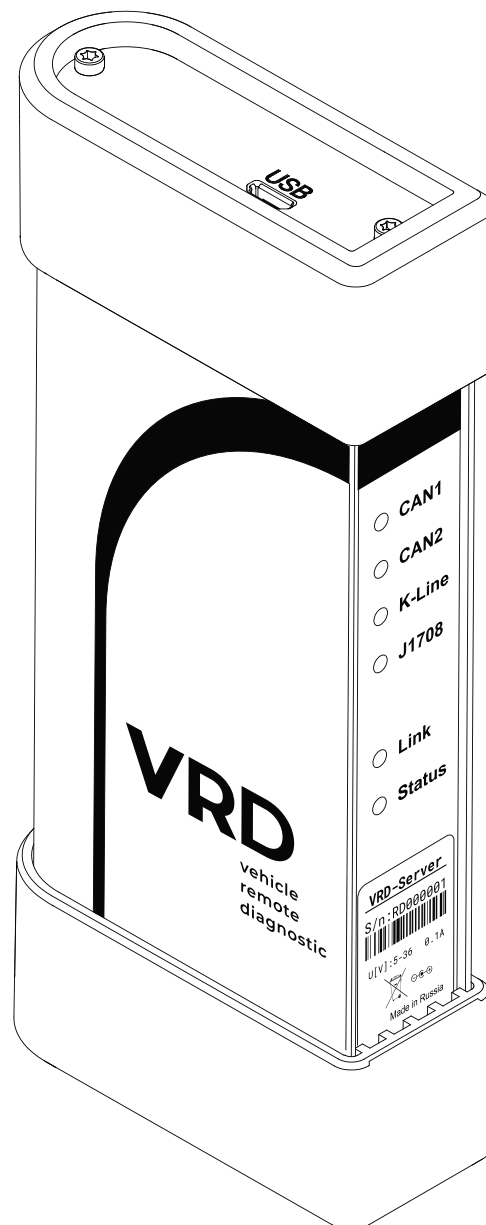


VRD-Server Device



Vehicle remote diagnostics



User Guide

Table of Contents

About this documen	3
1. General	4
1.1. Safety precautions	4
1.2. Storage and operating conditions	5
2. Equipment kit	6
3. Configuration	7
3.1 Connectors	8
3.2 VRD-Server indicators	8
4. Connection	9

About this document

This document contains information on using the VRD-Server device which makes part of the VRD system.

Document Version	Issue Date	Modifications
1	16.06.2021	Creation
2	23.12.2021	Amendment

1. General

The vehicle remote diagnostics (VRD) system is a set of devices for remote electronic diagnostics of vehicles: trucks, cars and specialized vehicles (hereinafter collectively referred to as vehicles).

The VRD system includes VRD-Server, VRD-Client mobile device and VRD Control software. For diagnostics, a diagnostic tool (communication interface, hereinafter referred to as the VCI, and dedicated software compatible with the diagnosed vehicle) is additionally used.

The system transfers diagnostic data between VRD-Client connected to the vehicle and VRD-Server connected to VCI. Data is transferred via Wi-Fi or mobile networks (through Internet). This allows a vehicle to be diagnosed remotely: the diagnostic technician and the diagnosed vehicle may stand at a distance from each other.

The VRD system is used to check errors that have occurred, correct faults or adjust parameters of the vehicle.

The VRD system is configured and controlled using VDR Control software.

VRD-Server supports data reading and transmission via main OBD interfaces:

- Two CAN-buses that support CAN 2.0B (125, 250, 500, 1000 Kb/S);
- Eight K-lines (ISO 14230, ISO 9141);
- J1708 interface;
- Transmits vehicle ignition status (if such a functionality is supported by the vehicle).

VRD- Server is fed from power supply unit (12 or 24 V) and transmits power to VCI. Input voltage range: 12 to 36 V, power consumption abt. 0.1 A.



Warning!

The manufacturer reserves the right to make changes to design and software of the device that do not impair operating parameters without prior notice.

1.1. Safety precautions

To prevent accidents or damage to the vehicle, VRD devices and/or VCI, please read this user guide and observe the following safety precaution when using the vehicle.

Do not diagnose the vehicle:

- Where mobile devices are not allowed;
- Near hospitals and medical centers since the working device may interfere with cardiac pacemakers, hearing aid devices or other equipment;
- In the area of blasting operations since the working device may interfere with these operations.

Make sure that the following requirements are met:

- The vehicle with the engine running is parked outdoors or in a well-ventilated area. Remember that exhaust fumes are toxic!;
- Transmission gear lever is moved to position P (Parking) for automatic transmission or to neutral for manual transmission. Make sure that the parking brake is engaged;
- Avoid water, fuel or grease on devices. Store and use the devices in a dry and clean area. Where external surfaces of the device are to be cleaned, use a clean cloth moistened with non-aggressive detergent solution;
- Adjust parameters when the vehicle is parked only.



Important!

VRD-Client may transmit data via GSM, UMTS, LTE, Wi-Fi wireless communication links. These communication links may be unstable. It depends on mobile provider, his equipment, distance from the device to cellular base stations, interference, and objects between the base station and the device. The system does not affect the diagnostic process. The specialist is responsible for diagnostics performed.

1.2. Storage and operating conditions

Store and use the device in a dry and clean area. Avoid moisture on VRD-Server. Where external surfaces of the device are to be cleaned, use a clean cloth moistened with non-aggressive detergent solution.

Do not:

- Disassemble, cut, destroy, bend, pierce or otherwise damage the device and its components;
- Use the defective device or defective components;
- Use the device for purpose other than intended.

2. Equipment kit

VRD-Server equipment kit:



Figure 1 VRD-Server equipment kit

- 1 – VRD-Server;
- 2 – VRDS-OBD-II cable;
- 3 – Micro-USB cable;
- 4 – 12/24V power supply unit (DC2.1-M).

3. Configuration

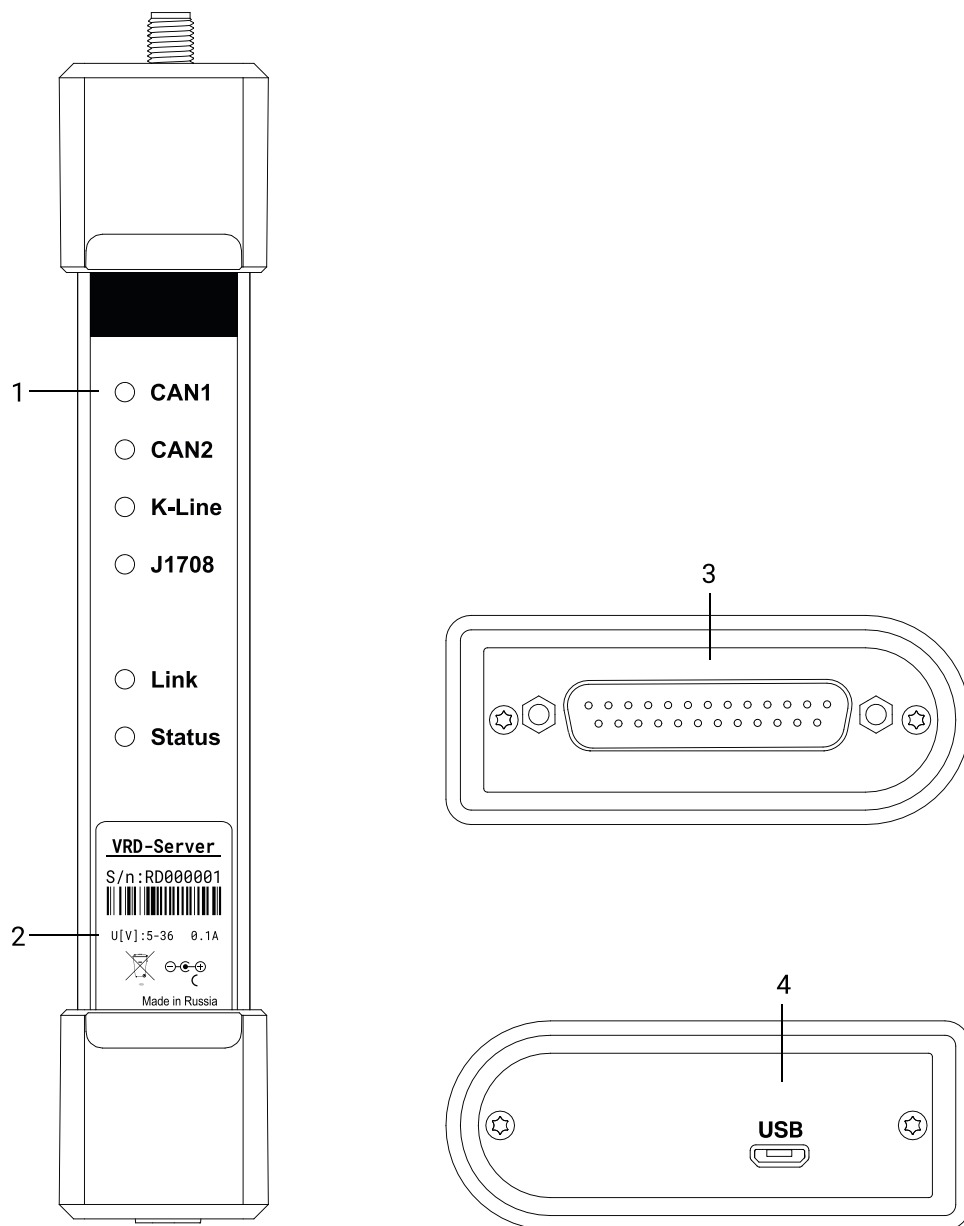
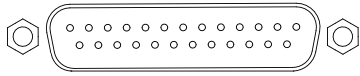


Figure 2 VRD-Server

- 1 – VRD-Server indicators;
- 2 – Label with device serial number ;
- 3 – Micro-USB connector;
- 4 – DB-25 connector to connect OBD-II interface cable.

3.1. Connectors



DB-25 connector

Used to connect VRD-Server to VCI using OBD-II interface cable, and to connect the 12/24 V external power supply unit to feed VRD-Server and VCI;



Micro-USB connector

Used to connect VRD-Server to PC.

3.2. VRD-Server indicators

LED indication signals

Indicator	Color	Status	Meaning
CAN1	*	Blinks green	Data receipt from VCI via CAN1 interface
CAN2	*	Blinks green	Data receipt from VCI via CAN2 interface
K-Line	*	Blinks green	Data receipt from VCI via K-Line interface
J1708	*	Blinks green	Data receipt from VCI via J1708 interface
Link	*	Blinks orange	Data receipt from vehicle
Status	*	Blinks blue	VRD-Server is waiting for diagnostic session to start
	●	Lights blue	Diagnostics is in progress

4. Connection

VRD-Server is connected to PC using micro-USB cable. The 12/24V external power supply unit and VCI diagnostic adapter are connected using VRDS-OBd-II cable

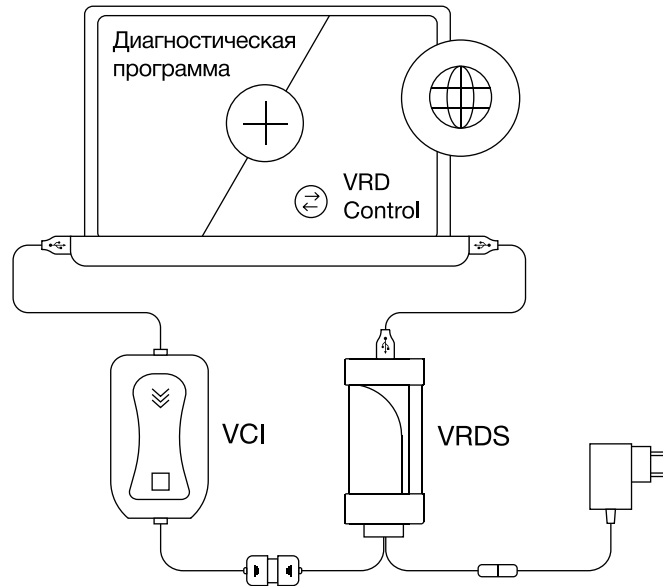


Figure 3 VRD-Server connection diagram