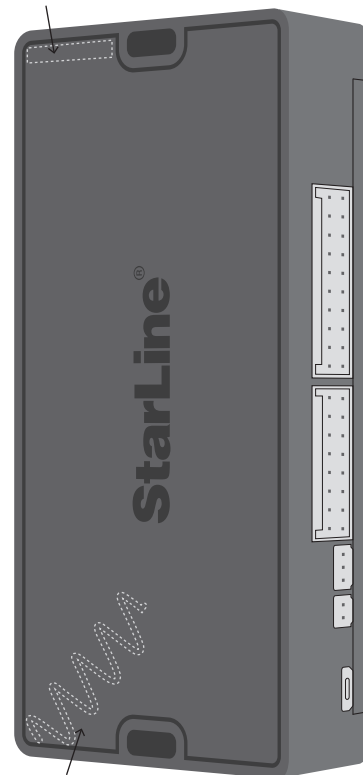# StarLine E9 V3

Security – telematic system connection diagram

For the cars equipped with CAN/LIN bus make a connection via the embedded digital CAN/LIN interface, for the elder cars make an analogue connection.
Find information and wiring tips on vehicles and features supported with CAN/LIN connection at **can.starline.ru**

Bluetooth antenna

StarLine

RF antenna

X1

X2

X3 — Valet button with LED

X4 — Temperature sensor

X5

USB-connector
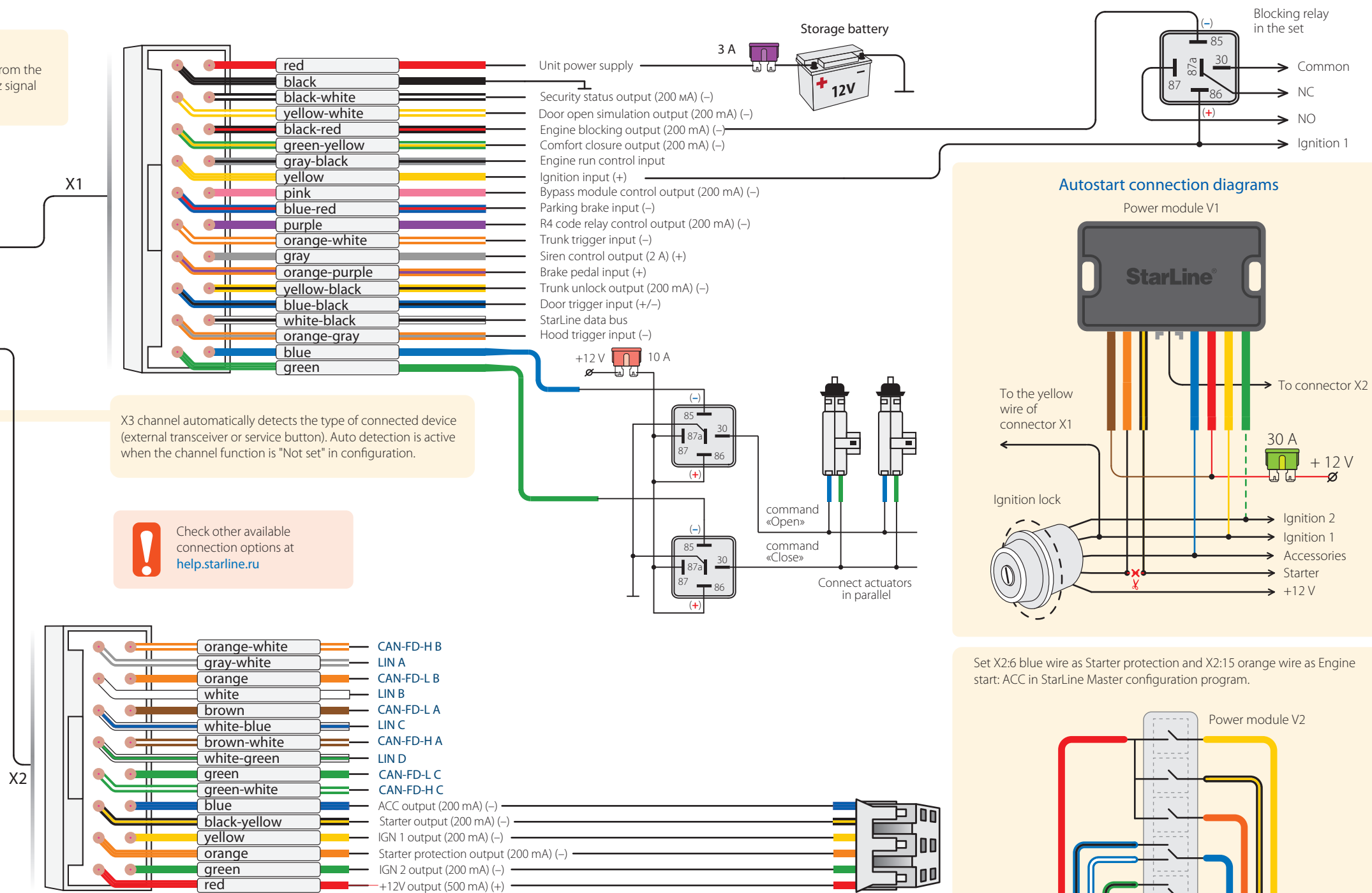
Mounting recommendations
Mount the main unit at a distance not less 10 cm from the metal surfaces, to avoid Bluetooth and RF 868 MHz signal transmission interference.

For convenient setup, diagnostics and software upgrade use the free StarLine Master software available at **help.starline.ru/slm**
Login into the program with a service code in the owner's plastic card.

The manufacturer StarLine ScPA LLC reserves the right to make technical improvements not shown in this diagram.

Information on firmware updates, actual versions of operation and installation manuals are available at **help.starline.ru**.

X1

Wire	Function
red	Unit power supply
black	
black-white	Security status output (200 мА) (–)
yellow-white	Door open simulation output (200 mA) (–)
black-red	Engine blocking output (200 mA) (–)
green-yellow	Comfort closure output (200 mA) (–)
gray-black	Engine run control input
yellow	Ignition input (+)
pink	Bypass module control output (200 mA) (–)
blue-red	Parking brake input (–)
purple	R4 code relay control output (200 mA) (–)
orange-white	Trunk trigger input (–)
gray	Siren control output (2 A) (+)
orange-purple	Brake pedal input (+)
yellow-black	Trunk unlock output (200 mA) (–)
blue-black	Door trigger input (+/–)
white-black	StarLine data bus
orange-gray	Hood trigger input (–)
blue	
green	

Storage battery
3 A
+12V

Blocking relay in the set
85 / 87a / 30
87 / 86
(–)
(+)
Common
NC
NO
Ignition 1

+12 V — 10 A
85 / 87a / 30 / 87 / 86
(–) (+)
command «Open»
command «Close»
Connect actuators in parallel

X3 channel automatically detects the type of connected device (external transceiver or service button). Auto detection is active when the channel function is "Not set" in configuration.

Check other available connection options at **help.starline.ru**

X2

Wire	Function
orange-white	CAN-FD-H B
gray-white	LIN A
orange	CAN-FD-L B
white	LIN B
brown	CAN-FD-L A
white-blue	LIN C
brown-white	CAN-FD-H A
white-green	LIN D
green	CAN-FD-L C
green-white	CAN-FD-H C
blue	ACC output (200 mA) (–)
black-yellow	Starter output (200 mA) (–)
yellow	IGN 1 output (200 mA) (–)
orange	Starter protection output (200 mA) (–)
green	IGN 2 output (200 mA) (–)
red	+12V output (500 mA) (+)

Autostart connection diagrams

Power module V1

StarLine

To the yellow wire of connector X1
To connector X2
30 A
+ 12 V

Ignition lock

Ignition 2
Ignition 1
Accessories
Starter
+12 V

Set X2:6 blue wire as Starter protection and X2:15 orange wire as Engine start: ACC in StarLine Master configuration program.

Power module V2

red / blue-black / green-black / green-white / green / blue / orange / black-yellow / yellow

+ 12 V   30 A

To the yellow wire of connector X1

Ignition 2
Ignition 1
Accessories
Starter
+12 V

Ignition lock

To connector X2

General installation specifications

The security system is designed for installation on vehicles with 12V on board voltage.

Prior to installation, make sure that the vehicle equipment circuits, to which the system is connected, are in suitable operating condition and no any trouble codes and check engine are indicated.

The system installation should be carried out according to the connection diagram.

The "ground" wire of the main unit should be connected first to a car body ground with an original screw.

Mount the wiring far from sources of electrical interference: ignition coils, high-voltage wires, etc.

Make sure that the harness is not lay in contact with the moving parts of the vehicle: pedals, steering shaft etc.

Connect all the harness to the main unit sockets only after all wires mounting is complete.

Do no fit the engine temperature sensor near the exhaust manifold, otherwise it may cause sensor overheating and damage.

Only the qualified and trained fitter may carry out the security system installation.

The configured parameters of the security systems must comply with a vehicle manual instruction requirements.
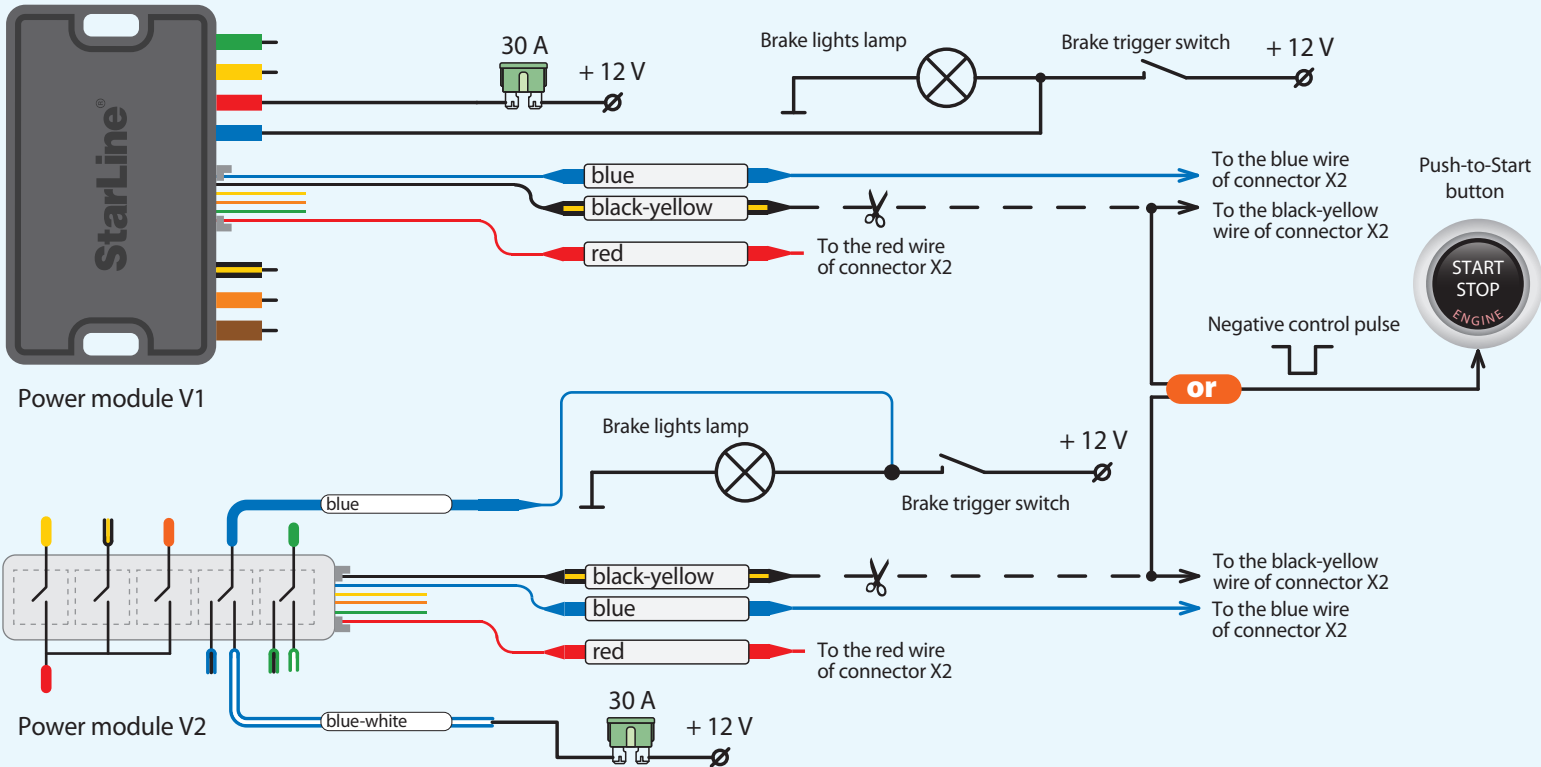
Diagram of start circuits connection on vehicles with PTS button

1. In StarLine Master program set X2:6 blue wire as "Engine start: simulate brake or clutch pedal" and X2:14 black-yellow wire as "Engine start: PTS button".
2. Connect wires according to diagram for corresponding power module.

30 A
+ 12 V

Brake lights lamp
Brake trigger switch
+ 12 V

blue — To the blue wire of connector X2
black-yellow — To the black-yellow wire of connector X2
red — To the red wire of connector X2

Push-to-Start button

START STOP ENGINE

Negative control pulse

or

Power module V1

Brake lights lamp
+ 12 V
blue
Brake trigger switch

black-yellow — To the black-yellow wire of connector X2
blue — To the blue wire of connector X2
red — To the red wire of connector X2

blue-white

30 A
+ 12 V

Power module V2

Eberspächer heater connection with digital bus control

blue-white
Heater control unit

pink

10-50 kOhm

+12 V

1. In StarLine Master program set the pink output wire of X1 connector as "Eberspacher preheater control via digital bus"
2. In "Engine start" section "Starting preheater" enable "Permission for preheater operation". For the point "Start type of preheater" select option "Eberspacher via digital bus".
3. Connect the wires according to the diagram.

Webasto heater connection with digital bus control

yellow
Heater control unit

pink
gray-black

51-75 kOhm

10-15 kOhm

+12 V

1. In StarLine Master software set the pink output wire of X1 connector as "Webasto heater control via digital bus", the gray-black wire – as "Webasto preheater start control via digital bus".
2. In "Engine start" section "Starting preheater" enable "Permission for preheater operation". For the point "Start type of preheater" select option "Webasto via digital bus".
3. Connect the wires according to the diagram.

NOTE! The tags included in the delivery set are already registered in the main unit and are in the transport mode, i.e. off. Pressing the tag button in this mode will be indicated by a green and red flashes of the built-in LED. Prior to operation press the tag button several times until the LED color turn to green (regular mode).

New devices registration

NOTE! At registration of new tags and smartphones all previously registered tags and smartphones will be erased from memory. So the existing devices should be registered simultaneously in one cycle with all the new devices. In total up to 5 Bluetooth devices can be registered in the system main unit.
When new RF pagers are registered, all previously registered remote keys will be erased from memory. So the existing remote keys should be registered simultaneously in one cycle with all the new remote keys.
In total, up to 4 RF pagers can be registered in the system main unit.

Switch to device registration mode

1. Disarm the security system.
2. Switch ignition Off if it is On.
3. Press the service button 7 times.
4. Switch ignition On. 7 light LED flashes of service button and 7 buzzer sounds will follow.
5. 2 short LED flashes and buzzer sounds will confirm entry into the Registration mode.

2-way remote control (pager) registration

6. Press a pager buttons 1 and 2 shortly.
7. In 3 seconds successful registration will be confirmed by a short beep sound of a pager, 2 LED flashes of service button and 2 buzzer sound signals. If pager is not registered, 4 beep sounds of pager will follow.
8. Repeat points 6-7 for each pager.

Bluetooth tags (transponders) registration

9. Remove a battery from tag.
10. Hold a tag button pressed and insert a battery back. A tag LED will turn red.
11. Release a button, a series of red flashes will follow.
12. In 10 seconds successful registration will be confirmed by a green LED flash, 2 flashes of a service button LED and 2 buzzer sounds. If a tag is not registered LED will turn red.
13. Repeat points 9-12 for all the remaining tags.
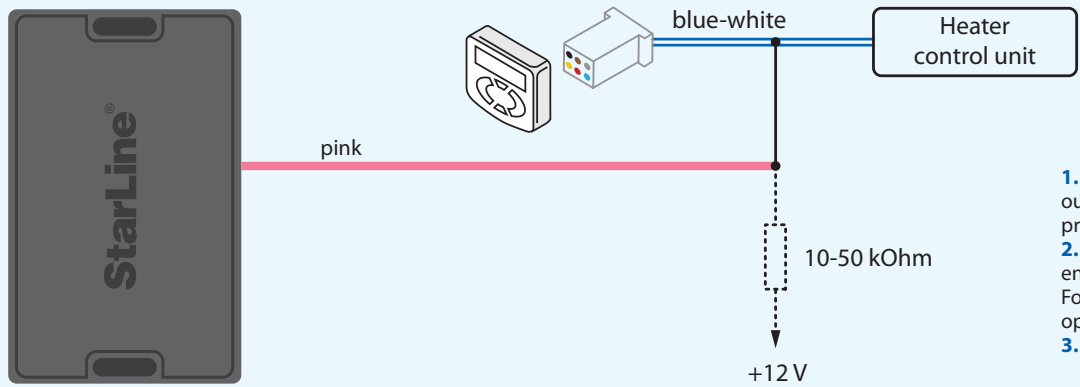
Smartphone registration

14. Register a smartphone* with use of the free StarLine mobile App.

Exit from the device registration mode

15. In 10 seconds switch ignition Off to exit the registration mode. An exit from Registration mode will be confirmed by double LED flashes and buzzer sounds and then additional signals in amount of total registered tags, pagers and smartphones will follow.
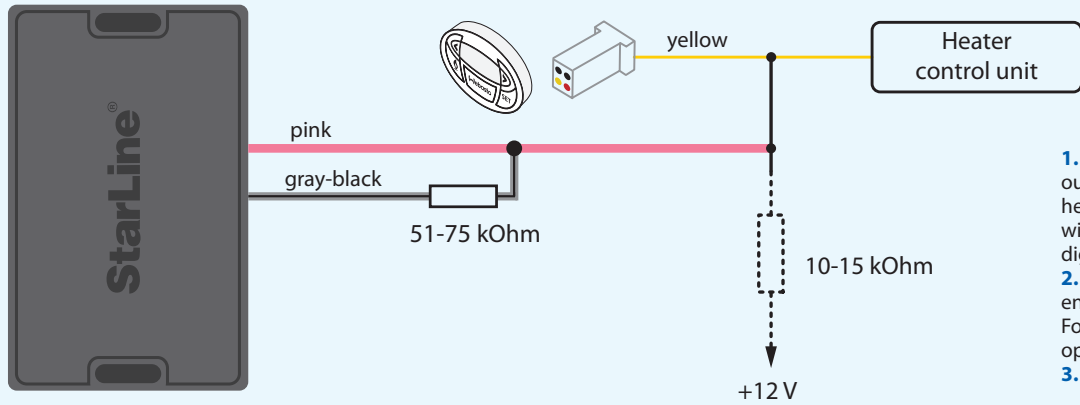
The iOS and Android smartphone with Bluetooth Smart 4.2 and above are supported.

Programming an owner authorization code (with car buttons)

1. Disarm security system.
2. Switch ignition Off, if it is On, then press service button 7 times.
3. Switch ignition On.
4. 7 LED flashes of service button and 7 buzzer sounds will follow.
5. Then 2 LED flashes of service button and 2 buzzer sound signals will follow, confirming entry into Registration mode.
6. Enter the owner authorization code using car OEM buttons with a pressing interval no more than 3 seconds. Every button pressing should be followed by a single service button LED flash.
   The owner authorization code consists of a code sequence containing from 3 to 30 OEM buttons pressing. The list of supported OEM buttons is available at can.starline.ru. If a service button LED flash does not follow after pressing of OEM button, so this button is not supported for this car.
7. In 3 seconds after the code entry 2 short LED flashes and 2 buzzer sound will follow, confirming the code successful registration.
8. Enter the owner authorization code again.
9. If the code is recorded properly, 2 LED flashes and 2 short buzzer sound will confirm. If the code recording is failed, so 4 short buzzer sounds will follow, in this case repeat steps 6-8.
10. In 10 sec switch ignition Off to exit the Registration mode.
11. An exit from Registration mode will be confirmed by double LED flashes and buzzer sounds and then additional signals in amount of total registered tags, pagers and smartphones will follow.
12. Write down and memorize this push sequence.