

Advanced Circuit Driving Techniques Article 3: "How I learned how to cut 4 seconds a lap in one day"

Racelogic's MD Julian Thomas on his rise from novice to competitive racer in 24 hours

This is the third in our series of articles discussing circuit driving techniques. If you have read the first two articles on compound cornering and hairpins, you might be asking yourself: exactly how effective is **VIDEO VBOX** and **CIRCUIT TOOLS** in driver training in a real life situation? Given a **VIDEO VBOX**, some track time and an expert driver to use as a comparison, just how close to the pace could a novice really get?

To answer this, we have put ourselves through this process...

The MD of Racelogic, Julian Thomas, has always been a keen trackday driver, but never had a proper attempt at racing. This year he partnered with Nigel Greensall, a very talented and active driver who has raced and won in everything from Legends to Formula One cars.

Julian Thomas – 'I took my ARDS test and the instructor said I would easily pass the test, but to my shock, he said I was driving too slowly to be competitive! This really made me think about my own driving, the car appeared to be on the limit and sliding

into and out of the corner, where was I going wrong? I began to realise the difficulty of the task that lay ahead...

On Nigel's recommendation, I booked a day in a FunCup car at Oulton Park, and he came along to provide a comparison. The day was alternating wet and dry, so we got a lot of varied conditions which made it difficult to compare laps directly between sessions. However, it became clear that I just needed to work on my slow, medium and fast corners!



Julian Thomas with Nigel Greensall and David Power, using in-car **VIDEO VBOX** to analyse their race data

During the day I got to learn the car, and began to think more and more about line and technique as the day progressed.

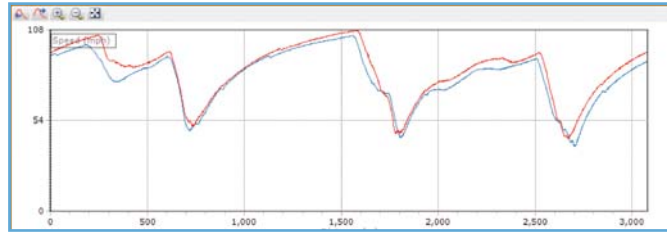
The next outing in the FunCup was a four hour endurance race at Snetterton. I would be up against other novice drivers, but also professional drivers and experienced teams who had spent the winter testing and sorting out their cars.



Our FunCup Car

We rented a petrol FunCup car from JPR who run the series, and Nigel said he put this car on Pole at Brands the Year before, beating the faster diesels, so there would be no excuses on that front! I shared the drive with Nigel and a long time friend of mine, David Power (from Powerflex). Both of us were Novices and hadn't driven Snetterton before.

We had booked two 40 minute slots on the Friday before the race for practice. I went out first to get used to the circuit and managed a 1'30.27", followed by Nigel who sent a benchmark of 1'27.98". Being only 2.29s off the pace seemed great until we looked through the data and saw that Nigel was held up in two corners and lost around 1s! Therefore I was at least 3.3s off at the start, which would put me quite close to the back of the grid come raceday. The ARDS instructor was right!



The 'before' comparison, Nigel's data in red, using **CIRCUIT TOOLS**, free with **VIDEO VBOX**

I then spent some time studying the data, and talking to Nigel, and we worked out the two main corners I was losing time, which were the two slowest corners. Nigel was taking a different line to me, and getting on the power much earlier which meant he was carrying this extra speed down the next section of track.

I then went out for the next section and eventually worked down to a 1'28.33", shaving a massive 1.94" off my time, just with one analysis session! This was now putting me into the competitive midfield area, a great improvement, but room for more.

In addition to the 2 sessions on Friday, we also had a 1 hour 'qualifying' session on Saturday, but since the grid was to be drawn out of a hat, we used this as a last minute training session. I had spent some time the night before going through the data, comparing my fastest laps with Nigel's, and I was pretty confident



Typical close racing in the FunCup series!

I knew of a number of areas where I could find some more speed.

I went out first in qualifying and worked down to a 1'27.46", so I had found 0.87s overnight, and it would be enough to put me 4th in class out of 19! Nigel then went out and set what would be the fastest time in our class of 1'25.92", so I was now only 1.53s off his pace.

I was really relishing the race, as this would give me plenty of time in the car to find some extra speed.

It was honestly a pleasure using **CIRCUIT TOOLS** in anger, every time I compared my latest lap with Nigel's, I could quickly see areas to work on.

I made good use of the delta-T channel to see where the lap-time was ebbing away around the lap, and the video to watch his lines, apex points and driving style.

We also discussed and then watched his slipstreaming technique, as he stayed a lot closer to the car as he overtook to maximise the slipstream when alongside another car.

One point which leapt out to me was how far ahead he was looking in comparison to me, see the screenshot below for an example of the Esses where you can clearly see Nigel looking a lot further around the corner than me.



Side by side **VIDEO VBOX** screenshot in **CIRCUIT TOOLS**: You can clearly see that Nigel is looking a lot further round the next corner than me

We were drawn 29th out of 32nd on the grid, which would certainly make the race exciting! We decided on Nigel going first and using his experience to claw back some of the lost places. After Nigel's 40 minute stint he had worked his way back up to first in class, it was a real privilege to watch such a display of race craft and natural speed at work. He had also managed to shave a little bit off his fastest time to set the fastest lap of the race (in our class) of 1'25.75".

It was my turn next, and I was dropped right in at the deep end; we were leading our class, and fighting in amongst a big bunch of competitive teams! It took me a little while to acclimatise to being in the middle of a pack of competing cars, whilst maintaining quick lap-times.

The FunCup series is run really well, and as part of their forward thinking approach to racing, we all had a one way earpiece to the Race Director who gave out information about incidents, Safety Cars and penalties as we were driving. The first time his voice crackled into my ear, I promptly drove off the track as I tried to compute what he was saying, whilst driving on the limit! However, I soon worked out a system, where I wouldn't overly concentrate on what he saying, but play it back in my head when I reached a straight piece of track. After my first stint I had managed to equal my qualifying time, but I knew there was more in the car if I could just squeeze it out.



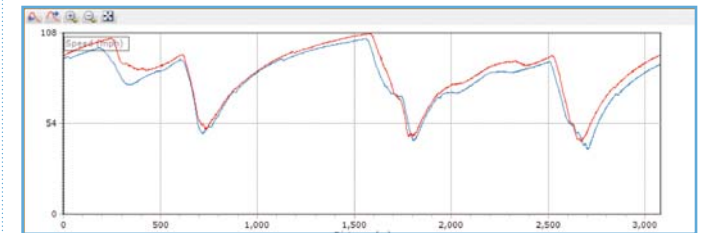
Learning the art of slipstreaming - footage using **VIDEO VBOX LITE**

I then spent the downtime before my next 40 minute stint comparing my race laps with Nigel's new fastest lap, and quickly worked out where the crucial time was being lost.

It was small differences all round the lap which added up to 1.71s, a combination of using more kerb at one corner, braking a bit earlier at the next, settling the car on the throttle on the entry and being more aggressive with the steering on the slower corners.

We had lead the class now for 2 hours when my second stint came round, but unfortunately a problem with the carburettor gasket dropped us to last place due to a 20 minute pitstop.

Nigel then told me to treat the last stint as a qualifying session, and he was putting the times of the class leaders on the pitboard with mine underneath with strict instructions to match or better their times which were in the 1'26" bracket. I also had the **VBOX OLED DISPLAY** showing me real time lap-times in the car, so I was all set for the challenge.



The 'after' comparison, using **CIRCUIT TOOLS** Analysis Software.



Comparing laps in **CIRCUIT TOOLS**

Armed with the new analysis data rattling round in my head, I headed out of the pits and put my head down.

Within 4 laps I had beaten my best time, and within 10 laps I had worked down to a 1'26.26", which turned out to be faster than set by any other team during the race by 0.3s!

Incidentally, my team mate, David Power had shaved 2.74s off his initial times, and was also putting in competitive laps which had kept us in the lead of our class, and he had never driven Snetterton or a FunCup before!



My fastest lap

In conclusion, if we hadn't had the gasket failure (always the 'if only's' in racing!) we would have won our class by some margin, which is quite an achievement for 2 novices.

The combination of Nigel's coaching and the Video VBOX had brought us up to a competitive speed really quickly, and made the whole experience very special. It almost felt like we were cheating, and by-passing many hours of testing and practice, but in reality we were approaching the race using all of the modern tools at our disposal!



Nigel's fastest lap

Will we be racing again? Oh yes, our next outing will be the Spa 25 hours in the same car, so even more time to analyse the data and try to set some competitive times!'

For more info, go to www.video vbox.co.uk