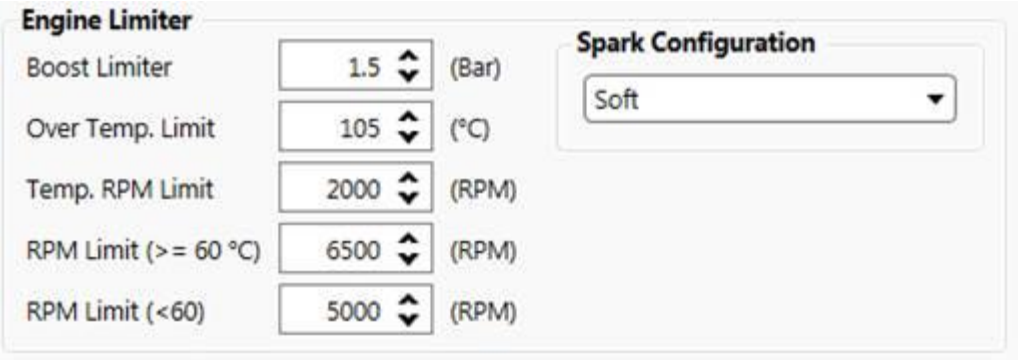
Engine Limiters

This block has a few protection features. Setting them may prevent the driver from damaging the engine in normal and racing conditions.



Boost limiter

This feature will cut the injectors clean if the MAP sensor detects a manifold pressure that is higher than the set value. It is not a boost controller but it is to protect against boost controller or waste-gate failure. It can be adjusted in tenths of a bar resolution. The spark will not be cut.

Over temperature limit

This feature and the next one will protect the engine against over temperature. The injectors will be cut until the revs fall below the next setting.

Temperature RPM limit

This is the maximum limp mode RPM's when the engine is over temperature. If it is due to a burst hose it is better to switch off before the engine is damaged. If it is due to low water the lower revs will help to cool it down instead of disabling the engine.

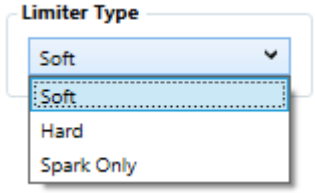
RPM limit (>=60°)

This feature will prevent the engine from over-revving under normal temperature conditions. It can be adjusted in 100 RPM intervals. RPM limit can be achieved by three methods.

RPM limit (<60°)

This feature will prevent the engine from over-revving under cold temperature conditions. It can be adjusted in 100 RPM intervals. This method will only cut the fuel and is just a protection.

Limiter Type



Soft

This mode will retard the timing in three stages and then cut the fuel completely. The result will be a smooth soft loss of power. Each 100 RPM over the limit, timing will be retarded further. First retard is 15 °BTDC, then 10 and then 5 °BTDC. Then during the third stage, fuel will be cut but not

the spark. This will prevent fuel from entering the exhaust and backfire there. This is the preferred method for engine over-rev limiting. **Note**: The engine may reach 300RPM above the set value.

Hard
This mode will cut the fuel and spark completely. It has a jerk type feel and may result in small detonations in the exhaust.

Spark Only
This mode will cut only the spark. This will give the backfire sensation when unburned fuel is ignited in the exhaust. **Note**: Damage to the exhaust system might occur in this method.