

User Manual

ACE-TK600 GPS Watch Tracker



Table of Contents

Chapter I Preface.....	4
I. General.....	4
II. Notices.....	4
 Chapter II about the Device.....	5
1. Appearance.....	5
2. Product Features.....	5
3. Product Specification.....	6
(1).Technical Specifications.....	6
(2).Others.....	7
 Chapter III Usage Preparation.....	8
I.Accessories.....	8
II.Appearance and Interface.....	8
1. Appearance and Buttons.....	8
2. Interface Definition.....	9
III.Charge the Battery.....	9
IV.Installation of SIM Card.....	11
 Chapter IV Commands Corresponding to and Operation Method of Basic Functions.....	11

1. Location Inquiry	12
(1) SMS Inquiry	12
(2) Platform Inquiry	13
2. Setup of Centre Number	13
3. Bi-directional Call Function	13
4. Adjust Receiver Volume	14
5. SOS Function	15
6. Monitoring Function	15
7. Regular Upload Interval Setup	16
8. Function of Changing Password	16
9. Set User Name Command	17
10. Set APN Command	17
11. Set Server Address Command	18
12. Low Voltage Alarming Function	19
13. Method to Set Time Zone	19
14. Electronic Fence Function	20
(1). GPS Fence Function	20
(2). Fence Reading Function	20
(3). Function of Canceling Fence	21
15. Auxiliary Functions	21
Notices	22

Chapter I Preface

I. General

ACE-TK600 represents the perfect combination of GSM and GPS technologies. This model, with its precise dimensions and compact appearance, expresses the advanced workmanship in the GSM and GPS field. It is a typical design combining communication products and GPS services.

As a professional security and positioning company, we will provide you with more and better products and services. Before using the watch, please spend several minutes reading this user's manual in order to get to know about operation details and obtain better services.

II. Notices

1. Please read this user's manual carefully and always use correct operation methods to prevent any possible errors.
2. This user's manual is for reference only. If some contents and operation steps are inconsistent with those for the actual product, the latter will prevail.
3. The defaulted password of this product is 0000.

Chapter II about the Device

ACE-TK600, as a personal remote positioning device made up of GPS module and GSM/GPRS module, is compact in dimensions with high accuracy. On the basis of GPS satellites and under dynamic conditions, it can provide you with accurate and correct location information. With such features, it can be used to protect and look for our old people and children. It can also be used for safety purpose and other purposes, such as remote positioning to protect property safety.

1 Appearance



2 Product Features

- Inbuilt GPS Module
- Internet positioning service center, used to receive and send positioning information
- GSM /GPRS modem supports Quad frequency bands, i.e. 850/900/1800/1900 MHz
- High-sensitivity, new workmanship and the most advanced GPS chip
- Can work effectively in limited space such as urban canyon
- Low energy consumption
- Fast signal acquisition
- Supports single positioning and continuous tracking;
- Supports alarming and remote monitoring
- Supports fast dial button
- Supports the location information inquiry by SMS and Internet
- May monitor without disturbing the tracked person and realizes real-time tracking;
- Can position the holder by call or SMS

- In emergency, press the SOS button to have an accurate positioning

3 Product Specifications

(1). Technical Specifications

GSM module	GSM 850/900/1800/1900 MHz Quad frequency
GPS sensitivity	-163dBm
GPS center frequency	L1, 1575.42MHz
GPS positioning accuracy	5-25m
GSM positioning accuracy	100-500m
Speed accuracy	0.1 m/s
Time accuracy	Synchronous with GPS
GPS Datum	WGS-84
Hot start	< 1s
Warm start	< 38s
Max. altitude	18000m
Max. speed	515m/s
Gravitational acceleration	< 4g

(2). Others

Operating temperature	-20---65℃
Humidity	5%---95%
Dimensions	64.5mm×45.5mm×17.5 mm (main unit)
Voltage	Rechargeable 500mAh battery
Power supply	DC5V
Standby time	>48h
Buttons	One SOS emergency button for emergency aid; Call A, Call B, Switch on and off buttons.

Chapter III Usage Preparation

I. Accessories

1. Main unit
2. USB data cable
3. Charger
4. Headset cable (optional)
- 5 Battery

II. Appearance and Interface

1. Appearance and Buttons

Four buttons are equipped with this watch, the upper right button serves for switch on and hold-on, the bottom right button serves for emergency (SOS button), while the upper left button for predetermined number 1 and the bottom left button for predetermined number 2 as shown in picture 1:



2. Interface Definition

GSM signal strength is indicated on the upper left corner of the main interface as showed in picture 2:

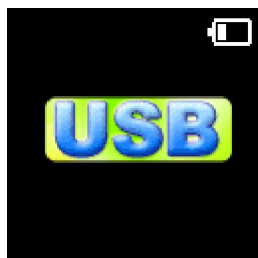


Button E is used to switch between digital clock interface and analog clock interface as showed in picture 3:



III. Charge the Battery

- ✧ Please use up the battery and discharge it for 2-3 times and then charge the battery for at least 12 hours for initial use, in order to keep the quality of the battery.
- ✧ The normal charging time of this product is 4-5 hours.
- ✧ Put the battery into the inside of the terminal and connect the charger to 100V/220V AC power supply to charge the battery. Then the power indicator on the upper right corner of the terminal screen will keep strolling as showed in picture 3-1:



- ✧ When the battery is fully charged, the power indicator will stop strolling; if the battery is charged on switch-off mode, the following picture 3-2 indicates the charging is finished:



Notes :

- ✧ Please always use the charger offered by the supplier. Dangers damages of the product caused by usage of any unconfirmed charger will not be compensated and repaired.
- ✧ The battery should be charged in time when the terminal automatic shutdown or being alarmed with low power.
- ✧ The standby duration and call duration offered by the supplier is calculated in perfect functional mode, in practice, working hours of the battery may vary due to difference of internet service, functional mode and usage mode.
- ✧ Disconnect the terminal and charger as soon as possible after the battery is well charged.

IV. Installation of SIM Card

Open the back cover, then you will see the place where the SIM card is placed. Then push the SIM card into the slot until it comes into its proper position completely and consolidate it with the dome sheet nearby.

Choose SIM card:

- ✧ The type of the SIM card is GSM card.
- ✧ Ensure sufficient money is within the SIM card in order to pay the communication fee.
- ✧ Prepare a SIM card for mobile phone, make sure that the card has opened such functions of Caller ID and sending and receiving SMS. If service platform real-time tracking is in need, then GPRS function should be open.

Chapter IV Commands Corresponding to and Operation Method of Basic Functions

1. Location Inquiry

(1) SMS Inquiry

① Send command to the terminal. send command 666 plus password to the terminal, then the terminal will return a piece of detailed latitude and longitude message.

Format: 666+ user password (4 figures)

eg: 6660000

② By the same means, send the command 123 plus password to the terminal, then the terminal will return a piece of website message. The guardian may inquire the location information of the ward attached with local map through this website message.

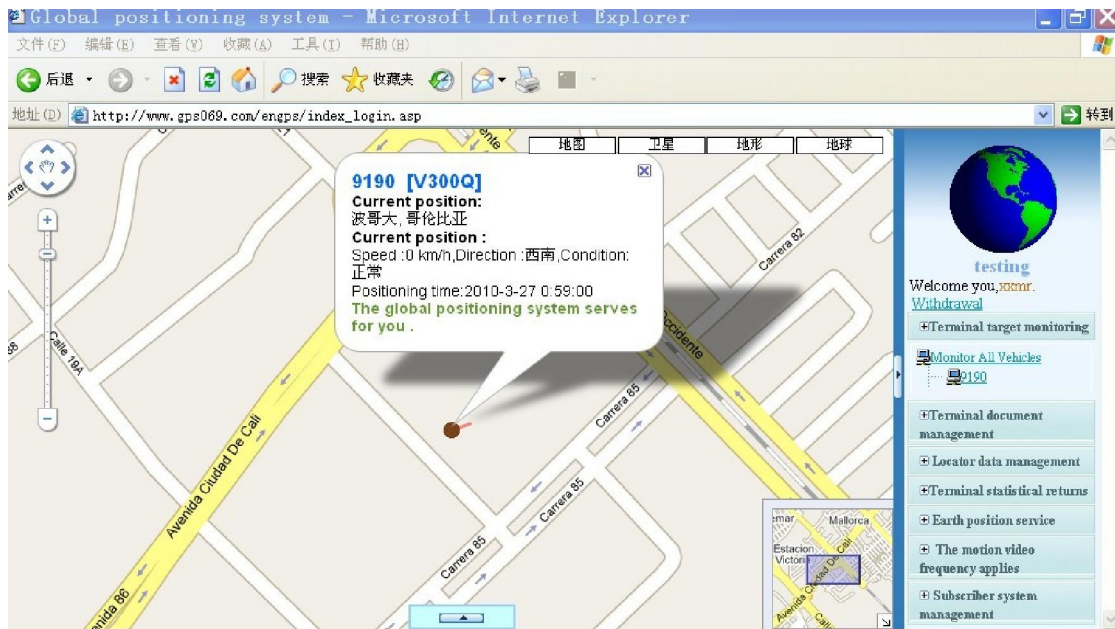
Format: 123+ user password (4 figures)

eg: 1230000

(2) Platform Inquiry

Step 1: Log onto the platform (Please contact with the service provider to get the platform address).

Step 2: Click the terminal of the ward, then the location of the ward will be displayed on the map.



2. SMS Work Mode:

Format: 700+ user password (4 figures)

eg: 7000000

Explanation : When ACE-TK600 tracker receives the SMS and confirms the user password correctly, it switches to the SMS application mode. After the success, it will send the confirmation messages (SET MODE OK, CURRENT MODE: SMS P2P) to the sender.

Specify: The factory default setting for the SMS mode.

3. Change the telephone number in advance instructions

Format: *new numbers with 4-20 figures * user password (4 figures) *location number (1-3) **

eg: *13900000000*0000*1**

Explanation: You can store 3 telephone numbers at most in advance。 When ACE-TK600 tracker receives the instruction and confirms the user password correctly, substitutes the new number for the existing number. After success, it will send the confirmation messages (SET USER NUMBER (1-3) OK) to the sender.

4. Adjust Receiver Volume

While making phone calls, the user could press upper or button left button to adjust receiver volume.

5. SOS Function

If a ward number (predetermined number in item3) is set, when the ward encounters emergency and presses the SOS button, the terminal will send alarming information and dial the three ward numbers in turn. Picture 5 is SOS alarming interface:



SOS SMS format: IMEI number: SOS (information about latitude and longitude or base station)

Example: 356823031017473:SOS (11354.6397,E,2232.6283,N)

or 356823031017473:SOS (26280E77)

Remarks: when interface in picture 5 appears on the phone, the terminal will skip to standby mode automatically; sound and interface during the dialing will be completely shielded.

6. Monitoring Function

The guardian may send SMS 555 plus password to the terminal of the ward, then the ward terminal will automatically call back to the mobile phone of the guardian and the guardian may hear the sound of the surroundings within 10m around the ward.

SMS format: 5550000

Remarks: 0000 is the initial defaulted password and in practice the password could be set by the user.

7. Change the user password of ACE-TK600

Format: 777+new password (4 figures) +old password (4 figures)

eg: 77712340000

Explanation: When ACE-TK600 tracker receives the SMS and confirm the user password correctly; changes the new user password to the old password. After set successfully, it will send the confirmation messages (SET USER PASSWORD OK) to the sender.

GPRS Work Mode

Format: 710+ user password (4 figures)

eg: 7100000

Explanation: When ACE-TK600 tracker receives the SMS and confirms the user password correctly, it switches to the GPRS application mode. After the success, it will send the confirmation messages (SET MODE OK , CURRENT MODE : GPRS) to the sender.

State: set the following instructions before you need to follow is set to GPRS mode. (Namely: must be in the GPRS mode only when you can set the following instructions.)

8. Set User name Command

SMS Command Format: #801#4~20-digit letters or numbers #4-digit password ##

Example: #801#13900139000#0000##

Notes: After executing this command, the user name of the terminal on GPRS mode is required to be set up according to actual demand. After the setup is successful, the

terminal will send reply with CONFING OK or PASSWORD ER if the password is wrong.

9. Change the service password

Format: #802#user password#new service password#old service password ##

eg: #802#0000#1111#0000##

Explanation: When ACE-TK600 tracker receives the instruction, confirms the user password and old service password correctly, changes the service password to the new service password. After the success, it will send the confirmation messages to the sender. The content is “CHANGE PASSWORD OK”

10. Three steps to send the GPS Position of unit to Platform

1 .Set up the access point name of GPRS

1 Format1: #803#user password#APN##

eg: #803#0000#CMNET##

Format2: #803#user password#APN#APN user name#APN password ##

Explanation1: Different GSM / GPRS service associations provide different APN, please according to local service providers to provide the APN to choose format 1 or 2 to use set.

Explanation2: When ACE-TK600 tracker receives the instruction and confirms the user password correctly, updates the access point name to the new access point name. After the success, it will send the confirmation messages to the sender. If sent the format 1, the content is “SET GPRS APN OK”; if it is format 2, the content is “SET GPRS ACCOUNT OK”.

Note: APN is CMNET after factory set or reset. APN is characters composed of 3 to 35 letters, numbers, dots (.) underscore (_) and connectors (-). APN user name and user password are respectively characters composed of from 3 to 20 the numbers and letters.

11. Set up the TCP/IP server and IP's address and port number

Format: #804#user password#fixed IP address # port ##

eg: #804#0000#222.125.12.32#80##

Explanation: When ACE-TK600 tracker receives the instruction and confirms the user password correctly, updates the IP address and port number preserved in the module , After the success, it will send the confirmation messages to the sender. The content is “SET SERVER IP AND PORT OK”

12. Regular Upload Interval Setup

Format: #805#user password# sampling interval T # the number of upload data each time N ##

eg: #805#0000#60#1##

Explanation: The time T unit of the sampling is second, 60 seconds at least, 59999 seconds at most; The number of upload data each time is N, at least is 1, at most is 50.

When ACE-TK600 receive the command, and confirm the password is correct, then ACE-TK600 will send a feedback message to the sender what is SET GPS SAMPLING TIME AND QUANTITY OK . also will implement this command, then the unit will get the GPRMC data and save in the memory. and send the GPRMC Data to the server.if the data can't send it to the server by other excuse like GSM Signal or Bad Internet, the data will save it automatically, and when the internet is ok, the unit will send the data again,and the state is AUTO. when users set the numberof data is 0, the unti will close this function,and the unit will send message to the sender what is "GPRS TIMER STOP"

13. Low-Voltage Alarming Function

If the terminal of the ward has a very low power and needs to be powered off, the terminal of the ward will automatically upload one piece of low-voltage alarming command to the monitoring center number.

SMS Format: IMEI Number: low power; please charge the battery in time (information about latitude and longitude or base station)

Example: 356823031017473: low power, please charge the battery in time

(11354.6397, E, 2232.6283, N) or 356823031017473: low power; please charge the battery in time (26280E77).

14. Electronic Fence Function

(1)GPS Fence Function

The guardian could get the center spot of a fence through Google map or single inquiry.

Set Fence Format: # command number (751) # fence radius # sampling interval # longitude # latitude # user password ##.

Example: #751#500#5#22.5442N#113.91E#0000##

After the setup is successful, the mobile phone will receive a piece of config ok command. Then, each time when the ward leaves this area, the terminal will send the alarming information of being out of the fence to the center number.

(2) Fence Reading Function

Send commands to the terminal: # command number (752) # user password 4 digits ##; after the command is set successfully, the terminal will read the data of the module fence working status and return message to the sending mobile phone, or PASSWORD ER if the password is wrong.

Example: #752#0000##

Return:#open:1#lat:11456.209400#lng:2233.470100#distance:500#time:5#status:2

Where, open: 1 indicates fence open; Open: 0 indicates fence closed;

lat:11456.209400, latitude;

lng: 2233.470100; longitude;

distance: 500; fence radius;

time: 5 sampling interval;

status: 2, terminal has obtained valid satellite data, fence works normally;

status: 1, fence open, but there are no valid satellite data have been received;

status: 0, no electronic fence is set.

(3) Function of Canceling Fence

Command name: # command number (760) # user password 4-digits ##

Example: #760#0000##

After the terminal receiving this command, all fence settings will be cancelled.

Advice: Do not set GSM fence and GPS fence at the same time.

15. Auxiliary Function

***RCONF# Read the internal parameters of the setup information.**

Data format:

ID: marked as code;

MOD: Point to Point (SMS P2P 2) / messaging platform (SMS SC) / GPRS ;

ST: location information request interval timer;

TN: SMS mode timer request number;

GU: GPRS user name, service password;

SRV: Server IP address, port number;

APN: GPRS access point, APN User Name , APN password;

SAMP: From the sampling interval, first upload a few articles (go cart track uploaded regularly mode) ;

U1: NO.1 authorization number

U2: NO.2 authorization number

U3: NO.3 authorization number

UP: User password.

Time zone:

Notices

1. This device is of non-waterproof design.
2. This device must work with the cooperation of GSM/GPRS network.
3. Make sure that the SIM card has sufficient balance in order to avoid inconvenience in use.
4. This device will not be able to work in case of power-off and out of the service area, even if you are a registered user.
5. This device supports the dual positioning mode of GPS and GSM/GPRS.
6. Please use this device in a legal area, any illegal consequence will be borne by the user.

Notes: due to the high sensitivity of the GPS module adopted by this product, it is normal to be drifting with weak GPS signal.