

**VW Passat
B6 / B7
Hitag-2 (keyless)
esl emulator, v2**

Usage:

VW Passat cars, coverage from 2005 and up to 2015. Emulates electronic steering lock module which incorporates steering lock module itself and key reader (base station) for Hitag-2 keys (keyless version). Emulator replaces both. Must store **IMMODATA**, **ESL_ID**, **KEY_ID** and **KEY_P3** before usage.

Side effect – car can be started without valid transponder key at all by pressing START/STOP button. At first start attempt after battery reconnection any suitable keyblank which fits key slot may be necessary.

Configuration:

- Power emulator from 12v power source, attach K-line adapter, launch configurator software.
- JMP must be OPEN for configuration,
- IMMODATA, KEY ID and KEY_P3 you can extract from CCM module eeprom dump using 3rd party software. Note that some online services can display ESL MAC in reverse order (swap).
- ESL_ID you can read from matched original ESL (broken one which you are going to replace) using K-line adapter and ESLID read utility, use same connection diagram as for ESL emulator.
- Store IMMODATA and any registered KEY ID / P3 into emulator. All three LEDs must go ON and then OFF not simultaneously, ESL status at first, then KEY auth (take attention!).
- Place solder joint to short JMP. Emulator is ready for installation on car now.

LED:

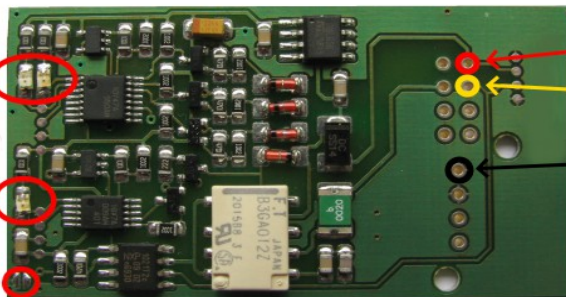
ESL status



KEY auth

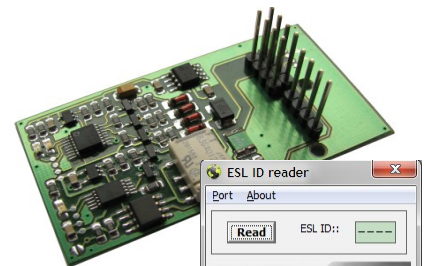


JMP →



+BAT
K-line

GND



Installation:

Use standard 2.54 mm pitch pin headers or solder wires directly.

LEDs on emulator board:

- **ESL status:** - two LEDs: **GREEN**: ESL unlocked, **RED**: ESL locked. LEDs go off after 1s of inactivity on LIN network. Otherwise ESL status is displayed.
- **KEY auth:** - one **RED** LED, goes on when key authorization takes place. Usually there is one long blink (1 second) if everything is OK or 4 short blinks if key data does not match.

