„GSM Configurator" software is a dedicated set up tool for configuration of GSM2000… modules as well as its earlier versions marked GSM2 though for the latter, some functions are not available.

PC computer used for the GSM configuration must feature "NET Framework" library version 4.8 which, in Windows® 10, it is installed as default.

Detailed description of „GSM Configurator" set up with instructions how to use it is provided in the text below. Further information may be obtained while working with the application as all control indicators, buttons and fields feature built-in help data displayed when overrun by cursor.

MODULE PROGRAMMING

Procedure of mini-USB cable driver installation:

Connect power supply to the module by means of popular mini-USB cable (see side picture) and then connect it to PC. The cable is not supplied with the module. The PC should detect new device and display "USB > RS Converter" notice followed by required driver installation. If not, the driver should be downloaded from the manufacturer's site www.elmes.pl followed by the mini-USB cable connection. PC system should now detect new device "USB > RS Converter" requesting drivers for the device. Folder from which the drivers were downloaded should be indicated. As for the currently produced modules it should be „...\USB cable drivers\VER 2A". A while later the system detects next device: "USB Serial Port" and additional COM port will appear (e.g., COM3 or higher). The new port number dedicated to GSM2000 module can be checked in two ways:

1. Check list of available COM ports in "GSM2 Configurator" software in menu Options before connecting mini-USB cable to the module and after the connection. Appearing new COM port may be the right port number.

NOTE: Settings window must be closed and opened every time next COM port selection is made.

2. Click "My Computer" with right mouse switch and select "Hardware" in folder "Properties". Now, select "Device Manager" and all hardware devices installed in the computer will be displayed. The new COM port number assigned to GSM2000 will appear in subfolder "Ports (COM and LPT)". Check that subfolder for any new COM appearing after cable connection. That will be the port looked for.

First step after launching "GSM2 Configurator" is selection of serial COM port for communication with the module – menu Options->Settings, field **A.1** .The same port should be selected as used for USB cable installation. Module GSM2000 must be powered and mini-USB cable must be connected to the computer otherwise it will not appear in the port name list.
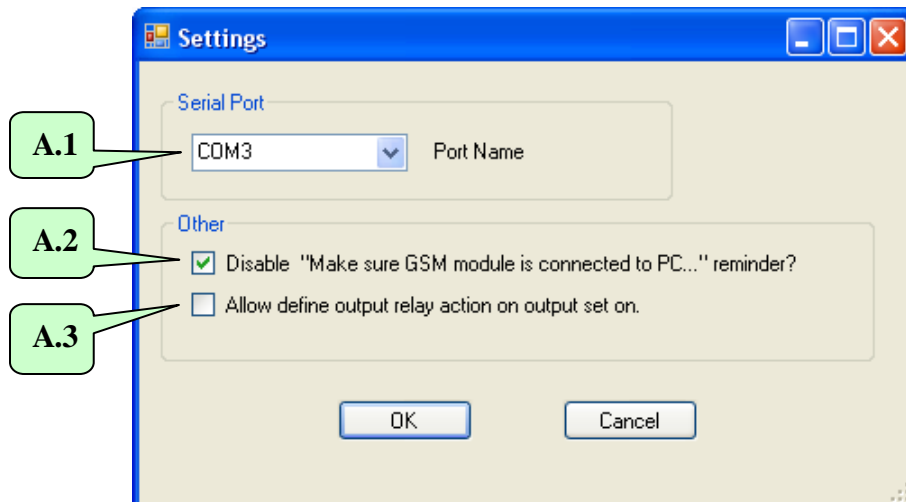
Other options in this menu:

The meaning of **A.2** option is described in section "Outputs" (2).

SIM card with PIN check feature switched off, or a card with PIN code set to 1234, may be inserted to the module before it is connected to the PC. Inserting PIN code protected SIM card, or a card with PIN code other than 1234 may block the card !!!.

At this stage, the SIM card is required for GSM signal level check only and it is not needed for the module set up. It will be needed for normal operation after the module configuration is completed.

Next, power the module (e.g., 12VDC/1A) and connect it to the PC by mini-USB cable.

Next step is to set all parameters and options of the programmed module (pt. 1 to 7). After all options are set, it is suggested to save them to HDD by clicking **B.2** in main window menu.

Programming is effective when all set options are sent to the module by clicking **B.4** in main window menu.

The programmed settings will permanently remain the module memory even if not powered.
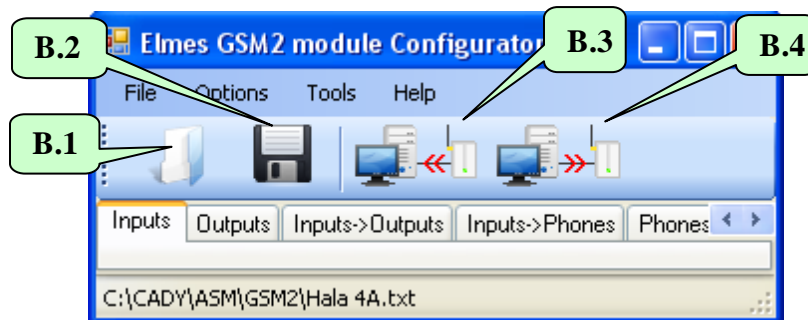
1. „Inputs"
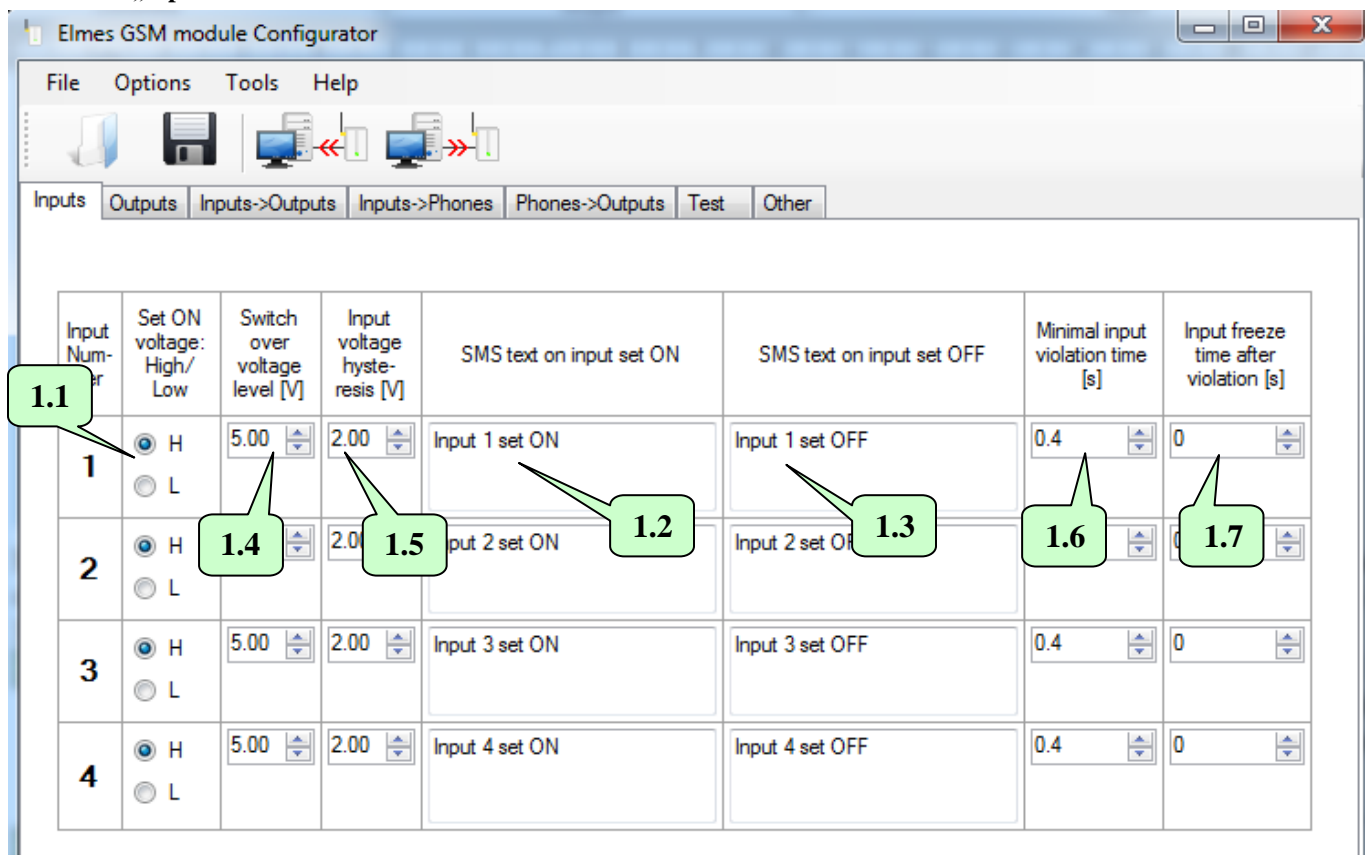
GSM2000 module features four control inputs with maximum or equal to 24VDC(!) input voltage level measured with reference to the module's ground (minus power supply).

Input voltage level below **1.4** - **1.5** is regarded as low –L (5V-2V=3V as default) while voltage level above **1.4** + **1.5** is regarded as high – H (5V+2V=7V as default).

Parameters defined for every input:

1.1 - Selection button of input trigger voltage level – low (L), or high (H). Selection of H or L trigger level means that when the input voltage level rises from low to high (H) or drops from high to low (L), SMS notification predefined in field **1.2** is send and calls are made to predefined phone numbers. When input signal voltage drops from H to L (H selected) or rises from L to H (L selected), only SMS notification, defined in field **1.3**, is send (no calls are made). Phones to be notified and type of notification (SMS and/or CLIP) are defined in menu "Inputs->Phones".

1.2 - In this field input activation (set on) SMS text is defined.

**1.3** - In this field input deactivation (set off) SMS text is defined.

1.4 - In this field input switch over voltage level is defined in the range of 0,2-14,5V. If input voltage exceeds switch over voltage by more than hysteresis defined in field **1.5**, the input will be regarded as high (H). If it falls below switch over voltage by more than hysteresis then it will be regarded as low (L).

**1.5** - In this field switch over hysteresis is defined in the range of 0,1-5V.

1.6 - In this field module input sensitivity is defined, that is the minimal violation time it is regarded as valid. Setting ranges from 0.2 to 65536 seconds with 0.1-second step.

1.7 - Input freezing time after violation ranging from 0 to 255 s with 1s step. After input is violated and CLIP or SMS notification is sent, the input freezes for pre-set time period, in which any other violation of the input will not activate CLIP or SMS notification. It allows avoidance of situation when many notifications are sent due to series of short input violations, e.g., from PIR detector.
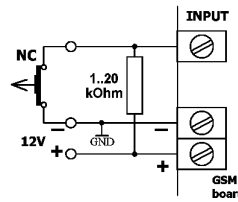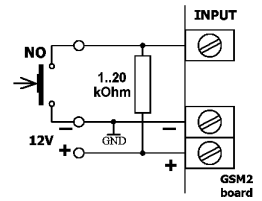
Inputs control signal level (L) or (H) wiring examples.
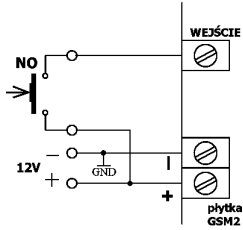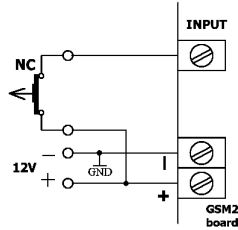
| A. +12V controlled input, NO Activation level H | B. +12V controlled input, NC Activation level L | C. Ground controlled input, NO Activation level L | D. Ground controlled input, NC Activation level H |

NOTES!

1. Grounds of external control device and GSM2000 module must be shorted.

2. Used switch type: NC – normally closed state at standby. NO – normally opened state at standby.

3. Resistor in examples C and D should be in 1- 20kOhm range as the module's internal resistance measured to ground is 36kOhm. Recommended resistor value is 4.7kOhm.

When CLIP call is made to phone number engaged or unavailable the call is redialled twice. First however, the module attempts to call remaining phones from predefined list and then returns to redial the undone call. Calls are considered done when:

- call is rejected;
- call is received and ended by call recipient;
- call is received but ended by the module due to notification time passage (up to 99s), defined in window "Other" **7.9**;
- call is not received nor rejected but defined in window "Other" **7.9** notification time out has passed (up to 99s).

If a call is either not rejected nor received but the defined in window "Other" **7.9** notification time has passed (up to 99s), the module would disconnect not assuming the call as done and will attempt to redial two times, but only if function "call once only" **7.10** is disabled.

2. „Outputs".
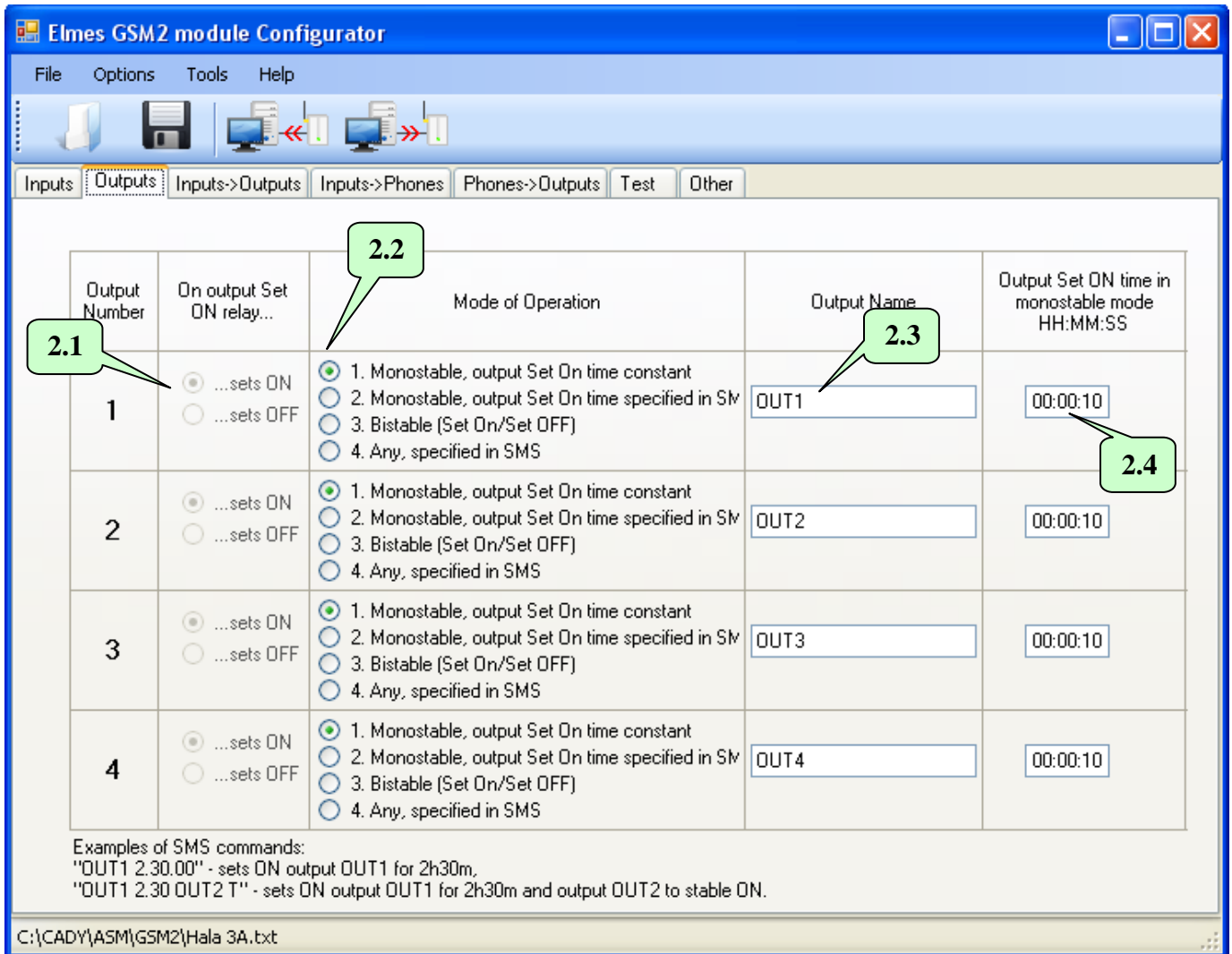
Elmes GSM2000 module features four relay control outputs. Each output has two installation terminals connected to relay output contacts and is jumper configured to operate in normally opened (NO), or normally closed (NC) mode (see pt. 8). Outputs can be operated in four control modes. This description covers only SMS control of outputs. Two other control modes: by CLIP (outputs controlled by calls made to module) and by input violation are described in windows "Phones->Outputs" and "Inputs->Outputs" respectively.

SMS text command pattern depends on selected operating mode of module's outputs, as shown in field 2.2 :

Selected in 2.2 Operating Mode	Examples of SMS commands content and their meaning
1. Pulse Mode with pre-set set ON time.	„OUT1" – Sets on output OUT1 for time pre-set in field 2.4
2. Pulse Mode with set on time defined in SMS text.	„OUT1 1:30" – Sets on output OUT1 for 1m30s „OUT1" – Sets on output OUT1 for time pre-set in field 2.4
3. Bistable Mode – on/off.	„OUT1 Y" or „OUT1" – Sets stable on output OUT1 „OUT1 N" – sets off output OUT1
4. Any mode defined in SMS command	„OUT1" – Sets ON output OUT1 for time pre-set in field 2.4 „OUT1 1:30:00" – Sets on output OUT1 for 1h30m „OUT1 Y" – Sets stable on output OUT1 „OUT1 N" – Sets off output OUT1

Remarks: command strings are space separated and quotation marks are not used!
- After applying name to an output, it should be then used in SMS commands, e.g., „STOVE 1:30:00" (switch on stove for 1h30m).
- In output bistable operation mode, letters T, Y, t, y can be used to mark set on while N, n to mark set off.
- In monostable (pulse) operation mode, output set on time can be specified as: HH:MM:SS, MM:SS or SS where ":" can be substituted by . / \ e.g., „OUT1 1.40.00" (one hour and 40 minutes); „OUT1 5/20" (5 minutes 20 seconds); „OUT1 6" (6 seconds).
- Single SMS command can control any number of outputs, e.g., „OUT1 OUT2 5 OUT3 T OUT4 12.00".

Correct SMS command is executed immediately after its receipt and, if this option is selected, see 7.2 , confirmed by return SMS with "OK" + inputs/outputs status. If a command contained any error, such as improper output name, incorrect password or content, the command is not executed and, if this option is selected, see 7.2 , "ERROR" SMS is returned. Typical error

could be SMS command "OUT1 Y" sent to output that operates in monostable mode (1 & 2) or, execution of SMS command "OUT1 5:00" when the output is defined to operate in mode 1 (Pulse Mode with predefined set on time).

Below listed, are all SMS control commands parameters that are set in various menus of the configuration software. These include:

- whether SMS command must begin with password – box **7.1** and the password - field **7.4** in window "Other";
- whether SMS command letters case (lower or upper) has meaning - box **7.3** in window "Other";
- whether the module confirms command execution by return SMS or, in case of error, confirms command rejection – field **7.2** in window "Other";
- whether SMS command can be sent from any phone - box **5.5**, or phone number in the list - boxes **5.3** & **5.4** in menu „Phones->Outputs".

All outputs may have relay output set ON or OFF on output activation, selected in field **2.1**. It does not mean whether relay contacts should close or open at output activation - that is NO-NC jumper pre-set manually on board of the module. It is whether the relay's coil should be unpowered at standby and powered at set on or, alternatively, powered at standby and un-powered at set on. The second case is rarely used but has important meaning in sensing and alarming power supply cut off.

Calling to the module's phone number from one of its 2048 listed phones can also control the GSM2000 outputs. Each of these phone numbers may have predefined one or many assigned outputs for simultaneous control. This mode allows programmed time pulse control of outputs only (bistable "on/off" operation is not permitted). The third and last available control mode of GSM2000 allows predefined output/s control by assigned to it input violation. This control mode does not allow bistable "on/off" operation either. Therefore, the function is set off as standard. To activate it select option **B.3** in menu „Options".

3. **„Inputs->Outputs".**
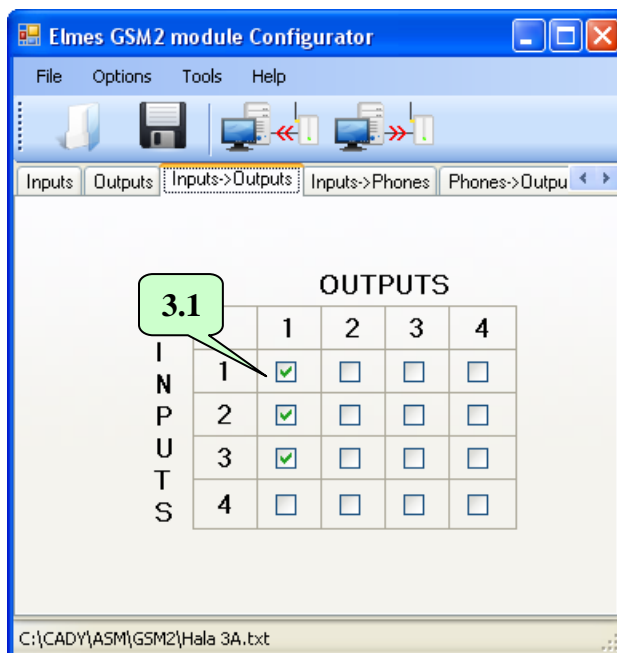
This menu allows selection of outputs activation by violation of inputs. By checking any selection box **3.1** violation of select-ed input would activate one or many outputs in operation modes described below:

1. For programmed time, if in menu "Outputs" in field **2.2** mode 1 or 2 is selected.
2. Permanently, until inputs return to idle state, if in menu "Outputs" in field **2.2** mode 3 or 4 is selected.

As shown in the above window example, inputs 1, 2 or 3 set on activates output 1.

4. „Inputs->Phones”.
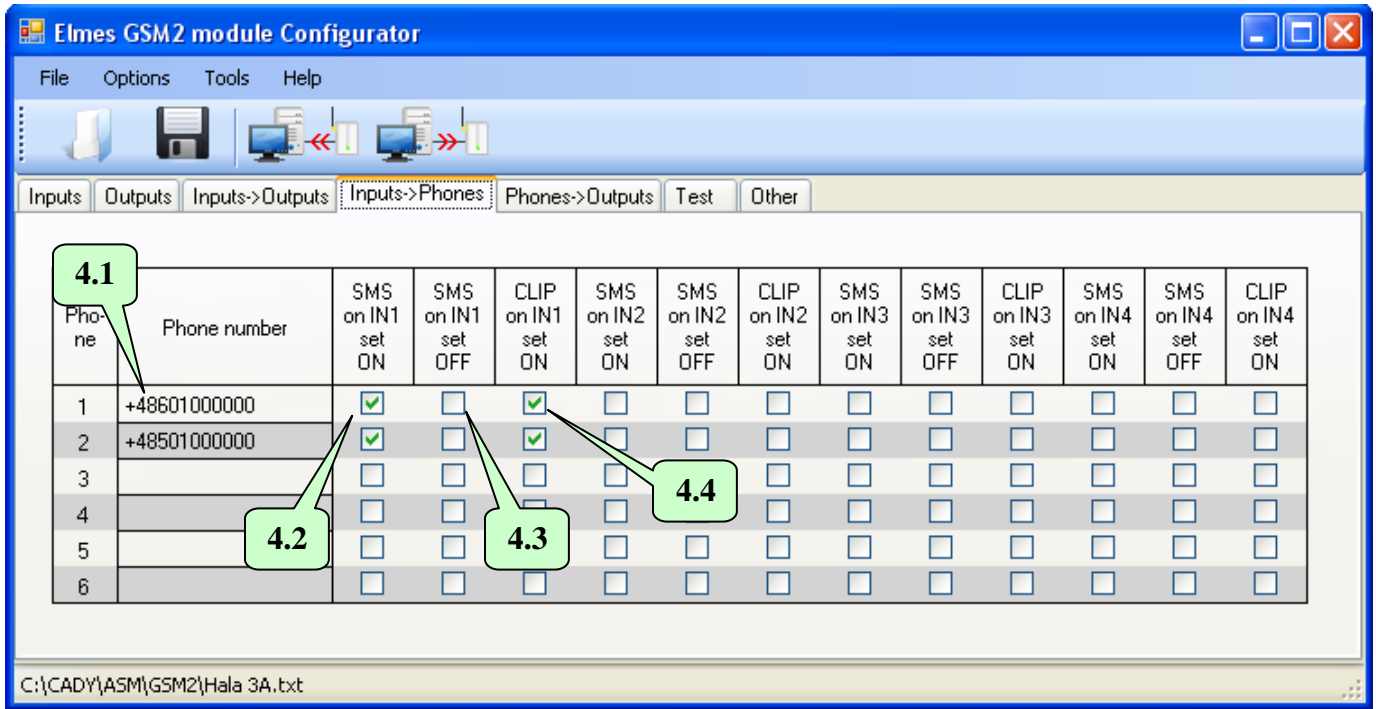
This window is for defining types of notifications that would be sent to first six phones on input set ON – box 4.2 , and set OFF - field 4.3 . Also, which phones would be called (CLIP notification) on input activation – box 4.4 . Shown phones - field 4.1 are for example purposes only. Phone numbers are input in window "Phones->Outputs".

5. „Phones->Outputs”.
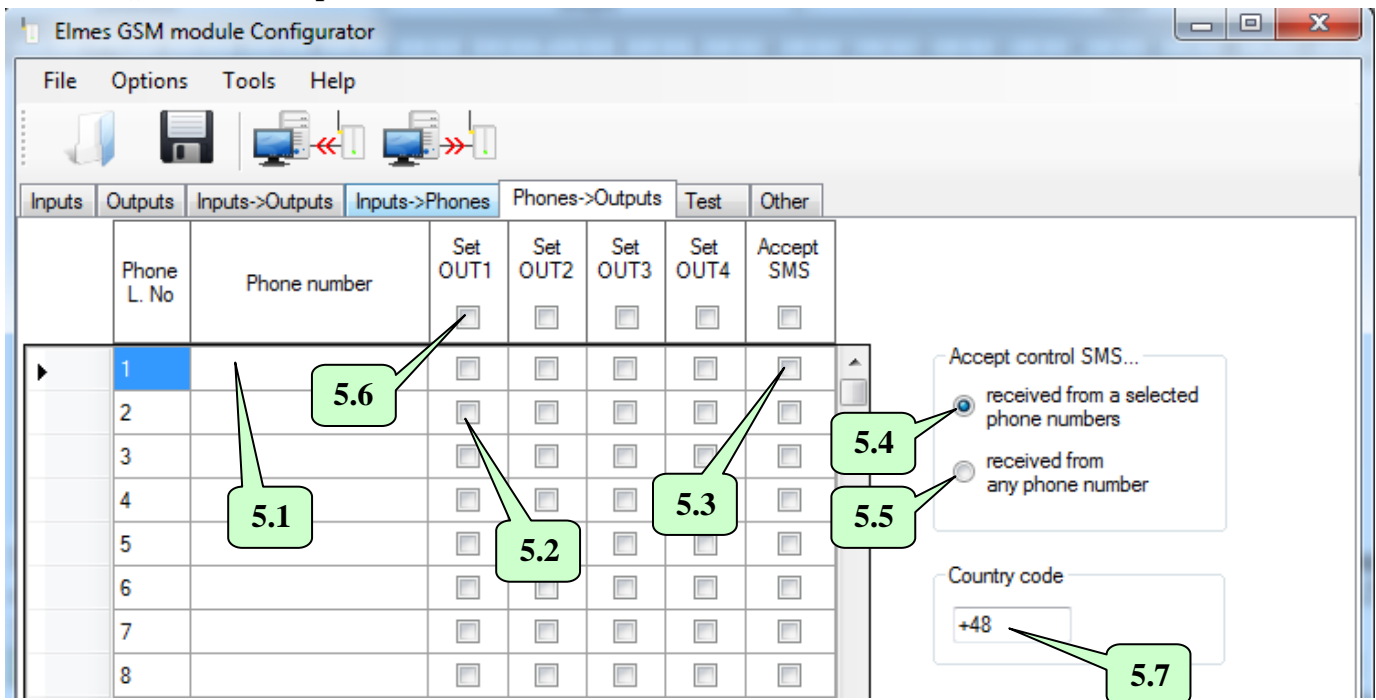
This window is designed to input phone numbers 5.1 that would operate with GSM2000. The list may contain up to 2048 phone numbers however, only the first 6 phones are entitled full functionality: can receive SMS and CLIP notifications on input violation (monitoring function) as well as can control module's outputs with SMS and CLIP commands. The remaining phones (7...2048) can be used to control module outputs only.

Additionally, phones numbered 1 up to 99 may remotely, by the use of SMS, add or delete phones in the list – see description of field 7.11 in window "Other Options".

Boxes 5.2 (4 for each phone) define which outputs are activated on call from respective phone number. Outputs are activated for programmed time only (bistable (on/off) mode is unavailable), even it is defined so in window "Outputs"

If outputs are to be activated by SMS commands from any phone, box 5.5 should be checked. If outputs are to be activated by phones listed in the module only, box 5.4 should be checked. Boxes 5.3 are used for selecting phone numbers from which SMS commands are accepted.

Boxes **5.6** allow set on/off selected function to all phones on the list.

5.7 is country code input box of module installation. If country code is not provided, CLIP remote control function (control by calling the module) may not be available (depending on local GSM operator rules).

6. „Test".
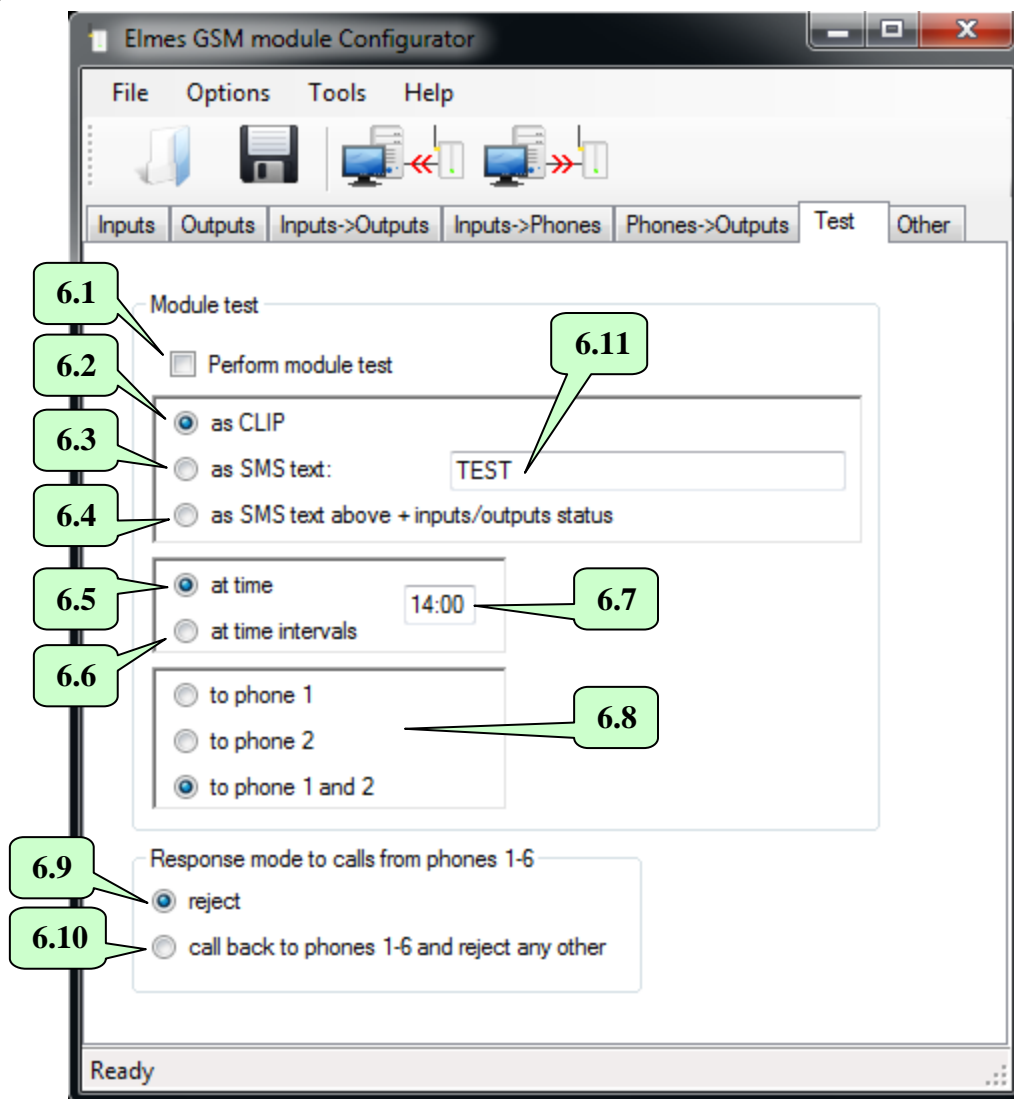
Periodical module's communication test will be performed if box **6.1** is checked. The test will be made by CLIP calls if button **6.2** is checked or, with SMS text specified in field **6.11**, if button **6.3** is checked or, with SMS text specified in field **6.11** and inputs/outputs status, if **6.4** is selected. The test will be made to the first, the second or to both phone numbers, depending on selection made in field **6.8**.

By checking field **6.5** the test would be performed once daily, at time specified in field **6.7**. In that case, module's real time clock should be set first either in GSM2 Configurator software by clicking field **8.6** in window "Tools->Diagnostics", or remotely by sending SMS with text "password TIME HH:MM:SS" or, "password TIME HH:MM" with seconds omitted. Example: "abcd TIME 12:30:00" sets the real time clock to 12:30, where "abcd" stands for password and must read exactly as input in field **7.4**. IMPORTANT! Time setting SMS must include a valid password regardless of setting in field **7.1**.

By checking button **6.6** the test would be performed periodically, after passing pre-set in field **6.7** time interval, e.g., 12 hours.

In that case, time to next test should be set in field **8.4** and button **8.6** checked in window "Tools-Diagnostics". Periodical test can be forced to perform at any time by resetting test time counter, e.g., by sending SMS with "password RESTART" where password is defined in field **7.4**. Within a minute the test will be performed and next test will be made after pre-set time interval, e.g., after 12 hours. IMPORTANT! Time setting SMS must include a valid password regardless of setting in box **7.1**.

NOTICE! Disconnecting or switching off power supply results in module's clock and time to next test counter reset. In that case, SMS text message should be sent to the module setting the clock and SMS with test time command, if function **6.5** is checked or, send SMS resetting time count to next test, if function **6.6** is checked.

Module test can also be done at any time by calling module from any of its listed phones. The call would be rejected and, if option **6.10** is checked, a return call will be made. If option **6.9** is checked, then the module would only reject the call without making a return call, similarly as in the case of all other phones.

In addition, GSM2000 module can be tested by SMS with "STATUS" text. In response we receive inputs/outputs status SMS. Format of this SMS is defined in boxes **7.14** and **7.15**.

7. „Other Options".
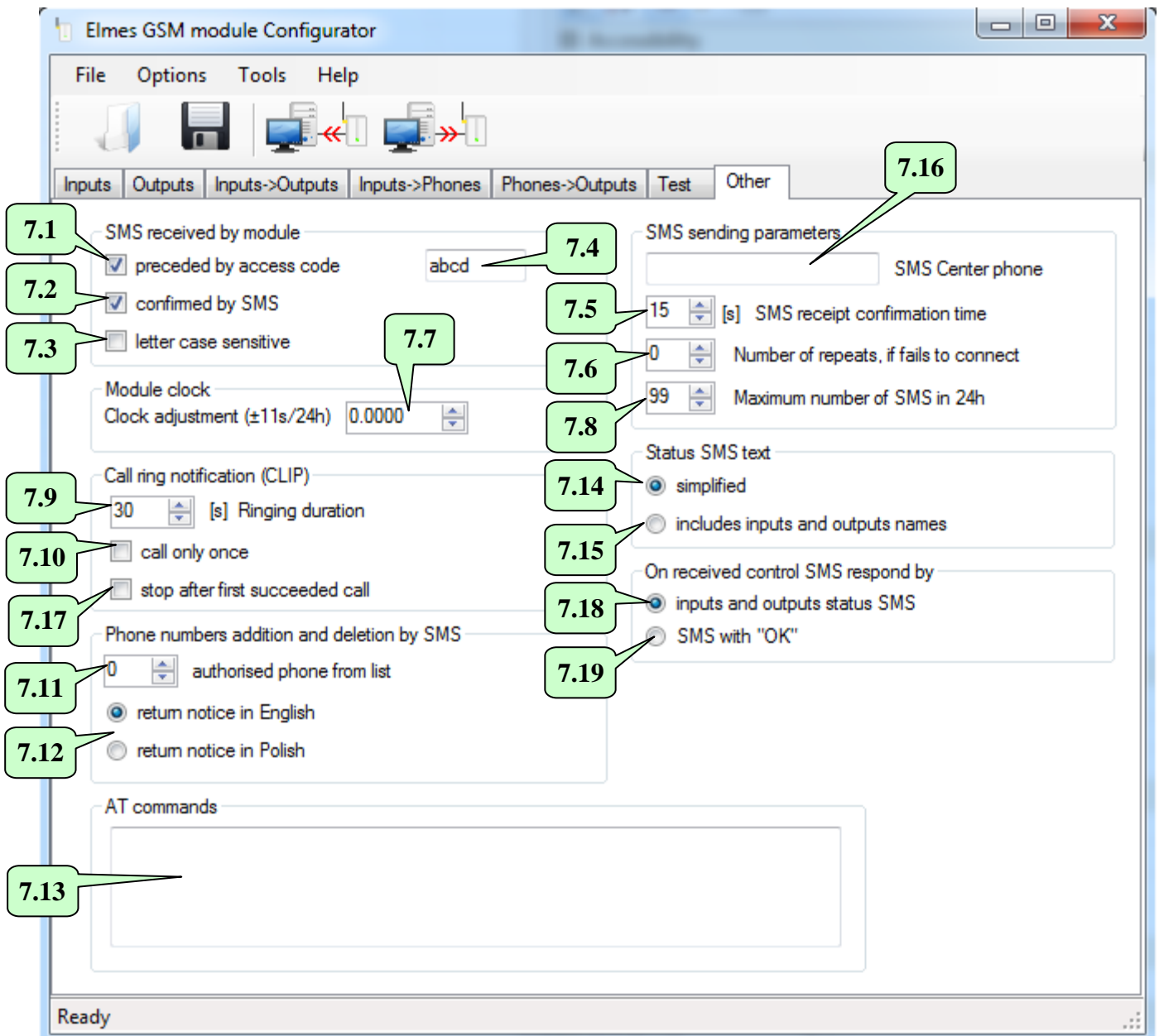
Check boxes **7.1** , **7.2** , **7.3** , **7.4** are designed to control the way module's outputs are operated by means of SMS commands and are described in detail in window "Outputs" (pt. 2).

Fields **7.5** , **7.6** and **7.16** were used in old firmware versions of the module. Since ver. 2.20 these fields are not used.

Field **7.7** allows correction of real time clock in the module. If the clock is fast then the value in the field should be decreased. If the clock is slow, the value should be increased. The adjustment allows -11 up to +11 seconds correction per day.

Field **7.8** allows sent SMS notifications limitation to maximum 200 a day (24h). This function protects against SMS cost increase in case of failure. If 0 value is input, the limitation is off.

Final field **7.9** defines how long the module would execute CLIP calls on input violation. After the pre-set time has passed, calls cease.

If box **7.10** is not checked, it means that in CLIP notification the module awaits call rejection. If, during the call, call rejection is not made, module disconnects and repeats calls twice. If **7.10** is checked, call is made only once even the call is not rejected. That does not refer to a control CLIP made always only once.

If option 7.17 is checked, first succeeded CLIP notification to any phone number (recipient rejected the call) stops the module from sending notifications to other phone numbers.

The meaning of field 7.11 depends on the firmware version installed in the module. In recent versions (>=2.40) the field determines number of administrative phones (maximum 99, counted from 1). If, e.g., number is set to 10, then the phones with list record number 1 to 10 in section "Phones->Outputs" will became administrative phones authorized to remotely (by SMS command) adding or removing phones in the list, while phones 11 up to 2048 will remain as common ones. SMS command used for phone list edition is as shown in the following examples:

"ADD +48123456789" with phone number inclusive of country code prefix number (+48) – adds this sample phone number to the first empty position of common phones, starting from 11 in the example.

"ADD-ADM +48123456789" adds this sample phone number to the first empty position of administrative phones, in the range of 1 up to 10 this example.

"DEL +48123456789" browses the whole list of phone numbers from 1 up to 2048 and deletes this sample phone number in the list. Whether the deleted phone number was a common type or administrative type will be notified by the module in return.

IMPORTANT: Only administrative phone type may add or delete other phones in the list. In addition, it must have option box 5.3 set on ("Accept SMS").

In older versions of module's firmware (<2.40) field 7.11 defines phone record number (in 1 to 255 range) of a phone with authorized administrative functions.

NOTE: The meaning of "0" put in the field 7.11 is that remote edition of phone list is set to off.

One "ADD' or "DEL" command may add or delete many phones in the phone list. In that case, different phone numbers must be space separated. Total number of characters in such SMS command cannot exceed 110 in 7-bit coding or, 50 characters in Unicode.

IMPORTANT! SMS command used to add a new phone to the module phone list can only add a phone number but cannot define output/s it may control by CLIP (5.2) nor whether the module can accept SMS commands coming from it (5.3). Therefore, these options should be earlier preselected using GSM Configurator software.

Box 7.12 is used for language selection the module sends return responses to SMS adding and deleting phones. It can be either Polish or English. The return response contains also information on number of available free positions on phone list.

Selection buttons 7.14 and 7.15 are used to define status SMS pattern informing of module's inputs/outputs state. If 7.14 is selected information on inputs/outputs state is send in simplified form. As an example, if module's input 1 and output 2 are set on, status SMS will read: "IN1..4=1000, OUT1..4=0100"

If option 7.15 is selected, status SMS will contain names of inputs/outputs taken from their description fields. As an example, if one of outputs is named G2 and it will be set on then status SMS will include "G2" name.

Also, if in field 1.2 we describe SMS notification content on violation of input 1 as, for example, "TEMP. HIGH" and in field 1.3 describe input 1 violation cease as "TEMP. OK" then status SMS will read "TEMP. HIGH" on input violated and "TEMP. OK" on input not violated.

Example below shows sample of status SMS content (input 1 violated, inputs 2, 3 and 4 not used, outputs 1 and 3 set on and outputs 2 and 4 off):

"TEMP. HIGH, , , ,OUT1, ,OUT3,"

The state of module's inputs and outputs is always returned on SMS with "STATUS" request. Instead, module's response to outputs control SMS, or clock set SMS, are inputs and outputs status SMS, if selection 7.18 is checked, or just „OK", if 7.19 is checked.

The content of periodically send module test SMS depends on settings made in options 6.3 and 6.4.

NOTICE 1: Long names should not be used as SMS longer than 160 characters will be cut short.

Field 7.13 (recommended for experienced users only).

This field is dedicated for inserting AT commands that will be send to GSM radio module at every restart of the device (e.g., after power on). One of such commands is module's limitation to log on to either 2G or 4G networks (applies to GSM2000LTE modules only. As default, the module selects best available network). Full description of all available commands may be found in specification documents of the used integrated GSM radio module.

8. Event Memory window.
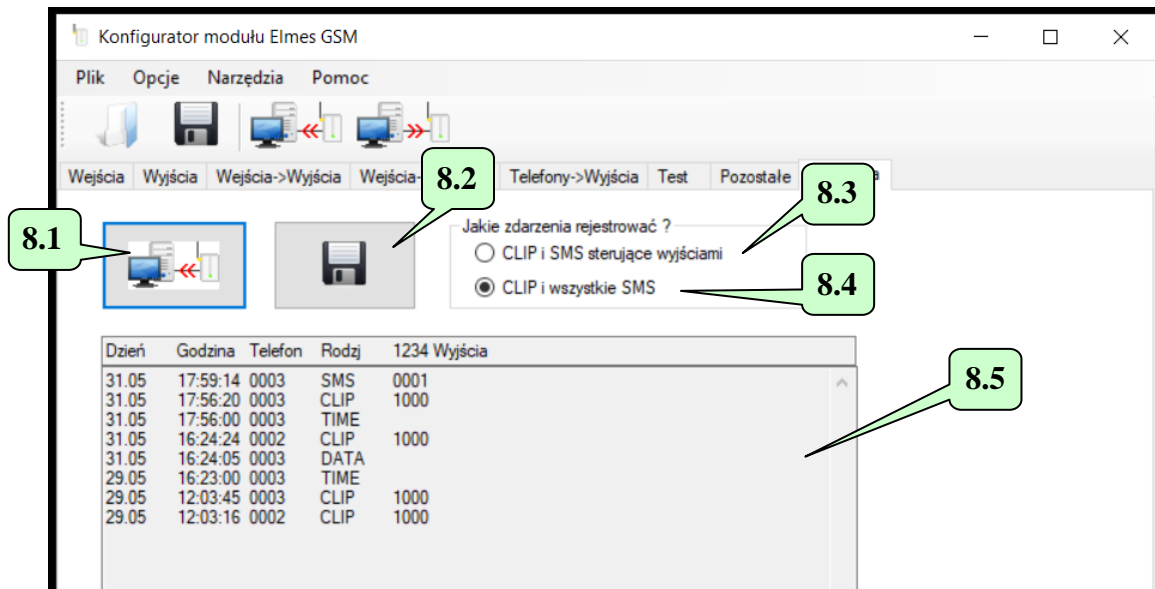
The GSM2000 module features memory capacity of up to 1790 events. When full, new events are saved replacing the oldest. User can decide what events should be recorded: received CLIP-s and SMS-s controlling module's outputs - **8.3**, or also SMS-s editing date and time in the module as well as adding or deleting phones in the phone list - **8.4**.

Pressing button field **8.1** displays event memory table **8.5** in the order of: the day and month of the event followed by the time and record number of the phone referenced, type of event and what outputs were set on (e.g., "1000" meaning output 1).

Displayed events can be recorded to a text file and saved to PC disk pressing button **8.2**.

Proper operation of event memory requires correct date and time. These can be set by pressing button **9.6** in "Diagnostics" window, or remotely by sending respective SMS command to the module. Command "DATE" sets required date, e.g., "abcd DATA 30:05:24" sets date to 30th May 2024, where "abcd" is the password from field **7.4** in "Other Options" window.

To set required time, "TIME" command is used. Example of such command is described in pt. 6 (window "TEST"). Regardless of setting in **7.1** SMS commands must commence with password.

9. „Diagnostics".
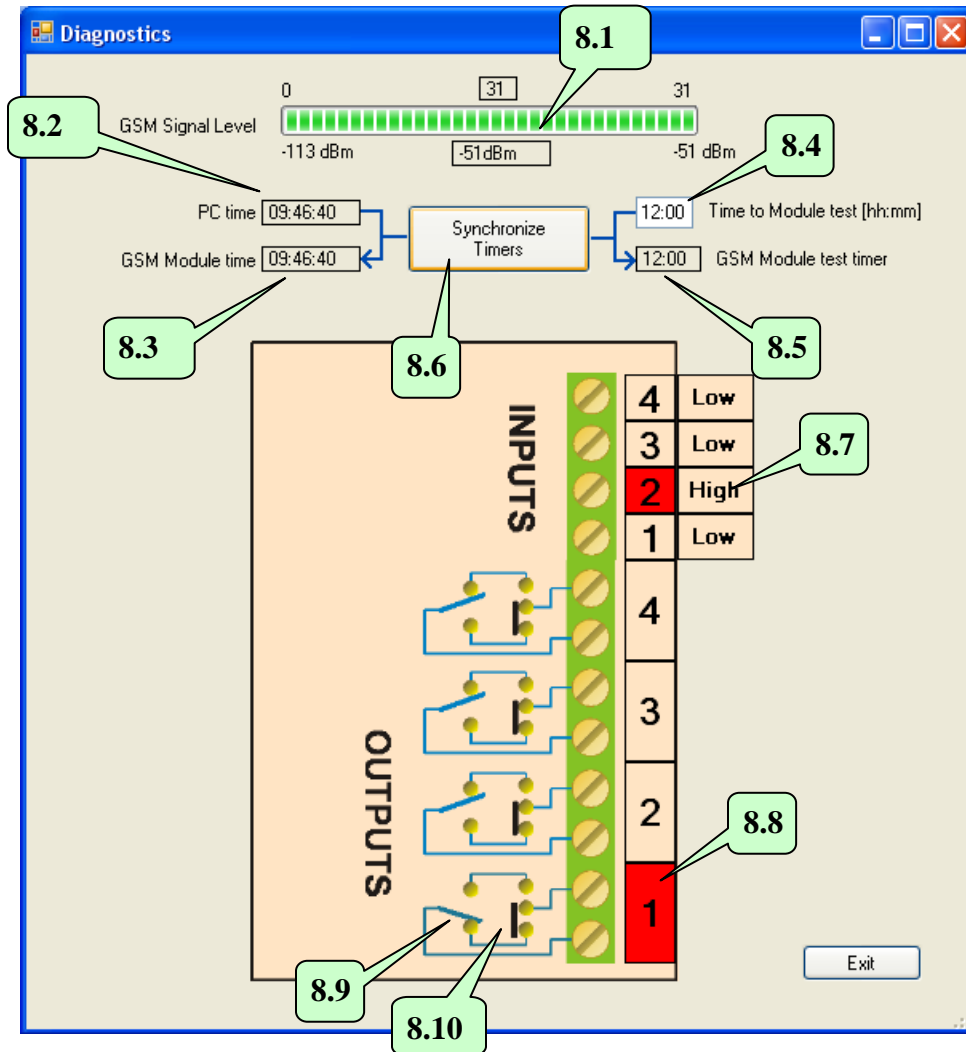
Window "Diagnostics" is available in menu "Tools". Before entering the window, it should be made sure that the module is USB cable connected to computer.

GSM signal bar line 8.1 displays quality level of communication of the module with GSM base station in physical units (from -113 up to -51dBm, where -51dBm represent very good level while -113dBm very poor level. Displayed number of bars (0-31) is symbolic representation of signal level only.

Fields from 8.2 to 8.6 are used in module time and test synchronization and were described in window "Test" – pt. 6. Just to remind that clicking button 8.6 clock time of the module is synchronized with clock of computer and time to next test from field 8.4 is send to module's counter.

Whether test would be performed at specified time daily or, after specified time interval and its set timing, it is defined in window "Test".

It should be noted that field 8.5 shows time to next test counter in the module and decreases every minute if 6.6 is checked.

Field 8.3 displays current clock time in the module.

Window diagram shows selected inputs activation signal level (High or Low) and whether inputs are currently activated (colour red) – as seen in field 8.7.

The diagram presents also outputs state of the module. For example, 8.9 shows relay contacts state of output 1. The output is currently activated as shown by red colour in field 8.8. Whether output should be opened (NO) or closed (NC) at standby is jumper selected 8.10 on module's board.

NOTICE! Diagram shows jumper state as delivered by manufactured – not their actual state.
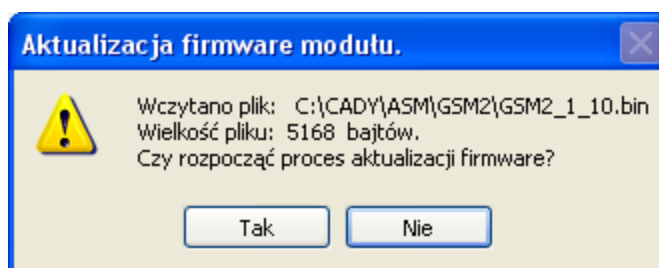
10. Firmware update.

Firmware update is done in "Tools-Firmware Update" window menu.

First step is to download new firmware file from the manufacturer's site - www.elmes.pl and save it to PC disk.
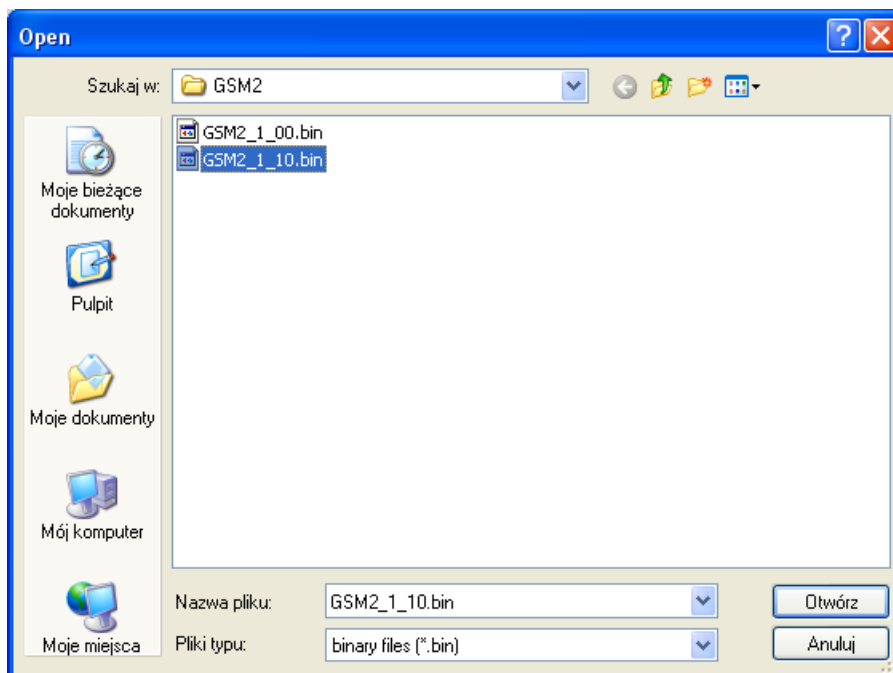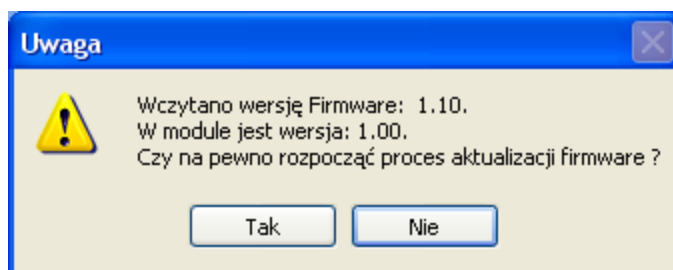
Next, the Configurator software asks if software update can start.

(File Loaded: File Size: Start Firmware Update?)

By clicking "Yes" the software will display firmware version loaded and what version is currently installed in the module. If loaded version is older or the same as currently in the module update is not required and update process can be discontinued.

(Firmware Loaded: Current Firmware in the Module: Sure to Firmware Update?)

If selected "Yes" the update procedure will start.
NOTICE! If, while in the firmware updating procedure, power supply sets off, the module LED would light steady on power return. The entire firmware update procedure should then be repeated.

FAQ – what to do if... ?

a. *The Module does not send SMS?*
    Answer: the GSM network operator SMS service centre phone number is either missing or has been input improperly. The problem does not apply to firmware version >=2.20 in which SMS service centre number is not used.

b. *The Module hangs on if +V of power supply is connected to any of its IN1..4 control inputs?*
    Answer: the reason for that the module's input voltage higher than +24V. To solve the problem power supply with lower voltage output should be used, or reduction of the module's voltage supply to acceptable level is required by the use of experimentally selected resistor within in range of 4k7...27kOhm.

The Module does not initialize (LED flashes fast in 1s rate then sets off for few seconds and starts flashing cycle again)?

Answer 1: check for proper SIM card contacting in the SIM socket. If necessary, clean all contacts with spirit cleaner.

Answer 2: SIM card PIN code is other than required 1234 or, PIN-less SIM card is used in module with firmware version earlier than 2.11.

Answer 3: power supply unit has insufficient current draw rating. Though average current draw of the module at outputs set off is less than 5 mA, it can be as high as 1 Amperes in short transmission pulses leading to the module's reset if insufficient current rating power supply is used.

c. *On an attempt of sending to or receiving data from the module while in communication mode with PC „Out of Time" message appears?*

Answer 1: improper COM port is selected in Options->Settings menu. The COM number should match that what appears when USB cable is plugged to PC and what disappears when unplugged.

Answer 2: the USB/RS interface drivers are either not installed at all or installation is faulty. Drivers are available for download at www.elmes.pl . After installation a new COM port should appear. Incorrect driver folder name given at installation is a frequent mistake. Proper driver folder name for modules with mini-USB socket currently manufactured is „VER 2A".

If driver installation has failed, it should be uninstalled with the cable still plugged, then unplug the cable, plug to PC again and follow cable installation steps described at top of this manual.

Answer 3: check module's connections with PC and if power supply is on.

Answer 4: if none of the above solves the problem, follow steps as below:
a. unplug and plug USB cable to the PC or,
b. switch off module's power supply and unplug USB cable from the PC, then switch on module's power supply and plug the USB cable to the PC.
c. plug in USB cable to another USB socket in the PC.

d. *The „GSM2 Configurator" software does not start up?*

Answer: missing Windows® component: „Microsoft.NET Framework 4.8". It can be downloaded from Microsoft® site and installed on PC.

e. *On an attempt of sending or receiving data from GSM2000 module „Access to port COM-x is denied" message appears?*

Answer: this error may be due to other software application using this port. For example, "Sony Ericsson PC Suite" periodically tests COM ports for a phone presence and, in consequence, block the port access. To solve the problem the following steps should be tried:
a. wait few seconds and try data exchange again,
b. disable software application blocking the port.

f. *On an attempt of sending or receiving data from GSM2000 module "The port COM3 does not exist" notice appears?*

Answer: after selecting proper COM3 port in menu Options, the USB cable was PC unplugged.

g. *After sending SMS command to GSM2000 module, the module responds with "OK" but the outputs are not set?*

Answer 1: the reason for this is that the password is the same as name of one of the outputs. Even if the function "SMS command must begin with password" is set off, any output name cannot be the same as password.

h. *At start up the "GSM Configurator" software displays error: " Configuration procedure cannot be initialized"*
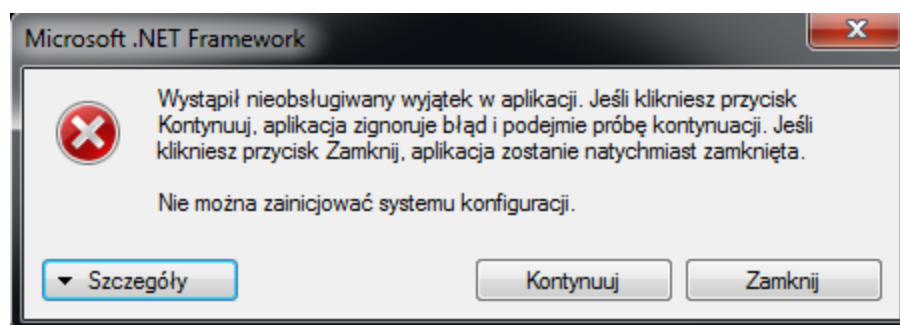
(Unexpected Error Occurred. Select Continue to Ignore Error. Select Close to Discontinue. Configuration System Cannot Initialize)

Answer: reason for the error may be improperly closed at earlier initialization file "user.config" in the application data folder: c:\Users\name_user\AppData\Local\Elmes_Elektronik\...
Solution to the problem may be the change of the file name or deleting the file. The file will be created again on next initialization of the application.

h. *On an attempt of sending or receiving data from PC to the GSM2000 module „Incorrect Parameter" message appears?*

Answer: the reason may be not up to date Window XP system. The problem may occur only with RS-USB converter with MCP2200 chip and pcb initials "GSM2T-USB". To solve the problem two Windows XP update patches (KB918365 and KB935892) should be downloaded from Microsoft© Windows site and installed in the PC. Alternatively, installing "Service Pack 3" for Windows XP would also help as it includes both update patches.

IF problem is of other nature from what is described above, please read description of module's subsequent firmware updates and install latest firmware version, if necessary. If that does not solve the problem, please contact Elmes Electronic Service at service@elmes.pl .

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www.elmes.pl email: elmes@elmes.pl