

Pandora would like to thank you for choosing our service-security system

**Pandora Smart Pro v3** is a car service-security system built for cars with on-board voltage of 12V. It is a complex engineering solution, which includes unique and modern technological software and hardware solutions.

When building the Pandora Smart Pro v3 we were using the most up-to-date electronics from world's best manufacturers. The device is built using high-precision mounting and control machinery, thus we guarantee highest possible quality, reliability and stable technical characteristics for the whole operation period.

The Pandora Smart Pro v3 has a cryptographically strong authorization code with unique dialog algorithm and individual encryption key on every device. It guarantees protection from electronic hacking for the whole operation period.

The system is built for your convenience: it's ergonomic, reliable, has the highest security and service characteristics, 3 years unconditional warranty and free service and support. We are happy to provide any support we can – feel free to use our online support.

**! WARNING! It is strongly advised to have professional car mechanic installing the system. Any car electronics installer should be able to install the system using installation scheme in this manual and the special software. Most features are highly dependent on competent installation. Our systems are thoroughly tested for quality, so if a feature fails to produce expected result, most likely the problem is in improper installation.**

This device has limited external factors resistance. It should not be subjected to water beyond occasional splatter, or operated in temperatures outside -40 to +85° C range. All system components must be installed only in a car interior.

The base unit and radio tags fulfill with the IP40 category of protection against water.

Our web-site: [pandorainfo.com](http://pandorainfo.com)

Customer support: [support@pandorainfo.com](mailto:support@pandorainfo.com)



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## System set

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**!** THE MANUFACTURER RESERVES THE RIGHT TO CHANGE THE SYSTEM SET AND CONSTRUCTION OF THE PRODUCT TO IMPROVE ITS TECHNOLOGICAL AND OPERATIONAL PARAMETERS WITHOUT A NOTIFICATION.

## Read before using


Carefully read this manual before starting installation and using the security-service system. Pay attention to text marked with !

! THE SECURITY AND TELEMETRIC SYSTEM IS A COMPLEX TECHNICAL PRODUCT. SYSTEM INSTALLATION AND CONFIGURATION MUST BE CARRIED OUT ONLY BY A SKILLED PROFESSIONAL.

! FEATURES AND SYSTEM MODES, CONTROL OF THE VEHICLES ZONES DEPENDS ON THE TYPE OF CONNECTION AND SYSTEM SETTINGS, ORIGINAL VEHICLE OPERATION LOGIC AND TRIM.

! THE SYSTEM SET INCLUDES THE "OWNER'S PERSONAL CARD". THIS CARD CONTAINS INFORMATION UNDER A PROTECTIVE LAYER THAT IS INTENDED ONLY FOR THE OWNER OF THE SYSTEM. MAKE SURE THAT THE PROTECTIVE LAYER ON THE OWNER'S PLASTIC CARD IS INTACT AFTER THE INSTALLATION OF THE SYSTEM. READ THE "OWNER'S PERSONAL CARD" SECTION OF THIS MANUAL BEFORE ERASING THE PROTECTIVE LAYER.

! WHEN SYSTEM INSTALLATION IS FINISHED:

- CHECK THE SYSTEM OPERATION AND FUNCTIONS WITH A SPECIALIST.
- WE RECOMMEND THAT YOU MARK EACH WORKING FUNCTION WITH A SIGN  IN THE "CONTROL THE SYSTEM" SECTION
- CHECK THAT THE "INSTALLATION CERTIFICATE" AND "WARRANTY CARD" ARE FILLED OUT. THESE DOCUMENTS MAY BE REQUIRED FOR CONTACTING THE CUSTOMER SUPPORT.
- ASK AN INSTALLER TO MARK THE LAYOUT OF THE SYSTEM COMPONENTS ON THE DIAGRAM. THIS INFORMATION MAY BE REQUIRED FOR DIAGNOSTIC/CONFIGURING OR EMERGENCY DEACTIVATION OF THE SYSTEM.

WE RECOMMEND THAT YOU CHANGE THE DEFAULT VALUE OF THE PIN-CODES OF THE SYSTEM. YOU CAN WRITE DOWN THE CHANGED PIN-CODES IN THE "PIN-CODES OF THE SYSTEM" SECTION.

## PIN-codes of the system

### The “Secret PIN-code”

(is written on the “Owner’s personal card”)

### The “Service PIN-code”

(default value is 1-1-1-1)

### The “Guest PIN-code”

(default value is 1-2-3-4)

### The “Immobilizer PIN-code”

(is used for the Validator (pin-to-drive) function)

CANNOT BE CHANGED						
<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>
<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>
<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>

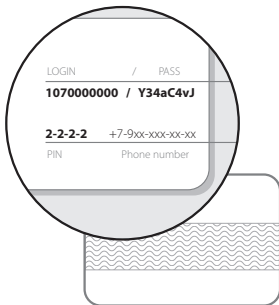
**!** IT IS RECOMMENDED THAT YOU WILL WRITE DOWN THE CHANGED OR CREATED VALUES OF ALL PIN-CODES. ELIMINATE THIRD-PARTY ACCESS TO THIS INFORMATION

## Owner’s personal card

**!** ERASE THE PROTECTIVE LAYER CAREFULLY. DO NOT USE ANY SHARP OBJECTS TO AVOID DAMAGING OF HIDDEN INFORMATION UNDER THE PROTECTIVE LAYER.

The owner’s personal card contains private information under a protective layer:

- PIN (the “Secret PIN-code”) is a 4-digit number. This code can be used to disarm the system and to deactivate immobilizer functions and to activate service mode. It can be also used to enter programming mode.
- LOGIN is a 10-digit number. This information is used to add the system to the online service and mobile applications.
- PASS contains 8 characters and can consist of digits, lower and upper case letters). This information is used to add the system to the online service and mobile applications.
- Phone number is a phone number of the built-in SIM-chip.



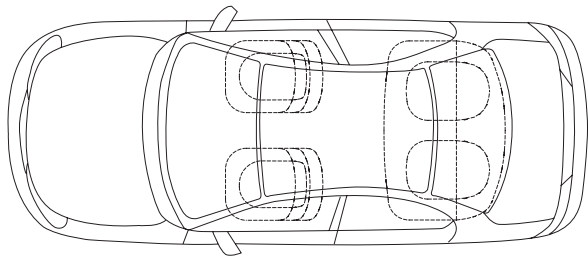
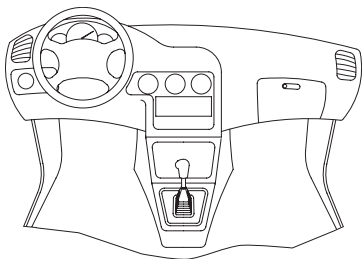
## External VALET button

An external VALET button with a three-color status LED indicator is placed inside a vehicle (see the system modules layout) The button is used for programming the system, arming/disarming, activating/deactivating immobilizer mode.



## System modules layout

- 1 External VALET button (VALET button via CAN)
- 2 Button for the immobilizer PIN
- 3 Circuit being blocked
- 4 Base unit
- 5 Beeper
- 6
- 7



## Base unit

**Built-in GSM modem (2G/3G/4G LTE)** provides a connection with our online-service pandora-on.com and mobile applications (Pandora Online/Pandora Pro), allows to control the system by a phone using DTMF-commands, voice and SMS notifications, automatic date and time detection. The modem operates in a mobile network using the built-in SIM-chip or/and a nano-SIM.

**Built-in SIM-chip** (SIM1 of the system) is an integrated SIM-card chip that it used to work with the built-in GSM modem. The built-in SIM-chip has a tariff plan for Russia (phone number is written on the "Owner's personal card").

**Built-in slot for a nano-SIM** (SIM2 of the system) is used for owner's SIM-card (nano-SIM) If both the SIM-chip and SIM-card are used in the system, there is a function that allows to automatically switch between the SIM-chip and the SIM-card if there is no internet connection

**I** T IS REQUIRED TO INSTALL AN ADDITIONAL SIM-CARD IN THE NANO-SIM SLOT FOR THE AUTOMATIC MODE. IF YOU INSTALL A SIM-CARD IN THE NANO-SIM SLOT, SET UP THE SIM2 SETTINGS.

**Built-in GPS/GLONASS-receiver** is designed to determine current location and to automatically determine UTS date and time.

**2.4GHz radio channel, Bluetooth 5.0 protocol (BT5.0)** supports up to 14 additional Bluetooth devices (see the "Additional devices" section), including a mobile phone.

**Built-in 3D accelerometer** is used to detect shock/motion/tilt including 2 separate zones of shock sensor (alarm and warning), the system allows to adjust sensitivity of each zone, to use data from the accelerometer to block the engine and close the central lock on movement.

**Temperature sensors** allow the system to measure temperature of different zones to send this information to the mobile apps. The following zones are available: interior temperature – built in sensor of the main unit, engine temperature – external temperature sensor (see the "System set"), outside temperature – digital car protocol\*.

The system setting allow you to reassign sensor to different zones and use information from external additional devices (PS-331BT, RHM-03 BT, DMS-100 BT); to implement automatic engine or engine pre-heater starts and stops by temperature-



**Built-in digital 2xCAN\* interface** allows the system to read status and execute commands via digital buses.

**Built-in digital IMMO-KEY port and immobilizer bypass\*** – hardware and software algorithms with the special Pandora CLONE server allow the system to bypass original immobilizers for automatic and remote engine starts. This port can be also used to control Webasto Thermo Top Evo и Eberspacher Hydronic/2 heaters.
















**Built-in micro-USB port** – update and configuration of the system using a PC and Pandora AlarmStudio.

 \*MORE INFORMATION IS AVAILABLE ON [LOADER.PANDORAINFO.COM](http://LOADER.PANDORAINFO.COM).

## Information signals of the system

LED INDICATOR SIGNALS	
SIGNALS	DESCRIPTION
THE SYSTEM IS ARMED	
Short red flashes	System is armed
Short green flashes	System is armed (an authorization device is in the coverage zone)
Fast red flashes	Alarm
THE SYSTEM IS DISARMED	
Faded	System is disarmed
Red	System is preparing for automatic or delayed arming
Green (when ignition is on)	System is in service mode
Green flashes (when switching on ignition)	Confirms the number of paired radio tags
Red flash (when switching on ignition)	Confirms a paired mobile device
WHEN ENTERING THE "SECRET PIN-CODE" OR THE "SERVICE PIN-CODE"	
Orange flash	Confirms a VALET button press
Short red flash	Confirms a digit input PIN-code is incorrect
Red and green flashes	Confirms correct PIN code

## SOUND AND LIGHT SIGNALIZATION



SIGNALS (sound / light)	DESCRIPTION
1x  /1x 	Arming
2x  /2x 	Disarming
5x  /5x 	Car search
30 sec.  /30 sec. 	Alarm, PANIC mode
3x 	Preparing for remote engine start
3x  /1x 	Warning level of a sensor is triggered
4x  /4x 	Sensors were triggered' signal when disarming / Parking light is not turned off notification / 'Sensors are triggered'" signal when arming
25 sec.  /25 sec. 	Engine blocking warning in Anti-Hi-Jack mode







## BEEPER SOUND SIGNALS

SIGNAL	DESCRIPTION
1 sound signal	Activating service mode
2 sound signals	Deactivating service mode
1 sound signal	Correct input of the "Immobilizer PIN-code"
3 sound signals/3 times	A battery in a radio tag is discharged
4 sound signals/4 times	Absence of an authorization device when you switch on ignition
Fast sound signals	Engine blocking warning





## SYSTEM FUNCTIONS AND MODES

### Security mode

The system confirms arming with **1x**  **sound** and **1x**  **light** signals. When the system is armed, the system monitors security zones with separated warning and alarm level of triggering:

- **Warning mode** - this mode activates when there is a slight impact on the shock sensor or additional sensor. It is accompanied with **1x**  **light** and **3x**  **sound** signals;
- **Alarm mode** - this mode activates when a sensor or one of the security zones is triggered. It is accompanied with **30 sec.**  **light** and **30 sec.**  **sound** signals. The alarm signals can be canceled by an arming or disarming command. If one of the security zones is triggered the system:
  - records this event in its non-volatile memory;
  - activates the alarm or warning mode;
  - informs an owner by all available means;
  - blocks the engine (in accordance with the settings and connections).
- If one of the security zones is opened at the moment of arming, the system will produce **4x**  **sound** and **4x**  **light** warning signals.

If one of the security zones fails, the system will forcibly turn off this zone. If a switch triggers more than 9 times in a row, it will be disabled until the next arming. The shock/tilt/motion sensor is temporarily deactivated (15 sec.) if it has been triggered more than 3 times in a row.

The system confirms disarming with **2x**  **sound** and **2x**  **light** signals. The system deactivate engine blocking (if the immobilizer function and additional blocking are not used). If there were alarm events during the armed period, the system will produce **4x**  **sound** and **4x**  **light** warning signals. The system continues to display all zones when it is disarmed, but the information is not saved in the memory.

### Security and monitored zones

- Interior temperature (status)
- Engine temperature (status)
- Outside temperature (status)\*
- Voltage of the on-board circuits (status)
- Engine operation control - RPM (status)
- Heater operating control (status)
- Fuel level (status)
- Parking (automatic gearbox) /Handbrake (manual gearbox) status

- “Parking light is not turned off” notification (status)
- Shock sensor (security zone – alarm and warning level)
- Motion sensor (security zone – alarm level)
- Tilt sensor (security zone – alarm level)
- OE alarm system status via CAN, additional sensor (status, security zone – alarm and warning level)
- Turning ignition on (status, security zone – alarm level)
- Opening doors (status, security zone – alarm level)
- Opening a trunk (status, security zone – alarm level)
- Opening a hood (status, security zone – alarm level)
- Pressing brake (status, security zone – alarm level)

! \*OUTSIDE TEMPERATURE IS AVAILABLE BY AN ADDITIONAL DEVICE (SEE THE “ADDITIONAL DEVICES” SECTION) OR BY CAN-BUS DATA (SEE [LOADER.PANDORAINFO.COM](http://LOADER.PANDORAINFO.COM)).

## Remote and automatic engine starts

The system allows for remote engine start using the “remote engine start” command from the mobile application or preconfigured automatic engine start function. Remote start can be used to heat engine and interior, charge battery or to cool the interior with air conditioning.

Remote and automatic starts can only be used when the system is armed. While the system is in remote or automatic start mode, it keeps performing all security functions of all of the security zones excluding a shock sensor (the system can be configured to not disable the shock sensor during a remote engine start). To compensate it, the motion sensor sensitivity and responsiveness will be increased. If any security zone will be triggered, the engine will be immediately stopped and alarm mode will be triggered.

When using the remote and automatic engine start functions, make sure that a car is secured with handbrake or some other means of fixating the car on a parking position. Remote and automatic engine start on automatic transmission cars will only occur, if a transmission selector lever was left in the «P» position.

If a car has manual transmission, remote or automatic start will only occur if the program neutral procedure was followed when the car was arming.

### AN EXAMPLE OF THE “PROGRAM NEUTRAL” PROCEDURE

1. When the engine is running, fixate the car with the handbrake and put gear lever to the neutral position. Program neutral procedure will be switched on automatically (by default system settings).
2. Turn the key in the ignition lock to the OFF position (the engine should still be running) and take

it out of the lock (skip this step for cars with a Start/Stop button).

3. Leave the car, close the doors.

4. Arm the system - the engine will be stopped. Now the system is ready to perform remote and automatic engine start.

### **Automatic starts**

The system allows configuring automatic engine start and stop conditions. Automatic starts can be configured using the internet-service or mobile apps. The following conditions can be specified for automatic engine starts: schedule, time period, engine temperature, voltage. The engine will be stopped automatically after specified time or when the engine temperature reaches a specified value. The engine can be also stopped by a user command.

**I** AUTOMATIC ENGINE STARTS AND STOPS BY TEMPERATURE ARE AVAILABLE ONLY IF A TEMPERATURE SENSOR IS CONNECTED. REMOTE AND AUTOMATIC ENGINE STARTS ARE NOT AVAILABLE IF THE HOOD IS OPEN.

### **Slave mode**

This mode allows arming and disarming using original vehicle control – an original key, button/sensor of a keyless access entry system.


Slave mode can be implemented using analog connections or a digital protocol of a vehicle

**I** THIS MODE IS DISABLED BY DEFAULT FOR A DIGITAL PROTOCOL. MORE INFORMATION ON [LOADER.PANDORAINFO.COM](http://LOADER.PANDORAINFO.COM). IT IS RECOMMENDED TO ACTIVATE THE "PROHIBIT DISARMING WHEN A TAG IS ABSENT" TO INCREASE SECURITY FEATURES OF THE SLAVE MODE. IF THIS MODE IS ACTIVATED, IT WILL BE POSSIBLE TO DISARM THE SYSTEM ONLY WHEN A TAG IS IN THE COVERAGE ZONE OR USING THE "SECRET PIN-CODE".

## Owner authorization devices and functions


### Authorization devices

**Authorization devices are Bluetooth devices paired with the system (radio tags, remote control D030, mobile phone with the app). The devices are used to recognize an owner in the radio coverage zone of the base unit to arm/disarm the system (Hands Free mode) and to implement immobilizer or Anti-Hi-Jack functions.**

 INSTALL THE BEEPER IF YOU USE AUTHORIZATION DEVICES.

### Hands Free mode

This mode is used for automatic arming/disarming  when an owner with an authorization device is distancing  or approaching  a vehicle.

 THIS MODE IS DISABLED BY DEFAULT. IT IS REQUIRED TO MAKE ADDITIONAL SETTINGS USING THE MOBILE APPLICATION OR PANDORA ALARM STUDIO TO USE THIS MODE. QUICK ACCESS COMMANDS TO MANAGE HANDS FREE MODE: 223\* - ACTIVATE HANDS FREE ARMING, 224\* - ACTIVATE HANDS FREE DISARMING, 222\* - DEACTIVATE ALL HANDS FREE.

### Immobilizer mode

This mode is used to recognize an owner using authorization devices when the system is disarmed. When turning on the ignition, the base unit performs a search for authorization devices in the radiocoverage zone. If there is no any authorization device in the radio coverage zone, the system will block the engine. Engine blocking will occur immediately or at the time a motion sensor detects movement, it depends on the system settings. When an authorization device appears in the coverage zone, the system will exit blocking mode and will continue to work in normal mode.

 THIS MODE IS ENABLED BY DEFAULT. IT IS REQUIRED TO MAKE ADDITIONAL CONNECTIONS FOR THIS MODE.

### ANTI-HI-JACK-1/2 modes

The Anti-Hi-Jack modes help to prevent aggressive seizure of a vehicle when authorization in case of disappearance of authorization devices from the radio coverage zone when system is disarmed.

ANTI-HI-JACK-1 mode – The base unit checks if an authorization device is in the radio coverage zone each time when ignition is on and a door is opened/closed.

ANTI-HI-JACK-2 mode – The base unit constantly checks if an authorization device is in the radio coverage zone when ignition is on.

If the system cannot detect an authorization device, the base unit will perform a delayed engine blocking. The siren will play the 'Engine blocking warning' ringtone before blocking. The engine will be blocked immediately or at the time the car starts moving, it depends on the system settings. When an authorization device appears in the coverage zone, the system will exit blocking mode and will continue to work in normal mode.


 THIS MODE IS DISABLED BY DEFAULT. THIS MODE CAN BE SET ONLY BY A PROFESSIONAL SPECIALIST.

### **Multi-button code immobilizer (pin-to-drive)**

Multi-button code immobilizer (pin-to-drive) is a function that allows disarming, disabling blocking and controlling service mode and time channels using original vehicle controls (button, lever or pedal) and a pre-programmed PIN-code (the "Immobilizer PIN-code").


#### AN EXAMPLE OF USING THE FUNCTION



- Turn on the ignition to disable engine blocking or enable service mode, turning on the ignition is not required if you want to disarm the system or control time channels.
- Enter the "Immobilizer PIN-code". Press a programmed button/lever/pedal the number of times equals to the first digit. Pauses between presses should not exceed 1 second. More than 1 second pause will be interpreted as the start of the next digit input. The immobilizer code can consist max of 4 digits from 1 to 9.
- The system will confirm the correct input by a sound signal of the beeper and a programmed function will be performed.

 THIS MODE IS DISABLED BY DEFAULT. THIS MODE CAN BE SET ONLY BY A PROFESSIONAL SPECIALIST.

## **Checking the number of paired devices**


The number of paired radio tags/mobile device can be checked by the number of flashes of the LED indicator. The number of tags/mobile device can be checked when switching on the ignition (the system must be disarmed). The number of green flashes will indicate the number of paired radio tags, a following red flash will indicate a paired mobile device.






You can also check the number of paired radio tags/mobile device by taking off and putting back on battery terminal. The system will emit short sound signals from a siren :

- First series of the siren signals  – indicates the number of paired radio tags;
- The second long signal  – after a pause of 2 seconds indicates a paired mobile devices.

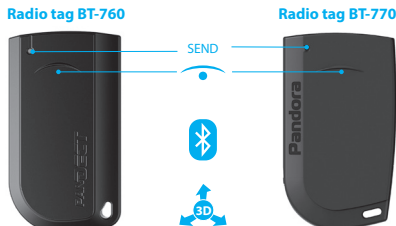


## IMMOBILIZER RADIO TAG

A radio tag is a device used to control a vehicle/system. The tag is also used as an authorization device for "Immobilizer/Anti-Hijack/HandsFree" modes. It works in the Bluetooth coverage zone. The radio tag has: a control button  for arming/disarming and activating/deactivating service mode; a built-in accelerometer allows the tag to go into energy saving mode when there is no movement; an LED indicator






-  - 2.4GHz, Bluetooth 4.2 Low Energy
-  - Control button
-  - LED indicator
-  - Battery
-  - Accelerometer

The tag should be operated in temperatures range from -10 to +40°C, IP40 category.



**!** AVOID MOISTURE ON THE RADIO TAG. DO NOT PLACE THE RADIO TAG NEAR MAGNETS OR PRODUCTS WITH SELF-MAGNETIC FIELDS

### Functions of the button

ACTION	FUNCTION
 - briefly (ignition is off)	Arm/disarm
 - hold for 2 seconds (system is disarmed)	Change the "Main owner's phone number"
 - hold for 3 seconds (ignition is on)	Activate/deactivate Service mode
 - hold for 6 seconds	Pair a tag with the base unit
 - hold for 10 seconds	Firmware update

## Light indication of SEND LED

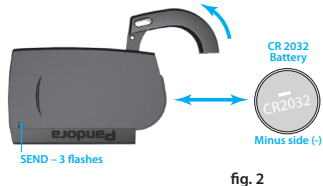
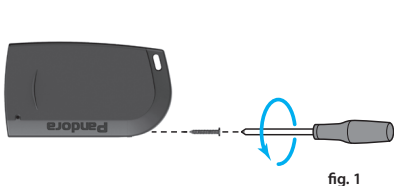
SIGNAL	DESCRIPTION
1 flash	Arming/disarming Confirmation of arming Low battery level (when installing a battery)
2 flash	Confirmation of disarming
3 flash	Battery is charged (when installing a battery)
Faded	Battery is discharged (when installing a battery, when pressing the button)

## Replacing an immobilizer tag battery

When replacing the battery you must carefully follow the following steps:


### Radio tag BT-770

- Unscrew the screw with a Philips PH00 screwdriver (fig.1);
- Slide the battery cover in the direction shown by the arrow (fig. 2);
- Remove the battery and install a new one in accordance with the correct polarity;
- The **SEND** indicator will produce 3 red lights if a quality battery is installed;
- Assemble the tag in the reverse order.



The tag can be operated as usually after finishing the procedure.

## Updating firmware of the tag

- Download the Pandora BT application (for Android or iOS devices equipped with a Bluetooth 4.0 Low Energy or higher module).
- Open the mobile app Pandora BT.
- Press and hold the button  of the radio tag until the 10th flash of the **SEND** indicator, then release the button.
- Select the found device and select one of the update option: FILE MANAGER – firmware will be uploaded from the phone storage (only for Android). INTERNET – firmware will be uploaded by an internet connection.

## CONTROL THE SYSTEM BY A PHONE

**!** FOR THE CORRECT OPERATION OF THE GSM FUNCTIONS, AN OWNER SHOULD MONITOR THE STATUS/BALANCE OF THE SIM CARD INSTALLED IN THE SYSTEM. IF THE SIM CARD IS BLOCKED OR DEFECTIVE, GSM FUNCTIONS OF THE SYSTEM WILL BE UNAVAILABLE.

Call the system's phone number. When it answers, enter a command code

#	Return to previous menu state	2 5 8 *	System information
*	Repeat the last message	2 2 2 *	Disable HandsFree
1 *	Arming	2 2 3 *	Enable HandsFree arming
0 *	Disarming	2 2 4 *	Enable HandsFree disarming
1 0 *	Silent arming	2 2 5 *	Enable Hands Free disarming only with autom. star
0 0 *	Silent disarming	7 8 9 *	Enable automatic engine start
1 5 9 *	Unlocking trunk	9 8 7 *	Disable automatic engine start
9 *	Help	2 9 7 *	End call
1 5 *	Tow truck mode	5 5 1 *	Activate Service mode*
1 0 0 *	Request GSM balance	5 5 2 *	Deactivate service mode
1 2 3 *	Start engine/prolong engine running	1 5 6 *	Switch on engine heater
3 2 1 *	Stop engine	6 5 1 *	Switch off engine heater
3 3 3 *	Additional function F via CAN	6 6 6 *	Activate Engine blocking
5 0 0 *	Request GPS coordinates	9 9 9 *	Deactivate engine blocking*
7 5 3 *	Connect to server	9 9 8 *	Deactivate authorization devices*
4 5 6 *	Switch on additional channel	8 8 8 *	Activate authorization devices
6 5 4 *	Switch off additional channel	4 2 4 *	Fuel level calibration

\*It is required to enter the "Secret PIN-code" after dialing a command

### DTMF commands

For example: To have simple access to engine start function, create a new contact in the contact list of your phone, name it 'Engine start', for instance, and add the number in the following format:

+XXXXXXXXXXXX,123\*,297\*

where

"+XXXXXXXXXXXX" – the system phone number,

"\*" - pause is a feature of the phone (can be displayed as the 'P', see the instructions of the phone),

"123\*" - remote engine start DTMF command,

"297\*" - end call DTMF command.

Contact can be added as a speed dial to any of the free button.

To have simple access to engine start function a phone other than the main owner's phone, create contact in the following format:

+XXXXXXXXXXXX,1234,123\*,297\*

where '1234' – guest PIN-code.

### **Activate/Deactivate service mode**

1. Call the system number. Wait for the answer.

2. Turn on the ignition, an authorization device (a radio tag, a Bluetooth remote control, a paired mobile phone with the app installed) must be in the coverage zone, enter the "Immobilizer PIN-code" (if the "Code immobilizer" function is enabled).

3. To activate service mode, dial the **551\*** DTMF command — "Activate service mode", then enter the "Secret PIN-code" from the owner's personal card.

To deactivate service mode, dial the **552\*** DTMF command — "Deactivate service mode".

### **Voice help**

The system has a voice help menu. During a voice call to the system, dial **9\*** and listen to the information about system control commands.

To end the session, hang up the phone.

### **Repeat the last message**

To repeat any message, press \* during a voice call to the system.

### **Arming/Disarming**

1. Call the system number. Wait for the answer.

2. Dial **1\*** to arm, and **0\*** to disarm.

For silent arming dial **10\*** or **00\*** for silent disarming.

3. The system will confirm arming/disarming.

To end the session, hang up the phone.

### **Enabling/disabling automatic engine starts**

Pandora systems have a function of prompt disabling automatic engine start:

1. Call the system number and wait for the answer.
2. Dial **987\*** to disable all automatic engine starts or **789\*** to enable.
3. The system will confirm execution of the command.  
To end the session, hang up the phone.

Automatic starts can be enabled again by dialing **789\*** (all previous settings will remain intact).

### **Request current coordinates**

1. Call the system number. Wait for the answer.
2. Dial **500\***.
3. The system will confirm: 'Current coordinates are sent via text message' and will send text message with coordinates and a web link to a map to your phone.  
To end the session, hang up the phone.

### **Request GSM balance**

1. Call the system number. Wait for the answer.
2. Dial **100\***.
3. The system will confirm: 'Balance information is sent via text message' and will send text message with account balance information to your phone.  
To end the session, hang up the phone.

### **Tow truck mode**

This mode is intended for car transportation with preservation of arming function. Tow truck mode can be activated only when the system is armed, it will be deactivated automatically when disarming.

1. Call the system number. If the system is in PANIC mode, receive an emergency call. Wait for the answer.
2. Dial **15\*** , to enable the "Tow truck" mode, the system will disable motion, shock and tilt sensors.  
To end the session, hung up the phone.
3. To disable this mode, disarm the system.

### **Activating/Deactivating engine blocking**

You can block a car engine using any phone. The engine will remain blocked until phone command 'Unlock engine' will be sent and the "Secret PIN-code" will be entered. This blocking cannot be disabled by any other means.

1. Call the system number and wait for the answer.
- c Dial **666\*** to block an engine or **999\*** to unlock it (after dialing **999\*** you should enter the “Secret PIN code” that is located on the owner’s card).

**!** ALL OTHER COMMANDS CAN BE ENTERED IN THE SAME MANNER.

## Changing settings via a phone

Disarm the system, call the system number, wait for the answer, switch on the ignition for 1-3 seconds (but no more than 5 seconds), then switch it off. The system will enter the settings mode.

An example of changing the owner’s system number:

1. Enter the setting menu via a phone according to the instruction above;
2. Dial DTMF command **1\***(phone number settings) and **1\***(owner’s system number);
3. Enter new owner’s number in the format **\*XXXXXXXXXX #** (the system recognizes ‘\*’ as ‘+’);
4. To confirm, dial **1\***.

**!** THERE ARE 2 WAYS TO CHANGE MAIN OWNER’S PHONE NUMBER

1. VIA A PHONE, USING DTMF COMMANDS SETTINGS MODE.
2. USING RADIO TAGS: TURN ON THE IGNITION WHEN THE SYSTEM IS DISARMED AND CALL THE SYSTEM PHONE NUMBER. WAIT FOR THE ANSWER, DIAL THE “GUEST PIN-CODE” (DEFAULT VALUE IS 1-2-3-4) IF YOU ARE CALLING NOT FROM THE MAIN OWNER’S NUMBER, THEN PRESS AND HOLD THE BUTTON ON THE RADIO TAG FOR 2 SECONDS (UNTIL THE SECOND FLASH OF THE SEND INDICATOR). RELEASE THE BUTTON, THE SYSTEM WILL RECOGNIZE THE INCOMING PHONE NUMBER AS THE “MAIN OWNER’S PHONE NUMBER.

1 \*

## Phone number settings

- 1 \* Owner's number -> #
- 2 \* Additional owner's number -> #
- 3 \* Second additional owner's number -> #
- 4 \* Account balance inquiry number -> #
- 5 \* System's number -> «#»

2 \*

## Settings of the voice calls

- 1 \* Voice calls on alarm
- 2 \* Voice calls on triggering warning level of the sensors
- 3 \* Voice calls on engine start
- 4 \* Voice calls on engine stop
- 5 \* Voice calls on restoring GSM connection
- 6 \* Voice calls on disarming
- 7 \* Voice calls on entering programming mode
- 8 \* Voice calls when radio relay connection is lost
- 9 \* Voice calls when on-board voltage is low
- 0 \* Voice calls on accident

3 \*

## Settings of the text messages

- 1 \* Text messages on alarm
- 2 \* Text messages on triggering warning level of the sensors
- 3 \* Text messages on engine start
- 4 \* Text messages on engine stop
- 5 \* Text messages on restoring GSM connection
- 6 \* Text messages on disarming
- 7 \* Text messages on entering programming mode
- 8 \* Text messages when radio relay connection is lost
- 9 \* Text messages when on-board voltage is low
- 0 \* Text messages on accident

5 \*

## Additional settings

- 1 \* Changing guest PIN-code
- 2 \* Entering as guest
- 5 \* Set threshold voltage for sending text message

6 \*

## Automatic engine start settings

- 1 \* By time
- 2 \* Set up time for automatic start
- 3 \* By voltage
- 4 \* Set up voltage for automatic start
- 5 \* By temperature
- 6 \* Set up temperature for automatic start
- 7 \* By period
- 8 \* Set up period for automatic start

7 \*

## Sensor sensitivity settings

- 1 \* Settings of the warning level of the shock sensor sensitivity
- 2 \* Settings of the alarm level of the shock sensor sensitivity
- 3 \* Settings of the motion sensor sensitivity
- 4 \* Settings of the tilt sensor sensitivity
- 5 \* Settings of the warning level of the supplementary sensor sensitivity
- 6 \* Settings of the alarm level of the supplementary sensor sensitivity

8 \*

## Settings of saving mode

- 1 \* GSM connection
- 2 \* Money saving mode of the GSM connection
- 3 \* Voice calls in roaming service

9 \*

## Current time and date settings

- 1 \* Set up date
- 2 \* Set up time

**NOTE: Engine start via temperature is available only if temperature sensor is connected. The sensor availability depends on the system set.**



## ONLINE SERVICE AND MOBILE APPLICATIONS

Telemetric function of the system allows you to control your vehicle using the online service [pandora-on.com](http://pandora-on.com) or mobile apps – Pandora Pro (for iOS), Pandora Online (for Android).

The Pandora Pro and Pandora Online applications can work via a Bluetooth channel when there is no connection to the server. To get these functions, the mobile phone must be paired with the system.

**!** FOR THE CORRECT OPERATION OF THE GSM FUNCTIONS, AN OWNER SHOULD MONITOR THE STATUS/BALANCE OF THE SIM CARD INSTALLED IN THE SYSTEM. IF THE SIM CARD IS BLOCKED OR DEFECTIVE, GSM FUNCTIONS OF THE SYSTEM WILL BE UNAVAILABLE.

Before using the online-service, It is required to create an account (Registration), login to your account (using your email and password created on the registration step) and add the system to your account (enter information from the "Owner's personal card").

### Registration

Visit the website or open the mobile app to create an account.

Web-service: <https://pandora-on.com>.

#### Mobile apps:

**Pandora Pro** for iOS is available in the AppStore;

**Pandora Online** for Android is available on the Play Market (Google Play).

**!** MINIMUM REQUIREMENTS: ANDROID V4.4; iOS V10.



You will create the data to sign in: LOGIN – your email, PASSWORD – a password entered during the registration. You will receive an email with a confirmation link. Click the link to complete the registration procedure.

## Login

After completing of the registration process, you can login to the online service via a computer's web browser or via the mobile apps Pandora Pro or Pandora Online. Use your previously created login/ password to login.

## Adding a system to your account

The created account can support up to 3 telemetry systems. Use the information from the "Owner's personal card" to add the system to your account.

Go to the "Add a device/Add a system" window and enter the LOGIN and PASS from the "Owner's personal card", create a name for your car and click "Add".

**!** ERASE THE PROTECTIVE LAYER CAREFULLY. DO NOT USE ANY SHARP OBJECTS TO AVOID DAMAGING OF HIDDEN INFORMATION UNDER THE PROTECTIVE LAYER.

AFTER THIS, YOU WILL BE ABLE TO CONTROL, CHANGE SETTING AND GET INFORMATION ABOUT THE VEHICLE STATE THROUGH THE ONLINE-SERVICE.

**!** NUMBER OF EVENTS IN THE HISTORY IS LIMITED. EVENTS ARE STORED FOR AT LEAST ONE MONTH.

## Control via Bluetooth

The Pandora Pro and Pandora Online applications can work via a Bluetooth channel when there is no connection to the server. This type of connection allows you to control the system, receive status information and use your mobile phone as an authorization device.

To get access to these functions, pair a mobile device in the system:

### I. ENTER THE PROGRAMMING MODE

Use the VALET button to enter the "Service PIN-code" (default value is 1-1-1-1). See the detailed instruction of code entering in the "Control the system in case of emergency" section.

### II. ENTER THE "PAIRING A MOBILE PHONE" PROGRAMMING LEVEL

After entering programming mode, press and hold the VALET button for 5 seconds (until the fifth signal of the Siren/Beeper"). The system will enter the "Pairing a mobile phone" programming level. The LED indicator will light green, the system is ready for pairing.

**!** THE PREVIOUSLY PAIRED DEVICE WILL BE ERASED FROM THE SYSTEM MEMORY AFTER ENTERING THE LEVEL.

### III. PAIR A MOBILE PHONE.

Turn on Bluetooth on your mobile phone and open the mobile application. Go to : Settings -> Bluetooth control -> Bluetooth device/ Not specified (Android)» -> + (iOS)/ Add (Android)». Select the found system in the search window, the system and the mobile device will be automatically paired. The system will confirm pairing with the series of green and red flashes of the LED and a sound signal of the siren.

- ! IF THERE IS NO AUTOMATIC PAIRING, ENABLE THE "PIN REQUEST FOR PHONE PAIRING" ITEM IN THE "RADIO TAG AND MOBILE DEVICE FUNCTIONS" SETTINGS AND MAKE THE PAIRING PROCEDURE AGAIN. A MOBILE DEVICE WILL REQUEST A PIN-CODE (FACTORY PRE-SET IS 0-0-1-1-1-1 WHERE 4 LAST DIGITS ARE THE "SERVICE PIN-CODE").



### IV. EXIT PROGRAMMING MODE

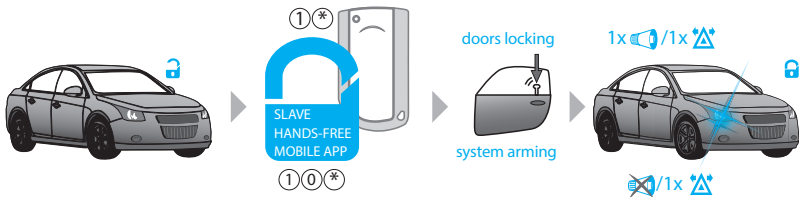
Turn on the ignition and then turn off to exit programming mode.

- ! THE SYSTEM SUPPORTS ONLY ONE MOBILE DEVICE.


## CONTROL THE SYSTEM

### Arming

To arm the system when the ignition is off, use one of the methods described below. The system will confirm the command with 1 short sound signal 1x  and 1 flash of light signalization 1x .



#### Radio tag

A radio tag must be in the Bluetooth coverage area. Shortly press the control button , on the tag.


#### Slave mode

Shortly press the "Lock" button on an original remote control or use a sensor/button on a door handle (for cars with an intelligent access system).


#### Phone

Call the system number. Wait for the answer. Dial the  command. To arm the system without siren signals dial the .

#### Online-service

Login to the PANDORA-ON.COM, when the system is online (there is an Internet connection) press the  button on the control panel.

#### Mobile applications Pandora Online and Pandora Pro

Open the mobile application. When the system is online (there is an Internet or Bluetooth connection), press and hold the  button on the control panel until the scale is fully loaded.

### HandsFree mode



Move with an authorization device away from your vehicle .

### VALET button


Press and hold the VALET button for 3 seconds. The system will be armed in 30 seconds. The LED indicator is lighting red during the countdown.

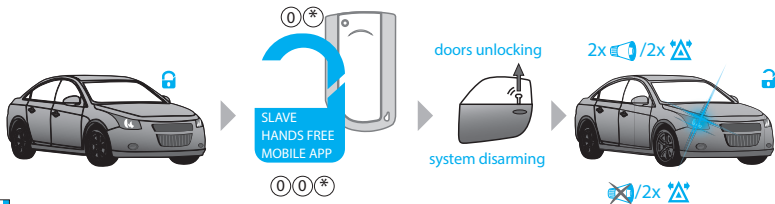
**!** THERE IS AN OPTION IN THE SYSTEM SETTINGS THAT ALLOWS TO ARM THE SYSTEM WITH DISABLED SENSORS (SHOCK/TILT/MOTION AND ADDITIONAL SENSORS). THE MODE CAN BE ACTIVATED ONLY BY A PROFESSIONAL SPECIALIST<sup>†</sup>.

## Disarming

**To disarm the system, use one of the methods described below. The system will confirm the command with 2 short sound signals  and 2 flashes of turn indicators .**

### Radio tag



Radio tag must be in the Bluetooth coverage area. Shortly press the control button  on the tag.




### Slave mode

Shortly press the "Unlock" button on an original remote control or use a sensor/button on a door handle (for cars with an intelligent access system).


### Phone

Call the system number. Wait for the answer. Dial the  command.  
To disarm the system without siren signals dial the  command.

### Online service

Login to the PANDORA-ON.COM, when the system is online (there is an Internet connection) press the  button on the control panel.

### Mobile applications Pandora Online and Pandora Pro

Open the mobile application. When the system is online (there is an Internet or Bluetooth connection), press and hold the  button on the control panel until the scale is fully loaded.

### HandsFree mode

Move toward the vehicle with an authorization device .



### VALET button

Enter the "Secret PIN-code" (see the "Emergency disarming using the VALET button" section).

## Locking/unlocking doors when ignition is on

**The system allows you to lock and unlock doors when ignition is on. To do this, use one of the methods described below.**

### Mobile applications Pandora Online and Pandora Pro



Open the mobile application. When the system is online (you are in the radio coverage area), press and hold the  button to lock doors or the  button to unlock doors on the control panel until the scale is fully loaded.

### Automatic modes



There are automatic lock modes that will lock the doors at the car movement or on switching on the ignition. When using doors locking mode on car movement start, the system will detect car moving and perform doors locking (it depends on speed status in a digital CAN-bus or motion sensor sensitivity settings). When using doors locking mode on switching on the ignition, the doors will be locked automatically 5 seconds after the ignition was switched on. If any door was opened after the ignition had been switched on, automatic locking will be disabled to prevent locking the keys inside the car. Doors can be automatically unlocked when the ignition is switched off.

 THESE MODES ARE DISABLED BY DEFAULT, USE THE PANDORA ALARM STUDIO TO ENABLE THESE SETTINGS.

## PANIC mode

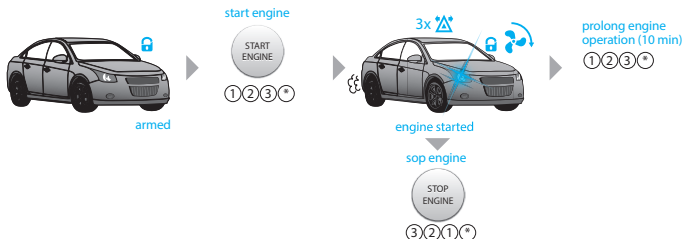
If your car or you are in danger and you want to draw attention to your car, you can use PANIC mode. In this mode the siren will sound  and turn signals  will flash repeatedly for 30 seconds. To activate this mode, use one of the methods described below.

### **Mobile applications Pandora Online and Pandora Pro**

Open the mobile application. When the system is online (there is an Internet or Bluetooth connection), press and hold the  button on the control panel until the scale is fully loaded. To switch this function off press and hold the  button on the control panel until the scale is fully loaded.

## Remote engine start


If the system is prepared for remote start, use one of the methods described below to start the engine, the system will confirm the command with 3x  light signalization.



### Original key

The system reads digital information from a car, this allows you to start and stop the engine by an original key.

- To start the engine, press the "LOCK" button 3 times within 5 seconds (the key must be in the radio coverage zone).
- To stop the engine, press the "LOCK" button 3 times within 5 seconds (the key must be in the radio coverage zone).

 REMOTE ENGINE START BY AN ORIGINAL KEY DOESN'T REQUIRED ANY ADDITIONAL SETTINGS. CHECK IF THE FUNCTION AVAILABLE FOR YOUR CAR IN [LOADER.PANDORAINFO.COM](http://LOADER.PANDORAINFO.COM).

 THE FUNCTION BECOMES AVAILABLE ONLY 30 SECONDS AFTER ARMING

### Phone


To start the engine, call the system number, wait for the answer. Dial the ①②③④ command. If you repeat the ①②③④ command when the engine is running, it will prolong the operation period by 10 minutes (this procedure can be repeated multiple times).

To stop the engine, call the system number, wait for the answer. Dial the ③②①④ command.



### Online service

- To start the engine, login to the [PANDORA-ON.COM](http://PANDORA-ON.COM) (when the system is online there is an Internet connection), press the START ENGINE button on the control panel. In a few seconds the engine will be started, it will be confirmed with the spinning  icon.



- To stop the engine, press the STOP ENGINE button on the control panel. In a few seconds the engine will be stopped and the spinning  icon will be faded.

#### **Mobile applications Pandora Online and Pandora Pro**


- To start the engine, open the mobile application. When the system is online (there is an Internet or Bluetooth connection) press and hold the START ENGINE button on the control panel until the scale is fully loaded. In a few seconds the engine will be started, it will be confirmed with the spinning  icon.
- In a few seconds the engine will be started, it will be confirmed with the spinning  icon.

## Service mode

It is recommended to put the system into the service mode before handing it to a car service or valet parking. When this mode is switched on, security system stops interfering with built-in electronics and disables all functions to ease maintenance.

**To switch on this mode, disarm the system, turn on the ignition, an authorization device (a radio tag, a Bluetooth remote control, a mobile phone) must be in the coverage zone, enter the “Immobilizer PIN-code” (if the “Code immobilizer” function is used) and use one of the method described below:**

#### **Radio tag**


To activate/deactivate service mode, press and hold the  button on a radio tag for 3 seconds (until the third flash of the LED), release the button.

#### **Phone**

Call the system number wait for the answer.

- To activate service mode, dial the  DTMF command and then dial the “Secret PIN-code” from the Owner’s personal card.
- To deactivate service mode dial the  DTMF command.

#### **Mobile applications Pandora Online and Pandora Pro**



To activate/deactivate service mode, open the mobile application. When the system is online (there is an Internet or Bluetooth connection), press and hold the  button on the control panel until the scale is fully loaded.

 To CHANGE BUTTONS LAYOUT OR ADD NEW BUTTONS ON THE CONTROL PANEL, GO TO “SETTINGS CONTROL BUTTONS”.

## Immobilizer buttons

- To activate service mode, enter the “Immobilizer PIN-code” and press the immobilizer button 10 times within 20 seconds.
- To deactivate service mode, turn on the ignition and enter the “Immobilizer PIN-code”.

## Service mode indication

- Activated Service mode is indicated by: an icon  in the mobile application, constant green LED when the ignition is on, long sound signal of a Beeper at the moment you activate the mode.
- Deactivated Service mode is indicated by: no “Service mode” icon  in the mobile application in the mobile application, no constant green LED when the ignition is on, two long sound signal of a Beeper at the moment you deactivate the mode.

## CONTROL OF THE SYSTEM IN CASE OF EMERGENCY

The system has emergency ways to deactivate security and anti-hijack functions (using the VALET button and the “Secret PIN-code”) in case of loss or failure of control devices or in case of discharge of a battery (when you cannot replace it or charge).

Before using emergency system control, check the system and vehicle control devices: check a battery, turn on a device in accordance with its manual (if required).

If all devices are working, try to make a primary vehicle diagnosis: check the vehicle original control device, vehicle battery charge level, gearbox selector position, check information on the dashboard.

 THE SYSTEM CAN BE CONTROLLED FROM A PHONE USING DTMF COMMANDS.

0\* – Disarming.

998\*xxxx – Deactivate authorization devices (Immobilizer and Anti-Hijack functions), where xxxx is the “Secret PIN-code” written on the Owner’s personal card under the protective layer.

1\* – Arming.

888\* – Activate authorization devices (Immobilizer and Anti-Hijack functions).

 READ THE PROCEDURE FOR ENTERING THE PIN-CODE BEFORE USING EMERGENCY FUNCTIONS.

### ENTERING THE PIN-CODE

The code must be entered only when the base unit is powered and the ignition is off. The PIN-code can be entered using the external or located on the base unit VALET button. The digits input and correct input is indicated by the external or located on the base unit LED indicator.

- **Enter the first digit** • Press the button the number of times equal to the first digit. Pauses between presses should not exceed 1 second. Each pressing will be confirmed with an orange LED indicator flash. Pause for more than 1 second, a red LED indicator flash and a short sound single of the Beeper confirm the input of the first digit. Then you can enter the next digit.
- **Enter the second digit** • Press the button the number of times equal to the second digit. Pauses between presses should not exceed 1 second. Each pressing will be confirmed with an orange LED indicator flash. Pause for more than 1 second, a red LED indicator flash and a short sound single of the Beeper confirm the input of the second digit. Then you can enter the next digit.
- **Enter the third digit** • Press the button the number of times equal to the third digit. Pauses between presses should not exceed 1 second. Each pressing will be confirmed with an orange LED indicator flash. Pause for more than 1 second, a red LED indicator flash and a short sound single of the Beeper confirm the input of the third digit. Then you can enter the next digit.

- **Enter the fourth digit** • Press the button the number of times equal to the fourth digit. Pauses between presses should not exceed 1 second. Each pressing will be confirmed with an orange LED indicator flash. The correct input will be confirmed with the series of green and red flashes of the LED indicator.

## Emergency disarming

In case you cannot disarm the system as usual, use the VALET button and the 'Secret PIN-code' written on the Owner's personal card (see the "General information" section):

- If your car is locked, unlock it by an original key. Not paying attention to the siren signals, make sure that the ignition is off and enter the "Secret PIN-code" (see the procedure description above). If there are no siren sounds or LED flashes, check the battery. It is not possible to enter the "Secret PIN-code", if there is no power supply.
- The system will be disarmed in case of correct PIN-code input. It will be confirmed with the series of green and red flashes of the LED indicator, the series of sound signals of the Beeper, 4 beeps of the Siren and 4 signals of the light signalization.
- The system will stay in previous state in case of incorrect input of the PIN-code. It will be indicated with a long red flash of the LED indicator. New input can be attempted after 5 seconds.
- Emergency disarming is equivalent to a normal method of disarming. No additional actions are required for further operation of the system.

## Emergency control of the anti-theft functions

This section describes how to deactivate and activate anti-theft functions (Immobilizer and Anti-Hi-jack), which use a radio tag, a remote control or a mobile phone as an owner authorization device, and "Code immobilizer" function, which uses standard car controls (buttons, levers, pedals) to enter the Immobilizer PIN-code.

### Emergency deactivation of anti-theft functions

To temporarily deactivate the Immobilizer or Code immobilizer function (pin-to-drive), turn on the ignition when the system is disarmed. Enter the "Secret code" from the owner's personal card using the VALET button. The immobilizer functions will be being deactivated by the time the ignition is turned off.

### Emergency activation/deactivation Immobilizer/Code Immobilizer functions

AEmergency control of the anti-theft functions is possible only when the system is disarmed, the ignition is off, service mode is deactivated, a vehicle battery is charged.

Enter the “Secret PIN-code” or the “Service PIN-code” (default value is 1-1-1-1) to put the system in programming mode.

To manage Immobilizer and Anti-Hi-Jack functions - After entering programming mode, press the VALET button 13 times.

To manage Immobilizer and Anti-Hi-Jack functions - After entering programming mode, press the VALET button 15 times.

Pauses between presses should not exceed 1 second. Each pressing will be confirmed with an orange LED indicator flash. The system will confirm entering the 13th level with the red flashes of the LED and short signals of the Siren/Beeper.

• **TO DEACTIVATE THE FUNCTION** – The LED indicator will be green after entering the programming level. The system will wait 10 seconds for entering the ‘Secret PIN-code’. If the PIN-code is not entered within 10 seconds or the input is incorrect, the siren will sound one signal, the LED will produce the series of red and green flashes and the system will return to the programming menu. Enter the ‘Secret PIN-code’ that is written on the owner’s plastic card. The system will confirm deactivating with two sound signals of the siren, a long red LED flash and two sound signals of the siren. Turn on the ignition and then turn off to exit programming mode. The function will be deactivated.

• **TO ACTIVATE THE FUNCTION** - The LED indicator will light red and the Beeper will sound a long beep after entering the programming level. The system will wait for action. Press the VALET button once activate the immobilizer function. The system will confirm enabling with one short sound signal of the Siren/Beeper and a green LED light. Turn on the ignition and then turn off to exit programming mode. The function will be activated.

## ADDITIONAL DEVICES

**Remote control D-030** is a two-way short-distance communication device designed to control a security system and receive information about its state. The remote control can be used as an owner authorization device.

### CONTROL COMMANDS

Arming/Disarming | Trunk | Remote engine start | Engine pre-heater

### STATUSES

Vehicle and system statuses

### OWNER AUTHORIZATION

Immobilizer | Anti-HiJack | Hands Free

OLED-DISPLAY | 2.4GHZ RADIO INTERFACE (BLE 4.2) | THREE CONTROL BUTTONS  
| SOUND INDICATOR | VIBRO INDICATOR | LED INDICATOR | BATTERY | MICRO-USB



**Radio tag BT-760 / BT-770** – is a one-way short-distance communication device designed to control a security system. The tag can be used as an owner authorization device.

### CONTROL COMMANDS

Arming/Disarming | Service mode

### OWNER AUTHORIZATION

Immobilizer | Anti-HiJack | Hands Free

2.4GHZ RADIO INTERFACE (BLE 4.2) | CONTROL BUTTON | LED INDICATOR | MOTION SENSOR | CR 2032 BATTERY



**Door sensor DMS-100 BT** is a wireless device designed to monitor internal or external perimeter state: any security zone can be assigned to the Hall/shock/tilt sensor state; temperature monitoring. The sensor can be installed on a door, hatch, trunk, trail, garage door.

2.4GHZ RADIO INTERFACE (BLE 4.2) | HALL SENSOR | TEMPERATURE SENSOR | SHOCK/ TILT SENSOR | CR123A BATTERY



**Radio module RHM-03 BT** – is a wireless device designed to control equipment of the engine compartment:

- Control of Hood lock, siren, engine blocking based or not based on car movement, digital control of engine pre-heaters Eberspacher and Webasto;
- Statuses of temperature, engine pre-heater, Trunk security zone.  
2.4GHz RADIO INTERFACE (BLE 4.2) | BUILT-IN RELAY (NC) | MOTION SENSORS | TRUNK SWITCH INPUT | EXTERNAL TEMPERATURE SENSOR | OUTPUTS: SIREN, HOOD LOCK | ENGINE PRE-HEATERS (LIN)



**RF-module RFM-470** is an external antenna that provides wireless communication between the system and remote controls:

- supports up to 4 remote controls D-043;
- integrated "CALL/SOS" for arming/disarming, driver call and emergency notifications;
- Integrated PANDORA security mode status LED.  
RADIO INTERFACE 868MHz/LoRa/128Bit | 2.4GHz INTERFACE (BLE 4.2) | MULTIFUNCTIONAL CALL/SOS BUTTON | SOUND INDICATOR | STATUS LED INDICATOR



**Piezo siren PS-331 BT** is a wireless device for sound indication and control of engine compartment:

- Control connection with the base unit;
- Temperature sensor, "Trunk" security zone.  
SOUND PRESSURE 118 dB | 2.4GHz (BLE 4.2) RADIO INTERFACE | FLEXIBLE INPUT "TRUNK" | FLEXIBLE OUTPUT | TEMPERATURE SENSOR



**Blocking radio relay BTR-101** is a wireless device designed to perform blocking engine blocking based or not based on car movement.

- 2.4GHz (BLE 4.2) RADIO INTERFACE | BUILT-IN BLOCKING RELAY (NC) | MOTION SENSOR

