Pandora would like to thank you for choosing
our telemetric module

Pandora

NAV-X

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

Product is in conformity with Electromagnetic Compatibility
Directive EMC 2004/108/EC and R&TTE Directive 1999/5/EC

GENERAL INFORMATION

The Pandora NAV-X is an autonomous compact module designed to add telemetry and service functions to Pandora service-security systems. The module can expand the system features with the following functions: web-service pandora-on.com and mobile applications Pandora Online | Pandora Pro – full access to remote control and monitoring functions, display of current coordinates, event history; DTMF-commands to control the system by phone; voice and SMS notifications; listening function.

Small dimensions and wireless connection with a security system allow you to make high secrecy installation.

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SYSTEM SET

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NOTE! The manufacturer reserves the right to change the set and construction of the product to improve its technological and operational parameters without notification.

FEATURES

- Built-in GSM modem (GPRS/SMS/LBS-services)
- Built-in nano-SIM slot
- Built-in GPS/GLONASS receiver
- Built-in radio interface 2.4 GHz (BLE4.2)
- Built-in micro-USB port

The VALET button is a multifunctional button located on the device. The button is used to change the settings of the module.

The LED indicator is an informational red and green LED indicator. The LED displays the current state of the module.

The microphone is a built in electroacoustic device required for the "Listening" function.

The fastening is side fasteners for fixing the module on a hard surface with clamps or ties.

PIN-codes of the telemetric module

Secret PIN-code CANNOT BE CHANGED

(is written on the Owner's card)

Service PIN-code ☐-☐-☐-☐

(default value is 1-1-1-1)

Guest PIN-code ☐-☐-☐-☐

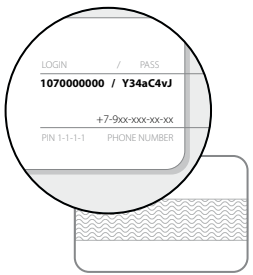
(default value is 1-2-3-4)

WARNING! WE RECOMMEND THAT YOU CHANGE THE DEFAULT VALUE, WRITE DOWN AND REMEMBER VALUE OF ALL PIN-CODES. ELIMINATE THIRD-PARTY ACCESS TO THIS INFORMATION.

OWNER'S CARD

The owner's code card contains private information under a protective layer.

WARNING! CAREFULLY REMOVE THE PROTECTIVE LAYER, DO NOT USE SHARP OBJECTS TO AVOID DAMAGING OF THE HIDDEN INFORMATION UNDER THE PROTECTIVE LAYER. THE HIDDEN INFORMATION UNDER THE PROTECTIVE LAYER IS INTEDED ONLY FOR THE OWNER. THE OWNER'S PERSONAL CARD AND THE HIDDEN INFORMATION CANNOT BE RESTORED



• LOGIN is a 10-digit number. This information is used to add the module to the web service and mobile applications. This information cannot be changed or restored.

• PASS contains 8 characters and can consist of digits, lower and upper case letters. This information is used to add the module to the web service and mobile applications. This information cannot be changed or restored.

• PIN ("Secret PIN-code") is a 4-digit number. This code is used to switch off radio tags, switch on "Service mode", disable engine blocking (see the "Control using a phone" section). This information cannot be changed or restored.

• Phone number is a number of the SIM-card supplied with the module. This number is not used if you change the SIM-card.

CONTROL

The Pandora NAV-X telemetry module is used for remote control and monitoring of a vehicle using a security-service system. To provide these functions, the module has a SIM-card with access to the Internet and GSM-communication:

• the Internet provides the work with the mobile applications and web-service;

• GSM-communication provides possibility to control a vehicle using a phone and to receive SMS notifications.

WARNING! FOR THE CORRECT OPERATION OF GSM FUNCTIONS, AN OWNER SHOULD MONITOR THE STATUS/ BALANCE OF THE SIM CARD INSTALLED IN THE MODULE. IF THE SIM CARD IS BLOCKED OR DEFECTIVE, GSM FUNCTIONS OF THE SYSTEM WILL BE UNAVAILABLE.

Web-service and mobile applications

It is required to create an account and attach the telemetry module to your account to start using the web service pandora-on.com and the mobile applications Pandora Online (Android)/ Pandora Pro (iOS).

To create an account, visit the web-site or open the mobile application and register your account. You will create the data to sign in: LOGIN – your email, PASSWORD – a password entered during the registration. You will receive an email with a confirmation link. Click the link to complete the registration procedure.

Log in to the web-site or mobile application using the specified data (email and password). In the "Add a device" or "Add a system" window, enter the LOGIN and PASS written on your "Owner's card", create a name for your car and click "Add". After this, you will be able to control, change setting and information about the vehicle state.

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

Mobile applications are available in the application stores:

App Store (iOS) – Pandora Pro;
Google Play (Android) - Pandora Online.

Download on the App Store

GET IT ON Google Play

ATTENTION! MINIMUM REQUIREMENTS FOR MOBILE DEVICES: ANDROID V4.4; IOS V10.

Control using a phone

The "Main owner's number" is used for remote control by a phone, receiving voice and SMS alerts. You can add additional phone number for notifications. To access control functions from a phone number that is not programmed as the "Main owner's number", it is required to enter the "Guest PIN-code".

All incoming calls to the module are checked for compliance with the "Main owner's number". If the incoming number is not equal to the "Main owner's number", a sound signal will invite to enter the "Guest PIN-code".

To control a security-service system using a phone, call the phone number of the SIM card installed in the module and dial a command. If you call not from the "Main owner's number", it will be required to enter the "Guest PIN-code".

(#) – Repeat voice notifications of the initial menu
(9)(*) – Help

During a voice call, dial 9* and listen to the information about the system control commands.

(2)(5)(8)(*) – System information about current firmware version

(2)(9)(7)(*) – End a call

To have simple access to engine start function, create a new contact in the contact list of your phone, name it 'Engine start', for instance, and add the number in the following format:
+XXXXXXXXXX,123*,297*
where '+XXXXXXXXXX' – the system phone number,
',' - pause is a feature of the phone (can be displayed as the 'P', see the instructions of the phone),
'123*' - remote engine start DTMF command,
'297*' - end call DTMF command
Contact can be added as a speed dial to any of the free button.
To have simple access to engine start function a phone other than the main owner's phone, create a contact in the following format:
+XXXXXXXXXX,1234,123*,297*
where '1234' – guest PIN-code.

(0)(0)(7)(*) – Turn on the built-in microphone

(1)(0)(0)(*) – Request balance of the SIM-card

The system will confirm: 'Balance information sent via a text message' and will send a text message with account balance information to your phone.

(5)(0)(0)(*) – Request current coordinates

The system will confirm: 'Current coordinate sent via a text message' and will send a text message with coordinates and a web link to a map to your phone.

(8)(8)(8)(*) – Enable radio tags (immobilizer and Anti-HiJack functions)

(9)(9)(8)(*) XXXX – Disable radio tags (immobilizer and Anti-HiJack functions). The "Secret PIN-code" (XXXX) written on the Pandora NAV-X owner's card is required for this command

(1)(*) – Arming

(1)(0)(*) – Silent arming

(0)(*) – Disarming

(0)(0)(*) – Silent disarming

(1)(2)(3)(*) – Remote engine start

(3)(2)(1)(*) – Remote engine stop

(7)(8)(9)(*) – Enable automatic engine starts

(9)(8)(7)(*) – Disable automatic engine starts

(1)(5)(9)(*) – Unlock trunk

(1)(5)(6)(*) – Switch on an engine heater

(6)(5)(1)(*) – Switch off an engine heater

(5)(5)(1)(*) XXXX – Enable the "Service mode". The "Secret PIN-code" (XXXX) written on the Pandora NAV-X owner's card is required for this command

(5)(5)(2)(*) – Disable the "Service mode"

1 5 * – "Tow truck" mode

This mode is intended for car transportation with preservation of arming function. The "Tow truck" mode can be activated only when the system is armed, it will be deactivated automatically when disarming.
Call the module number. If the system is in PANIC mode, receive an emergency call.
Dial 15* to enable the "Tow truck mode", the system will disable motion, shock and tilt sensors. To end the session, hang up the phone.
To disable this mode, disarm the system.

6 6 6 * – Activate engine blocking



WARNING! THE ENGINE BLOCKING THAT WAS ENABLED VIA A PHONE 666* CAN BE DEACTIVATED ONLY BY DIALING 999*XXXX

9 9 9 * XXXX – Deactivate engine blocking. The "Secret PIN-code" (XXXX) written on the Pandora NAV-X owner's card is required for this command

4 5 6 * – Switch on an additional channel

6 5 4 * – Switch off an additional channel

Changing settings by a phone

To change the system settings by a phone:

- Disarm the system;
- Call the system number and wait for the answer;
- Turn on ignition for 3-6 seconds (but no more than 7 seconds), then switch it off.
- The module will enter settings mode

You will hear the list of commands and theirs functions after entering setting mode (see the commands below 1 *, 2 *).

1 * Phone number settings

1 * Main owner's phone number
2 * Additional owner's phone number
3 * Second additional owner's phone number
4 * Balance inquiry number
5 * System's phone number.



WARNING! WE RECOMMEND THAT YOU WILL LISTEN VOICE HINTS WHILE CHANGING THE SETTINGS BY A PHONE.

2 * Additional functions

1 * Changing guest PIN-code
Write down or remember the new code

2 * Guest calls
If the setting is disabled, you can control the module only from the main owner's phone number. If it is enabled, you can call from any phone number, but it will be required to enter the Guest PIN-code to control the module.

3 * Remote engine blocking
The setting allows or doesn't allow to block the engine by the 666* DTMF command

4 * Listening function
The setting allows or doesn't allow to use the 007* DTMF command.

5 * Set threshold of voltage for sending a text message
You will receive a text message when the voltage is lower than the specified threshold.

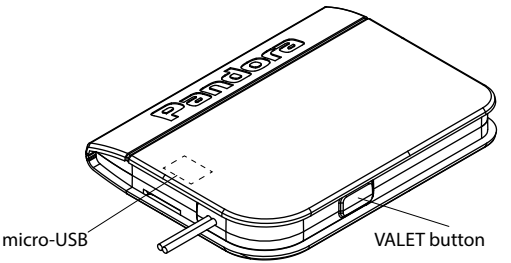
An example of changing main owner's phone number:
1. Enter the setting menu via a phone according to the instruction above
2. Dial the DTMF command 1 * (phone number settings) and 1 * (owner's system number);
3. Enter new owner's number in the format * 7 **XXXXXXXXXXX** # (the system recognizes '*' as '+');
4. To confirm, dial 1 *.

NOTE! ALL OTHER PHONE NUMBERS CAN BE SET IN THE SAME MANNER.

SETTINGS

General information

Before installation, configure the module using the Pandora Alarm Studio, pair the module with a security-service system, change a SIM-card (if required).



Entering the programming mode/ entering the "Service PIN code"

To change the settings, update firmware, pair the module with a security-service system, the module must be in the programming mode. To enter the programming mode, it is required to enter the "Service PIN-code" (default value is 1-1-1-1).

Enter the '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. Each pressing will be confirmed with a green flash of the LED. A pause for more than 1 second and a red flash of the LED confirm the input of the first digit. Then you can enter the next digit.
Enter the other digits in the same manner. The module will confirm the correct PIN-code with the series of red and green flashes.

Programming menu

Some functions can be changed only by the VALET button and the "Programming menu".
Use the VALET button to enter the desired level number after entering the programming mode:
Press the button the number of times equals to level number, pauses between presses should not exceed 1 second.

Level number	Module function
Level #1	Pairing the module with a security-service system
Level #2	Changing the "Service PIN-code"

Level №1 - Pairing the module with a security-service system

Update firmware of the security-service system (base unit firmware and Bluetooth modem firmware) before pairing.
The external power supply of the Pandora NAV-X module must be connected during pairing.
Pairing procedure:
Enter the Level №10 or Level №10.8 (it depeneds on a system) of the security-service system – Recording a telemetry module. The LED indicator of the system will light green and the system will enter the recording of the Pandora NAV-X module.
Enter the Level №1 of the telemetry module – "Level №1 – Pairing the module with a security-service system". If the procedure is done successfully, the security-service system will sound a beep and the LED will light green.
To finish pairing, briefly press the VALET button of the security-service system and the VALET button of the Pandora NAV-X module.



WARNING! ENABLE GPS AND SET CORRECT TIMEZONE IN THE SETTINGS OF THE SECURITY-SERVICE SYSTEM AFTER PAIRING THE MODULE

Level №2 - Changing the "Service PIN-code"

Prepare a new value of the "Service PIN-code", it should consist of 4 digits (from 1 to 9). We recommend that you write down and remember the new value.

Changing the "Service PIN-code" procedure:

Enter the level №2, the module will enter the "Changing the Service PIN-code" mode.

Press the VALET button the number of times equals to the first digit of a new code. Pauses between presses should not exceed 1 second, every pressing will confirm with a green flash of the LED. A pause for more than 1 second and a red flash of the LED 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 flashes of the LED. The system will wait for PIN-code re-entering.

Enter all four digits again.

If you were able to correctly enter the "Service PIN-code" twice, the LED indicator will produce the series of red and green flashes, the new PIN-code will be recorded, the system will return to the programming mode.

In case of the incorrect code input, the LED indicator will be lit red, the system will return to programming mode.

Programming and updating

Programming and updating of the module software is performed using the Pandora Alarm Studio.

Download the Pandora Alarm Studio to a PC with Windows XP/Vista/7/8/10;

Extract the program from the archive and run the file AlarmStudio.exe;

Connect the module to a PC via a USB cable;

Enter the "Service PIN-code" using the VALET button, the Pandora Alarm Studio will automatically connect to the module.

NOTE! It is recommended that you update firmware of the module before installing and programming.

Step by step example



ATTENTION! POWER SUPPLY MUST BE DISCONNECTED (BATTARIES MUST BE REMOVED AND EXTERNAL POWER MUST BE OFF) WHEN YOU CONFIGURE THE MODULE.

STEP №1.0 – Preparing for programming

Carefully remove the battery cover and the cover of the external

power connector. To do this, unscrew all screws using a "Philips": screwdriver.

STEP №1.1 – Changing a SIM-card

Carefully perform the following actions:

Make sure that a new SIM-card is working. Insert the SIM into your mobile phone and check the following services: voice communication, SMS, internet connection (check in 2G mode).

Disable PIN request of the SIM.

Remove the old SIM from the slot and insert a new one.



ATTENTION! THE SIM-CARD INSTALLED FROM THE FACTORY IS LINKED TO THE MODEM OF THE MODULE AND CANNOT WORK WITH OTHER DEVICES.

STEP №2.0 – Module setup

Make the following settings using the Pandora Alarm Studio:

"Main owner's number" setting – enter the owner's phone number in the following format: +xxxxxxxxxxx. The module will sent SMS and voice notifications to this phone number. You can also control the module using DTMF commands without the "Guest PIN-code" when you call from this phone number.

"Guest PIN-code" setting – change the default value of the PIN (1-2-3-4). The "Guest PIN-code" is required if you call not from the "Main owner's number".

"Additional phone numbers" – specify additional phone numbers. The module will sent SMS and voice notifications to these phone numbers.

"Time zone shift relative to UTC" - specify the current time zone offset. It is required for accurate time determination by a GPS/GLONASS receiver.

Make additional settings if required "Guest login", "Control via GPRS", "Control via GSM", "Voice and text notifications".

STEP №2.1 – Additional settings when changing the SIM card

Make the following settings if you have changed the SIM card:

"System phone number" setting – specify a new number of the installed SIM card in the format +xxxxxxxxxxx.

"Balance inquiry number" setting – Specify a command of the "Balance request" corresponding to a carrier.

" GPRS (APN) operator access point", "GPRS operator username", "GPRS operator password" – enter APN settings of your carrier.

STEP №2.2 – Finishing setup

Save the changed data in the Pandora Alarm Studio and disconnect the USB cable after you finish setting up the module.

STEP №3 – Pairing the module with a security-service system

Pair the module with a security-service system (see "Level №1 - Pairing the module with a security-service system").

STEP №4 – Module checking

Connect the main power and check the module functions before installation: control by a phone, web-interface, mobile applications, voice and SMS notifications, and request current coordinates 500*, request balance of the SIM-card 100*.

INSTALLATION

Configure and check the module before installation.

General installation requirements

The module must be rigidly fixed in order to avoid damage and movement while driving.

The device must be installed in places where there is no any liquids, condensate and high temperature.

The module installation must be performed when the module connectors and the negative battery terminal are disconnected.

Wire connections and insulation must be performed in accordance with the requirements of car manufacturers. Avoid contact of wires with sharp elements and moving parts of the car. Wiring through holes must be done using special rubber bushings.

To avoid the destruction of compounds by car vibration, ensure that there is a bit of free length to the wiring, providing enough sagging.

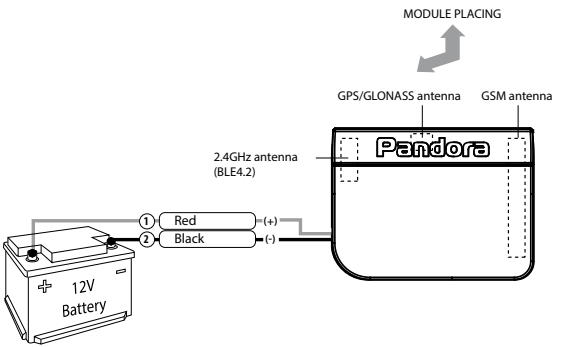
Main power supply connection

Connect power supply wires:

Black wire (–) – "Ground" of the module. It connects to the car "ground". This wire must be connected first during installation

Red wire (+12V) – Power of the module. It connects to reliable conductor with constant voltage of +12V.

Connect the connectors and check it.



Module placing

The following conditions must be considered when installing the module:

Good conditions for signals of the GPS/GLONASS receiver, GSM modem, 2.4GHz radio interface (BLE4.2);



WARNING! IT IS PROHIBIT TO CONNECT THE MODULE TO CAR WIRES WITH NORMAL VOLTAGE OTHER THAN 12V.

The module should be installed the front side up (the side with the VALET button and the LED). Satellite GPS/GLONASS signal can pass through plastic, glass, but it can't pass through metal surfaces.

WARRANTY OBLIGATIONS

The manufacturer guarantees correct operation of the service-security system if exploitation, installation, storage and transportation conditions described in this manual were met. The device should only be used according to installation scheme and user manuals.

Parts malfunctioning during warranty period on the fault of the manufacturer should be repaired or replaced by the installation center of the manufacturer or by certified service center.

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

• when warranty period expires

• if exploitation, installation, storage or transportation conditions were not met;

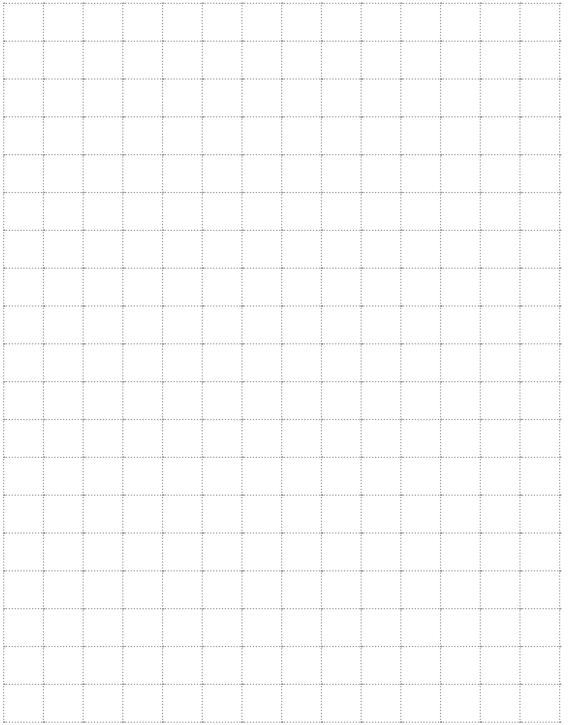
• if there is mechanical damage of the external parts of the system after it is sold. This includes: fire damage, consequential damage in case of car accident, aggressive liquids and water seeping damage, damage caused by improper use;

• if the damage was caused with incorrect settings and parameter adjustment;

• if there is no properly filled warranty card.

Warranty period is 3 years since the moment of purchase, but no more than 3,5 (three and a half) years since the moment of

production. This warranty does not include batteries, as they have their own service lifetime. Maintenances and repairs of the system with expired warranty period are carried out at the expense of the user on a separate contract between the user and the installer/ service center.



Acceptance certificate

The Pandora NAV-X is in conformity with Electromagnetic Compatibility Directive EMC 2004/108/EC and R&TTE Directive 1999/5/EC.

Serial number

Date of production «_____»_____20 y.

Responsible person's signature _____(stamp)

Packager _____ Signature_____

(personal stamp)

Warranty card

Model Pandora NAV-X

Serial number

Date of purchase «_____»_____20 y.

Seller's stamp

Seller's signature _____