

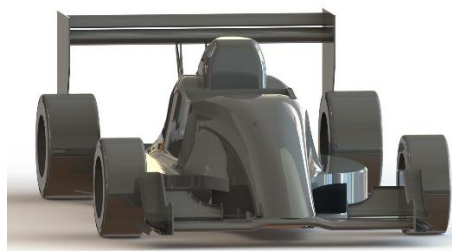
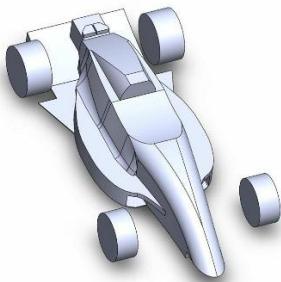
moleracing 2016 first report of the season

Winter Developments

For a change, I was doing nothing to the engine or the gearbox in the off season, and so decided to centre all improvements on going a tad quicker in the bends. Also for safety reasons, I decided to replace every nut and bolt on the car and all the rod end joints in the suspension. A new clutch slave cylinder was put in as it always makes dodgy noises! As I'd stripped the car so far, I took the opportunity to weld the chassis up and also extract all the rivet heads that get left in the tubes when you put a floor on. Amazingly I pulled out nearly half a kilogram of them



I have been assisted this winter by Naser Teymourain who is studying Motorsport at Oxford Brookes University. After several measuring sessions in Nottingham, the car has been painstakingly modelled in Solidworks and the wings, the floor and the half car have had the mighty resources of the university CFD modelling computers dedicated to it, as well as Naser and lecturers input to improving the downforce and reducing the drag



The main addition is a maximum allowable width carbon fibre floor, bonded onto the chassis, a new front wing that has been optimised for maximum downforce utilising ground effect, and at the same time, last year's suspension changes courtesy of Mike Musson, now work in conjunction with the new aero package. Copying some F1 BMW Sauber parts and at the rear of the car we have a new lower wing, to aid the floor by pulling the air from the venturi tunnels and will be tidying the main wing support structure for less drag. All the carbon fibre work has been supplied by John Hansell and his team at Fibre-Lyte – see www.carbon-fibre.com. The internals of both sidepods have been tidied up, the radiator made to work better, superfluous cooling holes in the bodywork has gone and all in all, it's a safe tidy machine again!

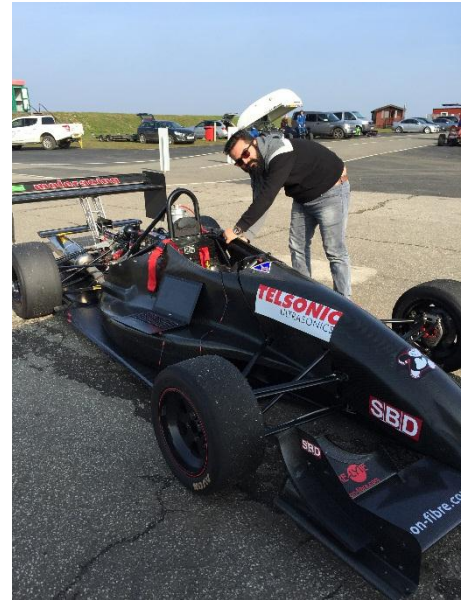
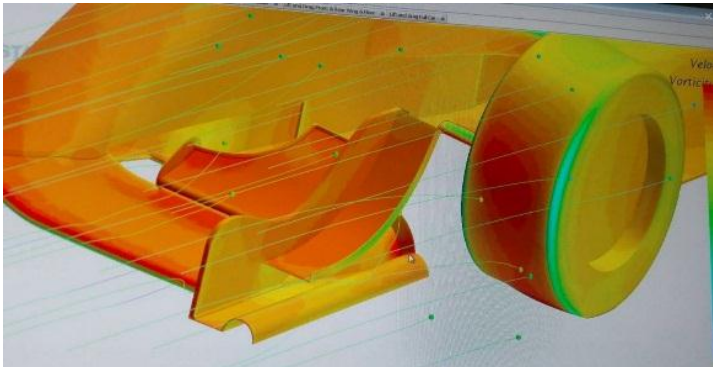


Well what does this all do on the track.....

Castle Combe

A shakedown at Blyton park blew the cobwebs away and discovered a few loose or missing nuts! New software was received from SBD that the SBD works car had tested the previous week at Goodwood. I had a few problems, with a wiring issue on an Anderson connector I had made, which due to mixing positive and negative up, spectacularly blew up a lead acid race battery short circuiting it and 550A letting go! Doing this once was excusable, but then to plug the lithium Ion super lightweight battery in and do the same again was just stupid and expensive!

So on to the season opener at Combe. We had some major panics with a potential failure of a rear suspension bolt, which led to fabricating an emergency top plate. But, bottom line, the car felt fantastic and was 6.3 seconds faster than last year, and clocked 144mph and I finished 4th in the top 12 run off behind Terry Holmes in the Judd Lola V8 and Steve



Broughton and Matt in the shared SBD Dallara, who also had had an extensive winter development program improving engine and aero and significant testing.



Photo by Scott Boulton at Combe

Rockingham

After a full pack away, a drive to Corby (for a night in a hotel not the trailer for a change), then a full unpack the following morning we were now ready to try the new well behaved and well handling machine out again. Conditions were the same as a year ago, so another good test on this much shorter circuit.

There were around 100 cars, and I was pleased to lead each session and eventually come out on the top spot by a second or so. It wasn't a British round, but there were 20 or so racing cars and I was pushed hard, setting a new 2 litre record, and ended up 8 tenths shy of the outright circuit record.

During the day the handling was tweaked with antiroll bar settings and progressively lowering the front wing height, but each run the car just inspired confidence to push harder. There was a major failure of one new appendage! Due to utilising a mounting in a way it had never been designed for and so it broke off, but no damage done.



What was impressive was the 1.5 second improvement on last year, but more so the huge lateral grip levels that were being generated, around 2.5G at 80mph. This was a result of the significant downforce being achieved with the stage 1 modifications that were on the car. In the final corner I thought I had seriously got carried away and was about to crash, due to carrying too much speed into the long lefthand bend. I was at the point of deciding what area of barrier I was going to hit and cursing myself for the amount of work I have to do after I'd crashed, and yet the car just sat there, glued to ground and carried round the corner allowing me to eventually apply more throttle!

The onboard video showing this run is shown by clicking [here](#). I hope you like the fun new starting animation we've had created for this season by Charlie Martin (gocharliehillclimb.com).

Croft

The British Championship circus rolled into town – well the garages at Croft Racing circuit actually in the driving rain of Easter Sunday for the following day. After offloading and completing a number of jobs including putting wet tyres on, the trailer was made comfortable for the night – two down duvets did the job as it was 3.8 degrees inside!

Rain lashed down most of the night and early morning. Not that I'm complaining as I love driving hard in the wet. Perhaps due to its Formula Ford origins, my car always goes well in the wet. We had 4 cars in the over 2 litre 'big

class' and around 10 2 litre cars, plus some mighty sports libre cars.

I was surprised to be over 7 seconds ahead of the field after the exceedingly damp first run, the car felt grippy and controlled. For the second practice, Naser had arrived and continued to assist and helped tune the car during the day. This also involved flo-viz testing with paint applied to various surfaces and then analysing the flow patterns to determine if the mods were working, the air flow was laminar or detached and also seeing where it was going. There were many good areas but excitingly, room for improvement and some additions.



For 2nd practice, still on wets, I managed to hold top spot by some 3 seconds, so the pack was catching. For timed run 1, it was damp but I switched to slicks. Despite giving away some 300 bhp to the big boys, I still was fastest overall, but now by around 1 second only. The new traction control system upgrade from SBD was working beautifully, I wished it would stop drying out and rain a bit more!! – but it didn't!

So, with the car taped up, holes smoothed out, pressures lowered, rear roll bars tweaked and full off confidence I set off on the final timed run before the top 12 run off.

Power overcame grip, and I dropped to 4th overall at this point by a 1.2secs, 2nd in class. But we were in the run off and had the chance for decent points, and we had decent tyres to put on! The top 12 run off is the best of 2 runs, and unfortunately I was a bit too cautious on my first run and slipped to 6th behind Steve Broughton and Matt in the SBD Dallara. However, pleased to say that I got some confidence beans from somewhere on the last run of the day, a blinding start of 1.88 seconds to 64ft (this is more than 1G forward acceleration), getting the throttle down earlier than before in the bends, braking later, carrying speed and it almost felt like the faster I drove the more grip the car had! Boy was it scary, but stopping the clocks some 3 seconds faster than the first run I moved up to 3rd overall and top 2 litre car, behind 2 V8's. John Graham took the round win, with Terry Holmes second.



6 weeks off now until the Snetterton rounds mid May and phase 2 upgrades to put on the car and keep the development going.....

Steve

2 Litre Class 2016 after 2 rounds

Steve Broughton,	SBD Dallara F3 RBo1	96
Steve Miles,	Van Diemen RF96mm16	92
Matt Hillam,	SBD Dallara F3 RBo1	91
Martin Webb,	Dallara F399	81
Tony Jarvis,	Dallara F399	80
Nick Algar,	DJ	49
Dave Cutliff	Van Diemen	46
Mark Smith,	SBD Reynard	
Craig Sampson,	SBD Reynard FVL	

British Sprint Championship 2016 after 2 rounds

Terry Holmes	3.5 Lola Tegra Judd	23
Steve Broughton	2.0 SBD Dallara F3 RBo1	19
Steve Miles	2.0 Van Diemen RF96mm15	19
Matt Hillam	2.0 SBD Dallara F3 RBo1	17
Matt Carter	1.3 radical PR6	14
John Graham	2.8 Gould	12
Simon Bainbridge	4.2 SBR Chrono V8	10
Graham Porrett	3.5 Lola Tegra Judd	10
Martin Webb	2.0 Dallara 399/00	10
Nick Algar,	2.0 DJ Firehawk	9
Tony Jarvis	2.0 Dallara 399/00	6
Mark Demster	2.0 Imagination	3
Grahame Harden	1.0 Jedi	3
Carole Torkington	1.6 SBD OMS	2

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