GPS
Vehicle
Tracker

User Manual

V5.6

GTLT2

Table of Contents

1. Product Overview

Thank you for your purchase of GTLT2 Vehicle GPS Tracker.The GT-LT2 GPS/GSM Tracker is a vehicle remote position device with build-in GPS and GSM/GPRS modules. It is a small size, high accuracy remote location tracking device. Based on GPS satellite, it provides accurate position information under dynamic conditions.

Applications:

GT-LT2 GPS/GSM vehicle tracker can be used for motorcycle, electric golf cart, car, and scooter. The devices built in antenna, integrative machine and easy to assemble.

For your safety:

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.	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.
10.	For safety reason, do not tell the other people your GTLT2 mobile number, without taking precautions. Otherwise, your privacy may be compromised along with other safety problem.

2. Specification

GSM module	MTK program, GSM 900/1800/850/1900 dual-band or quad-band Support the TCP protocol
GPS Chipset	JRC chipset
GPS sensitivity	-164dB
C/A Code	1.023MHz chip rate
Channels	210 channel all-in-view tracking
GPS frequency	L1,1575.42MHz
GPS Position Accuracy	2.5 meters, CEP
GSM Position Accuracy	Later will realize
Velocity Accuracy	0.1m/s
Time Accuracy	Synchronized to GPS time
Cold Start	35sec.,average
Hot Start	1sec.,average
Warm Start	30sec.,average
Altitude Limit	18,000 meters (60,000feet) max.
Velocity Limit	515 meters/second (1000knots) max.
Acceleration Limit	Less than 4g

Operating temperature	-20°C－65°C
Humidity	5%To 95% Non-condensing
Dimension	88mm×46mm×18mm
Voltage	12V
Average Current When stand-by	<84mA
LED	Green/ Blue/ Red LED showing GPS、GSM and power status
Out set SOS Key	One SOS emergency key: for urgent call

3. Wiring Installation

3.1. Product Parts List

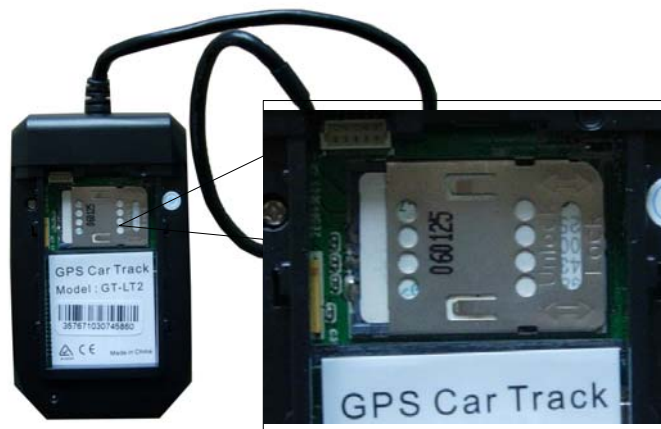| GPS Tracker Unit	
SOS Button and Socket cables	
Battery	

3.2. Precaution before Installation

| 1	Check if all the parts are included.
2	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 and SMS without problem.
3	Before install the SIM card; make sure to cut off power from the GPS Tracker unit. The correct installation method is to push the tray completely into the GPS Tracker unit, until you feel it is hooked by something.
4	Find a suitable place inside the car for installing the unit.
5	Check if all the wiring has been connected correctly; then connect the GPS Tracker unit to the power source.

3.3. INSTALLATION

3.3.1 Step 1: Install SIM Card

| 1 | Remove the back cover of GTLT2. Insert the SIM card by sliding it into the card slot.

Connect battery
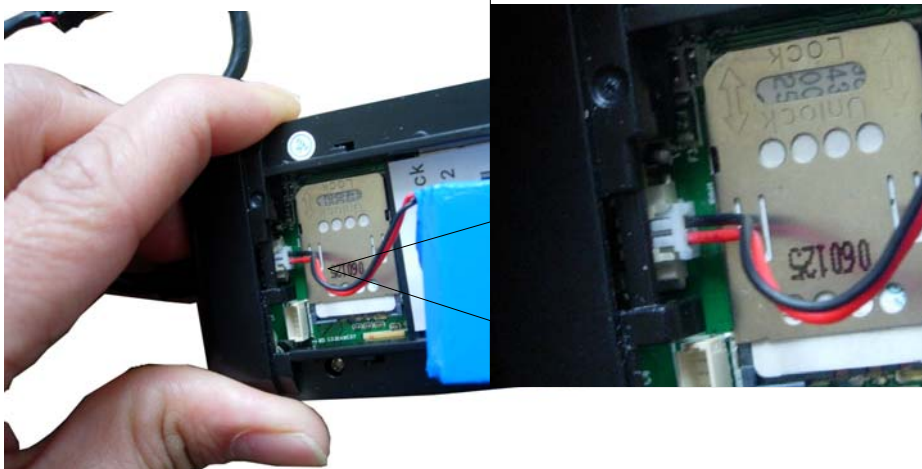
	Put back the back cover.
2	Make sure to turn off the power before install the SIM card.
3	Make sure to deactivate the PIN code, so that the SIM card can operate without PIN protection.
4	Before install the SIM card to the GPS Tracker, please use a mobile phone to make sure the SIM card can make & receive phone calls without problem.
5	Before install the SIM card to the GPS Tracker, please use a mobile phone to empty the SMS storage of the SIM card.

3.3.2 Wiring Description：
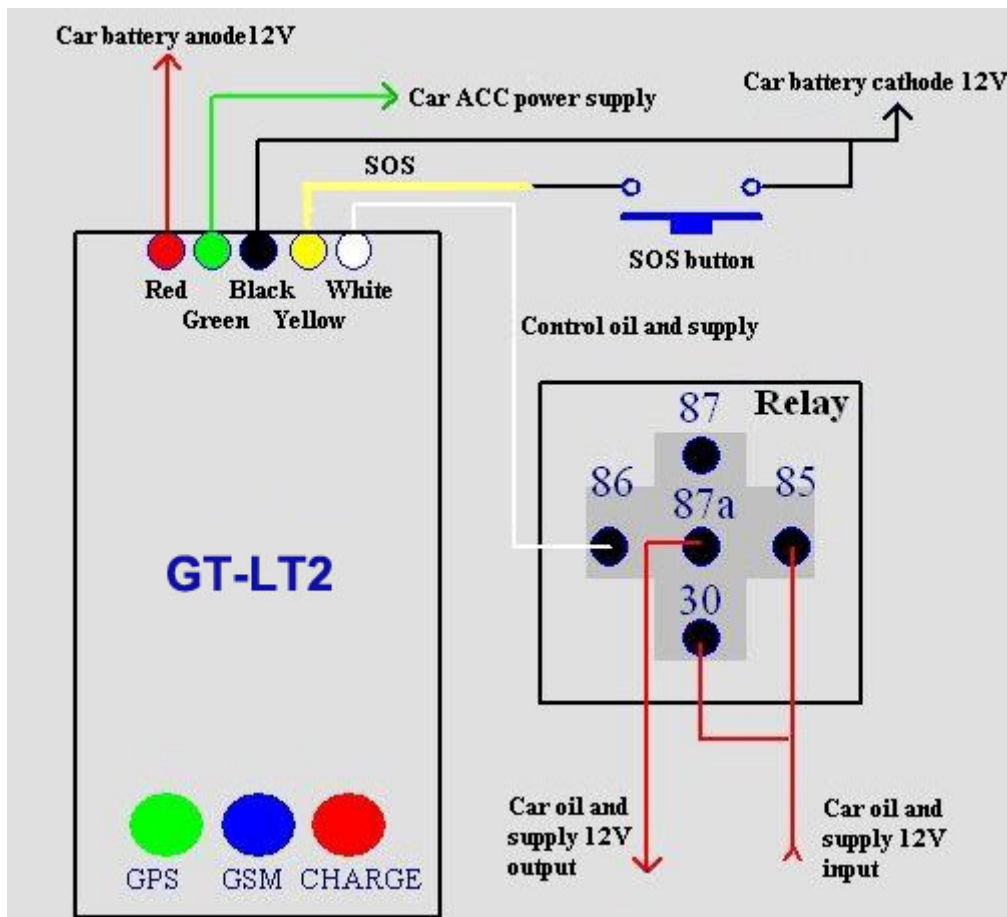
3.3.3 Description of GTLT2 LED :

LED State Description

Blue LED--- indicate the GSM signal state

State	Means
constant Lighting	no SIM card or not GSM net
flashlight once interval 8s	GSM receiver work well and standby
flash quickly	voice calls or in GSM connection

Red LED---indicate charge sate

State	Means
constant Lighting	charging
No light	charging was completed

Green LED--- indicate the GPS signal state

State	Means
No Lighting	Working, but no location
Flashing	Working and has located

3.4 Reset to factory:

Under the shutdown state, remove the back cover of GTLT2, then short circuit PIN3 and PIN4 of the 5-pin socket of GTLT2, then connect GTLT2 with the built-in battery or external power supply, 5 seconds after boot disconnect PIN3 and PIN4.
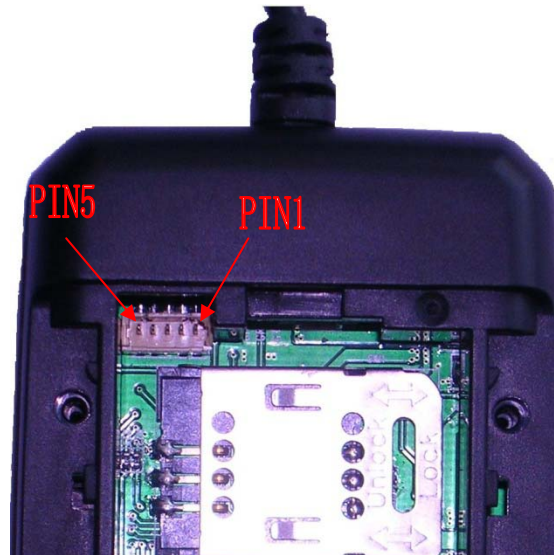
List of reset state:

Parameter	State
Working Mode	SMS
Pre-set phone numbers	None
User passwords	0000
GPS	Turn on
ACC status display	Turn on
Send regularly location information	Turn off
The number of returned base station	1
Press SOS button to call out	Turn On
Geo-fence	Turn off
GPRS services password	0000
GPRS user name	V500
APN	CMNET
IP address and port	0.0.0.0 0000
GPRS data upload	Turn off
Moving alarm	Turn off
Speed alarm	Turn off
Main Power Cut Alarm	Turn off

4. SMS Tracking by mobile phone(cell phone)

4.1 Time Zone

Command: 896****DNN

Description: Correct the time into your local time

1. **** is the default password. Default:0000

2. D=E/W, E means East Longitude, ahead of GTM time, W means West Longitude, behind GMT time.

3. NN is your time zone.

For example,

Example:

8960000E08

Remarks: China is in East Longitude, GTM+8 time zone.

4.2 Tracking

Track on Demand - Reply with longitude, latitude, speed and date

Command: 666****

**** is the default password. Default:0000

Example:

6660000

Description:

Get the current location of the tracker, send this SMS or make a telephone call directly to the tracker and it will report its longitude and latitude by SMS with format as follows:-

Data format:

Lat: Latitude Direction (+/-) Latitude Value   (Accuracy for 5 after the decimal point)

Long: Longitude Direction (+/-) Longitude Value   (Accuracy for 5 after the decimal point)

Speed: Speed KM/H   (Accuracy for 2 after the decimal point)

Direction: Direction   (Accuracy for 2 after the decimal point)

Date: Date YYYY-MM-DD

Time: Time HH：MM：SS (GMT)

BS: Base Station information

Fix: Location state (A/V)

ID: IMEI

STATE: Message state

Effective data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: A

ID: 353686009002030

STATE: SMS

Invalid data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: V

ID: 353686009002030

STATE: SMS

Note: If in the cold start and GPS no position, it will return to the void of information:

 eg: ERROR GPS GPRMC FRAME DATA

    BS: 27971054"

    ID: 353686009002030

    STATE: SMS

Track on Demand - Reply with a Google link
Command: 669****
**** is the default password. Default:0000
Description:
Send this command to the tracker and then you receive an SMS with an http link. Click on the link then the location can be shown directly on Google Map on your mobile phone. For example:
http://maps.google.com/maps?f=q&hl=en&q=22.622448,114.034057&ie=UTF8&z=16&iwloc=addr&om=1E
Example:
6690000
Google Earth and Google Map
Download Google Earth from http://earth.google.com/.
Start Google Earth (For more information about Google Earth please refer to http://earth.google.com/) or go to http://maps.google.com in your Internet Explorer.
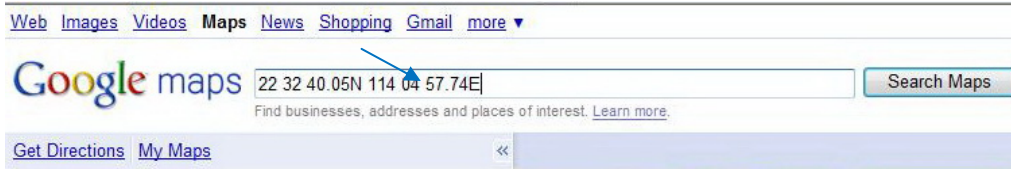Input the latitude and longitude that you receive from the tracker by SMS and click the search button. Google Earth or Google Maps will display the location for you.
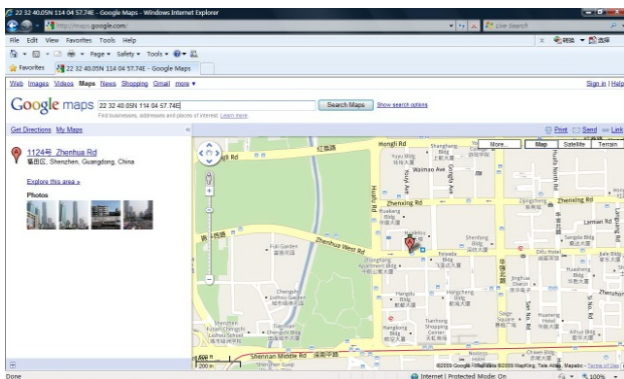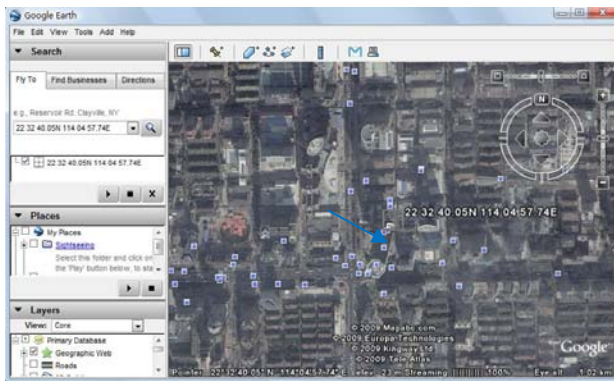Example:

When you receive: Latitude = 22 32 40.05N Longitude = 114 04 57.74E

Type as the following picture shows:

(Note: you should input the latitude and longitude as: 22 32 40.05N 114 04 57.74E)

And then you can find the location of your tracker:

Or you can use local map software on PDA or car navigation device to input the coordinates.

4. 3 Track by Preset Interval

Command: 4XX****

**** is the default password. Default:0000

Description:

1. XX is the interval time from 01-99(minutes).

2. XX=00 to turn off tracking by time

Example:

4010000

The tracker will send location data back to your mobile phone every 1 minute.

4. 4 Authorization

Command: *Authorized phone number* user password (default 0000) *location number (1 or 2 or 3) **

Example:

*008613900000000*0000*1**(To set the first authorized phone number)

*008613800000000*0000*2**(To set the second authorized phone number)

*008613500000000*0000*3**(To set the third authorized phone number)

Description:

1. There are only 3 numbers able to be authorized.

2.Tracking by call: You can call the gps tracker to get location, the gps tracker will reply location sms to authorized phone number only.

3.Receiving SOS alert message: After press SOS button, GTLT2 will send sms alert and location coordinates to the first authorize phone number.

Meanwhile, GTLT2 will call the first authorized phone number first; if failed, then call the second authorized phone number; if failed once again, then call the third authorized phone number.

After success, it will send the confirmation messages (SET USER NUMBER (1-3) OK) to the sender.

4. 5 Geo-fence
Command 1: set geo-fence square
003**** E/Wdddmm.mmmmN/Sdd.mmmmRzzz.z
**** is the default password. Default:0000
When the tracker moves out of a preset square scope, it will send an SMS alarm to the authorized phone number for SOS.
Description:
1.E represents East Longitude, W represents West Longitude; N Represents North Latitude, S Represents South Latitude.

Edddmm.mmmm is the Longitude in the unit of degree and minute (ddd is the degree, mm.mmmm is the minute) (Accuracy for 4 after the decimal point, the following zero cannot omit)

Ndddmm.mmmm is the Latitude in the unit of degree and minute (ddd is the degree, mm.mmmm is the minute) (Accuracy for 4 after the decimal point, the following zero cannot omit)
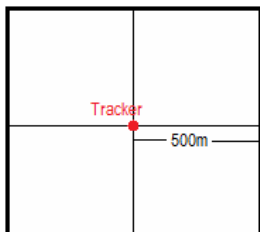
2.zzz.z is the radius from 0.1KM to 999.9KM.

3.After set successfully, the GTLT2 will reply: SET GEO-FENCE OK

Example:

0030000E11406.0024N2233.4230R0.5

Command 2: enable geo-fence

211****

**** is the default password. Default:0000

Example: 2110000

Description:

The command to enable geo-fence alarm

When the GPS tracker is in/out of the preset square, GTLT2 will send sms alert and location coordinates to the first authorize phone number.

Meanwhile, GTLT2 will call the first authorized phone number first; if failed, then call the second authorized phone number; if failed once again, then call the third authorized phone number.

Command 3: 210****

**** is the default password. Default:0000

Example: 2100000

Description:

The command to close geo-fence alarm.

5. Track by 800D web based tracking software

5.1. Enable GPRS

Send the SMS to the tracker as following format:

	Command	Remark
Command format:	710****	**** is the default password. Default:0000
For example:	7100000	710 : Command code 0000: password, default 0000

5.2. Set APN

Send the SMS to the tracker as following format

	Command	Remark
Command format:	**Format 1:**#803#****#APN## **Format 2:**#803#****#APN# APN user name#APN password ##	**** is the default password. Default:0000 Use format 2 if your APN requires APN user name and APN password.
For example:	#803#0000#CMNET##	803 : Command code 0000: password, default 0000 CMNET: APN, is gateway to connect internet, Each country is different, please contact your SIM card provider for APN name.

5.3.Set IP and Port

Send the SMS to the tracker as following format:

	Command	Remark
	Command	Remark

Command format:	#804#****#IP #port##	**** is the default password. Default:0000
For example:	#804#0000#119.146.223.203#8886##	804 : Command code 0000: password, default 0000 119.146.223.203 800D Platform server IP 8886 800D Platform server software Port

5.4.Upload data in preset time when car moving

Send the SMS to the tracker as following format:

	Command	**Remark**
Command format:	#805#****# sampling interval T # the number of upload data each time N ##	**** is the default password. Default:0000
For example:	#805#0000#60#1##	805 : Command code 0000: password, default 0000 The GPS Tracker will send location to server 800D every 60 seconds, 1 location reports every time.

## 5.5. Upload data in preset time when car stops

Send the SMS to the tracker as following format:

|	**Command**	**Remark**
Command format:	#809#****# sampling interval T # the number of upload data each time N ##	**** is the default password. Default:0000
For example:	#809#0000#60#1##	809 : Command code 0000: password, default 0000 The GPS Tracker will send location to server 800D every 60 seconds, 1 location reports every time.

5.6. Please go to http://119.146.223.203

Enter the user name and password we provided.

After log in, please go to "Vehicle Manager-Vehicle List"
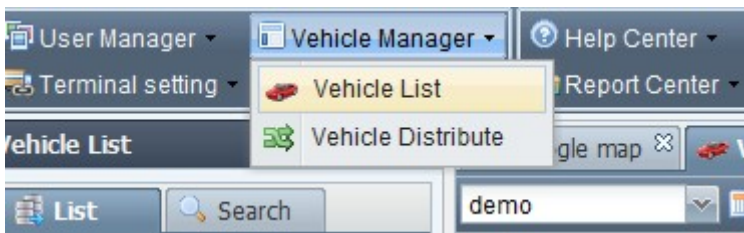
You will see the below window
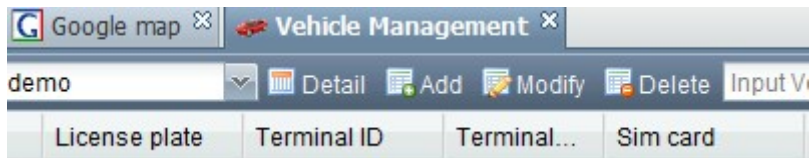
Please click "Add" button, you will see the below window:

License Plate: Define by yourself; you can enter A-Z number or Numeric

Terminal Type: Choose" Any one "

SIM card: the SIM card phone number you put in GTLT2.

Terminal ID: On the packing box of GTLT2, you can find the a white label writes "IMEI,, Terminal ID".

Terminal ID is cfce7afdfca898ef here.
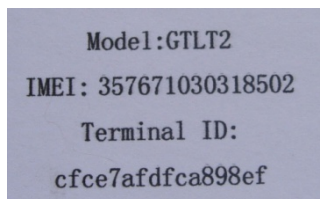
Click "Submit", and then you add the car successfully on the software 800d.

Put a check mark on the device, and right click, you will see the menu as below picture. Now you can track online.

6. SMS Command List

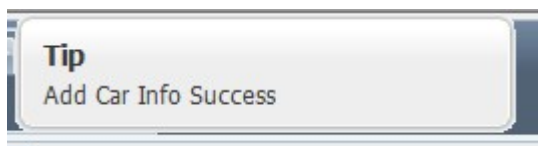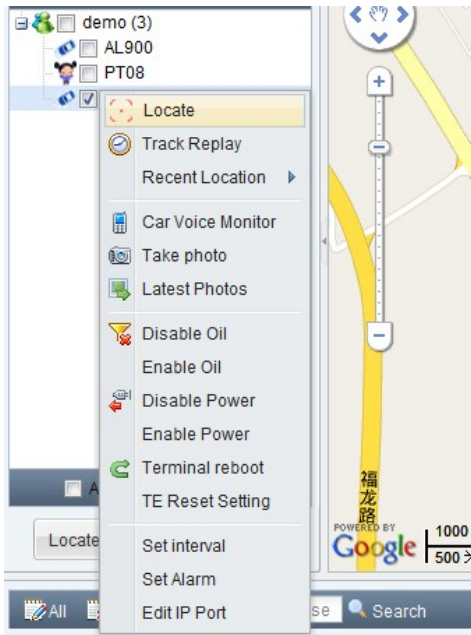Note: **** is user's password and the default password is 0000. The tracker will only accept commands from a user with the correct password. Commands with wrong password will be ignored.

Description	SMS Command	Example
Enable SMS mode	700****	7000000
Remarks: This command is used for turn on sms mode. Default is sms mode.		
Time Zone	896****DNN	8960000E08
Remarks: This command is used for correct time into your local time D=E/W, E means East Longitude, ahead of GTM time, W means West Longitude, behind GMT time. NN is your time zone. For example, China is in East Longtitude, GTM+8 time zone. Then we send 8960000E08		
Track on Demand	666****	6660000
Remarks: To get the current location of the tracker, send this SMS to the tracker and it will report its longitude and latitude by SMS		
Track on Demand **-Google Link**	669****	6690000
Remarks: Send this command to the tracker and then you receive an SMS with an http link. Click on the link then the location can be shown directly on Google Map on your mobile phone. For example: http://maps.google.com/maps?f=q&hl=en&q=22.622448,114.034057&ie=UTF8&z=16&iwloc=addr&om=1E		
Change Password on SMS mode	777+New Password+Old Password	77712340000
Remarks: The password will be changed from 0000 to 1234		
Track by Interval	4XX****	4300000

Remarks: To set interval for automatic timed report.
XX is the interval in minute. If XX=00 to turn off tracking by time.
In this example, the tracker will send location data back to your mobile phone every 30 minutes.

Authorization	*Authorized phone number* user password (default 0000) *location number (1 or 2 or 3) **	*008613900000000*0000*1**(To set the first authorized phone number) *008613800000000*0000*2**(To set the second authorized phone number) *008613500000000*0000*3**(To set the third authorized phone number)

Remarks: To authorize phone numbers for receiving location reports or SMS alarms or phone calls.

1. Tracking by call: You can call the gps tracker to get location, the gps tracker will reply location sms to authorized phone number only.

2. Receiving SOS alert message: After press SOS button, GTLT2 will send sms alert and location coordinates to the first authorize phone number.

Meanwhile, GTLT2 will call the first authorized phone number first; if failed, then call the second authorized phone number; if failed once again, then call the third authorized phone number.

3. Receiving Geo fence alert message: when the GTLT2 is in or out of the preset square, GTT2 will send send sms alert and location coordinates to the first authorize phone number.

Meanwhile, GTLT2 will call the first authorized phone number first; if failed, then call the second authorized phone number; if failed once again, then call the third authorized phone number.

Turn on/off Alarm Alert SMS	150****	1500000
	151****	1510000

Remarks:
Default mode: turn on alarm alert sms.
1. 150**** is the command to turn off alarm alert message. After sending this command, the gps tracker will neither call or send sms alert to the preset phone number when sos button pressed/in or out of preset geo-fence area/over-speed alert
2. 151**** is the command to turn on alarm alert message. After sending this command, the gps tracker will call and send sms alert to the preset phone number when sos button pressed/in or out of preset geo-fence area/over-speed alert

Turn On/Off Main Power Cut Alarm	011****	0110000
	010****	0100000

Remarks: If the GPS tracker is pulled out from car battery, the gps tracker will send sms alert to authorize phone number.
Turn on main power cut alarm: 011****,**** is the default password. Default:0000
Turn off main power cut alarm: 010****,**** is the default password. Default:0000

Turn On Power Saving mode	100****	1000000

Remark: to set power down mode when the tracker is inactive or stationary for 5 minutes.
1. GTLT2 will reply "VIBRATION SENSOR ON OK" . The GTLT2 will in power saving mode on both sms and gprs mode.
2. In Power Down mode, GPS stops working and GSM enters sleep and stop sending out message until it is activated by message, incoming calls, and movement.
3. You can send 222**** (**** is the 0000 default password) to wake up the GTLT2.

Cut/recover car engine	900**** 901**** 902**** 903****	9000000 9010000 9020000 9030000
Remarks: You need to connect a relay to cut/recover car engine. 1.Cut Car Engine 900**** is the command to cut car engine. 901**** is the command to double confirm cutting car engine. 2.Recover car engine 902**** is the command to recover car engine. 903**** is the command to double confirm recovering car engine.		
Set Geo-fence Alarm	003****E/Wdddmm.mmmmN/Sdd.m mmmRzzz.z	0030000E11406.0024N2233.4230R0.5
When the tracker moves out of a preset square scope, it will send an SMS alarm to the authorized phone number for SOS. Description: 1.E represents East Longitude, W represents West Longitude; N Represents North Latitude, S Represents South Latitude. Edddmm.mmmm is the Longitude in the unit of degree and minute (ddd is the degree, mm.mmmm is the minute) Ndddmm.mmmm is the Latitude in the unit of degree and minute (ddd is the degree, mm.mmmm is the minute) 2.zzz.z is the radius from 0.1KM to 999.9KM. 3.After set successfully, the GTLT2 will reply: SET GEO-FENCE OK		
Turn on/off geo-fence	210**** 211****	2100000 2110000
The default geo fence is Turn on 1.210****: Turn off geo fence alarm 2. 211****: Turn on geo fence alarm		
Turn on/off GPS Module	222**** 333****	2220000 3330000
The default GPS is Turn on 1.222****: Turn on GPS module 2. 333****: Turn off GPS module		
Presetting by SMS for GPRS tracking (Ensure that your SIM card supports GPRS connection prior to setting)		
Change Service Password on GPRS mode	802****+New Service Password+Old Service Password	802000012340000
Remarks: The password will be changed from 0000 to 1234		
Enable GPRS	710****	7100000
The command to switch to GPRS mode.		

| Set APN | Format 1:#803#****#APN## | #803#0000#CMNET## |
| | Format 2:#803#****#APN# APN user name#APN password ## | #803#0000# APN# APN user name#APN password ## |

Remarks:

1.If no APN username and password are required, just input APN only.

2. Use format 2 if your APN requires APN user name and APN password.

3. APN defaulted as 'CMNET'; APN is gateway to connect internet, Each country is different, please contact your SIM card provider for APN name.

| Set IP and Port | #804#****#IP # port ## | #804#0000#119.146.223.203#8886## |

Remarks: IP is your server's IP and Port.

| Upload in preset interval when car moving | #805#****#T # N ## | #805#0000#60#1## |

1. T=GPRS Upload Interval, from 5 to 65535 in the unit of second.

2. N= GPRS Upload Time from 1-50.

In this example: GTLT2 will send location every 60 seconds, 1 location   reports every time.

| Upload in preset interval when car stops | #809#****#T # N ## | #809#0000#60#1## |

3. T=GPRS Upload Interval, from 5 to 65535 in the unit of second.

4. N= GPRS Upload Time from 1-50.

In this example: GTLT2 will send location every 60 seconds, 1 location reports every time.

| Read All Parameters | *RCONF# | *RCONF# |

Remarks: This is the command to read all the present parameters including sms/gprs mode,interval,ip,port.etc.

7.Troubleshooting

Problem: Unit will not turn on	
Possible Cause:	**Resolution:**
Wiring was not connected properly	Check and make sure wiring connection is in order.
Battery needs charging	Recharge battery
Problem: Unit will not respond to SMS	
Possible Cause:	**Resolution:**
GSM antenna was not installed properly	Make GTLT2 connected to GSM network.
GSM Network is slow	Some GSM networks slow down during peak time or when they have equipment problems.
Unit is sleeping	Cancel sleeping mode
Wrong password in your SMS or wrong SMS format	Write correct password or SMS format
The SIM in GTLT2 has run out of credit	Replace or top up the SIM card
No SIM card	Insert a working SIM card. Check in phone that the SIM can send SMS message.

SIM card has expired	Check in phone that the SIM can send SMS message. Replace SIM card if needed.
SIM has PIN code set	Remove PIN code by inserting SIM in you phone and deleting the code.
SIM is warped or damaged	Inspect SIM, clean the contacts. If re-inserting does not help try another to see if it will work.
Roaming not enabled	If you are in a different country your SIM account must have roaming enabled.
Error connecting GSM antenna	Make sure the GSM antenna is connected to the GSM interface.

Problem: SMS received starts with 'Last…'	
Possible Cause:	**Resolution:**
Unit does not have clear view of the sky	Move the antenna of the unit to a location where the sky is visible.
GTLT2 is in an inner place	Wait for the target to come out
Battery is low	Recharge the unit and the GPS will start working.
Error connecting GPS antenna	Make sure the GPS antenna is connected to the GPS interface.

Problem: Unit Fails to Connect to Server via GPRS	
Possible Cause:	**Resolution:**
SIM card in GTLT2 does not support GPRS function	Enable SIM card GPRS function.
GPRS function of GTLT2 is turned off	Turn on GPRS function of GTLT2.
Incorrect IP address or PORT	Get the right IP address and PORT and reset to GTLT2
GSM signal is weak	Move the unit to a location with good GSM reception.

Contacts

If you encounter any problems when using our products, and cannot solve them by yourself, please contact our technical support team by writing an E-Mail to us. We will be pleased to help you.