

# Le Mans-style racers for the cost of a tin-top

The 750 Motor Club's RGB championship has come a long way in a short time. Le Mans podium finisher Anthony Reid tested a range of cars to see just how far

KEVIN TURNER

ALL PHOTOGRAPHY JEP/SAYLE

An affordable sports-prototype, multi-make series with frontrunners who can lap at current British Touring Car Championship speeds sounds like a good idea. And that's what the 750 Motor Club's RGB championship – enamed RGB Sports 1000 for 2018 – now provides.

Begun as a series in 2001, the category for motorcycle-powered machines has developed a long way. Originally populated by Caterham-style front-engined cars, often run by one-man bands, now the series has specially built mid-engined racers run by small constructors. Privateers still compete, but the increasing professionalism of works teams from Spire and Mittell has made RGB a difficult club championship to win.

The racing at the front is tough and the variety of the field high, with a lack of downforce meaning that overtaking is also possible, so it seemed like a good idea to try some of the cars for an Autosport track test. Step forward, former BTCC star and 1990 Le Mans 24 Hours podium finisher Anthony Reid, who tried them at Donington Park. >>

Reid stepped in to test five RGB racers



## RULES AT A GLANCE

- Front, mid and rear-engined layouts are permitted
- Standard four-stroke motorcycle engines with standard ECUs
- 'Mechanical grip' formula, so aerodynamic development is strictly controlled

### Procomp Phoenix

After introducing himself to all the owners and drivers, and taken a look at the cars, Reid climbs aboard Oliver Hewitt's Procomp Phoenix for his first run. Although a number of (standard) motorbike engines are permitted in RGB, all the cars here are powered by a 1000cc Honda unit producing around 170-180bhp. Unlike the other four test cars, the Phoenix has the engine in front of the driver (and slightly to the left). "This one looks very different to the others," says Reid.

The Phoenix is the oldest car here, having been built by category ace Tim Gray 15 years ago as an STM Phoenix, but it has scored multiple championship successes. As well as numerous class titles, it won the overall RGB crown in 2005 (Gray) and '10 (Alastair Boulton). It has subsequently been developed further by Matt Gilmour at Procomp.

The front-engined cars have traditionally had their own class, but that has changed for 2018. RGB has moved to a single-class structure, with the front-engined machines allowed to run at 550kg, as opposed to the 580kg (up from 560kg) of the mid-engined racers.

"We're trying to get people like me into the series – a regular guy with a normal job," says professional photographer Hewitt, who only started racing four years ago.

"We need to be lighter because, although all the engines are the same, I lose more through transmission losses."

Hewitt started racing at the age of 30, and has only competed in RGB because it is "cheap and fast". He bought the Phoenix for £8500 and estimates £7000 for the seven-meeting, 14-race 2018 season.

RGB's control tyre is the street-legal Yokohama A048R, a set of which can last a whole season. Not being a slick, it also operates in a wide range of temperatures, just as well given the biting cold conditions at Donington as Reid heads out.

Hewitt has never seen his car on track before in the hands of someone else, but Reid is soon back in. The experienced racer has noted that the right-front wheel is locking – something Hewitt had also found on his preliminary run – and the brake bias is moved to the rear.

After another run, Reid is enthusiastic. "I can see why it's been so successful," he says. "It's benign and gives you confidence to push."

"With the engine offset to the left, when you brake you can feel the weight transfer to the left-front. It's quite lazy and it has mid-corner to exit understeer, but it's got good mechanical grip. And I love the engine. The last three laps I was stretching its legs."

That probably helps explain why Reid picks up a warning for breaking the 98dB noise limit, something Hewitt falls foul of again later in the day.

#### FAST FACT

Caterham driver Doug Newman was the winner of the first Fisher Sportscars Roadgoing Bike-engined car race, held at Snetterton on April 8, 2001.



Reid found Procomp Phoenix benign with good mechanical grip

Fast Sabre is quick to change direction – "almost too pointy"



### AB Sabre t2a

Tim Hoverd's Sabre is next and has the engine in the more conventional position. The car, built in 2014, was designed by Andy Bates and Steve Wills at AB Performance, but Hoverd has done a lot of work himself, including suspension development and the carbon bodywork, which he did using resin infusion. Quite a few other design details (such as the pedal box) were done by Lee Baverstock from Garagisti.

"It's been through quite a few changes," says Hoverd. "The bodywork was designed by me, my son Tom and friend Adrian Moore [another RGBer]. Tom has a fancy qualification in aeronautical engineering, which at least means he's not a total aerodynamics amateur like me."

Uniquely in our quintet, the Sabre has paddleshift instead of a sequential gearchange. "It's a personal-preference thing," explains Hoverd. "I don't like taking my hands off the wheel. The gearing on the bike gearboxes is pretty close and if you're not careful you end up driving with one hand on the wheel

and the other on the shift lever. We're not allowed flat-shifters so all gearchanging is completely mechanical."

Hoverd budgets £12,000 per season, including testing (of which £1500 is for an engine rebuild), and finished fourth in the rear-engined class and fifth overall last year.

"The speed for the money is incredibly good," says Hoverd of the appeal of RGB. "The sound is fantastic – an RGB start is quite something. And the fact that we don't allow wings means the cars look quite retro."

Reid, who raced the MG-Lola EX257 Le Mans prototype, can see the Sabre's similarity to top-end sportscars. "Dynamically, it's more of a sports-racer than the Phoenix and it will be faster," reckons Reid. "It has very fast change of direction – almost a little too direct and pointy – but it also has mid-corner-to-exit understeer. The rear sits down, the front picks up and you get understeer, but it brakes well and fundamentally it is very good."

### BDN S3

Another privateer is Colin Chapman, who is on the RGB committee, and has provided his BDN S3 for Reid to try.

The BDN is a product of the Baldwin family – Bentley engineer Ian designed it, father Brian was the constructor/fabricator and Rob was the original driver. Chapman's car (which he sold before the start of this season) was built from a kit in 2011. The rear bodywork was originally designed to take a rear wing – not allowed in RGB – so Chapman has had to modify the tail to prevent lift.

Chapman was a motocross competitor who switched to Caterhams and then RGB with a Fisher Fury. Over his 14 seasons, he believes his budget has typically been between £5000-£10,000 per year, with his more recent full campaigns costing £7200 including testing, or £6000 without.

"We can fix pretty much everything on them ourselves," says

Chapman. "I get help on specialist stuff – my engines are done by Andy Bates at AB Performance and the support I get from Brian Baldwin is great."

"For performance per pound, I can't think of anything that can match RGB."

Reid finds the layout of the cockpit the most challenging thing about the BDN. "It's the least ergonomically friendly – you're sitting on the car rather than in it. You have to look really high up for the mirror [on the rollcage] and really low down for the dash," he says. "You don't spend a lot of time looking down the road!

"It doesn't have a lot of grip – not as much as the Sabre – but it's a well-sorted car. It's got a good balance, is predictable and the brakes are good. It's like a rear-wheel-drive touring car on old tyres. You feel safe and it's a well-built car."

Reid thought BDN lacks grip but is "well-built" and "well-sorted"





**BTCC PACE**  
 The RGB lap record at Donington Park is 1m11.33s. The fastest race lap at last year's BTCC round was 1m10.19s.

Current title-holder Spire GT-3's braking impressed Reid in test

### Mittell MC-52b v Spire GT-3

Spire has been the RGB constructor to beat for much of this decade, with Mittell becoming its chief rival. Scott Mittell ended a run of Spire title success in 2015, with Spire men John Cutmore and reigning champion Billy Albone striking back subsequently. It seems sensible for Reid to test these cars together.

Dan Lerner's Mittell is first up. It's the car that took the 2015 crown and Lerner bought it the following year. He had to sit out last season, but is planning to contest most '18 rounds. Like many of the other competitors, Lerner estimates a budget of £5000-£7000 depending on testing and has made RGB his racing 'home'.

Now an engineer at Jaguar Land Rover, Lerner used to be an instructor at PalmerSport, which enabled him to drive and instruct in a variety of cars. The Palmer JP-LM sports-prototype was his

favourite, so his research led him to RGB when he decided to go racing: "I knew what style of cars I liked and financially RGB is no more expensive than other 750MC championships."

Reid has a quick run and is immediately impressed, despite a sticking gear lever and slipping clutch on the car's first outing of the year. "The Mittell has a low-slung driving position, which I like – it makes you feel more part of the car," says Reid.

"It's got a very fine balance. The front is very accurate and you've got oversteer through the whole corner, but only a little bit." He immediately jumps out and into the Spire.

Paul Nightingale's Spire Sportscars initially had success with Cutmore and its GTR model, but then Paul Rogers arrived with his Contour and started winning, forcing Spire to respond.

"The GTR was quite a bulky car, so we set out to make

something smaller and lighter," says Nightingale. "By the time we'd finished only the steering rack was the same."

The GT-3 was designed using CAD, backed up by windtunnel work at MIRA. Spire has now produced over 20 examples, which have won more than 100 races outright, and one has even made it as far as Japan. A bewinged Bikesports version has also been developed.

The new basic kit for the RGB-spec GT-3 is £7990 plus VAT, with a complete kit for customers to build costing around £26,000 plus VAT. For £32,000, you get a race-ready machine, including three sets of wheels and tyres. Along with Mittell's MC-53, it is at the cutting edge of RGB designs.

Spire's willingness and ability to push the boundaries has caused some tension with the rulemakers, providing a parallel with the higher echelons of the sport. "I like to interpret the regulations to try to give us an edge although it doesn't always work," says Nightingale. "They try to keep it very close and very tight."

It's something Chapman also acknowledges. "It is a development championship, but you also want to make sure money doesn't drive it," he says. "Every year Spire and Mittell bring new stuff out. Sometimes these changes comply with the letter of the regs but not the spirit, so if necessary we update the regs to ban a specific change. We have to keep writing out loopholes to maintain the performance-per-pound of the formula."

"We try to keep the fundamentals of cheap engines and no added aero, to keep it close to a mechanical-grip series."

The GT-3 at Donington still weighs 560kg, not the 580kg limit of 2018. An updated version is in the pipeline for Albone's title defence. "It feels a great car just sitting in it," says Reid, who does have some difficulty with the headrest. He's soon up to speed and finds the GT-3 and Mittell difficult to separate.

"The performance levels of the Mittell and the Spire are very similar," he says. "The Spire has great brakes, though it's got a less-accurate turn-in – it's not linear like the Mittell. If you drive the Spire with commitment it has breakaway oversteer, which may be down to damper settings."

"I prefer the Mittell, but both are great cars, great fun to drive, with strong power-to-weight ratios."

"There's not much downforce and they're on treaded tyres. You can get out of shape in these cars and get them back. They talk to you." ❄



Mittell MC-52b has fine balance with accurate, linear turn-in

## REID'S RACE REQUEST

RGB's field has fluctuated between the teens and early 20s in recent times, and Reid is keen to join the fray after his day at Donington, with an outing in the Spire a possibility.

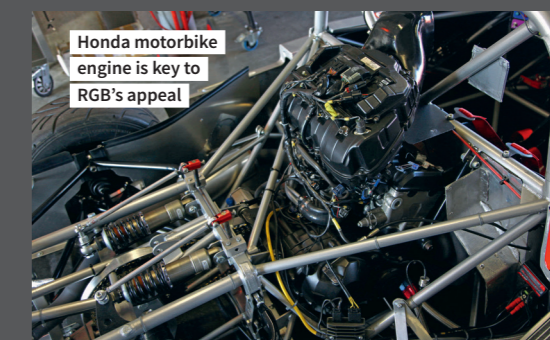
"The range of cars means there can be quite a big gap between them, but I think it's a great concept," reckons Reid. "It allows family-built cars like the Sabre to run with the semi-professionals. With a bit of development, it has the potential of the Spire and the Mittell, which is

quite an achievement for a home-built car.

"RGB is cheaper than many series and allows amateur drivers to compete in a sports-racing championship. It's also multi-make, so it's more of a challenge for the people building the cars."

"The bike engines give it a racy feel – they're high-revving, high-performance and light, so it makes the cars nimble. But I'll be able to tell you even more if I can get out in a race..."

**"THE CARS ARE HIGH-REVVING, HIGH-PERFORMANCE AND LIGHT"**



Honda motorbike engine is key to RGB's appeal

### RGB CHAMPIONS

YEAR	CHAMPION (CAR)
2003	Andy Charley (Sylva Striker)
2004	Tim Harmer (Genesis Evo)
2005	Tim Gray (STM Phoenix)
2006	Jonathan Wright (Radical SR4, minus wings)
2007	Derek Jones (Fisher Fury)
2008	Derek Jones (BDN S2)
2009	Tim Gray (AB Performance Striker)
2010	Alastair Boulton (STM Phoenix)
2011	Paul Rogers (Contour)
2012	Tim Gray (Spire GT-3)
2013	Matt Higginson (Spire GT-3)
2014	Matt Higginson (Spire GT-3)
2015	Scott Mittell (Mittell MC-52b)
2016	Matt Higginson (AB Arion S2)
2017	Billy Albone (Spire GT-3S)