

1.Product Brief Introduction

FV100 is a vehicle diagnostic VCI box developed by FCAR company to fit the host computer of the Android operating system, support Bluetooth,USB two communication modes, can be used with F7S series or F8S series diagnostics, suitable for 12V or 24V models, covering Cummins, Bosch, Weichai, Yuchai, Xichai, Chaochai and GM, Ford, Audi, Volkswagen, BMW, Honda, Toyota, Mercedes-Benz, Land Rover and more than 300 types of vehicle software around the world.

2.FV100 Structure Specification:



Order	Name	Describe	
number			
1	Power indicator	The red light is on when power supplying	
	light		
2	Diagnosis indicator	The green light flashing when	
	light	communicating with a vehicle	



Order	Name	Describe
numb		
er		
3	DB15 interface	Connect with the main test line and connect the
		vehicle through the diagnostic connector
4	USB Type-C	Connect with a tablet host or upgrade FV100
	interface	then using



FV100 Main Parameter

CPU	Cortex®-M3
Frequency	72MHZ
Bluetooth	V2.1+EDR, BT3.0, BT4.1
Memory	128KB

3. Connection Method

Connecting the vehicle electronic control system with the diagnostic program through FV100, we can read vehicle diagnostic information, view the data stream, and perform the function of action test, etc, for the specific vehicle diagnosis methods, please see the instructions for the use of the diagnostic instrument, the following are only for FV100 connection methods and usage notes.

To build a good communication between the diagnostic program and the vehicle, you need to do the following:

1) Connect the FV100 with the vehicle diagnosis seat and supply the power;

2) Build communication between FV100 and tablet host through Bluetooth pairing or USB data cable.

3) View the VCI connection status in the upper right corner of the screen (see 3.2), vehicle diagnostics can be performed if the connection is successful.

3.1 FV100 Connecting to Vehicle

FV100 needs to determine whether the diagnostic seat of the test vehicle is a standard OBD- II interface or a non-standard OBD- II interface before connecting to the vehicle.

Vehicles compatible with OBD- II management system require only one standard OBD II -16 connector to be connected to the vehicle diagnostic seat and provide power supply

Vehicles that are not compatible with OBD- II management systems need to select the corresponding connectors; some vehicles need to supply power to VCI boxes through other sources of power for the vehicles.

Here are the instructions for these two ways of connecting.

Connection of Standard OBD- || Interface

A vehicle connecting to the standard OBD- II interface only needs to be connected using an integrated main test line OBD connector, and no other connections are required, as shown in figure



Figure 3.1-1 connection of standard OBD- II interface

operaion Instructions:

1) Determine the location and the interface of the diagnostic seat;

2) Connect one end of the main test line to the DB15 interface of the FV100 and lock the fastening bolt;

3) Connect the other end of the main test line to the vehicle diagnosis seat.

4) At this point, the FV100 is powered by the vehicle diagnostic seat and the power indicator lights are on.

Note: After the test completed, rotate the fixed bolt first, then gently pull down the main test line to avoid damage to the diagnostic interface.

Vehicles that connect to non-OBD- II interfaces need to connect the main test line to the corresponding dedicated connector, as shown in *figure 3.1-2*



Figure 3.1-2 connection of non-OBD- II interface

1) Determine the location and he interface of the diagnostic seat, and if it needs an external power supply;

2) Connect one end of the main test line to the DB15 interface of the FV100 and lock the fastening bolt;



3) Connect the other end of the main test line to the special connector corresponding to the car;

4) Connect the special connector connected to the main test line with the vehicle diagnostic seat;

5) At this point, the FV100 is powered by the vehicle diagnostic seat and the power indicator lights are on(If not, it may be that the vehicle diagnostic seat does not have a power supply and can be powered to the FV100 by a cigarette lighter or a battery holder).

3.2 FV100 connection to host

After the FV100 is connected to the vehicle, it is necessary to match the connection between the host and the FV100 before the vehicle diagnosis can be carried out; FV100 supports two ways to communicate with tablet hosts: Bluetooth pairing and USB connections.

Through Bluetooth pairing:

1) Turn on the tablet host power supply

2) Select [VCI connection] on the main function menu; select connection mode [Bluetooth]

3) Click the scan icon on the right side of the device list, the system automatically scans nearby Bluetooth devices;

- 4) Select target Bluetooth to match.
- 5) Match complete, the VCI icon in the upper right corner of the screen from " VC_{k} " to

"VCI, indicates a successful Bluetooth match, vehicle diagnostics can be carried out.

← VCI Connection	VCI
Bluetooth State: Connected Current Device: FCAR_VCI BC:14:EF:76:2A:F8	8
USB Device List	
FCAR_VCI BC:14:EF:76:2A:F8	
FCAR_VCI BC:14:EF:52:7E:BD	

Note: if the Bluetooth device can not be found, the transmitter may be too weak, at this time, be as close as possible to the FV100.

USB connection is the fastest way to communicate between tablet host and FV100; Please use our factory configuration of special USB cable for connection, after the connection completed, the



VCI icon in the upper right corner of the screen from "VCI", to "VCI", indicates a successful Bluetooth match, vehicle diagnostics can be carried out.



Note: two types of connection can not be used at the same time!

4. Notes for maintenance and use

- > This machine is not allowed to be dismantled without authorization;
- Avoid a strong collision with the machine;
- > Avoid bringing the machine closer to the magnetic field;
- > Do not put the machine in a quake-prone, dusty, humid or hot place;
- When the host is dirty, please turn off the power first, it needs soft cloth and neutral detergent to clean the host, do not use water and chemical solvents to clean the machine, such as banana water, engine cleaning agent, gasoline, etc.
- Please unplug the power plug when not in use to avoid the aging of electrical components caused by long time electrification;



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: -- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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