# Immobilizer Mahindra Scorpio



## Overview:

Currently there are no programmers on the market that can read the EEPROM found in this type of immobilizer. The software solution for programmer Orange-5 which is described in this document was developed in order to allow read/write data through K-line interface and also to erase keys and add new keys. Transponders(keys) used have to be either pre coded with Tango or dealer keys.
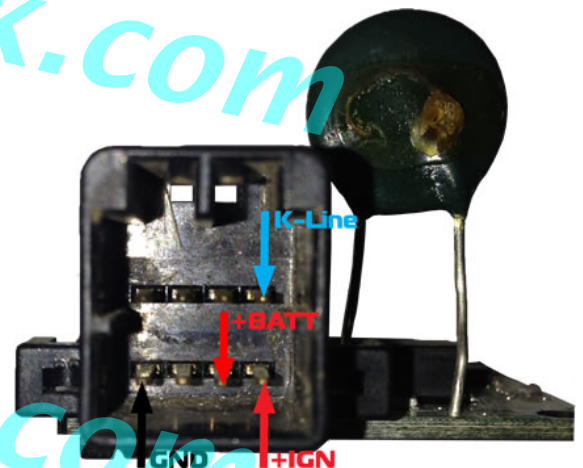
## Wiring:

It is possible to work directly in the car using its diagnostic port. To do so you will need to connect Orange-5 with mounted K-line/CAN adapter to the vehicle through a transitive cable :
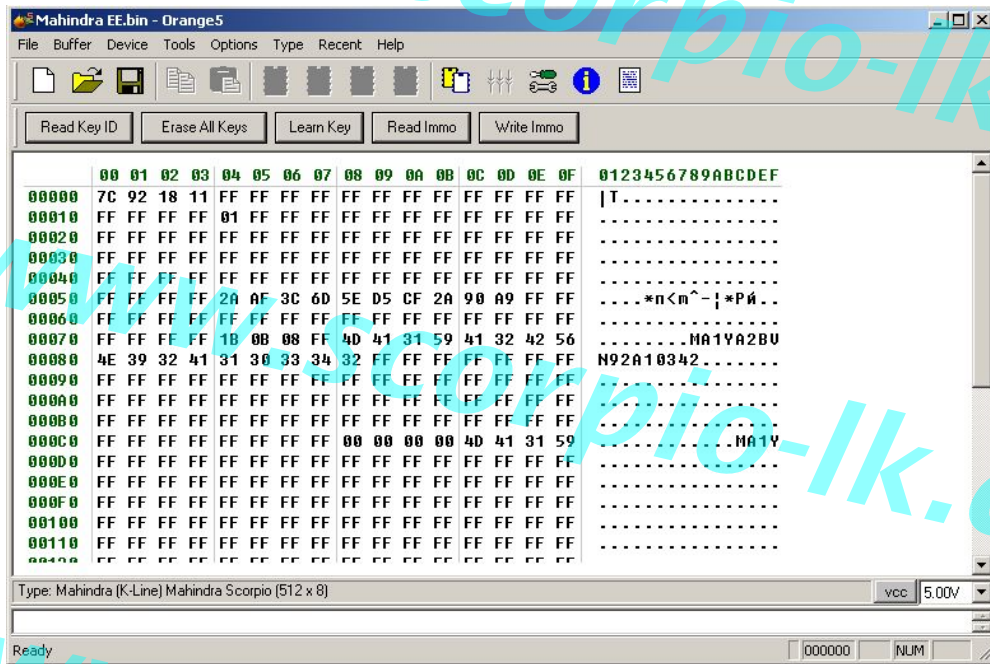


Work can be performed directly with the immobilizer drawn-out of the car using the following wiring diagram:

*Blue:* **K-Line**
*Black:* **GND**
*Red (upper):* **+BATT**
*Red (lower):* **+IGN**

Software features and layout:

- **Read Key ID** – Allows to read the ID of a transponder placed in the electromagnetic field of the ignition coil. This function could be used to detect malfunctions in the immobilizer system.
- **Erase All Key** – Erases/Deletes all Keys from the immobilizer EEPROM.
- **Learn Key** – Registers a transponder placed in the electromagnetic field of the ignition coil. Previously registered keys remain working. It is possible to register a total of four (4) keys. Only pre coded transponders PCF7936 can be used. They can be pre coded with either Tango programmer or use original dealer keys. Also keys can be reused as they are not locked after registration.
- **Read Immo** – Allows to read some EEPROM areas
- **Write Immo** – Writes some EEPROM areas. Keys **cannot** be written with this function, for this **Learn Key** has to be used. VIN can be rewritten.



**NOTE:** During work with this immobilizer you may encounter error Err-04. This error is not a major problem and appears because when ignition is turned on the immobilizer is not accessible through diagnostic for a while as during this time it is communicating with the ECU. Due to this after ignition before attempting to connect to the immobilizer wait several seconds (5-10 sec).