GH3000
Quick Start Guide

Document version 2.06

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This chapter introduces the device and helps to start using it quickly. Also you will find out how to configure your device using SMS messages.

Product Introduction - Quick Start Guide 1

Welcome!

Thank you for purchasing our device!
We hope it will satisfy your expectations and you will enjoy its particular features. Please, find several minutes to read this document before starting to use GH3000.

1. PREFACE

1.1 Introduction

GH3000 is a device with built-in function characteristics of a mobile phone and an integrated A-GPS receiver. This device is intended for the surveillance and protection of people, cargos and other objects. The A-GPS receiver will find the current location of the device and will sends this data to a person in charge or the operation centre.

1.2 Protection of copyrights

All rights protected. ©2011 Teltonika Ltd.
All rights are owned by the author. You may not copy, compile or transfer the present information to third parties or distribute it without a prior written consent by Ltd. Teltonika.
Other products and company names mentioned in this manual may be trademarks or names of products of such companies.

1.3 Contacts

In case you have problems with the use of the product beyond your possibilities to solve it, please address them to the Technical Assistance Center (TAC) by an e-mail: support@teltonika.lt or contact your local seller, we would be pleased to be of any assistance to you.

Note!

Teltonika recommends reading User Manual carefully. Teltonika does not take any responsibility for problems that occur due to inappropriate usage of a device, incorrect configuration or usage of software that was issued by a third party. Teltonika reserves the right to modify the functionality of the device without any prior notice.

2. GENERAL INFORMATION

2.1 Package contents

1 x Handheld A-GPS/GSM Tracker GH3000
1 x Reference card to the source of our software and documentation
1 x Li-Ion 1050mAh battery 3.7V
1 x USB – micro USB cable
1 x 230V to 5V USB charger
1 x Mini screw driver
1 x Neck strap

Note!

The manufacturer's set does not include a SIM card which is necessary to connect to the GSM network. A SIM card can be acquired from your local supplier of GSM services

If any part is missing in the set, please contact the representative of the manufacturer or dealer (www.teltonika.eu).

2.2 Defaults

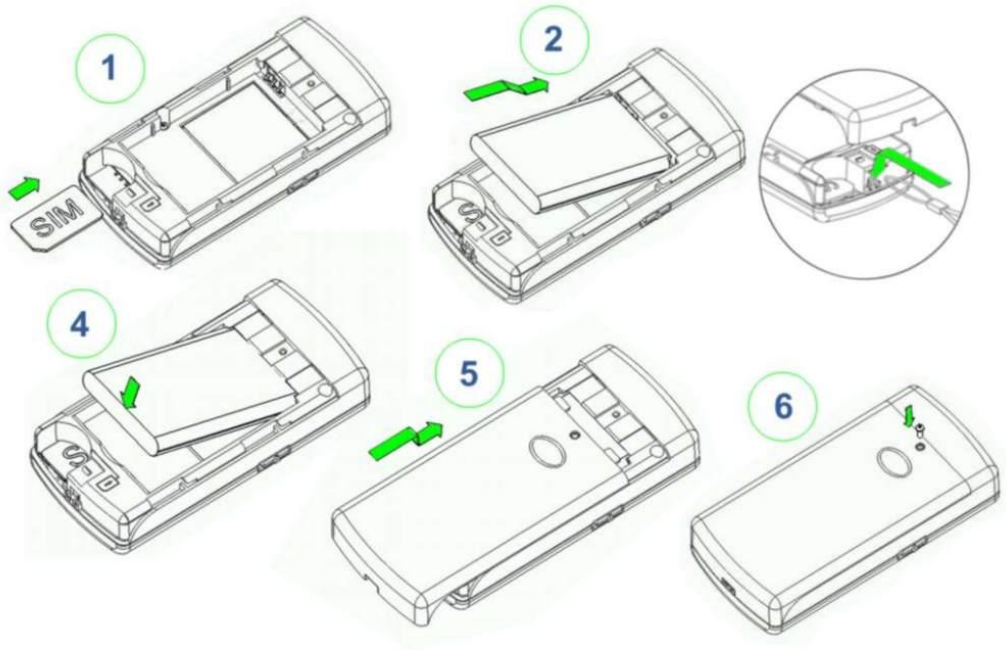
The device automatically saves its position data in to the memory and has other default configuration.

Periodical logging interval	Every 600 sec. (10min.)
Configuration password	0000
Device name	GH3000
AGPS option	Disabled
Alarm method	GPRS or SMS
Alarm SMS message sending period	Every 60sec. (1min)
Man-down function – base device position	Vertical (Disabled)
Alarm duration time	300 sec. (5min.)
Track logging Interval when Alarm is active	5 sec.
SMS tracking Interval	Every 600 sec. (1min)
Time in the SMS messages	GMT (+0:00)
Ringing melody	Pink Panther
Low battery alarm messages	When battery charge level becomes 30%

3. GETTING STARTED

3.1 Insert SIM card, battery, attach a neck strap

All SIM cards must be kept in a safe place. You may request your SIM card supplier to provide SIM cards and information about the use of SIM card related services. The supplier may be a service supplier, a network operator or another seller. How to insert the SIM card is shown below.



Note!

Before removing the cover, switch off the device and disconnect it from the charger or PC. The device must be always kept and used with a cover and the screw screwed tightly

If an unsuitable SIM card has been inserted or the device fails to detect it, the device will restart automatically and will try to make the connection again (if the SIM card is not inserted then the device will restart three times). If the connection fails, the device will indicate it. If the card has been inserted later, the device must be switched off and switched on again or has to be restarted manually.

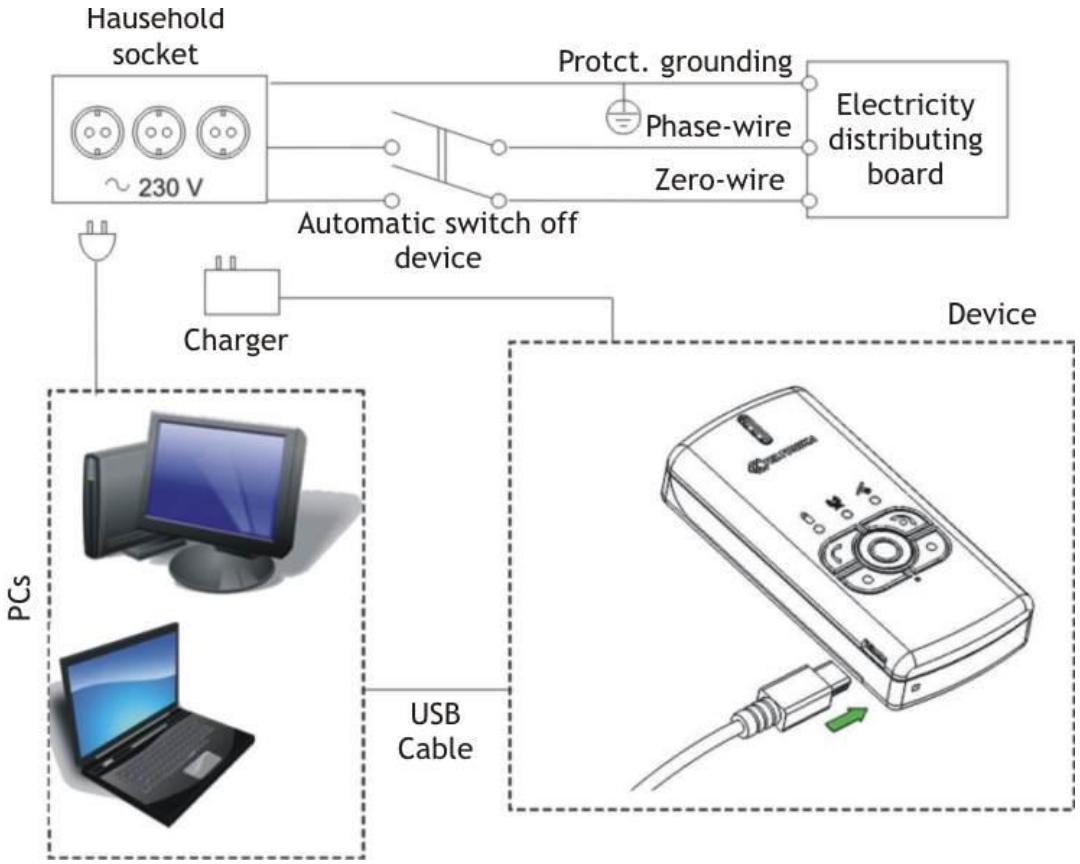
3.2 Charging the battery

Connect the USB wall charger to the device via USB cable and plug the charger in to the alternating current wall socket.
We recommend charging the device using a 220V USB wall charger when charging the device for the very first time (not charge it via PC).

If the device is working very intensively (GPS data logging period is very short, GPS data sending via GPRS is enabled, or GSM signal level is very low and device is constantly searching for GSM operator) then the battery charge time can be much longer then usual. The maximum battery charge time is 9 hours. To charge the battery faster we recommend charging the device when it is switched off. In order to prevent the device from turning on automatically when it is connected, you have to change its configuration using Track Assistant software. Battery charge time when the device is switched off is approximately 4 hours.

Note!

If the battery is fully discharged, the device will not indicate about charging for approximately 10 min. If the battery level is very low during charging, some of the functions of the device might be limited for a couple of hours until the battery reaches the required charge level.



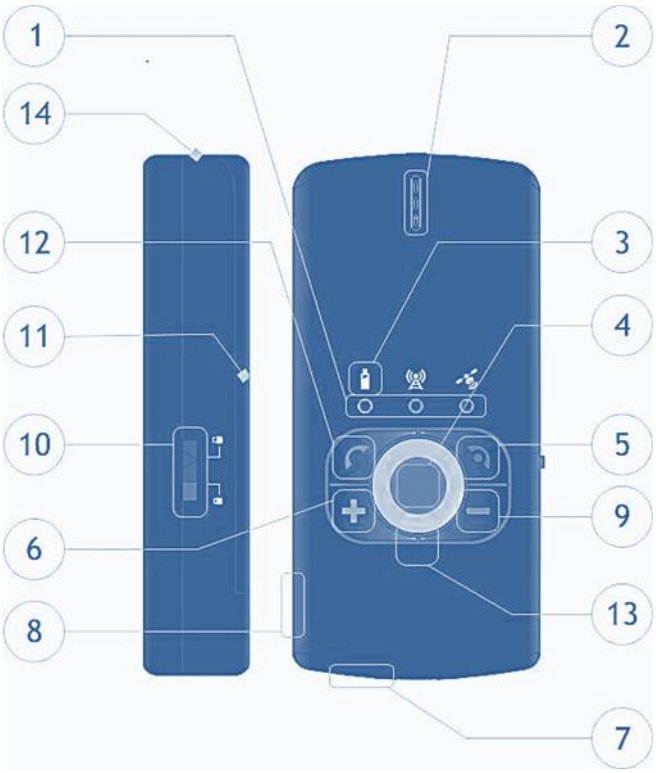
Note!

Only approved batteries, chargers and accessories (optional) supplied by Teltonika should be used with this device. By using other sorts of batteries, chargers and supplements you risk to be deprived of all guaranties and it also may be dangerous for you and your environment.

Note!

GH3000 should be fully charged (100%). If charged not fully (less than 95%) indication of the battery discharge level can be not accurate.

4. GETTING TO KNOW THE DEVICE



1. **LED indicators**

Indicates the status of device.

2. **Speaker**
3. **Icons**
4. **Alarm button**

Activates the alarm function.

5. **End call button**

Turn device on and off, cancel call.

6. **Volume up button**

Increasing speaker volume.

7. **Microphone**
8. **Micro USB connector**

Connector for connection to PC for programming and flashing, charging device.

9. **Volume down button**

Decreasing volume.

10. **Lock/unlock keyboard's switch**

Locks keyboard from unwanted pressing and function activation.

11. **Battery compartment**

Protecting battery from damages and falling down.

12. **Talk button**

Dials, answers a call.

13. **Reset button(inside hole)**
14. **Neck strap hanging place**

4.1 Turning device on

If you wish to turn on the device, push the (5) button and wait a few seconds until green battery LED turns off. After that device will vibrate hardly and play a melody. If device will not turn on, check the lock/unlock (10) switch, it should be unlocked, or charge the battery.

4.2 Turning device off

If you wish to turn off the device, push the (5) button and hold it pressed down until battery LED (1) indicator lights red and green at the same time, then release the button and device will switch off.

Press and hold (5) button, the battery LED turns on.

→

Hold the button pressed down for a while.

The battery LED turns off.

→

Hold the button pressed down for a while.

The battery LED lights red and green at the same time, release the button and the device will turn off.

5. QUICK DEVICE CONFIGURATION VIA SMS

You can configure the device either connecting it to the computer and using Track Assistant software or sending special SMS commands. If an SMS command has been received and accepted then the device will reply with a special confirmation SMS, otherwise the device will not reply at all.
The command and parameter's value are separated by a gap (space).

5.1 Change device configuration password

Before starting the configuration of the device you need to create your own configuration password or leave default value. To create your own configuration password is not necessary, but strongly recommended for security purposes. To create your own configuration password use the command shown below.

psw<*old configuration password*>**ch**<*new configuration password*>

Default configuration password is "0000". When creating a new configuration password use only (aA-zZ) and (0-9) symbols.

Example SMS Message	Response	Result
psw0000 ch1111	Configuration changed	Password changed from 0000 to 1111.

Note!

Remember your created password; you will not be able to change any configuration parameters of the device without it.

5.2 Changing time zone

If the device has never had a fix before or the battery has been removed, the device date will be incorrect (20070101). To synchronize device internal time device needs to receive at least one GPS signal from satellites. Place the device for a few minutes in the open sky and wait until GPS indicator LED will start flashing twice at a time. After time synchronization device time zone will be GMT (00:00). To set your local time zone send an SMS message:

psw<*configuration password*>**gmt**<*+-number*>

Example SMS Message	Response	Result
psw0000 gmt+2	Configuration changed	Time changed from 10:23:22 to 12:23:22.

5.3 Change periodical data logging

By default device is logging its position in the memory every 10 minutes (600 sec.). You can change this time by sending a simple SMS:

psw<*configuration password*>**t**<*time (in sec.)*>

Example SMS Message	Response	Result
psw0000 t3600	Configuration changed	Logging interval changed from 600sec.to 3600sec.

5.4 Change Alarm settings

There are three alarm modes in which device can work: m1 – SMS mode, m2 – Call mode and m3 – GPRS or SMS mode. For more details about these modes please read chapter Alarm function.

Note!

Alarm duration time will be set in seconds. Phone numbers can be set up to five. Alarm duration can't be less than 60 sec.

psw*<configuration password>***alarm***<method>***t***<alarm duration time><phone number>*

Example SMS Message	Response	Result
psw0000 alarm m1 t3600 +37067000000	Configuration changed	Alarm method: SMS, duration time: 3600s,Alarm SMS destination number: +37067000000.

There are two ways to delete phone numbers from the alarm number list; one of them is to delete all phone numbers which are on the list. The first way is:

psw*<configuration password>***alarm del**

Example SMS Message	Response	Result
psw0000 alarm del	Configuration changed	Alarm number list is empty.

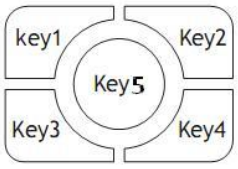
The second one is to delete phone numbers separately:

psw*<configuration password>***alarm del** *<phone number>*

Example SMS Message	Response	Result
psw0000 alarm del +37067000000	Configuration changed	+37067000000 removed from phone number list.

5.5 Change keyboard settings

Every key on the device keyboard has a number and can be configured to make a call to the determined phone number. By default key1, key2, key3 and key4 do not have any set functions. The key5 is already set to turn alarm on. To change keys configuration use a command shown below.



psw*<configuration password>***key[x]** *<phone number>*

Example SMS Message	Response	Result
psw0000 key1 +37067000000	Configuration changed	Function changed from none to +37067000000.

5.6 Change Man-down settings

To learn more about this function please read the chapter Man-down function. To switch this function on/off a quick configuration SMS messages can be used. By default this function is off.

psw<*configuration password*>**mandown**<*on/off*>

Example SMS Message	Response	Result
psw0000 mandown on	Configuration changed	Man-down function enabled.
psw0000 mandown off	Configuration changed	Man-down function disabled.

5.7 Change parking settings

The minimum radius of parking zone is 200 meters. If you use configuration message without the radius, device will set the radius to its default one, or to the radius which was set in the last device configuration. To learn more about this feature please read the chapter Parking.

psw<*password*>**park onr**<*radius*>

Or you can also use

psw<*password*>**park on**

Example SMS Message	Response	Result
psw0000 park on r280	Configuration changed	Parking function enabled, parking self geofence zone 280m.
psw0000 park off	Configuration changed	Parking function disabled.

5.8 Change GPRS settings

Use the simple configuration SMS to configure all necessary parameters for GPRS connection to the server. Information about your server IP address, SIM card connection authentication type, APN (Access point name), user name or password can be acquired from your local supplier of GSM services or device seller. The authentication type can be: 0-none, 1-pap, 2-chap.

psw<*configuration password*>**gprssp**<*sending period in sec.*>**ip**<*IP*>**p**<*PORT*>
apn<*authentication type*>**,**<*Access Point Name*>**,***username*,*password*

Example SMS Message	Response	Result
psw0000 gprs sp60 ip127.0.0.1 p8080 apn2,bigcompany.mnc012.mcc345.gprs,internet,mywap	Configuration changed	Every 60s device will connect to the server and send data stored on its memory. The server data settings: IP: 127.0.0.1, port 8080. GPRS connection settings: connection authentication type-PAP, access point name: bigcompany.mnc012.mcc345.gprs, user name: internet and password: mywap.

In case server does not require a password or a user name, you can send such SMS:

psw<*configuration password*>**gprssp**<*send period in sec.*>**ip**<*IP*>**p**<*PORT*>**apn**<*authentication type*>**,**<*Access Point Name*>

Example SMS Message	Response	Result
psw0000 gprs sp60 ip127.0.0.1 p8080 apn2,bigcompany.mnc012.mcc345.gprs	Configuration changed	Every 60s device will connect to the server and send data stored on its memory. The server data settings: IP: 127.0.0.1 port 8080. GPRS connection settings: connection authentication type-PAP, access point name: bigcompany.mnc012.mcc345.gprs.

Note!

Please pay attention the parameters after the apn should be written without gap (space)

5.9 Battery charge level notification

If you would like to be informed about the battery charge level then the battery notification function has to be configured first. By default this function is on, but you need to set the message destination number. To change battery notification parameters by SMS send the command shown below:

psw<*password*>**battery on**<*phone number*>

Example SMS Message	Response	Result
psw0000 battery on +37060011111	Configuration changed	Device will send SMS message when the battery charge level becomes less than the level is set.

Or you can also use:

psw<*password*>**battery** <*on/off*>

Example SMS Message	Response	Result
psw0000 battery off	Configuration changed	Device will stop sending notification about battery charge level.

5.10 Restore settings to factory default

If your device does not work as you want or has been configured and you do not remember what you have done, do not worry, just restore device settings to factory defaults and try again. You can restore device settings by sending an SMS:

psw<*password*>**restore**

Example SMS Message	Response	Result
psw0000 restore	Configuration changed	All parameters restored to factory defaults.

6. DEVICE MONITORING

6.1 Review device location on the map

Step1

Download and install Google Earth from the internet. It can be found athttp://earth.google.com/download-earth.html. Or just open your internet browser and type http://maps.google.com or http://maps.live.com.

Step2

Send SMS request (Fix?) to get location of the device from your mobile phone. Be sure your device is in the open sky, otherwise device will not find its location.

Step3

Read received SMS message and find the text Fix: <numbers>. These numbers are your device location coordinates. If instead of numbers there is N/A, that means the device could not find its location.

Step4

Open installed Google Earth software and on the left side of the window find the field **fly to**. In this field enter the coordinates you got from the device and press the button **Begin search**. If you use maps on your browser just type the coordinates into the search field and press the search button. After few seconds you will see your device location on the map.

This chapter describes how the functions work, how to use device safely and how to install software. Also, what are the system requirements and what function parameters you can change using this software.

We can do much more **2**

7. FOR YOUR SAFETY

Please read these basic recommendations. In disregarding them you may face danger or trespass existing laws. In case you wish to have more information, please read the brief user manual.

7.1 Switch on safely

Do not switch on the device where it is prohibited to use a mobile phone or when such use may cause disturbances or a danger.

7.2 Safe traffic is the most important

Do not infringe local legislation. When driving, use your hands only for driving the car. The most important thing you have to think of when driving is the safety of the traffic.

7.3 Disturbances

All wireless equipment may be sensitive to disturbances which may have effect on its operation.

7.4 Switch off in hospitals

Follow all restrictions. You might need to switch off when being in the vicinity of any medical equipment.

7.5 Switch off in the means of transport

Follow all restrictions. Wireless equipment may cause disturbances in air traffic.

7.6 Switch off when fuelling

Do not use the device in petrol stations. Do not use it in the vicinity of fuels or chemicals.

7.7 Switch off when being in the vicinity of places of explosions

Follow all restrictions. Do not use the device at places where explosive works are carried out.

7.8 Prepare your computer

Chargers, personal or portable computers to be connected to the device must comply with the requirements of DIN EN 60950-1.2003.

7.9 Use only the batteries supplied by the manufacturer

If an improper battery is inserted, there is a possibility of an explosion or other harm.

7.10 Use the battery safely

Ensure that the battery doesn't have contact with water. When storing, keep the device in a cool, dry place.
Ensure that the battery and device are not exposed to hot surfaces or direct sunlight.
When transporting, ensure that the battery is safe from metal particles and do not keep it with metal rings, chains, etc.Do not damage the battery with nails or sharp objects. Do not try to charge the battery directly from a household socket. This may lead to an explosion or other harm.

7.11 Safely disconnect the device

The device may be disconnected from the PC or charger by pulling out the USB cable from the computer USB socket or by pulling out the micro USB cable from GH3000.
To avoid mechanical damages, it is advisable to carry the equipment in a shock proof package.
The operation environment of the device has effect on its communication quality. If the operation of the device has been disturbed, only qualified maintenance staff may do the repair. It is recommended to send the device to a repair centre or sent back to the factory.

Power supply chains available at a place used for connecting GH3000 must have safety devices (automatic bipolar switch off devices) which protect from power supply excess, short circuit and failure of grounding. The switch off device must be installed at a place which is easy to access. Its power must be consistent with the power of the connected device, and the distance between the contacts must not be less than 3 mm.

8. INSTALLING SOFTWARE

Drivers and software can be found on our website. The software version can be found on the splash screen when the software is loading or the help section of the program.

Minimum system requirements for the software	
Operating Systems (OS)	MS Windows XP SP2/Vista/7 32bit
Disk space	20 MB
Minimum screen resolution	1024 x 768 (Full Screen)
Windows Installer	3.0
Microsoft.Net Framework	v.2 (SP2)

Note!

We are currently working on the support of additional OS. Please contact us or your local seller for further information

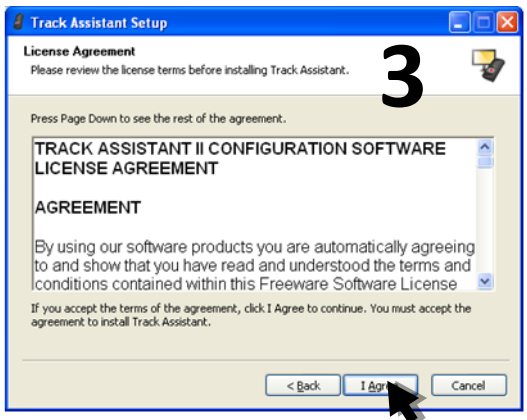
9. CONNECTING DEVICE TO A PC

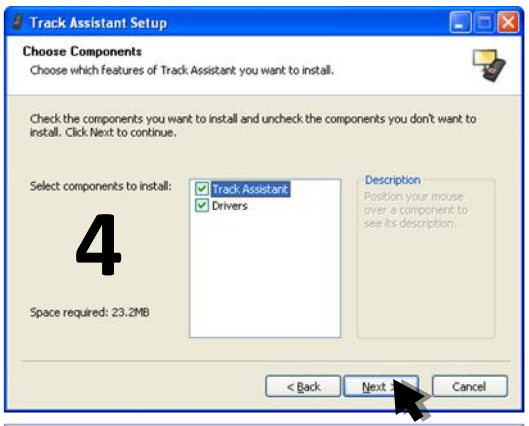
Before connecting the device to a PC it is recommended to install Track Assistant program at first.

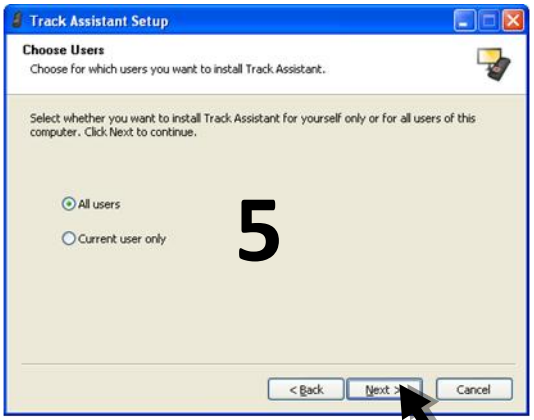
Download the software from our local server and double click on the installation file. The installation wizard will start automatically in several seconds. You will be able to choose your local language on the first window.

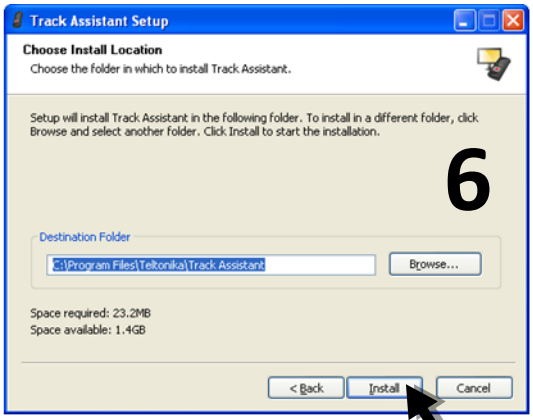
Installer Language
Please select a language.
English
OK
Cancel
1

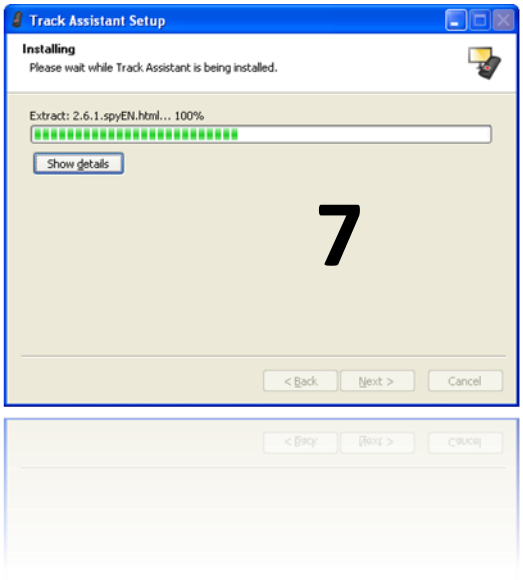
Track Assistant Setup
Welcome to the Track Assistant Setup Wizard
This wizard will guide you through the installation of Track Assistant.
It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.
Click Next to continue.
Track Assistant II
Next >
Cancel
2

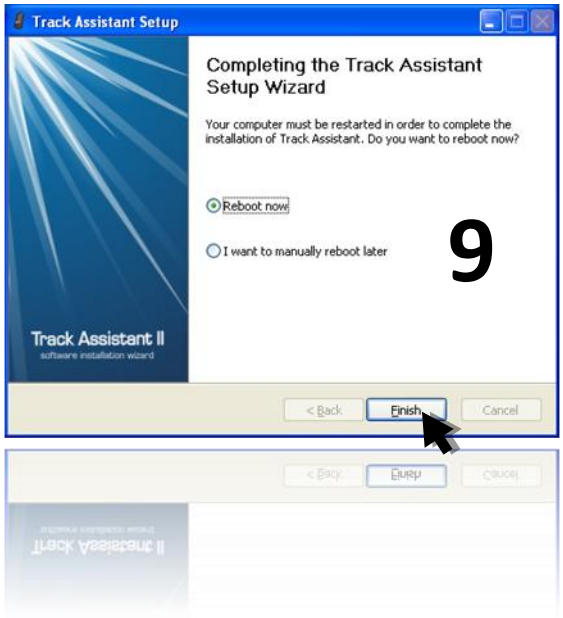

Track Assistant Setup
License Agreement
Please review the license terms before installing Track Assistant.
Press Page Down to see the rest of the agreement.
TRACK ASSISTANT II CONFIGURATION SOFTWARE LICENSE AGREEMENT
AGREEMENT
By using our software products you are automatically agreeing to and show that you have read and understood the terms and conditions contained within this Freeware Software License
If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install Track Assistant.
< Back
I Agree
Cancel
3


Track Assistant Setup
Choose Components
Choose which features of Track Assistant you want to install.
Check the components you want to install and uncheck the components you don't want to install. Click Next to continue.
Select components to install:
Track Assistant
Drivers
Description
Position your mouse over a component to see its description.
Space required: 23.2MB
< Back
Next >
Cancel
4


Track Assistant Setup
Choose Users
Choose for which users you want to install Track Assistant.
Select whether you want to install Track Assistant for yourself only or for all users of this computer. Click Next to continue.
All users
Current user only
< Back
Next >
Cancel
5


Track Assistant Setup
Choose Install Location
Choose the folder in which to install Track Assistant.
Setup will install Track Assistant in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.
Destination Folder
C:\Program Files\Teltonika\Track Assistant
Browse...
Space required: 23.2MB
Space available: 1.4GB
< Back
Install
Cancel
6





Note!

The device has a special configuration mode. The mode will be switched on immediately after it is connected to Track Assistant program. When the device is in configuration mode, all processes, such as GPS data logging and transmission via GPRS, will be suspended. To return the device to normal working mode disconnect it from the program. Device may not work properly for about 10-20 sec. until it returns to normal mode.

10. ALARM FUNCTION

Alarm function - sends alarm data via GPRS, calls or sends special warning SMS messages to one or more set phone numbers. When the Alarm function is activated the device starts searching its location all the time. Being in this mode, device is trying to get the most accurate track. That is why alarm mode draws the most power.

10.1 Alarm function activation

Alarm function can be activated by pressing button (4) (Chapter. Getting know the device) or automatically by events, depending on the configuration and parameters used.

10.2 Alarm configuration

To configure Alarm warning you need to know three basic alarm warning methods: SMS, cycle call, GPRS or SMS. The simplest Alarm configuration can be made in two ways: quick configuration SMS messages (Chapter. Quick configuration via SMS) and Track assistant software.
All the alarm methods have their own parameters, but there are a few basic parameters that are required for all methods.

Basic parameters
Alarm duration time - the device working time after activation of the alarm mode, Alarm track logging period - period, how often the device will write the coordinates in the memory, Pre-alarm time - the time until the alarm will be activated.

Cycle call method
To configure this alarm method you need to create a phone number list.
No answer time - when alarm is active, device will call to the first number in the list. If this number is busy or did not answer after this time limit is reached, device will terminate this call and start calling to the next phone number on the list.
Conversation time and conversation overtime - if the call will be answered device starts counting conversation time. When the conversation time reaches its limit, the device will make a warning notification and start counting Conversation overtime. When the conversation overtime reaches its limit, the device will terminate the conversation and start calling to the next phone number on the list.
Time for alarm stop - if the conversation time or overtime reaches or the call is ended by the caller or recipient the device will start counting the alarm for alarm stop parameter. When it reaches, if there is no request for call termination and alarm has not stopped, the device will start calling the next number in the phone number list.

GPRS or SMS method
To configure this alarm method you need to configure data logging period, alarm duration time, SMS messages sending period and create a phone number list.
Basically this method works only with GPRS, SMS method helps if there are some problems with server or GPRS and transferring data to server becomes impossible. In that case device starts sending SMS to the recipients added in the list until GPRS starts working again.

SMS method

Similar as in the GPRS or SMS method you need to configure data logging period, alarm duration time, SMS messages sending period and create a phone number list.

Note!

Parameters conversation time, overtime and time for alarm stop are made to avoid the fake situations such as unlimited time for a voice mail or operator notification about turned off mobile phone or out of GSM coverage.

11. CALL FUNCTION

11.1 Call function configuration

Before making a call from the device, you need to set up the phone number to call on the device keyboard. It can be done in two ways: quick configuration SMS message (Chapter. Quick configuration via SMS) or use Track assistant software. In the available keyboard functions list choose function Call and enter the phone number.

11.2 Call function activation

When the configuration is made press the button you configured and the device starts the call. The call process will be indicated by LED indicators.

11.3 Answer incoming call

An incoming call is indicated by LED indicators and a ringing tone. To answer an incoming call simply press button (12) and you will start the conversation.

12. MODEM EMULATION FUNCTION

Device can be connected to the PC through the USB port and after activating modem emulation function, it can be used as normal GSM/GPRS USB modem. When this function is activated the device can be controlled by AT commands. Note that modem emulation function can be activated only when the device is connected to the PC. Once activated the device can connect to the internet, transfer or receive data.

12.1 Modem emulation function configuration

To activate modem emulation function you need to set up this function on the button. To perform this, use Track assistant software.

Note!

If the modem emulation mode is enabled the device functions that worked before do not work anymore. Turn off the modem emulation if you want to use them again.

12.2 Modem emulation function activation

When the configuration is made press the button you configured and device enters into the modem emulation mode. When the device is working in modem emulation mode process will be indicated by LED indicators. To turn off this mode press configured button or simply disconnect device from the USB cable. You can connect to the internet after creating a dial-up modem on your PC. To learn how to do this please contact our support engineer or local seller

13. GEOFENCE FUNCTION

A Geofence is an area set up with invisible boundaries to monitor movement of your assets. Device will inform you about movement into and out of an area by a special SMS message. This function is activated by configuring your device with Track Assistant. To configure geofence the MS MapPoint software is required.

13.1 Geofence function configuration

To create your geofence zone you need Track Assistant software. Geofence zone can be a circle or polygon. Maximum number of any type of zones can be created up to 50, maximum corners of polygon is 10.
The maximum number of phone numbers to which the device will send SMS messages is 2.
If the device will detect that the zone is crossed, it will send an SMS message to the numbers filled in the Notify numbers fields. When the geofence is configured, it's possible to set its activation time on the Time scheduling table.

14. CONFIGURATION SECURITY

There is a possibility to protect the existing configuration. If the configuration password has been set, then the user must enter the configuration password to read or change the current configuration.

The wrong configuration password can be entered five times – after that the device will be blocked. To unblock the device you will need to enter the RPC (Remove password code) code. The wrong RPC code can be entered 20 times – after that the device will be blocked for good.

If the configuration password has been set, then the requests and the configuration SMS are password-protected.

The format of configuration SMS and requests is:

Note!

Request: *PSW:<password>; fix?*
Quick configuration: *PSW<password> Park on r450*

15. MAN-DOWN FUNCTION

This function monitors how the device base position angle is changing. If the angle changes by more than 45± 10 deg., the device activates the alarm function and starts sending data using one of the established methods.

15.1 Man-down function settings

This function can enable or disable man-down using the quick configuration SMS messages. To change other settings for this function, such as Base position, use Track assistant software.

Note!

If the device has changed its angle but there it is not an alarm situation, in order to avoid false alarm activation it is strongly recommended to user-alarm warning signal. When the pre-alarm warning signal is enabled you will be able to hear if the alarm is preparing to start and stop it if it is not necessary.

16. AUTHORIZED INCOMING CALL

The device has an authorized call telephone number list. It will reject all incoming calls if the authorized call number list is enabled and there are no numbers listed. If there are numbers on the list, then only the phone numbers, which are listed, will be allowed to call and all other callers will be rejected.
Rejected incoming calls will not be indicated by sound signals and LED indicators.

16.1 Authorized call number list configuration

The parameter Enable authorized incoming calls activates the authorized phone number list. This parameter can be changed with Track Assistant software. The authorized phone number list can contain up to 10 phone numbers.

17. AUTHORIZED SMS NUMBER LIST

The device also has an authorized SMS telephone number list. The device can respond to queries from subscribers who are listed. It will ignore received queries if the list is activated, but it does not contain any entries.
If you want the device to respond to queries regardless of what they received, turn off the authorized list.
All received SMS requests make special audio signal, if it has not been disabled.

17.1 Authorized SMS number list configuration

The authorized SMS number list can contain up to 10 phone numbers.

18. ACTION ON CALL FUNCTION

This is the automatic function activation by a call. When device receives a call from the phone number which is configured in the phone number field of this function, the device will reject the call and perform the function set in the settings.

18.1 Action on call configuration

The settings of this function can be configured with Track Assistant software.
There are three basic parameters: *Activation number* – the phone number which activates the selected function.
Function - the field where you can choose which function you will activate when the device receives a call from the activation number.
Phone number – redirects the chosen function to the phone number set in here (this field is not always required).

19. SMS TRACKING

The device has a function that periodically sends an SMS message with the coordinates to a specified number.

All sent data will be also saved in the memory and it could be reviewed.
What will be the SMS the user can set using Track Assistant software.
By default device sends: Message identification word (FIX!), device id (GH3000), IMEI number (IMEI), time (Time), device location (Fix), number of visible satellites (Sat), operator code (Op), GSM station number (Cell), GSM signal level (Sign_Lvl) and battery charge level.

19.1 Function activation

Function can be activated using a quick configuration SMS message or Track Assistant software. Maximum SMS (messages with the data) transmission period can be 2 messages per minute.

20. A-GPS FUNCTION

Assisted GPS, generally abbreviated as A-GPS, enhances the start-up performance of a GPS satellite-based positioning system under poor GPS visibility conditions (when only 2 satellites are visible). In all other cases A-GSP may lead to additional GPRS-traffic costs and processing time due to the A-GPS file download and handling. For more information please visit: http://en.wikipedia.org/wiki/Assisted_GPS

20.1 A-GPS function configuration

Use the Track assistant to configure A-GPS parameters. Using software you will be able to set up A-GPS data update timer.

21. LOW BATTERY LEVEL NOTIFICATION MESSAGES

The device monitors the battery charge level all the time and when the charge level becomes less than set, you will be notified about it by an SMS message. There is a possibility to be informed when the battery fully charges and the device is ready to be used.

21.1 Function configuration

You can choose a couple modes of configuration: the device does not send any notification about battery charge level or the device sends a notification when the battery discharges to a set value or the device discharges to a set value and is charged fully.

You change the battery charge level when device sends the notification messages using Track Assistant software.

A very important parameter is the phone number to which the device will send SMS messages about battery charge level. This number can be configured using quick configuration messages or Track Assistant software.

When changing the parameters of the discharging battery indication, take notice what you are changing – the battery charge level notification by SMS or by LED indication. These are separate parameters and can work separately with different configured charge levels.

Note!

Please have in mind that the battery charge level measurement can have an error of±5-10%. This error depends on the state and quality of the battery.

22. SIM PIN CODE

If an unsuitable SIM card has been inserted or the device fails to detect it, the device restarts automatically and tries to start the connection again (if the SIM card is not inserted the device restarts three times).

If a SIM card with an activated PIN Code has been inserted into the device, it will not be able to connect to the GSM network and perform certain functions. Therefore, if you want the device to be fully operational, the PIN code must be removed using a mobile phone, if available.

Otherwise, the PIN code can be entered using Track Assistant software. The program will automatically open a window where you can enter the PIN code. Now the PIN code will be remembered by the device and will always beused when the device is switched on. If you use a different SIM card with the same device, the new PIN code has to be entered again.

Note!

Please pay attention, if the GSM indicator is blinking red, the PIN code maybe enabled on your SIM card. The PIN code can be entered within the window of Track Assistant software.

23. SOUND INDICATION

The device has the possibility to play a certain sound: for incoming and outgoing SMS, when a function is enabling and disabling, the battery charge level becomes critical and rings when someone is calling.

23.1 Sound indication configuration

All sounds, such as incoming and outgoing SMS message notification and etc., can be enabled/disabled using Track Assistant software.

24. VIBRATION

Device can also vibrate on incoming call or receiving an SMS message and etc.

24.1 Vibration configuration

The vibration can be enabled/disabled using Track Assistant software.

25. MINUTE MINDER

The device beeps every minute, thus informing you of the call duration.

26. LIST OF SUPPORTED MAPS

The program is designed in a way that it will detect a digital map or maps if they are installed on your PC. If the user has installed just one digital map, the map list in Track Assistant will show the installed map. The program is able to process these digital maps:

a) Microsoft Map Point (tested with 2002, 2009);
b) Google Earth (Automatically creating the KML file only);

27. PARKING FUNCTION

This function allows you to know if your assets are moving out of its safety zone. After it moves out of the safety zone the device starts the configured alarm mode.

27.1 Parking configuration

Parking function can be configured by configuration SMS messages or Track Assistant software. Configuring it is important to configure the fence and alarm configurations. If you want to activate or deactivate the function by button you will need to set up the keyboard as well.
The basic configuration parameters of this function are:

a) The dimension of the fence which is around the asset has a minimal fence radius of 200 meters.
b) The form of the fence which can be set is a circle only. The device creates the zone after it finds a fix of its coordinates.

How the function will be activated or deactivated depends on your choice.

27.2 Parking activation/deactivation

Parking function can be activated by SMS or button.
Parking function can be enabled in whatever mode the device is working in, except when the alarm is enabled, there is an active conversation or an incoming call. When the device receives the command to activate the function it immediately finds its location and defines the safety zone and activate the alarm when the device leaves this zone. If there is no possibility to find its location, it will activate the alarm on movement detection.

28. AUTO ANSWER FUNCTION

This function counts ringing tones when you are calling. Depending on the set configuration, the device can answer an incoming call without pressing the answer button.

28.1 Auto answer configuration

Auto answer function can be configured only with Track Assistant software. You can set up the number of rings after which the device will answer an incoming call.

29. SILENT CALL FUNCTION

Silent call is a unique function which allows you to hear what is happening around the device without any indication. This can be done by sending a simple request SMS (spy). After receiving such an SMS, the device immediately disables its speaker, increases sensitivity of the microphone and calls back to the request sender.

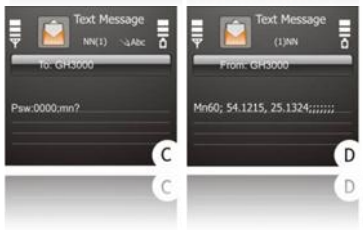
29.1 Silent call configuration

Silent call function can be configured with Track Assistant software and via SMS. You can enable or disable this function.

30. SPECIAL SMS REQUESTS

Special requests – these are special text messages which check the GH3000 device's status and provide response via SMS to the requesting person. Example: The requesting person sends an SMS with the content FIX? The device receives such an SMS message and will send back a status SMS.

FIX? – GH3000 turns on the GPS receiver (if satellites are available), gets its location and sends it (in case of reception) to the requesting person. If no current coordinates are detected, the device sends the latest coordinates (date/time) from its internal memory.



MN? – NAVIGON Mobile Navigator 6 ® (Version 6.3 or higher). After receiving such an SMS, GH3000 sends back an SMS to the mobile phone and you will be able to see the GH3000 position with the NAVIGON software (on the NAVIGON Map).
Restricted to Mobile Phones operating on Symbian Series 60 basis. You need to have the licensed NAVIGON Mobile Navigator 6 Software, Version 6.3 or higher, for this service. Please contact NAVIGON or Teltonika for further information. Please refer to the official Navigon website for map coverage of your country.

Smstrack on is a special request message (F) which activates the SMS tracking function.
To turn off this function use an SMS message with the text Smstrack off. (E)

If the device receives a request with the text Geo? (G) It finds its location and checks if it is in a set geofence zone and sends an SMS message with the information about these zones. (H)

ALARM: OFF – GH3000 will disable the ALARM. (I)
When the alarm method is set to Call, the device calls to all phone numbers in the list and saves its location until the Alarm duration time is reached. The message Terminate (J) will stop the calling process, but will not stop the alarm.

INF? – GH3000 will send information about its status (L).

TRACK? – GH3000 will send all collected records from internal memory to the Server (via GPRS, Server Solution needed).

31. NMEA FUNCTION

NMEA (National Marine Electronics Association) is a standard adapted for use in a variety of third-party mapping software programs.
Using this function you are able to connect your device to a PC where mapping software program installed and use the device as a simple GPS signal receiver for real time tracking.

31.1 NMEA function configuration

This function can be configured using Track Assistant software only. To use this function on one button configure NMEA on - to turn the function on and another button NMEA off - to turn the function off, on the device keyboard. Or configure NMEA switch - to turn the function on/off using the same button on the keyboard.

31.2 NMEA function activation/deactivation

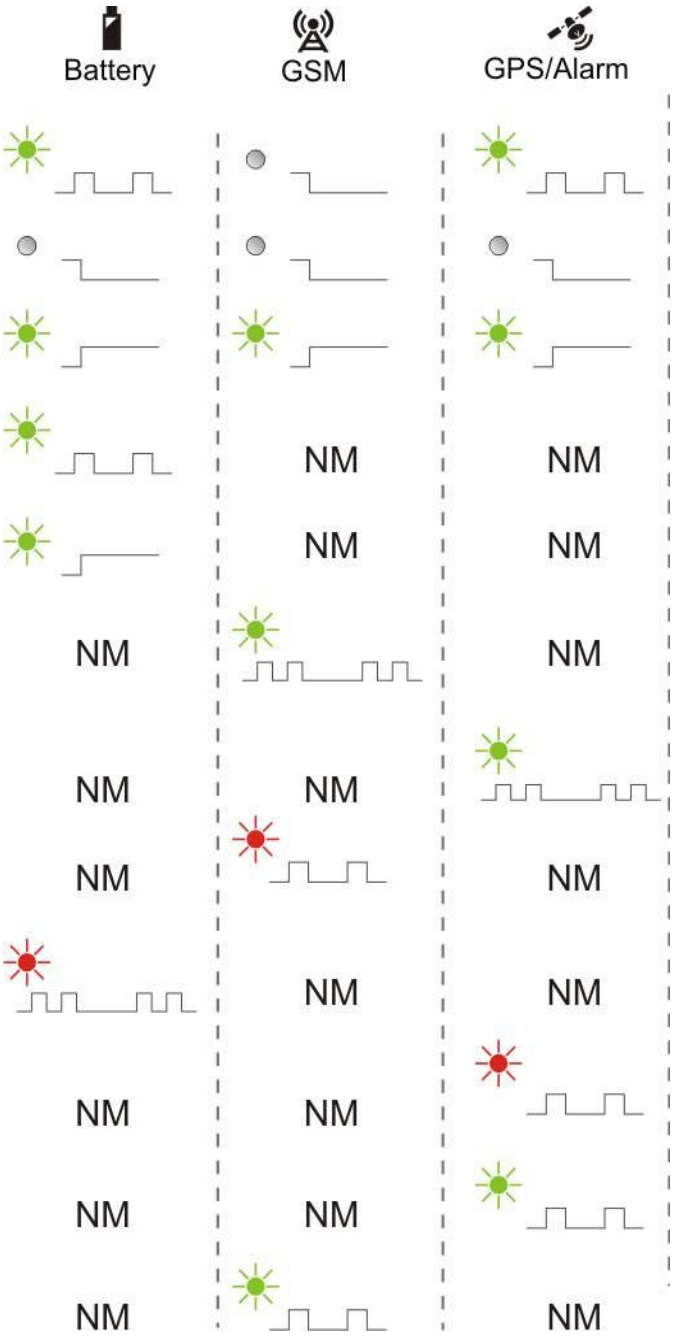
This function can be enabled using buttons on the keyboard only. To deactivate this function just disconnect the cable from the PC.

Note!

If the NMEA function is enabled, the device functions that worked before do not work anymore. Turn off NMEA if you want to use them again.

32. INDICATING THE STATUS

If you wish to find out in which mode and what the device is doing at the time, observe as carefully as possible the status of the three indicators.
Each status indicator consists of 2-colored lamps - one of which is indicating a failure (red) and the other one is indicating a process in progress (green). The red GPS/ALARM indicator, which shows that the Alarm (warning signal) mode is on, is an exception.



Device is in the NMEA mode

Device is turned off/in sleep mode

Device is in the modem emulation mode

Charging the battery

Battery is charged fully

Device has opened a GPRS session/active incoming call/active outgoing call

Device found its location

GSM Error (PIN enabled/no operator/bad SIM card)

Reached the critical battery charge level

Alarm enabled

Device searching its location

Device registering to GSM network

NM - means that it's no matter what LED indicator is blinking at the current moment.

33. DEVICE CHARACTERISTICS

33.1 Specifications of the device

Specification	
GPS Receiver	uBlox 50-channels
Sensitivity	Indoor GPS: -160 dBm
Internal Antenna	Patch
GSM frequencies	Dual-Band 900/1800 or 850/1900MHz
Vibro	Yes
Keyboard	5keys
Keyboard lock	Yes
Battery	1050mAh (Li-ion)
LED indicators	3
Weight	80g
Dimensions	92x44x18
Internal memory	1MB
Rec. operating temperature	0 up to 50C
General operating temperature	-20 up to 60C
Data transferring	
Supporting GPRS protocol	TCP/IP or UDP
Real time NMEA (0183) via USB	Yes
USB connector type	Micro USB
Configuration	
USB	Yes
SMS	Yes
Functions	
SPY call	Yes
Action On Call	Yes
Low battery level alarm messages	Yes
Voice call	Yes
GSM modem emulation mode	Yes
Man down	Yes
Geofence zones	Yes
circles	total up to 50 zones
polygons	
Support AGPS	Yes
Alarm notification methods	Voice call, SMS, GPRS, GPRS or SMS
Roaming detection	Yes
Incoming SMS notification	Yes
Outgoing SMS notification	Yes
SMS templates	Yes
Configuration protection	Yes
Authorized SMS p.n. list	Yes (up to 10 phone numbers)
Incoming Call authorization p.n. list	Yes (up to 10 phone numbers)
Device status identification via GPRS	Yes
Data transferring by request	Yes
Tracking by SMS	Yes
Parking	Yes

33.2 Battery life time

Transmissions per 24 hr.	1440	24	1	1440
Fixes per 24h	17280	480	24	1440
Duty cycle	100%	27%	10%	90%
Life Time (hr.)	4	96	250	>6

33.3 Electronic specification

Parameter	Min.(aver.)	Norm. (aver.)	Max. (aver.)
Supply voltage	4.5V DC	5V DC	5.5V DC
Current	2mA	60mA	100mA

34. MAINTENANCE AND REPAIR

This device is a high-quality design product; therefore, it should be handled carefully.

The following advice will assist you in meeting the guarantee requirements:

- Do not let the device get wet. In the precipitation, humidity and all sorts of liquids there may be minerals which may be the cause of corrosion of electricity chains. If your device got wet, take out the battery and let the device get fully dry; afterwards, insert the battery again.
- Do not use or keep the device in dusty and dirty places. Its moving and electronic parts may be damaged.
- Do not keep the device in high temperatures. High temperature may reduce the life time of the electronic parts or damage the battery and deform or melt some plastic parts.
- Do not keep the device in a cold environment. If the device warms up to room temperature, humidity may start condensing which may cause the failure of electricity circuit boards.
- Do not try opening the device except as specified in this User Manual.
- Do not throw, knock or shake the device. By handling it this way you can break internal circuit boards and small moving parts.
- Do not clean the device with strong chemicals, solutions or cleansing agents.
- Do not paint the device. The paint may block the moving parts and prevent them from operating well.
- Use the supplied or approved antenna only when it needs to be changed. Antennas which are not approved, their improvements or supplements may damage the device. By using supplements which are not approved you may also infringe the legislation in the field of the use of radio equipment.
- The chargers must be used indoors only.
- Before handing your device to the repair centre, make sure that its settings are stored within the Track Assistant Configuration Tool.

All these recommendations are equally important for your device, battery, charger and any other supplement. If any of the devices do not function properly, bring it for examination to the nearest authorized repair centre.

This sign on the packaging means that the electric and electronic equipment to be utilized must be stored separately.

This sign on the packaging means that the User Manual must be read before making use of this product.

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