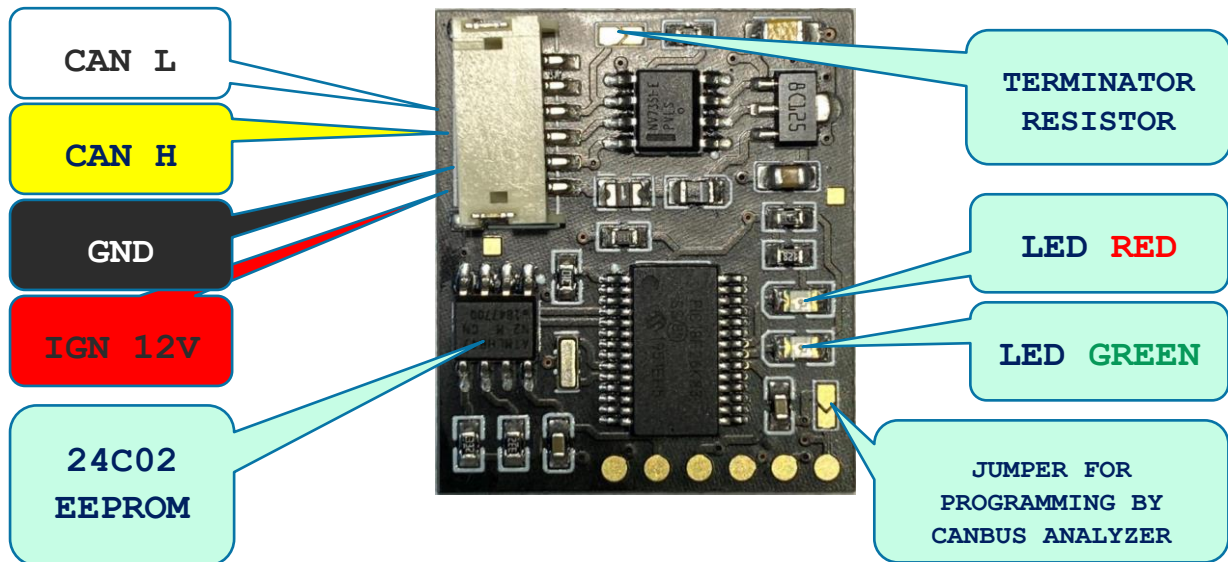


# UNICAN IMMOBILIZER EMULATOR

VERSION 1.11 - 24C02 EEPROM SYNCHRO / SPEED SETTINGS

Immobilizer emulator for systems communicating via CANBUS



## LED BEHAVIOR :

LED **RED** is ON all the time -> NO QUERY FROM ECU OR WRONG CANBUS SPEED SELECTED.

LED **RED** blinking -> ECU IS LOCKED, BAD REQUEST FROM ECU.

LED **GREEN** blinking -> ECU IS UNLOCKED OK.

THE SOFTWARE VERSION 1.11 INCLUDES THE FOLLOWING PROGRAMS, WHICH IS SELECTED AUTOMATICALLY :

- |                              |                                |
|------------------------------|--------------------------------|
| 1. RENAULT                   | - speed of CANBUS : 250/500    |
| 2. PSA                       | - speed of CANBUS : 250/500    |
| 3. VAG WFS4                  | - speed of CANBUS : 500        |
| 4. FIAT                      | - speed of CANBUS : 50/250/500 |
| 5. NISSAN NATS6/7            | - speed of CANBUS : 500        |
| 6. MERCEDES FBS2             | - speed of CANBUS : 125/500    |
| 7. MERCEDES CR2 (EDC15 ONLY) | - speed of CANBUS : 500        |
| 8. VAG3 WFS3                 | - speed of CANBUS : 500        |
| 9. VAG5 WFS5/MQB ECU & TCU   | - speed of CANBUS : 500        |

TO CHOOSE THE CORRECT SPEED OF THE CANBUS, YOU NEED TO ENTER THE APPROPRIATE VALUE INTO THE 24C02 EEPROM MEMORY MOUNTED ON THE EMULATOR, SPEED SETTING ADDRESS IS 0X01:

- Value 0x50 speed is set to 500 kbps
- Value 0x25 speed is set to 250 kbps
- Value 0x12 speed is set to 125 kbps
- Value 0x05 speed is set to 50 kbps

SYNCHRONIZATION BYTES -> DEPENDING ON THE SYSTEM TO WHICH WE WANT TO USE THE EMULATOR, ENTER FROM ECU DUMPS TO 24C02 ON EMULATOR PCB, START WRITE FROM THE ADDRESS 0X10, E.G :

RENAULT - 8C 0F 94 33 E7 14, SPEED 500

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00000	FF	50	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00010	8C	0F	94	33	E7	14	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00020	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00030	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00040	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00050	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00060	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00070	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00080	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00090	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000A0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000B0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000C0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000D0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000E0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000F0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF

PSA - 51434644 (QCFD - ASCII PIN CODE), SPEED 250

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	0123456789ABCDEF
00000	FF	25	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	'%'.....
00010	51	43	46	44	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	QCFD'.....
00020	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
00030	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
00040	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
00050	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
00060	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
00070	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
00080	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
00090	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
000A0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
000B0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
000C0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
000D0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
000E0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....
000F0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	.....

MERCEDES CR2/FAKE FBS3 (EDC15 ONLY) - CHOOSE A SPEED OF 500, AND DO NOT ENTER ANYTHING ELSE INTO THE EMULATOR, IN THE ECU WE MODIFY ONE LINE IN THE EEPROM 95P08 AT THE ADDRESS 0X1D0 : 02 03 00 FF FF XX XX XX

VAG WFS5 - CS 16 BYTES, MAC 4 BYTES, BRAND 1 BYTE, POWER CLASS 1 BYTE

VW -01, AUDI - 03, SKODA - 06, SEAT - 05

SPEED 500

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00000	FF	50	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00010	35	93	2B	D2	6B	26	5F	78	94	9F	DE	F1	29	E0	6D	56
00020	03	6F	54	B7	5A	F9	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00030	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00040	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00050	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00060	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00070	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00080	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00090	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000A0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000B0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000C0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000D0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000E0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000F0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF

FOR CREATE CONTENT TO WFS5 EMULATOR YOU CAN USE

VAG IMMO CALCULATOR SOFTWARE

VIN:	WAUZZZF ..	<input type="button" value="Save EEPROM"/> <b>Immo block</b> <input type="button" value="Import Data"/> <input type="button" value="Export Data"/> <b>Sec block</b> <input type="button" value="Import Data"/> <input type="button" value="Clone ECU"/>
Fazit:	BPG-810...10.0813J	
Immo ID:		
CS:	35932BD26B265F78949FDEF129E06D56	
MAC:	54B75AF9	
PIN:		
Status:	Learned <input type="button" value="v"/> PowerClass:	
Immo Type:	Immo 5	

ADAPTATION : FOR PROPER OPERATION OF THE EMULATOR SAVE THE IMMOBILIZER DATA IN ITS MEMORY (24C02 ON PCB), TWO DATA SETS SUITABLE FOR ECU AND TCU, IN THE CASE OF USING THE EMULATOR TO DISARM BOTH DRIVERS AT THE SAME TIME.

OFFSET DATA FOR ECU: CS 0x10, BRAND BYTE 0x20, POWER BYTE 0x21, MAC 0x22

OFFSET DATA FOR TCU: CS 0x30, BRAND BYTE 0x40, POWER BYTE 0x41, MAC 0x42

DECRYPTED DATA IS OBTAINED IN THE APPROPRIATE ORDER FROM THE SOFTWARE VAG IMMO CALCULATOR

VAG WFS4 - CS 6 BYTES, MAC 4 BYTES, BRAND 1 BYTE  
 VW -01, AUDI - 03, SKODA - 06, SEAT - 05  
 SPEED 500

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00000	FF	50	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00010	75	CE	3A	9E	37	4F	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00020	54	BF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00030	EE	E3	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00040	01	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00050	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00060	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00070	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00080	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00090	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000A0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000B0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000C0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000D0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000E0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000F0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF

FOR CREATE CONTENT TO WFS4 EMULATOR YOU CAN USE  
 VAG IMMO CALCULATOR SOFTWARE

MCU ID:	<input type="text" value="418486810EA091498206001024180C00"/>	<input type="checkbox"/> Auto Swap	<input type="button" value="Open EEPROM"/>
VIN:	<input type="text" value="WVWZZZ1KZDM635050"/>		<input type="button" value="Save EEPROM"/>
Immo ID	<input type="text" value="0000000000000000"/>		
CS:	<input type="text" value="75CE3A9E374F00"/>		<b>Immo block</b>
MAC:	<input type="text" value="54BFEEE3"/>		<input type="button" value="Import Data"/>
PIN:	<input type="text" value="39353"/>		<input type="button" value="Export Data"/>
PowerClass:	<input type="text" value="3A"/>		
Immo Type	<input type="text" value="WFS4"/>		<b>Sec block</b>
ECU Type:	<input type="text" value="Simos PCR 2.1"/>		<input type="button" value="Import Data"/>



VAG WFS3 - CS 6 BYTES, SPEED 500

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00000	FF	50	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00010	30	80	BC	62	79	EF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00020	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00030	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00040	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00050	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00060	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00070	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00080	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
00090	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000A0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000B0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000C0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000D0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000E0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
000F0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF

22.09.2020

Initial release v1.00

14.10.2020

Version release v1.01

Fixed:

- PSA critical bug fix (error in the algorithm)

15.10.2020

Version release v1.02

Fixed:

- FBS2 MB bug fix (some ECU gasoline in previous versions may not work)

03.11.2020

Version release v1.03

Added:

- VAG WFS3 algorithm (6 bytes CS CANBUS immo system)

27.11.2020

Version release v1.04

Fixed:

- In PSA improved immobilizer disarm signaling (LED) for newer ECUs that use multiple query to the immo system

24.05.2021

Version release v1.05

Added:

- VAG WFS5 algorithm (16 bytes CS CANBUS immo system)

27.12.2021

Version release v1.09

New:

- New redesigned PCB HW v109, added green LED as unlocked state of emulator, for more clear signalization. Also the emulator connector was changed to a new model, with a lower height, so that the UNICAN could more easily fit into modern ECUs.

Added:

- VAG WFS5/MQB TCU now is possible disarm both ECU & TCU at the same time.
- VAG WFS3 checking incoming data in WFS3 query for compliance of CS data in ECU and emulator.
- FIAT is added new ID from requesting authorization 0x64.

05.11.2022

Version release v1.11

Added:

- ECU EDC17C45 support has been added to the NISSAN CAN bus immobilizer emulation program.