Pandora

Pandora would like to thank you for
choosing our
MOTO EU service and security system

**Pandora MOTO EU** is a service and security system designed for motorcycles.

**Pandora** is the exclusive brand of security systems fully developed and manufactured in Russia.The manufacturing has its owen R&D department and more than 10 years of experience in the development of car-alarms making it able to offer the latest technology with unique features. In 2016, Pandora and TSS Group, have formed a new strategic partnership and thanks to long experience in the car security market, the selected functions and features have been optimized according to needs of EU and european customers.

When building **Pandora MOTO EU** 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.

**Pandora MOTO EU** has a cryptographically strong authorization code with unique dialog algorithm and individual 128 bit encryption key on every device. Experimental Engineering Factory guarantees 100% protection form electronic hacking for the whole operation period.

**WARNING! IT IS STRONGLY ADVISED TO HAVE PROFESSIONAL CAR MECHANIC INSTALLING THE SYSTEM. CERTIFIED INSTALLERS ARE RARE OUTSIDE RUSSIA, BUT ANY CAR ELECTRONICS INSTALLER SHOULD BE TABLE TO INSTALL PANDORA MOTO EU 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 RESULTS, MOST LIKELY THE PROBLEM IS IN IMPROPER INSTALLATION.**

It is essential for systems functioning that you read and understand instructions in this manual. Note that all radio devices are subject to interference, which could affect proper performance.

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° C range

**IMPORTANT! Note that this manual describes remote and manual functions for the most part. Functionality of the system is vast and would require a book-sized manual to fully describe. Instead we use a handy software named AlarmStudio that functions as both programming tool and an extended installation & functionality manual. It requires Windows and can be downloaded at tssgroup.sk**

Our website: **www.pandorainfo.eu**

Product is in comformity wiht Electromagnrtic Comparibility Directive EMC/2014/108/EC and R&TTE Directive 1999/5/EC

CE EAC

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# SYSTEM FEAUTRES

## Base unit

- Dialog coding of control commands sent at a frequency of 868 MHz.
- Built-in integral accelerometer for determining motion and shocks with adaptive processing algorithm and sensitivity controls.
- Built-in back-up battery
- Built-in temperature sensor, input for external temperature sensor, sensors reassigning feature
- Software updates via built-in micro-USB socket.
- Monitoring of on-board voltage
- Dialog coding of control commands, Individual 128-bit encryption key that can be changed during recording of the remote control process.
- Event history with exact time stamps is stored in the base unit and is transferred to the remote when it is in range.
- Advanced processing of sensor data, eliminating false alarm possibilities.

## 2-way LCD remote control

- OLED-display.
- 3 control buttons (arming and disarming buttons, multifunctional button).
- Vibration confirmation of the button press.
- Vibrating alert
- Built-in sound indicator (16 notification ringtones).
- Built-in light indicator (SEND/ALARM)
- Arming/disarming status indication.
- Security zones indication.
- Current time indication.
- Temperature and voltage indication.
- Battery level indicator.
- Time synchronizes with the base unit for exact time stamp in the event history.

- Prompt remote access to the sensitivity settings of sensors (shock/tilt/motion).
- View event history with time and event stamps.
- Automatic control of RF coverage zone.

## Security zones

Pandora MOTO EU service-security system guards following independent zones with corresponding zone notifications on the remote and recording alarms into the event history of the main unit:

- Trunk;
- Ignition trigger;
- Brake pressing;
- Clutch pressing;
- Triggering of the shock sensor (warning and alarm level);
- Triggering of the motion sensor;
- Triggering of the tilt sensor;
- Critically low on-board voltage.

# SYSTEM SET

| | | |
|---|---|---|
| 1. | Base unit | 1. |
| 2. | Main control remote with LCD | 1. |
| 3. | Cable with VALET button and three-colored LED indicator | 1. |
| 4. | User installation manual | 1. |
| 5. | Analog temperature sensor | 1. |
| 6. | Main cable of the base unit | 1. |
| 7. | Fastening kit | 1. |
| 8. | Reed switch | 2. |
| 9. | Blocking Relay | 1. |
| 10. | Siren (optional) | 1. |
| 11. | Packaging | 1. |

**WARNING! THE MANUFACTURER RESERVES THE RIGHT TO MAKE CHANGES IN THE PRODUCT SPECIFICATION AND DESIGN TO IMPROVE ITS TECHNOLOGICAL AND OPERATIONAL PARAMETERS WITHOUT NOTICE**

# SYSTEM OPERATION MODES

The system has 2 power saving operation modes. The modes can be adjusted using AlarmStudio.

Power saving mode 1. The system goes to this mode 24 hours (you can set the time interval using AlarmStudio) after last arming/disarming. This mode reduces energy consumption by 25%. Delay of the first command from the remote control is slightly increased in this mode.

Power saving mode 2. The system goes to this mode 10 day (you can set the time interval using AlarmStudio) after last arming/disarming. This mode reduces energy consumption by 50%.

**WARNING! RADIO CHANNEL IS DISABLED IN THE POWER SAVING MODE 2. SYSTEM CANNOT BE CONTROLLED VI A REMOTE CONTROL IN THIS MODE. ALL SECURITY ZONES REMAIN ACTIVE. READ THE SECTION BELOW TO ENTABLE RADIO CHANNEL**

To exit the power saving mode 2 and enable radio channel, change the status of any security zone (ignition, clutch handle, shock/tilt/motion sensor etc.). The siren will emit one sound signal if the system is armed. After that the system will wait for a disarming command from the remote control for 5 seconds. If the command is not received, alarm will triggered.

## REMOTE CONTROL

Two-way remote is the main mean of control over the system.

For easily distinguishable notifications the remote uses 16 ringtones. Each ringtone matches particular event.

Remote has flashing LED indicators for additional information.

## TURNING ON/OFF THE REMOTE CONTROL

To turn the remote control on, press and hold F button. **«REMOTE ON»** ringtone will play. Pressing and holding this button again for 3 seconds will cause the remote to turn off.

## MEANING OF THE REMOTE CONTROL LED INDICATORS

Green light indicator:
- Flashes if there is a connection with the base unit
- Goes dark when there is no connection with the base unit.

Red light indicator:
- Flashes frequently if there is any notification.
- Flashes occasionally when there is no connection.

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

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

## 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) | | Arming with sound confrmation | Search mode – flashes of turn signals with sound signals for 5 seconds |
|  (1 sec) | | Arming without sound confrmation | Search mode – flashes of turn signals without sound signals for 5 seconds |
|  (2 sec) | Switch on 'Ignition maintenance' mode | | |
|  (3 sec) | | | Remote engine start |
|  (short press) | | | Disarming with sound confirmation |
|  (1 sec) | | | Disarming without sound confirmation |
|  (>2 sec.) | Switch off 'Ignition maintenance' mode | | Switch off the ignition during remote or automatic engine start procedure. |

| | | | |
|---|---|---|---|
|  (short) | Arming when the engine is running with sound confirmation | Arming in 30 seconds with sound notifcation | |
|  (1 sec.) | Arming when the engine is running without sound confirmation | Arming in 30 seconds without sound notifcation | |
|  (short press) | PANIC mode | | |
|  (short press) | Switch on LCD lighting (available only on the remote with LCD) | | |
|  (3 sec.) | Switch on/off remote (available only on the remote with LCD) | | |

## ICONS OF THE REMOTE CONTROL


The system is armed


The system is disarmed


«Warning level of the shock sensor» security zone


«Alarm level of the shock sensor» security zone


«Motion sensor» security zone


«Tilt sensor» security zone


«Ignition» security zone


«Trunk» security zone


«Clutch», «Brake» security zone

«Neutral» indicator


«Low on-board voltage» security zone


Remote control battery level


Command sending

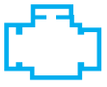
Numeric indicator. Displays current time

Battery level

Engine temperature


Alarm clock


Engine operation icon


Engine is started

Engine is stopped

## REPLACING A BATTERY IN THE REMOTE CONTROL

If high quality batteries are used, service-security system remote can function up to 4 months without needing a replacement. Battery needs to be replaced if the remote control is not turning on or the icon has only one bar left and starts flashing.

**To replace the battery:**

• move battery cover lock in the direction shown with arrow;

• take the battery out and place a new one on its place;

• the remote is ready for use (switch it on by pressing and holding F button for 3 seconds).

It is recommended to keep an extra AAA battery.

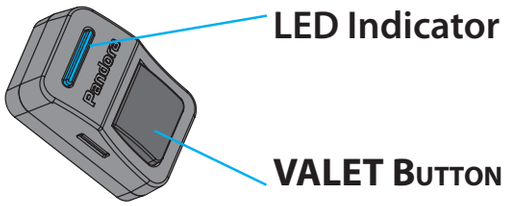
# CONTROL OVER THE SYSTEM IN A CASE OF EMERGENCY

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

☐-☐-☐-☐

Write down or remember the «Service PIN-code»

In case you cannot disarm the system using the remote control, the service PIN-code can be used (factory preset is 1-1-1-1). You can enter the code only if the base unit is powered, the ignition is switched off. The PIN-code entering is performed using external **VALET** button and indicated by flashes of the external LED indicator.




After correct input of PIN-code the system will enter programming mode if it was disarmed and the ignition was switched off. Exit programming mode is performed by switching the ignition on. For emergency arming when the engine is stopped, press and hold **VALET** button for 3 seconds. The system will be armed in 30 seconds. LED indicator lights red during 30 seconds countdown period.

**Entering the «Service PIN-code»:**

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

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

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

• Enter the fourth digit of the code using **VALET** button. Press the button a number of times, equal to the fourth digit. Pauses between presses should not exceed 1 second. Each pressing will be confirmed with orange LED indicator flash. After correct enter of the fourth digit the system will be disarmed. The correct input will be

confirmed with the series of green and red flashes of the LED indicator. If the input was incorrect, it will be indicated with a long red flash of the LED indicator and the system will stay in previous state. New input can be attempted after 5 seconds.

## ARMING PROCEDURE

Arming the system allows monitoring of all security zones, locks the doors and blocks the engine. To arm the system when the engine is stopped, shortly press  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  .
For arming without sound confirmation press and hold  button for more than 1 second.
If when arming one of the security zones were triggered, the siren will sound 4 short signals instead of 1, turn signals will flash 4 times, remote will play **«WARNING»** ringtone (after **«ARMING»** ringtone) and will show troubled zone. This zone sensor will be disabled at that moment. The sensor will be armed again in 15 seconds after the zone was set right.

## DISARMING PROCEDURE

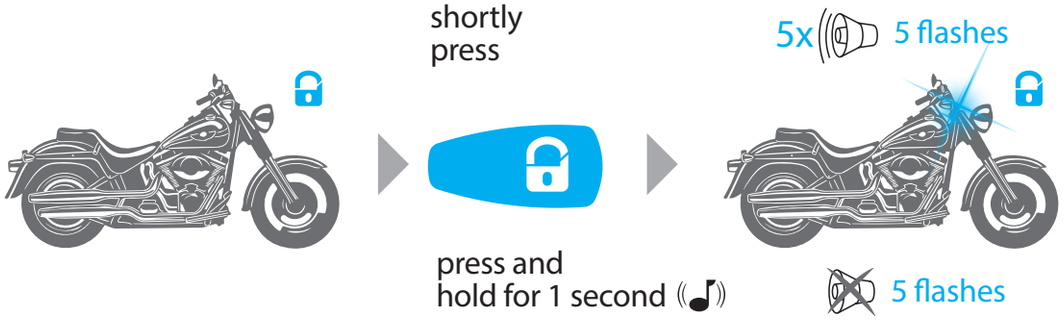
To disarm the system, shortly press  button on the remote. You will hear 2 short siren sounds and will see 2 flashes of turn signals. The remote will play **«DISARMING»** ringtone and security mode status icon will change to  .

For disarming without sound confirmation press  button for more than 1 second.

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 will sound **«WARNING»** ringtone (after **«DISARMING»** ringtone) and will indicate zones triggered. All recent alarm events can be viewed in the event history.

## VEHICLE SEARCH FUNCTION

To easily find your vehicle on a massive parking, shortly press button when the vehicle is 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 button for more than 1 second.

## PANIC MODE

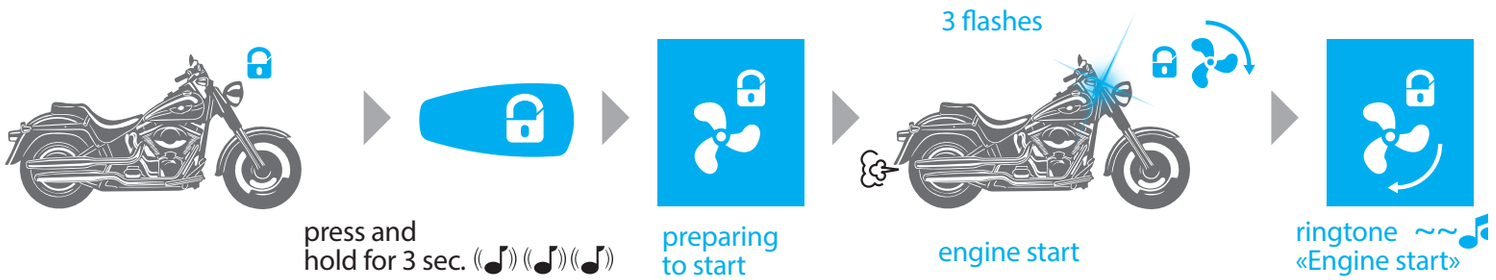
If your vehicle or you are in danger and you want to draw attention to your motorcylce, you can use PANIC mode. In this mode the siren will sound and turn signals will flash continuously for 30 seconds. To trigger PANIC mode, press and buttons simultaneously. To switch it off, press either or .

## REMOTE AND AUTOMATIC ENGINE START

The system allows for remote engine start using remote engine start command or automatic engine start using preconfigured automatic engine start function. Remote start can be used to heat engine, charge battery. Remote and automatic start can only be used when the system is armed. When using remote and automatic engine start functions, make sure that the motorcycle is securely fixed on a parking position While system is in remote and automatic start mode, it keeps performing all security functions of all of the security zones excluding shock sensor. 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 entered. Herewith all engine blocking functions will be activated.

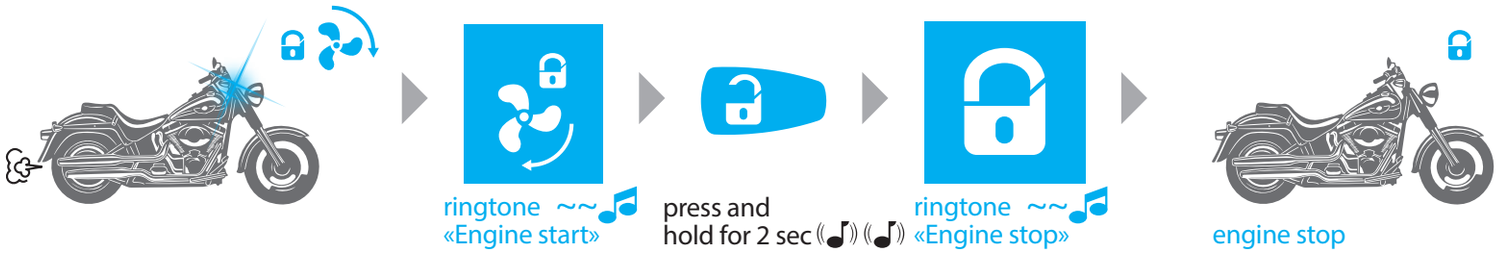
## REMOTE ENGINE START

If the system is prepared for remote start, to execute it, press and hold button for 3 second. Sound signal will confirm the command, LCD will show flashing engine operation icon signifying preparation to the engine start. In a few seconds the engine will be started, the remote control will play **«ENGINE START»** ringtone and shown spinning engine operation icon .




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 button for 2 or more seconds. The engine will be

immediately stopped and it will be confirmed by remote control playing **«ENGINE STOP»** rington and engine operation icon fading .




The remote control will give notification 1 minute before designated engine stop: icon will flash and **«ENGINE STOP IN 1 MINUTE»** ringtone will play every 10 seconds. If remote engine start command is sending during remote engine start procedure the operation period will be extended by 10 minutes. This procedure can be repeated multiple times.

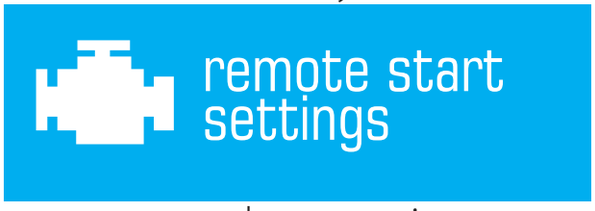
# SYSTEM SETTINGS MENU

Enter the main menu with F button short press. To switch between menu sections, shortly press F button.

## F ENTERING SETTINGS MENU

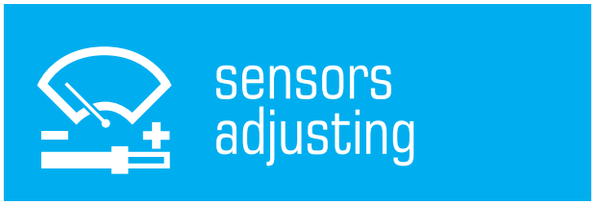

- control over motorcycle status, view event history


- sound notifications of the remote control




- remote and automatic engine start adjusting


- notifications on loss of radio signal




- sensors adjusting


- maintenance mode of the vehicle


- siren signals adjusting


- time setting


- alarm clock setting


- alarm clock time adjusting

F

F

F **EXIT SETTINGS MENU**

TO EXIT MENU, PRESS AND HOLD
F BUTTON FOR 1 SECOND.

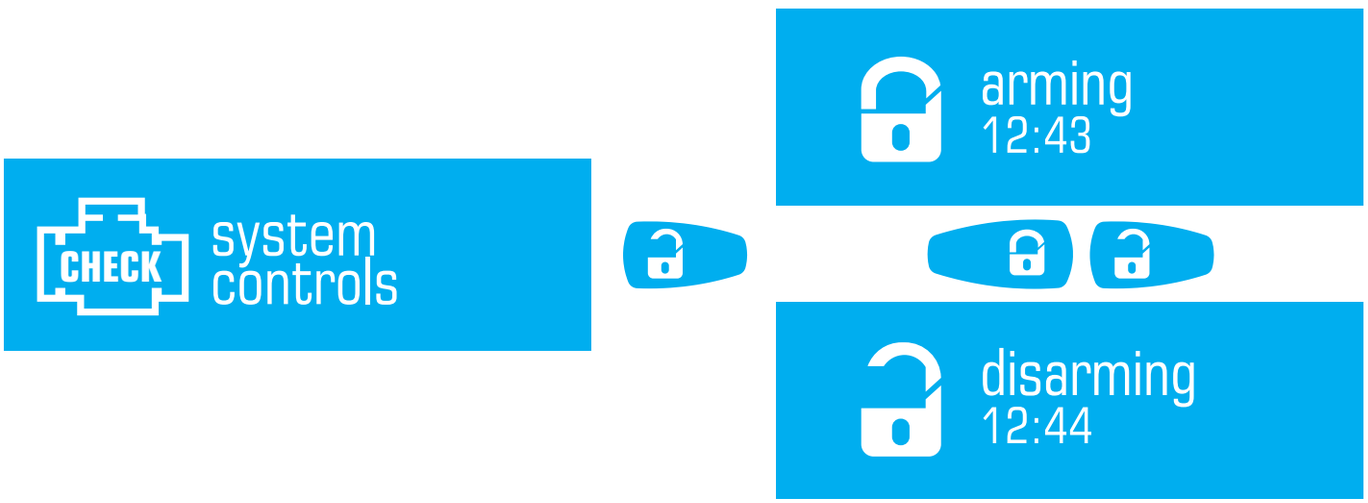
## VEHICLE STATUS CONTROL

To receive information about engine, exterior temperature, battery voltage and fuel level, select **«System controls»** menu and shortly press button.
To exit menu, press and hold F button for 1 second.

Note: Engine temperature indicating is available only if temperature sensor is connected. The sensor availability depends on the system set

## EVENT HISTORY

To view event history in the system's memory, select **«System controls»** menu, then shortly press button. Navigate several last events using (forward) and (back). Events are displayed by showing time of the event and flashing corresponding trigger zone indicators.



# WIRING DESCRIPTION

## X1 SOCKET (MAIN)

**Wire «1» (Black)** — It should be grounded (attached to the motorcycle body). This wire must be connected first during the installation.

**Wire «2» (Orange) (CH7+)** — Factory preset is «Control turn indicators». It connects to (+) control wire of the right turn signals (maximum load current is 6A). This output is multipurpose, it can operate in accordance with selected logic.

**Wire «3» (White) («Tachometer input »)** — analog input of the tachometer signal, it connects to the tachometer wire or to the signal wire of nozzle, which provide table pulses of any polarity corresponding to the RPM.

**Wire «4» (Orange) (CH6+)** — Factory preset is «Control turn indicators». It connects to (+) control wire of the left turn signals (maximum load current is 6A). This output is multipurpose, it can operate in accordance with selected logic.

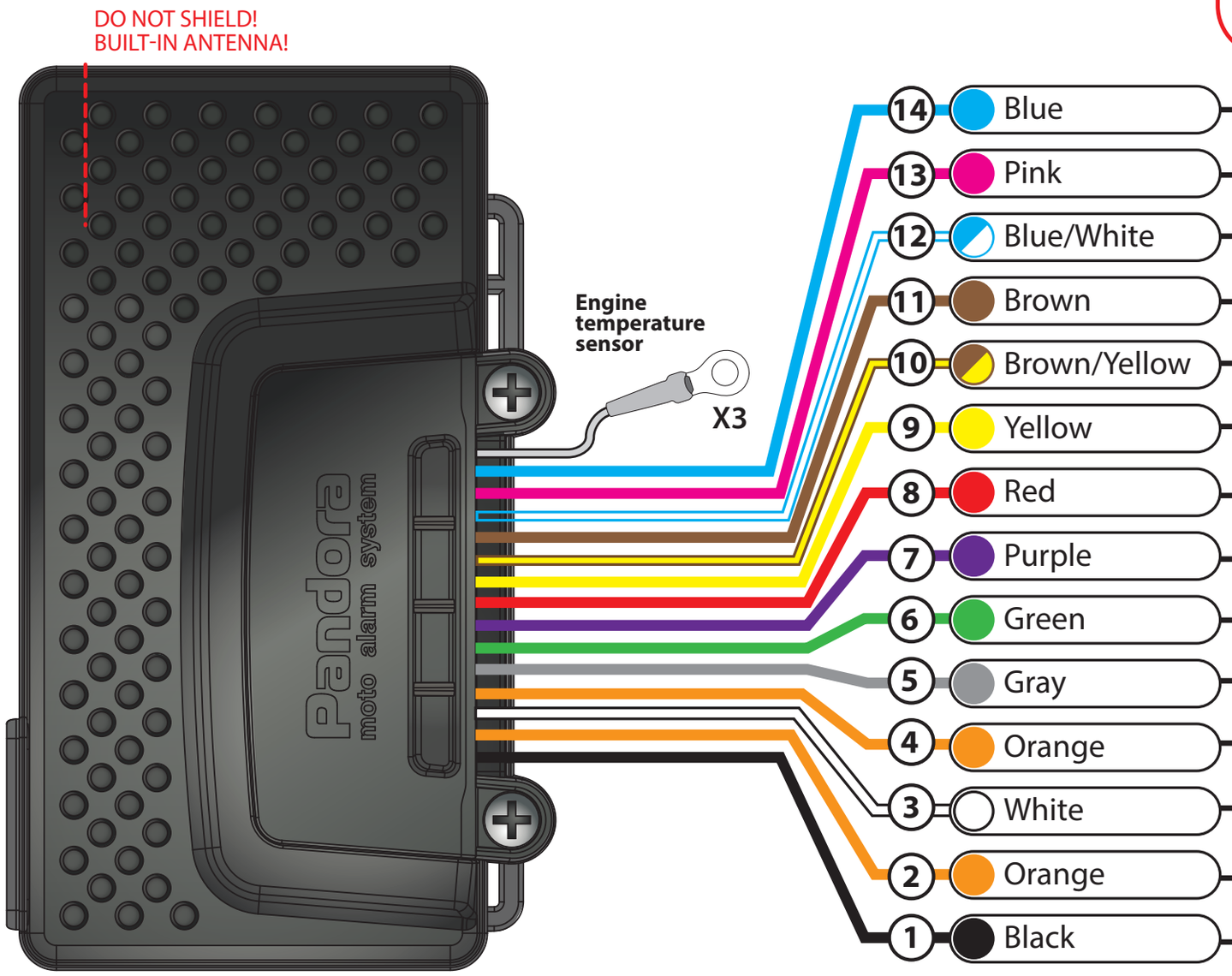
**Wire «5» (Gray) (INP4-/CH1-)** — Factory preset is «Clutch». It connects to appropriate wire that becomes grounded when clutch handle is pressing. This channel is universal and can operate as an input or output in accordance with selected logic.

**Wire «6» (Green) (CH4-)** — Factory preset is «N.O. blocking». The channel is used to control blocking relay with normally open logic (it becomes grounded when switching on the ignition and security system is not armed). A negative output of additional channel with maximum load current 200mA. This channel is universal and can operate in accordance with selected logic.

**Wire «7» (Purple) (CH5+)** — Factory setting is «Siren». It connects to siren control wire (+) (maximum load current is 2A). This output is multipurpose, it can operate in accordance with selected logic.

# Pandora DX model: 42

## Wiring diagram

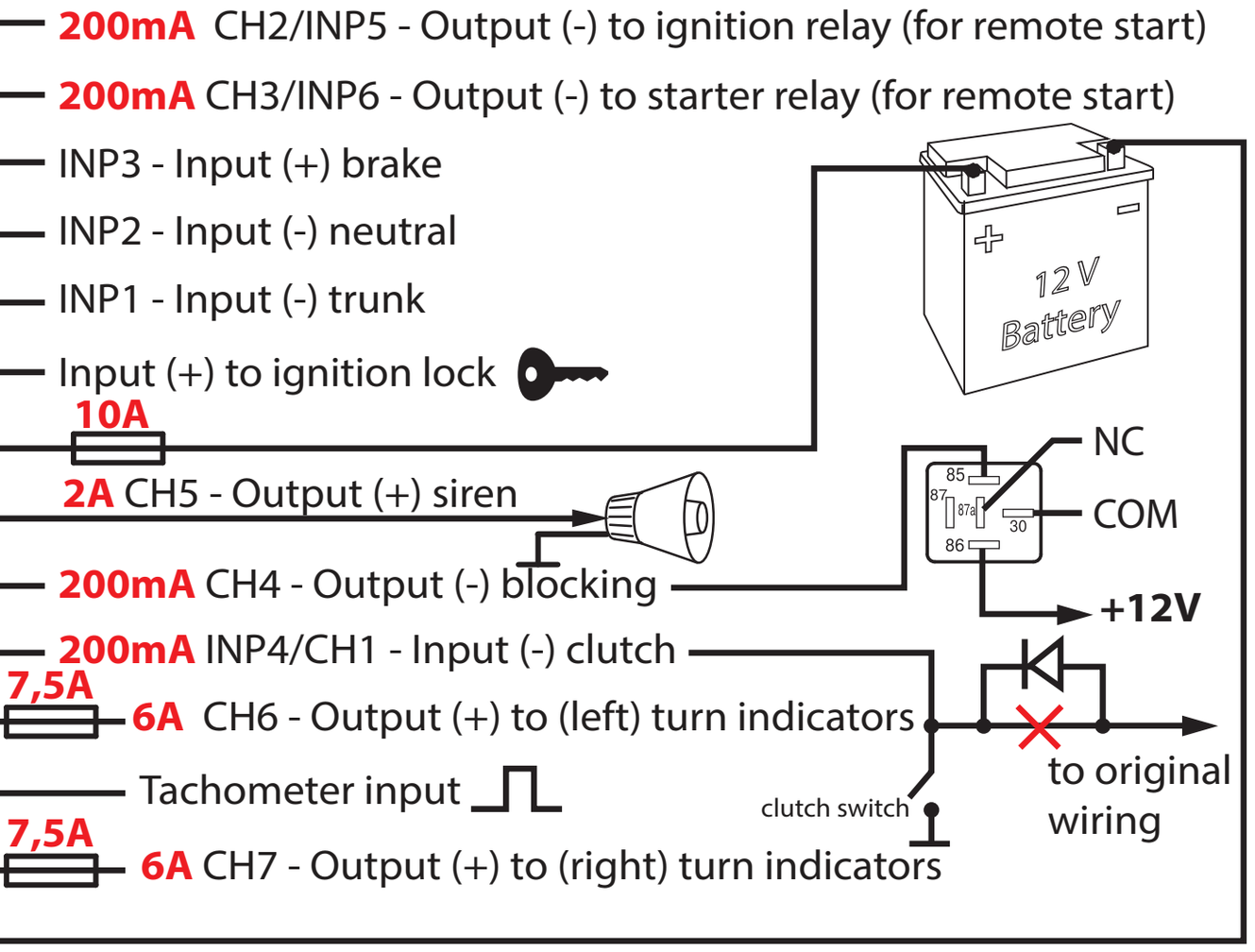


**WARNING!**

IT IS FORBIDEN TO SHIELD THE BUILT-IN ANTENNA! PLACE THE BASE UNIT AS FAR AS POSSIBLE FROM METAL SURFACES

IT IS FORBIDEN TO REMOVE ORIGINAL FUSES!

IT IS FORBIDEN TO INSTALL THE SYSTEM WITH DEMAGED CABLES!



**Wire «8» (Red) (INP+) («Power supply» +12V)** — It should be connected to reliable conductor with constant voltage of 12V.

**Wire «9» (Yellow) (INP+)** — Factory setting is «Ignition». This wire connects to ignition switch or to appropriate wire where +12V voltage appears when ignition is enabled and doesn't disappear until the moment ignition is disabled. This input is multipurpose, it can operate in accordance with selected logic.

**Wire «10» (Brown-yellow) (INP1-)** — Factory preset is «Trunk». It connects to appropriate wire that becomes grounded when a pannier opens or to a seat opening trigger. This input is multipurpose, it can operate in accordance with selected logic.

**Wire «11» (Brown) (INP2-)** — Factory preset is «Neutral». This wire should be connected to the wire which becomes grounded when the gear lever is in the «neutral» position. The 'Neutral' signal is one of the controlled zones for remote start procedure. This input is multipurpose, it can operate in accordance with selected logic.

**Wire «12» (Blue-white) (INP3+)** — Factory preset is «Brake». It connects to a brake trigger that receive +12V when a brake is pressed. The 'Brake' signal is one of the controlled zones for remote start procedure. This input is multipurpose, it can operate in accordance with selected logic.

**Wire «13» (Pink) (CH3-/INP6-)** — Factory preset is «Starter». This output is used to control starter relay. A negative output of additional channel with maximum load current 200mA. This channel is universal and can operate in accordance with selected logic.

**Wire «14» (Blue) (CH2-/INP5-)** — Factory preset is «Ignition». The output is used to control ignition relay. It is required for implementing remote start function, ignition maintenance and for in series (incut) connection of the ignition. A negative output of additional channel with maximum load current 200mA. This channel is universal and can operate in accordance with selected logic.

## AUTOMATIC ENGINE START

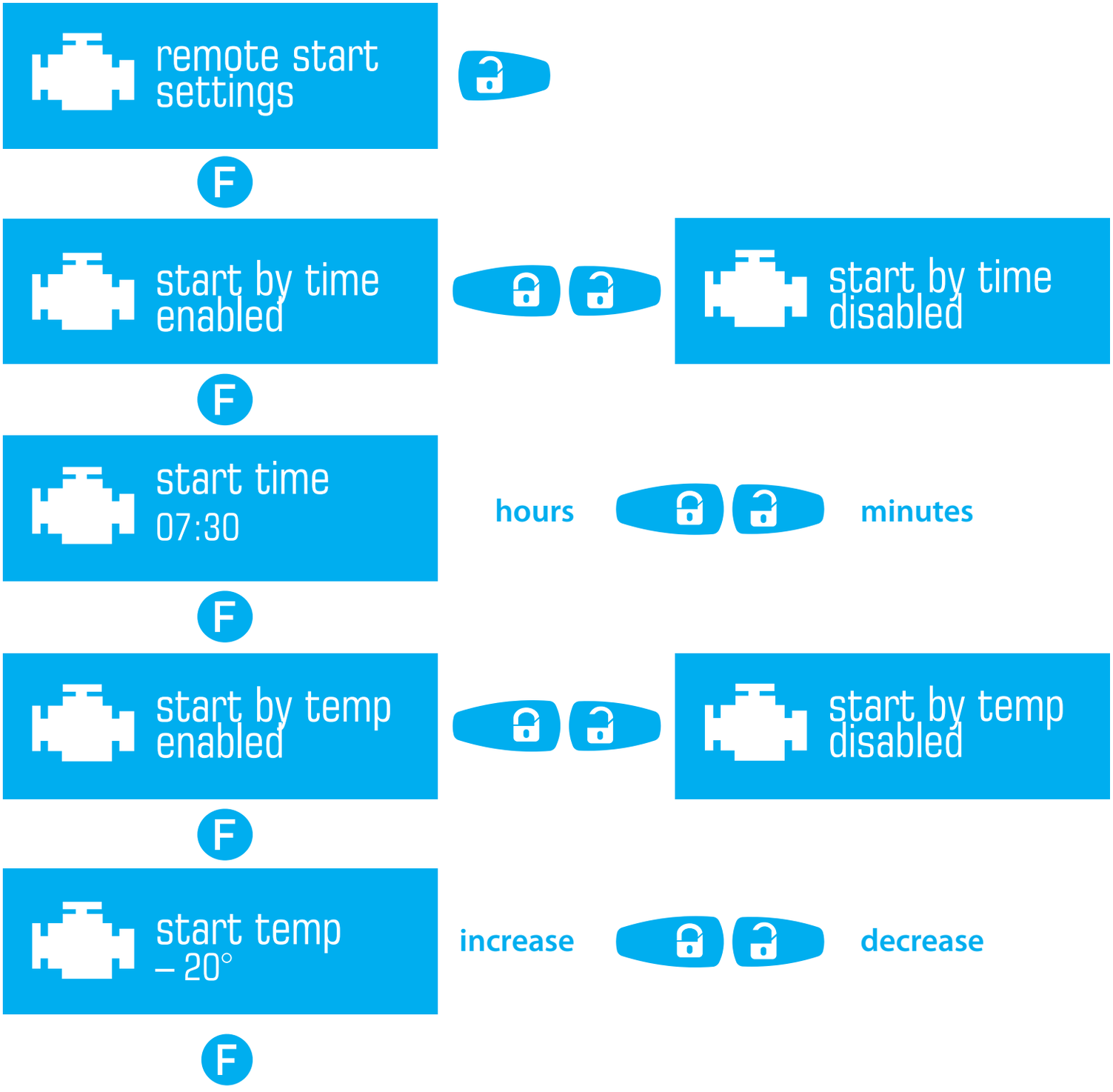
The system allows setting up modes of automatic engine start and stop. Synchronized real-time clock on the remote control and base unit and other autonomous system settings allow many engine start options without needing to have the remote control in command radio range. Automatic start and engine work conditions programming is done using LCD remote. Shortly press button to enter **«Remote start settings»** menu. Shortly press F button to switch between menu sublevels. Sublevel values are changed using and buttons.

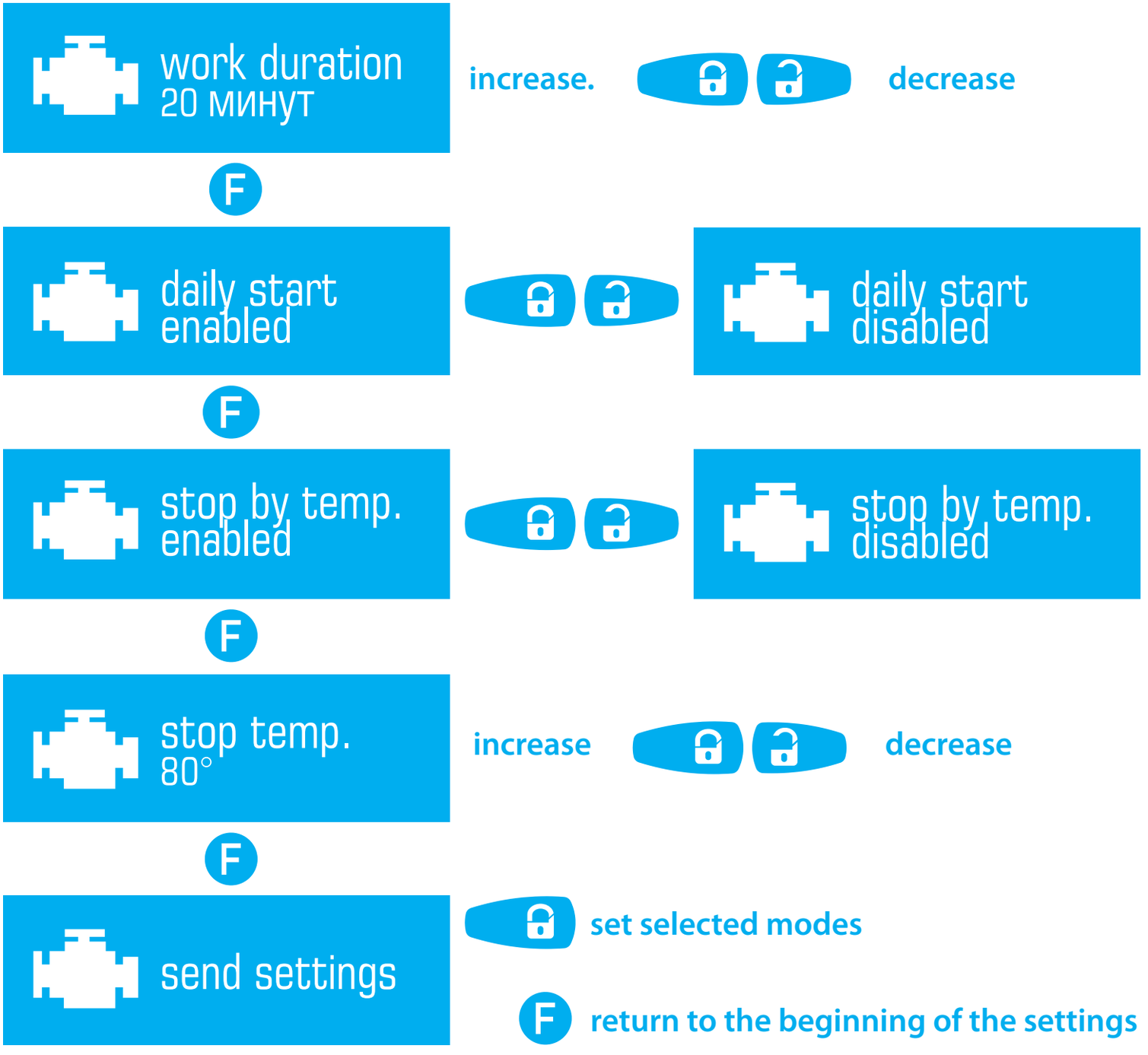
When changing settings are done, the values should be saved. To do this, proceed to «Send settings» sublevel by pressing of F button and press button to save new settings. Changes will be sent to the base unit, it will be confirmed with double sound signal of the remote control.

To exit menu, press and hold F button for 1 second.

Note: If you have not saved new settings, remote and automatic engine start settings will remain the same as before.

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


remote start settings
F
start by time enabled
start by time disabled
F
start time
07:30
hours
minutes
F
start by temp enabled
start by temp disabled
F
start temp
– 20°
increase
decrease
F


work duration
20 минут
increase.
decrease
F
daily start
enabled
daily start
disabled
F
stop by temp.
enabled
stop by temp.
disabled
F
stop temp.
80°
increase
decrease
F
send settings
set selected modes
F
return to the beginning of the settings

## SENSORS SETTINGS

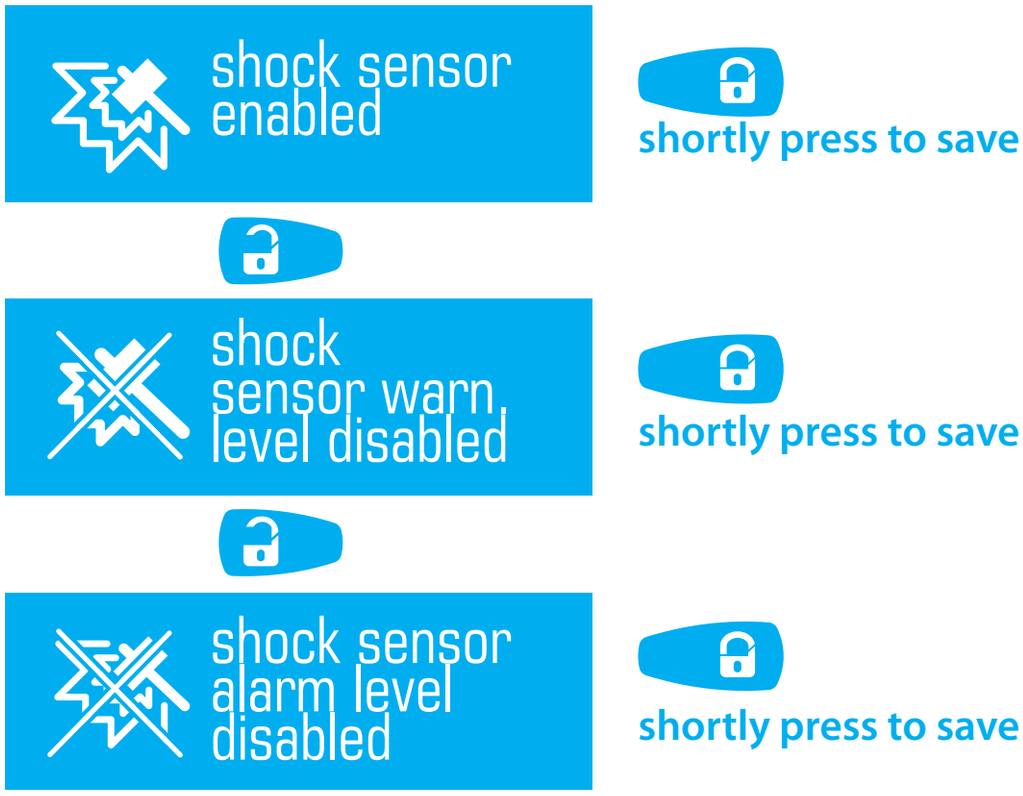
The system allows to adjust shock/motion/tilt sensors using the remote control. Shortly press button to enter **«Sensor settings»** menu. Shortly press F button to switch between menu sublevels of the shock/motion/tilt sensors. The sensitivity of a sensor are increased using and decreased using buttons. Maximum sensitivity value is 50 and minimum is 0.

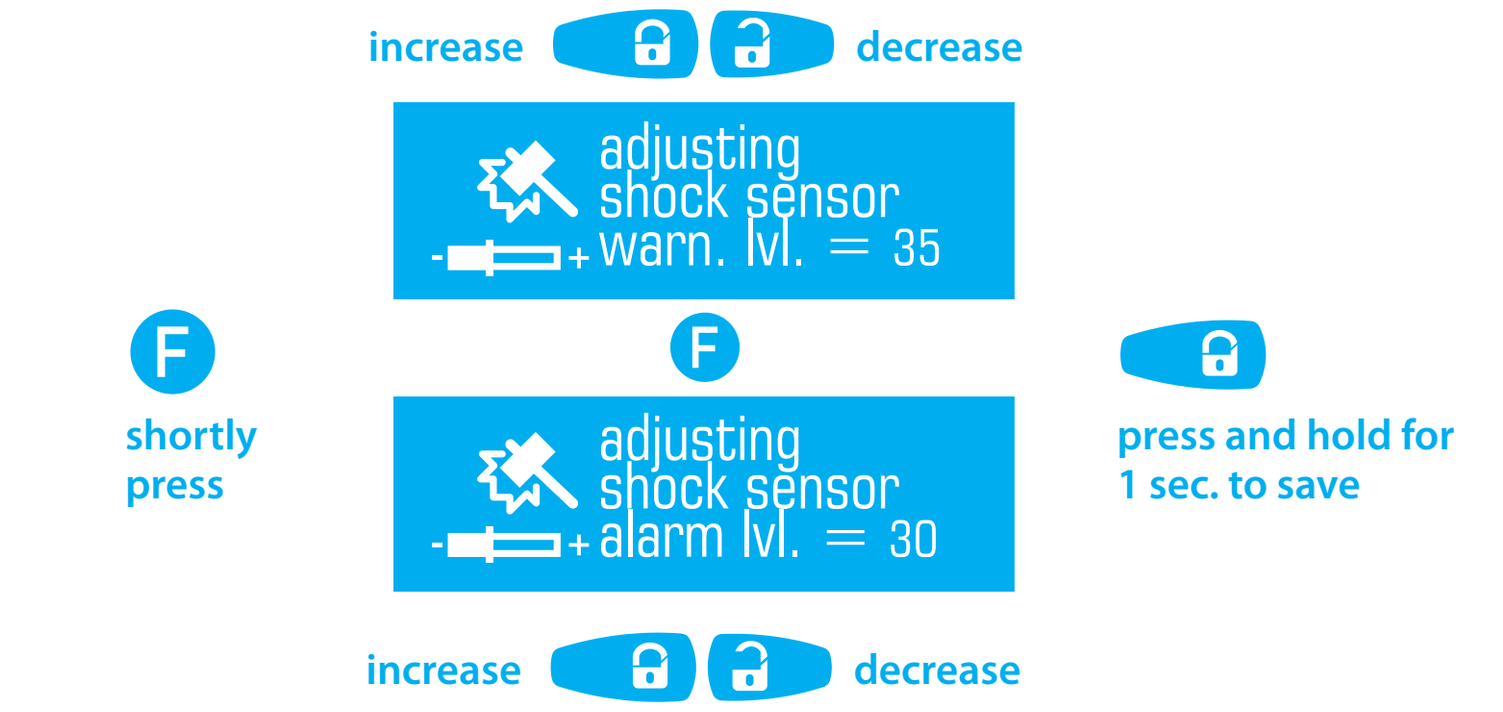
Press and hold button for 1 second to save new sensitivity values.

## SHOCK SENSOR SETTINGS

For prompt remote adjusting of shock sensitivity control, select **«Shock sensor»** submenu by short presses of F button. Short presses of button will cause switching between functions. To save new settings of shock sensitivity control, shortly press button .

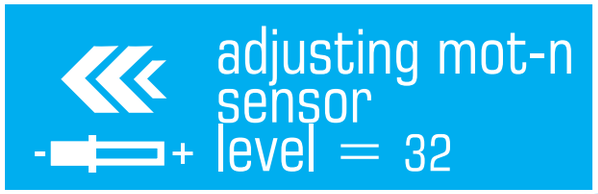
To enter **«Shock sensor warning/alarm level»** submenus, shortly press F button. Sublevel sensitivity can be set with short presses of and buttons. To save new settings of sensor, press and hold button for 1 second. To exit menu, press and hold F button for 1 second.


shock sensor enabled
shortly press to save
shock sensor warn. level disabled
shortly press to save
shock sensor alarm level disabled
shortly press to save


increase
decrease
adjusting shock sensor warn. lvl. = 35
F
shortly press
F
press and hold for 1 sec. to save
adjusting shock sensor alarm lvl. = 30
increase
decrease

## SETTING MOTION SENSOR

For prompt remote adjusting of motion sensor, select **«Motion sensor adjustment»** submenu by short presses of F button. Sublevel sensitivity can be set with short presses of and buttons. To save new settings of sensor, press and hold button for 1 second.



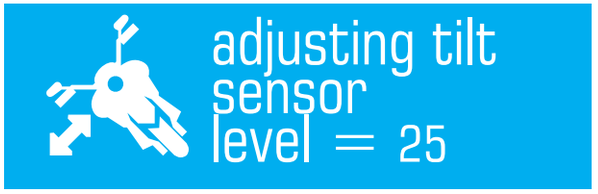

**increase** **decrease**

**press and hold for 1 sec. to save**

To exit menu, press and hold F button for 1 second

## TILT SENSOR SETTINGS

For prompt remote adjusting of motion sensor, select **«Motion sensor adjustment»** submenu by short presses of F button. Sublevel sensitivity can be set with short presses of and buttons. To save new settings of sensor, press and hold button for 1 second.




**increase** **decrease**

**press and hold for 1 sec. to save**

To exit menu, press and hold F button for 1 second.

## SIREN SIGNAL SETTINGS

To configure siren sounds, select **«Siren settings»** menu. Select one of the siren sound options using button.
To save new settings, shortly press button.


**sounds enabled**


**warning signals are disabled**


**warning and alarm signals are disabled**

**shortly press to save**

To exit menu, press and hold F button for 1 second.

## REMOTE CONTROL SOUND NOTIFICATIONS SETTINGS

This function disables all sound signals of the remote, this mode does not apply to alarm clock and main zones triggering. LED indication and vibration remain enabled.

To set one of two notification options, select Sounds menu. Short presses of and buttons will cause switching between menu settings. This mode does not require to save.


**sound signals are enabled**


**sound signals are disabled**

To exit menu, press and hold F button for 1 second.

## RADIO CHANNEL CONTROL SETTINGS

There are 3 options to notify when the owner is not in radio coverage zone. Select **«Connection lost»** menu, short presses of button will cause switching between menu settings. This mode does not require to save.

To exit menu, press and hold F button for 1 second.

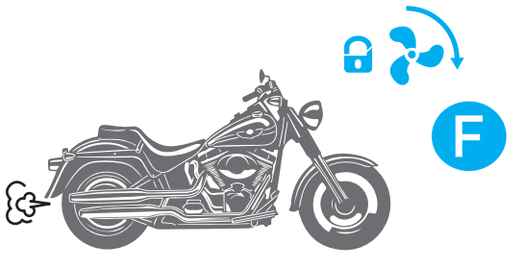

«Connection lost» ringtone notification

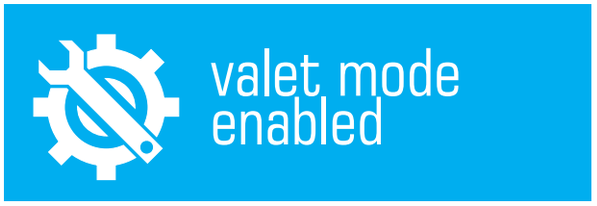

alarm signal


all notification are disabled

## MAINTENANCE/VALET MODE

It is recommended to put system into maintenance mode before handing your vehicle to the service. When this mode is switched on, security system stops interfering with built-in electronics and disables all functions to ease maintenance. Moreover, you will not have to leave the remote control in the car. Disabling maintenance mode is not possible without using the main remote control. This feature is implemented to prevent recording additional remotes during maintenance without the owner knowing. To activate maintenance mode when ignition is switched on, select **«Valet mode»** and shortly press button. The system will confirm enabled maintenance mode with green flash of **LED** indicator of the **VALET** button when ignition is switched on. To exit this mode, select Valet mode and shortly press button.




**maintenance mode is enabled**


**maintenance mode is disabled**

To exit menu, press and hold F button for 1 second.

## TIME SETTINGS

To set up time, select **«Time»** menu. With short presses of  button set hours, with short presses of  button set minutes.


**hours**  **minutes**

This mode does not require to save.
To exit menu, press and hold F button for 1 second.

## ALARM CLOCK SETTINGS

To set up the alarm clock, select **«Alarm clock»** menu. Enable alarm with short button press or disable it with short button press.


Setting of alarm is similar to clock setting.

# SYSTEM CONFIGURATION AND PROGRAMMING

## ENTERING THE PROGRAMMING MENU

To change the system settings using a computer or **VALET** button, the system should be in programming mode. Enter programming mode by entering «Service PIN-code» (factory preset is 1-1-1-1). PIN-code should be entered using external **VALET** button. The input is indicated by flashes of the external **LED** indicator. You can enter the code only if the base unit is powered form USB socket or from external power supply, the ignition is switched off , the system is disarmed and the system is not in maintenance mode.

**Entering the «Service PIN-code»:**

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

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

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

• Enter the fourth digit of the code using **VALET** button. Press the button a number of times, equal to the fourth digit. Pauses between presses should not exceed 1 second. Each pressing will be confirmed with orange **LED** indicator flash. The correct

input will be confirmed with the series of green and red flashes of the **LED** indicator and the system will enter programming mode. If the input was incorrect, it will be indicated with a long red flash of the **LED** indicator and the system will stay in previous state. New input can be attempted after 5 seconds.

**Status indicator lights during PIN-code entering:**

| «LED» indicator lights | Description |
|---|---|
| Short orange flash | Confirmation of VALET button pressing |
| Short red flash | Confirmation of entering a PIN-code digit |
| Red and green flashes | Entered PIN-code is correct |
| Long red flash | Entered PIN-code is incorrect |

**Exit programming mode:**

To exit programming mode turn on the ignition or press and hold **VALET** button for 10 second (the siren will emit a sound signal) or turn off power of the base unit.

The system will reboot programmatically (all changes will be saved) after exiting programming mode.

All ways to exit the programming menu are accompanied by sound signals of the siren and light signals of the **LED** indicator. The signals indicate the number of recorded control devices.

**Indication of recorded control devices:**

| «LED» indicator lights | Description |
|---|---|
| Short orange lights | The number of recorded remotes control |

## PREPARATION FOR SYSTEM PROGRAMMING FROM A COMPUTER

The system allows programming all settings and updating software of the base unit via micro-USB cable. If the base unit has not yet been installed in the vehicle, it will be powered via micro-USB cable while programming. To program using a computer, you need a standard USB cable, a computer with Windows XP/ Vista/7/8/10 and Pandora AlarmStudio application (you can download it from **pandorainfo.com**).

**In preparation to the programming these stages should be followed:**

- connect the system and PC via USB cable;
- start Pandora AlarmStudio;
- enter the programming settings mode by entering the service PIN-code.

## UPDATING FIRMWARE

It is recommended to update firmware of the base unit before installing and programming the system (actual version of the firmware you can download from **pandorainfo.com**). You can update firmware using AlarmStudio application after entering programming mode or using quick boot algorithm (PIN-code is not required). If the boot mode has been interrupted for some reason and the status indicator lights red, you need to load firmware using quick boot mode (without entering PIN-code).

**«Quick boot» mode:**

Open AlarmStudio, de-energize and disconnect the system; press and hold **VALET** button; release the button immediately after connecting the system and a computer via USB cable; the system will enter boot mode. You can use quick boot mode for updating firmware when the system is in any security state (armed or disarmed).

## PROGRAMMING USING VALET BUTTON

The system allows programming some settings using **VALET** button. To configure all the settings use a computer to program the system.

Enter programming mode by entering «Service PIN-code», Use **VALET** button to enter the desired level number (press the button a number of times, equal to level number; pauses between presses should not exceed 1 second). The system will confirm correct input with red and green **LED** flashes and proceed to the desired level. If the input was incorrect, the system will not confirm input and will await a new level input after a series of green and red flashes.

| | |
|---|---|
| Level 1 | Recording remote controls into the system memory |
| Level 2 | Changing the factory preset service PIN-code |
| Level 3 | Recording the idle speed to the system memory |
| Level 4 | Resetting to factory settings |

### Level 1 – Recordings remotes into the system memory

**Prepare to register all remote controls (you can register up to 4 remote controls), install batteries in the remote controls and turn on the main remote control if it was turned off.** Enter programming menu and then press **VALET** button once. **LED** indicator will light green and the system will enter the remote control recording mode. Remote controls are recorded one by one, in any order and without time limit. All previously recorded remote controls will be removed when you record new remote controls or overwrite old remote controls.

**Recording remote control:**

Press three buttons simultaneously (on the remote control) and hold them for 1 second (until a short beep from the main remote control), then release the buttons.

If the recording was successful, LCD remote will emit 2 short beeps and the base unit will emit 1 beep, after that you can move to recording the next remote.

**Saving changes:**

To finish the registration of the radio tags into the system, **VALET** button should be pressed once again, the series of red and green flashes of status **LED** indicator will confirm the saving.

## Level 2 – Changing the factory preset service PIN-code

**Prepare new value of the «Service PIN-code», it should consist of 4 digits (from 1 to 9). Write down or remember the new PIN-code.** Enter programming menu and then press **VALET** button twice. The system will enter «Changing Service PIN-code» mode and the status **LED** indicator will turn off.

**Changing «Service PIN-code»:**

- Enter the first digit of the code using **VALET** button. Press the button a number of times, equal to the first digit. Pauses between presses should not exceed 1 second, every pressing will confirm with orange **LED** indicator flash. Pause for more than 1 second and red **LED** indicator confirm the input of the first digit. Then you can enter the next digit.
- Enter the other digits of the new «Service PIN-code» in the same manner. The input of the fourth number will be confirmed by series of red and green **LED** indicator flashes. The system will wait for PIN-code re-entering
- Enter all four digits again;
- If you were able to correctly enter new «Service PIN-code» twice, the indicator will produce series of red and green flashes new PIN-code will be recorded, the system will return to the programming mode. In case of the incorrect code input the indicator will be lit red and the system will return to the programming mode and will wait for input of a new programming level.

## Level 3 – Recording idle speed

**To timely turn off the starter during automatic or remote engine start via analog tachometer input, it is necessary to record the engine idle speed.**

To record idle speed to the non-volatile system's memory, enter the programming menu. Press **VALET** button three times. Switch on the ignition and start the engine after entering this level of programming (the engine should be warmed-up, idle speed should match the stable idle speed of the warmed-up engine). The system will confirm the presence of the idle speed status with green flashes of the **LED** status indicator. Wait until the stable idle speed will be reached and save the changes

**Saving changes:**

Press **VALET** button once to save idle speed. Successful recording of the idle speed will be confirmed with one sound signal of the siren. The series of sound signals will indicate an unsuccessful recording. The system will exit programming menu and reboot after saving idle speed.

### Level 4 – Resetting to factory settings

**The procedure recovers the system's factory settings without deleting previously registered devices (tags, mobile device, relays, etc.), that was previously stored in the non-volatile memory.** To reset the factory settings enter the programming mode and press **VALET** button four times. Press and hold **VALET** button for more than 4 seconds until siren sound, then release the button. The system will confirm the resetting to the factory settings with a long red flash of the **LED** indicator. After that the system will return to the programming mode.