

TTS 200 GPS Personal Locator Hardware Installation Manual

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I. Working Directions

Thank you for your purchase of TTS 200 GPS Tracker. In order to realize the full functions of this product, please read this manual carefully before starting to use the product.

1. This product can only be maintained and repaired by qualified professional service personnel. If you detach this product for maintenance or repair, your warranty will be invalidated.
2. When connecting the other devices, read carefully their instruction manuals, so as to carry out correct installation; do not connect incompatible device.
3. Please use genuine original parts and qualified batteries and peripheral equipments, so as to avoid damage to this product.
4. As this product is a high-tech product, please read carefully this manual before starting to use the product, so as to avoid inappropriate operation.
5. Drivers should not operate this product while driving a vehicle, thereby, affecting safe driving.
6. This product can work properly only when GSM communication is in good condition.
7. Please reduce electromagnetic wave interference to the product; and use it properly.
8. GPS communication is liable to be affected by environmental shielding; may fail to carry out positioning during certain circumstances. It will resume the positioning function as soon as it leaves the shielding environment. This is normal. Please do not worry when encountering such problem.
9. We suggest replacing the stand-by battery each year in order to ensure its normal function.
10. Each signal sent out from the system will be confirmed for successful transmission in the base station of the mobile operator. However, if system stoppage occurs or if the mobile telephone is preset to a switch off state by the customer, it cannot ensure successful transmission.
11. The position report and the relevant data provided by this product is for reference only.
12. For safety reason, do not tell the other people your TTS 200 mobile number, without taking precautions. Otherwise, your privacy may be compromised along with other safety problem.

II. System Introduction

TTS 200 is a high-tech product through cooperation with mobile operators. It combines GPS Global Positioning System and GSM/GPRS communication system, (4 bands EGSM900, DCS1800, GSM850, GSM1900), which you can track the position of your children/ elders or vehicle.

GPS is the abbreviation for Global Positioning System, which is a product of the cold war between USA and USSR. During the cold war, USA arranged 24 position location satellites around the earth orbit, in order to measure the space coordinate and time of the measured objects through the triangular location method. These satellites were initially for military purpose. Then, they were allowed to be used for civilian purpose. Their locating precision can be kept within 10 to 15 meters.

GSM is the second digital mobile communication system (GPRS, second and fifth digital mobile communication system), and at present it is the mobile communication system that has the largest coverage and owns the most number of users. This product combines GPS and GSM/GPRS technologies together. It uses GPS system to locate your car, and sends the position/ situation report back to you via GSM/GPRS communication system.

By receiving detection message, through the TTS 200 microphone, you can monitor the present situation in your car from a far-away place. You can use the telephone remote control function to set monitoring mode, which will report the situation of your car to you periodically. Set up TTS 200 functions easily through SMS or PC, Press SOS button for any emergency, it will call or send a short message to your family/ friends immediately. Or make a phone conversation.

Following are the function descriptions for the TTS 200 products.

1. SOS Emergency Help Call Function

When the user presses the SOS button, TTS 200 will send a SMS message to the preset phone numbers for emergency help; and the voice monitoring function/ phone conversation function will be activated immediately. The SOS message will be sent continually until it has been disabled.

2. Geo-Fence (Park) Function

This device comes with unique geo-fence (park) function. It will send a warning message to the preset phone numbers (the owner/ parents/ control center....), when the vehicle/ object... has been moved beyond the pre-defined area.

3. Voice Monitoring Function

You can monitor the situation of your loved one remotely from mobile phone by sending a SMS command code to this device, w/o interfering the person. With this real-time surveillance function, you can monitor the situation of your loved one and/ or your vehicle, live & real-time.

4. GPS Position Tracking Function

With this function, the authorized person – the one who knows the password of the tracker, can know the geographic coordinates, location, speed, direction, and other related information of his loved one or car, anytime in any place. The report method can be via SMS or via GPRS. You can also make selection between one time report, and continuous report (tracking function).

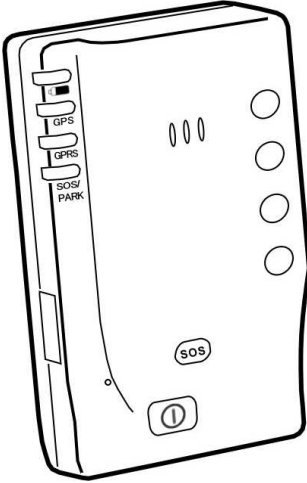
5. Bi-Direction Phone Conversation Function

You can have a phone conversation by making phone call to TTS 200, and vice versa. When there is an incoming call, there will be a voice prompt; at this time, the user can press the “Pick-Up/ Hang-Up” button to start the conversation. You can also dial out to the preset 2 phone numbers for 2-way phone conversation.

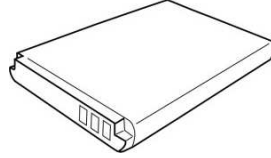
III. Wiring Installation

1. Product Parts List

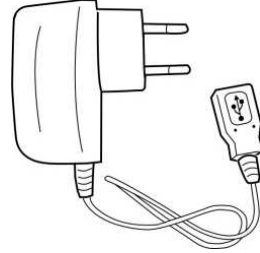
- TTS 200



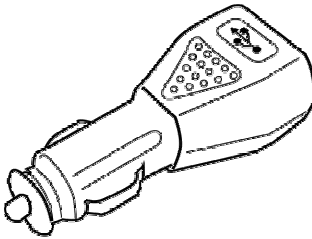
- Li-ion Battery



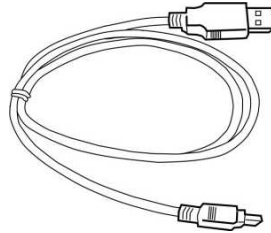
- AC Adaptor



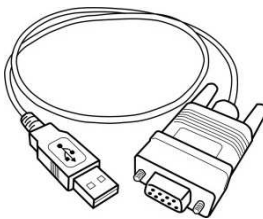
- Car Charger with USB Connector



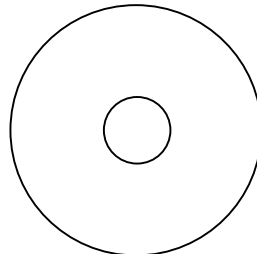
- USB-Mini USB Cable



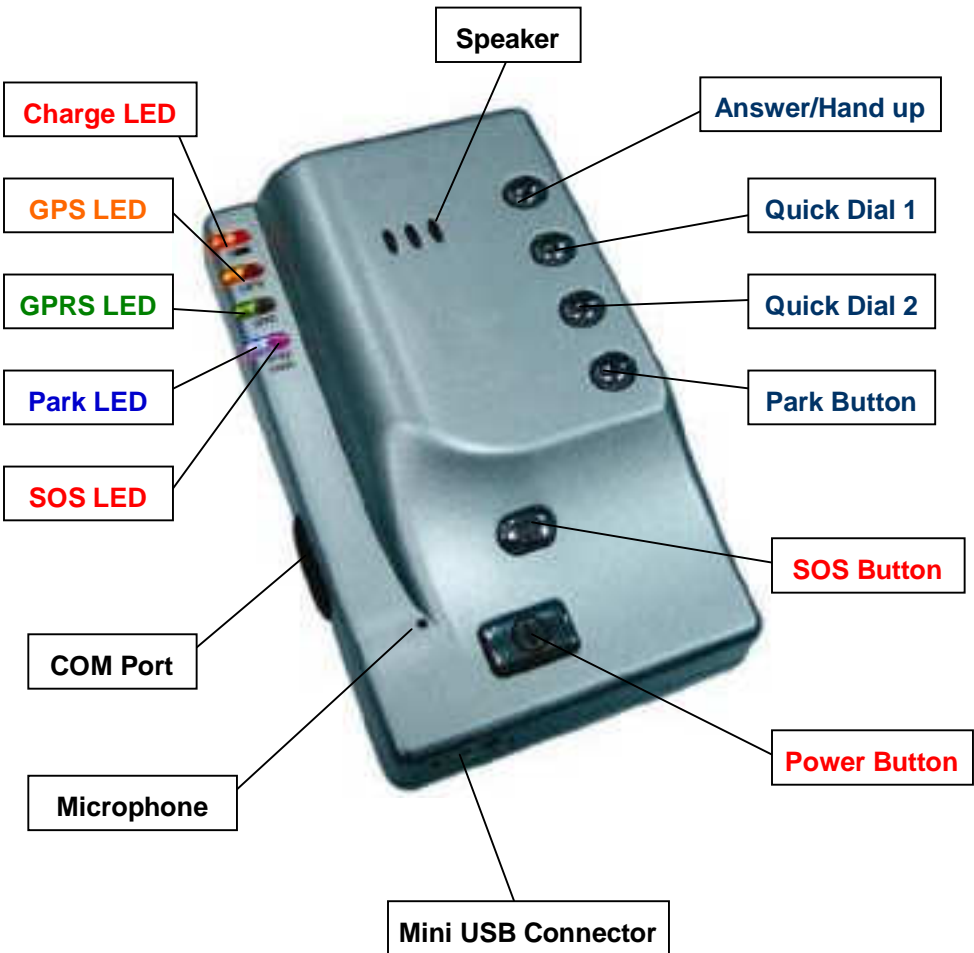
- USB - RS232 Cable



- CD



2. Panel Description



3. Precaution before Installation

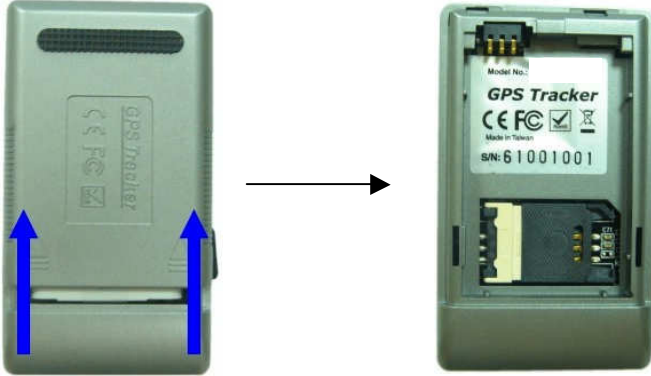
- Check if all the parts are included.
- Prepare a SIM card for **GSM** communication. Use some other mobile phone to confirm that the **PIN code** has not been set, and that it can dial out and receive telephone calls without problem.
- Before install the SIM card, make sure to turn off the device.
- **It takes around over 20 minutes for the very first time positioning. Please place the tracker without anything covered.**
- The factory default password is "8888".

4. Installation

Step1. Fully charge the battery for at least 8 hours before your first use.

Step2. Install SIM Card:

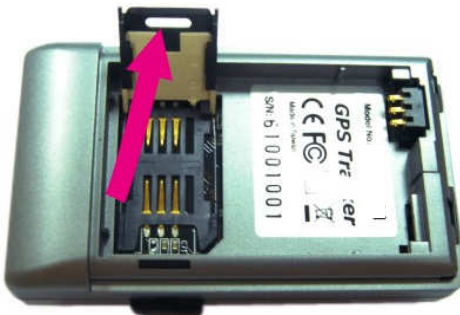
(1) Remove the back cover of your locator, as illustrated.



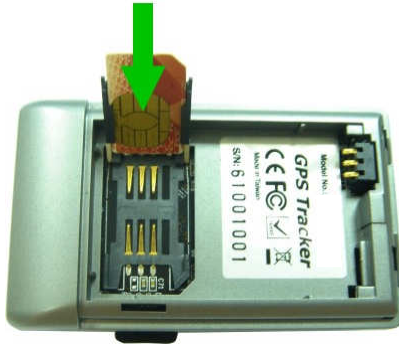
(2) Push the holder top (with an ellipse hole) upward to loose it.



(3) Pull the holder top up.

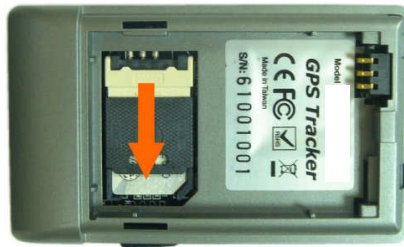


- (4) Insert the SIM card by sliding it into the card holder slot, with the chip module facing to the connectors on PCB, as shown in the picture.



- (5) Flip down the holder top.

- (6) Push the holder top downward, and let it snap in completely.



- De-activate the PIN code, so that the SIM card can operate without PIN protection.
- Before install the SIM card to the GPS Tracker, please use a mobile phone to make sure the SIM card can make & receive phone calls without problem.
- Before install the SIM card to the GPS Tracker, please use a mobile phone to empty the SMS storage of the SIM card.

Step3. Put the battery cover back after insert the battery.

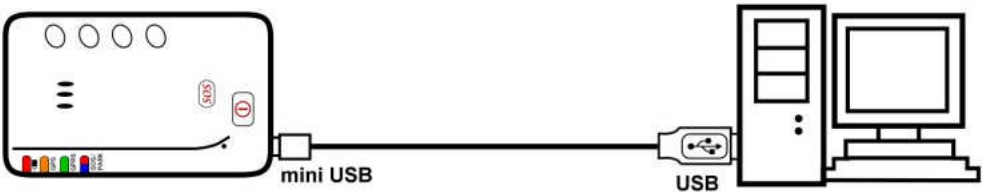


Step4. Turn on the unit, and check if the GPS can work properly or not.

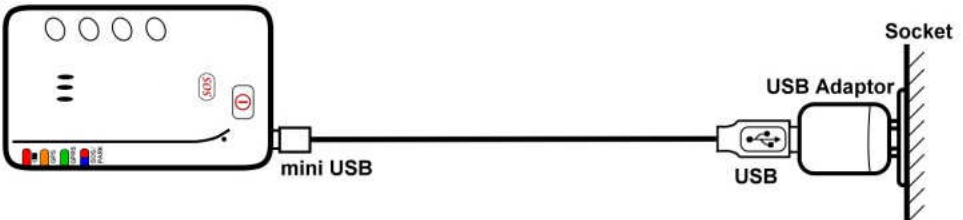
- ※ When GPS has got the position fix, the **GPS LED** will turn from steady orange light to “blinking orange”. Check if the GPS LED has turned to “**blinking orange light**” in about 1-3 minutes.

5. Battery Charging

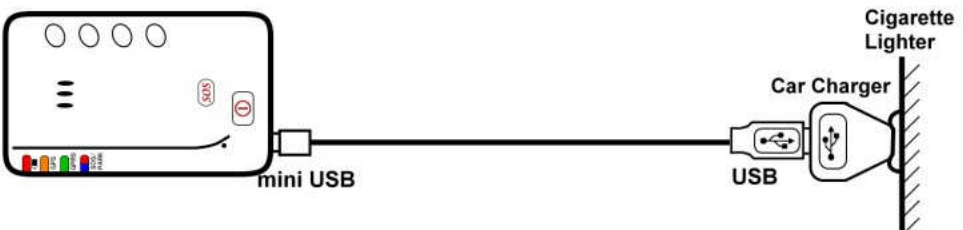
- **Method 1: USB connects to the PC or Notebook directly.**



- **Method 2: USB connects to the USB adaptor directly.**



- **Method 3: Car charger connects to the car cigarette lighter directly.**



6. Description of the LED Indicators

	Charge (RED LED)	GPS STATUS (ORANGE LED)	GSM/GPRS (GREEN LED)	SOS (RED)	PARK (BLUE)
Flash	NC	GPS is on, and position is fixed	GSM is on, and can be used normally	SOS	Monitor
Constant Glow	normal	GPS is on, but position not yet fixed	GSM online	NC	NC
Constant Dark	in trouble or no power	GPS is off, or GPS has troubles	GSM is unusable. It is in trouble or improperly installed SIM card	OFF	OFF

7. Check list after Installation

- When the battery is been charged thru mini-USB port, **RED LED** will be on.
- Flashing **Green LED** indicates GSM/ GPRS can function properly.
- The phone numbers for **PARK and SOS** have been changed as per your settings.
- When press **SOS button**, TTS 200 can send a SMS message for emergency help.
- Check the pre-set numbers to make sure both sides can have a conversation clearly.
- Turn off the power, press **PARK button**, to activate “Park” (Geo-fence) function.
- Go to an open-air place, and check if the **Orange LED** can change from steady orange to flash orange light. The orange LED will flash once per second, when the unit has got a position fix successfully.

IV. Operating Instructions

1. Power on (off)

Power On: When it is off, press the power button for 2 seconds to switch on the power. After power on, **GPS LED** will light on first (steady orange light, or flashing orange light after get a position fix); some 15 seconds later, **GPRS LED** starts to flash swiftly for 10 times; then **SOS/PARK LED** lights on, and shuts off some 15 seconds afterward. By then, the device is ready to work.

Power Off: When it is on, press the power button for 2 seconds to switch off the power; **SOS/PARK LED** will flash for 3 times; then GPS LED will shut off few seconds later. By then, the device is turned off.

2. SOS Emergency Help Function

When SOS button is pressed, **SOS LED** will flash; TTS 200 will send a SMS message for emergency help. The ones receive the message can activate the voice monitoring function, and offer assistance in time. The phone numbers list can be set by the users.

3. Voice Monitoring Function



If you want to know what is happening to your loved one, you can send a SMS command code “**100#Password**” to the unit to monitor the sound/ conversation live & real-time.

4. Conversation Function



Call In: One can make phone call to TTS 200 by simply dialing the SIM card number. To receive the incoming phone call, one should press the “**Pick-Up/ Hang-Up**” button to start the phone conversation.




Call Out: TTS 200 has two buttons for **speed dial**; you can preset 2 sets of phone numbers of those you want to talk with. After the setting, you can make phone call to the preset phone numbers by pressing down either of the two speed dial buttons, “**D1**” or “**D2**”.


D1

D2

5. Setting the Volume & Ring



Volume : Press “**D1**” for 3-5 seconds, the device will ring up. By then, you can press **D1(+)** or **D2(-)** to adjust volume up/ volume down; and  to confirm the setting.

Ringling : Press “**D2**” for 3-5 seconds, the unit will ring up. By then, you can press **D1(+)** or **D2(-)** to select the ring sound; and  to confirm the setting.

6. Position Report Function



No matter where you are, when you want to know the position of your loved on or your vehicle, send a SMS command code “**111#Password**” to TTS 200; it will report its location back to you.

Note: Position report function only can report once. For continuous report, please choose tracking function.

7. Tracking Function



Tracking report function can be turned on or off, according to your requirements. There are two reporting methods: a) Internet via **GPRS**, b) **SMS short message**

Note: Tracking function will continually report the position, until it is turned off.

8. Geo-fence (Park) Function



Press the **Park button**, **blue LED** will start to flash; and Geo-fence (Park) function is activated. The device will send a SMS message to the preset phone numbers, if your car or your loved one moves beyond the preset distance range. Press the Park button once again, the blue LED will shut off; and Geo-fence (Park) function will be cut off. The accuracy of GPS positioning is liable to be affected by time, weather, and other environmental factors. It is suggested to set the geo-fence range over **200 meters**.

9. Password



Password is the key to operate TTS 200 GPS Tracker. It is a 4-digit data. The default password is “8888”. Be sure to change the password after the installation, and keep it firmly in mind.

Note: In order to protect your privacy, do not tell others your password, unless it is necessary. Please change the password if it has been known by the persons who you do not want them to access the data.

10. COM Port

The COM Port in the left side of TTS 200 is reserved for factory to update the firmware. Currently, the port is still not functional to users.

V. Hardware Specifications

Weight	80 grams (battery included)
Dimensions	79.50 x 47.50 x 25.00 (mm)
GSM/ GPRS Module	Siemens TC65
Bandwidth	EGSM900: TX880-915MHz, RX 925-960MHz DCS1800: TX1710-1785MHz, RX 1805-1880MHz GSM850: TX824-849MHz, RX 869-894MHz GSM1900: TX1850-1910MHz, RX 1930-1990MHz
Maximum RF Output Power	EGSM900, GSM850: 33 dBm(2W) GSM1800, GSM1900: 30 dBm(1W)
Resistance	50Ω
Transmission Speed	Circuit switched 4.8/ 9.6 kbps
GPS Module	SiRF Star III
Frequency	L1, 1575.42mhz
Channels	20
Position Accuracy	10 meters CEP without SA
Speed Accuracy	0.1 meters/second, without SA
Coordinate System	WGS-84
Hot Start	< 6 Seconds average
Warm Start	< 38 Seconds average
Cold Start	< 60 Seconds average
Speed	Max. 515meters / second (1000 knots)
Buttons	6 Buttons: Answer, Quick Dial * 2, Park, SOS, Power
LED	5 LED: Charging, GPS, GSM, Park, SOS
USB	Mini USB PORT for charge and connect to PC.
Working Voltage	Rechargeable Li-ion battery3.7V 1000mAh ,5 V Input
Standby Mode	12 hours
Operating Mode	8 hours
Housing	Plastic
Operation Temperature	-20°C to +55°C
Storage Temperature	-30°C to + 70°C
Humidity	0~95%, non-condensing

VI. Troubleshooting

1. Why the power can not turn on ?

- Make sure the power button has been pressed and held for at least 2 seconds.
- GPS LED is constant glow or not.
- Check the SIM card is inserted or not.
- Check the battery is inserted or not. Also, the life of batter (dead or not).

2. Why does GSM fail to communicate?

- Check if the SIM card is activated or not.
- Check whether the SIM car has password or not.
- Check if the SIM card is inserted properly.
- If the vehicle is parked in a place where the GSM signal is weak.
- GSM base station of mobile operator is crashing.
- Whether this SIM card is suspended (such as forget to pay the bill...)

3. Why GPS can not calculate the position?

- Do not park your vehicle under shielding or under a building.
- Make sure there is not be any metal shield, such as windshield heat insulation paper with metallic content, above the GPS antenna - which may block the reception of GPS signal.
- Check whether GPS LED is dark or not. If it is, please restart TTS 200.

4. Why does GPS positioning take such a long time?

The time used for positioning is affected by many factors, such as the weather, distribution of clouds, roadside trees, elevated roads, nearby high buildings, heat insulating papers containing metal elements, and even the covering of the hands, may affect the reception effect of satellite signals. Positioning a vehicle in an idle state takes less time than positioning it in motion state.

5. Why the speaker has no any sound?

- Adjust the volume of the speaker
- Check if the signal line of the speaker is correctly connected, or becomes loose.

6. No warning message when the car is moved.

- Out of battery.
- Park button is off.
- A car is moved within a restricted area.

7. How long does it take to charge TTS 200? Can it be charged when the power is on?

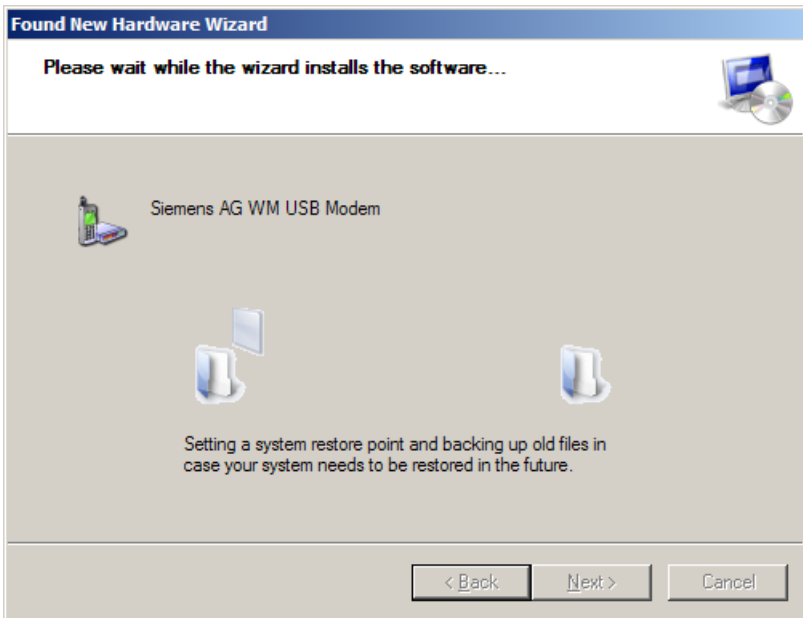
Charge time is 4 hours when the power is off. It takes longer to charge when the power is on. Highly recommend to turn off the power during charging. Otherwise, the power may not be able to turn on during charging.

8. Connect TTS 200 to PC via the USB to mini-USB cable, when TTS 200 is on. “Found New Hardware Wizard” (as illustrated below) will prompt to the screen.

Step1. Put the CD delivered with the device onto the CD drive; select “install the software automatically”, and then click “Next” to continue.



Step 2. Your computer will install the driver automatically.



Step 3. Complete the “Found New Hardware Wizard”; click “Finish” to close the wizard.

