

Snetterton Autosolo Driver Tuition 2022

*with Vini Cruz
12th March*



OVERVIEW



- 1- Vini's introduction and disclaimer
- 2- Vehicle Dynamics brief introduction (Participants only)
 - 2.1- Tyres
 - 2.2- Weight transfer
 - 2.3- Understeer/Oversteer
 - 2.4- Steering scrub, dynamic caster - artificial diff lock and braking power vs engine power
 - 2.5- All very subjective – Driver confidence is priority
- 3- Test and tuition layouts
- 4- Why this test and tuition layout
- 5- What to expect during the day
- 6- Timesheet
- 7- Feedback

Drivers be advised that you will be driven and drive in a circle for good part of the day. Please take precaution against motion sickness if required.

1- Vini's introduction and Disclaimer



Intro:

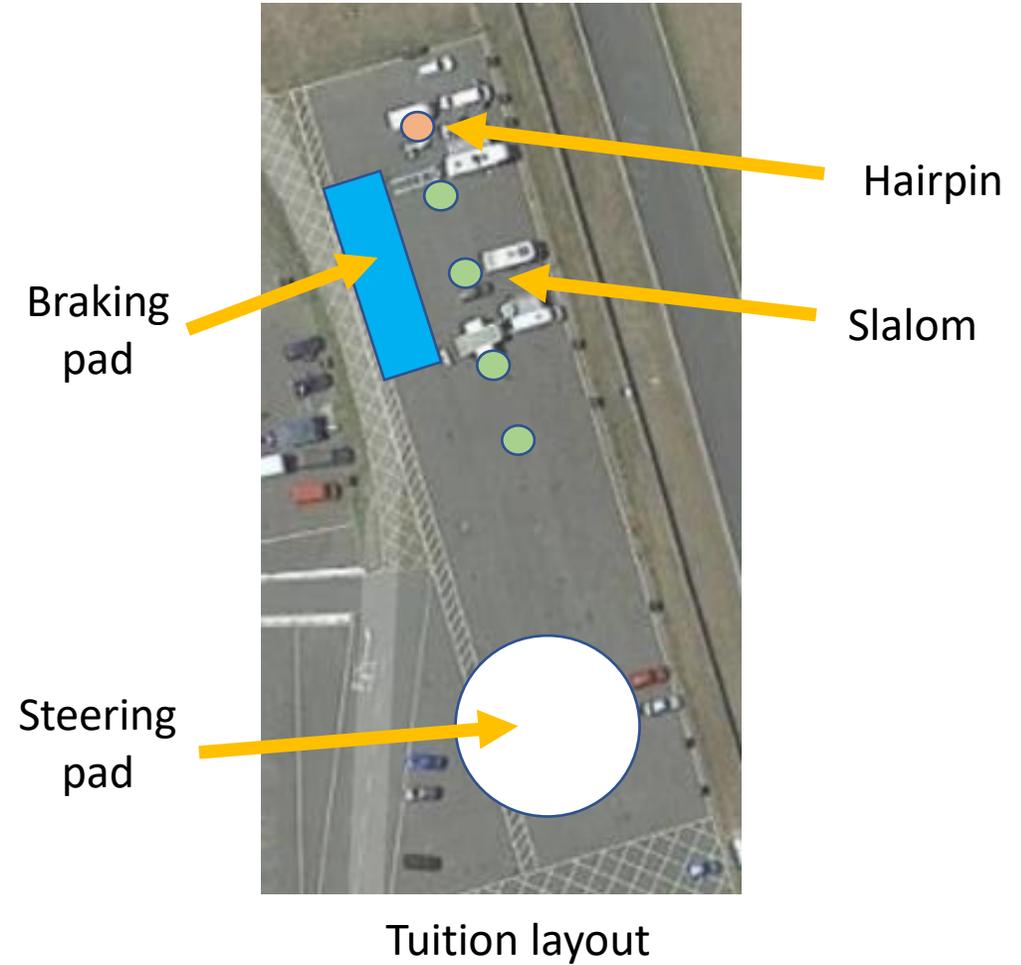
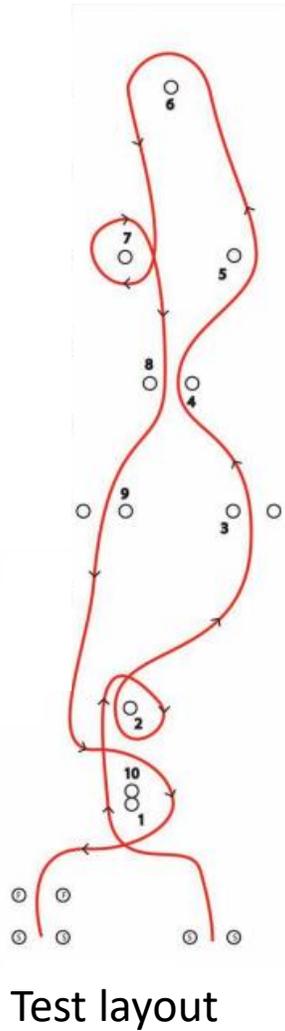
I have been involved in some sort of motorsport since I was about 10 years old. Back in Brazil I started racing karts, then went on to modify a 4x4 (Jeep JC5) and a 4x2 (VW Beetle) for off road events. I moved to the UK in 2004 and at around that time Steve Watts (Sevenoaks MC) introduced me to Autosolos. It was not until about 2012 that I managed to start competing in a Peugeot 106 1.1. I also competed in Targa Rallies and more recently in Stage Rally.

I graduated as a Motorsport Engineer in 2012. My first job in the field was as a Suspension System Design Engineer for Multimatic. Then as a Suspension Systems Research and Development Engineer/Vehicle Dynamics Engineer for Jaguar Land Rover. I'm currently a Vehicle Development Project Engineer for Multimatic who designs, develops and manufactures many OEM components and niche vehicles.

Disclaimer:

Everything I tell you today is very specific to the way I drive. So it might not work for you. However you will get the experience of getting your car to the limit of the tyres under controlled conditions, which hopefully will help you get a feel for how to extract the maximum out of it.

3- Test and tuition layouts



4 - Why this test and tuition layouts



When you are driving an Autosolo test, you are **constantly making vehicle inputs**, the car in turn is **constantly giving you feedback** on what's happening. This is a very **complex task**. It is helpful to break these inputs and feedbacks down individually in a **controlled environment** to understand how they work.

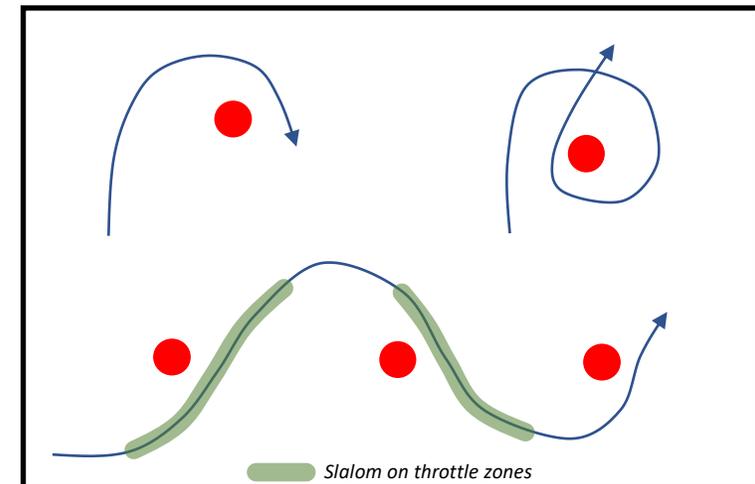
-At the **steering pad** we can drive in circles at a fixed radius increasing speed gradually until we reach **understeer/oversteer**

-At the **braking pad** you can have a feel for how to extract the **maximum out of the tyres braking** in a straight line

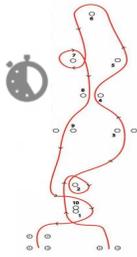
-At the **hairpin** we can understand the concept of **wide in, tight out** lines

-At the **slalom** we will see the importance of **steering vs throttle timing**

-The **test** chosen has all these **features combined**



5- What to expect during the day



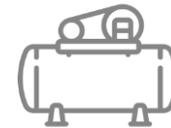
1- Set your car tyre pressures up as you usually do for events or using the manufacture's recommended tyre pressures (baseline setup), then do 2x timed runs, record your times



2- Come to the tuition area where I will take you around in the Pug 106. I will show you what I will ask you to do at each tuition feature and what to expect from the car



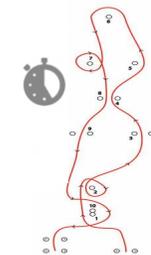
3- Then you will drive your own car (baseline setup) with me as a passenger over the same features, I will tell you what to do and what the car is doing in response to your inputs



4- At the end of the run we will have a chat about how you felt. I will then make suggestions to change your tyre pressures based on the behaviour of the car and marks from your tyres – please follow these suggestions



5- You will drive your car again with me as passenger at the tuition area with the new setup. We will discuss how you felt



6- You will then go back to the test for as many runs as you can fit. Compare your morning test run times (baseline) against your afternoon ones (new setup). As the test is then open to all and you can have as many runs as possible, I suggest you tweak the tyre pressures if you feel necessary or to gain experience on how it affects your car/your driving style

I'll be around to answer any questions and if you want to go around the test as a passenger or driver in my Peugeot 106

7- Feedback

This tuition day is a pilot for possible future ones. Please provide us with your honest feedback (good and bad) about how it went so we can improve running them.

Feel free to tell us on the day in person or send an email to vinicruzuk@hotmail.com.

You can also send an email to SCCON percy@sccon.co.uk if you prefer your feedback to remain anonymous to me.

*Big thank you to the **SCCON**
team and **Jamie Hopper** for
making this tuition day
possible!*