KVANT 2

INSTALLATION MANUAL

AUTHOR ALARM

Dear Client,

To install AUTHOR-ALARM anti-theft equipment, please use authorized dealerships or certified installation centers **only**.

The developer and manufacturer cannot be held liable for any damage resulting from the use of equipment for other than its intended purpose, non-compliance with safety rules, or neglecting the requirements set out herein. AUTHOR-ALARM equipment installed by any other third parties or individuals is not subject to warranty and service maintenance.

CONTENTS

BACKGROUND INFORMATION

The KVANT 2 immobilizer is designed to protect your car against theft or carjacking. In the Armed mode, the device blocks the engine by breaking the standard electrical circuit via a built-in relay. The device is also equipped with outputs that help you manage an auxiliary electromechanical hood lock.

Key benefits:

- Its compact size allows hidden installation in the passenger compartment or underhood space.
- Three modes of engine blocking.
- Authorization via a keyfob, smartphone, or PIN code.
- Anti-carjacking feature.
- It helps you manage the auxiliary electromechanical hood lock.

Attention!

- The manufacturer reserves the right, without any prior notice to the user, to introduce changes to the product design to improve its operation and technical specifications.
- These features may vary depending on the car's brand, model, equipment, and year of manufacture. For more details, please contact official dealerships,[1] certified installation centers, or AUTHOR-ALARM's Technical Support.

1 Centers authorized to install AUTHOR-ALARM devices.

- It is not recommended to scratch off the secret codes indicated on the inside of the Quick Start manual unless really needed.
- It is not recommended to disclose to third parties the PIN code or information indicated on the inside of the Quick Start manual.
- It is not recommended to keep authorization keyfobs together with a standard key or keyfob.

DEFINITIONS

Service button

It is the car's auxiliary button designed to enter the PIN code, switch into the Service mode, or change the device's settings. The button is included in the KVANT 2 set.

Authorization

It is an algorithm designed to unblock the engine and open the auxiliary hood lock. Depending on a mode, you can get authorized via a keyfob/smartphone paired with the system and/or the PIN code, with ignition on. If successful, two service indication signals will follow. For more details, see Page 33.

PIN code

The PIN code is a combination of pushes on the service button set by the owner, which helps you unblock the

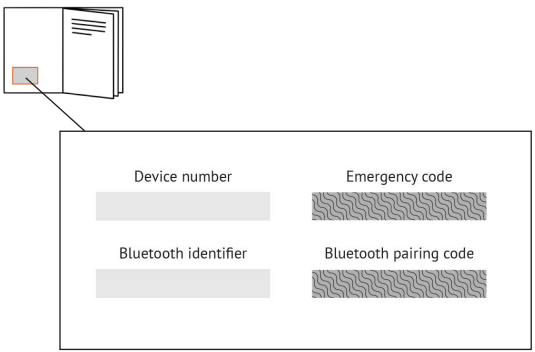
engine and open the auxiliary hood lock. For more details, see Page 30.

Indication

Service indication signals notify you about switching into the Armed mode, authorization, and changing of the device's settings. Indication is displayed via a buzzer installed in the passenger compartment. The buzzer is part of the KVANT 2 set.

SECRET CODES

The inside of the Quick Start manual, which is part of the KVANT 2 set, contains a sticker with secret codes that help you manage the device. Each code is unique and specific to a particular device, providing a strong security level and preventing unauthorized access.



Device number	KVANT 2 device ID number. Technical Support may request it, if required.
Bluetooth identifier	KVANT 2 serial number transmitted online. Technical Support may request it, if required.
Emergency code	It is a code that helps you unblock the engine if the user has forgotten the PIN code or if they do not have access to the paired keyfob or smartphone.
Bluetooth pairing code	It is a code that helps you pair your smartphone as a keyfob in the Author ID application.

INSTALLATION

For a detailed wiring diagram, go to the service portal, then go to Documentation and files, and click on the device you wish to install.

Connect KVANT 2 to the car only when ignition is off.

The manufacturer cannot be held liable for potential consequences of failure to observe safety measures (including damage to the car or malfunction of standard electrical equipment).

Functionality of KVANT 2 wires

1. **Red.** Permanent "+" (12V).
2. **Orange-black.** Service button.
3. **Yellow-green.** Universal channel "–". Default setting: a limit switch input of the driver door.
4. **Yellow.** Input IGN "+".
5. **Blue.** Output to indication (buzzer) "–".
6. **Black.** Ground "–".
7. **Black-white.** Blocking relay contact (common) "–".
8. **Purple-white.** Blocking relay contact (normally closed) "–".
9. **Purple.** Power output to the hood lock (open) "+".
10. **Green.** Power output to the hood lock (shut) "+".
11. **White-red.** Input "+". Brake pedal.
12. **Orange.** Universal channel "–". Default setting: direct management of hazard lights.

You can configure universal channels via Author Flasher or the Feature Status Change algorithm. For available settings, see Page 19.

Wiring notes

- Bundle the wires and protect them with an insulating tape or corrugated tubing.
- Do not allow wires to be pinched with lining boards of the car's interior.
- Do not bend wires over sharp edges of the car's metal parts.
- Use the car's standard places for laying wires or rubber lead-throughs.

- Use corrugations when passing from the car's stationary part to the moving one and when installing any optional devices.
- Use a wire of the same or larger cross-section if you need to extend another wire.
- To ensure stealthiness of operation, choose insulating materials similar to those used in the car.

HOW TO UPDATE FIRMWARE

You can update firmware via the Author Flasher tool (Version 4.7 and higher) and the BLED112 dongle. You can download Author Flasher alongside with the driver for BLED112, as well as installation and user manuals from the service portal.

For stable connection, make sure that BLED112 and KVANT 2 are as close as possible to each other.

Preparation for update

Follow these steps:

1. Download the latest firmware from the service portal.
2. Insert the BLED112 dongle into a USB port of your PC.
3. Turn on ignition but do not start the engine.
4. Get authorized.
   If successful, two service indication signals will follow.

5. Switch the device into the Firmware Update mode.
   5.1 Push the service button and hold it for 10 seconds.
   Service indication will be occurring once per second.
   5.2 Release the service button.
   5.3 Push the service button six times.
   The device will switch into the Firmware Update mode, which will be confirmed with six indication signals.
6. Update the firmware.

If the update process has not started within five minutes after entering the Firmware Update mode, the device will exit the mode and it will be ready to go to the setup menu. Service indication will be occurring once per second.

Firmware update

Follow these steps:
1. Launch Author Flasher.
2. In the navigation bar, select the **RF** interface.
3. Select **KVANT 2** out of available devices and click **Connect**.
4. Specify the path to the downloaded firmware.
5. Launch the firmware update process by clicking **Install**.
6. Once completed, click **OK**.
7. Turn off ignition.

SETTINGS

Feature Status Change algorithm

To configure KVANT 2 features, follow the algorithm below. The features are specified in the table on Page 16.

You can also configure these features via Author Flasher.

Configure the features via Author Flasher only after updating the firmware.

Follow the configuration steps below:

1. Switch the device into the Configuration mode.
2. Select a menu item.
3. Select a submenu item.
4. Select a setting item in the submenu.

To carry out the configuration, follow these steps:

1. Switch the device into the **Configuration mode**:
   - 1.1 Turn on ignition but do not start the engine.
   - 1.2 Get authorized.
     If successful, two service indication signals will follow.
   - 1.3 Push the service button and hold it for 10 seconds.
     Service indication will be occurring once per second.
   - 1.4 Release the service button. Now you can select a menu item.

2. **To select a menu item**, push the service button the number of times equal to the menu item in the table. After that, service indication will be occurring the number of times equal to the menu item. *For example: Five signals – you have selected the Authorization menu.*
   To get back to selecting of menu items (Step 2), push the service button once.
3. **To select a submenu item**,[1] push the service button the number of times equal to the submenu item. After that, service indication will be occurring the number of times equal to a **feature's current status**. After that, service indication will be occurring the number of times equal to the submenu item. *For example: One signal – you have selected the Classic mode setting. Then six signals will follow – you have selected the Smartphone pairing mode submenu.*
4. **To select a setting**, push the service button the number of times equal to a **new status of the setting**. For confirmation, service indication will be occurring the number of times equal to a **new status of the setting**. *For example: Two signals – you have selected the HID mode setting.*
   After that, the device will get back to submenu selection (Step 3) and it will be producing a series of signals equal to the submenu item and to the selected setting. *For example: Six signals – you have selected the Smartphone pairing mode submenu. Then two signals will follow – you have selected the HID mode setting.*

1 For more details, see Table of Features.

To get back to submenu selection without changing the setting, push the service button the number of times equal to the **current status of the setting**.
If successful, service indication will be occurring the number of times equal to the **current status of the setting**, after which the device will get back to submenu selection (Step 3).

If not, one long indication signal will follow, after which the device will get back to submenu selection (Step 3).

5. Turn off ignition.

Under this algorithm, you can configure several features.

Carefully push the service button the number of times equal to a feature status. Otherwise, you may set up some other feature by mistake.

To exit the algorithm without changing the setting, turn off ignition.

Table of Features

Feature statuses set by default are highlighted in gray.

Menu		Submenu		Settings	
2	Motion sensor sensitivity[1]			2-5	On
				1	Off
3	Blocking by ignition			2	On
				1	Off
4	Input/Output settings	1	Return to the menu		
		2	Yellow-green wire	1	Automatic transmission
				2	Hood limit switch
				3	Driver door switch
		3	Orange wire	1	Authorization status
				2	Hazard warning lights (or other external indication)
				3	Management of caution switch
5	Authorization menu	1	Return to the menu		
		2	Pair smartphones		
		3	Pair keyfobs		
		4	Authorization mode	1	Multi-authorization
				2	Two-factor authorization
		6	Smartphone pairing mode	1	Classic mode
				2	HID mode

1 The default value is 3.

Menu		Submenu		Settings	
5	Authorization menu	7	Unpair smartphones	7	Run
		8	Unpair keyfobs and smartphones	8	Run
		9	Set the PIN code	1	Delete the PIN code
				2	Set or change the PIN code
6	Firmware update				
7	Update of the radio module firmware				
8	Anti-carjacking	1	Return to the menu		
		2	Anti-carjacking mode	1	On
				2	Off
				3	Super Anti-carjacking mode
		3	Anti-carjacking trigger event	1	Keyfob disappearance
				2	Driver door opened
		4	Authorization method in the Anti-carjacking mode	1	PIN code
				2	Keyfob or PIN code
				3	Keyfob and PIN code
		5	Engine block in moving	1	Off
				2	On
		6	Time before warning indication[1]	1-24	On
9	Resetting user settings to default			9	Confirm reset

1 The default value is 3 (30 seconds).

Description of features

Motion sensor sensitivity
The feature is designed to enable/disable the accelerometer and configure its sensitivity. The accelerometer has five sensitivity levels where two is minimum while five is maximum. For more details, see Page 38.

Author Flasher: Settings → Basic → Motion sensor sensitivity

If the accelerometer is off (Level 1 sensitivity), the Anti-carjacking mode is disabled automatically.

Blocking by ignition
The feature is designed to choose an engine blocking algorithm. Under this algorithm, the engine will be blocked right after you turn on ignition unless there is a paired keyfob/smartphone in the recognition range of KVANT 2.

Author Flasher: Settings → Basic → Blocking by ignition

Input/Output settings
This menu helps you configure universal channels, depending on the preferred parameters of KVANT 2. The table below describes available settings of the channels. Default settings are highlighted in gray.

Author Flasher: Settings → Input/Output

Yellow-green wire Input "–" only		
Available settings	Automatic transmission	The feature is designed to choose an engine blocking algorithm. With this algorithm enabled, the engine will be blocked when the automatic transmission selector is shifted from Position P until you get authorized. To enable the feature, connect the yellow-green wire to the automatic transmission selector circuit where "–" occurs when shifting from Position P.
	Hood limit switch	The feature is designed to enable/disable the control over the hood cover position. It is used if an additional electromechanical lock is connected to the device. For more details, see Page 38. To enable the feature, connect the yellow-green wire to the standard circuit of the hood limit switch where "–" occurs when the hood cover is open, or install an auxiliary limit switch of the hood.[1]
	Driver door switch	The feature helps you enable/disable the control over opening of the driver door. For the Anti-carjacking mode to operate properly, this feature must be enabled if driver door opening was set as an event that triggers the mode.
Orange wire Output "–" only		
Available settings	Authorization status	Depending on inversion settings, the "–" control signal occurs when you get authorized and disappears after switching into the Armed mode.

1 Not included in the complete set.

Available settings	Hazard warning lights (or other external indication)	The feature helps you enable/disable the service indication signals that warn about the activation of the Anti-carjacking mode. The setting is designed for direct management of standard hazard lights.
	Management of caution switch	The feature helps you enable/disable the imitation of pushing on the caution switch.

Authorization menu

Pair smartphones
The feature is designed to pair smartphones with the device. See Page 25.

Author Flasher: Extra options → Smartphone pairing → Run

Pair keyfobs
The feature is designed to pair keyfobs with the device. See Page 24.

Author Flasher: Extra options → Switch device into keyfob pairing mode → Run

Authorization mode
The feature helps you choose an algorithm to unblock the engine. For more details, see Page 33.

Author Flasher: Settings → Authorization → Authorization mode

To enable the Two-factor Authorization mode, pair at least one keyfob/smartphone with the device and set a PIN code.

Once you have enabled the Two-factor Authorization mode, set a PIN code. If the PIN code is set already, the device will switch into the PIN Change mode.

Smartphone Pairing mode
The feature helps you select a radio module operation mode when using your smartphone as a keyfob. For more details, see Page 25.

Author Flasher: Settings → Authorization → Smartphone pairing mode

Unpair smartphones
The feature helps you unpair smartphones from the device. See Page 30.

Author Flasher: Extra options → Smartphone pairing → Run[1]

Unpair keyfobs and smartphones
The feature helps you unpair keyfobs and smartphones from the device. See Page 27.

Author Flasher: Extra options → Switch device into keyfob pairing mode → Run[2]

Set the PIN code
The feature helps you set, change, or delete the PIN code. For more details, see Page 30.

For the Two-factor Authorization mode to operate properly, set a PIN code.

1 The smartphones will be unpaired when the process starts.
2 The keyfobs and smartphones will be unpaired when the process starts.

Firmware update
The feature helps you enter the Firmware Update mode. See Page 11.

Update of the radio module firmware
The feature is designed to update firmware in the KVANT 2 radio module. For more details, see the relevant manual at the service portal.

Anti-carjacking

Anti-carjacking mode
The feature helps you enable Anti-carjacking or Super Anti-carjacking. For more details, see Page 35.

When you enable Anti-carjacking or Super Anti-carjacking, the following settings will be turned on automatically:

- *The yellow-green wire is assigned as the Driver door switch.*
- *The motion sensor sensitivity is set to Level 3 (if the accelerometer was disabled).*

Author Flasher: Settings → Mode selection → Anti-carjacking

Anti-carjacking trigger event
The feature helps you select an event that triggers Anti-carjacking or Super Anti-carjacking.

Author Flasher: Settings → Mode selection → Anti-carjacking trigger event

If you select the setting Driver door opened, a relevant connection must be implemented.

Authorization method in the Anti-carjacking mode
The feature helps you select a method to exit the Anti-carjacking mode before the engine is blocked and to disable the already triggered blocking.

Author Flasher: Settings → Mode selection → Authorization method in the Anti-carjacking mode

Engine block in moving
The feature is designed to block/unblock the engine when the car is moving.

Author Flasher: Settings → Mode selection → Engine block in moving

Time before warning indication
The feature is designed to set the time period after which the warning indication will be produced.

Number of presses	1	2	3	Each next press +10 sec	24
Time, sec	10	20	30		240

Author Flasher: Settings → Mode selection → Time before warning indication

Resetting user settings to default
The feature is designed to reset all settings to default.

Author Flasher: Extra options → Resetting user settings to default → Run

HOW TO CONFIGURE KEYFOBS AND SMARTPHONES

Keyfobs and smartphones are used for authorization and must be paired with the device first. KVANT 2 supports pairing with no more than two keyfobs and two smartphones at once.

Please note that its recognition range is limited in the Pairing mode. For successful pairing, stay in the passenger compartment.

You can pair keyfobs or smartphones with KVANT 2 via Author Flasher.

How to pair keyfobs

If other keyfobs have been paired before, clear the device's memory first before you pair a new one. See Section "How to unpair keyfobs and smartphones".

To pair a new keyfob, follow these steps:

1. Remove batteries from all keyfobs (including those paired with the system).
2. Turn on ignition but do not start the engine.
3. Get authorized.
   If successful, two service indication signals will follow.
4. *Switch* the *device into the Keyfob Pairing mode:*
   4.1 Push the service button and hold it for 10 seconds.
   Service indication will be occurring once per second.

4.2 Release the service button.
4.3 Push the service button five times.
If successful, five service indication signals will follow.
4.4 Push the service button three times.
If successful, three service indication signals will follow.

5. Push and hold the button on the keyfob body.
6. Insert the battery and release the button.
The keyfob LED will be blinking green once per second.
If successful, the LED will blink red once.
If unsuccessful, the LED will stop blinking green in 30 seconds.
7. Go back to Steps 5-6 if you wish to pair another keyfob.
8. Turn off ignition.

How to pair smartphones

Only one smartphone can be paired with KVANT 2 per session.

When launching the application, if a message says that the smartphone does not support the Keyfob mode (Bluetooth Peripheral mode not supported), use an alternative pairing method (the HID mode).

Some smartphone models may be incompatible with KVANT 2.

Classic mode

By default, you pair your smartphone with the device via Author ID in the Classic mode. The advantage of this mode is the high secrecy of operation. The device goes online only during the pairing process, which makes it difficult to track KVANT 2 via radio search devices.

The application is free and available in the App Store and Google Play Store for smartphones operated by iOS (starting from Version 10.2) and Android (starting from Version 5.0).

Download Author ID

To pair a smartphone as a keyfob, follow these steps:

1. Turn on Bluetooth in your smartphone.
2. Launch Author ID.
3. Turn on ignition but do not start the engine.
4. Get authorized.
   If successful, two service indication signals will follow.
5. Switch the device into the Smartphone Pairing mode:
   5.1 Push the service button and hold it for 10 seconds.
   Service indication will be occurring once per second.
   5.2 Release the service button.
   5.3 Push the service button five times.

If successful, five service indication signals will follow.

5.4 Push the service button twice.
If successful, two service indication signals will follow.

6. To pair a new device, click "+" in the upper right-hand corner of Author ID.
7. In the pop-up window, enter the **Bluetooth pairing code** indicated on the inside of the Quick Start manual → confirm the action.
If successful, pairing will be confirmed with two service indication signals.
8. Get back to the main screen.
9. On the main screen of Author ID, click on the key button to enable the Keyfob mode. Once the mode enabled, the button will be highlighted in orange.
10. Turn off ignition.
11. After clicking on the key button, close Author ID. Smartphone authorization is available only if Bluetooth is on.

HID mode

It is an alternative operating mode for the KVANT 2 radio module. You can use it where pairing in the Classic mode is impossible due to technical features of your smartphone. In this mode, the device is constantly on the radio and in search of a paired smartphone.

Before you pair your smartphone in the HID mode, set the relevant operating mode for the radio module. *See Page 13.*

To pair a smartphone as a keyfob, follow these steps:

1. Turn on Bluetooth in your smartphone.
2. Turn on ignition but do not start the engine.
3. Get authorized.
   If successful, two service indication signals will follow.
4. Switch the device into the Smartphone Pairing mode:
   4.1 Push the service button and hold it for 10 seconds.
   Service indication will be occurring once per second.
   4.2 Release the service button.
   4.3 Push the service button five times.
   If successful, five service indication signals will follow.
   4.4 Push the service button twice.
   If successful, two service indication signals will follow.
5. Search for new Bluetooth devices on your smartphone.
6. Select KVANT 2 out of available devices.
7. In the pop-up window, enter the **Bluetooth pairing code** indicated on the inside of the Quick Start manual → confirm the action.
   If successful, pairing will be confirmed with two service indication signals.
8. Turn off ignition.

Unpair keyfobs and smartphones

If you have lost your keyfob or smartphone, unpair it from KVANT 2 for security reasons.

The Two-Factor Authorization mode will be disabled automatically when you unpair all keyfobs and smartphones from the device. In the Anti-carjacking mode, the authorization method will also change to Keyfob or PIN code.

Once you have unpaired your smartphone from the device, disconnect the devices in the smartphone's Bluetooth settings.

To unpair a keyfob or smartphone, follow these steps:

1. Turn on ignition but do not start the engine.
2. Get authorized.
   If successful, two service indication signals will follow.
3. Push the service button and hold it for 10 seconds.
   Service indication will be occurring once per second.
4. Push the service button five times.
   If successful, five service indication signals will follow.
5. Push the service button eight times.
   Eight service indication signals will follow.
6. Push the service button eight times again.
   Eight service indication signals will follow. All keyfobs and smartphones will be unpaired.
7. Turn off ignition.

Unpair smartphones

To unpair smartphones, follow these steps:

1. Turn on ignition but do not start the engine.
2. Get authorized.
   If successful, two service indication signals will follow.
3. Push the service button and hold it for 10 seconds.
   Service indication will be occurring once per second.
4. Push the service button five times.
   If successful, five service indication signals will follow.
5. Push the service button seven times.
   Seven service indication signals will follow.
6. Push the service button seven times again.
   Seven service indication signals will follow. All smartphones will be unpaired.
7. Turn off ignition.

HOW TO SET, CHANGE, OR DELETE THE PIN CODE

The PIN code is a combination of service button pushes, which helps you unblock the engine. The PIN code can include from 2 to 9 pushes. The interval between the pushes must not exceed two seconds. There is no difference between long and short pushes.

You can also set or change your current PIN code by enabling the Two-factor Authorization mode again.

To set or change the PIN code, follow these steps:

1. Turn on ignition but do not start the engine.

2. Get authorized.
   If successful, two service indication signals will follow.
3. Push the service button and hold it for 10 seconds.
   Service indication will be occurring once per second.
4. Release the service button.
5. Push the service button five times.
   Five service indication signals will follow.
6. Push the service button nine times.
   Nine service indication signals will follow.
7. Push the service button twice.
   If successful, two service indication signals will follow. The device will switch into the PIN Change mode while indication will be occurring once per three seconds.
8. Enter the PIN code via the service button. Each button push must be confirmed with an indication signal.
   When the PIN code is entered, 3 service indication signals will follow.
9. Enter the PIN again.
   If the codes match, two service indication signals will follow. The device will save the new PIN code and get back to the main menu, which will be confirmed with five indication signals.
   If the codes do not match, four service indication signals will follow. In this case, repeat Steps 5-9.
10. Turn off ignition.

To delete the PIN code, follow these steps:
1. Turn on ignition but do not start the engine.
2. Get authorized.
   If successful, two service indication signals will follow.

3. Push the service button and hold it for 10 seconds.
   Service indication will be occurring once per second.
4. Release the service button.
5. Push the service button five times.
   If successful, five service indication signals will follow.
6. Push the service button nine times.
   Nine service indication signals will follow.
7. Push the service button once.
   If successful, one service indication signal will follow.
8. Turn off ignition.

ATTENTION! *If the PIN code is not set or deleted, enter the* ***Emergency code*** *to exit the Service mode.* *See Page 33.*

OPERABILITY CHECK

ARMED MODE

If the device is in this mode, it blocks both the engine and access to the engine room until you get authorized. If one attempts to start the engine and drive, the engine will be shut off.

KVANT 2 will switch into the Armed mode automatically in 10 seconds after you turn off ignition. If successful, three indication signals will follow.

If the device is armed and the hood is open, the lock will be shut in 10 seconds after the hood is closed.

To exit the Armed mode, get authorized.

AUTHORIZATION

It is an algorithm helping to disable the engine lock and open the hood lock. Depending on a mode, you can get authorized via a keyfob/smartphone paired with the system and/or the PIN code, with ignition on. If successful, two service indication signals will follow.

Authorization is required each time before starting the engine or driving, depending on a blocking method.

KVANT 2 offers the following authorization modes:

- **Multi-authorization**. Turn on ignition, having a paired keyfob/smartphone on hand, or enter the PIN code.[1]
- **Two-factor authorization**. Turn on ignition, having a paired keyfob/smartphone on hand, and then enter the PIN code.

Emergency authorization process

If it is impossible to get authorized via a paired keyfob/smartphone or PIN code, follow the emergency authorization process. Enter the **Emergency code** indicated on the inside of the Quick Start manual. Enter the code by turning ignition on and off the number of times equal to each digit of the code.

Example:

1. Scratch off the protective layer to reveal the Emergency code. For example, it may be **123**.

1 If the PIN code is set already, see Page 30.

2. Turn on ignition **once**.
3. Turn off ignition and pause for at least five seconds.
4. Turn ignition on and off **twice**.
5. Pause for at least five seconds.
6. Turn ignition on and off **three times**.
7. In five seconds after entering the last digit of the code, two indication signals will follow.

The time period of ignition on and the pause between each turn must not exceed five seconds.

The pause between entering each digit of the code must range from 5 to 15 seconds.

SECURITY FEATURES

Engine blocking

KVANT 2 offers the following algorithms to block the engine:

Algorithm	How it works	How to implement it
Engine Start Inhibit	The device will prevent the engine from starting right after you turn on ignition.	Turn on "Block by ignition" feature by using the algorithm specified on Page 13 or via Author Flasher.
Engine Shut-off	The device will shut off the engine at the start of driving.	Turn off "Block by ignition" feature by using the algorithm specified on Page 13 or via Author Flasher. Set by default.

Algorithm	How it works	How to implement it
Engine blocking by automatic transmission status	The device will block the engine when the automatic transmission selector is shifted from Position P. If "Block by ignition" feature is off while Engine blocking by automatic transmission status is on, you will be able to start the engine, but when you shift the selector from Position P, the engine will be blocked.	1. Select the "Automatic transmission" setting for the yellow-green wire by using the algorithm specified on Page 13 or via Author Flasher. 2. Just connect the yellow-green wire to the automatic transmission selector circuit where "–" occurs when shifting from Position P.

To unblock the engine, get authorized.

Anti-carjacking

The mode helps you prevent any theft attempted by means of force or intimidation. In this case, KVANT 2 will block the engine upon the end of warning indication signals.

Activation stages of Anti-carjacking

1. **Activation**. The algorithm will be enabled if, with ignition on, the driver's door **remains open for longer than three seconds** while the brake pedal **is not pressed** OR if the paired keyfob/smartphone **is not within the device's recognition range for longer than**

10 seconds.[1] In 30 seconds[2] after the start of driving, warning indication signals will start occurring.

2. **Warning**. Increasing warning signals are produced for 30 seconds. For the first 10 seconds, indication is produced only in the passenger compartment, then it is followed by hazard lights. Thus, the device reminds you to exit the mode by getting authorized[3] via a paired keyfob, smartphone, or PIN code. The auxiliary hood lock will also be closed.[4]
3. **Engine blocking**. Upon the end of warning indication signals, the engine will be blocked after holding the brake pedal for longer than five seconds. Restarting will be prohibited until the blocking is disabled.

To unblock the engine after Anti-carjacking is triggered, get authorized via a paired keyfob, smartphone, or PIN code.

Super Anti-carjacking

This algorithm is a specific instance of the Anti-carjacking mode. Under this mode, the engine can be started without authorization. Thus, the owner allows the thief to drive away in a car that will be blocked upon the end of warning indication signals. For more details, see Page 37.

In this mode, authorization occurs while driving (Stage 1 or 2).

1 It depends on Feature "Anti-carjacking trigger event".
2 It depends on Feature "Time before warning indication".
3 It depends on Feature "Authorization method in the Anti-carjacking mode".
4 If installation and connection was implemented.

Activation stages of Super Anti-carjacking

Stages	If the keyfob/ smartphone was present when turning on ignition	If the keyfob/ smartphone was missing when turning on ignition
0.Ignition is on	Two service indication signals will follow.	There are no indication signals.
1.Activation	After the start of driving, a timer is enabled for the start of warning indication signals. The default value is 30 seconds.[1]	
	If the keyfob/ smartphone is inside the passenger compartment, two service indication signals will follow to confirm authorization. The device will reset the algorithm. Now you can continue driving.	
	If not, Stage 2 follows.	
2.Warning	Increasing warning signals are produced for 30 seconds. For the first 10 seconds, indication is produced only in the passenger compartment, then it is followed by hazard lights. Thus, the device reminds you to exit the mode by getting authorized[2] via a paired keyfob, smartphone, or PIN code. The auxiliary hood lock will also be closed.[3]	
3.Engine blocking	Upon the end of warning indication signals, the engine will be blocked after holding the brake pedal for longer than five seconds. Restarting will be prohibited until the blocking is disabled.	

1 It depends on Feature "Time before warning indication".

2 It depends on Feature "Authorization method in the Anti-carjacking mode".

3 If installation and connection was implemented.

To unblock the engine after Super Anti-carjacking is triggered, get authorized via a paired keyfob, smartphone, or PIN code.

Hood lock management

KVANT 2 can manage the hood lock.

- **If an auxiliary electromechanical hood lock is connected to the device**, the lock shuts automatically when you enter the Armed mode (in 10 seconds after you turn off ignition). The hood lock will open when you get authorized.
- **If a yellow-green wire is connected to the device as a hood limit switch**, the lock will not shut if the hood is open, including after entering the Armed mode.

If the device is armed and the hood is open, the lock will be shut in 10 seconds after the hood is closed.

Accelerometer operation

The accelerometer is designed to detect the start of driving, which serves as a signal to block the engine. The accelerometer has five sensitivity levels where two is minimum while five is maximum. The default value is three.

To enable the accelerometer, set the sensitivity value from two to five. See Page 13.

To disable the accelerometer, set the sensitivity value to one. See Page 13.

SERVICE MODE

The mode is designed to disable anti-theft features when taking your car to the service center. With this feature enabled, it is not required to use any paired keyfob/ smartphone or enter any PIN code to start the engine and drive.

To enter the Service mode, turn on ignition, get authorized, and push the service button 10 times no later than two minutes after authorization. Entering the Service mode will be followed by 10 service indication signals.

To exit the Service mode, turn on ignition, get authorized,[1] and push the service button 10 times. Exiting the Service mode will be followed by two service indication signals.

ATTENTION! *If the PIN code is not set or deleted, enter the* ***Emergency code*** *to exit the Service mode.* *See Page 33.*

The device will not exit the Service mode after disconnecting the battery or turning ignition off and on again. If it is impossible to get authorized via a paired keyfob/smartphone or PIN code, enter the ***Emergency code****.* *See Page 33.*

The lock will not shut if the hood is open or KVANT 2 is in the Service mode. The lock is open and does not prevent access to the engine compartment.

1 Since the device is in the Service mode, authorization will not be confirmed with any service indication signals.

SPECIFICATIONS

Current consumption in the Active mode (ignition on)	Not over 10mA
Operating voltage	8V-15.5V
Operating temperature	- 40°C to +80°C
Commutation current of the blocking relay	Not over 10A[1]
Keyfob battery type	CR2032

FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that inter television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.

1 The acceptable short-term increase is up to 20A for no longer than 30 seconds.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

RF EXPOSURE INFORMATION

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.


Manufactured by AUTHOR-ALARM

The developer and manufacturer reserves the right to make technical improvements that are not specified in this manual. For more details, please go to the website:

author-alarm.com

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