

## Notes

This document regroups some notes I've taken on diverse things. View it as a personal log regarding my tuning adventure.

### ECU Tuning

Some comments about the maps I've made.

Refer to the PDF or Markdown README to find out what maps have been changed.

#### MS42\_0110C6\_32KB\_hatrix\_test\_1.bin

This is my first map! Its intended purpose is to check that I can read and write maps from and to the ECU.

To keep things simple I decided to lower the hard and soft limiters to 4000 RPM. The *soft* limiter cuts off some injectors whereas the *hard* limiter cuts off all injectors. After some warming up I decide to take the engine to higher RPMs, and the cut does work! The car simply stops producing any power when it reaches 4000 RPM.

I also changed the **Throttle Body Speed**, which is supposed to make the throttle more responsive. I didn't see a big change, going from 44 to 60. The maximum is 240 but I decided to play it safe, I will probably increase this value for the next maps.

The throttle is **drive by wire**, whatever the engine, M52TU or M54. Many people on forums seem to think M52TU are only cable driven, and not electronic. The MS42 Specs PDF by Siemens does though say that the cable is only a backup, and that the system is indeed *drive by wire*. Look for MDK, page 51.

In summary, this map achieved what I wanted to do, full success! After the test I reverted the car back to its original map.