

AJAX GPRS Communication Module



Installation, Programming and Operation Manual

GUARANTEE

During the guarantee period the manufacturer shall, at its sole discretion, replace or repair any defective product when it is returned to the factory. All parts replaced and/or repaired shall be covered for the remainder of the original guarantee, or for ninety (90) days, whichever period is longer. The original purchaser shall immediately send manufacturer a written notice of the defective parts or workmanship, which written notice must in all cases be received prior to expiry of the guarantee.

INTERNATIONAL GUARANTEE

Foreign customers shall enjoy the same guarantee rights as those enjoyed by any customer in Bulgaria, except that manufacturer shall not be liable for any related customs duties, taxes or VAT, which may be payable.

GUARANTEE PROCEDURE

This guarantee will be granted when the appliance in question is returned. The manufacturer shall accept no product whatsoever, of which no prior notice has been received.

CONDITIONS FOR WAIVING THE GUARANTEE

This guarantee shall apply to defects in products resulting only from improper materials or workmanship, related to its normal use. It shall not cover:

- § Damages resulting from improper transportation and handling;
- § Damages caused by natural calamities, such as fire, floods, storms, earthquakes or lightning;
- § Damages caused by incorrect voltage, accidental breakage or water; beyond the control of the manufacturer;
- § Damages caused by unauthorized system incorporation, changes, modifications or surrounding objects;
- § Damages caused by peripheral appliances unless such peripheral appliances have been supplied by the manufacturer;
- § Defects caused by inappropriate surrounding of installed products;
- § Damages caused by failure to use the product for its normal purpose;
- § Damages caused by improper maintenance;
- § Damages resulting from any other cause, bad maintenance or product misuse.

In the case of a reasonable number of unsuccessful attempts to repair the product, covered by this guarantee, the manufacturer's liability shall be limited to the replacement of the product as the sole compensation for breach of the guarantee. Under no circumstances shall the manufacturer be liable for any special, accidental or consequential damages, on the grounds of breach of guarantee, breach of agreement, negligence, or any other legal notion.

WAIVER

This Guarantee shall contain the entire guarantee and shall be prevailing over any and all other guarantees, explicit or implicit (including any implicit guarantees on behalf of the dealer, or adaptability to specific purposes), and over any other responsibilities or liabilities on behalf of the manufacturer. The manufacturer does neither agree, nor empower, any person, acting on his own behalf, to modify or alter this Guarantee, nor to replace it with another guarantee, or another liability with regard to this product.

UNWARRANTED SERVICES

The manufacturer shall repair or replace unwarranted products, which have been returned to its factory, at its sole discretion under the conditions below. The manufacturer shall accept no products for which no prior notice has been received.

The products, which the manufacturer deems repairable, will be repaired and returned. The manufacturer has prepared a price list and those products, which can be repaired, shall be paid for every repaired appliance.

The closest equivalent product, available at the time, shall replace the products manufacturer deems unrepairable. The current market price shall be charged for every replaced product.

WARNINGS:



This manual contains information on limitations regarding product use and function and information on the limitations as to liability of the manufacturer.

The entire manual should be carefully read!



ATTENTION: Some updates of the software are possible regarding adding new information. If you have any questions contact Teletek Electronics technical support department.

This manual is subject to change without notice!

Table of Contents

PART: INSTALLATION

1. General Information	4
1.1 General Functional Characteristics	4
1.2 General Technical Features	4
2. Functional Diagram	5
3. Basic Elements	5
3.1 Contents of the Equipment	5
3.2 Components of AJAX GPRS Module	6
4. Connection Diagrams	8
4.1 Connection to CA62 and AVA alarm panels	8
4.1.1 Mounting of AJAX GPRS	8
4.1.2 Connecting to AJAX GPRS	8
4.2 Connecting to ECLIPSE panel	8
5. Initial Power-up of the modul	9
6. Reset Function	9

PART: PROGRAMMING

7. Specialized ProsTE software - General Parameters	10
7.1 Menu "1. General Settings"	12
7.2 Menu "2. Ajax Software Package"	15
7.2.1 Submenu "AJAX SP PRO"	15
7.2.2 Submenu "AJAX SP STANDARD"	16
7.3 Menu "3. Phones and Emails"	17
7.3.1 Submenu "Phones"	17
7.3.2 Submenu "Emails"	18
7.3.3 Submenu "Common Settings for Serial comm"	19
7.4 Menu "4. Inputs / Outputs"	21
7.4.1 Submenu "INPUTS/OUTPUTS"	21
7.5 Menu "5. SMS"	25
8. Recording Messages via AJAX GSM GPRS Voice Messages	26

PART: USER

9. Management of outputs	28
9.1 Clip Functionality	28
9.2 DTMF Functionality	28
9.2.1 Monitoring the output status	28
9.2.2 Changing the status of an output	28
9.2.3 Monitoring and changing the status of inputs at the same time	29
9.3 Management via SMS	

APPENDIX	30
Notes	34

PART: INSTALLATION

1. General Information

The AJAX GPRS module is a communication device for connection between intruder/fire alarm panel and user/monitoring station.

Full functionality of the module is reached when connected to CA62 and AVA alarm panels (management and configuration through serial connection RS232) and ECLIPSE panels (management and configuration through BUS 485).

The module can work with other intruder and fire alarm panels as an autonomous device through its general purpose inputs/outputs. The module can be used for building of home automation systems.

1.1 General Functional Characteristics

- 8 programmable I/O¹ - I/O1-4 switch over electric current up to 100mA, while I/O 5-8 up to 500mA;
- Recording of 22 voice messages - 16 for inputs and 6 system messages²;
- Recording of 6 SMS messages - for test, identification and current status of the panel;
- 8 telephone numbers, up to 20 symbols each - for reporting of system events;
- Status LED indication;
- Remote management by users through user interface AJAX SP Professional;
- Energy-independent memory for storage of programmed data;
- Input for monitoring of AC: 9-35 VAC (if power supply is missing for more than 30 minutes, LED indication of the module is activated);
- Algorithm for monitoring the main power supply of the module with possibility for sending messages to user or monitoring station;
- Communication interfaces: GPRS, GSM SMS, GSM Voice and USB (transport protocols: UDP, TCP, DHCP and SMTP over PPP; application protocols: SIA-UDP, SIA-TCP, protocols for working with AXAJ Server PRO over TCP);

¹ I/O - General purpose Input/Output - configured by means ProsTE software (item 7.4)

² Via ProsTE software

1.2 General Technical Characteristics

- Main power supply - 9-30VDC, reversed polarity and overload protection;
- Resettable fuses;
- Current consumption:
 - Normal operation mode (standby) - 50mA
 - Communication (GSM) - up to 1.4A
- Time for filtration of signals incoming at I/O - 0.5sec;
- Mini USB input for direct PC connection (CDC class - virtual serial port);
- Working frequencies - 900/1800MHz;
- SIM interface - build-in;
- Antenna connector - SMA 50Ohm, internal mounted;
- Serial connector for connection to AVA and CA62 panels;
- Serial connector 485 interface for connecting of ECLIPSE panels;
- Reset jumper for restoring default settings.

2. Functional Diagram

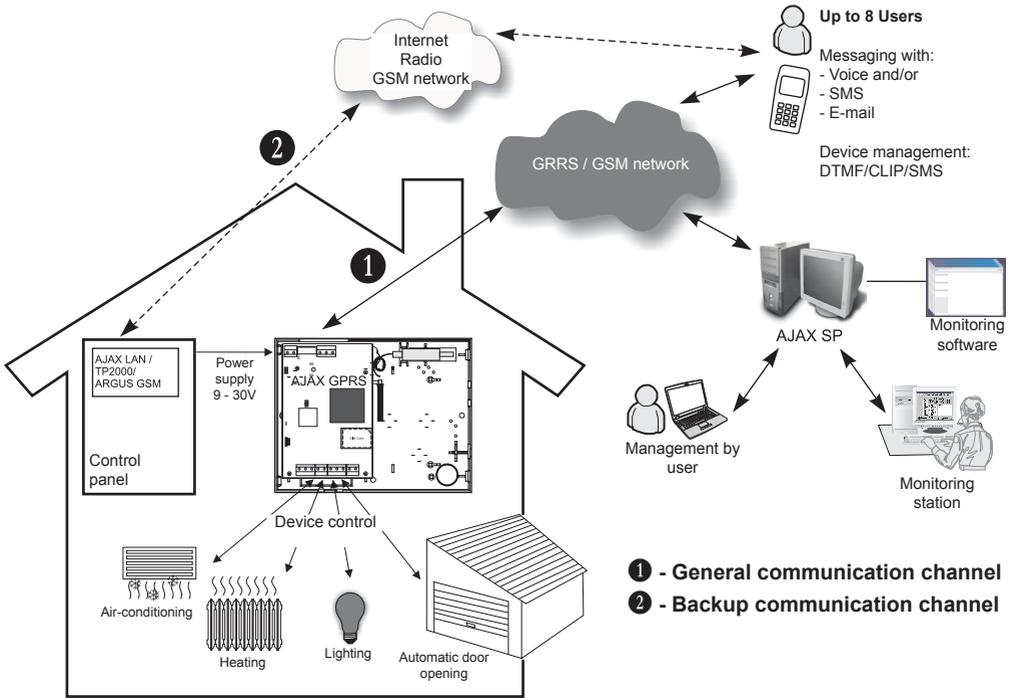
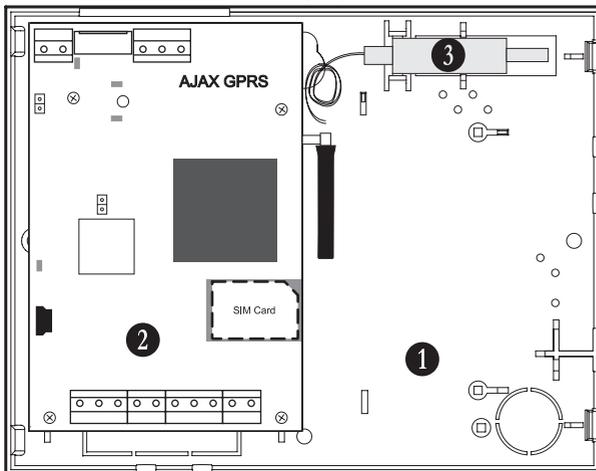


Figure 1.

3. Basic Elements

3.1 Contents of the Equipment



1. Small universal plastic box - bottom and cover with mounted light pipe for indication.
2. AJAX GPRS module - see the elements described in item 3.2.
3. Tamper switch for self protection of the box.

Figure 2.

Attention: Install the device away from electromagnetic and radio sources that can cause disruption to the device!

3.2 Components of AJAX GPRS Module

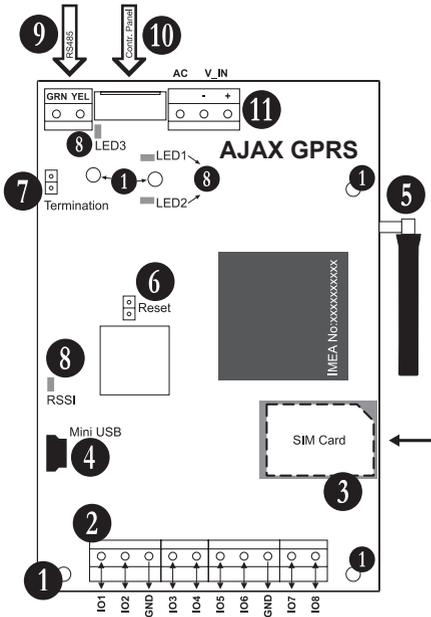


Figure 3.

1 Mounting holes

2 Terminals I/O:

- IO 1-4 - current up to 100mA;
- IO 5-8 - current up to 500mA;
- GND - common earth.

3 SIM Interface - Slot for SIM card. Follow the schematic for placing the SIM card.

Attention: Disable the PIN code verification before you insert the card in the slot!

4 Mini USB Interface - for direct PC connection.

5 Antenna - fixed to inner connector, SMA 50Ω.

6 Reset jumper - see the description in item 6.

7 "Termination" jumper - Used only with ECLIPSE panels. The jumper is set on when the module is the last (furthest from the control panel) device connected to the serial system BUS.

8 LED indication:

• **RSSI (green)** - Shows the signal strength - the installer counts the number of flashes over 7 seconds interval. Indication is visible only when the cover is removed and has the following meaning:

Number of flashes	Interval	Signal strength
☀	7 sec.	No signal
☀☀		Low
☀☀☀		Good
☀☀☀☀		Excellent

• **LED1 (yellow)** - Shows a technical problem in the power supply. Indication is visible with mounted cover and has the following meaning:

LED1	Description
Lights on	No AC power supply.
Flashes	Discharged battery of the backup power supply. <i>This indication has a priority in visualization.</i>

• **LED2 (red-green)** - Shows the current status of the module. This indication is visible with mounted cover of the box and has the following meaning:

LED2	Color	Description
Lights on	Red	<ul style="list-style-type: none"> • The module is in communication mode - events transmitting over GSM / GPRS channel; • The module is in programming mode - data exchange (reading/writing) with ProsTE software.
Flashes	Red	<ul style="list-style-type: none"> • Trouble with the SIM card: <ol style="list-style-type: none"> 1. The card is missing; 2. The card could not register to the available GSM network; 3. Active PIN code for verification. • No signal.
	Orange	The module transmits events over a Backup communication channel/ SMS, or via I/O terminals with connected RF transmitter in the system.
	Green	The module is in normal operation mode.

• **LED3 (red-green)** - Shows the status of communication by serial BUS (used when connecting ECLIPSE panels). Indication is visible only when the cover is removed and has the following meaning:

LED3	Color	Description
Lights on	Orange	Short circuit in the serial connection.
Flashes	Red	Low level of the main power supply of the control panel.
	Orange	Reversed polarity of the YEL and GRN lines of the serial connection with the ECLIPSE panel.
	Green	Communication between the module and the control panel.

⑨ **Terminal RS485 interface** for connection to ECLIPSE panels. The corresponding outputs of the panel YEL and GRN are connected to the terminal.

⑩ **Serial interface** for management and configuration of CA62 and AVA panels.

⑪ **Terminals for main power supply and AC monitoring:**

• $\pm V_IN$ - Main power supply 9-30VDC;

• AC - Terminal for monitoring the level of alternating current (AC). When the power supply is missing for more than 30 minutes, indication for a problem is activated - LED1 lights on constantly. It is possible for the module to send alarm messages to user or monitoring station when a problem with the power supply occurs.

NOTE: Elements ⑦, ⑧ and LED3 are applicable only with ECLIPCE panels!

4. Connection Diagrams

4.1. Connection to CA62 and AVA alarm panels

4.1.1 Mounting of AJAX GPRS

When connecting to CA62 and AVA alarm panels the PCB of the GPRS module needs to be mounted in the box of the control panel.

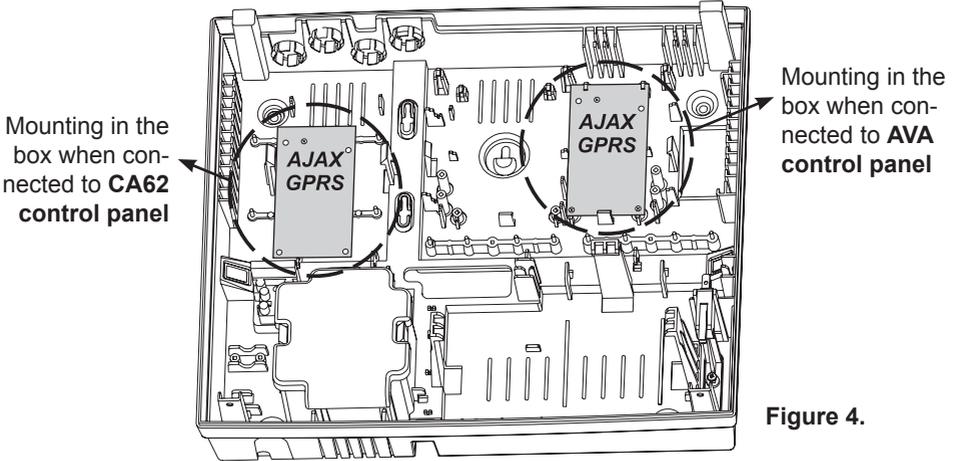


Figure 4.

4.1.2 Connecting of AJAX GPRS

For connection to the control panel, a flexible interface cable included in the pack is used - see the schematics for connection on Fig. 5a and 5b. The module receives power supply directly from the panel.

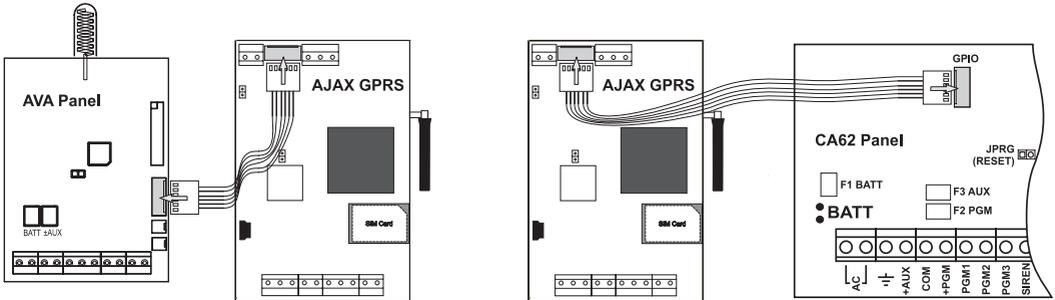


Figure 5.

4.2. Connecting to ECLIPSE panel

Switch off the power supply of the control panel and AJAX GPRS module; connect interface connector YEL of the panel to interface connector YEL of the module and connector GRN of the panel to connector GRN of the module. To terminal V_IN attach power supply from an auxiliary source or from \pm AUX of the main panel.

5. Initial Power-up of the Module

- ☞ Place the SIM card in a mobile phone **and disable the option for PIN code verification.**
- ☞ Check the power supply of the GPRS module - power supply from the control panel **MUST BE SWITCHED OFF.**
- ☞ Place the SIM card in the slot (position ③, item 3.2).

ATTENTION: The SIM card is always placed and removed only WHEN THE POWER SUPPLY IS OFF!

- ☞ Power on the module:
 - For ECLIPCE panels - wires YEL and GRN to RS485 terminal interface and V_IN terminal (positions ⑨ and ⑩, item 3.2).
 - For CA62 and AVA panels - serial BUS (position ⑩, item 3.2).
 - Other panels - power supply 9-30VDC to V_IN terminal (position ⑩, item 3.2).
- ☞ Wait for the registration of the GPRS module to the existing GSM/GPRS service to be completed - for 60 seconds LED2 lights on in red, while RSSI blinks once.
- ☞ Check the strength of the signal - RSSI should blink 3-4 times per 7 seconds. If the signal is not good enough, move the GPRS module until you find a place with good GSM/GPRS coverage, to ensure reliable work of the device.
- ☞ The module is in normal operation mode - the LED2 blinks in green.

6. Reset Function

This function allows the installer to restore the default factory settings.

To reset the GPRS module:

- ☞ Power off the AJAX GPRS module.
- ☞ Set a jumper to RESET terminal (position ⑥, item 3.2).
- ☞ Power on the module - LED2 lights on in red.
- ☞ Remove the jumper from the RESET terminal.
- ☞ The module enters in normal operation mode - the LED2 blinks in green.

PART: PROGRAMMING

7. Specialized ProsTE Software

ProsTE is a specialized software for programming of panels and modules produced by Teletek Electronics JSC.

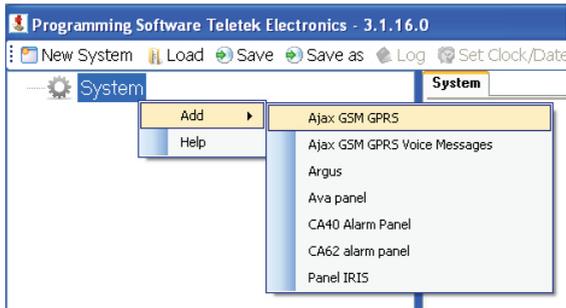
There are two programming approaches:

1. (**Recommended**) Reading the current configuration of the GPRS module, make changes to the parameters and write the new configuration to the GPRS module.
 2. Program all parameters in advance and directly write them to the GPRS module.
- Using the programme, the installer can save different parameter configurations as TDF fails (Teletek Data File) and store them in a database.

Programming of AJAX GPRS module via specialized software ProsTE

Connect the AJAX GPRS module to a PC communication port with standard USB-MiniUSB cable. The module needs to be in normal working mode - LED2 blinks in green. Start the programme by clicking on "ProgrammingSoftwareTeletekElectronics.Desktop.exe".

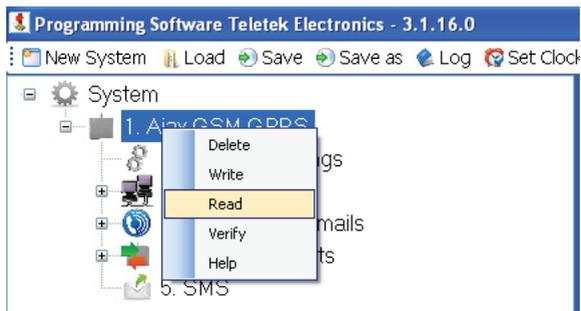
Choose by clicking the right button of the mouse: *System* → *Add* → *Ajax GSM GPRS*.



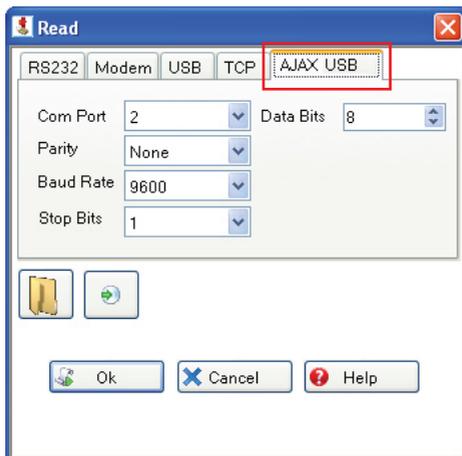
The parameters for programming AJAX GPRS module will load in the tree structure on the left. Click on the icon  to see all submenus of the programme:



Choose menu **Ajax GSM GPRS** and click on it with the right button. Choose option “Read”:



You can see the “Read” menu on the screen. Choose tab “AJAX USB”:



In the field "Com Port" choose the number of the PC communication port, to which the AJAX GPRS module is connected.

Do not change any other parameters in this window!

Confirm with OK button.

A new window for entering a password is shown. The default password is “1234”.



Confirm by clicking OK button - you need to wait while connection between the module and the software is established.

7.1 Menu “General Settings”

From the tree structure on the left side choose:  1. General Settings

On the right side of the screen you can programme the following parameters:

General Settings	
Net Settings APN	<input type="text"/>
Net Settings User Name	<input type="text"/>
Net Settings Password	<input type="text"/>
Account Number	<input type="text"/>
Poll Period (minutes)	20 <input type="button" value="↑"/> <input type="button" value="↓"/>
Poll Period (seconds)	0 <input type="button" value="↑"/> <input type="button" value="↓"/>
Ajax SP Acknowledge Time Out (seconds)	10 <input type="button" value="↑"/> <input type="button" value="↓"/>
Ajax SP Acknowledge Retries	5 <input type="button" value="↑"/> <input type="button" value="↓"/>
Time Stamp	<input type="checkbox"/>
Control Panel Type	Stand Alone / None <input type="button" value="↓"/>
User Password and PC ID	1234 <input type="text"/>
Low DC Power Supply .x10 mV	1140 <input type="button" value="↑"/> <input type="button" value="↓"/>
Monthly Test Message Date	1 <input type="button" value="↑"/> <input type="button" value="↓"/>
Monthly Test Message Hour	1 <input type="button" value="↑"/> <input type="button" value="↓"/>
Monthly Test Message Minutes	1 <input type="button" value="↑"/> <input type="button" value="↓"/>
RF Back-UP Change Time (mS)	500 <input type="button" value="↑"/> <input type="button" value="↓"/>
Back-UP SMS Reciever Phone Number	<input type="text"/>
Software Version	<input type="text"/>

- Net Settings APN (Access Point Name)
- Net Settings User Name
- Net Settings Password

In the first three fields specific GPRS settings are entered which are different for the different mobile providers.

Ask you mobile service provider if there is a specific information you have to fill in!

ATTENTION: IF fields “Net Settings” are not filled in and are left empty, AJAX GPRS will work ONLY as a GSM module!

• **Account Number** - Enter a number that corresponds to the site, where the module is installed. It is a unique number (*up to 10 symbols - digits from 0 to 9, letters from 'a' to 'f' or a combination of the two*), which is used to represent the module at the monitoring station, when E-mail or SMS back-up messages are sent.

• **Poll Period (minutes)** - Enter a time interval in minutes (0-225), in which polling messages will be sent*.

• **Poll Period (seconds)** - Enter a time interval in seconds (0-225), in which polling messages will be sent*.

* **Polling messages** - *These are messages between the module and the AJAX SP (Standard and Professional). A period of time is set in the AJAX SP, in which a minimum of one polling message from the module must be received or a lack of connection between the two will be taught to exist. The advisable period of time to be set in AJAX SP is at least twice the time set in the module.*

IMPORTANT!

Filling the fields "Poll Period" has specifics, which depend on the different system configurations.

Configuration 1: AJAX GPRS + AVA + AJAX SP STANDARD. It is obligatory to set the "Poll Period" fields, so that messages are sent. If this is not necessary, you can leave 0 in the fields.

Configuration 2: AJAX GPRS + AVA + AJAX SP PROFESSIONAL. In this case there may be doubling of the sent test messages.

In the configuration settings of AJAX SP PROFESSIONAL there is a parameter "ImAlivePeriod" that is set to 300sec (*See Installation and Operation Manual for AJAX SP PROFESSIONAL - Configuration of parameters*). This means that during the time period, AJAX SP needs to receive a message from the module, confirming that it is working properly. This information is sent as a test message for the module's condition.

If there are settings in the fields "Poll Period", the user / monitoring station will receive a second test message from the module itself.

To avoid doubling and excessive sending of test messages **it is advisable to leave the "Poll Period" fields empty.**

Configuration 3: AJAX GPRS + CA62 + AJAX SP STANDARD. In this case there may be doubling of the sent test messages.

To avoid doubling, settings need to be entered either in "Poll Period" fields (menus for programming AJAX GPRS) or in menu "Communicator" - field "Test period" (menus for programming alarm panel CA62).

Configuration 4: AJAX GPRS + CA62 + AJAX SP PROFESSIONAL. In this case there may be doubling of the sent test messages.

It is advisable that fields "Poll Period" (menus for programming AJAX GPRS) and menu "Communicator" - field "Test period" (menus for programming alarm panel CA62) are left empty (0).

When the GPRS service is not available (in case there is temporary failure of communication, the fields "Net Settings" are not filled in or other reason) AJAX GPRS works ONLY as GSM module. In this case Polling messages will be sent as SMS if there is a telephone number in the "Back-Up SMS Receiver Phone Number" field.

- **Ajax SP Acknowledge Time Out (seconds)** - Enter a time interval in seconds (0-255) for receiving acknowledgement of the received event in the monitoring station. If there is no acknowledgement from the monitoring station, the module will send the event again.
- **Ajax SP Acknowledge Retries** - Number of retries (0-255) for sending messages when there is no acknowledgement from the monitoring station.
- **Time Stamp** - Allows synchronization between the inner clock of the module and the time in AJAX SP (STANDARD / PROFESSIONAL). To allow synchronization put a tick in the field.
- **Control Panel Type** - The control panel connected to the GPRS module is chosen from the folding menu. The following options are available:
 - *Stand Alone/None* - the module is used as a separate device
 - *AVA* - when connected to AVA
 - *CA62* - when connected to CA62
- **User Password and PC ID** - A code is entered for “remote programming”, management via the user interface of Ajax SP PROFESSIONAL and management of outputs with SMS and DTMF commands. It is a 4 digit code.

ATTENTION: When working with CA62, the code entered in “User Password and PC ID” field needs to match with the code entered at address 6901 during engineer programming, so that communication between the two devices is achieved.

- **Low DC Power Supply, x10 mV** - Enter a number (500-3000), which is the power supply threshold of the module measured in mV. When the power supply falls below this value, a message is sent to the monitoring station. It is possible for a SMS, e-mail and/or voice message to 8 users to be sent when the event occurs.



If you want the module to send message when the threshold falls below 11.5mV, 1150 is entered in the field.

- **Monthly Test Message Date** - Enter a date of the month when a test messages is sent - SMS or voice message.
- **Monthly Test Message Hour** - Enter an hour of the day when a test message is sent - SMS or voice message.
- **Monthly Test Message Minutes** - Enter minutes when a test message is sent - SMS or voice message.
- **RF Back-UP Change Time (mS)** - Enter a time interval (0-10000) in ms. It is a time filter when passing from GPRS to RF Back-UP communication.
- **Back-up SMS Receiver Phone Number** - Enter a number of the back-up SMS monitoring station (*station GSM Defender Teletek and software SureSight 3S*). This means that the communication is used only when sending of events via GPRS service fails (GPRS Primary and Back-up SIA Receiver).
- **Software Version** - The current software revision of the GPRS module. The field is not accessible for changing.

To save the changed parameters push “Apply” at the bottom of the screen.

7.2 Menu “Ajax Software Package”

7.2.1 Menu “Ajax SP PRO”

Click on icon  in front of menu "2. Ajax Software Package" and click "1. Ajax Server PRO". On the right side of the screen the following parameters for programming are available:

Ajax SP PRO	
IP Address	0 . 0 . 0 . 0
Port:	37010
System ID	
SIA Encryption Key	

- **IP Address** - Enter the IP-address of the PC, where the Ajax SP PROFESSIONAL is installed.
- **Port** - Enter number of port for communication. Communication is established via UDP and TCP/IP protocols. **The entered port number MUST be open (available) for communication!**
- **System ID** - Enter a unique name (*up to 16 symbols - digits, letters or combination*) for identification between module and user in Ajax SP PROFESSIONAL. It is possible for one user to be associated to several modules, and the opposite - several users to be associated to one module.

ATTENTION: The entered name in the field “System ID” is used when registering the module to Ajax SP PROFESSIONAL*!

The name needs to be the same in order for the module to work correctly!

- **SIA Encryption Key** - Enter password for the coding algorithm when transferring data to AJAX SP Professional. The password needs to have 32 symbols - digits "1 - 9" and letters "A - F".

ATTENTION: The password in the field “SIA Encryption Key” is used when registering the module with Ajax SP PROFESSIONAL*!

The password needs to be the same, in order for the module to work correctly!

** See also “Installation and Operation Manual Ajax SP PROFESSIONAL - Adding and revising of systems in the server data base”.*

To save the changed parameters click “Apply” button in the bottom of the screen.

7.2.2 Menu “Ajax SP STANDARD”

Click on icon  in front of menu "2. Ajax Software Package" and click "2. Ajax Server STANDARD".

On the right side of the screen the following parameters for programming are available:

Ajax SP STANDARD	
Enable Ajax SP STANDARD	<input type="checkbox"/>
Primary SIA Receiver IP Address	<input type="text" value="0 . 0 . 0 . 0"/>
Primary SIA Receiver Port:	<input type="text" value="37010"/>
Enable Back-UP SIA Receiver	<input type="checkbox"/>
Back-UP SIA Receiver IP Address	<input type="text" value="0 . 0 . 0 . 0"/>
Back-UP SIA Receiver Port:	<input type="text" value="37010"/>
Use Encryption Key	<input checked="" type="checkbox"/>
Encryption Key	<input type="text"/>

- **Enable Ajax SP Standard** - Enables transferring of events to the PC, where the main Ajax SP STANDARD is installed. To enable the transfer put a mark in the field.
- **Primary SIA Receiver IP Address** - The IP of the PC, where the main Ajax SP STANDARD is installed needs to be entered.
- **Primary SIA Receiver Port** - Enter the number of the port of the main Ajax SP STANDARD. Communication is established entirely via UDP protocol.
- **Enable Back-up Receiver** - Enables transferring of events to the PC, where the back-up Ajax SP Standard is installed . To enable the transfer put a tick in the field.
- **Back-up SIA Receiver IP Address** - The IP of the PC, where the back-up Ajax SP Standard is installed needs to be entered .
- **Back-up SIA Receiver Port** - The number of the port of the back-up Ajax SP Standard is entered. Communication is established entirely via UDP protocol.
- **Use Encryption check box** - Use of encryption key - **the box always must be selected.**
- **Encryption Key** - Enter password for the coding algorithm when transferring data via AJAX SP. The password needs to have 32 symbols - digits "1 - 9" and letters "A - F".

ATTENTION: The same password is entered when registering the module with AJAX SP STANDARD! (See also “Installation and Operation Manual Ajax SP PROFESSIONAL - Menu “Configuration”).

To save the changed parameters push “Apply” at the bottom of the screen.

7.3 Menu “Phones and E-mails”

7.3.1 Submenu “Phones”

On the right side of the screen the following parameters for programming are available:

Phones								
Maximum Redial Attempts	3							
Phone Number Priority	1	2	3	4	5	6	7	8
	<input type="checkbox"/>							
Phone Number 1								
Phone Number 2								
Phone Number 3								
Phone Number 4								
Phone Number 5								
Phone Number 6								
Phone Number 7								
Phone Number 8								

- **Maximum Redial Attempts** - Enter the maximum number of attempts (0-255) for dialing every number with set priority.

- **Phone Number Priority** - Put mark to those number that will be dialed with priority. The sequence for dialing is determined by the number’s position in the row.

Note: Users with priority numbers have to confirm receiving the call by entering the code (1234 by default) and hear the voice message afterwards. All priority phone numbers need to confirm the call in order for the dialling to stop.

- **Phone Number 1-8** - Enter the phone numbers that will receive any messages via SMS, voice message (from inputs and serial communication - CA62, AVA, as well as service events - AC Loss; Power Low; Test Message etc.).

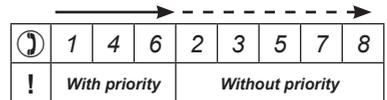
ATTENTION: Numbers must always start with “+” in order for the module to work correctly!

Phones								
Maximum Redial Attempts	3							
Phone Number Priority	1	2	3	4	5	6	7	8
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Phone Number 1	+359xxxxxxxx							
Phone Number 2	+359xxxxxxxx							
Phone Number 3	+359xxxxxxxx							
Phone Number 4	+359xxxxxxxx							
Phone Number 5	+359xxxxxxxx							
Phone Number 6	+359xxxxxxxx							
Phone Number 7	+359xxxxxxxx							
Phone Number 8	+359xxxxxxxx							



Telephone numbers 1, 4 u 6 are set with priority.

In case of an event the module will start dialing the numbers in this sequence:



If all users with priority numbers confirm the call by entering a password, the module will stop dialing.

7.3.2 Submenu “Emails”

On the right side of the screen the following parameters for programming are available:

Emails	
SMTP IP Address	0 . 0 . 0 . 0
SMTP Port:	25
Account Sender Email	sender@email.com
Account Sender User Name	username
Account Sender Password	<input type="text"/> <input type="text"/>
Email 1	name1@mail.com
Email 2	name2@mail.com
Email 3	name3@mail.com
Email 4	name4@mail.com
Email 5	name5@mail.com
Email 6	name6@mail.com
Email 7	name7@mail.com
Email 8	name8@mail.com

- **SMTP IP Address** - Enter the IP address of the SMTP server, which will be used by AJAX GPRS module for sending messages.
- **SMTP Port** - Contains the number of the SMTP port configured by the SMTP server. Normally, the 25-th port is used for e-mail messages.
- **Account Sender Email** - Enter an e-mail address (registered in the SMTP server), which the AJAX GPRS module will use for sending e-mail messages to users (addresses entered in the fields Email 1-8). The field is the same as “From” in “Outlook express”.
- **Account Sender User Name** - Enter the user name, which the user has registered in the SMTP server.
- **Account Sender Password** - Enter the password that is used by the user when registering in the SMTP server. Confirm the password in the second field.
- **Email1-8** - Enter the e-mail addresses that will receive messages in case of an event (AC Loss, Low Batt, Test Message etc.).

To save the changed parameters push “Apply” at the bottom of the screen.

7.3.3 Submenu “Common Settings for Serial Communication”

On the right side of the screen the following parameters for programming are available:

The screenshot shows a tree view on the left with the following structure:

- System
 - 1. Ajax GSM GPRS
 - 1. General Settings
 - 2. Ajax Software Package
 - 3. Phones and Emails
 - 1. Phones
 - 2. Emails
 - 3. Common Settings For Serial Comm. (highlighted)
 - 4. Inputs / Outputs
 - 5. SMS

The main window displays the 'Common Settings For Serial Comm.' settings:

Common Settings For Serial Comm.								
Enable All Events for SMSes (Phone)	1	2	3	4	5	6	7	8
	<input type="checkbox"/>							
Enable All Events for Email	1	2	3	4	5	6	7	8
	<input type="checkbox"/>							

Buttons at the bottom:

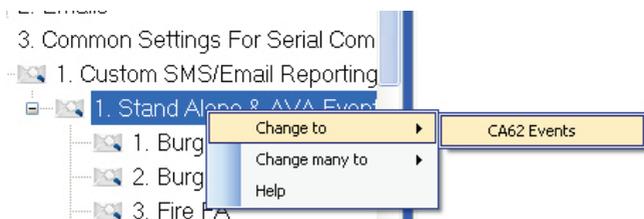
• **Enable All Event for SMSes (Phones)** - Put a mark for those phone numbers that will receive SMS messages for all possible events coming from the serial connection of the panel - see code chart in the Appendix.

• **Enable All Event for Email** - Put a mark for those numbers that will receive E-mail messages for all possible events coming from the serial connection of the panel - see code chart in the Appendix.

7.3.4 Submenu “Custom SMS/Email Reporting” (Sending of SMS/Email messages by user choice)

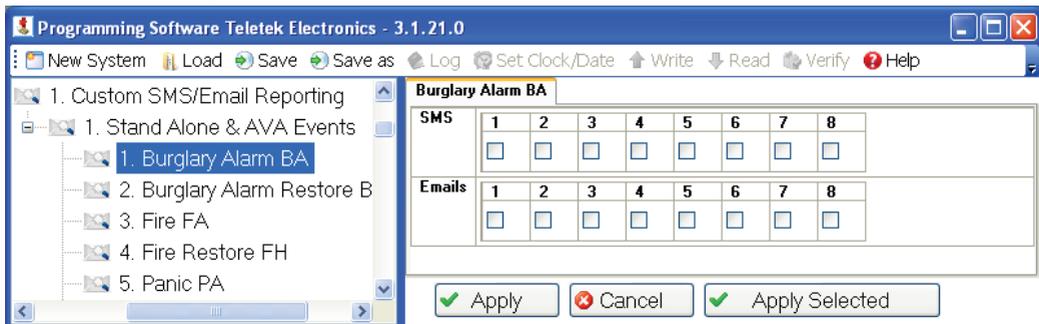
Click on the icon in front of the submenu “1. Stand alone & AVA Events” - a list of alarm events is shown. For every phone number transfer of an event via SMS and/or Email can be set.

Depending on the model of the used panel - CA62 or AVA, two separate lists of events are available. Switching between them is done with “Change to” (available after clicking the right mouse button on the active menu):



A full list of events for CA62 and AVA/individual module you can find in the Appendix.

On the right side of the screen the following parameters for programming are available. They are the same for all types of events:



Marks in the fields “SMS” and “Emails” mean that only concrete events will be sent to the defined phone number.

To save the changed parameters push “Apply” at the bottom of the screen.



All possible events will be transferred to phone number 1. Messages will be sent via SMS and Email. The settings are:

Common Settings								
Enable All Events for SMSes (Phone)	1	2	3	4	5	6	7	8
	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
Enable All Events for Email	1	2	3	4	5	6	7	8
	<input checked="" type="checkbox"/>	<input type="checkbox"/>						



When working with panel AVA, event “1. Burglary Alarm BA” will be sent via SMS individually towards phone numbers from 2 to 8 and via Email individually towards numbers 2 and 3. The settings are:

Burglary Alarm BA								
SMS	1	2	3	4	5	6	7	8
	<input type="checkbox"/>	<input checked="" type="checkbox"/>						
Emails	1	2	3	4	5	6	7	8
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

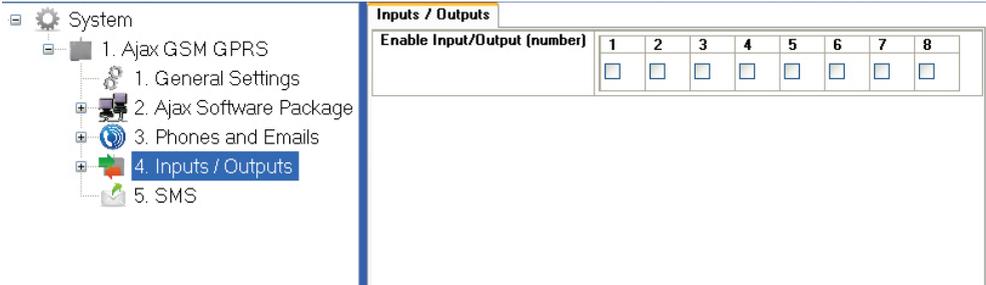


When working with panel AVA, event “3. Fire FH” will be sent via SMS and Email individually only towards phone numbers 2 and 3. The settings are:

Fire FA								
SMS	1	2	3	4	5	6	7	8
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
Emails	1	2	3	4	5	6	7	8
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				

Note: For phone number 1 setting is made in “Common Settings”, so individual setting is not necessary in the event fields.

7.4 Menu “INPUTS / OUTPUTS”



The menu allows enabling/disabling of these inputs/outputs that will be used for managing external devices for example.

• **Enable Input/Output (number)** - Marks are put for those inputs/outputs of the device that are enabled for use.

To save the changed parameters push “Apply” at the bottom of the screen.

7.4.1 Submenus “INPUTS / OUTPUTS”

The settings of all submenus are the same. In every submenu there are two tabs - programming for work as Input or as Output, depending on how the I/O terminal of AJAX GPRS module is used.

Attention: Every I/O can be used either as input or output.

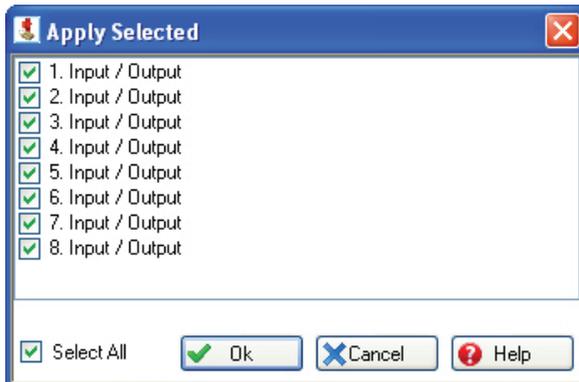
By default I/O 1-6 are programmed as inputs (tab INPUT is loaded automatically), while I/O 7-8 - as outputs (OUTPUT is loaded automatically).

The settings that are visible in the tab after clicking the ‘Apply’ button are saved.



By default the I/O3 terminal is programmed as input - INPUT tab is loaded automatically. Click on the OUTPUT tab. Make the necessary settings. Click the “Apply” button at the bottom of the page. I/O3 is programmed as output now.

If you want this programming to be the same for more than one I/O terminal, Click “Apply Selected” after you have clicked “Apply”. An additional page is opened, where the other terminals are listed and can be selected.



Use of I/O as INPUT

On the right side of the screen the following parameters for programming are available:

Input / Output																	
I/O Settings	Input																
	Activation Enable <input type="checkbox"/>																
	Activation SIA Code <input type="text"/>																
	SMS (Phones)																
	<table border="1"> <tr><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> </table>	1	2	3	4	5	6	7	8	<input type="checkbox"/>							
	1	2	3	4	5	6	7	8									
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>									
	Voice Messages (Phones)																
	<table border="1"> <tr><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> </table>	1	2	3	4	5	6	7	8	<input type="checkbox"/>							
	1	2	3	4	5	6	7	8									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										
Emails																	
<table border="1"> <tr><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> </table>	1	2	3	4	5	6	7	8	<input type="checkbox"/>								
1	2	3	4	5	6	7	8										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										
SMS / Email Message <input type="text"/>																	
DeActivation Enable <input type="checkbox"/>																	
DeActivation SIA Code <input type="text"/>																	
SMS (Phones)																	
<table border="1"> <tr><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> </table>	1	2	3	4	5	6	7	8	<input type="checkbox"/>								
1	2	3	4	5	6	7	8										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										
Voice Messages (Phones)																	
<table border="1"> <tr><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> </table>	1	2	3	4	5	6	7	8	<input type="checkbox"/>								
1	2	3	4	5	6	7	8										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										
Emails																	
<table border="1"> <tr><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> </table>	1	2	3	4	5	6	7	8	<input type="checkbox"/>								
1	2	3	4	5	6	7	8										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										
SMS / Email Message <input type="text"/>																	

- **Activation Enable (NO)** - Put a mark to enable sending messages (SIAoverIP, SMS, Voice, E-Mail and other), when the signal falls (falling edge).
- **Activation SIA Code** - Enter the event number that will be send when the input is activated - event numbers can be seen in the Appendix - SIA codes when working with CA62 and AVA / as separate module. Sending of only one message can be programmed.



To send message “Burglary Alarm” enter 1 in the field. To send message “Fire Alarm” enter 3 in the field etc.

ATTENTION: If we are working with panel CA62 and the code 30 is entered, the user receives message “Entering ambush code by xx user”, if we are working with panel AVA or AJAX GPRS as a separate module code 30 will match message “Engineer programming mode entry”.

- **SMS (phones)** - Choose telephone numbers that will receive SMS messages when the input is activated - mark the field under the respective number.
- **Voice Messages (phones)** - Choose telephone numbers that will receive voice messages when the input is activated - mark the field under the respective number.

NOTE: Voice messages are recorded via AJAX GSM GPRS Voice Module. Recording of two voice messages is possible for every input - one for activation and one for deactivation - see more on page 26, item 8.

- **Emails** - Choose e-mail addresses that will receive e-mail messages when the input is activated - mark the field under the respective e-mail address (see item 7.3.2).
- **SMS / Email Message** - Enter text that will be sent via SMS or Email message to users when the input is activated. Texts up to 20 symbols including spaces are allowed.
- **DeActivation Enable (NC)** - Put a tick to enable sending messages (SIAoverIP, SMS, Voice, Mail and other), when the signal rises (rising edge).
- **DeActivation SIA Code** - Enter event number that will be send when the input is deactivated - event numbers can be seen in the Appendix - SIA codes when working with CA62 and AVA / as separate module. **Sending of only one message can be programmed!**
- **SMS (phones)** - Telephone numbers that will receive voice messages when the input is deactivated - mark the field under the respective number.
- **Voice Messages (phones)** - Choose telephone numbers that will receive voice messages when the input is deactivated - mark the field under the respective number.
- **Emails** - Choose e-mail addresses, that will receive e-mail messages when the input is deactivated - mark the field under the respective e-mail address (see item 7.3.2).
- **SMS / Email Message** - Enter text that will be sent via SMS or Email message to users when the input is activated. Texts up to 20 symbols including spaces are allowed.

Use of I/O as OUTPUT

On the right side of the screen the following parameters for programming are available:

Input / Output	
I/O Settings	
Input	Output
CLIP DeActivation (NC)	None
CLIP Activation (NO)	None
DTMF Control Enable	<input type="checkbox"/>
SMS Control Enable	<input type="checkbox"/>
RF Back-UP Activation (NO)	Not Used / CLIP, SMS, DTMF Control
RF Back-UP DeActivation (NC)	Not Used / CLIP, SMS, DTMF Control

- **Clip DeActivation (NC)** - Enables CLIP functionality for deactivation of the outputs only with a call and without answering of the subscriber. From the folding menu choose one of the numbers in "Phones" (see item 7.3.1) that will be allowed to deactivate the output.
- **Clip Activation (NO)** - Enables CLIP functionality for activation of the outputs only with a call and without answering of the subscriber. From the folding menu choose one of the numbers in "Phones" (see item 7.3.1) that will be allowed to activate the output.

ATTENTION: When a certain telephone number is set to manage an output with CLIP functionality, it cannot be used for DTMF management.

• **DTMF Control Enable** - Enables the use of DTMF management of the output - activation or deactivation. When connected successfully (two short beeps) the user must enter an access code to be allowed management of the output. The access code is the one entered in “User Password and PC ID” in menu Basic Settings (see item 7.1). Working with management is described also in PART: USER.

During one call, several separate operations can be executed: management or check of the output condition. The time interval between them should not exceed 15 seconds.

• **SMS Control Enable** - Enables use of SMS for management of outputs - activation or deactivation. The format of the messages is described in PART: USER.

One operation can be executed with a single SMS. Entering symbol “#” after the output number, causes the output status to be returned as a second SMS.

ATTENTION: Telephone numbers set for Clip functionality can also manage outputs via SMS messages.

- **RF Back-UP Activation (NO)**, and
- **RF Back-UP DeActivation (NC)**

These fields relate to situations when there is a RF transmitter for back – up communication. From the folding menu choose which events will change the status of the output, so that the connected RF transmitter is managed. The following events can be chosen:

Open (Output activation)	Fire (Fire alarm in the system)
Close (Output Deactivation)	Fire Restored (Fire alarm in the system - restored)
Alarm (Alarm in the system)	AC Loss (Main power supply is lost)
Alarm Restored (Alarm event in the system - restored)	AC Normal (Main power supply is restored)
Tamper (Activated tamper in the system)	Battery Low (Low battery charge level)
Tamper Restored (Deactivated tamper in the system)	Battery Normal (Charge level of battery - restored)
Panic (Panic alarm in the system)	Bypass (Zone bypassing)
Panic Restored (Panic alarm in the system - restored)	Un-Bypass (Zone bypassed - restored)

ATTENTION: When choosing output for RF Back-UP reporting, SMS/DTMF/CLIP control is forbidden.

To save the changed parameters push “Apply” at the bottom of the screen.

7.5 Menu “SMS”

On the right side of the screen the following parameters for programming are available:

SMS	
General Message	<input type="text"/>
Battery Low Message	<input type="text"/>
Battery Normal Message	<input type="text"/>
AC Loss Message	<input type="text"/>
AC Normal Message	<input type="text"/>
Monthly Test Message	<input type="text"/>

- **General Message** - This message is always sent first. The event message is sent after it. Normally information about the site is entered: Name, Address or something else.
- **Battery Low Message** - The message is sent when the current falls below the value entered in “Low DC Power Supply, x10 mV” (see item 7.1, page 12).
- **Battery Normal Message** - The message is sent when the current value has normalized.
- **AC Loss Message** - The message is sent when at terminal AC (see position 11, item 3.2) there is no 220V supply for more than 30 minutes.
- **AC Normal Message** - Message is sent when the 220V power supply is restored.
- **Monthly Test Message** - This message is sent after a successful monthly functionality test of the module. Setting the date for the message is described in item 7.1 “Basic Settings”.

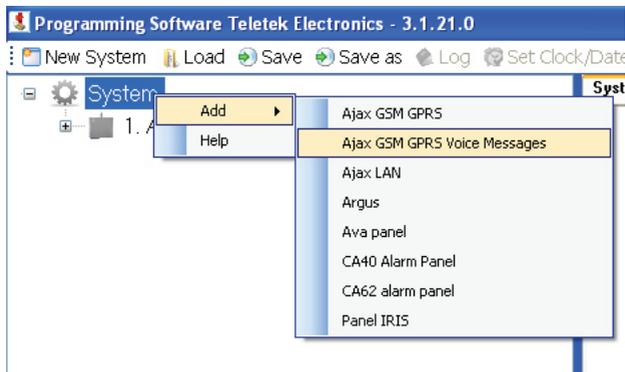
ATTENTION: SMS messages can have up to 20 symbols including spaces. It is advisable every message to end with a blank space, so that users can differentiate messages sent simultaneously.



IMPORTANT: If no text is entered, messages will not be sent!

8. Recording messages via AJAX GSM GPRS Voice Messages

In order to send voice messages to the user, they need to be recorded in advance. The recording is made via AJAX GSM GPRS Voice Module:



A new system for programming will be added to the tree structure - AJAX GSM GPRS Voice Module. Click on the icon , in order to see the submenus for adding voice messages.



Messages 1 to 6 are sent together with SMS service messages - see item 7.5.

Messages from 7 to 22 are distributed as couples for every input - for activation and deactivation respectively.

The recorded voice messages are sent only if this is allowed - there are entered settings in INPUTS/ OUTPUTS, submenu INPUT for every input. In the field "Voice Messages (Phones)" there are marks for those numbers that will receive messages.

IMPORTANT!

The messages need to be recorded with the following characteristics:

File format	WAV
Duration	up to 7 sec.
Bit rate	64K
Audio sample size	8bit
Channels	1 PCM (mono)
Audio sample rate	8kHz

Click a submenu for a voice message:



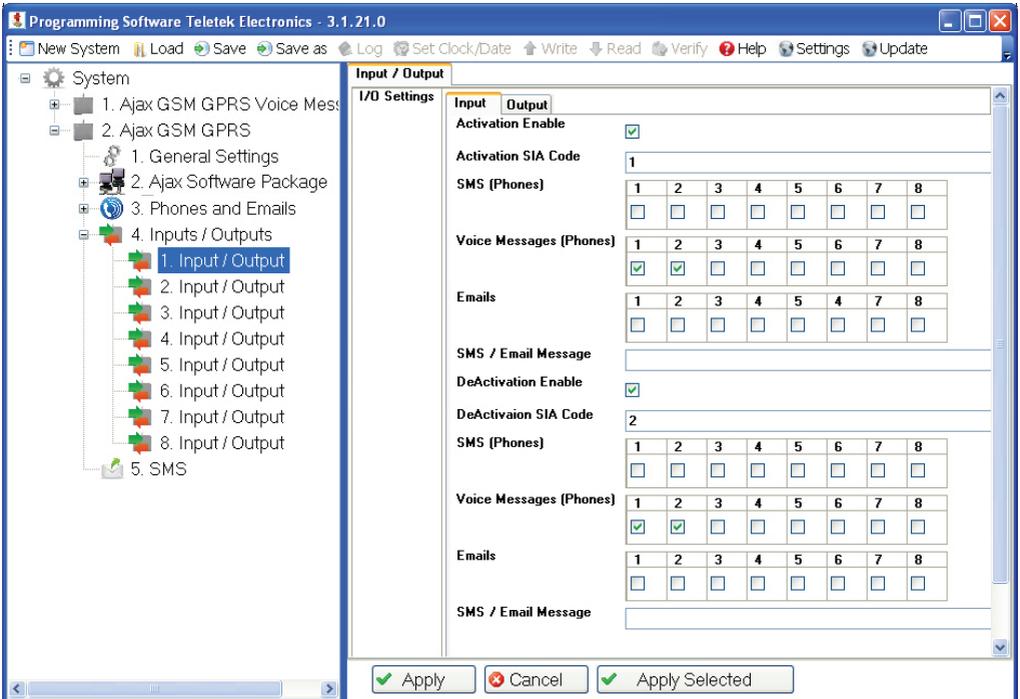
Push button “Add” to record a new voice message in the AJAX GPRS module. Choose the voice message from your PC and open it. The size of the message can be seen on the screen.

By using button “Clear” you can delete the recorded voice message.

To save the changed parameters click “Apply” button in the bottom of the screen.

Sending messages via serial communication

AJAX GPRS module can send messages via the serial communication of panels AVA and CA62. In order to do that the numbers of the message codes have to be entered in INPUTS/OUTPUTS, submenu INPUT:



When activating I/O1, voice message 1. Burglary Alarm (CA62) is set to be sent to phone numbers 1 and 2, while when deactivating the input message 2. Alarm Restore (CA62) is sent. In order to receive the messages they need to have been saved in INPUT1 - 7. Input1 Activation and 8. Input1 Deactivation in the system AJAX GSM GPRS Voice Module.

9. Management of outputs

9.1 CLIP Functionality

Users can activate/deactivate certain outputs of the module only by phone call. In order to do that the number needs to be set for that kind of management.

9.2 DTMF Functionality

Users can manage certain outputs of the module via DTMF control.

When a connection is established two beeps are heard, after which the user has to enter a valid code. If the code is valid two beeps are heard again and the user can manage outputs and monitor their status. If an invalid code is entered, the module will terminate the connection.

During one session the user can execute several operations. Terminating the session is automatic if no operation is started in 15 seconds or the user ends the connection.

ATTENTION: Telephone numbers that are used for CLIP functionality can't be used for DTMF management!

9.2.1 Monitoring the output status

The call format is: *{2 signals} {code} {2 signals} {Output No} {#}*

The status of the outputs can be 0 (NC) or 1 (NO). If the status of the output is 0 the module will answer with two beeps, if it is 1 - one beep.



Dial on your phone:

12347#

Output 7 has status 0 – the user hears two beeps after entering "#".

9.2.2 Changing the status of an output

The call format is: *{2 signals} {code} {2 signals} {Output No} {new state}*

The status of the outputs can be 0 (NC) or 1 (NO). The module signals the change of statuses – two beeps for 0 and one beep for 1.



Dial on your phone:

123471

The Output 7 status is changed to 1.

9.2.3 Monitoring and changing the status of inputs at the same time

During one call session the user can execute several operations, but the intervals between operations need to be less than 15 seconds.



Dial on your phone:

12347#*♪♪* 71 8#*♪♪* 81

Output number 7 has status 0 (two beeps), we switch it to status 1, we check the status of output 8 and we change it to 1. We can continue operation during the call, as long as the time interval between them is less than 15 seconds. Otherwise the module will terminate the call.

9.3 Management via SMS

One SMS message can execute only one operation.

The SMS message format is: *{code} {Output No} {new state}*

No blank spaces are entered in text message.



Enter the following in the SMS message:

123481

Output number 8 changes to status 1.



777781#

In this case the module will send SMS for confirmation and check up of the changed output.

The message will have the following format: "Output 8 in 1".

APPENDIX 1 - Table of events for CA62 alarm system

Event No	Description
1	Burglary alarm type activated / Activated zone with AUX attribute "24h Burglary"
2	Burglary alarm type deactivated / Restored zone with AUX attribute "24h Burglary"
3	Fire type alarm event in xx zone
4	Fire type restoring event in xx zone
5	Panic type alarm event in xx zone
6	Panic type restoring event in xx zone
7	Tamper type alarm event in xx zone
8	Tamper type restoring event in xx zone
9	Medical type alarm event in xx zone
10	Medical type restoring event in xx zone
11	Burglary Alarm type xx zone bypass
12	Burglary Alarm type xx zone bypass restoring
13	Fire type xx zone bypass
14	Fire type xx zone bypass restoring
15	Panic type xx zone bypass
16	Panic type xx zone bypass restoring
17	Tamper type xx zone bypass
18	Tamper type xx zone bypass restoring
19	Medical type xx zone bypass
20	Medical type xx zone bypass restoring
21	Disarm by xx user
22	Remote disarming by xx user
23	Disarming by key-switch in xx zone
24	Arming by xx user
25	Remote arming by xx user
26	Arming by key-switch in xx zone
27	Quick arm type arming
28	Program mode entry
29	Program mode exit
30	Entering ambush code by xx user
31	Telephone line failure
32	Recovery of faulty telephone line

33	Unsuccessful communication
34	Periodic test message communication
35	Digital communicator manual test
36	Fuse blown
37	Restored fuse
38	System default RESET
39	Loss of 220 V AC power supply
40	Restored 220 V AC power supply
41	Low battery charge level
42	Restored battery charge level
43	Activated zone with attribute "Write to log"
44	Restored zone with attribute "Write to log"
45	Activated zone with AUX attribute "24h Burglary"
46	Activated zone with AUX attribute "Battery Low"
47	Activated zone with AUX attribute "Gas Detector"
48	Activated zone with AUX attribute "Water Leakage"
49	Activated zone with AUX attribute "AC Lost"
50	Activated zone with AUX attribute "GSM Link Trouble"
51	Activated zone with AUX attribute "Refrigeration"
52	Activated zone with AUX attribute "Loss of Heat"
53	Activated zone with AUX attribute "Foil Break"
54	Activated zone with AUX attribute "Low bottled gas level"
55	Activated zone with AUX attribute "High temperature"
56	Activated zone with AUX attribute "Low temperature"
57	Restored zone with AUX attribute "Battery Low"
58	Restored zone with AUX attribute "Gas Detector"
59	Restored zone with AUX attribute "Water Leakage"
60	Restored zone with AUX attribute "AC Lost"
61	Restored zone with AUX attribute "GSM Link Trouble"
62	Restored zone with AUX attribute "Refrigeration"
63	Restored zone with AUX attribute "Loss of Heat", "Foil break", "Low bottled gas level", "High temp." or "Low temp."

**APPENDIX 2 - Table of events for AVA alarm system and the module as
independed working device**

Event No	SIA Code	Message Format	Description
1	BA	EV_BURG_ALARM	Alarm event "Burglary Alarm"
2	BH	EV_BURG_ALARM_REST	Restore of alarm event "Burglary Alarm"
3	FA	EV_FIRE	Alarm event "Fire"
4	FH	EV_FIRE_REST	Restore of alarm event "Fire"
5	PA	EV_PANIC	Alarm event "Panic"
6	PH	EV_PANIC_REST	Restore of alarm event "Panic"
7	TA	EV_TAMPER	Alarm event "Tamper"
8	TH	EV_TAMPER_REST	Restore of alarm event "Tamper"
9	MA	EV_MEDICAL	Alarm event "Medical"
10	MH	EV_MEDICAL_REST	Restore of alarm event "Medical"
11	UB	EV_BURG_ALARM_BPS	Bypass of "Burglary Alarm" type zone
12	UU	EV_BURG_ALARM_BPS_R	Restore of Bypass of "Burglary Alarm"
13	WA	EV_WATER_ALARM	Alarm event "Water Alarm"
14	WR	EV_WATER_ALARM_R	Restore of alarm event "Water Alarm Restore"
15	FB	EV_FIRE_BPS	Bypass of "Fire" type zone
16	FU	EV_FIRE_BPS_REST	Restore of Bypass of "Fire"
17	KA	EV_HEAT_ALARM	Alarm Event "High temperature" in the premises
18	KH	EV_HEAT_ALARM _R	Restored "High temperature" in the premises
19	TB	EV_TAMP_BPS	Alarm event "Tamper Bypass"
20	TU	EV_TAMP_BPS_R	Restored "Tamper Bypass"
21	ZA	EV_FREEZE_ALARM	Alarm Event "Low temperature" in the premises
22	ZH	EV_FREEZE_ALARM_R	Restored "Low temperature" in the premises
23	OP	EV_DISARM_USER	Disarming
24	OQ	EV_DISARM_REMOTE	Remote Disarming
25	OS	EV_DISARM_KEY	Disarming with key-switch
26	CL	EV_ARM_USER	Arming
27	CQ	EV_ARM_REMOTE	Remote Arming
28	CS	EV_ARM_KEY	Arming with key-switch
29	-	-	Not used
30	LB	EV_PROG_ENG	Enter Engineer Programming
31	LX	EV_PROG_ENG_END	Exit Engineer Programing
32	HA	EV_DURESS	Entered Ambush code

33	YS	EV_COMM_LINE	Telephone line failure
34	YK	EV_COMM_LINE_REST	Telephone line restored
35	YC	EV_COMM_FAIL	Event "Communications Fail"
36	RP	EV_TEST_AUTO	Sending of testing message
37	RX	EV_TEST_MANUAL	Manual test
38	YP	EV_FUSE	Alarm event "System trouble - fuse blown"
39	YQ	EV_FUSE_REST	Restore event "System trouble - fuse blown"
40	YW	EV_SYSTEM_RESET	System RESET
41	AT	EV_AC_LOSS	Power supply 220 VAC lost
42	AR	EV_AC_REST	Restore Power Supply 220 VAC
43	YM	EV_BAT_LOW	Low battery
44	YR	EV_BAT_REST	Restore battery
45	-	-	Not used
46	ES	EV_ExpM_TAMPER	Alarm Event "Expansion Device Tamper"
47	EJ	EV_ExpM_TAMPER_R	Restored event "Expansion Tamper Restore"
48	XT	EV_RF_BATT	Alarm event "Transmitter Battery Trouble"
49	XR	EV_RF_BATT_R	Restored event "Transmitter Battery Restored"
50	XQ	EV_RF_INTERF	Alarm event "RF Interference"
51	XH	EV_RF_INTER_R	Restored event "RF Interference Restored"
52-57	-	-	Not used
58	EM	EV_ExpM_LOST	Lost device
59	EN	EV_ExpM_LOST_R	Restored device
60	AS	EV_CLEAN_SENSOR	The smoke chamber of the fire detector have to be cleaned

Notes

Notes

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