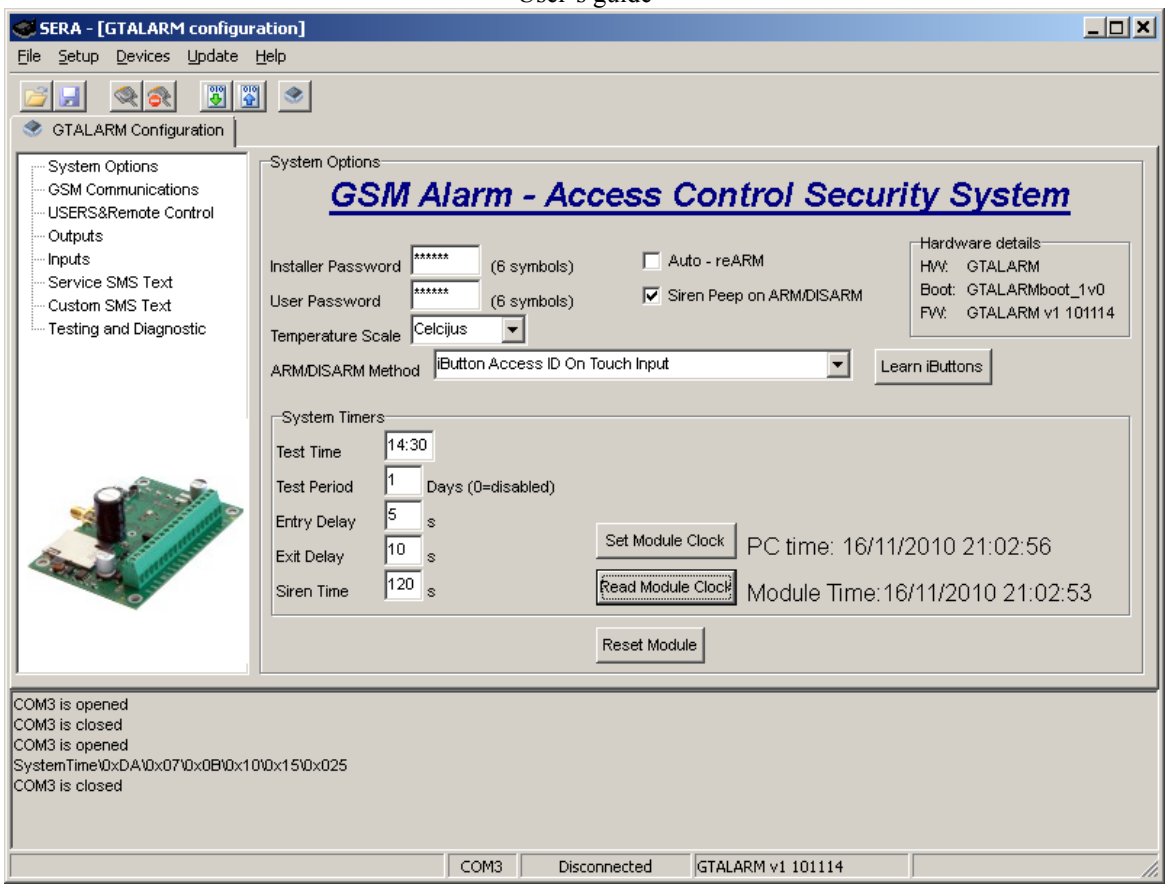
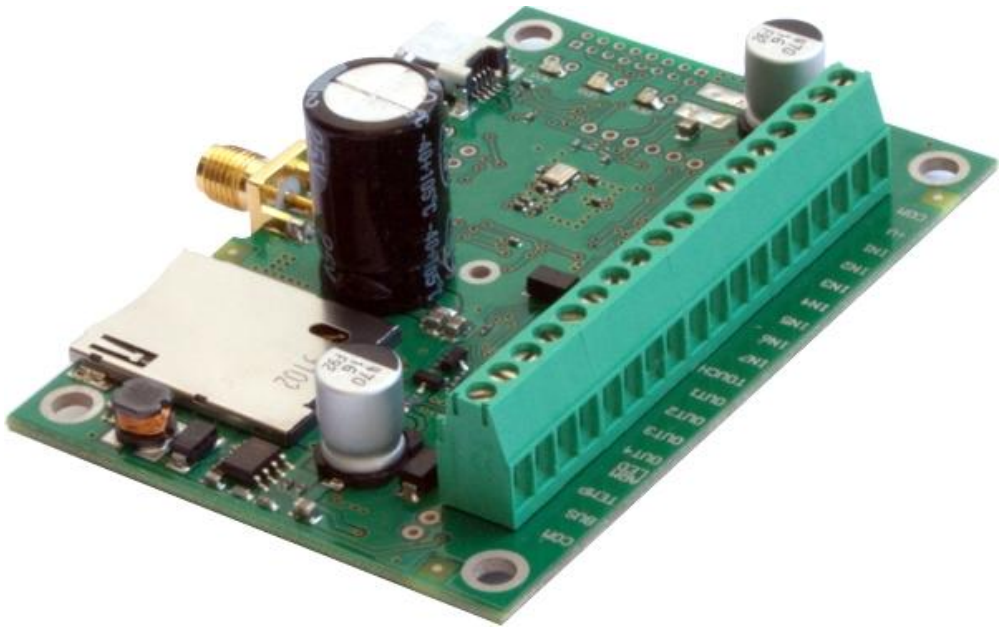
Topkodas

SERA

GTalarm v1 configuration and testing software in Microsoft Windows environment

User's guide





Content

1. Installation of SERA software

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

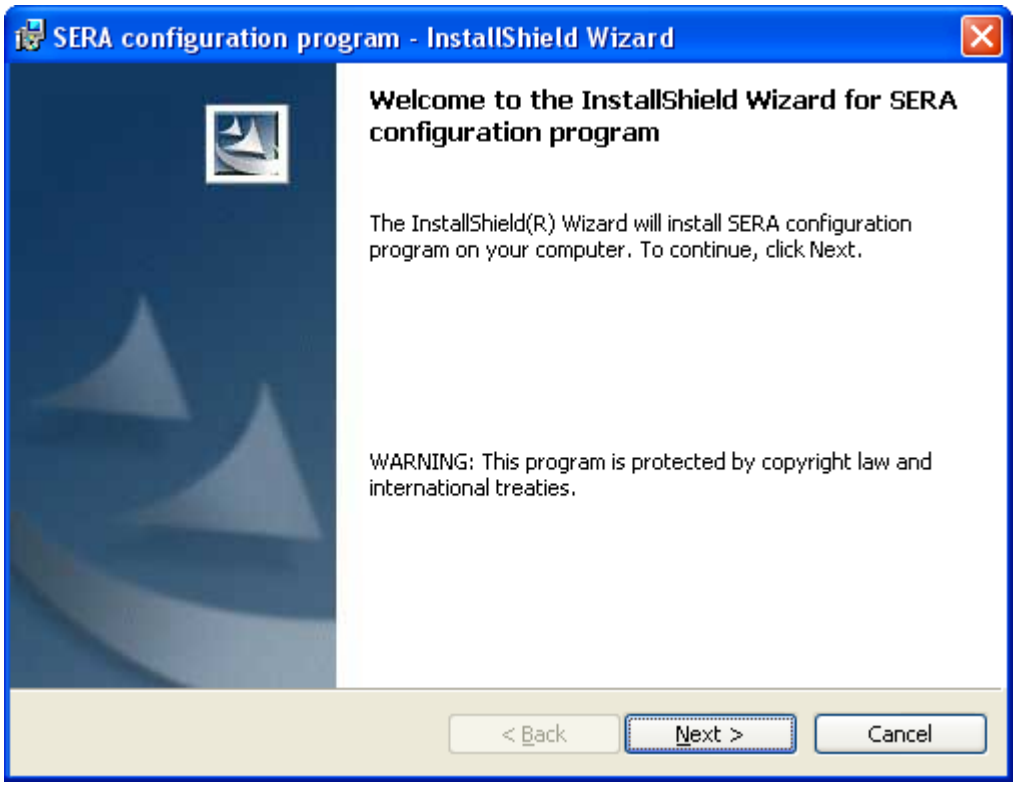


Fig. 1

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

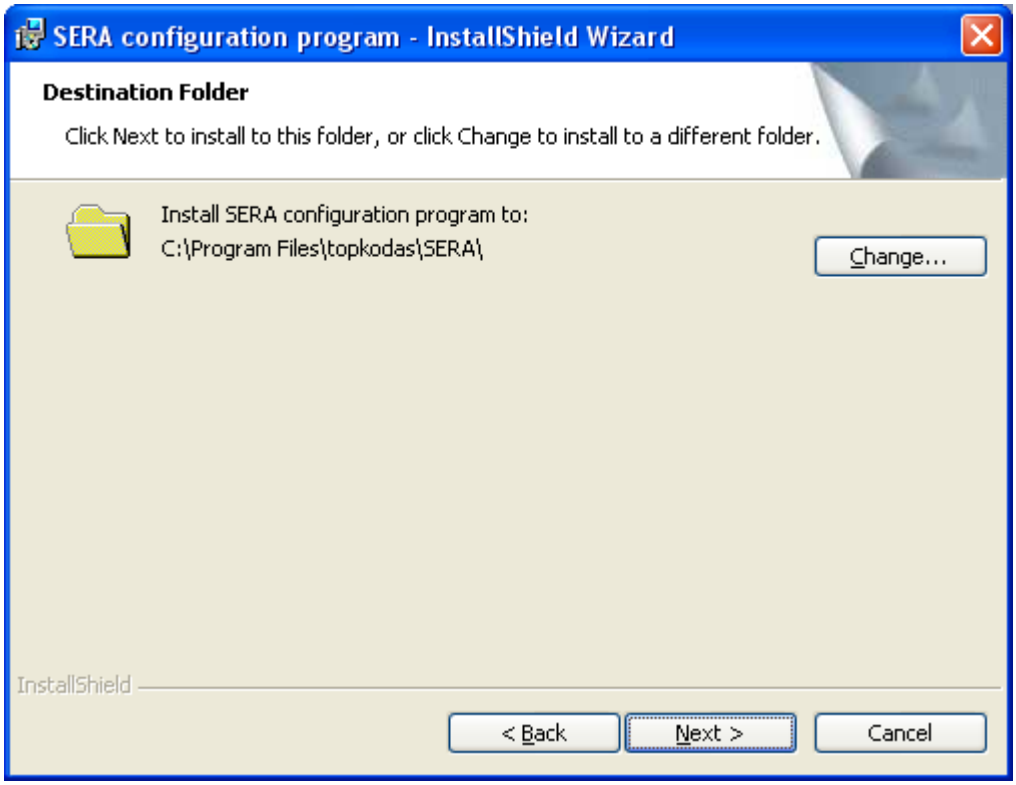


Fig. 2

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>.

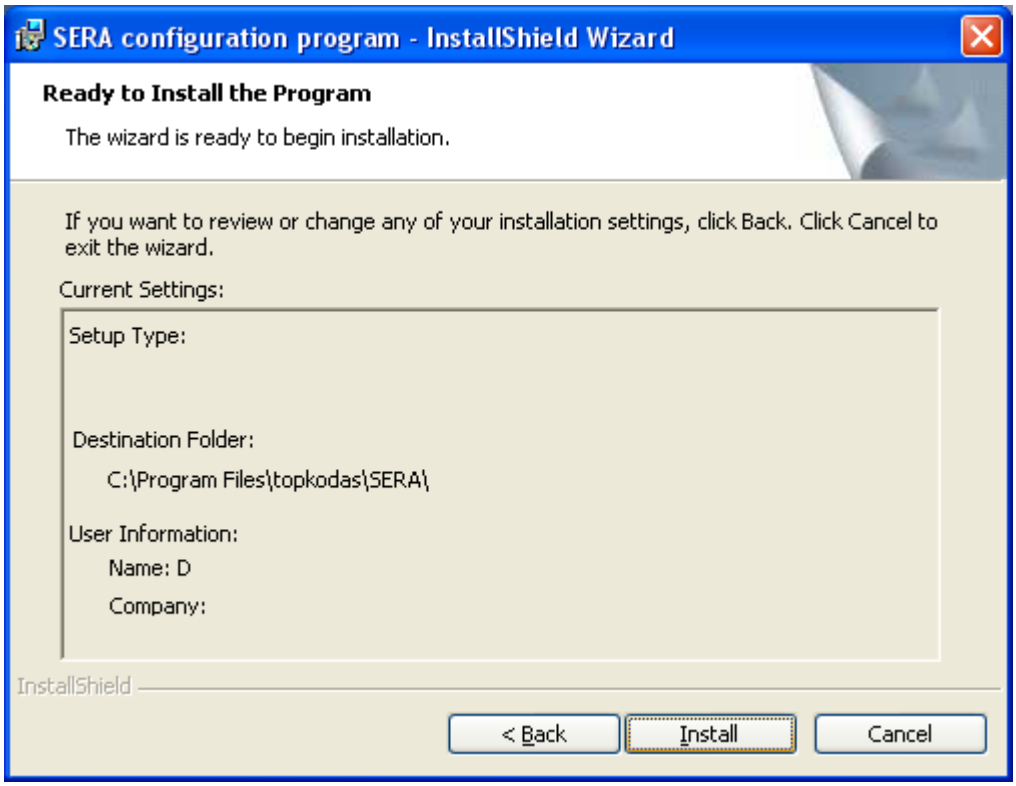


Fig. 3

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

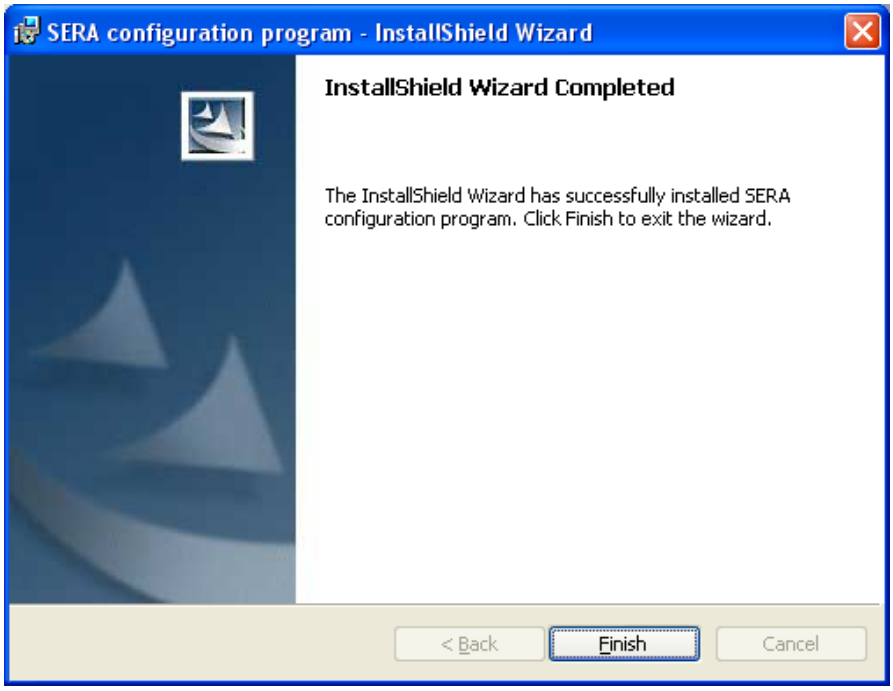


Fig. 4

After successful installation of the software SERA, press [Finish] in the displayed WindowFig. 4.

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

2. USB drivers installation

In order to configure the module 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:

Winows 2000/XP **usbser.inf** .

Windows 7 x86 or x64 **usbser_x86_x64.inf**

Fig. 5

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

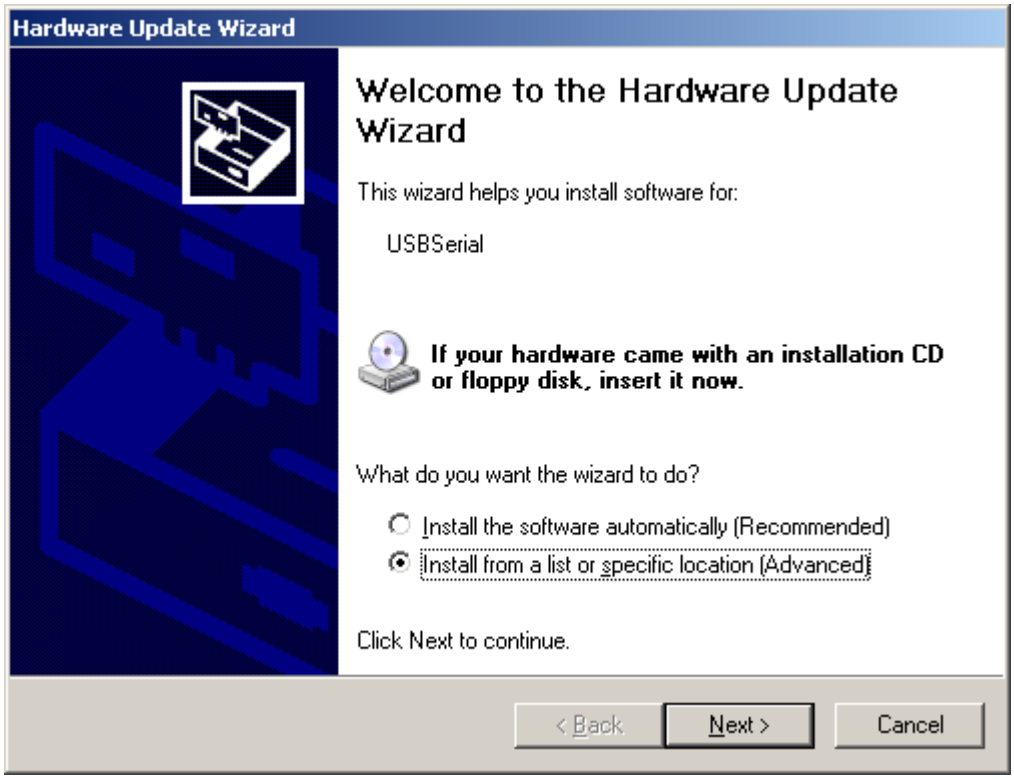


Fig. 6

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

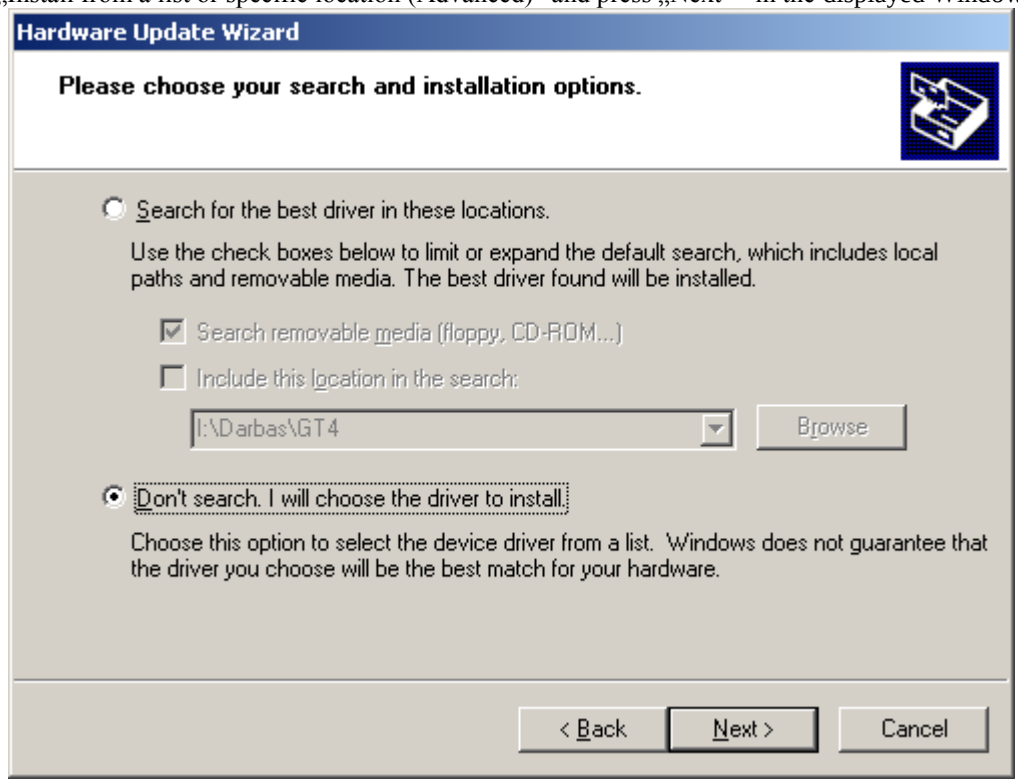
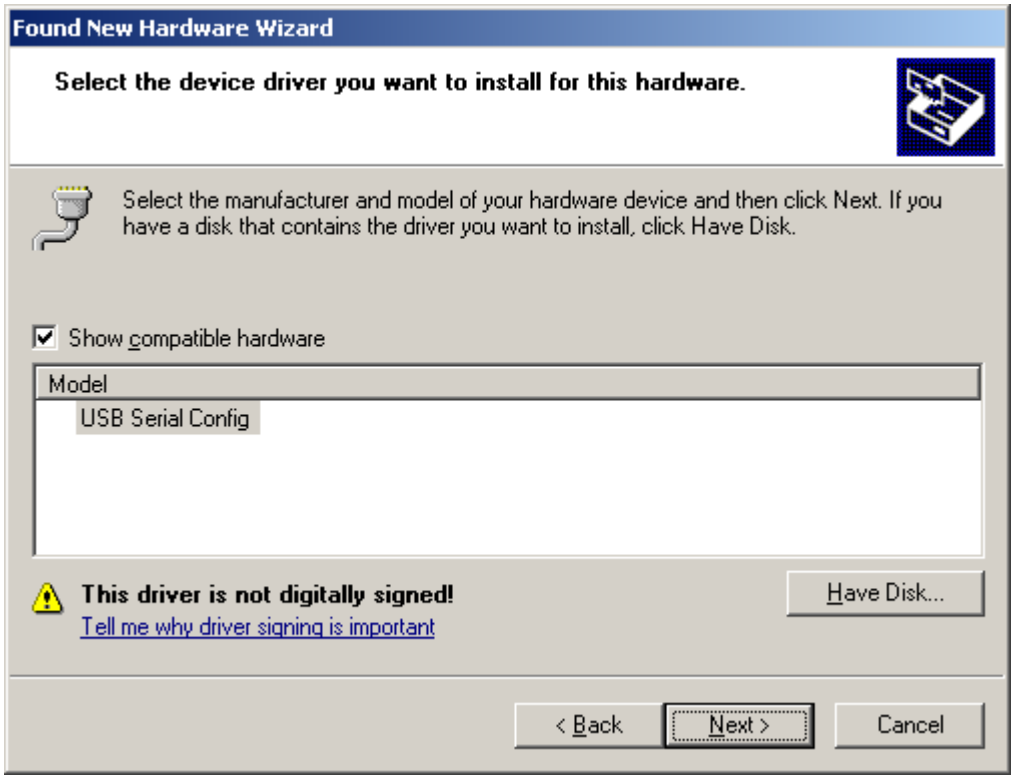
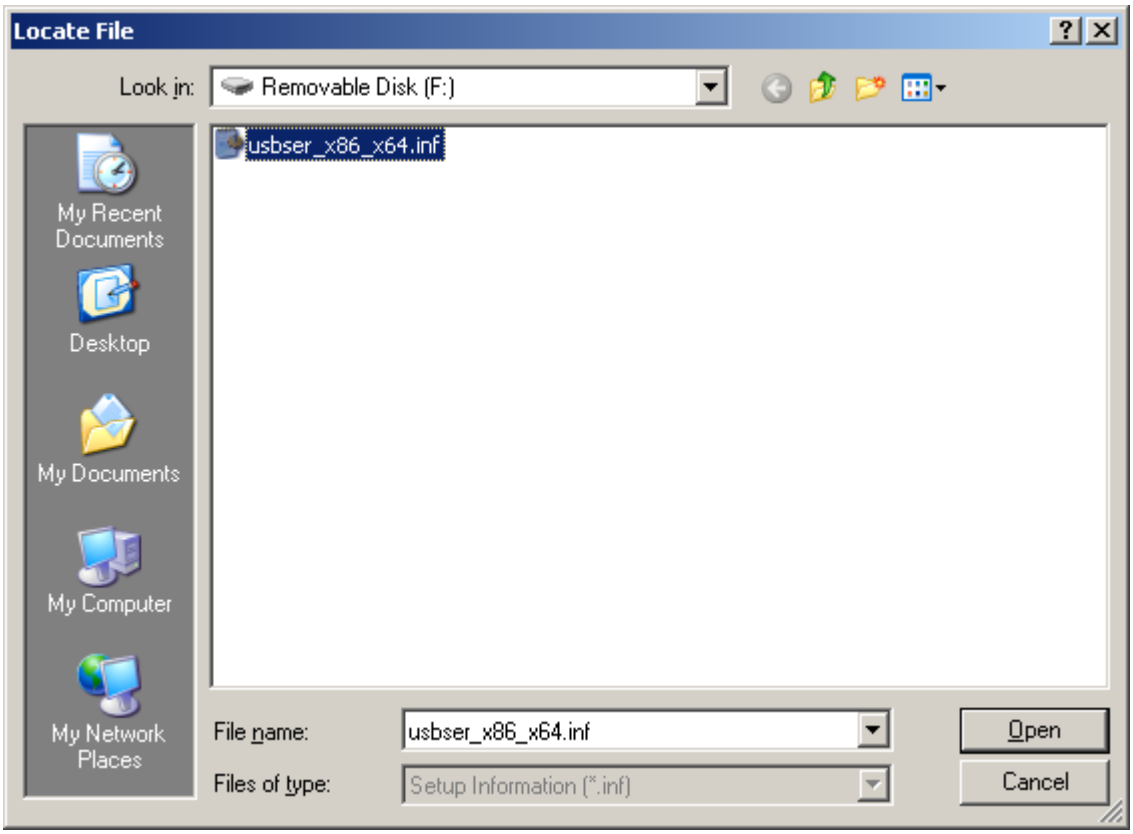


Fig. 7

In the displayed Window (fig. 7) select : Don‘t search I will choose the driver to install. Press Next>

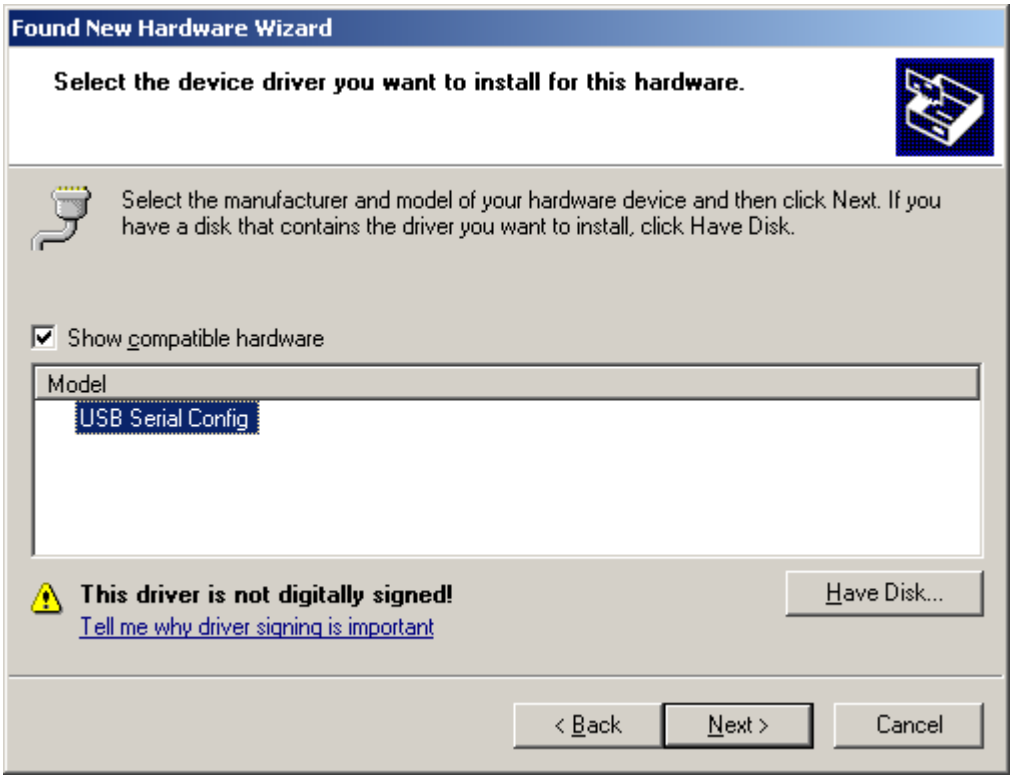


Press Have Disk button

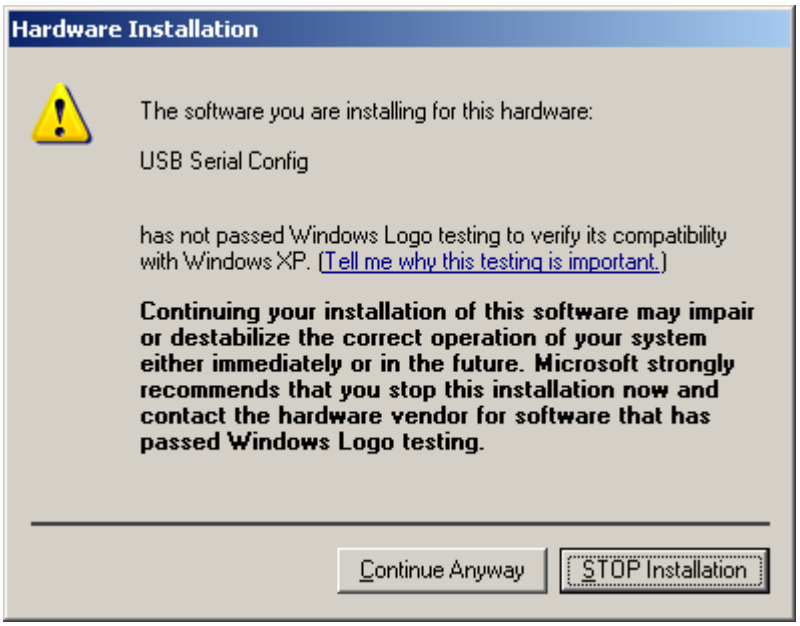


Select driver file:

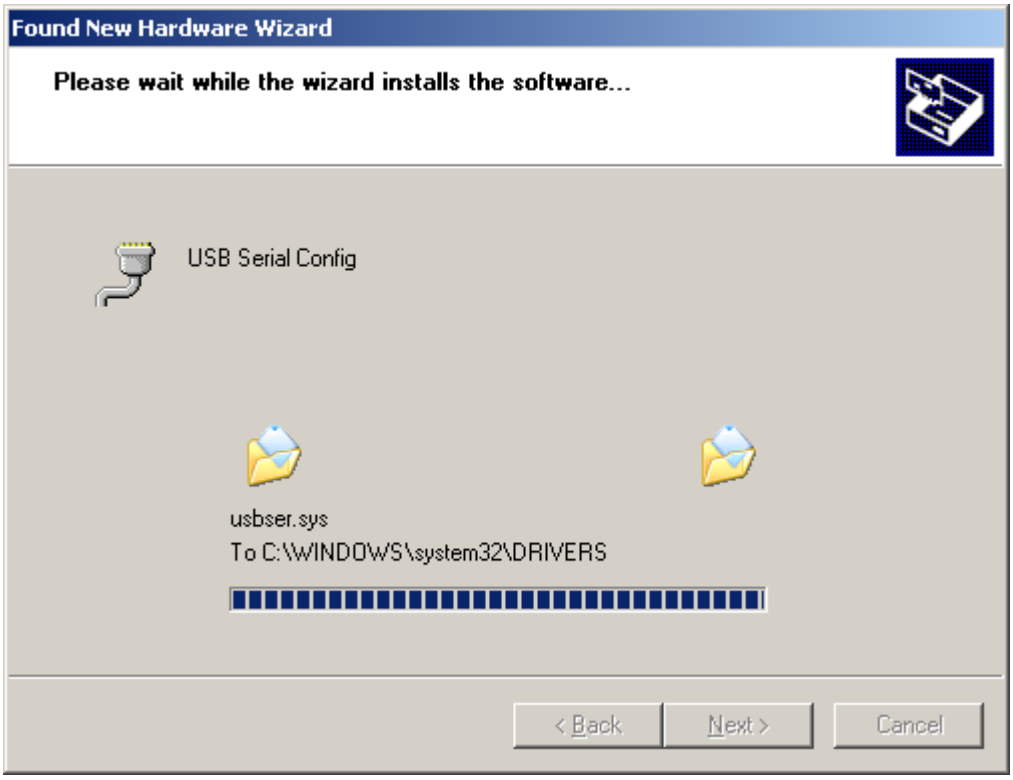
Windows XP	**usbser.inf** .
Windows 7 x86 or x64	**usbser_x86_x64.inf**



Press Next



Press Continue Anyway

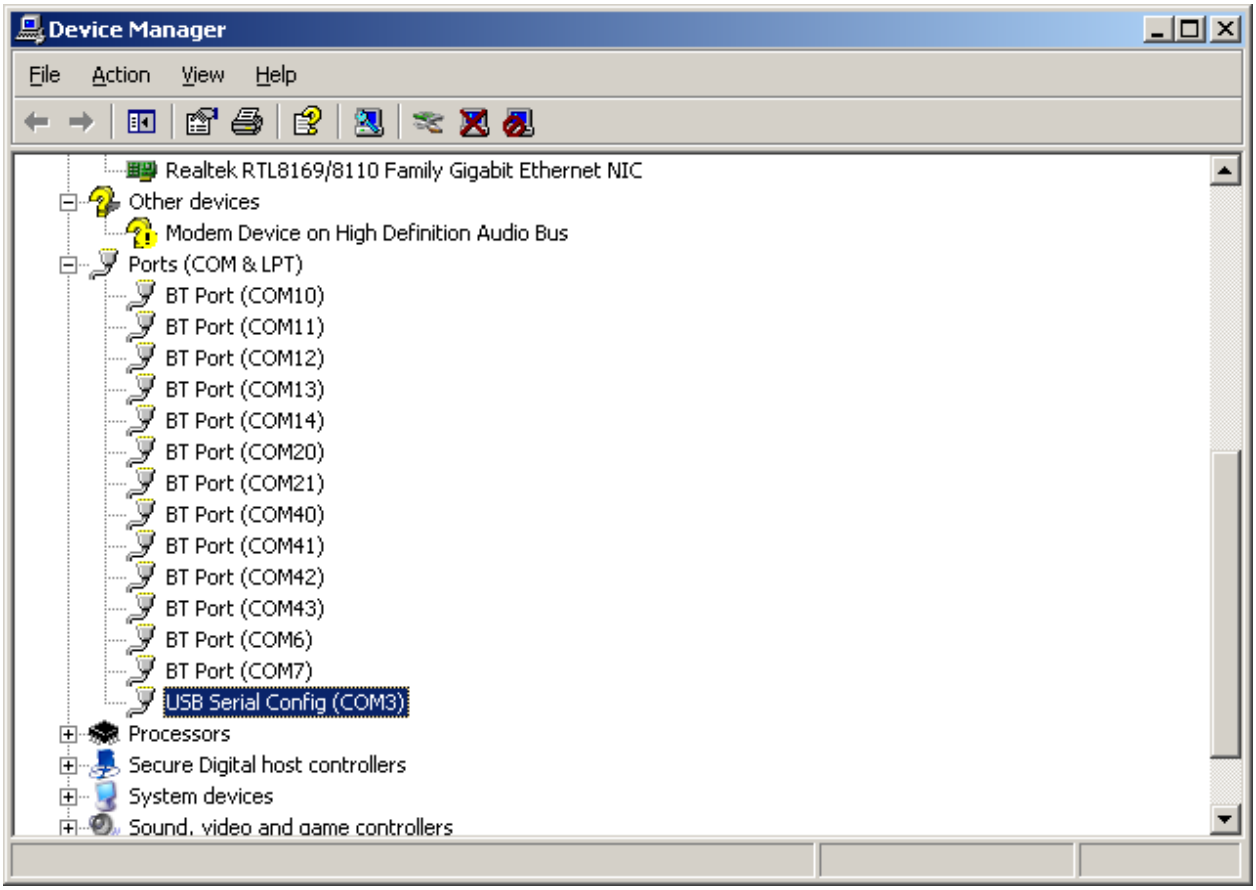


Wait while the driver will be installed

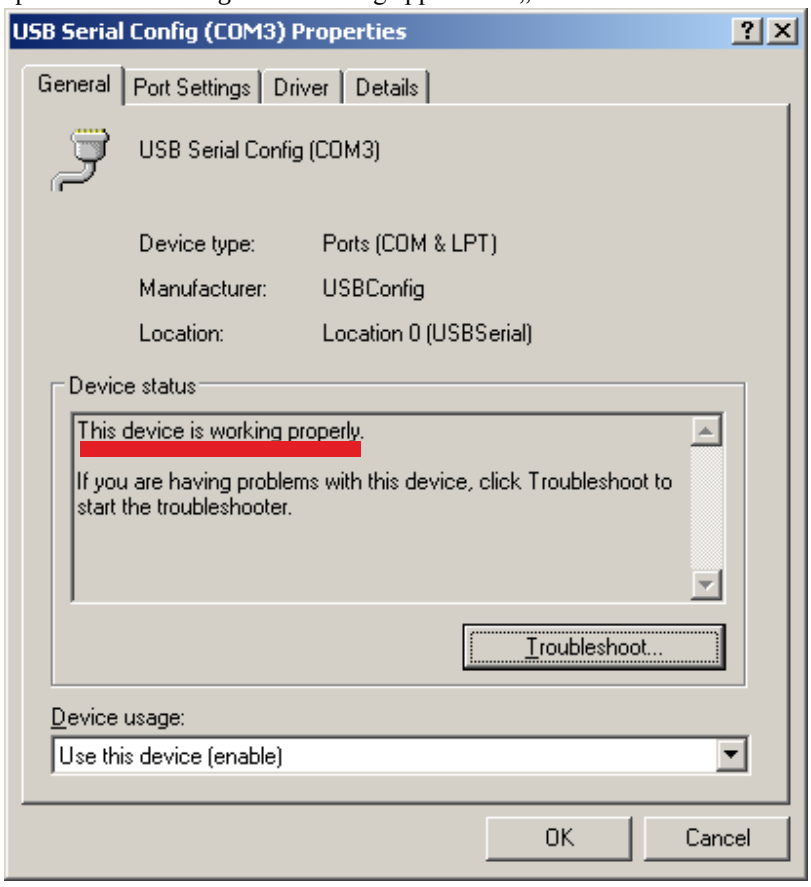
Fig. 8

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.

⚠	Attention! After installation of USB driver, it is necessary to restart the PC.



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. COM port number setting.

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 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.

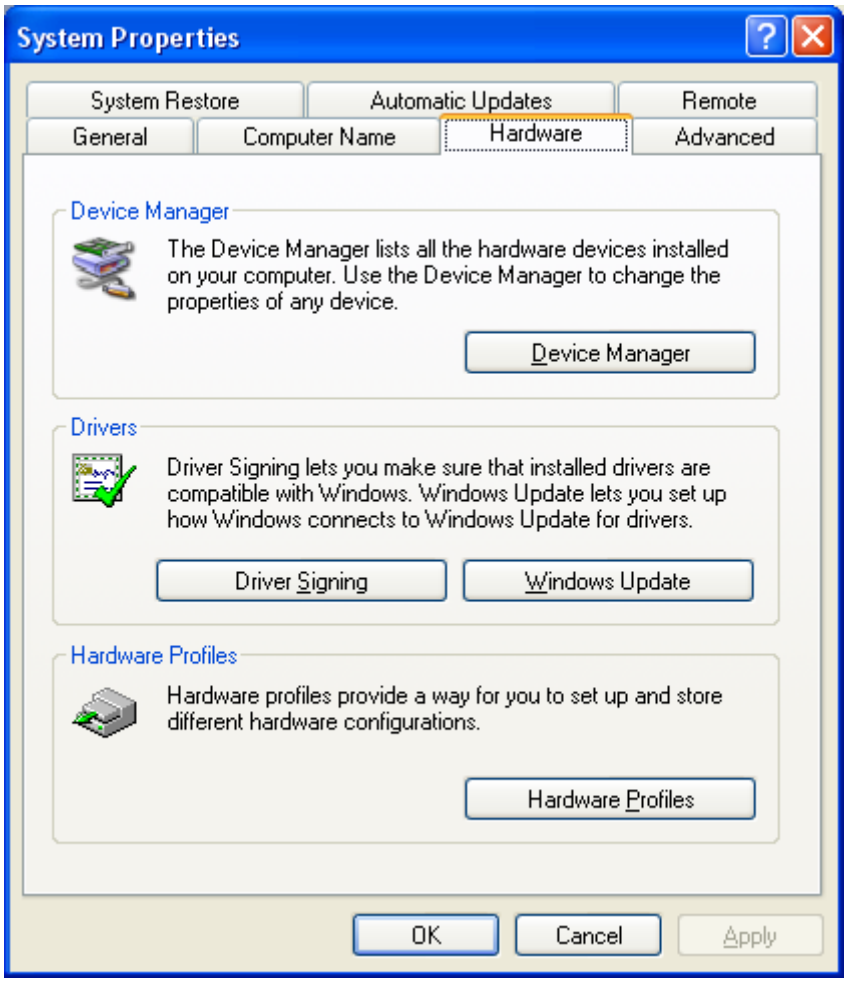


Fig. 9

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

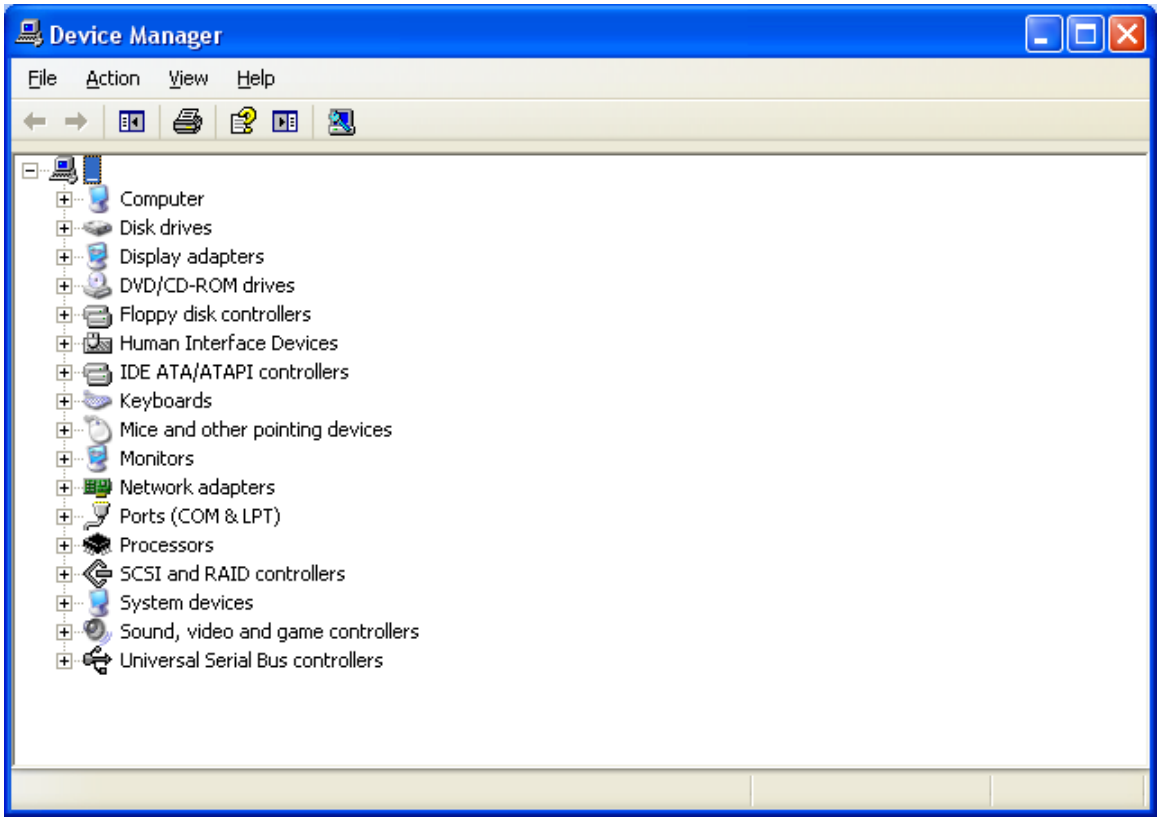


Fig. 10

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

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.

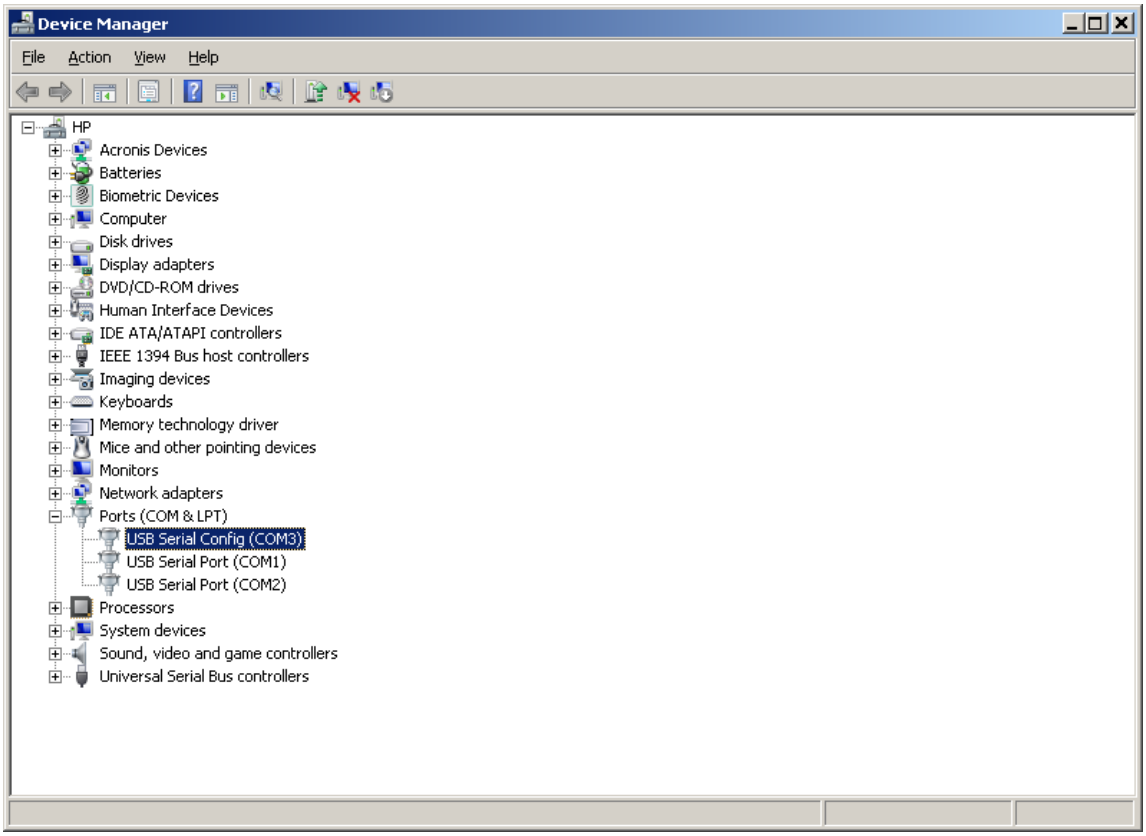
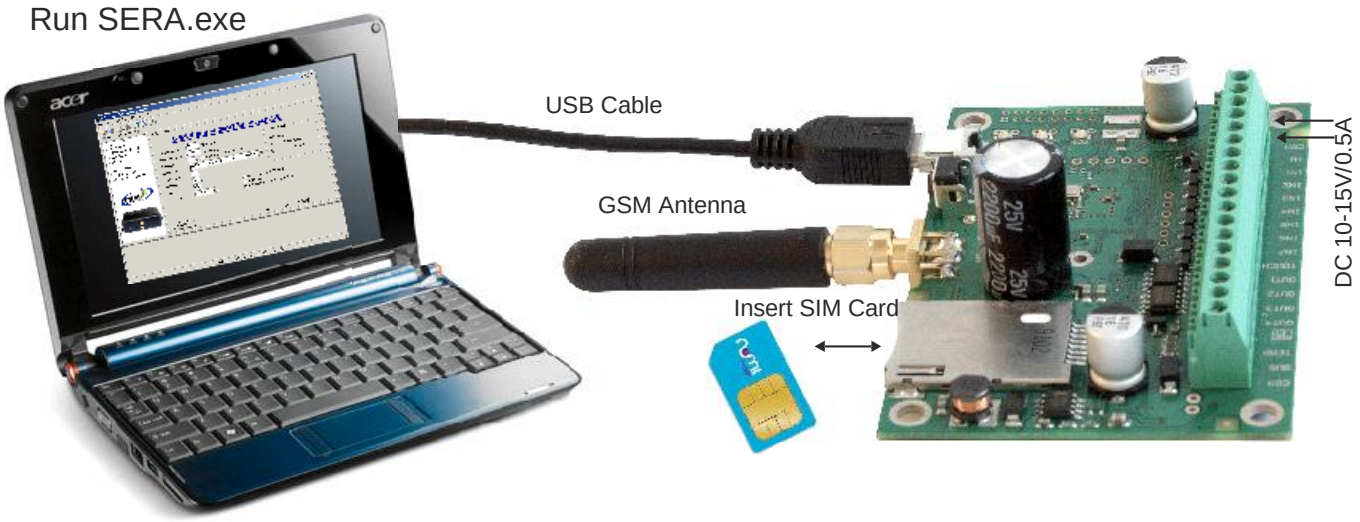


Fig. 11

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“ > „Topkodas“ > „SERA“ > „SERA“ or go to installation directory and click „SERA.exe“.

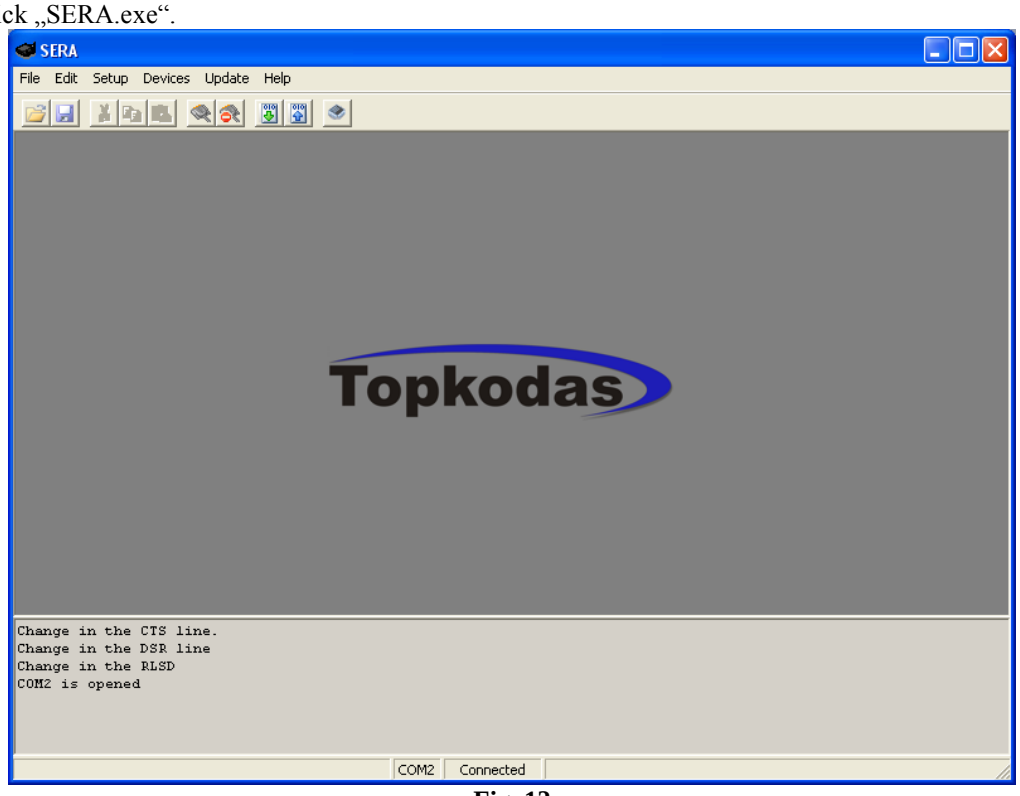


Fig. 12

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

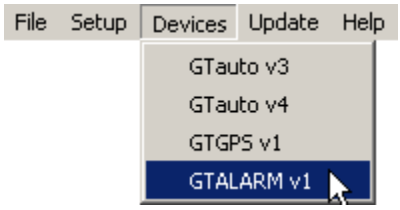


Fig. 13

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

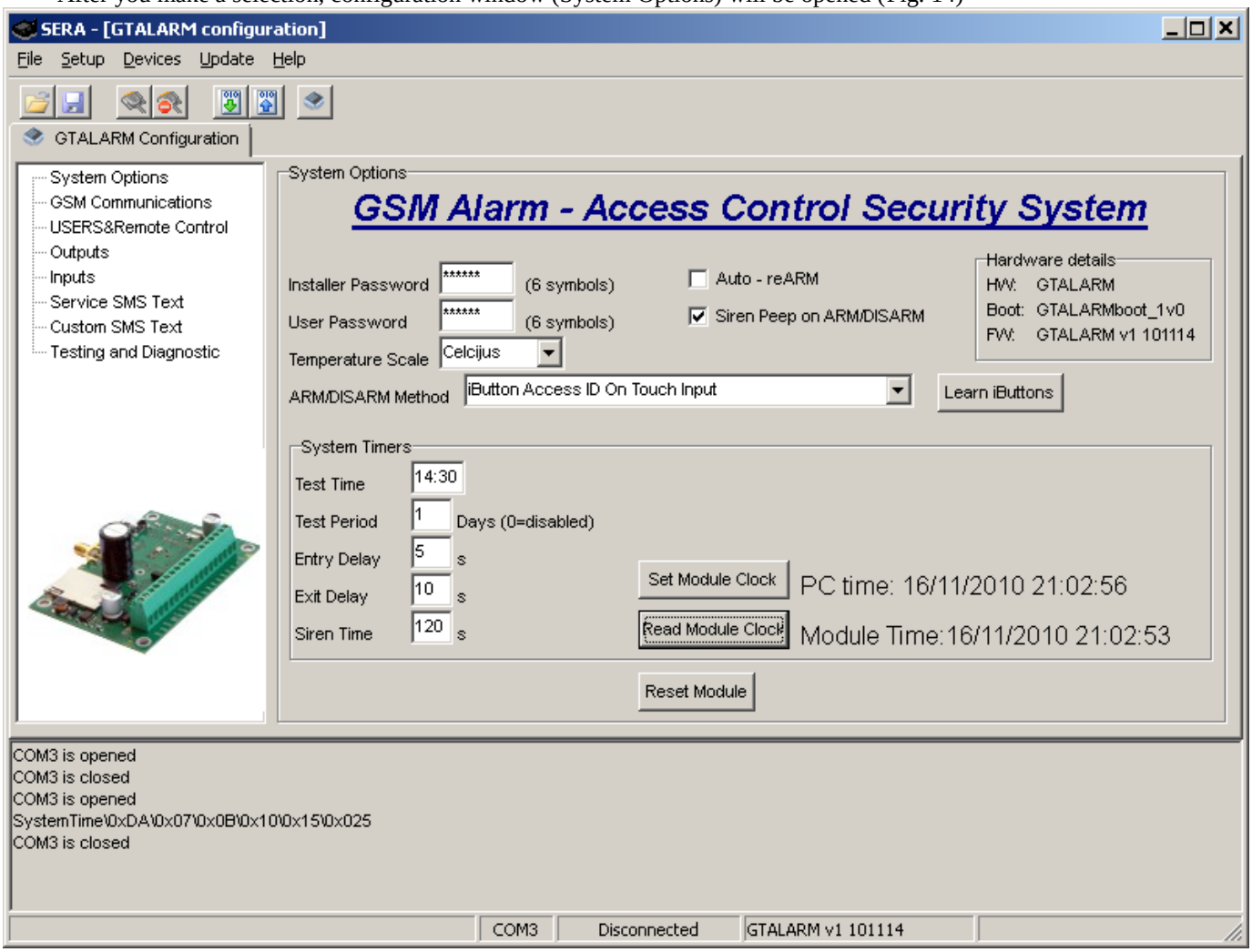


Fig. 14

Set the COM port to initialize. 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: 3 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

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 GTalarm device is selected ([Devices] > GTalarm v1). It also may be selected from the content of the module.

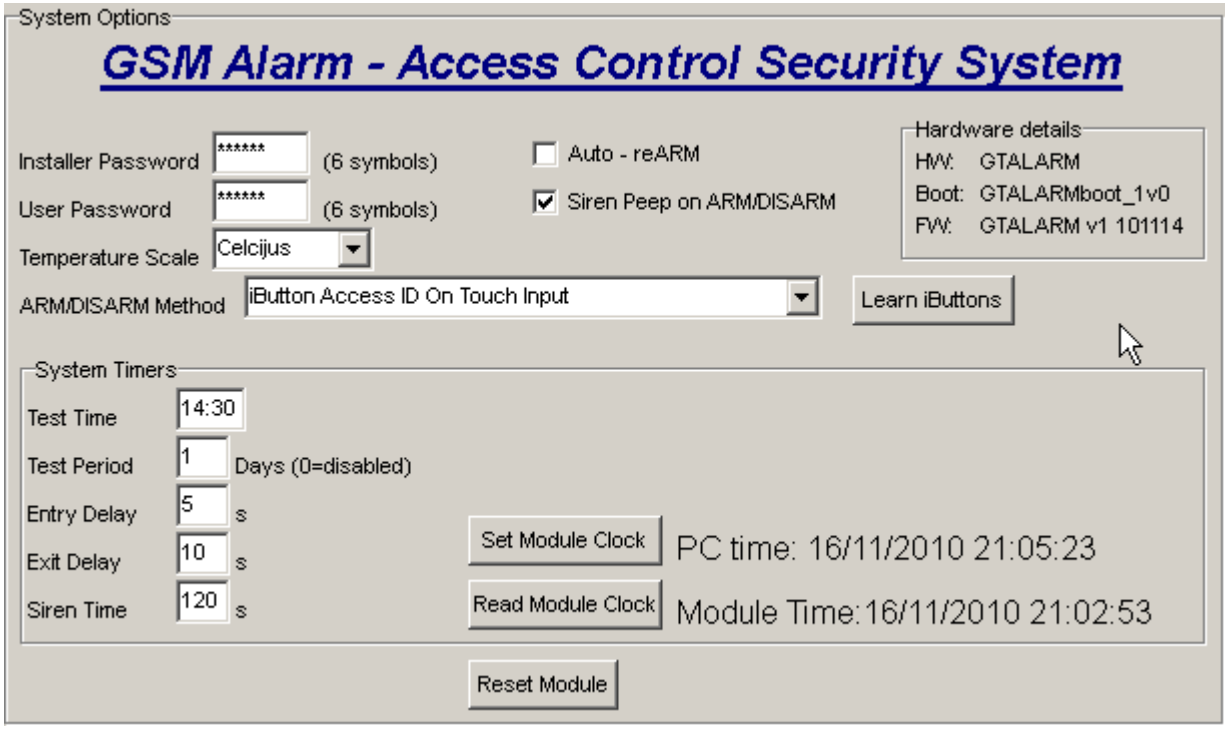


Fig. 20

Explanation of fields of Main Window:

Installer password	It is installer password comprised of 6 symbols, when the module is being configured via SMS messages. See INST codes table.
User password	It is installer password comprised of 6 symbols, each time the module is being controlled via SMS messages. See USER code table.
Temperature	It is temperature scale. Two scale types are possible, one of which may be selected after scrolling menu near the note "Temperature": • Celsius – temperature indications according to Celsius scale. • Fahrenheit – temperature indications according to Fahrenheit scale.
ARM/DISARM method (Touch input)	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: • **Disable** – programmable block of LOCK and UNLOCK inputs. The module will show no reaction towards signals in LOCK and UNLOCK inputs. • **>500ms** Positive Pulse On Touch input - If in input „Touch" >500ms the impulse will appear into +V, the security system's state will be changed from ARM to DISARM or wise versa. • **>500ms Negative Pulse On Touch input** - If in input „Touch" >500ms the impulse will appear into -V, the security system's state will be changed from ARM to

	DISARM or wise versa. • **Positive Level ARM/Negative Level DISARM On Touch input**. When in input „Touch“ is a positive level +V, the state of the module will be ARM. When negative level - V, the state of the module will be DISARM. • **Positive Level ARM/Negative Level DISARM On Touch input**. When in input „Touch“ is a positive level -V, the state of the module will be ARM. When negative level - V, the state of the module will be DISARM. • **5th mode (iButton Access ID On Touch Input)** uses „Touch“ input. System state ARM/DISARM is changed by using Dalass/Maxim iButton key. (iButton DS1990A - 64 Bit ID).
Learn iButtons	After pressing this button, the module will enter iButton keys associating mode. In this mode the module will enter into memory all touched keys, which will be able to control the module.
Test time	The time period since which informational SMS text message will be sent. Attention! In order to timely send the periodical test message, it is necessary to adjust settings of internal clock of the module.
Test Period	Test sending periodicity in 24 hours
Entry Delay	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 sending about alarmed zones.
Entry Delay	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.
Siren Time	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.
Siren Peep on ARM/DISARM	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.
Auto re-ARM	Automated activation of the system, if a door has nor been closed after DISARMing the system.
Temperature	It is temperature scale. Two scale types are possible, one of which may be selected after scrolling menu near the note “Temperature”: • Celsius – temperature indications according to Celsius scale. • Fahrenheit – temperature indications according to Fahrenheit scale.
Hardware details	This is info about GTalarm module: • HW – hardware version of the module. • **Boot** – start up program version (BOOT) This part of the program is able to update Firmware SW. • SW – Firmware version of the module.
Set Module Clock (button)	Sets module's clock according to PC time. ***Attention! Upon failure of power supply voltage, the module's clock should be reset***

Read Module Clock (button)	Sets the module's RTC Real Time Clock
Reset Module (button)	This function operates as programmable function of the module "RESET". 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.

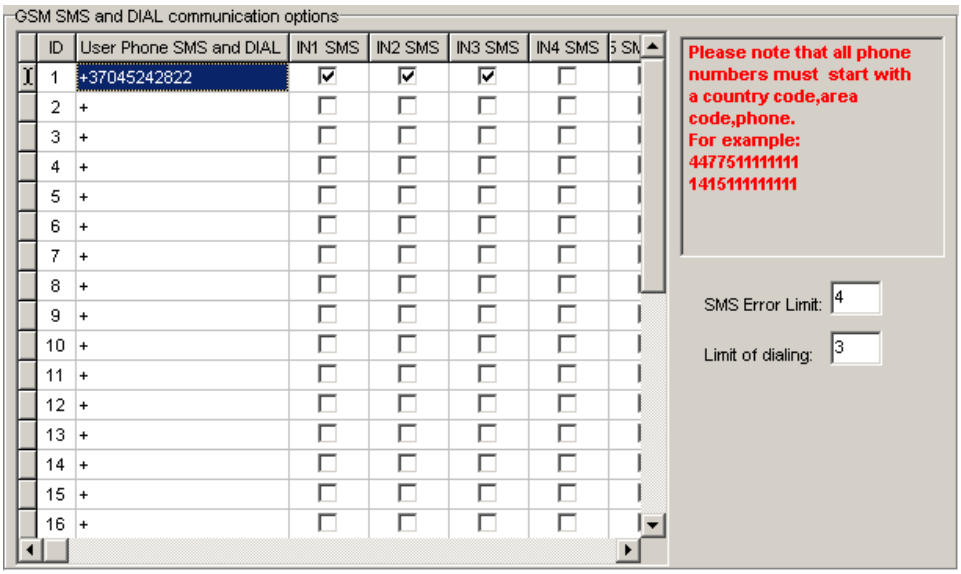


Fig. 21

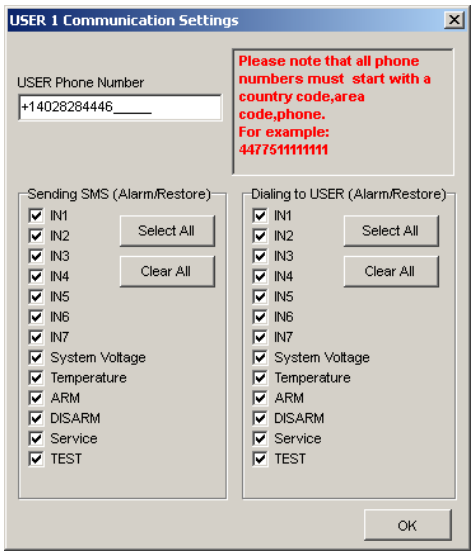


Fig. 22

Explanation of fields of [**GSM communication options**] Window:

ID	ID of the user to whom send SMS and make a call.
User Phone SMS and DIAL	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.
Sending SMS (Alarm/Restore)	The events with check boxes will be send to selected users via SMS
Dialling to USER (Alarm/Restore)	A user will be notified about these events (the check bow should be checked) by making him a short call
SMS error limit	SMS repetition limit in a case of failure to send SMS.
Limit of dialling	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. In such case the microphone will not be able to turn on, because when sending SMS message, the module will automatically terminate the call.

The number of users - up to 400

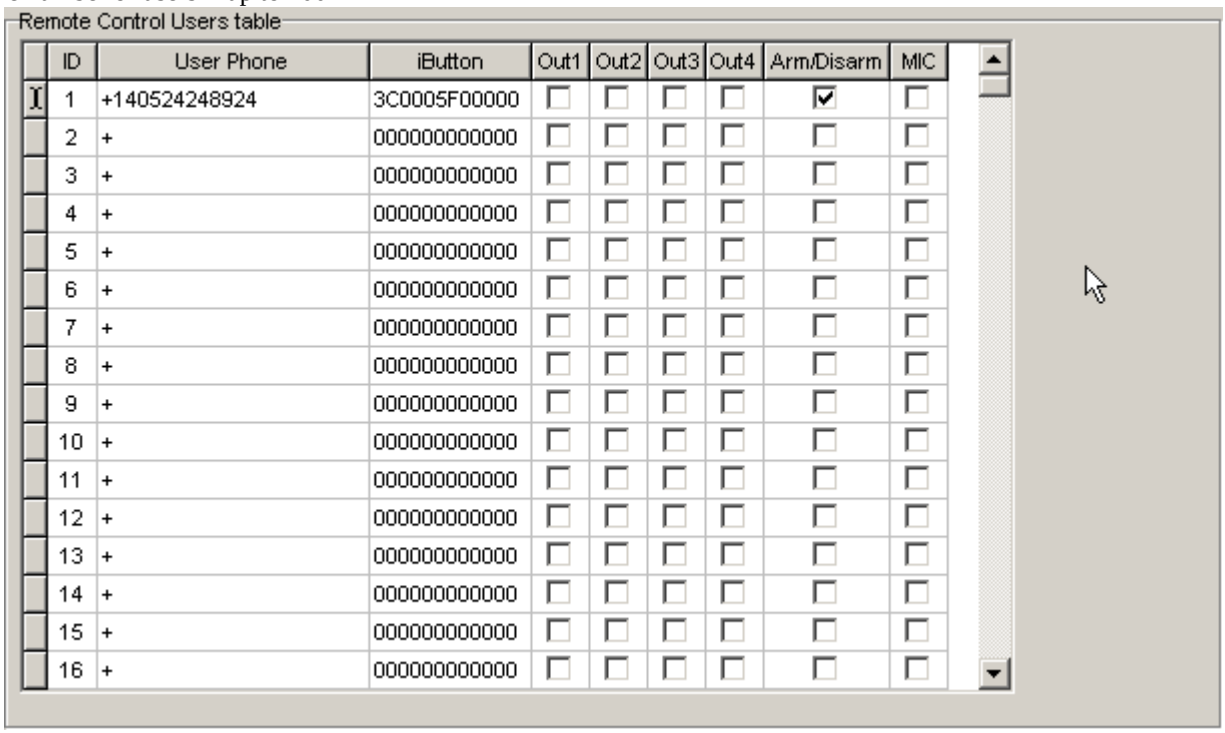


Fig. 23

Explanation of fields of **[Remote Control by Dialling]:**

ID	ID number of a user who is able to control the module by dialling up to 400.
User Phone	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.
iButton	iButton Maxim iButton key DS1990A - 64 Bit ID code. Might be entered manually or automatically registered after the module enters keys association mode. In order to delete the code, it is necessary to enter 000000000000
OUT1, OUT2,OUT3,OUT4	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.
ARM/DISARM command.	If this check box is checked, a user will be able to ARM/DISARM the security system by dialling.
MIC	If this check box is checked, a user will be able to activate microphone and to switch on voice listening.

5.5. Window [Outputs]

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

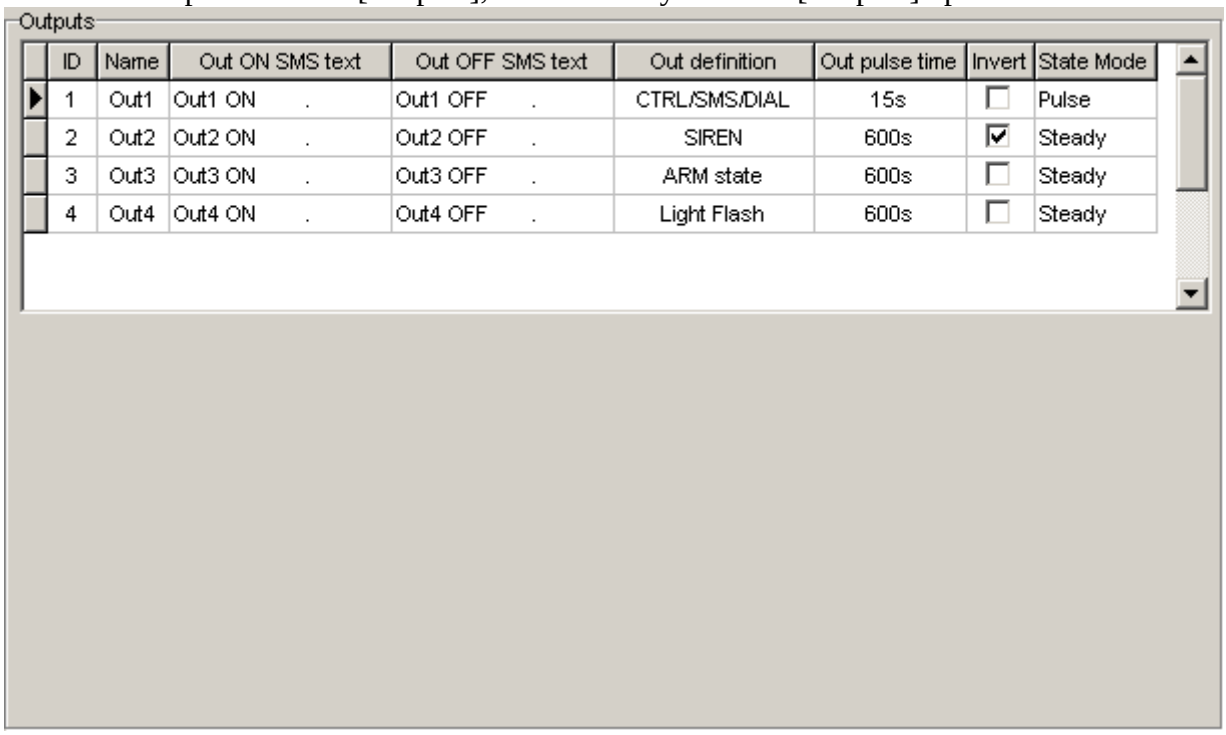


Fig. 24

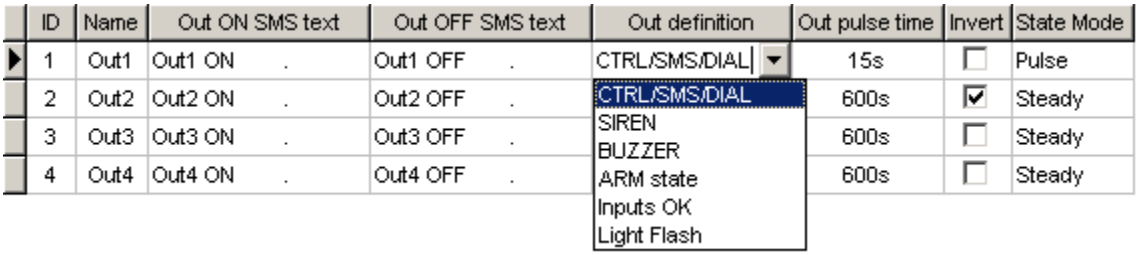


Fig. 25

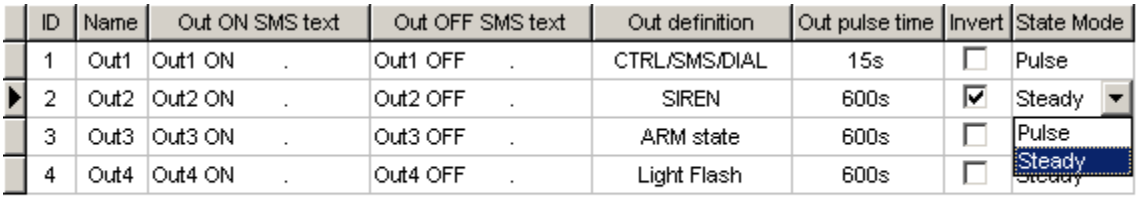


Fig. 26

Explanation of fields of [Outputs] Window:

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

	• 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. • SIREN – output used for connection of siren. Used for generating of voice signal in the event of alarm. • BUZER – sound signalling device. In the event of zone alarm - beeps continuously. When security system starts calculating exit delay, the user is able to hear short, repetitive sound signals. When 10 seconds are left till the begging of activation, signals are being repeated each 0.5 seconds. If after expiry of the delay time, all zones remain unalarmed, the system turns into ARM state along with beep sound to confirm the action. • **ARM State** – state of alarm system ARM/DISARM. May be used for light indication. When the output is set to operate in pulse mode, this feature may be used to close car windows or sunroof on arming. Impulse time should be set 20-30 seconds. On arming the output will generate signal to close windows. • 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. • Light Flash – used for connection of light signal. Upon alarm of the security system the light starts blinking. Lights will also blink when arming/disarming the security system. This feature may be applied to connect car direction signals.
Out pulse time	It is time in seconds, which indicates duration of impulse, when **Pulse** type is being selected in the column **[State Mode]**
Invert	Option to invert the output. If the check box is to be checked, the output will work as inverted.
State mode	Output commutation type, see Fig. 26. • Pulse – the output will work in pulse mode. Pulse time (seconds) should be set in [**Out pulse time**] column. • **Steady** – output will work on the steady level till the next commutation.

5.6. Window [Inputs]

In order to open **Inputs window**, it is necessary to select **Input**. All input parameters are being described in this window. Double click on the selected line in order to open input settings window see Fig. 31

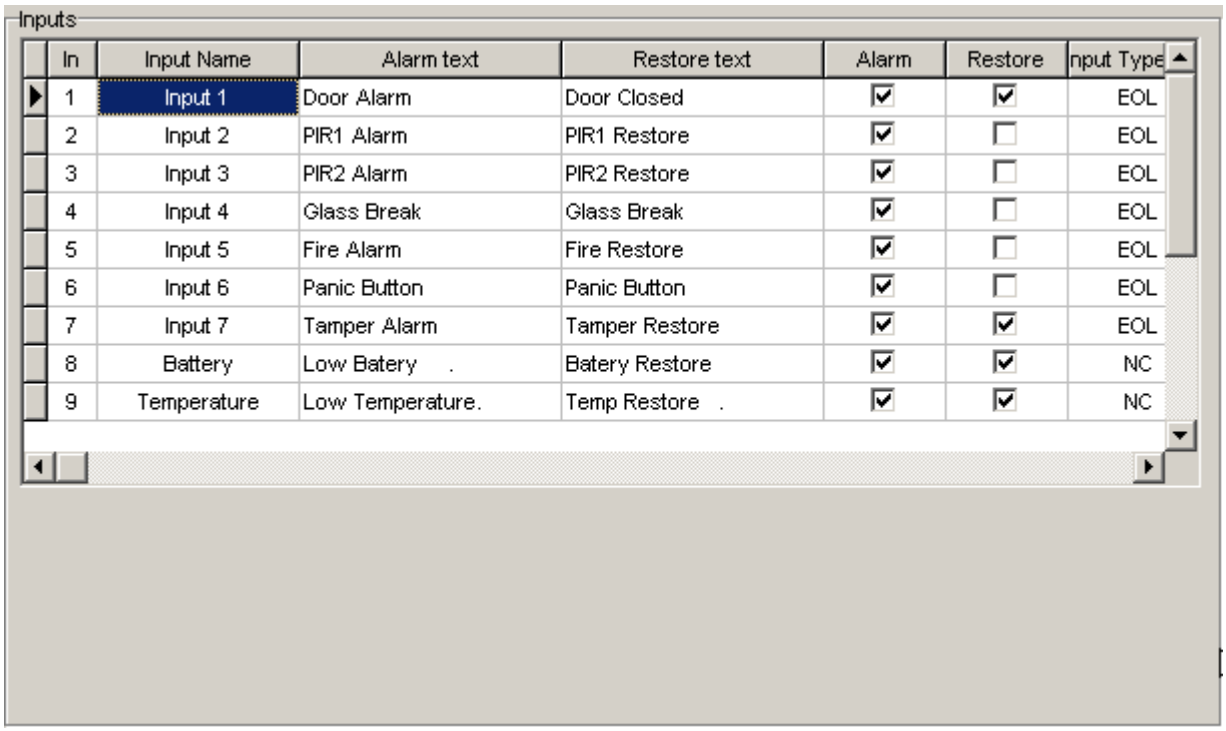


Fig. 27

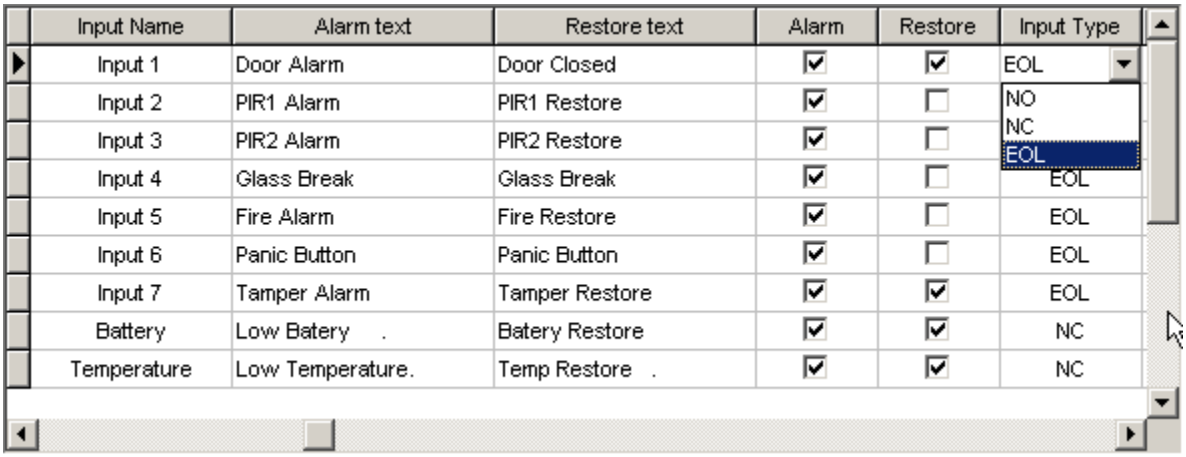


Fig. 28

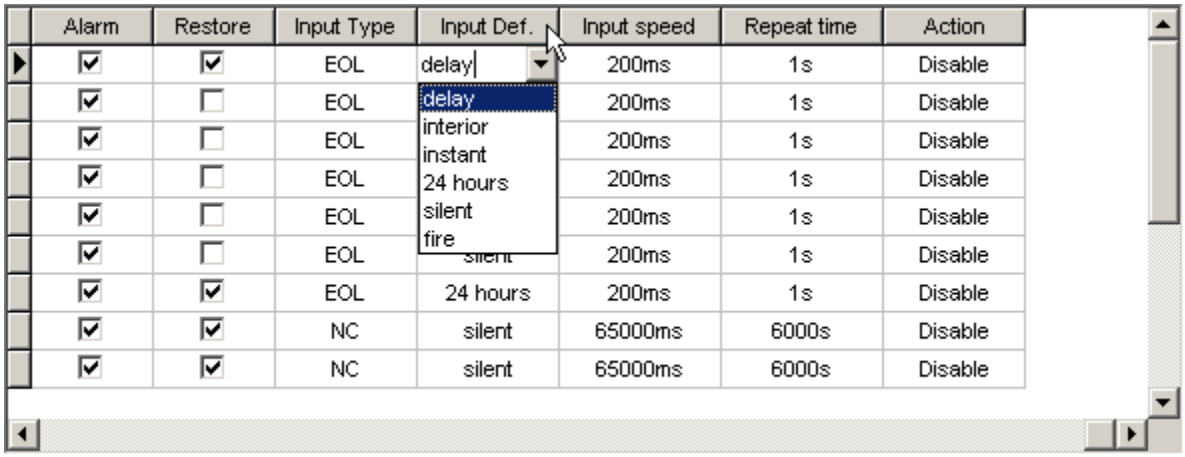


Fig. 29

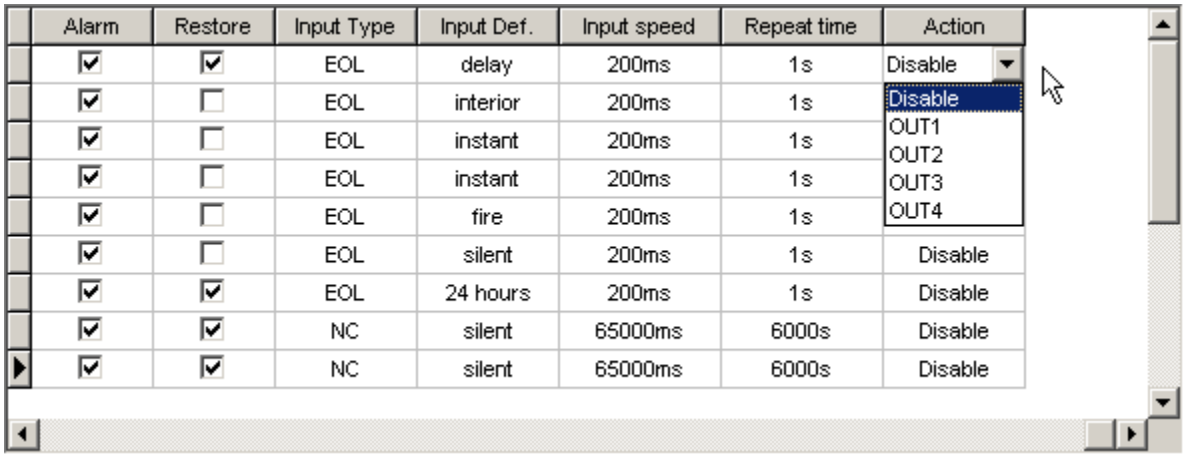


Fig. 30

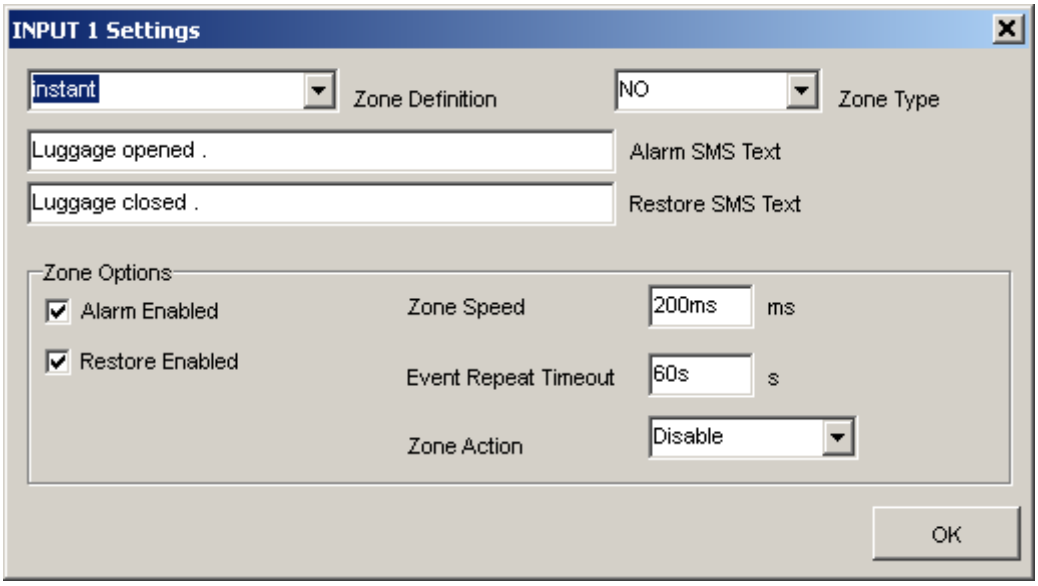


Fig. 31

Explanation of fields of [Inputs] window:

In	Input number
Input Name	Input name
Alarm text	It is the text, which will be received by a user after alarm response of appropriate sensor. This text may be changed.
Restore text	It is the text, which will be received by a user after restore of appropriate sensor. This text may be changed.

Alarm	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.
Restore	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.
Input Name	Input type you may select after scrolling menu: • NC – normally closed contact; • NO – normally open contact; • EOL - normally closed contact with 1 resistor
Input Def.	Input operation type you may select after scrolling menu: • Delay – Entry zone. Set "Entry delay" and "Exit Delay" are applied for this zone. Such type zones are used for connection of door sensor. • **Interior** – 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. • **Instant** – Instant zone. Upon disturbance of this zone, the system will immediately activate burglary alarm. If the security system was ARM'ed. • **24 hours** - 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 zones are safes, storehouses, tampers of the sensors. • **Silent** - 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. • Fire - 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.
Input speed	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.
Repeat time	The time period in seconds, during this time repeatable zone events are ignored.
Zone Action	Changes selected output's state upon alarm or restore.
Battery (Fig. 32)	**In8 Low Battery parameters** • **Alarm voltage** – voltage the module is connected to; when this voltage is reached, the 8 zone will be alarmed. • **Restore voltage** – voltage the module is connected to; when this voltage is reached, the 8 zone will be restored. • **Calibration** – coefficient, if changed voltage

	indications might be calibrated.
Temperature (Fig. 33)	**In9 Temperature parameters** • **Alarm temperature** – when this temperature will be reached 9 zone will be alarmed. • **Restore temperature** - when this temperature 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").**

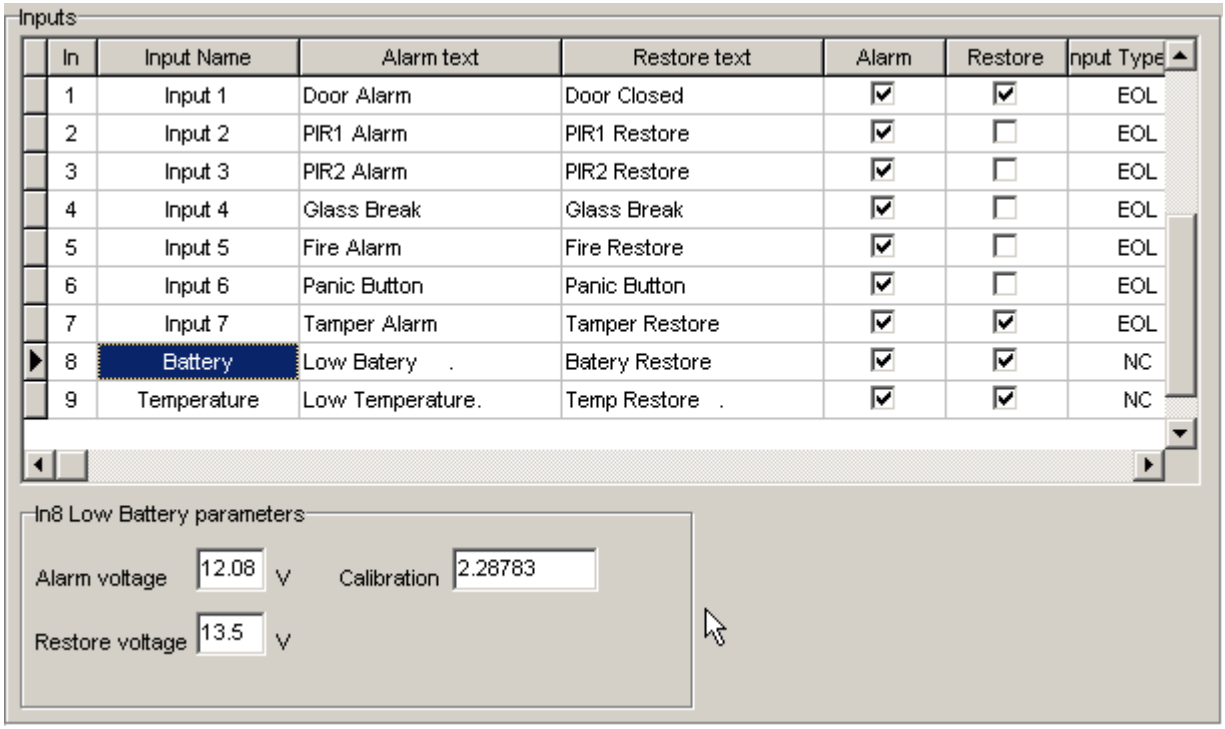


Fig. 32

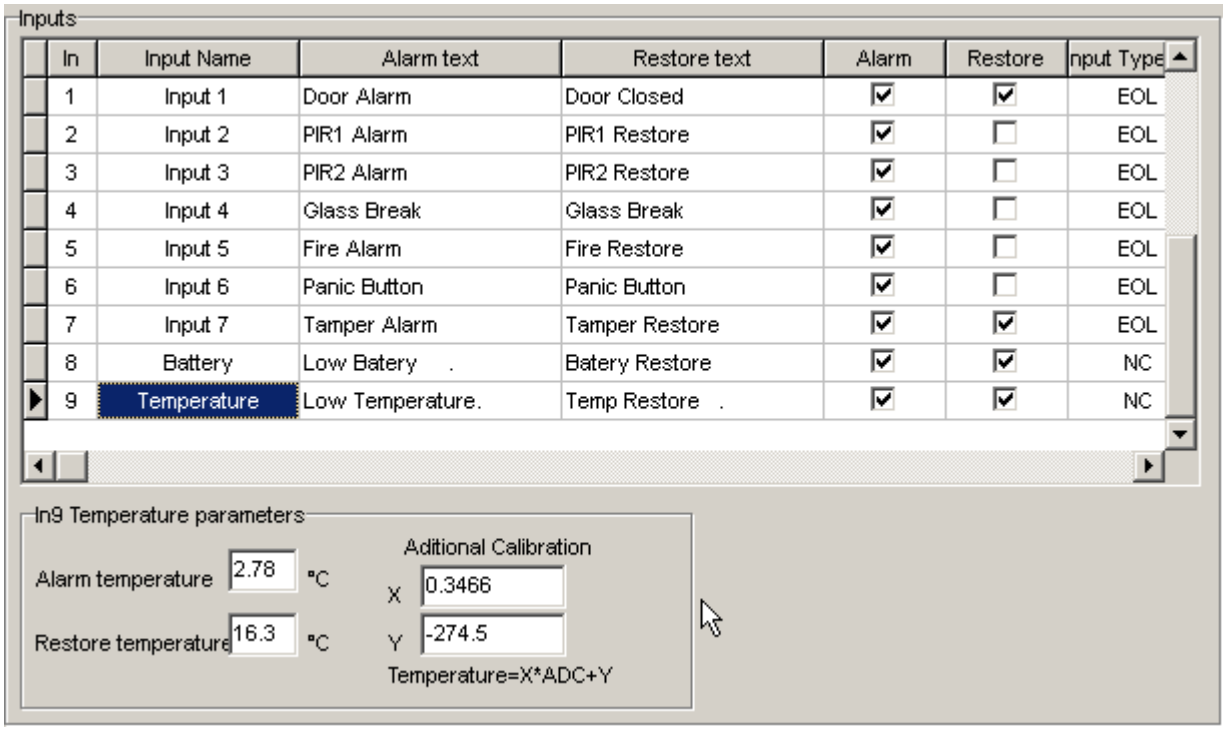
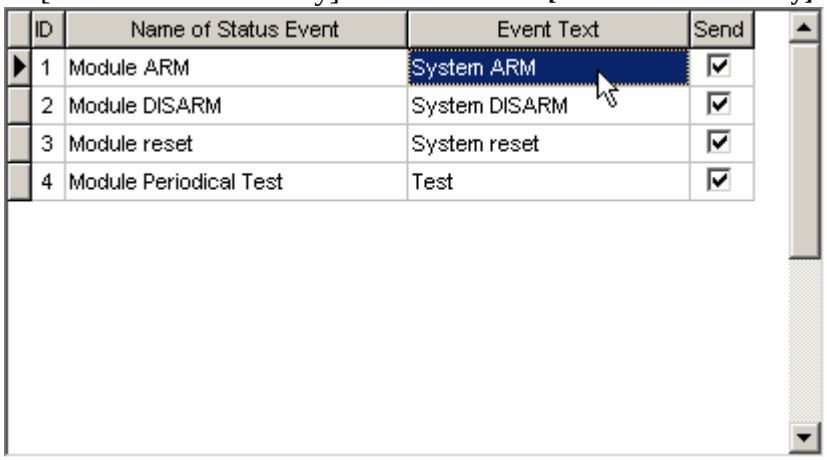

Inputs
In
Input Name
Alarm text
Restore text
Alarm
Restore
nput Type
1 Input 1 Door Alarm Door Closed EOL
2 Input 2 PIR1 Alarm PIR1 Restore EOL
3 Input 3 PIR2 Alarm PIR2 Restore EOL
4 Input 4 Glass Break Glass Break EOL
5 Input 5 Fire Alarm Fire Restore EOL
6 Input 6 Panic Button Panic Button EOL
7 Input 7 Tamper Alarm Tamper Restore EOL
8 Battery Low Batery . Batery Restore NC
9 Temperature Low Temperature. Temp Restore . NC
In9 Temperature parameters
Alarm temperature 2.78 °C
Restore temperature 16.3 °C
Aditional Calibration
X 0.3466
Y -274.5
Temperature=X*ADC+Y

Fig. 33

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	☑
2	Module DISARM	System DISARM	☑
3	Module reset	System reset	☑
4	Module Periodical Test	Test	☑

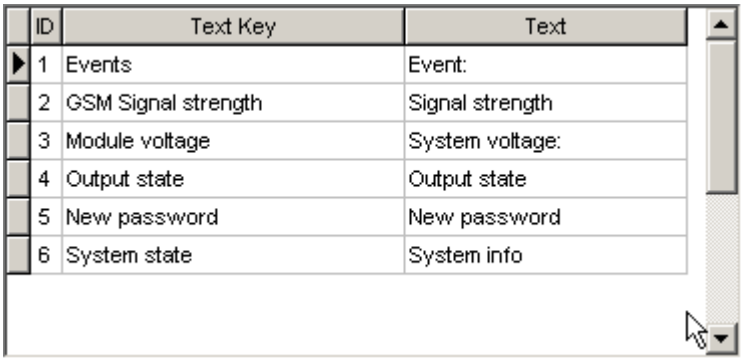
Fig. 34

Explanation of fields of **Service text summary** window:

Name of Status Event	Event name
Event Text	Event test, which may be changed
Send	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. 35) 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 state
5	New password	New password
6	System state	System info

Fig. 35

Explanation of fields of [**Text summary**] Window:

ID	Text number
Text name	Text in English
Text	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.

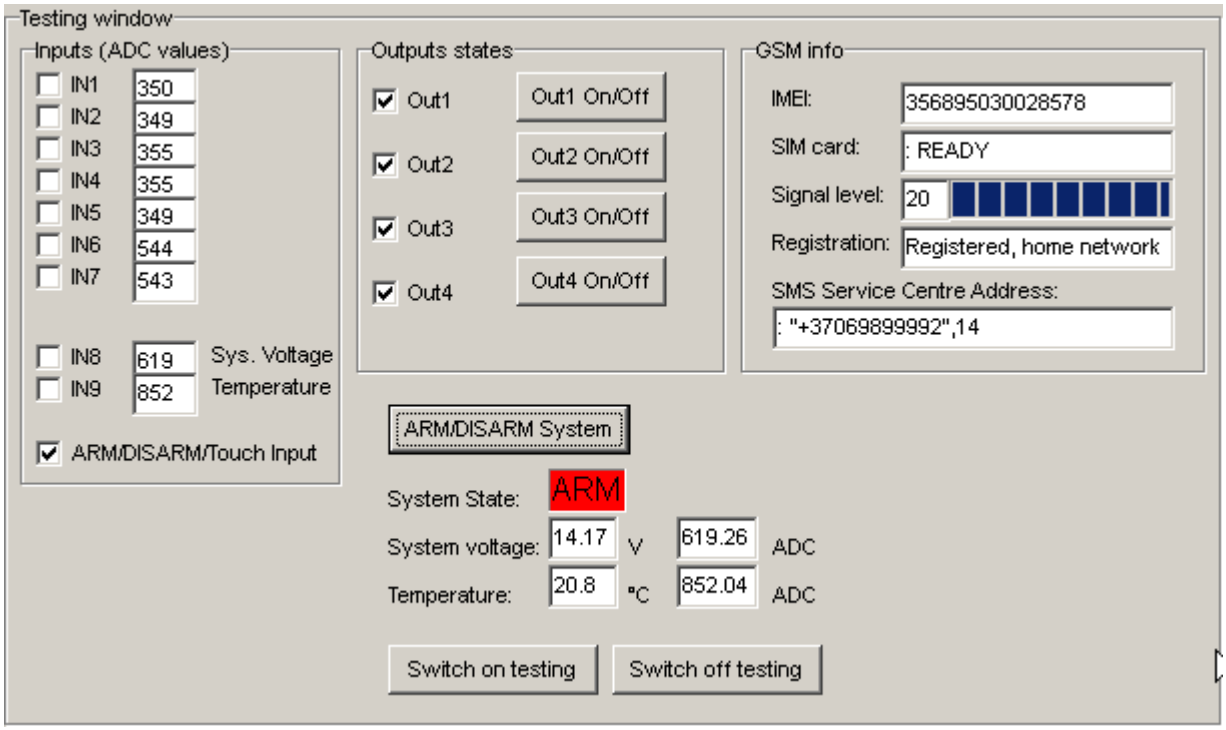


Fig. 36

Explanation of fields of Testing Window:

Inputs	**IN1**	This is indication of each input. 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.
	IN2	
	IN3	
	IN4	
	IN5	
	IN6	
	IN7	
	IN8	
	IN9	
	ARM/DISARM method (Touch input)	Control input "Touch" state
Outputs states	**Out1**	Checked box nearby the appropriate output means that this output is active.
	Out2	
	Out3	
	Out4	
	Button Out1 On/Off	By pressing buttons (on/off) output states are controlled. It is convenient to use when it is necessary to test outputs operation.
	Button Out2 On/Off	
	Button Out3 On/Off	
	Button Out4 On/Off	
GSM info	**IMEI**	IMEI number of GSM modem available in the module.
	SIM card	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.
	Signal level	Signal strength of GSM communication.
	Registration	State of GSM modem registration to GSM network.

	SMS Service Centre Address	SMS centre number. This number should be checked if it is correct. If this number is incorrect. SMS messaging may be impossible. This number may be changed after inserting SIM card into any mobile phone.
System voltage	Power supply voltage the module is connected to. Nearby number is value of ADC voltage. When multiplying this number by the coefficient Fig. 32, voltage value (V) will be achieved.	
Temperature	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. 33. After performing additional calibration, very accurate temperature measurement might be achieved up to 0.1 C.	
System State	**ARM**	Indication that at the moment the module is in ARM mode.
	DISARM	Indication that at the moment the module is in DISARM mode.
	WAITING ARM	Module mode when **Exit Delay** time is being calculated.
ARM/DISARM command. button	After pressing the button ARM/DISARM mode should be changed	
Switch on testing mode button	Pressing this button starts testing of the module.	
Switch on testing mode button	Pressing this button stops testing of the module.	

6. Saving of GTAUTO 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. 37 In order to save configuration go to [File > Save As... [Fig. 38 or press icon [Save] icon Fig. 39. Enter configuration parameter in the displayed table and press „OK“.

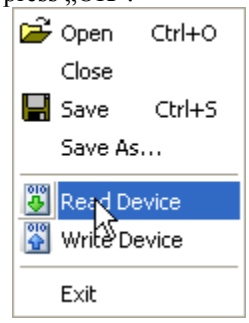


Fig. 37

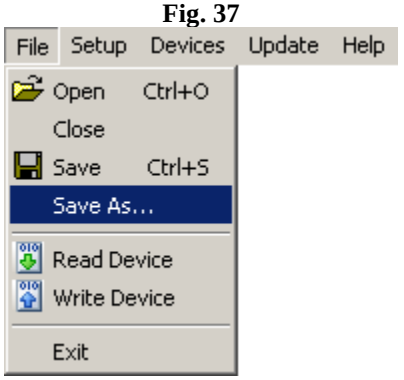


Fig. 38

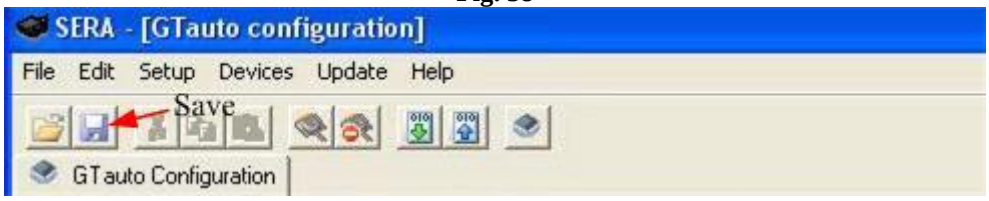


Fig. 39

7. Installing of saved configuration into the module GTAUTO

In order to start saved configuration go to [File] > [Open] Fig. 40 or press [Open] iconFig. 41

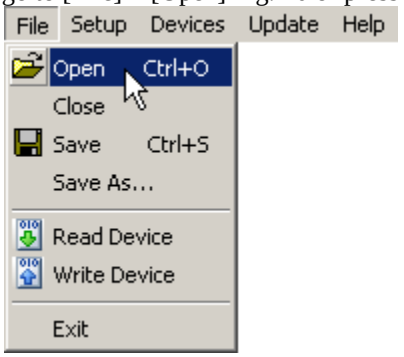


Fig. 40

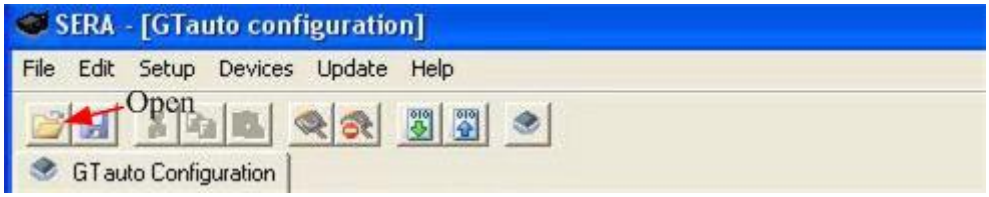


Fig. 41

Fig. 42

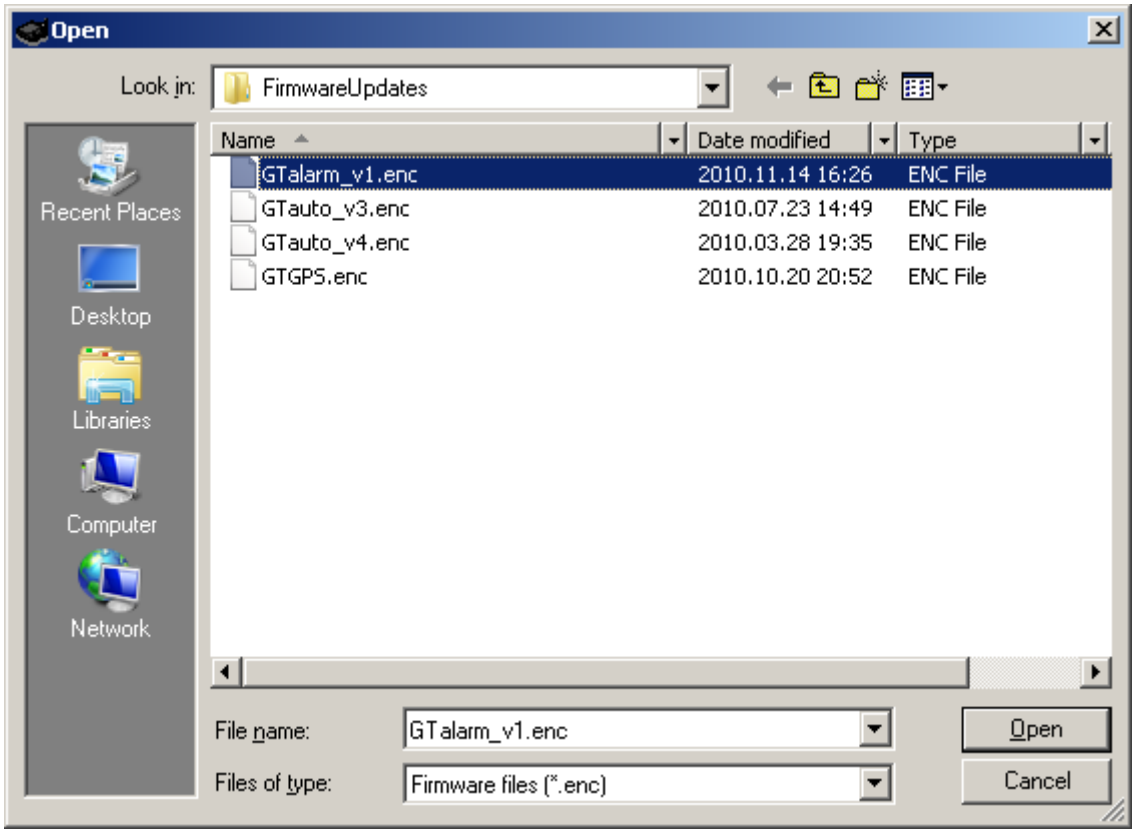
Click the file of saved configuration or press “Open” in displayed Window. Now all parameters of saved configuration have been loaded into application SERA. If no any other changes are necessary, press [File] > [Write Device] Fig. 42 in order to send this configuration into the module.

8. Updating of GTAUTO software version

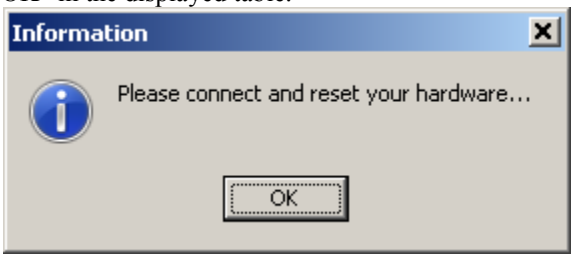
The latest software version may be found www.topkodas.lt . If a version of your module is older, please update it (to find out the version of your GTalarm software version ((**FW firmware**) send Test SMS from your module). For this purpose press [Update] in the menu list or [Update module] icon, Fig. 43. Specify the file of the newest software version and press [Open]. Follow further instructions of the program.

Fig. 43

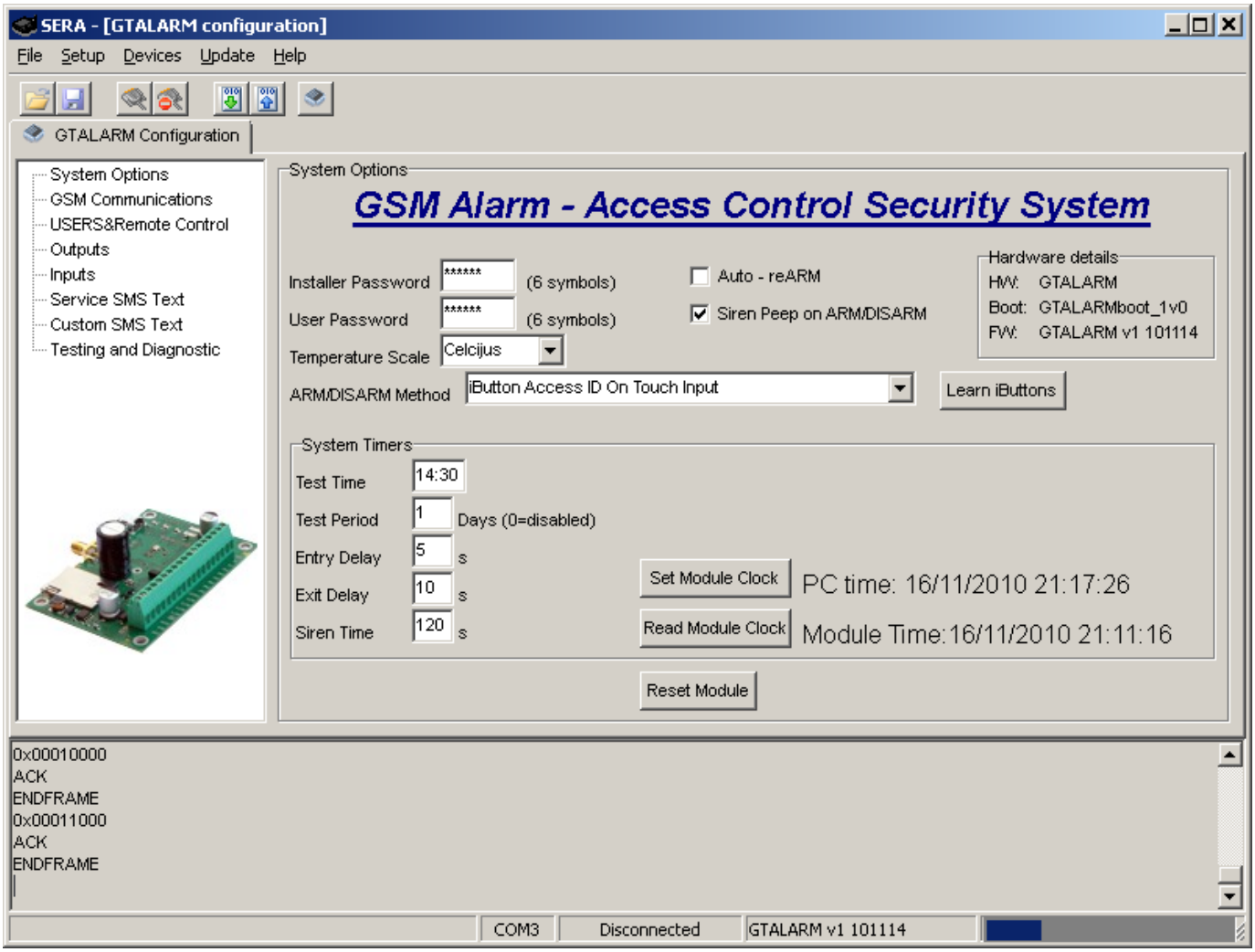
Select Firmware file of the module:



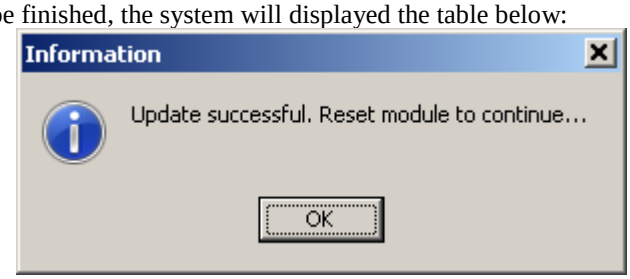
Press RESET button once and click “OK” in the displayed table.



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



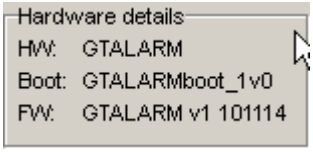
When updating of firmware will be finished, the system will displayed the table below:



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. **FW: xxxxxxxxx**



Programme version is also visible below: