After we opened the account for you , and registered the ID in the web software www.webgpstracking.net you can login your account click  ,then in the

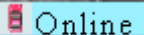



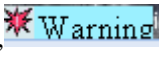
select your car ,and you will see your car in the map.






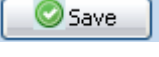
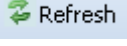
click  you can refresh the data , click  the export can to Excel. Click

you can search your car,  indicating the location of the

device is not exactly,  indicating the device is online,  indicating the device

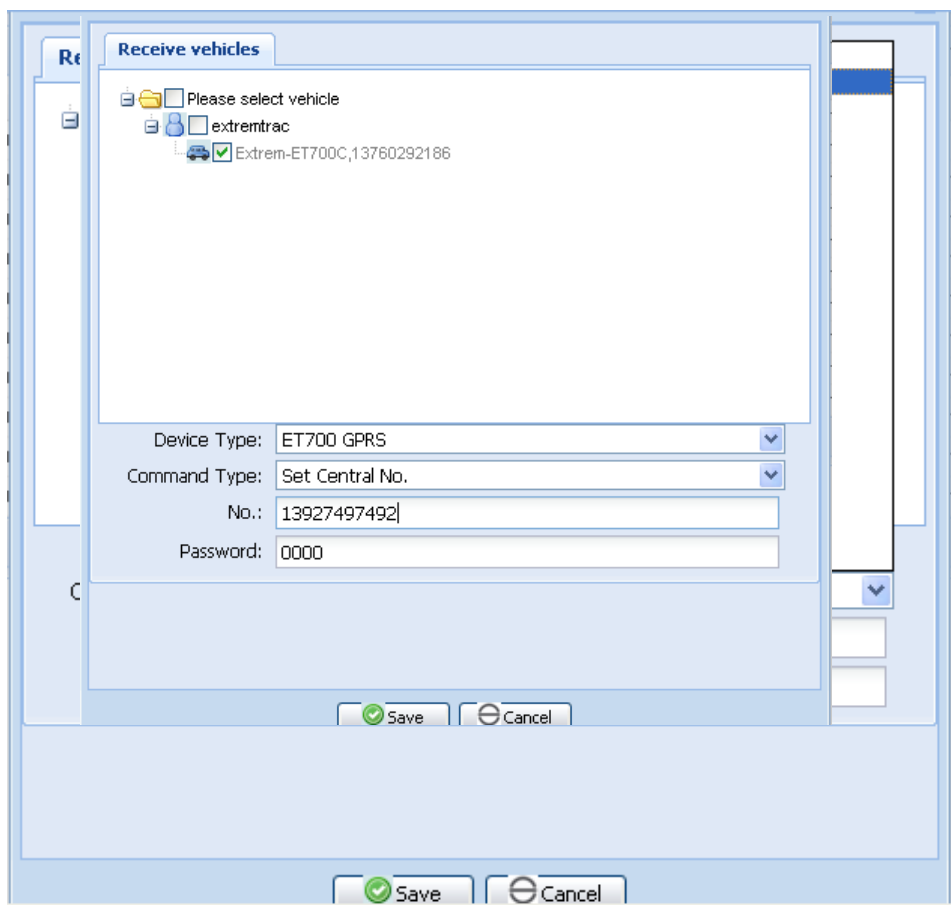
stopped,  indicating the device is warning.

5) Set the parameters

click  Device Parameters then click  and you will get an interface ,first you should select the ET700 GPRS for Device Type and then click  Extrem-ET700C,13760292186 then click  .after you set it you should click  if set success and you will see

Extrem-ET7 1376029218E extremetrac Set Central No.:No.:1392749 ET800 2009-11-06 02:51:32 Send successfully

you can set other functions in the follow interface



6) Control & Configuration

click  Vehicle Manager ,select your tracker and click it

| | | | | |
|-------------------------------------|-----------------------------|---------|-----|-----|
| <input checked="" type="checkbox"/> | 13760292186 | ET700-1 | BMW | Car |
| <input type="checkbox"/> | 15007350979 | MC300 | BMW | Car |

you can change the information in the follow interface

Vehicle Manager

Basic information about vehicles

*Group:extremtrac

*Vehicle ID: Extrem-ET700C

*Plate No: 13760292186

*Brand: BMW

*Type: Car

*Fuel Capacity(L): 100

Driver: Car owners

Created By: ET800

Creation Date: 2009-11-06 15:26:27

Device Information | SMS notification | Additional Information | Oilcan Information

Select Device: ET700-1

*Type: ET700 GPRS

*No.: ET700-1

State: Normal

*SIM/UIM: 13760292186

Service Provider: Vodafone

Country Name: China

Country Code: 86

IMEI:

Accessories: Mobile phone Personal Navigator
 camera Monitor Screen

Save Cancel

Note:

Group: select your Group, Select Device: select New Device

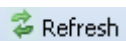
Type: select the ET700 GPRS

SIM/UIM: fill your ID number (the SIM card number in the tracker)

Fuel Capacity(L):if your tracker have the fuel monitor function you should fill the right content .

Other information you can fill or select at random

after you change the information ,you should tell us and we will give the right for your new ID, then you should click



Refresh

or login your account again and your tracker will be online

9. Technical Parameters:

| Item | Technical parameter |
|--------------------------------|--|
| Working voltage | 8 ~ 36V/DC |
| Power source anti- ties | ≥ 80V |
| Working electric current | Average 110mA @ DC 12V Sleeping < 45mA @DC 12V |
| Unit size | (2.2 x 5.2 x 7cm |
| Net weight | 0.26kg (Outer cover of Aluminium alloy) |
| Digital transmission Frequency | Siemens GSM: /900/1800/1900 MHz. / 850/1800/1900Mhz |
| GPS performance | Tracks up to 16 satellite channels of GPS Position precision<15 meters CEP U-blox 5 Generation without SA Cold start time< 48 sec. Warm start time< 38 sec., average Hot start time: <8 seconds ,average |
| Power port | + 5V/DC, 500mA (max) power supply Built in memory for 100,000 points data logging |
| Antenna | GPS SMA connection - 26dB Cable length 5meters |
| | GSM SMA connection - 3dB Cable length 3meters |
| Working temperature | -10 °C ~ + 70 °C |
| Working humidity | 5% ~ 95% |
| Store temperature | -25 °C ~ + 85 °C |

| | |
|-------------------------|---|
| Backup battery | Nickel- hydrogen 4.8V/DC 800 mAh |
| GPS dynamic Conditions: | Altitude 18,000 meters (60,000 feet) max |
| | Velocity 515 meters / second (1000 knots) max |
| | Acceleration 4G , max |
| GPRS feature | 2 Watts EGSM (GSM900 Class 4) |
| | 1 Watt GSM1800 (DCS1800 Class 1) |
| | Philip GSM/GPRS Module, 900/1800mhz |
| | GPRS class 10 |
| | Audio support (with echo-cancellation and noise reduction |