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Introduction

Warning! Vehicle security system is a complex technical device that requires special knowledge and experience in conducting of installation work.

Incompetent and unqualified actions may lead to failure of the security system and serious damages to electrical equipment.

Before installing and using the system, please read the user manual.

When reading this manual, pay special attention to the programmable functions and parameters of the security system - for preliminary consideration their feasibility with the installer.

To ensure the efficiency of functions described in this guide, the installer will have to not only to produce programming of their basic parameters, but also to ensure their hardware implementation on the vehicle.

Main system functions

Security system control

✦ Powerful dynamic code with protection against interception and scanning ProLock
✦ System control via the remote key fobs
✦ Possibility of simultaneously programming up to eight remote key fobs
✦ System control via a mobile phone by GSM-channel
✦ System control via a smartphone by GPRS-channel
✦ Control of basic system settings by GPRS-channel
✦ Possibility of direct control from the registered phones
✦ Possible ban on control from the unregistered phones
✦ Emergency arming without the remote key fob
✦ Emergency disarming without the remote key fobs
✦ Programming by a personal computer (USB optional)
✦ Software update by GPRS-channel
✦ Universal automatic CAN-adapter (optional)

Alert and informing functions

✦ Alert the people around about triggering of sensors warning zones
✦ Alert the owner about triggering of system security zones
✦ Alert the owner about failure of GSM-channel control (optional)
✦ Alert the owner about discharge and disconnection of the storage battery
✦ Alert the owner about disarming via a short call
✦ Alert the owner about attempts entering the code from the "foreign" phone
✦ Alert about the critical remaining balance on the system SIM card
✦ Position finding of the vehicle via USSD-service (GSM operator`s optional)
✦ Position location of the vehicle via GPS-module (optional)
✦ Memory of sensor activation for the entire security period

System security functions

✦ Automatic arming
✦ Automatic recovery of arming
✦ Automatic and remote switching of the alarm
✦ Multizone security (up to 20 independent zones)
✦ Built-in three-zone multi-layered acoustic impact sensor
✦ Built-in three-zone multi-layered tilt sensor
✦ Built-in three-zone multi-layered displacement sensor
✦ Three-zone multi-motion sensor (optional)
✦ Remote adjustment of sensor sensitivity
✦ Automatic corrective adjustment of sensor sensitivity
✦ Smart protection against false activation of sensors
✦ Programming of alarm and alert signals
✦ Switching on and off of sensors via a remote key fob or a phone
✦ Diagnostics of the sensors when arming and in the armed mode

Anti-theft system functions

✦ Built-in code immobilizer
✦ Automatic and remote locking of the engine
✦ Protection against forcible car theft with three ways of activation
✦ Simulation program of vehicle's engine trouble
✦ Engine blocking via an integrated power relay
✦ Engine blocking via external N.C and N.O relay

System service functions

✦ Service mode of system operation
✦ "Search" and "Alarm" modes
✦ "Light path" function
✦ Vehicle's interior light
✦ Remote control of the trunk lock
✦ Automatic glass lifting and hatch closing
✦ Turbo timer with manual and automatic start
✦ Control of central door locking by means of ignition, parking and motion sensor
✦ Automatic electric heating of SIM-card and GSM-module

Automatic engine starting

✦ Automatic engine starting on any type of vehicle
✦ Automatic engine starting via a phone or a smartphone
✦ Automatic engine starting by interior temperature or engine temperature
✦ Automatic engine starting at the vehicle battery discharging
✦ Control of engine starting on the tachometer, voltage or on-board network
✦ Universal inputs and outputs of engine starting control

Access to control of the security system

Procedures of the owner identification by entering a personal code are proposed to prevent access to the control system of third-party persons.

Personal code can be used for emergency shutdown of the system, to control the system by phone, to unlock the engine, to reset security programs against car theft, as well as in those cases where it is necessary to produce certain changes in the functions and settings of the system.

Factory setting of personal code is 1111.

Warning! Using the installer is required to reprogram the PIN code from factory settings on any your, individual or personal code.

For maximum efficiency of your vehicle protection, please, ensure confidentiality of your of personal code.

Access modes to system control

One of four different access modes can be used to control the system via a phone:

Access Mode 1 - system control via only registered phones and only after entering of personal code;

Access Mode 2 - system control without entering a personal code (direct control), but only with registered phones;

Access mode 3 - system control with both registered and unregistered phones, but only after entering a personal code;

Access mode 4 - direct system control with registered phones and control with unregistered phones after code entering.

Warning! Access mode 3 is selected in the factory settings. It should be borne in mind that in the case of change of access mode on the 1st or 2nd, you cannot operate the system with the phones, not programmed in its memory.

Arming via a remote key fob

1. Park your vehicle and stop the engine.
2. Leave the vehicle and close all doors, hood and trunk.
3. If required single disable or enable of audio confirmation – press the remote key fob button 🔇.
4. Press the remote key fob button 🔒 - the system will give 1 sound and 1 light signal or only 1 light signal, the engine will be blocked, and door locks will be closed and the system will go into the armed mode - system LED will blink with a frequency of one flash per second.

Note 1: Sound and light signals of confirmation are programmable independently of each other and can be changed by the installer.

Note2: When arming the system can automatically lift the vehicle glasses, close the door and activate other similar devices (option).

Switching off the sensors when arming

1. To switch off the warning zones of sensors is necessary no more than within 2 seconds after arming - press again the remote key fob button 🔒.

2. To switch off the main zones of sensors is necessary no more than within 2 seconds after arming – double press the remote key fob button 🔒.

Diagnostics of sensors when arming

If within 2 seconds after arming, the system submits one long sound signal - the hood is open or hood sensor is defective.

If within 2 seconds after arming, the system submits 2 long sound signals - the door is open or door sensors are defective.

If within 2 seconds after arming, the system submits three long sound signals - the trunk is open or trunk sensor is defective.

If within 2 seconds after arming the system submits 6 short sound signals - the system is out of reliable reception of GSM-network.

Note 1: When you restore the normal state of sensors of doors, hood or trunk they will be automatically switched to the security system.

Note 2: In the case during arming interior lighting is switched off with a delay and block the door sensors - the delay time of sensors diagnostic can be increased by programming. Maximum time is 60 seconds.

Delayed arming of the system

"Delayed arming" function is off in the factory setting. Delayed arming is needed in cases when you want to pick up heavy, awkward or bulky items from the vehicle:

1. Switch off ignition.

2. Open the driver's door.

3. Briefly press the remote key fob button 🔒 - timer of delayed arming will be started: system LED will blink with a frequency of 4 flashes per second.

4. In case of necessity, no more than within two seconds after the first press of the button 🔒, press it even 1 or 2 times to switch off the sensors (see "Switching off the sensors when arming").

5. Close the driver's door and, if necessary, no more than within 10 seconds open the other doors or trunk (can be opened in advance).

6. Close all doors and trunk - after 10 seconds the system will give 1 sound and 1 light signal, close all door locks and go into the armed mode.

Note 1: When the timer expires, and when you press again the button 🔒, the system will go into armed mode even at the opened doors or the trunk. When closing the doors and trunk, they will be automatically switched to the security system.

Note 2: To cancel the delayed arming press the button 🔇, 🔓 or ♡ of the remote key fob or switch on the ignition until the end of timer work.

Arming via a phone

1. Park your vehicle and stop the engine.

2. Leave the vehicle and close all doors, hood and trunk.

3. Call the SIM-card number of the vehicle security system.

4. Enter a personal code in case of necessity.

5. Press the "asterisk" to switch to the remote control mode.

6. Press the button "1" of a phone - the system will arm.

7. In case of necessity switch off the sensor's zones - press button "8".

8. Break the connection (see "Control via a phone").

Note 1: When controlling the security system via a mobile phone - listen to the voice prompts.

Note 2: In the case when arming the doors, hood or trunk will be unclosed - the system will notify by a phone.

Arming of the vehicle with a turbine

When arming the vehicle with a turbocharged engine is necessary to provide capability of its work during certain period of time without a key in the ignition. For this purpose the installer should arrange hardware support of ignition and perform the necessary settings.

Arming

1. Turn on parking or parking brake with the engine running - temporary support of ignition will be activated - system's LED will blink with a frequency of 4 flashes per second

2. Remove the key from the ignition - the engine will continue to run.

3. Leave the vehicle and close all doors and trunk.

4. Press the remote key fob button 🔒 - the system will give 1 sound and 1 light signal, close all door locks and go into the armed mode with the engine running.

5. After the programmed time (in the factory setting is 5 minutes) - the engine will be turned off and the system will go into the armed mode.

Note 1: Turn-off delay of the engine can be programmed in a fairly wide range - from 0 to 30 minutes. Before the end of the turn-off delay time, the system via a phone, can be converted into the standard armed mode or returned to the mode of further operation of the vehicle (see "Security with the engine running").

Note 2: If the car is not turbocharged or cooling of the turbine is not mandatory, the installer can implement a controlled enabling of ignition support for to put the system into the armed mode with the engine running. This mode will allow leaving a vehicle with the engine running for a while without a key in the ignition.

Automatic engine blocking

If you programmatically activate the "Automatic engine blocking" function, then the timer of engine blocking will be started every time after turning off the ignition and opening the driver's door (any door at nonseparated chains) - system's LED will flash at a rate of 4 flashes per second.

Press button ◁x, ⊏ or ◇ of the remote key fob or start up the ignition until the end of the lock timer work to cancel the automatic lock.

The lock system will give short sound signal and block the engine, when the timer expires.

Auto-Arming

If you programmatically activate the "Auto-Arming" function, then the timer of automatic arming will be started every time after turning off the ignition and opening the driver's door (any door at nonseparated chains) - system's LED will flash at a rate of 4 flashes per second.

Press button ◁x, ⊏ or ◇ of the remote key fob or start up the ignition until the end of the arming timer work to cancel the automatic arming.

When the arming timer expires, the system will give sound and light signal, closes the central locking and will arm - LED will blink with a frequency of 1 flash per second.

Note 1: Automatic arming of the system can be performed both with the closing of the central door locking system, and without it - function can be programmed.

Note 2: If the "Automatic engine blocking" and automatic arming are programmatically activated, the Auto-Arming function will be started immediately after the automatic block of the engine.

Emergency arming

If automatic arming of the system is not programmed, and use of remote key fob or mobile phone is not possible by any reason - the system can be armed at a special procedure of emergency arming:

1. Switch off ignition.
2. Open the driver's door.
3. Press and release the button of the contact sensor of driver's door 5 times within 5 seconds - the system will give short sound signal and system's LED will blink with a frequency of 4 flashes per second.
4. Close the driver's door and, if necessary, open other doors or trunk (can be opened in advance) no more than within 10 seconds.
5. Close all doors and trunk - the system will give 1 sound and 1 light signal, closes the door locks and goes into the armed mode after 10 seconds.

Armed Mode

System will give a certain number of short sound signals at activation of the first warning zones of sensors in the armed mode:

1 short signal	- impact sensor;
2 short signals	– tilt sensor;
3 short signals	– displacement sensor;
4 short signals	– motion sensor;
5 short signals	– additional sensor.

The system will send the corresponding voice and SMS-messages to the car owner at discharge of the storage battery of the vehicle below the set level.

The system will send the corresponding voice and SMS-messages when you detach and reattach a standard vehicle battery.

At activation of the second, main zones of sensors, when opening the doors, hood, trunk, and if you turn on the ignition - the system will alarm for 30 seconds and send the corresponding voice and SMS-messages (see "Automatic–transmission of voice messages via GSM".

Press any button on the remote key fob to switch off the alarm.

Note 1: One second after the end or shutdown of the alarm, the system will indicate the cause of activation by the additional sound signals:

1 long signal	– hood was opened;
2 long signals	– door was opened;
3 long signals	– trunk was opened;
4 long signals	– ignition was switched on;
5 long signals	– battery was disconnected;
1 short signal	– impact sensor was tripped;
2 short signals	– tilt sensor was tripped;
3 short signals	– displacement sensor was tripped;
4 short signals	– motion sensor was tripped;
5 short signals	– additional sensor was tripped.

Note 2: In the case of activation of security zones of sensors, information about the actuated sensors will be saved until disarming the system and switching on the ignition to reset the events memory.

Note 3: In the case if system equipped with the control–module the GSM-channel MCG-800, alarm messages will be sent also at loss of the periodic checking of the channel from the module MCG-800. In its turn, the control–module of the channel provides transmission of alarm SMS-messages in cases when the GSM-module of the security system is:
- ✦ out of range of its operator;
- ✦ "busy" by any subscriber more than programmed time;
- ✦ blocked by specialized "GSM-jammer";
- ✦ de-energized, damaged or defective.

Disarming via a remote key fob

1. If necessary single disable or enable of audio confirmation – press button 🔇 of the remote key fob.

2. Press button 🔓 of the remote key fob – the system will give 2 sound and 2 light signals or only 2 light signals, unlocks the central door locking, send the owner of the vehicle GSM-notification about disarming and activates the timer of automatic recovery of arming - system's LED will blink with a frequency of 4 flashes per second.

3. To cancel the automatic recovery of arming, open the door, trunk, switch on the ignition, or briefly press one of the buttons 🔇, 🔓 or ♡ of the remote key fob – system's LED stops flashing.

Note 1: If recovery of arming will not be canceled after 30 seconds, the system automatically returns to the armed mode. The recovery time of arming and the recovery function are programmable.

Note 2: At each disarming, the system produces a short call to the owner, without the need accepting the call by them. Duration of the short call and the function are programmable. Factory setting is 2 seconds.

Note 3: SMS-messages about disarming, as well as voice messages with the mandatory confirmation of message reception by the owner of the vehicle can be programmed in case of necessity.

Note 4: Voice and SMS-messages can be sent as at each fact of disarming system, and only in cases of prior "cocking" of the system by ghost button (any standard or additional button).

Note 5: Opening the second stage of the central door locking is performed by pressing the button 🔓 of the remote key fob after disarming the system.

Note 6: Sound and light confirmation signals are programmable independently of each other and can be changed by the installer.

Note 7: If alarm events were recorded during the arming mode - the system will give additional sound signals within 2 seconds after disarming:

|	
1 long signal	– hood was opened;
2 long signals	– door was opened;
3 long signals	– trunk was opened;
4 long signals	– ignition was switched on;
5 long signals	– battery was disconnected;
1 short signal	– impact sensor was tripped;
2 short signals	– tilt sensor was tripped;
3 short signals	– displacement sensor was tripped;
4 short signals	– motion sensor was tripped;
5 short signals	– additional sensor was tripped;
6 short signals	– connection problems with the GSM operator.

Note 8: To reset the events memory is necessary to disarm the system, open the door, turn on and turn off the ignition.

Disarming via a phone

In case the remote key fobs are missing, defective or for whatever reason, cannot be used - the system can be disarmed by the mobile phone:

1. Call the SIM-card number of the vehicle security system.

2. Enter a personal code, in case of necessity.

3. Press the "asterisk" to switch to the remote control mode.

4. Press button "2" of a phone - the system disarms.

5. Press again button "2" to open the central locking system.

6. Break the connection (see "System control via a phone").

Note 1: When controlling the security system via a mobile phone - listen to the voice prompts.

Note 2: When disarming the system via a phone, confirming sound and light signals are not given.

Note 3: When disarming the system via a phone, the function of automatic recovery of arming is not activated.

Emergency disarming the system

In case the remote key fobs and mobile phone are missing, defective or for whatever reason, cannot be used - the system can be disarmed by the procedure of emergency disarming:

1. Open the door by the standard key - the alarm mode will be switched on.

2. Ignoring the alarm, enter a complete personal code - the system will give 2 sound and 2 light signals and disarms - system's LED stops flashing (see "Entering a personal code").

Entering a personal code

Personal code can be entered as via the ignition switch and the LED, and through the ignition switch, LED and the remote key fob:

1. Turn on the ignition - in a second, system's LED indicator will begin digit-by-digit counting the numbers of a personal code by short flashes.

2. After the flash, corresponding 1st digit of the code, press button ♡ of the remote key fob or switch off the ignition - LED will start to count the second digit.

3. After the flash, corresponding 2nd digit of the code, press button ♡ of the remote key fob or switch on the ignition - LED will start to count the third digit.

4. After the flash, corresponding 3rd digit of the code, press button ♡ of the remote key fob or switch off the ignition - LED will start to count the fourth digit.

5. After the flash, corresponding 4th digit of the code, press button ♡ of the remote key fob or switch on the ignition - the personal code is entered.

Example of emergency entry of the personal code - 6795

1. Turn on the ignition and start to count the LED flashes.

2. After the sixth flash (the first digit of the code - 6) switch off the ignition - LED will start to count the second digit.

3. After the seventh flash (the second digit of the code - 7) turn on the ignition – LED will start to count the third digit.

4. After the ninth flash (the third digit of the code - 9) switch off the ignition– LED will start to count the fourth digit.

5. After the fifth flash (the fourth digit of the code - 5) turn on the ignition.

Code unblocking of the engine

If "Personal code when disarming" function is programmatically activated, then every time after disarming the system to unblock the engine will be needed to enter the first digit of a personal code.

By correctly entering the first digit of the code - the engine is unblocked and the LED, for conspiracy, will finish a series of flashes after 10th flash.

If the first digit of the code will be entered incorrectly, the engine unblocking can be made only by entering a full personal code.

Control with the ignition on

Remote key fob button 🔒 – closing the central door locking
Remote key fob button 🔓 – opening the central door locking (two stage)
Remote key fob button 🔈x – supply a short light signal (0.2 seconds)
Remote key fob button ♡ – code entry / remote control / alarm on
Switching off the alarm is carried out by pressing any remote key fob button.

Automatic control of the central door locking

Central door locking can be automatically closed, depending on the produced program settings by the installer:

✦ 4 seconds after the switching on the ignition;
✦ when motion sensor is triggered;
✦ when you turn off the parking brake;
✦ when you turn off the parking.

Central door locking can be automatically opened:

✦ when you turn off the ignition;
✦ when turn on the parking brake;
✦ when you turn on the parking

Note: Functions of automatic central door locking are disabled at open doors to avoid damage to locks.

Protection against forcible theft

Protection program against forcible car theft is designed to protect the vehicle and its owner after disarming the system and engine unblocking.

AntiHiJack from the driver's door

The function would require entering the first digit of a personal code after each door opening and subsequent switching on the ignition.

Function is cocked when you open the door. When the ignition is switched - LED indicator lights up and the program is started to prevent the forcible theft.

To reset the program, press the remote key fob button ♡ set number of times (determined by the first digit of the code) - LED indicator turns off.

If after a set time protection program is not reset, the system will simulate a gradually increasing in duration failures of the engine.

At this stage it is still possible to reset the program by entering the first digit of a personal code.

If protection program will not be reset, failures of the engine gradually lead to a complete stop engine and the inability to re-start engine.

Message: "Alert! Armed assault!" will be sent to the second phone number for SMS-messages in this case.

The engine will be blocked before the appointed time at any stage of work of the protection program when ignition switching off or when you enter the wrong first digit of a personal code.

Reset of the protection program against forcible car theft after the final engine blocking can be achieved only by entering a complete personal code (see "Entering a personal code").

Note 1: In order that AntiHiJack function from the driver's door is cocked just from the driver's door, the installer should necessarily share the control circuits of driver and passenger doors.

Note 2: Delay time of simulation of engine failure can be programmed in a wide range - from 5 seconds to 10 minutes. AntiHiJack function from the driver's door is programmatically disabled in the factory settings.

AntiHiJack from the ghost button

The function assumes performance of certain actions by the vehicle owner to activate and reset program for the protection against forcible car theft.

You can use two different versions of the vehicle protection and its owner against forcible car theft: active and passive protection.

Active protection: In the event of any danger or threat from third parties should be enabled any standard or additional electrical equipment, pre-determined by the installer, like "ghost button". When the ignition is switched on - LED indicator lights up and the program starts protection against forcible car theft. If "ghost button" is already activated when the ignition on - protection program will start immediately.

Passive protection: After turning off the ignition should be enabled any standard or additional electrical equipment, pre-determined by the installer as "ghost button" and only after that come out of the car. When you return to the car, if there is no potential danger or threat from third parties, switch off the equipment, defined as "ghost" before turning the ignition. If the ignition is turned on without switching off "ghost" - LED indicator lights up and the program starts protection against forcible car theft.

Note 1: Operation of "AntiHiJack from the ghost button" program and methods of its reset are the same as described earlier in the section "AntiHiJack from the driver's door".

Note 2: Theft protection program can be run as when you turn on "ghost equipment", and when it is turned off (programmable).

Note 3: Function «AntiHiJack from the ghost button" is programmatically enabled in the factory settings. Delay time of failure simulation is 30 seconds.

AntiHiJack by GSM-channel

With the ignition on (engine running) program of protection against forcible car theft can be started and reset via a phone:

1. Call the SIM-card number of the vehicle security system.

2. Enter a personal code in case of necessity.

3. Press the "asterisk" to switch to the remote control mode.

4. Guided by the voice prompts, press button "3" to activate or deactivate the protection AntiHiJack program or button "4" - for instant engine blocking.

5. Break the connection (see "System control via a phone").

Note: Operation of "AntiHiJack by GSM-channel" protection program and methods of its reset are the same as described earlier in the section "AntiHiJack from the driver's door".

Reservation of engine starting

For vehicles with manual gearbox and not turbocharged engine, remote and automatic engine start is possible only after arming with **reservation of starting:**

1. Turn on parking or parking brake with the engine running.

2. Press and hold the remote key fob button ⌂ for one second – central door locking opens and the system's LED starts flashing with the a frequency of 4 flashes per second.

3. Remove the key from the ignition - the engine will continue to run.

4. Leave the vehicle and close all doors and trunk.

5. Press the remote key fob button ⌂ - central door locking closes and the system's LED will start flashing with a frequency of 1 flash per second.

6. When the delay time of switching off the engine expires (in the factory setting is 5 minutes) - the engine is turned off and the system goes into the armed mode with reservation of the subsequent engine starting.

Note 1: Turn-off delay of the engine can be programmed in a fairly wide range - from 0 to 30 minutes. Until the end of delay time, the system can be transferred into the standard armed mode or returned to the mode of further operation of the vehicle.

Note 2: If you are installing a "zero" delay - the engine will turn off immediately by closing the central door locking. In this case, it will be impossible to leave the car with the engine running for some time without a key in the ignition.

Note 3: Cancel a reservation of engine starts is performed automatically when you open any of the vehicle doors.

Engine starting via a remote key fob

Remote engine start is possible only in armed mode. For vehicles with manual transmission and not turbocharged engine remote, engine start is possible only after arming with reservation of engine starting (see "Reservation of engine starting").

1. Briefly press the remote key fob button ♡ - the system will give sound signal, and will switch on turn signals or parking lights for 5 seconds.

2. Not later than 5 seconds, briefly press the remote key fob button ⌂ - the system will give short sound signal, produces an engine starting and goes into the armed mode with the engine running - turn signals will flash briefly.

Note 1: The system will be in the armed mode with the engine running for a time programmed by the installer. For an early engine stalling is necessary to press the remote key fob button ⌂ while holding.

Note 2: If engine starting will not be possible for any reason - the system will give 3 short sound signals and send the vehicle owner a SMS-message with information about starting problems.

Engine starting via a phone

Remote engine start is possible only in armed mode. For vehicles with manual transmission and not turbocharged engine remote engine start is possible only after arming with reservation of engine starting (see "Reservation of engine starting").

1. Call the SIM-card number of the vehicle security system.

2. Enter a personal code in case of necessity.

3. Press the "asterisk" to switch to the remote control mode.

4. Guided by the voice prompts, press button "4" - the system will produce engine starting and goes into the armed mode with the engine running.

5. Break the connection (see "System control via a phone").

Note: If engine starting will not be possible for any reason – the system send the car owner a corresponding SMS-message.

Automatic engine starting

Automatic engine starting is possible only in armed mode. For vehicles with manual transmission and not turbocharged engine automatic engine starting is possible only after arming with reservation of engine starting (see "Reservation of engine starting").

Engine starting by temperature of the engine

The system provides the possibility of organizing an automatic engine starting for its warm-up during the cold season. The installer should mount the special temperature sensor on the cylinder block and to program the lower temperature threshold for the engine starting for this function implementation.

Recommended time of engine operation for its warm-up is 20 - 30 minutes.

Note: Automatic engine starting by temperature is not programmed in the factory settings of the system.

Engine starting by interior vehicle temperature

The system provides the possibility of organizing an automatic starting the engine to warm-up of interior in the cold season and for cooling in summer. The installer should fix the special temperature sensor in the interior vehicle and to program as the lower and upper thresholds of interior temperature for the engine starting for this function implementation.

Note 1: If the external temperature sensor is not connected, engine starting will be carried out by the built-in temperature sensor of the system.

Note 2: Automatic engine starting by interior vehicle temperature is not programmed in the factory settings of the system.

Engine starting for battery charging

Possibility of sending voice and SMS-messages about discharge of the car battery is provided in the armed mode. The threshold of the battery voltage must be programmed to implement the sending of these messages.

The recommended threshold for sending messages about low battery is 11,75V.

The system also provides the possibility of organizing of automatic engine starts to recharge the regular car battery. The lower threshold of battery voltage for engine starting must be programmed to implement such engine starts.

The recommended threshold for automatic engine start is 12,25V.

By lowering this threshold residual battery capacity may be insufficient for reliable starting engine, and with increasing this threshold - will be significantly increased the frequency of engine starts to recharge the battery.

Recommended time of engine operation for battery charging is 20 - 30 minutes.

Note: Sending messages about low battery and engine starting to recharge the battery is not programmed in the factory settings.

Security with the engine running

In the case of automatic or remote start of the engine, as well as in the case of activation of "Delay of engine stalling" function, the system will be in a special mode of operation "Security with the engine running".

This mode provides automatic support for the ignition in the turned on state without a mechanical or electronic key in the lock.

Central door locking, door and trunk can be opened and closed without disarming the system and engine stalling by means of the remote key fob or the phone.

Especially for the security mode with the engine running there are additional, third zones of impact, tilt, displacement and motion sensors.

At activation of the third zones of sensors, at unauthorized opening of the doors, hood, trunk, or when you turn off the parking brake (parking) - the engine will be instantly switched off, the alarm will be turned on, as well as the corresponding voice and SMS-messages will be sent, and the system goes into the regular armed mode.

In the case of software and hardware implementation of the relevant functions, the engine is switched off at heating above 110 degrees, at dangerous increase of the idle speed and at emergency drop of oil pressure.

The system can be in the armed mode with the engine running for a time, pre-programmed by the installer.

After the set time the engine will be turned off, the system will give 1 sound and 1 light signal and switch to the normal armed mode.

The system can be switched from the security mode with the engine running into the armed mode or returned to the vehicle operation mode at any time.

Transition of the system to the armed mode via a remote key fob

Press and hold the remote key fob button for one second 🔒 - the system will give short sound signal, switch off the engine and goes into the normal armed mode.

Transition of the system to the armed mode via a phone

1. Call the SIM-card number the vehicle security system.
2. Enter a personal code in case of necessity.
3. Press the "asterisk" to switch to the remote control mode.
4. Press button "4" of a phone to turn off the engine.
5. Break the connection (see "System control via a phone").

Transition into vehicle operation via a remote key fob

1. Press the remote key fob button 🔓 to open the central door locking - system's LED will start flashing with a frequency of 4 flashes per second.
2. Not later than 30 seconds - open the driver's door.
3. Insert the key into the ignition and turn it to "On" position.
4. Switch off the parking (parking brake) or click the remote key fob button, while holding 🔓 - support of ignition is turned off and the system's LED turns off.

Transition turn into vehicle operation via a phone

1. Call the SIM-card number the vehicle security system.
2. Enter a personal code in case of necessity.
3. Press the "asterisk" to switch to the remote control mode.
2. Press button "2" of a phone to open the central door locking system.
5. Break the connection (see "System control via a phone").
6. Not later than 30 seconds - open the driver's door.
7. Insert the key into the ignition and turn it to "On" position.
8. Switch off the parking (parking brake) or click the remote key fob button, while holding ⌂ - support of ignition is turned off and the system's LED turns off.

System control via a remote key fob

The system allows remote start and engine stop, trunk opening, interior lights turning on, dipped beam turning on, control of window lifters, sunroof drive and other similar devices. The installer will have to ensure their hardware implementation on the vehicle.

1 In case of necessity of single disable or enable of audio confirmation: - press the remote key fob button ◁x.

2. Briefly press the remote key fob button ♡ - the system will give a short sound signal (if it is not turned off), and the turn signals will be turned on for 5 seconds (parking lights).

3. Not later than 5 seconds - briefly press one of the remote key fob buttons:

Button ⌂ – automatic engine starting/turning on the interior light
Button ⌂ – trunk opening/turning on the interior light
Button ◁x – activation of an additional channel 1/turning on the interior light
Button ♡ – turning on the interior light / activation of an additional channel 2

Note 1: Buttons ⌂, ⌂ and ◁x controls: engine starting, trunk opening and an additional channel 1, and if any of these functions is not implemented, then the interior light. Button ♡ controls interior light or additional channel 2.

Note 2: Activation of the actuators can be performed automatically - when arming or disarming security system and semi-automatically - when arming or disarming security system by holding the remote key fob buttons.

Note 3: Interior light is automatically activated when you open the door, and in alarm mode in the phase opposition duplicate parking lights. Interior light turns off when arming and at ignition starting. With the ignition on, interior light turns off when the doors are closed.

Note 4: At remote trunk opening in the armed mode, trunk, impact, tilt, displacement, motion and additional sensors are blocked for 30 seconds and for all time during which the trunk is opened. 10 seconds after closing the trunk is activated the output "Closing the central door locking", and after 2 seconds all sensors are unblocked.

"Search" and "Alarm" modes

To find the actual location of the car parking briefly press the remote key fob button ♡ – the system will give sound signal and parking lights will be turned on for 5 seconds. In case of preliminary pressing of the button ◁x – sound signal is not fed.

To activate the "Alarm" mode, press and hold the remote key fob button ♡ for one second - for the next 30 seconds will be flashing parking lights and siren sound continuously. Premature switching off the alarm is performed by pressing any remote key fob button.

The alarm can be switched on and off and through phone:
1. Call the SIM-card number the vehicle security system.
2. Enter a personal code in case of necessity.
3. Press the "asterisk" to switch to the remote control mode.
4. Press button "3" to activate or deactivate the alarm.
5. Break the connection (see "System control via a phone").

Service mode of system operation

The service mode is designed to temporarily disable the security and anti-theft functions when transferring the vehicle to a third party.

The service mode can also be used if the remote control key fob and mobile phone are missing or defective.

The remote control key fob allows you to control only those systems and devices of the car that are not associated with security and anti-theft functions in the service mode of system operation.

Switching on the service mode by phone:

1. Call the SIM-card number the vehicle security system.
2. Enter a personal code in case of necessity.
3. Press the "asterisk" to switch to the remote control mode.
4. If the system is arming - press button "2" to disarm.
5. Press button "2" to open the central door locking in case of necessity.
6. Press button "2" of a phone to activate the service mode.
7. Break the connection (see "System control via a phone").

Switching off the service mode by phone:

1. Call the SIM-card number the vehicle security system.
2. Enter a personal code in case of necessity.
3. Press the "asterisk" to switch to the remote control mode.
4. Press button "1" of a phone to deactivate the service mode.
5. Break the connection (see "System control via a phone").

Note: If the phone is defective or for any reason fails to use it, the service mode can be emergency activated.

Emergency activation of the service mode:

1. Initial state: the system is disarmed.
2. Open the hood and leave it open.
3. Enter a full personal code (see "Entering a personal code) - the system will give 3 short sound signals.
4. Close the hood - the system will give 6 short sound signals and goes into the service mode.

Emergency deactivation of the service mode:

1. Open the hood and leave it open.
2. Enter a full personal code (see "Entering a personal code) - the system will give two short sound signals and exit the service mode.
3. Close the hood, in case of necessity.

Control in the service mode:

Button 🔒 –central door locking closing
Button 🔓 –central door locking opening (two stage)
Button 🔇 – supply of a short light signal (0.2 seconds)
Button ♡ – code entry / remote control

Note! System's LED indicator will light up for 5 seconds at each turn on and off the ignition in the service mode.

Automatic transmission of voice and SMS messages via GSM

If the system registers the activation of the first warning zones of impact, tilt, displacement, movement, or an additional sensor - the- system will alert surrounding by supplying short sound signals.

If the system registers the activation of sensors of doors, hood, trunk, activation of the second or third zones of impact, tilt, displacement, movement or additional sensors, discharge or disconnecting the battery, switching on the ignition or engine starting - the- system will send the corresponding SMS-messages to the pre-programmed phone numbers, and call the number of the owner and told him about the events in voice mode.

After receiving a voice message, the vehicle owner will have to confirm its reception by pressing the "asterisk" - the system will automatically break connection.

If the message reception is not confirmed by the owner - system organizes a call the next programmed telephone number.

Total 3 numbers for voice messages can be programmed in the system and for each number can be made 3 attempts to dial.

Note: When receiving an alarm voice message, the vehicle owner may either confirm the reception by an "asterisk" or switch to the remote control mode of the system (listen to voice prompts).

Remote control of system state

If the system registers the activation of various sensors, as well as in the case of any other dangerous situations - the system will send GSM-messages to the pre-programmed phone numbers.

You can call to phone numbers of the system's SIM-card on your own initiative. The system, depending on the access mode, or reset the call, or ask for a personal code, or immediately begin to generate voice messages in a circle describing its current state and offer to make a choice:

"To enable or disable the messages - press 0"
"To check the account - press 1"
"To send a SMS about the location of the vehicle - press 2"
"To send a MMS about the location of the vehicle - press 3"
"To send a SMS about the location of the vehicle by GPS - press 4" (optional)
"To send the service message – press 6"
"To enable the microphone - press 8"
"To enter the remote control mode – press "asterisk"
"To activate the program mode – press "grid"

Note 1: Service message contains the name and model of the system, software version, IMEI GSM-module, temperature of internal and external sensors, as well as the number of remote key fobs pre-programmed in the system.

Note 2: In the listening mode of interior, button "7" of a phone reduces the sensitivity of the microphone, and button "9" - increases. Button "0" of a phone disables the listening mode.

System control via a phone

1. Call the SIM-card number the vehicle security system.
2. Enter a personal code in case of necessity.
3. Press the "asterisk" to switch to the remote control mode.
4. Perform the necessary actions following the voice prompts.
5. Break the connection at the end of the remote control session.

Warning! Be careful when entering a personal code. In case of an error when entering the code, the system will break the connection and send to the phone of the owner SMS containing the phone number from which is produced the wrong code entry.

In case of three errors when entering a personal code, the system will send SMS to the vehicle owner about an attempt to code selection and block code entry for 1 hour. After 1 hour, the system unlocks the entry code for a single attempt, after 2 hours - for two attempts, after 3 hours - for three attempts.

Unlock code entry is possible and ahead of schedule. For this purpose simply enter a personal code via the ignition switch and LED indicator.

Note: If the mistakes are made when entering the code from the phone of the car owner, the SMS-message about errors are not sent.

Programming of the system's GSM-module

1. Call the SIM-card number the vehicle security system.

2. Enter a personal code in case of necessity.

3. Press "#", the system will go to the programming mode and offer to program phone numbers for alerts and customer-service numbers.

4. If necessary programming of this or that number - press the proposed button. If the selected button is already programmed for any number - the system will offer to remove it and to program another number.

5 Enter full phone number in international format or abbreviated USSD-number of customer service and press "grid".

6. When pressing "grid", the system will speak the entered phone number and offer to program numbers the following.

7. At the end of the programming session - break the connection, or press "asterisk" to return to the remote control mode.

Note 1: The phone numbers are entered in the international format without the symbol «+»: 38067×××××××; 38050×××××××; 38063×××××××; etc.

Note 2: Service number for checking balance funds in your account of the SIM-card of the security system is determined by GSM-operator serving this SIM-card.

Note 3: Service numbers for sending a report on the location of the vehicle are entered in the event that the phone operator supports location services of your own phone and sending locations to another phone number. These service numbers are determined by GSM-operator.

Note 4: If the operator of the system's SIM-card does not support the location service of your own phone, you can use the location service of "friend." For this purpose, you must firstly install the system's SIM-card in any additional telephone, arrange an order of service from the phone of the vehicle owner, and allow continuous monitoring of your location from an additional phone.

The factory setting of service numbers: «∗111»; «∗145∗1∗»; «∗145∗1∗1∗».

Adjustment of sensors sensitivity

The system is equipped with a three-zone impact, tilt and displacement sensors.

The system can also be equipped with a three-zone motion sensor.

The first zones of sensors are designed to provide warnings of surrounding by supplying short sound signals.

The second zones of sensors are designed to recording all kinds of effects on the vehicle, turning on the alarm and sending the alarm GSM-messages.

The third zones of sensors are designed to provide full protection of the vehicle in the "Security with the engine running" mode. There is an instantaneous switching off of the engine and transition of the system into the standard armed mode with the activation of the alarm and sending the alarm GSM-messages at activation of the third zones.

Sensitivity adjustment via a remote key fob:

1. Initial state - the armed mode is enabled.

2. To enter the adjustment mode, press and hold a certain pair of the remote key fob buttons to the first, second or third flash of the remote key fob's LED - the system will give 1, 2 or 3 sound signals and goes into adjustment mode of the first, second or third zone of selected sensor:

🔒 and ⚡	–	impact sensor
🔒 and 🔇	–	tilt sensor
🔓 and 🔇	–	displacement sensor
🔓 and ⚡	–	motion sensor

3. Press the remote key fob button 🔒 to increase or button 🔓 – to decrease the sensitivity of the regulated zone - sensitivity change is confirmed by supply of short sound signals.

4. Test the sensitivity of the sensor by corresponding action. Apply few control impacts to the vehicle body (for adjustment impact sensor), make few jacking (for adjustment of tilt sensor) or movements of the vehicle (for adjustment of displacement sensor) or make few movements in the interior or in the vicinity of the vehicle (for adjustment of motion sensor) - the system will give short sound signals at activation of the regulated zone. If necessary, repeat the adjustment (point 3)

5. Press the remote key fob button ⚡– the system will give 3 sound signals, remembers new sensitivity level of the regulated zone and exits from the adjustment mode.

Note 1: If during adjustment of the sensor, the sensitivity of its zones will reach limit levels - the system will give long sound signals.

Note 2: If during adjustment of the sensors within three minutes will not press any button - the system will automatically exit from the adjustment mode.

Sensitivity adjustment via a smartphone:

Adjustment of sensor sensitivity by a smartphone (by GPRS-channel) allows independent adjustment of the sensitivity of each of the three zones of impact, tilt, displacement and motion sensors.

Control of the security system via a smartphone also provides the possibility of rapid differential switching off and on of any zones of sensors with preservation of their sensitivity.

Automatic adjustment of sensitivity:

Sensitivity of precisely this particular zone will be automatically decreased at activation of one or another zone of this or that sensor.

Sensitivity zones will decrease to such levels at which the false activations of sensors are minimized. Incremental restoration of sensitivity of "understatement" zones of the sensors will occur at reduction of the noise level. So, if for some zones within 15 minutes will not be recorded activations at higher sensitivity levels, the system will automatically come back to these levels.

Restoring the level of sensitivity of sensor's zones will occur up to the levels set while adjusting via remote key fob or smartphone.

System control via GPRS-channel

1. Do the programming your phone number, as the first number for the SMS-messages in system (cell 4 in voice menu – programming mode).

2. Activate GPRS-packet of data transmission on the system's card.

3. If Access Point Name (APN) to the Internet differs from **www.kyivstar.net** - send to the system's number SMS: **1111 SET APN www…** , where **www…** – new Access Point Name (APN) of your GSM operator, and where **1111** – a personal code of the system

4. Send to the system's number SMS: **1111 SET KEY 1234**, where **1111** – a personal code of the system; **1234** – a random encryption key (Think of yourself up to 6 digits).

5. Send to the system's number SMS: **1111 GPRS ON**, where **1111** – a personal code of the system.

6. Go from your smartphone on **the Play Market or App Store**, install and run the application **MAGNUM GSM car alarm system**.

7. Add car with mandatory input of IMEI and private key encryption, corresponding to sent in the SMS: **1111 SET KEY 1234.** IMEI system can be obtained by requesting the service message. To do this, call to the system number, enter a personal code and press the number "6". After a time you will receive a SMS containing a 15-digit IMEI code system

Note: The system confirms acceptance and implementation of correct SMS-commands by applying two short sound signals.

Software update

1. Do the programming your phone number, as the first number for the SMS-messages in system (cell 4 in voice menu – programming mode).

2. Activate GPRS-packet of data transmission on the system's card.

3. If Access Point Name (APN) to the Internet differs from **www.kyivstar.net** - send to the system's number SMS: **1111 SET APN www…** , where **www…** – new Access Point Name (APN) of your GSM operator, and where **1111** – a personal code of the system

4. If the system has not yet been activated GPRS-channel – send to the phone number of the system SMS: **1111 GPRS ON**, where **1111** – personal code of the system.

5. Disarm the system and cancel the automatic recovery of security.

6. Exit the programming and remote control mode.

7. Send to the system's number SMS: **1111 UPDATE d26**, where **d26** – software version, and where **1111** – a personal code of the system. Information on the current software version can be found at: **magnum.org.ua**

8. The system will give a short sound signal - beginning of the firmware upgrade.

9. During upgrade (approximately 90 seconds) is necessary to ensure a reliable and stable power of the system and does not produce any actions with it - the system will give two short sound signals after completion of upgrade.

Note 1: If during the upgrade occur any failure - the system will give 5 short sound signals, rollback to the previous firmware and send a message to the first SMS-number.

Note 2: Upgrading within the same version (d1 → d2 → d9 ...) occurs with saving all settings and can be done on the installed system.

Note 3: Upgrading to a new version of firmware with a change in the name of the letter (d32 → e1) occurs with a full reset to factory settings.

Note 4: If GPRS-channel will not be used for system control - it is recommended to send to the system's number SMS: **1111 GPRS OFF.**

Complete set of Magnum M880 system

1. Central unit of Magnum M880 .... 1 pcs.
2. Remote key fobs .... 2 pcs.
3. Main wiring harness, 24 wires, 1500 mm .... 1 pcs.
4. Wiring harness of engine starting, 6 wires, 1500 mm .... 1 pcs.
5. LED indicator with a cable 1400 mm .... 1 pcs.
6. GSM-antenna with a cable 2000 mm .... 1 pcs.
7. Microphone with a cable 1500 mm .... 1 pcs.
8. Temperature sensor with a cable 2000 mm .... 1 pcs.
9. Operating manual of Magnum M880 .... 1 pcs.
10. Installation Guide of Magnum M880 .... 1 pcs.
11. Packaging .... 1 pcs.

*manufacturer reserves the right to make changes to the component parts of product

Terms of warranty

1. Installation and configuration of the vehicle security system (hereinafter - product) must be carried out only by qualified service staff.

2. Person or organization who installed the product, are responsible for the accuracy and quality of the installation and configuration of all parameters of the product.

3. The warranty card is valid only with correctly and clearly filled data: model, serial number, date of sale, date of installation, stamps and signatures of the selling and installation company, as well as the signature of the buyer.

4. Warranty obligations do not cover batteries, fuses, microphones, antennas, cables, as well as housing and other parts of the product, wearing during operation.

5. Warranty obligations do not cover SIM-cards, quality of cellular communication and additional services of mobile operators. Choice of the mobile operator, the availability of funds on the account and other matters of organization of GSM-communication user performs independently.

6. Warranty obligations and free maintenance service are carried out on the territory of Ukraine. The manufacturer does not carry out the movement of goods across the borders of the country. Warranty service in other countries is provided by the official dealers of product manufacturer in these countries.

7. The warranty does not provide compensation for direct or indirect damages, losses or damages related to the assembly and dismantling works, as well as transporting the product for repair.

8. "MCC" LLC is not responsible for any damages directly or indirectly caused to people or their property in cases when this has happened as a result of non-compliance with the rules and conditions of use, installation of the product, intentional or careless actions of the buyer (consumer) or third parties.

9. Warranty obligations will be void and the product is removed from the warranty and service in the following cases:

9.1 opening, repair or modifications of the product have been carried out by any organization or persons who do not have this authority;

9.2 mechanical damages, traces of water or any other active media are found on the product or any of its individual elements;

9.3 product damage is caused by violation of the terms and conditions of the installation and operation of the product contained in the product manual;

9.4 product damage is caused by electrical voltage or currents exceeding the standards, claimed by the manufacturer in the product manual;

9.5 damage is caused by force majeure, accidents, intentional or careless actions of the consumer or third parties.

Warranty obligations

Warranty service is 12 months from the date of installation (sale)

Free maintenance service is 60 months from the date of release

(assuming of product purchase in an authorized sales center)

Under the free maintenance service is understood obligation of the manufacturer to correct deficiencies (defects) of the product, arisen on fault of the manufacturer, free of charge from the consumer (product buyer).

Release date of the product is indicated on packaging and recorded by the manufacturer on IMEI of the GSM-module of the security system

Counterfoil for warranty or service maintenance:

Problem Description _____

Performed works _____

_____

Performer _____ Date _____ Signature _____

Warranty Card

Name of security system	Serial number of the product	Date of sale	Date of installation

Following additional equipment produced by "MCC" LLC is installed with the vehicle security system:

- ☐ GPS-module _____
- ☐ Motion Sensor
- ☐ External microphone

Name of Trade Organization and (or) installation center:

_____

Performer _____ Date _____ Signature _____

Aware of the warranty obligations terms: Stamp here

Date _____ Signature _____