Ultimate Vibe Systems

Tailor-made Physics setups

Service included for the price :

- Work on car **Physics**.
- **Setups** your **championship tracks.**
- **Reference lap** Ghosts.
- Reference lap Telemetric datas.
- **Reference lap** with wheel/throttle/brake datas videos.
- Mod, setups and reference lap **Installation on your PC**.
- **After-sale service** whom allows you to get a tailor-made setup
  or physics modifications.

For the moment we have got 11 car with entirely made from scratch
or modified : **Funcup**, **Ligier JS2R**, **Lamera cup**, **Funyo
Mitjet 2.0L et 1.3 L**, et **Clio Williams GR.A, FR 2.0L,
992 Cup, Huracan Trofeo EVO 2** and **Wolf Thunder**.

I Modified files on each car :

Car
Weight.
Controls : ForceFB multiplier, assistance, wheel rotation,
steering ratio.
Driver 3D : steering animation.

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Tyres
This file modification is the most demanding :
to compensate for 2 software defect, tyre deformation
and heating; they have to work more than an entire day to create
a semi-slick tyre which has a realistic behavior.

Settings worked on **semi-slicks et slicks tyres :**
Rear and Front Width to recreate the real car's grip and balance.
Flexibility.
Lateral Grip.
Maximum Slide angle.
Ideal Pressure.

Tyre friction influence on heating.
Cold factor.

Settings **only** worked **on slicks tyres :**
Heat transfer to the tyre inside.

On **slicks tyres**, an additional half-day work is required to
find the right rear and front balance, under and over-heating,
compared to semi-slicks tyres; this explains the price difference.

Result of the work on **Ligier JS2R tyres** :
A the end of 2 lap in Spa origin tyres are at 63°.
on FW and 71° on RW at the Stavelot exit.
Ultimate Vibe reworked tyres are at 104°
on FW and 96° on RW at the Stavelot exit, the track point
where the tyres get their highest temperatures (cf our tyres video).

Engine
Sometimes, we need to import files from another car :
Ford Focus RS MK2 Engine, gearbox and sounds were required to
design Lamera Cup physics.

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Torque curve : To compensate for the software defects, we are giving more torque to low and mid engine revs.

Engine Inertia : To compensate for the software defects, we are giving to the engine more inertia to limit the engine revs decay when they are coming on a climb, or when they are cutting off.

Engine Limiter.
Engine Brake.

Drivetrain

Gears ratios and final ratio :
We are adjusting each gears ratios, until the gear shifts are performed at the same speed as the real car.
Upshift and downshift management :
Cut-off management (time and speed), declutching management (time and speed).
Auto-blip during downshift (time, intensity and speed).
Differential pre-load torque.

Note :
To recreate the differential lack on the Mitjet 2.0L, we had to copy a formula from one editor's car without differential to our drivetrain file.

Aero

Sometimes, we need to import files from another car :
ex : Aero files from a GT4 Alpine are the base of a Ligier JS2R aero.

Rear, body and front downforce :
Even on a car without downforce, they always have to integrate aerodynamicals values into the aero file.
Rear, body and front drag.

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Suspensions

Maximum ARB hardness.
Maximum spring hardness.

Body
Maximum Brake torque.

Setup
Once the physics are over, we are enlarging the the adjustment palettes, to recreate the real car's bahaviour (cf. our 991 Cup demonstration video).

II Car Setups

Tyres
FW Pressure.
RW Pressure.

Geometry
Camber.
Toe-in and toe-out.

Brake
Brake torque used (in %).
Brake distribution.

Dampers
Compression hardness.
Fast Compression hardness .
Rebound hardness (soften to get on kerbs more easily).
Fast rebound hardness.
Ground Clearance (according to championship rules).

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Suspensions

FW and RW hardness.
FW and RW Anti-roll bars (If the car has it.)
Left/right FW and RW bumpstop.

Differential
Global Torque.
Power lock (in %).
Coast lock (in %).

Work result on a **991 Cup** setup :
After a half-day work, we gained 1,7 seconds a lap
compared to the basic setup, thanks to traction gain to the rear drive
and the efficience gain on the front drive, cf. our 991 Cup
demonstration video.

Prices
For a car including physics, setups, drivers datas (telemetry, video with
driving inputs datas, ghost) and after-sale service for a
tailor-made modification.

For a car using semi-slicks tyres :
410 € Exclusives of taxes
For a car using slicks tyres :
510 € Exclusives of taxes

If you wish to receive further informations,
we can answer to your questions.

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Faites la différence