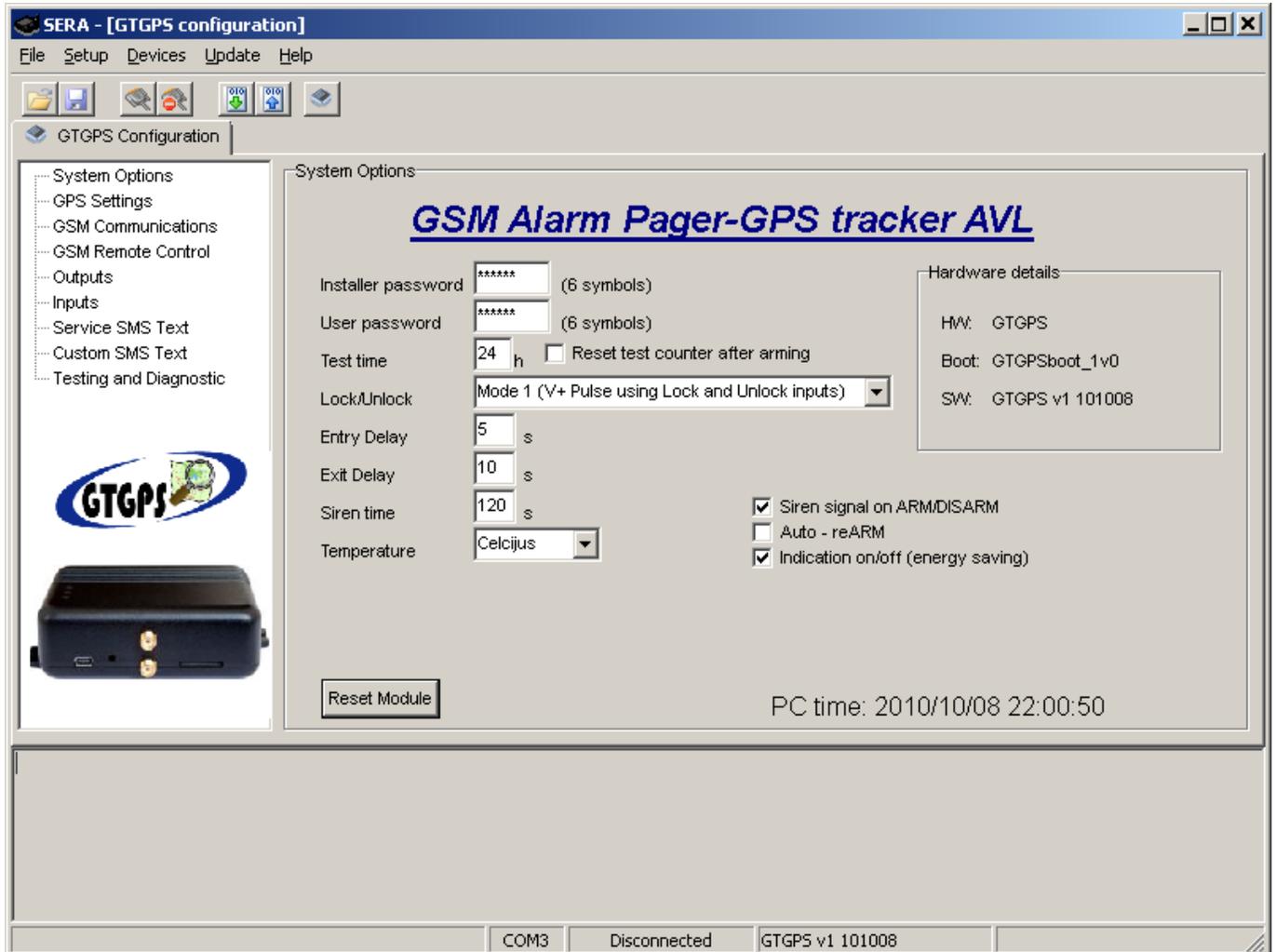




# SERA

GTGPS v1 configuration and testing software in Microsoft Windows environment

User's guide



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## 1. Installation of SERA software

Open the folder containing installation of the software SERA. Click the file „SERA setup.exe“ from the mentioned folder.

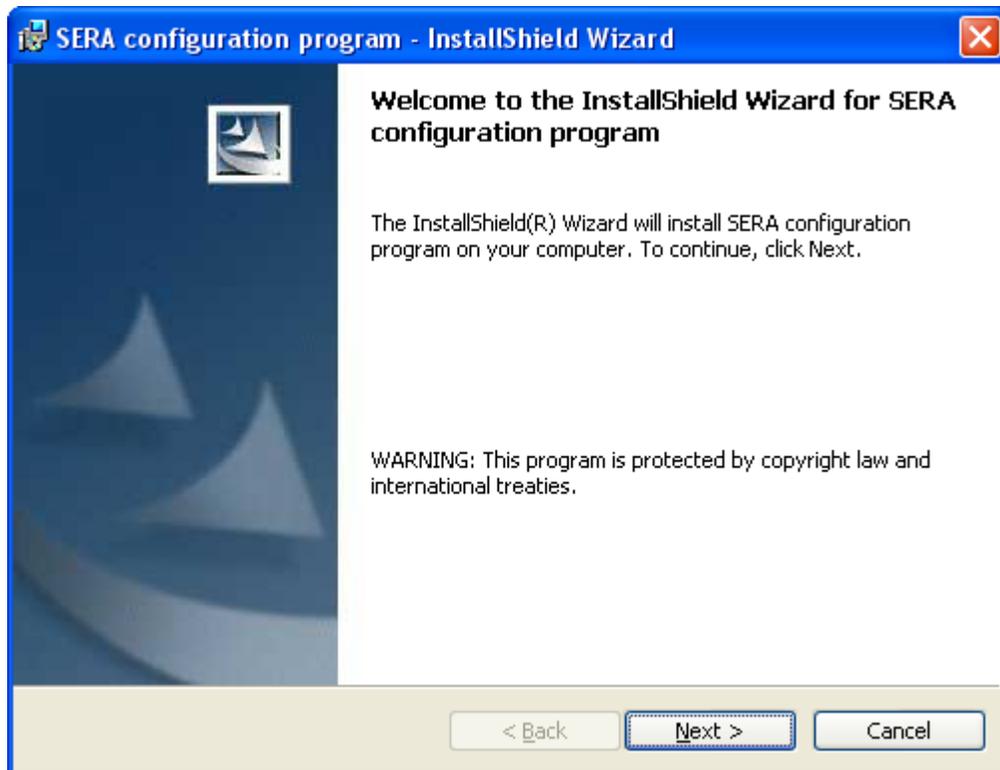
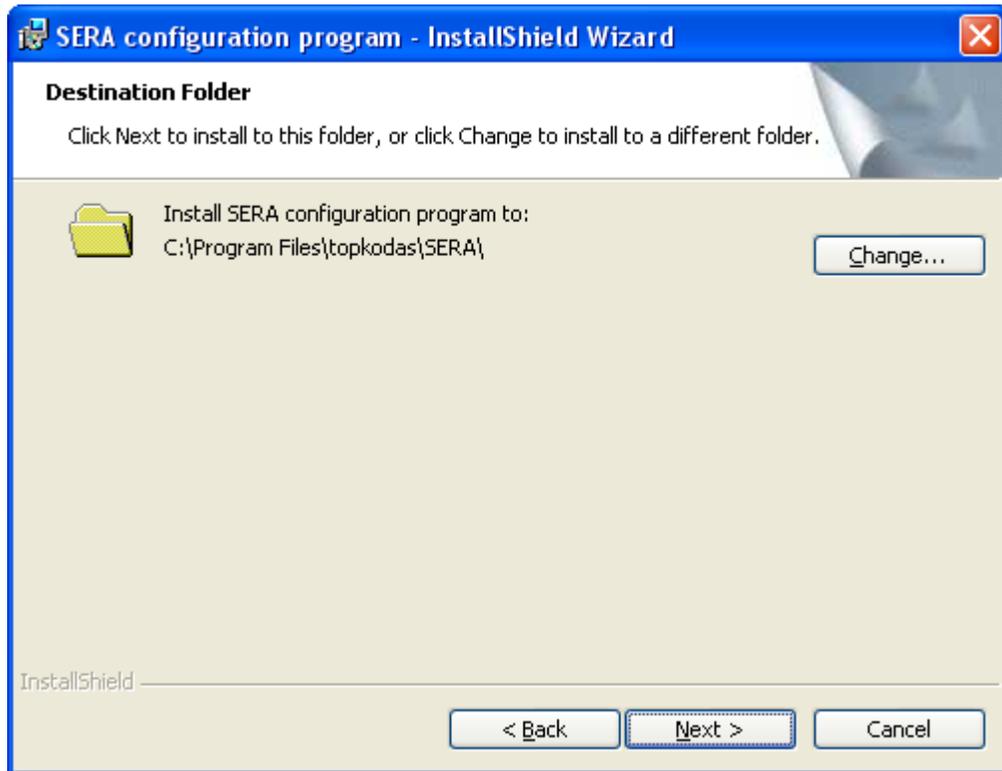


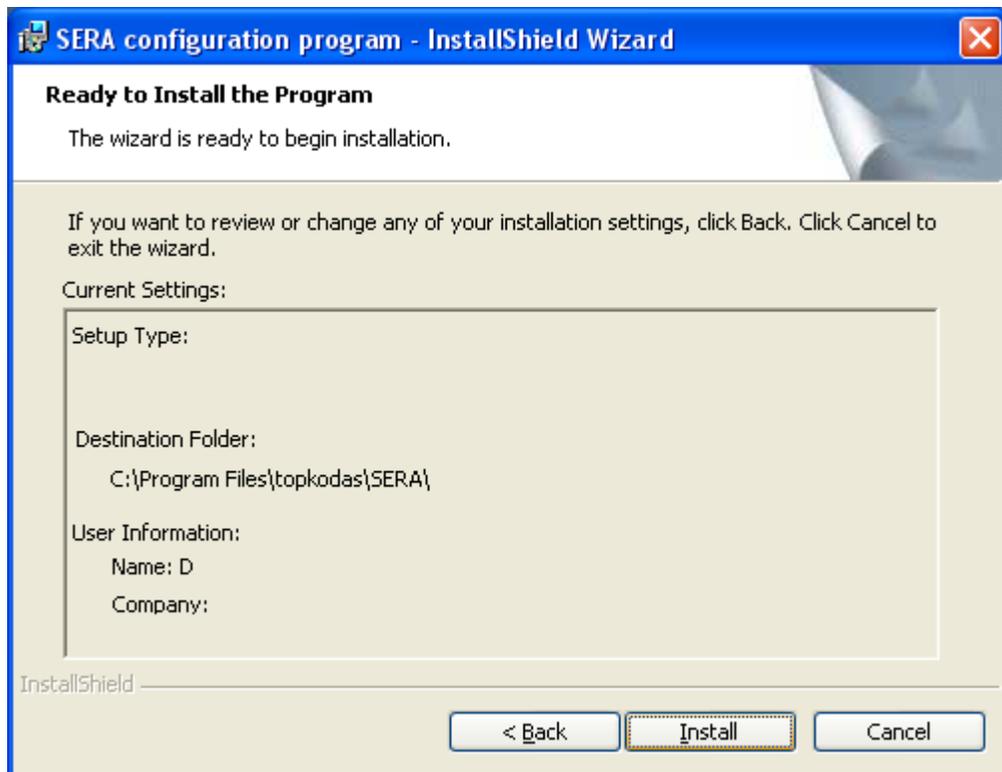
Fig. 1

In the displayed Window Fig. 1 press [Next>].



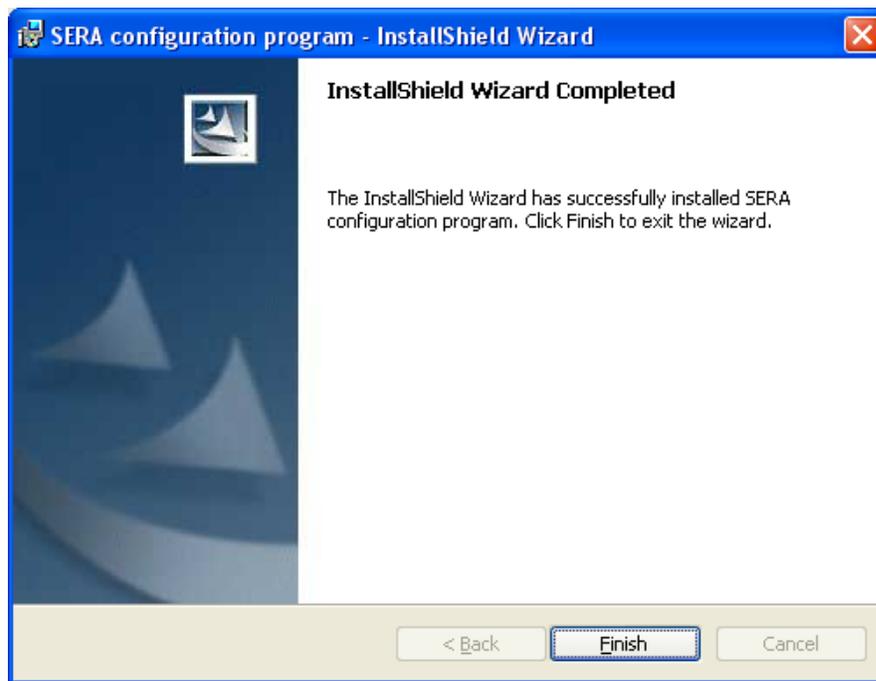
**Fig. 2**

Installation directory will be displayed in the Window Fig. 2 (fig.2). If installation directory of the software is OK, press [Next]. If you would like to install the software in the other directory press [Change], specify other installation directory and then press Next>.



**Fig. 3**

Check if the correct data are entered and press Install in the displayed Window (Fig. 3) (Fig.3).



**Fig. 4**

After successful installation of the software SERA, press [Finish] in the displayed Window Fig. 4 (fig. 4).

Congratulations, you have successfully installed the application SERA in your PC.

## 2. USB drivers installation

In order to configure GTGPS via USB interface, it is necessary to install USB DRIVER . Drive configuration is available in the file usbser.inf

After connection of USB cable (the module must be supplied with + 12V) to the PC via USB interface, OS Windows will find USB driver.

Driver configuration:

Windows XP

Windows 7 x86 or x64

usbser.inf .

usbser\_x86\_x64.inf



**Fig. 5**

Select [„No, not this time“] in the displayed Window (Fig.5) and press [„Next>“].



Fig. 6

Select „Install from a list or specific location (Advanced)“ and press „Next>“ in the displayed Window (Fig.6).

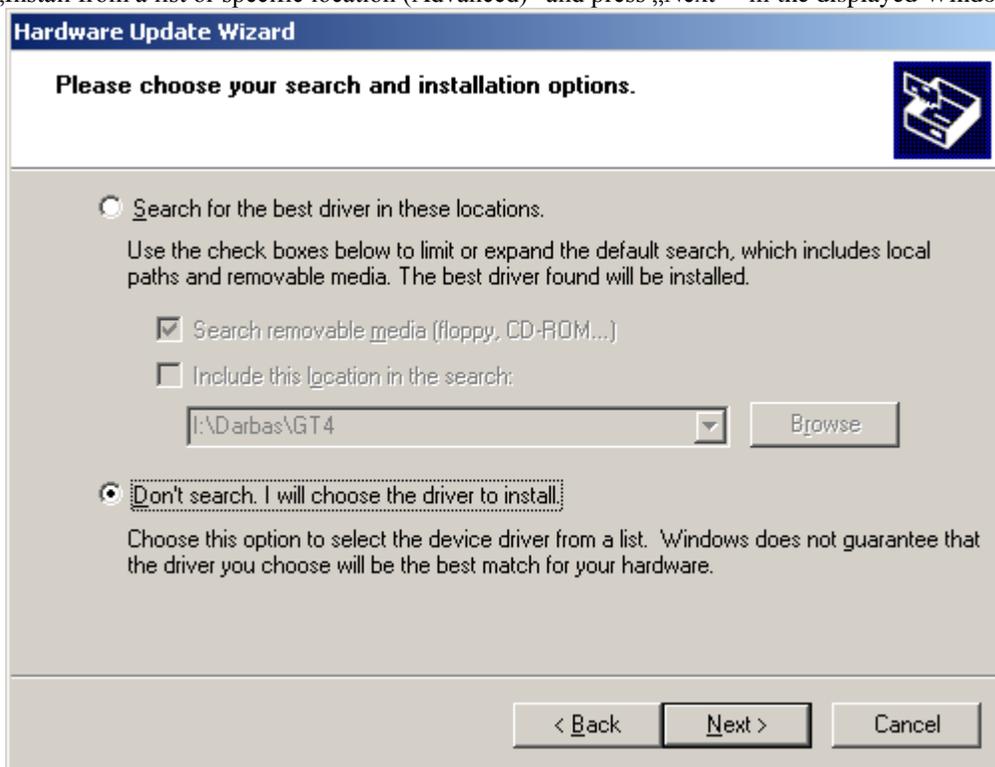
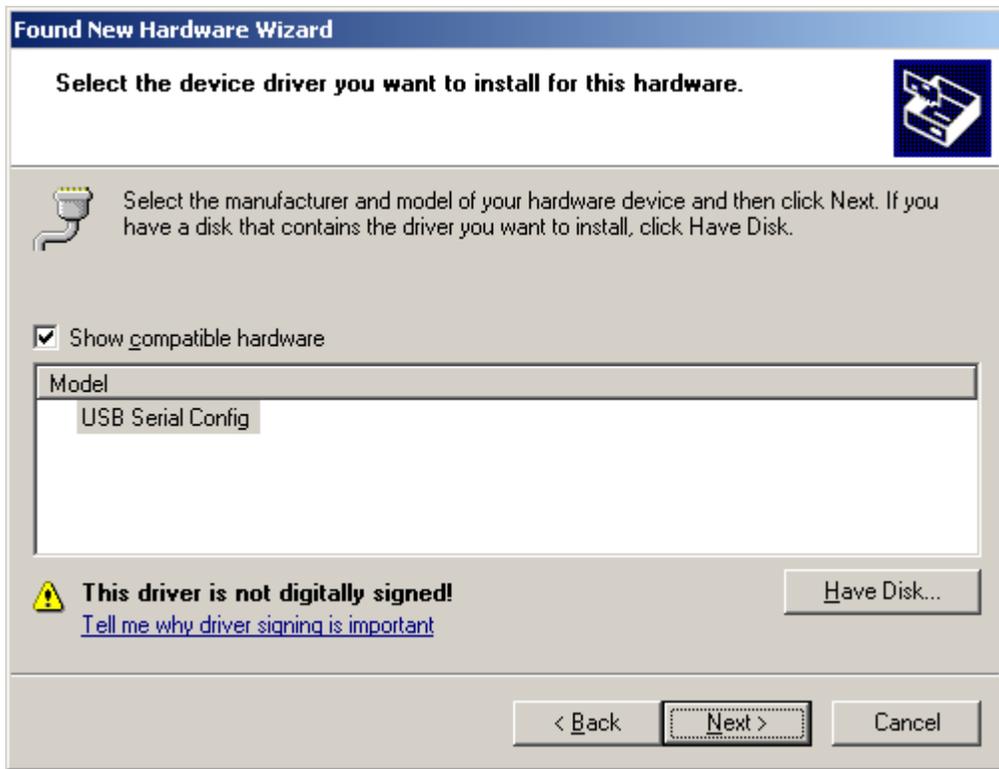
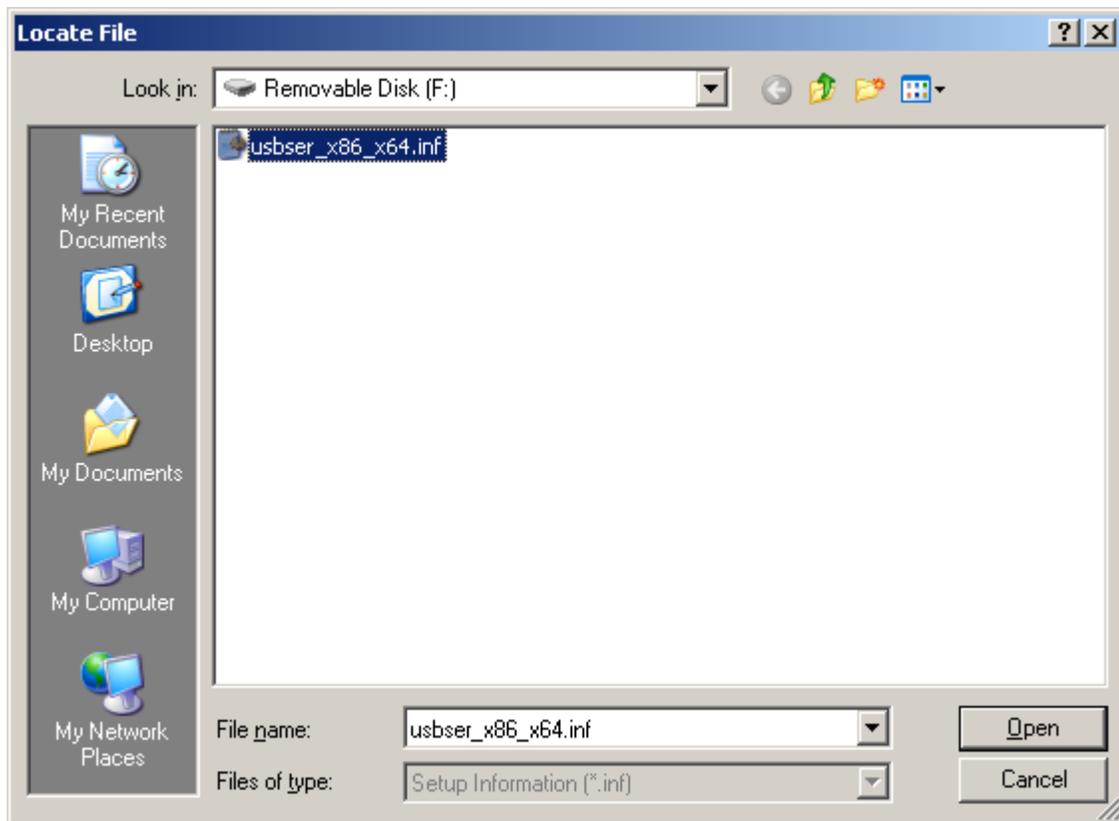


Fig. 7

In the displayed Window (fig. 7) select : Don't search I will choose the driver to install. Press Next>



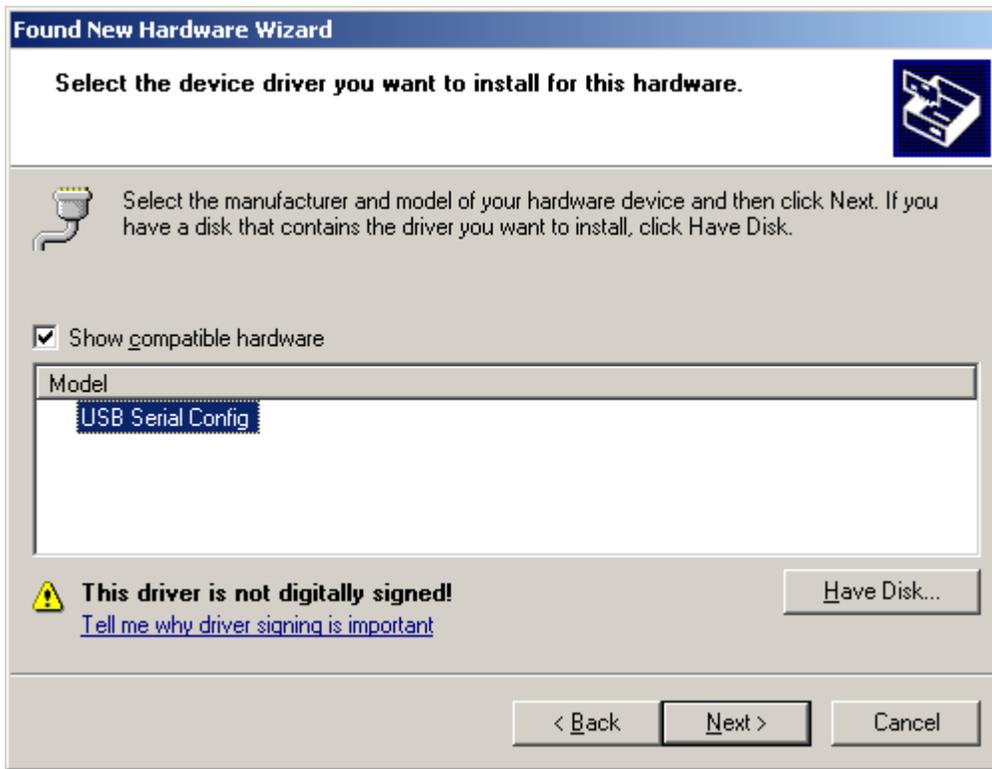
Press Have Disk button



Select driver file:

Windows XP  
Windows 7 x86 or x64

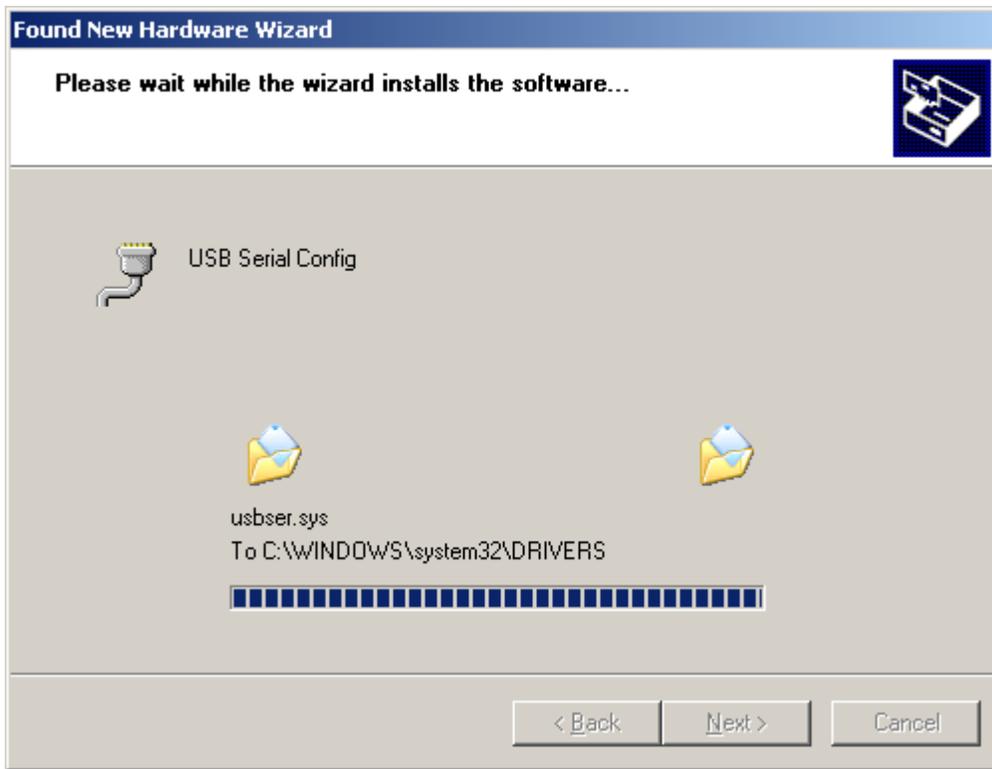
**usbser.inf .**  
**usbser\_x86\_x64.inf**



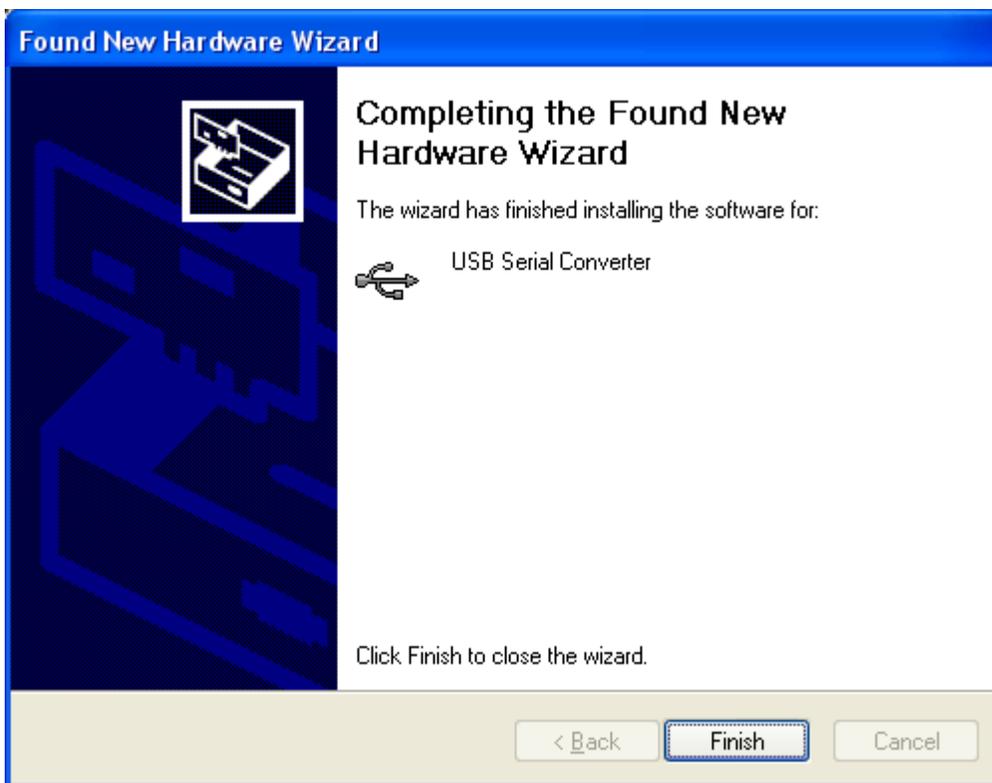
Press Next



Press Continue Anyway

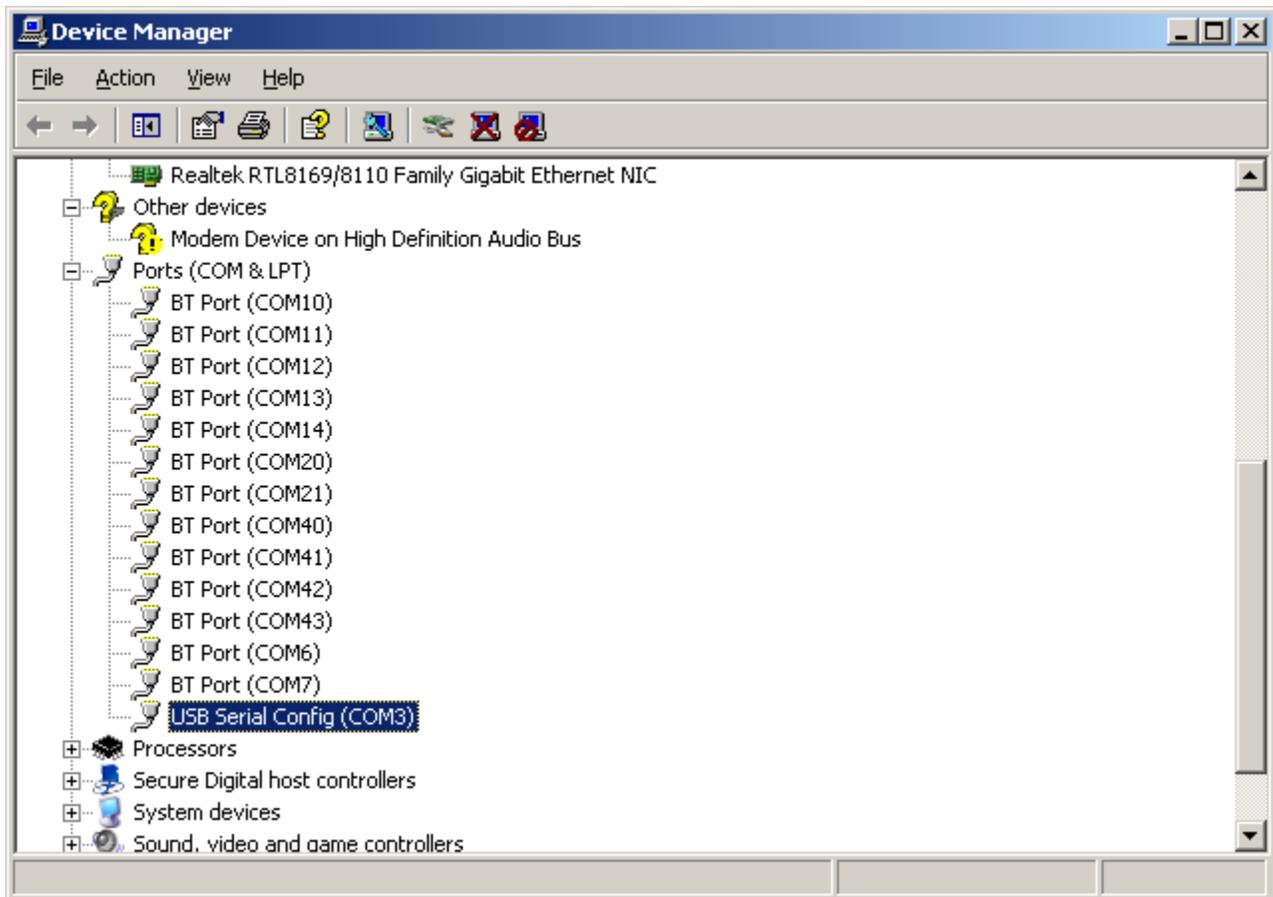


Wait while the driver will be installed

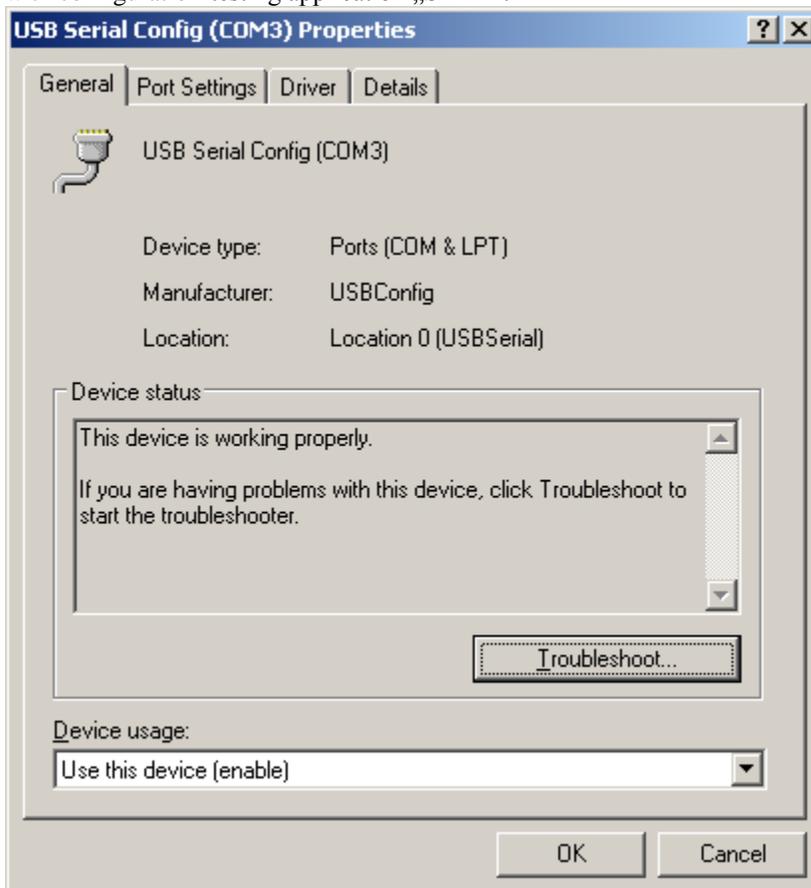


**Fig. 8**

Displayed Window (fig.8) means that your PC has found file necessary for driver's installation and successfully installed it. Press Finish Installation of USB Serial Config is finished.



Open Device Manager window and in the row (COM&LPT) press + in order to see all PC COM ports. The row should show USB Serial Config (COMx). Drag mouse cursor on this row and right click on the menu item Properties. You should see the window below with the note: „This device is working properly“ . This means that PC is successfully prepared for operation with configuration-testing application „SERA“.



### 3. Selection of COM port

After installing drivers you should check what COM port number has been assigned to the USB module. To perform this task in Windows environment follow the instructions mentioned below.

**Attention! The module should be connected to +12V (connection leads: black (-), red (+)) and to a PC via USB interface. DO NOT power the module from PC power supply unit, because absence of common grounding between two PC power supply units may damage the module.**

Open the Window [System Properties] (path: Start > Control Panel > System). [System Properties] Window (Fig. 9) is being displayed.

From the Window [System properties] select the tab [Hardware]. After selection of the tab [Hardware] Window (Fig. 9) will be displayed.

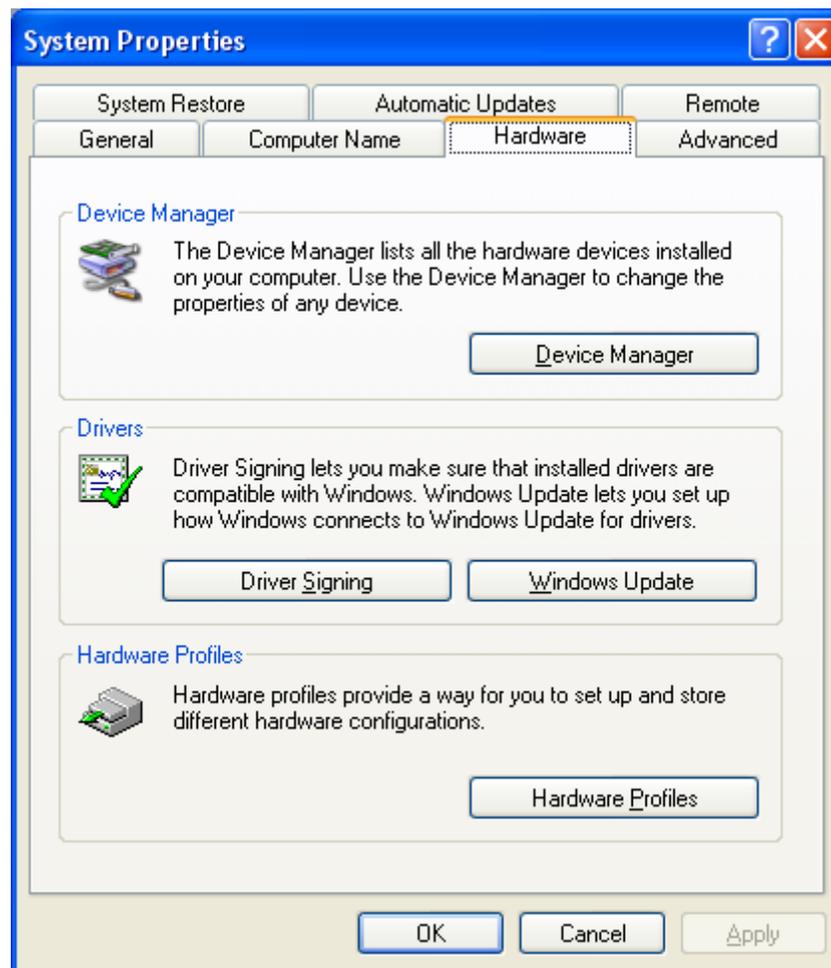
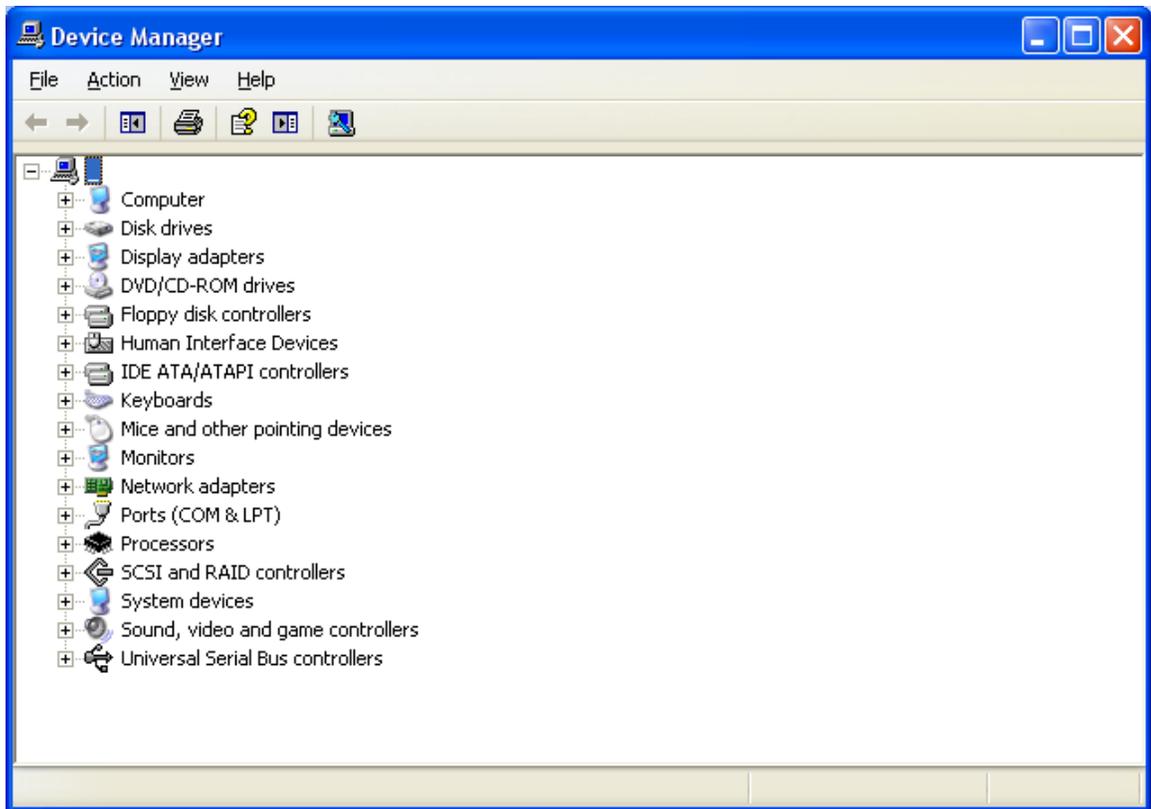


Fig. 9

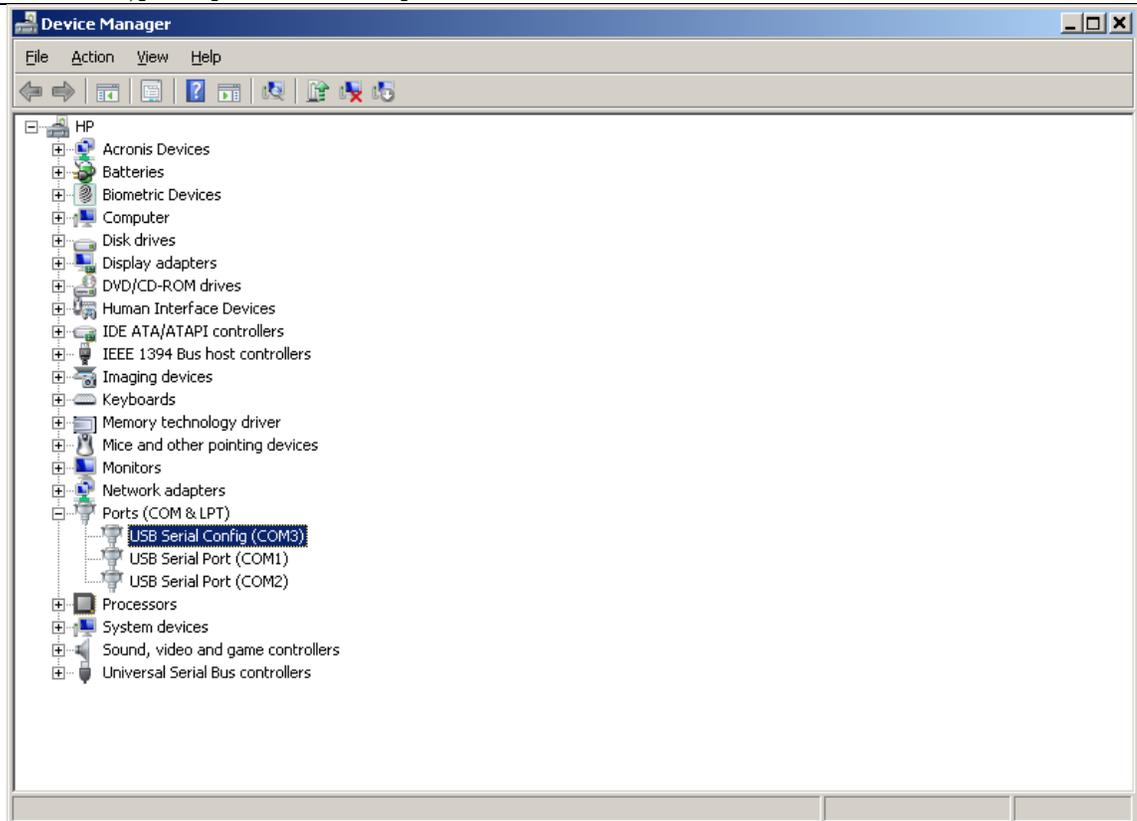
Select [Device Manager] from the tab [Hardware]. Window (Fig. 10) will be displayed.



**Fig. 10**

In [Device Manager] Window click „+“ symbol near [Ports (COM & LPT)] in order to scroll [Ports (COM & LPT)] menu. If the module is powered with +12V and it is connected to the PC via USB port, thus upon scrolling Ports (COM & LPT), Window (Fig. 11) will be displayed.

**Attention! If the module GTGPS is not powered with +12V and it is not connected to the PC via USB interface, menu [Ports (COM & LPT)] item [USB Serial Port] will not be visible.**



**Fig. 11**

From the displayed Window (Fig. 11) you must check what COM port is assigned to USB interface. [USB Serial Port (COM3)] is displayed in the example. This means that USB will be assigned to the third COM port. **Remember this COM port number and proceed with the clause Work with the software SERA**

## 4. Connection of the module to your PC

The module must be powered with (+12V >500mA) voltage, it should have inserted SIM card (with replenished account and removed **PIN CODE REQUEST**), connected GSM and GPS antennas and the module must be connected to the PC via programming cable.



## 5. Work with the software SERA

Start the software SERA. Go to „Start“ > „All programs“ > „Topkodus“ > „SERA“ > „SERA“ or go to installation directory and click „SERA.exe“.

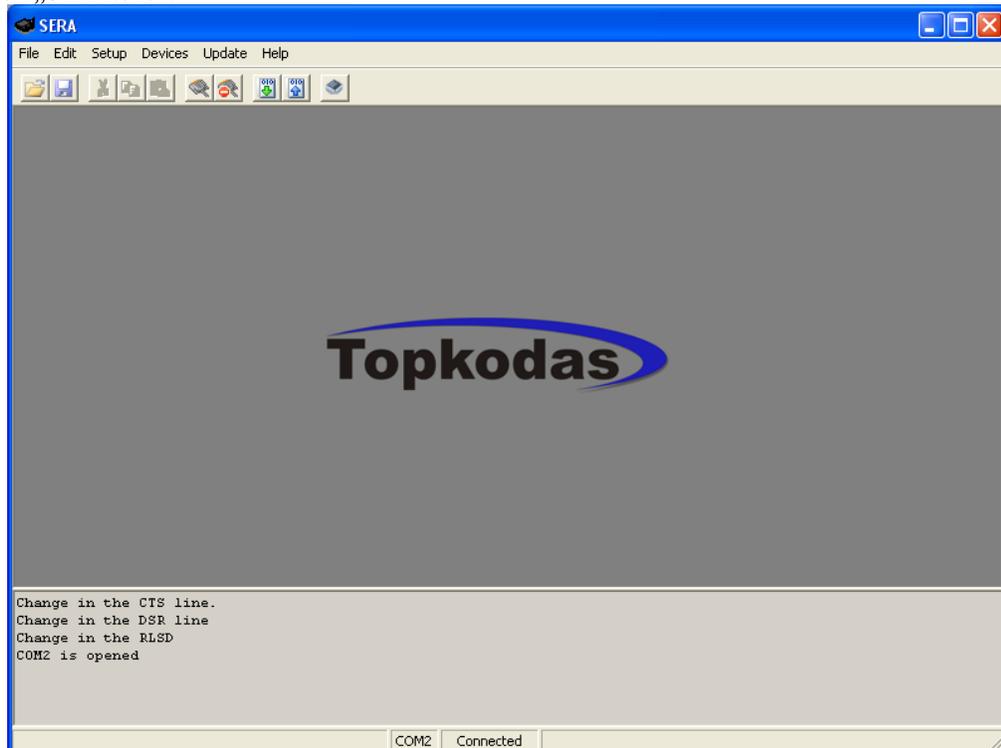


Fig. 12

13) If you are sure that the module is fully connected to PC and power supply, please go to Devices > GTGPS v1. (Fig.

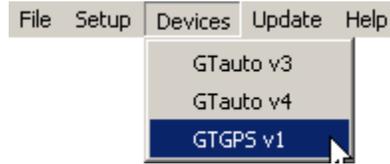


Fig. 13

After you make a selection, configuration window (System Options) will be opened (Fig. 14)

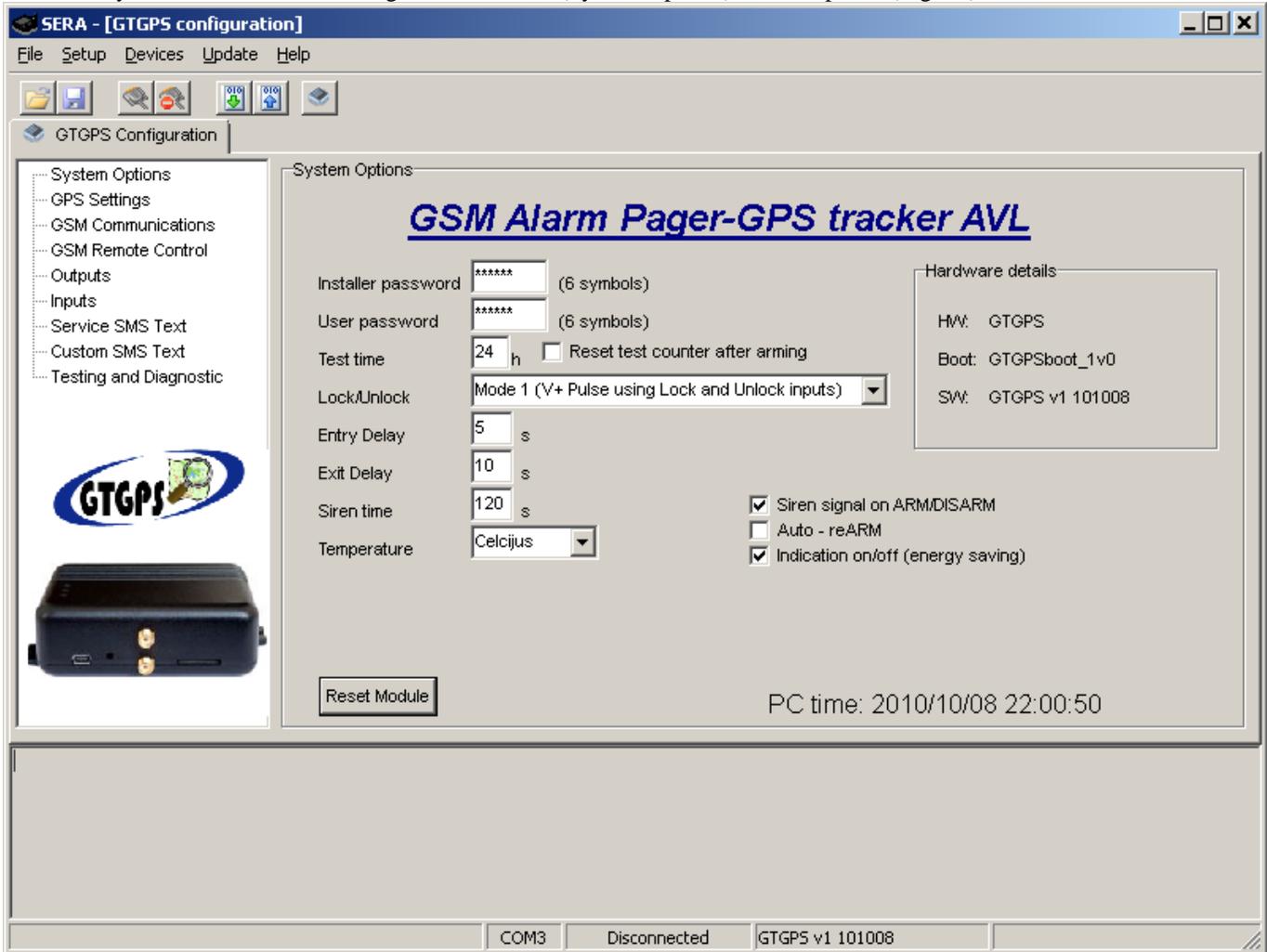


Fig. 14

Set the COM port to initialize GTGPS. Go to [Setup] > [Serial Port...] (Fig. 15).

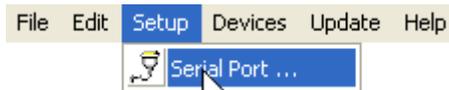


Fig. 15

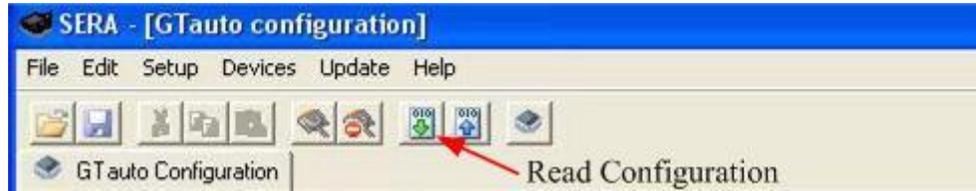
Window [Serial Port Setup] should be displayed (Fig. 16). Scroll the list and select COM port, you saw in [Device Manager] window. In the example the port USB Serial Config (COM3) was assigned to the module. Therefore select from the list COM3 and press OK. .

**Attention!** If you do not know the COM port you have connected the module, please open Device Manager and read the chapter: Selection of COM port



**Fig. 16**

Upon setting COM port, information of the module should be read out. Go to File > Read Device or press Read Configuration icon (Fig. 17)



**Fig. 17 Read Configuration icon**

**Attention! Each time after configuring the module press [File] > [Write Device] or press Send Configuration icon (Fig. 18) thus the software SERA will include configuration changes into the module!**



**Fig. 18 Send Configuration icon.**

### 5.1. Content of the module configuration

- System Options
- GPS Settings
- GSM Communications
- GSM Remote Control
- Outputs
- Inputs
- Service SMS Text
- Custom SMS Text
- Testing and Diagnostic



**Fig. 19**

Configuration content is available at the side of the screen. To open configuration window according to selected content menu, click preferred part of the content.

## 5.2. Main Window of the software SERA (System options)

Main Window (System Option) of the software SERA is displayed in Fig. (Fig. 20) This Window is displayed automatically when the GTGPS device is selected ([Devices] > GTGPS v1). It also may be selected from the content of the module.

Fig. 20

Explanation of fields of Main Window:

<b>Installer password</b>	It is installer password comprised of 6 symbols, when the module is being configured via SMS messages. See INST codes table.
<b>User password</b>	It is installer password comprised of 6 symbols, each time the module is being controlled via SMS messages. See USER code table.
<b>Test time</b>	Time period to inform how much time it will take to send informative SMS message to a user. Discretion of test setting time is one hour.
<b>Reset test counter after ARMing</b>	If a check box nearby this note will be checked, time of sending informative SMS message will be calculated from the beginning each time after security system is in ARM mode.
<b>Lock/Unlock</b>	When connecting the module to the central lock, it is necessary to set signals the module will enter ARM/DISARM modes. 5 versions is possible: <ul style="list-style-type: none"> <li>• <b>Disable</b> – programmable block of LOCK and UNLOCK inputs. The module will show no reaction towards signals in LOCK and UNLOCK inputs.</li> <li>• <b>Mode 1 (Mode 1 (V+ Pulse using Lock and Unlock inputs))</b> uses two inputs, i.e. Lock and Unlock. Lock input sets ARM mode after pulsing or steady signal. Unlock sets DISARM mode. It is comfortable to use 1 or 2 mode when connecting the module to the central lock of vehicle. Central lock mostly generates lock and unlock signals with two wires.</li> <li>• <b>Mode 2 (Mode 2 (V- Pulse using Lock and Unlock inputs))</b> as in 1 mode only inverted.</li> </ul>

	<ul style="list-style-type: none"> <li>• <b>Mode 3 (Mode 3 (V+ Level using Lock input))</b> uses only one Lock input. Unlock input is not used. These modes are comfortable to use when activating/deactivating the system by using switch or other access control device.</li> <li>• <b>Mode 4 (Mode 4 (V- Level using Lock input))</b> as in 3 mode only inverted.</li> <li>• <b>Mode 5 (Mode 5 (V+ &gt;500ms Pulse Lock input))</b> used only one Lock input. Unlock input is not used. The module ARM/DISARM state may be changed via voltage pulse longer than 500ms. It is possible to use a button or other control device, which will generate voltage pulse.</li> <li>• <b>Mode 6 (Mode 6 (V+ &gt;500ms Pulse Lock input))</b> similar as 5 mode only inverted.</li> </ul>
<b>Entry Delay</b>	Input time in seconds. The system starts calculating this time period after Delay type zone breaking. If during that time the security system will not be disarmed, The module will activate alarm state, i.e siren will be switch on and SMS will be send about alarmed zones.
<b>Entry Delay</b>	It is insensibility time (seconds) of the module into Delay and Interior type inputs before the module enters to ARM mode. This means that during calculation of this time period, the module will not activate alarm even if inputs will be activated.
<b>Siren Time</b>	This time value specifies how long the Siren of security system will be active after occurrence of alarm. Time period should be set in seconds from 1 sec to 999 sec.
<b>Indication</b>	<p><b>on/off (energy saving) – if this box is checked</b> it means that setting is On. If the box is not checked the setting is in <b>off (energy saving)</b>.</p> <ul style="list-style-type: none"> <li>• <b>On mode</b> – all LEDs available on the module are active and indicate activity of the module.</li> <li>• <b>Off (energy saving) mode</b> - lights only red LED, operation of GSM modem is being indicated.</li> </ul> <p>*red „control“ LED is on bus leads are always on not depending on Indication mode.</p>
<b>Siren Signal on ARM/DISARM</b>	When the function is active and the security system is turned into ARM state, siren will beep once, when turning into DISARM state - it will beep twice.
<b>Auto re-ARM</b>	Automated activation of the system, if a door has nor been closed after DISARMing the system.
<b>Temperature</b>	It is temperature scale. Two scale types are possible, one of which may be selected after scrolling menu near the note “Temperature”: <ul style="list-style-type: none"> <li>• Celsius – temperature indications according to Celsius scale.</li> <li>• Fahrenheit – temperature indications according to Fahrenheit scale.</li> </ul>
<b>Hardware details</b>	This is info about „GTGPS“ module: <ul style="list-style-type: none"> <li>• <b>HW</b> – hardware version of the module.</li> <li>• <b>Boot</b> – start up program version (BOOT) This part of the program is able to update Firmware SW.</li> <li>• <b>SW</b> – Firmware version of the module.</li> </ul>

Button [Reset Module] will reset the module as programmed. This function operates similarly as actual built-in RESET module. If this function will not operate, in the event USB Serial Port is not open or FW program of the module is not functioning properly.

### 5.3. Window [GSM communication options]

In order to open Window [GSM SMS and DIAL communication options] it is necessary to select „GSM Communication“ clause Fig. 19 from the left side. The Window Fig. 21 including user table whom GSM SMS messages are being sent and calls are being made. User number up to 16 Double click on the selected line will show selected user window Fig. 22to set what events should be sent to the specified number.

User numbers should be entered with international code. Near the telephone number of each user, check boxes which events will be sent to that user.

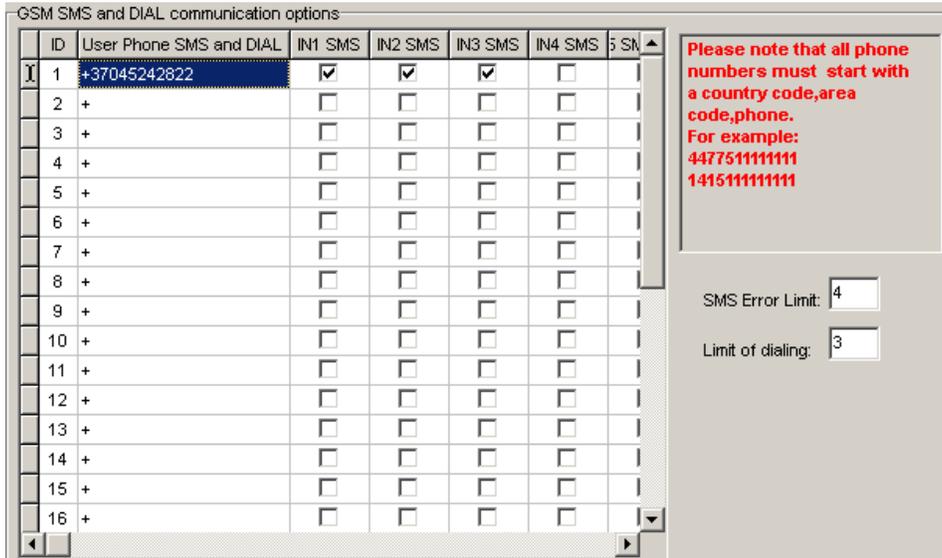


Fig. 21

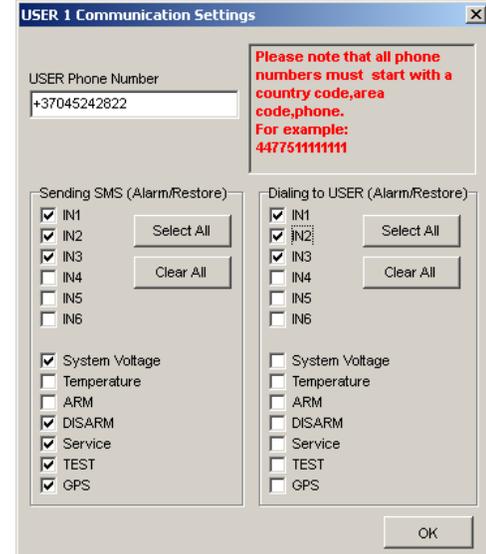


Fig. 22

Explanation of fields of [GSM communication options] Window:

<b>ID</b>	ID of the user to whom send SMS and make a call.
<b>User Phone SMS and DIAL</b>	This column includes user numbers to whom GSM SMS messages will be sent and short calls will be made. User number should be entered with international code.
<b>Sending SMS (Alarm/Restore)</b>	The events with check boxes will be send to selected users via SMS
<b>Dialling to USER (Alarm/Restore)</b>	A user will be notified about these events (the check bow should be checked) by making him a short call
<b>SMS error limit</b>	SMS repetition limit in a case of failure to send SMS.
<b>Limit of dialling</b>	It is a figure, which specifies how many times to call to a user's telephone number, in the event of alarm or if a user does not cancel call of the module. If a user after 15 sec will reject a call, the module will stop making calls till another event.

## 5.4. Remote Control by Dialling (Remote Control by Dialling)

To open Window [Remote Control by Dialling], it is necessary to select [GSM Remote Control]. A window Fig. 23 will be displayed including users table. These users would be able to control the module by dialling. The module will identify caller ID and if this ID will be available in the table, the module will perform selected action. It is possible to select few actions for one number, however some of these actions may disturb each other, e.g. if MIC and GPS are selected. In such case the microphone will not be able to be turned on, because when sending SMS with GPS parameters, the module will automatically reject the call.

User number up to 400

ID	User Phone	Out1	Out2	Out3	Out4	Arm/Disarm	MIC	GPS
1	+	<input type="checkbox"/>						
2	+	<input type="checkbox"/>						
3	+	<input type="checkbox"/>						
4	+	<input type="checkbox"/>						
5	+	<input type="checkbox"/>						
6	+	<input type="checkbox"/>						
7	+	<input type="checkbox"/>						
8	+	<input type="checkbox"/>						
9	+	<input type="checkbox"/>						
10	+	<input type="checkbox"/>						
11	+	<input type="checkbox"/>						
12	+	<input type="checkbox"/>						
13	+	<input type="checkbox"/>						
14	+	<input type="checkbox"/>						
15	+	<input type="checkbox"/>						
16	+	<input type="checkbox"/>						

**Please note that all phone numbers must start with a country code, area code, phone. For example: 447751111111 141511111111**

Fig. 23

Explanation of fields of [Remote Control by Dialling]:

<b>ID</b>	ID number of a user who is able to control the module by dialling up to 400.
<b>Remote User Phone</b>	Telephone numbers of users who will be able to control the module by dialling should be entered in this column. User number should be entered with international code.
<b>OUT1, OUT2, OUT3, OUT4</b>	Where the check boxes are checked, these inputs will be switched, if a user will call from this number. Preferred input may be assigned to each user's number. Thus different users are able to control different objects.
<b>ARM/DISARM command.</b>	If this check box is checked, a user will be able to ARM/DISARM the security system by dialling.
<b>MIC</b>	If this check box is checked, a user will be able to activate microphone and to switch on voice listening.
<b>GPS</b>	If this check box is checked, when dialling to the module, the module will send SMS with GPS coordinates to the number from which the call has been made.

## 5.5. Window [Outputs]

In order to open Window [Outputs], it is necessary to select [Outputs] option.

ID	Name	Out ON SMS text	Out OFF SMS text	Out definition	Out pulse time	Invert	State Mode
1	Out1	Out1 ON .	Out1 OFF .	CTRL/SMS/DIAL	15s	<input type="checkbox"/>	Pulse
2	Out2	Out2 ON .	Out2 OFF .	SIREN	600s	<input checked="" type="checkbox"/>	Steady
3	Out3	Out3 ON .	Out3 OFF .	ARM state	600s	<input type="checkbox"/>	Steady
4	Out4	Out4 ON .	Out4 OFF .	Light Flash	600s	<input type="checkbox"/>	Steady

Fig. 24

ID	Name	Out ON SMS text	Out OFF SMS text	Out definition	Out pulse time	Invert	State Mode
1	Out1	Out1 ON .	Out1 OFF .	CTRL/SMS/DIAL	15s	<input type="checkbox"/>	Pulse
2	Out2	Out2 ON .	Out2 OFF .	CTRL/SMS/DIAL	600s	<input checked="" type="checkbox"/>	Steady
3	Out3	Out3 ON .	Out3 OFF .	SIREN	600s	<input type="checkbox"/>	Steady
4	Out4	Out4 ON .	Out4 OFF .	BUZZER	600s	<input type="checkbox"/>	Steady
				ARM state			
				Inputs OK			
				Light Flash			

Fig. 25

ID	Name	Out ON SMS text	Out OFF SMS text	Out definition	Out pulse time	Invert	State Mode
1	Out1	Out1 ON .	Out1 OFF .	CTRL/SMS/DIAL	15s	<input type="checkbox"/>	Pulse
2	Out2	Out2 ON .	Out2 OFF .	SIREN	600s	<input checked="" type="checkbox"/>	Steady
3	Out3	Out3 ON .	Out3 OFF .	ARM state	600s	<input type="checkbox"/>	Pulse
4	Out4	Out4 ON .	Out4 OFF .	Light Flash	600s	<input type="checkbox"/>	Steady

Fig. 26

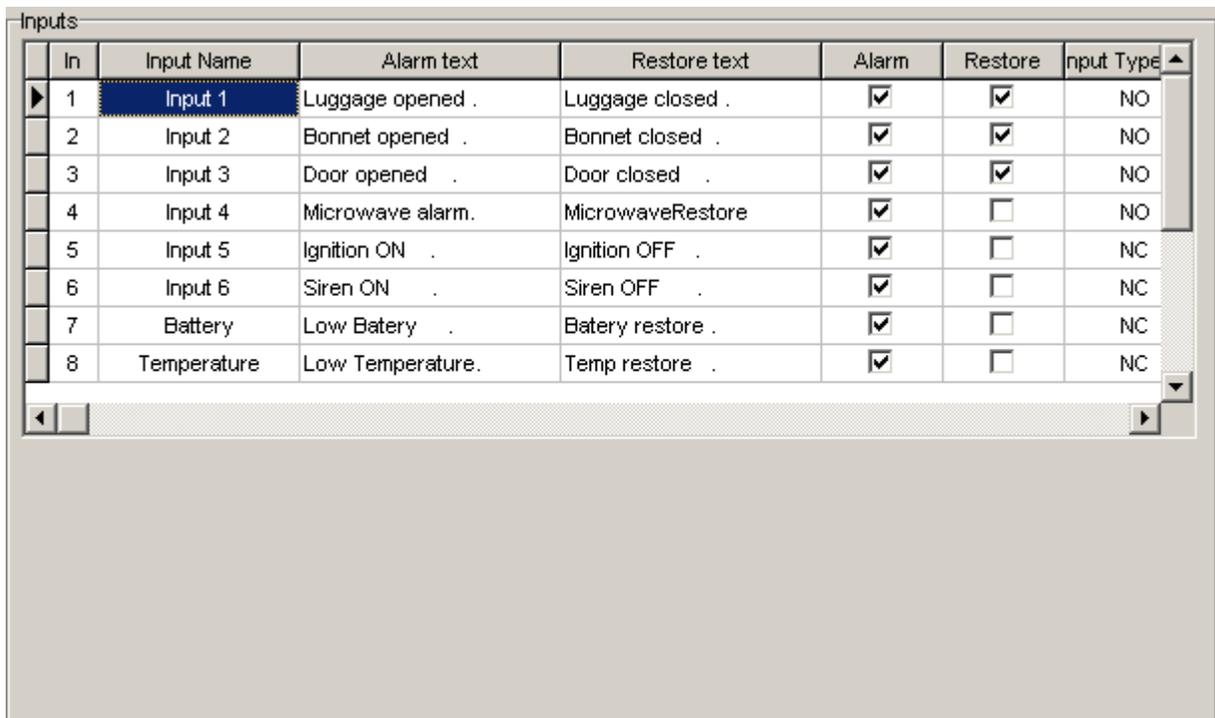
Explanation of fields of [Outputs] Window:

<b>ID</b>	Output ID number
<b>Name</b>	Output name
<b>Out ON text</b>	It is a text, which will be sent to a user after activation of output by the module. This text may be changed.
<b>Out OFF text</b>	It is a text, which will be sent to a user after deactivation of output by the module. This text may be changed.
<b>Out definition</b>	Output activity algorithm may be selected from scrolled menu, see Fig. 25:

	<ul style="list-style-type: none"> <li>• CTRL/SMS/DIAL – output will be possible to control via SMS message, short call or commutation via selected input. This algorithm may be used for ignition blocking, for gate control or for remoter starting of a car etc.</li> <li>• SIREN – output used for connection of siren. Used for generating of voice signal in the event of alarm.</li> <li>• BUZER – sound signalling device. Upon alarm of the zone beeps continuously. When security system starts calculating Exit time “Exit Delay”, the user is able to hear short voice signals. When 10 seconds are left till the activation, signals are being repeated each 0.5 seconds. If after expiry of delay time all zones remains unalarmed, the system turns into ARM state along with conformation beep.</li> <li>• <b>ARM State</b> – state of alarm system ARM/DISARM. For light indication may be used. When the output is set for operation in pulsating mode, this feature may be used to close car windows or roof ventilation. Impulse time should be set 20-30 seconds. When the security system will be turn on, the output will generate signal to close windows.</li> <li>• Inputs OK - if any of zones is disturbed, the output will be alarmed. This feature is usually used for indication whether all zones are in order.</li> <li>• Light Flash – used for connection of light signal. Upon alarm of the security system the light starts blinking. Lights will also blink when activating/deactivating the security system. This feature may be applied to connect car direction signals.</li> </ul>
<b>Out pulse time</b>	It is time in seconds, which indicates duration of impulse, when <b>Pulse</b> type is being selected in the column [ <b>State Mode</b> ]
<b>Invert</b>	Option to invert the output. If the check box is to be checked, the output will work as inverted.
<b>State mode</b>	Output commutation type, see Fig. 26. <ul style="list-style-type: none"> <li>• <b>Pulse</b> – the output will work in single pulse mode. Pulse time (seconds) should be set in [<b>Out pulse time</b>] column.</li> <li>• <b>Steady</b> – output will work on the steady level till the next commutation.</li> </ul>

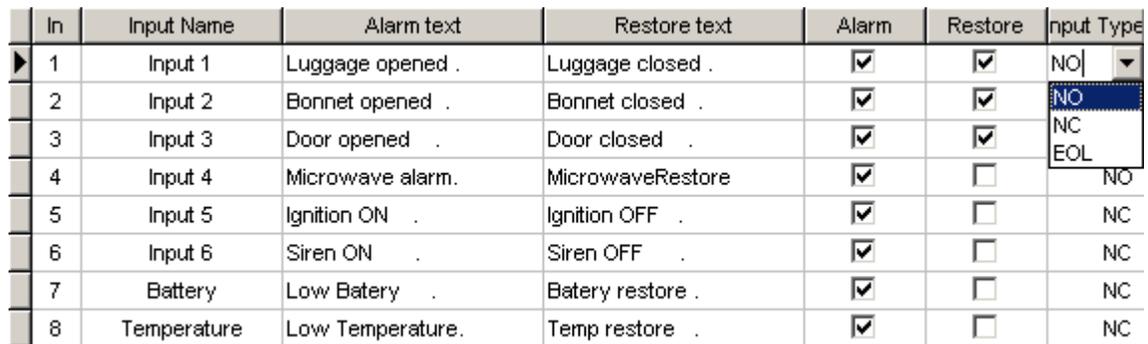
## 5.6. Window [Inputs]

In order to open Window [Inputs], it is necessary to select [Inputs] option. All input parameters are being described in this window. Double click on the selected line in order to open input settings window see Fig. 30



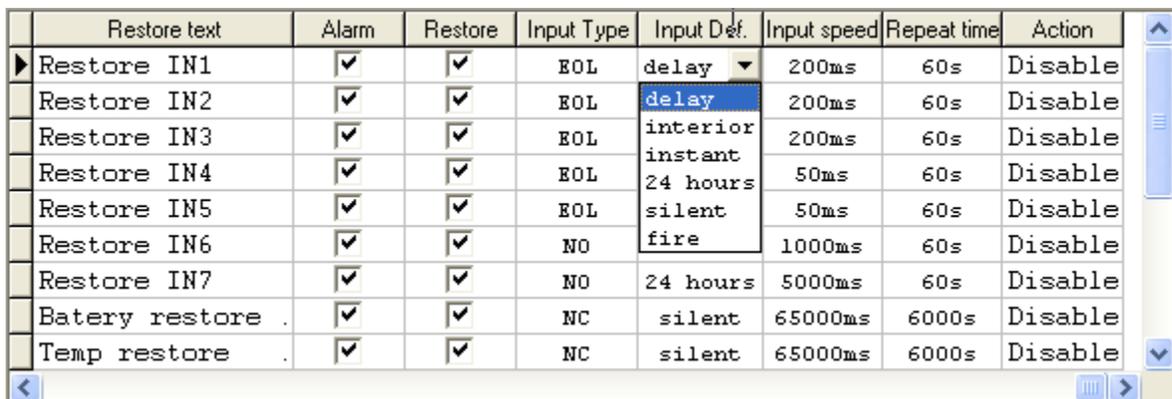
In	Input Name	Alarm text	Restore text	Alarm	Restore	Input Type
1	Input 1	Luggage opened .	Luggage closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
2	Input 2	Bonnet opened .	Bonnet closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
3	Input 3	Door opened .	Door closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
4	Input 4	Microwave alarm.	MicrowaveRestore	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NO
5	Input 5	Ignition ON .	Ignition OFF .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NC
6	Input 6	Siren ON .	Siren OFF .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NC
7	Battery	Low Batery .	Batery restore .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NC
8	Temperature	Low Temperature.	Temp restore .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NC

Fig. 27



In	Input Name	Alarm text	Restore text	Alarm	Restore	Input Type
1	Input 1	Luggage opened .	Luggage closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
2	Input 2	Bonnet opened .	Bonnet closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
3	Input 3	Door opened .	Door closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NC
4	Input 4	Microwave alarm.	MicrowaveRestore	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EOL
5	Input 5	Ignition ON .	Ignition OFF .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NO
6	Input 6	Siren ON .	Siren OFF .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NC
7	Battery	Low Batery .	Batery restore .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NC
8	Temperature	Low Temperature.	Temp restore .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NC

Fig. 28



Restore text	Alarm	Restore	Input Type	Input Def.	Input speed	Repeat time	Action
Restore IN1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EOL	delay	200ms	60s	Disable
Restore IN2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EOL	delay	200ms	60s	Disable
Restore IN3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EOL	interior	200ms	60s	Disable
Restore IN4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EOL	instant	50ms	60s	Disable
Restore IN5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EOL	24 hours	50ms	60s	Disable
Restore IN6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO	silent	1000ms	60s	Disable
Restore IN7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO	fire	5000ms	60s	Disable
Batery restore .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NC	24 hours	65000ms	6000s	Disable
Temp restore .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NC	silent	65000ms	6000s	Disable

Fig. 29

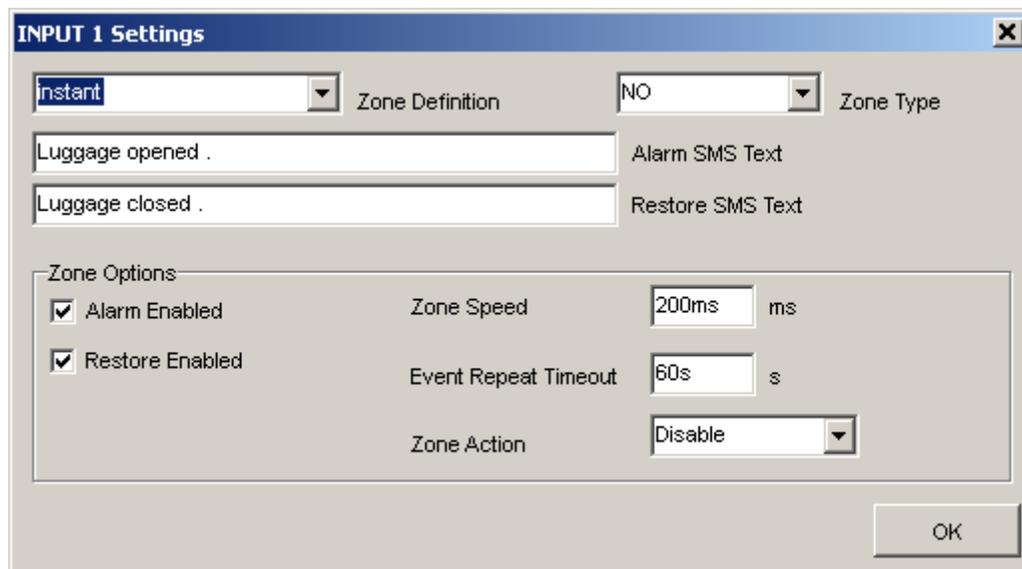


Fig. 30

Explanation of fields of [Inputs] window:

<b>In</b>	Input number
<b>Input Name</b>	Input name
<b>Alarm text</b>	It is the text, which will be received by a user after alarm response of appropriate sensor. This text may be changed.
<b>Restore text</b>	It is the text, which will be received by a user after restore of appropriate sensor. This text may be changed.
<b>Alarm</b>	If the box is checked it means that the module will react towards alarm response of appropriate sensor. If the box is not checked the module will not react towards alarm of the present input.
<b>Restore</b>	If the check box is checked, it means that the module will react towards restore of appropriate sensor after alarm response. If the check box is not checked the module will not react towards restore of the present input.
<b>Input Name</b>	Input type you may select after scrolling menu: <ul style="list-style-type: none"> <li>• NC – normally closed contact;</li> <li>• NO – normally open contact;</li> <li>• EOL - normally closed contact with 1 resistor</li> </ul>
<b>Input Def.</b>	Input operation type you may select after scrolling menu: <ul style="list-style-type: none"> <li>• <b>Delay – Entry zone.</b> Set "Entry delay" and "Exit Delay" are applied for this zone. Such type zones are used for connection of door sensor.</li> <li>• <b>Interior</b> – disturbance of this zone will not be responded, if alarm of “Delay” type zone occurred and “Entry Delay” or “Exit Delay” time still have not expired. Such type zones may be used for connection of motion sensor in front of the door. The input will be activated immediately if the door has not been open before.</li> <li>• <b>Instant</b> – Instant zone. Upon disturbance of this zone, the system will immediately activate burglary alarm. If the security system was ARM’ed.</li> <li>• <b>24 hours</b> - Upon disturbance of this zone, the system will activate burglary alarm not depending whether the security system is ARM or DISARM. The applications of this type</li> </ul>

	<p>zones are safes, storehouses, tampers of the sensors.</p> <ul style="list-style-type: none"> <li>• <b>Silent</b> - silent zone is always active not depending on whether the security system is ARM or DISARM. Upon disturbance of this zone, SMS messages are being generated but the siren will not be activated. These zones may be applied for voltage, temperature control, AC mains failure control and for alarm of silent panic.</li> <li>• <b>Fire</b> - this zone is always active not depending on whether the security system is ARM or DISARM. The zone generates a special siren signal with interruptions. The zone is applied for smoke sensors and for fire alarm.</li> </ul>
<b>Input speed</b>	It is the time in milliseconds, which indicates the shortest signal for reaction of the module. If signal is shorter than indicated, the module will ignore it.
<b>Repeat time</b>	The time period in seconds, during this time repeatable zone events are ignored.
<b>Input 4 (Fig. 31)</b>	Additional input function. Lock/Unlock blockage conditions. The following settings are possible: <ul style="list-style-type: none"> <li>• <b>Disable</b>- additional function off</li> <li>• <b>Unlock Blocking condition</b></li> <li>• <b>Lock Blocking condition</b></li> <li>• <b>Lock/Unlock Blocking condition</b></li> <li>• <b>Input reaction speed</b></li> </ul>
<b>Input 5 (Fig. 32)</b>	If check box is checked, this is to inform that upon input alarm, activation of the module will be blocked.
<b>Input 6 (Fig. 33)</b>	<p><b>In7 forced ARMing (special function)</b></p> <ul style="list-style-type: none"> <li>• <b>Disable</b> - additional function off</li> <li>• <b>Unlock Blocking condition</b></li> <li>• <b>Lock Blocking condition</b></li> <li>• <b>Lock/Unlock Blocking condition</b></li> <li>• <b>Force Arming</b> – if the module is in DISARM state, thus after selecting this function, the module will go to ARM mode after alarm response of Input7 (siren) zone.</li> <li>• <b>Min siren time</b> - it is time in seconds, indicating the time period the siren should be active in order to trigger that zone.</li> <li>• <b>Input reaction speed</b></li> </ul>
<b>Battery (Fig. 34)</b>	<p><b>In8 Low Battery parameters</b></p> <ul style="list-style-type: none"> <li>• <b>Alarm voltage</b> – voltage the module is connected to; when this voltage is reached, the 8 zone will be alarmed.</li> <li>• <b>Restore voltage</b> – voltage the module is connected to; when this voltage is reached, the 8 zone will be restored.</li> <li>• <b>Calibration</b> – coefficient, if changed voltage indications might be calibrated.</li> </ul>
<b>Temperature (Fig. 35)</b>	<p><b>In9 Temperature parameters</b></p> <ul style="list-style-type: none"> <li>• <b>Alarm temperature</b> – when this temperature will be reached 9 zone will be alarmed.</li> <li>• <b>Restore temperature</b> - when this temperature</li> </ul>

will be reached 9 zone will be restored.

- **Additional Calibration** – by changing X and Y coefficients, which influence temperature calculation formula, it is possible to calibrate temperature showings.

**Attention! In order to change temperature scale (C/F) go to "Main Window", select preferred temperature scale ("Temperature") and after this change send configuration into the module ("Write Device").**

Inputs

In	Input Name	Alarm text	Restore text	Alarm	Restore	Input Type
1	Input 1	Luggage opened .	Luggage closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
2	Input 2	Bonnet opened .	Bonnet closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
3	Input 3	Door opened .	Door closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
4	Input 4	Microwave alarm.	MicrowaveRestore	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NO
5	Input 5	Ignition ON .	Ignition OFF .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NC
6	Input 6	Siren ON .	Siren OFF .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NC
7	Battery	Low Batery .	Batery restore .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NC
8	Temperature	Low Temperature.	Temp restore .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NC

In4 (special function)

Lock/Unlock Blocking condition

Input Reaction Speed  ms

Fig. 31

Inputs

In	Input Name	Alarm text	Restore text	Alarm	Restore	Input Type
1	Input 1	Luggage opened .	Luggage closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
2	Input 2	Bonnet opened .	Bonnet closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
3	Input 3	Door opened .	Door closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
4	Input 4	Microwave alarm.	MicrowaveRestore	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NO
5	Input 5	Ignition ON .	Ignition OFF .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NC
6	Input 6	Siren ON .	Siren OFF .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NC
7	Battery	Low Batery .	Batery restore .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NC
8	Temperature	Low Temperature.	Temp restore .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NC

In5 blocks ARM (special function)

Enable function

Fig. 32

Inputs

In	Input Name	Alarm text	Restore text	Alarm	Restore	nput Type
1	Input 1	Luggage opened .	Luggage closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
2	Input 2	Bonnet opened .	Bonnet closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
3	Input 3	Door opened .	Door closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
4	Input 4	Microwave alarm.	MicrowaveRestore	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NO
5	Input 5	Ignition ON .	Ignition OFF .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NC
6	Input 6	Siren ON .	Siren OFF .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NC
7	Battery	Low Batery .	Batery restore .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NC
8	Temperature	Low Temperature.	Temp restore .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NC

In6 (special function)

Lock/Unlock Blocking condition

Input Signal Time to Force ARM  s

Input Reaction Speed  ms

Fig. 33

Inputs

In	Input Name	Alarm text	Restore text	Alarm	Restore	nput Type
1	Input 1	Luggage opened .	Luggage closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
2	Input 2	Bonnet opened .	Bonnet closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
3	Input 3	Door opened .	Door closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
4	Input 4	Microwave alarm.	MicrowaveRestore	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NO
5	Input 5	Ignition ON .	Ignition OFF .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NC
6	Input 6	Siren ON .	Siren OFF .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NC
7	Battery	Low Batery .	Batery restore .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NC
8	Temperature	Low Temperature.	Temp restore .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NC

In7 Low Battery parameters

Alarm voltage  V    Calibration

Restore voltage  V

Fig. 34

Inputs

In	Input Name	Alarm text	Restore text	Alarm	Restore	nput Type
1	Input 1	Luggage opened .	Luggage closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
2	Input 2	Bonnet opened .	Bonnet closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
3	Input 3	Door opened .	Door closed .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NO
4	Input 4	Microwave alarm.	MicrowaveRestore	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NO
5	Input 5	Ignition ON .	Ignition OFF .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NC
6	Input 6	Siren ON .	Siren OFF .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NC
7	Battery	Low Batery .	Batery restore .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NC
8	Temperature	Low Temperature.	Temp restore .	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NC

In8 Temperature parameters

Alarm temperature  °C

Restore temperature  °C

Additional Calibration

X

Y

Temperature=X\*ADC+Y

Fig. 35

## 5.7. Window “Service text summary”

In order to open [Service text summary] Window select [Service text summary] from the left section.

ID	Name of Status Event	Event Text	Send
1	Module ARM	System ARM	<input checked="" type="checkbox"/>
2	Module DISARM	System DISARM	<input checked="" type="checkbox"/>
3	Module reset	System reset	<input checked="" type="checkbox"/>
4	Module Periodical Test	Test	<input checked="" type="checkbox"/>
5	GPS Periodical Report	GPS Report	<input checked="" type="checkbox"/>
6	GPS Geofence Alarm	Geofence Alarm	<input checked="" type="checkbox"/>
7	GPS OverSpeed Alarm	OverSpeed Alarm	<input checked="" type="checkbox"/>

Fig. 36

Explanation of fields of “Service text summary” Window:

<b>Name of Status Event</b>	Event name
<b>Event Text</b>	Event test, which may be changed
<b>Send</b>	If the check box is checked, the message about a certain event will be sent to a user, if it is configured in [Communications] window.

## 5.8. Window [Text summary]

In order to open [Text summary] Window select [Text table] (Fig. 36) from the left side of the Window. This Window is intended for creation of equivalents.

ID	Text Key	Text
1	Events	Event:
2	GSM Signal strength	Signal strength
3	Module voltage	System voltage:
4	Output state	Output states
5	New password	New password
6	System state	System info

Fig. 37

Explanation of fields of [Text summary] Window:

<b>ID</b>	Text number
<b>Text name</b>	Text in English
<b>Text</b>	Equivalent of the text available in „Text name“, which may be changed. Words available in this field will comprise messages being sent.

## 5.9. Window [Testing and Diagnostic window]

In order to open [Testing and Diagnostic window] select [Testing and Diagnostic] option. This Window is intended for testing of the module, for operation analysis and diagnostics. This feature is very convenient when installing the module.

Fig. 38

Explanation of fields of “Testing Window”:

<b>Inputs</b>	<b>IN1</b>	This is alarm indication of each of eight inputs. Checked check box nearby the appropriate input means that the said input – zone was activated. Number near each input is a coefficient indicating input voltage.
	<b>IN2</b>	
	<b>IN3</b>	
	<b>IN4</b>	
	<b>IN5</b>	
	<b>IN6</b>	
	<b>IN7</b>	Lock Input indication. Number nearby is a coefficient indicating input voltage.
	<b>IN8</b>	
<b>Outputs states</b>	<b>Lock</b>	Lock Input indication. Number nearby is a coefficient indicating input voltage.
	<b>Unlock</b>	
	<b>Out1</b>	Checked box nearby the appropriate output means that this output is active.
	<b>Out2</b>	
	<b>Out3</b>	
	<b>Out4</b>	
	<b>Button Out1 On/Off</b>	By pressing buttons (on/off) output states are controlled. It is convenient to use when it is necessary to test outputs operation.
	<b>Button Out2 On/Off</b>	
<b>Button Out3 On/Off</b>		
<b>Button Out4 On/Off</b>		
<b>GSM info</b>	<b>IMEI</b>	IMEI number of GSM modem available in the module.
	<b>SIM card</b>	If note READY is visible, it means that SIM card is fully functioning. Otherwise, check whether PIN code request is off or replace SIM card.
	<b>Signal level</b>	Signal strength of GSM communication.
	<b>Registration</b>	State of GSM modem registration to GSM network.

	<b>SMS Service Centre Address</b>	SMS centre number. This number should be checked if it correct. If this number is incorrect. SMS messaging may be impossible. This number may be changed after inserting SIM card into any mobile phone.
<b>System voltage</b>	power supply voltage the module is connected to. Nearby number is value of ADC voltage. When multiplying this number by the coefficient available in IN8 window Fig. 33, voltage value (V) will be achieved.	
<b>Temperature</b>	Temperature of temperature sensor. The number nearby is temperature ADC value used to calculate temperature according to the formula: $Temperature = X * ADC + Y$ . X and Y coefficients may be changed in temperature window in order to additionally calibrate temperature measuring. These coefficients see Fig. 34. After performing additional calibration, it is possible to achieve precise temperature measurement.	
<b>System State</b>	<b>ARM</b>	Indication that at the moment the module is in ARM mode.
	<b>DISARM</b>	Indication that at the moment the module is in DISARM mode.
	<b>WAITING ARM</b>	Module mode when <b>Exit Delay</b> time is being calculated.
<b>GSM info</b>	<b>Latitude</b>	Showings of geographic latitude defined by GPS receiver
	<b>Longitude</b>	Showings of geographic longitude defined by GPS receiver
	<b>Altitude</b>	Showings of geographic altitude defined by GPS receiver
	<b>Test time</b>	Showings of height above sea level defined by GPS receiver
	<b>Speed</b>	Speed of GPS receiver movement
	<b>PDOP/VDOP/HDOP</b>	PDOP [Position dilution of precision] - the term to specify the satellite layout on GPS precision in real time. This is the coefficient, which is shown on the receiver's screen thus providing information on accuracy of carried out works. If the coefficient is small, work conditions are ideal and measurement bias is minimal, and if the coefficient is big - it is recommended to wait for the better satellite layout . If registered PDOP is too big, the receiver will simply not to allow performing necessary jobs. When measuring under 1-3 PDOP coefficient value, measuring bias will be minimal. Accordingly: VDOP - vertical accuracy HDOP - horizontal accuracy
	<b>Fix Quality</b>	GPS receiver's state whether communication is available. The following conditions are possible: <ul style="list-style-type: none"> <li>• Not Fixed - No communication</li> <li>• Fixed-GPS - communication fixed</li> <li>• Dgps Fixed - GGPS communication is fixed</li> <li>• Unknown Status - status unknown</li> </ul>
	<b>GPS Mode</b>	GPS communication type: <ul style="list-style-type: none"> <li>• Not Fixed - No communication</li> <li>• 2D</li> <li>• 3D</li> </ul>
	<b>Sat Used</b>	Number of satellites used to calculate GPS coordinates setting
	<b>Sat in View</b>	General number of visible satellites
<b>Geofence Dist.</b>	Showings of measured distance from geofence zone till the centre of the module	
<b>Switch on testing mode</b>	Pressing this button starts testing of the module.	
<b>Switch on testing mode</b>	Pressing this button stops testing of the module.	

## 6. Saving of GTGPS module configuration into PC

After configuration of the module, all settings may be saved at PC. It enables to save time, when next time the same configuration will be used – it will not be necessary again to set the same parameters.

If you want to save that is already recorded by the module, firstly you must read configuration of the module. [File > Read Device] see Fig. 39 In order to save configuration go to [File > Save As...] [Fig. 40 or press icon [Save] icon Fig. 41. Enter configuration parameter in the displayed table and press „OK“.



Fig. 39



Fig. 40

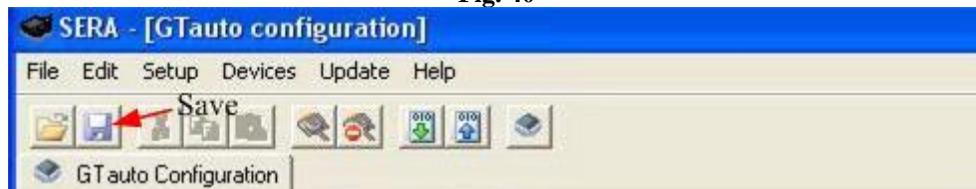


Fig. 41

## 7. Installing of saved configuration into the module GTGPS

In order to start saved configuration go to [File] > [Open] Fig. 42 or press [Open] icon Fig. 43

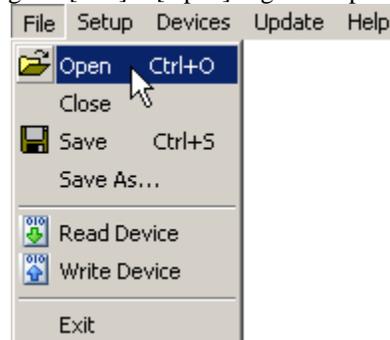


Fig. 42



Fig. 43



Fig. 44

Click the file of saved configuration or press “Open” in displayed Window. Now all parameters of saved configuration have been loaded into application SERA. If no any other changes are necessary, press [File] > [Write Device] Fig. 44 in order to send this configuration into the module.

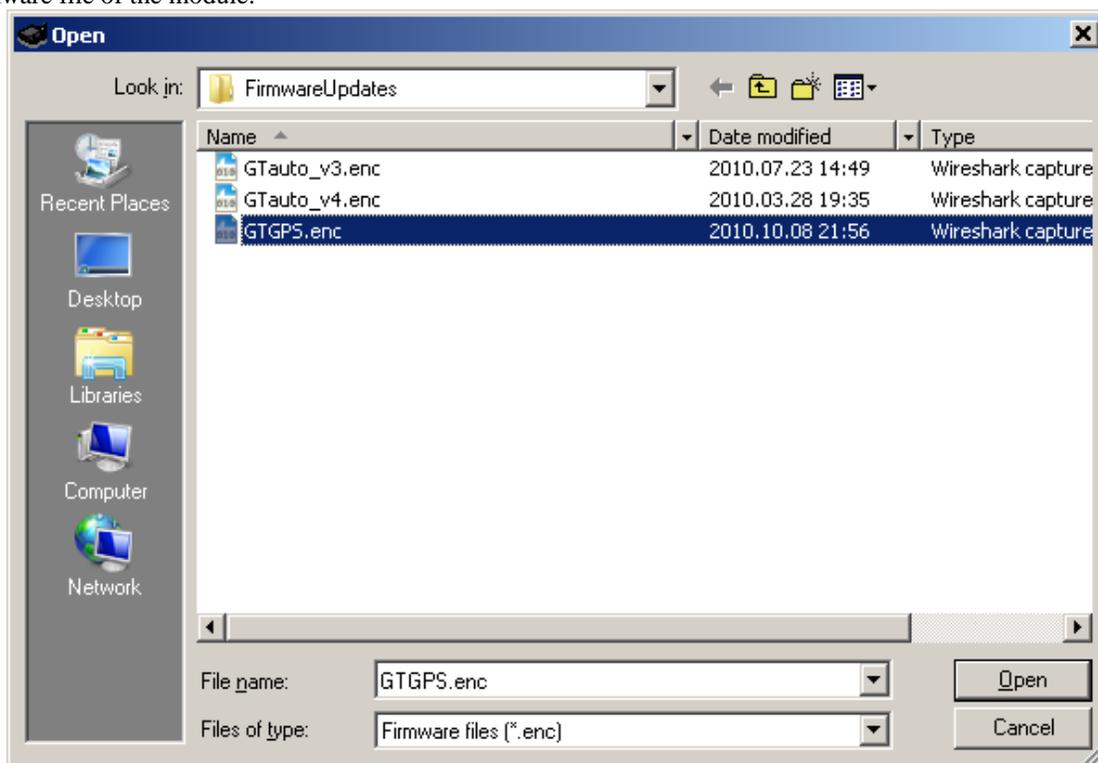
## 8. Updating of GTGPS software version

The latest software version may be found [www.topkodas.lt](http://www.topkodas.lt) . If a version of your module is older, please update it (to find out the version of your GTGPS software version (SW) send Test SMS from your module). For this purpose press [Update] in the menu list or [Update module] icon, Fig. 45. Specify the file of the newest software version and press [Open]. Follow further instructions of the program.

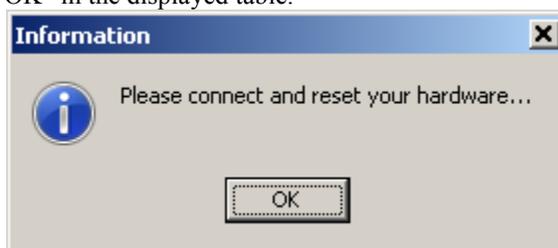


Fig. 45

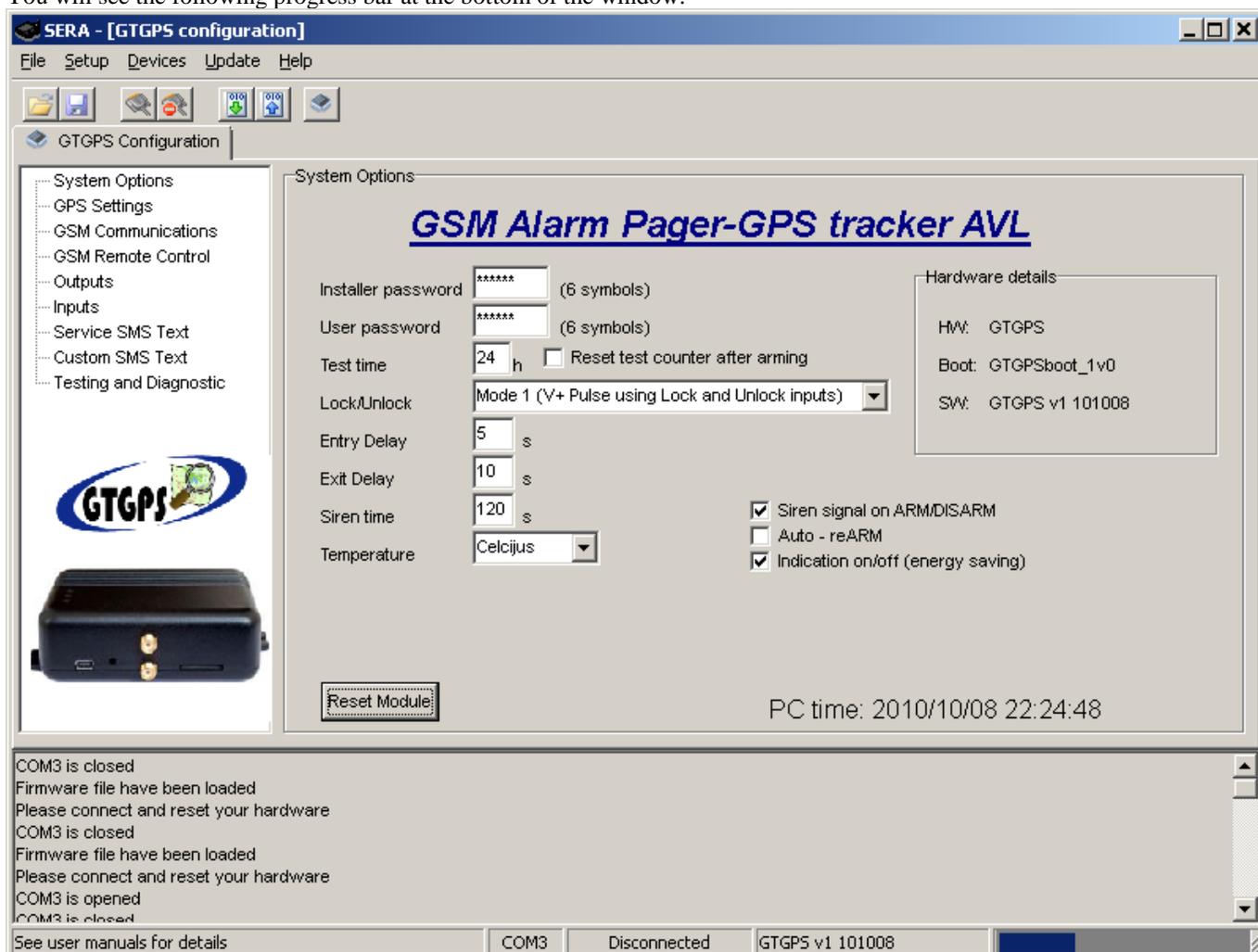
Select Firmware file of the module:



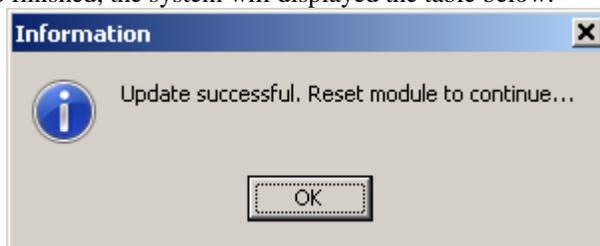
Press RESET button once and click “OK” in the displayed table.



You will see the following progress bar at the bottom of the window:



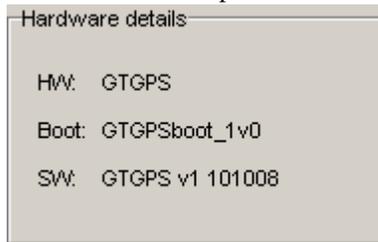
When updating of firmware will be finished, the system will displayed the table below:



Then press RESET button. Then press OK.

Read configuration of the module [File->Read Device].

Go to Main Window. Check whether the firmware has been updated. **SW: xxxxxxxx**



Programme version is also visible below:

