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

Pandora Elite v2 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 Elite v2 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 Elite v2 has a cryptographically strong authorization code with unique dialog algorithm and individual encryption key on every device. It guarantees protection form 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 Alarm Studio 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, remote control and radio tags fulfil with the IP40 category of protection against water.

Our web-site: pandorainfo.com
Customer support: support@pandorainfo.com

Product is in conformity with Electromagnetic Compatibility Directive EMC 2004/108/EC and R&TTE Directive 1999/5/EC

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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.

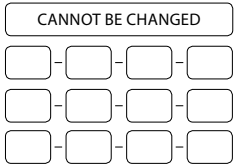
! The system set includes the "Owner's personal card". This card contains information under a protective layer that is intended only for the owner of the system. Make sure that the protective layer on the owner's plastic card is intact after the installation of the system. Read the "Owner's personal 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)



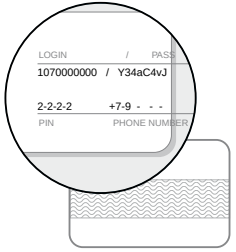
! It is recommended that you will write down the changed or created values of all PIN-codes. Eliminate third-party access to this information.

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.

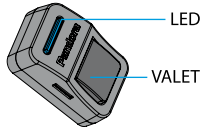
The owner's personal card contains private information under a protective layer:

- **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.



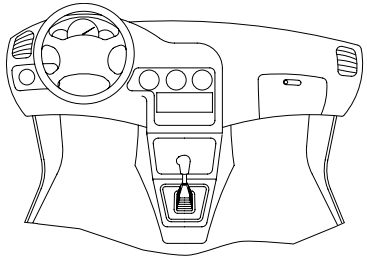
External VALET button

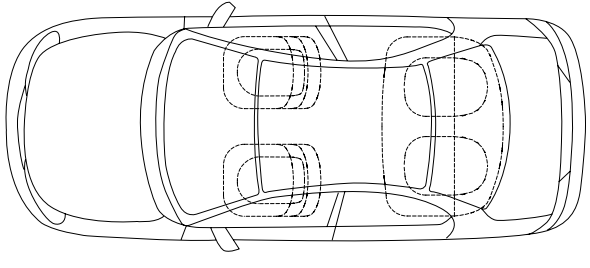
An external VALET button with a three-color status LED indicator is placed inside a vehicle (see the system modules layout).
The button is used for programing the system, arming/disarming, activating/deactivating immobilizer mode.



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 is and 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 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.

! It is required to install an additional SIM-card in the nano-SIM slot for the automatic mode.

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 remote control or 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.

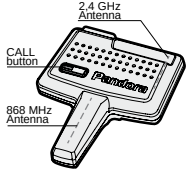
Emergency power – the system has an input for an external back-up battery in order to notify an owner in case of power disconnection in armed mode. The battery will be charged automatically when engine is running.

Built-in digital 3xCAN/2xLIN* interface allows the system to read status end exucute commands via digital buses, and work with Webasto Thermo Top Evo и Eberspacher Hydronic/2.

Built-in digital IMMO-KEYport and immobilzer bypass* – hardware and software algortihms with the special Pandora CLONE server allow the system to bypass original immobilizers for automatic and remote engine starts.

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

! *More information is available on loader.pandorainfo.com



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

868MHz Antenna, LoRa modulation supports up to 4 remote controls D-043 LoRa, D-022 LoRa.

2.4GHz Antenna, Bluetooth 4.2 protocol provides connection between the base unit and the RF-module.

CALL button is an integrated button. Press and hold the button for 1 second or more, the remote control will indicate "CALL".

Piezo siren PS-332 BT is a wireless device for sound indication:
Control connection with the base unit
Sound pressure 118 dB | 2.4GHz (BLE 4.2) Radio interface

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 the ignition)	Confirms the number of paired radio tags
Red flash (when switching on the 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 /1x	Warning level of a sensor is triggerd
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	
SINGNAL	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 a 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 senor. 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 30 sec. light and 30 sec. sound signals. he 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 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).

Remote and automatic engine starts

The system allows for remote engine start using the "remote engine start" command from a remote control, 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 NETURAL 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 a remote control or mobile application. 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

! 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 trunk 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.

! This mode is disabled by default for a digital protocol. More information on 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 modes.

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) 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.

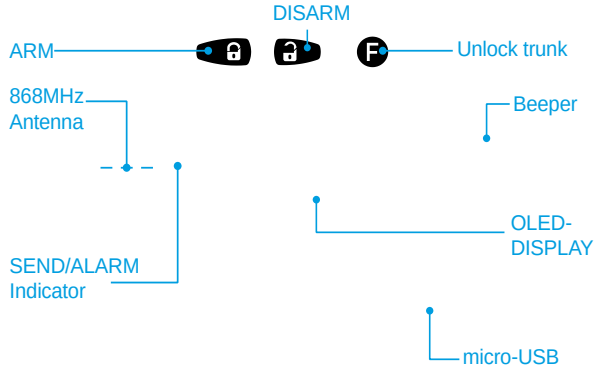
You can also check the number of paired radio tags/mobile device by taking off and putting back on battery terminal. The system will emit short sound signals from a siren :

- 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.

REMOTE CONTROL D-043

A two-way remote control is a mean of control over the system.

For easily distinguishable notifications the remote uses 16 ringtones. Each ringtone matches a particular event. Remote has flashing LED indicators for additional information.



The remote is fully operational when shipped. To switch on the remote, press and hold the F button for 3 seconds. The "REMOTE ON" ringtone will play. Pressing and holding this button again for 3 seconds will cause the remote to switch off.

! All control commands are transmitted via radio channel, for maximum effectiveness and range it is recommended not to shield aerial area (see picture) with fingers when using a remote control.

! A remote control is a unified control device. Its functions depend on security system model.

SEND/ALARM indicator signals

Green indicator:

- Flashes if there is a connection with the base unit
- Goes dark when there is no connection with the base unit

Red indicator:

- Flashes frequently if there is any notification
- Flashes occasionally when there is no connection.

Charging the remote control

- Battery is charged
- Battery is discharged

There is battery charge level indication on the display of the remote control. Charge the battery if the remote control doesn't turn on or the charge indicator displays low level. Charging is performed using a standard micro-USB cable.

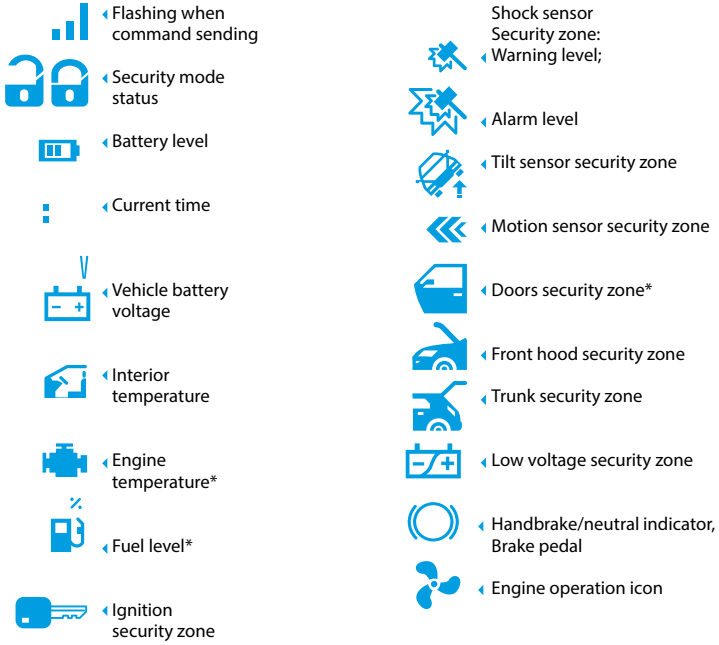
Firmware update

- Run the Pandora Alarm Studio application on a PC with Windows XP/Vista/7/8/10 and connect a USB-cable to it.
- Press and hold the F, button and connect a USB cable. Release the button after connection. The remote control and the app will enter boot mode.
- Press the "Update software" button in the Pandora Alarm Studio and select one of the following options: "Firmware archive" – it will upload firmware from the server to the firmwares folder of the Pandora Alarm Studio; "Load from file" – select a file with firmware on your PC.
- Start uploading by pressing the "Upload" button.
- Disconnect the USB-cable after completion of the procedure

Quick access functions of the remote control

	System is disarmed		System is armed (no alarm events)
	Ignition is on	Ignition is off	
(short press)	Lock doors without arming	Arming with a sound confrmation	Search mode – flashes of turn signals with sound signals for 5 seconds
(1 sec.)		Arming without a sound confrmation	Search mode – flashes of turn signals with sound signals for 5 seconds
(2 sec.)	Switch on 'Ignition maintenance' mode		
(3 sec.)	Switch on "Program neutral" (reservation mode)		Remote engine start
(short press)	Unlock doors	Unlock doors	Disarming with a sound confirmation
(1 sec.)			Disarming without a sound confirmation
(2 sec. and more)	Switch off 'Ignition maintenance' mode		Switch off the ignition during remote or automatic engine start procedure
F (short press)	Switch on LCD lighting (available only on the remote with LCD)		
F (1 sec.)	Unlock trunk		
F (2 sec.)	Additional function via CAN		
F (3 sec.)	Switch on/off the remote		
+ (short press)	PANIC mode		
+ F (short press)	Arming when the engine is running with sound confirmation	Arming in 30 seconds with a sound notification	
+ F (1 sec.)	Arming when the engine is running without sound confirmation	Arming in 30 seconds without a sound notification	

Icons of the remote control

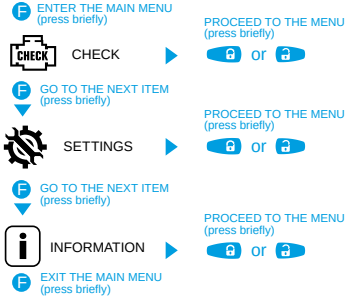


*Separate display indication of doors, original alarm status, fuel level depend on information in CAN-bus digital protocol of specific car.

Remote control menu

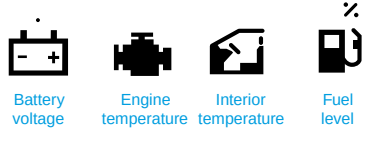
You can control and manage all main settings and parameters of the system using the menu of the remote control.

Briefly press the F, button to enter the menu. The following presses of the F button will switch between menu items. Press the or button to enter a selected item.



Check menu

To get information about engine temperature, interior temperature, battery voltage and fuel level, select the CHECK menu by short presses of the F button and briefly press the or button.

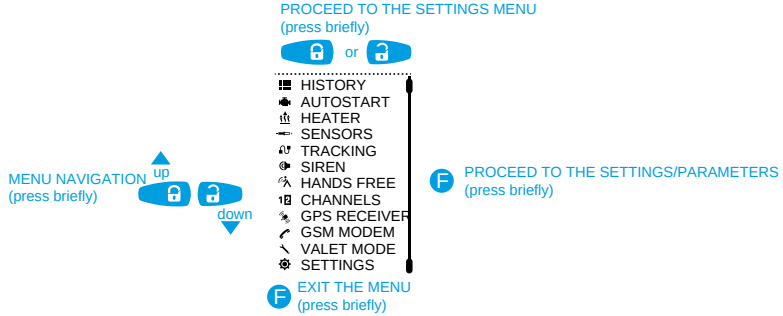


If there are no any actions within 5 seconds, the remote control will exit the main menu automatically. You can manually exit the menu by pressing the F button.

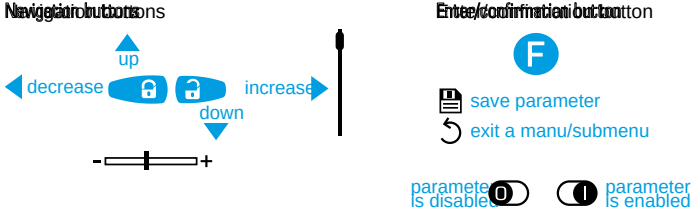
Settings

To change settings and parameters of the system, select the SETTINGS menu by short presses of the F button and briefly press the 🔓 or 🔒.

Briefly press 🔓 or 🔒, button to select a sub-menu.



To enter a sub-menu, briefly press F button.



VIEW EVENT HISTORY

This menu allows viewing the event history stored in the remote control memory. The remote control displays an event name and its time.

! The number of events is limited by the memory of the remote control.

AUTOMATIC ENGINE START SETTINGS

This menu allows configuring the automatic engine start and stop settings. A synchronized real-time clock in the remote control and the base unit and other autonomous system settings allow to implement set of conditions of engine start and operation regardless of whether the remote control is in the radio coverage zone or not.

- **ENABLE** - this submenu switches on/off all automatic engine starts.
- **TIMER** - this submenu allows starting an engine every day at the scheduled time.
- **START TEMP** - this submenu allows starting an engine automatically when the engine temperature is low.
- **WORK TIME** - This submenu determines the maximum engine operation time for automatic and remote starts.
- **PERIODICALLY** - this submenu allows starting engine periodically with a configured time interval.
- **STOP TEMP** - this submenu determines the engine stop temperature.

! If you have not saved new settings, remote and automatic engine start settings will remain the same as before. Engine start via temperature is available only if temperature sensor is connected. Automatic engine start settings don't affect remote engine start functions.

CONTROL OVER AN ENGINE PREHEATER

This menu allows switching on/off an engine pre-heater.

SETTINGS AND ADJUSTMENT OF THE SENSORS

This menu allows controlling and adjusting sensors (shock/motion/tilt) sensitivity. SHOCK and additional EXTERNAL sensors have separate sensitivity zones. Alarm zone triggers when there are considerable impact on a sensor. If the alarm zone is triggered, the system will indicate it with light and sound alarm for 30 sec. Warning zone triggers when there are minor impact on a sensor (the sensitivity of the warning zone should be higher than the alarm level sensitivity for correct operation). Warning level is indicated by one light and three sound signals.

• **SHOCK** — This submenu allows adjusting sensitivity of the alarm and warning zones of the shock sensor.
- Warning and alarm zones are enabled.
- Warning and alarm zones are disabled.
- Warning zone is disabled.

• **MOTION** — This submenu allows adjusting sensitivity of the motion sensor.
- датчик движения включен.
- датчик движения выключен.

• **TILT** — This submenu allows adjusting sensitivity of the tilt sensor
- Tilt sensor is enabled.
- Tilt sensor is disabled.

• **EXTERNAL** — This submenu allows adjusting sensitivity of the alarm and warning zones of the additional sensor.
- Warning and alarm zones are enabled.
- Warning and alarm zones are disabled.
- Warning zone is disabled.

TRACKING
This menu allows you to switch on and off the tracking function for online services

OPTIONS OF SIREN SOUND SIGNALS
This menu allows configuring siren sound notifications.
- all sound signals are enabled.
- warning signals are disabled.
- warning and alarm signals are disabled.

SETTINGS OF THE HANDS FREE MODE
This menu allows configuring the Hands Free mode for arming/disarming.
- Enable arming in the Hands Free mode.
- Enable disarming in the Hands Free mode.
- Enable arming and disarming in the Hands Free mode.
- Disable arming and disarming in the Hands Free mode.

TIME CHANNEL CONTROL
This menu allows switching on/off time channels. These channels are used to implement additional functions and to control external devices. The channels are configured using the Pandora Alarm Studio application.

COORDINATES DETECTION
This menu allows you to switch on and off detection of GPS/GLONASS coordinates.

MANAGE THE BUILT-IN MODEM
This menu allows you to switch on and off the built-in GSM-modem.

SERVICE/VALET MODE
his menu allows activating/deactivating the service (valet) mode (see the "Service mode" section)

SETTING OF THE REMOTE CONTROL
This menu allows configuring the remote control operation.
- **SOUND** — This submenu allows switching on/off sound signals.
- **VIBRO** — This submenu allows switching on/off vibrations.
- **BACKLIGHT** — This submenu allows adjusting LCD backlight brightness.
- **RFM LOST** — This submenu allows configuring sound notifications in case of losing connection between a remote control and a base unit

- Disable notification signals.
- Enable notification by "Connection is lost" ringtone.
- Enable notification by "ALARM" ringtone. The "ALARM" ringtone will be played if the system is armed.

The system will notify you with a short signal one time per minute after the ringtone. The notifications will come until the connection is established or the notification can be canceled by a short press of F button. If the system is disarmed only one "Connection is lost" ringtone will be played.
- **TIME** - This menu allows you to set time of the remote. It is required to arm and disarm the system after to send the changed value to the base unit.

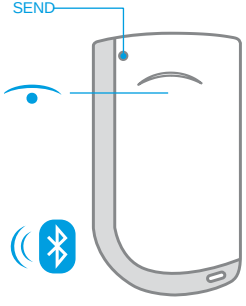
! Date and time detection is performed automatically for systems with GSM.

To get technical information about the remote control, select the INFORMATION menu by short presses of the button and briefly press the button.

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-Hi-Jack/Hands Free" 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 SEND.



- Control button for arming/disarming and activating/deactivating service mode
- LED indicator **SEND**
- Bluetooth protocol
- Built-in accelerometer
- CR 2032 Battery

Light indication of the SEND indicator when there is a short press of the button

- No flashes – a battery is discharged
- 1 flash – radio tag operation is correct

Light indication of the SEND indicator when installing a battery

- No flashes – a battery is discharged
- 1 flash – low battery level
- flashes – high battery level

! 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
Short press when ignition is off	Arm/disarm
Press and hold for 2 sec when the system is disarmed	Change the "Main owner's phone number"
Press and hold for 3 sec when ignition is on	Activate/deactivate Service mode
Press and hold for 6 sec.	Pair a tag with the base unit
Press and hold for 10 sec.	Firmware update

Replacing an immobilizer tag battery

Carefully open the cover of the tag's battery compartment. Extract discharged battery and insert a new one keeping in mind the correct polarity. Replacing a battery will not cause a loss of tag code information, as authorization data is stored in the non-volatile memory of the MCU. Carefully close the cover of the tag's battery compartment. All elements of construction should be rigidly locked in places. If it is so, the tag can be operated as usually.

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	2 5 8 *	System information
*	Repeat the last message	2 2 2 *	Disable Hands Free mode
1 *	Arming	2 2 3 *	Enable Hands Free arming
0 *	Disarming	2 2 4 *	Enable Hands Free disarming
1 0 *	Silent arming	2 2 5 *	Enable Hands Free disarming only with autom. start
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 *	Enable service mode (see description below)*
1 0 0 *	Request GSM account balance	5 5 2 *	Disable service mode
1 2 3 *	Start the engine/prolong heating	1 5 6 *	Switch on engine preheater
3 2 1 *	Stop the engine	6 5 1 *	Switch off engine preheater
3 3 3 *	Switch on add. function using F via CAN	6 6 6 *	Enable engine blocking
5 0 0 *	Request current coordinates	9 9 9 *	Disable authorization devices*
7 5 3 *	Force connection to the server	9 9 8 *	*
4 5 6 *	Switch on additional channel	8 8 8 *	Enable 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: +XXXXXXXXXX,123*,297* where "+XXXXXXXXXX" – 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: +XXXXXXXXXX,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 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.
4. 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 using a remote control or VALET button.
1. Call the system number and wait for the answer.
2. 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.

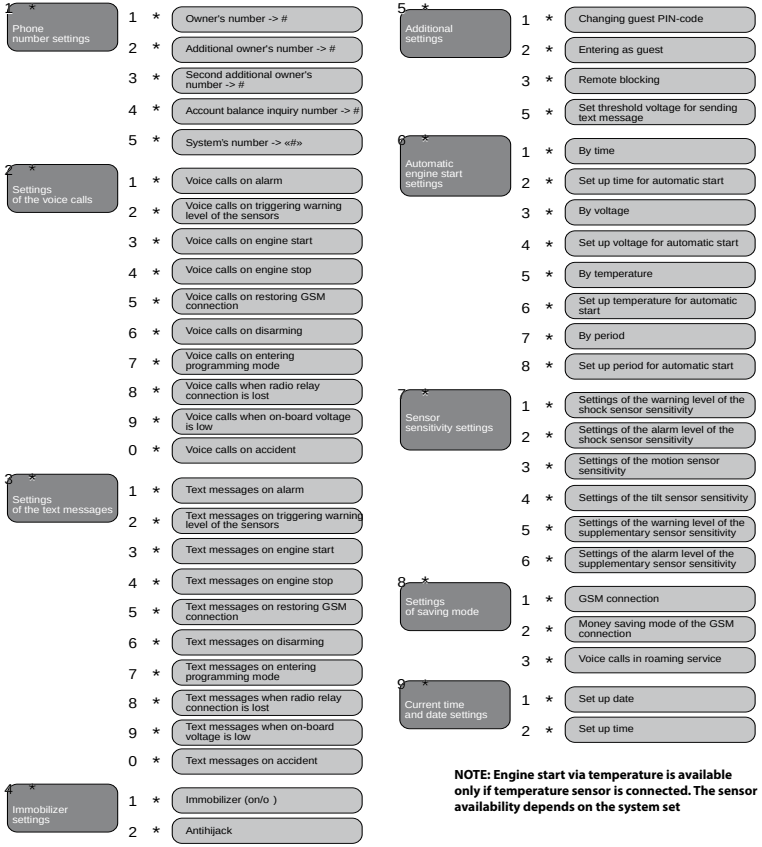
Changing settings via a phone

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 3 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.
3. Using the Pandora Alarm Studio or Pandora BT applications.

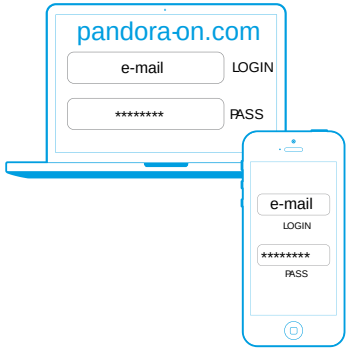


NOTE: Engine start via temperature is available only if temperature sensor is connected. The sensor availability depends on the system set

ONLINE SERVICE AND MOBILE APPLICATIONS

Telemetric function of the system allows you to control your vehicle using the online service pandora-on.com 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).

Download on the App Store

GET IT ON Google Play

! Minimum requirements: Andriod 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" sett ings 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".

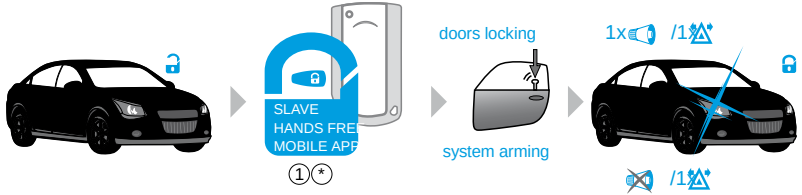
IV. EXIT PROGRAMMING MODE

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

! The system supports only one mobile device.

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.



Remote control
Shortly press the button on the remote control when you are in the radio coverage zone. The remote control will play "ARMING" ringtone and security mode status icon (the lock) will be changed to .
To arm the system without a sound notification press and hold the button for more than 1 seconds.

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 1*. command. To arm the system without siren signals dial the 10*.

Online-service PRO.P-ON.RU
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.

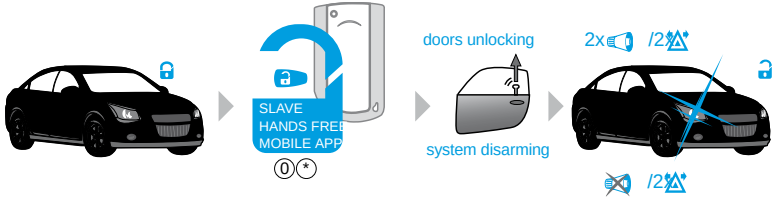
HandsFree mode
Move with an authorization device away from your vehicle .

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 setting "Switch off sensors when arming using VALET butt on" is available in the Alarm Studio ("Main settings" -> "Sensors settings").

Disarming

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



Remote control
Press and hold the , button on the remote control when you are in the radio coverage zone. The remote control will play "DISARMING" ringtone and security mode status icon (the lock) will be changed to .

To disarm the system without sound confirmation press and hold the button for 1 second or more.

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 0* command. To disarm the system without siren signals dial the 00* 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.

Remote control
Press the button to lock doors or the button to unlock doors when you are in the radio coverage zone.

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.

Car search function

To easily find your vehicle on a massive parking, shortly press the