TTE Combo

LAN Communication Module

- **Installation and Programming Manual**
- **Operation Instruction**
- **User Guide**

Attention:
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.

The information in this manual is a subject to change without notice!

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Table of contents

DOCUMENTATION FEEDBACK

If you have any comments or suggestions on our products' manuals or installation instructions you can email us on:
info@teletek-electronics.bg
Your feedback on product documentation will help us to improve the contents of our manuals and stickers and keep them up-to-date.
Please, include in your feedback email the product name, the revision of the manual or instruction (8-digit number with Revision and date of issue) and the page number.

1. INTRODUCTION

1.1 General Information

TTE Combo is a universal communication module, that can be connected to any panel capable to transmit CID events, including Eclipse Series. The general application of the module is to transmit the incoming events from the panel (the events recorded into the panel's memory log file) to AJAX SP Pro server and/or SIA-DC09 Receiver station via several reporting channels – LAN/GPRS/PSTN (communication media) – using alternative or parallel reporting type.

TTE Combo is a module for emulation of a standard PSTN line or Receiver Station. The module receives the events from the connected alarm control panel and returns a confirmation for the successful receiving. TTE Combo is equipped with an internal loop buffer with capacity of 256 events. In case of overflow of the internal buffer, the module stops the confirming of successfully received events. In this way the untransmitted events will be kept into the log buffer of the alarm control panel and would not be lost. These events will be transmitted when the module's buffer is unloaded during the next successful transmitting of events to AJAX SP Pro server or SIA-DC09 Receiver station. The received CID (Contact ID) events are converted internally into SIA code.

Reporting via "SIA over IP" protocol is realised via standard GPRS and/or LAN channel. The user can use one or both reporting channels. When the both reporting channels are used, the user can set their priority of using – setting one for main and the other for a backup – alternative reporting type. There is also an option for using a parallel reporting type, as the events are transmitted via the both reporting channels.

When the control panel is additionally equipped with a digital communicator, the standard PSTN telephone line can also be used for backup channel for transmitting of events, as the TTE Combo is connected directly to the digital communicator terminals of the panel. The hardware connection with the panel is monitored and in case of fault or trouble with the line the module will report to the monitoring station.

In case of connection to Eclipse series control panel, TTE Combo is fully compatible and can operate in configuration with Eclipse VD (voice dialer) mounted on slot to the panel's PCB. The user can use the full functionality of the Voice Management Mode and the monitoring via TTE Combo through the available PSTN line.

The user also can remotely control the outputs of TTE Combo via AJAX WEB software application and MobileTTE smartphone application.

According the application, TTE Combo can be powered up directly from the control panel (± AUX terminals, 9-30VDC) or from a stand-alone power supply unit. The module can be mounted directly into the panel's box or into a separate small plastic box (SB-U) suitable for wall mounting according the application.

TTE Combo is programmed via ProsTE software or remotely via AJAX Web User Interface.

1.1.1 Functional Features

- Compatible with control panels capable of sending Contact ID (CID)
- Control panel communication supervision
- AES 128 encryption
- Supports 2G networks
- Communication channels – PSTN, LAN and/or GPRS
- Main and Back-up reporting channels
- Connecting to AJAX SP PRO through IP or DNS address
- Supports operation with SIA-DC09 IP protocol messages
- LAN settings – Manual or Automatic (DHCP)
- 1 input (TAMPER/NC to GND)
- 2 outputs OC type
- Internal buffer for 256 events
- Micro USB input for direct PC connection
- Jumper for restoring of the default factory settings
- Reversed polarity protection

1.1.2 Technical Specifications

- Main power supply: ....9-30VDC (no tolerance)
- Current consumption:
  - o Normal operation mode (standby): 100mA
  - o Maximal consumption: 200mA
- Time for filtration of signals incoming at I/O: ....0.3 seconds
- GPRS working frequencies: ....850/900/1800/1900 MHz
- Antenna connector (internal mounted): ....SMA 50Ohm
- Operating temperature: ....-20°C ÷ +60°C
- Dimensions (PCB): 73x108mm

> **Important note:**
> The purpose of this manual is to give directions for programming the TTE Combo module and its operation with AJAX SP Pro server. You can refer to the installation manual of the module (applied into the packing box) for details about its elements and PCB hardware.
> Find out more materials also at www.teletek-electronics.com.

1.1.3 Operation Block Diagrams

Operation with a Burglary Alarm Control panel
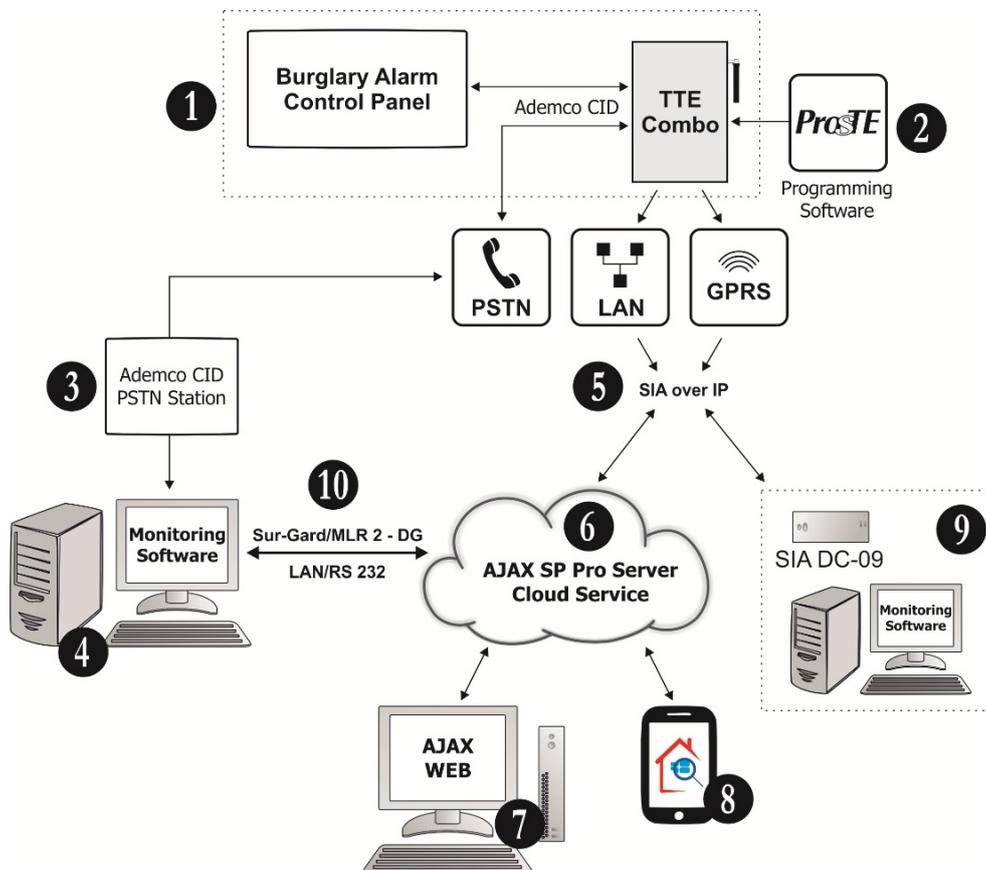
1. TTE Combo communication module and burglary alarm control panel. The control panel is compatible to transmit CID events – see item 2.1 Connection to Burglary Alarm Control Panel.

2. Program the TTE Combo module with ProsTE – see item 3. Programming with ProsTE.

3. Standard telephone line connected to PSTN Station.

4. Monitoring station for receiving of events via RS232 communication protocol.

5. SIA over IP communication protocol.

6. AJAX SP Pro Server. This is a computer with installed AJAX SP Pro Server administrative interface. Usually it is situated into a Monitoring station of a service security provider.

7. AJAX WEB. This is a User interface (web site) for management and control of panels and communication modules produced by Teletek Electronics JSC. After registration the User can review the status and to control (switch ON/OFF) the outputs of TTE Combo attached to his account.

8. Mobile TTE. This is a smartphone application for management and control of panels and communication modules produced by Teletek Electronics JSC, which are attached to a User account at AJAX WEB. The smartphone application is compatible with iOS and Android platforms.

9. SIA DC-09 Alarm Receiver and Monitoring Software. Monitoring station of a service security provider operating with SIA-DC09 IP reporting to monitoring software.

10. SURGARD MLR 2 communication protocol, providing message transfer via LAN or RS 232 between AJAX SP Pro server and Monitoring software.

Operation as Stand-Alone Device

This configuration is suitable for realizing of home automation applications where the User wants to control different electrical appliances via the outputs of the module. In this case, TTE Combo must be powered up from and external power supply unit providing 9-30VDC. The outputs can be switched ON/OFF remotely via AJAX WEB or MobileTTE.

1.2 Before you start

Before starting you need the following equipment (full configuration):
- ProsTE Programming Software installed on a local computer or laptop for reading, writing and saving the module's configuration.
- Standard USB-Micro USB data cable.
- Valid SIM Card supporting 2G networks with disabled PIN protection code.
- Router.
- CAT-5 Ethernet cable, max. 90 m (not included into the kit).
- Access to WAN/LAN available and enabled network.
- Control panel with digital communicator (supporting CID protocol).
- Access to PSTN available network.
- Resistor 220k (included in the kit of the supplied equipment) for termination of the terminals of the digital communicator for phone device connection (in case the phone device is not used).

And also, is helpful to have prepared:
- A valid account registration in AJAX WEB User interface*.
- An installed Mobile TTE application on your smartphone**.

For monitoring and management of burglary control panels Eclipse series and module's outputs. Ask your local distributer or security provider how to access the AJAX WEB site and to register an account.
*** You can download the application from Google Play or App Store according your smartphone model. You will be able to review all attached systems to your AJAX WEB account after adding them into the Mobile TTE application.*

The manufacturer also recommends:
- Review the status of the burglary alarm panel to which the TTE Combo module is going to be connected. Check the programming and settings for operation with communication equipment. Set the phone numbers: one for communication with the Central Monitoring Station, and other for connection with TTE Combo module. Set CID protocol for transferring of events.
- Check the subscription plan of the used SIM card and network coverage. The SIM card must support 2G network. To be able to connect to AJAX SP Pro Server and use the Mobile TTE application on your smartphone, your plan must include a mobile internet (at least 100MB data traffic per month).
- In case the TTE Combo is going to be used as a stand-alone device, equip it with a suitable external power supply unit providing 9-30VDC.
- Connect the "In1" terminal of the module to the TAMPER switch of the control panel (or to a TAMPER Zone type).
- Equip your Router device for access to WAN/LAN network with an uninterruptable power supply (UPS) unit.

Important note:
When only LAN communication media of TTE Combo module is going to be used for reporting of events in your burglary alarm system for security, it is obligatory to equip your Router device with a UPS unit. In this way, in case of a main power supply failure in the protected site, the router will stay powered on and will be able to send messages for "AC lost" and "Burglary Alarm" to the monitoring station and/or the end user.

2. HARDWARE INSTALLATION

TTE Combo is a universal communication module which provides the opportunity for connection to different types of control panels and reporting for events to a monitoring station and/or end User.

2.1 Connection to Burglary Alarm Control Panel

TTE Combo is mounted into the panel's installation box. The module can be powered on directly from the *+/- AUX outputs* (required 9-30VDC) of the control panel as observing the polarity; or from an external power supply unit.

Connection of a Tamper switch (optional)
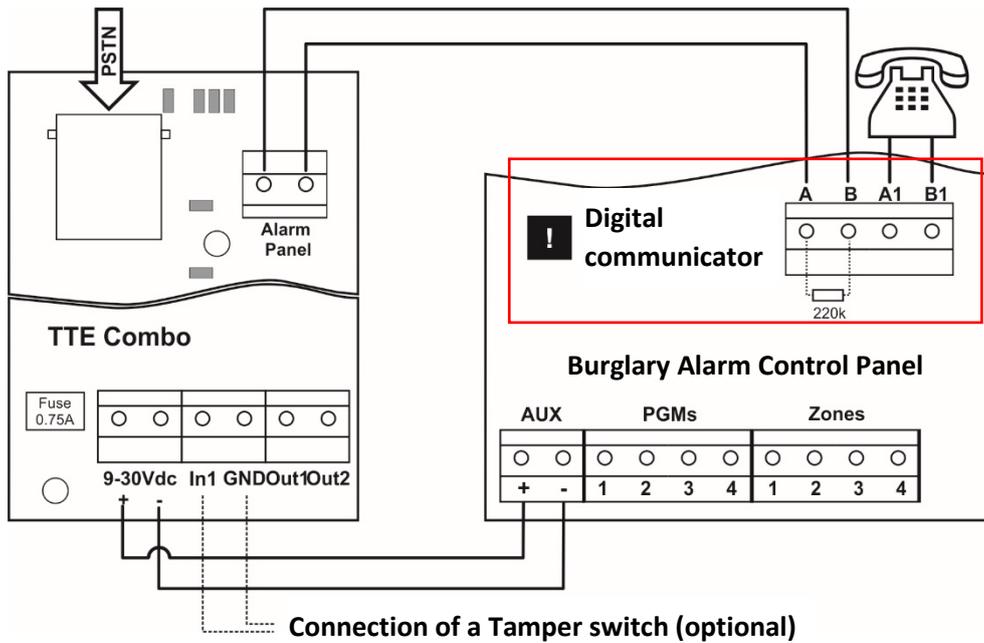
Important note:
If the terminals A1 and B1 (on the presented diagram) are not used for connection of a telephone device, the terminals must be terminated with a 220k resistance! If the A1 and B1 terminals are missing the resistance of 220k must be connected to A and B terminals!

2.2 Internal Structure of the Outputs

TTE Combo has 2 outputs OC type that can be used for small home automation projects.
The Internal structure of the output is presented on the following schematic diagram:
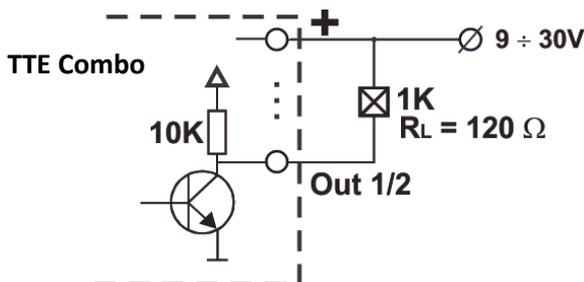
Attention:
All electrical connections must be done ONLY when the mains and back-up power supplies of the module are switched off!

2.3 Basic Installation Steps
(for full configuration)

1. Turn off the main and backup power supply of the control panel.
2. Connect the power supply of the module (9-30VDC) – from the control panel or external power unit.
3. Run the CAT-5 Ethernet cable for LAN connection through any suitable cable opening of the box and connect it to the LAN connector of the module.
4. Switch off the PIN protection code of the SIM card and place it into the SIM interface holder of TTE Combo module.
5. Run the PSTN cable through any suitable cable opening of the box and connect it to the LINE connector of the module.
6. Connect the digital communicator of the control panel (A and B terminals) to ALARM PANEL terminals of TTE Combo.
7. Connect the phone device to A1 and B1 terminals of the control panel; in case the phone device is not used – terminate the A1 and B1 terminals with 220k resistor.
8. Connect t a TAMPER switch (or TAMPER zone) to IN1 terminals of TTE Combo.
9. Turn on the main and backup power supply of the panel.
10. Wait for the connection with the Main and/or Backup Receiver station - up to 90 sec the Main/Backup Receiver LEDs are blinking in red. The established connection is indicated with blinking in green.
11. Check the signal strength - 2 or 3 RSSI LEDs are lighting on in green. If the signal strength is poor, change the location of the module or use external antenna.
12. The module is in normal operation mode - the PSTN LED lights on in green, and Main/Backup Receiver LEDs are blinking in green (depends on the application).
13. Set the parameters of TTE Combo module using ProsTE programming software – see also 3. Programming with ProsTE.
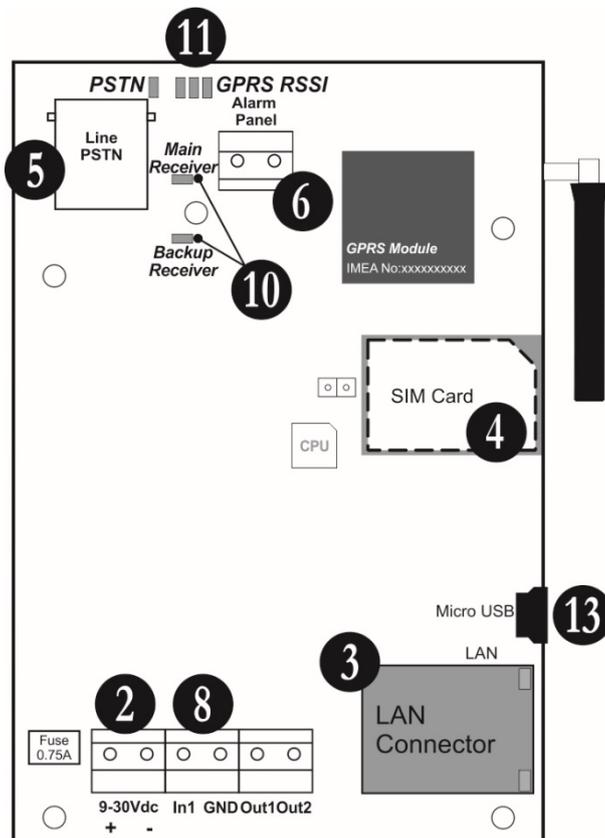
2.4 TTE Combo Module LED Indication

The LED indication of TTE Combo communication module has the following meaning during operation.
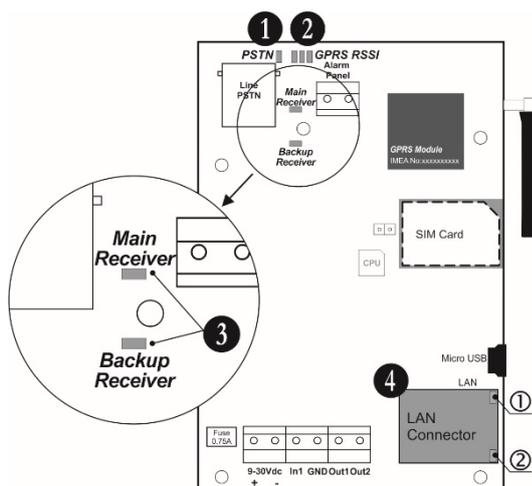
1. *PSTN* - LED for presence of PSTN telephone line.

2. *RSSI* – 3 LEDs for the signal strength of the available GSM/GPRS network.

3. *Main/Backup Receiver* - LED for Main/Backup Receiver status.

4. *LAN LEDs* – LEDs for LAN network status.

The LED Indication has the following meaning:

LED	Action		Description
PSTN (green)	Lights OFF		The PSTN line is missing or it is unavailable.
	Lights ON		The PSTN line is available.
RSSI Signal Strength	●○○		The signal strength is poor (from -111 to -91 dBm).
	●●○		The signal strength is good (from -90 to -70 dBm).
	●●●		The signal strength is very good (from -69 to -51 dBm).
Main Receiver	Blinking Slow (1 sec)	Green	Successful connection with the Main Receiver station via the Main IP address and the Main communication media (GPRS/LAN).
		Red	No connection with the Main Receiver station. Possible problem with the used communication media GPRS or LAN. • Possible troubles with the SIM card (GPRS media): 1. The SIM card is missing. 2. The SIM card could not register to the available GSM/GPRS network. 3. Active PIN code for verification. • No signal/link. • Wrong configuration (Server type, IP, Port, Encr. Key, etc.)
		Orange	There is at least 1 transmitted and received (confirmed) event in a 3 sec. time interval.
	Blinking Fast (0.25 sec)	Green-Orange	Successful connection with the Main Receiver station via the Main IP address and the Backup communication media (GPRS/LAN).
Backup Receiver	LED indication for the Backup Receiver station. The description is the same as the one for the Main Receiver.		
RJ-45 (LAN connector indication)	LAN Status	①	LED LAN Action. The LED is blinking when there is activity on the link; otherwise, the LED is on.
		②	LED LAN Link. The LED is lit on when there is a link to an Ethernet device; otherwise the LED is off.

2.5 Restore to Factory Settings

This function is for restoring of the default parameters of the module set by the manufacturer.
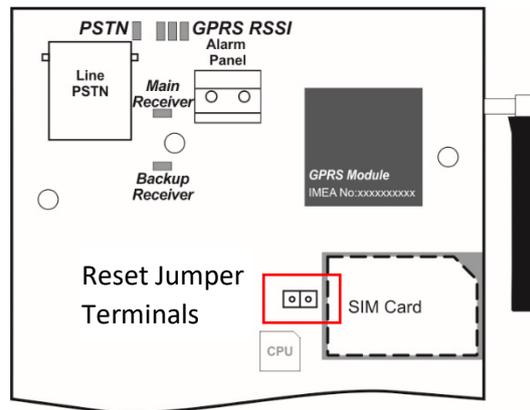
The Reset Jumper is situated on the left side of the SIM card holder. To perform restoring of the factory settings:

1. Turn off the power supply of the module.
2. Place a jumper on *Reset Jumper* terminals.
3. Turn on the power supply of the module.
4. Wait for 10 seconds and remove the *Reset Jumper.*
5. Wait for the *Main/Backup Receiver LED* to start blinking in green – the initial startup can take up to 90 seconds.
6. Program the module with ProsTE software according the application.

3. PROGRAMMING WITH ProsTE

ProsTE is a specialized software for programming of panels and modules produced by Teletek Electronics JSC. The installer can quickly read the current configuration, to set new parameters and to write it back to the panel or module.

Attention: Always use the latest version of ProsTE software downloaded from www.teletek-electronics.com or ask your local distributer for more information and details.

To connect the TTE Combo to a local computer or laptop for programming, use a standard USB-Micro USB data cable.
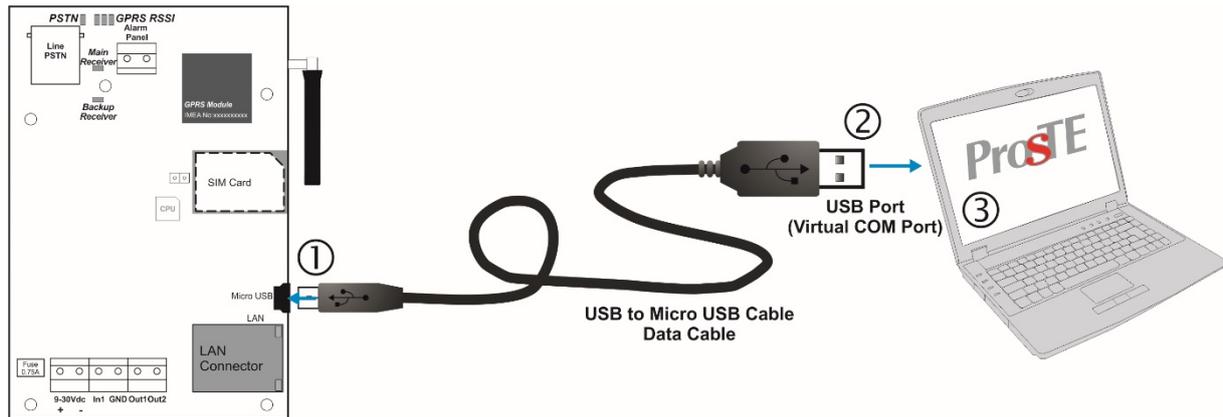
Note: The TTE Combo module must be powered up during programming! After connecting to the computer, you may be asked to wait until the system is installing some USB drivers.

3.1 Reading a Configuration

Run the ProsTE software and choose in sequence using the right mouse button: *System – Add – TTE Combo.*
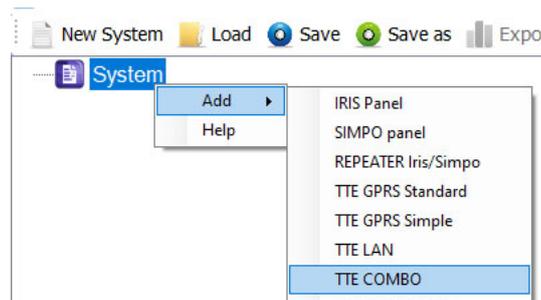
The TTE Combo menus are loaded at the left side as a tree structure. Select the module and using the right mouse button again choose in sequence: *TTE Combo – Read.*
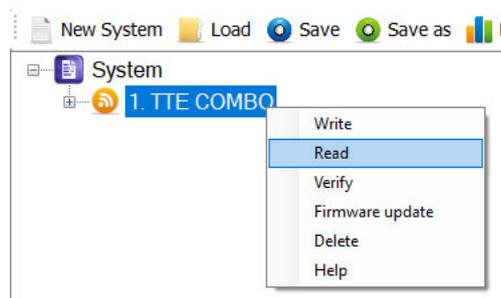
Read is a command for downloading the current module's parameters and settings into ProsTE software.

A new window with options for *Reading* is opened:
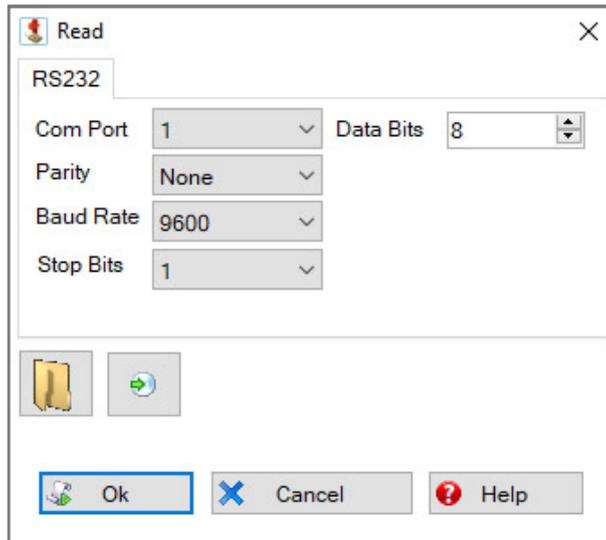
In *Com Port* field, select the number of *USB port* to which the module is physically connected. Press OK button to continue. Next you have to enter a *Password code – "1234" by default.*

If the downloading is successful a message *"Download from hardware finished successfully!"* will appear on the screen.

3.2 General Settings Menu

Click on the "+" icon in front of *TTE Combo module* to expand the programming menus. Select *General Settings* menu. The possible settings are displayed on the right side on the screen:
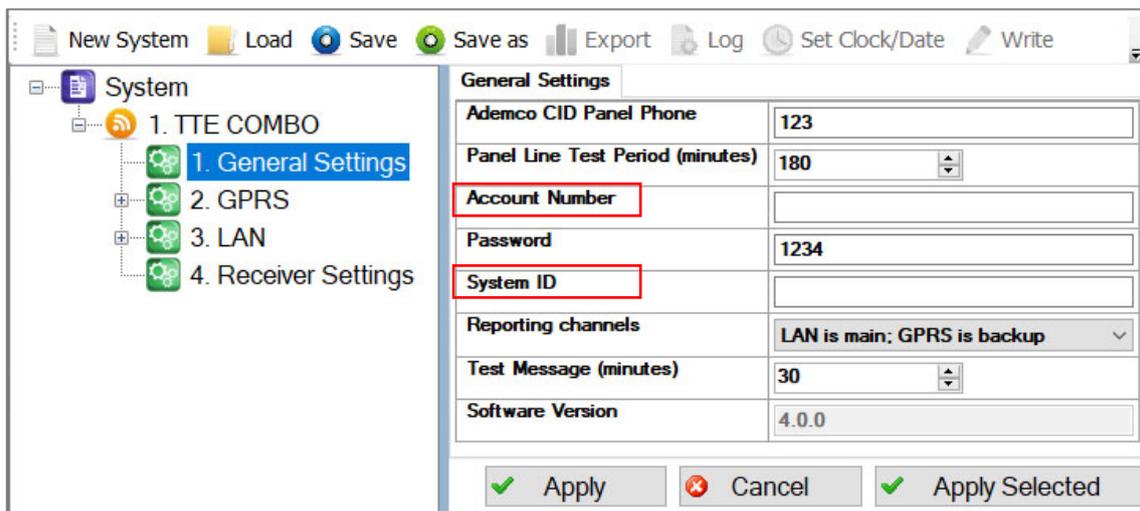
Important Note. According the used way for monitoring, there are two general approaches for programming of the **Account Number** and **System ID fields.**

      - For Monitoring stations. Enter into the fields the specific information for the site according the used software for monitoring. See the description of the fields below.

      - For AJAX SP Pro Server. Leave empty. The fields will be filled in automatically after the registration of the <u>TTE Combo as standalone device</u> to a User account at AJAX WEB.

Description of the fields

- ***"Ademco CID Panel Phone"*** – Enter a phone number for connection between the control panel and TTE Combo. The phone number can be up to 16 digits long, as spaces, letters and special symbols are not allowed.

> **Note:** *You must set the same phone number to the control panel, in the digital communicator programming menus. The "Contact ID (CID)" communication protocol must be set for reporting in the digital communicator menus also.*
>
> **Useful Tip:** *In case of connection to* **Eclipse control panel,** *enter into engineering programming menus* **"8. COMMUNICATION – 1. DIGITAL COMM – 5. PHONES – 1.PHONE – 1.PHONE NUMBER"** *and set the same phone number set in the "Ademco CID Panel Phone" field. Save and enter in the next submenu* **"2.PROTOCOL"** *to set "CID" type for the communication protocol.*

- ***"Panel Line Test Period"*** – Enter a time interval in minutes (from 2 to 10080) for periodic test of the connection between the control panel and TTE Combo module. The purpose of the test is to check the physical connection presence between terminals "A" and "B" on the digital communicator of the control panel and "ALARM PANEL" terminals of TTE Combo – see item 2.1 Connection to Burglary Alarm Control Panel.

  In case of trouble with the connection (broken line, disconnection between panel and module, absence of 220k resistor), a trouble message *"Service Required" ("YX" SIA code)* will be sent to the monitoring station. When the connection is restored the monitoring station will receive a message *"Service Completed" ("YZ" SIA code).*

  When TTE combo is used as standalone device or the testing of the connection with the control panel is not necessary, the periodic test can be disabled with setting "0" in the field.

  Example: For periodic test at every hour, enter 60; for periodic test at 24 hours – enter 1440, etc.; to disable the periodic test – enter 0.

  Useful Information: The used SIA codes and their description are presented in item 7. APPENDIX – SIA CODES.

- ***"Account number"*** - This is the number of the protected site (up to 6 digits), where the module TTE Combo is installed. In AJAX WEB, this is the number of the registered TTE Combo module.
- ***"Password"*** – User access code for reading/ writing parameters to the module via ProsTE. The default set code is 1234. To change it you must enter a new 4-digit code into the field. The code is used also when connecting to AJAX WEB and MobileTTE application.
- ***"System ID"*** –This is a unique name for identification (up to 15 symbols – digits, letters and special characters), between module and user in the monitoring software.
- ***"Reporting channels"*** – Use the drop-down menu to set the type and the way of reporting of used channels (also called media) for transmitting of events to Receiver Monitoring station/Server (AJAX SP Pro or SIA-DC09). The user can choose among several option according the application and needs.
  - *"LAN is main; GPRS is backup"* – The both communication media are used for reporting. The *Alternative reporting* is applied for transmitting of events. LAN media is the Main media for reporting and GPRS is the Backup one.
  - *"GPRS is main; LAN is backup"* – The both communication media are used for reporting. The *Alternative reporting* is applied for transmitting of events. GPRS media is the Main media for reporting and LAN is the Backup one.
  - *"Use only GPRS media"* – Only the GPRS channel is used for reporting of events.

o *"Use only LAN media"* – Only the LAN channel is used for reporting of events.
o *"Both GPRS and LAN media are main (Ver.<4.0)"* – This option can be applied for TTE combo with software version 4.0.0 and higher. The both communication media are used for reporting. The *Parallel reporting* is applied for transmitting of events. The both media are Main.

Note: *According the set reporting channels it is obligatory to set properly also the submenus "GPRS Settings" and/or "LAN Settings"!*

Definitions

- **Alternative Reporting.** *In alternative reporting, to the available communication media are set priorities for using. One of the media is set with the highest priority for using – Main, and the other(s) are set with lower priority – Backup. In case of an event in the system, it is transmitted first through the Main media and if the transmitting is successful, the event is not transmitted further. If the transmitting through the Main media is failed, the event is transmitted through the Backup media. In alternative reporting is important the events to be successfully transmitted through only one of the set communication media, starting with the Main one. The User sets the priority of the used communication media.*
- **Parallel Reporting.** *In parallel reporting, the events are transmitted through all used communication media. All reporting channels are Main in priority and are used for transmitting. If the transmitting through one of the media is failed, the incoming events will be stored in the loop buffer of the module (TTE Combo). When the transmitting through the media is restored, all the stored events will be sent. In parallel reporting is obligatory the events to be successfully transmitted through all communication media.*

Important: *In case the option "LAN is main; GPRS is backup" or "GPRS is main; LAN is backup" is set, and the module uses Alternative reporting type for transmitting of events, is applied a special internal test for availability and presence of the used media. The test is performed on every hour and its purpose is to inform the Monitoring station for possible problems with both Main and Backup media.*
In case of a problem with any of the media, a message "Communication trouble" ("YC" SIA code) will be sent to the monitoring station, as the type of the media is presented with "1" for GPRS and "2" for LAN. For example, the SIA code "YC1" means that there is problem with the used GPRS media of TTE Combo.
The restoring event is "Communication Restore" ("YK" SIA code).

- **"Test message (minutes)"** – Enter a time in minutes (from 3 to 10080) for a time period for sending test message from the module to a monitoring station. You can disable the sending of test messages with setting "0" in the field.
  Example: For sending a test message every hour, enter 60; for sending a test message every 24 hours – enter 1440, etc.
- **"Software version"** – The current software revision of the TTE Combo module. The field is not accessible for changing.

Confirm with *"Apply"* button.

3.3 GPRS Settings Menu

Select the *GPRS* menu, click on "+" icon in front of it and expand the *GPRS Settings submenu*. In the fields must be set some specific information for the mobile service provider.
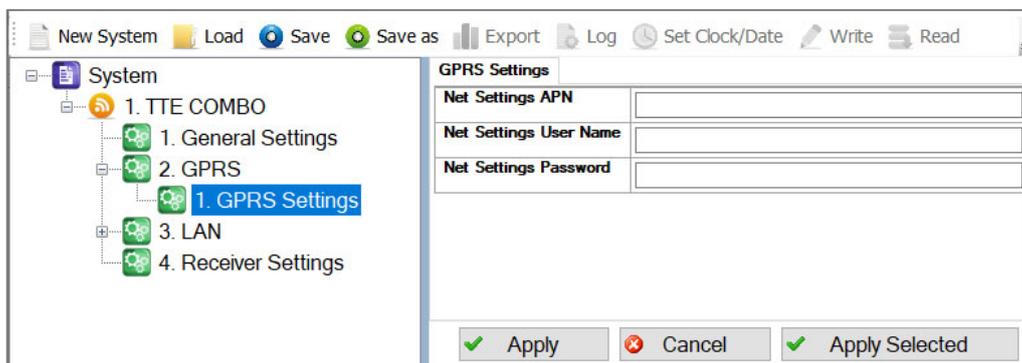
Important Note. There are two general approaches for programming of the *GPRS Settings submenu*.

- **For Monitoring stations.** Enter into the fields the specific information for the **Net Settings** of the mobile operator:
  - o *"Net APN"* – Enter the APN (Access Point Name) of the GPRS network.
  - o *"User Name"* – Enter valid user name for access to the GPRS network.
  - o *"Password"* – Enter valid password for access to the GPRS network.

- **For AJAX SP Pro Server.** Leave empty. The fields will be filled in automatically after the registration of TTE Combo module to a User account at AJAX WEB – the user sets the mobile service provider according the selected country.

3.4 LAN Settings Menu

Select the *LAN* menu, click on "+" icon in front of it and expand the *LAN Settings submenu*. You can choose between *Automatic* and *Manual* settings of the network characteristics.
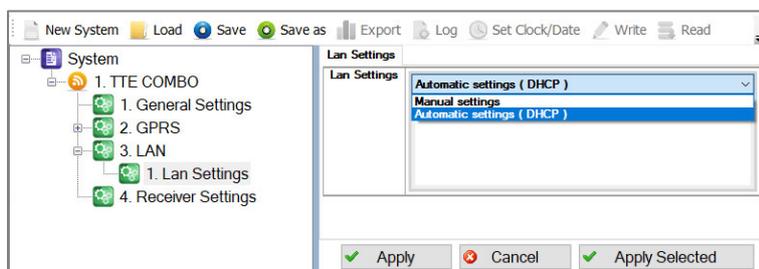
The *"Automatic Settings (DHCP)"* option is set by default; it is recommended for a network using DHCP server. In this case the Combo module will take the network settings directly from the server.

If you are not sure about your server type choose the option *"Manual Settings"* from the drop-down list and enter manually the parameters of the network – IP address, Subnet Mask and Gateway.
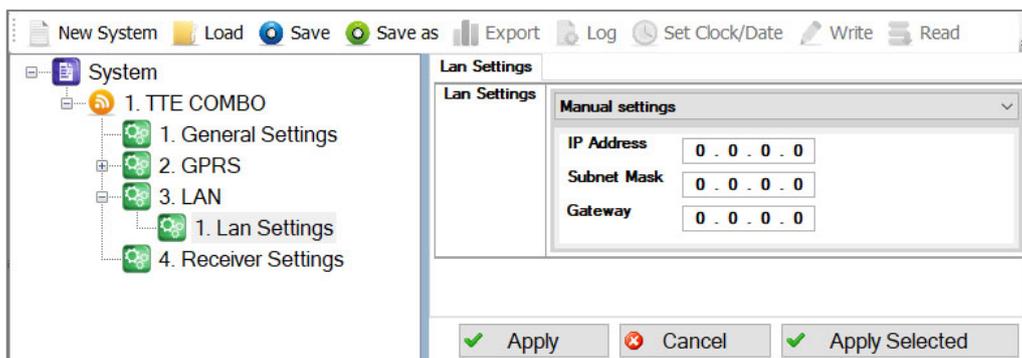
Confirm with *"Apply"* button.

3.5 Receiver Settings Menu

This is a menu for setting the options for connection with Monitoring station server (AJAX SP Pro and/or SIA-DC09). There are two sections: for *Main Receiver* and for *Backup Receiver.*

Important Note. There are two general approaches for programming of the *Main Receiver Settings* fields**.**

       - For Monitoring stations. Enter into the fields the specific information for the main receiver according the used equipment and network. See the description of the fields below.

       - For AJAX SP Pro Server. Leave the default settings. The fields for *Main Receiver* will be filled in automatically after the registration of TTE Combo module as a standalone device, to a User account at AJAX WEB.
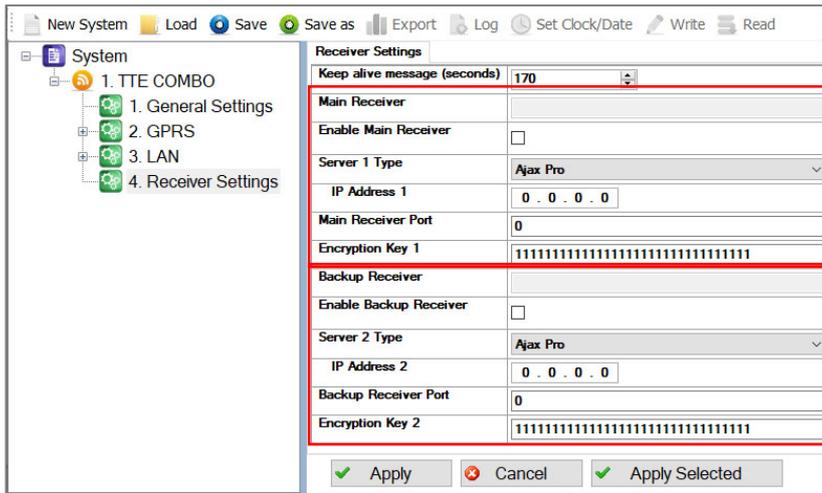
Note: The settings for the *Backup Receiver* must be set manually just in case of using a second backup server for monitoring.

Here is a short description of the fields

- *"Keep Alive Message (seconds)"* – This is a time period, in which the TTE Combo module sends its status to AJAX SP Pro server to keep the communication alive. The default set period between two messages is 170 seconds, but it can be changed according the system requirements – from 20 to 200 seconds.
- *"Main Receiver" Section* – These are the settings for the Main Receiver Server for monitoring.
  - *"Enable Main Receiver"* – Enabling the communication with the Main Receiver server for monitoring.
  - *"Server 1 Type"* – The type of the server for monitoring: *AJAX SP Pro* or *SIA-DC09 Receiver**.
  - *"IP Address 1"* – The IP address of the Main Receiver server for monitoring.
  - *"Main Receiver Port"* – The Port of the Main Receiver server for monitoring.
  - *"Encryption Key 1"* – A special security encrypted key for the connection. The key is 32-symbols long and must be set one and the same at the TTE Combo and the server for monitoring for proper operation.

    * For SIA09 Receiver the settings must be set manually. There is no option for automatic settings.

- *"Backup Receiver" Section* – These are the settings for the Backup Receiver Server for monitoring in case of the Main Receiver failure. The settings in this section have the same description as those for the Main Receiver.

Important Note
An internal algorithm for the reporting of events is applied for operation, when both Main and Backup Receivers are used.

Server Type 1	Server Type 2	Reporting Type
AJAX Pro	AJAX Pro	Alternative
AJAX Pro	SIA-DC09	Parallel
SIA-09	AJAX Pro	Parallel
SIA-DC09	SIA-DC09	Alternative

3.6 Saving a TDF File

When you complete with all parameters setting of TTE Combo you have to save the module's configuration as TDF file. TDF (Teletek Data File) is a file format for ProsTE software.

To save the current opened module configuration, press the *"Save as"* button on the ProsTE ribbon bar and browse a place on your local computer. **It is recommended in one TDF file to save only one TTE Combo module configuration.**

3.7 Writing a Configuration

To upload the settings from ProsTE to the TTE Combo module you have to *write* them to the currently connected module. Select *TTE Combo main menu* and choose using the right mouse button: *TTE Combo – Write.*
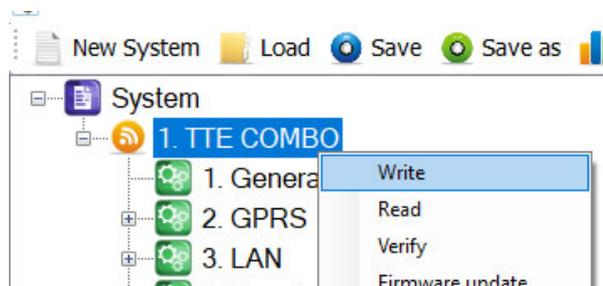
Write is a command for uploading the current ProsTE settings to the device configuration.

In the *Write* window select the USB port number to which you are physically connected and press *OK* button. The software will ask for a password. The default password is 1234:

Note: The "Password" is set at General Settings Menu - *3.2 General Settings Menu.*
A system message will inform if the writing of the new configuration in the TTE Combo module is successful.

4. AJAX WEB User Interface

AJAX WEB User Interface is a web service for monitoring of burglary alarm panels and communication modules produced by Teletek Electronics JSC. It is configured as a web application (web page) during the installation of AJAX SP Pro Cloud Server.

Ask your security provider, the monitoring company or your local distributor, whether and how you can access AJAX WEB User Interface. You can also visit www.teletek-ajax.com for review and test*.

*** Note:** All previewed examples and screens below are based on this web application.*

4.1 Creating an Account

To be able to control your TTE Combo communication module, first you must have a User account registered to AJAX WEB User Interface (hereafter referred to as AJAX WEB).

On the home page of AJAX WEB, the User must login with his personal *User Name* and *Password* or to create a new account:
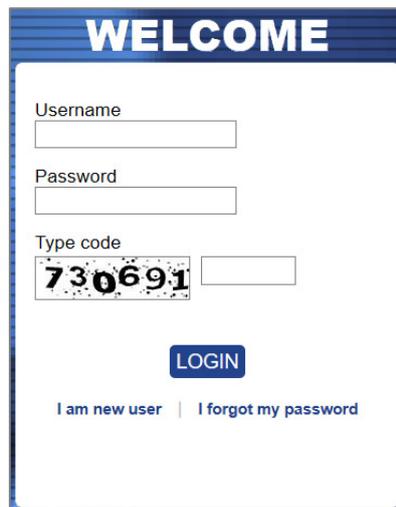
To create a new account, click on "*I am new user"* and fill in the registration form:
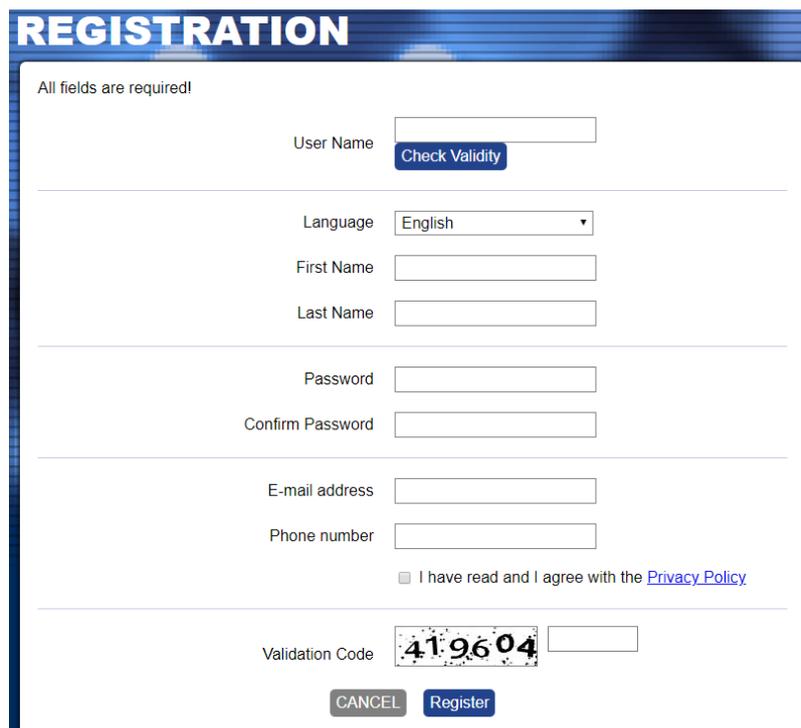
Attention: It is important to enter a valid e-mail address, so to be able to complete the registration and to receive in the future the information for the registered systems to your account at AJAX WEB.

When you complete the form, press the *Register* button. You will be returned to the main home page with the following information message:

Go to your personal e-mail box and confirm the received link. The Home page of AJAX WEB is loaded automatically and in case of successful registration you will see the following confirmation message over the login section:
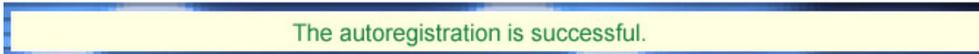
Then you can login the AJAX WEB.

Note: In case you receive a message for browser incompatibility, you have to proceed with registration pressing the option "Ignore and save this decision". Then, return to your e-mail box and confirm the received link again.

4.2 Adding a System to Account

After login, a system list for the User account is shown on. You will see your First and Last names from the registration form on the upper right corner of the screen. Next to it is the menu for editing your personal details.

For the new registered Users, the *System List* will be empty at the very beginning.
To add a system for monitoring press *New Module* button on the right.
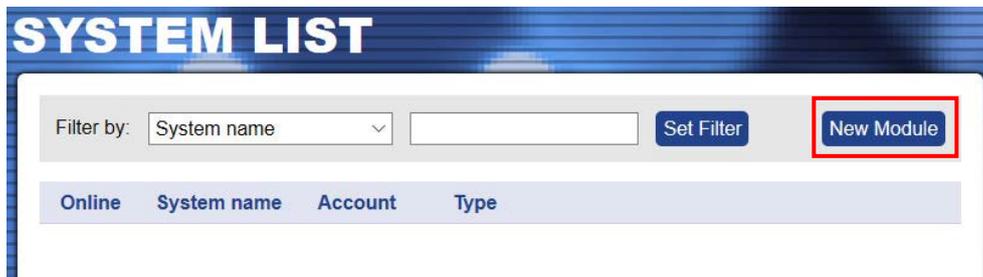
A new window *"New Module Registration"* with addition information for describing the security system is opened.

In case of registering of a *TTE Combo module* you have to make the following settings:

- ***"System Name"*** – Enter a name describing the protected site. The name can be edited or changed later.
- ***"Panel"*** – Select ***Standalone*** type from the drop-down list.
- ***"Type of connection"*** – You can choose between LAN and GPRS communication media. As a universal module TTE Combo supports operation via both of them but you can choose only one of them for access to the AJAX WEB. When the both media are enabled for operation of a TTE Combo module, it is recommended to use GPRS media for registration, because it is more versatile. Select ***GPRS*** type from the drop-down list.
- ***"Country"*** – Select from the drop-down list the country of the mobile operator.
- ***"Mobile operator"*** – According the selected country you must select the mobile service provider.
- ***"Attach TDF File"*** – Click on *Browse* and select the preliminary saved TDF file of the TTE Combo module's configuration.

TTE Combo can be registered only as a standalone device. It is recommended to use GPRS connection type.
Note: When LAN media is used the fields for Country and Mobile Operator are canceled.

Select your country and mobile service provider*.

* Important Note: *If the used mobile operator is not present in the list, choose any other, just to complete the registration. Then after loading the service TDF file in ProsTE software, you must enter the exact settings in GPRS Settings menu and then write into the TTE Combo module.*

Confirm with *Register* button.

In a new window is presented summary information about the new system registration:

New module registration

You will receive an email with instructions and settings for your device.

Please set your device with the following parameters

Primary IP   78.130.143.82
Primary Port   37000
System ID   123456@#$998784
Ecnryption key   70FD5316074159DFDE19B94C9E259F7F
Account number   998784
Operator APN   globul1
Operator username globul1
Operator password globul1

Use the following QR code to register in MobileTTE

Get TDF   Close

All this information is loaded in a service TDF file which is sent to your personal e-mail address (those you have been provided for the account registration).

This is the service information for the Mobile Operator in GPRS Settings menu of ProsTE software. It is different and depends on the selected country and the mobile operator.

This is a special QR code for directly adding the system information to MobileTTE smartphone application.

You can also directly download the service TDF file for the security system and save it to your local computer.

Press "*Get TDF*" button and download the service TDF file containing the pre-programmed information for the module and the automatically set parameters for the connection with AJAX SP Pro server (in ProsTE *"Receiver Settings" menu*).

Press *Close* button to exit the *New Module Registration* window.

At this stage your TTE Combo is added to the *System list* but it is still offline, because the settings for the connection with AJAX SP Pro server are not set to the module yet.

SYSTEM LIST

Filter by:	System name		Set Filter	New Module

Online	System name	Account	Type				
○	Office	998784	Unknown panel	Status	Offline	Edit	Delete	Share

Important note:

Every new added system must be connected (to become online) to the AJAX SP Pro server in 24 hours after the registration. That means the TTE Combo module to be programmed with the received service TDF file and connected to an available network (Ethernet or GPRS, according the registration). If, 24 hours after the registration there is no online connection between the module and the server, the registration will be automatically deleted and the Account number will be free for other new registration.

4.3 Online Connection with AJAX SP Pro Server

After the successful adding of the new registered module to the User account, the TTE Combo must be programmed with the service TDF file generated during the registration.

Open ProsTE software and connect your local computer to the TTE Combo using standard USB – Micro USB data cable. Press *Load* button on the main ribbon bar and open the downloaded earlier service TDF file for your registered system. Click on the "+" icon in front of *System* to expand the menus of TTE Combo module. You can review the *General Settings* and *Receiver Settings menus.* There will be available the automatically set parameters from the server.

Select in sequence using the right mouse button *TTE Combo – Write* to upload the settings into the module. Follow the steps as described in item 3.7 Writing a Configuration.

When the uploading is complete, go back to the AJAX WEB and login into your account.

If the online connection is established, the module will be now online, the type and its software version will be recognized and visible, and the module will be ready for remote control by user.
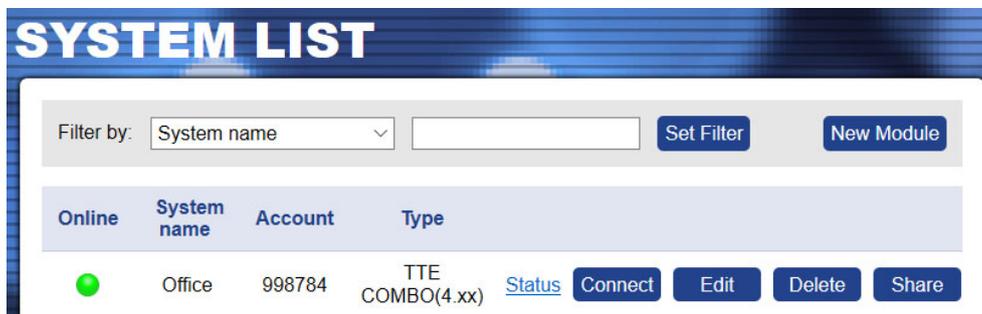
Important note:

If a connected system operates for a while, and for some reasons becomes offline, the server will keep it in the system list up to 30 days after the disconnection. After that period the system will be deleted automatically.

4.4 Operation with System

The User can perform some operation with the systems added to his account.
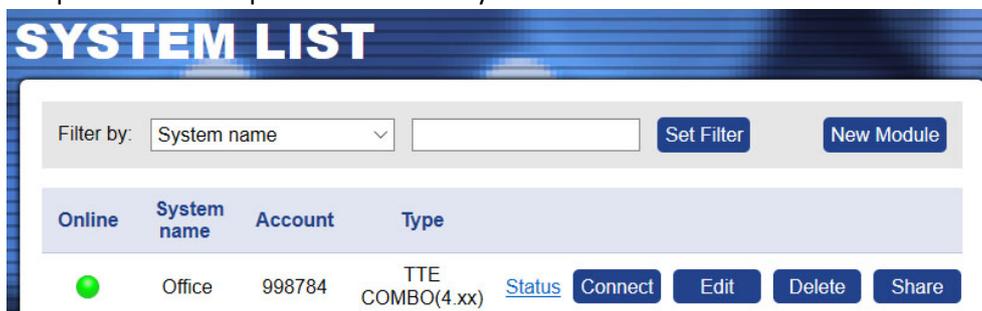
- *"Search Filter"* – On the top of the *System List section,* the User can search among the added systems to his account filtering them by: *System Name, Status (Online/Offline), Account number or Type (panel or module).* Choose from the drop-down list the option for filtering and enter into the second field word or value for searching. Press the *Set Filter* button to start.

- **"New Module"** – Adding new system to the User account – see item <u>4.2 Adding a System to Account</u>.

- **"Status"** – Click on the button to review some information about the connection between the system and the server – the system status. In the new window you will find details about the date of registration, last communication and the last user login for management and control.

System status:	
Register on:	21 Nov 2019, 2:02:48 PM
Last communication with server:	22 Nov 2019, 12:38:36 PM
Last client login:	22 Nov 2019, 12:37:51 PM
	Close

- **"Connect/Busy"** – Remote control of the TTE Combo outputs.
  Attention: Every system can be shared for operation between different users, but only one of them can access it at a time. If the system is accessed from a User, the button becomes inactive with text "Busy". That means the system is not accessible for control from other users at this time.
  The system is accessible when the button *"Connect"* is visible and active. To connect to a TTE Combo standalone module, press the button and enter the *PC ID Number* (1234 by default) – this is the password set with ProsTE – see also item <u>3.2 General Settings Menu</u>.

- **"Edit"** – Editing the name of the system and setting the type of notification messages for events received via MobileTTE. Press the button to open the window for editing:

Here you can change the name of the system.

You can use the QR code at any time for scanning and directly adding the system information to MobileTTE smartphone application.

These are special sections for setting the notification messages received via MobileTTE.

Device settings

Device name: Office

	Red Dot Notifications	Push Notifications
Alarm & Restore	☑	☑
Arm, Disarm, Bypass	☑	☑
Fire & Restore	☑	☑
Medical Alarm	☑	☑
Panic & Ambush code	☑	☑
Special Messages	☑	☑
Tamper & Restore	☑	☑
Trouble & Restore	☑	☑

Close   Save

- o **"Red Dot Notifications"** – A special mark (a red dot) alerts the User in case of occurring of an event (in the system list of MobileTTE). Check the boxes of those events for which you want to be alerted. See <u>Red Dot Notifications</u> in the User Guide.
  - o **"Push Notifications"** – Check the boxes for those events for which you want to receive a push notification messages on your smartphone. See <u>Push Notifications</u> in the User Guide.

- *"Delete"* – Deleting the system from the list and from AJAX WEB. The site will ask for confirmation. ***Note:*** *Once deleted from the list and from the AJAX WEB, the system could not be restored again. If you delete it by mistake, you have to add the system again following the steps described in* 4.2 Adding a System to Account.

- *"Share"* – Sharing the access to a system between two or more different users. To share the access, you have to know in advance the account Usernames of those Users to which you want to assign rights for operation. Press the *"Share"* button to open the *"User Assignment"* window.
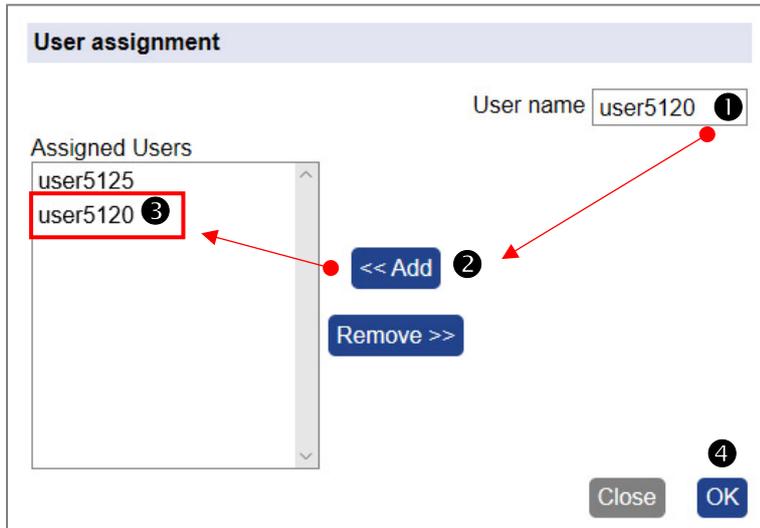
Step-by-Step Example for sharing access to a system:
1. Enter in "User name" field a real account Username registered in AJAX WEB.
2. Press "<<Add" button.
3. The name of the User will be added to the list of the Assigned Users.
4. Press "OK" button.

To remove a User from the List, select it and press *"Remove>>"* button. Then confirm with *"OK"*.

The shared system is added automatically to the user account, but without the option for sharing (for account "user5120" from the example above):
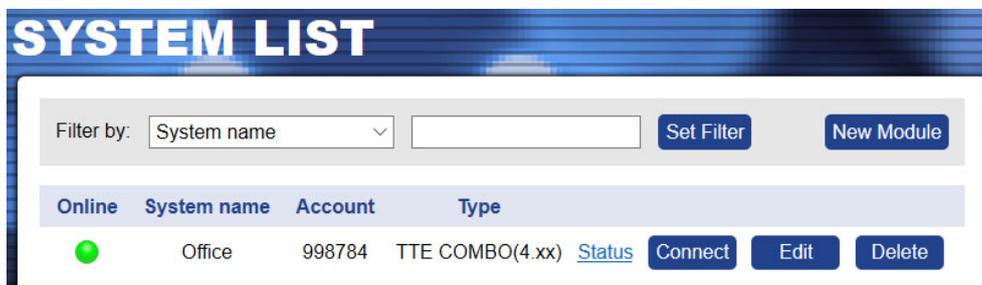
Note: The right to share a system for operation with other users, can only the User who is performed the New Module Registration procedure (the initial registration of the system) to his own account.

5. TTE Combo – Installation Summary

Here is a short list of the important steps necessary for successful connection of TTE Combo module to AJAX WEB.

- Disable the PIN protection code of the SIM card for the module and place it in the holder.
- Power on TTE Combo – from the control panel or from external power unit 9-30VDC. See also item 2.1 Connection to Burglary Alarm Control Panel.
- Read the Factory setting of TTE Combo and pre-program the phone number for connection with the panel (*Ademco CID panel number*), the *Panel line test period* and the type and the priority of used *Reporting channels* – see item 3.2 General Settings Menu. If you will use LAN as a communication media to AJAX WEB, it is recommended to leave *"Automatic Settings (DHCP)"* in LAN Settings menu.
- Save this configuration (FileName.TDF) on your local computer or laptop. You will need this file later during adding the system to AJAX WEB.
- Open AJAX WEB site and login. If you are a new user - make a registration.
- In the system list of your account press *"New module"* button and register your TTE Combo module as a standalone system.
- Save the service TDF from the registration form on your local computer or laptop.
- Open ProsTE software, connect to TTE Combo and write the service TDF file received from AJAX WEB.
- The established connection with AJAX WEB is indicated with blinking with green LED *"Main/Backup Receiver"* of TTE Combo communication module. The Online status of the system will be indicated with an active online status (green) after login the AJAX WEB.
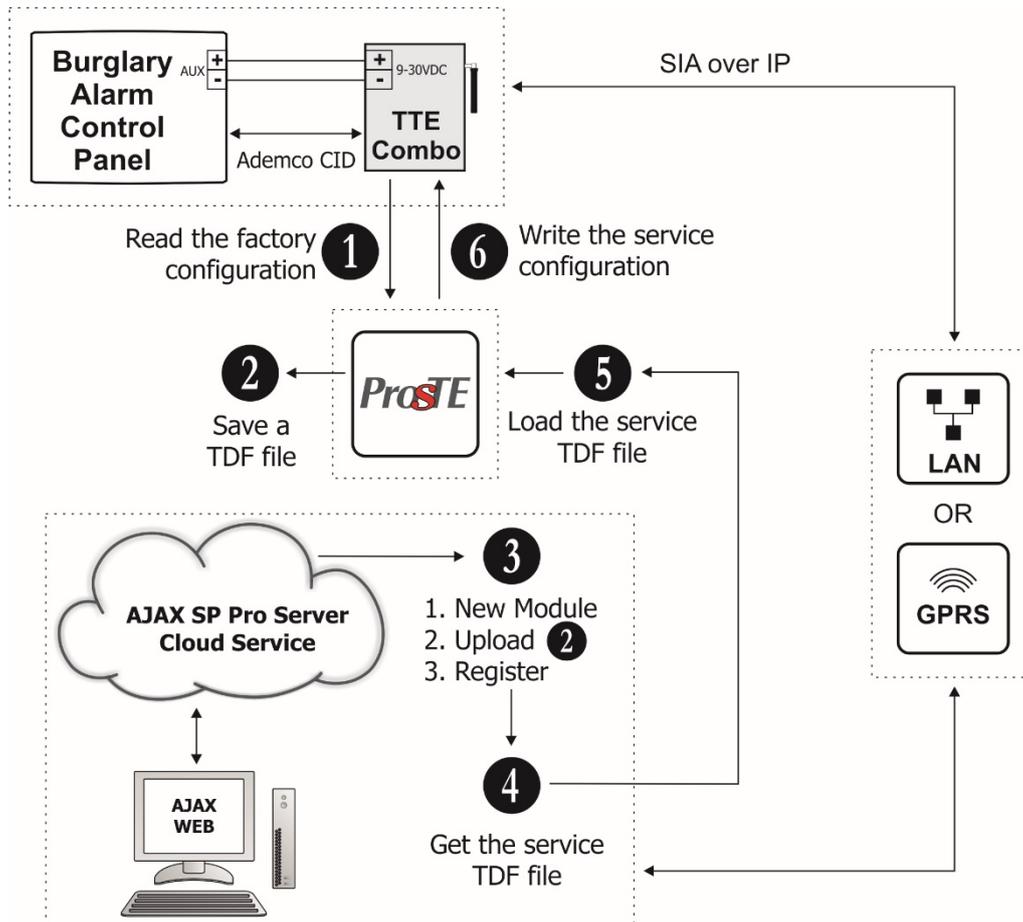
6. USER GUIDE

6.1 AJAX WEB User Interface

Using AJAX WEB interface, the user can remotely control the outputs of his TTE Combo module and to review the status of the Input (activated TAMPER).

6.1.1 Remote Access

Login in your AJAX WEB User account and press *"Connect"* button.
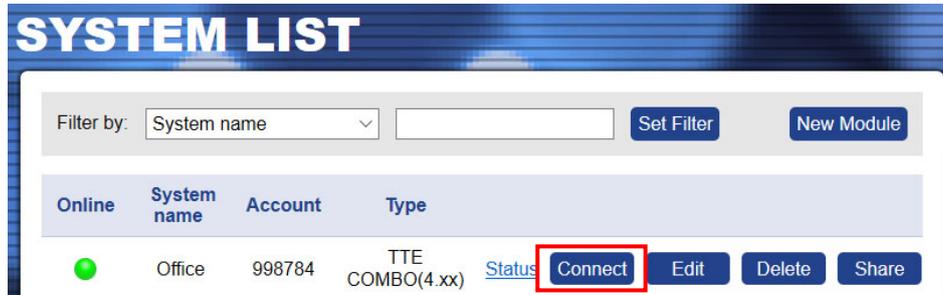
The site will ask for a Password - *PC ID Number* (1234 by default):
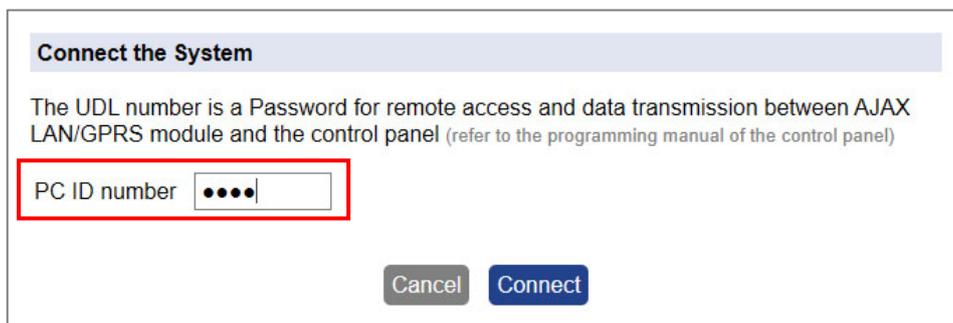
Press *"Connect"* button and wait until the connection with the system is established.

6.1.2 Main Menus

The online connection with the module provides the following activities for the User:

- **Communication Module.** Control of the TTE Combo Outputs and preview the status of the Input – see item 6.1.3 Communication Module.
- **Edit Parameters.** Menu for setting the parameters of TTE Combo module.

The unavailable menus are presented into grey; the available – into blue; and the current selected – into black colour.
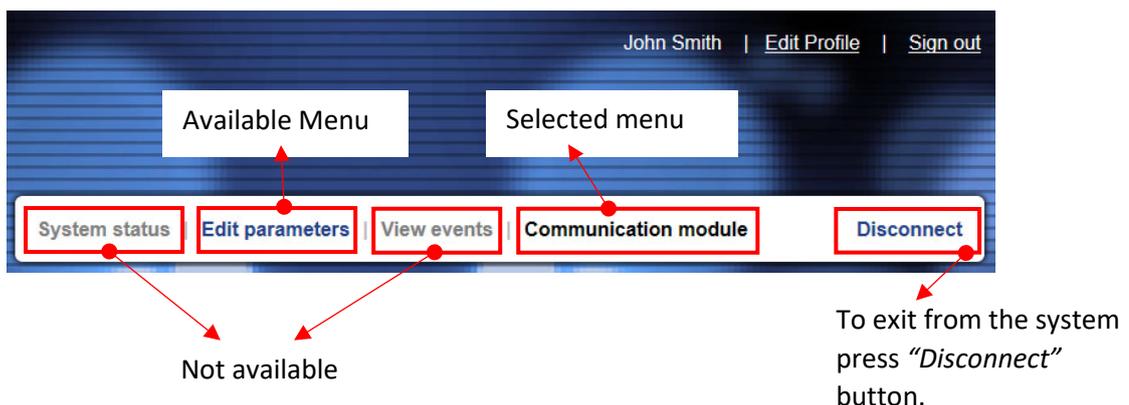
6.1.3 Communication Module

In this menu the User can review the status of the input terminal (activated TAMPER) and to control (switch ON/OFF) the outputs of TTE Combo communication module.

Description of TTE Combo Input and Outputs states:

Icon	Terminal	Description
⚪	Input	The Input is not activated. The TAMPER switch (TAMPER zone type) is closed.
	Output	The output is turned OFF (deactivated) or it is not used.
🟢	Input	The Input is activated. The TAMPER switch (TAMPER zone type) is opened and TAMPER Alarm message is sent to Monitoring station and MobileTTE (notification).
	Output	The output is turned ON (activated).

The current information for all 3 terminals (PGMs) of TTE Combo is displayed as the User can review their current status. The outputs are remotely controlled with Turn ON/OFF button. The User can set different names for every terminal according its functionality in the system – press <u>Set Name</u> button and enter a name to recognize.

The terminals are displayed with numbers following their physical order on the PCB (left to right counting).
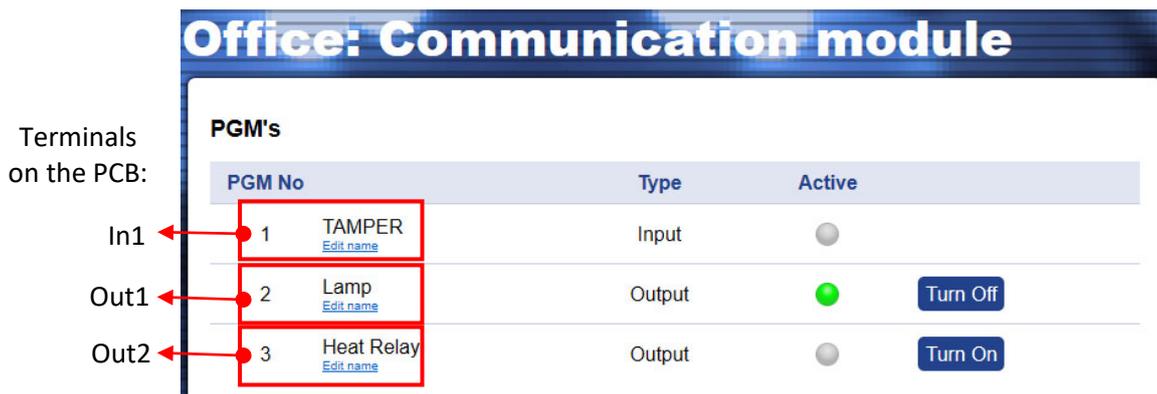
To activate the PGM output, press once the *"Turn ON"* button next to it. The status becomes *"Active"* and the button is changed to *"Turn OFF"*.

To deactivate the PGM output, press once the *"Turn OFF"* button. The status becomes *"Inactive"* and the button is changed to *"Turn ON"*.

6.1.4 Edit Parameters Menu

In this menu the User can perform programming of TTE Combo parameters same as the programming with ProsTE software. Click on *Edit Parameters menu* to enter into *System Parameters settings.*

To expand the programming menus, click on the "►" icon on the tree structure on the left. Select the menu and review the available parameters on the right.

All changes are saved with "UPLOAD" button.

Attention: To avoid problems in operation, it is recommended the settings in this menu to be done only by a technician trained in installation of TTE Combo module!
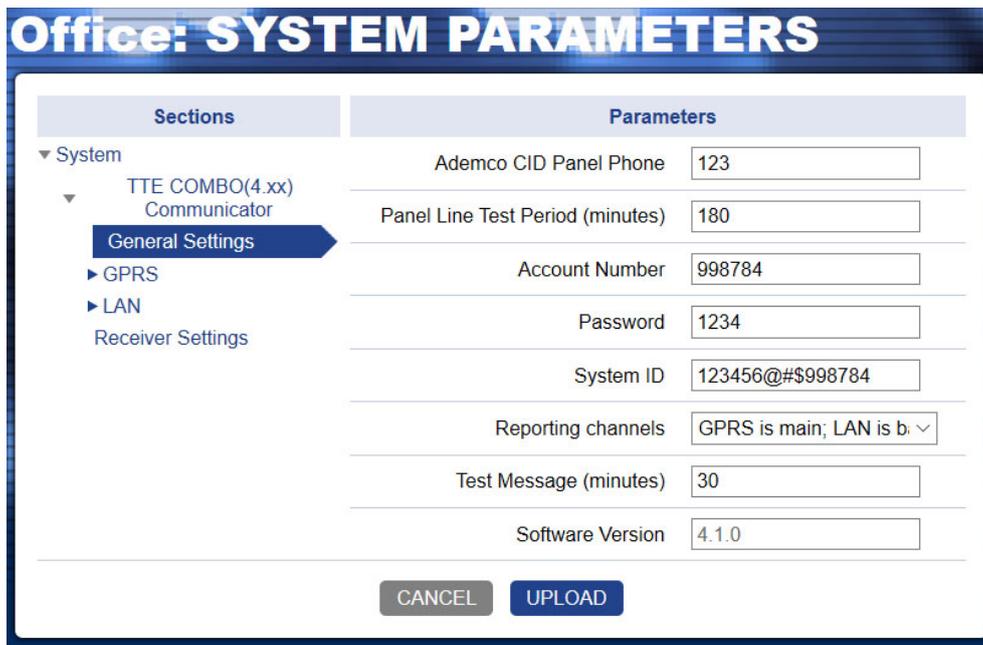
6.2 Mobile TTE Smartphone Application

Mobile TTE is a smart phone application suitable for remote management of burglary control panels and modules produced by Teletek Electronics JSC. The application is compatible with Android and iOS platforms and can be downloaded directly from Google Play and App Store, or you can use the QR codes below:

6.2.1 Adding a System to Mobile TTE
Run the Mobile TTE application and Press *Menu – Add System*.
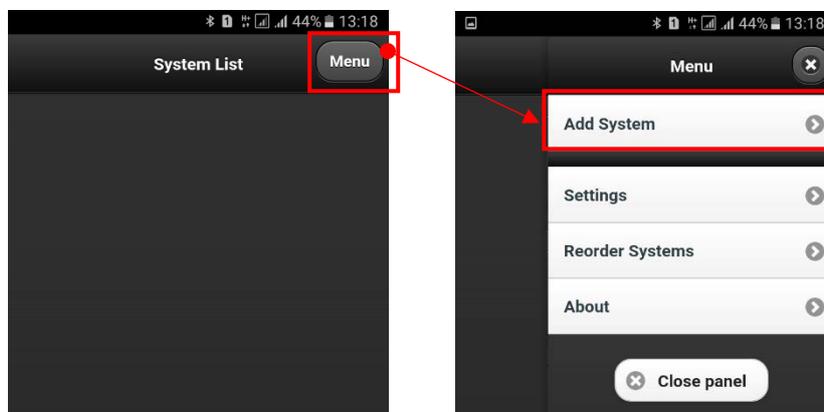
Then you have to choose the way of adding the system. You can add the information manually or to scan the QR code received after registration of the system in AJAX WEB (recommended).

Choose the button to add the settings for system manually.

You will be asked to enter:
- your account username and password in AJAX WEB;
- a system attached to your AJAX WEB account;
- UDL (PC ID) code (1234 by default).
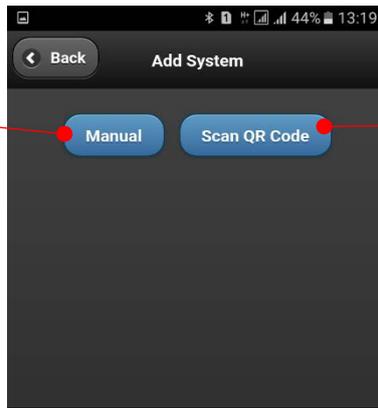
Open the e-mail from the registration of the system and scan the received QR code after the registration.

The system will be added to the *System List* of MobileTTE. If the system is online and ready for operation that will be displayed with text in green. If there is a red dot in the upper left corner, that means there is a system event (the red dot notifications are set in AJAX WEB user account for every of the attached system and also edited in MobileTTE Settings Menu).

6.2.2 Connection to a System

To connect with the system – TTE Combo module standalone device, press the button and wait until the connection is established.

When you are connecting to a system for the first time, you will be asked to enter a User code – this is the Password code set with ProsTE – see item 3.2 General Settings Menu .
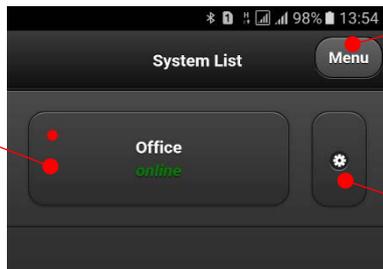
Press for more settings in MobileTTE application – language of the menus and reordering of the systems in the list.

Press to connect with the system.

Press to edit the system parameters and account settings or to delete the system from the list.

6.2.3 Operation with outputs

After entering the available outputs for management are loaded on the screen. The outputs are presented with their names set in AJAX WEB with an additional service name "Module". The status of the output is changed with pressing ON/OFF button.

Note: The Outputs are appeared with the numbers following their physical order on the PCB!

Out1
(on the PCB)

Out2
(on the PCB)
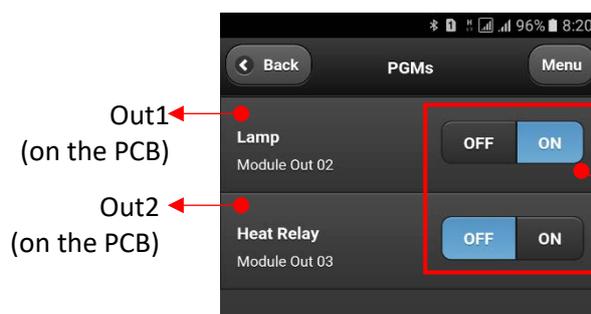
Control buttons:
- Output is switched ON.
- Output is switched OFF.

6.2.4 System Main Menu

There are some important settings for the system. After connection press "*Menu*" button in the right upper corner of the screen. Then choose *Settings.*
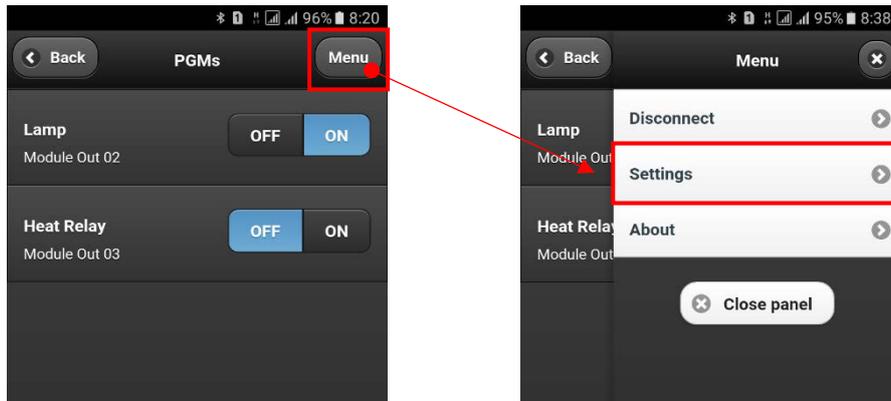
The general functions of MobileTTE is to provide to the user remote control of the outputs of TTE Combo communication module, and to receive notification messages in case of alarm or trouble events and the arming status of the connected burglary alarm panel.

The receiving of notification messages is disabled by default. The enabling of this function is in the *Settings* menu of the respective system.
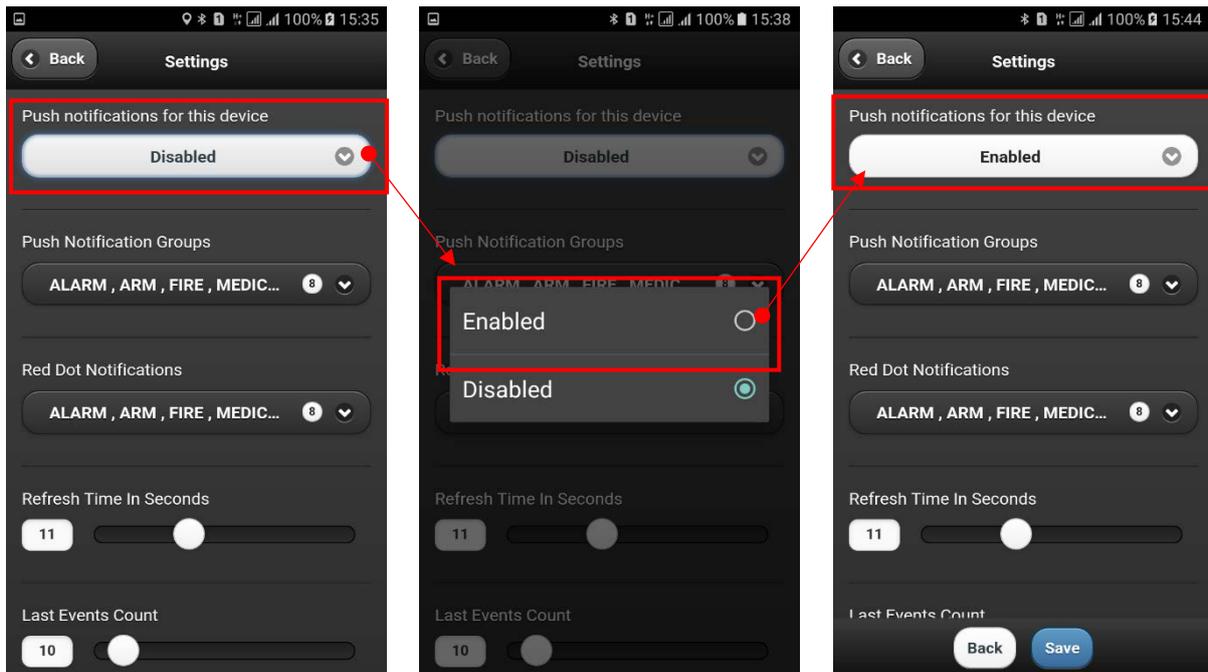
The receiving of notification messages is enabled when the *"Enabled"* setting is visible in the section.

In this menu the User can also set the type of the events for which to receive notifications. Select the *Push Notification Groups* and select those type of events for which you want to be informed.
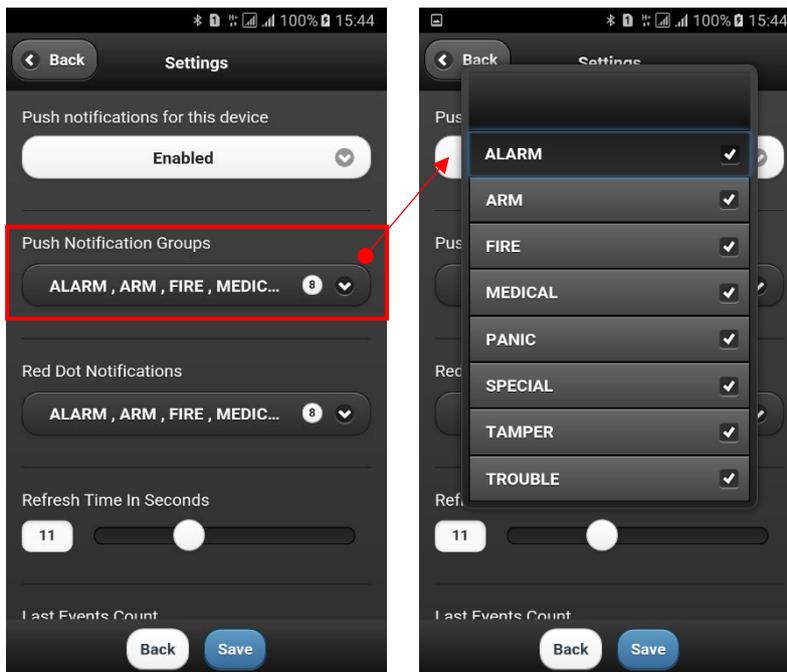
By default, all types of events are enabled (it depends also of the settings in AJAX WEB). The number of set notifications will be visible on the screen.

Note, these are events for the status of the connected burglary control panel to TTE Combo module (via digital communicator).

The notifications (for the status of the control panel) have the following description:

Event	Description	Sound type
ALARM	Notification in case of burglary alarm in the system.	Special alarm tone*
ARM	Notification in case of arming (Full, Stay, Sleep) and disarming.	General notification tone
FIRE	Notification in case of fire alarm in the system.	
MEDICAL	Notification in case of medical alarm in the system. (Activated medical type zone or panic button.)	
PANIC	Notification in case of panic alarm in the system. (Activated panic type zone or panic button.)	
SPECIAL	Notification in case of other special events in the system like resetting of the system, time changed, test, etc. The special messages are programmed in the Eclipse panel engineering menus.	
TAMPER	Notification in case of open tamper in the system (panel or device).	
TROUBLE	Notification in case of trouble or fault event in the system, for example "220 AC Lost", "Battery Lost", etc.	

*Note: Some smartphone models do not support the second alarm tone for notifications. In case the receiving of notifications in enabled, but you do not receive them, is necessary to check your smartphone settings and to enable also the notifications from installed applications programs.

In *Settings* menu the user can also set the visualization of events via red dot in the system list. Select the *Red Dot Notification* and select those type of events for which you want to be informed.
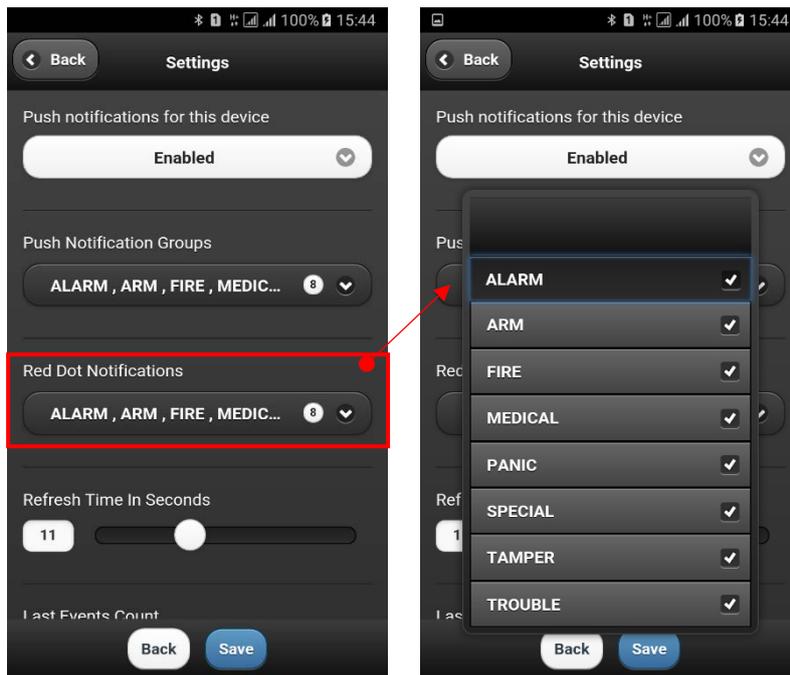
You can find the description of the events in the table above.

It is recommended to leave the default settings for *Refresh time* and *Last Events Count* because they are optimal for the application.

Move down to the bottom of *Settings* menu. There is an option to select different language of your MobileTTE smartphone application.
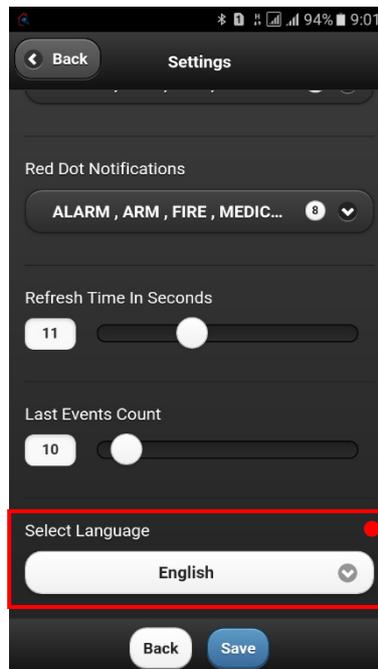
Change the language of the MobileTTE application menus. *Note: This setting will not affect the set names of the PGMs in the system.*

To exit from *Settings menu*, press *Save* button to confirm changes, or *Back* button to reject them.
To exit from MobileTTE application press the *Back* button of your smartphone.
The currently installed version of MobileTTE on your smartphone is reviewed with *About* button.

7. APPENDIX – SIA CODES

SIA Code	Event Code	Description	Address Field
AN	Analog Restoral	An analog fire sensor has been restored to normal operation.	Zone or point
AR	AC Restoral	AC power of the control panel has been restored.	Unused
AS	Analog Service	An analog fire sensor needs to be cleaned or calibrated.	Zone or point
AT	AC Trouble	AC power of the control panel has been failed.	Unused
BA	Burglary Alarm	Burglary zone has been violated while armed.	Zone or point
BB	Burglary Bypass	Burglary zone has been bypassed.	Zone or point
BC	Burglary Cancel	Alarm has been cancelled by authorized user.	User number
BD	Swinger Trouble	A non-fire zone has been violated after a Swinger Shutdown (short intermittent) on the zone.	Zone or point
BE	Swinger Trouble Restore	A non-fire zone restores to normal from a Swinger (short intermittent) Trouble state.	Zone or point
BH	Burglary Alarm Restore	Alarm condition eliminated.	Zone or point
BJ	Burglary Trouble Restore	Trouble condition eliminated.	Zone or point
BM	Burglary Alarm - Cross Point	Burglary alarm w/cross point also in alarm - alarm verified.	Zone or point
BR	Burglary Restoral	Alarm/trouble condition has been eliminated.	Zone or point
BS	Burglary Supervisory	Unsafe intrusion detection system condition.	Zone or point
BT	Burglary Trouble	Burglary zone disabled by fault.	Zone or point
BU	Burglary Unbypass	Zone bypass has been removed.	Zone or point
BV	Burglary Verified	A burglary alarm has occurred and been verified within programmed conditions (zone or point not sent).	Area number
BX	Burglary Test	Burglary zone activated during testing.	Zone or point
CA	Automatic Closing	System armed automatically.	Area number
CD	Closing Delinquent	The system has not been armed for a programmed amount of time.	Area number
CE	Closing Extend	Extend closing time.	User number
CF	Forced Closing	System armed; some zones not ready.	User number
CG	Close Area	System has been partially armed.	Area number
CI	Fail to Close	An area has not been armed at the end of the closing window.	Area number
CJ	Late Close	An area was armed after the closing window.	User number
CK	Early Close	An area was armed before the closing window.	User number
CL	Closing Report	System armed, normal.	User number
CP	Automatic Closing	System armed automatically.	User number
CQ	Remote Closing	The system was armed from a remote location.	User number
CR	Recent Closing	An alarm occurred within five minutes after the system was closed.	User number
CS	Closing Keyswitch	Account has been armed by keyswitch.	Zone or point
CT	Late to Open	System was not disarmed on time.	Area number
CW	Was Force Armed	Header for a force armed session, forced point msg. may follow.	Area number
CZ	Point Closing	A point, as opposed to a whole area or account, has closed.	Zone or point
DC	Access Closed	Access to all users prohibited.	Door number
DD	Access Denied	Access denied, unknown code.	Door number

SIA Code	Event Code	Description	Address Field
DF	Door Forced	Door opened without access request.	Door number
DG	Access Granted	Door access granted.	Door number
DK	Access Lockout	Access denied, known code.	Door number
DO	Access Open	Access to authorized users allowed.	Door number
DR	Door Restoral	Access alarm/trouble condition eliminated.	Door number
DS	Door Station	Identifies door for next report.	Door number
DT	Access Trouble	Access system trouble.	Unused
DU	Dealer ID	Dealer ID number.	Dealer ID
EA	Exit Alarm	An exit zone remained violated at the end of the exit delay period.	Zone or point
EE	Exit Error	An exit zone remained violated at the end of the exit delay period.	User number
EJ	Expansion Tamper Restore	Expansion device tamper restoral.	Expansion device number
EM	Expansion Device Missing	Expansion device missing.	Expansion device number
EN	Expansion Missing Restore	Expansion device communications re-established.	Expansion device number
ER	Expansion Restoral	Expansion device trouble eliminated.	Expander number
ES	Expansion Device Tamper	Expansion device enclosure tamper.	Expansion device number
ET	Expansion Trouble	Expansion device trouble.	Expander number
FA	Fire Alarm	Fire condition detected.	Zone or point
FB	Fire Bypass	Zone has been bypassed.	Zone or point
FH	Fire Alarm Restore	Alarm condition eliminated.	Zone or point
FI	Fire Test Begin	The transmitter area's fire test has begun.	Area number
FJ	Fire Trouble Restore	Trouble condition eliminated.	Zone or point
FK	Fire Test End	The transmitter area's fire test has ended.	Area number
FQ	Fire Supervisory Trouble Restore	A fire supervisory zone that was in trouble condition has now restored to normal.	Zone or point
FR	Fire Restoral	Alarm/trouble condition has been eliminated.	Zone or point
FS	Fire Supervisory	Unsafe fire detection system condition.	Zone or point
FT	Fire Trouble	Zone disabled by fault.	Zone or point
FU	Fire Unbypass	Bypass has been removed.	Zone or point
FX	Fire Test	Fire zone activated during test.	Zone or point
FY	Missing Fire Trouble	A fire point is now logically missing.	Zone or point
GA	Gas Alarm	Gas alarm condition detected.	Zone or point
GB	Gas Bypass	Zone has been bypassed.	Zone or point
GH	Gas Alarm Restore	Alarm condition eliminated.	Zone or point
GJ	Gas Trouble Restore	Trouble condition eliminated.	Zone or point
GR	Gas Restoral	Alarm/trouble condition has been eliminated.	Zone or point
GS	Gas Supervisory	Unsafe gas detection system condition.	Zone or point
GT	Gas Trouble	Zone disabled by fault.	Zone or point
GU	Gas Unbypass	Bypass has been removed.	Zone or point
GX	Gas Test	Zone activated during test.	Zone or point
HA	Holdup Alarm	Silent alarm, user under duress.	Zone or point

SIA Code	Event Code	Description	Address Field
HB	Holdup Bypass	Zone has been bypassed.	Zone or point
HH	Holdup Alarm Restore	Alarm condition eliminated.	Zone or point
HJ	Holdup Trouble Restore	Trouble condition eliminated.	Zone or point
HR	Holdup Restoral	Alarm/trouble condition has been eliminated.	Zone or point
HS	Holdup Supervisory	Unsafe holdup system condition.	Zone or point
HT	Holdup Trouble	Zone disabled by fault.	Zone or point
HU	Holdup Unbypass	Bypass has been removed.	Zone or point
JA	User Code Tamper	Too many unsuccessful attempts have been made to enter a user ID.	Area number
JD	Date Changed	The date was changed in the transmitter/receiver.	User number
JH	Holiday Changed	The transmitter's holiday schedule has been changed.	User number
JL	Log Threshold	The transmitter's log memory has reached its threshold level.	Unused
JO	Log Overflow	The transmitter's log memory has overflowed.	Unused
JR	Schedule Executed	An automatic scheduled event was executed.	Area number
JS	Schedule Changed	An automatic schedule was changed.	User number
JT	Time Changed	The time was changed in the transmitter/receiver.	User number
JV	User Code Changed	A user's code has been changed.	User number
JX	User Code Deleted	A user's code has been removed.	User number
KA	Heat Alarm	High temperature detected on premise.	Zone or point
KB	Heat Bypass	Zone has been bypassed.	Zone or point
KH	Heat Alarm Restore	Alarm condition eliminated.	Zone or point
KJ	Heat Trouble Restore	Trouble condition eliminated.	Zone or point
KR	Heat Restoral	Alarm/trouble condition has been eliminated.	Zone or point
KS	Heat Supervisory	Unsafe heat detection system condition.	Zone or point
KT	Heat Trouble	Zone disabled by fault.	Zone or point
KU	Heat Unbypass	Bypass has been removed.	Zone or point
LB	Local Program	Begin local programming.	Unused
LD	Local Program Denied	Access code incorrect.	Unused
LE	Listen-in Ended	The listen-in session has been terminated.	Unused
LF	Listen-in Begin	The listen-in session with the RECEIVER has begun.	Unused
LR	Phone Line Restoral	Phone line restored to service.	Line number
LS	Local Program Success	Local programming successful.	Unused
LT	Phone Line Trouble	Phone line trouble report.	Line number
LU	Local Program Fail	Local programming unsuccessful.	Unused
LX	Local Programming Ended	A local programming session has been terminated.	Unused
MA	Medical Alarm	Emergency assistance request.	Zone or point
MB	Medical Bypass	Zone has been bypassed.	Zone or point
MH	Medical Alarm Restore	Alarm condition eliminated.	Zone or point
MJ	Medical Trouble Restore	Trouble condition eliminated.	Zone or point
MR	Medical Restoral	Alarm/trouble condition has been eliminated.	Zone or point
MS	Medical Supervisory	Unsafe system condition exists.	Zone or point
MT	Medical Trouble	Zone disabled by fault.	Zone or point
MU	Medical Unbypass	Bypass has been removed.	Zone or point

SIA Code	Event Code	Description	Address Field
NA	No Activity	There has been no zone activity for a programmed amount of time.	Zone number
NF	Forced Perimeter Arm	Some zones/points not ready.	Area number
NL	Perimeter Armed	An area has been perimeter armed.	Area number
OA	Automatic Opening	System has disarmed automatically	Area number
OC	Cancel Report	Untyped zone cancel.	User number
OG	Open Area	System has been partially disarmed.	Area number
OI	Fail to Open	An area has not been armed at the end of the opening window.	Area number
OJ	Late Open	An area was disarmed after the opening window.	User number
OK	Early Open	An area was disarmed before the opening window.	User number
OP	Opening Report	Account was disarmed.	User number
OQ	Remote Opening	The system was disarmed from a remote location.	User number
OR	Disarm From Alarm	Account in alarm was reset/disarmed.	User number
OS	Opening Keyswitch	Account has been disarmed by keyswitch.	Zone or point
OT	Late To Close	System was not armed on time.	User number
OZ	Point Opening	A point, rather than a full area or account, disarmed.	Zone or point
PA	Panic Alarm	Emergency assistance request, manually activated.	Zone or point
PB	Panic Bypass	Panic zone has been bypassed.	Zone or point
PH	Panic Alarm Restore	Alarm condition eliminated.	Zone or point
PJ	Panic Trouble Restore	Trouble condition eliminated.	Zone or point
PR	Panic Restoral	Alarm/trouble condition has been eliminated.	Zone or point
PS	Panic Supervisory	Unsafe system condition exists.	Zone or point
PT	Panic Trouble	Zone disabled by fault.	Zone or point
PU	Panic Unbypass	Panic zone bypass has been removed.	Zone or point
QA	Emergency Alarm	Emergency assistance request.	Zone or point
QB	Emergency Bypass	Zone has been bypassed.	Zone or point
QH	Emergency Alarm Restore	Alarm condition has been eliminated.	Zone or point
QJ	Emergency Trouble Restore	Trouble condition has been eliminated.	Zone or point
QR	Emergency Restoral	Alarm/trouble condition has been eliminated.	Zone or point
QS	Emergency Supervisory	Unsafe system condition exists.	Zone or point
QT	Emergency Trouble	Zone disabled by fault.	Zone or point
QU	Emergency Unbypass	Bypass has been removed.	Zone or point
RA	Remote Programmer Call Failed	Transmitter failed to communicate with the remote programmer.	Unused
RB	Remote Program Begin	Remote programming session initiated.	Unused
RC	Relay Close	A relay has energized.	Relay number
RD	Remote Program Denied	Access passcode incorrect.	Unused
RN	Remote Reset	A TRANSMITTER was reset via a remote programmer.	Unused
RO	Relay Open	A relay has de-energized.	Relay number
RP	Automatic Test	Automatic communication test report.	Unused
RR	Power Up	System lost power, is now restored.	Unused
RS	Remote Program Success	Remote programming successful.	Unused
RT	Data Lost	Dialer data lost, transmission error.	Line number
RU	Remote Program Fail	Remote programming unsuccessful.	Unused

SIA Code	Event Code	Description	Address Field
RX	Manual Test	Manual communication test report.	User number
SA	Sprinkler Alarm	Sprinkler flow condition exists.	Zone or point
SB	Sprinkler Bypass	Sprinkler zone has been bypassed.	Zone or point
SH	Sprinkler Alarm Restore	Alarm condition eliminated.	Zone or point
SJ	Sprinkler Trouble Restore	Trouble condition eliminated.	Zone or point
SR	Sprinkler Restoral	Alarm/trouble condition has been eliminated.	Zone or point
SS	Sprinkler Supervisory	Unsafe sprinkler system condition.	Zone or point
ST	Sprinkler Trouble	Zone disabled by fault.	Zone or point
SU	Sprinkler Unbypass	Sprinkler zone bypass has been removed.	Zone or point
TA	Tamper Alarm	Opened TAMPER at TTE Combo module (IN1 Terminal).	Zone or point
TB	Tamper Bypass	Tamper detection has been bypassed.	Zone or point
TE	Test End	Communicator restored to operation.	Unused
TH	Tamper Alarm Restore	TAMPER Restored at TTE Combo module (IN1 Terminal).	Zone or point
TP	Walk Test Point	This point was tested during a Walk Test.	Point number
TR	Tamper Restoral	Alarm equipment enclosure has been closed.	Zone or point
TS	Test Start	Communicator taken out of operation.	Unused
TU	Tamper Unbypass	Tamper detection bypass has been removed.	Zone or point
TX	Test Report	An unspecified (manual or automatic) communicator test.	Unused
UA	Untyped Zone Alarm	Alarm condition from zone of unknown type.	Zone or point
UB	Untyped Zone Bypass	Zone of unknown type has been bypassed.	Zone or point
UH	Untyped Alarm Restore	Alarm condition eliminated.	Zone or point
UJ	Untyped Trouble Restore	Trouble condition eliminated.	Zone or point
UR	Untyped Zone Restoral	Alarm/trouble condition eliminated from zone of unknown type.	Zone or point
US	Untyped Zone Supervisory	Unsafe condition from zone of unknown type.	Zone or point
UT	Untyped Zone Trouble	Trouble condition from zone of unknown type.	Zone or point
UU	Untyped Zone Unbypass	Bypass on zone of unknown type has been removed.	Zone or point
UX	Undefined	An undefined alarm condition has occurred.	Unused
UY	Untyped Missing Trouble	A point or device which was not armed is now logically missing.	Zone or point
UZ	Untyped Missing Alarm	A point or device which was armed is now logically missing.	Zone or point
VI	Printer Paper In	TRANSMITTER or RECEIVER paper in.	Printer number
VO	Printer Paper Out	TRANSMITTER or RECEIVER paper out.	Printer number
VR	Printer Restore	TRANSMITTER or RECEIVER trouble restored.	Printer number
VT	Printer Trouble	TRANSMITTER or RECEIVER trouble.	Printer number
VX	Printer Test	TRANSMITTER or RECEIVER test.	Printer number
VY	Printer Online	RECEIVER'S printer is now online.	Unused
VZ	Printer Offline	RECEIVER'S printer is now offline.	Unused
WA	Water Alarm	Water detected at protected premises.	Zone or point
WB	Water Bypass	Water detection has been bypassed.	Zone or point
WH	Water Alarm Restore	Water alarm condition eliminated.	Zone or point
WJ	Water Trouble Restore	Water trouble condition eliminated.	Zone or point
WR	Water Restoral	Water alarm/trouble condition has been eliminated.	Zone or point

SIA Code	Event Code	Description	Address Field
WS	Water Supervisory	Water unsafe water detection system condition.	Zone or point
WT	Water Trouble	Water zone disabled by fault.	Zone or point
WU	Water Unbypass	Water detection bypass has been removed.	Zone or point
XE	Extra Point	Panel has sensed an extra point not specified for this site.	Point number
XF	Extra RF Point	Panel has sensed an extra RF point not specified for this site.	Point number
XH	RF Interference Restoral	A radio device is no longer detecting RF Interference.	Receiver number
XI	Sensor Reset	A user has reset a sensor.	Zone or point
XQ	RF Interference	A radio device is detecting RF Interference.	Receiver number
XR	Transmitter Battery Restoral	Low battery has been corrected.	Zone or point
XT	Transmitter Battery Trouble	Low battery in wireless transmitter.	Zone or point
XW	Forced Point	A point was forced out of the system at arm time.	Zone or point
YA	Bell Fault	A trouble condition has been detected on a Local Bell, Siren, or Annunciator.	Unused
YB	Busy Seconds	Percent of time receiver's line card is on-line.	Line card number
YC	Communications Trouble	Problem with Main or Backup communication media. *Example: "YC1"- Problem with GPRS media; "YC2"- Problem with LAN media. The type of the media and the priority of transmitting is set in General Settings menu.*	1 - GPRS 2 - LAN
YD	Receiver Line Card Trouble	A line card identified by the passed address is in trouble.	Line card number
YE	Receiver Line Card Restored	A line card identified by the passed address is restored.	Line card number
YF	Parameter Checksum Fail	System data corrupted.	Unused
YG	Parameter Changed	A TRANSMITTER'S parameters have been changed.	Unused
YH	Bell Restored	A trouble condition has been restored on a Local Bell, Siren, or Annunciator.	Unused
YI	Overcurrent Trouble	An Expansion Device has detected an overcurrent condition.	Unused
YJ	Overcurrent Restore	An Expansion Device has restored from an overcurrent condition.	Unused
YK	Communications Restore	The transmitting of messages via Main or Backup media is Restored. *Example: "YK1"- GPRS communication media restored; "YK2"- LAN communication media restored.*	1 - GPRS 2 - LAN
YM	System Battery Missing	TRANSMITTER/RECEIVER battery is missing.	Unused
YN	Invalid Report	TRANSMITTER has sent a packet with invalid data.	Unused
YO	Unknown Message	Impossible translation of the received CID event *Example: "YO1205" – the translation of CID 1205 is missing.*	CID code
YP	Power Supply Trouble	TRANSMITTER/RECEIVER has a problem with the power supply.	Unused
YQ	Power Supply Restored	TRANSMITTER'S/RECEIVER'S power supply has been restored.	Unused
YR	System Battery Restoral	Low battery has been corrected.	Unused
YS	Communications Trouble	RECEIVER and TRANSMITTER.	Unused
YT	System Battery Trouble	Low battery in control/communicator.	Unused

SIA Code	Event Code	Description	Address Field
YW	Watchdog Reset	The TRANSMITTER created an internal reset.	Unused
YX	Service Required	Problem with the connection to the control panel – line is broken or the phone device terminals are not terminated with 220k resistor - 2.1 Connection to Burglary Alarm Control Panel.	Unused
YY	Status Report	This is a header for an account status report transmission.	Unused
YZ	Service Completed	Connection with the control panel is restored.	Unused
ZA	Freeze Alarm	Low temperature detected at premises.	Zone or point
ZB	Freeze Bypass	Low temperature detection has been bypassed.	Zone or point
ZH	Freeze Alarm Restore	Alarm condition eliminated.	Zone or point
ZJ	Freeze Trouble Restore	Trouble condition eliminated.	Zone or point
ZR	Freeze Restoral	Alarm/trouble condition has been eliminated.	Zone or point
ZS	Freeze Supervisory	Unsafe freeze detection system condition.	Zone or point
ZT	Freeze Trouble	Zone disabled by fault.	Zone or point
ZU	Freeze Unbypass	Low temperature detection bypass removed.	Zone or point

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