Handheld GPS/GSM Tracker

GH1201

User Manual v1.10

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1. PREFACE

INTRODUCTION

GH1201 is a device with built-in functions characteristic of a mobile phone and an integrated GPS receiver. This device is intended for the surveillance and protection of people, cargo and objects. The GPS receiver may define the current location of the device and sends this data to a person in charge or the operation centre.

PROTECTION OF COPYRIGHTS

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 Centre (TAC) by e-Mail support@teltonika.lt or contact your local vendor. We would be pleased to be of any assistance to you.

FOR YOUR SAFETY

Please read these basic explanations. In disregarding them you may face danger or trespassing of existing laws. In case you wish to have more information, please read the concise user manual.

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 danger.

SAFE TRAFFIC IS THE MOST IMPORTANT

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

DISTURBANCES

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

SWITCH OFF IN HOSPITALS

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

SWITCH OFF IN THE MEANS OF TRANSPORT

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

SWITCH OFF WHEN FUELING

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

SWITCH OFF WHEN BEING IN THE VICINITY OF PLACES OF EXPLOSIONS

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

PREPARE YOUR COMPUTER

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

CONNECT THE DEVICE TO THE COMPUTER

Computers to be connected to the device may be stationary or portable having an USB connection.

CHARGER

Chargers and personal computers must comply with the requirements of DIN EN 60950-1.2003.

USE ONLY THE BATTERIES SUPPLIED BY THE MANUFACTURER

If a battery of an improperly sort is inserted, there is a possibility for explosion or other harms.

USE THE BATTERY SAFELY

Ensure that the battery is not immersed in the 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.

Do not mix the polarity of wires when connecting the battery to the device.

Ensure that the positive and negative poles are protected from short circuit.

When transporting, ensure that the battery is safe from metal articles and do not keep it with metal rings, chains, etc.

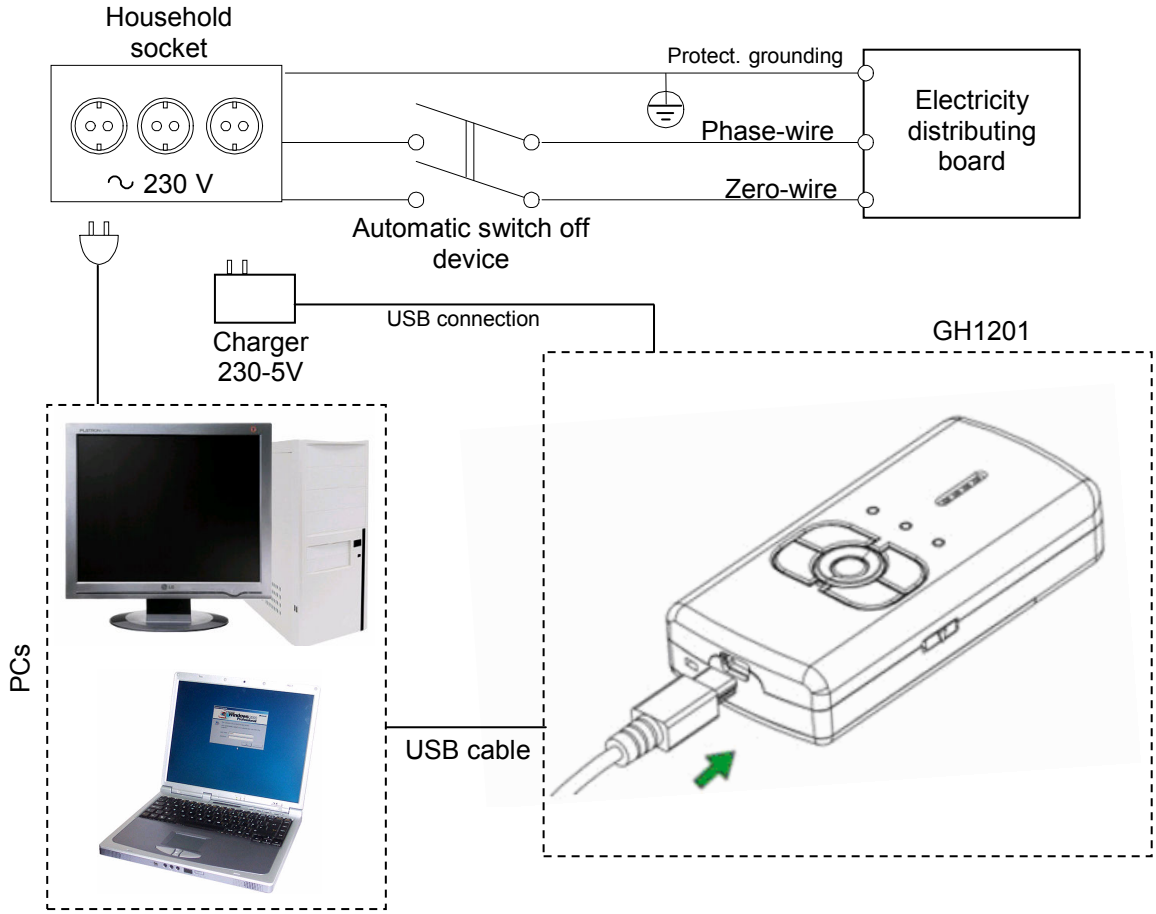
Do not damage the battery with nails or sharp objects.

Do not try to charge the battery directly from a household socket. This may lead to explosion or other harms.

To avoid mechanical damages, it is advisable to carry the equipment in a blow-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 deliver the device to a repair centre or back to the factory.

Power supply chains available at a place used for connecting GH1201 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.



SAFELY DISCONNECT THE DEVICE

The device may be disconnected from the PC or charger by pulling out the USB connection from the computer USB socket or by pulling out the mini USB connection from GH1201.

2. GENERAL INFORMATION

2.1 PACKAGE CONTENT

GH1201 is supplied to the client packed in a cardboard box with all supplements that are necessary for operation. The set consists of:

- Handheld GPS/GSM Tracker GH1201
- Li-Ion or Li-Pol 750mAh battery 3.7V
- USB – mini USB cable
- 230V – USB charger
- SETUP CD-ROM with User's Manual and Software
- Printed User's Quick-Start Manual
- Mini Screw Driver
- Neck Strap

Note: The manufacturer's set does not include any 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 SPECIFICATIONS OF THE DEVICE

GPS receiver	SiRF Star III 20 channels
GPS antenna	Internal
GSM frequencies	Quadband GSM 900/1800 MHz and 850/1900 MHz
GPRS	Class 10 data
Voice calls	Yes
Vibro	Yes
Data transfer	SMS or GPRS
Connection to a PC	USB
Transmission of NMEA Code	USB
Configuration	SMS or USB
Internal memory	1MB
Buttons	6
Lock for keyboard	Yes
Battery	Li-Ion or Li-Pol 750mAh 3.7V
LED indicators	3 (Battery, GSM, GPS/Alarm)
Dimensions (mm)	91 x 44 x 19
Standby time (GPS off / GPRS off)	336 hours*
Working time (GPS always on / GPRS off)	6 hours*
Working time periodically switching on GPS (time: 1 hour)	120 hours*
Recommended operating temperature	0 up to 50ºC
General operating temperature	-20 up to 60 ºC
Weight	80g

* More powerful batteries may be purchased as additional accessories

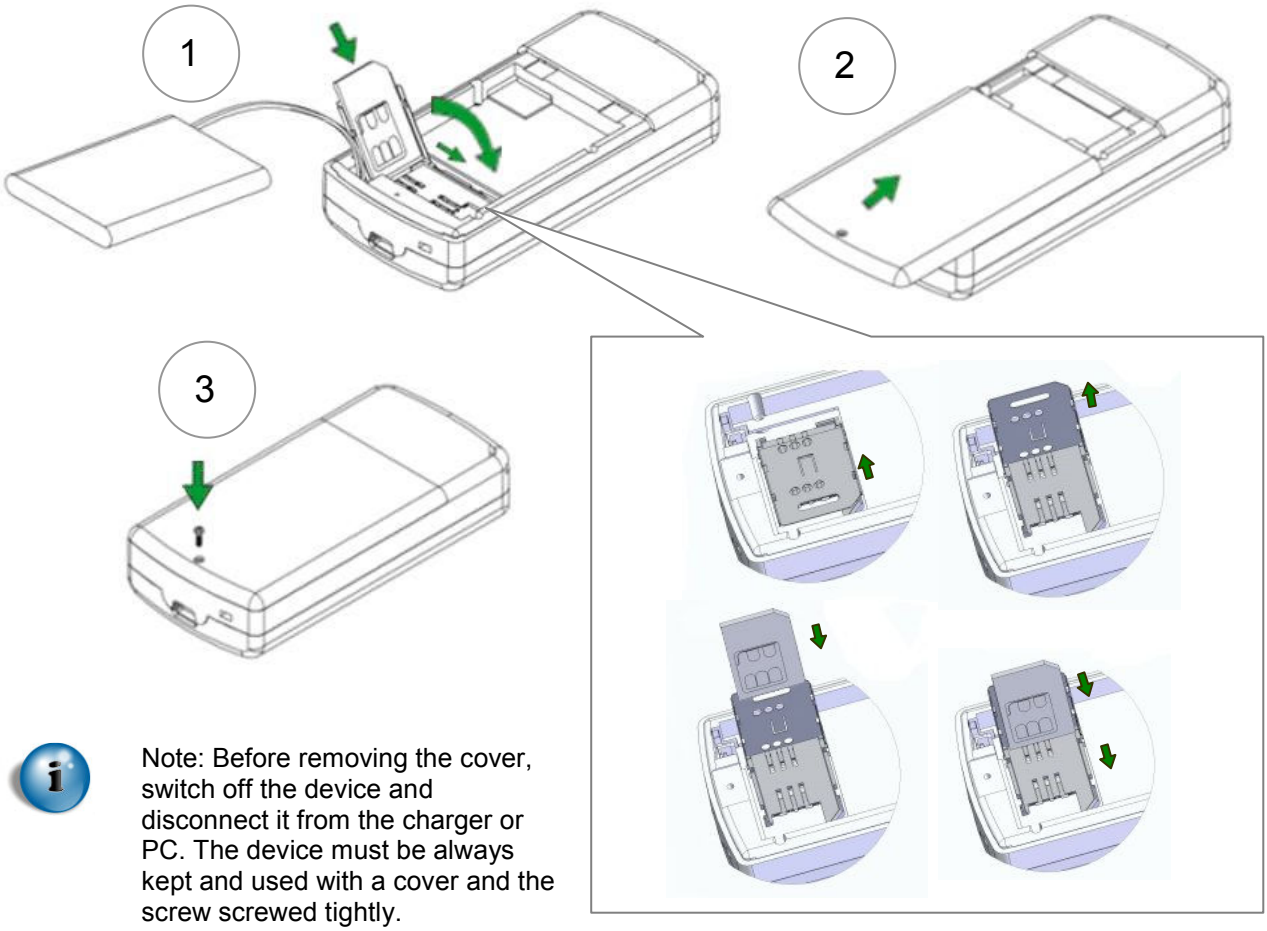
2.3 ELECTRONIC SPECIFICATIONS

Parameter	Min	Norm	Max
Supply voltage (DC)	4.5V	5V	5.5V
Use of electric current	2mA	360mA	2500mA (10ms)
Battery voltage (DC)	3.7V		4.2V
Charger voltage (DC)	4.5V	5V	5.5V
Charger electric current	600mA		1000mA

3. GETTING STARTED

3.1 INSERTING SIM CARD AND BATTERY

All SIM cards must be kept in a save 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. The SIM card must be inserted in the way as set 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.

To insert the battery correctly, please connect its connector to the connector of the device. Afterwards hold the battery so that the wire of the battery is directed to the left. Bend the wire carefully and put it along the left internal side of the device. Now put the battery along the left side of the device over the wire and insert it into the device.

3.2 CHARGING THE BATTERY

By connecting the device to one of the USB connectors of a PC or by using the 230V – 5V charger available in the set, it is possible to charge the internal battery of the device. For the first time, it is advisable to charge the battery using the 230-5V charger (not via PC).

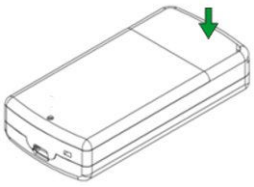
1. Connect the charger and the device by using an USB cable.
2. Plug the charger in the alternating current wall socket.

After the device is connected to the PC or alternating current wall socket, the battery charging will start. Charging is indicated by the indicator which is present on the GH1201 (see Indicators of the device). If, for the first time, the device has been connected with an empty battery, the indicator starts to flash just after several minutes.

Note: Only approved batteries, chargers and supplements 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 may also be dangerous for you and your environment.

If an unsuitable SIM card has been inserted or the device fails to detect it, the device will reload automatically and tries to start the connection anew (if SIM card is not inserted the device will reloads three times). If the reconnection fails, the device will show it by its indicator (Indicators of the device).

If the card has been inserted later, the device must be switched off and switched on again or has to be reloaded.



Note: As with any other radio communication transmitters, do not touch its antenna. Touching the antenna may be a cause for deterioration of the communication quality and the device may use more energy as usual. The antenna of the device will operate better and its battery will discharge slower if the surface of the antenna will not be subject of touching when in use.

4. INSTALLING SOFTWARE

Drivers and software necessary for installing are written on a SETUP CD-ROM disk supplied with the device. TELTONIKA recommends to check www.teltonika.eu for software updates. The software version indicated on the splash screen.

Minimum system requirements

Operating Systems (OS)*:	MS Windows 2000 SP3 or MS Windows XP SP1
Disk space:	20 MB
Minimum screen resolution:	1024 x 768 (Full Screen)
Windows Installer	3.0

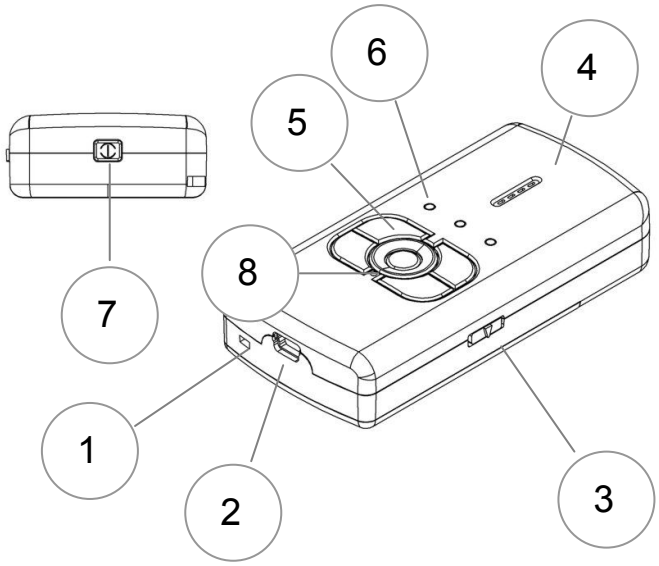
* We are currently working on the support of additional OS. Please contact us or your local seller for further information.

All components required for the **Track Assistant Software** are available in the set of the device; however, should you fail to find it, try downloading it from the official website: www.teltonika.eu.

- Insert the CD available within the set into the CD driver.
- The installation of the software starts by activating the Setup.exe file available in the catalogue ...\Drivers Installation Files\Setup.exe
- Install the **Track Assistant Software** by referring to the information indicated within the related windows.

5. GETTING TO KNOW THE HANDHELD GPS/GSM TRACKER

1 – Microphone
2 – USB connector
3 – Lock switch for the keyboard
4 – Speaker
5 – Keyboard
6 – Indicators
7 – Switch On / Switch Off button
8 – Reset Button



Button	State	Description
	On Call	Mute
	Incoming Call	Answer incoming call
	On Call	End call
	Incoming Call	Reject incoming call
	On Call	Decrease device speaker volume
	Incoming Call	Answer incoming call
	On Call	Increase speaker volume
	Incoming Call	Answer incoming call
	Normal	Track switch
Alarm	On Call	End call

Note: (7) By a push on the (Switch On / Switch Off) button, the device can be switched on or off.

If you wish to **switch on** the device, push the button shortly. After a short time the indicator lights up and a special switch-on signal appears. GH1201 will switch immediately into the standby mode.

If you wish to **switch off** the device, push the button until all three indicators light up and then release the button. Now you will hear the special switch off signal and the indicator will light up red/green.

If you continue to push the button even after all three indicators light up the switch off process will be cancelled and a cancellation signal can be heard.

5.1 CONNECTING TO A PC

Before connecting the device to the PC it is recommended to install Track Assistant program at first. When the software installed, GH1201 can be connected to a stationary or portable computer by using an USB data cable. Please wait until the computer detects the new device and it will switch on automatically. Afterwards, activate the **Track Assistant Software**.

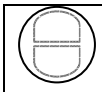
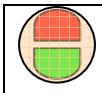
6. DEVICE INDICATORS

6.1 INDICATING THE STATUS

If you wish to correctly find out the parameters under which the device operates, observe as carefully as possible the status of the three indicators.

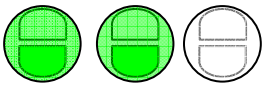
Each status indicator consists of 2-coloured lamps - one of which is indicating a **failure** (red) and the other one is indicating a **process in progress** (green).

The red **GPS/ALARM** indicator, which signals at the time of **Alarm** (warning signal), is an exception.

		Battery	GSM	GPS/ALARM
	**Indicator Off**	Device on stand-by	Device on stand-by, Connected to GSM Network	Device on stand-by
	**On**	Battery fully charged		
	Flashing	Battery is charging	Trying to connect to the GSM network, Data Transfer, Call Initiation	Device is trying to find the location
	Flashing twice at a time			Device did find the location
	**On**		SIM error / impossible to detect the GSM network (when on stand-by)	
	Flashing		SIM error / impossible to detect the GSM network	Alarm signal activated (ALARM)
	Flashing twice at a time	Battery has reached a critical level		
	**Both indicators on**	Device is switching off / reloading		

6.2 INDICATING A BUTTON PUSH

If GH1201 is in standby mode you can check if the device is powered with a short button push. The standby check is possible with each button on the keyboard. If the device is powered, the Battery LED will lighten green.



Each button on the keyboard may have a special function and can be configured with the **Track Assistant Configuration Tool**. You can activate the button function like this: After you have started to push the button, the **Battery** indicator turns on but there is no sound signal; if you keep on pushing the button, the **GSM** indicator turns on as well and a sound signal (a beep) can be heard. Now the button has to be released and the device will execute the button function.

The button function can be recalled directly: If you keep on pushing the button after the first sound signal a second signal (deeper signal, cancellation notification) will be heard and the **Battery** indicator turns on. Now you can release the button and none button function will be executed at all.

Note:If the keyboard is locked, it will not be possible to switch on the device at all. If you keep on pushing the switch-on button, the device will switch on and off immediately. If the keyboard is locked, the device does not react to any button push. The only exception is the Alarm button. Please view the **Track Assistant Configuration Tool** explanation for further details.

6.3 SOUND INDICATION

Action	Sound signal
Function activated	one short beep
Function turned off	two beeps (high and low)
Error	one short low tone beep
Device switching on	special sound signal
Device switching off	special sound signal
Outgoing SMS Notification	one short beep
Outgoing SMS Error Notification	two low tone beeps
Incoming SMS Notification	special sound signals
Alarm Actuation Delay	special sound signal

7. SPECIAL SMS REQUESTS

Special requests – these are special text messages which are checking the GH1201 device status and provide response via SMS to the requesting person. Example: The requesting person sends a SMS with the content FIX? using a Mobile Phone to GH1201 and GH1201 will send back a status SMS.

The special requests are:

FIX? – GH1201 starts the GPS receiver (if satellites are available), gets location and sends it (in case of reception) to the requesting person. If no current coordinates will be detected GH1201 will send the latest coordinates (date/time) from its internal memory. In the Log Tracking Modus stored data will be sent immediately after request.

Location is available

FIX! Id:GH-1201 Imei:35397601XXXXXXX
Time:YYYY.MM.DD HH:MM:SS
Fix:54.1215, 25.1324 Sat:9 Op:24602
Cell:030B Sign_Lvl:26 Bat_Lvl:94

Location is not available*

FIX! Id:GH-1201 Imei:35397601XXXXXXX
Time:YYYY.MM.DD HH:MM:SS **Fix:N/A**
Sat:N/A Op:24602 Cell:030B Sign_Lvl:26
Bat_Lvl:94

* N/A will only be sent if no data is available within the internal memory

INF? – GH1201 will send all information about it´s status.

INF! Id:GH-1201 Imei:35397601XXXXXXX
Time: YYYY.MM.DD HH:MM:SS
Version:HH_1.X.X.X CF:1 Live:21511
Op:24602 Cell:030B Sig_Lvl:32 Bat_Lvl:94

GEO? – GH1201 will check in which Geofence zone[1] it is and if it is inside - will send the Geofence zone name.

Device is in the Zone(s)

GEO! Id:GH-1201 Imei:35397601XXXXXXX
Time: YYYY.MM.DD HH:MM:SS Fix:54.1215,
25.1324 Sat:9 Bat_Lvl:94
Geo: ZONE_NAME

Device is out of the Zone(s)

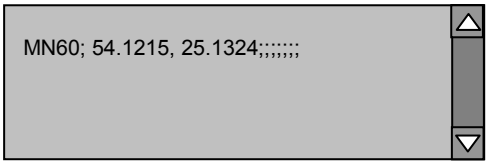
GEO! Id:GH-1201 Imei:35397601XXXXXXX
Time:YYYY.MM.DD HH:MM:SS Fix:54.1215,
25.1324 Sat:9 Bat_Lvl:94
Geo: N/A

LIVE? – When GH1201 receives such a request it returns back the information about how long it has been working after last restart (in seconds).

LIVE! Id:GH-1201 Imei:35397601XXXXXXX
Time: YYYY.MM.DD HH:MM:SS
Fix:54.1215, 25.1324 Sat:9 **Live:21511**
Bat_Lvl:94

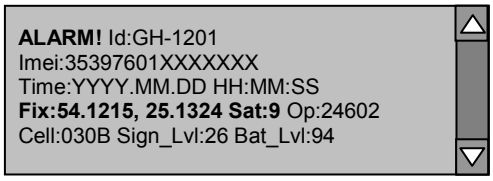
[1] To get valid responses the Geofence zones must be configured using TAMT (Track Assistant Monitoring Tool).

MN? – NAVIGON2 Mobile Navigator 6 ® (Version 6.3 or higher). After receiving such a SMS GH1201 will send back a SMS to the Mobile Phone and you will be able to see the GH1201 position within the NAVIGON software (on the NAVIGON Map).

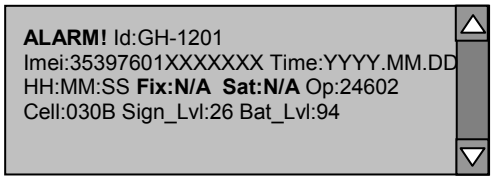


ALARM:ON – GH1201 will enable the ALARM.

Location is available



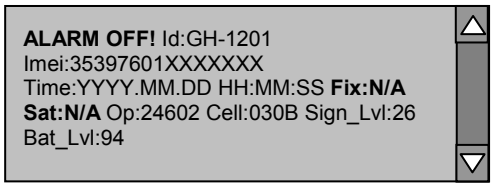
Location is not available



ALARM:OFF – GH1201 will disable the ALARM.

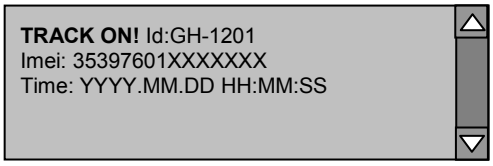
Location is available

Location is not available

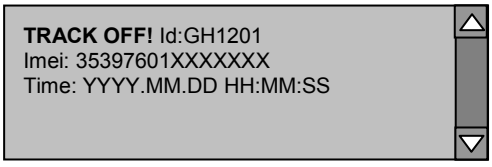


TRACK? – GH1201 will send all collected positions from internal memory to the Server (via GPRS, Server Solution needed).

TRACK:ON – GH1201 will enable the „Event Tracking“ function.



TRACK:OFF – GH1201 will disable the „Event Tracking“ function.



TRACK:ON,<**P1**3>,<**P2**4> -Starts “Event Tracking” function according to the parameters P1 and P2 (please view footer).

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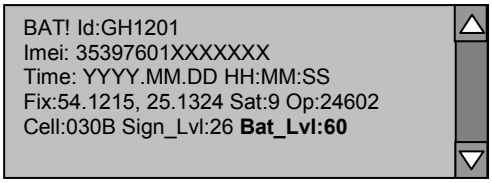
[2] Restriced to Mobile Phones operating on Symbian Series 60 basis. You need to have the licensed NAVIGON Mobile Navigator 6 Software, Version 6.3 or higher , for this service. Please contact NAVIGON or Teltonika for further information.

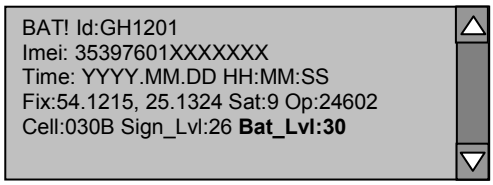
[3] P1 - Interval of position acquisition (sec.)

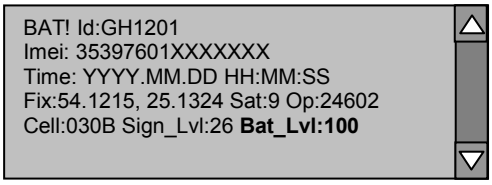
[4] P2 - Duration of the “Event Tracking” function (min.)

Notification about Battery Level

When the function **Send Notification about Battery Level** is activate you will be informed depends of configuration is chosen via SMS message about the level of the battery.







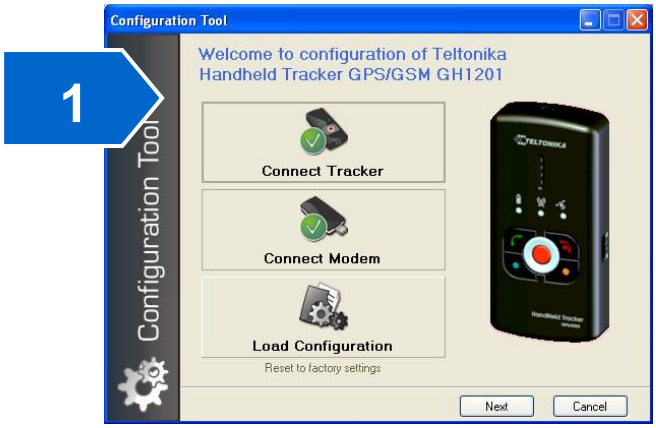
8. TRACK ASSISTANT SOFTWARE

8.1 Track Assistant Configuration Tool

The Track Assistant Configuration Tool will be installed together with the device drivers. It is launched by clicking **Start** > **All Programs** > **Teltonika** > **Track Assistant Configuration Tool** in the program menu. A special window will inform about the activation of this program.

8.1.1 Configuration of GH1201 Using a PC

Please start the Track Assistant Configuration Tool. After GH1201 has been connected to the PC the battery LED will start flashing in green.

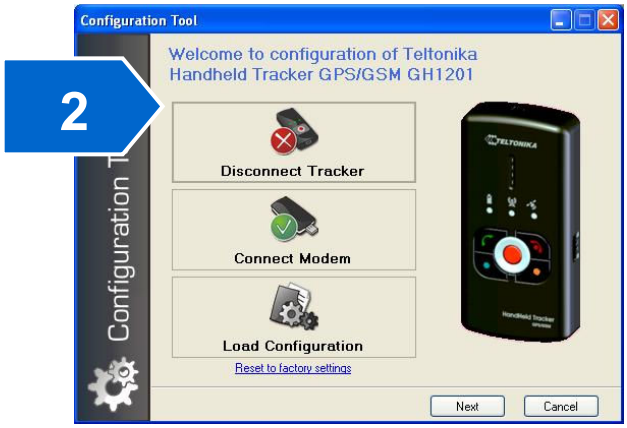


Click the button **Connect Tracker** if you want to configure your device directly from your PC using an USB cable.

Click the button **Connect Modem** if you did connect a Teltonika GSM modem and wish to configure your GH1201 remotely.

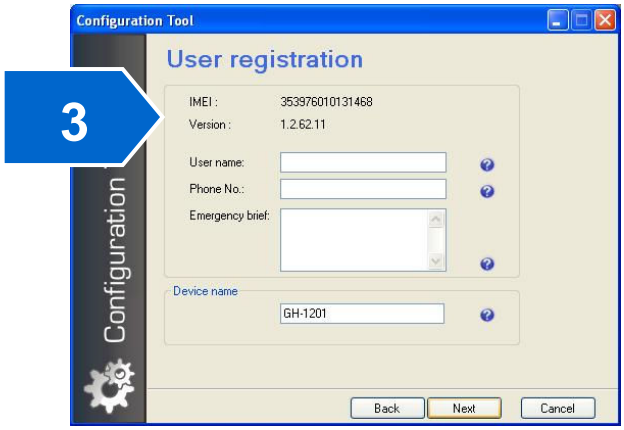
Click the button **Load Configuration** if you want to review a saved configuration file.

If you wish to switch to another configuration window, always click the button **Next**.



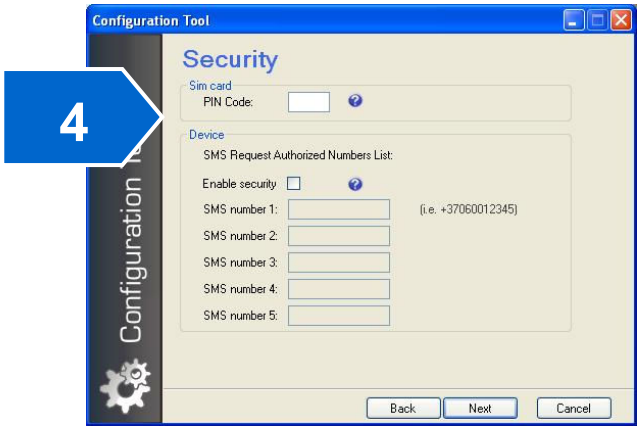
When the device is connected to the computer, the name of the last clicked button will change to **Disconnect Tracker**, and by clicking this button you can disconnect the device from the computer.

If you wish to start, click the button **Next**.



Please read the information about the device in the window **User Registration**: **IMEI Number** and the **Firmware Version** of the device program. Please enter the **User Name**, which will be shown for this device within the Track Assistant Monitoring Tool, the phone number of the SIM card inserted into the GH1201 and additional **Emergency Information** about the owner of the device.

Type the name of the device into the box **Device Name,** which will be indicated as device ID within all SMS messages sent by GH1201 (please view **Special SMS Requests**).



If a SIM card with an activated PIN Code has been inserted into the device, you need to type it into the box **SIM Card** of the window **Security**.

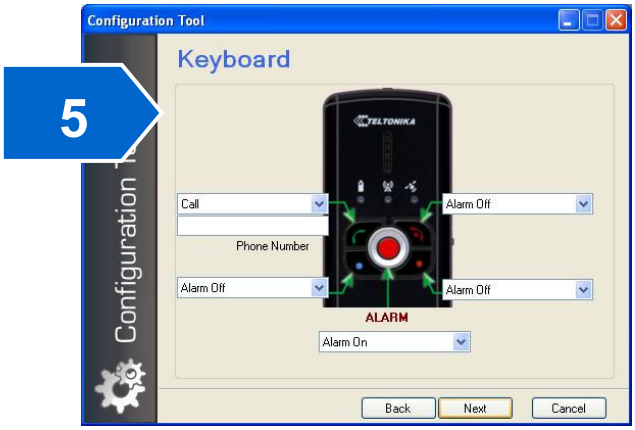
The PIN Code has no effect if configurations are being rewritten but please note that if the PIN Code is not typed, it will prevent the device from registering into the GSM network.

If the device is not registered in the GSM network, it will not be possible to send or receive SMS messages and dial phone numbers as well receiving any calls.

You can turn the list of **authorised SMS numbers** on or off within the box **Device**. If the list is activated, the user must type in the subscribers' numbers, which the device will respond to (format +441234567890).

If this function has been activated, it will protect GH1201 from unwelcome queries via SMS (i.e. Fix?, Inf? Geo? etc.) by external persons without authorization.

If the list of authorised numbers is not activated, everybody is allowed to send queries via SMS to the device, and the device will always respond to them.



You can dedicate a function for each button on the **Keyboard**. Later on you can activate this function by clicking on the respective button on your GH1201. Please view the section “Indicating a button push” in this manual as well.

Call function allows you to call to a number which should be typed into the Phone Number field. Please use a format like: +441234567890

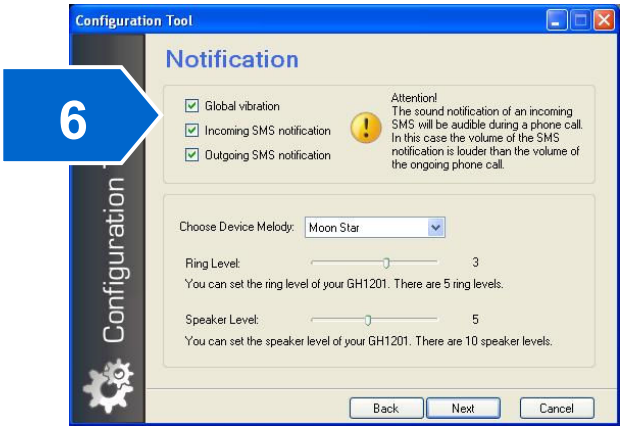
If you choose the **SMS** function, a special request field will appear. There you can chose which kind of information the device will send to the number typed into the **Phone Number** field (please view the chapter 7. Special SMS requests for further information).

Alarm Off function will allow you to turn off an Alarm which has been activated before with the Alarm button.

Track Switch function will turn on / turn off the Event Tracking function.

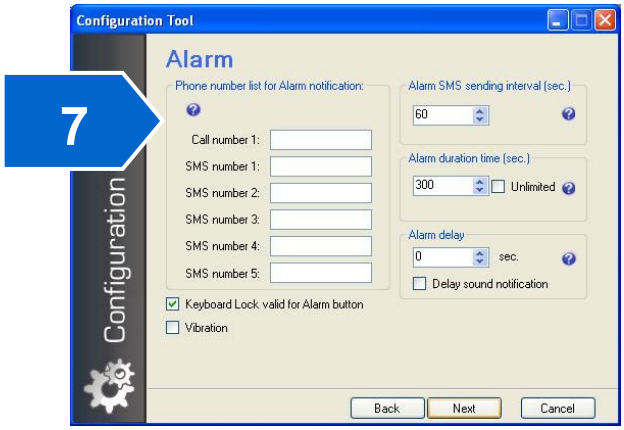
Emulate Modem function will switch the device into the modem mode when GH1201 is connected to a PC.

Please note: If you set the button **Alarm** activation method to **Call**, window 7 of this Configuration Tool will not open.



By ticking next to **Vibration**, you can activate a vibro. You can also activate a signal warning about incoming or outgoing SMS messages.

Choose the ringing tone of the device and set the levels of the ring (**Ring Level,** 5 = loudest level) and speaker (**Speaker Level** 10 = loudest level).



When you open the **Alarm** window you can insert up to five **SMS numbers** to send Alarm Messages. In parallel a call to one phone number can be initiated, specified in the below box **Call Number 1**.

In the box **Alarm SMS Sending Interval (sec.)** you can specify the frequency of sending **SMS** messages. After the specified time passes, the device will automatically send **Alarm SMS** messages. The time is indicated in seconds.

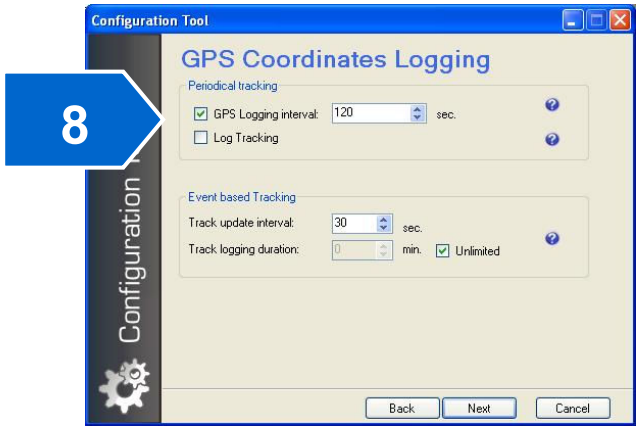
In the box **Alarm Duration Time** (sec.) you can specify the duration of the Alarm function. After the specified time passes, the alarm will be automatically turned off. The time is indicated in seconds. If you wish to set the time **unlimited** you are able to switch of the Alarm with a button push or via SMS.

In the box **Alarm Delay** you can specify the **Alarm** actuation time. After the specified time passes the Alarm will be activated. During this time period the alarm procedure can be cancelled by pushing the defined Alarm Off button.

Delay sound notification activates an additional acoustic signal for this alarm preparation phase.

Uncheck **Keyboard lock valid for Alarm button** if you want the Alarm button to be always active - even if the keyboard is locked.

On top you can choose the option that the Alarm will be combined with **Vibration**.



You can fix the automatic data update interval (**GPS Logging Interval**). If this function has been activated, the device will activate the GPS module after the set time. The geographical co-ordinates will be located and recorded into the device memory.

If the device has been requested to specify the current location, the search may take up to 3 minutes.

If the automatic data update interval has been activated, the device will automatically update the data about its location within the internal memory.

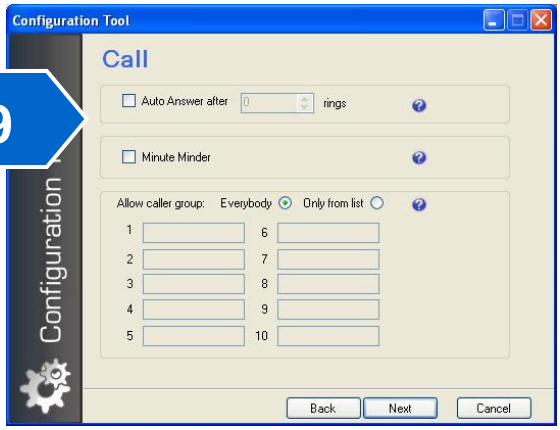
If you wish to get an immediate reply with the last geographical co-ordinates from the memory of the device, you need to activate the function **Log Tracking**.

If this function has been activated, the device will not start to track the new geographical co-ordinates (up to 3 minutes process as indicated above) but will directly send the newest location stored within the internal memory.

On top you can setup the **Event Tracking** settings. This track you can activate by pressing a button or sending a special SMS.

The **Track Update Interval** is setting the interval in which the GPS coordinates will be acquired.

With **Track Logging Duration** you can define the time period after which the Event Tracking will be finalized. You can choose as well an **unlimited** time for the **Event Tracking** function. In the case it might be ended by button push (Track Switch) or via SMS.



If you wish that the device would automatically answer after a set number of rings, please activate the function **Auto Answer** and specify the number of rings.

If you wish to hear a special signal warning each time a minute passes, activate the function **Minute Minder**.

If you need to restrict the number of subscribers that are able to call to the device, activate the list of authorized subscribers' numbers.

To activate, choose the function **Only from List**.

After having activated this function, you need to type the numbers of subscribers into the boxes below. Then, the device will ignore all calling numbers, which are not available in this list.

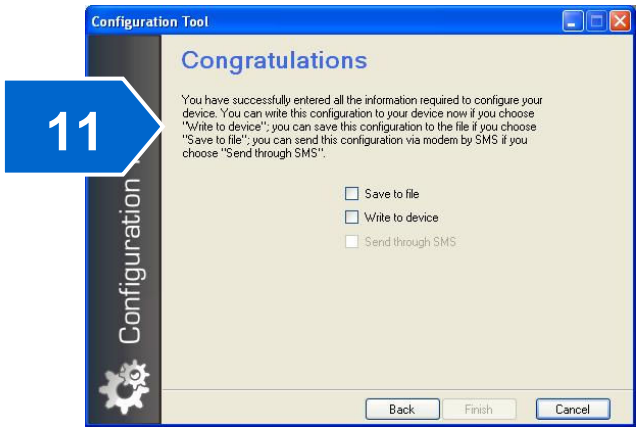
If the function **Everybody** has been activated, all subscribers' numbers will be able to call to the device.

Activate the function **Send Notification about Battery Level** if you wish to be informed via SMS message about the level of the battery.

After having activated this function, it will be possible to choose either of the following:

Inform about the battery level, when the battery level becomes 60% and 40% or when the level becomes 60% and 40%, as well as when GH1201 is 100% charged.

Please specify the numbers in the below list of up to 5 numbers, to whom SMS messages notifying about the battery level will be addressed. Please note that these numbers are equal to the SMS numbers for Alarm Messages. Changes in this list will automatically be transferred to the Alarm Messages SMS numbers list!



In the last window you are able to choose the function **Save to File**, if you wish to save the settings on your PC.

If you wish to store the settings into your GH1201 please choose **Write to Device**.

Send Through SMS will be active when a (Teltonika) GSM Modem is connected to your PC. If this option is selected the program will send all configuration changes to the GH1201 device via SMS.

Click the button **Finish**. If you have chosen **Send Through SMS** a window will open and you need to insert the telephone number of your GH1201 to receive the configuration SMS.

8.1.2 PIN Code

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 either removed by using a Mobile Phone, if available.

Or, if you wish to enable automatic PIN Code entry by using the program **Track Assistant**, connect the device to a PC and click the button **Connect**. When the device starts the connection to the PC, the program will check if it hosts a SIM card and if the PIN Code is activated. If it has been activated, the program will automatically open a window where you can insert the PIN Code. Now the PIN Code will be adopted by GH1201 and will be always used when the device will be switched on.

8.2 TRACK ASSISTANT MONITORING TOOL

The Monitoring Tool is installed together with the drivers of the device. You can switch it on within the program menu **Start** > **All Programs** > **Teltonika** > **Track Assistant Monitoring Tool**. A special window will inform you about the activation of the program.

8.2.1 Monitoring GH1201 when using PC

The **Track Assistant Monitoring Tool** enables the user to manage GH1201 directly from his personal or portable computer, which is connected to a GSM Modem. With a GSM Modem (i.e. Teltonika ModemUSB/G10) connected to the personal or portable computer, you can receive SMS messages with geographical coordinates from the device and immediately track it on the map.

The quantity of SMS messages is not restricted since all SMS messages available in the Modem may be stored in the computer memory and, thus, compile the whole history of received or sent SMS messages.

By using the **Track Assistant Monitoring Tool** you may also request the device for special SMS queries, which do not need to be memorized because they are already programmed within the program.

Stored GPS Data can be reviewed directly from GH1201 (with the USB cable) and can be shown on the map. You can store or export the data.

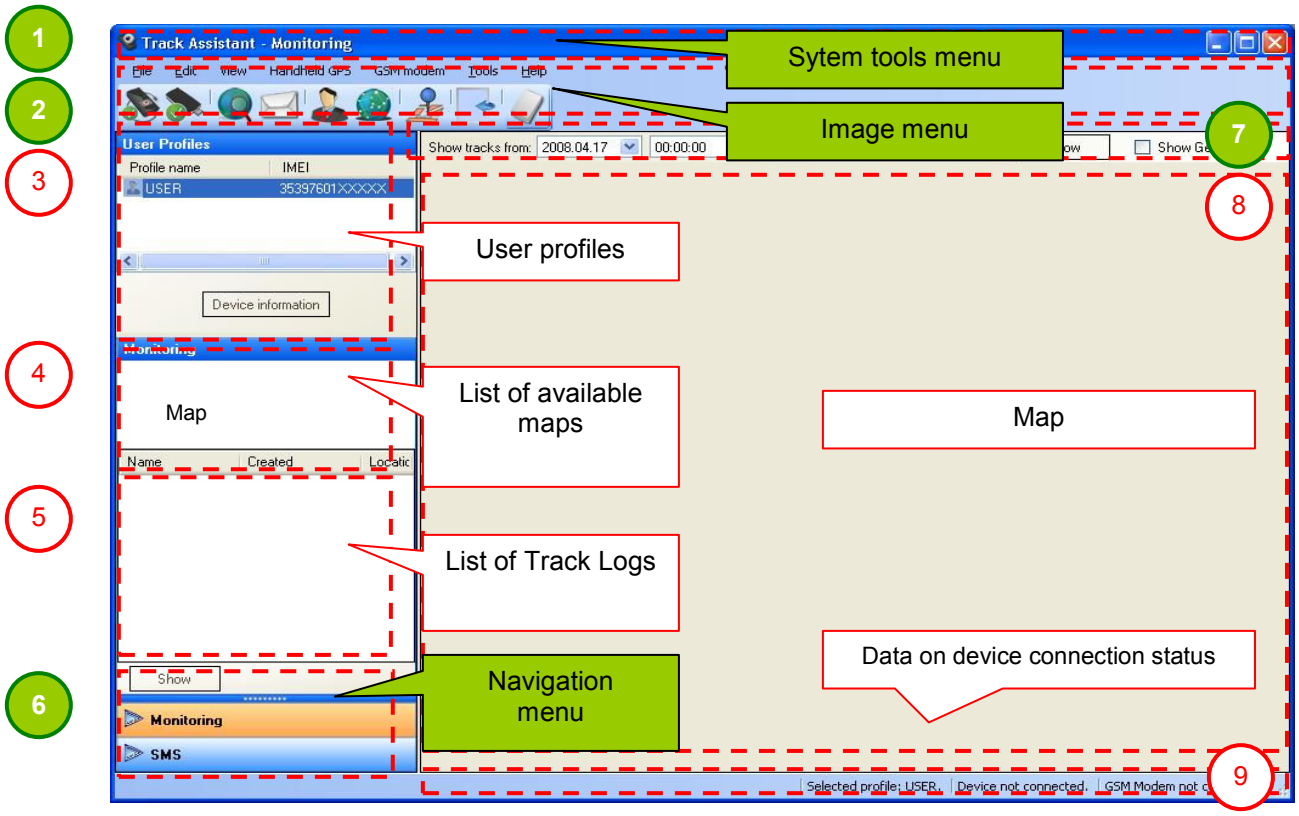
By using a special tool option, you will be able to set up to ten Geofence zones and send the configurations with SMS messages by a Modem or record it directly to the device if it is connected.

In addition, you will be able to store the data within the computer, review them or send them to another person.

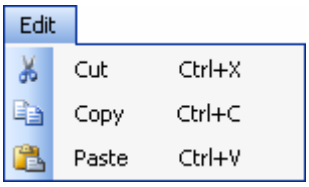
If you are using MS Virtual Earth map on your Track Assistant monitoring software there you can see three kind of points: yellow, green and red. Yellow point shows if in current position your speed was less when 5km/h, green – more when 5km/h but less when 150km/h and red – more when 150km/h.

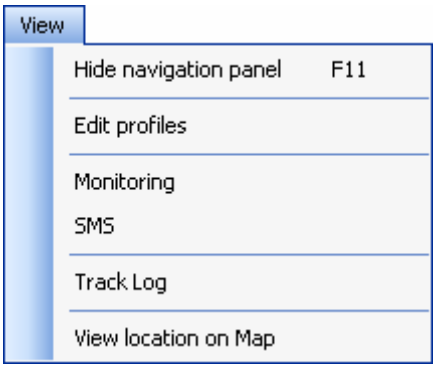
8.2.2 The Monitoring Tool. General View

The tool consists of five information windows (3, 4, 5, 8, 9) and four configuration tools (1, 2, 6, 7).



1 – SYSTEM TOOL MENU





Hide Navigation F11 – hide the Navigation Panel

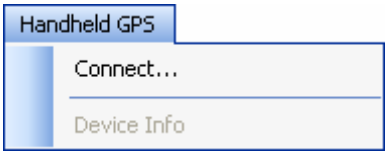
Edit profiles – edit data of the user registered within the system

Monitoring – open the map

SMS – open the SMS window

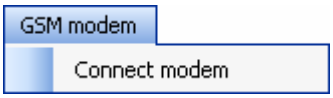
Track Log – open the tool to copy data from the device to read out log data

View Location on Map – open the tool where you can insert the geographical co-ordinates - and the system will later show them on the map

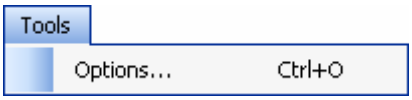


Connect ... – connect the device to the Monitoring Tool

Device Info – review the information about the device



Connect Modem – connect a Modem to the Track Assistant Monitoring Tool



Options ... Ctrl+O – additional settings

2 – IMAGE MENU


Connect GH1201


Disconnect GH1201


Connect GSM Modem


Disconnect GSM Modem


Open the map


Open the SMS window


Edit user profiles


Read and store Track Log


Set Geofence


Hide Navigation panel


Show Navigation panel


Erase positions on the map


Update the list of incoming messages


Delete selected message


Read the parameters available in the device


Upload configuration updates to the device


Upload complete configuration to the device

3 – USER PROFILES

After the device has been configured successfully and all necessary data has been inserted a profile will be created for each new user. By clicking twice on the respective profile (or by clicking on the icon **Edit user profiles**) the detailed profile data will be shown and can be edited.

A new record in the list of registered users appears immediately after the connection of the new device and the introduction of the necessary data. Data on the registered users may be found by clicking twice on the name of the selected user or choosing the button for editing user data in the image menu or system tool menu.

4 – LIST OF AVAILABLE MAPS

A list of maps available in the PC will place here. The program will detect available maps automatically.

5 – LIST OF TRACK LOGS

A list of previously stored Track Logs will place here. By clicking on **Show,** you can see them on the map.

6 – NAVIGATION MENU

It is easy navigation between different windows.

7 – TRACK LOG FILTER

With this filter, you can select the mostly needed data based on date and time, which can be reflected later as positions on the map to be analyzed. Also, it is possible to review the set Geofence zones.

8 – MAP

Shows the positions on the map.

9 – DATA ON DEVICE CONNECTION STATUS

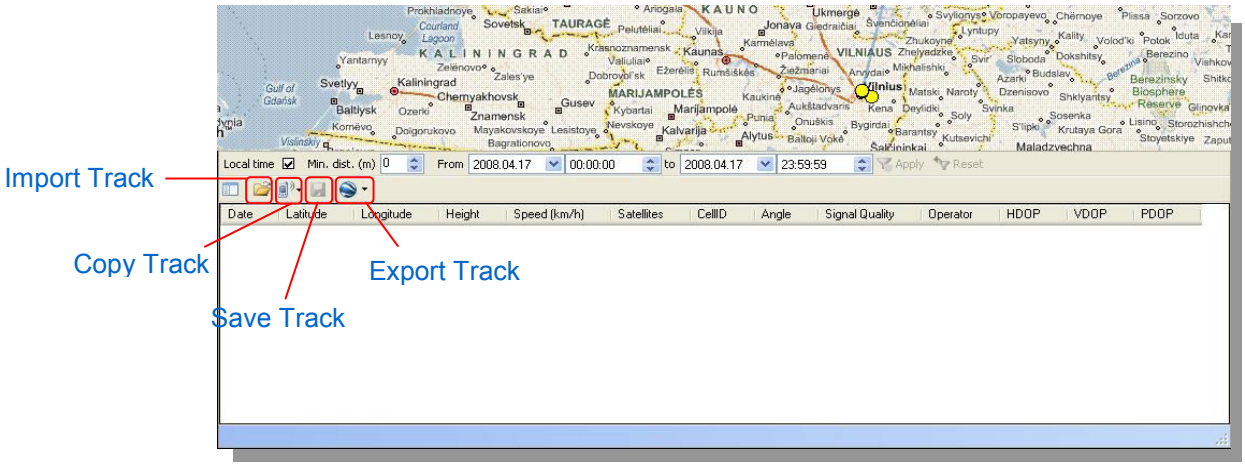
Here, you will be able to view the information about the current device status, no matter if it is a Modem or GH1201. If the device connected to the system, you will be able to see the message **Device Connected,** and if it is a Modem, the message will be **GSM Modem Connected,** as well as **COM PORT** to which they are connected. In the system, you will also be able to see the name of the device if it was registered.

8.2.3 Transfer of Logged Data To a PC

The device has an internal 1MB memory where it can store the history of its geographical coordinates. If you wish to transfer this data from GH1201 to the PC, please follow these steps:

- Start **Track Assistant Monitoring Tool**.
- Connect the device to one of the USB ports of the PC.
- Click the button **Connect**.
- Choose **View** > **Track Log** in the system menu.

The window **Track Log** will open.



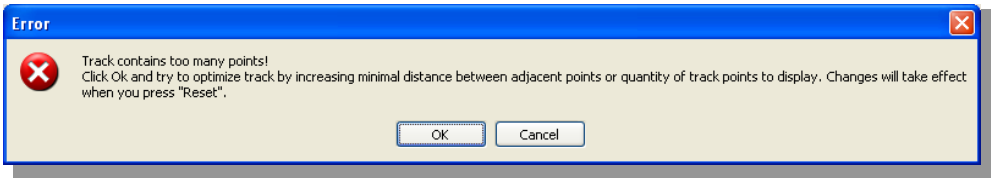
Click the button **Copy Track** (an arrow to the right of the button **Copy Track** allows to choose the log data you wish to store into the PC).

Choose the menu **Event Points** to transmit the summary of all tracks which has been taken by event (on request by button push or SMS) from the GH1201 to your PC.

Choose **Periodical Points** to show the history of track points based on the periodical GPS Logging (i.e. every 30 sec.)

Choose **Alarm Points** to show the data stored while the warning signal **Alarm** has been launched.

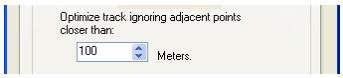
When the track contains too many points an Error warning will appear.



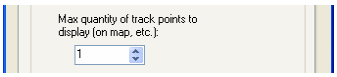
If an error window (as shown in figure above) appears during data transfer, you can click **OK** to resolve the issue. Upon clicking, you will have two options. These options will help to optimize the data history. The options are as mentioned below:

a) By increasing the distance between neighboring points (picture a)

b) By increasing the maximum number of track points for display (picture b).



Data filter and image window (a)



Data filter and image window (b)

After having copied the data from the device, the program will inquire if you wish to save it.

The program window **Track Log** provides an unique possibility to filter the data read processes based on the date and time. If you wish to see, just the data pertaining to a specific period you need to type the data and time of your choice in the boxes next to the words **From** and **to**. After a specific period is selected, click the button **Apply**, and you will be able to see the data pertaining only to the selected period, which you will be able to treat in the following way:

- Save in the program (button **Save Track Log**).
- Create data archive in the form of a special file (button **Export**).
- View them on a Google Earth map (button **Open KML File**).
- Import data archive (button **Insert**)

Note: The button **Open KML File** will only be activated if you install a free of charge **Google Earth** map (you can download it from the link http://earth.google.com/download-earth.html).

The data saved in the program may in the map be reviewed by choosing the relevant Track Log within the Monitoring window and by clicking the button **Show**.

The created special data archive may be sent to other users who will be able to review it using **Track Assistant**, **Microsoft Excel** © or other programs supporting the *.xml file format.

Data may be deleted from the device by clicking the button **Clear Log**. The data stored in the program may be deleted by clicking the button **Delete**; if you wish to rename it, click **Rename**.

8.2.4 Geofence Zones and Their Detection

This function enables to detect the Geofence zone where the device is located. The user may set up to ten Geofence zones and dedicate names to them.

In the settings, you can provide the name of the zone **Zone Name**, geographical co-ordinates of the centre of the zone **Center Longitude**, **Center Latitude**, radius of the zone **Radius** (in meters) and thickness of the fence of the zone **Fence Thickness**.

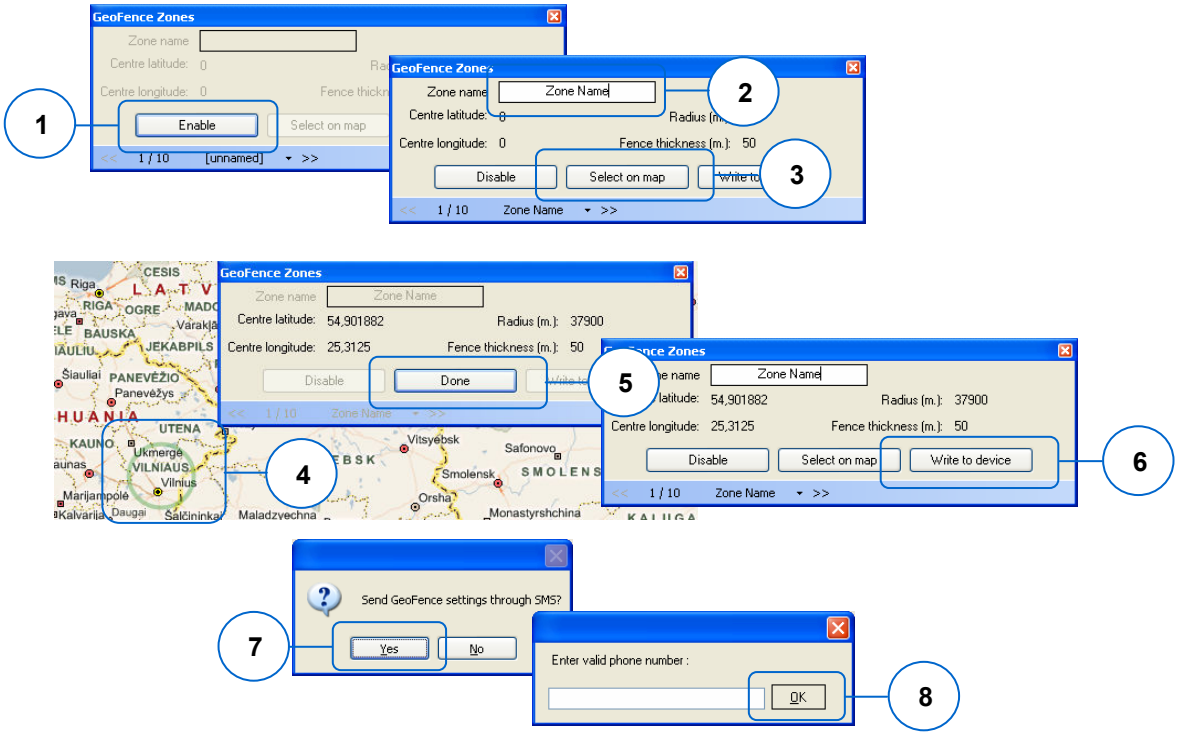
If this function is activated by **Enable Geofence Function**, the device will check if the zone fences are intersected. If the intersection of the zone fence (in both directions) has been detected, the device will send

a SMS message to all numbers available in the list of subscribers' numbers under **Alarm** settings (Track Assistant Configuration Tool).

If a SMS message has been sent to the device with a text **GEO?**, the device will detect the zone where it is located, and if the device detects that it is located in one of the set zones, it will send the name of this zone. If zone not detected, the device will send a SMS message where the zone will be shown as unidentified (**N/A**).

If you wish to set the zones, click the button **Geofence** in the menu. If you set the zones for the first time, the window **Geofence Zones** will be activated where you can enable Geofence zones **Enable Geofence Zones**.

To set a zone, the following steps should be performed:



1 – Enable the zone (**Enable**)

2 – Set Name the zone (**Zone Name**)

3 – Click **Select on map** to change into the map modus

4 – Place the mouse into the middle of the zone you would like to create. Hold the left mouse button and draw the circle until the desired radius has been reached. To design the fence thickness you need to click, with the intended distance to the defined radius, outside of the drawn circle. If you want to correct the zone immediately, please click on the map again. Now the zone will be deleted and can be created again.

5 – Confirm the selection of the zone (**Done**)

6 – Save the updates into GH1201 or send the settings via SMS message by clicking the button **Write to Device** if a GSM Modem is connected.

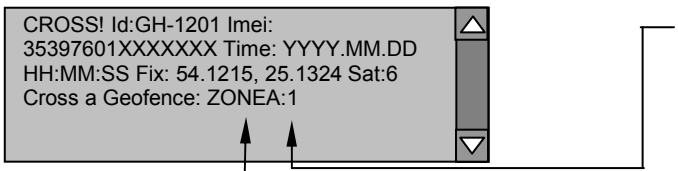
7 – If a GSM Modem connected after clicking on **Write to Device** a window will open asking for your confirmation if you would like to send the configuration through SMS; click on **Yes** to continue configuration.

8 – Insert the telephone number of your GH1201 to send the configuration via SMS.

Cross Zone Notification

After you set geofence zone you will be able to get notification if your device crosses the current zone. After your device cross the zone (i.e. which name is "A") you will get SMS message to the phone numbers which are written in the "Phone Number List for Alarm Notification" fields.

SMS format is:



The number „1“ shows what your device came in the zone. The number „0“ shows that your device left the zone.

This is your current zone name.

8.2.5 Maps

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

- Microsoft Map Point
- Akis
- Google Earth (see **Transfer the logged data to PC**)

9. 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 a cause of corrosion of the 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 batteries and deform or melt some plastic parts.
- Do not keep the device in cold environment. If the device warms up to the 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 in 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 is not functioning properly, bring it for examination to the nearest authorized repair centre.

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

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

In case you have problems with the use of the product beyond your possibilities to solve it, please address them to the Technical Assistance Centre by e-Mail support@teltonika.lt.

10. NOTES

Date	Comments

Žirmūnų g. 27
LT-09105, VilniusLithuania
Tel. / faks. +370 5 2127472
info@teltonika.lt
www.teltonika.lt

CE

Declaration of Conformity

We, manufacturer UAB Teltonika, hereby declare under sole responsibility, that the following equipment:

Equipment:	Handheld GSM/GPS Tracker
Model Numbers:	GH1201

Are in conformity with the following EC Directives, including all amendments:

R&TTE Directive 1999/5/EC

Standards applied:

3GPP TS11.10-1 rel99

Expert Opinion (for Teltonika GSM/GPRS module TM2), No: P251-0158/06, Slovenian Institute of Quality and Metrology (notified body's identification number 1304), Ljubljana, Slovenia

LVD Directive 2006/95/EC

Standards applied:

IEC 60950-1:2001, modified

Test report No: 950-1.16-07E, Testing Centre UAB Ratesta, Kaunas, Lithuania

EMC Directive 89/336/EC

Standards applied:

EN 301 489-7 V1.2.1:2002

EN 301 489-1 V1.4.1:2002

Test report No: PB-81, Equipment and Devices EMC Control Section of Communications Regulatory Authority, Kaunas, Lithuania

Full name and identification of the person responsible for product quality and accordance with standards on behalf of the manufacturer

Date

2007 09 19

Place

Vilnius, Lithuania

Managing Director

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Arvydas Paukštys