

## Universal emulator UNIEMU user manual

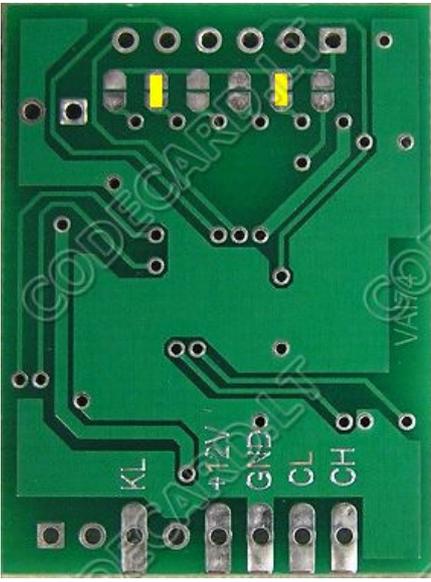
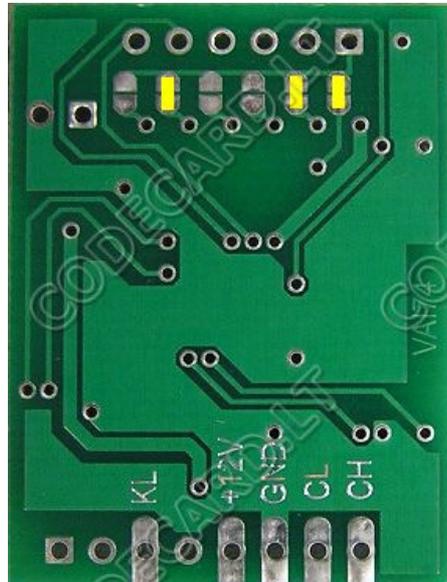
### 1. Mercedes Benz Seat Occupant sensor emulator - Type1: **not included**

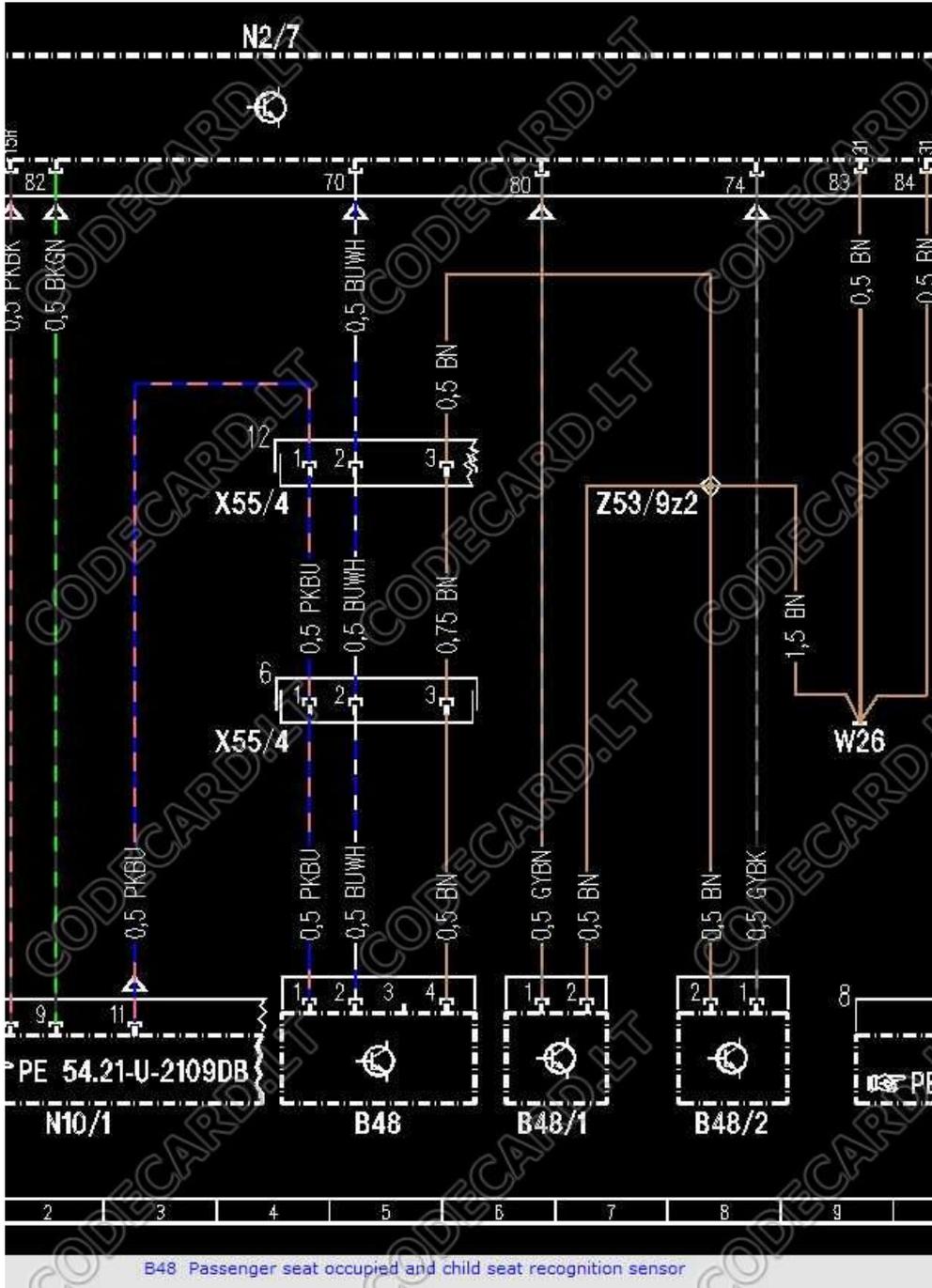
Can emulate only Mercedes Benz E-class W211, CLS W219 (2004-2007) with BOSCH airbag computers seat occupant sensor. Is possible to set emulator in two states: passenger airbag "ON" or "OFF" (child seat recognized).

not occupied	occupied

### 2. Mercedes Benz Seat Occupant sensor emulator - Type2:

**Can emulate only Mercedes Benz E-class W211 (2002-2004) with TEMIC airbag computers** seat occupant sensor. Possible to set emulator in two states: passenger airbag "ON" or "OFF" (child seat recognized).

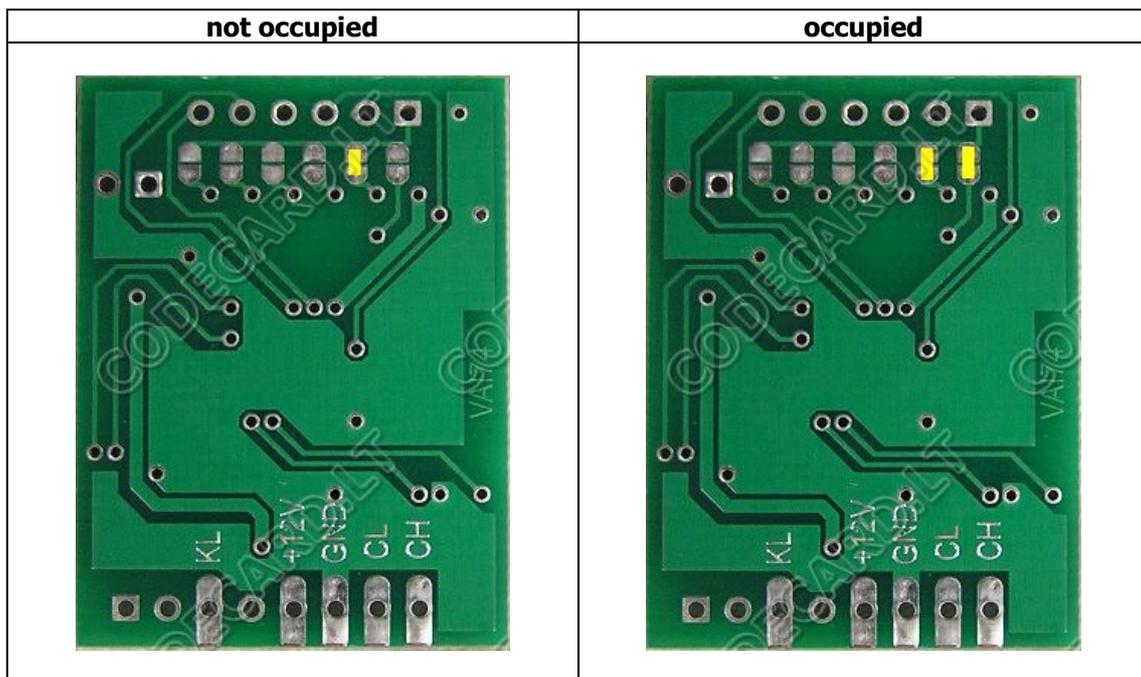
not occupied	occupied
	



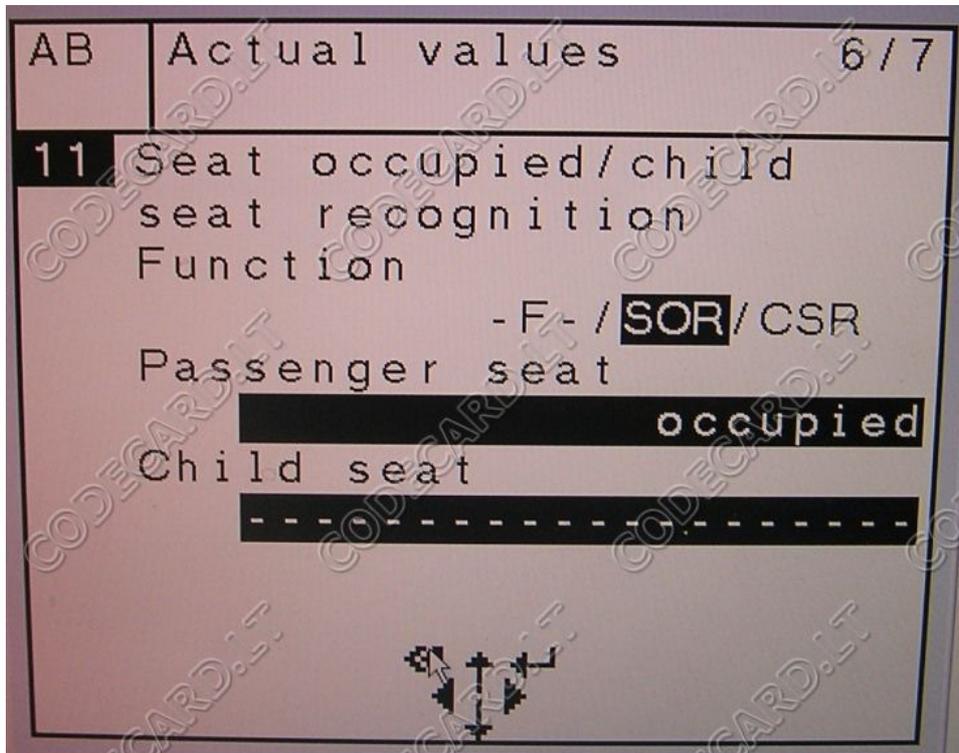
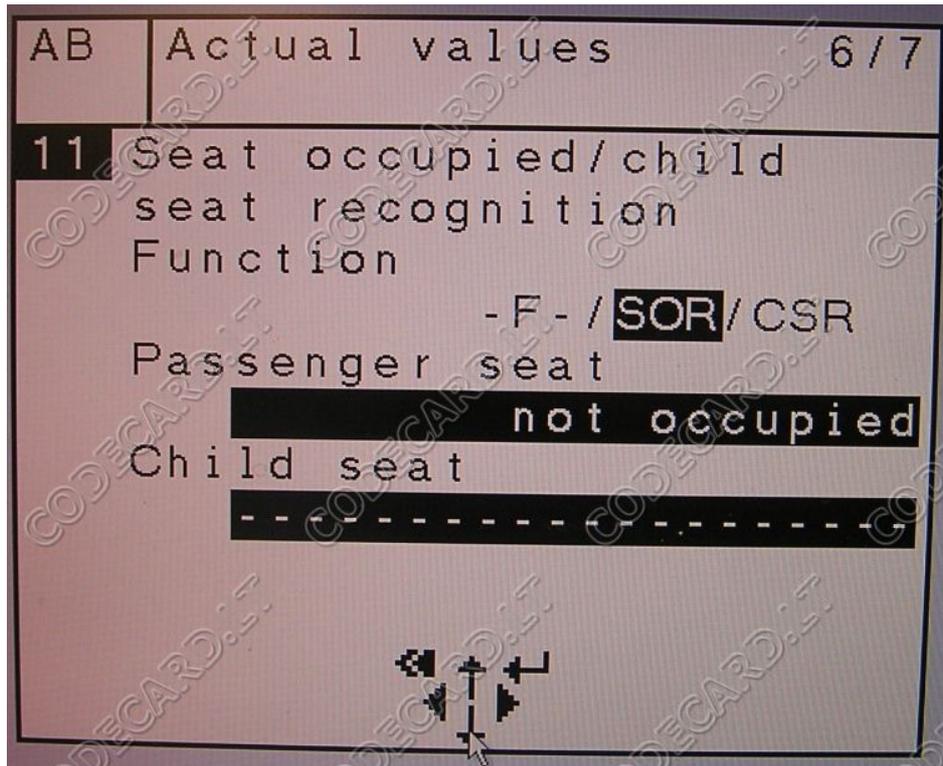
Disconnect **X55/4** under passenger seat and connect emulator instead **B48**: PKBU=+12V, BUWH=KL (K-line), BN=GND.

### 3. Mercedes Benz Seat Occupant sensor emulator - Type3

Can emulate older (year 1997-2001) Mercedes Benz A-class W168, C-class W202, Vito W638, ML (with TRW airbag computer) seat occupant sensor. Possible to set emulator in two states: passenger airbag "ON" or "OFF" (child seat recognized).

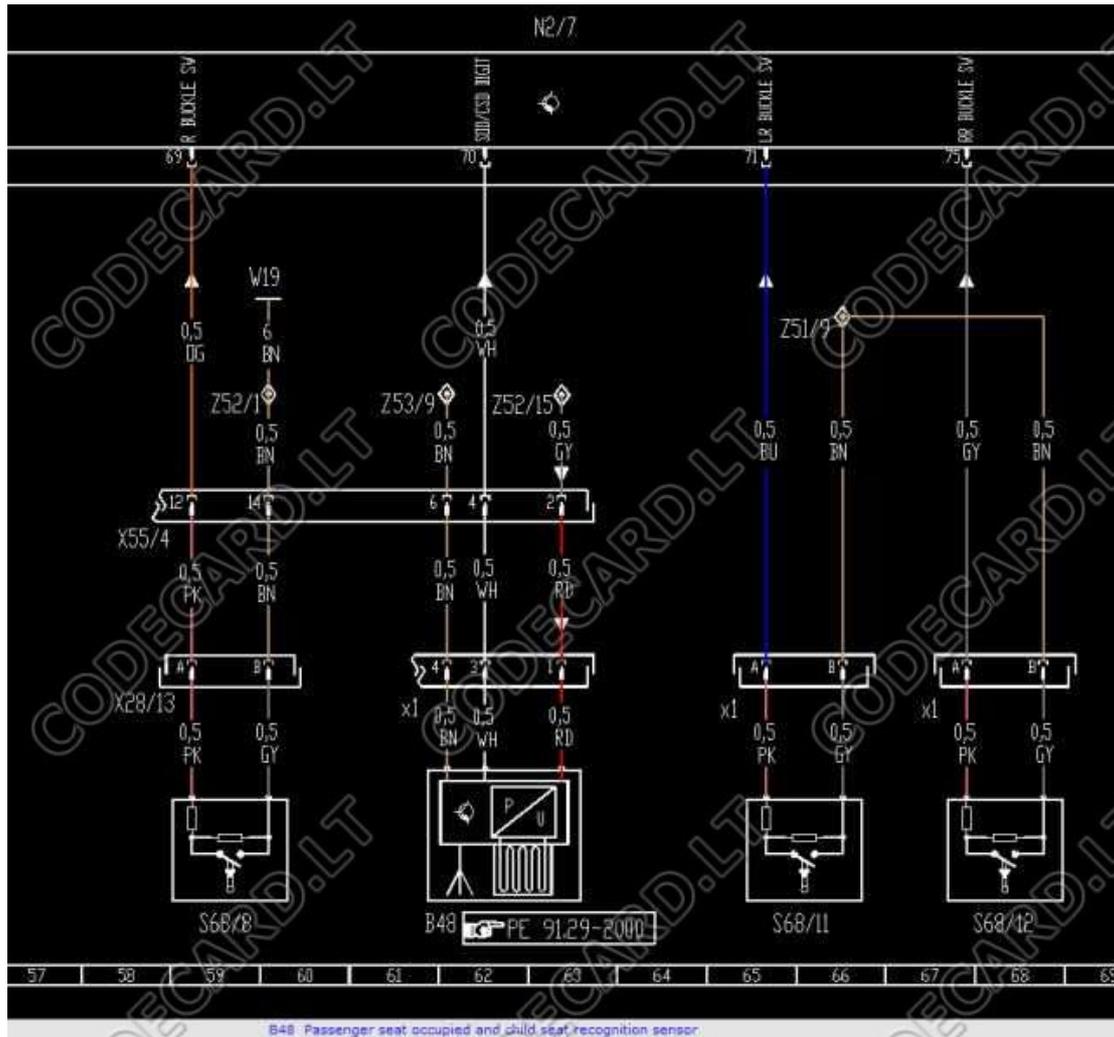


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On picture connection sample for A-class W168: Red wire - +12V, Black wire – GND, Green – Kline.

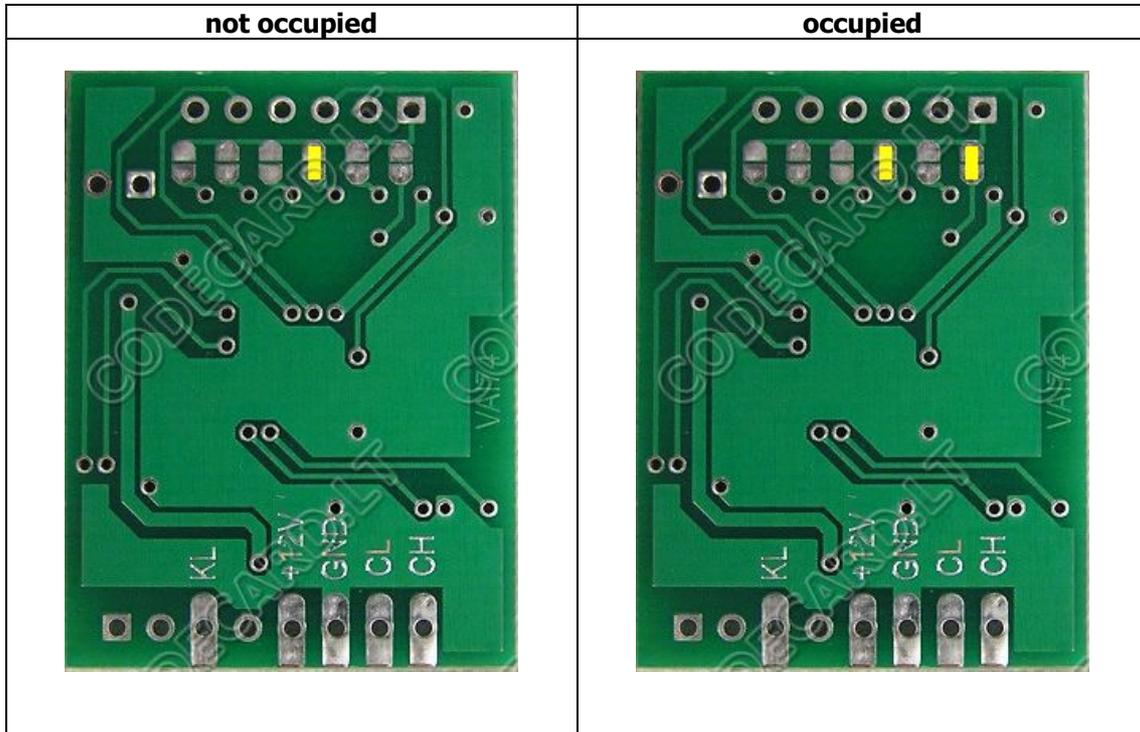


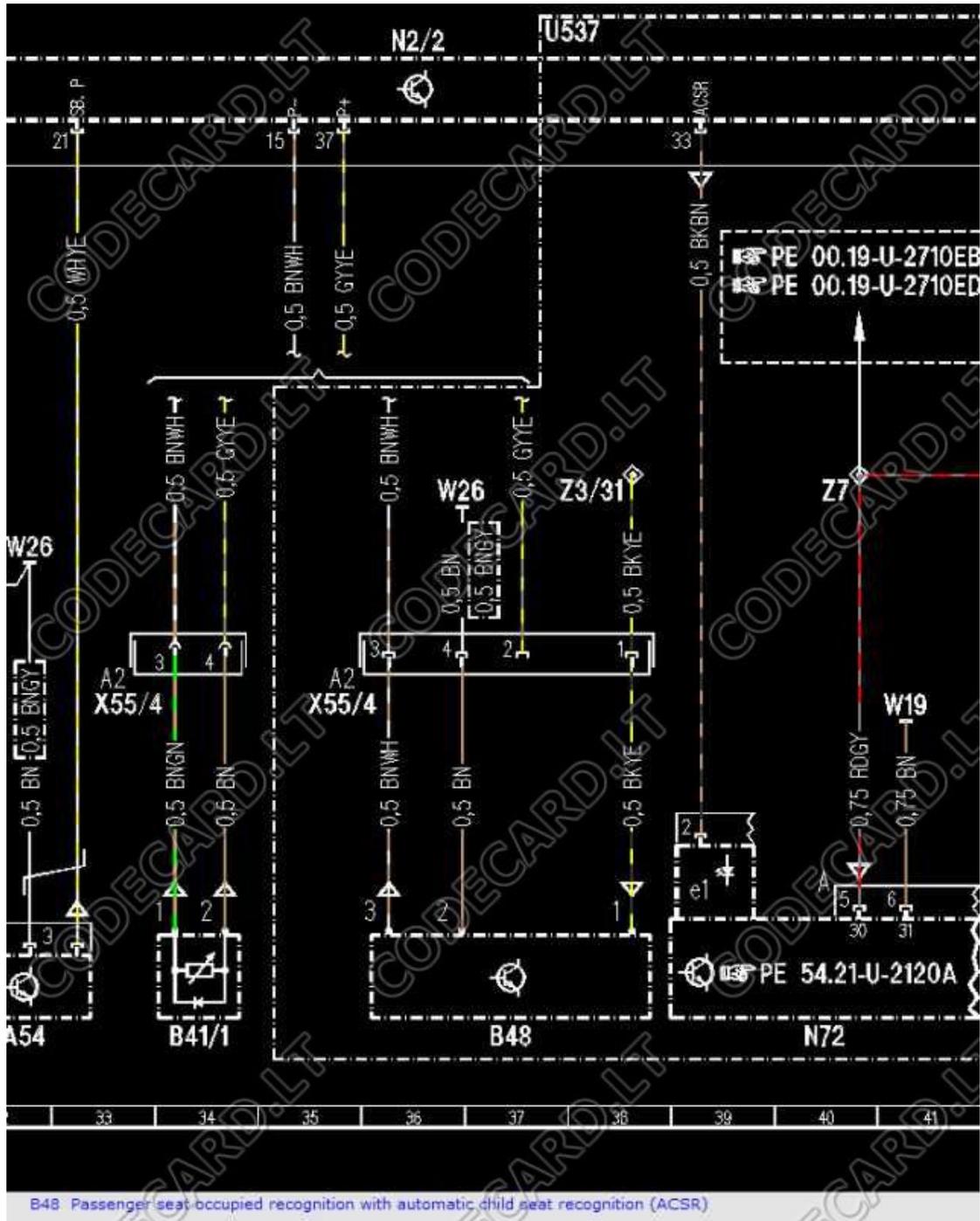
B48 Passenger seat occupied and child seat recognition sensor.

Disconnect **X1** under passenger seat and connect emulator instead **B48**: RD=+12V, WH=KL (K-line), BN=GND.

**4. Mercedes Benz Seat Occupant sensor emulator - Type4**

Can emulate Mercedes Benz (year 2000-2006 E-class W210, Vito W639, ML W163, A-class W168, C-class W203, CLK W209, Vaneo seat) occupant sensor. Is possible to set emulator in two states: passenger airbag "ON" or "OFF" (child seat recognized).

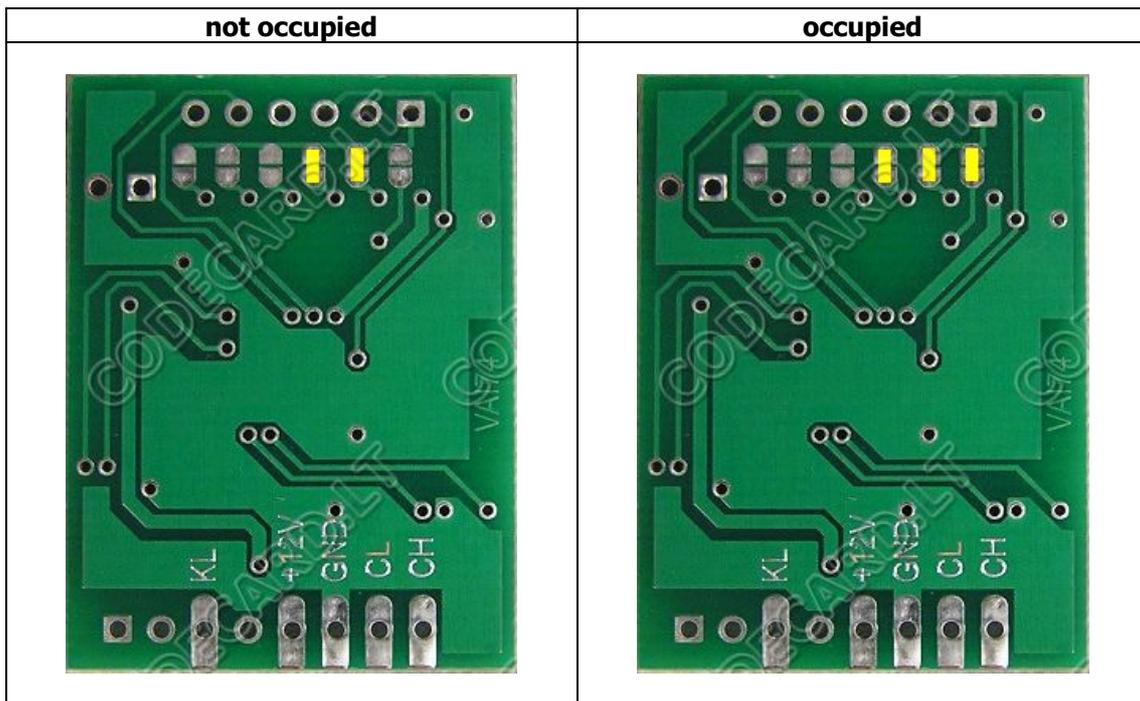


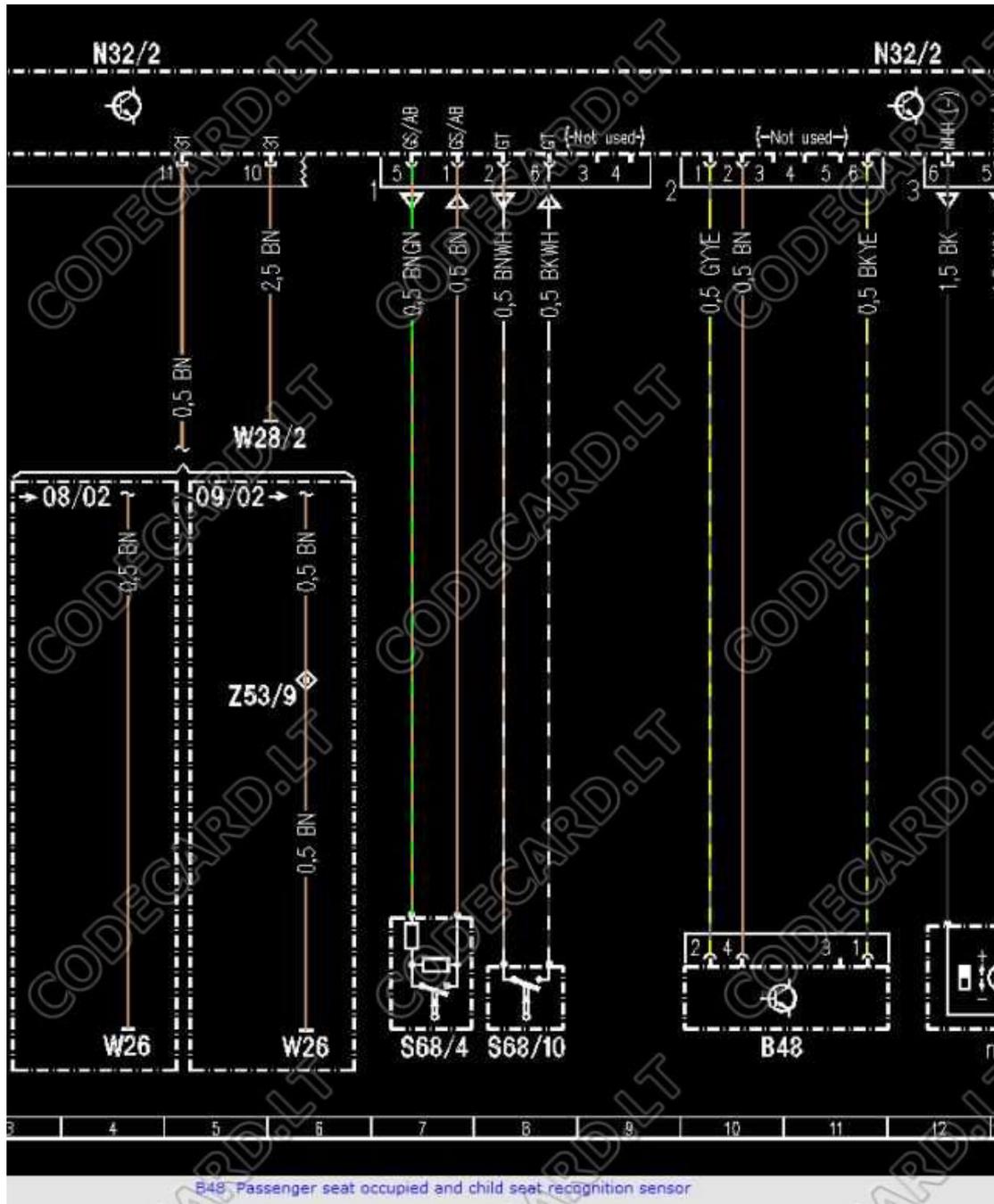


W210 wiring: Disconnect **X55/4** under passenger seat and connect emulator instead **B48**:  
 BKYE=+12V, BNWH=KL (K-line), BN=GND.

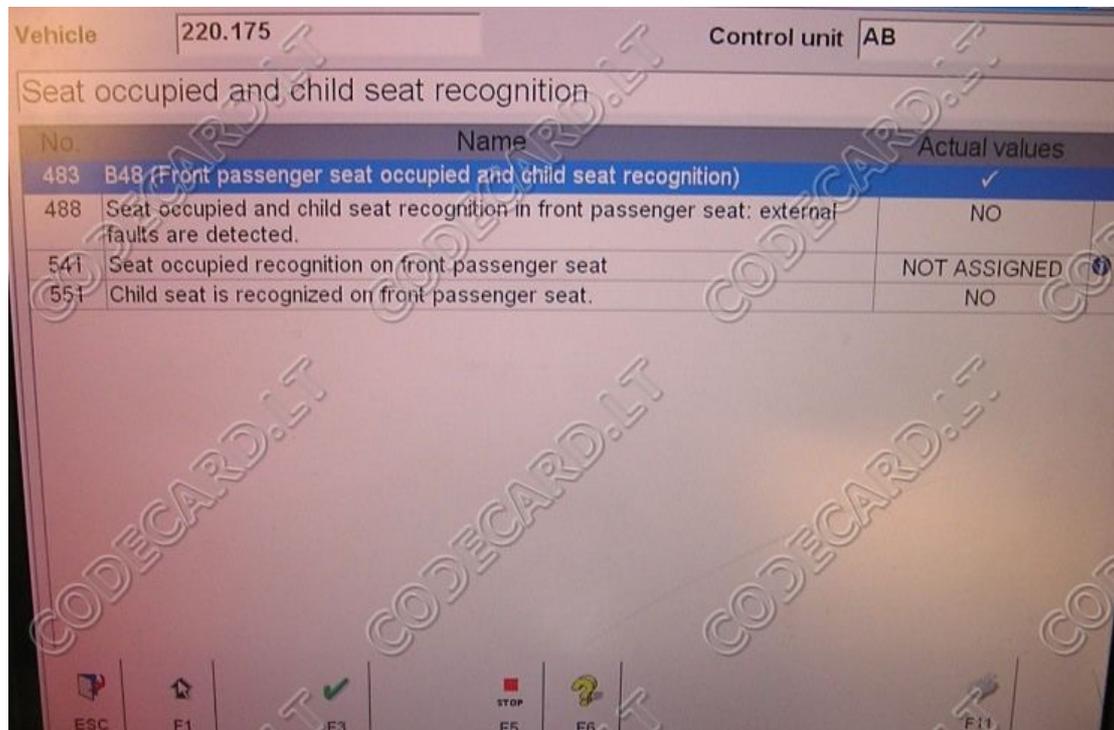
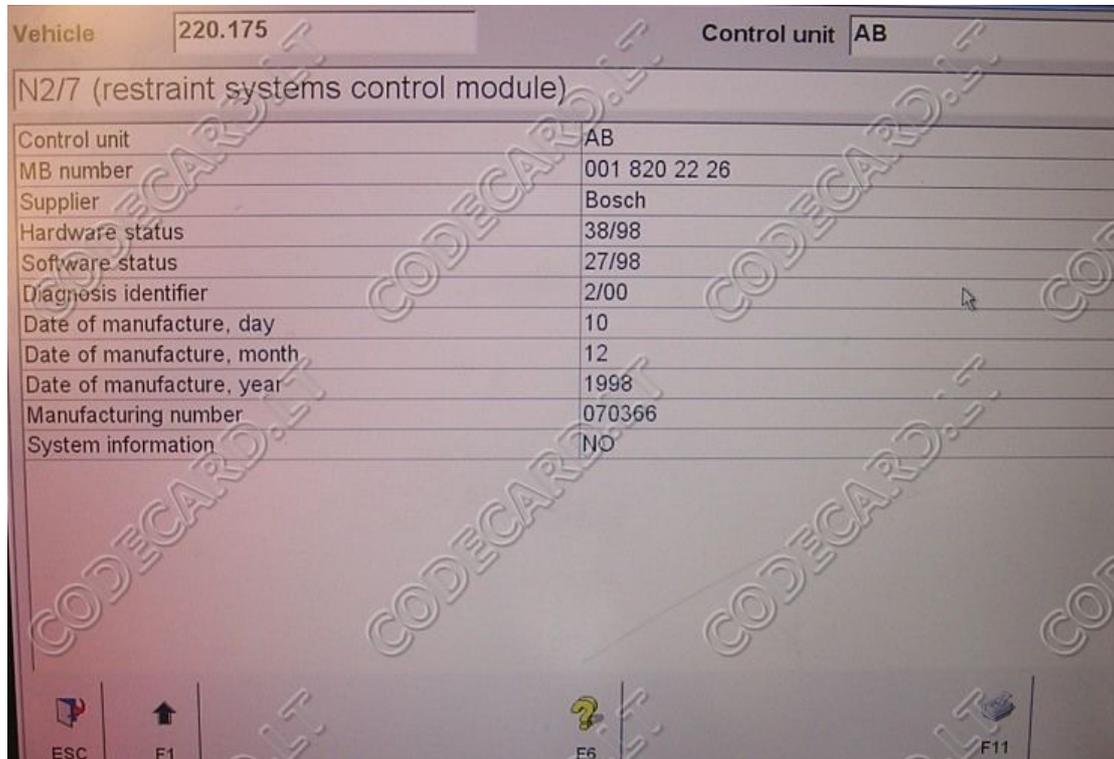
**5. Mercedes Benz Seat Occupant sensor emulator – Type5**

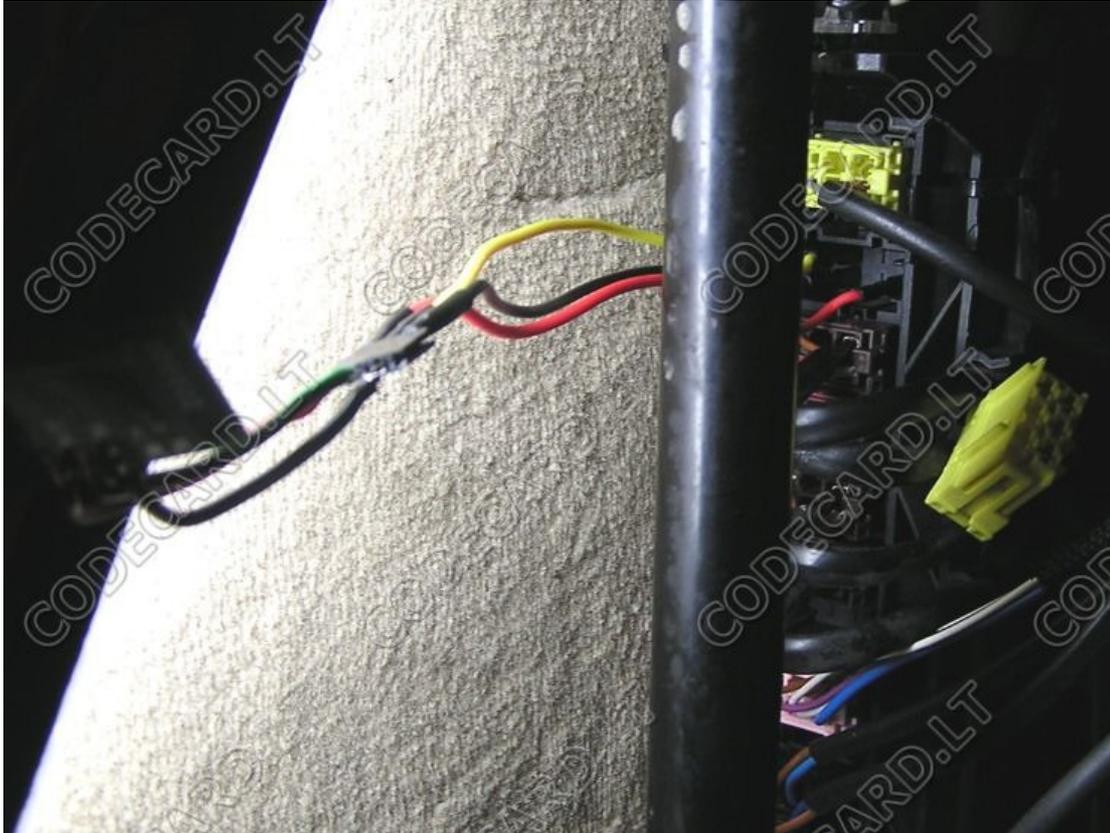
**Can emulate S class W220 2000-2005 seat occupant sensor.** Is possible to set emulator in two states: passenger airbag "ON" or "OFF" (child seat recognized).





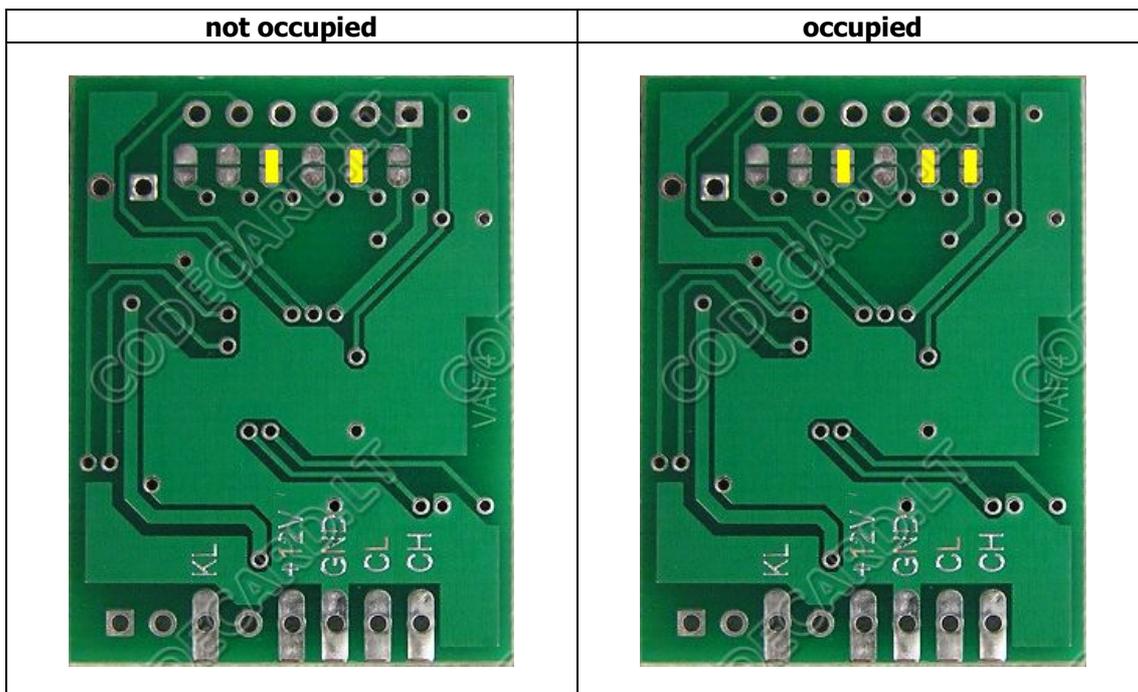
Disconnect **connector 2** under passenger seat and connect emulator instead **B48**:  
 RD=+12V, WH=KL (K-line), BN=GND.





**6. BMW E60, E63, E90 (2003-2005) Seat Occupant sensor emulator**

BMW E60, E63, E90 (year 2003-2005) Seat Occupant sensor emulator. Works with BMW cars with older type key (with metal blade)

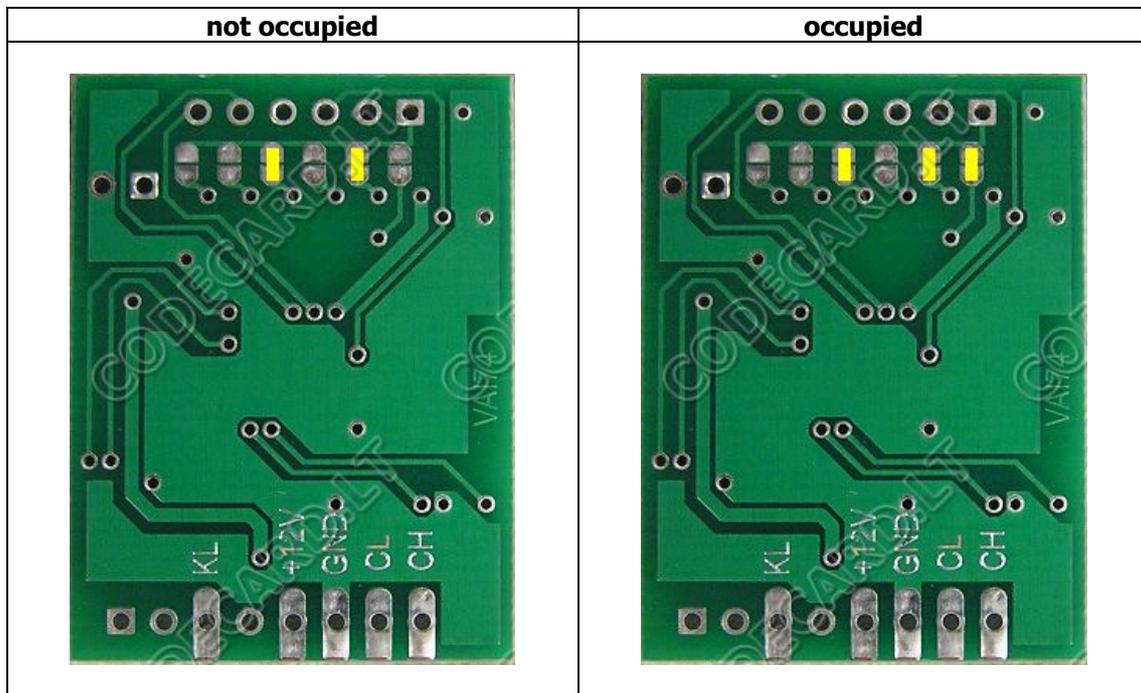


**Connection diagram: disconnect original passenger recognition sensor (usually is 3 pin yellow connector) and on car side wires connect UNIEMU:**

- Sensor power supply (check with multimeter- must be ~12V with ignition ON) - UNIEMU **+12V**
- Ground wire (check with tester) – UNIEMU **GND**
- Sensor signal wire (check with multimeter- must be ~9-10V with ignition ON) – UNIEMU **KL**

**7. BMW E60, E63, E90 (2005-2007) Seat Occupant sensor emulator**

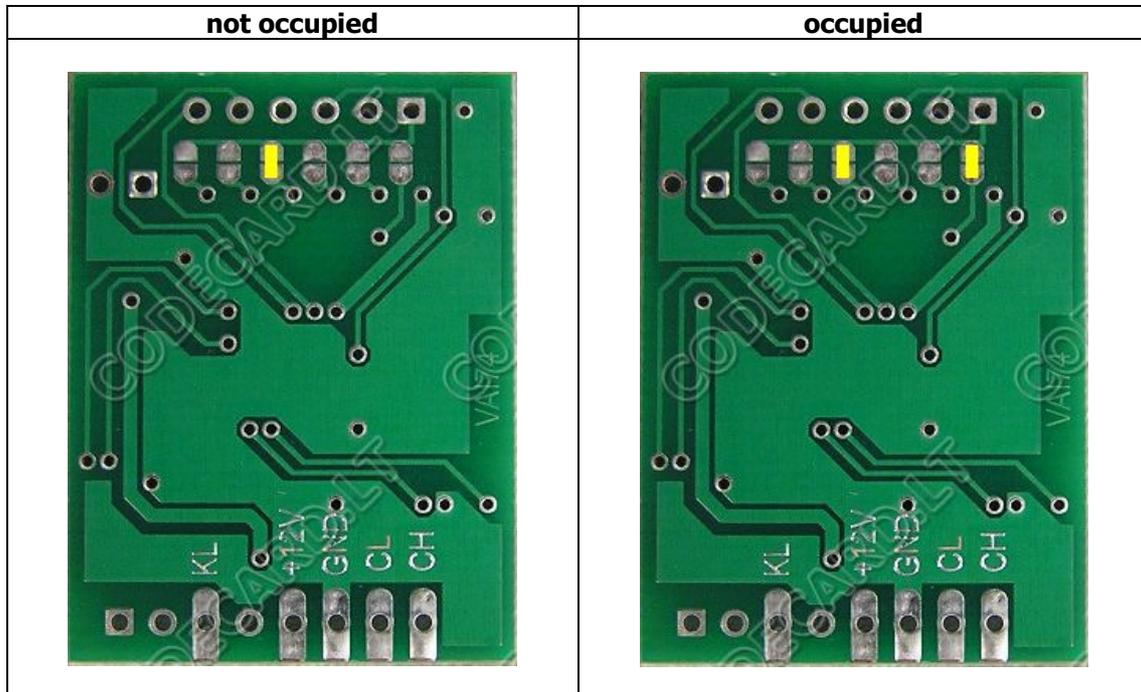
BMW E60, E63, E65, E90, X5 (year 2005-2007) Seat Occupant sensor emulator. Works with BMW cars with new smart key (restyling models).



**Connection diagram: disconnect original passenger recognition sensor (usually is 3 pin yellow connector) and on car side wires connect UNIEMU:**

- Sensor power supply (check with multimeter- must be ~12V with ignition ON) - UNIEMU **+12V**
- Ground wire (check with tester) – UNIEMU **GND**
- Sensor signal wire (check with multimeter- must be ~9-10V with ignition ON) – UNIEMU **KL**

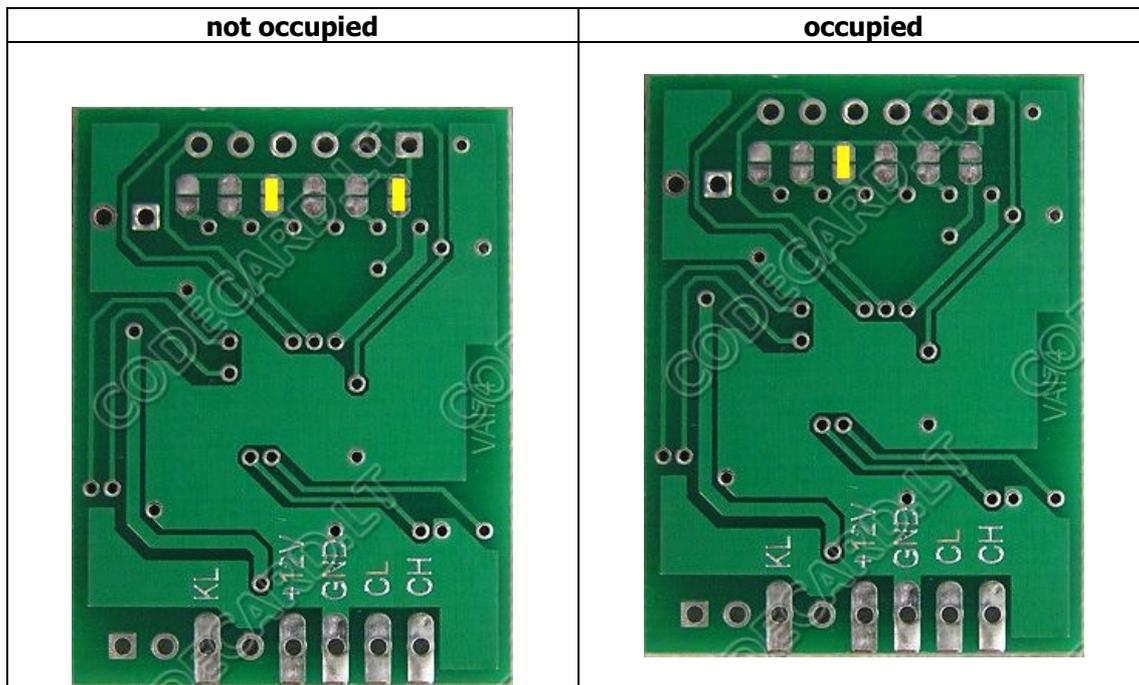
**8. Older BMW E38, E39, E36, E46, X5, X3, E65, E60 and other 1997-2003 BMW seat occupant sensor emulator**



**Connection diagram: disconnect original passenger recognition sensor (usually is 3 pin yellow connector) and on car side wires connect UNIEMU:**

- Sensor power supply (check with multimeter- must be ~12V with ignition ON) - UNIEMU **+12V**
- Ground wire (check with tester) – UNIEMU **GND**
- Sensor signal wire (check with multimeter- must be ~9-10V with ignition ON) – UNIEMU **KL**

## 9. 2002-2005 Mini Cooper, BMW E60, E63, E90 (2007+) seat occupant sensor emulator

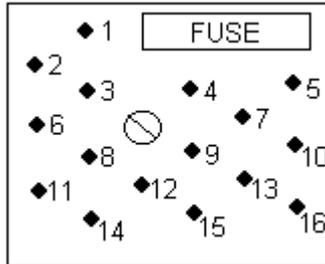


**Connection diagram: disconnect original passenger recognition sensor (usually is 3 pin yellow connector) and on car side wires connect UNIEMU:**

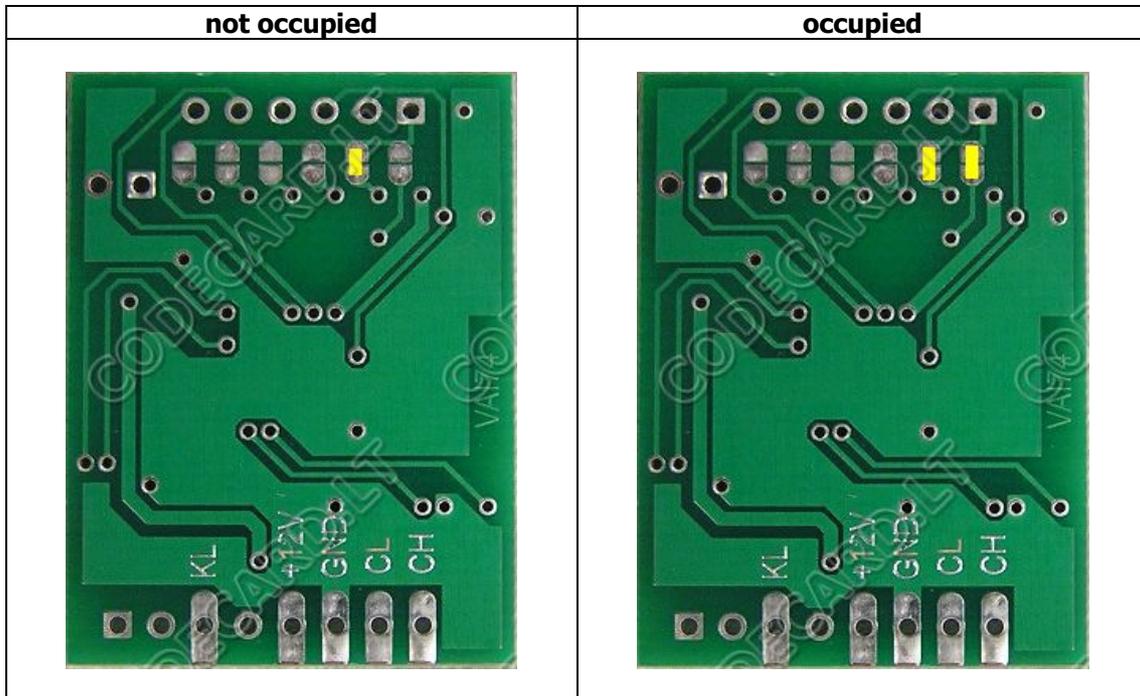
- Sensor power supply (check with multimeter- must be ~12V with ignition ON) - UNIEMU **+12V**
- Ground wire (check with tester) – UNIEMU **GND**
- Sensor signal wire (check with multimeter- must be ~9-10V with ignition ON) – UNIEMU **KL**

- 10. BMW I-bus emulator for car radio** – necessary for BMW car radio and CDC repair.  
Remove "DISABLED" message.

**+12V – pin5;** To switch "ON" radio need connect +12V also to pin9;  
**K-line** pin need to be connected to radio or CDC I-Bus **pin7;**  
**GND – pin15;**



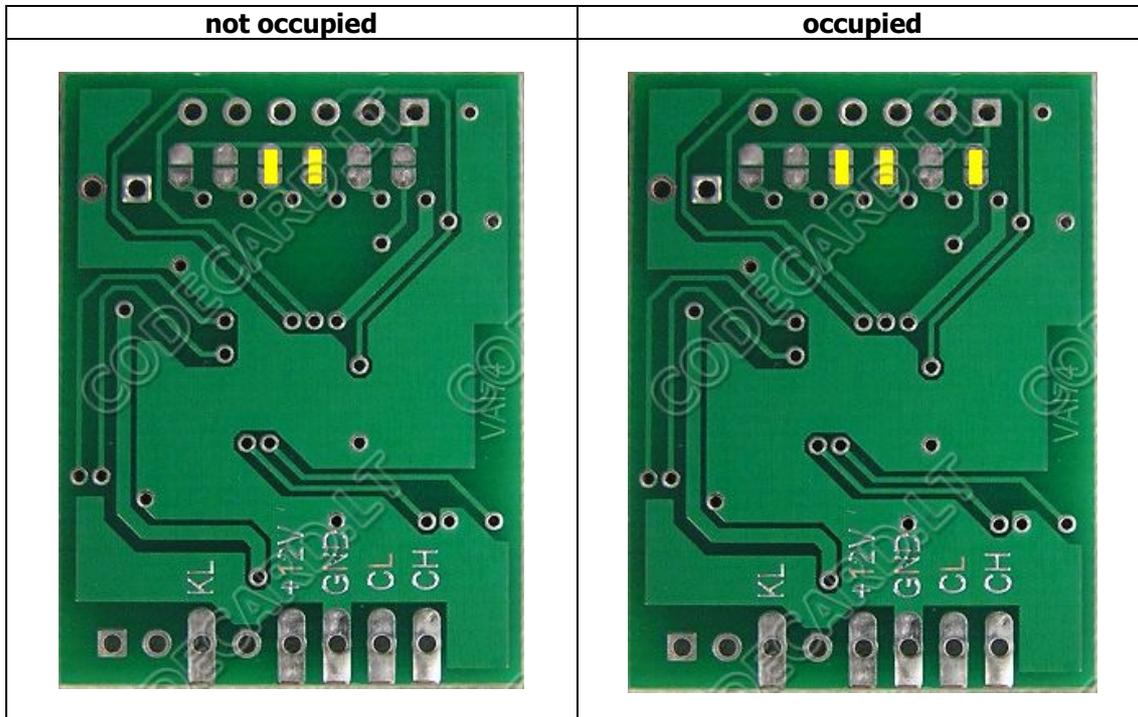
**11. Mazda 6 Seat Occupant sensor emulator:**



**Mazda 6 connection diagram: disconnect original passenger recognition sensor (usually is 3 pin yellow connector) and on car side wires connect UNIEMU:**

- Sensor power supply (check with multimeter- must be ~12V with ignition ON) - UNIEMU **+12V**
- Ground wire (check with tester) – UNIEMU **GND**
- Sensor signal wire (check with multimeter- must be ~9-10V with ignition ON) – UNIEMU **KL**

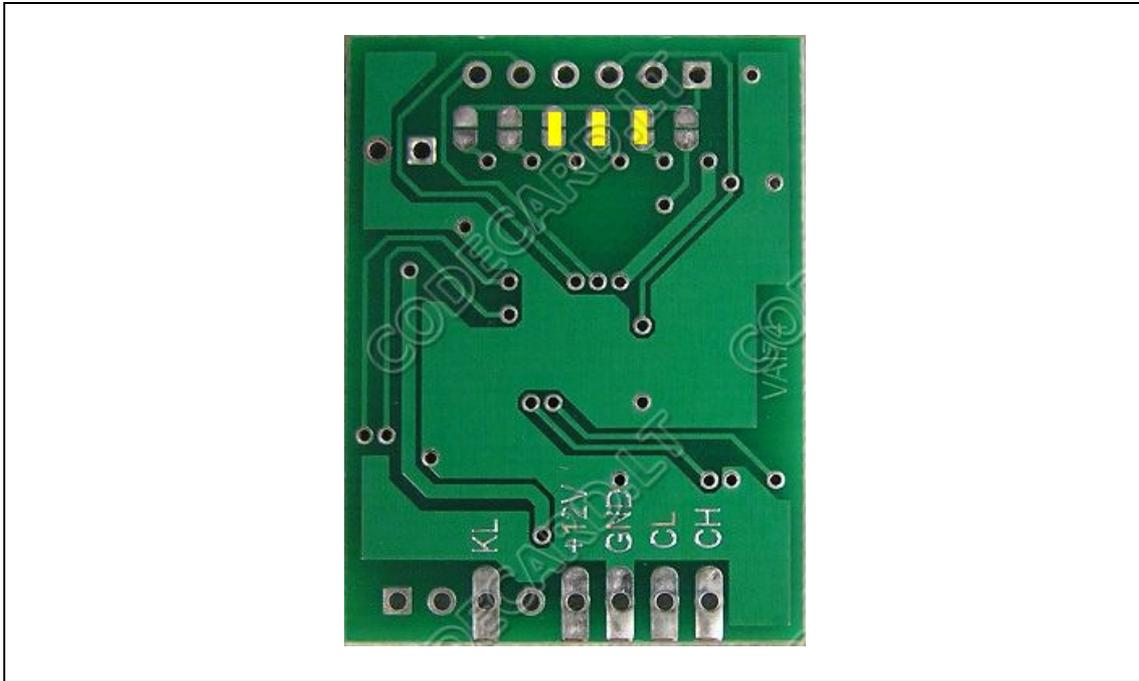
**12. Fiat Stilo Seat Occupant sensor emulator**



**Fiat Stilo connection diagram: disconnect original passenger recognition sensor (usually is 3 pin yellow connector) and on car side wires connect UNIEMU:**

- Sensor power supply (check with multimeter- must be ~12V with ignition ON) - UNIEMU **+12V**
- Ground wire (check with tester) – UNIEMU **GND**
- Sensor signal wire (check with multimeter- must be ~9-10V with ignition ON) – UNIEMU **KL**

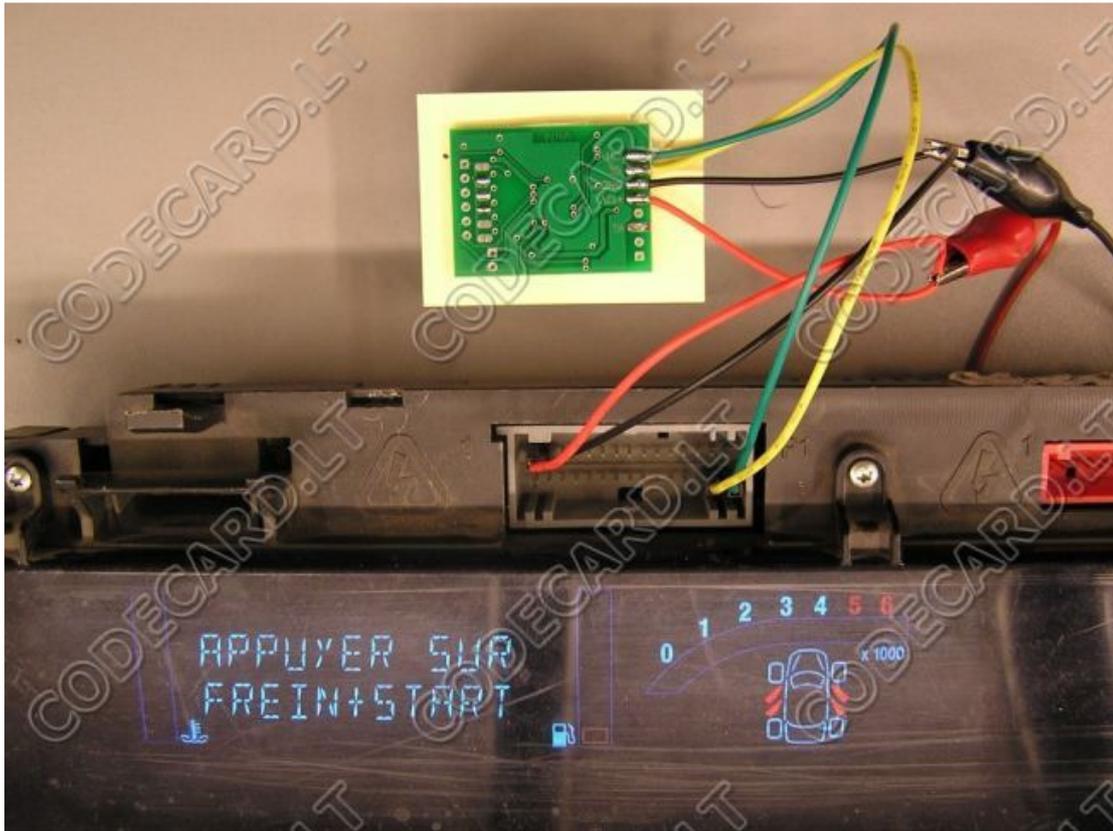
**13. Renault CAN bus emulator for instrument cluster repair**



**Renault Scenic wiring:**

- 1 - +12V
- 2 - GND
- 30 - CH
- 29 - CL

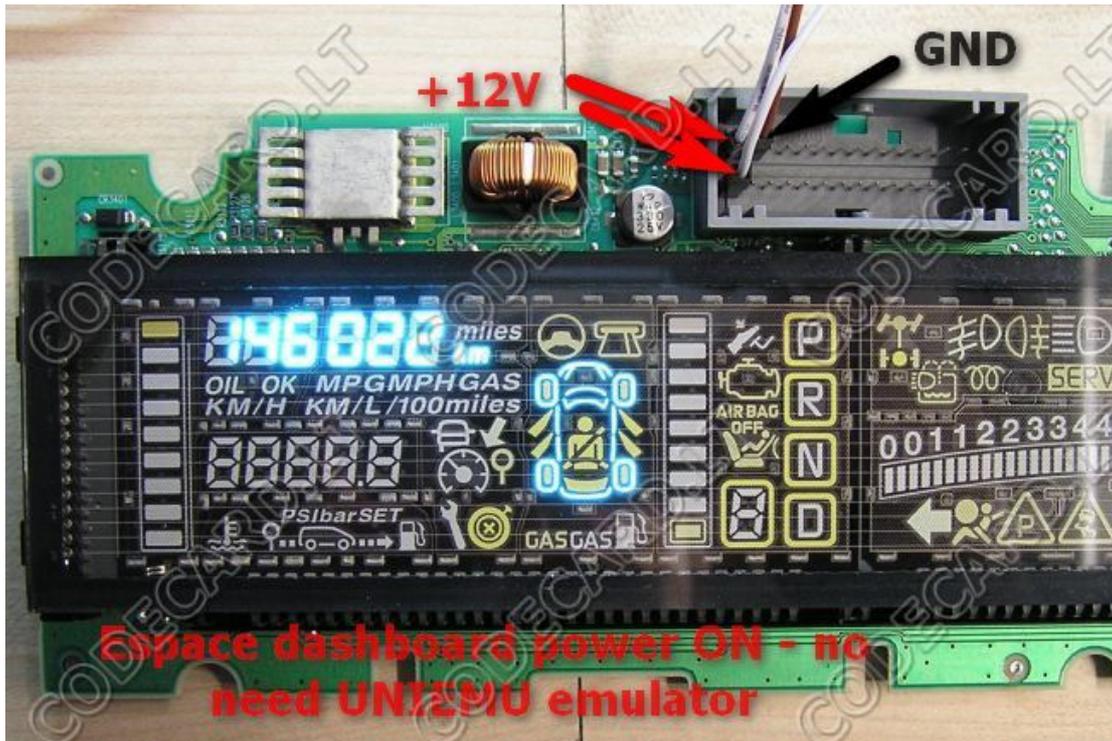
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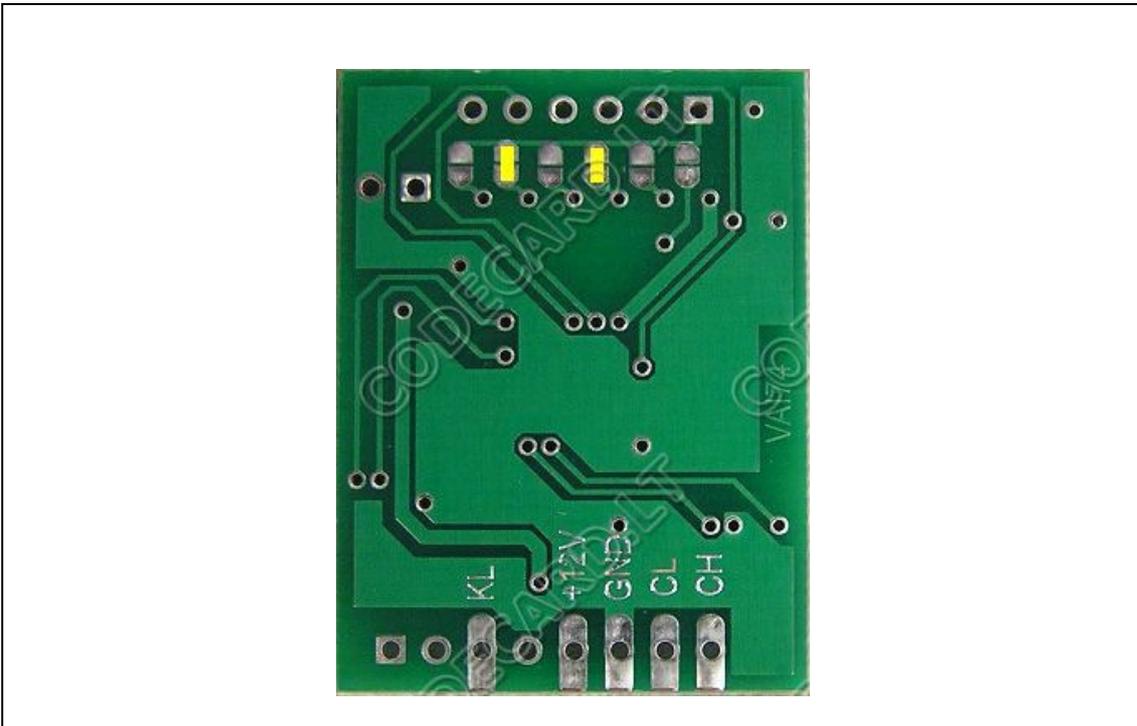
**Renault Megane wiring:**

- 1 - CH
- 4 - CL
- 15 - +12V
- 30 - GND

**Renault Espace wiring:**

- 1, 16 - +12V
- 2 - GND

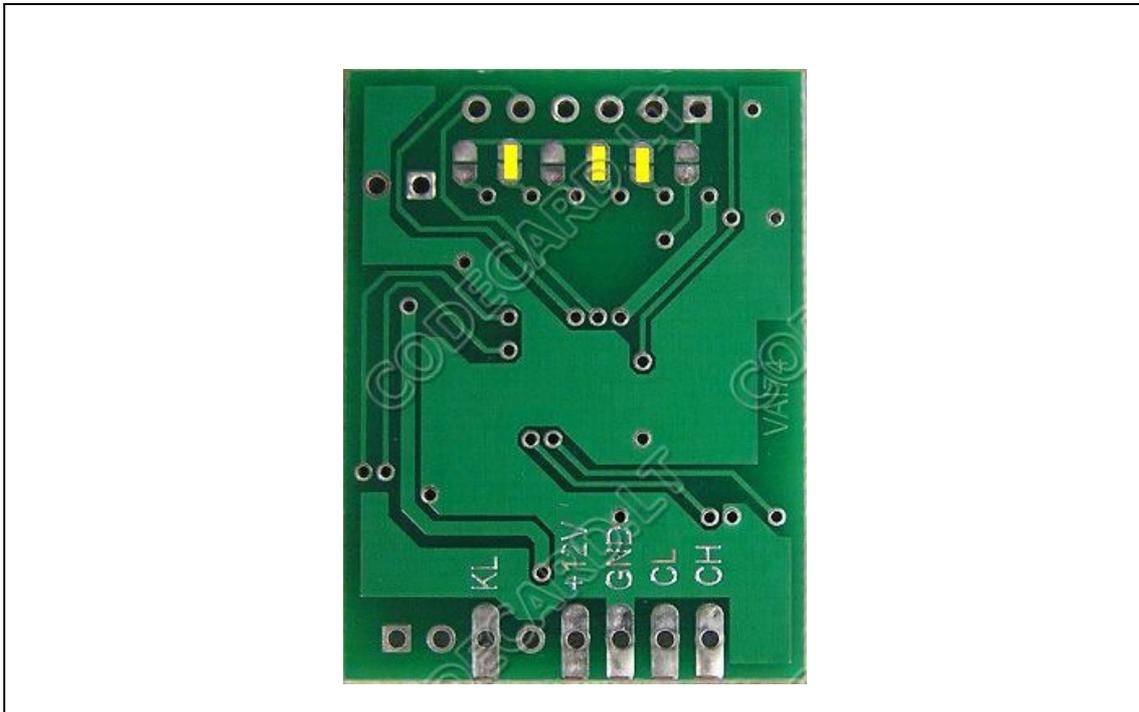
**14. Suzuki seat occupant sensor emulator for airbag system repair.**



**Suzuki connection diagram: disconnect original passenger recognition sensor (usually is 3 pin yellow connector) and on car side wires connect UNIEMU:**

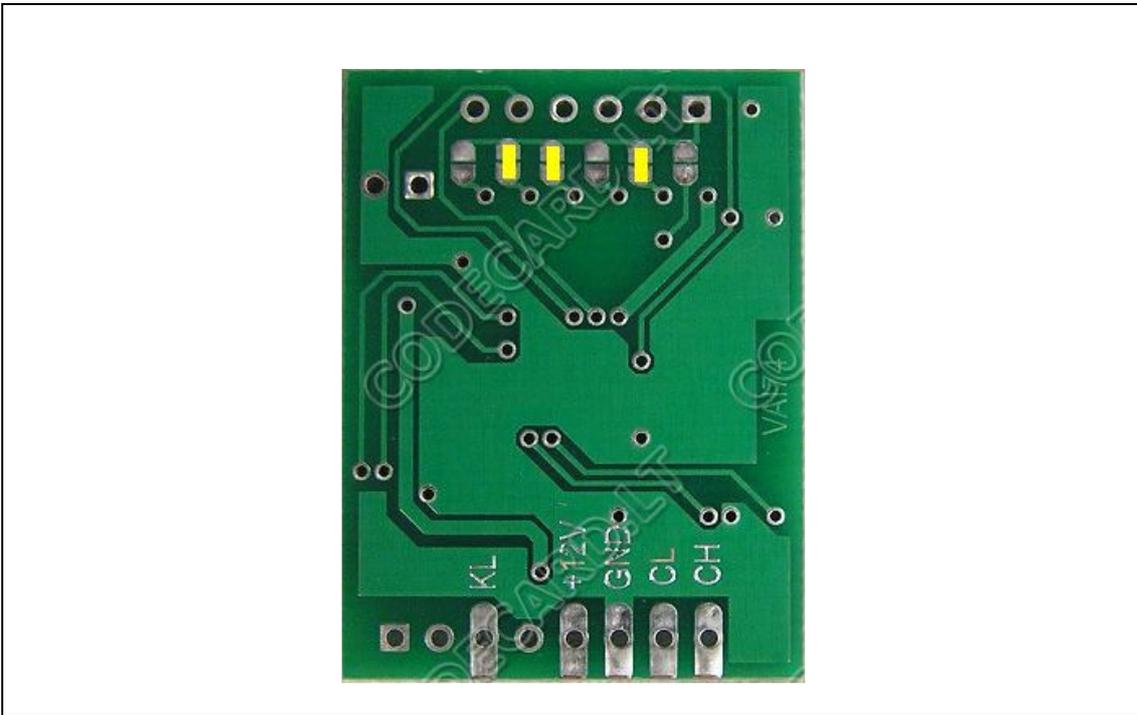
- Sensor power supply (check with multimeter- must be ~12V with ignition ON) - UNIEMU **+12V**
- Ground wire (check with tester) – UNIEMU **GND**
- Sensor signal wire (check with multimeter- must be ~9-10V with ignition ON) – UNIEMU **KL**

**15. VW immobilizer emulator for VW-Audi-Seat-Skoda cars year 1996-2001**

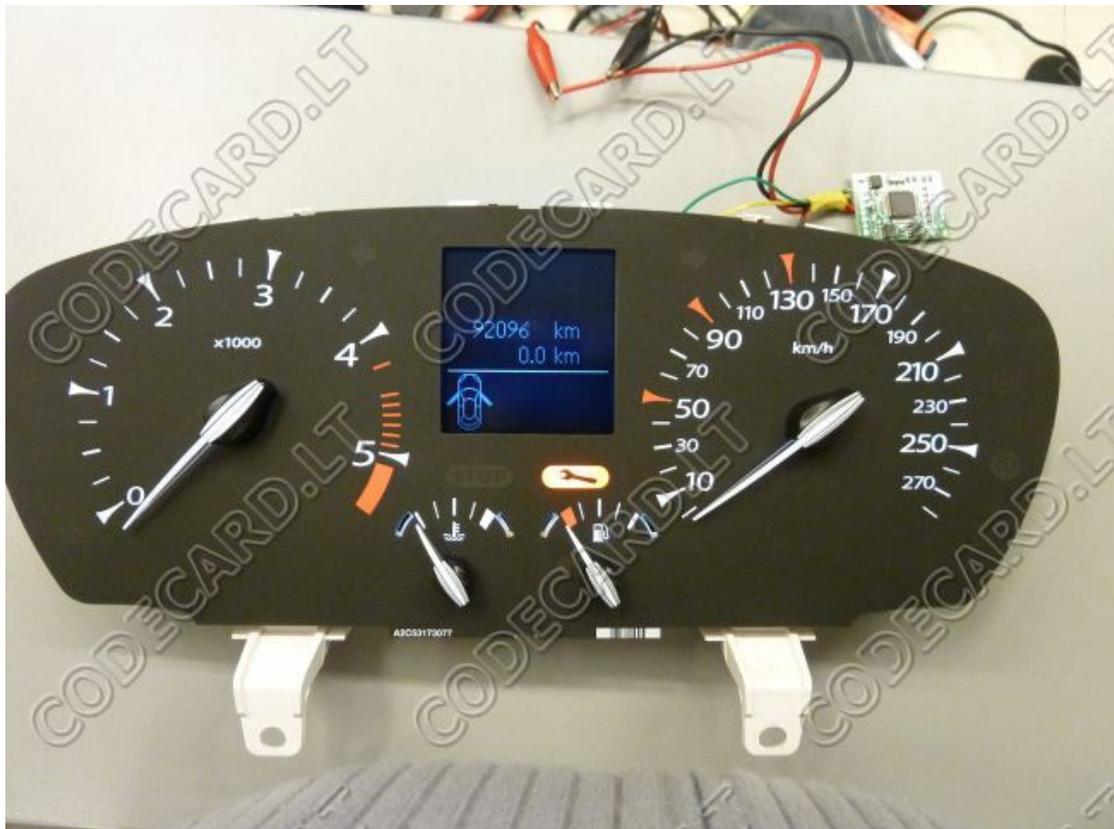


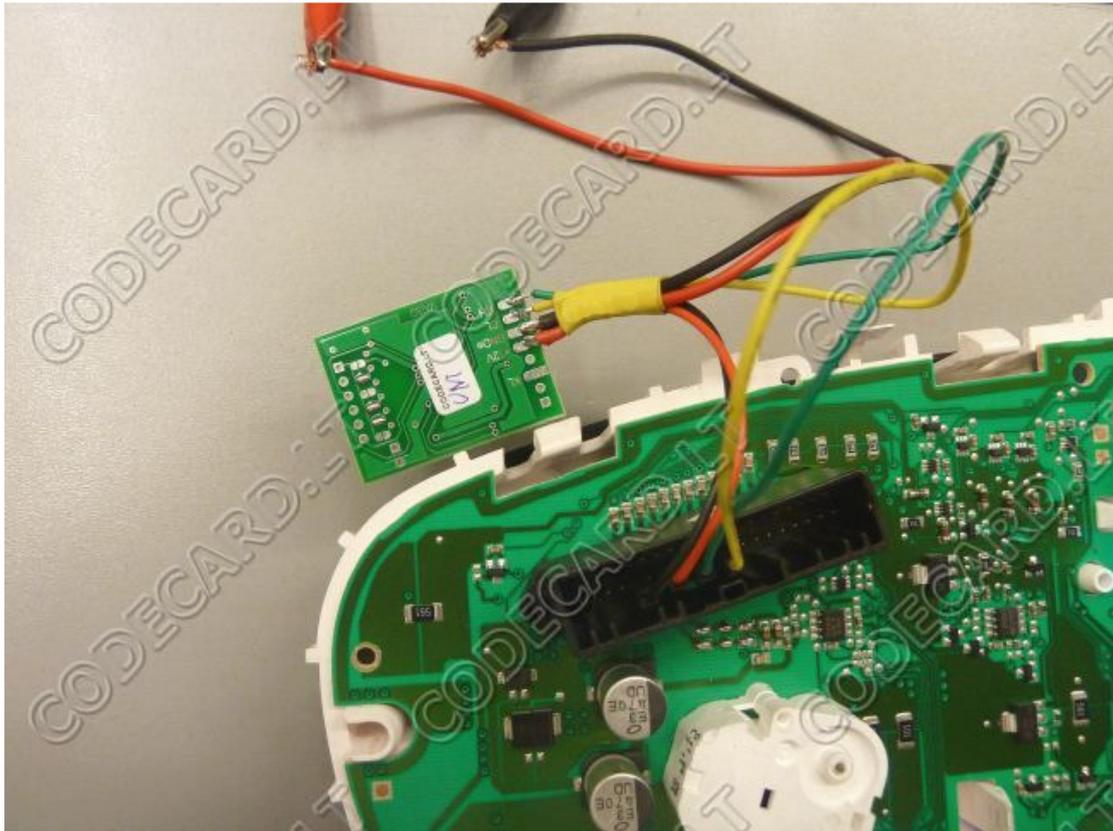
This is the same function emulator like [www.codecard.lt](http://www.codecard.lt) VWEMU. For connection diagram look VWEMU manual.

**16.** Laguna III instrument cluster CAN bus emulator for dash testing on the table.



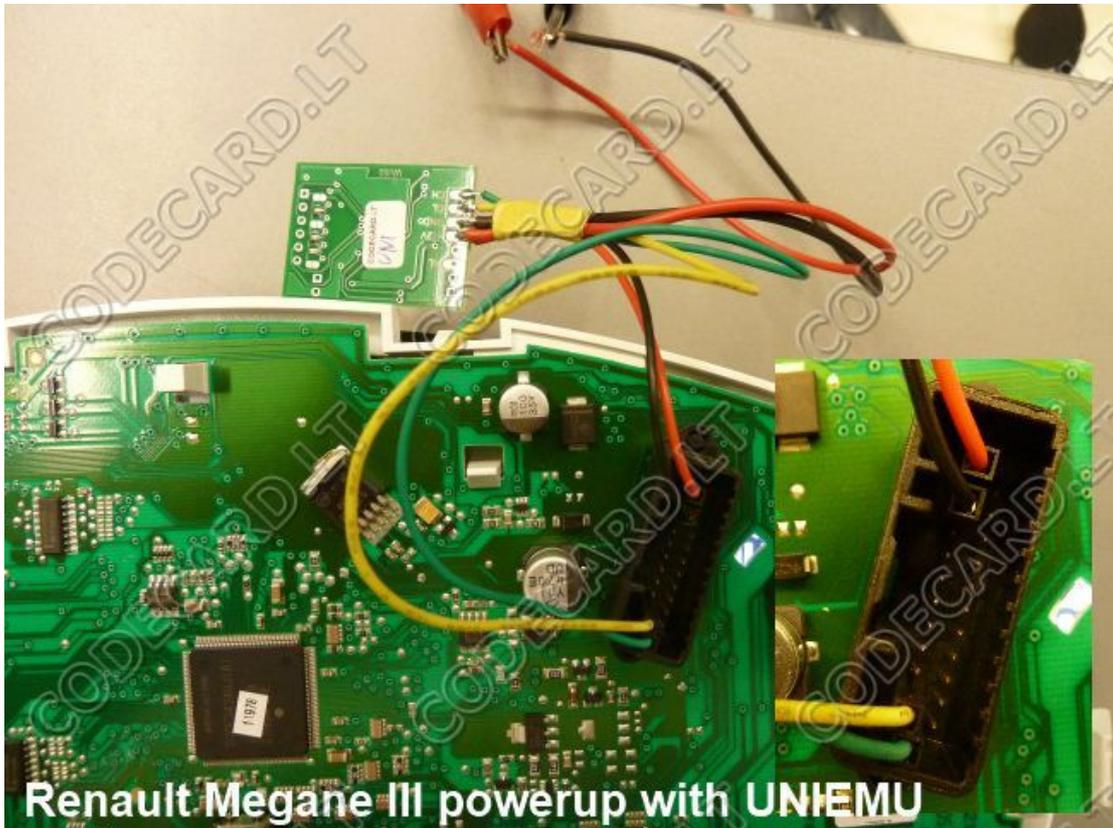
Renault Laguna III wiring:





Dashboard 9 pin - CH  
Dashboard 11 pin - CL  
Dashboard 7 pin - +12V  
Dashboard 5 pin - GND

Renault Megane III wiring:

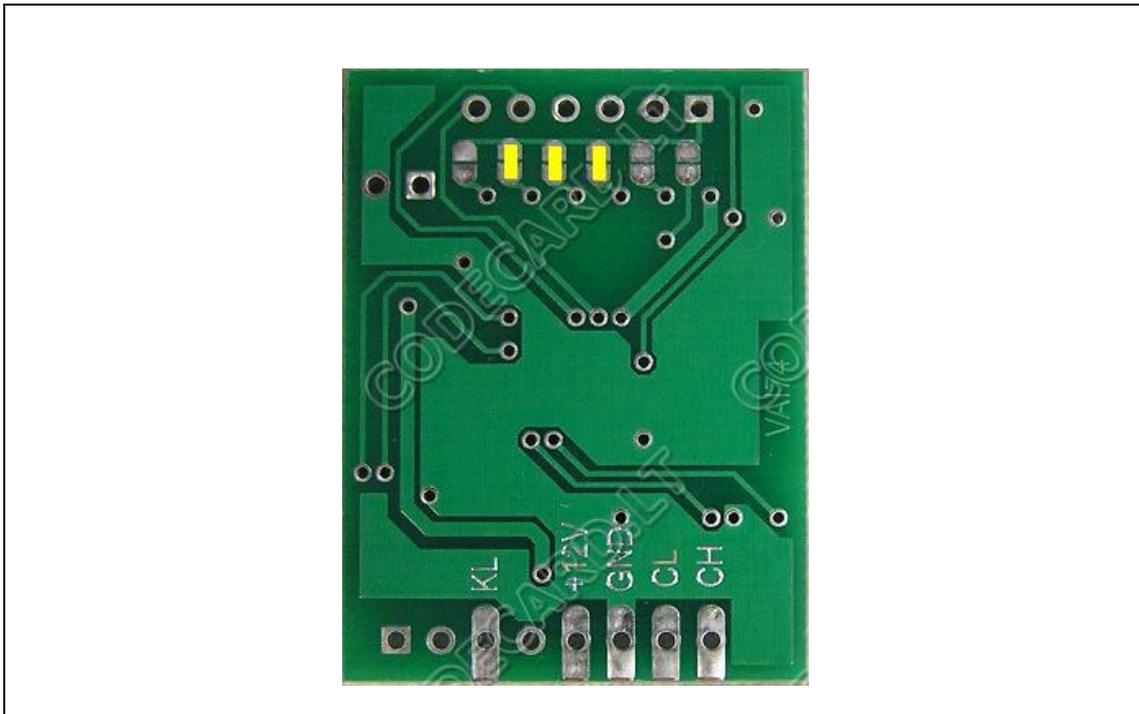


Renault Megane III powerup with UNIEMU

Dashboard 12 pin - CH  
Dashboard 11 pin - CL  
Dashboard 2 pin - +12V  
Dashboard 3 pin - GND

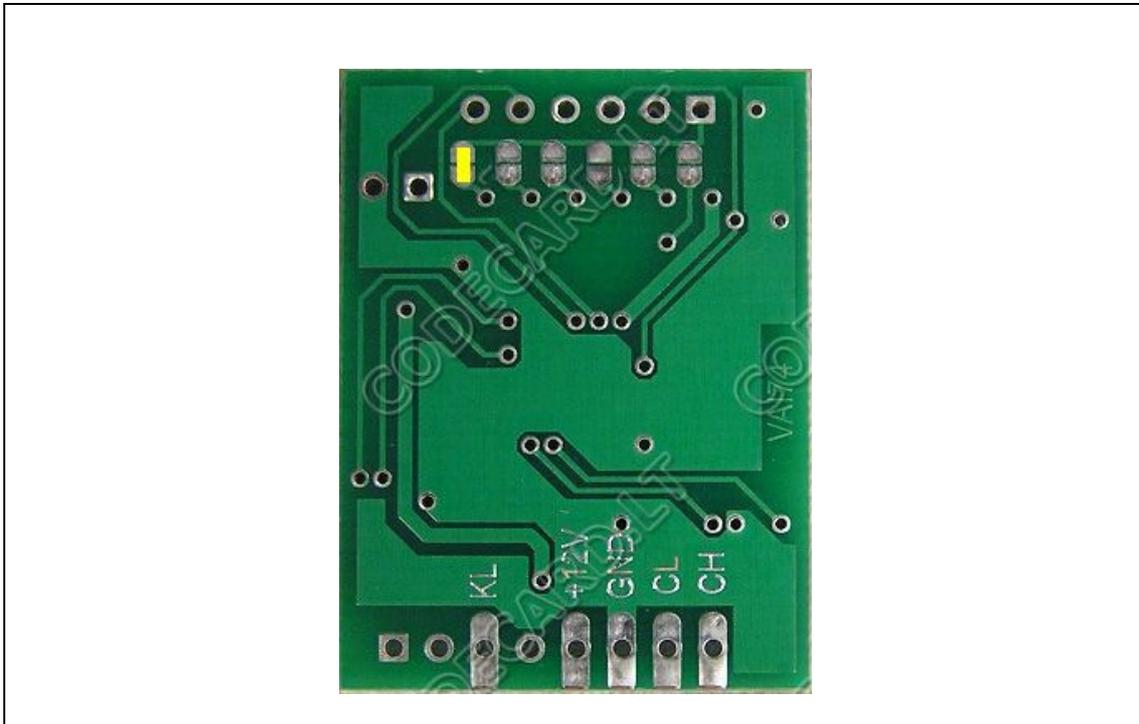
**Scenic III: check wiring diagrams for exact pinout.**

- 17. BMW E60, E61, E90, E91 all car error erase by K-line** – when +12V on emulator appears, emulator after few seconds send "erase all errors" message by K-line. This emulator can be used to eliminate sporadic car engine, airbag, body electronic defects like "my car airbag lamp is ON after 3 days again!" or "you erased errors on my BMW and few days everything was OK, now check engine, ABS, tractions lamps indicate fault".

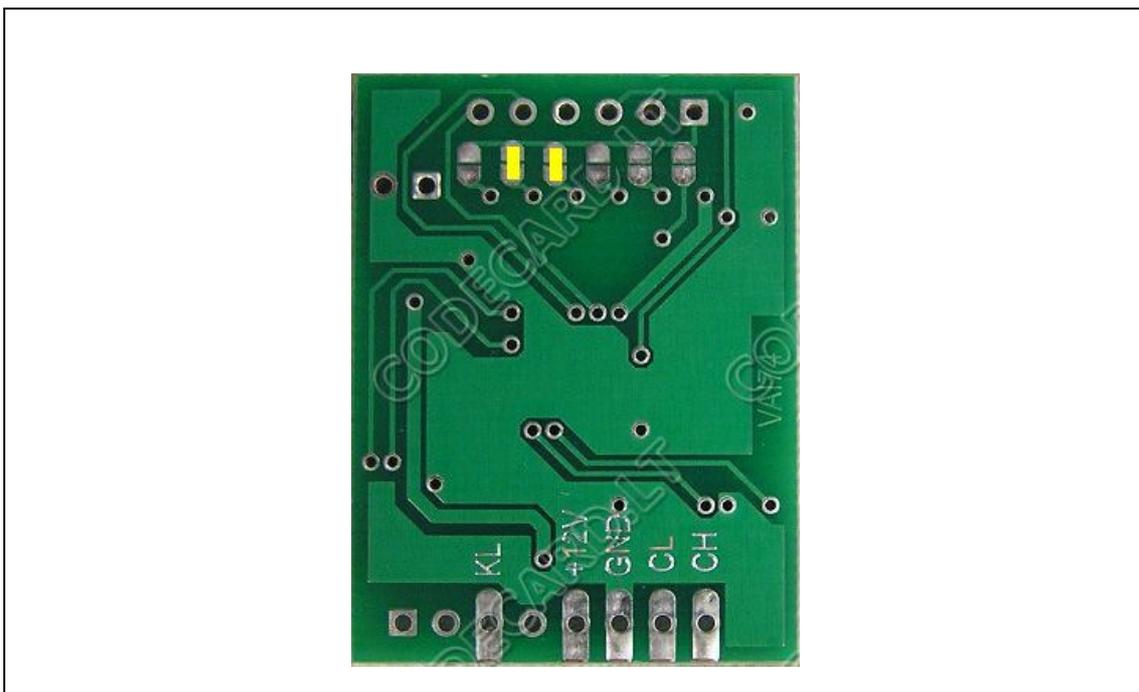


Usually you can connect it to car OBDII connector:  
GND – OBDII pin4  
+12V – OBDII pin1 (on this pin is +12V when ignition is ON)  
KL – to OBDII connector pin7

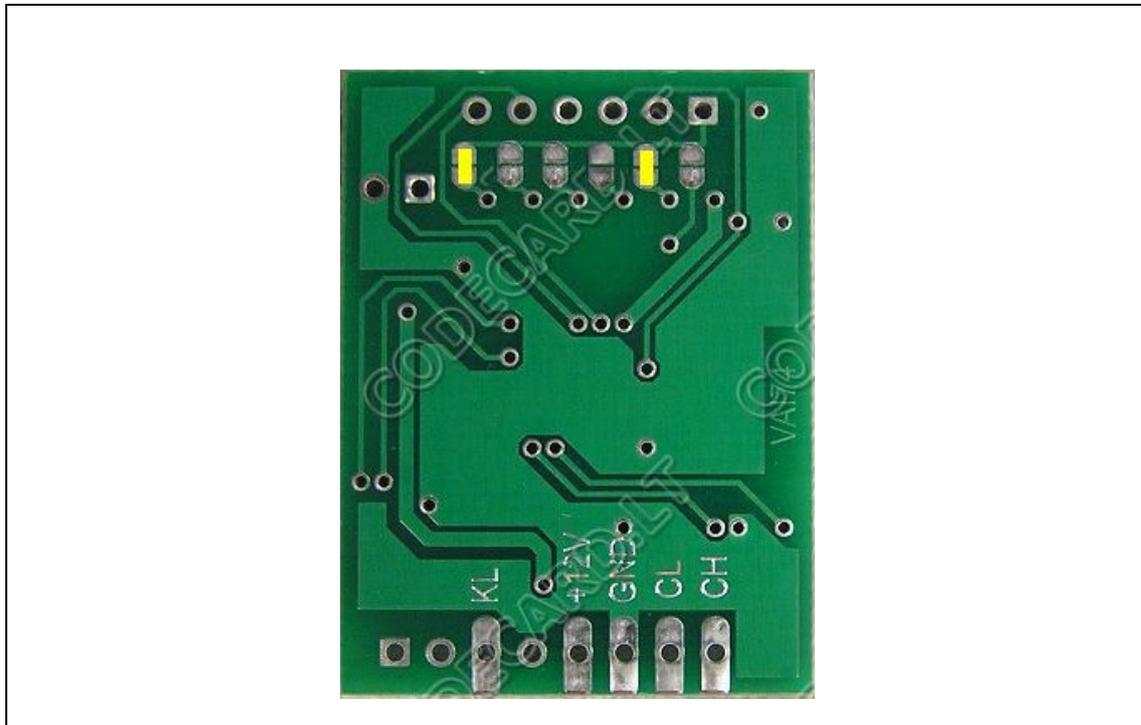
**18.** Hyundai immobilizer emulator

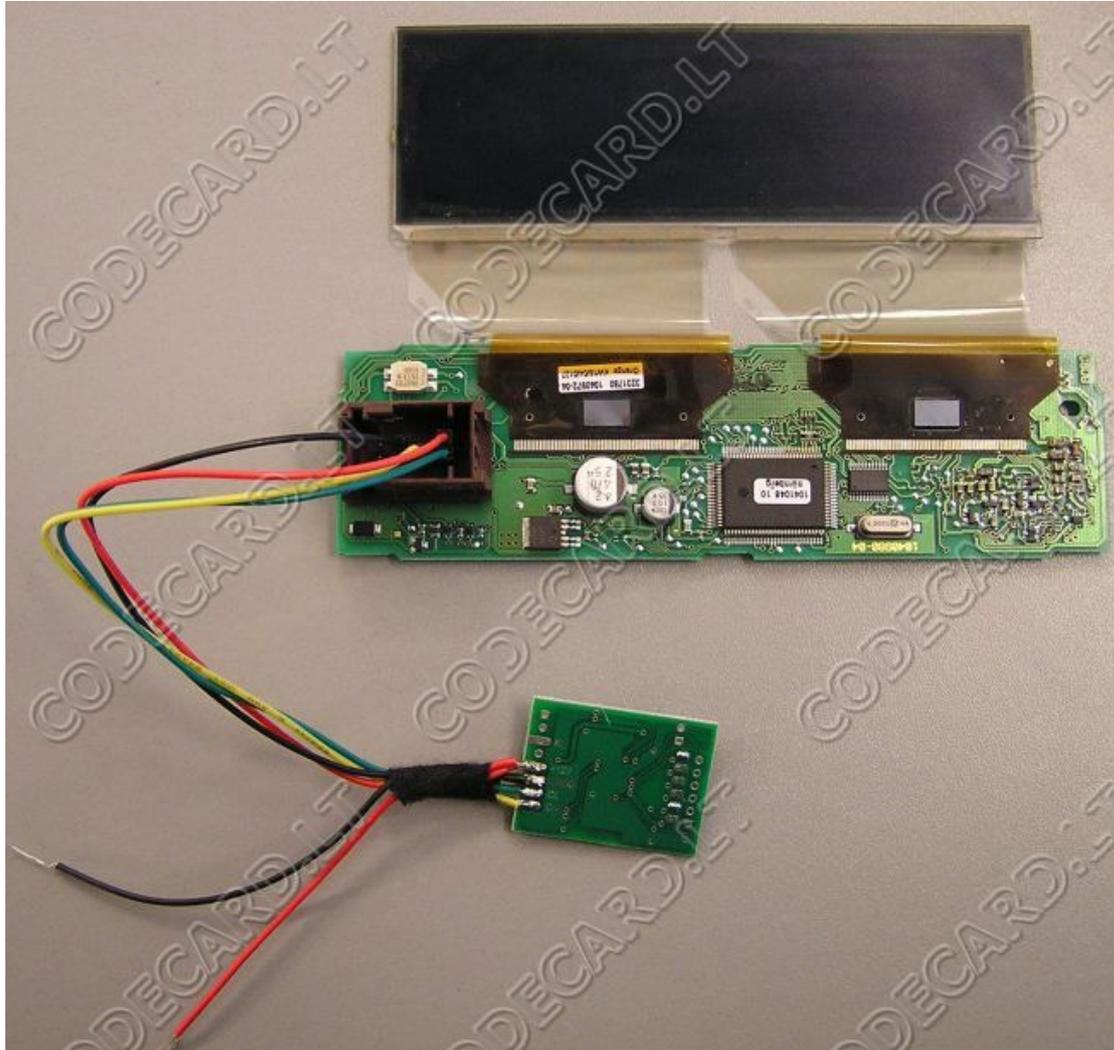


**19.** KIA immobilizer emulator



**20. Peugeot-Citroen PSA display CAN bus emulator for LCD display testing on the table**

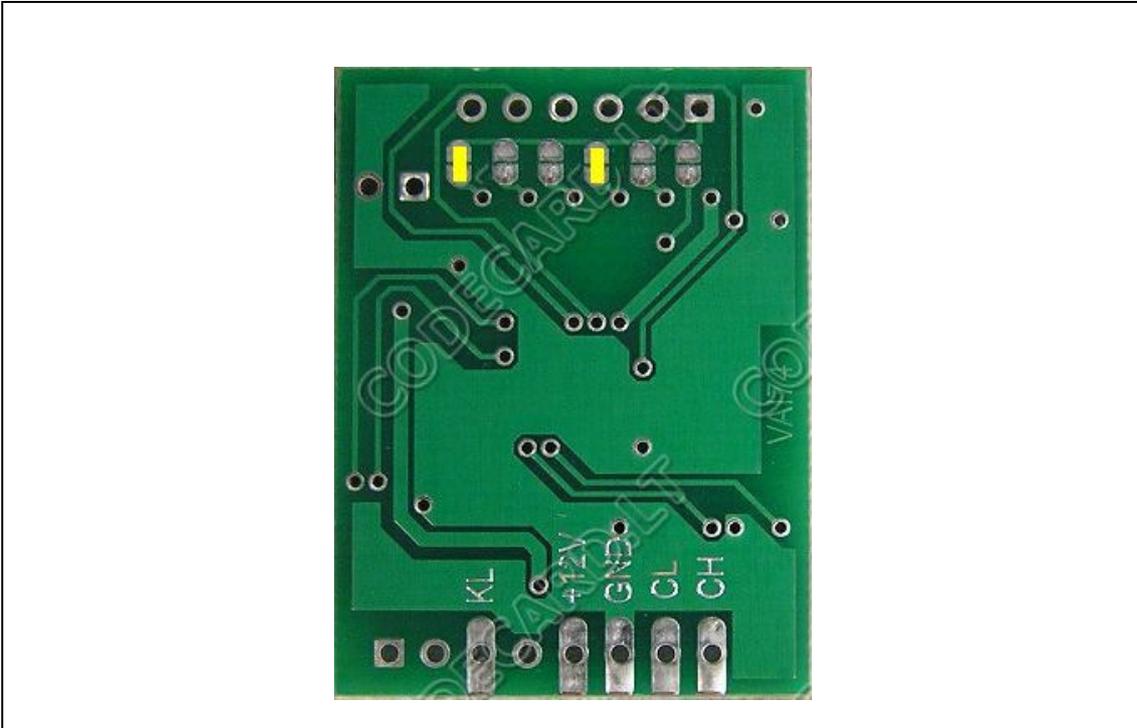




**PSA LCD connection on-table wiring (remove 121 SMD resistor from UNIEMU connected on CH-CL):**

- 9 - CH
- 7 - CL
- 1 - +12V
- 4 - GND

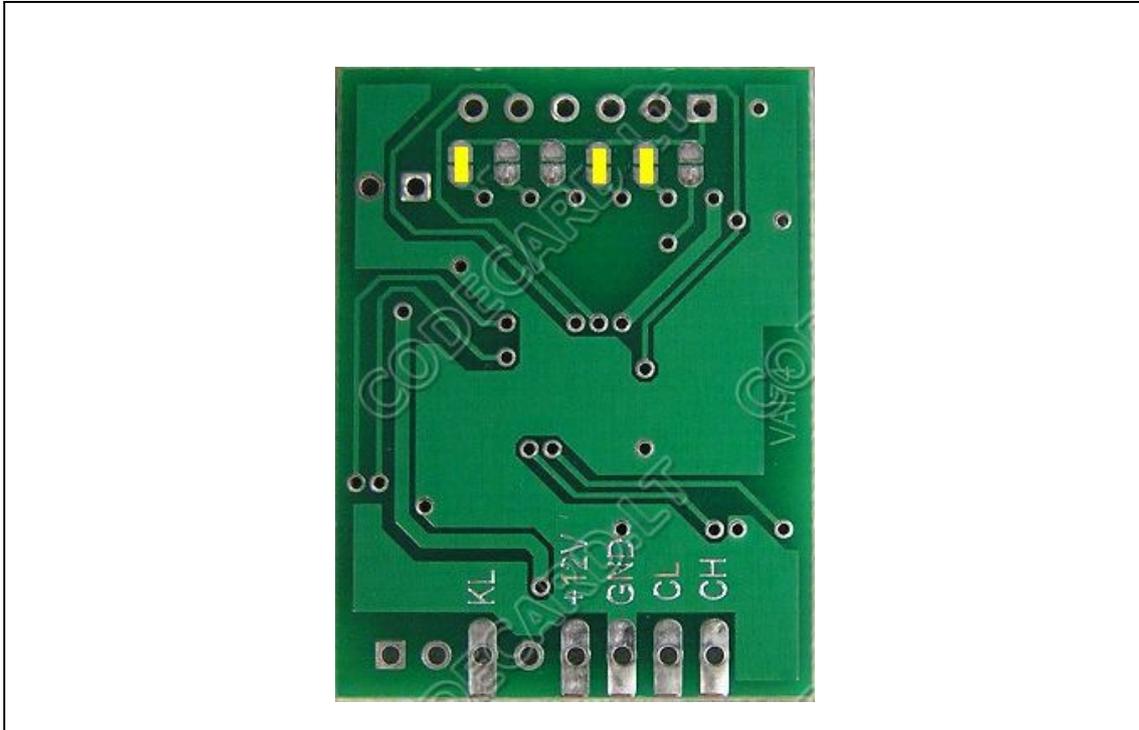
**21. Opel seat occupant sensor emulator for airbag system repair.**



**Opel connection diagram: disconnect original passenger recognition sensor (usually is 3 pin yellow connector) and on car side wires connect UNIEMU:**

- Sensor power supply (check with multimeter- must be ~12V with ignition ON) - UNIEMU **+12V**
- Ground wire (check with tester) – UNIEMU **GND**
- Sensor signal wire (check with multimeter- must be ~9-10V with ignition ON) – UNIEMU **KL**

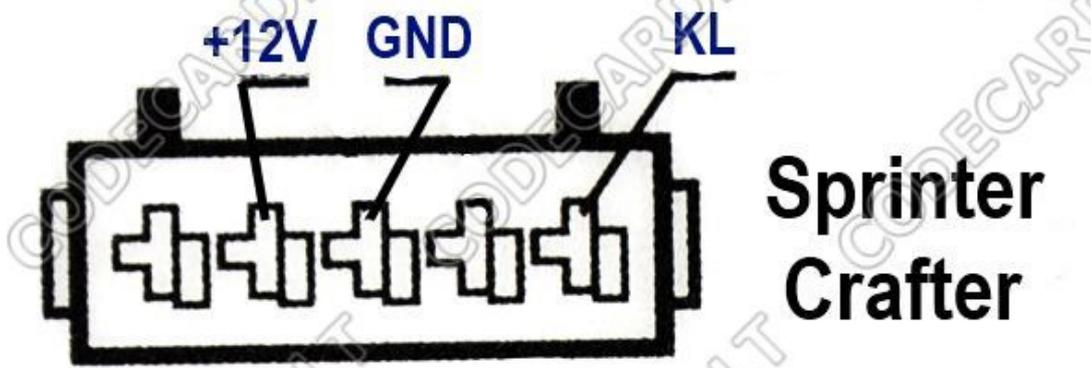
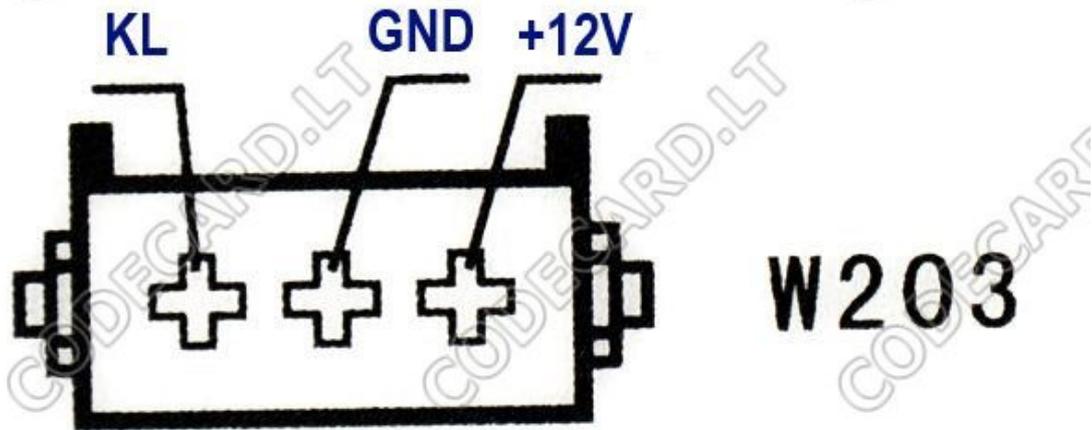
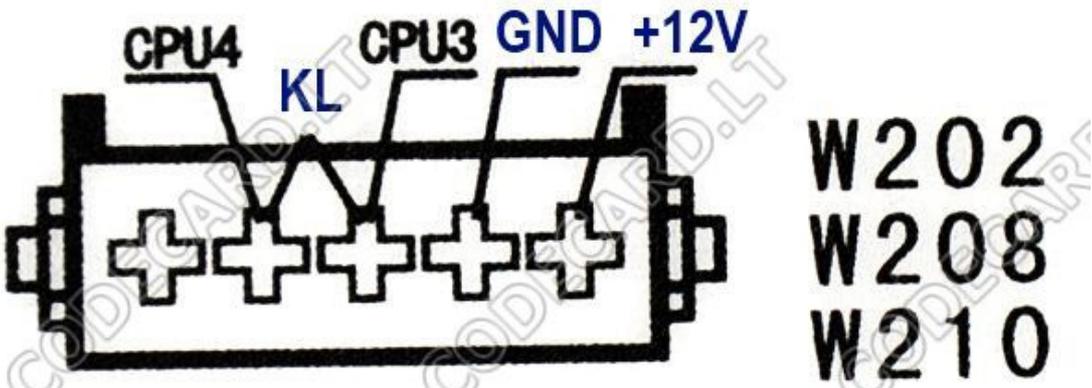
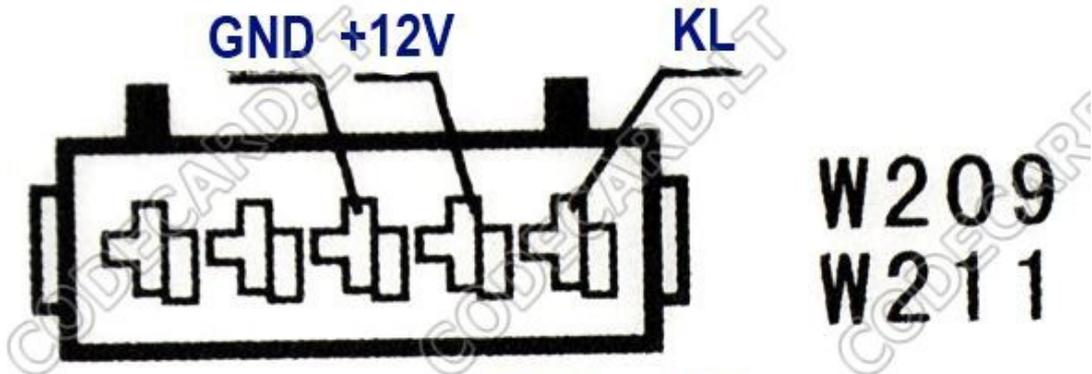
**22. Mercedes ESL emulator** – can emulate defective Mercedes electronic steering lock



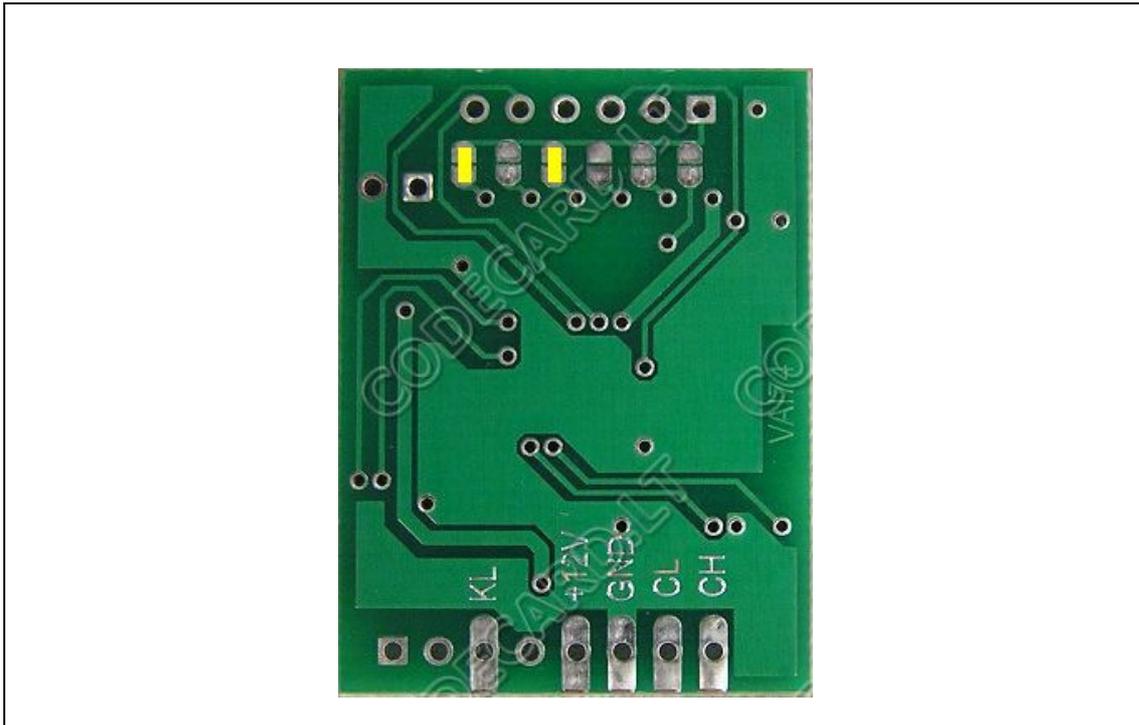
**Disconnect steering lock and connect UNIEMU emulator according picture**

**NOTE: some older W202, W210, W203 may not work, also Sprinter 2010+, Crafter 2010+ changed ESL crypto system and may not work!**

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**23. VAG all cars DTC error erase by CAN bus.** When +12V on emulator appears, emulator after few seconds send "erase all errors" message by CAN bus. This emulator can be used to eliminate sporadic car engine, airbag, body electronic defects like "my car airbag lamp is ON after 3 days again!" or "you erased errors on my BMW and few days everything was OK, now check engine, ABS, tractions lamps indicate fault". We do this emulator for Audi A6, Q7 "steering lock defective" error erase – with this fault IGNITION not switching ON. Emulator +12V we connected to salon illumination lamp – fault in car are erase every time when you open driver door.



Usually you can connect it to car OBDII connector:

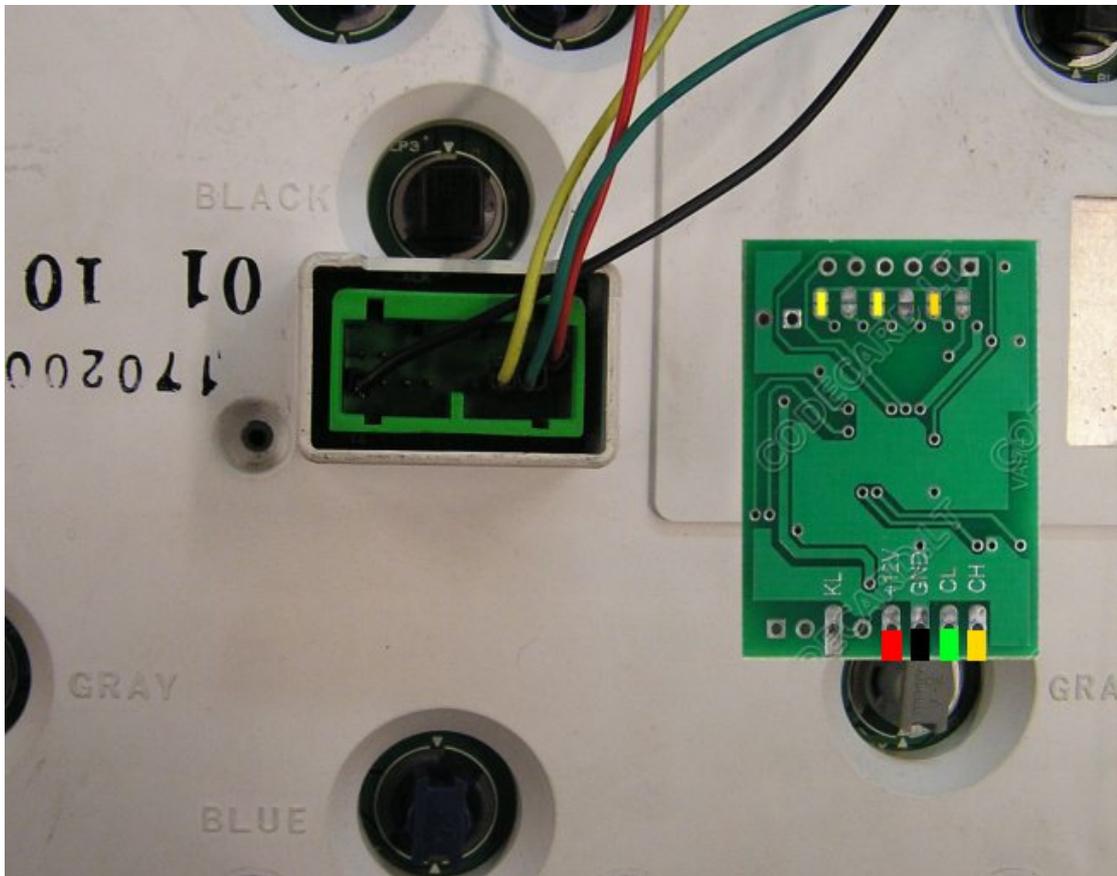
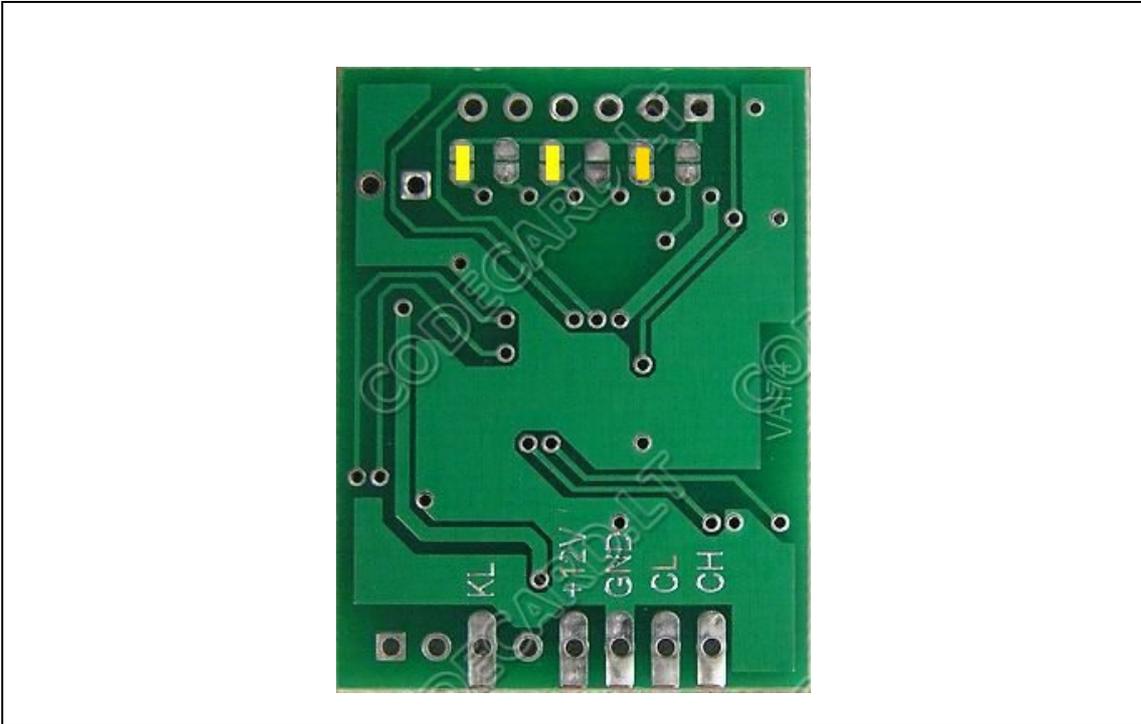
GND – OBDII pin4

+12V – OBDII pin8 (on this pin is +12V when ignition is ON) or pin16 (+12V all time – fault will be erased after battery disconnecting)

CH – to OBDII connector pin6

CL – to OBDII connector pin14

- 24. Volvo dash (instrument cluster) test on-table** – tested and works only with Volvo dashboards with 3K91D – for repair purposes. With emulator dashboard works like in car with ignition ON



Volvo dash with green connector emulator connection pinout:

- GND – to cluster green connector pin7
- +12V – to cluster green connector pin6
- CH – to cluster green connector pin12
- CL – to cluster green connector pin13

**25. Audi A5, A6, A7, A8, Q5, Q7 dash (instrument cluster) test on-table** – tested and works with all Audi 2005-2012 – for repair purposes. With emulator dashboard works like in car with ignition ON



**Audi ignition ON**

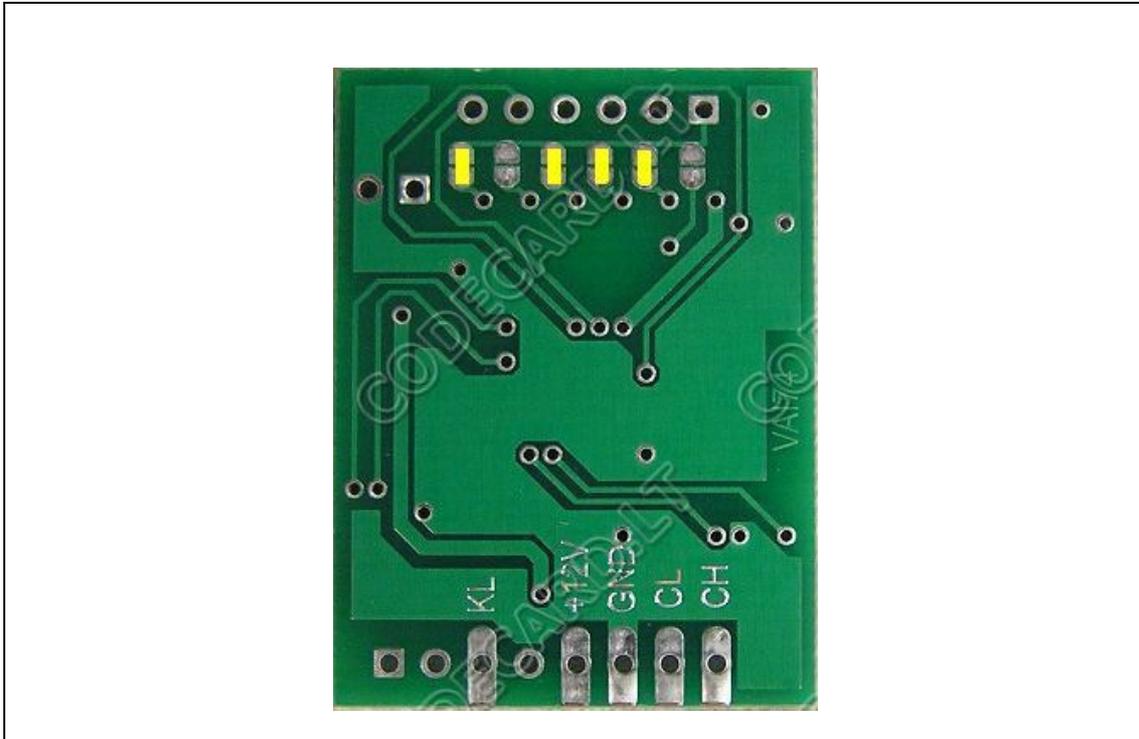


**Audi ignition OFF**



Audi dash with grey connector emulator connection pinout:  
GND – to cluster green connector pin7  
+12V – to cluster green connector pin6  
CH – to cluster green connector pin12  
CL – to cluster green connector pin13

- 26. Nissan Micra EPS (Electric power steering) DTC errors erase by OBDII –** erase EPS errors by K-line. When some temporary errors (like steering motor load) in Nissan EPS system is detected, EPS not work until this error is not erased. You can install emulator permanently in car to erase EPS errors after each ignition ON.



Connection:

GND – to OBDII connector pin4

+12V – to OBDII connector pin16

KL – to OBDII connector pin7

**27. Mercedes W203, W209, W211, W164 all car DTC errors erase by OBDII –**  
fast DTC erase by CAN bus after car repair. Connect UNIEMU emulator to car OBDII  
connector:

GND – OBDII pin4

+12V – OBDII pin1 (on this pin is +12V when ignition is ON) or pin16 (+12V all time – fault  
will be erased after battery disconnecting)

CH – to OBDII connector pin6

CL – to OBDII connector pin14

Configure UNIEMU jumps according you needs: for older Mercedes car like W211, W164 use  
**W211 picture**, for newer W221, W204, W212 – **W221 picture**:

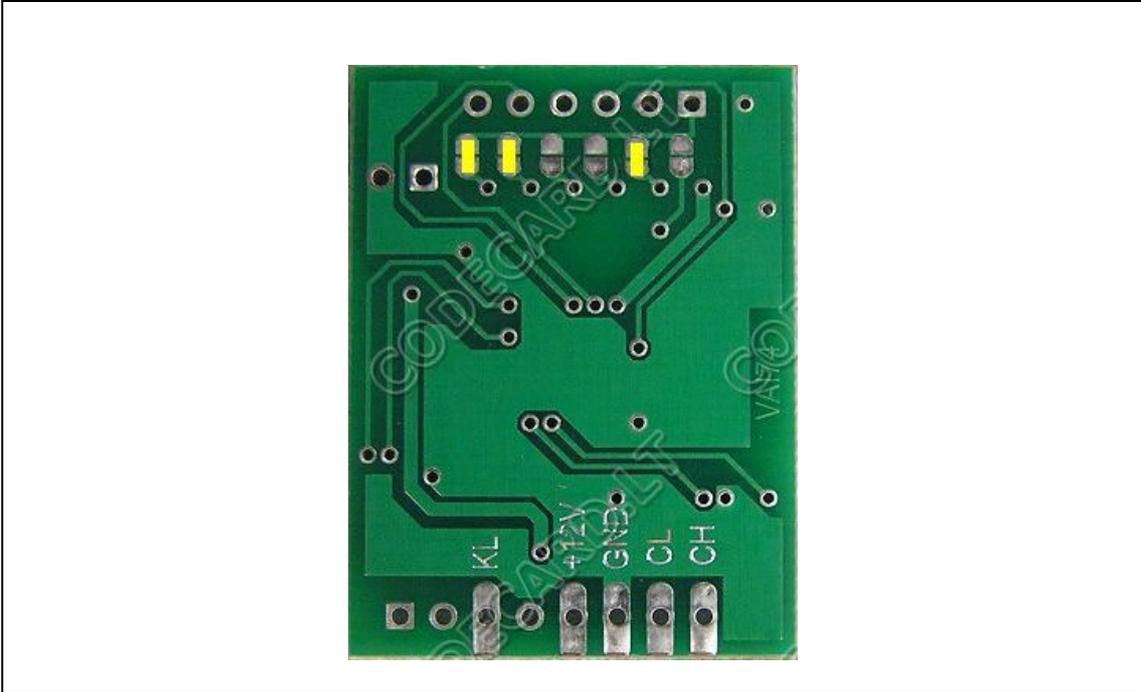


**W211, W164 DTC erase**



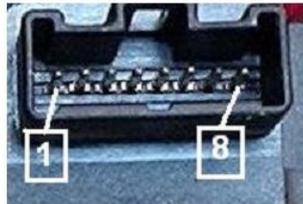
**W221, W204 DTC erase**

**28. Nissan NATS5 immobilizer emulator** – replace defective Nissan immobiliser. Best installation place is inside motor ECU.



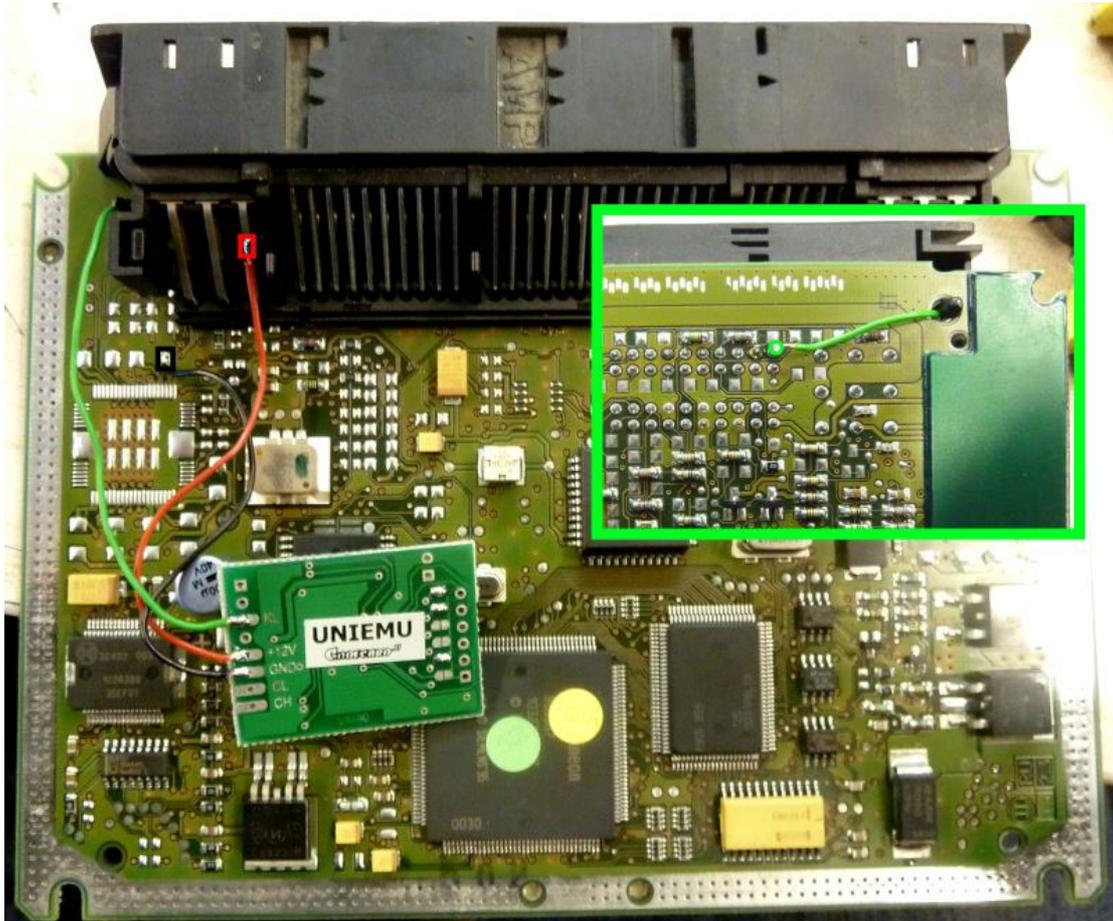
Connection diagram:

Disconnect original NATS5 immobiliser connector and connect UNIEMU to connector wires:



- 1 – K-Line;
- 4 – GND;
- 6 – Indication LED;
- 7 – +12V (Ign);
- 8 – +12V (Batt).

GND – NATS5 wiring **pin4** or to ECU ground;  
 +12V – NATS5 wiring **pin7** or to ECU ignition pin (find according car wiring diagram);  
 KL – to NATS5 wiring **pin1** or to ECU immo pin (find according car wiring diagram);



Also you need to change IMMO bytes in motor ECU EEPROM. UNIEMU IMMO bytes for Nissan cars is 6666. Works with:

- Bosch 0281010141 2.2L diesel ECU with 24C04 EEPROM memory: change EEPROM for UNIEMU:

```

00000000 9B 01 01 DF 01 DB 00 8C 55 0C 00 0F 08 06 04 03 .....U.....
00000010 14 28 30 38 33 2E 32 38 00 00 00 00 00 00 00 00 .(083.28.....
00000020 86 00 8C 55 0C 00 31 30 33 37 33 35 00 80 35 33 ...U..103735..53
00000030 00 00 55 55 00 00 9D 00 0F 01 00 00 01 00 CC CF ..UU.....
00000040 00 00 00 00 00 00 00 00 28 00 00 00 00 12 D9 00 .....(.....
00000050 00 0A 00 00 00 00 00 00 D6 1C 64 3D 17 34 80 80 .....d=.4..
00000060 00 00 00 80 00 01 00 00 00 00 00 00 00 00 00 00 .....
00000070 00 66 66 66 00 00 00 00 00 00 00 D6 1C 64 3D 17 34 .fff.....d=.4
00000080 81 81 00 00 00 81 00 00 00 00 00 00 00 00 00 00 .....
00000090 00 00 00 66 66 66 66 66 66 66 66 66 FF FF 01 2B ..fffffff...+
000000A0 45 80 80 00 01 28 01 00 02 BD 00 2C 4D C0 10 E....(.....,M..
000000B0 00 01 28 05 00 00 B8 00 20 1C 4D 80 80 00 01 28 ..(.....M....(
000000C0 04 00 00 00 80 00 1D 45 02 02 00 01 28 01 00 CE .....E....(...
000000D0 B6 FF 00 24 08 10 10 00 00 28 41 00 00 B6 02 00 ...$.....(A....
000000E0 FF .....
000000F0 FF 2B 80 FD 33 07 00 .....+.3..
00000100 00 77 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .w.....
00000110 00 00 FF .....
00000120 FF .....
00000130 FF .....

```

- Bosch 0281010316 2.7L diesel ECU with 24C04 EEPROM memory: change EEPROM for UNIEMU:

```

00000000 DB 02 02 FF 00 DB 00 8C 55 0C 00 0F 85 03 00 01 .....U.....
00000010 14 28 30 38 39 2E 32 35 00 00 00 00 00 00 00 00 .(089.25.....
00000020 28 00 8C 55 0C 00 31 30 33 37 33 36 30 30 32 38 (...U..1037360028

```

```

00000030 00 00 55 55 00 00 DC 00 4E 01 00 00 F5 8F 20 38 ..UU....N..... 8
00000040 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00000050 00 00 00 00 00 00 00 00 00 00 00 00 00 10 27 .....
00000060 00 00 00 00 05 00 80 00 00 00 00 00 00 00 00 .....
00000070 0F 46 00 00 00 00 00 00 00 0F FF FF 01 28 4C 90 .F.....(L.
00000080 10 00 01 28 28 81 00 10 F5 8F 20 38 88 87 CE 92 ...((..... 8....
00000090 34 00 00 00 38 31 00 00 00 90 02 62 1C 00 51 9B 4...81....b..Q.
000000A0 80 80 00 00 00 00 80 1C A6 00 00 66 66 66 88 .....rrr.
000000B0 87 CE 92 34 00 00 00 38 31 00 00 90 02 62 1C ...4...81....b.
000000C0 00 A2 36 80 80 00 00 00 00 80 1C A6 00 00 72 ..6.....r
000000D0 66 66 66 66 66 66 66 66 00 00 00 FF FF 01 28 4C rr.....(L
000000E0 90 10 00 01 28 28 81 00 10 F5 8F FF FF FF FF FF .....((.....
000000F0 FF .....

```

- 1.5 gasoline Hitachi ECU with 93C46 or 93C56:
- 1.8 and 2.0 gasoline Hitachi ECU with 93C56: change EEPROM for UNIEMU:

```

00000000 FF FF 37 7D 00 00 1E 01 FF FF 01 00 01 00 66 66 ..7}.....&=
00000010 0A AC FF FF 7A 00 FF FF 5E 5F 54 5B 48 4E 3D 42 ....z...^_T[HN=B
00000020 32 38 2A 2E 20 25 1A 1D 13 16 0C 11 80 90 80 80 28*. %.....
00000030 80 80 80 80 80 80 80 80 80 80 70 80 70 70 70 .....p.pppp
00000040 38 38 38 38 38 38 38 38 38 38 38 38 38 38 38 8888888888888888
00000050 38 38 38 38 81 81 80 81 80 80 81 8F 81 81 81 81 8888.....
00000060 83 82 83 84 82 83 82 83 08 08 09 08 09 09 31 09 .....1.
00000070 39 31 41 39 49 41 61 59 79 71 C9 A1 5B 32 00 C2 91A9IAaYyq..[2..

```

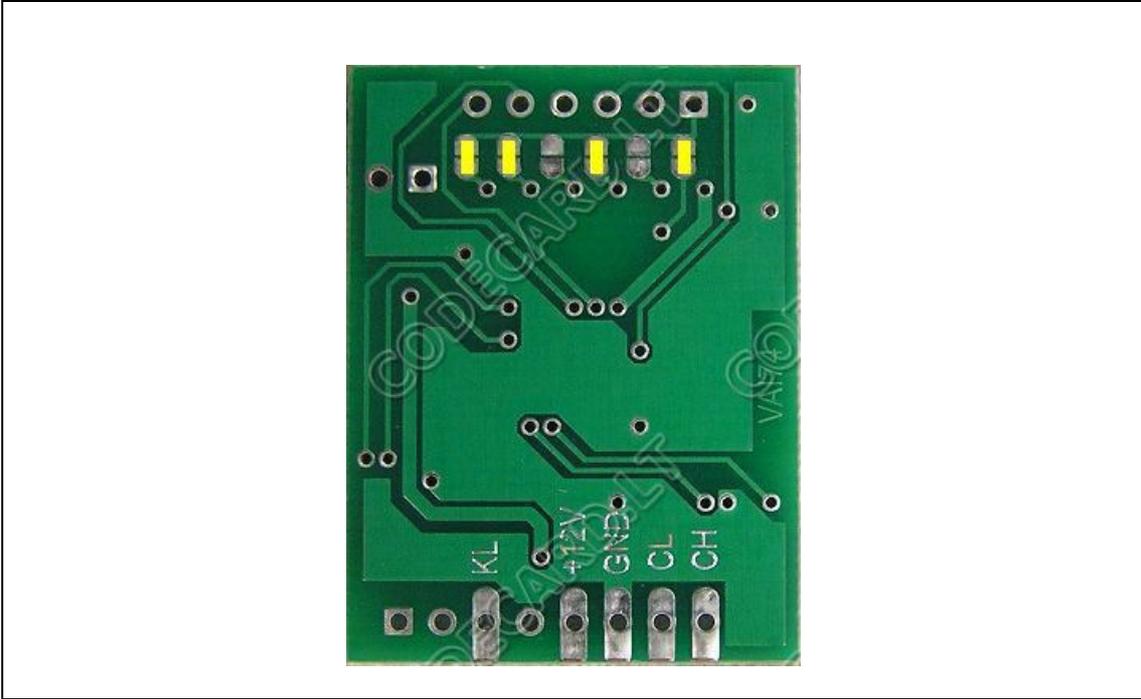
- 1.4 gasoline Bosch ECU with 24LC02: change EEPROM for UNIEMU:

```

00000000 01 00 06 00 9E AE 66 66 08 01 05 00 00 00 00 00 .....ff.....
00000010 FF EA .....
00000020 FF .....

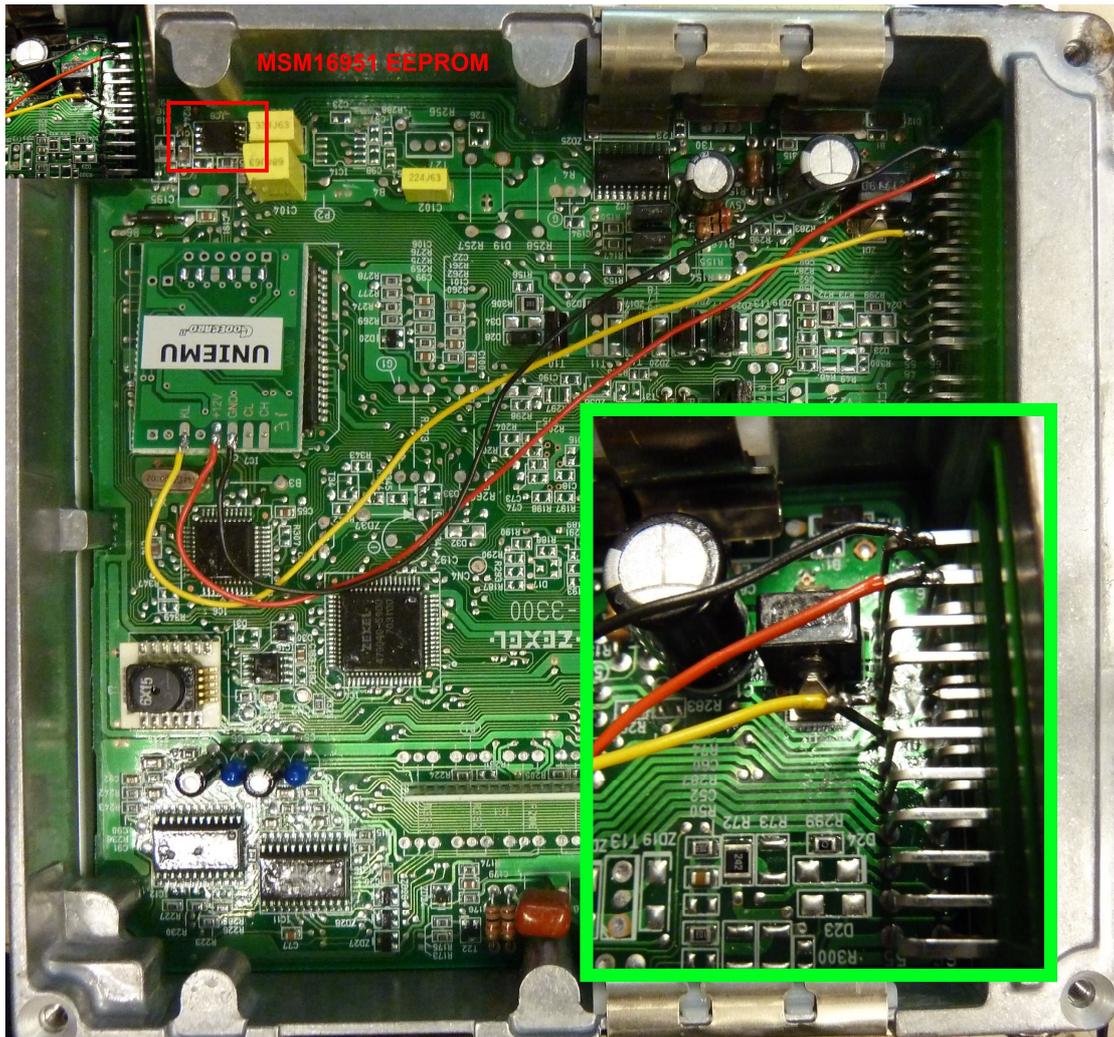
```

- 29. KIA with Zexel ECU immobilizer emulator** – replace defective Kia immobiliser.  
Best instalation place is inside motor ECU.



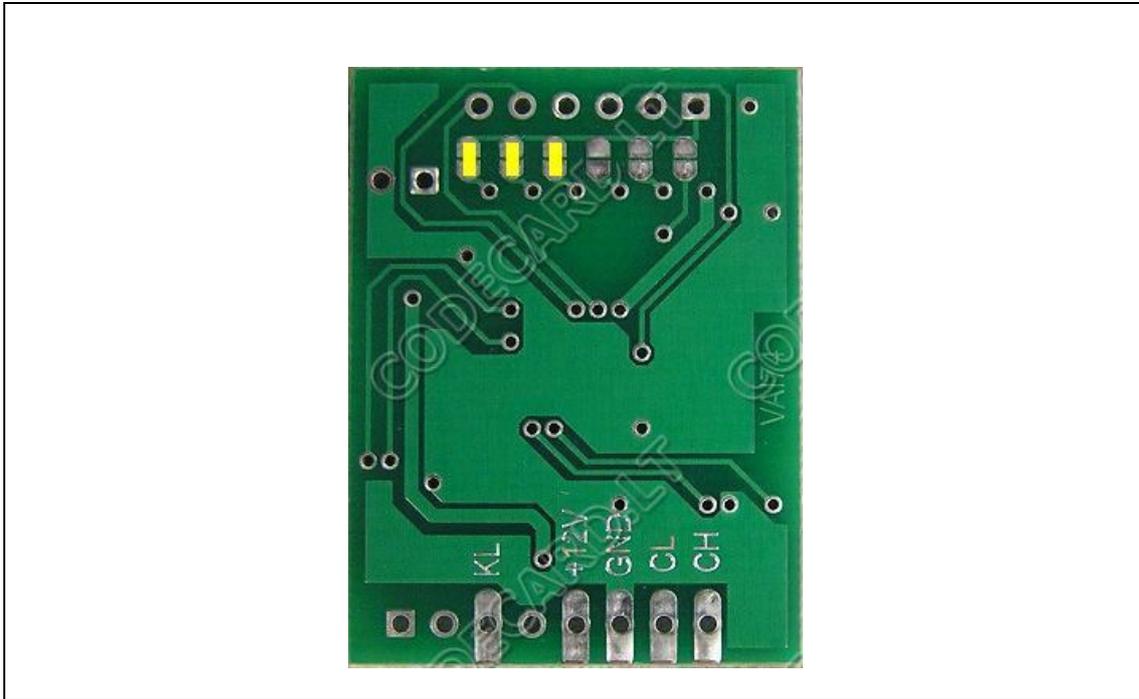
Connection diagram:

Disconnect original immobiliser connector and connect UNIEMU to Zexel ECU like in picture:

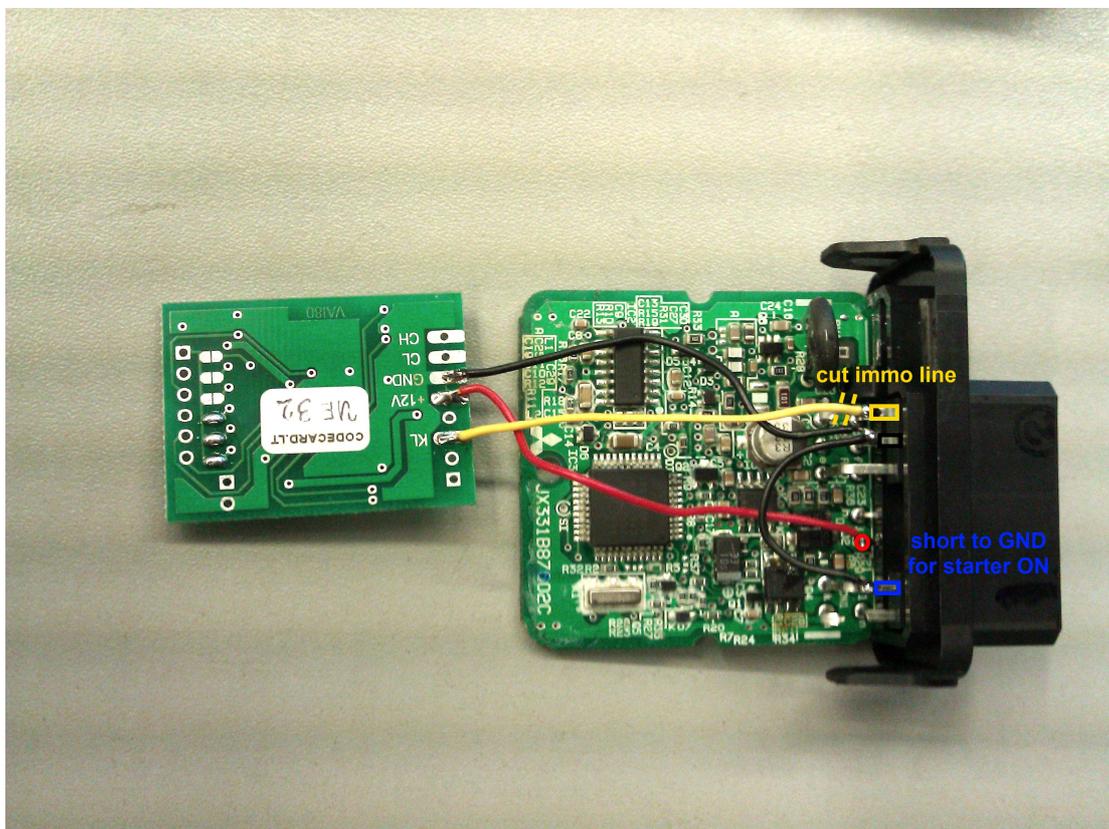


GND – to ECU ground;  
+12V – to ECU ignition pin (find according car wiring diagram);  
KL – to ECU immo pin (find according car wiring diagram);

- 30. Mazda 1999-2004 immobilizer emulator** – replace defective Mazda immobiliser.  
Best installation place is inside immobilizer or motor ECU.



Connection diagram:



**UNIEMU immo word for Mazda is 13119387** . You need to change immo word inside motor ECU. For ex. RF4W motor ECU with 93C56 EEPROM:

```
00000000 00 00 5A 00 5A 00 5A 00 00 00 00 00 00 00 00 00 ..Z.Z.Z.....
00000010 00 00 00 00 3E 00 11 13 87 93 FE 00 AA 3D 55 91 ....>.....=U.
00000020 5C 00 AA 1E 55 91 00 00 00 00 00 00 00 00 00 00 \...U.....
00000030 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00000040 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00000050 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00000060 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00000070 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
```

Others Mazda ECU code word location you must find **yourself**.

---

On diagrams you can find color codes:

<b>Color codes:</b>		
	Color	Abbreviation
1	Black	BK
2	White	WH
3	Red	RD
4	Green	GN or GR
5	Brown	BR or BN
6	Blue	BL or BU
7	Orange	OR
8	Yellow	YL
9	Violet	VI
10	Slate	SL
11	Pink	PK
12	Tan	TN

For ex: BUPK = blue wire with pink line.