Teletek electronics

BRAVO

Wireless Alarm Control System

Installation and Operation Manual

CE

BRAVO − Wireless Alarm Control Panel

| TABLE OF CONTENTS | | ⚠ WARNINGS |

- **Teletek Electronics JSC is not responsible for any damages caused on the BRAVO panel when the user uses other power adapter types with similar technical characteristics but not approved from the manufacturer.**

- **When changing batteries in the BRAVO control panel or periphery devices, the user must use only the ones approved by Teletek Electronics JSC and with the described in this manual technical specifications and parameters.**

- **The BRAVO panel is designed according and with conformity to high standards for test and operation for wireless alarm control systems. However, it is possible some limitations to occur in operation, due to low transmission power and limited frequency range:**
  A) The receivers operation could be disturbed or blocked by radio signals occurring on or close their operation frequencies, regardless of the digital algorithm used.
  B) Every receiver can respond only to one transmitted signal at a time.
  C) All wireless devices should be tested regularly with purpose to find any sources of interference and to protect the whole system against unexpected faults.

- **The user must be cautioned that any changes or modifications of the BRAVO panel and the wireless periphery, which is not specially approved by Teletek Electronics JSC, could void the supported documentation and certification.**

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!

GENERAL INFORMATION

1. General Information for the System

BRAVO is a wireless alarm control panel suitable for installation in residential houses and small offices. The system is very easy to control via key fobs or MobileTTE smartphone application*.
*requires GPRS module installed to the panel*

Up to two communication modules (GPRS, PSTN, PSTN VD or MOUT/PGM) can be added to the system for programming via AjaxWEB web interface or MobileTTE smartphone application.

Some additional settings are available via specialized ProsTE programming software. The connection to the panel is realized with a standard USB - mini USB cable. The USB interface is located on the left outer side of the panel's box and it is accessible without opening the front cover.

Available for purchase:
The BRAVO panel is available for purchasing as:
1. A control panel, without peripheral devices included;
2. A kit, including a control panel and a set of peripheral devices, prepared in advance for direct mounting on the protected site.

Supported types of peripheral devices:
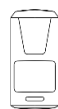
BRAVO PIR – Passive infrared detector

BRAVO MC – Magnetic contact

BRAVO FL – Flood detector

BRAVO FD – Fire detector

BRAVO RC – Key fob remote control

BRAVO SR200 – Outdoor sounder

BRAVO SR300 – Outdoor sounder

Technical and Functional Characteristics

General for the Panel	
- Type of the indication	LED
- Areas	1
- Max. zones/ detectors	16 (including PIR, MC, FL, FD)
- Max. key fobs remote controls	8
- Max. outdoor sounders	1; 115dB
- Built-in sounder	85 dB
- Memory LOG file	256 events
Wireless connection	
- Frequency	868MHz – 869MHz (Adaptive Frequency Agility Algorithm)
- Type	Two-way communication
- Signal coding	YES; According the requirements of Grade 2
- Detecting of radio interference	YES; According the requirements of Grade 2
Main power supply of the panel	
- BRAVO EXT	Adapter AC-DC; 5 VDC/ 1A
- BRAVO INTR	Built-in power supply unit: 100-240 VAC; 50-60Hz
Consumption	
- BRAVO EXT	200mA
- BRAVO INTR	150mA
Back-up power supply of the panel	
- Battery	1 x 3.7 V/ 4000mAh, Li-Po (Type A according EN50131 Grade 2), max. size 80x65x10mm
Environment	
- Operation temperature	0°C up to +40°C, Class II (indoor mounting)
- Degree of protection	IP30
- Relative humidity	93% @ +30°C
- Size	220x160x38mm
- Weight, kg	BRAVO EXT – 1,223kg; BRAVO INTR – 1,376kg
- Material	ABS plastic

2. Planning Your Wireless System

In order to achieve the best efficiency of your wireless system, prior to installation plan the location of the control panel and the wireless devices within the premises.
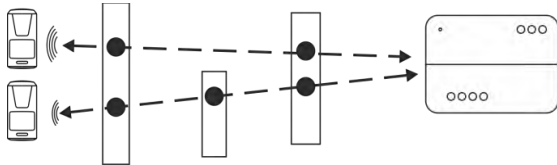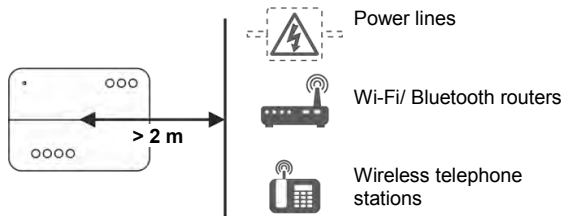
- The installation place of the control panel should be in premises located above the ground level.
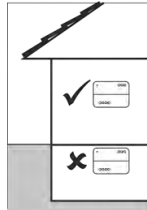
- Minimize the number of obstacles between the control panel and the wireless devices to obtain a stronger signal.

- The control panel should be installed in a minimum distance of at least 2 meters far from other sources of radio signals (Wi-Fi or Bluetooth routers, wireless telephone stations, etc.).

Power lines

Wi-Fi/ Bluetooth routers

Wireless telephone stations

ATTENTION: Do not install the panel close to sources of strong radio fields as these can cause interference and thus diminish the serviceability of the system and its radio band.

- The control panel should be installed approximately within the center of the protected premises.

Entrance
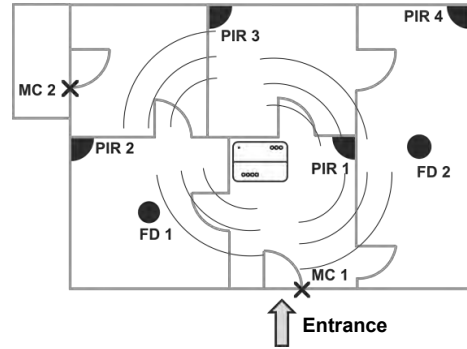
The minimum distance between the panel and enrolled peripheral devices must be 1 meter to guarantee the proper operation of the system, including in test mode.

> 1 m
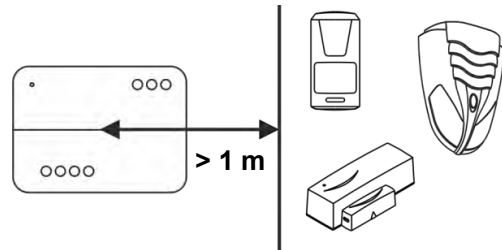
- In case of installing the control panel in a corner, leave the following minimum distances:
  o 20 cm on the left side surface to provide a free access to the USB interface input for programming with ProsTE software;
  o 5 cm on all other sides of the box for providing a proper ventilation.

> 5 cm.
> 20 cm.
> 5 cm.
40°C
0°C
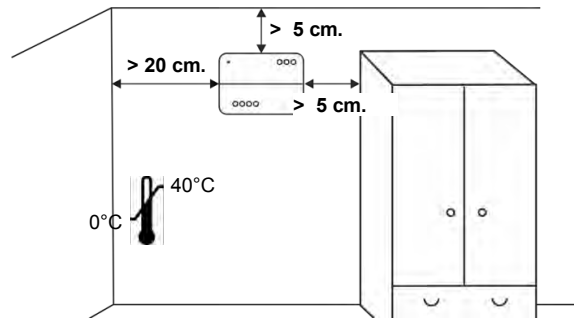
ATTENTION: The control panel installation location should be dry and should not be subjected to harsh temperature changes.
The control panel should be installed close to grounding and telephone cables.

GENERAL INFORMATION

- The construction and the width of the walls between the premises also affect the radio signals transmitted between the devices and the control panel.

  Attention: In the table below are listed approximate values.

 The quality of the radio coverage and signal strength is reduced with **10-20%** in premises with **plasterboard and wood walls**.

 The quality of the radio coverage and signal strength is reduced with **30-40%** in premises with **brick walls**.

 The quality of the radio coverage and signal strength is reduced with **40-60%** in premises with **concrete and building blocks walls**.

 The quality of the radio coverage and signal strength is reduced with **80%, and sometimes with 100%** (full reflection) in premises with **metal walls or surfaces**.
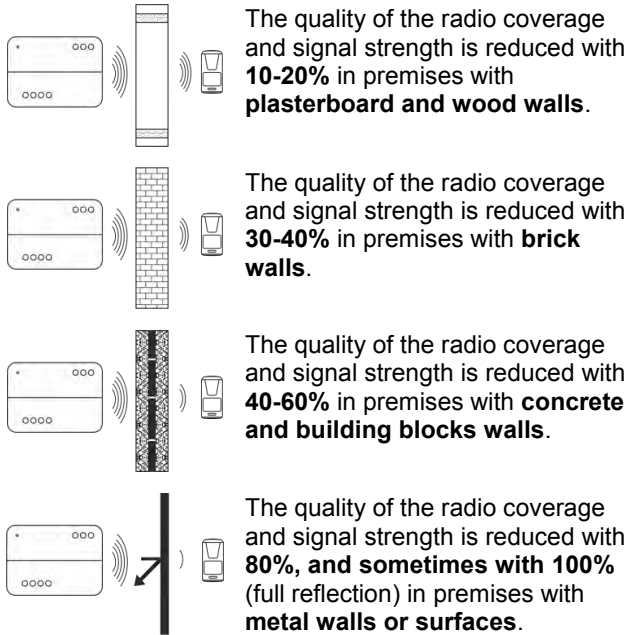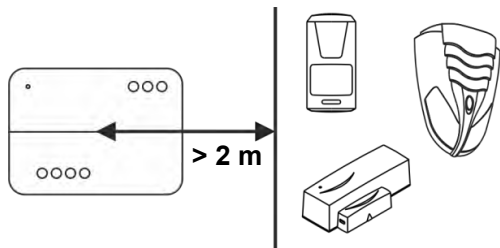

ATTENTION:
If you need to increase the panel's sensitivity for receiving the signals from the wireless devices (because of specific conditions in the premises like reinforced walls between the rooms, security zones in a great distance from the panel, etc.), you can make additional settings in the panel – move the dip switch 8 in ON position – see section "Hardware setting" (item 4).

In increased sensitivity for receiving signals operation mode, the minimum distance between the panel and enrolled peripheral devices must be 2 meters to guarantee the proper operation of the system, including in test mode.

> 2 m

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3. Basic Steps for Installation

3.1. Preparation for mounting

- Undo the two screws fixing the cover to the bottom and open the panel's enclosure.
  Attention: The screws are with interrupted thread and you do not need to undo them all. They must stay fixed to the cover.
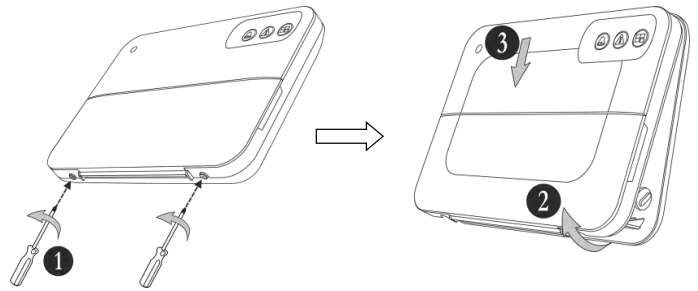
- Mount the bottom of the box as use appropriate fixing elements according the mounting surface.
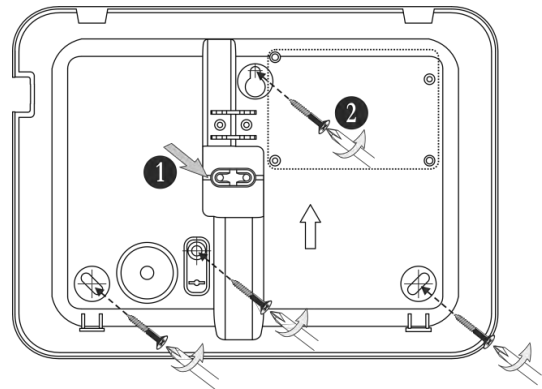
1. Break out the plastic cap from the bottom to fix the main power cable – see the steps for mounting of BRAVO INTR (item 3.3).
2. Fix the bottom to the mounting surface and level it horizontally before the final fixing with the supporting screws.

5

INSTALLATION

3.2. Mounting and connection of BRAVO EXT

- Run the connector of the power adapter through the main cable channel and lead it on the internal side of the bottom.

The cable length of the power adapter is ~1700mm, so you have to locate the panel installation place near a power socket.

ATTENTION: Use only the original power supply adapter 5V/ 1A, supplied with control panel!

- Prepare the panel for connecting to the mains power 230V.

1. Connect the power adaptor connector to the input on the panel's PCB.
2. The cable of the battery must be connected to the "Battery" terminal.
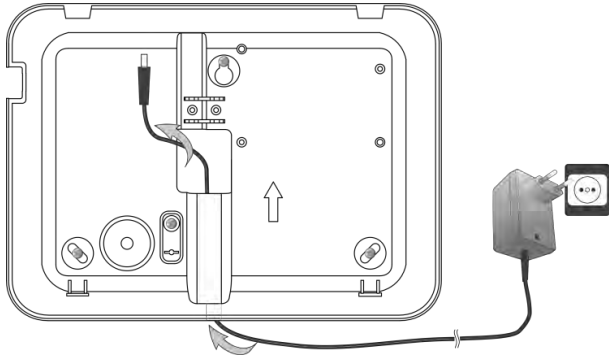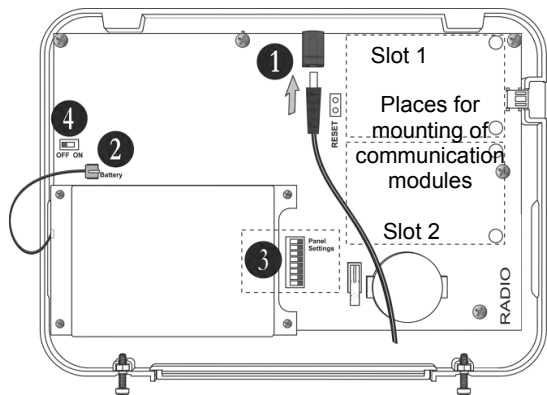**3.** Set the dip-switches position according the system configuration – see the section "Hardware settings" (item 4).
4. Switch on the battery – set the mini switch in "ON" position.

- Close the panel's box following the steps in item 3.1 in a reverse order.

- Plug in the power adapter in the socket and proceed with peripheral device enrolment – see the section "System Configuration" (item 6).

3.3. Mounting and connection of BRAVO INTR

BRAVO INTR is a wireless alarm panel with built-in power supply unit, which is factory mounted to the bottom of the box.

- Prepare the panel for connecting to the mains power 230V.
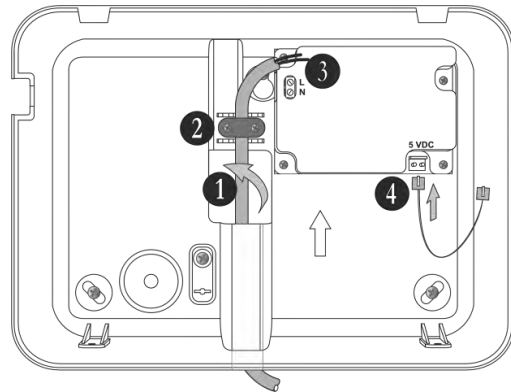
1. Run the mains power supply cable through the main cable channel and lead it on the internal side of the bottom.
2. Fix the mains power cable to the bottom using the plastic cap and screws from the spare parts kit.
3. Connect the mains power cable to the "L N" terminal as observe the polarity.
4. Assure that a special cable is connected to "5VDC" terminal.
Note: Position the cable for 5 VDC power supply as shown on the picture and observe keeping this position when you close the BRAVO INTR box!

ATTENTION: Switch on the mains power supply (230V +10%/-15%, 50-60Hz) **ONLY AFTER** the final closing of the panel's box and switched on battery!

- The installer should strictly observe the polarity of the electrical connection when connecting the power cable to "L N" terminal. The ends of the power cable should be clearly stripped and fixed tightly to the terminal of the power supply unit – use a plain screwdriver to tight the screws.

INSTALLATION
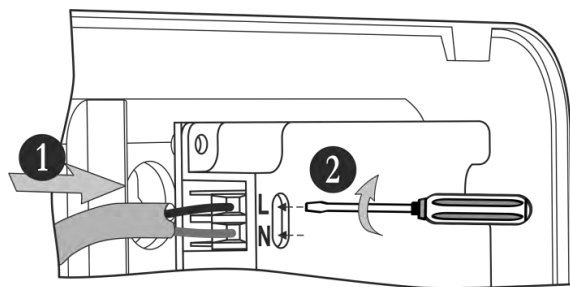
ATTENTION: The wires should be placed tight in the socket terminals!
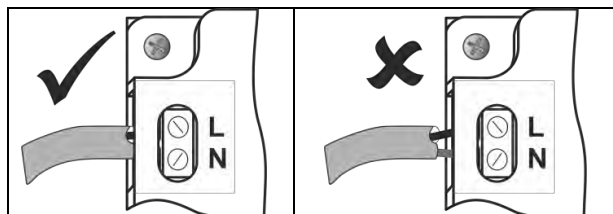
- Connect the cable on "5VDC" terminal to the same terminal on the panel's PCB.

1. Connect the cable on "5VDC" terminal of the power supply unit to the "5VDC" terminal on the panel's PCB.
2. The cable of the battery must be connected to the "Battery" terminal.
3. Set the dip-switches position according the system configuration – see the section "Hardware settings" (item 4).
4. Switch on the battery – set the mini switch in "ON" position.

- Close the panel's box following the steps in item 3.1 in a reverse order.
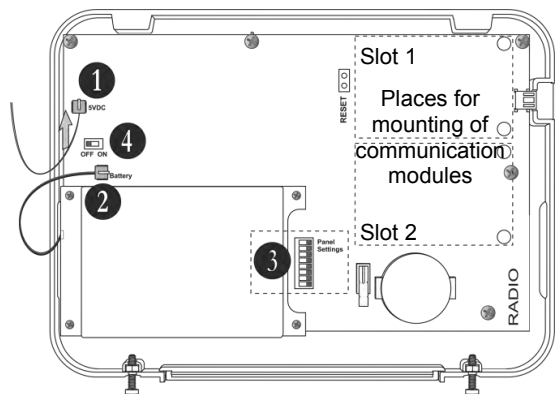
- Switch on the mains power supply and proceed with peripheral device enrolment – see the section "System Configuration" (item 6).

3.4. Mounting of BRAVO PIR
BRAVO PIR is a wireless passive infrared detector for detecting of movement.

Technical Characteristics:

Battery	1 x 3 V/ 1500mAh, CR123A type
Battery life (max. without LED)	3 years
Operation frequency	~868 MHz
Radio distance (open space)	Up to 400m
Working temperature	-10°C - +50°C
Storing temperature	- 40°C - +50°C
White light immunity	5 200 Lux
Walk detection speed	0.3 m/s - 3.0 m/s
Coverage angle	90°
Mounting height	1.5 - 3.6 m (2.1 m)
Number of detection zones	54
Dimensions	66 x 132 x 60 mm
Range when mounted in a corner	12 m x 12 m (90°)
Range when mounted on a wall	17 m x 15 m (110°)

Mounting
1. Open the detector box as use small plain screwdriver – use a small flat screwdriver and slightly press at the opening in the bottom side and then open the cover up.
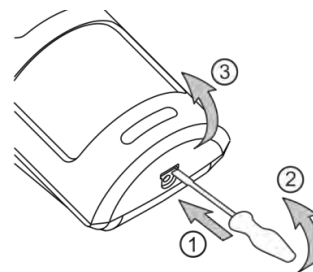
2. Remove the detector PCB by pressing the clip downward and pull it out.
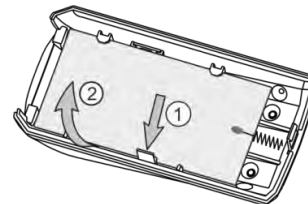
3. Mount the detector at the place of installation. Use the respective opening according the mounting location – on a wall or in a corner.

Mounting on a wall   Mounting in a corner

Place for mounting bracket
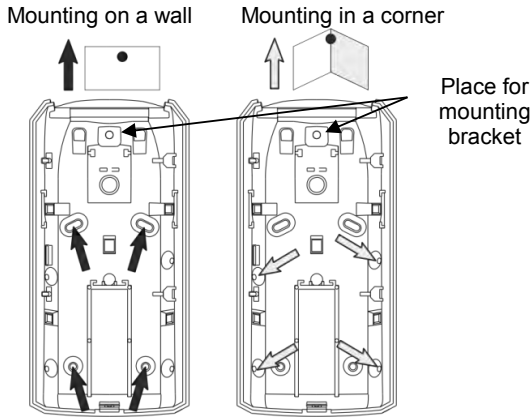
ATTENTION: When the detector is installed on a mounting bracket, it is impossible to use the second tamper-switch for self-protection (on the back side of the PCB) and the requirements of standard EN50131 Grade 2 are not covered!

Use the elements for the second tamper-switch, according the place of installation:

Mounting on a wall

Break the pin

Mounting in a corner

Break the pin
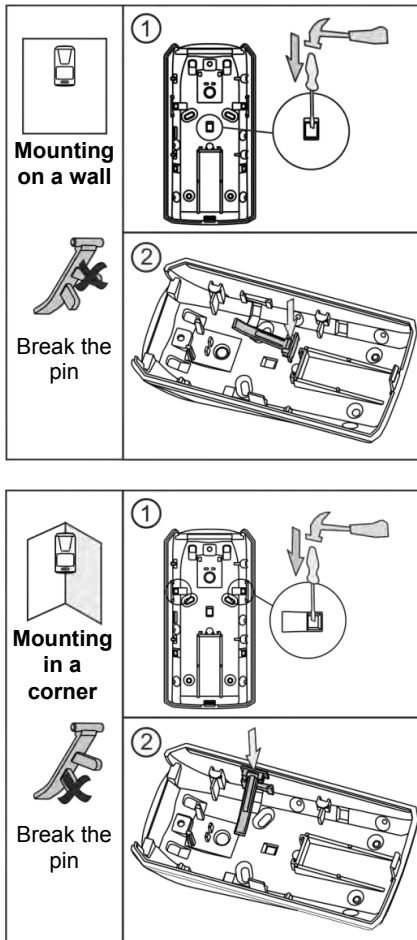
4. Mount the PCB back onto the base by placing it first on the front clips.
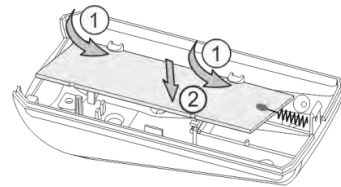
5. Enroll the detector to the panel configuration as follow the steps described at item 6.2 in "System Configuration" section.

Description of the PCB elements
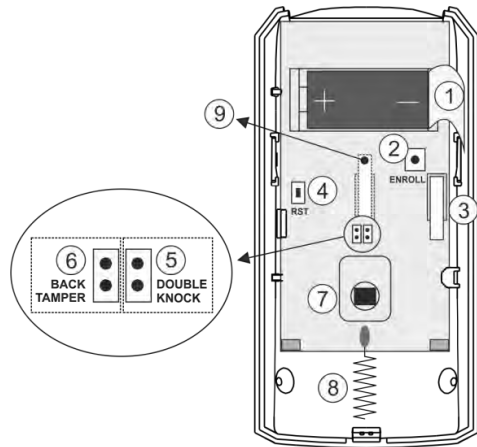
1 – Protection folio for the battery; it is removed directly before the enrolment of the detector to the panel.
2 – ENROLL Button. Use it to enroll the detector to the panel.
3 – The first tamper-button for self-protection. Used for signaling in case of removing the detector's cover.
4 – RST (RESET) Button. Use it to reset the detector.
5 – DOUBLE KNOCK Jumper ("Double knock" operation mode). Set a jumper on the terminals (on the right side) to activate the "Double knock" operation mode.
6 - BACK TAMPER Jumper (follows the state of the second tamper-switch for self-protection). Set a jumper on the terminals (at the left side) to enable the operation of the second tamper-switch.
7 – Motion sensor.
8 - Antenna.
9 – The second tamper-button for self-protection. Used for signaling in case of removing the detector's box from the mounting surface – it is enabled when there is a jumper set at BACK TAMPER terminals.

INSTALLATION

3.5. Mounting of BRAVO MC

BRAVO MC is a wireless magnetic contact detection of door or window opening. BRAVO MC has a wired zone input for connecting of wired magnetic contact.

Technical Characteristics:

Battery	1 x 3 V/ 1500mAh, CR123A type
Battery life (max. without LED)	3 years
Operation frequency	~868 MHz
Radio distance (open space)	Up to 400m
Working temperature	-10°C - +50°C
Storing temperature	- 40°C - +50°C
Operation distance	25-30mm
Wired zone input	1
Dimensions	93 x 31 x 27 mm

Mounting

1. Remove the bases of BRAVO MC and the magnet.
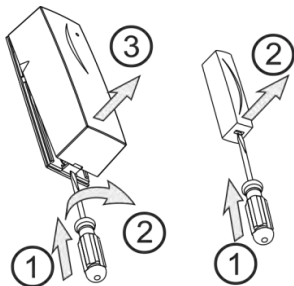
2. Mount the bases on the place of installation, as pay attention to the position of the magnet in relation to the BRAVO MC body – see the picture below.
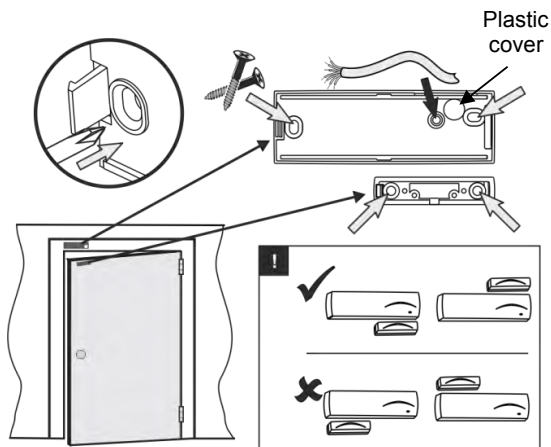
Note: To use the wired zone input you have to drill an additional hole for the cables.

ATTENTION: Remove the plastic cover from the base to ensure the double action of tamper button for self-protection.

3. Enroll the detector to the panel configuration as follow the steps described at item 6.2 in "System Configuration" section.

4. Mount back the magnet and BRAVO MC to their bases.

ATTENTION: Use the plastic pads when installing the magnet on metal surfaces. The pads will protect the magnet field from a "short-circuit".

Description of the PCB elements
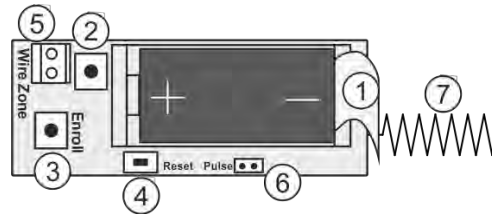
1 – Protection folio for the battery; it is removed directly before the enrolment of the detector to the panel.
2 – Tamper button for self-protection.
3 – ENROLL Button. Use it to enroll the detector to the panel.
4 – RST (RESET) Button. Use it to reset the detector.
5 – Terminal for connection of wired zone.
6 – "Pulse" Jumper.
7 - Antenna.

BRAVO − Wireless Alarm Control Panel

INSTALLATION

3.6. Mounting of BRAVO SR 200

BRAVO SR 200 is a wireless electrodynamic siren for outdoor mounting.

Technical Characteristics:

Battery	3 x 3 V/ 15Ah, CR4615 type, size D
Battery life (max. without LED)	3 years*
Operation frequency	~868 MHz
Radio distance (open space)	Up to 400m
Working temperature	-30°C - +65°C
Storing temperature	- 40°C - +65°C
Sounder volume	115dB/ 1 m
Dimensions	180 x 210 x 85 mm

* Based on normal use of the siren (e.g. 1 alarm per month with strobe and 1 minute alarm cycle, and 8 squawks per day at an average of 25°C). If the use is more frequent or the alarm cycle is set for more than 1 minute the battery life may be reduced.
Using optional power supply with adapter 12V/1A will extend the battery life.

Mounting

1. Use a small flat screwdriver to lift up and remove the orange plastic cap. Undo the screw fixing the plastic cover to the base. Lift up the siren cover and remove it.

2. Remove the light pipe, undo the screws and remove one by one the metal and the plastic covers protecting the battery and the electronic parts.
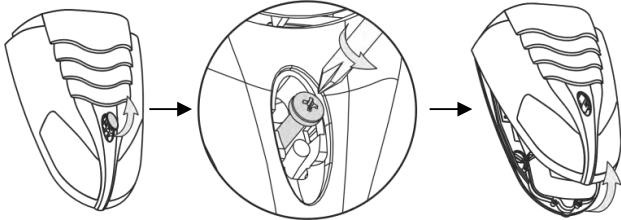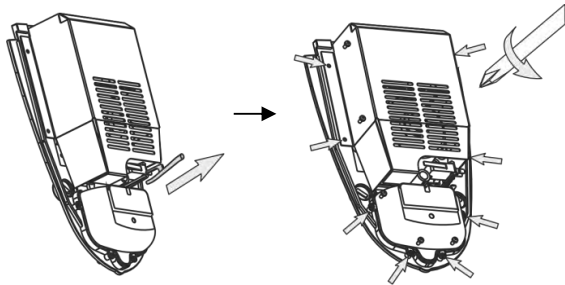

3. Use the drilling template on the back side of the packing box to mark and drill the holes for installation.
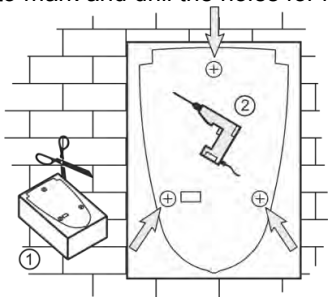
4. Mount the siren base as first fix the screw for the main installation hole, then lever the siren, and at the end fix the supporting screws on the both sides.
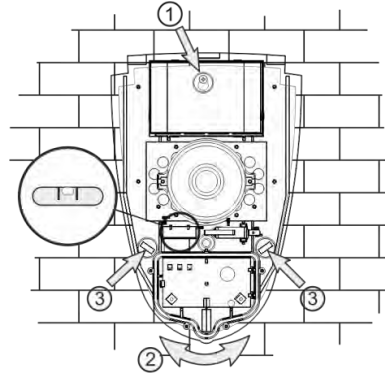
5. Set the tamper position as use the screw on it – regulate the position so that the screw end to contact with the installation surface, and the contact plate to be pressed when the cover of the siren is closed (the plate must be horizontal and when pressed with siren cover to close the tamper button under it – a click is heard).
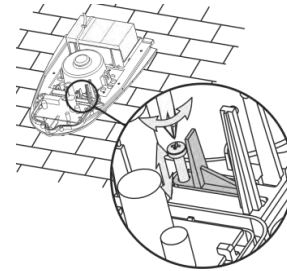
6. Enroll the siren to the panel configuration as follow the steps described at item 6.4 in "System Configuration" section.

Description of the PCB elements
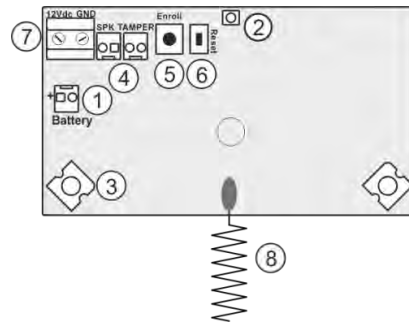
1 – Terminal for connecting the battery.
2 – LED for siren status.
3 – LED signalization in Alarm mode.
4 - Terminals SPK (SPEAKER) and TAMPER for connecting the sounder and tamper button wires.
5 – ENROLL Button. Use it to enroll the siren to the panel.
6 – RST (RESET) Button. Use it to reset the detector.
7 – Terminals +12VDC and GND for optional power supply with adapter 12VDC/ 1A – see also item 10.4.
8 - Antenna.

10

INSTALLATION

3.7. Mounting of BRAVO SR300

BRAVO SR300 is a wireless piezo siren for outdoor mounting. The siren is available in two variant according the type of the used batteries: BRAVO SR300 AKL and BRAVO SR300 LIT.

Technical Specifications:

| Battery: - BRAVO SR300 ALK - BRAVO SR300 LIT	4x1.5V, alkaline, LR14 2x3V, Li-MnO$_2$
Battery life (max. without LED)	3 years*
Battery low voltage signal sent: - BRAVO SR300 ALK - BRAVO SR300 LIT	At value <5.1VDC At value <5.5VDC
Operation frequency	~868 MHz
Radio distance (open space)	Up to 400m
Working temperature: - BRAVO SR300 ALK - BRAVO SR300 LIT	-10°C - +40°C -25°C - +60°C
Sounder volume	110dB/ 1 m
Dimensions	310 x 230 x 60 mm

* Based on normal use of the siren (e.g. 1 alarm per month with strobe and 1 minute alarm cycle, and 8 squawks per day at an average of 25°C). If the use is more frequent or the alarm cycle is set for more than 1 minute the battery life may be reduced.
*Using optional power supply with adapter 12V/1A will extend the battery life.*

Mounting

1. Lift up the cover and remove it from the base. Undo the screws and remove one-by-one the metal and the plastic covers.


2. Use the drilling template on the back side of the packing box to mark and drill the holes for installation.
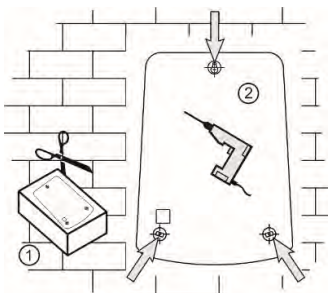
3. Mount the siren base as first fix the screw for the main installation hole, then lever the siren, and at the end fix the supporting screws on the both sides.
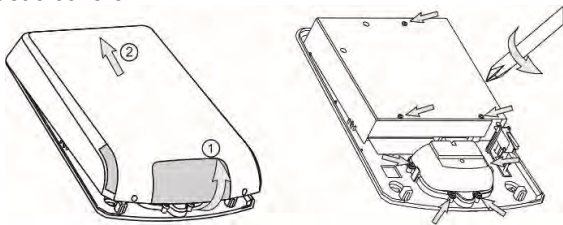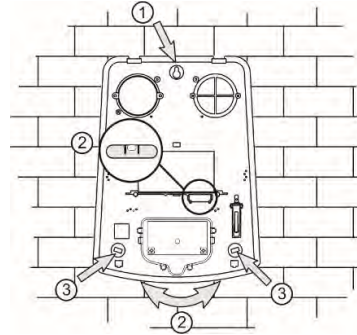

4. Set the tamper position as use the screw on it - regulate the position so that the screw end to contact with the installation surface, and the contact plate to be pressed when the cover of the siren is closed (the plate must be horizontal and when pressed with siren cover to close the tamper button under it - a click is heard).
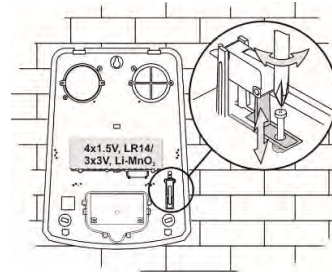
5. Enroll the siren to the panel configuration as follow the steps described at item 6.4 in "System Configuration" section.

Description of the PCB elements
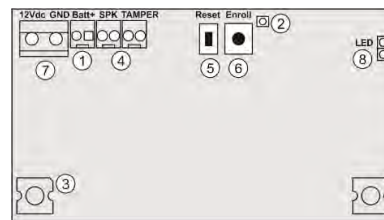
1 – Terminal for connecting the battery.
2 - LED for siren status.
3 – LED signalization in Alarm mode; Optional LED signalization in standby mode ("chasing LEDs" type).
4 - Terminals SPK (SPEAKER) and TAMPER for connecting the sounder and tamper button wires.
5 – ENROLL button. Use it to enroll the siren to the panel.
6 – RESET Button. Use it to reset the detector.
7 – Terminals +12VDC and GND for optional power supply with adapter 12VDC/ 1A – see also item 10.4.
8 – LED Terminals. Set a jumper to switch on the optional "chasing LEDs" signalization.
Attention: Using the optional "chasing LEDs" signalization in standby mode will reduce the battery life.

INSTALLATION

3.8. Mounting of BRAVO FL
BRAVO FL is a wireless flood detector.

Technical Characteristics:

Battery	1 x 3 V/ 1500mAh, CR123A type
Battery life (max. without LED)	3 years
Operation frequency	~868 MHz
Radio distance (open space)	Up to 400m
Working temperature	-10°C - +50°C
Storing temperature	- 40°C - +50°C
Dimensions: - body - flood sensor	93 x 31 x 27 mm 64 x 19 x 13 mm
Connection wires	2x0,35mm, white, 2 meters

Mounting

1. BRAVO FL is prepared for direct mounting at the place of the installation. The main body and the flood sensor are connected with wires 2 meters long.

Main body

Connecting wires
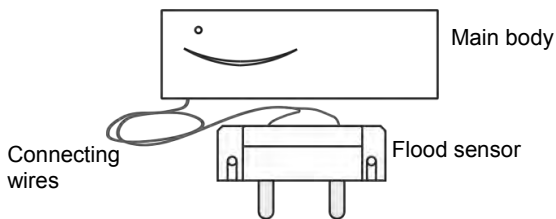
Flood sensor

2. Remove the base of BRAVO FL and prepare it for mounting at the place of installation.
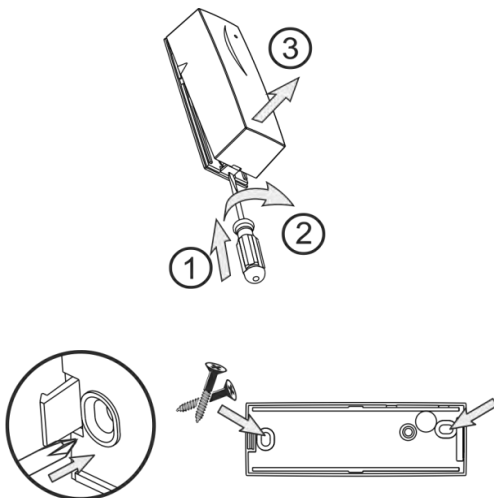
Note: The base of the detector can be mounted also with double-sided mounting tape at the place of installation.

3. Mount the flood sensor at max. 5 mm distance from the floor of the protected room, and the main body above is at higher position – up to 2 meters.

2 m

Max. 5 mm
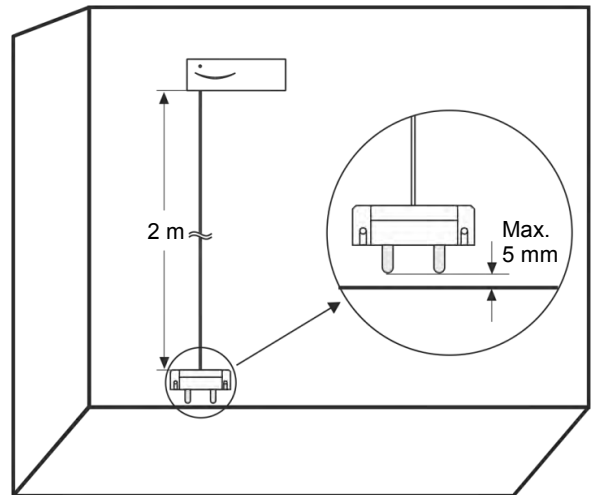
ATTENTION: Do not cut and change the length of the connecting wires!

4. Enroll the detector to the panel configuration as follow the steps described at item 6.2 in "System Configuration" section.

Note: You can enroll BRAVO FL to every position (zone number) from 3 to 16, as the "24-hour security zone" zone type is set automatically.

Description of the PCB elements
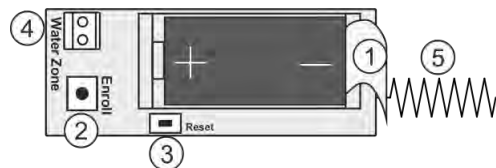
Water Zone

Enroll

Reset

1 – Protection folio for the battery; it is removed directly before the enrolment of the detector to the panel.
2 – ENROLL Button. Use it to enroll the detector to the panel.
3 – RST (RESET) Button. Use it to reset the detector.
4 – Terminals for wired water (flood) zone – 2 meters long wires are factory connected.
5 - Antenna.

12

INSTALLATION

3.9. Mounting of BRAVO FD

BRAVO FD is wireless combined fire alarm detector with optical-smoke and heat (rate-of-rise) parts.

Technical Characteristics:

Battery	2 x 3 V/ 1500mAh, CR123A type
Battery life (max. without LED)	3 years
Operation frequency	~868 MHz
Radio distance (open space)	Up to 400m
Working temperature	-10°C - +50°C
Storing temperature	- 40°C - +50°C
Mounting height	Up to 16m
Protected area	Up to 120m^2
Dimensions (including base)	103x56mm
Sensitivity	Rate-of-rise 10ºC/ min (max 60ºC)
Class for the heat part, according EN54-5	A1R

Mounting

1. Remove the detector from the base as rotate both parts opposite to each other – the base clockwise and the detector counter clockwise.
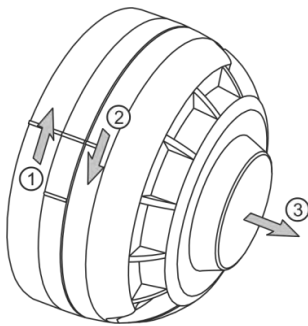
2. Mount the base at the place of installation.

ATTENTION: Avoid placing the detector close to the following sources of interference:
- heated surfaces;
- direct air flows from chimneys, windows, fans and sources of evaporation
- smoke, ash and other contaminators.
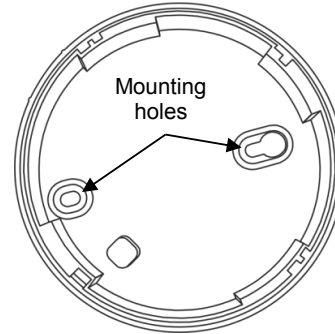
3. Enroll the detector to the panel configuration as follow the steps described at item 6.2 in "System Configuration" section.

Note: You can enroll BRAVO FD to every position (zone number) from 3 to 16, as the "24-fire zone" zone type is set automatically.

4. Mount the detector back to the base – locate the marker on the outer side of the detector's body to coincide with the short pin on the outer side of the base. Then rotate the detector clockwise until the marker coincides with long pin on the outer side of the base.
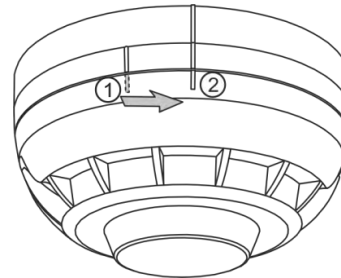
Description of the PCB elements
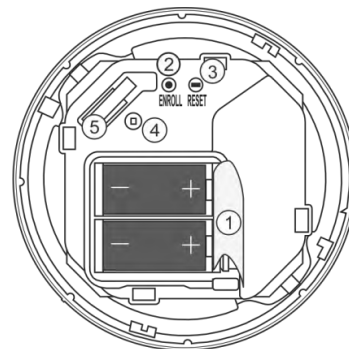
1 – Protection folio for the batteries; it is removed directly before the enrolment of the detector to the panel.
2 – ENROLL Button. Use it to enroll the detector to the panel.
3 – RST (RESET) Button. Use it to reset the detector.
4 – LED for the current status of the detector
5 – Tamper button for self-protection.

13

INSTALLATION

3.10. Preparing of BRAVO RC

BRAVO RC is a key fob remote control for:
- Arming and Disarming of BRAVO system;
- Information for the system status;
- Information for current alarm events via LED and sound signalization.

Technical Characteristics:

Battery	1 x 3 V/ 600 mAh, CR2450 type
Battery life (max. without LED)	3 years
Operation frequency	~868 Mhz
Radio distance (open space)	Up to 200m
Working temperature	-10°C - +50°C
Storing temperature	- 40°C - +50°C
Dimensions	32x65x16mm

Switching on the battery

1. Remove the back cover of the key fob as undo the two screws:
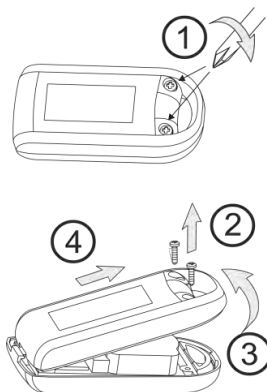
2. Remove the protecting folio:

3.Close the cover of the remote control.

4. Enroll the key fob to the panel configuration as follow the steps described at item 6.3 in "System Configuration" section.

Note: You can find detailed information for operation with the key fobs by User in items 8 and 9 of this manual.
The sequence for replacing the battery of a key fob is described in item 10.3.

Specialized LED indication of a key fob

The button has different LED and sound signalization when a control button is pressed:

Button	Color	Sound	Action
🔒	Green	Two signals	Full Arming
✳	Green	One signal	According the programmed for the button*
🔓	Green	Three signals	Disarming
All	Yellow	Long signal	Battery low of the remote control**
	Red	Long signal	No communication with the panel

* The functionality of the button is programmed with ProsTE software as the action can be different for every one remote key-fob.

** The indication is visualized after the indication of the main action of the pressed button and refers to the used key-fob.

By pressing the button of the key fob the user is informed for the current system status and alarm events:

LED	Color	Sound	Description
	Green	Three signals	System is disarmed
	Red	Two signals	System is armed
	Red blinking	Combined melody	Alarm memory (in disarming)

14

INSTALLATION

3.11. Mounting of communication modules

Different in functionality communication modules are designed for operation with BRAVO wireless panel.

The BRAVO panel can operate with up to two communication modules at the same time, mounted to Slot 1 and Slot 2 on the main PCB of the panel.
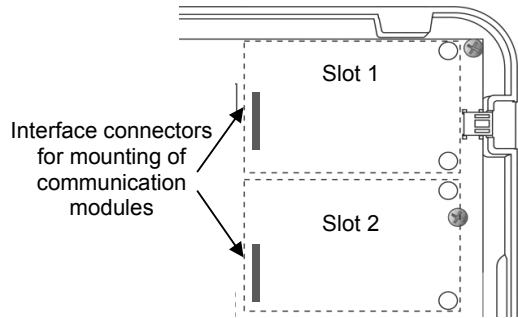
ATTENTION: The communication modules must be added to the system configuration **ONLY WHEN** both main power supply from the control panel and back-up battery are **SWITCHED OFF.**

ATTENTION: The communication modules must be enabled for operation via ProsTE software or AjaxWEB web application.

The priority in operation (sensing of messages for events) is set via mini dip-switch 6 on the panel's PCB – see also item "4. Hardware settings".

When the "Alternative" communication type is set (position OFF of mini dip-switch 6), the priority for message distribution is as follows:

- Slot 1 – Main communication channel.
- Slot 2 – Backup communication channel.

You can find more detail description of the settings and parameters for supported communication modules in item 7.9 – Programming of parameters with ProsTE software, menu "6. Slots".

Types of communication modules from BRAVO series:

Module	Functionality	Monitoring and control
GPRS	- Sending of messages for events to Users; - Remote management – Arming and Disarming; - Remote management of zones (bypass/ de-bypass); - Reviewing the memory log events; - Programming of panel parameters (Ajax WEB).	MobileTTE Ajax WEB
PSTN	- Sending of messages for events to 4 phone numbers; - Choosing of communication protocol SIA, CID or User.	-
PSTN VD	- Sending of messages for events to 4 phone numbers with voice messaging; - Remote control of system (arm/disarm) over PSTN with voice guiding.	PSTN ("Voice Dialer" protocol set)
MOUT / PGM	- MOUT Mode. Sending of messages for events via transmitter to a monitoring station; connecting f outdoor siren with external power supply. - PGM Mode. Remote control of home automation devices using the PGM outputs of the module.	MobileTTE Ajax WEB

15

INSTALLATION

3.11.1. BRAVO GPRS Module

Mounting

1. Remove the cover of the panel – see item 3.1. Switch off the main and backup power supply.
Mount BRAVO GPRS module to Slot 1 or Slot 2 on the main PCB.
2. Fix the module with screws to the panel's PCB.
3. Place a SIM card as shown on the picture.

> **ATTENTION: The PIN check option of the SIM card must be disabled!**

4. Switch on the main and backup power supply and close the cover of the box.
5. Use the ProsTE software (see the connection between the panel and PC in item 7.9) to enable the module for operation and to set additional parameters if needed.

Description of the PCB elements
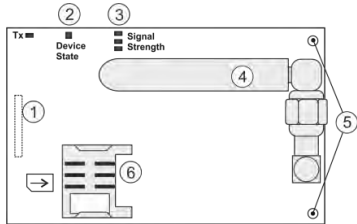
1 – An interface connector for coupling with the panel's PCB (on the back side of the module PCB).

2 – LED indication for the module status:

Color	Description
Red (light on)	Problem with the SIM card; problem with the GPRS channel; no communication between the module and the server.
Orange (blinking)	The module is sending messages via back-up channel.
Green (blinking)	The module is in normal operation mode (the connection with the server is stable and the transmitting of messages is successful).

3 – LEDs for radio signal strength:
- All OFF: No signal.
- 1 LED lighting: Low signal.
- 2 LEDs lighting: Good signal.
- 3 LEDs lighting: Very good signal.

4 – Antenna.
5 – Mounting holes.
6 – Holder for the SIM card.

3.11.2. BRAVO PSTN Module

Mounting

1. Remove the cover of the panel – see item 3.1. Switch off the main and backup power supply.
Mount BRAVO PSTN module to Slot 1 or Slot 2 on the panel's PCB.
2. Fix the module with screws to the panel's PCB.
3. Connect the telephone line to the terminals T and R, and the telephone device to terminals T1 and R1. There are no requirements for the polarity of the connection.

4. Switch on the main and backup power supply and close the cover of the box.
5. Use the ProsTE software (see the connection between the panel and PC in item 7.9) to enable the module for operation and to set additional parameters if needed.
6. Perform communicator test as described in item 9.7.

Description of the PCB elements

1 – An interface connector for coupling with the panel's PCB (on the back side of the module PCB).
2 – Mounting holes.
3 – Terminals for connecting of telephone line and device.

4 - LED indication for the module status:

Color	Description
Red	The telephone line is missing. The module is unable to send message for an event.
Green	The module is in normal operation mode (the connection with the telephone line is stable and the transmitting of messages is successful).

16

INSTALLATION

### 3.11.3. BRAVO PSTN VD Module

Mounting

1. Remove the cover of the panel – see item 3.1. Switch off the main and backup power supply.
Mount BRAVO PSTN VD module to Slot 1 or Slot 2 on the panel's PCB.
2. Fix the module with screws to the panel's PCB.
3. Connect the telephone line to the terminals T and R, and the telephone device to terminals T1 and R1. There are no requirements for the polarity of the connection.

4. Switch on the main and backup power supply and close the cover of the box.
5. Use the ProsTE software (see the connection between the panel and PC in item 7.9) to enable the module for operation and to set additional parameters if needed.
6. Perform communicator test as described in item 9.7.

Description of the PCB elements

1 – An interface connector for coupling with the panel's PCB (on the back side of the module PCB).
2 – Mounting holes.
3 – Terminals for connecting of telephone line and device.

4 - LED indication for the module status:

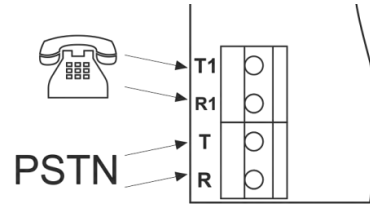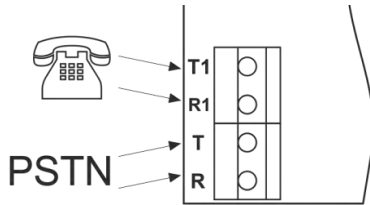| Color	Description
Red	The telephone line is missing. The module is unable to send message for an event.
Green	The module is in normal operation mode (the connection with the telephone line is stable and the transmitting of messages is successful).

5 – Holder with a mini SD card. The voice messages for events are recorded to the mini SD card.

3.11.4. BRAVO MOUT Module

Mounting

1. Remove the cover of the panel – see item 3.1. Switch off the main and backup power supply.
Mount BRAVO MOUT module to Slot 1 or Slot 2 on the panel's PCB.
2. Fix the module with screws to the panel's PCB.
3. Connect the outputs of the module according the application of the module.
ATTENTION: The functionality of the outputs can be set in one of two operation modes using ProsTE software:
- MOUT – Transmitting signals to radio transmitter or connecting of wired siren (see Examples 1 and 2).
- PGM – Programmable outputs OC, 100mA.

4. Switch on the main and backup power supply and close the cover of the box.

Description of the PCB elements
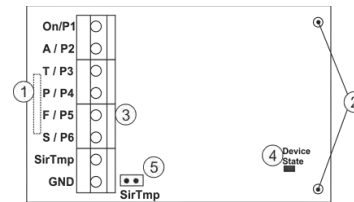
1 – An interface connector for coupling with the panel's PCB (on the back side of the module PCB).
2 – Mounting holes.
3 – Terminal row:

Output	MOUT Mode	PGM Mode
On / P1	Event "Arm / Disarm".	OC, 100mA
A / P2	Event "Burglary Alarm".	OC, 100mA
T / P3	Event "Tamper / Lost device".	OC, 100mA
P / P4	Event "Panic Alarm".	OC, 100mA
F / P5	Event "Fire Alarm".	OC, 100mA
S / P6	Event "Siren" – repeats the alarm cycle of a connected wired siren (the silent alarms do not affect at this output).	OC, 100mA
SirTmp	Jumper for disabling the signals from a wired siren connected to the module.	-
GND	Common ground.	Common ground.

4 - LED indication for the module status:

Color	Description
Yellow	Power-up initialization mode.
Red	No communication with the panel.
Green	The module is in normal operation mode.

5 – Jumper SirTmp (see the connection diagram between BRAVO MOUT and wired siren in *Application Example 2*).

17

INSTALLATION

Application Example 1 (MOUT Mode)
Connection between BRAVO MOUT and radio transmitter TP2000 for sending messages for events to monitoring station.
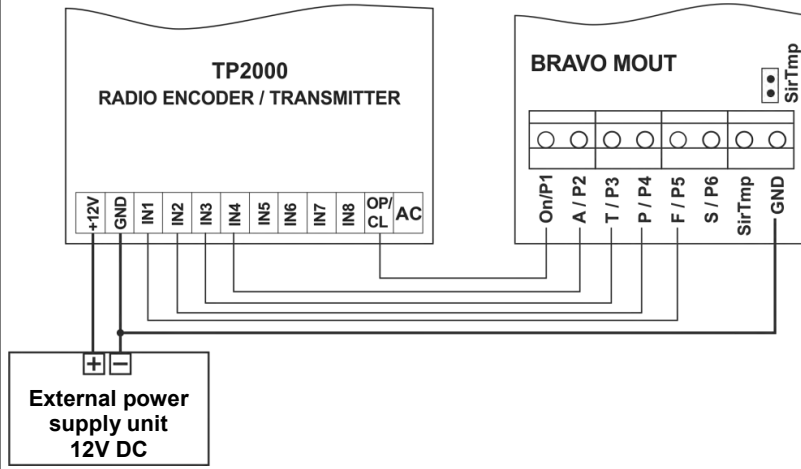
ATTENTION:

When the BRAVO MOUT is mounted on Slot 1 and "Alternative" communication type is set, the panel will send messages only through the main channel and never through the backup channel, regardless of that whether the transmitted signal is received from the monitoring station or not.

When the BRAVO MOUT is mounted on Slot 2 and "Alternative" communication type is set, the panel will send messages first through the main channel and in case of failure – through the backup channel.

Application Example 2 (MOUT Mode)
Connection diagram between BRAVO MOUT and wired outdoor siren.

Compatible outdoor sirens
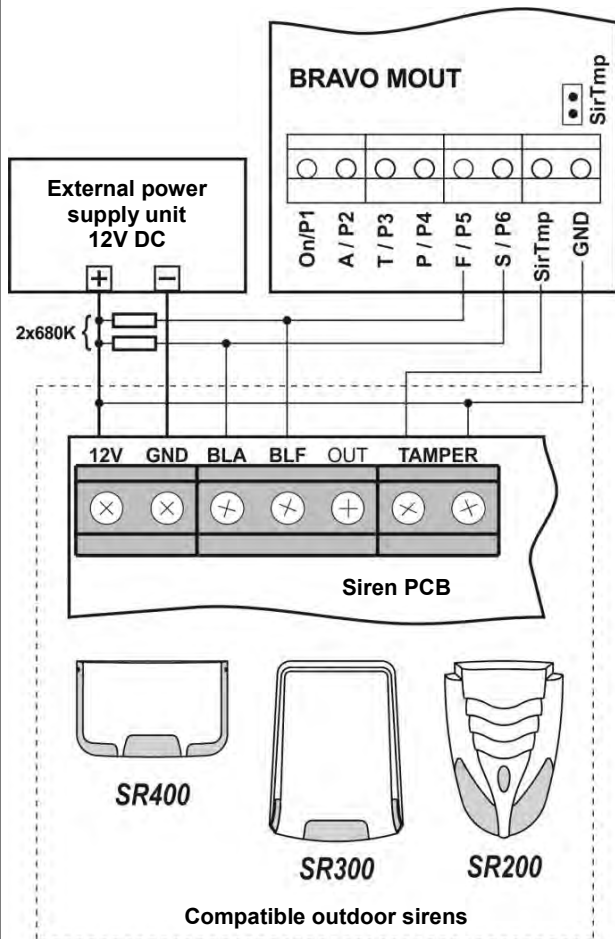
Note:
The jumper *SirTmp* must be removed in case of connection of wired siren to BRAVO MOUT module, for announcing of the following technical troubles:
- Open tamper of the wired siren;
- Broken line between wired siren and BRAVO MOUT module.

When the jumper *SirTmp* is set, the BRAVO panel will not follow the status of the connected wired siren.

Indication of BRAVO panel in case of connection of wired siren to BRAVO MOUT
One wired siren can be connected to BRAVO MOUT module. In programming mode and selected "Sounder Group" the connected wired siren is shown as device in position 16*.

* Note: The indication will be active directly after the connection of BRAVO MOUT module to the panel's PCB and set MOUT operation mode.

For correct operation of the siren it is obligatory to connect 2x680K resistors as shown on the connection diagram.
The wired siren can be bypassed like all other wireless devices in the system.
In case of technical trouble with the wired siren (tamper signal or broken line between the siren and BRAVO MOUT module) the indication in Technical troubles review mode is:

4. Hardware Settings

4.1. Dip-switches

Use the dip-switches to set some additional settings according the configuration and operation of the system.

Every dip-switch has two positions ON and OFF used to set certain functionality.
Use a small suitable tool to set the position of the dip-switch.

ATTENTION: The numbers of the dip-switches are described according their location on the panel's PCB.

The dip-switches order and their functionality are described as:

No	Description	Position	
		ON	**OFF**
8	Power RF (Increased sensitivity of the control panel)	✓	✗
7	Not used	-	-
6	Communication type	All	Altern.
5	Zone types (see item 4.2)	Config. 2	Config. 1
4	Sound signalization on ARM/ DISARM (for the built-in sounder only)	✓	✗
3	Clear the bypassed zones on DISARM	✓	✗
2	LED Indication – panel (in ARMING)	✗	✓
1	LED Indication - devices	✗	✓

✓ - Enabled; ✗ - Disabled

Every change of the position of the dip-switches is instant and does not require resetting of the panel for confirmation of the new settings.

All dip-switches are set in OFF position from the manufacturer after the production.

The setting of the dip-switches does not change after full hardware reset of the panel.
The current position of the hardware dip-switches can be checked via the software applications ProsTE and AjaxWEB.

4.2. Type configurations of the zones

The installer can choose between two basic configurations for the zone types with setting the position of dip-switch 5.

The zone type description is as follow:
- **Entry-Exit** – Provides time to arm and disarm the site. After arming, the detector, which was triggered off in this zone, will not sound an alarm until the programmed EXIT TIME expires.
  When the entry-exit zone is opened in armed mode an ENTRY TIME starts running during which the user must disarm the system. When the entry time expires and the system is not disarmed the sounders will alarm for burglary not authorized entry.
- **Follow** – An alarm zone which is active only when the site is armed. The zone operates instantaneously. Activating the zone during entry or exit time does not cause an alarm event.
- **Instant -** An alarm zone which is active only when the site is armed. The zone operates instantaneously. Activating the zone during entry or exit time causes an alarm event.
- **Fire –** 24-hour fire zone. All wireless fire detectors are automatically attached to this type of zone during the enrollment. The zone operates instantaneously when a fire detector is activated as the sounders are activated and FIRE alarm message is sent via the available communication channels.
- **24-hour security zone.** All wireless flood detectors are automatically attached to this type of zone during the enrollment. The zone operates instantaneously when a flood detector is activated as FLOOD alarm message is sent via the available communication channels.

The description of the zone configurations:

Zone No	Configuration		Type of the Device
	1	**2**	
1	Entry-Exit	Instant	MC or PIR
2*	Entry-Exit	Instant	MC
	Follow		PIR
3-16*	Instant, fire or 24-hour security zone	Instant, fire or 24-hour security zone	Every device

* Depends on the type of the enrolled detector to the zone.

19

HARDWARE SETTINGS

4.3. Hardware reset

After hardware reset of the panel all default settings are restored, the enrolled devices and the memory log events are deleted.

To perform hardware reset:

1. Switch off the main and the back-up power supply of the panel.
2. Set a jumper on the RESET terminals.
3. Switch on the main and the back-up power supply of the panel – the zone LEDs (1-16) are blinking in sequence in different colors – signalization "chasing LEDs" type.
4. Remove the jumper from the RESET terminals – the panel goes to normal operation mode, as only the status LED is lighting on in green.

Note: You can skip the chasing LEDs signalization test as directly remove the jumper from RESET terminals after switching on the mains and back-up power supply.

After the initial start-up and every resetting, the panel goes through initialization procedure – the status LED starts blinking for 10-15 seconds until the system is established in normal operation mode.

4.4. Sound signalization from the panel

Signalization	Description
Button*	Single short beep indicating the pressing of a key.
Confirmation	Two long sound signals, indicating the system confirmation for executed operation.
Cancelation	A single long beep, indicating system incorrectly executed operation.
Entry time*	Continuous beep, indicating intrusion into an entrance zone.
Exit time*	Short beeps, indicating the system is armed and the user is required to leave the entrance zone. Ten seconds before the exit time is over beep frequency increases.
Technical trouble*	Two short beeps at every 20 sec, indicating a technical trouble. To stop the signalization - press the ATTENTION button.
Chime*	Short beeps with subsequently increasing period, indicating intrusion into a zone with an activated chime option when the system is disarmed.
Arming	The dip-switch 4 is set in ON position. Two short sound signals indicating system ARMING.
Disarming	The dip-switch 4 is set in ON position. Three short sound signals indicating system DISARMING.

* Note: The signalization can be disabled via specialized ProsTE programming software – see item 7.9.

BUTTONS AND INDICATION

5. Description of the Front Panel
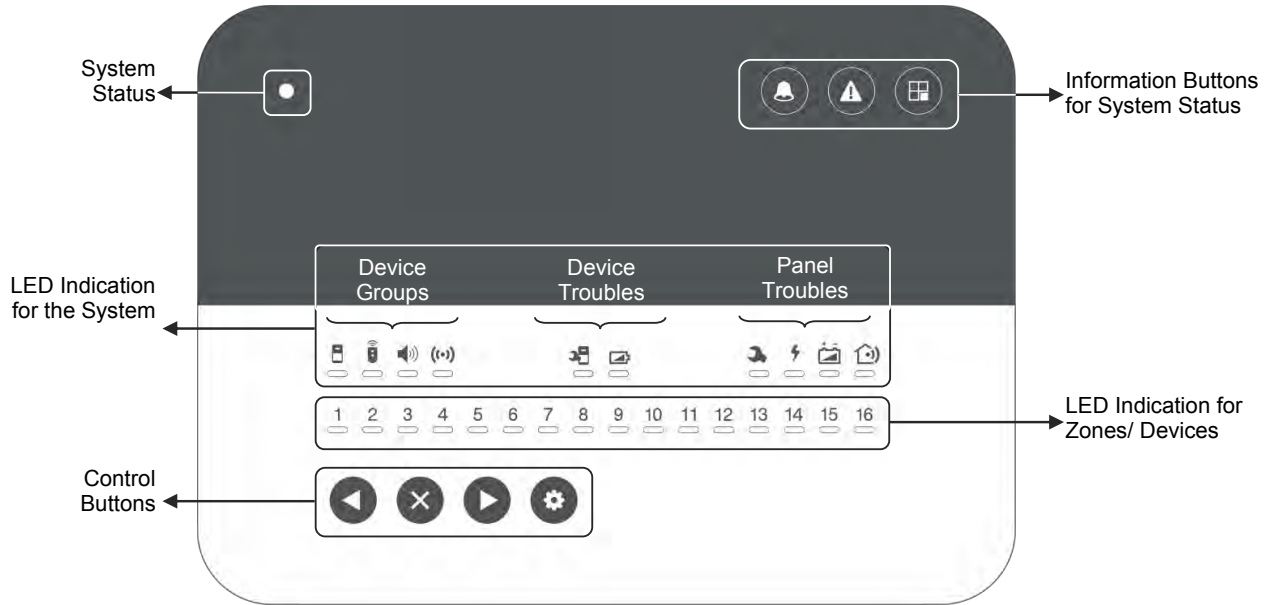
BRAVO Panel – Front view, open cover.

5.1. Buttons

System Control	
	Button Programming - Entry/ Exit for "Device enrolment" mode – see item 6.1; - Scrolling over the device groups in "Device enrolment" mode; - Entering in a special mode for disarming the system from User via the panel's buttons – see item 8.3.2. **LED Indication** After entering in the "Device enrolment" mode lights on in red.
	Button Cancel - Deleting a device in "Device enrolment" mode - see item 7.5. - Setting digits in a special mode for disarming the system from User via the panel's buttons – see item 8.3.2.
 Back Forward	**Arrow Buttons** - Scrolling over zone and position numbers in "Device enrolment" mode, for reviewing the bypassed devices in the system, or reviewing the alarms in zones; **-** Selecting digits in a special mode for disarming the system from User via the panel's buttons – see item 8.3.2.

System Status	
	Button Alarm Review - Entry/ Exit for "Reviewing Alarm Events" mode – see item 9.2. **LED Indication** In case of alarm event in the system lights on in red. After entering the "Reviewing Alarm Events" mode, the button is blinking.
	Button Attention - Entry/ Exit for "Reviewing Troubles" mode – see item 9.1. **LED Indication** In case of a technical trouble in the system lights on in yellow. After entering the "Reviewing Troubles" mode, the button is blinking.
	Button Bypass - Entry/ Exit for "Bypassing zones/ devices" mode – see item 7.5. **LED Indication** Lights on in yellow if there are bypassed zones/ devices in the system. After entering the "Reviewing bypassed Zones/ Devices" mode, the button is blinking.

21

BRAVO – Wireless Alarm Control Panel

BUTTONS AND INDICATION

5.2. LED Indication

System Status	
Information LED for the current status of the system:	
Green	- Normal operation mode. - The system is ready for arming. - Blinking during searching of a free channel.
Red	- The system is armed. - Blinking during an alarm cycle.
Off	- The system is not ready for arming – there are open instant type zones. - No main or back-up power supply. - The jumper RESET is not removed. - Technical problem with the panel or with a device.

Indicators for Device Groups	
	Detectors To the group can be enrolled up to 16 devices from BRAVO PIR, MC, FD or FL type – **only 1 detector to each zone**. **LED Indication** Lights on in red in case of activated detector together with the corresponding zone number. In "Device enrolment" mode lights on permanently as indication for a selected group.
	Key fob remote controls To the group can be enrolled up to 8 devices BRAVO RC type. **Attention: The enrolled to positions 1 and 2 key fobs become MANAGER and are obligatory for entry in "Device enrolment" mode –** see item 6.3. **LED Indication** In "Device enrolment" mode lights on permanently as indication for a selected group.
	Sounders To the group can be enrolled 1 outdoor wireless siren. **LED Indication** In "Device enrolment" mode lights on permanently as indication for a selected group.
	Repeater panel To the group can be enrolled 1 device BRAVO RPT type.

Indicators for Device Troubles	
	Technical trouble Indication for: - Activated tamper switch; - Lost device.
	Battery low charge Indication for low battery charge of a device.

LED Indication
In "Reviewing Troubles" mode the respective LED indicator lights on in yellow and the number of the first device with trouble is blinking and the indicator for its type is lighting on. If there are more devices with troubles, their numbers are lighting in yellow.
Reviewing of their type is done by the arrows.

Indicators for Panel Troubles	
	Tamper Indication for activated tamper – the panel's box is open or the tamper plate on the bottom is broken.
	Mains power supply 230V lost The sound signalization for mains power supply lost can be immediate or delayed for programmed time interval. By default the signalization is immediate. The time delay for the signalization can be programmed via specialized ProsTE software – see item 7.9.
	Battery low charge Indication for low charge, missing or switched off battery of the panel.
	Trouble with the communication channel Indication for trouble in the connection with any of the used communication modules.

LED Indication
In "Reviewing Troubles" mode the respective LED indicator lights on in yellow.

Indicators for Zones/ Devices		

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

LED Indication

Color	Mode	
	Enrolment	**Test**
Green	Free position	Successful test
Red	Enrolled device	Unsuccessful test
Yellow	Bypassed device	Open zone
Off	The position is not used for the current type of the device	No device enrolled to the position

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SYSTEM CONFIGURATION

6. Device Enrolment

The enrolment is a process of adding peripheral devices to the system configuration.

The LED indication has the following meaning:

  Device Groups

  Position of a device (zone number)

A device group is selected, when the LED indicator under the respective icon lights on permanently in red. The exit from the "Device enrolment" mode is automatic after 10 minutes if there is no activity with the panel (button pressed). Exit from the "Device enrolment" mode can be done also with pressing of button "Programming" several times.

ATTENTION: Up to 1 detector can be enrolled to a zone.

> The minimum distance between the panel and enrolled peripheral devices must be 1 meter (in increased sensitivity mode – 2 meters) to guarantee the proper operation of the system, including in test mode.
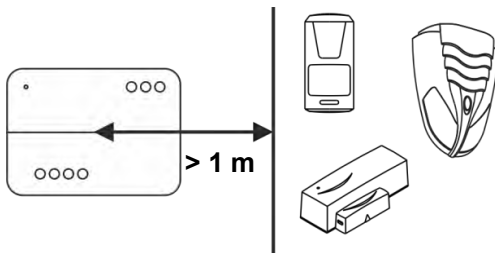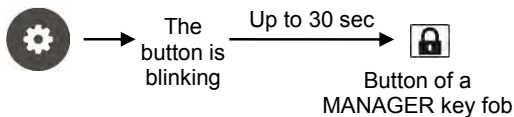

6.1. Access to the Device Enrolment mode

- In case of a new system, or after realized hardware reset, or NO MANAGER key fobs are enrolled to the system configuration, to enter in "Device enrolment" mode press button:

- In case that there are MANAGER key fobs already enrolled to the system configuration, to enter in "Device enrolment" mode press in sequence:

6.2. General steps for enrolling a detector

- Prepare the detector for enrolling – remove the cover to access the detector's PCB and the battery.
- Enter in "Device enrolment" mode.
- The system enters in the menu for detectors enrolment. The LED indicator under the icon is lighting on and the Zone 1 is blinking:

The numbers of the free zones (with no detectors enrolled) are lighting in green, and these with already enrolled devices – in red. The currently selected zone number is blinking.

- Use the buttons with arrows to select a number of a free zone – the zone number blinks in green.
- Remove the protection strip from the battery – the LED(s) of the detector is lighting in sequence in red and green.
- Press the ENROLL button on the detector's PCB – the LED(s) is blinking in red and after a short time interval – in green. The panel confirms the successful enrolment with a sound signal, and the selected zone number is blinking in red.
- Go to the place for installation of the detector and make a radio test for signal strength – see item 7.1.
- Close the cover of the detector and check it for proper operation – when the detector is activated (zone open) the respective zone number on the panel light on in red together with the indicator for type of the device.

6.3. General steps for enrolling a key fob

- Prepare the remote key-fob for enrollment to the system – remove the cover and pull out the protection folio. Close the cover and tight on the bolts.
- Enter in "Device enrolment" mode.
- The system enters in the menu for detectors enrolment. Press the "Programming" button once again to move to the menu for key fobs enrolment. The LED indicator under the icon is lighting on and the position 1 is blinking:

The numbers of the free positions (with no key fobs enrolled) are lighting in green, and these with already enrolled key fobs – in red. The currently selected position number is blinking.

23

SYSTEM CONFIGURATION

ATTENTION: The enrolled to positions 1 and 2 key fob remote controls are calling MANAGER and are used for entry in "Device enrolment" mode and zone walk test.

- Use the buttons with arrows to select a number of a free position – the number blinks in green.

- Press random button of the key fob – the LED [i] (Info) blinks in red and after a short time interval lights on in green. The panel confirms the successful enrolment with a sound signal, and the selected position number is blinking in red.

- After exit from the "Device enrolment" mode the key fob is ready for operation.

- By default the button [✱] has no functionality. The installer can program the functionality of the button via ProsTE software, as the possible options are described in item 7.9.
  The functionality of the button can be set to be different for every of the key fobs.

6.4. General steps for enrolling an outdoor sounder

- Prepare the siren for enrolment – remove the covers to access the PCB and the battery terminals.
- Enter in "Device enrolment" mode.
- The system enters in the menu for detectors enrolment. Press the "Programming" button twice to move to the menu for sounder enrolment. The LED indicator under the icon is lighting on and the position 1 is blinking:

The BRAVO panel supports operation with one outdoor sounder, which can be enrolled to position 1.

- Switch on the battery – the LED on the PCB is lighting on in sequence in red and green.
- Press the ENROLL button – the LED is blinking in red and after a short time interval – in green. The panel confirms the successful enrolment with a sound signal, and the position number is blinking in red.
- Go to the place for installation of the sounder and make a radio test for signal strength – see item 7.1.
- Close the covers of the sounder and test its operation simulating an alarm event.
- By default the alarm cycle of the sounder is set to 1 minute. The installer can program other duration of the alarm cycle (up to 3 minutes) via ProsTE software – see item 7.9.

Tips & Tricks...

- You can scroll over the device groups also using the arrow buttons – when reaching the last zone/ position the panel automatically moves to the next device group.

- Leave the enrolment of the used key fobs at the end – in this way the entry in the "Device enrolment" mode will be easier during the installation of the other devices.

- In "Device enrolment" mode the zones/ positions of bypassed devices are lighting in yellow.

- Use a double-sided mounting tape for fixing the detectors during the initial installation – it is possible to change the mounting place later in order to obtain a better strength of the radio signal.

- After successful enrolment to the panel, write the zone number on the sticker and place it on the inner side of the detector's enclosure.

- Fill in the Object card for the protected site given at item 11.

24

SYSTEM CONFIGURATION

7. Test of Devices

7.1. Radio test of devices

The radio test should be performed in order to check the signal strength and coverage on the site and the quality of the communication between the control panel and the wireless devices (BRAVO PIR, MC, FL, FD, SR200, SR300).

The radio test can be performed directly after the enrolment of the device and after that during the maintenance of the system.

To perform a radio test of a device:
- Remove the cover of the device to access the PCB.
- Press the ENROLL button – the LED(s) will blink single in green. After 20-30 seconds the device will inform for signal coverage with a new indication according which:
  - 3 blinks in green – the signal coverage is good and there is a stable communication between the device and the panel;
  - 3 blinks in red – no signal coverage and communication between the device and the panel;
  - 3 blinks in yellow – there is a signal coverage, but the communication between the device and the panel is unstable. In this case it is recommended to change the place of installation and to perform a new radio test.

Tips & Tricks...

- Perform the radio test just after the enrolment of the device and at the place of installation, as in that way you can choose the place with the best signal coverage.

7.2. Key fob operation test

Perform this test to check the communication between the panel and the key fob remote control, and also the position to which it is enrolled.

To perform the key fob operation test:
- Enter in "Device enrolment" mode.
- The system enters in the menu for detectors enrolment.
- Press [i] button of the key fob to perform the test.
- The panel automatically enters in the key fobs menu and the number of the position to which the key fob is enrolled is blinking.

7.3. Outdoor sounder operation test

The test can be performed, if an option "Siren check" is set to [✶] button of a key fob – see item 7.9. When this option is set and programmed to the panel via ProsTE software, in every pressing of [✶] button of the key fob, the outdoor sounder replays with a single squawk.

7.4. Zone Walk Test

Perform this test to check the communication between the panel and the enrolled devices to the zones.

The test can be performed only if there is MANAGER key fob enrolled to the system configuration.

To perform a zone walk test enter in sequence:
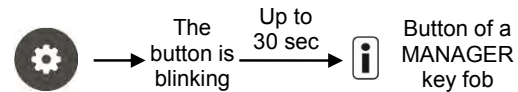
- The panel enters in a walk test mode for 10 minutes. Every pressing of a random button of the MANAGER key fob starts a new time interval of 10 minutes.
- The zone numbers with enrolled devices (PIR, MC, FD or FL type) are lighting on in red.
- Activate a detector (open the zone) – the respective zone number is blinking in yellow, which means that the zone is open. The panel confirms the test with Chime sound signal, and the outdoor sounder with a single flash and squawk signals.
- The walk test is successful if after closing of the zone its number is lighting on in green.
- The walk test is not successful if after closing of the zone its number is lighting on in red.

The exit from the zone walk test mode is automatic after 10 minutes, if there is no pressed button of a MANAGER key fob. The installer can exit the walk test mode at any time with pressing the "Programming" button.

7.5. Bypassing of Devices

Bypassing is a special mode for disabling devices temporally from the system configuration. The panel does not follow the current status of the bypassed devices.

- **To bypass (disable) a device:**
  - Enter in "Device enrolment" mode.
  - Use arrow buttons to select a number of device, which you want to bypass.
  - The number of the selected device on the panel is blinking in red and the detector's LED(s) – in yellow.
  - Press the "Bypass" [⊞] button.
  - The number of the selected device on the panel is blinking in yellow.
  - Press the "Programming" [⚙] button several times to exit the "Device enrolment" mode.
  - The "Bypass" button is lighting on in yellow, which is an indication for bypassed devices in the system.

25

SYSTEM CONFIGURATION

- **To un-bypass (enable) a device:**
  - Enter in "Device enrolment" mode.
  - The numbers of the bypassed devices are lighting in yellow.
  - Use the arrows to select the number of a bypassed device, which you want to enable – blinking in yellow.
  - Press the "Bypass" button.
  - The number of the device on the panel is blinking in red.
  - Press the button "Programming" several times to exit the "Device enrolment" mode.

- **To bypass/ un-bypass a key fob:**
  - Enter in "Device enrolment" mode.
  - Press the button "Programming".
  - Use arrow buttons to select a number of key fob, which you want to bypass/ un-bypass.
  - Press the "Bypass" button.
  - Press the button "Programming" several times to exit the "Device enrolment" mode.

- **To bypass/ un-bypass an outdoor sounder:**
  - Enter in "Device enrolment" mode.
  - Press twice the button "Programming".
  - Press the "Bypass" button.
  - Press the button "Programming" to exit the "Device enrolment" mode.

Note: If a wired siren is connected to the panel via BRAVO MOUT module it is shown as enrolled device to position 16. The wired siren can be bypassed in the same way as the wireless sounder, as selecting position 16 and pressing the "Bypass" button.

7.6. Deleting of Devices
The deleting is a complete removing the device from the system configuration.
- To delete a device:
  - Enter in "Device enrolment" mode.
  - Use arrow buttons to select a number of device, which you want to delete.
  - The number of the selected device on the panel is blinking in red and detector's LED(s) – in yellow.
  - Press and hold the "Cancel" button until a confirmation sound signal is heard.
  - The number of the zone on the panel is blinking in green.
  - Press the "Programming" button several times to exit the "Device enrolment" mode.

7.7. Resetting Detectors and Sounders
The resetting of a device is restoring of its default factory settings. But the position to which the device has been enrolled in the panel stays occupied. If the occupied position is not deleted (see item 7.6), with the next enrollment of the same device to the panel it will be attached automatically to this position.

To reset a detector or outdoor sounder:
- Remove the cover of the device.
- With battery on, press the "RESET" or "RST" button for 3-5 seconds until you see 3 green blinks from the LED(s).

7.8. Resetting Key Fobs
- Press and hold at the same time + buttons of the key fob until the button lights on in red.
- Release buttons + .
- Press the button while is lighting on in red (the button will lighting on in arrond 5 seconds).
- Wait the button to blink three times in green – the key fob is reseted.

ATTENTION: Before resetting of a MANAGER key fob it is obligatory first to delete it or bypass it from the panel!

Tips & Tricks...
- The zone walk test is performed to all detectors in the system including the bypassed ones.
- Enter in zone walk test mode and start system testing from the near to control panel devices. Press a random button of the key fob every time after a successful test to prolong the time of the test.
- If you are not familiar with the system configuration you can check the detector number (zone number), as enter in "Device enrolment" mode – the number of a selected device is blinking in red on the panel, and the device LED(s) – in yellow.
- It is recommended to remove the batteries of all bypassed, deleted and reset devices if you plan not to use them for a long time.

CONFIGURATION WITH ProsTE SOFTWARE

7.9. Programming of parameters with ProsTE Software

The installer can program some additional parameters and settings via specialized ProsTE software.
ProsTE specialized software is available for download for registered users only from the official web page of the manufacturer:
http://www.teletek-electronics.com

To program the BRAVO panel you have to install ProsTE software on a local PC or laptop.
The connection between the panel and the computer is realized via USB – mini USB standard cable.

ATTENTION: The initial connection between BRAVO panel and your local PC or laptop can take several minutes.
Please, wait until the full installation of all necessary drives is over, to continue your work with ProsTE.
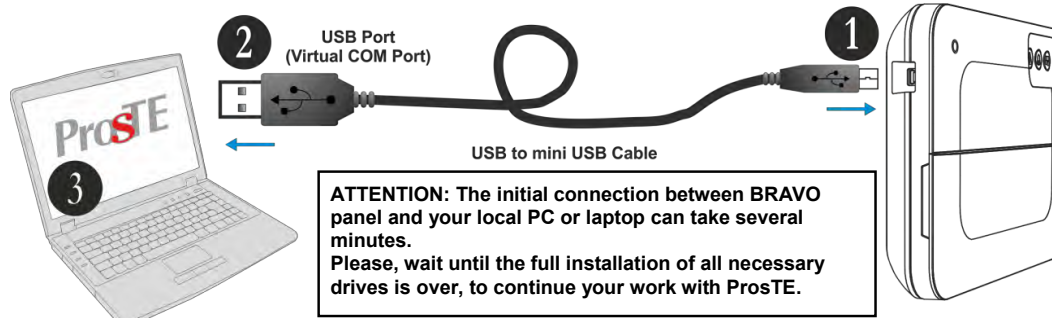
Run the program and select the BRAVO panel from the list.

Reading the system configuration.

- Select the BRAVO panel and use the right mouse button to open a list with control options:
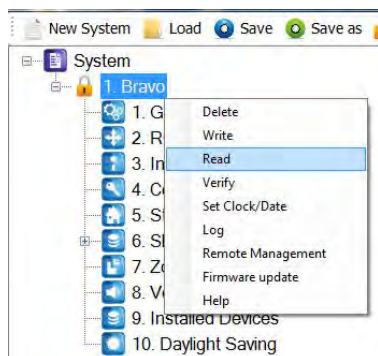
- Select "Read". In the "Read" window select the "RS232" tab. Enter the COM port number to which you are physically connected. Press the "OK" button.
- Enter a valid PC ID code in the "Additional Parameters" screen. By default the PC ID code is 1234, and the second field can be left empty:
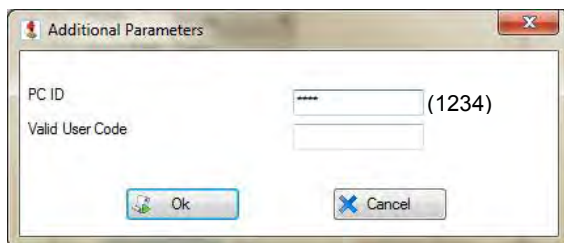
- Press the "OK" button and wait for the message for successful reading of the system configuration.

Menu "1. General Settings"

Select the "1. General Settings" menu – at the right side of the screen are available the following settings:

- **Enable Panic Alarm Sounds** (enabling of the sound signalization at panic alarm event).
  The sound signalization is enabled when the box under to the respective panic type is checked.
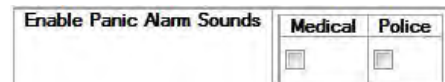
- **Enable Trouble Sounds** (enabling the sound signalization for technical troubles).
  The sound signalization is enabled when the box next to the respective trouble is checked. By default the sound signalization for all technical troubles is enabled.

  Description of the troubles:
  - *Device Tamper/ Lost* – Active tamper of device/ Lost communication with device
  - *Device Battery Low* – Low charge of battery of a device
  - *Panel Tamper* – Active tamper of the panel's box
  - *Panel AC Lost* – The mains power supply is missing
  - *Panel Battery Low* - Low charge of the panel's battery
  - *Panel Comm Fail* – The communication with central monitoring station is lost

- **Enable Panel Sounds** (enabling of sound signalization from the panel).
  The sound signalization is enabled when the box next to the respective sound is checked.

27

Description of the sound types:
- *Buttons Beep* – A single beep when pressing a button
- *Alarm* – Alarm signal for unauthorized access to the protected premises
- *Exit* – Exit time running
- *Entry* – Entry time running
- *Chime* – "Chime" sound signalization at opening of entry-exit zone type

The detailed description of all sound signalization types is presented in item 4.4.

- **AC Loss Delay [min]** (setting a time delay for the sound signalization for lost mains power supply). Enter a time interval from 1 to 255 minutes. By default no time delay is set and the signalization is immediate.

- **Entry/ Exit Time [sec]** (setting the entry and exit time duration in seconds). Enter a time interval from 1 to 255 seconds.

Exit Time [sec]	45
Entry Time [sec]	15

- **Bell Time [min]** (setting the duration of the alarm cycle). Enter a time interval from 1 to 3 minutes. By default the bell time is 1 minute.

- **Lost Time if Armed/ Disarmed [min]** (setting a time delay for the sound signalization for lost device). Enter a time interval from 1 to 120 minutes. The panel will alert for lost device if within the set time the communication with the device is not restored.

Lost Time if Armed [min]	120
Lost Time if Disarmed [min]	120

- **Account code length –** From the drop-down menu chose the account code length – 4 or 6 digits.

- **Account code** (a unique number for communication with server for monitoring and management). Enter a code up to 4 or 6 digits in hexadecimal form.

Account Code	ffff

Note: The code combination FFFF entered in the field means that the code will not be used.

- **Area Name** (panel name, e.g. Home Alarm). Type a name for the panel (or the system if you prefer) up to 16 symbols, including spaces.

- **Panel Tamper Alarm** (setting an option for activation of the tamper sound signalization when the panel's box is opened). The tamper alarm event activates the sounders – built-in one and the outdoor. Select one option of the drop-down menu:
- *No Alarm* – No sound alarm when the tamper is activated.
- *In ARM only* – The sound alarm for tamper is activated when the system is armed.
- *Always* – The sound alarm for tamper is activated regardless of the system status (ARM or DISARM).

- **WL Device Alarm** (setting of options for sending of alarm signals from wireless devices). In the menu are programmed alarm signals from:
- *Zone Tamper* (Open tamper in a zone)
- *Zone Lost* (Lost detector in a zone)
- *Siren Tamper* (Open tamper of a sounder)
- *Siren Lost* (Lost outdoor sounder)

For every of the alarm signals the installer should set one option from the drop-down menu:
- *No Alarm* – No alarm when the tamper is activated.
- *In ARM only* – The sound alarm for tamper is activated when the system is armed.
- *Always* – The sound alarm for tamper is activated regardless of the system status (ARM or DISARM).

After setting all parameters in "General Settings", save the new configuration with ✔ Apply button.

Menu "2. RC Button *"

This a menu for setting the functionality of ✳ button for every of the enrolled to the system configuration remote key fobs.
Select "2. RC Button *" – in the right side of the screen are displayed fields for setting of every of the key fobs, as BRAVO RC 1 corresponds to the key fob enrolled to position 1 of the control panel, BRAVO RC 2 corresponds to position 2 and so on.

Select the functionality of the button from the drop-down menu for every key fob:
- *No Func* – No functionality of the button
- *Stay Arm* – Arming in "Stay ARM" mode
- *Panic Fire* – Panic button for FIRE alarm event
- *Panic Medical* - Panic button for MEDICAL alarm event
- *Panic Police* - Panic button for POLICE alarm event
- *Siren Check* – Testing the operation of outdoor sounder.

CONFIGURATION WITH ProsTE SOFTWARE

Menu "3. Info" - Information menu

This is an information menu where the fields are not editable. After reading the system configuration the fields are filled in with information for:

- *Panel SN* – Serial number of the panel
- *Panel version* – Software version of the panel
- *Compilation Date* – Software date
- *Power Downs* – Number of main and back-up power supplies failures.
- *Channel* – Number of channels change
- *Battery [mV]* – Current battery charge
- *DIP Switches* - The installer checks the current setting of the hardware DIP-switches. The selected check box means that the switch is in "ON" position, and missing check – "OFF" position.

Menu "4. Codes"

This is a specialized menu for setting codes to access the ProsTE programming software, users' levels for remote access via mobile applications Mobile TTE and AjaxWEB, and remote management via ProsTE, as and a special code for disarming by user via panel buttons.

By default the set access code combinations are:
- - PC ID – 1234
- - Engineer – 7777
- - Manager 1 – 0000
- - Manager 2 – no code combination
- - User 1-6 - no code combination
- - Panel Disarm – no code combination

The codes are 4-digits combination of digits 0-9. Every code must be verified in the second field for confirmation.

The code is not used when the FFFF combination is entered in the both fields.

Description of the entered code combinations:

- **PC ID** – User access code for reading/ writing parameters to the BRAVO panel; ID number of the panel.

- **Engineer** – Engineer access code for writing parameters via ProsTE software to BRAVO panel. Remote access for programming and access via mobile applications Mobile TTE and AjaxWEB.

- **Manager 1-2 –** Managers in the system with extended rights for remote access and management.

- **User 1-6 –** Users with rights for remote arming and disarming of the system.

- **Panel Disarm** – Special user code for disarming the system. No code combination is set by default. This is a secret code, which allows the user to disarm the system only with the panel buttons.

After setting all parameters in "Codes", save the new configuration with ✔ Apply button.

Menu "5.Stay ARM Settings"

In this menu the installer sets zone numbers for bypassing in Stay ARM mode.

Place check marks for those zones which should be bypassed during Stay ARM mode. The zones without check marks will be armed in Stay ARM mode activation.

> **ATTENTION:** The bypassed at this mode zone numbers are not indicated from the panel during Stay ARM.

After setting all parameters in "Stay ARM Settings", save the new configuration with ✔ Apply button.

*Note: To use the "Stay ARM" mode, you have to set the "Stay ARM" option for function of the ✳ button of the key fob in "2. RC Button *" menu.*

29

CONFIGURATION WITH ProsTE SOFTWARE

Menu "6. Slots"

In this menu the installer sets the parameters of the mounted communication modules to panel's PCB. Select the "6. Slots" menu. At the right side of the screen are displayed parameters for setting.

> **ATTENTION**: The mounted communication modules to the BRAVO PCB must be enabled for operation via the ProsTE programming software or AjaxWEB!

- **Enable Slots** (enabling the communication modules).

> - **Slot 1** - Corresponds to Slot 1 terminal on the BRAVO's PCB.
> - **Slot 2** - Corresponds to Slot 2 terminal on the BRAVO's PCB.

To enable the mounted to Slot 1 or 2 communication module you have to select the field next to it.
Press the ✔ Apply button.
To view information about the type of the communication module you have first to write the new configuration to the module and then to read it again.

- **Test Message Fields**

In the fields the installer sets a start time for sending of test message and a period in hours.

- **Test Message Period (hours)** - Time (0-255) in hours for periodical sending of test messages.
- **Test Message start time** – Set a start time for sending a test message.

> **ATTENTION:** Sending of test messages can be disabled if in the both fields is entered 0.

- **Information fields for the communication module mounted to Slot 1 or 2**.

The fields are locked for editing and can be only reviewed by user.

- **Slot 1 Type** – Type of the communication module connected to Slot 1 – GPRS, PSTN or other.
- **Slot 1 Version** – The software revision of the module.
- **Slot 1 Priority** – Priority for sending messages for events. The priority depends on the setting of DIP-switch 6*.

> * When DIP-switch 6 is set on "OFF" position the message transmitting is from alternative type: the mounted to Slot 1 module starts sending messages, and this mounted to Slot 2 is waiting. If the module to Slot 1 fails, the module to Slot 2 starts sending the same message. If the module to Slot 1 succeeds, the module to Slot 2 does not transmit the message at all.
> When DIP-switch 6 is set on "ON" position the message is transmitted by the both modules.

- **Slot 1 Errors** – In the fields are viewed the current existing faults and errors for the communication module operation.
The existing errors are selected in the field next to them, as the description is as follows:
> - *Connection Missing* – Failure in connection with the server for monitoring and management of the system.
> - *Cannot Send* – Event in the system (alarm or trouble) that cannot be send because of failure in the connection with server or other trouble.
> - *Time Out* – Problem with the communication module and lost connection with the panel.
> - *Not Ready* – The communication module is not ready for operation – no SIM card inserted or the module is missing, but it is enabled for operation.

The information field for Slot 2 includes identical information.

Save the new configuration with ✔ Apply button.

CONFIGURATION WITH ProsTE SOFTWARE

BRAVO GPRS

GPRS Settings "1. General Settings"

Select the "1. General Settings" submenu from main menu "1. GPRS":

At the right side of the screen are displayed the following fields.

- **Net Settings APN**
- **Net Settings User Name**
- **Net Settings Password**

Some specific GPRS settings are entered in the first three fields. They are different for the different mobile service providers.
Ask you mobile service provider if there is specific information you have to fill in!

- **Account Code** – Enter here the same account code from the general "General Settings" menu. This account code will be used for communication with the monitoring server.

After setting all parameters in "1. General Settings", save the new configuration with ✔ Apply button.

GPRS Settings "2. Software Package"

Select the "2. Ajax Servers" submenu from main menu "1. GPRS":

At the right side of the screen are available the following settings:

- **IP Address 1 –** Enter the IP-address of the PC, where the Ajax SP PROFESSIONAL is installed.

- **IP Address 2 –** Enter the IP-address of back-up Ajax SP PROFESSIONAL.

- **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 15 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 "0 - 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!

After setting all parameters in "Software Package", save the new configuration with ✔ Apply button.
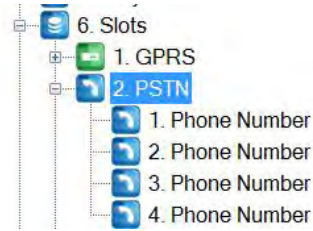
31

CONFIGURATION WITH ProsTE SOFTWARE

BRAVO PSTN and PSTN VD

These are submenus for setting the parameters of the connected to the panel PSTN communication modules. The modules can transmit messages up to 4 telephone numbers.
PSTN VD is a communication module with voice guiding and remote control of the panel.

General Settings
Select the submenu "2. PSTN".

At the right side of the screen are displayed the following parameters for programming:

- **Dialer options –** Settings for communication PSTN module. For every parameter can be set only one option, which is selected from a drop-down menu. The options has the following meaning:

Telephone Line monitor (TLM) (monitoring of the telephone line)	Disable	TLM is disabled.
	Enable	TLM is enabled and in case of trouble an event "Telephone line trouble" is generated.
Dialing type	Tone	The tone dialing type is selected.
	Pulse	The pulse dialing type is selected.
Blind dialing (no checking the presence of "Wait dial tone" signal).	Disable	The checking of "Wait dial tone" signal is enabled.
	Enable	No checking of "Wait dial tone" signal. The
Report type Choosing an algorithm for sending messages for	All	The messages are transmitted to all phone numbers, starting with the first one.
	Alternative*	If the messages are

events to the programmed phone numbers.		successfully sent to the first recorded phone number, the rest of the phone numbers are not dialed. If the message transmission to the first phone number is failed, the system will try to dial the next recorded phone number and so on until a successful message transmission is achieved.

* Note: *If the alarm events are assigned to different telephone numbers, the setting of this option does not matter. In that case independent message report to different telephone numbers is realized - "SPLIT Report".*

- **Communication Attempts –** Number of attempts for communication with monitoring station. Enter a number from 1 to 5.
  The entered parameter represents the number of attempts to be made for each of the telephone numbers. If the value 4 is set and there are two telephone numbers, the total number of attempts for transmitting messages will be 8 - by 4 for every of the phone numbers.
  After the assigned number of attempts for communication is reached, the attempts to transmit messages will be terminated. The attempts to transmit will be renewed to the central station first, when the next transmission event occurs.

- **Telephone line trouble delay (min)** – Setting a delay in minutes in case of telephone line monitor fault.
  A delay from 1 to 255 minutes is set prior to indication of a telephone line failure.

Save the new configuration with button.

Additional settings for communication module BRAVO PSTN VD.

- **VD Options.**
  You can set more than one option for the voice dialer operation. The option is enabled when the field next to it is enabled:
  - **Report –** Sending of report for event to user through the programmed telephone numbers.
  - **Management –** Management and control through PSTN telephone line.
  - **Modem -** Playing of audio file at successful connection with a modem.
  - **Skip site name –** The recording for the name of the site will not be played at the beginning of the message.

32

CONFIGURATION WITH ProsTE SOFTWARE

In the field for BRAVO PSTN VD parameters are available and the following values for setting:

VD Message Repetitions	3
VD Language	0
Number of Incoming Rings	4

- **VD Message Repetitions –** Enter a number of attempts for transmitting messages via the voice dialer to the recorded telephone numbers. Set a value from 1 to 9, as the setting 1 means that the dialer will make 1 attempt, setting 2 – two attempts and so on.

- **VD Language –** Set the language for the voice dialer messages. Enter a digit corresponding to the respective language:
  - [0] - English
  - [1] - Portuguese
  - [2] - Italian
  - [3] - Romanian
  - [4] - Greek
  - [5] - Persian (Farsi)
  - [6] - French

  Attention: Ask your distributer for more information whether the voice dialer supports your native language and the value which corresponds to it.

- **Number of incoming rings –** Enter here the maximal number of incoming rings, which the panel should wait before answering the call. Set a number from 1 to 9. Setting of 0 means that the remote programming is disabled.

Save the new configuration with ✔ Apply button.

Entering of telephone numbers and events

To access the menus for entering of telephone numbers, click on the "+" icon in front of "2. PSTN". The user can enter up to four telephone numbers for sending messages for events to monitoring station via SIA or CID communication protocol.
There is an option for informing directly the user in case of alarm events via User communication protocol.
The programming of the telephone numbers is analogical.
When using BRAVO PSTN VD "Voice dialer" communication protocol must be set at "Protocol" field. The "Voice dialer" protocol allows management of the system through telephone line – see the Operation Algorithm described at point 9.8.

ATTENTION: If the "Voice Dialer" protocol is set, but BRAVO PSTN without voice module is installed to the panel, or there is problem of reading the messages recorded in the mini SD of BRAVO PSTN VD, then the PSTN module (regardless the type) will operate on "User" communication protocol.

On the right side of the screen are displayed the following parameters:

Phone Number		
Number		
Protocol	CID	
Message Types	Alarm and Restore	☑
	Tamper and Restore	☑
	Panic	☐
	Fire	☐
	Arm, Disarm and Bypass	☑
	Medical Alarm	☐
	Trouble and Restore	☑
	Special messages	☐

- **Number –** Enter in the field the telephone number up to 32 characters (no intervals).
  As an option the user can add some special functionality with following symbols:

Symbol	Description
P	Switches on "pulse dialer".
T	Switches on "tone dialer".
D	2 seconds pause.
*	Switches on "Wait dial tone".
#	"Blind dialing"; Switches off "Wait dial tone".

- **Protocol –** Choose a communication protocol. From the drop-down menu select one of the protocols:
  - **CID** – Communication protocol for transmitting messages for events to a monitoring station.
  - **SIA** – Communication protocol for transmitting messages for events to a monitoring station.
  - **Voice dialer (VD) –** User communication protocol allowing management of the system through telephone line.
  - **User (Ignore Message Types)** – Communication protocol for transmitting alarm events directly to user. The entered message types are ignored and in case of alarm event the user will receive an incoming call from the system with melody message.

- **Message Types –** Set the message types for transmitting to a monitoring station through the telephone number.
  The message type is set when the check box next to it is selected. To every message type are associated a group of events:

33

CONFIGURATION WITH ProsTE SOFTWARE

Type	Events
Alarm and Restore	- Burglary ALARM - Burglary ALARM Restore
Tamper and Restore	- TAMPER (from a device or from the control panel - TAMPER Restore
Panic	- Panic ALARM (from a panic button or a key fob remote control) - Panic ALARM Restore
Fire	- FIRE ALARM (from a fire detector) - FIRE ALARM Restore
Arm, Disarm and Bypass	- Arming of the system - Disarming of the system - Zone bypass
Medical Alarm	- Medical ALARM (from a panic button or a key fob remote control) - Medical ALARM Restore
Trouble and Restore	- Main power supply 230V AC lost - Main power supply 230V AC Restore - Problem with the battery (from a device or from the panel – the battery is missing or is with low charge) - Battery Restore - Problem with a communication device (PSTN, GPRS) - Communication device Restore
Special messages	Special events group: - Flood alarm - Flood alarm Restore - Device Enrollment - Device Deleting - Memory LOG file Erasing - Programming mode entry - Programming mode exit - Remote programming mode entry - Remote programming mode exit - Periodic test - Initial power up - System Reset - Time setting - User code change

BRAVO MOUT / PGM

Това е меню за настройка на функционалността на модул за управление BRAVO MOUT. В зависимост от настройката изходите на модула работят в два различни режима със следното приложение:
- *Режим MOUT* – Към изходите може да се свързва трансмитер за предаване на събития; или свързване на допълнителна жична сирена с външно захранване.
- *Режим PGM* – Изходите на модула могат да се използват за реализиране на домашна автоматика и дистанционно управление на устройства. Характеристиките изходите са OC, 100mA, като активното им състояние е GND.

В меню "6. Слотове" изберете подменю "3. MOUT/ PGM".
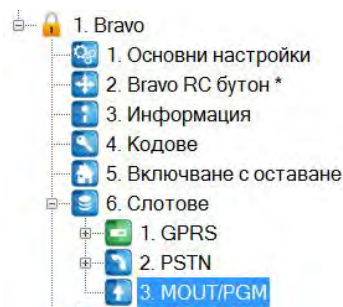
В дясната част на екрана са достъпни следните полета за въвеждане на настройки:

- **Режим** – От падащото меню се избира функционалността на модула: MOUT (предаване на сигнали) или PGM.

- **PGM 1-6** – Въвежда се име на PGM изхода, до 8 символа заедно с интервалите, с което изходът ще се визуализира при управление през мобилно приложение MobileTTE и AjaxWEB. Полетата се попълват само при избран режим на работа PGM.

Save the new configuration with ✔ Apply button.

CONFIGURATION WITH ProsTE SOFTWARE

Menu 6. "Zone Names"

In this menu the installer can enter specific names for all zones in panel.

By default the names of zones are set as Zone 1, Zone 2, etc. Enter the new name in the field next to the zone number. The name must be no longer than 14 symbols (letters A-Z, digits 0-9) including spaces.

Zone Names	
Zone 1	Entrance
Zone 2	Room 1
Zone 3	Room 2
Zone 4	Room 3
Zone 5	Zone 5
Zone 6	Zone 6
Zone 7	Zone 7
...	...
Zone 16	Zone 16

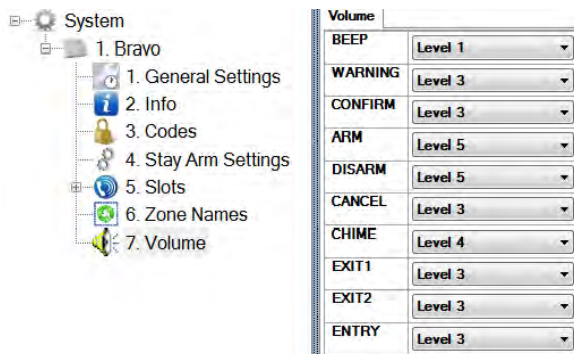Save the new configuration with ✔ Apply button.

Menu 7. "Zone Volume"

In this menu the installer can set the volume level of the built-in sounder in BRAVO panel for announcement of different operation in the system.

The installer can choose among 9 volume levels selected from a drop down menu.

The description of the fields:

- **BEEP** – Single sound when a button is pressed.
- **WARNING** – Sound signalization for system trouble.
- **CONFIRM –** Sound signalization for confirmation of an operation.
- **ARM –** Sound signalization when ARMING.
- **DISARM -** Sound signalization when DISARMING.
- **CANCEL –** Sound signalization for rejecting of an operation.
- **CHIME –** "Chime" sound signalization
- **EXIT 1 –** Exit time is running sound signalization.
- **EXIT 2 –** Exit time for the last 10 seconds.
- **ENTRY –** Entry time is running sound signalization.

Volume	
BEEP	Level 1
WARNING	Level 3
CONFIRM	Level 3
ARM	Level 5
DISARM	Level 5
CANCEL	Level 3
CHIME	Level 4
EXIT1	Level 3
EXIT2	Level 3
ENTRY	Level 3

ATTENTION: In the "1.GENERAL SETTINGS" menu the sound signalization from the panel and for system troubles should be enabled.

Writing of system configuration.

- Select the BRAVO panel and use the right mouse button to open a list with control options:
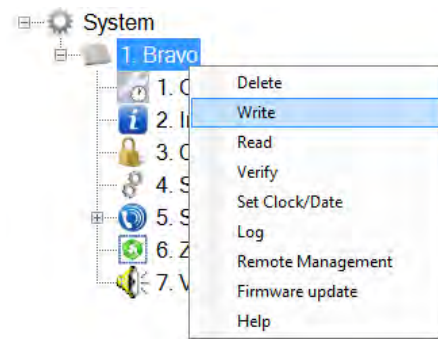
- Select "Write" option. In the "Write" window select the "RS232" tab. Enter the COM port number to which you are physically connected. Press the "OK" button.
- Enter a valid PC ID and Valid User Code in the "Additional Parameters". The default codes are listed on the picture below:
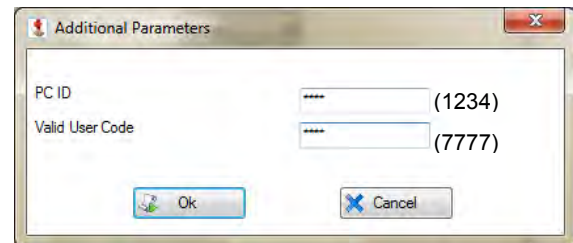
- Press the "OK" button and wait for the message for successful writing of the configuration.

Setting the time and date

- Select the BRAVO panel and use the right mouse button to open a list with control options:

- Select "Set Clock/ Date" option. In the "Set Clock/ Date" window select the "RS232" tab. Enter the COM port number to which you are physically connected. Press the "OK" button.
- Enter a valid PC ID (1234 by default) and Valid User Code (7777 by default) in the "Additional Parameters".

35

CONFIGURATION WITH ProsTE SOFTWARE

Reading the Log memory file

- Select the BRAVO panel and use the right mouse button to open a list with control options:
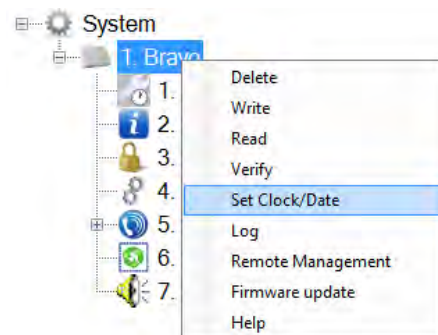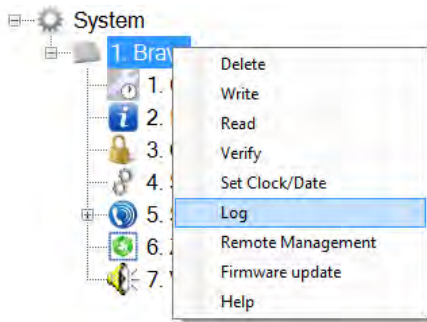

- Select "Log" option. In the "Log" window select the "RS232" tab. Enter the COM port number to which you are physically connected. Press the "OK" button.
- Enter a valid PC ID (1234 by default) and Valid User Code (7777 by default) in the "Additional Parameters".
- In a new window are listed the events in the memory log file with time and date of occurring. The first event in the list is the newest one.

7.10. Default Parameters after Hardware Reset

Remote control "*" button	No func
Enable panic alarm sounds	All Disabled
Enable trouble sounds	All Enabled
Enable panel sounds	All Enabled
AC lost delayed (min)	0
Panel tamper alarm	Always
Exit time (sec)	15
Entry time (sec)	15
Bell time (min)	1
Lost time if armed (min)	120
Lost time if disarmed (min)	120
Account code	ffff
Name	TTE Bravo

WL Device Alarm:
    - Zone tamper
    - Zone lost
    - Siren tamper
    - Siren lost
	
	 Always
	 In ARM only
	 Always
	 In ARM only

After realizing a hardware reset of BRAVO panel by default are restored the settings at "General Settings" menu, the combinations of all user codes, settings of communication modules, as and the bypassed zones in "Stay ARM" mode.

7.11. Firmware Update

Actual files (SPF) for firmware update are available for download for registered users only from the official web page of the manufacturer:
http://www.teletek-electronics.com

ATTENTION: The firmware update does not affect on the current system settings and the configuration parameters of the panel.

During the firmware update process the LEDs for device groups are blinking together.

To do a firmware update of your BRAVO panel:
1. Download the last actual file for firmware update from the official web page of the manufacturer and save it to your local computer or laptop.
2. Connect the BRAVO panel to the computer and run the ProsTE software.
3. Choose BRAVO system from the drop down menu, as described in the beginning of item 7.9.
4. Click with the right button of the mouse and choose from the option list "Firmware update" menu.
5. In the new dialogue window press the Browse button and select the SPF file from your local computer.
6. Enter in "Device Enrollment" mode on the panel.
7. Press the Update button in the dialogue window.
8. In the dialogue window "Communication" choose a COM port (to which the panel is physically connected) and press OK button for confirmation.
9. Wait until the firmware update process is complete - BRAVO panel will return in normal operation mode.
10. Press the Finish button in the dialogue window..

8. Arm and Disarm Management

IMPORTANT: To arm/ disarm and to check the status of your BRAVO panel via smart phone you should install the mobile application Mobile TTE, which is available for download and installation from here:
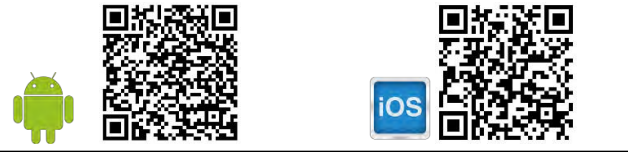
8.1. Full Arming Mode
Full arming mode means all zones are secured exept the bypassed ones.
The arming is performed with a key fobs, mobile application Mobile TTE or user web interface AjaxWEB.

To arm the system, press 🔒 button of the key fob. An exit time starts running during which the user must leave the premises.

> **ATTENTION**: The arming can be instant without exit time for leaving the premises. This depends on the set default type configuration of the zones – see the settings of dip-switch 6 in the object card, item 11!

8.2. Stay Arming Mode
Stay arming mode means the user is allowed to stay at certain zones – this is a partial arming of the system. The zones which will stay disarmed in this mode are programmed via ProsTE software (see item 7.9. – menu "Stay ARM Settings").

To arm the system, press ✳ button of the key fob. An exit time starts running during which the user must leave the premises.

> **ATTENTION**: The ✳ button must be enabled for operation with setting the "Stay ARM" option via ProsTE software – check the setting in the object card, item 11!

8.3. Disarming
Going in the entrance zone the user must disarm the system during the entry time running. The user can disarm the system with a key fobs, mobile application Mobile TTE, user web interface AjaxWEB or via panels' buttons.

8.3.1. Disarming via key fob
To disarm the system, press 🔓 button of the key fob.

8.3.2. Disarming via panel buttons
Attention: This functionality is available only if a special disarm code is set via ProsTE software!

Use the arrow buttons to enter digits from 1 to 9, and 10 for 0.

Example
For illustration of the specialized code entering we will present entering of Disarm code 3208:

The system is in Full or Stay ARM mode.	
Press button	⚙
Zone 1 is blinking in yellow	1
Press the "Forward" arrow button to digit 3	▶
Zone 3 is blinking in yellow	3
Confirm – Press and hold the button for 2-3 sec.	✕
Zone 3 will light for short in green – the digit is confirmed	3
Press the "Back" arrow button back to digit 2	◀
Zone 2 is blinking in yellow	2
Confirm – Press and hold the button for 2-3 sec.	✕
Zone 2 will light for short in green – the digit is confirmed	2
Press the "Forward" arrow button to digit 10 (*10 is used for entering of 0*)	▶
Zone 10 is blinking in yellow	10
Confirm – Press and hold the button for 2-3 sec.	✕
Zone 10 will light for short in green – the digit is confirmed	10
Press the "Back" arrow button back to digit 8	◀
Zone 8 is blinking in yellow	8
Confirm – Press and hold the button for 2-3 sec.	✕
Zone 8 will light for short in green – the digit is confirmed	8

> **ATTENTION**: Entering of the specialized disarm code can be canceled at any time by pressing the "Programming" button – that will reject the entered digits and the user can restart the code performing.

37

USER INSTRUCTIONS

9. Operation with the System

9.1. Reviewing of Alarm events

Button lights on permanently in red.

Press the button to review the current alarm events. The zone number with the newest (last in the time) alarm is blinking and the group device indicator is lighting on. The other zone numbers with active alarms are lighting on. **Use the arrow buttons to review the order of the alarms as:**

- arrow for scrolling to the before last alarm;

- arrow for scrolling to the first alarm. While the zone number is selected the LED of the device enrolled to it is blinking in yellow.

9.2. Clearing of Alarm events
The indication for the alarms will stay active until the next arming, but can be also cleared by user manually.

To clear manually the alarms, press in sequence:

 The button is blinking → Button of a MANAGER key fob

To exit from the Reviewing Alarms Mode press the "Memory" button once again. The exit is automatic after 3 minutes if there is no pressed button.

9.3. Reviewing Troubles Mode

Button lights on permanently in yellow.

The panel performs two short sound signals at every 20 seconds.

Press the "Attention" button to review the current troubles indicated from devices and/ or the panel. For detailed description of the indicators see also items 5.1 and 5.2.

To exit from the Reviewing Troubles Mode press the "Attention" button once again. The exit is automatic after 3 minutes if there is no pressed button.

After exit from the Reviewing Troubles Mode the sound signalization will stop. LED indication will remain active until restoring of the current troubles.

9.4. Reviewing of Bypassed Devices

Button lights on permanently in yellow.

Press the button to review the bypassed devices. The zone number of the first bypassed device is blinking and the group device indicator is showing its type. The LED of the selected device is blinking in yellow. Use the arrow buttons to review the other bypassed devices.

Press the button to review if there are bypassed devices from other group types.
To exit from the Reviewing Bypassed Devices press the "Bypass" button once again. The exit is automatic after 3 minutes if there is no pressed button.

9.5. Erasing the Log Memory
ATTENTION: The full list of the last 256 memory events can be viewed via ProsTE software, Mobile TTE and AjaxWEB web application.

To erase the log memory:
• Enter in "Device enrolment" mode.
• Use the arrows to select a free zone or position – it is blinking in green.
• Press and hold at the same time buttons + .
• The panel will confirm the erasing with a sound signal.

9.6. Changing Signal Strength of a Key Fob
This functionality allows the user to increase/ decrease the strength of the emitted signal of the key fobs.

To increase the signal strength, press at the same time the buttons + of the key fob.

To decrease the signal strength, press at the same time the buttons + of the key fob.

38

MAINTENANCE

10. Replacing Batteries

10.1. Replacing the Panel Battery

ATTENTION: Use only Li-Po batteries supplied by the manufacturer, with parameters 3,7V/ 4000mAh and max. size 80x65x10mm!

To replace the battery with new:
- Switch off the mains power supply of the panel.
- Undo the two screws fixing the front panel to the bottom. The cover must be closed.
- Switch off the battery – set the dip-switch "Battery" in "OFF" position.
- Switch off the "Battery" connector from the terminal.
- Remove the cover of the battery.
- Replace the battery with new. Run the cable with connector through the side opening of the cover. Mount the battery cover back on its place.
- Switch on the "Battery" connector to the terminal and set the dip-switch "Battery" in "ON" position.
- Close the box and switch on the mains power supply of the panel.
- Set the internal clock with ProsTE software.

10.2. Detectors (PIR, MC, FL, FD)

ATTENTION: Use only battery approved by the manufacturer, type CR123A 3V/ 1500mAh!

To replace the battery with new:
- Remove the cover of the detector's enclosure.
- Remove the battery (two batteries in BRAVO FD).
- Press button ENROLL on the PCB. Wait for 10-15 seconds and place the new battery, as observe the polarity. The LED lights in sequence in red, then in green.
- Mount back the cover of the device enclosure.

10.3. Key Fob

ATTENTION: Use only battery approved by the manufacturer, type CR2450 3V/600mAh!

To replace the battery with new:
- Remove the cover of the key fob.
- Remove the battery.
- Place the new battery, as observe the polarity.

10.4. Outdoor sounder

ATTENTION: Use only battery pack approved by the manufacturer – 3x3V/ 15Ah, CR34615 type, size D!

To replace the battery pack with new:
- Remove the sounder covers to access the PCB.
- Switch off the connector of the battery pack and dismount it from the plastic bottom.
- Press button ENROLL on the PCB. Wait for 10-15 seconds and switch on the connector of the new battery pack, as observe the polarity. The LED will light first in red and then continuously in green.
- Mount the covers back on their places.

As option, the outdoor sounder BRAVO SR can be powered on with adapter 12VDC/1A. The prepared wires of the adapter are connected to the terminals +12V and GND on the PCB with strictly observing the polarity.
Attention: The connection of the optional adapter for power on of BRAVO SR must be performed from a qualified electrician only!

Tips & Tricks...

- Bypass the device before replacing its battery so to eliminate the tamper signalization from the panel.
- The battery life can be increased if the LED indication of devices is disabled – set the dip-switch 1 in position "ON".

Environmental Protection

Directive of batteries disposal – Information for the user (2013/56/EO)

The used batteries from devices after changing with new should not be disposed together with other household waste. The chemical elements, used in the batteries can seriously harm the man's health and the outdoor environment.
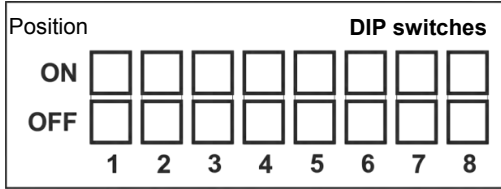The recycling of the used batteries and waste of batteries contributes for protection, keeping clean and improving the outdoor environment

39

MAINTENANCE

11. Object Cart

The object card of the site should be filled in by the installer after the installation and configuration via ProsTE software.

- Hardware settings of the dip-switches:

- Panel Settings (ProsTE):

Function of button ✱	No functionality	☐
	Stay Arming	☐
	Panic FIRE	☐
	Panic MEDICAL	☐
	Panic POLICE	☐
	Checking the outdoor sounder	☐
Enabled tamper sound signalization	Panic MEDICAL	☐
	Panic POLICE	☐
Enabled trouble sound signalization	Lost/ Tamper of device	☐
	Battery low charge - device	☐
	Tamper signal	☐
	Mains power supply 230V loss	☐
	Battery low charge - panel	☐
	Communication loss	☐
Enabled sounds from the panel	Buttons	☐
	Alarm event	☐
	Entry time	☐
	Exit time	☐
	Chime	☐
Signalization for 23 0V loss	Immediate	☐
	Delayed, min.	
Tamper signal from the panel	None	☐
	In arm mode only	☐
	Always	☐
Times	To exit when arming, sec.	
	To entry when disarming, sec.	
	Alarm cycle, min.	
Special	Disarm code (……………………………..)	☐

- Communication and management:

Communication modules installed	GPRS	☐
	PSTN digital communicator	☐
	PSTN digital communicator and voice module	☐
	MOUT	☐
AjaxWEB	Yes	☐
	No	☐

- Zones (location and names):

№	Type	Detector	Room
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

- Site Diagram:
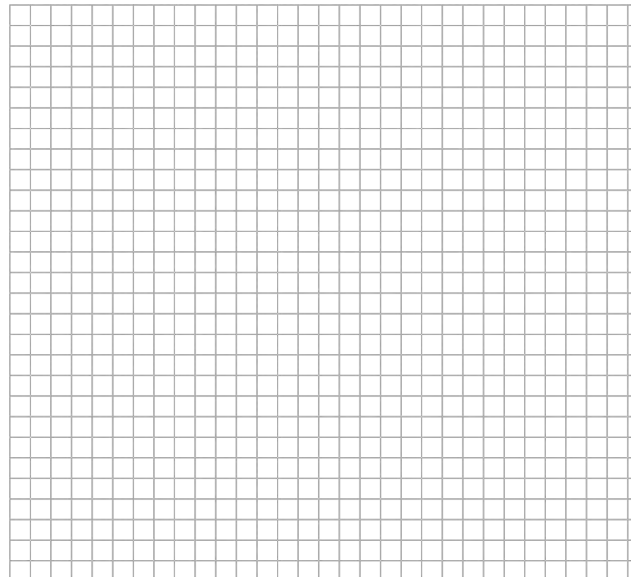
INDEX

Ajax WEB
Specialized user web interface for programming, monitoring and management of intruder alarm control panels produced by Teletek Electronics JSC. The application requires mounted GPRS or LAN communication modules to the panel's configuration.

Arming
This is an action for preparing the system for full or partial protection of the premises (Full ARM or Stay ARM). In Full ARM mode, in case of violation in instant type zone the sirens will be activated immediately and message for burglary alarm will be transmitted to User or monitoring station (via GPRS or PSTN channel if there is mounted communication module in the panel).

Bypass
This is a temporary excluding (disabling) a device or zone from the system configuration. The panel does not follow the status of a bypassed device or zone.

Communication module
This is a specialized device for transmitting messages for alarm or trouble events to user or monitoring station via GPRS, PSTN or other communication channel.

Control panel
This is a control device gathering information for the current system status from all enrolled to it devices in the system configuration. The control panel informs the user for all alarm and trouble events in the system with sound and LED signalization.

Detector
This is a device sending signals to the control panel in case of detecting some specific activity in the protected zone. For example, BRAVO PIR detects movement; BRAVO FL detects water presence, and so on.

Device Group
The devices with same type are organized into groups. For example, in BRAVO panel, the devices PIR, MC, FD and FL form the group of Detectors; RC and panic buttons form the group of key fobs, etc.

Disarming
This is an action for stopping the full or partial protection of the premises. In disarmed state the panel will indicate only with LED indication the activated zones without sound signalization.

Double Action Mode
This is a specialized operation mode in BRAVO PIR for minimization of the false alarms in the system. In double action mode the detector will generate an alarm event only if there are two consecutive activations of the zone in time period of 60 sec.

Enrollment of device
The enrollment is a process for adding devices to system configuration.

Key fob transmitter
This is a control device for remotely arming and disarming the system.

MobileTTE
Specialized smart phone application for management and monitoring of intruder alarm control panels produced by Teletek Electronics JSC. The application requires mounted GPRS communication module to the panel's configuration.

ProsTE
Specialized software for programming of intruder and fire alarm control panels produced by Teletek Electronics JSC. The software is free of charge and can be downloaded from the official web page of the manufacturer.

Reset of device
This is a process for restoration of the factory settings of a device.

Security system
This is a set of devices enrolled to a supervising control panel, all located in the premises of the protected area.

Signal Strength
This is the quality of the communication link between the control panel and devices in the system.

Siren
This is a sound signalization device which is activated in case of alarm event in the system during Full ARM or Stay ARM mode.

Tamper
This is a specialized button (or switch) for self-protection of the device box. In normal state the tamper-button stays pressed from the cover of the device, and in case of opening will generate sound signalization for technical trouble (see also item 4.4).

Type of zone
It is defined according the requirements for reaction of the system in case of alarm or other signal from the respective device. All zone types are described in item 4.2.

Zone
This is a separated part of the total protected area, which is monitored by a detector enrolled to the system configuration.

Zone (Device) Activation
This means that a device, which monitors the status of a zone is detected some specific activity in the protected zone (the device is activated). For example: BRAVO PIR is activated from a movement; BRAVO MC magnetic contact is open – the two parts are separated on distance 30mm or more; BRAVO FD fire detector is activated from a smoke and raising heat, and so on.
Note: Other terminology for zone (device) activation is zone opening.

Zone (Device) Restore
This means that a device, which monitors the status of a zone has come back to normal operation mode.
See also the definition for Zone (Device) Activation.

41

GUARANTEE

GUARANTEE

The guarantee terms are determined by the serial number (barcode) of the electronic device!
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 6 months, whichever period is longer. The original purchaser shall immediately send manufacturer a written notice of the defective parts or workmanship.

INTERNATIONAL GUARANTEE
Foreign customers shall possess the same guarantee rights as those 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
The guarantee will be granted when the appliance in question is returned. The guarantee period and the period for repair are determined in advance. The manufacturer shall not accept any product, of which no prior notice has been received via the RAN form at: http://www.teletek-electronics.com/en/support/Service
The setup and programming included in the technical documentation shall not be regarded as defects. Teletek Electronics bears no responsibility for the loss of programming information in the device being serviced.

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:
- Devices with destroyed serial number (barcode);
- 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 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, service 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 via the RAN form at: http://www.teletek-electronics.com/en/support/Service .
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 by the Customer. The devices with unwarranted services carry 6 month guarantee for the replaced parts.
The closest equivalent product, available at the time, shall replace the products, the manufacturer deems un-repairable. The current market price shall be charged for every replaced product.

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