

# Essay on drag racing

[Technology](#), [Cars](#)



Car racing is a sport which facilitates automotive vehicles, Drag racing is a competition of vehicles which is concerned by how fast a car, van, and motorcycles can achieve with a limited time. Often times it is one vs. one which most of the time taken place on different types of race tracks.

Remapping is a process that changes your car engines computer, which is formally known as engine control unit (ECU). (Tan, 2018) stated that as of today there are five racing circuit in the Philippines which are namely, Batangas racing circuit, Carmona racing circuit, Clark International speed way, Plawan international circuit and Tarlac circuit hill, which are all functioning for the entire year, for racing competitions and practicing.

When a vehicle undergo remapping, your car or van can achieve better performance and may improve your overall driving experience and also savemoneyon your fuel costs over the months and years. As of today, modern vehicles contains ECU (Engine Control Unit) that is typically effective. It is a small computer which controls how the engine works.

Philkotse. com (2019) stated that ECU is a chip with a software installed and have a default settings for the car's function. It is apparent that cars today have progressed when it comes to comparing the old cars that were purely mechanical.

The new cars are now managed by the advanced and modern technologies, the ECU is the main software that really undergoes remapping wherein the old program is deleted and will be replaced by a new program which comes from different modes depending on the type and model of the vehicle. M.

Ogenia descirbes that most drag racers are cautious to use remapping because of the reasons that they usually think it'll destroy their motors and

have some problems during the drag race as stated by (personalcommunication, August 15, 2018).

While L. Diamante stated that some drag racers are open for raising awareness about remapping, more over it is always a great idea to check the vehicles condition first before heading to remap your vehicle. Racers are still not aware of what is the effect of remapping which is why the research study was made to comprehend if there is a connection between remapped vehicles towards winning a race, most of the time the frequent problem when participating in a race is the motor's capability to run fast enough to meet the goal time, " the lesser the time much better" ( personal communication July 27, 2019). As of today there is no existing research why drag racers should remap their cars and it's effect on the chance on winning a race.

The Engine Control Unit or ECU is a computer that controls many of the functions of a modern car. The ECU is set in the factory with specifications that often result in less power than the car is actually capable of. Power programmers, including control modules, give the users an option to adjust these settings. Control modules are simple power programmers designed to " piggyback" or work on the conjunction with a car computer.

The other type of power programmer is the lone programmer, designed to completely replace the ECU area. A control module is also different from a flash programmer, which makes changes to the ECU, while the former receives data from the computer and changes it at that time. Power programmers are devices that connect to the ECU or DLC and allows the

user to customize air and fuel flow to increase vehicle power. Many power programmers are specific to the particular car model and are simple to plug in, and can be used instantly. Others work on any vehicle, but they are not so simple to connect, and one should consider installation. In any case, the programmer will be able to determine the correct flow of air and fuel to achieve better performance .

Beretta (2014), an Engine management unit (ECU) could be a agglomerate of Electronic management unit that controls the series of actuators on an inside combustion engine to secure the optimum engine performance. The programmable ECU might management the quantity of fuel to be injected into every cylinder. This varies looking on the engine's revolutions per minute and also the position of the treadle (or the manifold air pressure).

The engine tuner will regulate this by citing a spreadsheet-like page on the portable computer wherever every cell represents associate step intersection between a particular revolutions per minute worth associate phase an treadle position (or the throttle position, because it is called). during this cell variety admire the quantity of fuel to be injected is entered. This program is commonly mentioned as a fuel table or fuel map.

Formerly ECU's, air-fuel fusion, ignition temporal strategy, and idle speed were spontaneously set and smartly managed by mechanical and pneumatic means that. Programmable ECU's square measure needed wherever important aftermarket modifications are created to a vehicles engine. As a consequence of those changes, the recent ECU might not offer acceptable management for the new configuration. In these things, a programmable

ECU will be wired in. These may be programmed/mapped with a portable computer connected employing a serial or USB cable, whereas the engine is running.

Sophisticated engine management systems receive inputs from alternative sources, and management alternative factors of the engine; as an example, some variable valve temporal order systems area unit electronically controlled, and turbocharger waste gates may be managed. They conjointly could communicate with transmission management units or directly interface electronically controlled automatic transmissions, and traction management systems.

Such systems area unit used for several combustion engines in alternative operations. In aeronautic applications, the systems area unit called Full Authority Digital Engine Controls (FADECs). This sort of electronic management is a smaller amount familiar in piston-engine lightweight fixed-wing craft and helicopters than in cars. this is often because of the common configuration of a carbureted engine with a magneto electric machine ignition that doesn't need power generated by associate degree generator to run, that is taken into account a security advantage.

Anonymous (2019), as mentioned, several fashionable ECU's area unit cover from exterior case by the manufacturer. If the ECU is largely inaccessible, generally associate rank external ECU (ECM or External management Module) is engaged. This external box is coupled to the engine and has its own computer code. The external ECU will adapt far more than one or two values, and whereas calibration the computer code on the ECU itself (remap)

still is taken into account the most effective approach of calibration, this methodology is in distinction to the higher than power box resolution, a reliable appreciation to tune.

The very fact that the automotive stick around original is a plus too. you'll be able to simply take away the calibration this manner by separating the unit. There are several automotive homeowners who have had their automotive tuned and have had years of troublefree driving. Moreover, there also are negative aspects to chip calibration that don't seem to be constantly mentioned by chip calibration corporations. They raised count up the benefits upon the disadvantages so as to form associate degree knowing selection for chip calibration.

Cars and vans these days have an electronic management program, which is the one who manipulates and capable of handling the fuel inside the engine motor. It is ECU is the one who decides how much fuel would be used and mixed in with the air and then gush it into the cylinder then ignite, ECU's are also the one who controls the turbo if the vehicle has one based on the report of Defence(2019). He also concluded that after undergoing remap the car will have extra power and/ or performance and does not only advantage an owner can be able to get but also when the driver drives normally without using the extra power the chances of getting a 5MPG is feasible.

Remapping is like a brain surgery performed in your vehicle to improve both the economy and performance. Even though a vehicle is about 10 to 20 years old an ECU can still be fitted inside it. The ' electronic brain' controls all the different functions of the engine, for example are: pre- setting of

parameters programmed into the car in the factory, ignition of timing, turbo boost in pressure ( if fitted), and fuel mixture. “ once size fits all” is a factory setting that was made so different varieties of vehicles may meet within the range of emission, it may also with stand conditions such as the changes in temperature. Remapping is very versatile and can be changed onto the way you want it depending on your needs, it is also in relation like having your very own suit tailor rather than purchasing ‘ off the peg’, as said by Remapping and Diagnostics LTD (2019).

The rising operative and complicity of electronic application warrants not only the use of mere high levelled apparatus, examples of it are multi-core processors on the other hand efficacious methods and technology to support desired decisions . one of the most promising known solution to deal with software intricacy and permissible to to reuse is component based engineering reported by Faragardi et. al. (2018).

Ladislav (2015), stated that coil springs are also well known for the name “ spiral spring, a type of material/ technology that manipulates energy gathered and release it over time. Coil springs are the ones who absorbs shock or any disturbances between the surface ground and wheel, thus also helps to sustain the balance of a transportation. The coil is protected by a layer of polymer that enclosed the spring by a couple of length in centimeters to lessen the collision of the metals towards one another.

When the vehicle is over used on long transportation, coil spring often times be bombarded way too much within which is caused by different types of railroad, which is also known for drivers and passengers as a “ bumpy ride”.

After some time when the coil spring was damaged, the open exterior due to fracture from the rupture of metals will soon build dark coloration with rust. After a couple of months, the indentation of rust on the surface of the coil spring will enable rust to spread more than soon be known as fatigue. The damage on coil spring is caused by stress due to the repetitive collision of metals which results to rupture.

A safe and good way of tuning electronic engines is through ECU remapping, it empowers the engine unit as well as its torque and engine capacity, henceforth gives driver comfort. Most drivers want to enhance the power of their machines which commonly leads them into two ways, the mechanical tuning and electronic tuning. Mechanical tuning is where you replace parts of the car itself and cost so much more than a penny on the other hand electronic tuning known as ECU remapping is basically an alternative for mechanical remapping.

Some car owners are troubled whether the idea of having electronic tuning but it is said that remapping is much safer than mechanical tuning. Chip tuning is most effective on diesel powered cars and turbo engine vehicles, unfortunately remapping can't be done on cars without computer. There are main advantages in remapping which are increase of power on the engine, better comfort while driving, reduce fuel consumption and increase the dynamics and manoeuvrability ability of the car also compared to mechanical tuning, remapping has more benefits than just mechanical remapping and has lower price rate as stated by The Mechanic Doctor (2019).



When a motor is charged by a turbo, more power manifests inside the engine motor. A turbo charger has the capacity to breath and intake. Warm air which is produced by the engine while running may exhaust the engine spin turbine rapidly engine the exhaust way of the turbo, meanwhile the shaft of the turbo transmits the rotation to the intake part of the turbo which pushes more air towards the inside of the engine motor to boost power.

Modernized turbo engine motor are controlled by the ECU. When an ECU was remapped and customised the potentiality of fuel injection and turbo measure is tuned into 25%-30% and was enlarged in turns of power which makes remapping feasible in power accumulation increase for petrol and designed motors. Modernized ECU's tuned surpass the on boarddiagnostic(OBD) port is often times not feasible because of protective measurements. When that happen, the ECU must be injected out of the car to be able to remap and tune it. When optimizing the ECU software itself there is a probability of ' fooling' the ecu through the use of a power box.

It is usually placed in between the ECU and the motor transmitters but it's still not recommended even though it may also boost the turbo engine and cut the usage of fuel. It is also stated in the blog that most of the car owners have experienced trouble free driving hence also said that even though there are advantages there are in car tuning there are still disadvantages, it is highly recommended that the owners must balance and look through every perspective before having their car tuned up. When it comes to fuel consumption when a vehicle has undergo remapping will be slightly lower, the car will start to have more engine power and boost up the vehicles

performance, meanwhile when the car goes it specifically consume more fuel but a little lower than the consumption of a normal car( The Carblogger, 2019).