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

Pandora Professional is a premium car service-security system, built for cars with on-board voltage of 12V. It is a complex engineering solution which includes car security system, telemetry, remote and automatic engine start and various service options, all controlled from your OEM key remote, smartphone or online service. When building Pandora Professional 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.

With the Pandora Professional your car will have numerous new features for both security and service. Elegant and advanced technical design and unique ergonomic interaction algorithms that are used in the Pandora Professional allow enhancing your car with fantastic set of intuitive and useful functions. Your car controls and monitoring options at your fingertips.

WARNING! IT IS STRONGLY ADVISED TO HAVE PROFESSIONAL CAR MECHANIC INSTALLING THE SYSTEM. ANY CAR ELECTRONICS INSTALLER SHOULD BE ABLE TO INSTALL PANDORA PROFESSIONAL USING INSTALLATION SCHEME IN THIS MANUAL AND ALARMSTUDIO 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 $+80^{\circ}$ C

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

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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

1. Base unit	1.
2. Remote control	1.
3. Radio tag	2
4. Leather case for immobilizer tags	1.
5. External VALET button	1.
6. User manual	1.
7. Installation manual (wiring diagram)	1
8. Owner's personal card	1.
9. Relay module	1.
10. Radio relay BTR-101	1.
11. Radio relay BT-01	1.
12. Siren	1.
13. Beeper	1.
14. Digital temperature sensor	1.
15. External GSM antenna	1.
16. Main cable of the base unit	1.
17. Additional cable of the base unit	2
18. IMMO-KEY cable	1.
19. USB cable	1.
20. Fastening kit	1.
21. Packaging	1

Manufacturer reserves the right to change set and construction of the product to improve its technological and operational parameters without notification

Base unit

- Online service and mobile application for Android and iOS.
- Individual secret PIN-code for disarming and switching off the immobilizer.
- · Hands Free mode for arming/disarming.
- · Immobilizer and "Anti-Hi-Jack-1, Anti-Hi-Jack-2" modes.
- · Automatic arming.
- · Code immobilizer.
- · Algorithms of original immobilizer bypass.
- · Integrated 3G/GSM-modem.
- · Built-in GPS/GLONASS receiver.
- · Integrated 868 MHz radio interface.
- Integrated 2.4 GHz module with support of Bluetooth 4.2 Low Energy protocol.
- · Dialog coding of control commands.
- · Individual 128-bit encryption key.
- Built-in integral accelerometer for determining motion and shocks with adaptive processing algorithm and sensitivity controls.
- · Advanced process of sensor data reading, eliminating false alarm possibilities.
- Built-in temperature sensor.
- · Built-in microphone.
- · Built-in battery.
- Firmware updates via built-in micro-USB connector.

Control and monitoring

Control of the vehicles zones depends on the type of connection and system settings.

Type №1. Digital connection – It allows reading information (statuses) and controlling vehicles (commands) by digital buses of the vehicles. The detailed information about digital protocols is available on loader.pandorainfo.com. The declared statuses may not be available for certain vehicle trims.

Type №2. Analog connection – It is a direct connection of analog inputs and outputs to electrical circuits of a vehicle in accordance with a connection diagram.

Type N^2 3. Built-in sensors – The sensors perform control and protection of the vehicle. Additional connections are not required

Type \mathbb{N}^2 4. Additional sensor (*optional) – External additional sensors are connected to the base unit (see the System set)

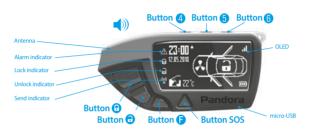
Туре				Guarded and monitored zones	
Nº1	№2	Nº3	Nº4		
•		•		Interior temperature (status)	
•			•	Engine temperature (status)	
•			•*	Outside temperature (status)	
		•		Voltage of the on-board circuits (status, security zone – alarm level)	
		•		Shock sensor (security zone – alarm and warning level)	
		•		Motion sensor (security zone – alarm level)	
		•		Tilt sensor (security zone – alarm level)	
•			•*	Additional sensor, OE alarm system status via CAN (status, security zone – alarm and warning level)	

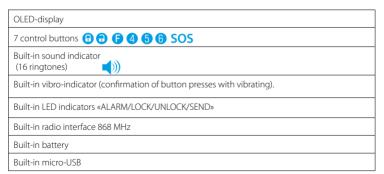
•	•		Turning ignition on (status, security zone – alarm level)
•	•		Opening doors, separate indication for each door via CAN (status, security zone – alarm level)
•	•		Opening a trunk (status, security zone – alarm level)
•	•		Pressing brake (status, security zone – alarm level)
•	•		Engine operation control - RPM (status)
•	•		Position of a gearbox selector/handbrake(status)
•			"Parking light is not turned off" notification

Туре				Control (Commands)	
_Nº1	Nº2	Nº3	№4	Control (Communas)	
•	•			Central lock	
•				Car original alarm system	
•	•			Trunk	
•	•			Turn lights	
•	•			Closing windows	
•	•		•*	Engine pre-heaters	
•	•		•*	Block engine	
•	•		•*	Block original keyless system	

REMOTE CONTROL D670

Two-way remote control is the main mean to control the system. For easily distinguishable notifications, the remote uses 16 ringtones. Each ringtone matches particular event. Remote has flashing LED indicators for additional information.





WARNING!

• ALL CONTROL COMMANDS ARE TRANSMITTED VIA RADIO CHANNEL, FOR MAXIMUM EFFECTIVENESS AND RANGE IT IS RECOMMENDED NOT TO SHIELD THE ANTENNA AREA (SEE PICTURE) WITH FINGERS WHEN USING A REMOTE.

 A REMOTE CONTROL IS A UNIFIED CONTROL DEVICE. ITS FUNCTIONS DEPEND ON SECURITY SYSTEM MODEL.

Charging a remote control



- -The battery is charged
- -The battery is discharged 🔲

There is an indication of the battery charge level. Charge the battery if the remote control does not turn on or the charge level indicator displays the last segment. The battery is charged using a standard micro-USB cable.

Updating firmware of the remote control

- Download the Pandora Alarm Studio application to a personal computer and run the program (the latest version of the application can be downloaded from pandorainfo. com)
- Download firmware for the remote control. It can be downloaded by the Pandora Alarm Studio
- Press and hold the button 4 of the remote control. Release the button right after connecting the remote control with a PC via a USB cable. The application will offer to update the firmware.
- Upload the firmware to the remote control using the Pandora Alarm Studio application **«LOAD FROM FILE»**.

Icons of the remote control

Red ALARM indicator

Flashes occasionally and sounds a short signal one time per minute after the end of any alarm notification. It indicates until any button you press any button.

Green LOCK indicator

Flashes occasionally if there is a connection and the system is armed

Red UNLOCK indicator

Flashes occasionally when the system is armed

Red SEND indicator

Flashes occasionally when there is no connection

Icons of the remote control



98

 Security mode status (Armed/ disarmed)

Battery charge level

Current time indicator

75≈ Fuel level

<u>ζ</u>

◆Inside temperature



Engine temperature*



Alarm clock



Security zone

Shock sensor: Warning level:



Security zone

Shock sensor:



Car battery voltage



Security zone.
 Tilt sensor



Security zone
 Motion sensor



Security zone "Doors". separate indication for each door



Security zone "Hood"



Security zone
"Trunk"





"Low voltage security zone"



Handbrake/neutral indicator, Brake pedal security zone



"Engine is working"

^{*} Engine temperature indication is available only if a sensor is connected. Separate indication of doors, original alarm status, fuel level depend on information in CAN-bus digital protocol of specific car.

QUICK ACCESS FUNCTIONS OF THE REMOTE CONTROL

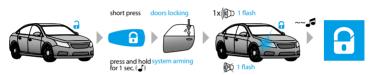
	System is disarmed		System is armed (no alarm events)			
	Ignition is switched on	Ignition is switched off				
(short press)	Lock doors without arming	Arming with sound confirmation	Search mode – flashes of turn signals with sound signals for 5 seconds			
(1 sec)		Arming without sound confirmation	Search mode – flashes of turn signals without sound signals for 5 seconds			
(2 sec)	Switch on the "Ignition backing" mode					
(3 sec)	Switch on the "Program neutral"		Start engine			
(short press)	Unlock doors	Unlock doors	Disarming with sound confirmation			
(1 sec)		Unlock doors	Disarming without sound confirmation			
(2 sec and more)	Switch off the "Ignition backing" mode		Switch off the ignition during remote or automatic engine start procedure			
(short press)	Switch on LCD lighting					
(1 sec)	Unlock trunk					

(2 sec)	Switch on/off timer channel							
(3 sec)	Switch on/off the remote control							
(short press)	PANIC mode	PANIC mode						
(short press)	Arming when the engine is running with sound confirmation	engine is running with seconds with sound						
(1 sec)	Arming when the engine is running without sound confirmation Arming in 30 seconds without sound notification							
6 (1 sec)	Request current car stat	Request current car status ("CHECK» command)						
(2 sec)	Events history							
6 (3 sec)	Force connection to the online service							
б (1 сек.)	Enter settings menu							
(3 sec.)	Switching on engine preheater							
(2 sec.)	Switching off engine preheater							

Armina

Arming the system allows monitoring of all security zones, locks the doors and blocks the engine.

To arm the system when the ignition is switched off, shortly press ① button on the remote control. The siren will emit one sound signal and turn signals will flash once. The remote control will play "ARMING" ringtone and security mode status icon (the lock) will change to:



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

If doors, front hood or trunk was open when arming, the siren will sound 4 beeps instead of 1, turn signals will flash 4 times, a remote will play the "WARNING" ringtone (after the "ARMING" ringtone) and will show a troubled zone. This zone sensor will be disabled at that moment. Sensor will be armed again in 15 seconds after the zone was set right.

Disarming

To disarm the system, shortly press button on the remote control. You will hear 2 short siren sounds and will see 2 flashes of turn signals. The remote will play "Disarming", ringtone and security mode status icon will change to:



To disarm the system, shortly press without sound confirmation press and 3 button for 1 second or more.

If there were new alarming events during the time system was armed, siren will sound 4 times and turn signals will flash 4 times, the remote control will play the "WARNING" ringtone (after the "DISARMING" ringtone) and will indicate zones triggered. All recent alarm events can be viewed in the event history.

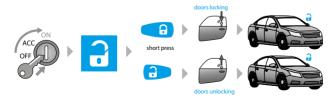
Unlocking a trunk



To independently unlock the trunk, no matter if the system is armed or not, press and hold button for 1 second.

If the system is armed when this action is performed, the trunk zone, shock and supplementary sensors will be disabled. All the other security zones will remain armed

If the trunk is not opened in 15 seconds after sending 'Unlock a trunk' command, the system will enable the sensors and arm the trunk security zone. It will be confirmed with a single flash of turn lights.



Locking/unlocking doors when the ignition is switched on

The system is able to control doors locking when the ignition is switched on. To lock doors, shortly press ③ arming button, to unlock doors , press ④ disarming button.

There is an automatic movement lock mode that will lock the doors at the car movement or on switching on the ignition. Doors will be unlocked after the ignition is switched off There is an option in the settings that allows to prohibit automatic unlocking on switching off the ignition.

When using doors locking mode on the car movement start, the system will detect car moving and perform doors locking (it depends on motion sensor sensitivity settings).

When using doors locking mode when switching on the ignition, in no less than 5 seconds after the ignition was switched on, the doors will be locked automatically. If any door is being opened after the ignition was switched on, automatic locking will be disabled to prevent locking keys inside a car.

Car search function

To easily find your car on a massive parking, shortly press ① press button when the car us armed. The system will sound the siren and flash turn signals 5 times in a row. To search for car without sound confirmation, press and hold ② for more than 1 second.



Delayed arming

If when leaving the car you cannot arm it using a remote control (you have your hands full), you can use the **"DELAYED ARMING"** function.

To activate this mode, shortly press ① and ⑤ buttons simultaneously. The LED indicator will turn red, the system will lock doors and will arm in 30 second, a siren will sound and turn signals will flash once indicating that the mode is triggered.

To activate this mode without sound confirmation, press and hold both ① and ⑤ buttons for 1 second until the sound and vibration signal.



To cancel delayed arming press 3 button.

PANIC mode

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

To trigger the PANIC mode, press ① and ②. buttons simultaneously. To switch it off, press either ③ or ③ button.



Remote and automatic engine start

The system allows for remote engine start using the "REMOTE ENGINE START" command 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 start can only be used when the system is armed. 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.

Remote and automatic engine start on automatic transmission cars will only occur, if a transmission selector lever was left in a «P» position. 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.

While the system is in remote and 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 remote engine start). To compensate, 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. Herewith all engine blocking functions will be activated..

Program neutral procedure (for cars with manual transmission)

If you are planning to use remote and automatic engine start on a car with manual transmission, before arming you will need to perform following actions:

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 (it depends on the system settings) or press and hold ① button for 3 second to forced switch on this program.



- 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.
- 3. Leave the car, close the doors.
- 4. Press ① button to arm a car and lock doors. The "engine is running icon will be spinning on a LCD remote and the security mode status icon will appear ②.
- The engine will be stopped. Now the system is ready to perform remote and automatic engine start.

Remote engine start



If the system is prepared for remote start, to execute it, press and hold ① button for 3 seconds. Sound signal will confirm the command, LCD will show flashing the "engine is running" icon signifying preparation to the engine start.

In a few seconds the engine will be started, the remote will play the **"ENGINE START"** ringtone and show spinning engine operation icon

Note! Engine operation duration depends on system settings – either heating time or threshold temperature for engine stop.



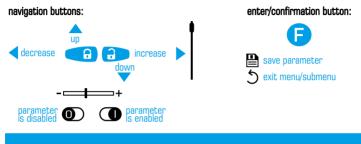
To remotely stop the engine while it performs heating, press and hold that button for 2 or more seconds. The engine will be immediately stopped and it will be confirmed by remote playing the "ENGINE STOP" ringtone and the "Engine is running" icon fading.

The remote will give notification 1 minute before designated engine stop: the icon will flash and the "ENGINE STOP IN 1 MINUTE" ringtone will play every 10 seconds. Sending the "REMOTE ENGINE START" command while the "ENGINE STOP IN

1 MINUTE" ringtone is playing will extend its operation period by 10 minutes. This procedure can be repeated multiple times.

System settings menu

Main system parameters and settings can be changed using LCD remote. All actions in the settings menu are performed by buttons.

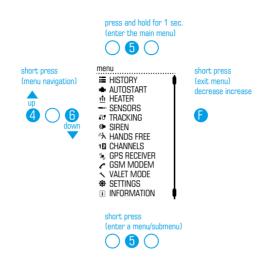




WARNING! SYSTEM SETTINGS CAN BE CHANGED ONLY WHEN A REMOTE CONTROL IS IN THE RADIO COVERAGE AREA.

Main menu:

Press and hold **5** button for 1 second to enter the main settings menu. To navigate levels, shortly press **4** and **6**, buttons. To enter a sub-menu, set the cursor to the desired setting and shortly press **5** button. If there is no any actions within 5 seconds, the main menu will be closed. To exit the menu at any time, shortly press **5** button.



Menu/Submenu

HISTORY 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

NOTE! The number of events is limited by the memory of the remote control. Use our internet service to view more detailed event history

▲ ALITOSTART 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.

NOTE! 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. The sensor availability depends on the system set.

- **«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.

CONTROL OVER AN ENGINE PREHEATER

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

Note! To quickly switch on an engine pre-heater, press and hold button 5 for 3 seconds. To quickly switch off an engine pre-heater, press and hold button 5 for 2 seconds.

SETTINGS AND ADJUSTMENT OF THE SENSORS

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. 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
- » Motion sensor is enabled
- >> Motion sensor is disabled
- "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

TRACKING SETTINGS OF THE TRACKING FUNCTION

This menu allows switching on/off the "TRACKING" function.

SIREN 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

A HANDS FREE 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

12 CHANNELS TIME CHANNEL CONTROL

This menu allows switching on/off time channels. The channels are used to implement additional functions and to control external devices. The configuration of the time channels is performed using a special software Pandora Alarm Studio.

■ GPS RECEIVER GPS/GLONASS RECEIVER CONTROL

This menu allows switching on/off a GPS/GLONASS receiver of the system.

Note! The system will not detect its coordinates and will not show tracks if the built-in GPS/GLONASS receiver is switched off.

✓ GSM MODEM GSM MODEM CONTROL

This menu allows switching on/off a GSM modem of the system.

Note! Service functions (voice calls, SMS, mobile applications, internet-service) will not work if the GSM modern is switched off.

VALET MODE SERVICE/VALET MODE

This menu allows enabling/disabling the service (valet) mode (see the "Service mode" section).

SETTINGS 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
- «LANGUAGE» This submenu allows changing interface language of a remote control.
- **«WIDGETS»** This submenu allows configuring information about a car state that is displayed in the main screen of a remote control.

INFORMATION

This menu displays technical information about a remote control.

RADIO TAG BT760

- Control button
- Integrated SEND indicator
- Integrated Bluetooth interface
- · Integrated accelerometer
- · Battery CR 2032
- · 2.4 GHz frequency (dialog encryption AES-128)



Replacing an immobilizer tag battery

Carefully open the cover of the tag battery compartment. Remove a 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 battery compartment. All elements of construction should be rigidly locked in places. If it is so, the tag can be operated as usually.



Arming disarming using a radio tag

To arm/disarm the system, RF tag should be in the Bluetooth coverage area. The system produces a protected (AES-128 encryption) interactive high-speed exchange of authorization codes in the frequency range 2,4 GHz on one of 125 channels. To arm the system when the ignition is switched off, shortly press the tag button. The system will confirm the command receiving with 1 short sound signal and 1 flash of turn indicators. To disarm the system, shortly press the tag button. The system will confirm the command receiving with 2 short sound signals and 2 flashes of turn indicators. Each button press will be confirmed with LED indicator flash of the tag that indicates the battery is functioning correctly. If LED indicator does not flash or light, the tag battery should be replaced (see 'Replacing immobilizer tag battery' section).

SPECIAL FUNCTIONS OF THE SYSTEM

Arming/Disarming in the Hands Free mode

The system allows for programmable Hands Free arming and disarming. To arm the system, when the engine is not running, move with the remote tag away from the car at a distance greater than the regular radio coverage (10 meters for 2,4 GHz) – the system will be armed automatically. To disarm the system, move toward the car with remote tag. Enabling/disabling this function can be performed with a phone (see 'Control over system via a phone' section).

Immobilizer and owner's personal safety

The system has a function that can contribute towards owner's personal safety. In case of a car accident, the system will automatically detect it and send notifications to emergency services and owner's close ones. All notifications are supplemented with car current coordinates and web links to online map services.

Immobilizer mode

This mode is enabled by default. Use a phone to disable this mode (see 'Control over system via a phone' section). When switching on the ignition, a base unit of the security system

performs a search for immobilizer tags in radio zone. If no radio tags are detected when the ignition is switched on, the system will block the engine with all radio relays that are programmed into the system. Engine blocking will occur immediately or at the time a motion sensor detects movement, it depends on the system settings.

WARNING! IF THE SYSTEM DOES NOT RECOGNIZE A RADIO TAG, THE BEEPER WILL EMIT 5 SOUND SIGNALS WHEN THE IGNITION IS TURNED ON, THIS WILL REPEAT 5 TIMES. CHECK A RADIO TAG BATTERY, MOVE A TAG (IT GOES TO THE SLEEP MODE WHEN IT REMAINS MOTIONLESS AND THE IGNITION IS SWITCHED OF. A BUILT-IN ACCELEROMETER HAVE TO RECOGNIZE MOVEMENT TO ACTIVATE A TAG).

Anti-Hi-Jack mode

This mode is disabled by default. Use the Pandora Alarm Studio application to enable this mode. The Anti-hi-jack mode helps to prevent aggressive seizure of the car using delayed engine blocking on door opening. Every time on opening/closing a door when the ignition is switched on, immobilizer requests a response from a radio tag using a unique algorithm. After a door was opened while the engine is running, if the system cannot detect a radio tag, the engine will be stopped after 1 minute (general safety requirement). A siren will play 'ENGINE BLOCKING WARNING' ringtone before blocking. The engine will be blocked immediately or at the time the car starts moving, it depends on system settings.

Anti-Hi-Jack-2 mode

This mode is disabled by default. Use the Pandora Alarm Studio application to enable this mode. The Anti-Hi-Jack-2 mode helps to prevent aggressive seizure of the car using delayed engine blocking on radio tag disappearance. The system constantly requests a response from a tag using a unique algorithm when the ignition is being switched on. If the system cannot detect a radio tag, the engine will be stopped after 1 minute (general safety requirement for car movement). A siren will play 'ENGINE BLOCKING WARNING' ringtone before blocking. When warning signals end, the system

will block the engine. Engine blocking will occur immediately or at the time the car starts moving, it depends on block implementation and system settings.

Arming/Disarming in the SLAVE mode

This mode is disabled by default. To use this mode, it is required to make additional settings or additional connections. It is possible to monitor the status of an original security system of a car by CAN-bus or by analog inputs in the "Slave" mode. When arming and disarming original security system, Pandora will be armed and disarmed respectively.

There is an option named 'Prohibit disarming when the tag is absent' in the system settings. When this option is enabled, disarming procedure will be performed only if there is a tag in the radio zone.

Multi-button code immobilizer

Multi button code immobilizer (pin-to-drive) is a function that allows disarming, disabling blocking and controlling timer channels using original vehicle controls (button, lever or pedal).

To enter the immobilizer code, switch on the ignition and press a programmed button a 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. After entering a correct immobilizer code, depending on the settings, either the engine blocking will be disabled or a programmed time channel will be activated or the system will be disarmed. It is required to make additional connections and settings to use this function.

Back-up power supply

A built-in battery allows extending operating time of the system in the armed mode to promptly notify an owner in the cases of an unauthorized disconnection of the onboard power supply. Power supply from the back-up battery can be also occur in case of a short-time voltage drop at the time of starting the engine. If the back-up battery is discharged, the system automatically starts charging it when the main power supply is active.

PANDORA AND A PHONE

WARNING! FOR THE CORRECT OPERATION OF THE GSM FUNCTIONS, THE 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.

Phone notifications

If any of security zones is triggered the system will immediately notify the owner by all available means: it will send alarm notification to the remote, will call and text owner's mobile phone and will save information about the event on **pandora-on.com** online service.

Security zones triggered notifications

- · Left/right, front/rear door security zone triggered;
- Trunk security zone triggered;
- · Front hood security zone triggered;
- · Brake pedal security zone triggered;
- · Ignition security zone triggered;
- · Warning level of the shock sensor security zone triggered;
- · Shock sensor security zone triggered;
- · Warning level of the additional sensor security zone triggered;
- · Additional sensor security zone triggered;
- · Motion sensor security zone triggered;
- · Tilt sensor security zone triggered;
- · Voltage drop security zone triggered.

Receiving voice information via a phone

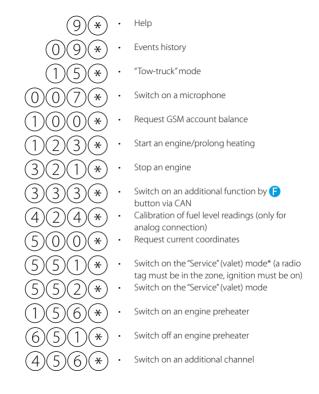
Call the system and listen to the status report.

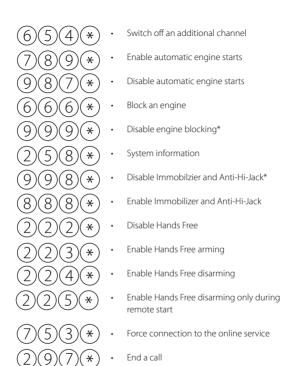
- 1. System security status: armed/disarmed.
- 2. If the alarm was triggered, the system will communicate the cause, number of events, time and date (in case events occurred more than 24 hours away).
- 3. Temperature sensors readings.
- 4. On-board voltage (to the nearest tenth of a volt).
- 5. GSM connection signal level.
- Notification if the remote engine start is programmed, and on what conditions (temperature, time, periodic start).
- 7. Current time and date.
- 8. Allows control command input.
- 9. Voice help in navigating control commands.

Control over the system via a phone

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







^{*} the "Secret PIN-code"

WARNING! IF A CALL IS NOT MADE FROM THE OWNER'S NUMBER, A GUEST PIN-CODE SHOULD BE ENTERED, FACTORY PRESET OF THE GUEST PIN-CODE IS 1-2-3-4. PLEASE CHANGE THE GUEST PIN-CODE AFTER THE SYSTEM IS INSTALLED.

Voice help

The system has voice help menu. During a voice call press (9)(*) buttons and listen to the information about the system control commands. To end the session, hang up the phone.

Repeating the last message

To repeat any message, (*) button during a voice call.

Arming/Disarming

- 1. Call the system number and wait for the answer.
- 2. Dial (1)(*) to arm the system or (0)(*) to disarm it.
- 3. The system will confirm:
- "Arming/Disarming".

Active security mode

- 1. Arm the system using any method.
- 2. Call the system number and wait for the answer.
- 3. Dial (1)(1)(*)
- 4. The system will confirm: "Command executed". To end the session hang up the phone.

Events history

- 1. Call the system number and wait for the answer.
- 2. Dial (0)(9)(*)

3. Listen to the information about the latest event that is registered by the system. To navigate the event history, press 4 (listen to the previous/earlier event) or 6 (listen to the next/later event).

Switching on the microphone

- 1. Call the system number and wait for the answer.
- 2. Dial (0)(0)(7)(*)
- 3. The system will switch on the built-in microphone.

Request GSM account balance

- 1. Call the system number and wait for the answer.
- 2. Dial (1)(0)(0)(*)
- 3. The system will switch on the built-in microphone.

Request current coordinates

- 1. Call the system number and wait for the answer.
- 2. Dial (5)(0)(0)(*)
- 3. The system will confirm: "Balance information sent via text message" and will send a text message with account balance information to your phone.

Switching on/off an additional channel

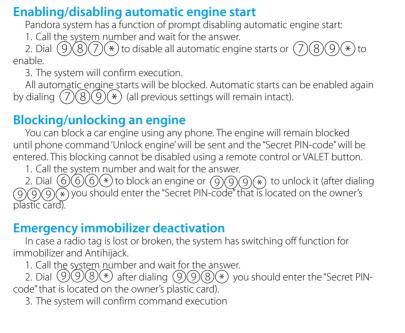
Pandora system can control an additional time channel:

- 1. Call the system number and wait for the answer.
- 2. Dial (4)(5)(6)(*) to switch on a channel or (6)(5)(4)(*) to switch off a channel.
 - 3. The system will confirm command execution.

Switching on/off an engine preheater

Pandora system has an additional channel to control an engine preheater:

1. Call the system number and wait for the answer.



to switch off

2. Dia (1)(5)(6)(*) to switch on a channel or (6)

3. The system will confirm command execution.

Switching on the immobilizer function

To restore the functions of immobilizer and Anti-hi-jack:

- 1. Call the system number and wait for the answer.
- 2. Dial (8)(8)(8)(*)
- 3. The system will confirm command execution.

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.

- 1. Call the system number. If the system is in PANIC mode, receive an emergency call. Wait for the answer.
- 2. Dial (1)(5)(*), 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.

Changing settings via a phone

To enter the settings programming mode:

Option 1. Disarm the system, call the system number, wait for the answer, press and hold button on the main remote control for 3 seconds. The system will enter the settings programming mode.

Option 2. Disarm the system, call the system number, wait for the answer, switch on the ignition for 1-3 seconds, then switch it off. The system will enter the settings programming mode.



WARNING! THE SYSTEM MUST BE DISARMED FOR CHANGING THE SETTINGS.



Phone numbers setting



Owner's number -> (#)
An example: 1 (*) -> -> dial a phone
number in the format*79xxxxxxxx#



Additional owner's phone number
 -> (#)



The second additional owner's phone number
 -> (#)



Account balance request number -> (#)



System phone number -> (#)



Settings of the voice calls



Voice calls on alarm



 Voice calls on triggering warning level of the sensors



· Voice on engine start



· Voice on engine stop



· Voice calls on restoring GSM connection



Voice calls on disarming



· Voice calls on entering programming mode



Voice calls when radio relay connection is lost



Voice calls when on-board voltage is low



Voice calls on accidents



Settings of the text messages



· Text messages on alarm



 Text messages on triggering warning level of the sensor



Text messages on engine start



Text messages on engine stop



· Text messages on restoring GSM connections



· Text messages on disarming



Text messages on entering programming mode



Text messages when radio relay connection is lost



Text messages when on-board voltage is low



· Text messages on accident



(1)(*) · Immobilizer (on/off)

2 × Anti-Hi-Jack (on/off)

Additional settings

1 (*) · Changing the guest PIN-code

2)(*) • Entering as a guest

3 (*) · Remote blocking

4 \times • Switch on the microphone

(5)(*) • Set threshold voltage for sending notifications

Automatic engine start settings

-(1)(*) · By time

Set up time for automatic start

-(3)(*) · By voltage

Set up voltage for automatic start

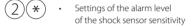
Set up temperature for automatic start

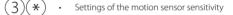




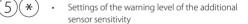


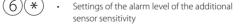












Settings of money and power saving modes

- 1)(*) GSM connections
- (2) (*) Money saving mode of the GSM connection
- (3)(*) · Voice calls in roaming service



Current time and date settings



• Set up date



Set up time

ONLINE SERVICE PANDORA-ON.COM AND MOBILE APPLICATIONS

Warning! 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, the GSM functions of the system will be unavailable.

Registration - Visit pandora-on.com website and register following the instructions

System login - After completing of the registration process, you can login- to the online service via a computer's web browser or via special mobile apps for the Android (Pandora Online) and iOS (Pandora Pro). Use your previously created login/password to enter the web site or mobile app.



Adding a car to the online service

The Internet service pandora-on.com can support simultaneously several telemetry systems, installed on various cars (private car park).

To add a telemetry system (car) to the service, press 'Add car' button and go through the process of adding, following the instructions. To add a car, individual owner's card with registration information is needed (shipped with the system).

MARNING! REMOVE THE PROTECTIVE LAYER CAREFULLY, DO NOT USE SHARP OBJECTS TO AVOID DAMAGING OF HIDDEN INFORMATION UNDER A PROTECTIVE LAYER

Events History

Event history holds more than 100 different types of events that can happen to the system. Every event is saved with date, time, coordinates and status of all control zones at the time the event has occurred. The number of events in the history is limited. Storage of event history life is no less than 1 month.

Mobile applications for Android and iOS

You can download mobile apps from your device's app store (Google Play, App Store). To access the app, use the login data received from the service at the registration stage.

Control via a radio channel

Mobile applications Pandora Online and Pandora Pro can control the system, receive status information and open advanced settings without Internet connection when a phone is in the Bluetooth coverage zone.

To get access to these functions, record the mobile device in the system. To pair a mobile device, enter the programming mode and go to the programming level Nº18 "Pairing and unpairing a mobile device". To enter the programming mode, enter the "Service PIN-code" using the VALET button (factory pre-set is "1-1-1-1"). Entering the «Service PIN-code» is similar to entering the «Secret PIN-code» (see the "Control over the system in case of emergency" section). To proceed to the programming level Nº18, press the VALET button 18 times after entering the programming mode.

Pairing a mobile device:

The LED indicator will light green after entering the level. Open the 'Pandora Online' or Pandora Pro mobile application, go to 'Bluetooth Control' -> 'Not specified' menu ('Bluetooth device' for iOS). This setting will be available after adding the system in the account. The application will search for the system via Bluetooth connection. Select the found system, the system and the mobile device will be automatically paired. The system will confirm the pairing with a sound signal of a siren and red light of the LED indicator.

Unpairing a mobile device:

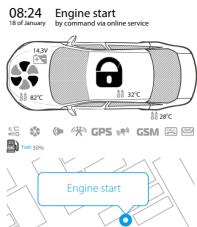
The LED indicator will light red after entering the level. Press the VALET button and hold it for more than 4 seconds, release the button. The system will confirm deleting with the series of sound signals of a siren and the system will return to mobile device registration mode (the LED indicator will light green).

Saving changes:

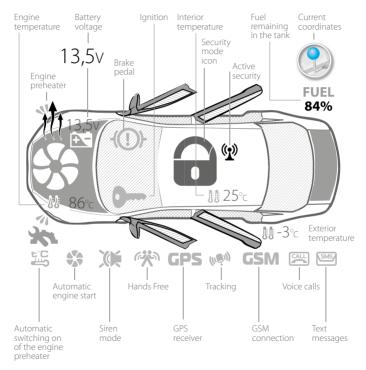
To finish the registration of a mobile device, the VALET button should be pressed once, the series of red and green flashes of the status LED indicator will confirm the saving, switch on the ignition to automatically save the settings and exit the programming mode.

WARNING! THE SYSTEM SUPPORTS ONLY ONE MOBILE DEVICE IF THERE IS NO AUTOMATIC PAIRING, ENABLE 'PIN REQUEST FOR PHONE PAIRING' ITEM IN THE 'RADIO TAG AND MOBILE DEVICE FUNCTIONS' SETTINGS AND MAKE PAIRING PROCEDURE AGAIN. THE MOBILE DEVICE WILL REQUEST PIN-CODE (0-0-1-1-1-1)

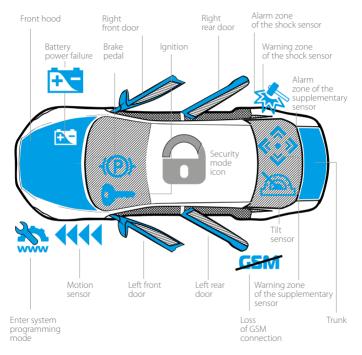




System status information



Security and warning zones



SERVICE (VALET) 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 or parking. Moreover, you will not have to leave a remote control or radio tag to the valet or the mechanic. To switch on this mode, switch on the ignition, a radio tag must be in the coverage zone, enter the "Immobilizer PIN-code" (if the "Code immobilizer" function is implemented):

Switch on/off the service mode using a radio tag

- To switch on the service mode, press and hold the button on a radio tag for 3 seconds. Release the button after 3 flashes of the LED of the radio tag.
- To switch off the service mode, press and hold the button on a radio tag for 3 seconds. Release the button after 3 flashes of the LED of the radio tag.

Switch on/off the service mode using a remote control

Enter the main settings menu - press and hold **(5)** button for 1 second. Select the "VALET MODE" menu using **(4)** or **(5)** buttons and shortly press **(5)** button.

To switch on the service mode, hover over the parameter status using using using using using using using using using or buttons and shortly press button.

To switch off the service mode, hover over the parameter status using or buttons and shortly press button.

Switch on/off the service mode using a phone

Call the system number, wait for the answer.

- To switch on the service mode, dial the 551* DTMF command and enter the "Secret PIN-code" written on the owner's plastic card
- To switch off the service mode, dial the 552* DTMF command.

Switch on/off the service mode using an immobilizer button

- To switch on the service mode, enter the "Immobilizer PIN-code" and press the immobilizer button 10 times within 20 seconds.
- To switch off the service mode, turn on the ignition and enter the "Immobilizer PIN-code".

Service mode indication

 The system will confirm switching on the service mode with a long sound signal of a Beeper and the green LED indicator when the ignition is turned on. The system will confirm switching off the service mode with two long sound signals of a Beeper and fading the green LED indicator when the ignition is turned on.

CONTROL OVER THE SYSTEM IN CASE OF EMERGENCY

If you are not able to disarm the system using a remote control or radio tag, use a phone to deactivate the system quickly. To disarm the system by a phone, call the system's number. When it answers, dial the **0*** command. If the call is not made from the owner's number, the guest PIN- code should be entered. The factory preset of the guest PIN-code is 1-2-3-4.

To disable the immobilizer tags, dial the **998*** command (after dialing, enter the 'Secret PIN-code' that is located on the owner's plastic card). To enable the immobilizer tags, dial the **888*** command. If the system cannot be deactivated using a phone, apply emergency disarming and enabling/disabling the immobilizer tags using the VALET button

Emergency disarming using the VALET button

WARNING! MAKE SURE THAT THE PROTECTIVE LAYER ON THE OWNER'S PLASTIC CARD IS INTACT AFTER THE INSTALLATION OF THE SYSTEM. THE PLASTIC CARD HOLDS THE SECRET PIN-CODE:

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

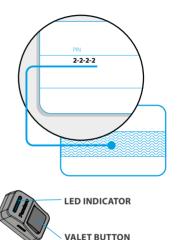
In case you cannot disarm the system using a phone or immobilizer tag, the 'Secret PIN-code' can be used. The 'Secret PIN-code' is written on the owner's plastic card under the protective layer. The code must be entered only when the base unit is powered and the ignition is switched off. The PIN-code can be entered using an

external or located on the base unit VALET button. The digits input is indicated by an external or located on the base unit LFD indicator.

Entering the PIN-code:

•ENTER THE FIRST DIGIT• Press the VALET button a number of times, equals to the first digit. Pauses between presses should not exceed 1 second. Each pressing will be confirmed with an orange LED indicator flash. A pause for more than 1 second and a red LED indicator flash confirm the input of the first digit. Then you can enter the next digit.

•ENTER THE SECOND DIGIT• Press the VALET button a number of times, equals to the second digit. Pauses between presses should not exceed 1 second. Each pressing will be confirmed with an orange LED indicator flash. A pause for more than 1 second and a red LED indicator flash confirm the input of the second digit. Then you can enter the next digit.



• ENTER THE THIRD DIGIT • Press the VALET button a number of times, equals to the third digit. Pauses between presses should not exceed 1 second. Each pressing will be confirmed with an orange LED indicator flash. A pause for more than 1 second and a red LED indicator flash confirm the input of the third digit. Then you can enter the next digit.

- ENTER THE FOURTH DIGIT Enter the fourth digit of the code using VALET button. Press the button a number of times, equals to the fourth digit. Pauses between presses should not exceed 1 second. Each pressing will be confirmed with an orange LED indicator flash. The system will confirm correct PIN-code with the series of red and green flashes.
 - If the input was correct, the system will be disarmed.
- If the input was incorrect, it will be indicated with a red LED indicator flash and the system will stay in the previous state. New input can be attempted after 5 seconds.
- If the system was disarmed and the ignition was off, it will enter the programming mode after correct entering the "Secret PIN-code".

For emergency arming when the ignition is off, 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.

Enabling/disabling the immobilizer radio tags

WARNING! IT IS HIGHLY RECOMENDED TO CHANGE THE FACTORY PRESET OF THE "SERVICE PIN-CODE" FOR IMPROVING SECURITY OF THE SYSTEM.



Write down or remember the "Service PIN-code"

To disable the immobilizer radio tags, enter the level 15 (the system must be in the programming mode). Enter the 'Secret PIN-code' to disable the radio tags or press the VALET button once to enable the radio tags. Enter the "Service PIN-code" to enter the programming

mode (the factory preset of the service PIN-code is '1-1-1-1'). You can enter the code only if the base unit is powered, the ignition is switched off, the system is disarmed and the service mode is switched off. If there is no 'Service PIN-code', you can enter the programming mode using the 'Secret PIN-code' written on the owner's card. After entering the programming mode, press the VALET button 15 times. Green color of the LED indicator means the radio tags are enabled, red color means the radio tag are disabled.

Disabling the radio tags:

The LED indicator will light green after entering the programming level. The system will wait for entering the 'Secret PIN-code'. Enter the 'Secret PIN-code' that is written on the owner's plastic card. The system will confirm disabling of the radio tags with two sound signals of the siren and a long red LED flash

After that, the system will return to the programming menu. If the PIN-code is not entered within 10 seconds or the input is incorrect, the siren will sound one signal, the LED will produce the series of red and green flashes and the system will return to the programming menu.

Enabling the radio tags:

The LED indicator will light red after entering the programming level. The system will wait for action. Press the VALET button once to enable the radio tags. The system will confirm enabling with one short sound signal of the siren and a green LED light. After that the system will return to the programming menu.

Siren sounds and turn indicators signals

Signal name	Description
Alarm, PANIC mode	Incessant sound and light signals for 30 sec
Arming	1 sound and 1 light signals
Disarming	2 sound and 2 light signals
'Sensors triggered' signal when disarming	4 sound and 4 light signals
'Sensors malfunction' signal when arming	4 sound and 4 light signals
Warning level of a sensor is triggered	3 sound signals
Car search	5 sound and 5 light signals

Meaning of the LED indicator colors

Indicator status	Description
Short red flashes	The system is armed
Lit red	The system is preparing for automatic arming
Orange flash	Confirms VALET button press
Orange flashes	Confirms the number of recorded remote controls (when switching on the ignition)
Green flashes	Confirms the number of recorded radio tags (when switching on the ignition)
Red flash	Confirms the recorded mobile device (when switching on the ignition)
Red and green flashes	PIN-code is confirmed
Faded	The system is disarmed

Beeper sound signals

Signal	Description
Enable the Service mode	1 sound signal
Disable the Service mode	2 sound signals
A battery in a radio tag is discharged	3 sound signals / 3 times
Absence of a radio tag	5 sound signals / 5 times
Blocking warning	Fast sound signals

Checking the number of recorded remote controls/radio tags/mobile device

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

You can also check the number of recorded tags and registered mobile device by taking off and putting back on battery terminal. The system will emit short sound signals from a siren with less than 1 sec. interval. The number of the signals equals to the number of recorded remote controls. After a pause of 2 seconds the system will emit short sound signals from a siren with less than 1 sec. interval. The number of the signals equals to the number of recorded radio tags. After a pause of 2 seconds the system signal will indicate registered mobile device.

WARRANTY ORLIGATIONS

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.

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.

Transportation rules

Products should be transported in the original packaging by any means of transport as long as they are protected from mechanical damage and precipitation. Packaged products should be stored on racks in piles of 6 or less boxes, in enclosed, dry, heated rooms (no less than 1m from heating) which exclude possible interaction with moisture, oil products and damaging environmental factors.

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

INSTALLATION CERTIFCATE

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 manufacture.	
Car specifications:	
Car model	Type
ld number (VIN)	
Registration number	
Security system specification:	
Model Pandora Professional	
Serial number	_
Service center name, full address and installer's s	·
Signature/	
Work accepted/	
Date « » 20 year.	Signator

ACCEPTANCE CERTIFICATE

Model Pandora Professional 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 Professional		
Serial number		
Date of purchase «»	20year	
Seller's (installer's) stamp		
Seller's signature		

