

Farnear Personal GPS Tracker



GPS Tracker

Model: FN01-4GWB

Version: V1.2

Date: Feb 20th

Farnear IOT Terminal

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Revision History

Version	Author	Revision Date	Description of change
V1.0	Kaisen	Jan 8 th , 2019	First version
V1.1	Kaisen	June 22 nd , 2019	Edit
V1.2	Kaisen	Feb 20 th , 2020	Edit

Related Files

Version	File	Remarks
V1.2	<Farnear FNIOT GPRS Protocol and Command List>	GPRS/SMS Data communication
V1.3	<Farnear FNIOT GPRS Protocol and Command List>	GPRS/SMS Data communication
V1.4	<Farnear FNIOT GPRS Protocol and Command List>	GPRS/SMS Data communication
Download link:		

Related Software

Version	Software	Remarks
V1.0	< Parameter Tool >	Parameter configuration tool on PC (Under developing)
Download link:		

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1. Introduction

FN01 is a personal remote location device with small size, IP67 case, build-in long standby time battery and easy to use. This tracker can be used as an emergency cellular phone and allows speed dialing authorized numbers for 2-way voice communication, of course, you can define the dialing yourself. This tracker sends alert and call the preset numbers for immediate assistance. The alerts include Date, Time, Coordinate, Speed and Map URL link. It will send the coordinate to the designated server by GPRS and then displaying the location by tracking platform.



Applications

Employee
Management



Elderly
Care



Kids
Protection



Vehicle
Tracking



Pets
Animals



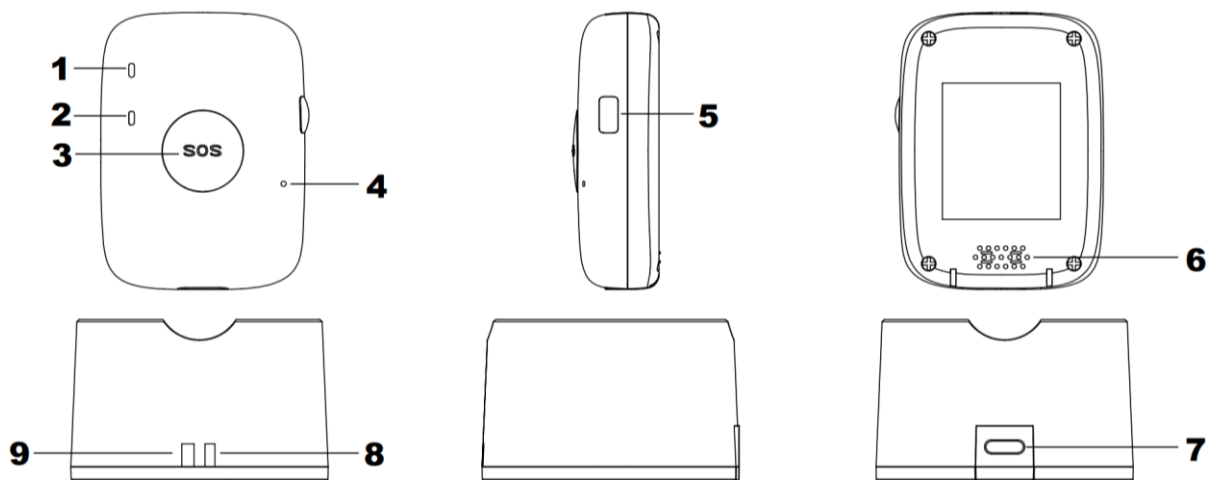
Valuables
Tracking



2. Main function

- 2.1 IP67 Real waterproof
- 2.2 3G/2G full band and 4G
- 2.3 Real Time Tracking on PC/Tablet/Mobile
- 2.4 One week battery life
- 2.5 Voice monitoring
- 2.6 Two way talking
- 2.7 SOS/GEO-Fence/Fall down alarm
- 2.8 Speed/Low battery Alarm
- 2.9 Small size 61*45*19mm
- 2.10 OTA

3. Hardware



GPS Tracker		
1	RED LED	Power and GSM signal
2	Blue LED	GPS signal
3	SOS Button	SOS Alarm, Wake up the device
4	Microphone	
5	Power Button	1. Switch on/off, 2. Make calling
6	Speaker	
Charger Station		
7	Type C port	Charger station port
8/9	RED LED	Get Power

4. Specification

Item		Specification
Case		Real IP67 (1m deep water, stay 30m)
Dimension		61*45*19mm
Weight		Device is 50g, Full box is around 250g
GSM Chip		Qualcomm(4G)
GPS Chip		Qualcomm/Ublox, Accuracy: 5m-15m
Charging Voltage		DC 5V/1A
Internal Battery		900mAh/3.7V Lithium polymer battery
Power Consumption		Average 3~5mA standby current
Battery Life		30 seconds time interval 20h
		5 minutes time interval 2days
		10 minutes time interval 3days
		60 minutes time interval 5days
Operating Temperature		-20°C~70°C
Humidity		5%~95%
LED Light		2 LED lights indicating GPS/GSM/Power status
Button/Switch		1 SOS button, 1 Power button (Define the button yourself)
SIM Card		Nano SIM Card
Sensor		3D Acceleration sensor
Frequency Band	2G	850MHz/900MHz/1800MHz/1900MHz
	3G	Europe: B1/B8, North America: B2/B4/B5
	4G	North America : B2/4/5/12/13
GPS Sensitivity		-161dBm
GPS Start Speed		Cold start 29s, Warm start 28s, Hot start 1s
Accuracy		5m-15m
Charge/Data		Dock station
Memory		Store 20.000 location data.
Option		WiFi, BLE
Protocol and Data		Protocol: MQTT, HTTP, TCP Data: txt, binary, json

5. Operation

5.1 Charging

When you get FN01, Please charge it first. Full charge will take 3 hours.

5.2 Installing SIM Card

FN01 is suitable to Nano SIM Card only, and it support 2G/3G band.

Ensure the sim card is available and has enough fee.

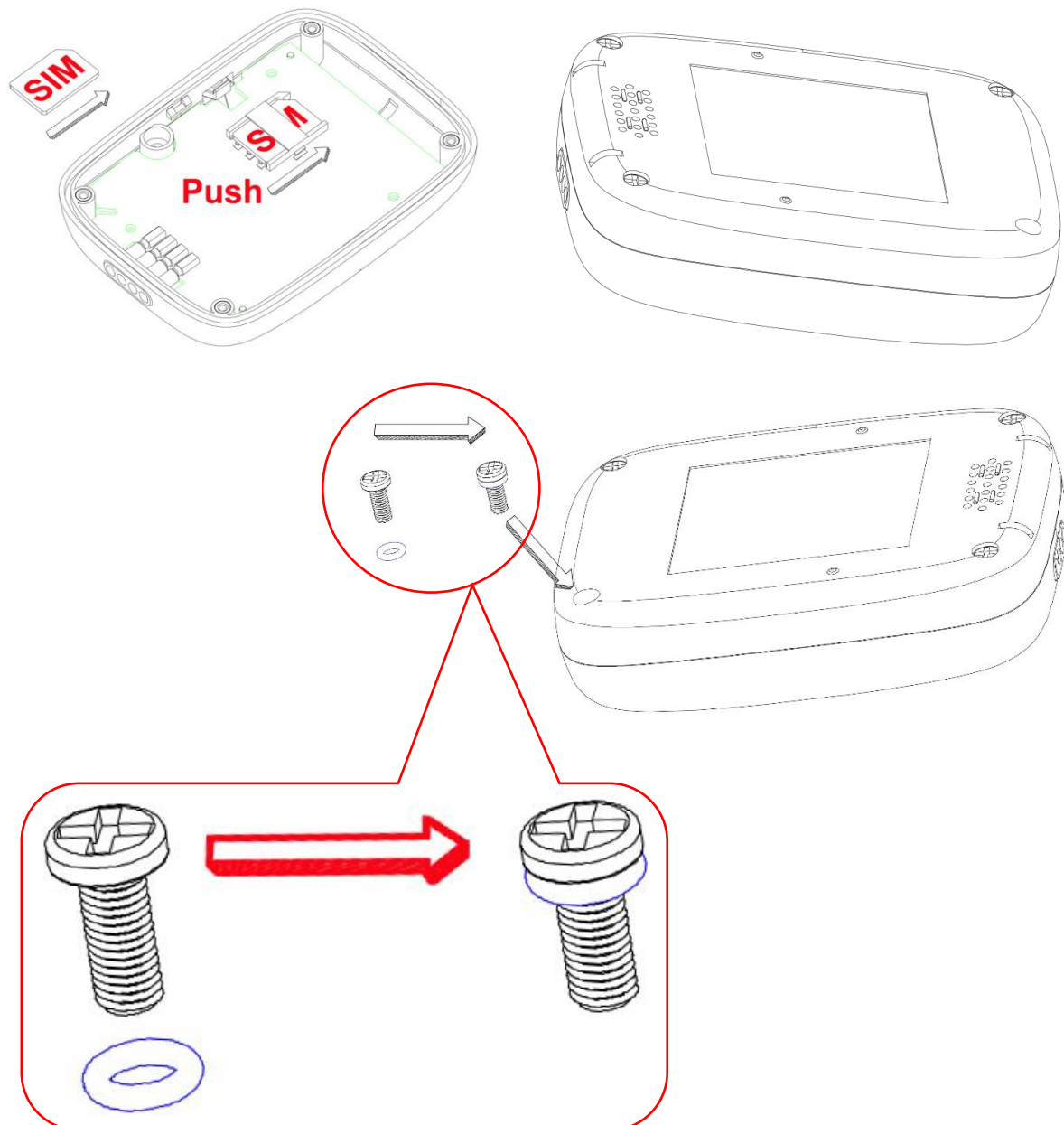
Ensure PIN code is closed.

Caller ID service is necessary to FN01.

If you use gps tracking platform, please confirm that your sim card has GPRS function.

The tracker should be switched off before installing sim card.

Open the tracker as follow picture, and put into your sim card, then close the device



Remark: when you open the device, the O-ring on the screw may be taken out, so you need put it back as above picture: Put the O-ring on the screw (The zoom in in picture), then fix the screw on the case. (The O-ring is necessary for waterproof IP67)

6. Switch ON/OFF

6.1 Press the side button till the tracker vibrate, two LED will bright during this time.

6.2 When you loose the button, Red led will blink fast.

6.3 Work mode:

Red LED	Condition
Blink once	Standby
Blink twice	GPRS
Blink fast	SOS
Blue LED	
Blink once	GPS work but no signal
Blink twice	GPS work and there is signal
OFF	GPS is in sleep mode

6.4 Press the side button and don't loose it until you feel the vibrate, it will off after a sound of DiDi.

7. Set by SMS

7.1 Authorized Number

:123456AX,code,Phone number,mn#

X is 1/2/3/4/5/6/7/8 (1/2/3 is SOS number)

m: 0---listen in, 1---Call in and hang off, 2---Call in and wait for user operation (Answer or Hang off), 3---Call in ring, and answer automatically if user didn't press the button after 3 rings

n: 0---Call in without GPS location, 1---Call in with GPS location

In some country you need add country code, otherwise, you can't operate the device

It will reply you #IMEI,CMD-A1 OK#

Example:

:123456A1,+86,13823561161,20

#867688033841044,CMD-A1 OK#

:123456A1,D (Delete A1)

#867688033841044,CMD-A1 OK#

7.2 Get the Single Position

:123456F

Reply:

CMD-F,A,

<http://maps.google.com/maps?f=q&hl=en>

[&q=22.7193300,114.387885&ie=UTF8&z=16&iwloc=addr&om=1Speed:000.1](http://maps.google.com/maps?f=q&hl=en&q=22.7193300,114.387885&ie=UTF8&z=16&iwloc=addr&om=1Speed:000.1)

:123456A1,,13823561161,20

#867688033841044,CMD-A1 OK#

:123456A1,D

#867688033841044,CMD-A1 OK#

:123456F

CMD-F,A,

maps.google.com



7.3 Checking Firmware Version

:123456B

Reply:

#867688033841044,CMD-B,V1.01,S:FN01-NM-20190423C,01#

#867688033841044,CMD-B,V1.01,S:FN01-NM-20190423C,01#

:123456B

7.4 Set Fall Down and Fall Down Alarm

:123456K2,X

X=1 Open, X=2 Close

Example:

:123456K2,1

#867688033841044,CMD-K2,OK#

#867688033841044,CMD-K2,OK#

ALM-F2,A,

maps.google.com

Alarm:ALM-F2,A,

<http://maps.google.com/maps?f=q&hl=en&q=22.7198618,114.3877993&ie=UTF8&z=16&iwloc=addr&om=1Speed:000.3>

7.5 SOS Alarm

Press the big SOS button till you feel vibrate, then loose it. The authorized number will get message, and calling after message.

KEY,A,

maps.google.com

KEY,A,

<http://maps.google.com/maps?f=q&hl=en&q=22.7197523,114.3878368&ie=UTF8&z=16&iwloc=addr&om=1Speed:001.3>

7.6 Set GEO-Fence

There are 2 kinds of Geo-fence. Circle Geo Fence and Rectangle Geo Fence.

The command of Circle Geo Fence is E

The command of Rectangle Geo Fence is I

The alarm mode of these two are the same: #ALM-Bx-y,maps.google.com#

x=1 is Circle Geo-fence go in alarm

x=2 is Circle Geo-fence go out alarm

x=3 is Rectangle Geo-fence go in alarm

x=4 is Rectangle Geo-fence go out alarm

y is the number of Geo-fence. (You can set 5 fence for each fence)

Circle Fence: :123456Ex,y,zaa.aaaaaaaN/S,bbb.bbbbbbE/W,k

x is fence number;

y is switch, y=1 on, y=0 off

z is alarm mode, 1 go in alarm, 2 go out alarm, 3 go out and in alarm

aa.aaaaaaaN(S), bb.bbbbbbE(W) is the coordinate of the circle center

k is the radius and its unit is meter, maximum value is more than 4billion

Example:

Send: :123456E1,1,1,22.7198011N,114.3878008E,50

Reply: #867688033841044,CMD-E,OK#

:123456E1,1,1,22.7198011N,
114.3878008E,50

Rectangle Fence:

#867688033841044,CMD-E,OK#

:123456Ix,y,z,aa.aaaaaaaN/S,bbb.bbbbbbbE/

W,cc.ccccccN/S,ddd.dddddddE/W

x is fence number;

y is switch, y=1 on, y=0 off

z is alarm mode, 1 go in alarm, 2 go out alarm, 3 go out and in alarm

aa.aaaaaaaN/S,bbb.bbbbbbbE/W,cc.ccccccN/S,ddd.dddddddE/W is the two coordinate of the rectangle (the two coordinates of opposite angles)

Example:

Send: :123456I1,1,1,22.7198011N,114.38780

08E,22.7198012N,114.3878009E

Reply: #867688033841044,CMD-I,OK#

:123456I2,1,1,22.7198011N,
114.3878008E,22.7198012N,
114.3878009E

#867688033841044,CMD-I,OK#

Alarm:

ALM-B3-2,A,

<http://maps.google.com/maps?f=q&hl=en&q=22.7197820,114.3877998&ie=UTF8&z=16&iwloc=addr&om=1Speed:000.9>

This is a Rectangle Fence Alarm

ALM-B3-2,A,

maps.google.com



7.7 Connect to Server

Set APN

:123456OAPN,Name,PSW (You need confirm with your sim card supplier about the PSW)

#IMEI,CMD-O,APN#

Set IP&Port

:123456CTIP;Port

#IMEI,CMD-C#

Example:

Send: :123456O3gnet,,

Reply: #867688033841044,CMD-O,3gnet#

Send: :123456CT123.249.83.8;10385

Reply: #867688033841044,CMD-C#

Connect Server

:123456Dx x=1 connect, x=0 disconnect

:123456O3gnet,,

#867688033841044,CMD-O,
3gnet,,#

:123456CT123.249.83.8;10385

#867688033841044,CMD-C#

:123456D1

#867688033841044,CMD-D#



There are many 3rd parties platform. So, we don't offer Platform and App. As a gps tracker factory, we only focus at gps tracker. We offer OEM, ODM and Customization, so you can test the tracker first, and then list your requirements. More command please reference protocol.

8. Command List

Function	Command	Explain	Example
A Set and Delete authorized number	:123456Ax, Country code, phone number, mn	x can be 1,2,3,4,5,6,7,8,L means A1,A2,A3,A4,A5,A6,A7,A8,AL(All number) m is call in: 0-listen in, 1-hang off, 2-wait for the user press button answer, 3-answer automatically after 3 rings n Call in with location: 0-without, 1-with	:123456A1,,13823561161,20
	#IMEI,CMD-AX OK#		#867688033841044,CMD-A1 OK#
	:123456AX,D	x can be 1,2,3,4,5,6,7,8.L means A1,A2,A3,A4,A5,A6,A7,A8,AL(All number)	:123456A1,D
	#IMEI,CMD-x OK#		#867688033841044,CMD-A1 OK#
B Ask for Version	:123456B	:123456B	:123456B
	#IMEI,CMD-B,Boot,Firmware,Parameter#	Boot is the Boot version Firmware is firmware version Parameter is Parameter version	#867688033841044,CMD-B,V1.01,S:FN01-NM-20190423C,01#
C Set GPRS Server	:123456CxIP/URL;Port	x is T means TCP x is U means UDP Remark: ';' is necessary (semicolon)	:123456CT123.249.83.8;10385
	#IMEI,CMD-C#		#867688033841044,CMD-C#
D GPRS Switch	:123456DX	X is 1 Open (Only SMS) X is 0 Close (SMS and GPRS)	:123456D1
	#IMEI,CMD-D#	SMS:#IMEI,CMD-D#	#867688033841044,CMD-D#
E Circle Geo-Fence	123456Ex,y,zaa.aaaaaaN/S,bbb.bbbbbbE/W,k	x is fence number; y is switch, y=1 on, y=0 off z is alarm mode, 1 go in alarm, 2 go out alarm, 3 go out and in alarm aa.aaaaaaN(S), bb.bbbbbbE(W) is the coordinate of the circle center k is the radius and its unit is meter, maximum value is more than 4billion	:123456E1,1,1,22.7198011N,114.3878008E,100
	#IMEI,CMD-E,OK#		#867688033841044,CMD-E,OK#
	#IMEI,ALM-BX-Y,A,DATE,TIME,LAT,LON,Speed,Battery-GSM Signal,HDOP#	X=1 is Go in alarm, X=2 is Go out alarm Y is the number of the Geo-fence	#867688033841044,ALM-B1-1,A,DAT E:190622,TIME:144956,LAT:22.7193976N,LON:114.3878200E,Speed:000.1,100-22,03.72#



F Location	:123456F		:123456F
	GPRS:#IMEI,CMD-F,A,DATE,TIME,LAT,LON,Speed,Batter-Signal,HDOP# SMS:CMD-F,A,Google link		CMD-F,A,http://maps.google.com/maps?f=q&hl=en&q=22.7198011,114.3878008&ie=UTF8&z=16&iwloc=addr&om=1Speed:000.1
G Ask for Parameter	:123456G		:123456G
	#IMEI,CMD-G,A1:-:30,A2:-:20,A3:-:20,A4:-:20,A5:-:20,A6:-:20,A7:-:20,A8:-:20,IP;Port>Password,APN:,name,password,Report time-unit,Ask for GPS-unit,Reconnect time-unit,time zone,speed value,low battery value,Heart beat-its unit#		#867688033841044,CMD-G,A1:-13823561161:30,A2:-:20,A3:-:20,A4:-:20,A5:-:20,A6:-:20,A7:-:20,A8:-:20,IP:0.0.0.0:0,123.249.83.8:10385,123456,APN:,,5-M,10-M,10-M,+08:00,80,30,3-M#
H Change Password	:Old PSWH,New PSW		:123456H,000000
	#IMEI,CMD-H,New PSW#		#867688033841044,CMD-H,000000#
I Rectangle Geo-fence	:123456Ix,y,z,aa.aaaaaaN/S,bbb.bb bbbbbE/W,cc.ccccccN/S,ddd.ddddd ddE/W	x is fence number (Maximum is 5) y is switch, y=1 on, y=0 off z is alarm mode, 1 go in alarm, 2 go out alarm, 3 go out and in alarm aa.aaaaaaN(S), bb.bbbbbbE(W) is the 1st coordinate cc.ccccccN/S,ddd.dddddE/W is the 2nd coordinate	:123456I1,1,1,22.7198011N,114.3878 008E,22.7198012N,114.3878009E
	#IMEI,CMD-I,OK#		#867688033841044,CMD-I,OK#
	#IMEI,ALM-Bx-y,A,DATE,TIME,LAT,L ON,Speed,Battery-Signal,HDOP#	x=3 is Go in, x=4 is Go out y is the number of the Geo-fence	#867688033841044,ALM-B4-1,A,DAT E:190624,TIME:150324,LAT:22.7195 393N,LON:114.3878296E,Speed:001. 2,097-19,06.52#
J Set Over Speed	:123456Jz,xxx (Unit is km)	z is switch, z=0 close, z=1 open	:123456J1,003
	#IMEI,CMD-Jz,xxx#	xxx is speed value	#867688033841044,CMD-J1,003#
	#IMEI,ALM-C,A,DATE,TIME,LAT,LO N,Speed,Battery-GSM Signal,HDOP#		#867688033841044,ALM-C,A,DATE: 190624,TIME:142652,LAT:22.719549 1N,LON:114.3876458E,Speed:006.0, 100-13,18.30#

K Fall down	:123456Kx,a,b,c	x=1 Set the sensitivity, a is the height level, range: 1-9 (Default: 2) b is the movement times after falling down. (Default is 4 times) x=2 Switch of fall down: a=1 on, a=0 off x=3 Set fall down alarm calling a is authorized number (***) b is talking mode, 1 two way, 0 listen in. c is the loops of dialing (1-9). (Default is 3) x=4 Set fall down alarm message(***) a is authorized number (hexadecimal) b=1 with message, b=0 without message x=5 set the fall down and detection time a=1s-9s No fall down time. (Default is 3s) b=1s-99s Movement detected time (Default is 7s) *** Authorized number:(A) 01 is 00000001 A1 02 is 00000010 A2 03 is 00000011 A1,A2 FF is 11111111 A1-A8	:123456K1,1,3
			#867688033841044,CMD-K1,OK#
			:123456K2,1
			#867688033841044,CMD-K2,OK#
			:123456K3,01,1,3
			#867688033841044,CMD-K3,OK#
			:123456K4,02,1
			#867688033841044,CMD-K4,OK#
	#IMEI,ALM-F2,A,DATE,TIME,LAT,LO N,Speed,Battery-GSM Signal,HDOP#		ALM-F2,A, http://maps.google.com/maps?f=q&hl=en&q=22.7198618,114.3877993&ie=UTF8&z=16&iwloc=addr&om=1 Speed:000.3
L Time Zone	:123456L±XX:YY#	(+ East, - West, 0≤XX≤12, 0≤YY<60)	:123456L+08:00
	#IMEI,CMD-L OK#		#867688033841044,CMD-L,+08:00#
M Continuous Tracking	:123456Mx,yyyz	x is switch, x=1 open, x=0 close yyy is the interval time and z is the unit (S/M/H)	:123456M1,003M
	#867688033841044,CMD-M,yyy-z#		#867688033841044,CMD-M,3-M#
	#IMEI,CMD-T,A,DATE,TIME,LAT,LO N,Speed,Battery-GSM Signal,HDOP#		#867688038673715,CMD-T,V,DATE: 190624,TIME:084756,LAT:45.749397 0N,LOT:073.4602095W,Speed:000.6, 100-11,02.66#
N Low Battery	:123456NL/H,x,yy	NH is full battery alarm, NL is low battery alarm	:123456NL,1,30

	#IMEI,CMD-NL,x,yy#	x is switch, x=1 open, x=0 close yy is the percentage	#867688033841044,CMD-NL,1,30#
	#IMEI,ALM-A1,A,DATE,TIME,LAT,LON,Speed,Battery-GSM Signal,HDOP#		#867688033841044,CMD-T,A,DATE:190624,TIME:141556,LAT:22.7195668N,LON:114.3877683E,Speed:001.8,100-18,04.62#
O Set APN	123456OAPN,User name>Password	Most of User name and Password is Null. So, you have to check with your SIM Card supplier	:123456O3gnet,,
	#IMEI,CMD-O,APN,User name>Password#		#867688033841044,CMD-O,3gnet,,#
P Define the Button	:123456PX,a,b,c,d,e,f	X is button number a=0 press times, a=1 press time b is authorized number (***) c is the loops of calling d is authorized number (***) e is the switch of gps, e=1 open, e=0 close f is switching off function, f=1 available, f=0 disable	:123456P2,1,01H,6,02H,1,1 Button2, Press 6 times(Reference follow command), Dial A1, 6 loops, send A2 message, Open GPS, Switch off function available
	#IMEI,CMD-Px,a#	*** Authorized number:(B,D) 01H is 00000001 A1 02H is 00000010 A2 03H is 00000011 A1,A2 FFH is 11111111 A1-A8	#867688033841044,CMD-P2,1#
	:123456Px,y,z	x is button number y is 2 Call in: z=0, 1, 2, z=0 invalid, z=1 answer, z=2 hang off y is 3 Talking: z=0, 1, 2, 3, z=0 invalid, z=1 volume +, z=2 volume -, z=3 hang off	:123456P2,4,6 (Press button2 6 times, the function will be triggered)
	#IMEI,CMD-PX,Y#	y is 4 Define the pressing times of the button: z is pressing times, 1<z<100 y is 5 Dial out Talking or Listen in: z=0 listen in, z=1 two way talking	#867688033841044,CMD-P2,4#
	Close the switch off function	FN01: SOS button is P1, Side button is P2	:123456P2,1,,00H,0,00H,0,0
			#867688033841044,CMD-P2,1#
S	:123456Sx,y	x=1 is with SSID, x=0 is without SSID y=0-9, The number of router, y=0 means	:123456S1,3

Set WiFi (Available for WiFi model)	#IMEI,CMD-Sx,y,OK#	closing WiFi data.	#862831030183839,CMD-S1,3,OK#
U Work Mode	:123456Ux	x=0 (Normal mode) x=1 Smart mode(Judge dynamic or non-dynamic by G-sensor, send continuous tracking data in dynamic, send hear beat only in non-dynamic) x=2 Power saving mode (Base on G-sensor , non –dynamic, don't send heart beat)	:123456U0
	#IMEI,CMD-U,x,OK#	x=3 Sleep mode(GSM Close, location will be stored in the device, if there is alarm or reconnect GPRS, then open GSM) x=4 Deep Sleep(GSM Close, If there is alarm or reconnect GPRS, then open gsm)	#867688033841044,CMD-U,0,OK#
Z Firmware Command	:123456Zx	x=0 Restart the device (RESTART) x=1 factory reset (INITIALIZE)	:123456Z0
	#IMEI,CMD-Z,x,Letter#	x=2 Switch off the tracker (POWEROFF) x=3 Update firmware by Socket (UPDATE) x=4 Update firmware by OTA (OTA)	#867688033841044,CMD-Z,0,RESTART#
Alarm	SOS Alarm	#IMEI,CMD-KEY,A,DATE,TIME,LAT,LON,Speed,Battery-GSM Signal,HDOP#	KEY,A,http://maps.google.com/maps?f=q&hl=en&q=22.7197523,114.3878368&ie=UTF8&z=16&iwloc=addr&om=1Speed:001.3
	OTA Alarm	#IMEI,ALM-G1# (You will receive this alarm after OTA)	#867688033841044,ALM-G1#
	No signal Alarm (No signal for long time)	#IMEI,ALM-D1,A,DATE,TIME,LAT,LON,Speed,Battery-GSM Signal,HDOP#	#867688033841044,ALM-D1,A,DATE:190622,TIME:174743,LAT:22.7198015N,LON:114.3878825E,Speed:000.8,100-21,02.45#
	Get signal Alarm (Get signal after long time without signal)	#IMEI,ALM-D2,A,DATE,TIME,LAT,LON,Speed,Battery-GSM Signal,HDOP#	#867688033841044,ALM-D2,A,DATE:190622,TIME:174743,LAT:22.7198015N,LON:114.3878825E,Speed:000.8,100-21,02.45#
	Get signal from no signal condition after F command	#IMEI,ALM-D3,A,DATE,TIME,LAT,LON,Speed,Battery-GSM Signal,HDOP#	#867688033841044,ALM-D3,A,DATE:190622,TIME:174743,LAT:22.7198015N,LON:114.3878825E,Speed:000.8,100-21,02.45#



Others	Call the tracker and Get location When you set Authorized number, you can set this function.	CALL,A,Google linke	CALL,A, http://maps.google.com/maps?f=q&hl=en&q=22.7198721,114.3877820&ie=UTF8&z=16&iwloc=addr&om=1Speed:001.6
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9. Cautions

1. Don't put the unit in overheated or overcooled places.
2. Handle carefully. Don't vibrate, shake or hit it violently.
3. Don't disassemble or refit the unit. The device should be installed by technical person.
4. Please use the battery and charger provided by manufacturer. Using other batteries and chargers will cause unwanted situation.
5. Don't dismount the antenna randomly, or use other antennas. This maybe interfere the transmission, and increase the radiation as well.
6. Don't paint the unit, this may cause some foreign materials left in between the parts.
7. Clear the unit with a piece of dry cloth after the device go into water. Don't clean in chemicals, detergent.
8. This product get location via satellite. Position drift is normal in some environment, because it is limited by satellite transmission characteristics.
9. This product has some sensitive functions, such as: tracking, listen-in, etc. So, the user must use it within the legal limit. If the user illegally use it, and lead to damage of other's rights or interests, the user should afford the consequences himself.
10. The warranty of this product is 1 year from our customer receive it.

§ 15.19 Labeling requirements.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

§ 15.21 Information to user.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

§ 15.105 Information to the user.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

SAR Body Operation

This device was tested for typical body-support operations. To comply with RF exposure requirements, a minimum separation distance of **0.5cm** must be maintained between the user's body and the handset, including the antenna. Third-party belt-clips, holsters, and similar accessories used by this device should not contain any metallic components. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or an approved antenna.

10. Support

Thanks for choosing our device, enjoy your safe time from now on.

If you have any questions or problems, please feel free to contact us

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