

Roadstar Installation Instruction Manual



This instruction manual describes installation of GPS/GPRS vehicle tracking device **Roadstar**. Modem is already set to work with system for vehicle tracking, and in case of additional setup check document **Roadstar Configuration Instruction Manual**.

Precautions

To ensure correct working conditions for **Roadstar**, read carefully following text:

- Ambient temperature from -30°C to +70°C!
- Do not install device near strong electromagnetic field or heating source!
- Do not place device near water or other liquids!
- Install GSM/GPS antenna below glass or plastic. Avoid installation below metal surfaces which can disturb GSM/GPS signal receiving and transmission!
- Supply device with voltage as described in this instruction manual!
- It is recommended to choose installation spot inside vehicle which is not visible from the outside of the vehicle!

Opening device and inserting SIM card

To ensure that **Roadstar** will work within system for tracking vehicles www.tracking.rs it is necessary to provide unlocked SIM card with GPRS traffic provided (depends on chosen mobile operator).

Following pictures show how to open device and insert SIM card into it.

First remove 4 screws as shown in picture on the left side. Gently pull out board and place SIM card into place shown in picture on the right side.



Picture 1 – Placing SIM card

When finished, place board back to the housing and put back removed screws.

NOTE: Software on **Roadstar** automatically sets parameters for GPRS for most SIM cards of different mobile operators. In case you need to set different parameters, check document **Roadstar Configuration Manual** for details.

Placing antenna

Next step in installation is placing antenna. **Roadstar** has two connectors for antennas: one for GSM signal and other one for GPS signal. Antenna provided with modem has both connectors, for GSM and GPS, and is easily mounted to modem. Both, antenna and modem have specified which connector is for which signal (written on modem and cables) – GSM of antenna into GSM of device, GPS of antenna into GPS of device.



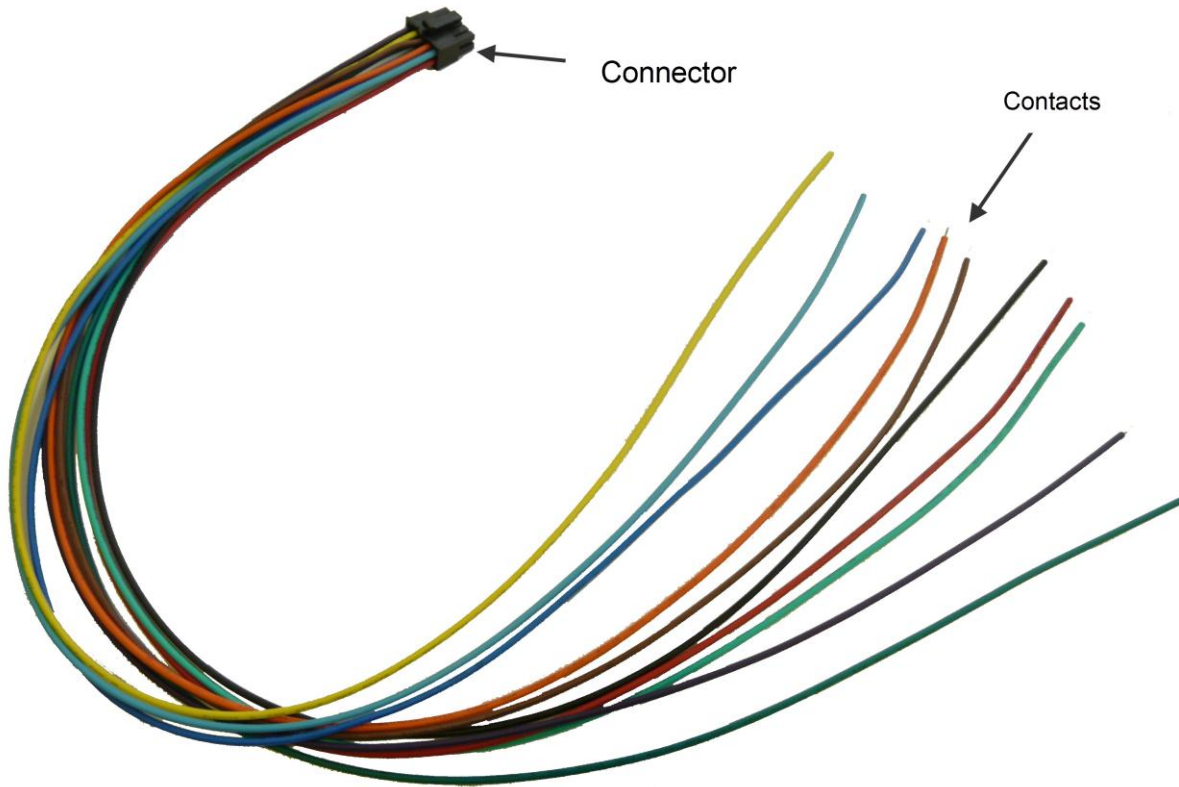
Picture 2 – Connecting antenna to Roadstar

It is important to install antenna on a proper place where GSM and GPS signal receiving and transmission will not be disturbed, so that device could work correct. Avoid placing antenna below metal or simmilar surfaces which can disturb signal receiving and transmission. Best place to put it is on the front or back glass of the vehicle.

Connecting power supply and control contacts

After placing SIM card and antenna, next step of installation is connecting power supply and contacts.

On the following picture is shown 10-wire cable which is connected to device. Cable has connector on one side, and it is connected to modem, and on the other sides are contacts which will be described.



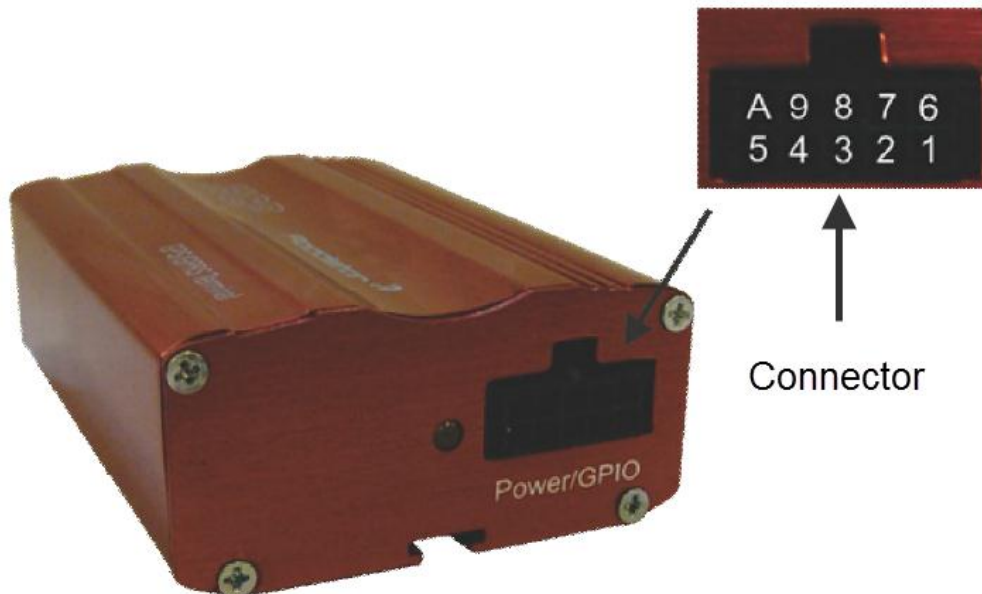
Picture 3 – 10-wire cable

Table 1 shows list of all 10 contacts on the cable, with description for each contact and its color. Column **Parameters** shows values for current/voltage on specified contact.

Contact	Color	Signal	Description	Parameters
1	Red	Vcc	Voltage positive end	8V-30V DC
2	Tirquoise	DI_2	Digital input 2	0V-24V DC
3	Dark blue	DI_1	Digital input 1	0V-24V DC
4	Dark green	DI_4	Digital input 4 or impulsator	0V-24V DC
5	Black	GND	Ground	0V
6	Light blue	DI_3	Digital input 3	0V-24V DC
7	Orange	DO_1	Digital output 1	200mA
8	Brown	DO_2	Digital output 2	200mA
9	Yellow	AI_1	Analog input 1	0V-24V DC
A	Purple	AI_2	Analog input 2	0V-24V DC

Table 1 – 10-wire cable contact description

Device is connected to this cable via connector as shown in picture 4.



Picture 4 – Connector on Roadstar

Connecting device to the power supply is achieved using contacts number 1 and 5 (red and black wire) – Vcc and GND. Maximum value for power supply is 30V DC!

Device will automatically switch on when it is connected to the power supply, and will automatically switch off when disconnected from it!

To track data for vehicle using www.tracking.rs system, it is necessary to connect following contacts:

- contact number 3 (dark blue) – to detect if engine is on
- contact number 4 (dark green) – impulsator (counter for distance)
- contact number 6 (light blue) – door state (opened/closed)

NOTE: It is not mandatory to connect all contacts (contact 3, contact 4, contact 6), but then you won't be able to track parameters for that contact!

Contact number 3 (engine on/off) connect to detect if engine is switched on. For this purposes, depending on vehicle type, connect contact number 3 to a contact on vehicle which gets voltage up to 24V when engine is switched on (take care not to exceed 24V DC, because device could be damaged).

NOTE: Do not connect contact number 3 directly to engine key contacts!

Contact number 4 (impulsator) connect to tachograph. Take care that maximum voltage connected to this contact does not exceed 24V DC!

Contact number 6 (door state open/closed) connect to contact on a vehicle which detects if door is opened or closed. Take care that maximum voltage connected to this contact does not exceed 24V DC!

Take care of maximum values for current/voltage specified for each contact – Table 1! Otherwise, device could be damaged!

We recommend you to electrically isolate other unused contacts (wires), to avoid possible problems with device functionality and damage!

LED indicator

LED diode is used to indicate power on of device and type of working regime. Depending the operation performed, there are several scenarios of blinking:

- when both GSM and GPS signal level is fine, one blink each 5 seconds
- when GSM signal is present and GPS signal is lost, two blinks each 2 seconds
- when GSM signal is lost and GPS signal is present, one blink each 2 seconds
- in other cases, three blinks each 2 seconds

Picture 5 shows LED diode on **Roadstar**.



Picture 5 – Status LED

Recommended parameters

Following table shows recommended values of parameters for **Roadstar**. There are minimum, optimum and maximum values.

Parameter	Pin/Parameter	Min.	Typ.	Max.	Unit
Supply voltage	Vcc	8	12	30	V
Supply current	Ic			500	mA
Ambient temperature	--	-30	+25	+65	°C

Table 2 – Recommended values

Vehicle tracking

After successful performing of all previous steps for installation modem inside a vehicle, you are ready to track a vehicle using www.tracking.rs system.

For more information about tracking using this system check document **System for Vehicle Tracking Roadstar – Instruction Manual**.