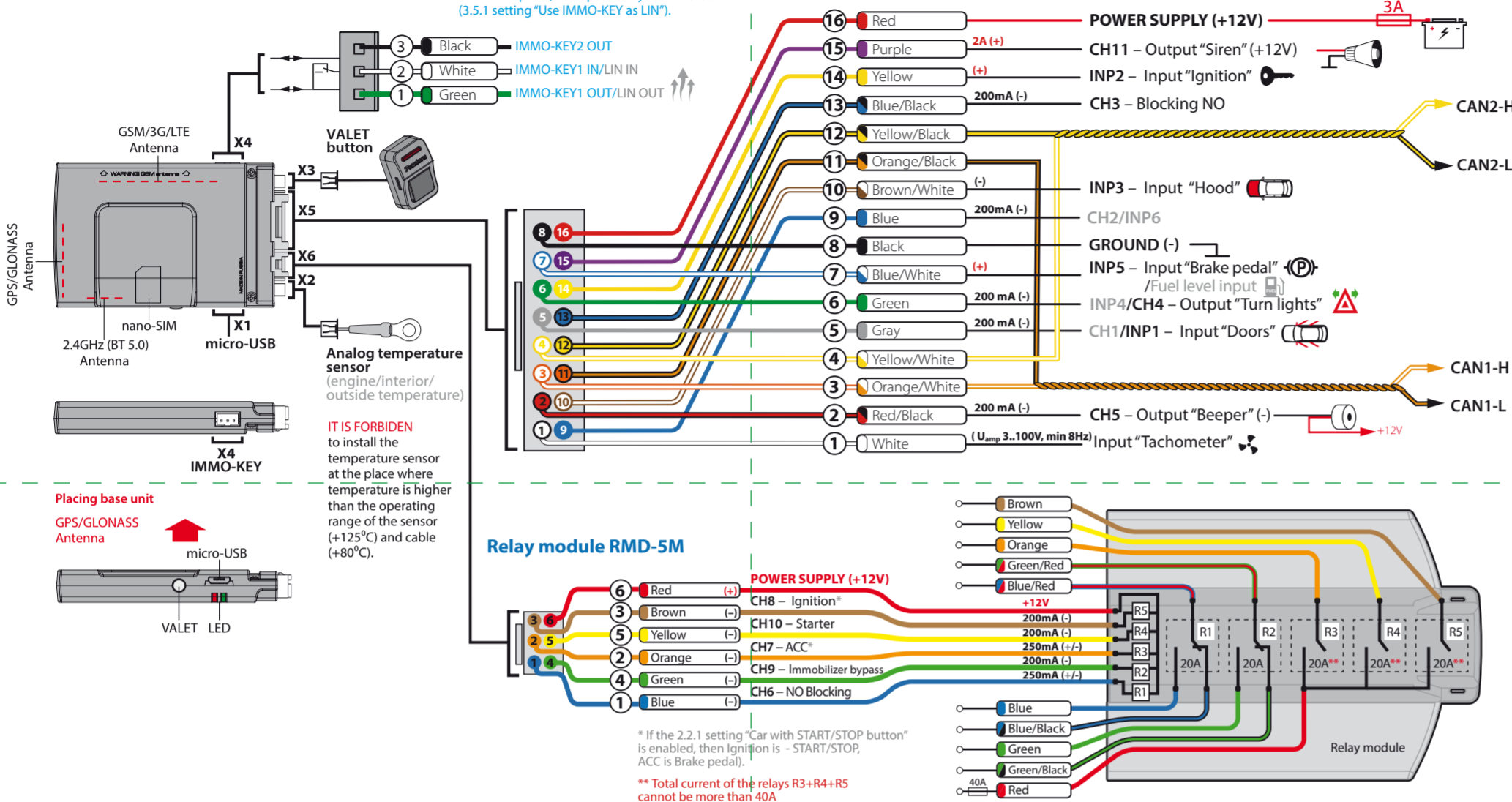




model: Pandora Smart Pro v3 WIRING DIAGRAM

XP4 connector (IMMO-KEY) is used for remote engine start only (see installation manuals on loader.pandorainfo.com or in the AlarmStudio) or to control digital engine pre-heaters Webast Thermo Top Evo, Eberspacher Hydronic 1/2/3 (3.5.1 setting "Use IMMO-KEY as LIN").



IT IS FORBIDDEN to install the temperature sensor at the place where temperature is higher than the operating range of the sensor (+125°C) and cable (+80°C).

* If the 2.2.1 setting "Car with START/STOP button" is enabled, then Ignition is - START/STOP, ACC is Brake pedal.
** Total current of the relays R3+R4+R5 cannot be more than 40A

WARNING! Before starting the installation of the system, choose a car model in the ALARM STUDIO (CAN-bus protocol).
WARNING! Do not shield the built-in antennas when installing the system and additional devices. Keep minimum distance of 20 mm between the modules and metal parts.
WARNING! Disconnect the power supply before installing/replacing a SIM-card.

WARNING! All power circuits of additional devices that are not powered through the base unit of the system should have their own fuses.
IT IS FORBIDDEN to install the system on a car with normal voltage other than 12V.
IT IS FORBIDDEN to bypass original fuses of a security system in the installation process.
IT IS FORBIDDEN to install the security system with damaged output cables.

PROGRAMMING TABLE

Function	VALET button		
	Level	Delete	Update
№0 - Entering a level			
№1 - Pairing a remote control D030/D043/Watch2	P1	H3*	
№2 - Changing the Service PIN-code	P2		
№3 - Recording the idle speed (rpm)	P3		
№4 - Reset to the factory settings	P4	H4	
№10.1.1 - Pairing a radio tag BT760/BT770	H1→P1→P1	H3	
№10.1.2 - Pairing a radio tag BT760/BT770	H1→P1→P2	H3	
№10.1.3 - Pairing a radio tag BT760/BT770	H1→P1→P3	H3	
№10.3.1 - Pairing a door sensor DMS-100 BT	H1→P3→P1	H3	H5
№10.3.2 - Pairing a door sensor DMS-100 BT	H1→P3→P2	H3	H5
№10.3.3 - Pairing a door sensor DMS-100 BT	H1→P3→P3	H3	H5
№10.3.4 - Pairing a door sensor DMS-100 BT	H1→P3→P4	H3	H5
№10.4.1 - Pairing a radio relay BTR-101	H1→P4→P1	H3	H5
№10.4.1 - Pairing a radio relay BTR-101	H1→P4→P2	H3	H5
№10.5 - Pairing a mobile phone	H1→P5		
№10.6 - Pairing an engine compartment module RHM-03BT/PS-331BT/PS-332BT	H1→P6	H3	H5
№10.7 - Pairing an additional device DI-04 or BT-01	H1→P7	H3	H5
№10.8 - Pairing a telemetry module Pandora Eye Pro	H1→P8	H3	H5
№10.9 - Pairing a GPS-receiver NAV-035 BT	H1→P9	H3	H5
№10.10 - Updating Bluetooth modem firmware	H1→P10		
№10.11 - Pairing an RF module RFM-470	H1→P11	H3	H5
№11 - Programming and configuring an "Immobilizer PIN-code"	H1•P1		
№13 - Emergency deactivating/activating code immobilizer function (pin-to-drive)	H1•P3		
№15 - Emergency deactivating/activating authorization devices (immobilizer, Anti-hi-jack)	H1•P5		
№17 - Programming bypass of an original immobilizer	H1•P7		
№50 - Pairing a mobile phone	H5		
№100 - Exit the programming menu	H10		

Control by the VALET button (see the "Level №0 Entering a level" section)
P - press X times | H - hold for X sec. | → - 1 sec. pause | • - without a pause

EXAMPLES OF PAIRING ADDITIONAL DEVICES

WARNING! All additional devices included in the system set are paired with the system. The maximum number of paired Bluetooth devices must not exceed 14.

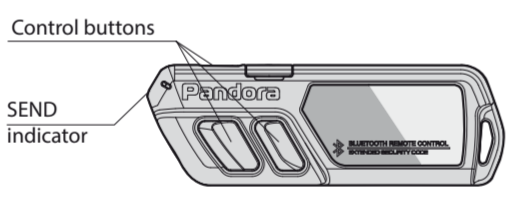
WARNING! Do not shield the built-in antennas when installing the additional devices. Keep minimum distance of 20 mm between the modules and metal parts

WARNING! All functions (pairing, removing, updating additional devices) are available in Pandora Specialist app (minimum requirements: Android 4.4, Bluetooth 4.0)

***WARNING!** See the "Level №10 - Manage Bluetooth devices" section

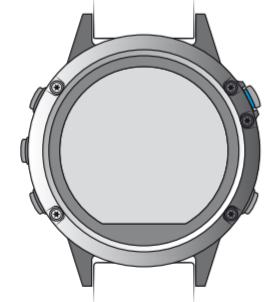
№1 Pairing a remote control D030

- Enter the programming level №1.
- If the LED is green, the system is ready for pairing*.
- Press and hold 3 buttons of a remote control (arm/disarm/F) simultaneously for 1 second (until a short beep), then release the buttons.
- If pairing was successful, the LED will be red, the siren/beeper will sound a beep. The system will enter the programming level №0.



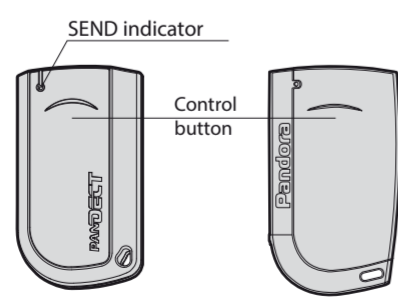
№1 Pairing a Watch2

- Enter the programming level №1.
- If the LED is green, the system is ready for pairing*.
- Go to the MENU -> Settings -> Bluetooth -> Car -> Pair in the Watch2 menu and wait for pairing.
- If pairing was successful, the LED will be red, the siren/beeper will sound a beep. The system will enter the programming level №0.



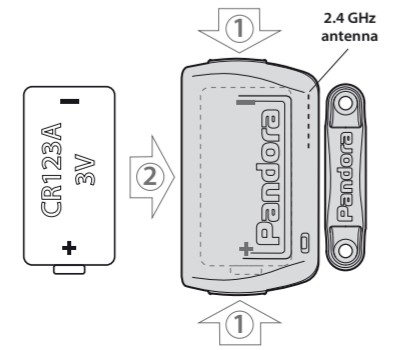
№10.1.1 - 3 Pairing radio tags BT760/BT770

- Enter the programming level №10.1.1...3.
- If the LED is green, the system is ready for pairing*.
- Press the control button on a tag and hold it for 6 seconds (6 flashes of the tag status indicator), release the button after the sixth flash.
- If pairing was successful, the LED will light red and the siren/beeper will sound a beep. The system will enter the programming level №0.

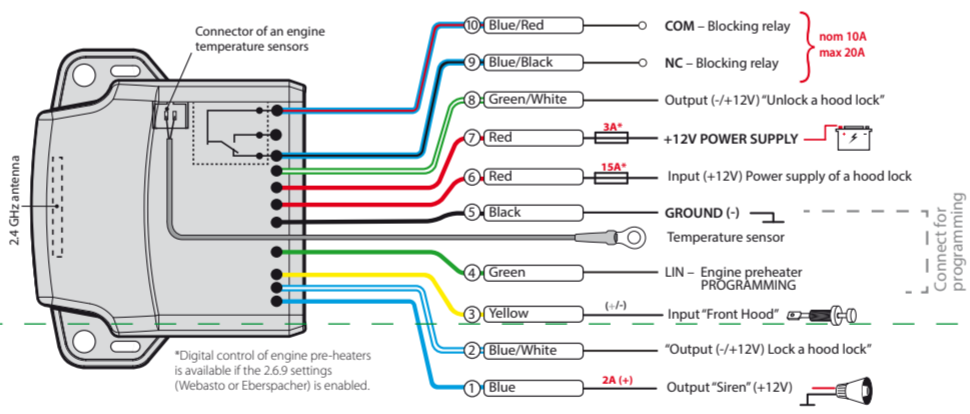


№10.3 Pairing door sensor DMS-100 BT

- Enter the programming level №10.3.1...4.
- If the LED is green, the system is ready for pairing*.
- Open the plastic case (1) of the sensor carefully and insert a battery (2) into the sensor.
- If pairing was successful, the LED will light red and the siren/beeper will sound a beep. The system will enter the programming level №0.

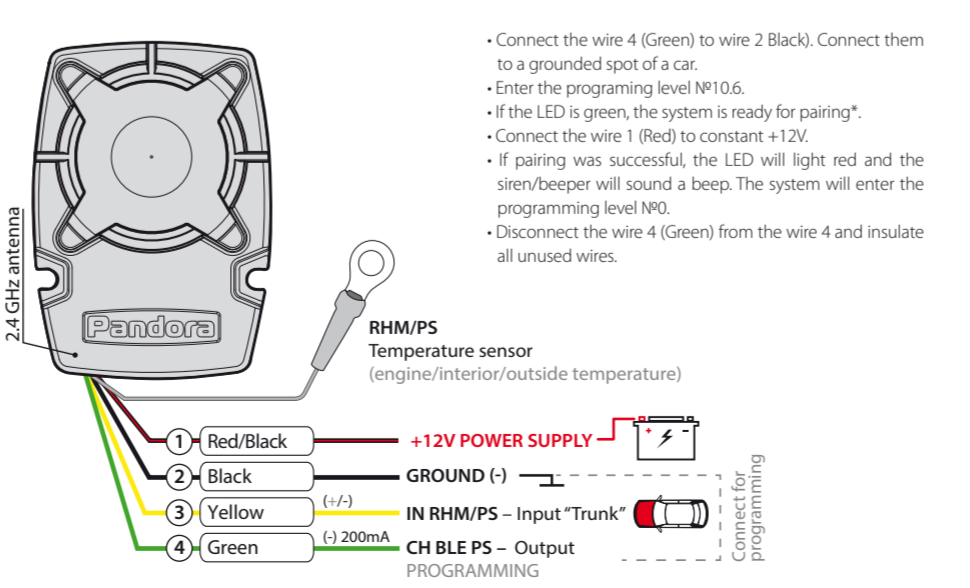


№10.6 An example of pairing a radio module RHM-03 BT



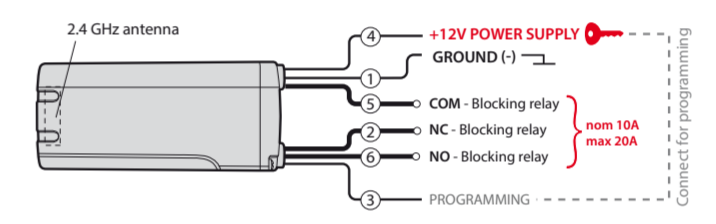
- Connect the wire 4 (Green) to wire 5 (Black). Connect them to ground (-).
- Enter the programming level №10.6 - "Pairing an engine compartment module". The LED will light green or red*
- Connect the wire 7 (Red) to +12V.
- If pairing was successful, the LED will light red and a siren/beeper of the base unit will sound a beep. The system will automatically enter the programming level №0.
- Disconnect the wire 4 (Green) from the wire 5 and insulate all unused wires.

№10.6 Pairing a siren PS-331BT



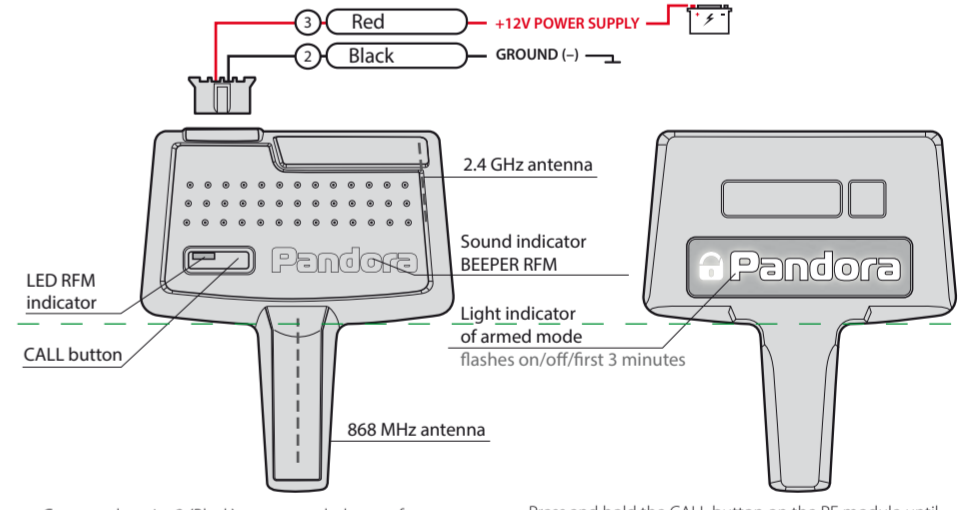
- Connect the wire 4 (Green) to wire 2 (Black). Connect them to a grounded spot of a car.
- Enter the programming level №10.6.
- If the LED is green, the system is ready for pairing*.
- Connect the wire 1 (Red) to constant +12V.
- If pairing was successful, the LED will light red and the siren/beeper will sound a beep. The system will enter the programming level №0.
- Disconnect the wire 4 (Green) from the wire 2 and insulate all unused wires.

№10.4 Pairing a radio relay



- Connect the wire 1 (GROUND) to a grounded spot of a car.
- Enter the programming level №10.4.1 or №10.4.2.
- If the LED is green, the system is ready for pairing*.
- Connect the wire 3 (PROGRAMMING) to wire 4 (+12V POWER SUPPLY). Connect them to +12V.
- If pairing was successful, the LED will light red and the siren/beeper will sound a beep. The system will enter the programming level №0.
- Disconnect the wire 3 (PROGRAMMING) from the wire 4 and insulate all unused wires. Connect the wire 4 to the ignition (+12V when ignition is on).

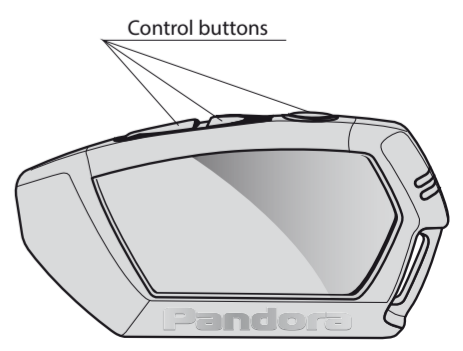
№10.11 Pairing an RF module RFM-470



- Connect the wire 2 (Black) to a grounded spot of a car. Connect the wire 3 (Red) to constant +12V.
- Enter the programming level №10.11.
- If the LED is green, the system is ready for pairing*.
- Press and hold the CALL button on the RF module until the sixth beep of the BEEPER-RFM (sixth flash of the BEEPER-LED).
- If pairing was successful, the LED will light red and the siren/beeper will sound a beep. The system will enter the programming level №0

Pairing remote control D-043 with the RF module RFM-470

- The last remote control can be directly paired with the system by Bluetooth. To do this: Enable the "BLE-CHANNEL" function in the remote control (SETTINGS -> SETTINGS -> BLE-CHANNEL -> Enable); Remove the previously paired device at the level №1 "Pairing a control device D/030/D043/Watch2" of the system
- Enter the programming menu of the system (level №0).
- Briefly press the CALL button on the RF module.
- If the LED is green and the Siren/beeper sounded a beep, the system is ready for pairing.
- Press and hold 3 buttons of a remote control (arm/disarm/F) simultaneously for 1 second (until a short beep), then release the buttons.
- If pairing was successful, the siren/beeper will sound a beep.
- Pair the next remote controls (up to 4) sequentially.
- Press the CALL or VALET button on the RF module to finish pairing.
- The system will confirm finishing with the series of red and green flashes of the LED. The system will enter the programming level №1
- The system will automatically search a Bluetooth remote control within 1 minute. If necessary, skip the step by briefly pressing the VALET button. The system will enter the programming level №0.



PROGRAMMING THE SYSTEM

System settings and parameters can be configured using the Pandora Alarm Studio application. Some functions can be configured only by the programming menu of the system. It is required to put the system to programming mode to get access to the settings

Entering/Exiting programming mode

You can enter the programming mode only if the base unit is powered from a USB cable or the main power supply is connected, the ignition is off, the system is disarmed and service mode is off. To enter programming mode, enter the “Service PIN-code” (default value is 1-1-1-1) using an external VALET button or the VALET button located on the base unit.

NOTE! See the detailed description of PIN-code entering procedure in the “CONTROL OVER THE SYSTEM IN CASE OF EMERGENCY” section of the user manual.

If you don't have the ‘Service PIN-code’, you can enter programming mode using the ‘Secret PIN-code’ written on the owner's card.

NOTE! The description of pairing is printed on the side of this manual where the wiring diagram is shown.

Level №2 – Changing the Service PIN-code

NOTE! Prepare a 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 the programming level №2.
• Enter the first digit of the code using the VALET button. Press the button the number of times equals to the first digit. Pauses between presses should not exceed 1 second, every pressing will confirm with an orange LED indicator flash. Pause for more than 1 second and a red LED indicator flash with a sound from the Beeper confirms the input of the first digit. Then you can enter the next digit;
• Enter the other numbers in the same manner. The input of the fourth number will be confirmed by the series of red and green LED indicator flashes and the series of sound signals of the Beeper. The system will wait for PIN-code re-entering;
• Enter all four digits again.
- If you correctly enter the “Service

Each pressing is confirmed with an orange flash of the LED. A pause for more than 1 second and the red LED confirms the input for the current memory cell, you can start entering the next memory cell. After entering the code, press the VALET button to enter the next sublevel.

№11.2 - Confirmation of the PIN-code input

Confirm the entered PIN-code on this sublevel. Repeat the procedure described above and press the VALET button. The system will compare two inputs after that.

- If you correctly enter the code twice, the indicator will produce the series of red and green flashes and the Beeper will produce the series of sounds, the new code will be recorded, the system will return to the programming level №0.

- In case of the incorrect code input the indicator will be lit red and the Beeper will sound a long beep, the system will not change the code and will return to the programming level №0.

The system stops to execute commands when it is in programming mode. Therefore, exit programming mode after changing settings and parameters of the system. To exit programming mode, use one of the following methods:
• Press and hold the VALET button for more than 10 seconds;
• Turn on and then turn off the ignition when a USB cable is disconnected and the main power supply of the system is connected;
• Disconnect the power supply (main and USB power supply).

The system will reboot programmatically (all changes will be saved) after exiting programming mode. All ways to exit programming mode are accompanied by sound signals of the siren and light signals of the LED indicator. The light signals indicate the number of paired control devices.

NOTE! See the “Checking the number of recorded remote controls/radio tags/mobile device” section of the user manual for detailed description

PIN-code” twice, the indicator will produce the series of red and green flashes and the Beeper will produce the series of sounds, the new PIN-code will be recorded, the system will return to the programming level №0.
- In case of the incorrect code input the indicator will be lit red and the Beeper will sound a long beep, the system will not change the code and will return to the programming level №0.

Level №3 – Recording the idle speed (rpm)

NOTE! To timely turn off the starter during automatic or remote engine start and the correct operation of the «Smart Turbo Timer», it is necessary to record the engine idle speed via digital or analog tachometer input.

Enter the programming level №3.
• Turn on the ignition and start the engine. Wait until the stable idle speed will be reached (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 LED indicator.
• Press the VALET button once to save idle speed. Successful recording of the idle speed will be confirmed with the

Level №13/№15 – Emergency deactivating/activating authorization devices/functions

NOTE! See the detailed description in the “CONTROL OVER THE SYSTEM IN CASE OF EMERGENCY” section of the user manual.

To deactivate/activate “Code immobilizer function” (pin-to-drive), enter the programming level №13. To deactivate/activate authorization devices (mobile phone, radio tags, Bluetooth remote control), enter the programming level №15.

• Deactivating the function

The LED indicator will light green after entering the programming level. The system will wait (10 seconds) for entering the ‘Secret PIN-code’. If the PIN-code is not entered within 10 seconds the system will return to the programming menu. Enter the ‘Secret PIN-code’ that is written on the owner's card. The system will confirm deactivating the function with a long red LED flash, two sound signals of the siren and sound signals of the beeper.

• Activating the function

The LED indicator will light red and the

PANDORA ALARM STUDIO

The Pandora Alarm Studio application allows you to change the main settings and parameters of the system, update firmware, download installation manuals, connect to the server to make CLONE procedure.

Working with the Pandora Alarm Studio

A current version of the Pandora AlarmStudio can be downloaded from pandorainfo.com. The Pandora AlarmStudio is provided only to authorized installers of Pandora systems.

Download the Pandora AlarmStudio to a PC with Windows XP/Vista/7/8/10.
• Run the Pandora AlarmStudio;
• Connect the system to the PC via a USB cable;
• Put the system to the programming mode;
• The Pandora AlarmStudio will automatically connect to the system and you will be able to configure settings and update firmware. It is recommended to update firmware of the base unit before installing and programming the system:

series of red and green flashes of the LED indicator and the series of sound signals of the Beeper. The system will exit programming menu and reboot after saving the idle speed.

Level №4 – Reset to the factory settings

NOTE! The procedure recovers the factory settings of the system without deleting previously registered devices (tags, mobile device, relays, etc.) that is stored in the non-volatile memory.

Enter the programming level №4.
• Press and hold the VALET button for more than 4 seconds. Release the button after a sound of the Siren/Beeper. The system will confirm the resetting to the factory settings with a long red flash of the LED indicator. After that, the system will reset the settings to default and return to the programming level №0.

Level №10 – Manage Bluetooth devices Updating Bluetooth modem firmware

ATTENTION! All functions of this level are available in the Pandora Specialist app.

beeper will emit a long sound signal after entering the programming level. The system will wait for an action. Press the VALET button once to activate the function. The system will confirm activating with a green LED flash and one short sound signal of the siren and beeper.

Level №17 – Programming bypass of an original immobilizer
Bypass learning procedure is performed on this level.

NOTE! See the detailed instruction in the installation manuals for cars.

Level №50 – Pairing a mobile phone

NOTE! See the detailed description in the “MOBILE APPLICATIONS” section of the user manual.

The system supports only one mobile device. If a mobile device has been already paired, it will be deleted when you enter this level. When you overwrite the same device in the system memory, you should delete the Bluetooth connection on your mobile device, delete the mobile device from the system memory and then pair the

• Open the “Update Software” window and select one of the update options (“Load from file” – upload firmware file from a PC folder, “Firmware archive” – upload firmware from a server to “firmwares” folder);
• Select firmware and press the “Update” button to upload firmware to the base unit. It is required to exit programming mode after settings were changed or firmware was updated.

NOTE! If 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 the PIN-code). Open AlarmStudio, de-energize and disconnect the system, press and hold VALET button located on the base unit, release the button immediately after connecting the system and a computer via USB cable, the system will enter boot mode.

PROGRAMMING TABLE

NOTE! The programming table is printed on the side of this manual where the wiring diagram is shown

This level is used to pair/remove/update additional devices and to update Bluetooth modem of the system. Each device is paired at a sublevel. To pair devices of the same type, a sublevel is divided into cells. To enter a sublevel or a cell of sublevel make a pause for more than 1 second (→), then press (P) the VALET button the number of times equals to the desired sublevel or cell number: “Level №10 → (1sec) “Sublevel 1...10” → (1sec) “Cell of sublevel 1...4”.

• Pairing/Deleting an additional device

Each sublevel or cell displays its current state by a color of the LED: green light means the system is ready for pairing, red light means a device has been already paired and it is required to delete it for pairing a new device. To delete a device, press and hold the VALET button for 3 seconds (3 orange flashes of the LED). The system will be in pairing mode for 1 minute. After a minute or immediately after pairing a device, the system will automatically enter the programming level №0.

NOTE! Examples of pairing Bluetooth devices are printed on the side of this

mobile device with the system again. Put the system in programming mode by entering the “Service PIN-code” (default value is 1-1-1-1). The system will enter the programming level №0. Press and hold the VALET button for 5 seconds (until the fifth sound signal of the beeper or the fifth orange flash of the LED) to enter the programming level №50.

The LED indicator will light green after entering the programming level №50 and the system will enter the mobile device pairing mode. Turn on Bluetooth on your mobile phone and open the mobile application. Go to the search device screen and select the found system. The system will confirm the pairing with the series of green and red flashes of the LED and a sound signal of the siren. The system will return to the programming level №0.

ATTENTION! If there is no automatic pairing, enable the “PIN request for phone pairing” item in the “Radio tag and mobile device functions” settings in the Pandora Alarm Studio application and make the pairing procedure again. A mobile device will request a PIN-code (Factory pre-set is

Level №0 Entering a level

After entering programming mode, the system waits for level input – “Level 0 Entering a level”. Enter a desired level using the VALET button (see the programming table) to change settings or parameters.
• To enter a level (“Level №1...№17”), press (P) the VALET button the number of times equals to the desired level number (1...17), pauses between presses should not exceed 1 second. The system will confirm correct input with red LED flashes and short sound signals of the siren/beeper and proceed to the desired level.
To enter a sublevel or a cell of sublevel make a pause for more than 1 second →, then press (P) the VALET button the number of times equals to the desired sublevel or cell number: “Level №10 → (1sec) “Sublevel 1...10” → (1sec) “Cell of sublevel 1...4”.
• For quick access to the higher level, press and hold (H) the VALET button. The siren will sounds tone beeps (up to 10). These sounds means the sequence number of a two-digit level number (the first signal – level №10, the fifth signal – level №50, the tenth signal – level №100). Release the VALET button immediately after the desired

manual where the wiring diagram is shown.

• Updating firmware of the built-in Bluetooth modem/Updating firmware of an additional device

Enter an appropriate sublevel or a cell of the PROGRAMMING TABLE and use the Pandora BT application to update firmware.
To update firmware of the built-in Bluetooth modem, enter the “Level №10” → “Sublevel 10”. To update firmware of an additional device, enter the “Level №10” → “Sublevel” or “Cell” corresponding to an additional device. The LED will light red after entering. Press and hold (H) the VALET button for 6 seconds. Open the Pandora Specialist, go to “Search device” screen and select the device and then select one of the update option: INTERNET – It allows you to upload firmware from a server. FILE MANAGER – This function is available only for Android devices. It allows you to upload firmware from phone storage.

Level №11 – Programming and configuring an “Immobilizer PIN-code”

The level is divided into 3 sublevels (Sublevel 11.0 – Selecting buttons;

0-0-1-1-1 where the 4 last digits 1-1-1-1 are the “Service PIN-code”, it will be different if you have changed the “Service PIN-code”).

Level №100 – Exit the programming menu

NOTE! See the detailed description in the “MOBILE APPLICATIONS” section of the user manual.

To exit the programming menu, press and hold the VALET button for more than 10 seconds until the tenth sound signal of the Siren/Beeper or until a red flash of the LED. The system will exit programming mode and will reboot programmatically.

number of signal. To enter an intermediate level (Level №11...№17), press the VALET button the number of times equals to the second digit (1...7) of the desired level number immediately (+) after releasing the button. The system will confirm correct input with red LED flashes and short sound signals of the siren/beeper and proceed to the desired level.

Level №1 – Pairing a remote control/Watch2

Prepare to pair a Bluetooth device (remote control or Watch2) in accordance with its manual. The system will be in the remote controls pairing mode for 1 minute. After a minute or immediately after pairing a Bluetooth remote control, the system will automatically enter the programming level №0. 868 MHz remote controls are paired one by one, all 868 MHz remote controls that was previously paired will be removed. A Bluetooth remote control must be paired last or separately. To remove a Bluetooth remote control, press and hold the VALET button for 3 seconds on the programming level №1.

sublevel 11.1 entering the PIN-code; sublevel 11.2 – confirmation of the PIN-code input). Use the VALET button to navigate between sublevels and save the code.

Enter the programming level № 11 **Sublevel 11.0 – Selecting buttons:** The system will automatically enter the sublevel 11.0 (Selecting buttons) after entering the level 11. The system will wait for buttons pressing. Each pressing will be confirmed with an orange flash of the LED. You can turn on the ignition (the system will stay in programming mode). Some buttons can be detected via digital bus only when ignition is on. The system can determine buttons via analog “Code immobilizer 1” and “Code immobilizer 2” inputs or via digital protocol of a car. After selecting active buttons, press the VALET button to enter the sublevel 11.1 (Entering the PIN-code).

Sublevel 11.1 – Entering the PIN-code:

Program the immobilizer deactivation PIN-code using the selected button or buttons on this sublevel. The code can consist of one or more memory cells, each memory cell can store a sequence of pressing each of the five selected immobilizer buttons. The code is entered by pressing the selected buttons for at least 1 second.

FUEL LEVEL CALIBRATION	
WARNING! This procedure is used only in case of analog connection. At least 2 values are required for correct display of fuel level.	
Make a connection in of the «Fuel level input» to an original fuel sensor Enable the “Use INP (+) to control fuel level” setting in the Alarm Studio. Set the value: • Start the engine • Call the system number and wait for the answer • Dial 424* command (Fuel level calibration). The system will confirm the input of the command. • Dial a DTMF command (use values from the table below, it depends on the current fuel level). The system will confirm the input of the command (xxx* - command executed). • End the call.	
FUEL LEVEL CALIBRATION TABLE (424*)	
DTMF command	Fuel level
0*	0%
10*	10%
20*	20%
25*	25%
30*	30%
40*	40%
50*	50%
60*	60%
70*	70%
80*	80%
90*	90%
100*	100%
88	* Reset all calibration values