

EFI TECHNOLOGY

PGR02 / PGS02

PGN04 / PGR04 / PGZ04

PGS06

For ASW-NEXT

Short User Manual

Immo

 **Tools.it**

October 2023

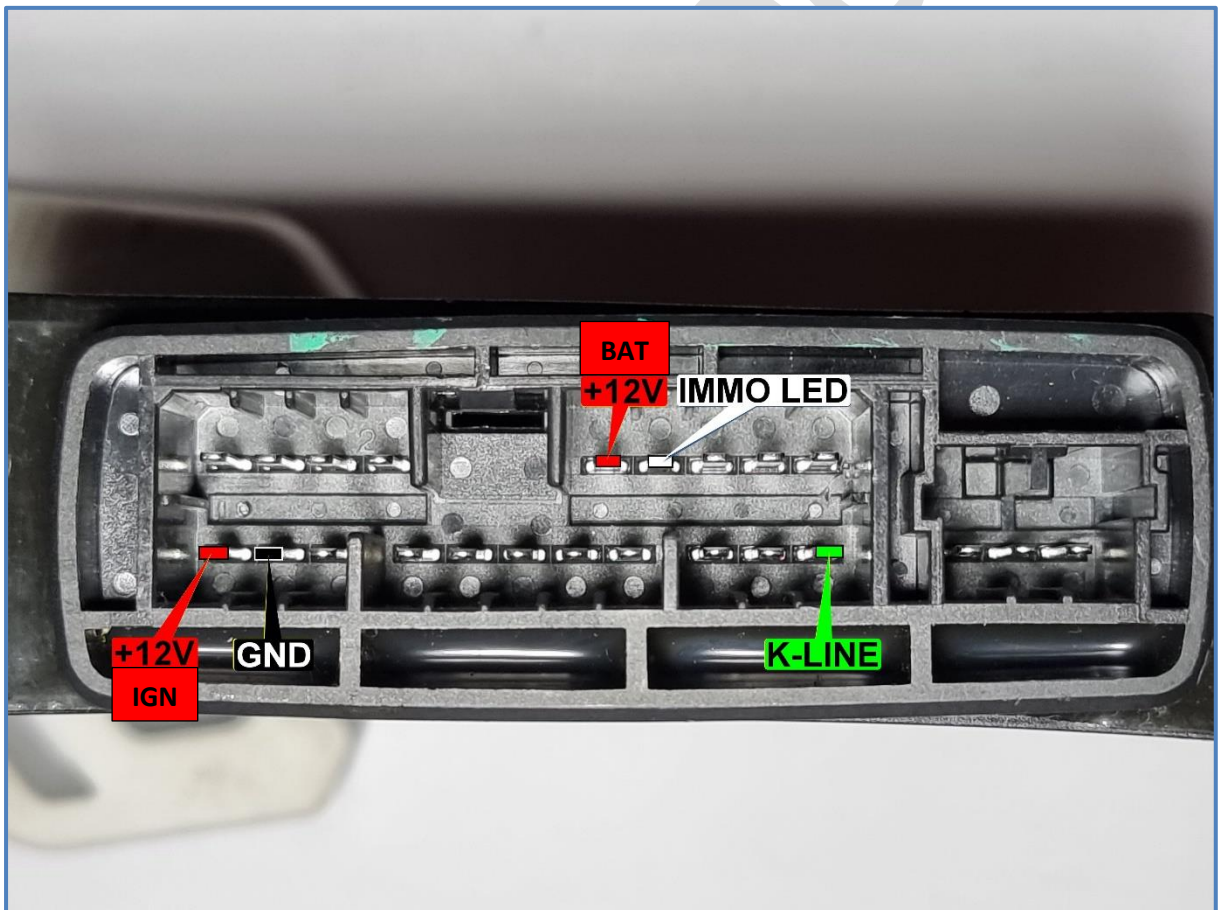
From V1.21 ASW-NEXT software will output troubleshooting information in case of error message **Set REPROG...FAILED** during write key or program maps.

This error takes place when engine is running at the moment of attempt to set REPROG mode or when supply voltage is lower than 10V or higher than 14.4V

You can suspect internal hardware fault of EFI TECHNOLOGY control unit if ignition voltage displayed in troubleshooting information significantly differ from the real voltage of power supply. Minor difference (+/-0.6V) is allowed.

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1. How to connect?



2. Software functions

- **Read Identification**

- **Read / Set keys**

To read existing and to store new desired values of transponders. Up to 4 keys can be programmed during this procedure.

- **Reset to VIRGIN**

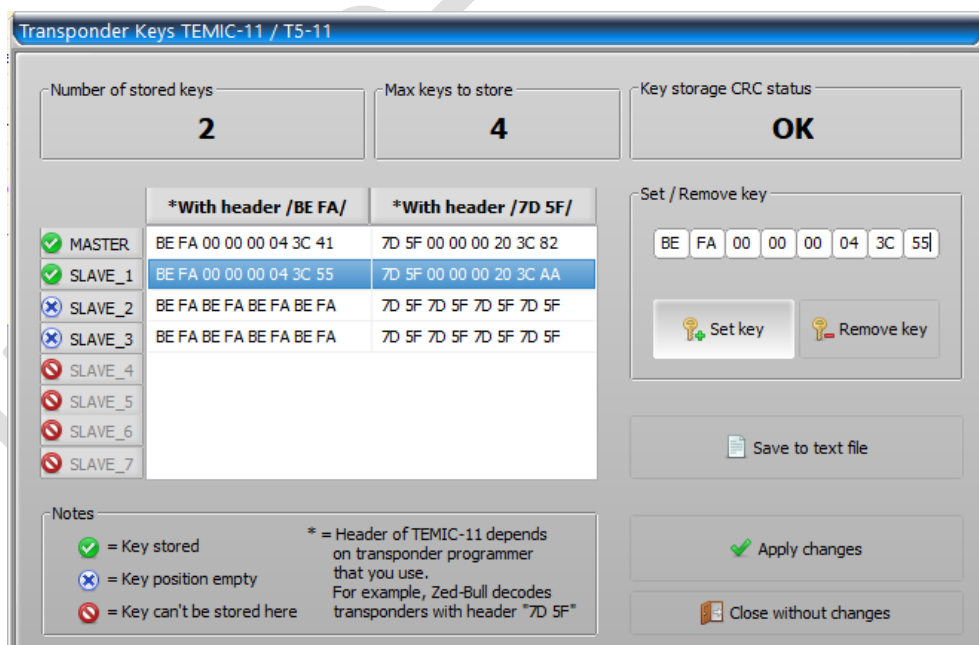
Erases all keys. Control unit is ready to self-learn new transponder values after Reset-to-VIRGIN.

3. Key programming procedures

Let's overview several possible situations:

- **All keys were lost**

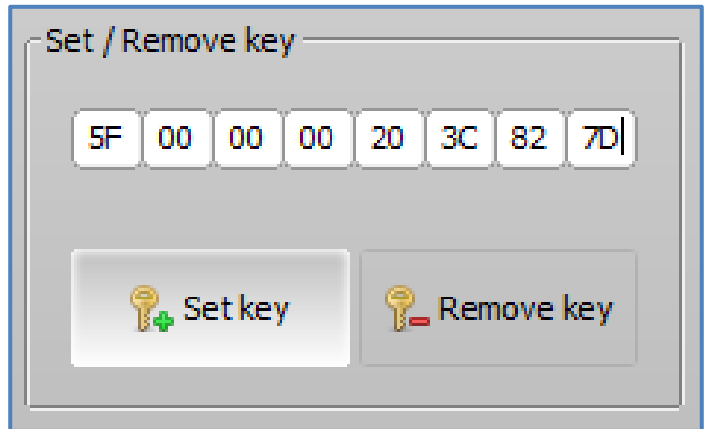
Connect wires from interface of ASW-NEXT to CDI unit, apply +12V power to connection and press „**Read /Set keys**“ button. Diagnostic connection to CDI unit will be established and transponder values will be read:



Write value of any active (marked with green) key to transponder **T5** as **TEMIC-11** using any suitable transponder programmer. Choose data with header „**BE FA**“ or „**7D 5F**“ depending on type of your transponder programmer.

➤ You want to set / delete key(s) manually in CDI unit

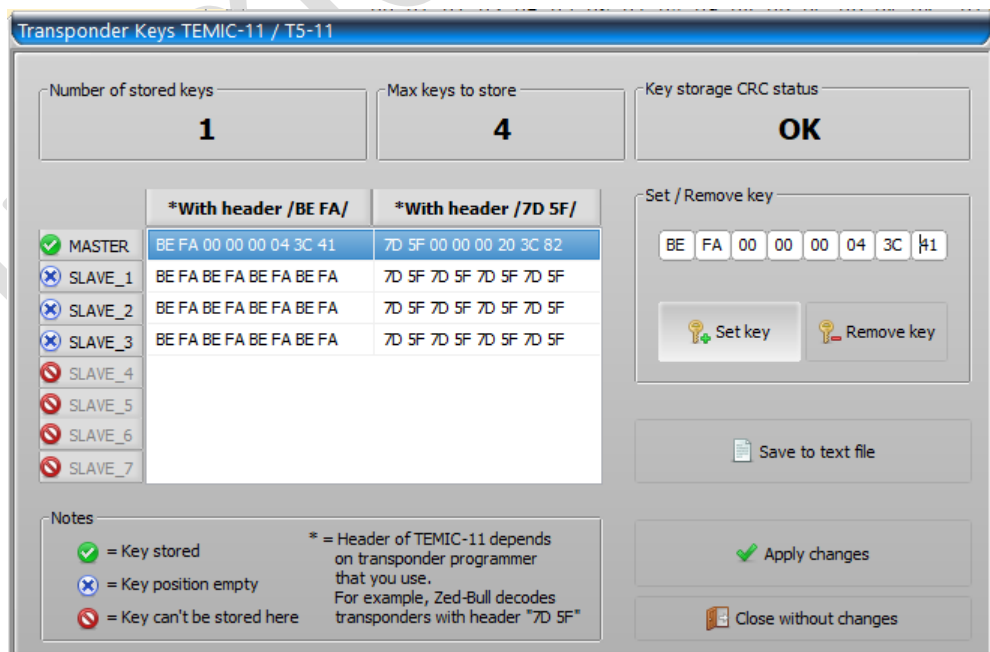
Press „**Read /Set Keys**“ button. Diagnostic connection to CDI unit will be established and transponder values will be read. Select position to set key to. Read key you want to store to CDI unit with any transponder programmer.



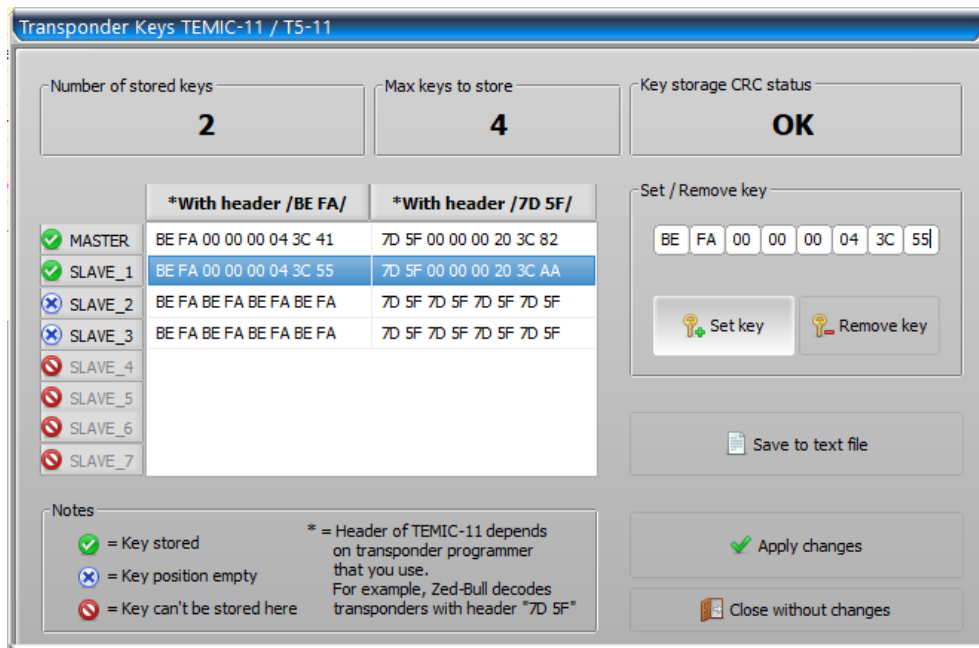
Let's say you've got **TYPE-11** or **T5-11** transponder and your transponder reader displayed value as in the picture above.

Enter this value to the „**Set / Remove key**“ field and press „**Set key**“ button. **Software will accept valid transponder value from a key programmer of every type – no data conversion of any kind is required.**

Software will automatically re-align bits and now it looks like this:



You may delete unneeded keys and set as many keys as you need (max 4):



- Use „**Save to text file**“ to access transponder data later if no physical transponder is prepared yet.
- Press „**Apply changes**“ button to write key programming values to control unit

Please note that CDI unit will treat itself as not completely programmed with only one key stored. To avoid this you must to store one more key, even if single key is needed. Just enter any valid value for a second key position, different from value of **MASTER** key.

➤ **You want to reset CDI unit to VIRGIN state**

- Fill all key positions with **BE FA BE FA BE FA BE FA**
- Press „**Apply changes**“ to program blank key values to memory
or
- Press button „**Reset to VIRGIN**“

➤ **You want to check how many keys programmed to the CDI unit**

- Press „**Read Identification**“ button to read HW / SW info along with number of keys programmed to the control unit

➤ **You want to learn keys to the VIRGIN CDI unit**

- Make yourself two valid **T5-11** transponders or take two ready suitable keys of **TEMIC-11 / TYPE-11**.

To make **T5-11** transponders please program to one of them, for example:

BE FA 00 00 00 11 22 33 (7D 5F 00 00 00 88 44 CC)* and

BE FA 00 00 00 11 22 34 (7D 5F 00 00 00 88 44 2C)* to another.

Both transponders must be programmed with different values.

- Turn on ignition with first key for 1.5 sec. Turn off ignition while LED is still on. Key will be stored as a **MASTER**
- Turn on ignition with second key for 1.5 sec. Turn off ignition while LED is still on. Key will be stored as a **SERVICE**
- Turn on ignition with first key again for 1.5 sec. Turn off ignition while LED is still on. Programming procedure closed.

NOTE: Do not exceed time of 1.5 seconds when changing key in ignition lock between every step.

*- Depends on type of transponder programmer (does it use **BE FA** or **7D 5F** header)

Read / Write MAPS

Software of ASW-NEXT is now able to read and reprogram ignition advance and fuel tables. You may find this useful to improve engine performance or to remove speed limiter.

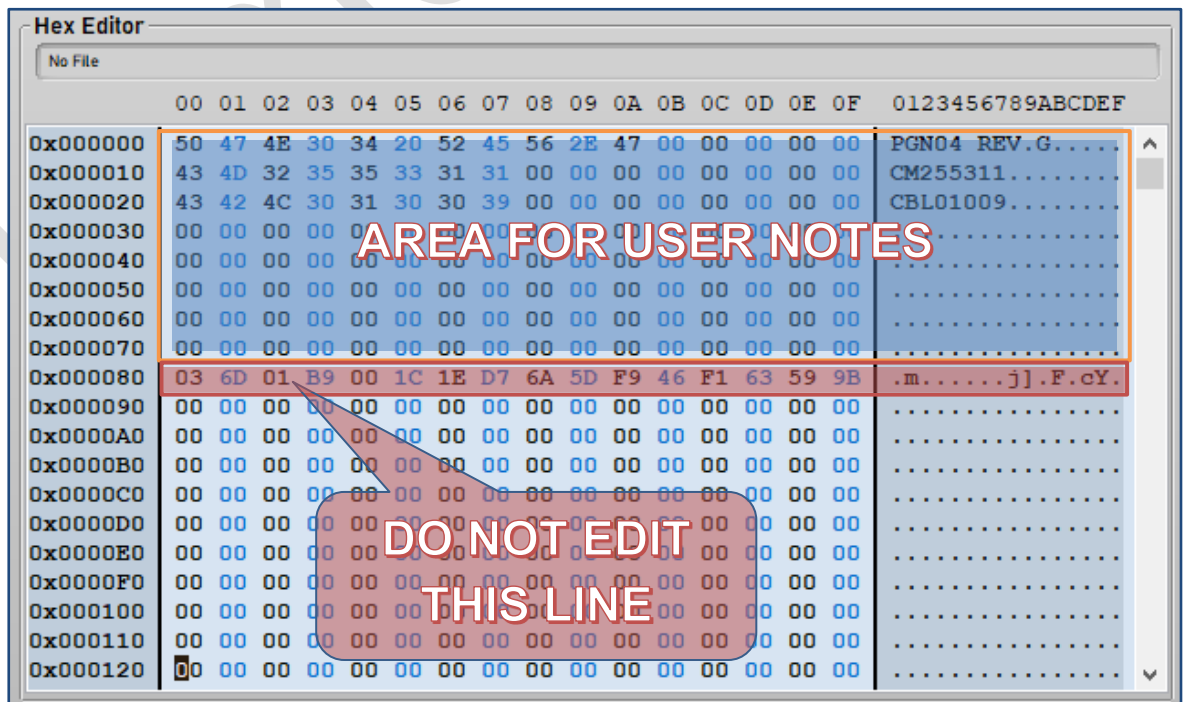
NOTE: Software of ASW-NEXT by itself does not modify map files to remove any limitations. Please use appropriate software to edit map files, e. g. WinOLS.

NOTE: Software of ASW-NEXT will recalculate CRCs in map file, modified by third-party software before to program it to engine control unit.

MAP file

MAP is saved to binary file. File size for PGN04 / PGR04 / PGZ04 / PGR02 / PGS02 / PGS06 MAP file is **64kb**. Ignition advance and fuel tables in binary MAP file are located at their physical addresses in the memory space of STM8. Upper 8 lines (128 bytes) can be modified by the user without any limitations. This area is reserved to store various text notes about MAP file.

NOTE: Do not edit data at 0080-008F. MAP file will be treated as corrupted once data at line 0080 was modified.



- **IMMO-OFF / IMMO-ON**

This function configures immobilizer feature presence. Works by K-Line.

