

Pandora

WIRING DIAGRAM

PROFESSIONAL V3

Antenna GSM / LTE (4G/3G/2G)
GNSS (GPS/GLONASS)

Antenna 2.4 GHz
Bluetooth 5.0

Antenna 868 MHz
LoRa HS

WARNING! Do not shield the built-in antenna (Keep minimum distance of 20mm from metal parts).

WARNING! The main unit is designed to operate at temperatures from -40°C to +85°C, the degree of protections is IP40.

WARNING! Pairing/deleting/updating of the additional devices is available in the mobile application Pandora Specialist for Android smartphones and tablets.

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

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

***NOTE!** The green light of LED - memory cell is empty, system is ready for pairing. The red light of LED - memory cell is busy, delete the paired device by pressing and holding the VALET button for 3 sec. or until 4 orange flashes of the system's LED and 3 sound signals of the siren/beeper.

WARNING! Before starting the installation of the system: check the connection points on loader.pandorainfo.com, Pandora Specialist, Pandora Alarm Studio, update system firmware, choose a car model if connecting to CAN-bus.

WARNING! The base unit and system elements must be installed in places with appropriate temperature, moisture and dust protection characteristics (IP40 - interior, IP54 and higher - interior, engine compartment).

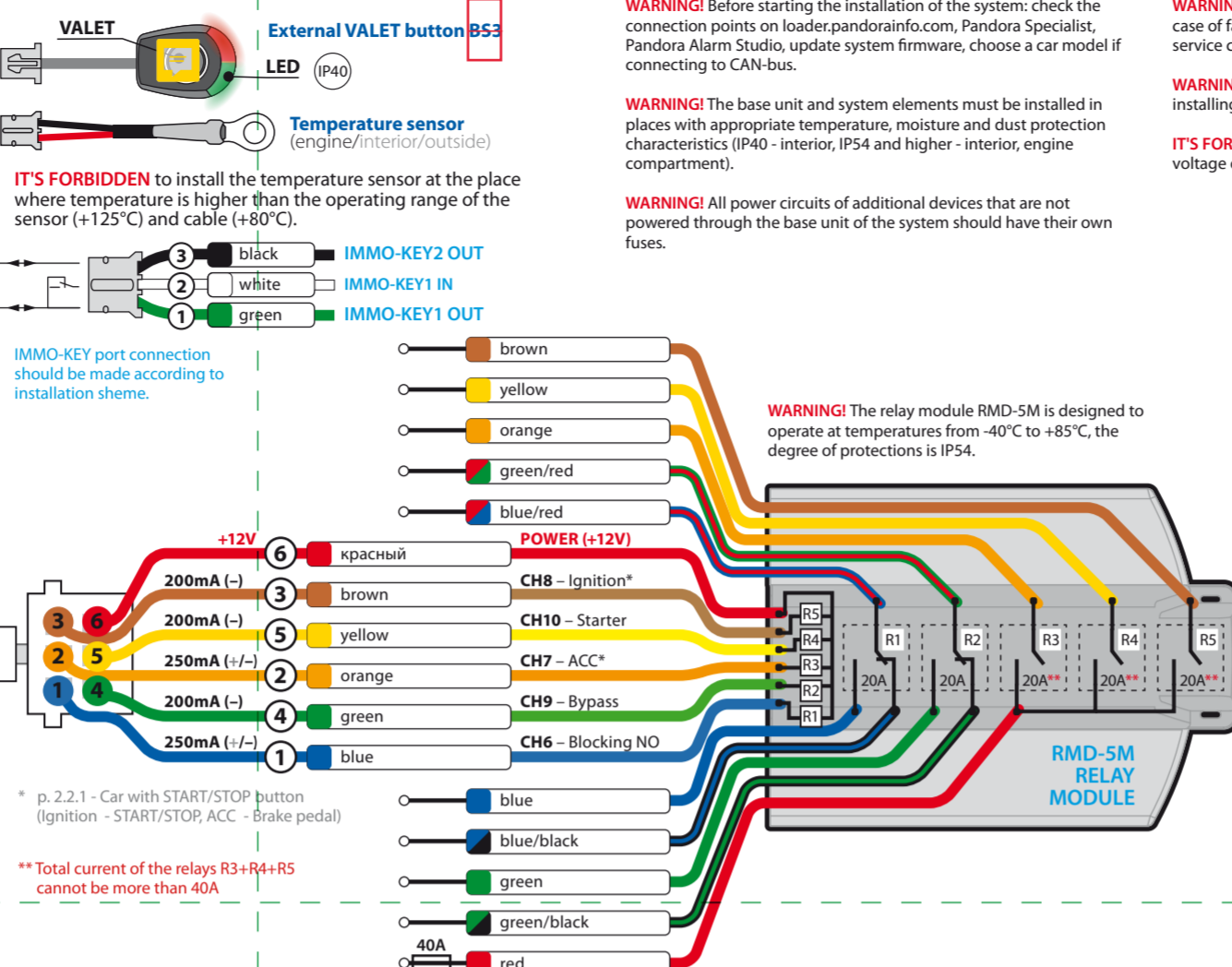
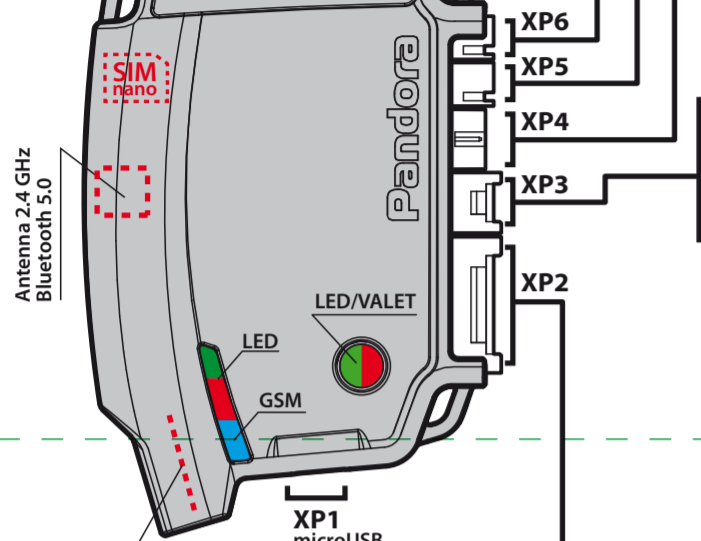
WARNING! All power circuits of additional devices that are not powered through the base unit of the system should have their own fuses.

WARNING! Disconnect the power supply before installing/replacing a SIM-card.

IT'S FORBIDDEN to install the system on a car with on-board voltage other than 12V.

IT'S FORBIDDEN to install the security system with damaged output cables.

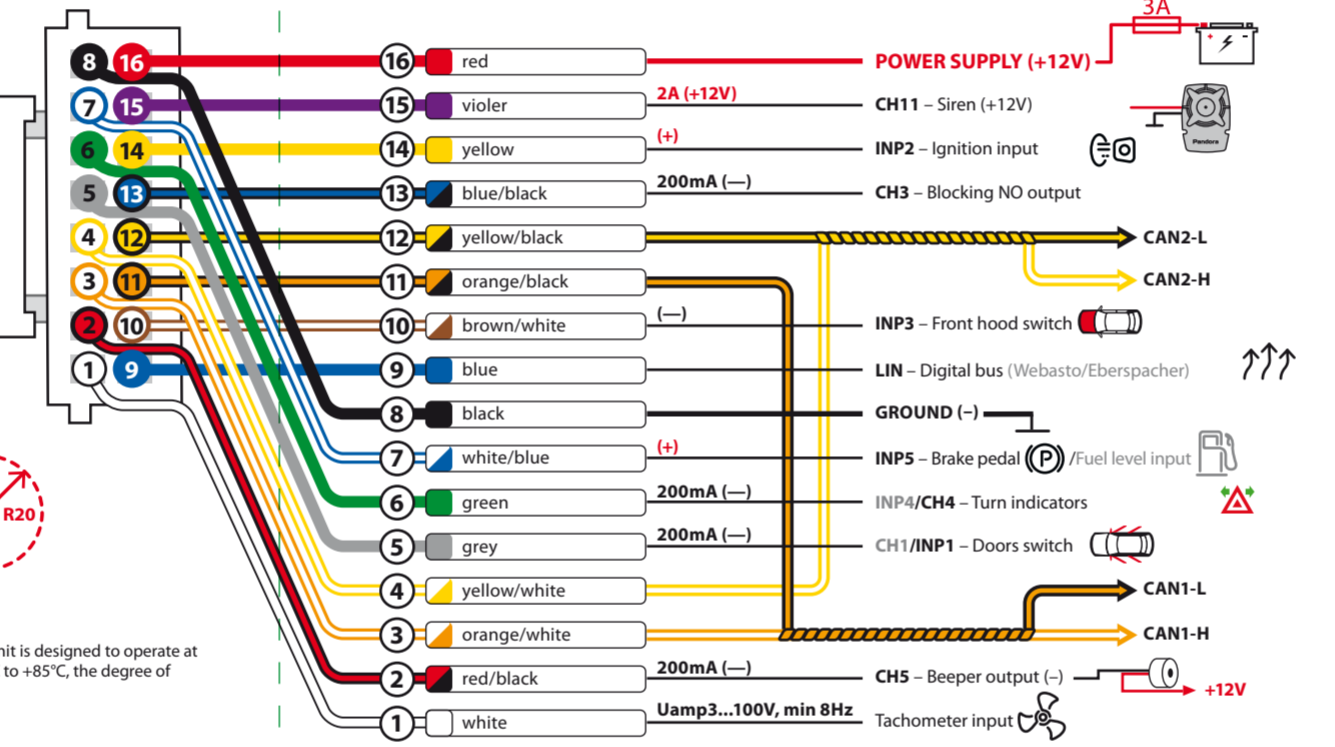
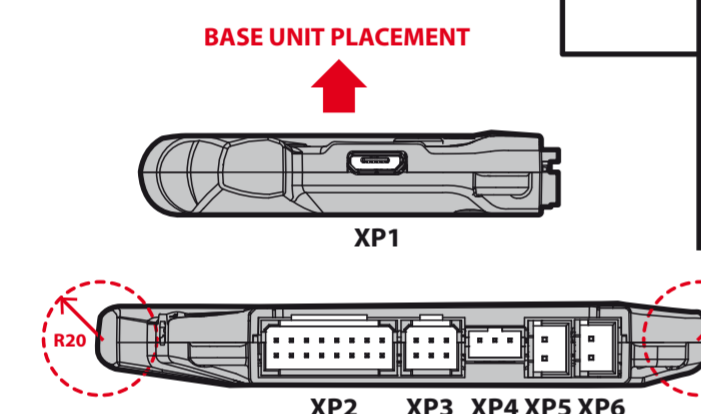
IT'S FORBIDDEN to exclude or change the nominal of the fuses provided with the security system when connecting to the vehicle's wiring.



* p. 2.2.1 - Car with START/STOP button (Ignition - START/STOP, ACC - Brake pedal)

** Total current of the relays R3+R4+R5 cannot be more than 40A

WARNING! The relay module RMD-5M is designed to operate at temperatures from -40°C to +85°C, the degree of protections is IP54.



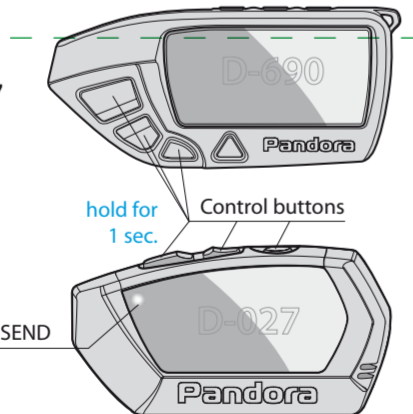
PROGRAMMING TABLE

| FUNCTION | VALET BUTTON | | |
|---|--------------|--------|--------|
| №0 - Entering a level | Level | Delete | Update |
| №1 - Pairing a remote control D-027 (up to 4) | P1 | | |
| №2 - Programming 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 BT-760 / BT-770 / BT-780 | H1→P1→P1 | H3 | H5 |
| №10.1.2 - Pairing a radio tag BT-760 / BT-770 / BT-780 | H1→P1→P2 | H3 | H5 |
| №10.1.3 - Pairing a radio tag BT-760 / BT-770 / BT-780 | H1→P1→P3 | H3 | H5 |
| №10.2.1 - Pairing a D-030 / D-035 / Band / Watch2 | H1→P2→P1 | H3 | |
| №10.2.2 - Pairing a D-030 / D-035 / Band / Watch2 | H1→P2→P2 | H3 | |
| №10.2.3 - Pairing a D-030 / D-035 / Band / Watch2 | H1→P2→P3 | H3 | |
| №10.3.1 - Pairing a door sensor DMS-100BT | H1→P3→P1 | H3 | H5 |
| №10.3.2 - Pairing a door sensor DMS-100BT | H1→P3→P2 | H3 | H5 |
| №10.3.3 - Pairing a door sensor DMS-100BT | H1→P3→P3 | H3 | H5 |
| №10.3.4 - Pairing a door sensor DMS-100BT | H1→P3→P4 | H3 | H5 |
| №10.4.1 - Pairing a radio relay BTR-101 | H1→P4→P1 | H3 | H5 |
| №10.4.2 - Pairing a radio relay BTR-101 | H1→P4→P2 | H3 | H5 |
| №10.6 - Pairing a RHM-03BT / PS-331BT / PS-332BT | H1→P6 | H3 | H5 |
| №10.7 - Pairing a DI-04BT / BT-02 / BT-01 | H1→P7 | H3 | H5 |
| №10.8 - Pairing a telemetric module NAV-09 / NAV-X | H1→P8 | H3 | |
| №10.9 - Pairing a GPS/GLONASS receiver NAV-035BT | H1→P9 | H3 | H5 |
| №10.11 - Pairing a RFM-470 | H1→P11 | H3 | H5 |
| №11 - Programming the Immobiliser PIN-code | H1-P1 | | |
| №13 - Emergency deactivating/activating Code Immobiliser function (pin-to-drive) | H1-P3 | | |
| №15 - Emergency deactivating/activating authorization devices (Immobiliser, Anti-Hi-Jack) | H1-P5 | | |
| №17 - Programming bypass of an original immobiliser | H1-P7 | | |
| №18 - Programming the Beach mode PIN-code | H1-P8 | | |
| №50 - Pairing a mobile device | H5 | | |
| №100 - Exit the programming menu | H10 | | |

P - press X times H - hold for X sec. → - 1 sec. pause • - without a pause

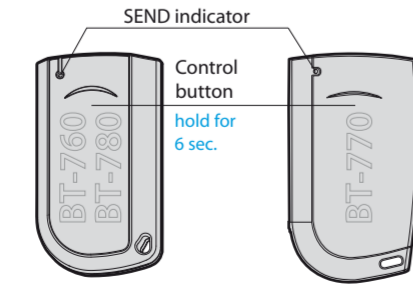
№1 Pairing a remote control D-690 / D-027

- Enter the programming level №1;
- Press and hold 3 buttons of a remote control (arm/disarm/F) simultaneously for 1 second (until a short beep and red flash of the LED SEND indicator), then release the buttons;
- If pairing was successful, the siren/beeper will sound a beep;
- Pair the next remote controls (up to 4) consequentially. Press the VALET button to finish pairing;
- Finish pairing on the level №1: the siren/beeper will sound a beep; the system will enter the programming level №0.



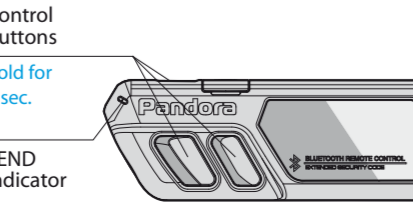
№10.1.1-3 Pairing radio tags BT760 / BT770 / BT780

- Enter the programming level №10.1.1/10.1.2/10.1.3;
- If the LED is green, the system is ready for pairing*;
- Press the control button on a tag and hold until 6 red flashes of the SEND indicator.
- 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.



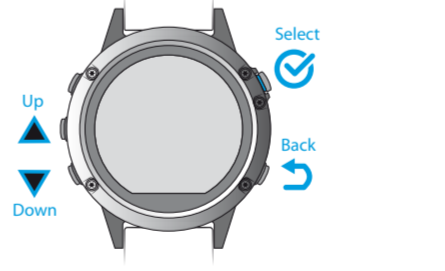
№10.2.1-3 Pairing a remote control D-030/D-035

- Enter the programming level №10.2.1/10.2.2/10.2.3;
- 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 and red flash of the SEND indicator), 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.



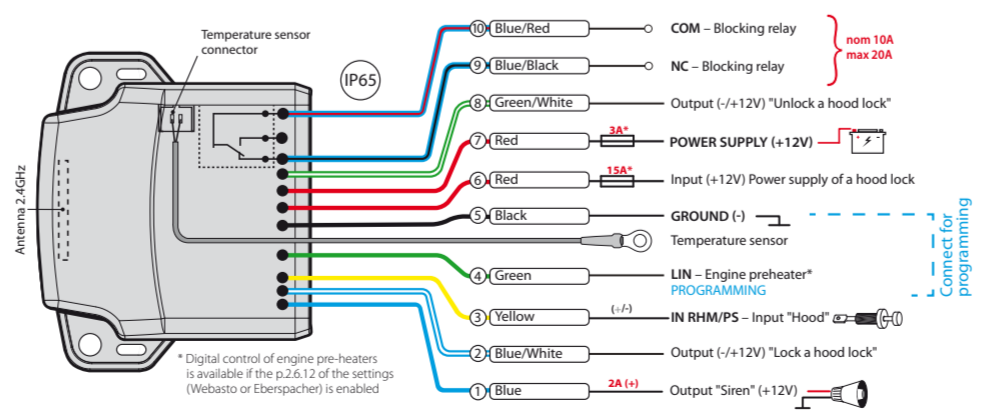
№10.2.1-3 Pairing a Watch2

- Enter the programming level №10.2.1/10.2.2/10.2.3;
- 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.



EXAMPLES OF ADDITIONAL DEVICES PAIRING

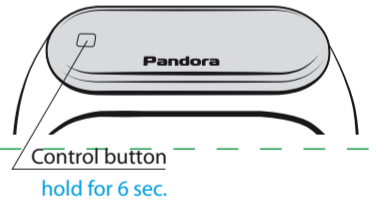
№10.6 Pairing a radio module RHM-03 BT



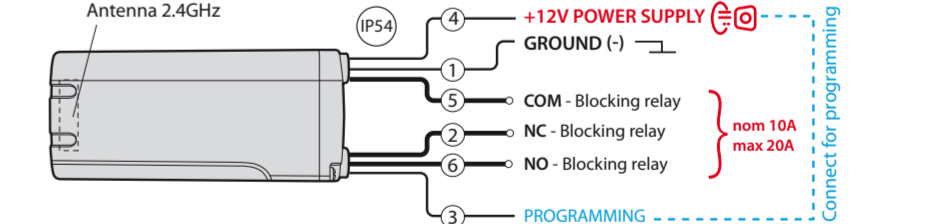
- Connect the wire 4 (Green) to wire 5 (Black). Connect them to ground (-);
- Enter the programming level №10.6;
- If the LED is green, the system is ready for pairing*;
- Connect the wire 7 (Red) to permanent +12V power supply;
- If pairing was successful, the LED will light red and the siren/beeper 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.

№10.2.1-3 Pairing a Band

- Enter the programming level №10.2.1/10.2.2/10.2.3;
- If the LED is green, the system is ready for pairing*;
- Press and hold the control button on a Band for 6 sec. (the countdown will be displayed on a screen);
- If pairing was successful, the LED will be red, the siren/beeper will sound a beep. The system will enter the programming level №0.



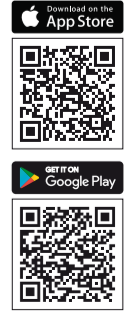
№10.4.1-2 Pairing a radio relay BTR-101



- 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).

№50 Pandora Specialist mobile application

- Pandora Specialist mobile application allows to install and configure the system.
- To download/Install the mobile application on a smartphone or a tablet scan the QR-code or go to the:
 - App Store (iOS),
 - Google Play (Android).
 - Connect the mobile device to the system using USB-OTG adapter or wireless Bluetooth connection.
- Wireless Bluetooth connection**
- Enter the programming level №50 (press and hold VALET button until the fifth beep of the siren/beeper or the fifth orange flash of LED).
 - If the LED is green, the system is ready for pairing.
 - Open the Pandora Specialist app on the mobile device, go to the "Fast mounting" or "Advanced mounting" -> "Bluetooth", connect with the found device.
- USB-OTG connection**
- Open the Pandora Specialist mobile application on Android device, connect the USB-OTG adapter to your mobile device -> connect the USB cable to the system -> connect the USB-OTG adapter with the USB cable -> enter the "Service PIN-code".
- WARNING!** After the settings were made, delete the mobile device from the system memory by entering the programming level №50 again.



PROGRAMMING THE SYSTEM

System settings and parameters can be configured using the Pandora Alarm Studio program and the Pandora Specialist mobile 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.

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 personal card”

WARNING! It is forbidden to damage the protective layer of the «Owner’s personal

Enter the programming level №2.

- Enter the first digit of a new “Service PIN-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 digits in the same manner. The input of the fourth digit 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 entered the “Service 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 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 №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 Immobiliser function” (pin-to-drive), enter the programming level №13. To deactivate/activate authorization devices (mobile phone, radio tags, Bluetooth remote control, watches), 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 level №0. Enter the “Secret PIN-code” that is written on the “Owner’s personal card”. The system will confirm deactivating the function with a

card» - the information under the protective layer of the card is intended only for the owner of the system. When the owner complains about the erased protective layer, the system is reinstalled at the expense of the installer.

The system stops to execute commands when it is in programming mode. Therefore, exit programming mode after changing the 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 paired devices” section of the user manual for detailed description.

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» function, it is necessary to record the engine idle speed via digital or analogue 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 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 paired devices (tags, mobile device, relays, etc.) that are stored in the non-volatile memory.

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 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

NOTE! See the detailed instructions on loader.pandorainfo.com, Pandora Specialist, Pandora Alarm Studio.

Level №50 - Pairing a mobile phone

NOTE! See the detailed description in the “MOBILE APPLICATION” 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

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 Alarm Studio can be downloaded from pandorainfo.com. The Pandora Alarm Studio is provided only to authorized installers of the Pandora systems. Download the Pandora Alarm Studio to a PC with Windows XP/Vista/7/8/10.

- Run the Pandora Alarm Studio;
- Connect the system to the PC via a USB cable;
- Enter the “Service PIN-code” (default value is 1-1-1-1) to put the system into the programming mode;
- The Pandora Alarm Studio 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:

Enter the programming level №4.

- Press and hold the VALET button for more than 4 seconds. Release the button after the fourth sound signal of the siren/beeper. The system will confirm the resetting to the factory settings with a long red flash of the LED indicator, the system will return to the programming level №0. Press and hold VALET button for more than 10 seconds to reset system to the factory settings and exit the programming mode.

Level №10 - Manage Bluetooth devices / Firmware Update.

WARNING! All functions of this level are available in the Pandora Specialist app when using a Bluetooth connection.

- For the management of the additional devices go to «Advanced mounting» -> «Pairing/unpairing devices».
- For the firmware update of the additional devices go to «Advanced mounting» -> «System devices».

This level is used to pair/remove/update additional devices 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

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 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 siren/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/beeper. 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

- 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 Alarm Studio, 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.

PROGRAMMING TABLE

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

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 it’s current state by a colour 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 (4 orange flashes of the LED, or 3 sound signals of the Siren). 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 additional devices are printed on the side of this manual where the wiring diagram is shown.

- **Updating firmware of an additional device**

Firmware update is available in Pandora Specialist and Pandora BT mobile applications when entering the sublevel or the cell, corresponding to the “Programming table”. 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

0-0-1-1-1-1 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

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.

Level №0 Entering a level

Enter the programming mode using the “Service PIN-code” (default value is 1-1-1-1), 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 sound tone beeps (up to 10). These sounds mean 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 number of signals. To enter an intermediate

hold the VALET button for 5 seconds until 6 orange flashes of LED indicator or 5 sound signals of the siren/beeper. Open the Pandora Specialist or Pandora BT app, go to «Search device» screen, select the device and then select one of the update options:

- 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 the phone storage.

Level №11/№18 - Programming the «Immobiliser code» / «Beach mode PIN-code»

THE LEVEL IS DIVIDED INTO 3 SUBLEVELS • Buttons determination

To program the «Immobiliser code», enter the programming mode and press the VALET button 11 times to enter level №11, to program «Beach mode PIN-code» enter level №18. After entering the level 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 analogue «Code immobiliser»/«Code immobiliser2» inputs INP or via digital protocol of a car (check the «Code immobiliser» options on

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

Prepare to pair all remote controls in accordance with their manual. Pair all remote controls (one-by-one) during 1 minute. After a minute the system will automatically enter the programming level №0. When pairing new remote controls or re-pairing “old” ones, all previously paired remote controls will be erased from the system memory.

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.

loader.pandorainfo.com, Pandora Alarm Studio, Pandora Specialist). After selecting active buttons, press the VALET button to enter the next sublevel (Entering the PIN-code).

- **Entering the PIN-code:**

Program the Immobiliser 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 immobiliser buttons. The code is entered by pressing the selected buttons for at least 1 second. 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.

- **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 entered the code twice, the LED 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.

ANALOGUE FUEL LEVEL CALIBRATION

WARNING! This procedure is available only for analogue connection of the fuel sensor.

Make a connection of the «Fuel level input» to an original fuel sensor. Enable the “Use INP (+) to control fuel level” setting. Set at least two values of the fuel level using mobile application or by phone.

- **Pandora Specialist application:**

Start the engine; go to “Advanced mounting” -> “Bluetooth” -> Choose system -> “Fuel calibrating” -> “Calibrate fuel!”. Set the actual value of the fuel level sensor.

- **Mobile phone**

Start the engine; call the system phone number, wait for the answer, enter the DTMF command 424* “Calibrate fuel level”, the system will confirm command (424* - command executed), depending of the actual fuel level enter the DTMF command (see the values in the table), the system will confirm command (xxx* command executed), end call.

FUEL LEVEL CALIBRATION TABLE (424*)

| DTMF command | Fuel level |
|--------------|------------------------------|
| 00* | 0% |
| 10* | 10% |
| 20* | 20% |
| 25* | 25% |
| 30* | 30% |
| 40* | 40% |
| 50* | 50% |
| 60* | 60% |
| 70* | 70% |
| 75* | 75% |
| 80* | 80% |
| 90* | 90% |
| 100* | 100% |
| 888* | Reset all calibration values |

VOLTAGE CALIBRATION

To calibrate actual voltage value, use the Pandora Specialist mobile application: Go to the “Advanced mounting” -> “Bluetooth” -> Choose system -> “Advanced settings” -> “Main settings” -> “General settings” -> “Voltage calibration”, set the actual voltage value.

