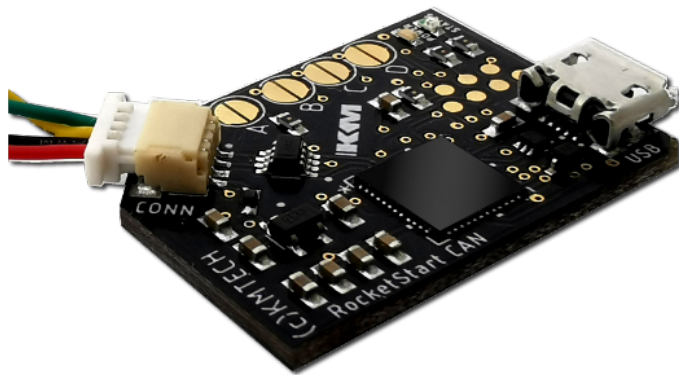


# Knowledge Needs

RocketStart RSCAN : RENAULT MODE



## GENERAL

Regarding Renault cars, to authenticate after correct key recognition, an exchange is made between engine ECU and UCH (body). This authentication is a “challenge” using a secret key named “ISK” for “Immobilizer Secret Key”. This ISK is 6 bytes long.

To make an engine starting after a correct key recognition, it needs that ISK stored in UCH is the same as in the engine ECU.

Our emulator will emulate this exchange (challenge) the same way like an UCH does in the case of a correct key inserted..

## To extract ISK from car :

- **From UCH :**
  - with diagtool Renault Can CLIP : using RESERVE CODE <sup>(1)</sup>
  - with Renault ECU tool / AVDI / Renolink... <sup>(1)</sup>
  - with direct EEPROM reading (and software like RocketDump or RPE2/ Renault Clip Tool by MrRorry)
- **From engine ECU :**
  - by EEPROM direct reading and via our free software “RocketStart EasyPrepare”
  - by EEPROM direct reading or with Renault ECU tool<sup>(1)</sup> and using our free software “RocketStart EasyPrepare”

<sup>(1)</sup> if model is supported by tool

# STUDY CASES

All cases written after are studied in diagnostic needs only. Use only for race. Depending on your country laws, immobilizer bypass can be forbidden. Informations are for general informations purposes only.

## CASE #1

- ★ Original (from car) Engine ECU
- ★ Original (from car) UCH

### What to do ?

Extract ISK and program emulator with it. **Nothing to cut.**

## CASE #2

- ★ Donor (not from car) Engine ECU
- ★ Original (from car) Engine ECU but out of service
- ★ Original (from car) UCH

### What to do ?

#### Method 1 : (better one)

Clone original ECU data to donor ECU and follow CASE #1.

#### Method 2 :

Extract ISK (with methods talked before) from UCH or original engine ECU, virginize the donor engine ECU (with RocketStart EasyPrepare or RocketDump), program emulator with ISK of car. **Nothing to cut.** The virgin ECU will learn ISK from emulator when ignition on. **This method will work only if car is supporting auto-coding/auto-sync..**

## CASE #3

- ★ Donor (not from car) Engine ECU
- ★ Original (from car) UCH

### What to do ?

#### Method 1 : (best one)

Extract ISK (with methods talked before) from UCH, virginize the donor engine ECU (with RocketStart EasyPrepare or RocketDump), program emulator with ISK of car. **Nothing to cut.** The virgin ECU will learn ISK from emulator when ignition on. **This method will work only if car is supporting auto-coding/auto-sync..**

#### Method 2 :

Virginize engine ECU (*with RocketStart EasyPrepare or RocketDump*) and program emulator with generic ISK (46464646464646 : so different from original UCH). Virgin engine ECU will learn ISK from emulator. **In some case (eg. edc15c13) you will have to open CAN bus lines between engine ECU and UCH cause ISK can overlap and interfere.**

## WHAT TO REMEMBER ?

- ★ The cleanest and best solution (with no need to cut CAN lines) is to use this combination:

**Emulator ISK = Engine ECU ISK = UCH ISK**

- ★ Engine will start if :

**Emulator ISK = Engine ECU ISK**

- **EXCEPT** if Engine ECU ISK **IS DIFFÉRENT** than UCH ISK and if there is an overlap between these two. In this case you can try to remove loop antenna or open can bus lines but that is not advised cause it can makes some failures (eg: 0 rpm, no temperature...).

# THANKS FOR READING !

If this document is missing some needs or infos, feel free to ask by mail at [contact@kmtech.fr](mailto:contact@kmtech.fr) !