digital tuning Rtek7™ ECU Upgrade for S5 Turbo II v1.7

Instructions

Thank you for purchasing the digital tuning Rtek7 ECU upgrade. Below you will find a detailed description of what the ECU upgrade does and how to use it.

The Rtek7 ECU Upgrade v1.7 for S5 Turbo II cars has five main features:

1: Eliminates Fuel Cut ("FCD")
2: Allows 720cc secondary injectors to be used without an AFC
3: Lowers the secondary staging RPM to 3600 RPM
4: Retards timing ~1 degree per PSI above 9 PSI
5: Eliminates the Accelerated Warm-up System

Built in Fuel Cut Defenser (FCD):
The stock ECU will cut fuel to the rear rotor when boost hits the fuel cut threshold of about 8.6 psi. Although this was put into the stock ECU as a protection mechanism, it's a quite harsh mechanism and not required for mild improvements in boost.

The Rtek7 goes right to the source by removing the code responsible for Fuel Cut from the ECU altogether. This has the additional benefits over external FCDs in that it doesn't alter the boost signal to the in-dash gauge, there are no wires to splice, and no additional box to clutter the engine bay.

RUNNING TOO MUCH BOOST WITHOUT ENOUGH FUEL CAN DESTROY AN ENGINE. EVEN THOUGH THE FCD IS BUILT INTO THE ECU, IT IS THE CUSTOMER'S RESPONSIBILITY TO ADDRESS FUEL REQUIREMENTS SEPARATELY.

720cc Secondary Injectors:
The secondary injectors MUST be at least 720cc or engine damage will result! For version 1.7, the fuel map has been corrected to compensate for larger 720cc secondaries without the need for external fuel control, like an AFC, to keep from running very rich. If you have an AFC, it will no longer have to trick the ECU to compensate for the larger injectors. The AFC can be used for fine tuning. This also means that you CANNOT run version 1.7 in a car with 550cc secondaries or you will run lean.

Lower secondary injection point to 3600:
Normally the secondary injectors start adding fuel at 3800 RPM. The problem is that the secondary injectors will not come on below this rpm regardless of the boost being run. This can lead to cars running lean below 3800rpm even if they have larger injectors, fuel pump etc. Lowering the RPM at which the secondary injectors come on allows them to add fuel before the primary injectors start to max out.

Timing retard above 9psi:
The stock ECU has no additional timing control for above around 9-10psi. This mod extends the timing control to give a little more safety for those running 9+ psi. Timing is pulled about one degree per PSI.

AWS:
When you first start your RX7, the ECU will rev the engine to approximately 3000 RPM's - this is the Accelerated Warm-up System (AWS) in action. The purpose of the AWS is to warm up the precat. Of course, one of the worst things you can do to a cold engine is high revs. This mod removes the AWS code from the ECU allowing your car to idle normally when cold.

Please join the discussion forum at www.digitaltuning.com/forum

If you have any questions regarding the installation or use of your Rtek7 ECU upgrade, please email us at support@digitaltuning.com