Economical & Practical Mini Vehicle GPS Tracker

User Manual
V2.1

Content

1. Introductions

This tracking device is based on GSM/GPRS network and GPS Satellite positioning system, which is widely applied for tracking of car, motorcycle, E-bike and other vehicles due to design of mini size, waterproof and wide voltage input 8-80V. It's one of your best choice on vehicle tracking with its practical functions and competitive price.

2. Appearance

3. Key Features

- Stable & Practical Functions
- Quad Band GSM, Enable to Work Worldwide
- U-Blox GPS Chip, 56 Channels, Accuracy:10m
- ACC detecting, Remote Engine cut, Geo-fence
- Alarm: Towing alarm, Over-speed alarm, External power cut alert, Geo-fence alert
- Different reporting interval basing on Acc on/off, Daily report per 24 hours to your mobile phone
- 12-80V wide voltage input, backup battery available
- Sleep mode, SMS & Web tracking available
- Map Link Available on SMS Query
- Weather-Proof IP65 design
- Mini design with size: 88x51x19mm (LxWxH)

4. Specifications

Storage Temperature	-40 to 90 °C
Operating Environment	Temperature: -20 to 60 °C, Humidity:<95%
GPS Module	U-BLOX UBX-G7020, 56 channels

GPS/GSM Antenna	Built-in
GPRS	MTK MT6260 Quad band:850/900/1800/1900 MHz, GPRS Class 12
Sensitivity	Tracking: –159 dBm Cold starts: –144 dBm Hot starts: –156 dBm Cold start: <38s Warm Start: <4s Hot Start: 1s
A-GPS/LBS	Assist Now Online and Assist Now Offline services, OMA SUPL compliant GPRS
Power Supply	12-80VDC, Backup Rechargeable 140mAh Li-Polymer Battery
Motion Sensor	Built-in
Case	ABS plastic, Fire-proof
Measurement	88x51x19mm (LxWxH)
Weight	100g

5. How to use

5.1 Preparation before installation

a) check if all the components are ready (main unit, Velcro, relay-optional). b) Prepare a 2G GSM SIM card, 3G or 4G is ok as long as it can support 2G GSM network,
make sure the GPRS is available.

c) Open the case of the tracker, and insert the SIM card following the printing on the case.

5.2 Installation Guide

a) Wiring Definition
Red: Positive + (8-80V)
Black: Ground
Orange: ACC detecting
Yellow: cut off output
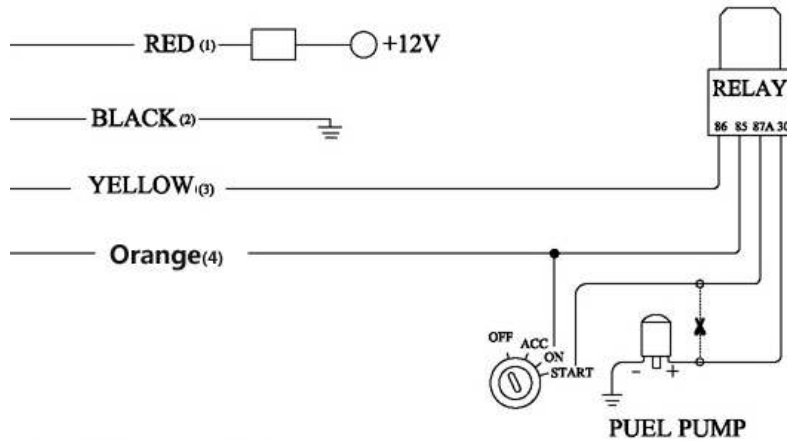
b) Where to install

Hide the device under the dashboard (or somewhere you prefer), Make sure the face with printing up to sky and no metal covering above the case of the tracker.

Fix the device with Velcro

Keep the wires connected to the vehicle

c) LED Indicator

There are two LED indicator (Blue & Yellow)near the SIM card slot

Blue LED	Blinking	Searching the GPS signal
	On	GPS signal is ok
Yellow LED	Blinking	Searching the GSM network
	On	GPRS is connected

Note: we suggest the user do a bench test to make sure the device can work normally before installation.

6. Setting & Query Commands

Note: the default password is "0000"

6.1 Set User Number

Command: *XXXXXXXXXXX0000*space*1*

XXXXXXXXXXX 0000	Master mobile phone number
space *1*	Default password
e.g.	Space between password and master serial
To device **0712345678***0000 1*	The master serial, value:1-3
Back to mobile phone SET OK	
Note: All the alerts will be sent to user number once it's set, but other mobile phone can send commands to configure or query as long as the password is correct. D101# (cancel the first user number)	

| D102#   (cancel the second user number) |
| D103#   (cancel the third user number) |

6.2 Set the working mode

SMS mode (default), command: 700*0000*

GPRS mode, command: 710*0000*

700	Command code for SMS mode
710	Command code for GPRS mode
0000	Password
Two working mode available basing on GPRS and SMS. If the user only wants to check the vehicle position & map link or to disable the engine remote with mobile phone, the SMS working mode is suitable. You can choose GPRS working mode if you want to monitor the vehicle in real time and to check the history trace etc. So you need to send command "710*0000*" to activate GPRS mode if you prefer GPRS when the first time to use this device	

6.3 Set APN

Command1: 803*0000*space*apn name*

Command2: 803*0000*space*apn name*space*apn user name*space*apn password*

Note: Command2 is needed when there is user name and password for the APN of the SIM card

803	Command code
0000	Password
space	Space between the parameter
apn name	The APN name for SIM card inside the tracker
apn user name	The use name for the APN
apn password	The password for the APN

e.g.
To device
  803*0000 cmnet*
Back to mobile phone
  SET OK	

6.4 Change password

Command: 777*12340000*

777	Command code
1234	New password
0000	Default password
e.g. To device	

| 77712340000 |
| Back to mobile phone |
| SET OK |
| Note: the new password should be 4 digits |

6.5 Change IP and Port

Command: 804*0000*space*ip address*space*port*

804	Command code
0000	Password
space	Space between parameter
Ip address	New IP address, put your IP address
port	New Port, put your port

e.g.
To device
   804*0000* **107**.**173.28.18 7979** to mobile phone
   SET OK	

6.6 Change Time Zone

Command: 896*0000DNN*

896	Command code
0000	Password
D	Time zone type: =E or W E=East time, W=West time
NN	Parameter for time zone (1-12), Greenwich mean time

e.g.
To device
   8960000E08
Back to mobile
   SET OK	

6.7 Set reporting interval

ACC ON interval: 805*0000*space*X*
ACC OFF interval: 809*0000*space*X*

805	Command code to set interval when ACC ON
809	Command code to set interval when ACC OFF
0000	Password
space	There is a space between password and time
X	Interval parameter, X=(10- 18000), unit: second,
e.g. To device 805*0000 20*	

Back to mobile phone
SET OK
To device
809*0000 600*
Back to mobile phone
SET OK

6.8 Set Sleep Model

Sleep*0000*space*X*

sleep	Command code to set sleep mode
0000	Password
space	There is a space between password and mode no.
X	Time, X=(0~720, unit: minute), 0 mean disable sleep mode, 1 means activate sleep mode
e.g. To device 　Sleep*0000 0* Back to mobile phone 　SET OK To device 　Sleep*0000 1* Back to mobile phone 　SET OK **Note:** The device will go to sleep mode if it does not receive any commands within the setting time The GPS/GSM module will be off and enter power saving mode, any shock or commands or calling to the device can awake it.	

6.9 Longitude and Latitude query

Command: 666*0000*

666	Command code
0000	Password
e.g. To device 　666*0000* Back to mobile phone 　La:+22 37.4187 　Lo:+114 03.2950 　Date:2015-05-30 16:12:58 　ID:8813000690 　STATE: ACC OFF 　FIX:V 　Bat:6	

6.10 Google map link query

Command: 669*0000*

669	Command code
0000	Password
e.g. To device 669*0000* Back to mobile phone http://maps.google.com/maps?q=22.62386%2c114.05445 A,2015-05-15 14:27:13	

6.11 Daily report to mobile phone

Command: 665*0000HHMM*

Turn off daily report command: 665*0000OFF*

665	Command code
0000	Password
HHMM	Fix time per day, HH=(hour:0-23), MM=(minute:0-59)
e.g. To device 665*00001550* Back to mobile phone http://maps.google.com/maps?q=22.62378%2c114.05449 Date:2015-05-15 15:50:00 ID:8813000697 STATE:Daily ACC OFF FIX:A Bat:6 This report can be sent to your mobile phone (user number) at 15:50 every day. To device 665*0000OFF* Back to mobile phone SET DAILY REPORT OFF	

6.12 Remote engine cut (optional)

Engine cut: 940*0000*

Engine recovery: 941*0000*

940	Command code to cut engine
941	Command code to recover engine
0000	Password
e.g. To device 940*0000*	

941*0000*	
Back to mobile phone	
SET OK	

6.13 Set External Power Cut Alert

ON command: 011*0000*
OFF command: 010*0000*

011	Command code to activate the alert
010	Command code to disable the alert
0000	Password

e.g.
To device
    011*0000*
    010*0000*
Back to mobile phone
    POWER ALARM ON
    POWER ALARM OFF
When activate the power cut alert, all user number will get alert once external power is cut, but only the first user number can get calling alert	

6.14 Set Geo-fence

Activate Geo-fence: 211*0000*
Disable Geo-fence: 210*0000*
Set the radius: 005*0000*space*1000*

211	Command code to activate Geo-fence
210	Command code to disable Geo-fence
005	Command code to set the radius
0000	Password
space	There is a space between password and radius
1000	Parameter for radius, unit: meter

e.g.
To device
    211*0000*
    210*0000*
Back to mobile phone
    SET OK
Note: The shock alarm (6.16) must be activated in the meantime, when send command "211".	

6.15 Set Over-speed Alert

Command: 122*0000*space*X*

122	Command code to activate the alert
0000	Password

space	There is a space between password and speed
X	Over-speed threshold, integer, unit: KM/H X=(0-999), 0=alert off

e.g.

To device

  122*0000 120*

Back to mobile phone

  SET OK

When activate the over-speed alert, the user number will get alert once speed is over 120km/h.

6.16 Shock Alarm

ON Command: 181*0000TX*

OFF Command: 180*0000*

181	Command code to enable Tow Alarm
180	Command code to disable Tow Alarm
0000	Password
TX	T is separator, X is the consecutive shocking time, X=(0~120) unit: second

e.g.

To device

  180*0000*

Back to mobile phone

  SET OK

To device

  181*0000T09*

Back to mobile phone

  SET OK

Note: Tow alarm will be sent to user when ACC is off and the consecutive shock reach 9 seconds , the alarm message as below:

  http://maps.google.com/maps?q=22.62425%2c114.05454

  Date:2015-05-15 17:24:58

  ID:8813000697

  STATE:Tow Alarm ACC OFF

  FIX:A

  Bat:6

6.17 Auxiliary commands

Reset the device	Send *RESET* by SMS
Read configuration	Send *RCONF* by SMS