

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

Pandora Camper v3 is a car service-security system built for motorhomes 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 Camper v3 we were using the most up-to-date electronics from 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 Camper 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's strongly recommended to install a security system by the skilled automotive technician! The installation must be performed according to the provided technical documentation, installation guides and schemes. The functionality and features of the system depend on its correct installation/configuration and/or the specifics of the vehicle.

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

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 "Immobiliser PIN-code"

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

CANNOT BE CHANGED			
□	□	□	□
□	□	□	□
□	□	□	□

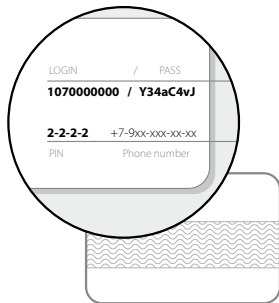
! IT IS RECOMMENDED THAT YOU WILL WRITE DOWN THE CHANGED OR CREATED VALUES OF ALL PIN-CODES. ELIMINATE THIRD-PARTY ACCESS TO THIS INFORMATION

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.

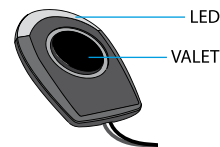
The owner's personal card contains private information under a protective layer:

- PIN (the "Secret PIN-code") is a 4-digit number. This code can be used to disarm the system and to deactivate immobiliser 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 application.
- 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 application.
- Phone number is a phone number of the built-in SIM-card.

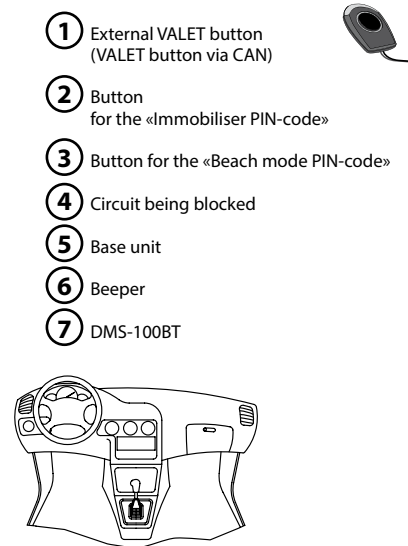
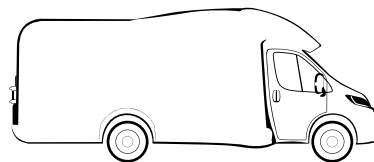
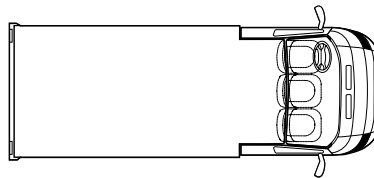
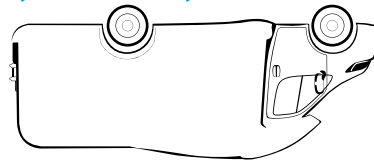


External VALET button

An external VALET button with a two-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 Immobiliser mode.



System modules layout



- 1 External VALET button (VALET button via CAN)
- 2 Button for the «Immobiliser PIN-code»
- 3 Button for the «Beach mode PIN-code»
- 4 Circuit being blocked
- 5 Base unit
- 6 Beeper
- 7 DMS-100BT

! DMS-100BT SENSORS FROM THE KIT ARE ALREADY PAIRED WITH THE BASE UNIT. ACCORDING TO THE INSTALLATION PLACE YOU CAN CHANGE THE DEFAULT LOGIC OF THE ALARM ZONE IN PANDORA SPECIALIST: ««ADVANCED SETTINGS» -> «INPUTS AND OUTPUTS» -> «INPUTS SETTINGS». FILL THE TABLE WITH THE ACTUAL LOGIC:

DMS1 Window	DMS6
DMS2 Window	DMS7
DMS3	DMS8
DMS4	DMS9
DMS5	DMS10

Base unit

Built-in GSM modem (2G/3G/4G LTE) provides a connection with our online-service pandora-on.com and Pandora Connect (iOS and Android) mobile application, 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 nano-SIM.

Built-in slot for a nano-SIM used for owners SIM-card.

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); to implement automatic engine or engine pre-heater starts and stops by temperature.

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
















Built-in digital IMMO-KEY port and immobiliser bypass* – hardware and software algorithms with the special Pandora CLONE server allow the system to bypass original immobilisers for automatic and remote engine starts. This port can be also used to control Webasto Thermo Top Evo and Eberspacher Hydronic 1/2/3 heaters.

Built-in Type C USB port – update and configuration of the system using a PC and Pandora Specialist.

! *MORE INFORMATION IS AVAILABLE IN PANDORA SPECIALIST.

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
Simultaneous red and green flash (when switching on ignition)	System indicates the number of paired remote controls
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"	
Simultaneous red and green 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 "Immobiliser 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 deactivates engine blocking (if the immobiliser 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 front doors (status, security zone – alarm level)
- Opening side doors (status, security zone – alarm level)
- Opening camper windows (status, security zone – alarm level)
- Opening camper sunroofs (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)

 *STATUSES ARE AVAILABLE IN CAN-BUS DATA OR ADDITIONAL ANALOG CONNECTION SHOULD BE MADE (SEE INFO IN PANDORA SPECIALIST).

**OPTION (SEE «ADDITIONAL DEVICES» SECTION).

Stay Home mode

This mode is used to control the outer perimeter of a vehicle during parking when passengers are inside the vehicle. This mode allows the system to protect your vehicle against intrusion through the parts of the vehicle that can be opened.

- The system will be armed silently when you activate the "Stay Home" mode, it will be confirmed with **1x**  light signal. The system controls vehicle security zones and an additional gas sensor (it is not included in the set) in this mode, built-in sensors (shock/tilt/motion) are disabled in this mode.
- The system will be disarmed when you deactivate the "Stay Home" mode, it will be confirmed with **2x**  sound and **1x**  light signals.

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 fixing 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.

! 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. AFTER THIRD FAILED CONSECUTIVE ATTEMPT OF AUTOMATIC START ALL SUBSEQUENT AUTOMATIC STARTS WILL BE CANCELLED UNTIL ARMING/DISARMING OF THE CAR (IT DOESN'T AFFECT AT REMOTE START FEATURE).

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 IN PANDORA SPECIALIST. 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 R-468BT, 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 immobiliser 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 PANDORA SPECIALIST 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.

Immobiliser 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 radio coverage 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 immobiliser (pin-to-drive)

Multi-button Code immobiliser (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 "Immobiliser 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 "Immobiliser 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 immobiliser 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.

Beach mode

This mode allows to use the pre-programmed «Beach mode PIN-code» for system arming/disarming. The code must be entered using factory vehicle controls (buttons/sensors) or additionally installed element.

When using the Beach mode system disarming is possible only by entering «Beach mode PIN-code» or «Secret PIN-code» by a VALET button (see «Control the system in case of emergency»)


AN EXAMPLE OF USING BEACH MODE

- Press the factory or additionally installed element until the single light flash, thereafter start to enter «Beach mode PIN-code».
- Enter the «Beach mode PIN-code», code can consist max of 4 digits from 1 to 9:
 - Press the control element 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.
- After the correct input the system will confirm arming/disarming by the sound and light signals.

 THIS MODE IS DISABLED BY DEFAULT- CONFIGURATION OF THE SYSTEM SHOULD BE MADE BY A QUALIFIED TECHNICIAN. EMERGENCY DISABLING OF THE SYSTEM IS MADE WITH THE «SECRET PIN-CODE» AND VALET BUTTON (SEE «CONTROL THE SYSTEM IN CASE OF EMERGENCY»).

Checking the number of paired devices

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

REMOTE CONTROL R-468BT

The R-468BT remote control is designed to control and monitor a state of a security system and implementation of Immobilizer, Anti-hi-Jack1/2, HandsFree functions at a distance of a Bluetooth connection.

! WARNING! TO USE THE REMOTE CONTROL AS AN OWNER AUTHORIZATION DEVICE IT IS NECESSARY TO ENABLE «USE REMOTE AS A RADIO TAG» FUNCTION IN SYSTEM SETTINGS.



- Battery type: CR2032
- Operating range: from -10°C t° +40°C
- Degree of protection: IP40
- Dimensions: 62x32x12 mm
- Compatibility with Bluetooth software of the system: v.2xx ->2.23 and higher; v.3->3.14 and higher; v.4->4.07 and higher.

! WARNING! DO NOT SHIELD THE BUILT-IN ANTENNA WHILE USING THE REMOTE CONTROL (SEE PICTURE).

FOR THE CORRECT OPERATION OF THE REMOTE CONTROL AS THE OWNER AUTHORIZATION DEVICE DO NOT PLACE IT NEAR A METAL OBJECTS, MAGNETS AND ELECTRONIC DEVICES (CREDIT CARDS, PHONES, KEYS, REMOTES, ETC.). YOU CAN PLACE IT DISCREETLY ON A PANTS BELT OR IN THE FRONT POCKET OF CLOTHING.

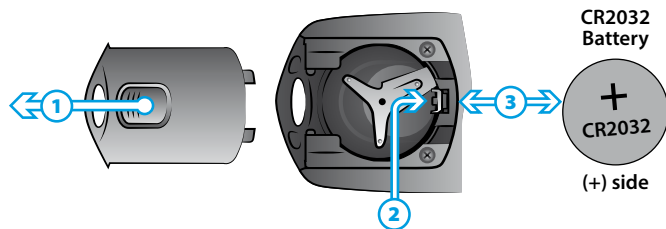
DO NOT EXPOSE THE REMOTE CONTROL WITH HIGH TEMPERATURES, MOISTURE, OR STRONG IMPACTS.

Replacing the battery

The CR2032 battery with a nominal voltage of 3V is used in the remote control. The battery should be replaced if the sound and light indication is missing while pressing buttons.

An example of replacing the battery:

- remove the key ring;
- press the lock-button on the battery cover and slide cover down (pic.1);
- gently press the battery holder and release the battery (pic. 2);
- install the new battery observing the polarity (pic. 3);
- close the battery cover and install the key ring back.



Pairing a remote control

To pair a remote control with a system, enter the programming mode and enter the programming level (№10.2.1 / 10.2.2 / 10.2.3, see the Programming table of the system).

An example of pairing the remote control:

- enter the programming level;
- simultaneously press and hold three buttons on the remote control for 1 second or until the red flash of the «SEND/ALARM» LED indicator;
- if pairing was successful, system will make a short beep with a Beeper/Siren;
- turn ignition ON and OFF to exit Programming mode.

Firmware update
































Use the Pandora Specialist (Android/iOS) mobile application to update the firmware

- open the mobile app, go to the «Advanced mounting» -> «Bluetooth»;
- press and hold the **F** button until the tenth flash of the SEND/ALARM LED indicator;
- select a found device and choose one of the update options («Download firmware» - it will download actual firmware from the server; «File manager» - select a file on your smartphone);
- start the firmware update.


Remote control signals




SIGNALS	DESCRIPTION
1 green flash	Confirmation of the remote engine start/stop commands
1 green flash and 1 beep	System arming confirmation
2 green flashes and 2 beeps	System disarming confirmation
1 green flash and 3 beeps	Warning (one of security zones is triggered when arming)
1 red flash	Button pressing confirmation
1 red flash and 1 beep	Button holding confirmation
1 long red flash and 1 long beep	Connection with the system lost
series of red flashes and 3 beeping	Alarm mode One of the security zones triggered when arming

Quick access functions of the remote control

	System is disarmed		System is armed (no alarm events)
	Ignition is on	Ignition is off	
 (briefly)	Lock doors	Arming 	Search mode 
 (1 sec.)		Stay Home mode ON 	Search mode 
 (2 sec.)	Hold-On ignition mode ON		
 (3 sec.)	Program neutral		Remote engine start 
 (briefly)	Unlock doors	Unlock doors	Disarming 
 (1 sec.)			Disarming 
 (2 sec.)	Hold-On ignition mode OFF		Remote engine stop 
 (3 sec.)	Enable/disable Service mode		
 (1 sec.)	Unlock trunk		
 (2 sec.)	Switch ON time channel		
 (10 sec.)	Update remote controls firmware		
 +  briefly	PANIC mode		
 +  briefly	Arming when ignition ON 	Arming in 30 sec 	
 +  (1 sec.)	Arming when ignition ON 	Arming in 30 sec 	
 +  (2 sec.)	Deactivation/activation sound confirmation of button pressing on the remote control		

IMMOBILISER RADIO TAG

A radio tag is a device used to control a vehicle/system. The tag is also used as an authorization device for "Immobiliser/Anti-hi-Jack/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 **SEND**.








-  - 2.4GHz, Bluetooth 4.2 Low Energy
-  - Control button
- SEND** - LED indicator
- CR 2032** - Battery
-  - Accelerometer



The tag should be operated in temperatures range from -10° to $+40^{\circ}\text{C}$, IP40 category.

FOR PROPER AND STABLE OPERATION OF THE RADIO TAG IT'S RECOMMENDED TO KEEP IT AT A DISTANCE FROM THE METAL OBJECTS, MAGNETIC AND ELECTRONIC DEVICES (MAGNETIC AND CREDIT CARDS, MOBILE PHONES, KEYS, KEY FOBS ETC.). DO NOT EXPOSE THE TAG TO HIGH TEMPERATURES, MOISTURE, OR STRONG IMPACTS. IT IS RECOMMENDED TO PLACE THE RADIO TAG ON THE BELT IN A SEPARATE CASE OR IN THE FRONT POCKET OF CLOTHING.

Functions of the button

ACTION	FUNCTION
 - briefly (ignition is off)	Arm/disarm
 - hold for 1 second (system is disarmed)	Activating Stay Home mode
 - hold for 1 second (engine is running)	Activating ignition «Hold On» mode
 - 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)

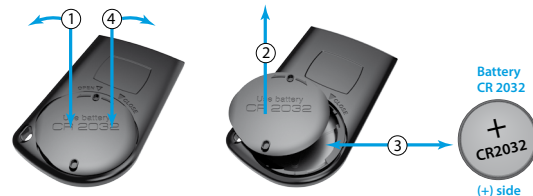
Replacing an immobiliser tag battery

When replacing the battery you must carefully follow the steps:

Radio tag BT-780

To install or replace the battery (CR2032), carefully follow these steps:

1. Turn the battery cover in the «OPEN» direction;
2. Remove the battery cover;
3. Remove the battery from the battery compartment and, observing the polarity, install a new one (when installing a high-quality battery, the SEND indicator light will produce three red flashes);
4. Install and rotate the battery cover in the «CLOSE» direction. After completing the procedure, you can continue to operate the radio tag in normal mode.




Prompt entry/change of the main owner phone number

For a prompt entry/change of the Main owner's phone number follow next steps:

- Disarm the system, being near the vehicle call the system phone number, wait for the answer (Enter the «Guest PIN-code» if you are calling not from the owner's phone number. Default value is 1-2-3-4);
- Press and hold button on the radio tag until two flashes of the SEND indicator, then release button;
- System will save incoming phone number as the «Main owner's phone number» and will repeat it;
- End call.

! THE PHONE NUMBER COULD BE ALSO CHANGE USING MOBILE DEVICE (SEE «CHANGING SETTINGS VIA PHONE» SECTION).

Updating firmware of the tag

- Use the Pandora Specialist (Android/iOS) mobile application to update the firmware.
- Open the mobile app Pandora Specialist, go to «Advanced mounting» -> «Bluetooth».
- Press and hold the button  of the radio tag until the 10th flash of the SEND indicator, then release the button.
- Select a found device and choose one of the update options («Download firmware» - it will download actual firmware from the server; «File manager» - select a file on your smartphone);
- Start the firmware update.

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 phone number from the «Main owner's phone number», after the system answers, enter a command code.

If you are calling from the phone number different from the «Main owner's phone number», including the «Additional owner's phone numbers» you need to enter the «Guest PIN-code» (default values is 1-2-3-4).

#	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 DIALLING A COMMAND.

I If the «MAIN OWNER'S PHONE NUMBER» IS NOT PROGRAMMED, THE SYSTEM WILL RECEIVE A CALL FROM ANY NUMBER WITHOUT THE NEED TO ENTER THE «GUEST PIN-CODE». ADDITIONAL SYSTEM SETTINGS ALLOW TO: RECEIVE A CALL FROM THE "FIRST ADDITIONAL OWNER'S NUMBER" WITHOUT ENTERING THE «GUEST PIN»; REQUEST THE «GUEST PIN-CODE» WHILE CALLING FROM ANY PHONE NUMBERS; DENY INCOMING CALLS FOR ALL NUMBERS EXCEPT THE «MAIN OWNER'S PHONE NUMBER». THE CONFIGURATION SHOULD BE MADE BY A QUALIFIED TECHNICIAN.

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 Bluetooth remote control, a paired mobile phone with the app installed) must be in the coverage zone, enter the "Immobiliser PIN-code" (if the "Code immobiliser" 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 (no more than 5 seconds), then switch it off. The system will enter the settings mode.

An example of changing the «Main owner's phone number»:

1. Enter the setting menu via a phone according to the instruction above;
2. Dial DTMF command **1***(phone number settings) and **1***(main 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 THE "MAIN OWNER'S PHONE NUMBER":

1. VIA A PHONE, USING DTMF COMMANDS SETTINGS MODE.
2. USING RADIO TAG OR VALET BUTTON:
 - 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 PHONE NUMBER";
 - PRESS AND HOLD THE BUTTON ON THE RADIO TAG FOR 2 SECONDS (UNTIL THE SECOND FLASH OF THE SEND INDICATOR) OR SHORTLY PRESS THE VALET BUTTON;
 - THE SYSTEM WILL RECOGNIZE THE INCOMING PHONE NUMBER AS THE «MAIN OWNER'S PHONE NUMBER» AND WILL DICTATE THE STORED FIGURES. END CALL.

1 * Phone number settings	1 * Main owner's number -> #	5 * Additional settings	1 * Changing guest PIN-code	
	2 * Additional owner's number -> #		2 * Entering as guest	
	3 * Second additional owner's number -> #		5 * Set threshold voltage for sending text message	
	4 * Account balance inquiry number -> #		6 * Automatic engine start settings	1 * By time
	5 * System's number -> «#»			2 * Set up time for automatic start
2 * Settings of the voice calls	1 * Voice calls on alarm	3 * By voltage		
	2 * Voice calls on triggering warning level of the sensors	4 * Set up voltage for automatic start		
	3 * Voice calls on engine start	5 * By temperature		
	4 * Voice calls on engine stop	6 * Set up temperature for automatic start		
	5 * Voice calls on restoring GSM connection	7 * By period		
3 * Settings of the text messages	6 * Voice calls on disarming	7 * Sensor sensitivity settings	8 * Set up period for automatic start	
	7 * Voice calls on entering programming mode		1 * Settings of the warning level of the shock sensor sensitivity	
	8 * Voice calls when radio relay connection is lost		2 * Settings of the alarm level of the shock sensor sensitivity	
	9 * Voice calls when on-board voltage is low		3 * Settings of the motion sensor sensitivity	
	0 * Voice calls on accident		4 * Settings of the tilt sensor sensitivity	
4 * Settings of the motion sensor sensitivity	1 * Text messages on alarm	8 * Settings of saving mode	5 * Settings of the warning level of the supplementary sensor sensitivity	
	2 * Text messages on triggering warning level of the sensors		6 * Settings of the alarm level of the supplementary sensor sensitivity	
	3 * Text messages on engine start		1 * GSM connection	
	4 * Text messages on engine stop		2 * Money saving mode of the GSM connection	
	5 * Text messages on restoring GSM connection		3 * Voice calls in roaming service	
	6 * Text messages on disarming		9 * Current time and date settings	1 * Set up date
	7 * Text messages on entering programming mode	2 * Set up time		
	8 * Text messages when radio relay connection is lost			
	9 * Text messages when on-board voltage is low			
	0 * Text messages on accident			

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 APPLICATION

Telemetric functions of the system allow you to control your vehicle using the online service pandora-on.com or mobile app - Pandora Connect. A SIM card with Internet access is installed in the system to provide this functionality.

When approaching the vehicle or when Internet connection is missing a mobile phone with the app installed can work with the system via a Bluetooth connection. 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").

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

The Pandora Connect mobile app is available for downloading from the corresponding app store:

App Store for iOS devices;

Google Play for Android devices.

! THE MANUFACTURER RESERVES THE RIGHT TO MAKE CHANGES OF THE INTERFACE AND FUNCTIONALITY OF THE INTERNET SERVICE AND MOBILE APPLICATION WITHOUT NOTIFYING THE CONSUMER.



Registration

Visit the website or open the mobile app to create an account. You will create the data to sign in: LOGIN - your e-mail, 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 app Pandora Connect. Use your previously created data:

Login - your e-mail;

Password - previously created password.

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 vehicle and click «Add».

If you need to use several systems/devices on the same account: enter the application settings, click «Change», click «+», in the «Device Registration» window, enter the data of a new system/device located on the «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.

After this, you will be able to control, change setting and get information about the vehicle state through the online-services.

Control via Bluetooth

The Connect mobile application 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. 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

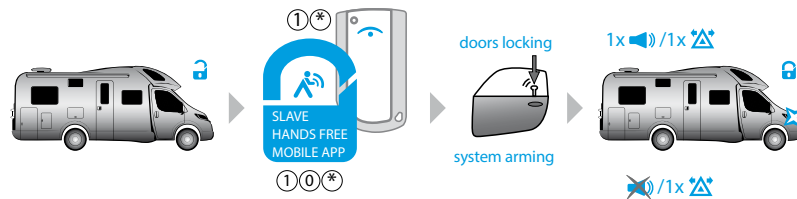
Turn on the ignition and then turn off to exit programming mode.

! 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 1x  short sound signal and 1x  flash of light signalization.



Remote control

Shortly press the  button on the remote control when you are in the radio coverage zone. The remote control will confirm arming with 1 sound signal and 1 SEND flash.



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 application Pandora Connect


Open the mobile application Pandora Connect. 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.



Activating Stay Home mode

To activate Stay Home mode when the ignition is off, use one of the methods described below. The system will confirm the command with 1 flash  of light signalization.


Remote control

Press and hold the  button on the remote control for 1 second (until a sound signal/flash of the SEND/ALARM indicator) when you are in the radio coverage zone.

Mobile application

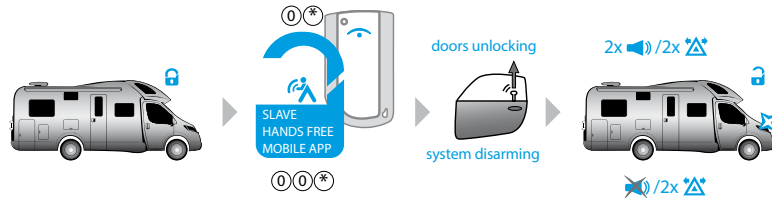
Open the mobile application. When the system is online (there is an Internet or Bluetooth connection), press and hold the  button on the control panel until the scale is fully loaded. The security mode status icon will be changed to .

Radio tag



A radio tag must be in the Bluetooth coverage area. Press and hold the control button  on the tag for 2 seconds (until the second flash of the «SEND» indicator).

Disarming


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



Remote control

Press and hold the  button on the remote control when you are in the radio coverage zone. The remote control will confirm disarming with 2 sound signals and 2 SEND flashes. 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  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 application Pandora Connect

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).

Unlocking the trunk


The system allows to unlock the trunk no matter if the system is armed or not. If the system is armed when this action is performed, the trunk will be disarmed, shock and supplementary sensors will be disabled. All the other security zones will remain armed. If the trunk was not opened in 15 seconds after using «unlock trunk» command, the system will lock it again, enable sensors and arm trunk security zone. This will be indicated with 1x  flash of turn signals.

To unlock the trunk, choose one of the following methods:

Remote control

Press and hold for 1 second the  button on the remote control when you are in the radio coverage zone.

Mobile application Pandora Connect

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



Slave mode

Shortly press the open trunk button on a factory remote control or use a sensor/button on a trunk door (for cars with an intelligent access system).

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 application Pandora Connect




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 SPECIALIST TO ENABLE THESE SETTINGS.

Car search function



To easily find your vehicle on a massive parking, shortly press the  button when the system is armed. The system will sound the siren 5x  and flash turn signals 5x .

To use this function without sound signals press and hold the  button for 1 second.


PANIC mode

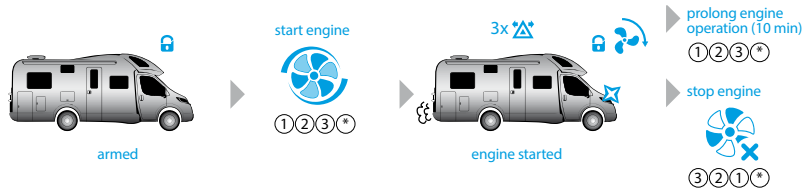
If your car or you are in danger and you want to draw attention to your car, you can use PANIC mode. In this mode the siren will sound  and turn signals  will flash repeatedly for 30 seconds. To activate this mode, use one of the methods described below.

Mobile application Pandora Connect



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.



Remote Control

- To start the engine, press and hold the  button for 3 seconds (the remote control must be in the radio coverage zone). In a few seconds the engine will be started.
- To stop the engine, press and hold the  button for 2 seconds or more (the remote control must be in the radio coverage zone). The engine will be immediately stopped.

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 REQUIRE ANY ADDITIONAL SETTINGS. CHECK IF THE FUNCTION AVAILABLE FOR YOUR CAR IN PANDORA SPECIALIST.



! THE FUNCTION BECOMES AVAILABLE ONLY 30 SECONDS AFTER ARMING.

Phone






To start the engine, call the system number, wait for the answer. Dial the 1 2 3 * command. If you repeat the 1 2 3 * 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 3 2 1 * command.

Online service

- To start the engine, login to the 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 application Pandora Connect

- 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 .
- Sending the command again (press the  icon and confirm command) will extend operation period of the remote or automatic engine start by 10 minutes. This procedure can be repeated multiple times.
- To stop the engine, press and hold the STOP ENGINE  button on the control panel until the scale is fully loaded. In a few seconds the engine will be stopped and the spinning icon  will be faded.

Engine preheater

Use one of the methods described below for remote start of the engine preheater:

Phone

For remote control of the engine preheater, call the system number, wait for the answer and dial the command:

- 1 5 6 * - to start the engine preheater. The system will confirm command by a voice message “Switch on engine preheater”;
- 6 5 1 * - to stop the engine preheater. The system will confirm command by a voice message “Switch off engine preheater”.


If the control of the preheater operation function is implemented, a voice message «Engine preheater switched on» will play in the main voice menu for the entire duration of the preheater operation.

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 activate Service mode, disarm the system, turn on the ignition, an authorization device (radio tag, remotes, watches, band) must be in the Bluetooth coverage zone, enter the «Immobiliser PIN-code» (if the «Code immobiliser» function is used) and use one of the methods described below.
- To deactivate Service mode, use one of the methods below without any additional conditions (ignition, authorization devices, system modes):

Remote control



To activate/deactivate Service mode, while system is disarmed, turn ignition on and press the  button on the remote control for 3 sec.

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 Connect

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 THE LOCATION OF THE BUTTONS ON THE CONTROL PANEL GO TO THE SETTINGS AND ENTER THE «CONTROL BUTTONS» MENU.

Immobiliser buttons



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

Automatic mode

- The system can automatically deactivate Service mode when vehicle starts driving (speed increases) and the owner authorization device (radio tag, Bluetooth remote control, watches or mobile device) is in the radio coverage zone.

 THIS FUNCTION DOES NOT REQUIRE ADDITIONAL CONFIGURATIONS. SEE DETAILED INFORMATION ABOUT “SPEED” FUNCTION IN PANDORA SPECIALIST.

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 signals of a Beeper at the moment you deactivate the mode.

CONTROL OF THE SYSTEM IN CASE OF EMERGENCY

! 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

Call the system phone number and enter the command after the answer:

0* – Disarming

998*xxxx – Deactivate authorization devices, where XXXX is the «Secret PIN-code» written on the Owner's personal card.

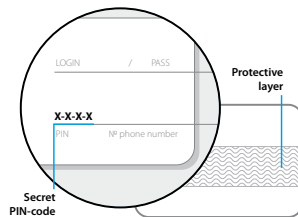
! THE PHONE NUMBER OF THE SYSTEM IS LOCATED UNDER THE PROTECTIVE LAYER ON THE OWNER'S PERSONAL CARD. IF THE CALL IS MADE FROM THE «ADDITIONAL NUMBER», OR A NUMBER NOT SAVED IN THE MEMORY OF THE BASE UNIT, THEN AFTER THE SOUND SIGNAL, YOU WILL NEED TO ENTER THE «GUEST PIN CODE» (FACTORY VALUE IS 1-2-3-4). FOR A COMPLETE LIST OF COMMANDS, SEE THE SECTION «CONTROL THE SYSTEM BY A PHONE».

The system has emergency ways to deactivate security and Anti-Hi-Jack 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).

- «Secret PIN-code» is located under protective layer on the Owner's personal card;
- VALET button is located on the base unit and on the external VALET button.

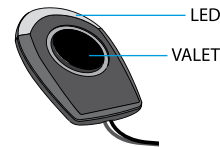
Owner's personal card

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



External VALET button

! THE EXTERNAL VALET BUTTON IS PLACED IN THE INTERIOR (CHECK «SYSTEM MODULES LAYOUT»).



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

- **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 a simultaneous red and green LED indicator flash. Wait for more than 1 second, one red flash of the LED indicator and one short sound signal of the Beeper will 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 a simultaneous red and green LED indicator flash. Wait for more than 1 second, one red flash of the LED indicator and one short sound signal of the Beeper will 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 a simultaneous red and green LED indicator flash. Wait for more than 1 second, one red flash of the LED indicator and one short sound signal of the Beeper will 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 a simultaneous red and green LED indicator flash. The correct input will be confirmed with the series of green and red flashes of the LED indicator.

Emergency disarming/ Beach mode deactivation

If the doors are locked, open the door with the 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) with the VALET button. 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 (notification of the security zones triggered). Emergency disarming is equivalent to a normal method of disarming. No additional actions are required for further operation of the system.
- The system will stay in the previous state in case of incorrect input of the PIN-code. It will be indicated with a long red flash of the LED indicator and a short single sound of the beeper. New input can be attempted after 5 seconds.

Emergency control of the anti-theft functions

This section describes two options to deactivate Immobiliser modes:

- Immobiliser and Anti-Hi-Jack - use owner authorization devices (tags, remotes, watches, bands) for engine blocking;
- Code Immobiliser - uses standard vehicle controls (buttons, levers, pedals) to enter the "Immobiliser PIN-code".

OPTION №1 – EMERGENCY DEACTIVATION OF ANTI-THEFT MODES

This option is used for a temporary deactivation of the anti-theft modes. Deactivation is made by entering the "Secret PIN-code" with the VALET button when the system is disarmed and the Service mode disabled.

- To temporarily deactivate the Immobiliser or/and Code Immobiliser (pin-to-drive) functions, turn on the ignition when the system is disarmed and enter the «Secret PIN-code» from the Owner's personal card using the VALET button. The Immobiliser and Code Immobiliser functions will be deactivated by the time the ignition is turned off.

OPTION №2 – EMERGENCY DEACTIVATION OF ANTI-THEFT FUNCTIONS

This method is used for a permanent deactivation of the anti-theft functions. Deactivation and activation are made by entering the «Secret PIN-code» from the Owner's personal card using the VALET button while system is disarmed, ignition is off and the Service mode is disabled.

1. Enter the programming mode by entering the «Secret PIN-code» (from the Owner's personal card) or the «Service PIN-code» (default value is 1-1-1-1).

2. Code Immobiliser - enter the programming level №13 - press the VALET button 13 times (without pauses).

2. Immobiliser / Anti-Hi-Jack - enter the programming level №15 - press the VALET button 15 times (without pauses).

3. 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 system will return to the programming menu. Enter the «Secret PIN-code» that is written on the Owner's personal card. The system will confirm deactivating with 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.

4. To activate the function - The LED indicator will light red after entering the programming level. The system will wait for action. Press the VALET button once to activate the function. The system will confirm enabling with one short sound signal of the Siren 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 R-468BT is a one-way short-distance communication device designed to control a security system. The remote control can be used as an owner authorization device.

CONTROL COMMANDS

Arming/Disarming | Trunk | Remote engine start | Stay Home mode

OWNER AUTHORIZATION

Immobiliser | Anti-Hi-Jack | Hands Free

2.4GHz RADIO INTERFACE (BLE 4.2) | THREE CONTROL BUTTONS
| SOUND INDICATOR | LED INDICATOR | CR 2032 BATTERY



Radio tag BT-760 / BT-770 / BT-780 – 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 | Stay Home mode

OWNER AUTHORIZATION

Immobiliser | Anti-Hi-Jack | 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 | SHOCK/TILT SENSOR | CR123A BATTERY



Radio module CIM-03BT – 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



WARRANTY OBLIGATIONS

Manufacturer guarantees correct operation of the service-security system if exploitation, installation, storage and transportation conditions described in this manual were met.

The system should only be used according to installation scheme and user manuals.

The system is meant to be installed by the professional car electronics installers. The installer should fill in installation certificate that is included in this manual.

Parts malfunctioning during warranty period on the fault of the manufacturer should be repaired or replaced by the installation center of the manufacturer or by certified service center. List of certified service centers can be found on pandorainfo.com

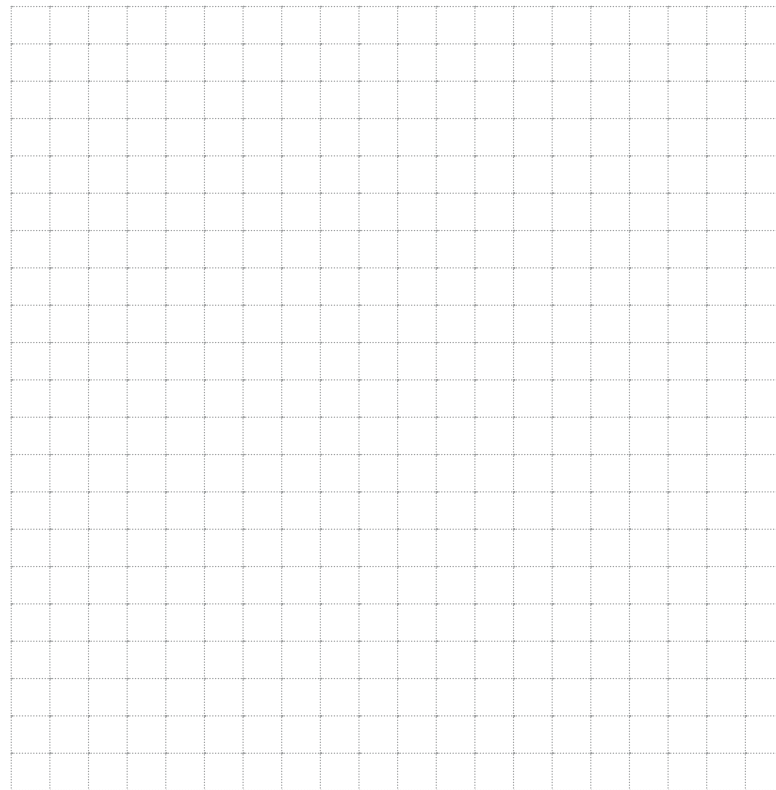
The user loses the right for warranty services in the following cases:

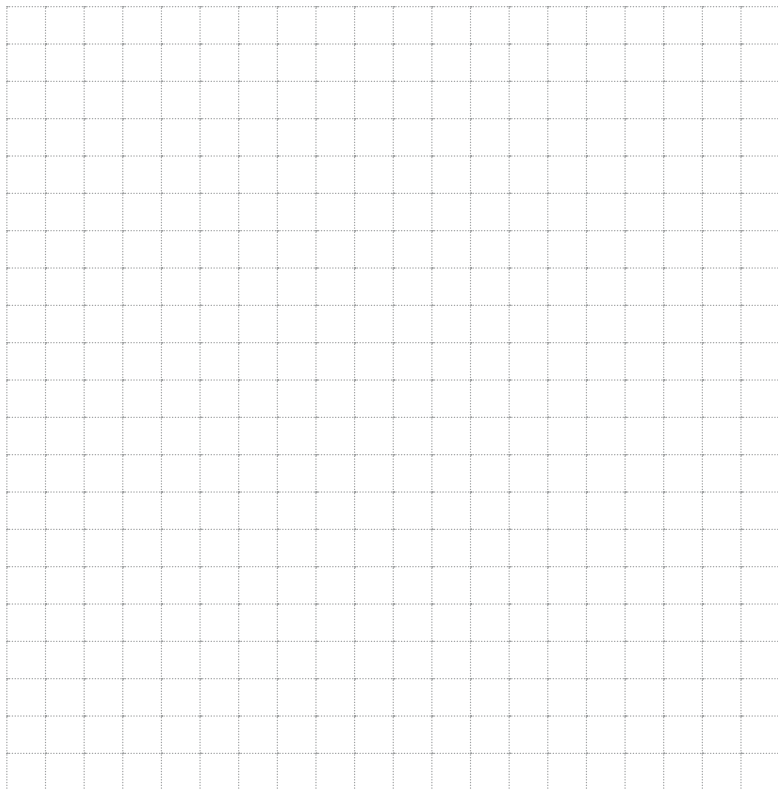
- when warranty period expires;
 - if exploitation, installation, storage or transportation conditions were not met;
 - if there is mechanical damage of the external parts of the system after it is sold.
- This includes: fire damage, consequential damage in case of car accident, aggressive liquids and water seeping damage, damage caused by improper use;
- if the damage was caused with incorrect settings and parameter adjustment;
 - if system devices are replaced with any devices that are not recommended by the manufacturer;
 - if manufacturer sealing is broken;
 - if there is no properly filled warranty card and installation certificate.

Warranty period is 3 years since the moment of purchase, but no more than 3.5 (three and a half) years since the moment of production. This warranty does not include batteries of the remotes, as they have their own service lifetime.

Maintenances and repairs of the system with expired warranty period are carried out at the expense of the user on a separate contract between the user and the installer/service center.

! WE RECOMMEND THAT YOU ASK AN INSTALLER TO FILL OUT THE INSTALLATION CERTIFICATE AND THE WARRANTY CARD. THESE DOCUMENTS MAY BE REQUIRED FOR CONTACTING THE CUSTOMER SUPPORT..





INSTALLATION CERTIFICATE

I, the undersigned _____
Position, name. _____

professional installer, certify that installation of the service-security system, specified below, was carried out by me in accordance with manuals and schemes provided by the manufacturer.

Car specifications:

Car model _____ Type _____

Id number (VIN) _____

Registration number _____

Security system specification:

Model Pandora Camper v3

Serial number _____

Service center name, full address and installer's stamp

Signature _____ / _____ /

Signator

Work accepted _____ / _____ /

Signator

Date « ____ » _____ 20 ____ year.

ACCEPTANCE CERTIFICATE

Model Pandora Pandora Camper v3 is in conformity with Electromagnetic Compatibility Directive EMC 2004/108/EC and R&TTE Directive 1999/5/EC.

Serial number _____ Date of production _____

Responsible person's signature (stamp)

Packager _____

Signature (personal stamp)

WARRANTY CARD

Model Pandora Camper v3

Serial number _____

Date of purchase « ____ » _____ 20 ____ year

Seller's (installer's) stamp

Seller's signature _____