



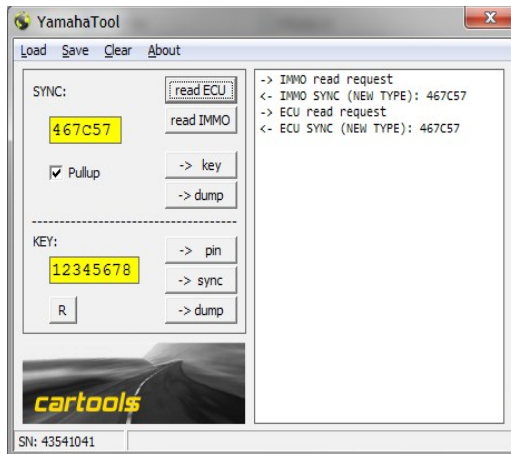
# Yamaha IMMO tool

## for bikes

- read SYNC code from ECU
- read SYNC code from IMMO / SKU (Smart Key Unit)
- SKU / ESCL dump explorer / editor

### Features:

- OLD and NEW systems both covered,
- allows to read out SYNC code from K-line used for IMMO-ECU communication without intervention into ECU,
- allows to update / edit immo data in SKU units (EEPROMS 24c02 / 24c04 ) and ESCL (93c56),
- conversion of SYNC to MASTER (RED) KEY for older immobilizer systems (MORIC with 4D keys),
- KEY code to PIN code conversion.

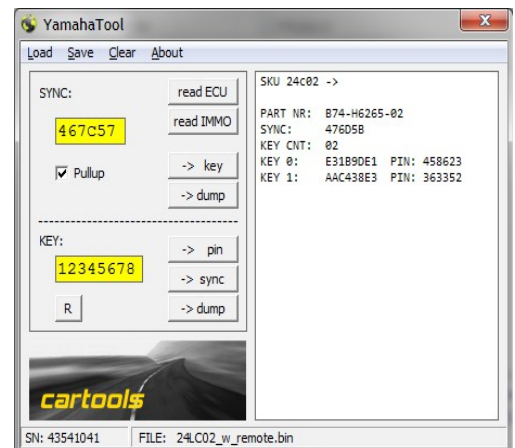


### Connection:

- connection to PC: use USB-B mini cable (not supplied).
- connect tool to +BAT (or IGN), GND, LINE.
- line pullup to +12v is OFF by default, it is possible to switch it ON on demand (mark Pullup checkbox in software!). **Green LED** is ON if pullup activated.
- NOTE – there is no line pullup in ECU, so if you read ECU and all remaining stuff is disconnected (immo, dashboard...) pullup is mandatory.
- "read ECU" / "read IMMO" activate read mode, **Red LED** goes ON. **Activate necessary mode first**, then turn ON ignition / power on ECU. If everything is OK you will see SYNC code actually stored inside ECU or IMMO accordingly.
- It is shown if OLD or NEW system detected or if ECU is in factory new (virgin) state.
- **Important:** if you read ECU, IMMO must be disconnected, if you read IMMO/SKU must disconnect ECU first.

### Software:

- you can load and explore SKU / ESCL dump from file.
- In case of ESCL it does not matter if it is read in 8-bit or 16-bit mode,
- you can update SYNC or KEY0 (first key) if necessary and save updated file.
- for older systems (MORIC with 4D key) you can generate RED KEY from SYNC – DST transponder Page3. KEY is shown in dump form, so for most transponder machines must use data in reverse order (3 bytes of SN first, then 1 byte MANID). Simply press "R" button.
- only last 18 bits of SN are mandatory, so MANID and first 6 bits of SN may be any, they are not used for IMMO / ECU exchange.



### Comments:

- it is not possible to mix OLD and NEW system units although both use 3-byte SYNC.
- Usually SKU's with 24c02 (xxx-H591A-xx) are designed for NEW immo system (12 pin connector, installed on small bikes and mopeds without ESCL and without CAN network),
- Usually SKU's with 24c04 (xxx-86265-xx) are designed for OLD immo system even if they are installed on 2024 MY bikes (18-pin connector, CAN and ESCL on board).
- If SKU has same part number (xxx-86265-xx) but has no EEPROM inside most likely it is designed for NEW immo system.

