TK-Prog v 1.7 smart-key solution

Quick start guide

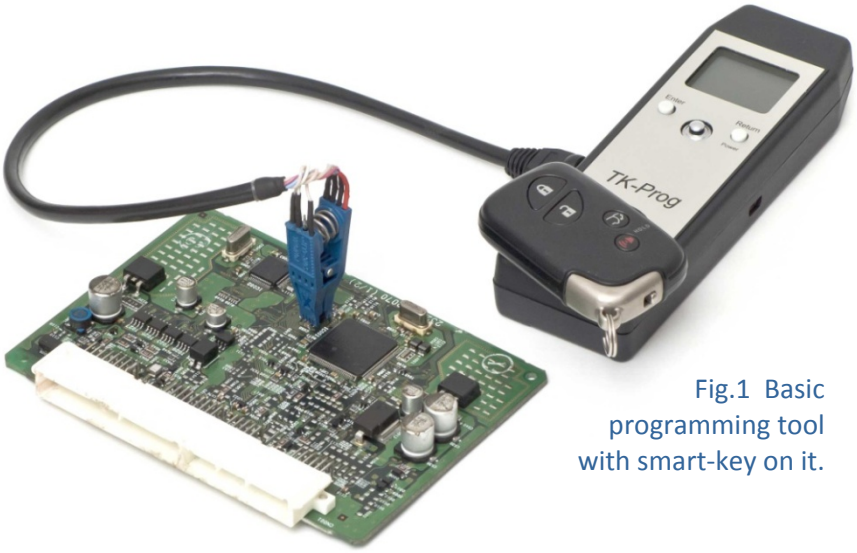

Fig.1 Basic programming tool with smart-key on it.

TK-Prog is advanced equipment set for electronic smart-key registration within Lexus and Toyota passenger cars:

Lexus: LX 570, GX 460, RX, LS 460, GS, IS;
Toyota: Land Cruiser 200, Land Cruiser Prado, RAV4, Venza, Corolla;
Subaru: Impreza, Forester, Legacy, Outback.

The set includes 2 devices: **basic programming tool** for work with Certification unit on table;
OBD programming tool for work on car.

1. How to start a car without original smart-key?

In this case you need to register **primary*** key within Certification unit via basic programming tool.

Known smart-key types for Lexus, Toyota and Subaru: **94, D4, 98, 9F**. Pay special attention for 98-type: it could be 1-chip or 2-chip that are *not equivalent*.
Refer to operation manual for detailed description.

Remove the Certification unit from car and plug clip-connector to IC003 chip on Certification unit board (red wire on clipconnector must be linked up with first pin on EEPROM chip).

Select 'Program KEY' entry in 'Normal' submenu. If Certification unit memory reading performed successfully you will see such message on LCD: "Reading… OK 98". Figure 98 mean smart-key type that you can use for current Certification unit (smart-key type detection described in section 6).
If electrical contact between clipconnector and IC003 chip is bad you will see message: "Waiting EEP Press 'Enter' to cancel" on LCD. When normal contact will be restored another message appears: "Reading… OK 98".
Also you can cancel the operation by pressing 'Enter' button.

After successful reading press 'Enter' button. Message "Saved file EEP34.BIN" will appear. It means that Certification unit memory content was saved in basic programming tool internal storage as EEP34.BIN file.

Press 'Enter' button once again and you will see message: "Put on a key or press 'Enter' to cancel". So put a smart-key of appropriate type on basic programming tool as shown on fig. 1.

On successful smart-key reading message "data1:98,02 Page1:98 KEY ok" will appear, and later "Modification is done".
It designates that the smart-key is registered as primary in current Certification unit.

If the smart-key have improper type message "data1:98, 03 Page1:94 Page1 Error" will appear. You have to use correct smart-key to complete registration procedure.

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primary* smart-key allows to launch the engine, but remote door blocking function does not work. Car start is possible only if the smart-key is no farther than one centimeter from the start button. Remote doors blocking can be activated by OBD programming tool as well as permanent smart-key registration. **It is possible to register only primary key for Subaru vehicles. You should use dealer equipment to register permanent keys.

2. How to add brand new smart-keys to my car?

To perform permanent key registration you need OBD programming tool, registered primary key or working original smart-key and brand new smartkeys of appropriate type.

Plug OBD programming tool into car OBD-connector. Push button on OBD tool once. You will hear short beep and immobilizer indicator on dashboard will stop blinking.
This indicates smart-key registration procedure have begun. Bring primary (or original) smart-key to the start button within 30 seconds after sound signal. You will hear short beep once again. Bring the primary (or original) key out of the car. Bring new smart-key to the start button within 30 seconds after sound signal. Put new smart-key on front passenger seat after a short sound signal. Second sound signal will inform you about successful key registration. Bring the key out of car.

No sound signal means the key was not registered. There are two most common reason for this issue: (a) smart-key, that you have tried to register, has improper type; (b) smart-key, that you have tried to register, is locked – already

registered on another car. See section 4 for Fig.1 Basic programming tool with smart-key on it locked smart-keys issue or refer to operation manual for details.
To register more smart-keys repeat procedure.

After last smart-key registration you should wait until the OBD programming tool beeps long and immobilizer indicator on dashboard starts to blink. After that you may unplug OBD tool – registration procedure is completed now.

After this primary key can be only used for engine start. To enable remote door lock operation repeat whole procedure but use registered permanent smart-key as first (primary).

3. Can I erase smartkeys from my car?

Yes, you can. You should use this function when you want to register smart-keys, that have been already registered on other cars, or in case of lost keys. For this function you need OBD programming tool and one of smart-keys that you want leave as registered.

Plug OBD programming tool into car OBD-connector. Push button on OBD tool for 3-4 seconds. You will hear two short beeps and immobilizer indicator on dashboard will stop blinking.
This indicates erasing procedure have begun.
Bring the smart-key to the start button within 30 seconds after sound signal. You will hear short beep and immobilizer indicator on dashboard starts to blink.
Procedure completed successfully.

Now you should wait until the OBD programming tool beeps long. After that you may unplug OBD tool.

4. Can I register used (not brand new) smart-keys?

Yes, to register used smartkeys (that have been already registered on another car) follow next instruction.

1. If there is no registered key on the car perform primary key registration procedure (see section 1).

2. Perform erasing procedure (see section 3). Use primary or original key for this.

3. Perform reset procedure using 'Reset EEP' function in 'Professional' submenu (refer to operation manual for details).

4. Perform permanent smart-key registration procedure (see section 2) with used (not brand new) smart-keys of appropriate type.

5. Certification unit memory backup and restore.

This function is used when you need to restore initial state of Certification unit (as before primary key registration). To perform restoration you need basic programming tool and binary file with backup data. The file was made automatically during primary key registration (see section 1).

Remove the Certification unit from car and clip-connector to IC003 chip on Certification unit board. Select 'Return KEY' entry in 'Normal' submenu. As you start return procedure, message "Writing…" will appear on LCD. If programming process completes successfully you will see next message several second later: "Writing… OK EEP34.BIN Returned". It means the Certification unit is in initial state.

If any error occurs during programming the message will be as follows: "Writing… ERROR". Press 'Enter' to exit restore mode (refer to operation manual for details).

6. Smart-key type detection.

You can use basic programming tool for smart-key type detection. You need it to check compatibility with particular Certification unit.

Start testing by selecting 'Test KEY' option in 'Normal' or 'Professional' submenu.
Message "Put on a key or press 'Enter' to cancel" will be displayed until you put a smartkey on basic programming tool.
If the key is recognized you will see message like this: "Data1: 94". It means you can use this smart-key with corresponding Certification unit (as described in section 1).

7. Odometer correction.

This function allows to correct odometer by dashboard EEPROM in-circuit programming.

Check and note current odometer indication. Dismount dashboard from car and remove back cover. Plug clip-connector to EEPROM chip.

Select correct vehicle model in 'Odometer tool' submenu. If electrical contact is good and reading performed successfully you will see such message on LCD: "Saved in EEP34.BIN".
Next dialog "OLD ODO: xxx. OLD ODO OK?", where xxx – calculated mileage, asks you confirm correctness of mileage.
If so press 'Enter' button and you will see message: "[NEW ODO]" and numeric field. Enter new desired odometer indication and use ┘symbol for confirmation. On successful writing message "ODO successfully corrected" will appear.

Reassemble dashboard and ensure the correctness of new odometer indication. If indication is not correct you should restore original value by means of "EEPROM tool" function.

As additional functionality you can use basic programming tool as EEPROM programming tool.
Supported chips: 93C46, 93C56, 93C66, 93C76, 93C86.
Programming could be performed on-board without unsolder. Also TK-Prog has built-in flashlight for your convenience when working on car (under dashboard and so on).

If you have any unsolved questions after reading this quick start guide please refer to full Operation manual for detailed description.