RUN DOWN OF THE FEATURES FOR BMW E46 M3

6MT Shift Lights Settings
This feature allows SMG style shift lights to operate on manual E46 M3s. The options available are as follows:

- Disabled
- Enabled (Always active)
- Enabled with Sport Mode

The options above are self explanatory.

Sport Memory Settings
This feature allows control over how the 'sport' button behaves. The options available are as follows:

- Sport mode via button press (default)
- Sport mode always on
- Comfort mode always on
- Enabled upon DSC button press (DSC off)
- Sport mode memory

The above options are self explanatory, most people select 'sport mode memory' allowing the car to remember the last setting when the car was turned off.

Dyno Rev Limit
This feature removes the static rev limit of 6300 RPM that interferes with correct Dyno operation. It is recommended that you set this at the same value as the 'in gear' rev limit mentioned below.

Rev Limit (All Gears + N)
The Rev Limit is fairly self explanatory, the limit can be adjusted dependent on the end users requirements. The stock rev limit of an E46 M3 is 8000RPM. It is not advised to go beyond 8200RPM.

Transmission Swap
If you have a chassis swapped car or want to change your transmission then you can swap between SMG and Manual. If you swap from SMG to Manual, the DTCs for SMG parts will be disabled automatically.

SMG Final Drive Swap
If you have an SMG equipped car and wish to change your final drive (differential ratio) you can change the ratio expected by the ECU to one of the following options, this will allow correct shifting when in 'auto':

- 3.62:1 Ratio (Stock E46 M3)
- 3.91:1 Ratio
- 4.10:1 Ratio

IAT Sensor Re-scale
IAT sensor rescaling allows the use of alternative Intake Air Temperature sensors, this is useful for those wishing to run a CSL style airbox without having to use a stock CSL IAT sensor.

MAP Sensor Swap (CSL Only)
This allows use of a non BMW MAP sensor on CSL ECU software. A 1 Bar GM sensor is a good alternative.

Cat Protection Threshold (EGT)
Allows you to modify the temperature at which EGT (Exhaust Gas Temperature) 'Cat' protection kicks in.

155 MPH Limiter Removal
Ticking this option will remove the factory imposed speed limiter of 155MPH or 258KPH.

Burble / Pop On Lift Off
This option will alter the fuel cut delay and minimum ignition to allow rally style pops and bangs. Due to the nature of this change, it is not recommended for use with cars running cats.

CSL SMG Shifting / Rev Matching
This is one of the best modifications you can make to your SMG equipped M3. The feature will update the ECU to use the same shifting and rev matching parameters as that of the M3 CSL. After applying this option, the car will shift gears with increased accuracy and also rev match on down changes, just like in the M3 CSL.

SMG Inertia Update
This option increases the clamping force of the clutch reducing SMG 'clutch slur'. It is recommended when using the CSL SMG Shifting and Rev Matching option.

Disable SAP / Cat Heating Sequence
This option will disable the secondary air pump that performs 'cat heating'.

Disable SAP DTCs (SAP hardware removed)
This option should be selected when the secondary air pump has been physically removed from the vehicle. Selecting this option will prevent the check engine light illuminating. You can get SAP blanking plates.

Disable CSL intake flap DTCs
Selecting this option is recommended if you are running an M3 CSL ECU and wish to 'delete' or remove the intake flap and motor. Selecting this option will prevent the check engine light illuminating.

Enable Cruise control (CSL / CSL Clones Only)
This option will allow CSL converted ECUs to activate cruise control.

Enable Alpha N / MAF Delete (Experimental)
This option is for those who wish to drive to their tuner with a carbon airbox fitted, a custom Alpha N tune is still required.

EWS Delete + EWS Tampering DTC Delete
Enables the vehicle to run with a foreign ECU, useful for ECU swaps or motor swaps.

Disable Cat Protection (Disables enrichment)
For those running catless or decats, disabling cat protection / enrichment enables finer control of the fueling without the ECU trying to protect the catalytic converters.

Disable EGT Monitoring
Disables exhaust gas temperature monitoring. If you have 'headers' without an option for an EGT sensor, please use this option to prevent EGT control and associated check engine lights / DTCs.

Disable Cat Efficiency DTCs
Allows a user to run catless or decats whilst still keeping the rear / secondary lambda probes in place.

Disable Rear O2 DTCs (Hardware Removed)
Allows complete removal of the secondary O2 / lambda sensors, useful when running after-market headers and decats.

Disable CSL intake flap DTCs
Suppresses the DTCs associated with full CSL software when a flap is not fitted.

Disable '151' DTC (For CSL Clones)
Suppresses the '151' DTC that is flagged when full CSL software is flashed to converted MSS54Hp ECUs.

Disable '105' DTC for Motorsport Thermostats
Suppresses the '105' DTC flagged when running a Motorsport thermostat.

Warm Up Light Recalibration
This option allows finite control of the 'warm up' lights that surround the rev counter of the E46 M3 and E39 M5.

Performance Tuning by Evolve Automotive
Allows application of a tune to the E46 M3. The tune has been developed by Evolve Automotive and is tried and tested throughout the world. Gains expected are 14-25BHP and increased driveability.

CSL Intake Flap Control (CSL Only)
Allows control of at what RPM the intake flap opens and closes when in 'sport' and 'comfort' modes on the M3 CSL.

Throttle Adjustment (Comfort / Sport)
Allows finite control over the mapping of the electronic throttle vs accelerator pedal in both 'comfort' and 'sport' modes.

Servotronic Adjustment (E39 M5 Only)
Allows finite control over the weighting of the servotronic steering found in the E39 M5. The weight or assistance of the steering can be changed based on the current speed of the vehicle.

Exhaust Backfire by BuildJournal
Allows / enables backfires / pop / bangs as designed by the guys over at BuildJournal. This setting must not be enabled if you have cats and is separate to the standard pops and bangs feature.