

VAG

immo emulator, wfs-4

ver. 2

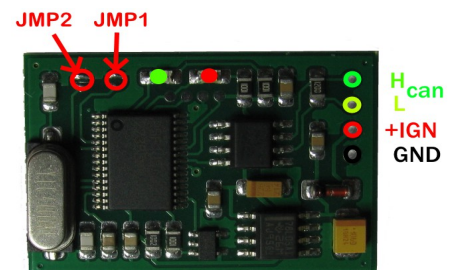
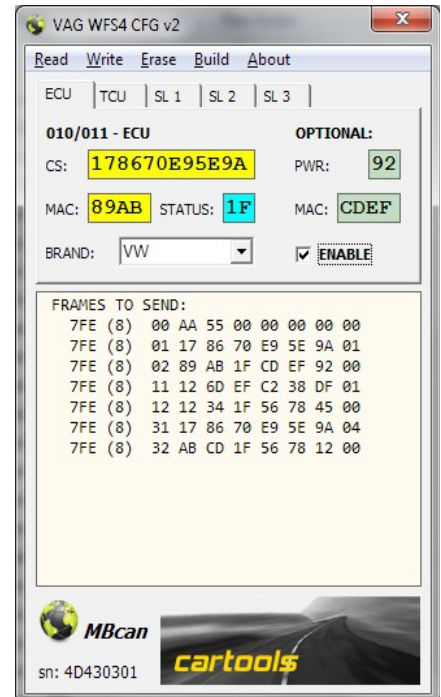
Usage:

VAG cars, WFS4 system, ECU, TCU, Slave1..3 authorization (WFS4 targets). CAN 500 Kb used for communication. Each WFS4 target may use own rules / immo DATA, emulator can authorize any or all of them.

Installation:

Must store IMMO data into emulator using any CAN logger or MBcan:

- **JMP1** and **JMP2** on board both OPEN to allow configuration mode,
- launch CONFIGURATOR software,
- choose target(s), enter data, set **ENABLE** flag:
 - **IMMO CS**, **MAC** (mac bcm) and **BRAND** is mandatory. CS 7th byte may be any, it is actually ignored;
 - **STATUS**: immo status response, if not sure what it means leave it as is (1F by default);
 - if **OPTIONAL** data (**MAC** ecu/tcu/slave and **PWR** class) is not known leave these fields as is. How to proceed is described later;
- when all targets are configured:
 - using **MBcan**: simply write data into emulator;
 - using **CANary**: Build --> for CANary --> save file. You can load generated file into CANary and send all prepared frames;
 - using **any CAN logger**: Build --> Screen, you will see which messages are necessary for configuration. Message count may vary from 3 to 11, depends on how many targets must to be authorized;
 - emulator must acknowledge each message with ID 7FF, data must match;
 - **NOTE**: CAN communication speed is 500 Kb, STD ID's used, must allow 200 mS delay between frames, rules become active at next emulator startup (restart is necessary);
- install emulator on car (connections: PT-CAN, IGN_ON (Kl.15), GND):
- if **OPTIONAL** data is missing (unknown) must allow emulator to make self alignment. Short one of JMP (JMP1 or JMP2, no matter which one), switch IGN ON/OFF several times, check if all targets are authorized (check LEDs on emulator board!);
 - **HINT**: you can read **OPTIONAL** data detected by emulator using MBcan (JMP1 and JMP2 both must be temporary open to allow readout);
- **finally place solder joints to short JMP1 and JMP2 both** to avoid any data updates by accident.



LED behavior:

- **RED** and **GREEN** both go ON for 0.2s at startup (IGN_ON);
- **RED** blinking: at least one of enabled targets is NOT authorized (request received, DATA is not valid, self-alignment etc.);
- **GREEN** is ON for 2 seconds: any enabled TARGET - received data is valid, authorization response sent;
 - **NOTE**: TARGET may still remain unauthorized due to wrong MAC !!!
- **RED** and **GREEN** both alternating – CONFIGURATION mode, DATA received;
- **RED** or **GREEN** - no any activity after startup blink: all enabled targets are silent, no requests for authorization received, or all targets are DISABLED by rules.

