

## Nanocom Evolution TD5 Map facility

### List of Functions

- READ MAP FROM ECU
- WRITE MAP TO ECU
- WRITE TUNING MAP TO ECU

#### READ MAP FROM ECU

This function reads the map files from ECU with flash memory and stores it to an SD card in .map or if the data is protected as a .tun file. Ignition must be on for the Nanocom to read the file from the ECU

#### WRITE MAP TO ECU

This function writes original or tuned map files into the ECU. With the latest Firmware update for the Evolution the map file is now read from the SD card to the unit's flash memory to eliminate any issues with the Read from the SD card.

#### WRITE TUNING MAP TO ECU

This function writes protected- tuned map files into the ECU. It will only write the map if the ECU VIN and the Nanocom ID match with the VIN and ID of the .tun file. Therefore the .tun file must be created specifically for use with the Nanocom and vehicle VIN

- 1) MODIFYING THE MAP FILES OF THE ECUs IS NOT LEGAL AND IT IS YOUR OWN RESPONSIBILITY IF YOU USE THESE FUNCTIONS**
- 2) WRITING THE ECU's FIRMWARE IS A DANGEROUS OPERATION BECAUSE THE MEMORY MUST BE CLEARED AND REWRITTEN. IT IS AT YOUR RISK AND RESPONSIBILITY IF YOU DO THAT. NANOCOM MANUFACTURERS ARE NOT RESPONSIBLE FOR ANY DAMAGE CAUSED TO ECUs.**
- 3) WITH REGARDS THE ABOVE POINT 2 IT SHOULD BE NOTED THAT THE ERASING OF THE ECU MEMORY IS A DESIGN FAULT BY THE ECU MANUFACTURER WHICH LAND ROVER RECTIFIED IN THE 2005 DISCOVERY 3. ONCE THE ECU ROM IS ERASED, ANY FAILURE IN THE WRITING BACK OF THAT INFORMATION WILL RENDER THE ECU UNUSABLE. IT DOES NOT MATTER IF YOU USE YOUR OWN DEVICE SUCH AS THE NANOCOM OR GO TO A PROFESSIONAL TUNER, THE SAME SITUATION CAN OCCUR SO YOU NEED TO BE AWARE OF THAT FACT BEFORE MODIFYING THE SYSTEM. AGAIN BLACKBOX SOLUTIONS AS NANOCOM MANUFACTURERS WILL NOT BE HELD LIABLE FOR DESTROYED ECUS.**
- 4) REMEMBER TO SWITCH OFF ALL THE ELECTRONIC DEVICES INSIDE THE CAR DURING THE MAP FILE WRITING, TO PREVENT PROBLEMS THAT CAN BE CAUSED FROM THE RF INTERFERENCES.**

## **5) MODIFYING THE MAP FILES OF ECUs MAY CREATE MECHANICAL PROBLEMS TO THE ENGINE AND TRANSMISSION OF THE VEHICLE**

The following is a known working procedure for reading and writing .map files to a TD5 ECU.

There are 2 very important points to note before attempting to read or write a map to a TD 5 ECU with the Nanocom Evolution. This is not a guarantee that the procedure will work as there are many factors involved in the remapping of the ECU.

1. A good quality SD card must be used. During extensive recent testing we found the only reliable SD card we had available was the Kingston 2GB micro SD card with adaptor. However the use of ANY SD card is at the customers own responsibility. We do not manufacture SD cards and cannot vouch for their reliability. The one we used is simply an example.
2. A constant power supply must be maintained to the ECU during the process otherwise data can be lost and an unusable ECU will be the end result. It is essential that the vehicle battery is maintained at a constant level otherwise the ECU drops communication and the map write will fail.

**NOTE. BATTERY CHARGERS ARE NOT SUITABLE FOR THIS WORK. YOU NEED SOMETHING LIKE A CTEK CHARGER ON SUPPLY MODE OR SIMILAR.**

Complete step by step testing procedure carried out successfully on different Nanocom Evolution units with different levels of Firmware and using different maps.

1. Insert a good quality SD card into the unit
2. Connect the OBD lead to the Nanocom Evolution without it being connected to the vehicles OBD socket.
3. Ensure the Ignition is OFF and connect the OBD lead to the vehicle.
4. Select the TD5 Map function from the Nanocom Evolution menu.
5. Select the Write map to ECU function and then from the selection box that pops up select the .map file you wish to write to the ECU which should already be stored on the SD card.
6. The file will then be transferred from the SD card to the flash memory of the Nanocom (only with Firmware version BBS V1.12)
7. Switch ignition ON when prompted and wait.
8. Switch ignition OFF then wait the required 15 seconds (the screen shows the message to wait so you cannot actually go any further).
9. Switch ignition ON and the system should start to load the map to the ECU.

Please note that you HAVE to turn ignition ON or OFF when requested BEFORE clicking OK to the message otherwise the system will believe you have already done this.

Failure messages experienced range from "MAP not for TD5" (despite being read and saved from the ECU) to Map Read Error. If you check the SD card files you will find an Error.txt file has been created which may give an indication as to why the issue occurred.

On the Defender TD5 it has also been noted that the 10AS alarm can cause interference when remapping. There is a centre fuse (number 4) under the driver seat which will disable the security ECU but allow everything else to work. With the ignition off, just remove it, turn the ignition on, flash the ECU and then turn the ignition off and refit the fuse.