

SEXUAL WHEELING

Words: Jamie 'Jay' Wilkins Pics: Fresh Orange

Will carbon wheels really make your bike steer faster? Can they do even more than that? Or are they simply the ultimate in bike bling? We find out the proper way

There are more myths than truths about lightweight wheels. Worse still, the bling brigade have almost reduced them to aesthetic-upgrade status. Trick wheels have had some bad press too, not least when Robert Dunlop suffered a near-fatal 130mph crash after his rear Marvic magnesium wheel disintegrated at the Isle of Man TT in 1994.

At Fast Bikes though, we've long been firm fans of light wheels, and completely convinced of their benefits. However, we've not yet conducted a full track test to fully explore the effects, good and bad, that they can have. In the BSTs, we had the perfect lab rat.

BSTs were first imported to the UK by HPS in 2002, though cynicism and the cost meant they've been slow burners.

Moby tried some on his

Fireblade last year and was hugely impressed, so we've been keen to test them on track since. The BSTs are

the lightest wheels with full approval for road use that you can buy, capable of saving 40-60% compared to stock hoops, and having passed the Germans' strict TÜV tests you have peace of mind too.

To make sure the test was as complete and fair as possible, we roped in some big guns for back-up. Team Vivaldi Kawasaki's Ben Wilson rode both sets of wheels to offer a second opinion, and his team mechanic Carl looked after the bike through the day. Michelin provided two sets of the outstanding Power Race tyres, so each set of wheels could be tested with fresh, equal tyres. Suspension advice came in the peerless form of Öhlins UK Racing Manager Richard Brendish, top Öhlins consultant to the BSB grid, along with his giant race truck. We recorded data on our V-Box, and took lap times using the ZX-10R's own timer.

With so much top quality support in place, it was crucial to test at a track that offered a complete range of corners. Donington's GP circuit boasts everything



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ZX-10R Tech Spec

Our ZX-10R longtermer is a bit trick, and an ideal test bike for the BST wheels. The two most crucial elements were the tyres and shock. Michelin Power Race tyres grip like shit to a sheep, thanks to dual compound tech direct from MotoGP that uses softer rubber at the edges for ultimate grip, and harder rubber in the centre for better wear.

The Elka race shock massively improved the bike on both the road and track over the stock unit. As well as being accurately sprung for my weight, it has a wider range of rebound damping and twin-speed compression damping. This means that the set-up is no longer a compromise between road holding and handling. You really can have the best of both. See the longtermers section for the full spec.

BST Tech Spec

The Blackstone Tek wheels are made with pre-preg (the best) carbon-fibre. It's harder to work with, but the toughened epoxy resin application system ensures a totally even application of the woven, unidirectional material. This is why they look so neat close up. The really trick bit is that they're engineered as a single monocoque that includes the rim, and the five hollow spokes. No parts are bonded together. This reduces weight and increases strength. The glory of carbon is that you can position the strength where you want it, so the rim and spokes are as light as possible without compromising strength. Rim weight is key to inertia, so BST went to great effort to make theirs significantly lighter than any rival's.

As testimony to their durability, the BSTs have passed all the toughest tests for road certification, including the ultra-stringent German TuV that's used as a benchmark worldwide. For more info look on www.blackstonetek.com, or www.bikehps.com

from hairpins to 130mph sweepers, with the vital inclusion of severe direction changes at both low and high speed. A small, sweeping track like Brands Indy would have offered fewer dimensions in which to test the effects of the wheels. Donington is also a track that I know intimately, so I'd be able to go flat out from the start on the road wheels. Our good friends at Hottrax kindly sorted us out with a space on one of their slick-running trackdays, so we were ready to rock.

The first session in the morning, on stock wheels, involves little more than scrubbing-in the tyres and establishing gears and brake points, made simpler thanks to Vivaldi's tyre warmers. The bike feels odd though, strangely flat for something with 173bhp, though I put it down to the fast circuit.

"...IT FEELS FLAT, on stock rims. Odd WITH 173BHP.."

The next session is spent flat-out to establish the benchmark by which the BST wheels will be judged, and the feeling returns. I'd spent the previous week riding the bike on the carbon wheels as part of last issue's ultra-trick litre bike test, but I hadn't expected to feel the bike regress as much when the standard wheels were refitted for the circuit. This is the first hint at the performance potential of the BST wheels.

The ZX-10R is working really well on track, as you'd expect it to. The



set-up and upgrades are all working well. It doesn't steer as fast as I'd hoped though, and getting it turned down the epic Craner Curves requires loads of bar and peg pressure. The slipper clutch is struggling under maximum braking too, though the forks are sound and the Ten loves an apex. The Ten's own lap timer records two successive laps only 0.01s apart, so it looks like me and the ZX are going as fast as we're going to.

The final morning session is a chance for Ben Wilson to get out on the bike. Only two days earlier he'd been racing his Vivaldi ZX-10R to two more strong points finishes in the British Superbike series, so it was vital for him to get acquainted with a road bike in order to make useful observations on the carbon wheels in the afternoon.

He's in the groove quickly though. Racers tend to be very fussy about their bikes when looking for the final half second saving they need to win, but most can jump on anything and go fast right away as Ben demonstrates. While he's on my bike, I take Vivaldi's replica ZX-10R for a spin.

The end of the session is signalled by a sight to turn my stomach. Not a big crash, thankfully, but something far worse – rain. We'd driven up to Donny in a downpour, but thought we'd escaped it. Having rescheduled the test three times owing to bad weather, the possibility that we might get soaked before trying the BST wheels is soul destroying.

Back at the team's massive truck, Ben tells me what he thinks of the bike: "It's good, and fast for a road bike. The

front feels odd to me, as that's not how I like my forks set, though I could see earlier that you trusted it more. I could go faster, but there's quite a bite of traffic out there and not everyone is predictable. I'm not really up for hacking through like you were in case I slip into race mode, I don't want to piss anyone off."

"...THE ZX-10R FEELS LIKE A TOTALLY DIFFERENT BIKE, its responsiveness has gone through the roof..."

During lunch Carl gets the wheels swapped over. He's cursing the road bike, – race machines are far easier to work on – and by the time the rear spindle's slotted

home the sun is back out. With a new set of Medium Soft Power Race tyres cooking in the tyre warmers we're ready to go again. Ben's out first, gets the tyres scrubbed with barely two laps, and winds the Kawasaki up. It's like playing wife swap with a porn star. Will I ever be able to satisfy the ZX-10R again?

It looks fast, and I can't wait to hear his thoughts when he gets in:

"I'm really surprised at the difference, to be honest. The flick down Craners is much better, and it drives harder out of the tight turns too. It's more unstable and wheelie prone, but the front end felt much nicer in the corners." Ben's comments fitted in with what I'd found on the road, and he'd gone over a second faster with the carbon wheels in the bike.

Now it was my turn, and I had no idea whether the effect of the wheels would be more or less pronounced on the track than the road, or if I'd be able to feel as much difference as a racer's finely tuned receptors. Howling out of the pits, tyres red hot from the warmers, it didn't take long to get an answer.

The ZX-10R feels like a totally different bike. It seems that 50kg of ballast has fallen off the Kawasaki in the pits, and that all inertia is gone. Its responsiveness has gone through the roof, leaping forwards at the slightest invite from the throttle and changing direction unbelievably fast. Remember that with over 170bhp at the wheel, and weight already saved from the claimed 170kg dry mass, this was not an unresponsive bike in the first place.



Other Cool Wheels:

Although they're the lightest, BST aren't the only funky wheels on sale. This ain't a charity feature, so here are some others to drool over. Remember to compare weights when buying, as there's a direct link to performance gains.

n.b. all weights include sprocket and cush drive, no tyres, no discs

Marchesini, from Crescent Performance, 01202 820170, crescent-suzuki.com

PVM, from Harris Performance, 01992 532500, harris-performance.com
Special offer on 20 spoke alloys, £poa

BST & Dymag, from HPS, 0870 774 7740, bikehps.com

	Front	Rear	Price
BST carbon	2.4	4.6	£1950
Dymag carbon	2.6	5.0	£2150
Dymag alloy	3.9	6.6	£1000
PVM 20 spoke	3.3	5.3	£poa
PVM 10 spoke	3.3	5.3	£1231
PVM 5 spoke	3.3	5.2	£1130
Marchesini alloy	4.2	6.8	£1335
Standard GSX-R K5	4.8	7.7	£813

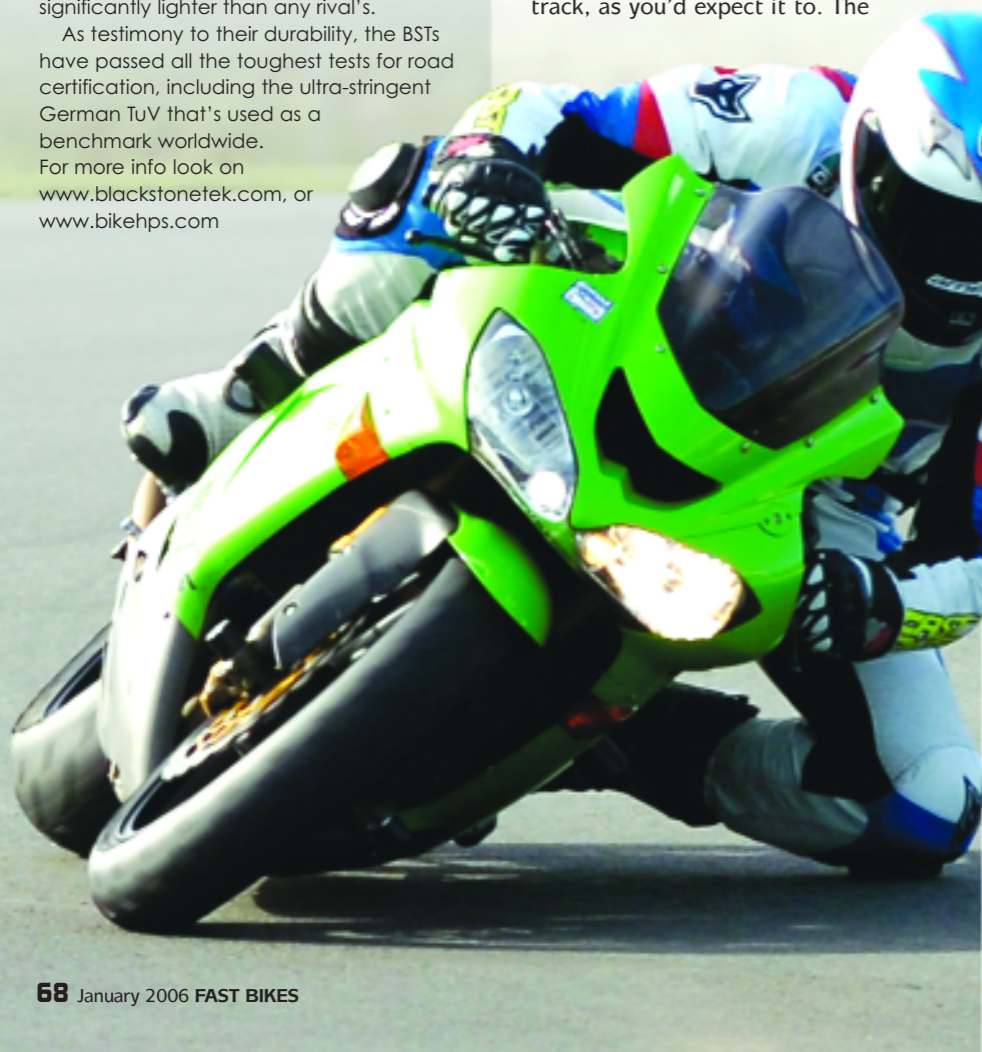
Thanks To:

Hottrax(co.uk) - 08707 669861

HPS - bikehps.com, 0870 774 7740

Team Vivaldi - Richard, Ben and Carl. Look on VPR0M0.co.uk for the latest team news

Michelin for the excellent Power Racer tyres. Michelin.com, 01782 401853



Vivaldi Bomb Disposal Team in action



A stupid vegetable, and Mr Vivaldi

Around a full lap of the Donington GP circuit there's snappier drive and more power wheelies out of the last corner, Goddard's. It's a similar boost to when the Sato system added 12bhp. There's more speed on the front straight, but the brake point stays the same because the bike's stopping better. The first corner, Redgate, is entered fractionally faster. There's little difference mid-corner, though again the bike drives harder towards Hollywood.

The Craner Curves were one of the main reasons we travelled up to

"...THERE IS NO OTHER MOD THAT CAN SAVE TWO SECONDS a lap instantly, even for the same money..."

Donington. On the side of the tyre, at full lean, the deceived speedo will show over 140mph. The V-Box shows it's actually 115mph, but nonetheless this is the UK's fastest and most challenging direction change on a bike. The BSTs leave you gob-smacked as the bike now snaps from full lean right to full lean left in an instant. Not only is it less effort, it takes less time so you can get back on the gas for the plunge through the left.

Foggy's Esses are another big surprise. You're only doing around 50mph as you change direction, so the spinning wheels have less inertia than at high speed, yet

the bike turns massively quicker. Forget clichéd comparisons to '600 handling', few 125s turn this fast. The Melbourne Loop was another vital factor for our test, giving us a dead stop hairpin to complete the variety of corners. Again braking is improved, with more stability. The exit is uphill and can make some bikes feel sluggish. Not this one though, it sprints out to the kerb by which time it's into its stride and wheeling ferociously.

After a fairly clean lap, the timer surprises me so much that I double-take and nearly miss my brake marker for turn one. It reading exactly two seconds lower than the morning's best time. In just three reasonably clear laps I'd equalled my best time on the stock wheels, and then cut a second on each of two successive laps. Not only is that an incredible leap in performance, it also suggests that there's more to come. You don't arrive at your absolute best in one-second chunks. With an empty track, the BST wheels could be up to three seconds a lap faster. Best of all, the time comes effortlessly.

So there you have it, a definitive answer. Lightweight wheels improve your bike, and the lighter they are the more they improve it. After track tyres, there is no other modification you can make that will instantly cut two seconds from your times, even for £1,900.

Obviously the difference shows more the faster you're going, but when you're on it this bike goes, stops, and handles dramatically better on road and track. The British Superbike racer was as impressed as us, and Richard Brendish from Öhlins cast all the suspension concerns aside (see box), proving the nay-sayers wrong. Of course, you could always just buy some because they look trick.



Suspension Issues:

"If you fit carbon-fibre wheels to a bike, the suspension won't need a single click. The main effect on the way in which the chassis works will be increased tyre life, owing to greater suspension efficiency. When super-light wheels first arrived in the late '80s, the thinking was that they'd ruin suspension, particularly over rapid bumps, but we've since learned that this isn't the case. You can fit these wheels without worrying about your suspension at all." - Richard Brendish, Öhlins UK Racing Manager

Lap times

	Jay	Ben Wilson
Stock wheels	1m44.5s	1m44.4s
BST wheels	1m42.5s	1m43.2s

Vivaldi British Superbike Team

In case you didn't know, Vivaldi by Naturally Best produce potatoes with 'a wonderful texture and mouth-watering buttery taste'. They're highly active in motorsport sponsorship too.

The Vivaldi BSB team is uniquely independent, as team boss Richard Wilson explained to us: "Vivaldi is the sole sponsor, and we pay for everything from the leathers to the oil in the bikes. That means we're free to choose the absolute best of everything." Ben is partnered in the team by Tristan Palmer, and Ollie Bridewell campaigns another ZX-10R in the National Superstock series. All in rookie seasons, they excelled themselves in 2005:

Ben Wilson: 17th overall. Best result 6th
Tristan Palmer: 21st overall. Best result 12th
Ollie Bridewell: 5th overall. Best result 2nd

STOP PRESS - Vivaldi '06 line-up

Ben Wilson	British Superbikes
Ollie Bridewell	British Superbikes
Tommy Bridewell	British Supersport

