Pro Smart v3.1

Toyota / Lexus
2015 - 2018 MY

<div align="center">❖ **Purpose of the device**</div>

ProSmart v3.1 is designed for emergency start of the car and programming the keys in case of their loss.

This device works with the Smart Key system which uses a new generation SmartEcu (* *See SKU numbers of Smart ECU units*). **Access to the contents of SmartEcu memory in such systems is impossible. These systems are used in cars 2015-2018.**

- **Lexus:** GX, IS, LS, LX, NX, RX
- **Toyota:** Alphard, Camry, CHR, Highlander, Land Cruiser, Land Cruiser Prado, RAV4

Smart keys with **ID - 39, 88, A8, A9** are used in systems with SmartECU of new generation.

✚ **Attention!** ProSmart v3.1 performs emergency start car and key programming using another SmartECU (new **or used ECU with a key registered to this unit**).

✚ **Attention! During the programming new Smart ECU or additional keys, the gear selector MUST BE in the "PARK" position!!!** In case of the **"NEUTRAL"** position, all ECUs will be **BLOCKED**! To fix this issue, **use Toyota TK-Prog Master v5.0** to reset these ECUs.

ProSmart v3.1 is special OBD adapter with the needle-probe for connection via LIN bus of the vehicle.

Fig. 1

For emergency start of the car and programming of the smart-keys the following procedures are performed:

➢ **ResetImmo** - resetting the vehicle immobilizer ECU *(in this version, this process is automatic, without any additional actions)*;

➢ **SmartAdaptation** - binding another Smart ECU (new or used ECU with the key registered in the unit);

➢ **AddKey** - binding additional smart key (if necessary).

❖   **ResetImmo procedure + SmartAdaptation**

To perform ResetImmo + SmartAdaptation requires:

1) **Unplug all connectors from Smart ECU !!!**
2) Connect **ProSmart 3.1** to SmartECU connector using blue needle probe (see fig. 2-7). Or you can connect it to the steering lock ECU connector, but without unlinking this plug (fig. 8).
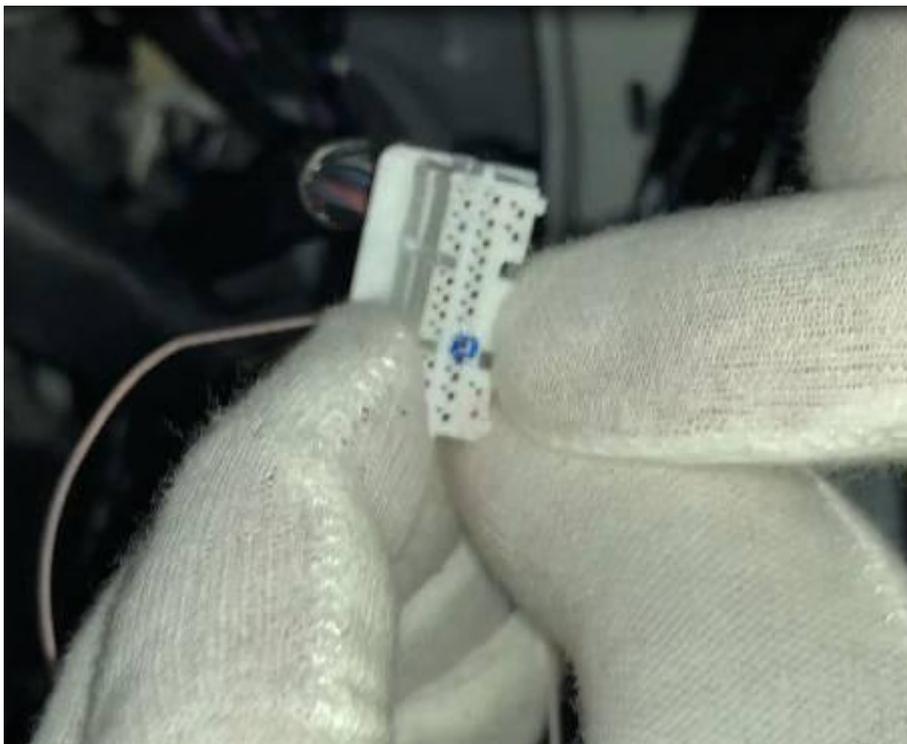

Fig. 2

Fig. 3

Smart ECU connection for IS, LC150, LC200, LX, NX, Highlander, Prado		
Key	Pin	Color of needle-probe
A8	6	Blue
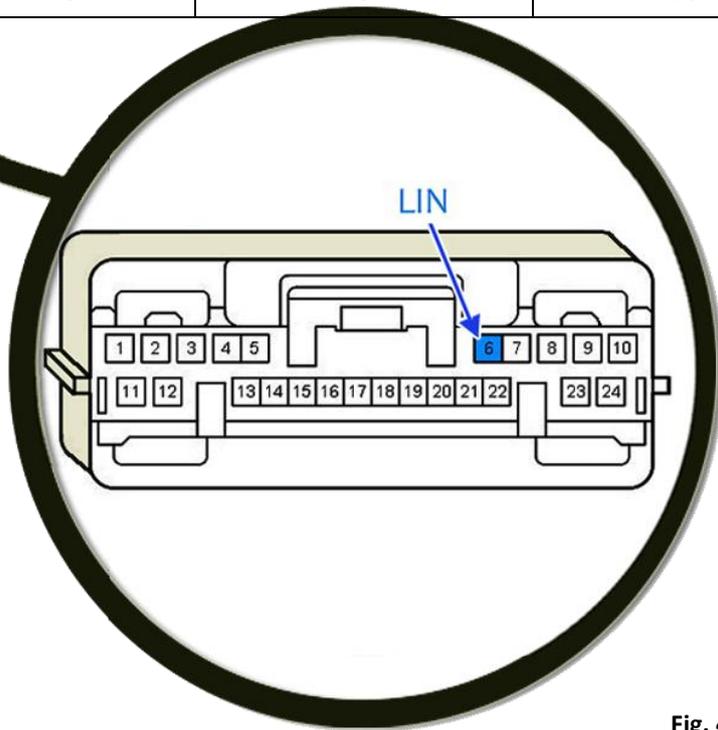
Fig. 4

Smart ECU connection for Camry (since 2018), CH-R, RX200t, RX450h, LS500		
Key	Pin	Color of needle-probe
A9	13	Blue
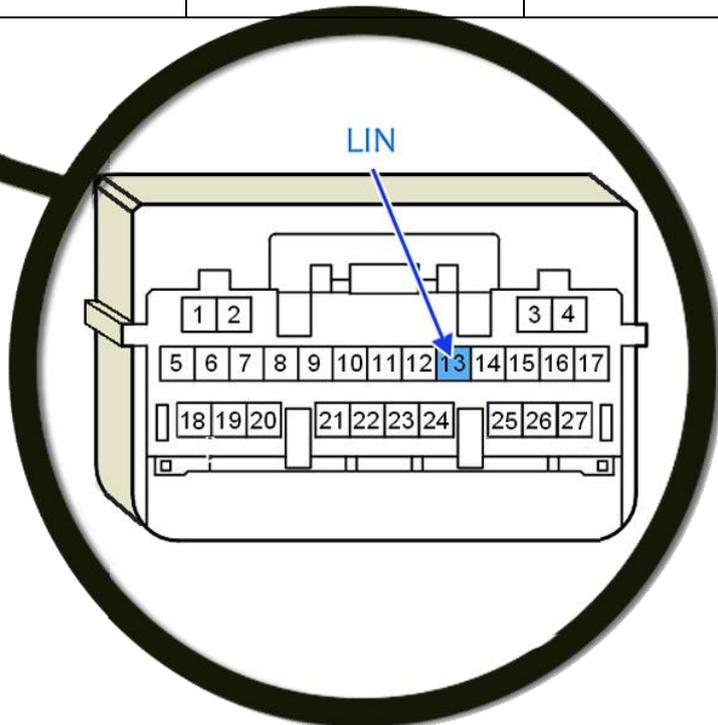
Fig.5
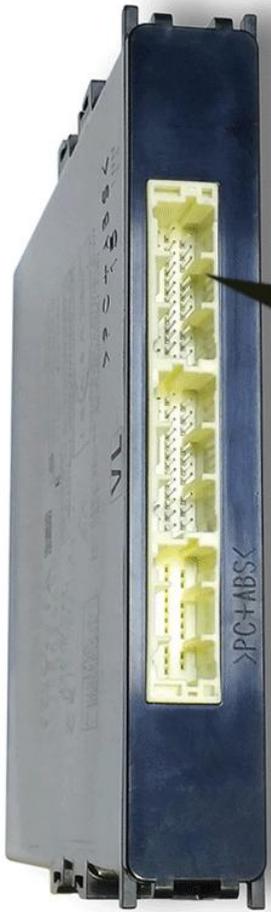
Smart ECU connection for Camry (till 2018), ES, GS, RAV4		
Key	Pin	Color of needle-probe
88	17	Blue
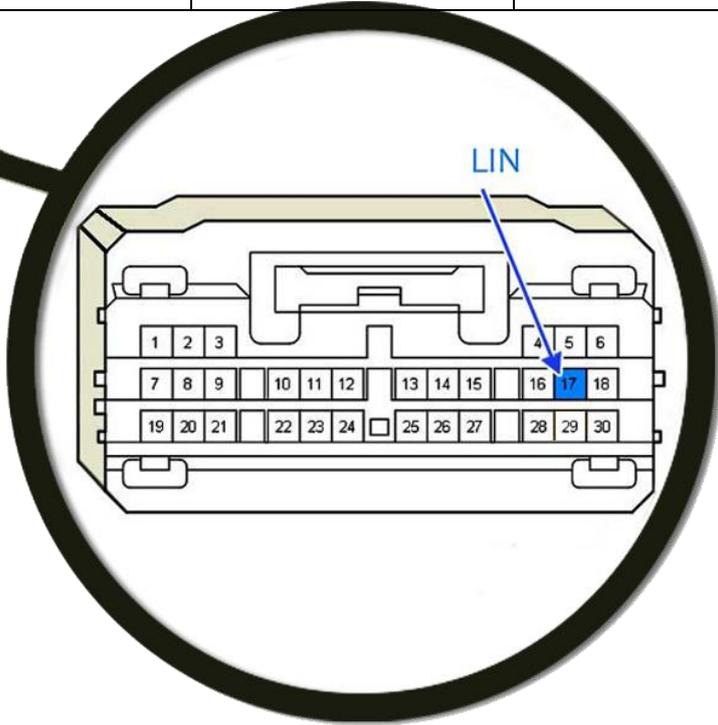
Fig.6

Smart ECU connection for Fortuner, Hilux (from 2015 to 2018+)		
Key	Pin	Color of needle-probe
39	5	Blue
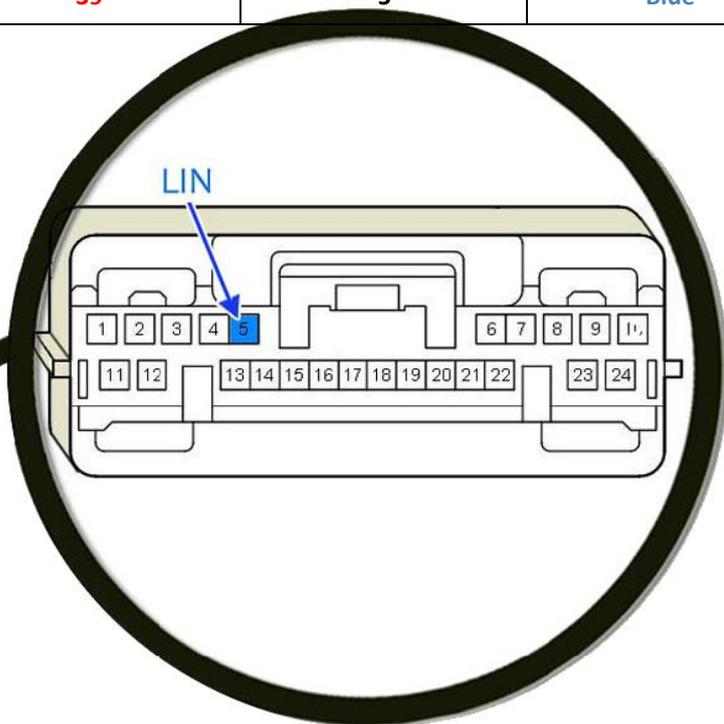
Fig.7

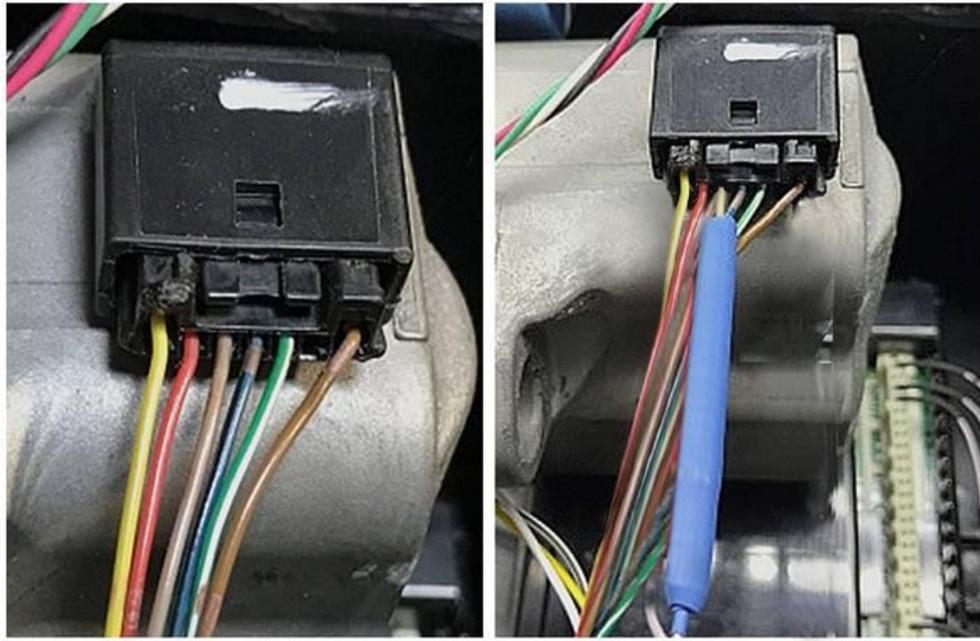| Connection to the Steering Lock ECU	
Pin	**Color of needle-probe**
5	Blue

Fig.8

3) Plug connectors to **another SmartECU** (new or used ECU with a key registered to this unit);

4) Set OBD adapter switch to **position #1**;

5) Turn the ignition off;

6) Insert the OBD adapter into the OBD connector;

7) After connecting the sound **beep once**. LED blinks **green** quickly;

8) Bring smart-key to **"START"** button. A beep will sound (**a single signal for the used ECU,** and a **double beep for the new ECU**). The LED will turn **green** and then flash periodically;

9) Remove smart-key from **"START"** button;

10) Wait OBD adapter emits **three beeps**. Disconnect **ProSmart** from OBD connector;

11) The SmartECU binding procedure is complete. You can start your car.

List of possible LED signals	
LED Signals	**State of the procedure**
Single flashing (green color)	The connection is established
Single flashing (red color)	Incorrect connection or LIN bus is damaged
Fast flashing of the LED (green color)	Procedure of reset is in progress
Double flashing of the LED (green color)	Reset of Immo ECU is complete
The LED constantly turns red	Error during the reset procedure

❖ AddKey procedure

The AddKey procedure is performed if you need to bind additional smart keys.

Procedure for adding a key:

1) Set the switch of the OBD adapter to **position #2**;
2) Turn the ignition off;
3) Insert the OBD adapter into the OBD connector. After connecting the adapter emits **double beep**. The immobilizer lamp on the dashboard will stop flashing and go out;
4) Within 30 seconds, bring the **registered (bound) smart key** to the **START** button. **One beep** will sound and smart-key LED will light up;
5) Remove the smart-key from the car;
6) Within 30 seconds, bring additional smart key to the START button;
7) After a **single beep**, remove smart-key from **START** button;
8) If the **second single beep** sounded, it means the additional key is programmed successfully. After that, you need to remove the smart key from the car.

   If the second audio signal does not sound, this means the smart key is not registered.

   The key may not be registered for the following reasons:

✓ Type of smart key does not match the type of key used in the vehicle. In this case, you must use the appropriate smart-key;

✓ Smart key is locked (the key is registered to another car). You need to unlock this key using a special programmer, or use a new smart key**.**

9) To continue registering smart keys, you need to repeat steps 6-8.

10) After you finish the binding of the last smart key, you need to wait OBD adapter emits **three beeps**. Disconnect the adapter from the OBD connector.

   AddKey procedure is complete. After completion of the procedure the immobilizer lamp starts flashing on the dashboard.

- In version 3.1, **the process of ECU reset is automatic**, without any additional actions**.**

   After resetting the Immo ECU, the **Smart Adaptation** procedure takes place. This procedure is the binding (registering) of the new or used SmartECU to the car.

- **Attention !!!** **The binding to used ECU** is possible only if you have **registered smart-key to this block!** ProSmart 3.1 works with SmartKey system that uses new generation SmartEcu **(* See SKU numbers of SmartECU units)**. When performing SmartAdaptation, the smart key is **automatically registered** in the car.

❖ SKU block numbers

* SKU numbers of SmartECU new generation (2017-2018)			
Model	**Petrol (Gasoline)**	**Diesel**	**Hybrid**
Lexus ES	89990-30441		
Lexus GS	89990-33412 (2018) 89990-33411 (2017)		
Lexus IS	89990-53381		
Lexus LS 500	899H0-50010		899H0-50020
Lexux LX 570	89990-60291	(till 07/2017) 89990-60470 (since 08/2017) 89990-60471	
Lexus NX	89990-78080		89990-78100
Lexus RX	(since 2015-18) 89990-48430 (since 2017-18) 89990-48431		(since 2015-18) 89990-48450 (since 2017-18) 89990-48451
Toyota Alphard	89990-58110 89990-58210 89990-58240		
Toyota Camry	89990-33400, 89990-33690		89990-33480
Toyota CH-R	89990-F4010		89990-F4050
Toyota Hilux	89990-0K081, 89990-0e080		
Toyota Highlander	89990-0E081		89990-0E150
Toyota LC 200	89990-60471	89990-60280	-
Toyota Prado	89990–60196	89990-60205	
Toyota RAV4	89990-42112	89990-42112	89990-42091

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