**TL201/VT108 GPS Tracker GPRS Protocol (Version 5.0)**

Data format from software to tracker:

:\123456Command,Data#

<table>
<thead>
<tr>
<th>:</th>
<th>Header</th>
</tr>
</thead>
<tbody>
<tr>
<td>123456</td>
<td>Password, the default password is 123456</td>
</tr>
</tbody>
</table>

**Command**

- "A1"  Set authorized numbers
- "A2"  Set authorized numbers
- "A3"  Set authorized numbers
- "A4"  Set authorized numbers
- "A5"  Set authorized numbers
- "F"   Locate one time
- "M"   Set continuous tracking
- "J"   Set the Speeding alarm
- "I"   Set GEO fence
- "L"   Set the time zone
- "N"   Set low battery alarm
- "H"   Modify the password
- "T1" Cut off the ACC or fuel(Open the relay), only available for VT108
- "T0" recover ACC or fuel(Close the relay), only available for VT108
- "U1" Switch to the listen in mode, only available for VT108
- "U0" Switch to the talk mode, only available for VT108
- "C"  Set the APN, IP & Port
- "O"  Set the user name and password for APN

**Data**

It depends on the command, and it will be null in some commands

# Ending

**Example**

:\123456H456789#

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**Details of all the sentences from software to tracker. The default password is 123456.**

<table>
<thead>
<tr>
<th>Name</th>
<th>Sentence content</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set authorized numbers</td>
<td>:123456A1,phone number#</td>
<td>For TL201: A1,A2,A3 is for setting the 3 SOS numbers. A4 is for CALL1 number.</td>
</tr>
<tr>
<td></td>
<td>:123456A2,phone number#</td>
<td>A5 is for CALL 2 number.</td>
</tr>
<tr>
<td></td>
<td>:123456A3,phone number#</td>
<td>For VT108: A1,A2,A3 is for setting the 3 SOS numbers. A4 is for the call center number</td>
</tr>
<tr>
<td></td>
<td>:123456A4,phone number#</td>
<td>Phone number must include the country code like +8613812345678. +86 is the country code of China. Please do not use 00 instead of +</td>
</tr>
<tr>
<td></td>
<td>:123456A5,phone number#</td>
<td>Set +8613812345678 as the first SOS number.</td>
</tr>
<tr>
<td>Sample of setting</td>
<td>:123456A1,+8613812345678#</td>
<td>authorized numbers</td>
</tr>
<tr>
<td>Delete authorized</td>
<td>:123456A1,D#</td>
<td>For TL201: A1,A2,A3 is for setting the 3 SOS numbers. A4 is for CALL1 number.</td>
</tr>
<tr>
<td>numbers</td>
<td>:123456A2,D#</td>
<td>A5 is for CALL 2 number.</td>
</tr>
<tr>
<td></td>
<td>:123456A3,D#</td>
<td>For VT108: A1,A2,A3 is for setting the 3 SOS numbers. A4 is for the call center number</td>
</tr>
<tr>
<td></td>
<td>:123456A4,D#</td>
<td>Phone number must include the country code like +8613812345678. +86 is the country code of China. Please do not use 00 instead of +</td>
</tr>
<tr>
<td></td>
<td>:123456A5,D#</td>
<td>Set +8613812345678 as the first SOS number.</td>
</tr>
<tr>
<td>Locate one time</td>
<td>:123456F#</td>
<td>The tracker will reply the position for one time.</td>
</tr>
<tr>
<td>Set continuous tracking</td>
<td>:123456Mx,yyyz#</td>
<td>x=1 means on, x=0 means off. yyy means time interval. If z=S/M</td>
</tr>
</tbody>
</table>
### Sample of Setting continuous tracking

```
:123456M1,030S#
```

The tracker will reply the position according to the time interval you set.

### Set the speeding alarm

```
:123456Jx,yyy#
```

- x=1 means on, x=0 means off
- y=0 means off
- yyy means the alarm speed, it should be < 250 and must be three digital, e.g. 080=80km/h.

### Sample of setting speeding alarm

```
:123456J1,080#
```

The tracker will send a speeding alarm to server if it is over the 80km/h.

### Set GEO fence

```
:123456Ix,y,z,aabbccddeeffghhijjklmnnnpepppqqrrssji#
```

- x = NO. of the GEO-fence (1-5), 5 GEO fence can be set
- y = 1 means on, y = 0 means off
- z = 0 means go in, z = 1 means go out
- e = N means the north latitude, e = S means the south latitude
- j = E means the east longitude, j = W means the west longitude
- aa, bb, cc, dd, kk, ll, mm, nn, qq, rr, ss must be 2 numbers. 03 means 3.
- fff, ppp must be 3 numbers. 011 means 11

#### Example of setting GEO fence

```
:123456I1,1,1,51113525N009125670E50241115N011011173E#
```

The tracker will send an alarm data when it in/out the district.

### Set the time zone

```
:123456Lxyy#
```

- x = + means east x = - means west
- yy means the time zone, must be 2 numbers

#### Sample of setting the time zone

```
:123456L+08#
```

Set the +08 time zone

### Set the low battery alarm

```
:123456Nx,yy#
```

- x = 1 means on, x = 0 means off
- yy means battery lower then yy% then send the alarm. It must be <= 45. It must be 2 numbers.

#### Sample of setting the low battery alarm

```
:123456N1,40#
```

The tracker will send a low battery alarm if the battery is lower then 40%

### Modify the password

```
:123456H456789#
```

456789 is the new password, new password must be 6 numbers
<table>
<thead>
<tr>
<th>cut off the ACC or fuel</th>
<th>:123456T1#</th>
<th>The car can not be started, only available for VT108</th>
</tr>
</thead>
<tbody>
<tr>
<td>recover ACC or fuel</td>
<td>:123456T0#</td>
<td>The car can be started, only available for VT108</td>
</tr>
<tr>
<td>Switch to the listen in mode</td>
<td>:123456U1#</td>
<td>The tracker will pick up the incoming call then the call center can talk to the driver.</td>
</tr>
<tr>
<td>Switch to the talk mode</td>
<td>:123456U0#</td>
<td>The tracker will pick up the incoming call then the call center can hear the sound around the car.</td>
</tr>
<tr>
<td>Set the APN, IP and port</td>
<td>:123456C$$$$, IP:Port#</td>
<td>$$ $$ is the APN, you can get the APN from your local GSM provider.</td>
</tr>
<tr>
<td>Sample of setting the APN</td>
<td>:123456CCMNET, 119.122.101.91:7289#</td>
<td>CMNET is the APN of China mobile.</td>
</tr>
<tr>
<td>Set the username and password for APN</td>
<td>:123456O&amp;&amp;&amp;&amp;, @@@@#</td>
<td>&amp;&amp;&amp;&amp; is the username and @@@@ is the password.</td>
</tr>
<tr>
<td>Sample of setting the username and password for APN</td>
<td>:123456Ointernet,internet123#</td>
<td>The user name is internet and the password is internet123.</td>
</tr>
</tbody>
</table>

Data format from tracker to software

```
#IMEI, Type, A/V, Date, Time, Latitude, Longitude, Speed, Status, Others#
```

<table>
<thead>
<tr>
<th>#</th>
<th>Header</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMEI</td>
<td>The IMEI of the tracker, it can be used as the tracker ID</td>
</tr>
<tr>
<td>Type</td>
<td>“CMD-A1” reply for A1 command, set the authorized number. “CMD-A2” reply for A2 command, set the authorized number. “CMD-A3” reply for A3 command, set the authorized number. “CMD-A4” reply for A4 command, set the authorized number. “CMD-A5” reply for A5 command, set the authorized number. “CMD-F” reply for F command, Locate one time “CMD-T” continuous tracking “CMD-J” reply for J command, Set speeding alarm “CMD-I” reply for I command, Set GEO fence “CMD-L” reply for L command, Set the time zone “CMD-N” reply for N command, Set low battery alarm “CMD-H” reply for H command, Modify the password “CMD-T1” reply for T1 command, Recover ACC or engine “CMD-T0” reply for T0 command, Cut the ACC or engine “CMD-U1” reply for U1 command, Switch to the listen in mode “CMD-U0” reply for U0 command, Switch to the talk mode “CMD-C” reply for C command, Set the APN, IP and port “CMD-O” reply for O command, Set the username and password for the APN. “CMD-X” Heartbeat data, it will send this data to keep the connection with the server if no data communicate between the tracker and server for a long time. “ALM-A” SOS alarm “ALM-B” GEO alarm “ALM-C” Speeding alarm “ALM-D” Low-battery alarm “ERROR!” Setting unsuccessful, means you did you send the sentences in the correct format</td>
</tr>
<tr>
<td>A/V</td>
<td>A=GPS had Fixed V=GPS not fixed</td>
</tr>
<tr>
<td>Date</td>
<td>Date of GPS fix, in the format of YYMMDD. It will be UTC if you did not set the time zone. It can be null if GPS not fix.</td>
</tr>
<tr>
<td>Time</td>
<td>Time of GPS fix, in the format of HHMMSS. It will be UTC if you did not set the time zone. It can be null if GPS not fix.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Latitude</td>
<td>The format is dd.ddddddN/S. It can be null if GPS not fix.</td>
</tr>
<tr>
<td>Longitude</td>
<td>The format is ddd.ddddddE/W. It can be null if GPS not fix.</td>
</tr>
<tr>
<td>Speed</td>
<td>Speed in km/h. It can be null if GPS not fix.</td>
</tr>
<tr>
<td>Status</td>
<td>For TL201: In the format of XX-YY, XX means the battery, the top is 100. YY means the GSM signal, the top is 31. For VT108: In the format of A-B-C-XX-YY, A=1 means ACC on, A=0 means ACC off. B=1 means tracker get power for the car battery, B=0 means tracker lose power from car battery. C=1 means door open, C=0 means door close. XX means the battery, the top is 100. YY means the GSM signal, the top is 31.</td>
</tr>
<tr>
<td>Direction</td>
<td>Indicates the current direction of travel over</td>
</tr>
<tr>
<td>#</td>
<td>Ending</td>
</tr>
</tbody>
</table>

Example for TL201
```
#353327020115804,CMD-T,A,DATE:090329,TIME:223252,LAT:22.7634066N,LOT:114.3964783E,Speed:000.0,84-20,000#
```

Example for VT108
```
#353327020115804,CMD-T,A,DATE:090329,TIME:223252,LAT:22.7634066N,LOT:114.3964783E,Speed:000.0,1-1-0-84-20,000#
```