

StarLine

A9, AS9, B9

Security-telematic system

User manual


EAC

CE

Contents

General description	9
Specifications	12
Light and sound indication	15
Complex control using the remote key	16
Value of remote key pictograms	18
Main control commands from the remote key	20
Cursor menu	22
Operation modes	24
"Security on" mode	24
"Alarm" mode	26
"Panic" mode	26
"Anti hijack" mode	27
"Slave" mode	28
"Hands free" mode	28
Service mode	28
"Drive prohibition" function	29
"Engine starting" function	30
Function "Engine starting preheater"	33
Function "Turbotimer"	35
GSM control commands	36
Change of settings	39
Emergency security deactivation	40
Emergency security deactivation	44
Change of owner authorization code	47
Owner authorization code	49

Please, read attentively!

Prior to operation of the security complex carefully read this manual paying special attention to the sections marked  and determine whether this security complex is suitable for your car, for which following the car manufacturer's requirements and the car operation manual.

If you could not determine whether this security complex can be installed on the car, return it to the seller within 14 days after purchase.

The security complex is a complicated technical device implying connection to the car circuits related to engine operation.

The security complex should be installed only by specially trained qualified specialists.

Mounting, programming, maintenance, repair and disassembly-assembly of the security complex shall not be carried out by persons who are not qualified specialists and have not passed training and knowledge test in safety rules.

During security complex parameter programming, the set parameters should not contradict the requirements of the car operation manual.

The user bears full responsibility for damage incurred to people, animals and assets as a result of inappropriate use of the security complex or use with violations of the safety requirements specified in this manual.

The manufacturer shall should not be responsible for losses and injuries caused by failure to observe the safety rules and requirements outlined in this manual.

To avoid possible misunderstandings, keep the documents enclosed to the security complex at sale. Check filling-in of the warranty slip, include the date of sale and seller's stamp. If there is no sale (purchase) date, the warranty period is counted from the date of security complex manufacture.

If your security complex has a remote key or a wireless tag:

- Do not carry the remote key or tag on the same bundle with the car keys
- Always switch over the complex to the service mode when handing the car over for maintenance or washing. Do not hand tags and remote keys over to third parties to prevent unauthorized access to security functions
- Do not leave remote key or tags in areas accessible to children and animals
- Do not let liquids ingress the remote key
- If the remote key display shows an icon warning about remote key battery discharge, take timely measures to replace the battery.
- Store the spare battery in the car in the factory packing



The full electronic version of the manual is available on the website help.starline.ru.

Mandatory safety measures during use of the engine starting function

It should be borne in mind that the car is a source of extra hazard.

Before security complex operation, carefully study the measures for safe use of the function of remote or automatic engine starting outlined below:

1. Always park the car on an open, well ventilated area;
2. Always apply the car's parking brake, which shall be operable and prevent car movement;
3. Leaving the car, be sure to set the automatic transmission control lever to the "PARK" position, and the manual gearbox changeover lever – to the neutral position;
4. If your car has a manual gearbox, prior to activating the function of remote or automatic engine starting, be sure to perform the procedure of preparation for engine starting – "program neutral";
5. Never hand over the security complex control remote key to children and other persons without their preliminary study of the operation manual;
6. Before activating the function of remote or automatic engine starting:
 - make sure the car is operable;
 - make sure there is a sufficient amount of fuel, oil, cooling fluid etc;
 - set the operation parameters of the passenger compartment heater (air conditioner), window heating and other accessories to the required levels;
 - set the passenger control ventilation regulator to air circulation, which will allow more efficient warming or cooling of air in the car.

Safety precautions during charging of your car's storage battery

Remember that any battery charging process implies supply of voltage exceeding the rated 12 V to the storage battery and accordingly to the car circuit, which may damage the car electronic equipment and additional installed equipment in your car.

Do not use charging and starting/charging devices for storage battery charging directly on the car without disconnecting the storage battery terminals from the car circuit in the following modes:

- rapid charging by increased current ("boost" or similar modes)
- various START modes intended for engine starting
- in the storage battery 24 V charging mode

Never use starting and charging devices for engine starting without a connected storage battery and with connected inoperable storage batteries (short circuits in banks, breakage of plates etc.)

Never use inoperable charging devices, 24 V charging devices and devices not intended for storage battery charging, e.g., welding invertors.

All the aforesaid devices and modes may cause uncontrolled supply of increased voltage over 25 V and up to 60 V to the car circuit and cause failure of the electronic components of the security complex and car equipment.

The light-up method should not be used for storage battery charging. Even the described "safe" light-up methods are safe only for the "donor" car. Connection and disconnection of a fully discharged or inoperable storage battery on your car with the engine operating may cause failure of the electronic devices of your car and the car alarm due to a short circuit or surges of increased voltage occurring during storage battery connection and disconnection.

If the aforesaid devices and modes are used, the car owner shall be responsible for damage of the electronic equipment.



Observe the technology for safe storage battery charging!

Before charging, the storage battery terminals shall be disconnected from the car circuit. After that the storage battery charging process can be started. After charging, connect the storage battery to the car circuit.

This is necessary because without measuring devices you cannot determine storage battery operability or status and the reason of its discharge (internal short circuits or breaks). Any connection of the charging device to an inoperable storage battery causes the risk of damage of the car electronic equipment and the security complex by increased voltage.

Main terms used in the manual:

Service code — the code is given on the owner's plastic card. It is used for entry in the StarLine Master application.

Code of emergency security deactivation — the code is given on the owner's plastic card. It is used for emergency security deactivation.

Owner authorization code (owner's code) — the code is given in the corresponding section of this manual (page 48). It is used for owner authorization by means of the standard car buttons.

GSM-password — password for access to complex control by means of SMS-command and voice menu from guest telephone numbers.

Personal account — the user's personal account on the website starline.online, where security complex control and parameter changing are available.

General description

Security telematic complexes **StarLine A96** and **StarLine A66** (hereinafter the complex) are intended for vehicle protection from theft and armed assault. The set of functions depends on the combination of modules installed in the complex (ask the setting specialist).

The functions of automatic and remote engine starting are available for the **StarLine A96** complex.

Depending on the installed modules, the complex is controlled by means of a remote key, SMS commands, voice menu, wireless tag, from the StarLine and StarLine Key mobile application or from the personal account on the website starline.online. To enter the personal account use the login and password given on the owner's plastic card included in the delivery set.



The **868 MHz module** should be installed for complex control by means of the remote key.

The **Bluetooth Smart module** should be installed for complex control by means of the tag (or use of a smartphone as a tag).

The **GSM module** shall be installed for complex control by means of SMS commands, voice menu, from the StarLine mobile application and the personal account on the website starline.online, GLONASS+GPS antenna should be installed for track reception.

The **2CAN+2LIN module** should be installed for use of the "Drive prohibition" function (page 29).

Main advantages:

- operation in the “Slave” mode (page 28) (security mode activation or deactivation using the standard car remote key);
- driver identification by means of the wireless tag or smartphone via the Bluetooth Smart protocol;
- connection of wireless underhood unit StarLine R6 for control of the hood locks, horn and engine blocking;
- additional owner authorization by means of a wireless tag, smartphone or entry of the secret code by means of the standard buttons;
- a dialogue code of StarLine control with individual 128 bit encryption keys, guaranteeing reliable protection from all known code grabbers;
- the possibility to install the 2CAN+2LIN module for reception of statuses and control via the CAN bus;
- remote and automatic engine starting;
- temporary deactivation of the standard immobilizer using the iKEY technology (via the digital CAN and LIN buses) or Fortin and iDataLink module control;
- remote control of engine prestart heating devices;
- determination of transport vehicle coordinates, speed and movement direction;
- determination of driving parameters, driving style;
- monitoring of car parameters (mileage, error codes, mains voltage etc);
- automatic data transmission to the monitoring server;
- data recording and storage in the non-volatile memory (“black box”). The event log contains information on tracks for the last 1000 kilometers at driving in the city and 5000 — on the highway and on 13000 events;
- control of functions and display of parameters on the monitoring server and in the StarLine mobile application;
- high-sensitivity GLONASS+GPS module;

- the service button combined with the LED indicator of system status;
- the special StarLine Master program, used for individual setting of the complex depending on owner's wishes and car's peculiarities.

Specifications

Main unit

Parameter	Value
Interfaces	<ul style="list-style-type: none"> • Up to 28 channels (if the analogue channel module is installed): <ul style="list-style-type: none"> - 2 relays with a full group of contacts for central lock control (NC, NO, common), 10 A - 2 positive outputs for connection of turn signals, 7.5 A - 1 positive output for horn connection 3 A - 13 negative outputs of OC (open collector) type, 0.3 A - 2 negative outputs of OC (open collector) type, 0.3 A – if the CAN-LIN module is installed - 1 frequency input for connection of the engine speed signal - 2 positive inputs - 1 universal input with programmable polarity - 3 negative outputs - 6 additional universal inputs with programmable polarity (if the analogue channel module is installed) and 2 negative outputs of OC (open collector) type • a connector for starting module connection • a connector for connection to digital car buses (2 CAN and 2 LIN) (*) • a connector for the GLONASS/GPS antenna (**) • a connector for the LED button • a connector for the engine temperature sensor
Supply voltage	8-16 V
Operating temperature range	from -40 °C to +85 °C

(*) — if the 2CAN+2LIN module is installed in the main unit

(**) — the GLONASS/GPS antenna can be connected only if the GSM module is installed in the main unit

2CAN+2LIN module

Parameter	Value
Interfaces	<ul style="list-style-type: none"> • CAN — 2 • LIN — 2 • Alternative output — 2
Supply voltage	8...16B
Operating temperature range	from -40 °C to +85 °C

868 MHz transceiver module

Parameter	Value
Operating frequency	868.7...869.2 MHz
Antenna type	external, SMA jack
Remote key control range	up to 1500 meters (*)
Range of notification to the remote key	up to 2000 meters (*)
Encryption protocol	AES 128
Supply voltage	3V
Operating temperature range	from -40 °C to +85 °C

(*) — communication range depends on many factors: atmospheric conditions, terrain features, security complex installation location and presence of obstacles to radio signals.

Bluetooth Smart module

Parameter	Value
Operating frequency	2.4 GHz
Antenna type	built-in
Operational range	up to 10 meters (*)
Encryption protocol	AES 128
Supply voltage	3V
Operating temperature range	from -40 °C to +85 °C

(*) — communication range depends on many factors: atmospheric conditions, terrain features, security complex installation location and presence of obstacles to radio signals.

GSM module

Parameter	Value
GSM standard	900-1800 MHz
Antenna type	built-in
Data transmission service	GPRS
Number of SIM	one
Supply voltage	8...16V
Operating temperature range	from -40 °C to +85 °C

GLONASS/GPS antenna

Parameter	Value
GPS/GLONASS receiver sensitivity	-148 dBm — "cold" start -163 dBm — "hot" start -165 dBm — in the tracking mode
Supply voltage	5V
Operating temperature range	from -40 °C to +85 °C

(*) — the GLONASS/GPS antenna can be connected only if the GSM module is installed in the main unit

Light and sound indication

The security complex informs about its status by means of sound (horn) and light signals (turn signals)

● — short signal

▬ — long signal

Event	Light signals	Horn
Security activation	●	●
Security activation with security zone breach	● ● ● ●	● ● ● ●
Security activation with deactivation of "Hands free"	●	● ▬
Security activation with deactivation of "Hands free" mode with security zone breach	● ● ● ●	● ● ● ● ▬
Security deactivation	● ●	● ●
Security deactivation (one of the zones was violated in the security cycle)	● ● ●	● ● ●
Alarm	30 s	30 s
Warning level alarm	● ● ● ● ● ●	● ● ●
Panic	10 s	10 s
Exit from service mode	● ●	● ●

Complex control using the tag



The presence of a tag depends on the set of the complex



The tags, which are included in set, are initially in transport mode, in which they are disabled! Pressing the tag button in this mode will be indicated by the green and red flashes of the built-in LED.

Before operating, it is necessary to press the tag button several times before changing the color of the flashes to green.

Testing for a connection

To test if the tag is connected to the main unit, press the tag button short. If there is a connection, the LED lights up in the color corresponding to the set mode:

- green — «Anti-hijack by the tag» mode is disabled;
- red — «Anti-hijack by the tag» mode is enabled;
- yellow — service mode.

Complex control

Duration of pressing the tag button:

- short — press and release the button, then a flash corresponding to the current mode of operation will follow;
- long — hold the button until the LED flashes. The duration of depression can be of two levels:
 - 1 level — hold the button until a long flash of the LED corresponding to the current mode of operation appears;
 - 2 level — press and hold the tag button, followed by two short flashes and one long one, and again a series of short flashes — release the button.

Command	Duration of pressing
Arm / Disarm	1 short
Enable / Disable «Anti-hijack by the tag»	long (1 level)
Enable / Disable Service mode	long (2 level)

Replacing the tag's battery

If the tag's battery is discharged, then when the ignition ON 3 sounds of the buzzer will sound and an SMS will be sent to the owner number.

We recommend that you replace the battery as soon as possible.

To replace the battery with a neatly flat metal or plastic object (metal ruler, thin plastic) open the tag body and, observing the polarity (as pictured in the photo), install the battery in the compartment. Before closing the tag body, install a waterproof seal between its parts. After installing the battery in the tag, the complex is ready for operation.



Complex control using the remote key

The complex (depending on the set) includes two remote keys:

- remote key with LCD display (liquid-crystal display):

Security-telematics complexes StarLine A9



Security-telematics complexes StarLine B9



The service life of the LCD remote key battery is up to 4 months depending on operation conditions. Use a battery of AAA type for the LCD remote key.

- additional remote key



The service life of the battery of the additional remote key is up to 1 year depending on operation conditions. Use a battery of CR2032 type for the additional remote key.

The main and additional remote keys have identical cryptographic robustness. Both remote keys transmit control commands using the dialogue algorithm of data exchange, which prevents smart electronic break.

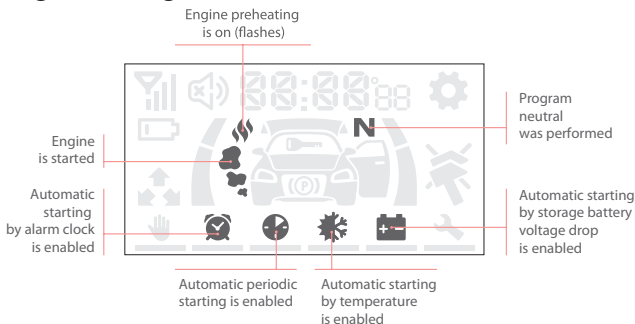
The information on current status of the security complex is transmitted to the main remote key and shown on the display. The additional remote key does not have notification functions, it is intended only for transmission of the main control commands.



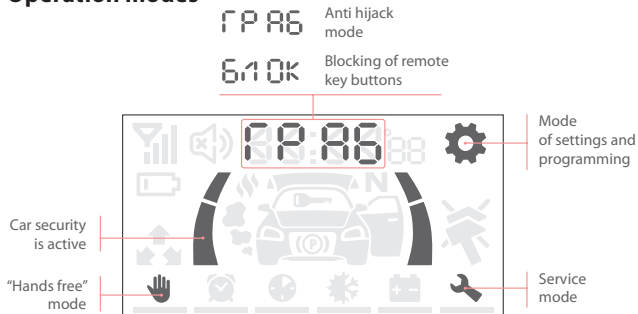
The remote key with LCD is used in the “Slave” mode.

Value of remote key pictograms

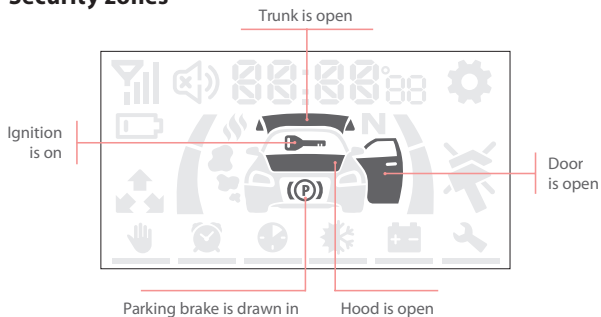
Engine starting



Operation modes



Security zones



Sensors

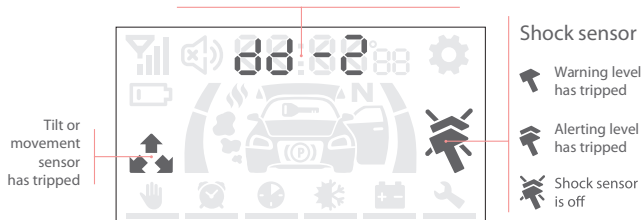
Sensor has tripped

dd - 1 Additional sensor 1

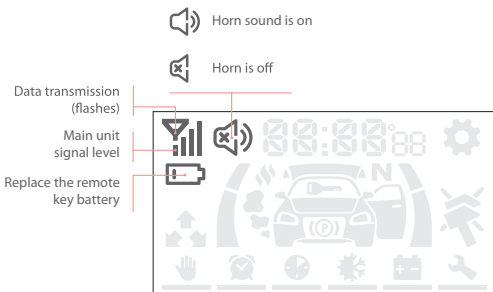
dd - 2 Additional sensor 2

↑ + dH Tilt sensor

↑ + dd Movement sensor











Additional information




































Main control commands from the remote key

This manual uses the following terms of duration of pressing on the remote key buttons:

Short pressing	<p>One pressing of the button (or two buttons at the same time) with duration less than 1.5 second</p> <p>Example: 1 — short pressing of the first button; 23 — short simultaneous pressing of buttons 2 and 3</p>
Long pressing	<p>Pressing and holding of a button or two buttons until a melodic sound signal and a vibration signal. Two levels of long pressing are provided:</p> <ul style="list-style-type: none"> • Long pressing of the first level — long pressing of the button until the first sound signal; <p>Examples: 1  — long pressing of the first button; 12  — long pressing of the first and second button</p> <ul style="list-style-type: none"> • Long pressing of the second level — long pressing of the button until the second sound signal; <p>Examples: 4  — long pressing of the fourth button of the second level</p>


Double pressing	Two pressings of one button within 1 second; Example:   — double pressing of button 1
Successive pressing	Two pressings of one or different buttons. The first pressing shall be long (of the first or second level), the second pressing shall be short. The first button should be released before the second pressing. Example:    — successive pressing of buttons 2 and 1

Main control commands from the remote key:

Command	Combination of buttons
Activate security	
Deactivate security	
Request passenger compartment temperature, engine temperature and storage battery voltage	
Start the engine	 
Stop the engine	 
Switch on the pre-start engine heater	  
Switch off the pre-start engine heater	  
Car search on the parking lot	 
Switch on/off the shock sensor	  
Switch on/off the tilt and motion sensor	  
Activate the "Panic" mode	 
Unlock the trunk	 
Activate automatic starting	Cursor menu
Activate/deactivate the service mode	Cursor menu
Activate/deactivate the "Hands free" mode	Cursor menu
Activate/deactivate button blocking	 
Activate the remote key vibration signal only	  
Activate the remote key sound and vibration signal	  

Cursor menu




Some functions of the security complex are controlled from the cursor menu: control of the "Hands free" mode, service mode, setting of automatic engine starting.




Entry and exit from the menu is performed by long holding of button 4 of the first level: **4** . If the remote key buttons are not pressed for 15 seconds, automatic exit from the menu will be performed.

At entry in the menu, the cursor will be set to the first pictogram. Transition to the next and previous menu item is performed by short pressing of buttons **1** or **4** accordingly. A function is selected by short pressing of buttons 2 and 3: **23**. Parameter value is changed by pressing buttons **2** or **3** (increase accordingly).

In case of long holding of the button, the rate of parameter value change increases. Transition to menu items, parameter change and exit from the menu will be confirmed by a melodic sound signal.

The description and control of the settings are given in the table.

Pictogram	Parameter	Description	Setting step
	"Hands free" mode	Activate/deactivate the "Hands free" mode	—
	Automatic starting by alarm clock	Set hours and minutes of engine starting	1 minute
	Automatic starting by timer	Set engine starting periodicity in hours	1 hour

Pictogram	Parameter	Description	Setting step
	Automatic starting by temperature	Set a temperature value in degrees Celsius	1 °C
	Automatic starting by voltage	Set the value of storage battery voltage in Volts	0,1 V
	Service mode	Activate/deactivate the service mode	—

The information on the additional remote key settings is available in the electronic manual on the website help.starline.ru.

Operation modes

Security modes	Security on
	Security off
	Anti hijack
	Alarm
	Panic
Additional modes	Slave
	Hands free
	Service mode
	Device registration mode
	Telematic setting mode

The security modes protect the car against theft.

The additional modes are intended for setting of the complex parameters (telematic setting mode), adding of new devices (device registration mode), deactivation of protective functions for car handover for maintenance (service mode) and convenient complex control ("Slave" mode, "Hands free" mode).

"Security on" mode

The following zones are monitored in the "Security on" mode: ignition, doors, trunk, hood, shock sensor, tilt sensor, movement sensor, additional sensor. If a zone is violated, the complex will set to the "Alarm" mode (page 26).



Security activation is performed only with the ignition off.

If a security activation command is sent with the ignition on, only closing of the central lock will be performed.

Security activation is performed by one of the following methods:

- short pressing on remote key button **1** ;
- by SMS-command **11**;
- by command **11** from the voice menu;
- from the StarLine mobile application;
- from the personal account on the website starline.online;
- by activation of standard system security in the "Slave" mode (page 28);
- in case of tag loss or touch of the door handle sensor in the "Hands free" mode (page 28);
- by single pressing on the tag button in the "Security off" or "Alarm" mode.

The complex will confirm successful security activation by one sound signal and one flash of light emergency alarm.



If the doors, hood, trunk are not properly closed, the parking brake is not tightened, the brake pedal is pressed or one of the limit switches of the doors, hood, trunk is faulty (constantly closed), the complex will warn thereof by 4 sound signals and 4 flashes of light signals.

Restore the violated security zone and check presence of a single confirmation signal on switchover to the security mode.

"Security off" mode

Security deactivation is performed by one of the following methods:

- short pressing on remote key button **2** ;
- by SMS-command **10**;
- by command **10** from the voice menu;
- from the StarLine mobile application;
- from the personal account on the website starline.online;
- deactivation of standard system security ("Slave" mode);
- in case of tag detection or touch of the door handle sensor ("Hands free" mode);
- by single pressing on the tag button in the "Security on" mode.

Successful security deactivation will be confirmed by 2 sound signals and 2 light signals. If the "Alarm" mode was activated during security,

3 sound signals and 3 flashes of light signals will follow.

After complex security deactivation, the remote key screen will display all the events which occurred during the security.



After security deactivation, if no actions are taken, the complex will automatically set to the “Security on” mode and close the central lock in 30 seconds.

“Alarm” mode

The “Alarm” mode is activated at violation of any zone in the “Security on” mode. The complex will switch on sound alerting by the horn and light emergency alarm for 30 seconds and will notify the owner (telephone call, remote key, SMS-message, notification in the mobile application). If the zone is not restored, the complex will repeat the alarm cycle once more.

If a warning zone is violated, 3 light signals and 3 long horn signals will follow.

The “Alarm” mode is reset without security deactivation by a short pressing on remote key button **1** or **2**.



ATTENTION! The maximum number of zone actuations is limited to 8 repetitions per 1 security cycle.

“Panic” mode

The “Panic” mode is intended to ensure safety of the owner and car.

This mode is activated by owner’s command by a double pressing on remote key button 1: **1 1** or SMS-command **19**. Upon command reception the complex activates sound alerting by the horn and emergency light alarm for 10 seconds to attract the attention of nearby persons.

“Anti hijack” mode

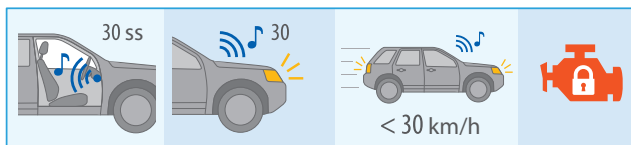
The “Anti hijack” mode is intended for driver protection against

assault during driving.

The mode is activated by one of the following methods:

- by SMS-command **31**;
- by command **31** from the voice menu;
- from the StarLine mobile application;
- from the personal account on the website starline.online

Upon command reception the complex will issue warning signals of upcoming engine blocking by the horn and light emergency alarm for 30 seconds. At speed decrease below 30 km/h the engine will be blocked.



Exit from the “Anti hijack” mode and engine unblocking is performed by one of the following methods:

- SMS-command **30 xxxx**, where xxxx – is the code of emergency security deactivation is given on the owner’s plastic card;
- by entering the code of emergency security deactivation given on the owner’s plastic card, by means of the service button;
- from the StarLine mobile application. It is necessary to enter the code of emergency security deactivation given on the owner’s plastic card;
- from the personal account on the website starline.online. It is necessary to enter the code of emergency security deactivation given on the owner’s plastic card.



Operation of the “Anti hijack at tag loss” mode is described in the electronic manual on the website help.starline.ru

“Slave” mode

The “Slave” mode allows for complex control by means of the standard

alarm remote key.

In this mode, additional owner authorization by presence of the tag or LCD remote key is used. At deactivation of standard alarm security, the complex checks presence of the tag in the identification zone. If the tag is found, car security is deactivated.

If the tag (remote key) is not found within 10 seconds, the complex will set to the "Alarm" mode (page 26).

"Hands free" mode

The "Hands free" mode is intended for automatic control of security activation/deactivation according to tag presence.

When the tag is present near the car, security deactivation is performed automatically. When the tag disappears from the visibility zone, the complex sets to the "Security on" mode.

The "Hands free" mode can be activated or deactivated by means of the remote key (cursor menu), SMS-command (71 or 70 respectively), a command from the voice menu, from the mobile application or personal account on the website starline.online

Service mode

The service mode is intended for temporary deactivation of security functions and prohibition of access to complex settings. It is recommended for the maintenance period.



The service mode can be activated only from the "Security off" mode near the car.

Switchover to the service mode is performed by one of the following methods:

- in the remote key's cursor menu by selecting the corresponding item;
- holding of the tag button for 5 seconds;

- by SMS-command **51**;
- by command **51** from the voice menu;
- from the StarLine mobile application;
- from the personal account on the website starline.online

Switchover to the service mode will be confirmed by yellow indication of the tag LED.



ATTENTION! In the service mode, transition to the other additional modes is prohibited!

Exit from the service mode is performed by one of the following methods:

- in the remote key's cursor menu by selecting the corresponding item;
- holding of the tag button for 5 seconds;
- by SMS-command **50**;
- by command **50** from the voice menu;
- from the StarLine mobile application;
- from the personal account on the website starline.online

“Drive prohibition” function

Use of the “Drive prohibition” function prohibits driving without additional owner identification.

Additional authorization is performed by entering the code of owner authorization (page 49) using the standard car buttons (for instance, the multimedia control buttons on the steering wheel, window raiser control buttons) at each security deactivation. The code is entered **with the ignition switched-off**.

If the owner authorization code is not entered, then if an attempt at driving is made, the engine will be blocked for 1 minute or until entry of the owner authorization code (page 49).

“Engine starting” function (only for StarLine A96)

The starting function allows for remote and automatic car engine starting/stopping.

Preparation of a car with manual transmission for remote and automatic engine starting

Before engine starting, perform the procedure “program neutral”:

- apply the parking brake with the engine operating. The LED on the service button will light up;
- take the key out of the ignition lock. The engine will continue operating;
- leave the car, close the doors, trunk, hood and send the “Security activation” command. The engine will be stopped;
- the complex will set to the security mode;
- the “N” pictogram will appear on the remote key;
- the complex is ready for remote and automatic engine starting.




If the door is opened or ignition is switched on after fulfillment of the “program neutral”, remote and automatic engine starting will be canceled until the next execution of the “program neutral” algorithm.

Preparation of a car with automatic transmission for remote and automatic engine starting

Make sure the automatic transmission selector is in the “Parking” position.

Engine starting

Remote engine starting is performed by one of the following methods:

- by long pressing on remote key button 1 ;
- by SMS-command 21;
- by command 21 from the voice menu;
- from the StarLine mobile application;
- from the personal account on the website starline.online

Automatic engine starting can be performed according to one of the conditions:

- according to temperature value. Engine starting at engine temperature decrease below the specified value.

The temperature value is set in the cursor menu on the remote key, in the StarLine application or in the personal account on the website starline.online;

- according to value of storage battery voltage. Engine starting at storage battery voltage decrease.

The voltage value is set in the cursor menu on the remote key, in the StarLine application or the personal account on the website starline.online;

- periodic. Engine starting with the preset operation period after the preset recurrent time interval.

The interval and period are set in the cursor menu on the remote key, in the StarLine application or the personal account on the website starline.online;

- by alarm clock. Engine starting at the preset time.

Engine starting schedules are set in the cursor menu on the remote key, in the StarLine application or the personal account on the website starline.online.



The minimum time of engine operation at remote starting is 10 minutes. It can be changed in the personal account on the website starline.online or in the StarLine mobile application.




ATTENTION! Automatic engine starting will not take place if less than 1 hour has passed after the last start or the previous automatic start has failed.

Upon drive completion, automatic engine starting is possible not earlier than 5 minutes after engine stopping.

Engine stopping

The engine is stopped if:

- remote key button 2 is pressed for a long time ;
- the owner sent a command (SMS-command 20, command 20 from the voice menu, command from the StarLine mobile application or from the personal account on the website starline.online);
- the “Alarm” mode is activated (page 26);
- the car has started moving;
- the hood is open;
- the parking brake is off (for cars with manual transmission);
- the automatic transmission selector was switched over from the “Parking” position (for cars with automatic transmission);
- the brake pedal is pressed.

Car driving continuation after remote engine starting

To continue driving the car, without stopping the engine after remote starting, do as follows:

- **for cars with ignition lock:**
 - deactivate complex security;
 - insert the key into the ignition lock, turn it to position “Ignition on” and start moving;
 - the LED on the service button will go out at movement start,

pressing of the brake pedal or parking brake release;

- **for cars with START/STOP button:**

Several options are possible depending on the car and complex connection method:

- **first variant (*):**

- deactivate complex security;
- hold the brake pedal for 3 seconds;
- the LED on the service button will go out, after which movement can be started (the START/STOP button need not be pressed);

- **second variant (*):**

- deactivate complex security;
- press the START/STOP button 1 or 2 times (*);
- the LED on the service button will go out, after which movement can be started.



ATTENTION! (*) Ask the installation specialist during mounting about the connection method of your complex and the operation algorithm.




Function “Engine starting preheater”

The function allows for engine preheating before starting. The starting preheater can be controlled both in the manual and automatic mode.

Manual mode

In the manual mode the starting preheater is switched on/off by a command.

The starting preheater can be switched on by one of following methods:

- successive pressing of remote key buttons    ;
- by SMS-command **221**;
- from the StarLine mobile application;
- from the personal account on the website starline.online.





Time of preheater operation in this mode is 20 minutes. It can be changed in the personal account on the website starline.online or in the StarLine mobile application.



ATTENTION! If the starting preheater has normal settings, differing from those set in the personal account, operation time may differ from the specified one.

Operation can be prolonged by sending a repeated command for starting preheater switch-on.

The starting preheater can be switched off by one of following methods:

- successive pressing of remote key buttons   ;
- by SMS-command **220**;
- from the StarLine mobile application;
- from the personal account on the website starline.online.

Automatic mode



The automatic mode is activated by the installation specialist during complex setting after mounting.

In the automatic mode the starting preheater is switched on before operation of engine remote and/or automatic starting. If engine temperature before remote or automatic starting is less than specified, the starting preheater will be started. The engine will be started after engine warm-up to the preset temperature (during automatic starting) or upon expiry of the preset time.

The starting preheater is switched off upon expiry of the specified time or reaching of the switch-off temperature threshold.

Time of preheater operation in this mode is 10 minutes. Operation can be prolonged by manual sending of a repeated command for starting preheater switch-on.

Operation time and switch-off temperature threshold of the starting preheater can be changed in the personal account on the website starline.online or in the StarLine mobile application.

Function “Turbotimer”

Use the function “Turbotimer” for turbocharged cars for engine turbine cooling.

Activate the function as follows:

- apply the parking brake with the engine operating. The LED on the service button will light up;
- take the key out of the ignition lock. The engine will continue operating;
- leave the car, close the doors, trunk, hood and activate the “Security on” mode;
- the engine will be stopped when the turbine cools down.



Turbine cooldown time is calculated automatically and depends on engine speed before the drive end.

The maximum turbine cooldown time is 5 minutes.

GSM control commands



Complex control by means of GSM commands is only possible if the GSM module is available.

The telephone number, from which the first call to the complex number was made, will be recorded automatically as the owner's main number. All commands from this number are sent without a GSM-password. To send commands from other numbers, a password shall be entered in the beginning of the command text (for instance, send the following SMS-message for security activation "1234 11", where 1234 — GSM password, 11 — command number).

The GSM-password is set from the owner's main number at the first call.

The control commands are given in the table.

SMS command text	Command meaning
10	Deactivate security
OXPAHA- (SECURITY-)	
O-	
11	Security activation
OXPAHA+ (SECURITY+)	
O+	
12	Security activation without shock sensor
13	Security activation without an additional sensor
14	Security activation without preliminary level of the shock sensor

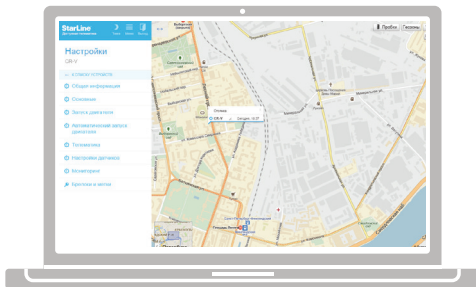
SMS command text	Command meaning
15	Security activation without tilt sensor and motion sensor
19	Activation of the "Panic" mode
ПАНИКА	
PANIC	
20	Remote engine stopping
ДВИГАТЕЛЬ- (ENGINE-)	
Д-	
D-	
21	Remote engine starting
ДВИГАТЕЛЬ+ (ENGINE+)	
Д+	
D+	
220	Switch off of the starting pre-start engine heater
221	Switch on of the starting pre-start engine heater
30 xxxx	Deactivation of the "Anti hijack" mode, where xxxx is the code of emergency security deactivation is given on the owner's plastic card
АНТИ- xxxx (ANTI-)	
A- xxxx	
31	Activation of "Anti hijack" mode
АНТИ+ (ANTI+)	
A+	
40	Car coordinate request
GPS	

SMS command text	Command meaning
41	Car state request
АВТО (AUTO)	
СОСТОЯНИЕ (STATE)	
AUTO	
45	Request about the state of GSM/GPRS connection and balance data
БАЛАНС	
ДЕНЬГИ	
BALANCE	
MONEY	
50	Deactivation of the service mode
СЕРВИС- (SERVICE-)	
G-	
S	
51	Activation of the service mode
СЕРВИС+ (SERVICE+)	
G+	
S+	
70	Deactivation of the "Hands free mode"
РУКИ- (HANDS-)	
P-	
R-	

SMS command text	Command meaning
71	Activation of the "Hands free mode"
РУКИ+ (HANDS+)	
P+	
R+	

Change of settings

Change of user settings is available in the personal account on the website starline.online



Registration of remote keys, tags and smartphones

Use the “Device registration” mode for registration of new remote keys, tags and smartphones.



To prevent unauthorized adding of new components, entry in the device registration mode is possible only from the “Security off” mode.



ATTENTION! Tags and smartphones shall be registered in one cycle. At registration of new tags and smartphones all previous tags and smartphones will be deleted from memory. It will be necessary to register them again. In total, up to 5 devices can be registered in the complex.

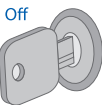


ATTENTION! When new remote keys are registered, all previous remote keys will be deleted from the memory. It will be necessary to register them again. In total, up to 4 remote keys can be registered in the complex.

Entry in the device registration mode

1) Deactivate complex security.

2) Switch off ignition (if it is on).



3) Press the service button 7 times.

Press
7 times



- 4) Switch on the ignition. 7 light signals on the service button will follow.

On



Confirming
signals will follow

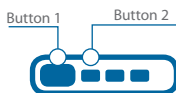
- 5) Entry in the registration mode will be confirmed by 2 short LED signals..

2 times



Remote key registration

- 1) Press the remote key buttons 1 and 2 shortly.



- 2) In 3 seconds, successful registration will be confirmed by a short sound signal of the remote key and 2 LED signals. If the remote key was not registered, 4 sound signals of the remote key will follow.

2 times



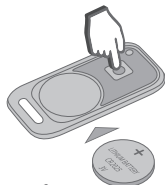
- 3) Perform items 1 and 2 for each remote key.

Tag registration

1) Remove the battery from the tag.



2) Press and hold the tag button and install the battery. The tag LED will light up red.



3) Release the button and check presence of a series of red flashes for 10 seconds.



4) Successful registration will be confirmed by a green flash and 2 LED signals. If the tag was not registered, the LED will light up red.



5) Repeat items 1-3 for the remaining tags.

Smartphone registration

- 1) Register the smartphone using the StarLine mobile application (see the application menu "Smartphone as a tag").



Exit from the device registration mode

Exit from the device registration mode is performed automatically in 5 minutes or at ignition switch-off.

Exit from the "Device registration" mode will be confirmed by 2 LED signals and by signals the number whereof corresponds to the total number of registered remote keys, tags and smartphones.

After registration, an SMS message with the list of registered devices will be sent to the owner's telephone.



Emergency security deactivation

If the tag was lost, the tag or remote key battery has discharged, there is no access to the mobile application or the "Anti hijack" mode is on, use the code of emergency security deactivation given on the plastic card.

The screenshot shows a web interface with the following elements:

- Login:** A text input field.
- Password:** A text input field.
- Code of emergency security deactivation:** A text input field highlighted with an orange oval.
- Service code:** A text input field.
- Text:** "The login and password for entering the personal account on the website www.starline-online.ru"
- Technical support phone, toll free in Russia:** 8-800-333-80-30

Do the following to deactivate complex security:

- 1) Switch on the ignition. The "Alarm" mode is activated.
- 2) Press the service button the number of times corresponding to the first digit of the code of emergency security deactivation.

On

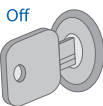


Press
X times



X - the first digit
of the code
of emergency
security deactivation

- 3) Switch on ignition or wait for 5 seconds. The LED on the service button will light up, the number of flashes will correspond to the ordinal number of the digit of the code of emergency security deactivation (1,2, 3 or 4 times).



- 4) Switch on the ignition.



- 5) Repeat items 2-4 for the remaining code digits.

If the code of emergency security deactivation is entered correctly, 3 short sound signals of the horn and 3 flashes of light signals will follow. The complex will set to the "Security off" mode.



If the code of emergency security deactivation is entered incorrectly 3 times, the possibility of repeated code entry will be blocked for 15 minutes and an SMS-notification will be sent to the owner's telephone.

An attempt at digit entry will be indicated by 5 LED flashes.

Example of entry of code 5342

	on	Alarm				off	on	off	on	off		
Ignition												
Press the service button		5 times			3 times			4 times				
Flashes of the service button			1 time		23 times							

	on		off		on	3 times
Ignition						
Press the service button		2 times				3 times
Flashes of the service button			4 times			

Change of owner authorization code

The owner code is used for user authorization by means of the standard car buttons (page 49).

Do as follows to change the owner authorization code:

1) Deactivate complex security.



2) Switch off ignition (if it is on).



3) Press the service button 7 times.



4) Switch on the ignition. 7 light signals of the LED on the service button will follow. Entry in the registration mode will be confirmed by 2 short signals of the LED on the service button.



Confirming
signals will follow

5) Enter a new owner authorization code using the standard car buttons with pressing interval not more than 3 seconds. Each pressing of the standard button will be accompanied with a single light signal on the service button.

Press the standard
car buttons





The owner authorization code consists of a code sequence, containing from 5 to 30 pressings of the standard buttons. The list of standard buttons supported by the car is given on the website can.starline.ru

If a light signal does not follow after pressing of a standard button, the button is not supported in the given car.

- 6) In 3 seconds after owner's code entry, 2 short signals of the LED on the service button will follow, confirming code acceptance.



- 7) Enter the owner authorization code again.

- 8) If the code is entered correctly, 2 short signals of the LED on the service button will follow. If the code is entered incorrectly, 4 short light LED signals will follow, in this case repeat items 7 and 8.



In 10 s
switch off.

- 9) In 10 seconds switch off ignition to exit the registration mode.



- 10) Exit from the registration mode will be confirmed by 2 light signals of the LED on the service button and by signals the number whereof corresponds to the total number of registered remote keys, tags and smartphones.



Owner authorization code

A sequence of six empty square boxes connected by blue right-pointing arrows, representing an owner authorization code.

The manufacturer reserves the right to change
the design and elements without prior notification

Manufacturer:
Limited Liability Company
"Scientific and Production Association StarLine"
(LLC "SPA StarLine")
194044, Russia, Saint Petersburg,
9 Komissara Smirnova Str., letter A, office 204