

Mini GPS Personal Tracker



User Manual

PT80

PT80 is a compact size GPS tracking device which is specially developed and designed for tracking Kids, Elder or Pets. It is especially well designed to work with Bofan Web-based tracking software LiveGTS which is suitable for a company to establish their own tracking platform to provide real-time tracking service to their clients, targeting large sales teams, students, camping teams, travel teams etc.

With superior GPS and GPRS modules, PT80 has good sensitivity and stable performance. It can get accurate GPS fix even in remote places. And also can reply street name directly to the user by SMS if working with LiveGTS.

1. Features

- Small size
- Built-in GSM and GPS antennas
- Adding/cancelling 3 authorized numbers
- Panic Button for emergency situation
- Equipped with internal battery, rechargeable
- Geo-Fence management
- Low power alert
- over speed alert
- Tracking via SMS /GPRS
- Get street address by SMS request
- Get Google link for current location by SMS request
- web-based real time tracking service(demo.livegts.com)
- Internal motion sensor to save power and send move alarm
- Support voice monitoring
- Mileage and GPRS report by distance
- Position logging capacity up to 10,000+ waypoints when no GPRS signal
- Save up to 50% GPRS cost when working on web-based tracking software LiveGTS
- Available to set different alarm notification ways when alarm (sending alarm via SMS/call/platform)



2. Technical Parameters:

Items	Parameters
Dimension	6.5*4.2*2.0cm
Weight	80g
GSM module	embedded GSM 900/1800/1900Mhz embedded GSM 850/900/1800/1900Mhz (Optional)
GPS Chipset	GPS SiRF-Star III chipset
GPS Sensitivity	-158Db
GPS Frequency	L1, 1575.42 MHz
Position Accuracy	10 meters, 2D RMS
Hot start	1 sec., average
Warm start	38 sec., average
Cold start	42 sec., average
Operating temperature	-25° to 65° C
Humidity	5% to 95% Non-condensing
Internal battery	Rechargeable and replaceable 800 mAh battery (3.7V), 5V for charging input.
Charging connector	DC 5V (USB port)
Standby time	Over 50 hours
LED	3 LEDs showing Power, GPS and GSM status
KEY	SOS , KEY 2, KEY 3

3. Getting Started

This part will describe how to set up your PT80

3.1 Hardware and Accessories

PT80's standard package includes following items:

1*Main Unit

1*Mini USB cable

3.2 View



3.3 Install Simcard

Please charge the tracker via Mini USB Cable for 8-12 hours for first use. Later please charge the battery 3~4 hours in time to keep it working normally.

Then open cover of PT80 and install the simard into the main unit by referring to the picture below:



A



B



C

After simcard installed, you can close the cover and to turn on the device as below, then the LED will flashing



RED Light - indicating power status	
RED light Flashing fast	Low power, please charge immediately
RED light Flashing (on for 2 seconds and off for 2 seconds)	Power is ok
Blue Light - indicating GSM signal status	
Blue light Flashing fast	GSM module restarting / no simcard insert
Blue light Flashing (on for 2 seconds and off for 2 seconds)	No GSM signal
Blue light Flashing (on for 0.1 second and off for 2.9 seconds)	PT80 is connected to the GSM network
Green Light - indicating GPS signal status	

Green light Flashing (on for 2 seconds and off for 2 seconds)	No GPS signal
Green light Flashing (on for 0.1 second and off for 2.9 seconds)	GPS signal fixed

4 Start Tracking

You can start to use the tracker normally after it receives GSM and GPS signal. There are two ways to track, one is by SMS on mobile basically and the other is via GPRS on LiveGTS software platform.

4.1 Tracking via SMS by using your mobile:

When you want to locate your PT80, you can call the number of simcard installed in PT80 or send a SMS command: 000000RCP to PT80 from your mobile and after seconds, it will reply a SMS with the coordinates data back to your mobile.

To get position by calling:

- (a) Call the SIM card number in PT80 from your mobile phone.
- (b) PT80 will hang up automatically after several rings, then replies a position SMS to your mobile phone.

To get position by sending SMS command:

you edit this SMS: 000000RCP on your mobile phone and send it out to the SIM card number in PT80 (Notes: The default password of tracker is 000000).

After a few seconds, you will get a SMS reply with below content on your mobile phone:

Latitude = 22.5632 Longitude = 114.0940, Speed = 2.6854Km/h, Odometer = 10.98KM GPRS: ON, EXPW: OFF, Time: 2010-12-07 08:47:45

Remark:

GPRS means GPRS state:

ON: GPRS connect ok OFF: GPRS disconnect Fail: GPRS connect fail

EXPW means external power state:

ON: connect external power already OFF: disconnect external power



if you find there is "Last " in the message that tracker replied, such as "Last: Lat=22.5632 Lng=114.0940 Speed=0.00KM/h Odometer=0.000KM GPRS:OFF EXPW:OFF Time:2010-12-08-08:58:45 It means the device does not get GPS signal and this data is for the last place where the tracker got GPS signal successfully

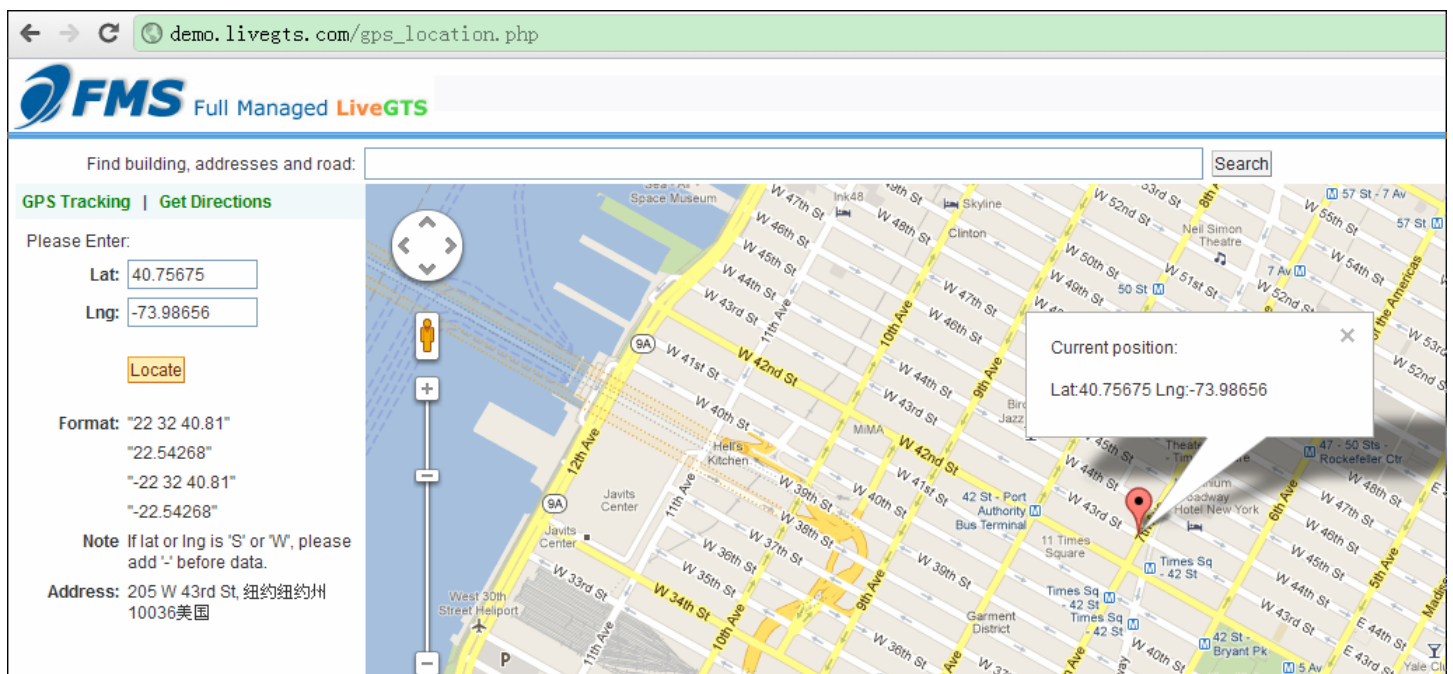


if you find all data is "0" in the message that tracker replied, such as "Lat=0.0000 Lng=0.0000 Speed=0.00KM/h Odometer=0KM GPRS:0 EXPW:0 Time:0" please kindly charge the tracker first then check again

Locate PT80 on google Map :

Option 1.

You can visit our FMS demo <http://demo.livegts.com> to check the location of your PT80 by manually input the latitude and longitude and click the "Locate" button. It will display the location on map as follows:



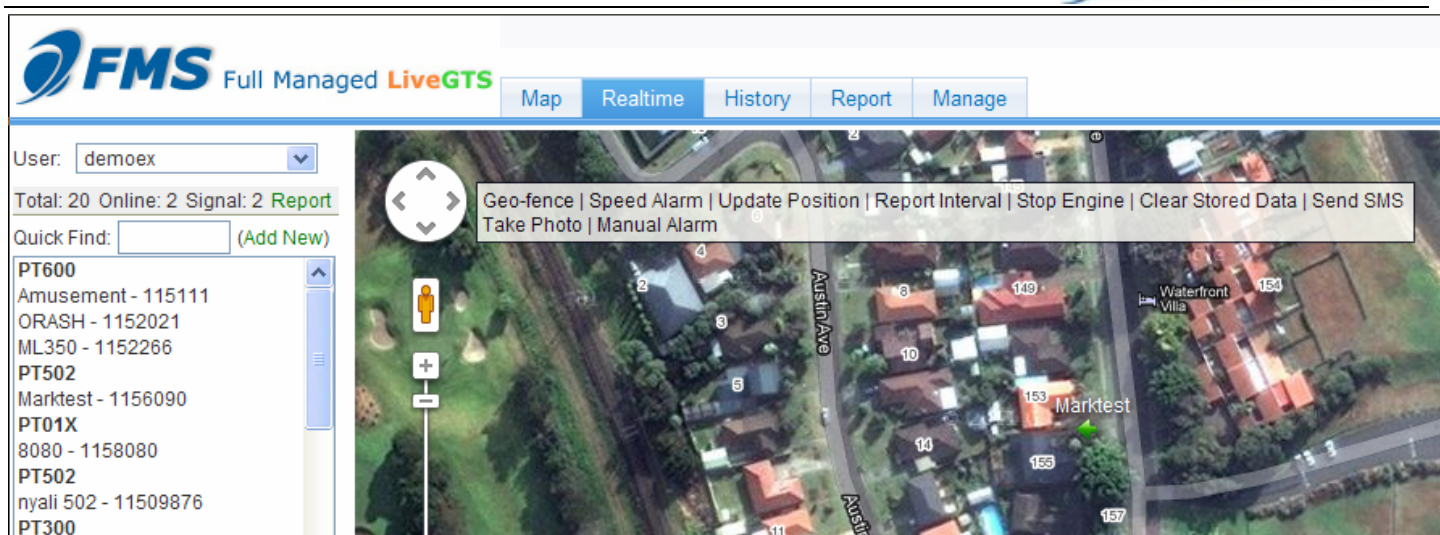
The screenshot shows a web browser window with the URL demo.livegts.com/gps_location.php. The page features the FMS Full Managed LiveGTS logo and a search bar. Below the search bar, there are input fields for "Lat:" (40.75675) and "Lng:" (-73.98656), followed by a "Locate" button. A "Format:" section lists several coordinate strings. A "Note" indicates that 'S' or 'W' should be added before the data. The "Address:" field shows "205 W 43rd St, 纽约纽约州 10036美国". The map displays a grid of streets in Manhattan, with a red pin indicating the current position at approximately W 43rd St and W 4th Ave. A tooltip above the pin displays "Current position: Lat:40.75675 Lng:-73.98656".

Option 2.

Send 000000RCM to PT80 and get google map link, you can click the link by using your smart phone, you will be able to locate PT80 on the google map

4.2 Tracking via GPRS by log on GPS Tracking Software LiveGTS

If you want to live track your PT80 from LiveGTS as follows:



You can follow the steps below:

4.2.1 Add the tracker into LiveGTS software

Login LiveGTS: You can open the tracking website by IE and login with your account.

Go to "Manage" -> click "Add New Tracker" button, then fill in your tracker name and tracker ID, select correct tracker Model PT80 or PT01x(because PT80 use the same plugin firmware as PT01x), click "Modify" button to add this tracker into software successfully.

Modify GPS Tracker

Name:	<input type="text" value="PT01X Test"/>
Tracker ID:	<input type="text" value="115123456"/> Please input digital number Tracker ID must start with 115 or IMEI. This is a public account, please don't use SIM card number as tracker ID.
Model:	<input type="text" value="PT01X"/> ▼
<input type="button" value="Modify"/>	

- Note:**
1. Tracker ID can be any digit numbers you want, but it must start with the fixed 3 digits given when using in FMS or your private account on our server (here in this example, tracker ID starts with fixed 115).
 2. Tracker ID must not be over 15 digits.
 3. Tracker name can be any letter or number as you want



Before you send SMS command to configure PT80, please ensure that your SIM card in PT80 supports GPRS connection and has enough credit.

4.2.2 Set ID for PT80

Command : <password>GID<ID>

Example: send this SMS **000000GID115123456** to tracker

PT80 will reply with an SMS (SET OK, ID= 115123456) to confirm this setting.



000000 is default password.

Please make sure you set the same tracker ID with the one you added to the LiveGTS as above step

4.2.3 Set APN

Command: <password >APN<APN>, <User>, <Pass>

Note: If your APN doesn't have username and password, please input APN only.

SMS Example: **000000APNCMNET** (CMNET is China mobile's APN, no username & password)

PT80 will reply with an SMS (SET OK, APN: CMNET, USER: PASS :) to confirm this setting.



You can ask your GSM operator for your simcard APN, username and password

4.2.4 Set server and port

Command: <password> SVR<IP/domain>, <Port>

SMS Example: **000000SVRDEMO.LIVEGTS.COM, 8080**

PT80 will reply SMS (SET OK, IP: DEMO.LIVEGTS.COM) to confirm this setting



We strongly suggest you setting domain as IP, because domain name is more easier to be remembered than IP

4.2.5 Set Report Time Interval for Sending GPRS Packet

Command:<password>GTI<Report time interval>

SMS Example: 000000GTI30

PT80 will reply SMS(SET OK, GTI:30)

Then PT80 will report data by GPRS to server every **30** seconds. We suggest time interval \geq 30 seconds. Time interval value should not exceed 65535 seconds.

You will be able to see your trackers on the map in the "Real-time" page of the LiveGTS software if all above settings correct.

After PT80 connects to software successfully, you can:

--Get street address by SMS request

The tracker must work on the LiveGTS successfully and get good GPS&GPRS signal.

Then you can send the SMS command to get the detail address instead of latitude and longitude.

Command: <password>RCA

SMS Example: 000000RCA

SMS reply: Center: Nigang West Road Side Rd,Futian,Shenzhen,Guangdong,China

(**Note:** tracker can only reply the detail address in English)



PT80 will only reply command from a user which uses the correct password. Command with wrong password is ignored.

5 SMS Command List

Remark: 000000 is default password

Description	Command	Remarks
Get current location	<password>RCP	RCP= R esult C urrent P osition Get current location's latitude and longitude of PT80
Voice Monitoring	<password>TEN	PT80 SIM card will call your mobile after you send the command to PT80, you can answer this call and start to listen the voice around PT80
Extending use of Voice Monitoring	<password>TEM1	If you want to save credit of SIM card number in PT80, you can send this command to PT80, later call PT80's SIM card number from your phone to monitor voice
Get street address by SMS request	<password>RCA	RCA = R esult C urrent A ddress Note: this command is only valid when tracker is connecting to server by GPRS successfully and GPRS signal under stable status.
Get Google map link by SMS request	<password>RCM	RCM = R esult C urrent M ap (this command is still valid even don't config PT80's GPRS connecting)
Sleeping Mode	<password>SLP<Index>	SLP= S leep Index =0 to Disable Sleeping Mode =[0,65565](unit: second) Example: 000000SPD300 It means PT80 will active sleep mode if it stays

		immobile for 5 minutes
Set password	<password>PWD<new password>	PWD= P assword (must be 6 digits)
Reset password when the previous password is forgotten	000000RPW<new password>	RPW= R eset P assword Please long press the SOS button when you send this command to PT80 (new password must be 6 digits)
Set preset phone number for SOS	<password>SOS,<SOSNumber1>,<SOS Number2>,<SOSNumber3>	SOS Number: Preset phone number to receive phone call or SMS from PT80. Max 16 digits. Maximum 3 SOS numbers can be set. If only set the 1st number, PT80 will send SMS and then call to this first number after pressing SOS button. If set the 2nd or 3rd numbers too, PT80 will send SMS to all 3 numbers, only call to the 1 st number after press SOS button. Note: <password>SOS, command is for cancel all pre set numbers.
Set preset phone number for KEY 2, KEY 3 button	<password>KEY,<KEY2Number>,<KEY3 Number2>	PT80 will dial KEY2 number when you press KEY 2 BUTTON and PT80 will dial KEY3 number when you press KEY 3 BUTTON
Set Over Speed Alert When car speed is higher than the preset value,PT80 will send an alert SMS to the preset SOS number.	<password>SPD<Max Speed>	SPD= S peed Max Speed (the preset speed value) =0 to turn off this function =[0,500](unit: Km/h) Example: 000000SPD80 it will send alert when it is over 80Km/h
Set Geo-fence Alert When car leaves out or enters a preset scope, PT80 will send one Geo-fence SMS to the preset SOS number.	<password>GOF<Type>,<SWLat>,<SWLng>,<NELat>,<NELng>	GOF= G eo- F ence Type =1, alert when out of range Type=2, alert when enter this range SW=South-West NE=North-East Example: 000000GOF0, to turn off this function

Set time zone difference	<password>TMZ<Time>	TMZ= T ime Z one Time from -13 to 13 Example: 000000TMZ8
Restart	<password>RST<Type>	RST= R estart Type=0 or null, to reboot PT80 Type=1 to reboot GPS Type=2 to reboot GSM
Reset PT80 to default	<password>DFT	DFT= D efault
Request Power	<password>RPO	RPO= R equest P ower Voltage
Cut Power Alarm	<password>CPA<Value>	CPA= C ut P ower A larm Value=0 to disable Cut Power Alarm Value=1 to enable Cut Power Alarm Default set: 000000CPA1
Get IMEI	<password>IME	To get IMEI number
Set Alarm Different alarms can be set at the same time, just use “,” between different alarms, please refer to below example details for ignition on/off alarm.	<password>SAL<Alarm><Index1><Index2><Index3>	SAL= S et A larm Alarm =IN1, for SOS button IN2, for Key 2 button IN3, for Key 3 button SPD, for over speed alarm GEO, for geo-fence alarm MLA, for Mileage Alarm SKA, for shake alarm LPA, for low power alarm (any alarm command) Index1=1, to alert on platform =0, do not alert on platform Index2=1, to send alert SMS to SOS number =0, do not send alert SMS to SOS number Index3=1, to call the preset SOS phone number =0, do not call the preset SOS phone number

For example:

000000SALIN1111

It means PT80 will send SOS alarm to platform, send SMS alert to SOS number, call SOS number when SOS BUTTON pressed

000000SALGEO110

It means PT80 will send SOS alarm to platform, send alarm SMS to SOS number **without** calling SOS number when Geo-fence alarm triggered

<p>Shake Alarm (or Move Alarm)</p>	<p><password>SKA<index></p>	<p>SKA= shake alarm Index = 1, to send shake alarm SMS to SOS number when PT80 shakes = 0, not to send shake alarm SMS to SOS number when PT80 shakes.</p>
<p>Set char for alert SMS contents</p>	<p><password>ACH<Alarm><Char></p>	<p>ACH=Alarm CHar Alarm=IN1, for (SOS Alarm) SPD, for over speed alarm GEO, for geo-fence alarm MLA, for Mileage Alarm SKA, for shake alarm</p>

For example:

000000ACHIN1Help Me

it means PT80 will send a "Help Me" SMS to SOS number when SOS button pressed

<p>Clear Saved data</p>	<p><password>CSV</p>	<p>CSV=Clear Saved data</p>
<p>Extended Commands for setting report time interval</p>	<p><password>GTI<Time Interval>,<Distant Interval>, <Angle>,<Move Ratio></p>	<p>If you want to save the GPRS cost, you can use Time Interval and Move Ratio, for example, you can send command:</p> <p>000000GTI30,0,0,240</p> <p>Then PT80 will report data to server very 30 seconds when it is moving, and PT80 will report data to server every 2 hours (30secondsx240=7200seconds=2hours) when it stops moving.</p> <p>The complete command's explanation:</p> <p>Example: 000000GTI30,300,30,240</p> <p>Then PT80 will report data to server every 30</p>

		<p>seconds when it is moving, PT80 will report data to server every 300 meters distance moving, PT80 will report data to server when it bends for 30 degrees or over 30 degrees, PT80 will report data to server every 2 hours (30secondsx240=7200seconds=2hours) when it stops moving. (If no special use, please kindly not use this command)</p>
Check previous command setting	<password>ASK<Command>	<p>Examples: 000000ASKSVR, to check the server & port what you set 000000ASKGID, to check the tracker ID</p>

6 Trouble shooting

Problem: Device can't power on	
Possible Cause:	Resolution:
Battery needs charging	Recharge battery
Problem: Device doesn't respond to SMS	
Possible Cause:	Resolution:
Low power	Kindly charge PT80 for 3hours at least
GSM Network is slow	Wait for SMS. Sometimes GSM network slows down during peak time or base has problem.
Wrong password in your SMS or wrong SMS format	Write correct password or SMS format
The SIM in PT80 runs out of credit	Recharge credit of the SIM card
No SIM card	Insert working SIM card. Check in phone that the SIM can send SMS message.
SIM card has expired	Check in phone if the SIM card can send SMS message. Replace SIM card if need.
SIM has PIN code set	Remove PIN code by inserting SIM card in your phone and deleting the code.
SIM is warped or damaged	Inspect SIM card, clean the contacts. If re-installing does not help, try another to check
Roaming not enabled	If you are in another country, your SIM card must have roaming service enabled.
Problem: Reply SMS starts with 'Last...'	
Possible Cause:	Resolution:
PT80 does not have clear view of the sky	Put the unit to a location where the sky is visible.
PT80 is indoor	Make it work in an open area outside

Battery power is low	Recharge device
Problem: Can't real-time tracking on platform	
Possible Cause:	Resolution:
GPRS setting is not correct.	Please set each step strictly according to user manual.
APN is wrong	Ask your GSM provider to get the correct APN, username and password if it has, then set again.
Tracker ID set by SMS command is not same as that one written in software	Check if the tracker ID you set into tracker is same exactly as the one you write in software.

You are welcomed to contact your sales representative in our company or email us at bofanelectronics@gmail.com if there is any question.