



TOYOTA 4C immo emulator

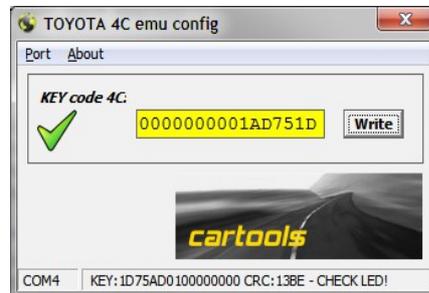
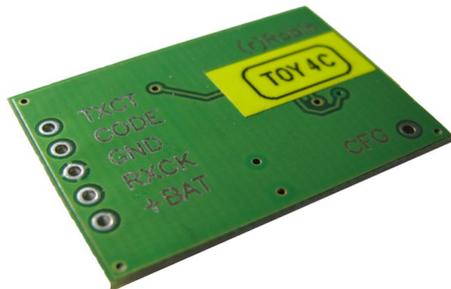
For systems without
immobox -
4C keys stored into ECM

Description :

Emulator (EMU) replaces 4C key and key reader amplifier for older TOYOTA systems. This allows to make Plug & Play ECU if emulator installed directly into ECM. All systems based on 5-pin external key reader (amplifier) are covered.

Preparing:

Must store valid / existing KEY data from ECM dump into EMU using configurator utility and any K-line adapter. Attach K-line to CFG pin and 12v power supply to pins +BAT and GND on emulator board, don't forget to power K-line adapter too! Launch software.



Usually KEY data is well visible in ECU dump – 8 bytes containing 3, 4 or 5 zeros (0x00), one or more repeat. Can be stored in direct or reverse order, sometimes must use swap (if 16-bit eeprom used). You must enter KEY data into configurator so that it starts with zeros (as in picture). Choose correct COM port, press “WRITE”. Observe LED on emulator board. If everything is okay you must see 4 fast blinks meaning KEY data is accepted and stored.

Installation:

Attach wires according to their meanings, use exact wiring diagrams for your car. Note that lot of interpretations possible, sometimes similiary looking ECU's have different pinouts for different model years, sometimes pin numbers in wiring diagrams doesn't match numbers stamped onto ECU connector - numbers 1 to 52 can really match reverse numbering 52 to 1 and so on. Be carefull!

Another option is to use original KEY READER connector. EMU pins are 1:1 wired to be compatible with COROLLA key reader for 2003 MY and up (E12), part number **2U3F-15607-AB**: **pin1 +12, pin2 RXCK, pin3 GND, pin4 CODE, pin5 TXCT**. Older ones use different pinout - **pin1 +12, pin2 CODE, pin3 RXCK, pin4 TXCT, pin5 GND**. Really you must identify GND wire to say which one you actually have.

By the way, you can update KEY data “on the fly” - it is not necessary to remove EMU, just attach K-line adapter (common GND is a must!) and store new data.

LED on emulator board:

Short blink (200mS) at startup, then LED must go on for about 1 second (ECM request / EMU response). LED is ON when KEY data is requested and EMU sends it to ECU. If LED stays ON for a longer time (some seconds at startup), most likely ECU is not satisfied with KEY data stored into emulator. Must check what you actually stored into EMU (swap? reverse order? not KEY data at all?). Observe IMMO indicator / check ECM for fault codes / verify KEY data.

Important: Wiring diagrams you can find at TOYOTA tech info site <https://www.toyota-tech.eu/>

