

MMprog

Transponder programmer

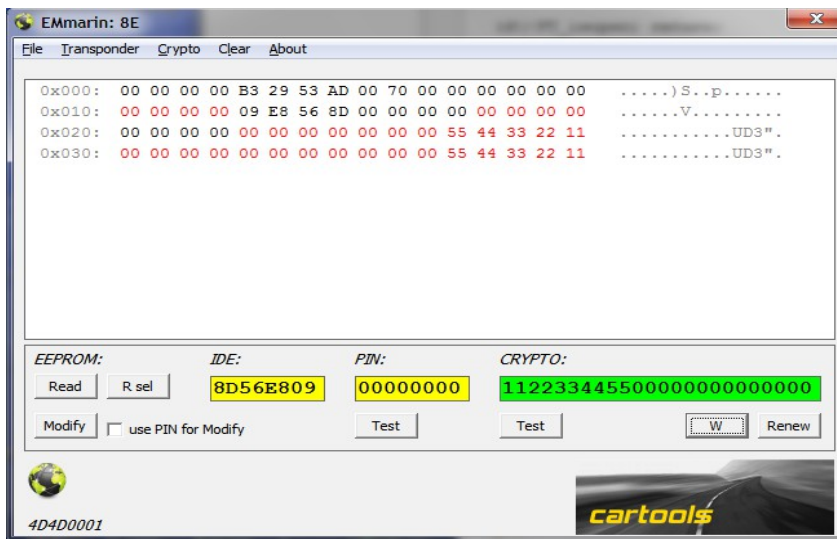


MMprog_8E software

Compatible with:

original transponders from Emmarin (EM4079 – wedge type, EM4178 - remotes) and all known 8E emulators:

Main screen:



Each EEPROM bank consists of 32 pages, each page means one 16-bit WORD (2 bytes). Wedge type transponders and emulators have only one memory bank (64 bytes total). Remotes have more, typically 8 memory banks. All important data is stored in BANK 0.

CRYPTO is stored twice - 0x24...0x2F and 0x34...0x3F. First one is for LF authorization, 2nd one seems to be used for RF communication. PIN code is a part of CRYPTO.

Default **PIN** is all 0's. Most popular transponder programmers say "LOCKED" if PIN is not equal to all 0's. That's not true, any value is good enough if it is known, it actually doesn't mean "LOCKED". Although some EEPROM addresses are OTP, so take care! It is possible to modify IDE on some emulators (like XT27), must update EEPROM at 0x14 to 0x17.

Buttons:

Read: read entire memory. Note that some 8E do not support memory banking, must choose LFOonly transponder type (BANK 0 only).

R sel: read selected, you can select desired addresses using SPACE on your keyboard.

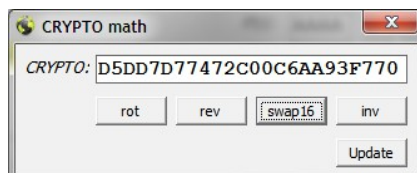
Modify: write selected. Some pages can be written only using PIN code.

Test under PIN: test PIN code.

Test under CRYPTO: test cryptokey.

W writes provided cryptokey, **Renew** writes default cryptokey (all 0's). For both operations valid PIN code is mandatory.

CRYPTO math:



rot: reorder bits in each byte: 0..7 to 7..0 (MS to LS, reverse bits);

rev: reorder bytes: 0..11 to 11..0 (reverse bytes);

swap16: reorder 16-bit words (16-bit swap, MMLL to LLMM);

inv: invert bits (do 0xFF-X or X eor 0xFF);

Update: update CRYPTO on main screen.

Every time window is opened, CRYPTO is taken from MAIN screen (pages P9...P4).

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