

# **SERA**

# GTC812 configuration and testing software in Microsoft Windows environment

User's guide
--------------

SERA - [Configuration Sof	tware] - [GTC12 configuration]
<u>File Settings Devices Updat</u>	e <u>A</u> bout
System Options	System Settings
GSM Communications	
USERS&Remote Control	GSM Alarm Security System- Access Control-Temperature Controller
Outputs	
Inputs	Hardware details
Event SMS Text	Installer Password (6 symbols)
Custom SMS Text Temperature Controller	User Password (6 symbols)
Testing and Diagnostic	FVV: GTC812v120626
	Temperature Scale
	ARM/DISARM Method Disable _ Learn iButtons Stop Learning
	Curtue Terrer
	System Timers
	Test Time 14:30
	Test Period 1 Days (0=disabled)
	Entry Delay 5 s
Tuphunters WOD 9 GTC812 NOD 1	Set Module Clock DC time: 27/06/2012 14:30:52
GICOIZ NC 3	Exit Delay
	Siren Time 120 s Read Module Clock Module time
	Reset Module
COM6 is closed	
Firmware file have been loaded	
See user manuals for details	COM6 Disconnected GTC812v120626

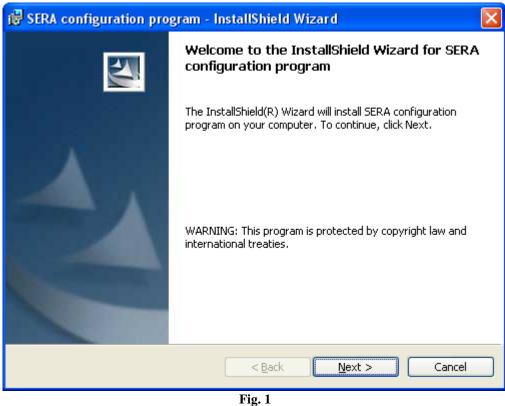


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#### 1. Installation of SERA software

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



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

📸 SERA configuration program - InstallShield Wizard 🛛 🛛 🔀
Destination Folder Click Next to install to this folder, or click Change to install to a different folder.
Install SERA configuration program to: C:\Program Files\topkodas\SERA\ Change
InstallShield

Installation directory will be displayed in the Window Fig. 2 (fig.2). If installation directory of the software is OK, press [Next]. If you want to install the software into other directory, press Change. Locate the another directory to install the software and press Next.

🔀 SERA configuration program - InstallShield Wizard	X
Ready to Install the Program The wizard is ready to begin installation.	1
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard. Current Settings:	
Setup Type:	
Destination Folder:	
C:\Program Files\topkodas\SERA\	
User Information:	
Name: D	
Company:	
I InstallShield	
< <u>B</u> ack Install Cancel	
Fig. 3	

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

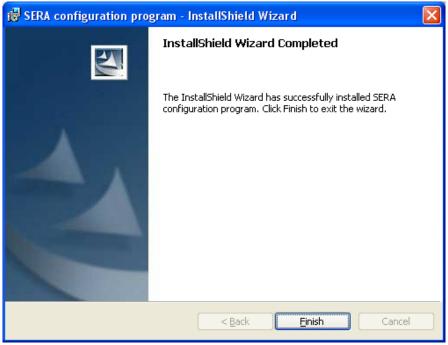


Fig. 4

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:

Driver configura	ation:	
Winows 2000/X	CP usbser.	.inf .
Windows 7 x86	or x64 usbser	_x86_x64.inf
	ound New Hardware W	
		Welcome to the Found New Hardware Wizard         Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission).         Read our privacy policy         Can Windows connect to Windows Update to search for software?         Yes, this time only         Yes, now and gvery time I connect a device
		⊙ No, not this time Click Next to continue.
[		< <u>B</u> ack <u>N</u> ext > Cancel

Fig. 5

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

Hardware Update Wizard	
	Welcome to the Hardware Update Wizard
	This wizard helps you install software for:
	USBSerial
	If your hardware came with an installation CD or floppy disk, insert it now.
	What do you want the wizard to do?
	O Install the software automatically (Recommended)
	Install from a list or specific location (Advanced)
	Click Next to continue.
	< <u>B</u> ack <u>N</u> ext > Cancel

Fig. 6

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

ware Update Wizard	
ease choose your search and inst	tallation options.
© Search for the best driver in these	locations.
Use the check boxes below to limit paths and removable media. The b	or expand the default search, which includes local est driver found will be installed.
🔽 Search removable <u>m</u> edia (fic	appy, CD-ROM)
$\square$ Include this location in the s	earch:
I:\Darbas\GT4	BIowse
Don't search. I will choose the driv	rer to install.
Choose this option to select the de- the driver you choose will be the be	vice driver from a list. Windows does not guarantee that est match for your hardware.
·	
	< <u>B</u> ack <u>N</u> ext> Cancel

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

Found New Hardware Wizard
Select the device driver you want to install for this hardware.
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
Show compatible hardware
Model
USB Serial Config
Image: This driver is not digitally signed!       Have Disk         Tell me why driver signing is important       Have Disk
< <u>B</u> ack <u>Next</u> > Cancel

#### Press Have Disk button

Locate File						? ×
Look jn	: 🗣 Removab	le Disk (F:)		• ©	🤣 📂 🖽 -	
My Recent Documents Desktop My Documents My Computer	usbser_x8	5_x64.inf				
My Network	File <u>n</u> ame:	usbser_x86_x6	64.inf		•	<u>O</u> pen
Places	Files of <u>type</u> :	Setup Informat	tion (*.inf)		7	Cancel
Select driver file:						

lect driver file: Windows XP Windows 7 x86 or x64

usbser.inf . usbser\_x86\_x64.inf

ound New Hardware Wizard
Select the device driver you want to install for this hardware.
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
Show compatible hardware
Model USB Serial Config
This driver is not digitally signed!       Have Disk         Tell me why driver signing is important       Have Disk
< <u>B</u> ack <u>N</u> ext > Cancel

Press Next

Hardware	Installation
1	The software you are installing for this hardware: USB Serial Config has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
	Continue Anyway STOP Installation

Press Continue Anyway

Found New Hardware Wizard	
Please wait while the wizard installs the	e software
USB Serial Config	
usbser.sys To C:\WINDOWS\system32	NDRIVERS
	< <u>B</u> ack. <u>N</u> ext > Cancel

Wait while the driver will be installed

Found New Hardware Wiz	ard
	Completing the Found New Hardware Wizard
	The wizard has finished installing the software for:
	USB Serial Converter
	Click Finish to close the wizard.
	< <u>B</u> ack <b>Finish</b> Cancel

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.

🚇 Device Manager	
Eile Action View Help	
Realtek RTL8169/8110 Family Gigabit Ethernet NIC	▲
🔁 🥵 Other devices	
- 🔁 Modem Device on High Definition Audio Bus	
🖨 🖉 Ports (COM & LPT)	
BT Port (COM10)	
- 🖉 BT Port (COM11)	
- 🖉 BT Port (COM13)	
- 🖉 BT Port (COM14)	
- 🖉 BT Port (COM20)	
- Z BT Port (COM40)	
- 🖉 BT Port (COM41)	
- 🖉 BT Port (COM42)	
BT Port (COM43)	
J BT Port (COM6)	
BT Port (COM7)	
USB Serial Config (COM3)	
🕀 🐨 Processors	
🖻 🚽 Secure Digital host controllers	
🗈 😼 System devices	-
中心, Sound, video and came controllers	

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. <u>You should see the window below with the note: "This device is working properly</u>". This means that PC is successfully prepared for operation with configuration-testing application "SERA".

-		U	0 11	,,,	
ι	JSB Seria	Config (COM3) P	roperties		<u>? ×</u>
	General	Port Settings Driv	ver Details		
	Į	USB Serial Config	(COM3)		
		Device type:	Ports (COM & LP	T)	
		Manufacturer:	USBConfig		
		Location:	Location 0 (USB	Serial)	
		e status			
	If you	device is working pr u are having problem the troubleshooter.		click Troublesho	ot to
			ſ	<u>T</u> roubleshoo	ot
	<u>D</u> evice	usage:			
	Use th	is device (enable)			•
				ОК	Cancel

## **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.



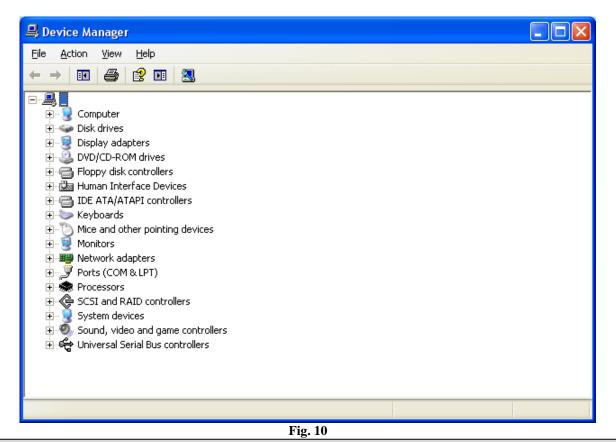
Attention! The module should be connected to +12V and to a PC via USB interface. The module and the PC should have ground connection, because absence of the ground connection between the power source of the module and the PC may damage the module.

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.

System Properties ? 🔀
System Restore Automatic Updates Remote
General Computer Name Hardware Advanced
Device Manager
The Device Manager lists all the hardware devices installed on your computer. Use the Device Manager to change the properties of any device.
Device Manager
Drivers
Driver Signing lets you make sure that installed drivers are compatible with Windows. Windows Update lets you set up how Windows connects to Windows Update for drivers.
Driver <u>S</u> igning <u>W</u> indows Update
Hardware Profiles
Hardware profiles provide a way for you to set up and store different hardware configurations.
Hardware <u>P</u> rofiles
OK Cancel Apply
Fig. 9

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



 $\wedge$ 

Attention! If the module GTC812 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.

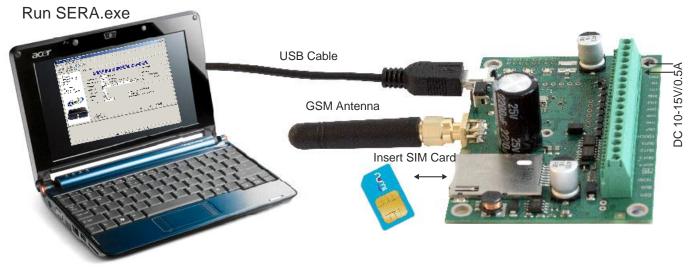
In [Device Manager] Window click "+" symbol near [Ports (COM & LPT)] in order to scroll [Ports (COM & LPT)] menu. If the module is powered with +12V and it is connected to the PC via USB port, thus upon scrolling Ports (COM & LPT), Window (Fig. 11) will be displayed.

🛃 Device Manager	
Eile Action View Help	
EHP	
🗎 🕀 🐨 Acronis Devices	
E Batteries	
Biometric Devices	
E-1 Computer	
😟 🧫 Disk drives 🕀 🌉 Display adapters	
Display adapters	
DVD/CD-ROM drives	
🗈 🧤 Human Interface Devices	
E Carl IDE ATA/ATAPI controllers	
EEE 1394 Bus host controllers	
🗄 🚎 Imaging devices	
🗄 Keyboards	
Email: The second	
Monitors     Network adapters	
Ports (COM & LPT)	
USB Serial Config (COM3)	
USB Serial Port (COM1)	
USB Serial Port (COM2)	
Processors	
⊡ 1 Subset 5	
E - Sound, video and game controllers	
E Universal Serial Bus controllers	
- •	
1	
<b>Γίσ</b> 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 (10-15V > 500mA) voltage, it should have inserted SIM card (with replenished account and removed **PIN CODE REQUEST**), connected GSM 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".

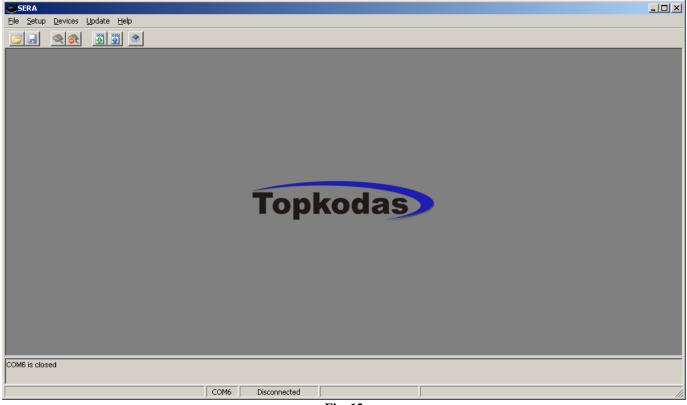


Fig. 12

If you are sure that the module is fully connected to PC and power supply, please go to Devices > GTC812. (Fig. 13)

					Fi	ig. 13				
	File	Settings	Devices	Update	About	0				
			GTau GTau GTGF	to v4 25 v1						
			GTCC GTCC	312						
			-		vindow (S	ystem Options)	will be opened	(Fig. 14)		
SERA - [Configur File Settings Devic			.12 configural	tion		_				<u>- 0 ×</u>
System Options - SSM Communication - USERS&Remote Co- - Outputs - Inputs - Event SMS Text - Custom SMS Text - Temperature Contr - Testing and Diagno	ons ontrol	Installer Pass User Passwo Temperature S	Alarm word ***** rd ***** Scale Celcijus	(6 symbols) (6 symbols)	☐ Auto ☑ Siren	- reARM - Peep on ARM/DISARM : Auto-Bypass	Hardware details HW: GTC812v1 Boot: GTC812boot_ FW: GTC812v1205	1v0 i26	r <mark>e Controll</mark>	<u>er</u>
GTC612		ARM/DISARM System Time Test Time Test Period Entry Delay Exit Delay Siren Time	14:30	0=disabled)	Set Module Ci Read Module C Reset Module	<sup>ock</sup> PC time: 27/0	6/2012 14:39:52	Stop Learning	]	
COM6 is closed Firmware file have bee		ordusoro								▲ ▼
See user menuals for d	- h - il -			COM6 0	ucconnected	CTC9120120626				

Fig. 14

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

File	Edit	Setup	Devices	Update	Help
		, <mark>∮</mark> Ser	ial Port		
		]	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.

Serial Port Setup	
COM3 ('Device'USBSER000)	ок

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

😻 SERA -	[GTauto con	figuratio	n]	
File Edit :	Setup Devices	Update	Help	
-	X BIB	<b>R</b>		
S GTauto	Configuration		Read Configuration	

#### Fig. 17 Read Configuration icon

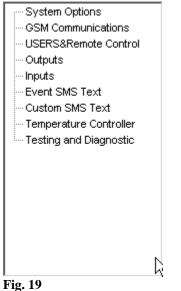


Attention! Each time after configuring the module press [File] > [Write Device] or press Send Configuration icon (Fig. 18) thus the software SERA will write configuration changes into the module!

Update Help	Send Configuration	
🧥 🧥 🕅 অপ অপ	ital	

Fig. 18 Send Configuration icon.

#### 5.1. Content of the module configuration



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 GTC812 device is selected ([Devices] > GTC812). It also may be selected from the content of the module.

## GSM Alarm System- Access Control-Temperature Controller

Installer Password ****** (6 symbols) User Password ****** (6 symbols) Temperature Scale Celcijus 💽	<ul> <li>Auto - reARM</li> <li>Siren Peep on ARM/DISARM</li> <li>Zone Auto-Bypass</li> </ul>	Hardware details HW: GTC812v1 Boot: GTC812boot_1v0 FW: GTC812v120626	
ARM/DISARM Method	D On Touch Input	Learn iButtons	Stop Learning
System Timers			
Test Time 14:30			
Test Period 1 Days (0=disabled)			
Entry Delay 5 s			
Exit Delay 10 s	Set Module Clock PC time: 02/07/	2012 10:47:34	
Siren Time 120 s	Read Module Clock Module time		
	Reset Module		R

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
	0
	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
	Touch input. when in input "Touch is a

	positive level +V, the state of the module
	<b>▲</b>
	will be ARM. When negative level - V, the state of the module will be DISARM.
	Positive Level ARM/Negative Level DISARM On
	<b>Touch input</b> . When in input "Touch" is a
	positive level -V, the state of the module
	<b>▲</b>
	will be ARM. When negative level - V, the state of the module will be DISARM.
	• 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.
Stop Learning (button)	Upon pressing the button, the mode for new iButton keys learning
	will be stopped, and at the same time the program will automatically read the codes of newly learned keys. To review the codes of these
	keys refer menu USERS&Remote Control, see $5.3$ chapter.
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 send 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 timer count down 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 -
Auto re-ARM	it will beep twice. Automated activation of the system, if a door (delay zone) has nor
	been opened/closed after DISARMing the system.
Zone Auto Bypass	Upon checking the check box, the system will allow to activate ARM
	mode even if certain zones have been triggered.
	If the check box has not been checked, the system will not allow to
	enter into ARM state, in a case any of the the zones has been
Temperature	triggered. It is temperature scale. Two scale types are possible, one of which
remperature	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 the module:
	• <b>HW</b> – hardware version of the module.
	• <b>Boot</b> – start up program version (BOOT) This part
	of the software is able to update Firmware SW.
	• <b>FW</b> – 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)	Set 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. This function will not operate, in the case of USB Serial Port
	is not open or FW program of the module is not functioning properly.

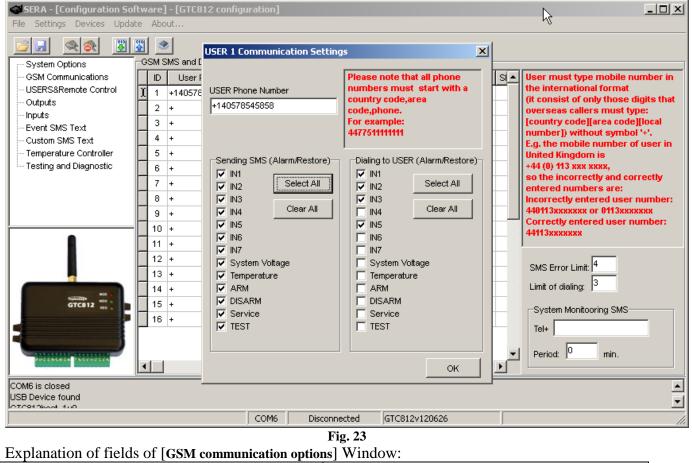
#### Window [GSM communication options]

In order to open Window [GSM SMS and DIAL communication options] it is necessary to select "GSM Communication" clause Fig. 19. The Window Fig. 22 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. 23to 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.

_	SMS and DIAL communication	. <u> </u>											
ID	User Phone SMS Snd DIAL	IN1 SMS	IN2 SMS	IN3 SMS	IN4 SMS	IN5 SMS	IN6 SMS	IN7 SMS	Test SMS	ARM SMS	DISARM SMS		User must type mobile number in
(1	+1405727278		~				~						the international format (it consist of only those digits that
2	+												overseas callers must type:
3	+												[country code][area code][local
4	+												number]) without symbol '+'. E.g. the mobile number of user in
5	+												United Kingdom is
6	+												+44 (0) 113 xxx xxxx,
7	+												so the incorrectly and correctly entered numbers are:
8	+												Incorrectly entered user number:
9	+												440113xxxxxxx or 0113xxxxxxx
10	+												Correctly entered user number: 44113xxxxxxx
11	+												
12	+												
13	+												
14	+		Γ	Γ	Г	Γ			Γ				SMS Error Limit:
15	+												Limit of dialing: 3
16													
												-	
•													

Fig. 21 Fig. 22



ID I	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

	phone 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.
System Monitoring SMS	This function is intended for permanent system
	monitoring. The message contains information about
	in/out states, communication strength, voltage and
	temperature.

#### 5.3. Remote Control by short call

To open Window [Remote Control by Dialling], it is necessary to select [GSM Remote Control]. A window Fig. 24 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.

	ID	User Name 😽	User Phone	iButton	Out1	Out2	Out3	Out4	Arm/Disarm
Γ	1		+	000000000000000000000000000000000000000					
Γ	2		+	000000000000000000000000000000000000000					
I	3		+	000000000000000000000000000000000000000					
I	4		+	000000000000000000000000000000000000000					
	5		+	000000000000000000000000000000000000000					
I	6		+	000000000000000000000000000000000000000					
I	7		+	000000000000000000000000000000000000000					
	8		+	000000000000000000000000000000000000000					
I	9		+	000000000000000000000000000000000000000					
	10		+	000000000000000000000000000000000000000					
	11		+	000000000000000000000000000000000000000					
	12		+	000000000000000000000000000000000000000					
	13		+	000000000000000000000000000000000000000					
	14		+	000000000000000000000000000000000000000					
	15		+	000000000000000000000000000000000000000					
	16		+	000000000000000000000000000000000000000					
	17		+	000000000000000000000000000000000000000					
	18		+	000000000000000000000000000000000000000					
	19		+	000000000000000000000000000000000000000					
	20		+	000000000000000000000000000000000000000					

The number of users - up to 400

Fig. 24

	0
Explanation of fields of [Remote Control by Dialling	J]:
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.
	The code might be entered manually or automatically
	registered, upon entering the module into keys learning
	mode. In order to delete the code enter 00000000000
OUT1, OUT2, OUT3, OUT4	Where the check boxes are checked, these inputs will be
	switched, if a user will call from this number. Preferred
	output 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 short call to the
	module.

## 5.4. 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
ŀ	1	Out1	Out1 ON .	Out1 OFF .	CTRL/SMS/DIAL	15s		Pulse
1	2	Out2	Out2ON .	Out2 OFF .	SIREN	600s	V	Steady
I	3	Out3	Out3ON .	Out3 OFF .	ARM state	600s		Steady
1	4	Out4	Out4 ON .	Out4 OFF .	Light Flash	600s		Steady

Fig. 25

ID	Name	Out ON SMS text	Out OFF SMS	Stext	Out definition	Out pulse time	Invert	State Mode	
1	Out1	Out1 ON .	Out1 OFF .		CTRL/SMS/DIAL	N 600s		Steady	
2	Out2	Out2 ON .	Out2 OFF .		CTRL/SMS/DIAL	600s		Steady	
3	Out3	Out3 ON .	Out3 OFF .		ISIREN IBUZZER	600s		Steady	
4	Out4	Out4 ON .	Out4 OFF .		ARM state	600s		Steady	
					Inputs OK Light Flash DISARM state <b>Fig. 26</b>				•

	ID	Name	Out ON SMS text	Out OFF SMS text	Out definition	Out pulse time	Invert	State Mode
Þ	1	Out1	Out1ON .	Out1 OFF .	CTRL/SMS/DIAL	600s		Steady 🚽 🖍
	2	Out2	Out2 ON .	Out2 OFF .	CTRL/SMS/DIAL	600s		Pulse
	3	Out3	Out3ON .	Out3 OFF .	CTRL/SMS/DIAL	600s		Steady
	4	Out4	Out4 ON .	Out4 OFF .	CTRL/SMS/DIAL	600s		Steady
Г		-						
								Ŀ

Fig. 27

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, seeFig. 26:

	<ul> <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 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.</li> <li>ARM State – state of alarm system ARM/DISARM. It 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.</li> <li>Inputs OK - if any of zones is disturbed, the output will be activated. 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. This feature may be applied to connect car direction signals.</li> <li>DISARM State – the output will be activated only if the system has been turned off.</li> </ul>
Out pulse time	It is time in seconds, which indicates duration of
	impulse, when <b>Pulse</b> 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. 27.
	• Pulse – the output will work in pulse
	mode. Pulse time (seconds) should be
	<ul> <li>set in [Out pulse time] column.</li> <li>Steady – output will work on the steady</li> </ul>
	• <b>Steady</b> – output will work on the steady level till the next commutation.
L	ie , er un the next commutation.

#### 5.5. 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. 32

	In	Input Name	Alarm text	Restore text	Alarm	Restore	Input Type	Input Def.	Input speed	Repeat time	Action
Þ	1	Input 1	Door Alarm	Door Closed	<	<	EOL	delay	200ms	1s	Disable
	2	Input 2	PIR1 Alarm	PIR1 Restore	~		EOL	interior	200ms	1s	Disable
	3	Input 3	PIR2 Alarm	PIR2 Restore	~		EOL	instant	200ms	1s	Disable
	4	Input 4	Glass Break	Glass Break	~		EOL	instant	200ms	1s	Disable
	5	Input 5	Fire Alarm	Fire Restore	~		EOL	fire	200ms	1s	Disable
	6	Input 6	Panic Button	Panic Button	~		EOL	silent	200ms	1s	Disable
	7	Input 7	Tamper Alarm	Tamper Restore	~	•	EOL	24 hours	200ms	1s	Disable
	8	Battery	Low Batery .	Batery Restore	~	<b>V</b>	NC	silent	65000ms	6000s	Disable

#### Fig. 28

	In	Input Name	Alarm text	Restore text	Alarm	Restore	Input Type	Input Def.	Input speed	Repeat time	Action
►	1	Input 1	Door Alarm	Door Closed	<	<	EOL 🗾	delay	200ms	1s	Disable
	2	Input 2	PIR1 Alarm	PIR1 Restore	•		NO	interior	200ms	1s	Disable
	3	Input 3	PIR2 Alarm	PIR2 Restore	•		NC EOL	instant	200ms	1s	Disable
	4	Input 4	Glass Break	Glass Break	•		EOL	instant	200ms	1s	Disable
	5	Input 5	Fire Alarm	Fire Restore	V		EOL	fire	200ms	1s	Disable
	6	Input 6	Panic Button	Panic Button	•		EOL	silent	200ms	1s	Disable
	7	Input 7	Tamper Alarm	Tamper Restore	~	•	EOL	24 hours	200ms	1s	Disable
	8	Battery	Low Batery .	Batery Restore	•	•	NC	silent	65000ms	6000s	Disable

#### Fig. 29

	In	Input Name	Alarm text	Restore text	Alarm	Restore	Input Type	Input Def.	Input speed	Repeat time	Action
	1	Input 1	Door Alarm	Door Closed	<	V	EOL	delay	200ms	1s	Disable
۲	2	Input 2	PIR1 Alarm	PIR1 Restore	~		EOL	interior 🔹	200ms	1s	Disable
	3	Input 3	PIR2 Alarm	PIR2 Restore	~		EOL	delay	200ms	1s	Disable
	4	Input 4	Glass Break	Glass Break	~		EOL	interior Instant	200ms	1s	Disable
	5	Input 5	Fire Alarm	Fire Restore	~		EOL	24 hours	200ms	1s	Disable
	6	Input 6	Panic Button	Panic Button	~		EOL	silent	200ms	1s	Disable
	7	Input 7	Tamper Alarm	Tamper Restore	~		EOL	fire linterior stav	200ms	1s	Disable
	8	Battery	Low Batery .	Batery Restore	•			instant stay	65000ms	6000s	Disable

#### Fig. 30

	In	Input Name	Alarm text	Restore text	Alarm	Restore	Input Type	Input Def.	Input speed	Repeat time	Action
Þ	1	Input 1	Door Alarm	Door Closed	<	V	EOL	delay	200ms	1s	Disable 📃 💌
	2	Input 2	PIR1 Alarm	PIR1 Restore	~		EOL	interior	200ms	1s	Disable
	3	Input 3	PIR2 Alarm	PIR2 Restore	<b>V</b>		EOL	instant	200ms	1s	
	4	Input 4	Glass Break	Glass Break	•		EOL	instant	200ms	1s	
	5	Input 5	Fire Alarm	Fire Restore	•		EOL	fire	200ms	1s	OUT4
	6	Input 6	Panic Button	Panic Button	~		EOL	silent	200ms	1s	Disable
	7	Input 7	Tamper Alarm	Tamper Restore	•		EOL	24 hours	200ms	1s	Disable
	8	Battery	Low Batery .	Batery Restore	<b>V</b>		NC	silent	65000ms	6000s	Disable

Fig. 31

INPUT 1 Settings		×
instant	Zone Definition	NO Zone Type
Luggage opened .		Alarm SMS Text
Luggage closed .		Restore SMS Text
Zone Options	Zone Speed	200ms ms
Restore Enabled	Event Repeat Timeout	60s s
	Zone Action	Disable 💌
		ок
	E'- 22	



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
Input Name	not react towards restore of the present input.           Input type you may select after scrolling menu:
Input Ivanie	<ul> <li>NC – normally closed contact;</li> </ul>
	•
	• <b>NO</b> – normally open contact;
	• <b>EOL</b> - normally closed contact with 1
	resistor
Input Def.	Input operation type you may select after scrolling menu:
	• <b>Delay</b> – 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
	ARM OF DISARMI. The applications of this type

	<ul> <li>zones are safes, storehouses, tampers of the sensors.</li> <li>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.</li> <li>Fire - this zone is always active not depending on whether the security system is in ARM or DISARM. state The zone generates a special siren signal with interruptions. The zone is applied for smoke sensors and for fire alarm.</li> </ul>
Input speed	It is the time in milliseconds, which indicates the shortest signal for reaction of the module. If signal is shorter, the module will ignore it.
Repeat time	The time period in seconds, during this time repeatable zone events are ignored.
Zone Action	Changing of selected output state upon alarm ot restore.
Battery (Fig. 33)	<ul> <li>In8 Low Battery parameters <ul> <li>Alarm voltage – voltage the module is connected to; when this voltage is reached, the 8 zone will be alarmed.</li> <li>Restore voltage – voltage the module is connected to; when this voltage is reached, the 8 zone will be restored.</li> <li>Calibration – coefficient, if changed voltage indications might be calibrated.</li> </ul> </li> </ul>

Inputs											
In	Input Name	Alarm text	Restore text	Alarm	Restore	Input Type	Input Def.	Input speed	Repeat time	Action	
1	Input 1	Door Alarm	Door Closed	V	•	EOL	delay	200ms	1s	Disable	
1	Input 2	PIR1 Alarm	PIR1 Restore	•		EOL	interior	200ms	1s	Disable	
3	Input 3	PIR2 Alarm	PIR2 Restore	•		EOL	instant	200ms	1s	Disable	
4	Input 4	Glass Break	Glass Break	•		EOL	instant	200ms	1s	Disable	]
5	Input 5	Fire Alarm	Fire Restore	•		EOL	fire	200ms	1s	Disable	
6	Input 6	Panic Button	Panic Button	•		EOL	silent	200ms	1s	Disable	
0 7 ▶ 8	Input 7	Tamper Alarm	Tamper Restore	•	•	EOL	24 hours	200ms	1s	Disable	
8	Battery	Low Batery .	Batery Restore	•	•	NC	silent	65000ms	6000s	Disable	
I In8 L Alarr	In S Low Battery parameters Alarm voltage 12 V Calibration 2.28783 Restore voltage 13.6 V										

Fig. 33

#### Window Event SMS Text 5.6.

In order to open Service Text Summary window, it is necessary to select the item Event SMS Text from the content.

3	Service text summary								
	D	Name of Status Event	Event Text	Send	-				
	1	Module ARM	System ARM						
	2	Module DISARM	System DISARM						
	3	Module reset	System reset						
	4	Zone Auto-Bypass	Auto-Bypass						
	5	Module Periodical Test	Test Report						
	6	Module STAY ARM	Armed STAY						
					•				

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.

#### Window [Text summary] 5.7.

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	
Þ	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	
			ĥ	<u>ð</u> -

F1g. 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.	

#### 5.1. Window Temperature Controller

In order to open window of Temperature Controller Settings, select Temperature Controller.

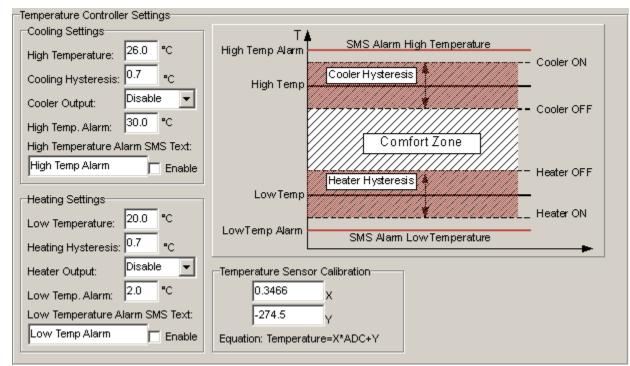
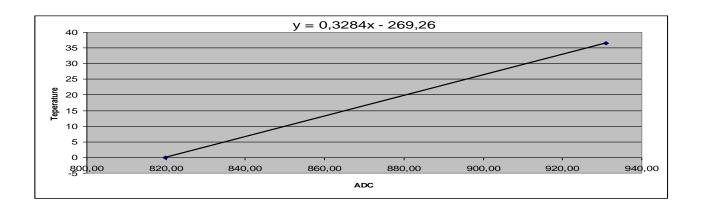


Fig.	36
------	----

High Tomporature	Temperature value upon which cooling device will be		
High Temperature	Temperature value upon which cooling device will be		
	activated.		
Cooling Hysteresis	Cooling device control hysteresis		
Cooler Output	To select output for cooling device control. If cooling		
	device is not used, select the option Disable.		
High Temp. Alarm	Temperature value upon reaching which high temperature		
	alarm will be send.		
High Temperature Alarm SMS Text	Enter High temperature alarm SMS text		
Enable	To send high temperature alarm.		
Low Temperature	Temperature value upon which heating device will be		
	activated.		
Heating Hysteresis	Heating device control hysteresis		
Heater Output	To select output for cooling device control. If heating		
	device is not used, select the option Disable.		
Low Temp. Alarm	Temperature value upon reaching which low temperature		
	alarm will be send.		
High Temperature Alarm SMS Text	Low temperature alarm SMS text is being recorded.		
Enable	Enable To send low temperature alarm.		
Temperature Sensor Calibration	Temperature sensor value calculation coefficients. They		
_	might be used to calibrate temperature measurements.		
	Temperature calculation formula $T=X*ADC+Y$		
X	X- multiplier		
Enable	Y - coefficient.		

Following the equation Temperature=X\*ADC+Y by selecting X and Y coefficients. Temperature calibration may be performed in software SERA in testing window. It is necessary to have accurate thermometer in order to measure temperature at least in two points. In testing window to read temperature ADC indications in these points. Following the equation "Temperature=X\*ADC+Y" to calculate X and Y coefficients. Calculated X and Y coefficients should be programmed in the module. It is easy to calculate X and Y coefficients in MC Excel by using trendline.



#### 5.2. 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.

Testing window				
Inputs (ADC values)	Outputs states		GSM info	
□ IN1 315 □ IN2 314	🔽 Out1	Out1 On/Off	IMEI:	359772032701527
IN3 315	C Out2	Out2 On/Off	SIM card:	READY
IN4 312 IN5 486		Out3 On/Off	Signal level:	
□ IN6 490	Out3		Registration:	Registered, home network
□ IN7 489	Cut4	Out4 On/Off		Centre Address:
IN8 554 Sys. Vottage			: "+37069950	)115",14
Touch Input	System State:	ARM/DISARM Syst	em <mark>ARM</mark>	
	System voltage:	12.69 🗸 554.73	ADC	
	Temperature:	80.1 • <sub>C</sub> 1023	ADC 🔽 Hig	h Temp Alarm 🔲 Low Temp Alarm
R			1	
		Switch on testing	gSwitch	n off testing

Fig. 37

Explanation of fields of Testing Window:

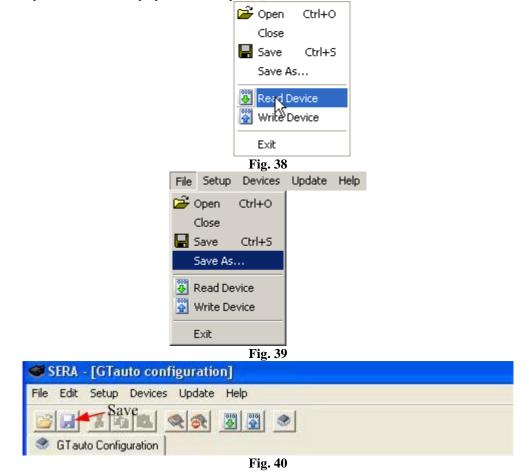
1	0			
Inputs	IN1			
IN2				
	IN3	This is indication of each input Chasted sheet has nearby the		
11/14		This is indication of each input. Checked check box nearby the appropriate input means that the said input – zone was activated Number near each input is a coefficient indicating input voltage.		
			IN7	
	IN8			
	<b>ARM/DISARM</b> Touch input	"Touch" input state		
<b>Outputs states</b>	Out1			
	Out2	Checked box nearby the appropriate output means that this output		
	Out3	is active.		
	Out4			
	Button Out1 On/Off	By pressing buttons (on/off) output states are controlled. It is		

	Button Out2 On/Off	convenient to use when it is necessary to test outputs operation.			
	Button Out3 On/Off	convenient to use when it is necessary to test outputs operation.			
	Button Out4 On/Off	DATE is a factor of CCOM and a second state of the second state			
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	SMS centre number. This number should be checked if it is			
	Address	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				
	coefficient Fig. 33, voltage value (V) will be achieved.				
Temperature	Temperature of temperature sensor. The number nearby is temperature ADC value used to				
I	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.				
	To review these coefficients refer Fig. 36 After performing additional calibration, it is possible to				
	achieve a very accurate temperature measurement up to 0,1 C in a narrow temperature				
	measurement range.				
System State		Indication that at the moment the module is in ARM			
System State	ARM				
		mode.			
	DISARM	Indication that at the moment the module is in DISARM			
	DISARIVI	mode.			
	WAITING ARM	Module mode when Exit Delay time is being calculated.			
ARM/DISARM					
command.	After pressing the button ARM/	DISARM mode should be changed			
button	The pressing the sutton Them,	Distriction mode should be changed			
Switch on					
testing mode	Pressing this button starts testing	a of the module			
button		S of the module.			
Switch on					
testing mode	Pressing this button stops testing	g of the module			
button	Pressing this button stops testing of the module.				
DULIUII					

## 6. Saving module configuration into the file

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. 38 In order to save configuration go to [File > Save As... [Fig. 39 or press icon [Save] icon Fig. 40. Enter configuration parameter in the displayed table and press ",OK".



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

In order to start saved configuration go to [File] > [Open] Fig. 41 or press [Open] iconFig. 42

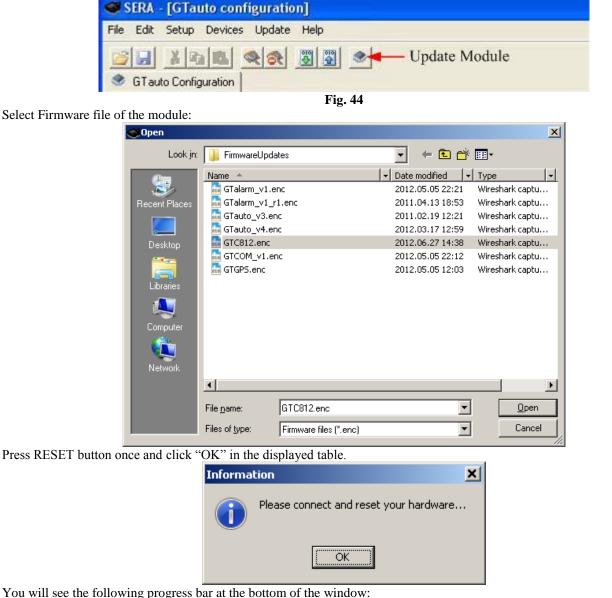


SERA - [GTauto configuration]						
File Edit Setup Devices Update Help	P					
GTauto Configuration	<b>8 •</b>					
Fig. 42						
P	🚰 Open Ctrl+O					
	Close					
6	Save Ctrl+S					
	Save As					
-	🖗 Read Device					
	Write Device					
	Exit					
	Fig. 43					

**Fig. 43** 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. 43 in order to send this configuration into the module.

## 8. Updating of firmware

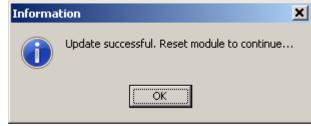
The latest software version may be found <u>www.topkodas.lt</u>. If a version of your module is older, please update it (to find out the version of your GTC812 software version ((**FW firmware**) send Test SMS from your module). For this purpose press [Update] in the menu list or [Update module] icon, Fig. 44. Specify the file of the newest software version and press [Open]. Follow further instructions of the program.



COM3 Disconnected GTCOM v1 110516

SERA - [Configuration Sof	ftware] - [GTC812 configuration]	
<u>File Settings Devices Updat</u>	te <u>A</u> bout	
	31	
System Options GSM Communications USERS&Remote Control 	System Settings GSM Alarm System- Access Control-Temperature Controlle Installer Password (6 symbols) Auto - reARM User Password (6 symbols) Siren Peep on ARM/DISARM W Siren Peep on ARM/DISARM Siren Peep on ARM/DISARM Disc GTC812v1 Boot: GTC812v1 Boot: GTC812v120626	<u>r</u>
E Testing and Diagnostic	Temperature Scale     Celcijus       ARM/DISARM Method     iButton Access ID On Touch Input       System Timers       Test Time       14:30       Test Period       1       Days (0=disabled)	
	Test Period     Test Period       Entry Delay     5       Exit Delay     10       Siren Time     120       Read Module Clock     Module time	
COM3 is closed		<b></b>
Firmware file have been loaded		•
See user manuals for details	COM3 Disconnected GTC812v120626	

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: xxxxxxxx

	Hardware details
	HW: GTC812v1
	Boot: GTC812boot_1v0
	FW: GTC812v120626 N
	5
Programme version is also visible below:	

riogramme version is also visible below.				
	COM6	Disconnected	GTC812v120626	_//