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Issue 309 + January 2016

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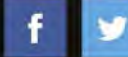
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The upside of never being satisfied is that we're constantly imagining what might be next. We built our own Win Tunnel in 2013 because we believed that for cycling, the science of speed hadn't begun to be understood. We were sure that it would help us create a system of products that make you faster.

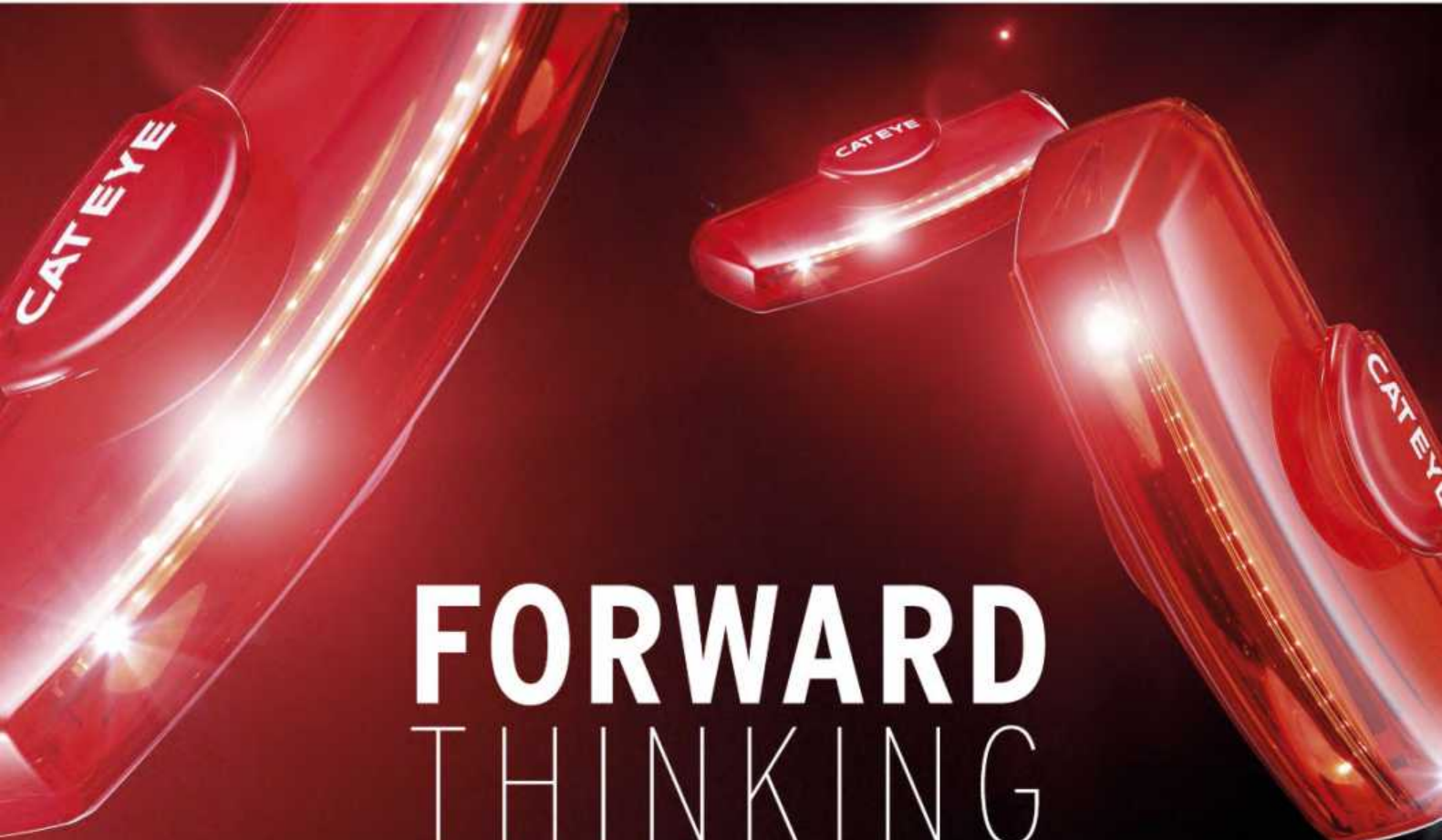
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PRO FOR A DAY

110 Ever wondered what it would be like in the peloton? Have you got what it takes to ride, ride and ride some more? We thought we had what it took until we rocked up to the start line...

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156 The Velominati's Rules are a sacred text for many riders, but should they be? David Millar reveals which rules to break and which to adhere to

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Canada's Cervélo lends us one of the most striking looking bikes we've seen. Its MTN-Qhubeka S5 team bike not only wins pro races, it also raises money for Africa **108**

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Turbo trainers are nothing new, but these days the smart money is on smart trainers. We try out a dozen data-loving indoor trainers to see how smart they really are **134**



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EVERY MONTH



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141 How to maintain your fitness levels and look after your diet over the festive period; teach your kids to ride; make cycling resolutions you'll actually stick to; build a training plan targeting a springtime sportive; bag yourself a bargain bike; and how to steer clear of the flu this winter



163 We head for the Italian Alps to take on the mighty Granfondo Stelvio Santini, travel to Oxfordshire for the second annual Bike Oxford sportive, look ahead to the 2016 Ride Across Britain and reveal the five events you should pencil into your calendar in the coming year

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See p96



FROM THE EDITOR...

Other people are weird. And when I say other people I mean other cyclists. And when I say other cyclists I actually mean deputy editor Paul. On the surface Paul appears to be a completely grounded bloke with a mortgage, a hatchback and an impressive collection of vinyl records. But he is weird. Why? Because early this year he willingly signed up to take part in Paris-Brest-Paris, the legendary 1200km non-stop ride from the French capital to the Brittany coast and back. That's 1200 kilometres. Non-stop. Like I say, weird. Needless to say Paul loved it – the pervert – and you can read all about it on p150. I don't see myself succumbing to PBP's charms, but I do fancy adding some 'weirdness' to my cycling life. Any weird ideas would be gladly accepted...

Rob Spedding, Editor-in-chief

ANY OTHER BUSINESS?

Are rules really rules?

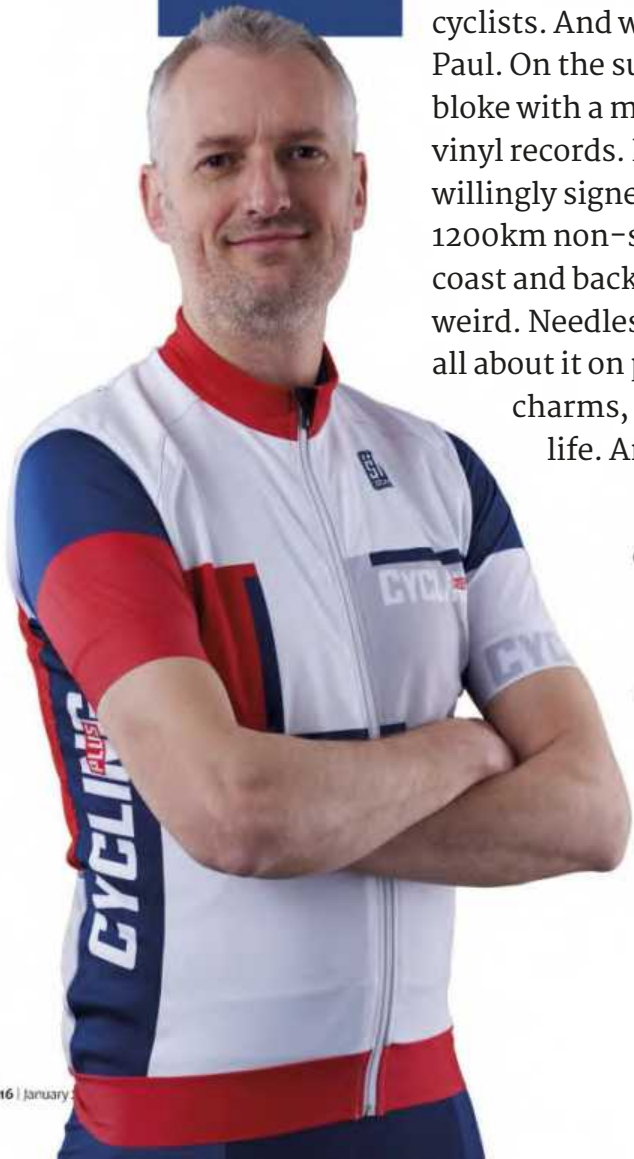
Although I adhere to a few of my own cycling rules – never ride in all black kit, don't ride on pavements... I've never paid attention to The Rules, the (mostly) tongue-in-cheek list from Velominati. Some riders, though, treat them as sacrosanct. Ex-pro David Millar isn't one of them as we discover on page 156.

Daydream believer...

Go on, admit it. Even though you're a grown-up with a job, you still fantasise about mixing it up in the pro peloton. But how would an amateur fare among the professionals? There's only one way to find out, so we sent Steve Chidley to ride with One Pro Cycling. Don't crash into them we said...

Get in touch...

Although we don't have a letters page we still want to hear from you. So, make sure you chat to us via @cyclingplus on Twitter, CyclingPlusMagazine on Facebook and cyclingplus on Instagram. And, of course, you can always send an 'old-fashioned' email to cyclingplus@immediate.co.uk. It's good to talk!



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First Ride sees our test team bring you their first impressions of the most exciting new bikes available. As soon as they're out, we're riding!



Before you buy a bike, you want to know how it stacks up against its rivals and that's where Road Test comes in. Each month we compare six bikes



There's a plethora of new gadgets and gear tempting you to part with your cash. New Kit is where we'll tell you what's worth splashing out on



To make the best buying decision you need products tested in context. Our Gear Guide is where we put the gear you need through its paces



We don't just test bikes and send them back – some are here for the long haul. Find out what our favourite rides are like to live with in Our Bikes

THIS MONTH'S TESTERS PREVIEW THEIR ISSUE HIGHLIGHTS



BIKE AND KIT TESTS

The Van Nicholas Amazon Cross turns up in its SRAM 1x11 guise (p20), and I get a Cortina to play with (Marin, not Ford) on p26. Vittoria, meanwhile, is now making bicycle wheels (p92).

Robin Wilmott,
technical writer



GROUP TESTS

A month of contrasts... out in the wilds of Yorkshire testing brake blocks made for carbon rims (p86); and working up a head of steam indoors testing high-tech turbos (p134).

Guy Kesteven,
freelance tester



LOTS OF BIKE TESTS...

Both of the main bikes tests fell to me this month. Six of Germany's purveyors of road bikes have a Teutonic tussle on p50, while a pair of contrasting winter bikes duke it out on p128.

Matthew Allen,
technical writer

RATINGS EXPLAINED



EXCEPTIONAL

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GOOD

It'll do the job very well



BELOW AVERAGE

Flawed in some way



POOR

Simply put, don't bother



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ALPS
NICE-GENEVA
28 AUGUST - 3 SEPTEMBER 2016

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SPECIFICATION

Weight 9.05kg (ML)

Frame Amazon

Cross 3AL/2.5V

Titanium

Fork VNT SLX

carbon

Gears SRAM Force 1,

42t chainring,

11-28 cassette

Brakes SRAM

Force hydraulic

disc, 160mm front,

140mm rear rotors

Wheels Mavic

Aksium One Disc

Finishing kit VNT

Elements alloy bar,

stem and seatpost,

VNT Elements

saddle, Schwalbe

Rocket Ron 33mm

tyres

FIRST RIDE

VAN NICHOLAS AMAZON CROSS

£2628 > Off-road Ti Fighter



Van Nicholas has made a success of offering reasonably priced titanium-framed bikes, and the Amazon is one

of its popular long-standing models. This is the new spin-off, the Amazon Cross, set up for a life off the tarmac.

The aerospace-grade titanium frame is created from round tubes – save for an ovalised top-tube and chainstays, and the lengthy, flared head-tube. The stays are S-shaped to improve tyre and heel clearance, and the chainstays are double crimped on the drive side for added chainring room, but a chainstay bridge does cut into the already slightly limited rubber room.

The seatstays retain the cantilever brake mounts of the normal Amazon model, which is strange since you'd need a fork swap to run an equivalent brake up front – and we're not sure who would want to revert from discs to cantis. Equally curious is the fact that the fork includes mudguard fittings, even though the frame itself doesn't.

Images: Robert Smith

The Van Nic handles well off-road, but the ride is on the harsh side



- HIGHS**
Beautiful frame, groupset, wheels
- LOWS**
Harsh off road, mismatched fork
- BUY IF**
You want a good value, bomb-proof machine for occasional forays away from tarmac

Van Nicholas's rear dropouts are laser-cut from chunky 7mm titanium plate, with extensive cutouts that incorporate an elegant 'V' shape, along with the disc calliper mount. They're each welded to the stays with short step-down tube sections that blend them together well, and the welding throughout the frame is perfectly neat. The rear brake hose and single gear cable run via the top-tube and seatstays, with exposed gear cable between stops on each tube. For longevity, added weatherproofing and reduced frame-scratching, we'd rather see complete outer casing from shifter to mech.

With our frame's 103cm wheelbase, we found the Amazon Cross extremely stable, with good road manners and reasonably crisp handling off road, but a surprisingly firm feel. With 40psi in the 33mm 'cross tyres, the rubber was expectedly squashy on tarmac, but on a fireroad the ride became very harsh, most noticeably at the front,

although the rear was hardly floaty either. Maybe the straight fork blades, alloy steerer and fairly ordinary alloy finishing kit contributed heavily to the ride feel, but it was far from plush.

The Amazon Cross has a great drivetrain, with a complete SRAM Force 1 set-up, but as supplied it's over-gearred. Out on the road, the heavy-duty tyres and other cyclo-cross features ensured we never got close to the 11-tooth sprocket – even when descending – and at average road-riding speeds, we barely used the outer half of the cassette.

When playing in the Van Nic's designated terrain, it's the lower end of the gearing range that's most important, and it's here where the ratios let the bike down. The

Below 'V' stands for Van Nicholas... or vanity, if you prefer **Bottom** Makes a change from the internal cable routing we usually see, and is much easier for the home mechanic to fettle the cables



Detail images: Robert Smith

company's retail model does allow for individual gearing selection, so we'd advise you to carefully consider the kind of riding you'll be doing before buying.

In this spec, the 42x28 lowest gear was limiting on long or steep climbs, and on sticky, technical trails we found ourselves only ever using the three largest sprockets. For the average rider looking to use the Amazon Cross as intended, we'd definitely recommend opting for a 38- or 40-tooth chainring instead, paired with a 11-32t cassette for improved versatility.

Mavic's Aksium One Disc wheelset is a tough and efficient favourite, with a width well suited to wider rubber, but that can't smooth over the obvious cracks in this bike's make-up.

It's undoubtedly great-looking and beautifully made, but the Amazon Cross gives off mixed messages, as although it's quite capable off-road, it doesn't feel quite at home there.

THE VERDICT

Despite a fine pedigree and good intentions, it doesn't live up to its name off-road





BIKE

sky



COMING SOON

THREE THINGS WE LOVE ABOUT THE... KONA KAPU

£1699 ★★★★★

It's classically comfortable

Its combination of Reynolds's light and lively 853 steel and endurance-friendly geometry is a winning one. The front end is taller and the top-tube shorter than a race machine's, which makes this plush, comfortable bike great for day-long rides. The relaxed frame angles add to its composure and further bolster its credentials as a long-distance cruiser.

It's tough

Reynolds 853 has the advantages of seamless construction and 'air-hardening', which strengthens the weld areas – a potential area of weakness in non-air-hardened steel. Heat treatment further increases the material's strength and resistance to damage, the added toughness allowing for thinner walls, making the frame lighter yet highly resistant to fatigue.

It rides well across the board

The geometry may suggest a bike that's just for lazy weekend cruises, but the Kapu handles itself really rather well when you do put the hammer down. The big volume 28mm tyres offer bags of grip, while the wide compact drop bar gives a well-balanced reaction to your steering inputs.

ONE THING WE'D CHANGE

How about some mudguards?

We'd make one addition. As it stands, the Kapu has everything we'd want from a classy winter trainer. It rides comfortably and its frame boasts a full range of fixtures and fittings, including mudguard eyes, rack mounts, pegs for a full-size pump and a pip to rest the chain on when you remove the rear wheel. It even has long-drop brakes. So please can we have it with mudguards too?



SPECIFICATION

WEIGHT 9.75kg
(56cm)

FRAME Reynolds
853 steel

FORK P2 Reynolds
853

GEARS Shimano
105, Ultegra rear
mech 50/34, 11–28

BRAKES

TRP RG957 long
reach

WHEELS Mavic
Aksium

FINISHING KIT
Continental Grand
Sport 28mm tyres,
San Marco Era
saddle, Kona alloy
road bar, Kona Road
light stem, Kona
Thumb seatpost,
Shimano RS500
chainset



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COOL"
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Bikes etc

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MARIN CORTINA T3 CX

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Marin County, California holds a special place in the mind of anyone either old enough

to remember the birth of mountain biking, or who knows their history.

The eponymous brand has long been respected among the fat-tyre fraternity, though forays in to skinnier tyres and drop bars have been surprisingly few. But Marin's Italian-monickered cyclo cross machines might just go some way to reversing the trend. Yes, sadly Cortina refers to the Italian Alpine town, not Ford's much-loved 70s motor.

At first glance, the Cortina has a straightforward design, the bare unidirectional (UD) carbon fibre and glossy finish masking the tube's subtle shape shifts. There's a tapered head tube, beefy carbon fork with tapered alloy steerer, triangulations in the top and down tube, bandy-legged seatstays that are flattened

and become a split monostay, and chainstays that remain horizontal and flip up to meet the dropouts, maximising chain clearance. All cable routing aside from the front brake hose is internal for clean lines, and there are mudguard mounts.

After some road rides to bed in the brake pads, the Cortina began to show its character. The intermediate tread pattern of Conti's rubber allowed us to roll quickly with minimal buzz, and rising from the saddle to lean on the pedals was rewarded with brisk acceleration and a good, solid feeling from the cockpit.

Off road, we appreciated the little extra volume of the 35mm tyres as we threaded a line between rocks and mud. Handling was quick thanks to the short stem and rigid front end, and there was good traction on everything short of deep mud. The 46/36, 11-28 gearing covers most off-road needs, and won't short-change you on the road, and

Shimano's hydraulic discs have ample power and great control.

Fun as the Cortina is, it carries a bit more weight than we'd like for £2500. Whether partly due to heft or layup, we found the bike better on the road or on relatively consistent gravel, as constant bumps were quite jarring, despite the tyres. An alloy steerer, non-series chainset and bombproof tubeless-compatible, but weighty wheels join the own brand finishing kit in adding mass, which of itself doesn't spoil the ride, but with some serious competition around, you'll need to be a big Marin fan who isn't going racing to fire up this particular Cortina.

SPECIFICATION

Weight 9.21kg (54cm)

Frame T3 UD carbon

Fork Marin CX carbon disc with alloy steerer

Gears Shimano RS685 shifters,

S500 46/36 chainset, 105 mechs, 11-28

Brakes Shimano BR785 hydraulic disc, 160mm Shimano disc rotors

Wheels Marin DiscLite hubs, WTB Frequency Race i19

TCS rims

Finishing kit Marin alloy stem, bar and seatpost,

Marin Speed Concept saddle,

Continental Cyclocross Race 35mm tyres

THE VERDICT

A taut and engaging ride, but the Cortina is light on spec and true off-road performance





◀ Good on the road and not-too-bumpy gravel, but not quite as impressive over more challenging off-road conditions

⬆ The chainstays start off horizontally before kicking up at the dropouts, keeping the driveside stay clear of the chain

⬇ The Cortina has plenty of mud clearance even with 35mm tyres fitted, and there are no brake blocks to accumulate muck



HIGHS

Responsive frame, brakes, gearing

LOWS

Weight, price, rough-stuff performance

BUYIF

You're looking for an all-weather carbon-framed machine to combine tarmac and off-road routes



The standard cyclo-cross gearing should cover all on- and off-road needs



CALIBRE RIVELIN

£299.99 > How low can you go? We test this budget blaster from the Go Outdoors superstore

+ An ultra-budget bike normally means poor tyres, shonky brakes, wonky wheels – and way too much weight. Thankfully, the Rivelin meets the low-cost challenge head on and mostly comes out on top.

The Shimano Claris 8-speed kit works well, with reliable easy shifting and a decent range (ours came with an 11-25t cassette but stores will have a 28t top). The ride position is comfortable, though a little tall up front and short in reach, and despite the weight, solidity and stiffness, it's surprisingly comfortable.

That's partly down to the frame and carbon fork and partly to the tyres, which won't win prizes for speed but roll smoothly and are supple and tough.

At nearly 11kg the Rivelin isn't a climber's friend – but it doesn't handle like a heavy bike. When descending, the carbon fork holds its line and smooths out rougher surfaces well. Braking is

also better than expected: the Tektro units are free of vibration and the softer-compound pads give a lot of feel at the levers.

The wheels felt sluggish and draggy at first but improved once bedded in – and after a quick wipe to remove excess grease from the rear freehub internals.

The Rivelin is a good, solid bike at a great price, and has clearly been put together by a knowledgeable team. It would make a good winter trainer or a cost-effective commuter, as the frame has provision for mudguards and a rear rack.

SPECIFICATION

Weight 10.9kg (58cm)

Frame Aluminium

Fork Carbon/alloy

Gears Shimano Claris (50/34, 11-25)

Brakes Tektro R312

dual pivot

Wheels Calibre

Finishing kit

Calibre C3 saddle, unbranded alloy stem, compact drop bar and seatpost, 25mm Schwalbe Lugano Active tyres, FSA Tempo chainset

THE VERDICT

Weighty, but handling and smoothness is far better than the modest price would suggest



FIRST RIDE



SHOOTOUT!

With a grand to spend, are you better off going all-road or classic road?

VERENTI SUBSTANCE

£750 ★★★★★

Vs

GENESIS EQUILIBRIUM 10

£999 ★★★★★

The simple butted aluminium frame and fork are well finished and adorned with rack and guard mounts, which is one reason why its cheaper sibling did so well in issue 307. The burly-looking unicrown fork offers masses of clearance and is surprisingly compliant over rough terrain.

What's in a frame?

The Equilibrium's classy double-butted steel chassis is complemented by a carbon fork that's rigid in all the right places yet offers a comparable smoothness to the supple steel. Provision for a rear rack and guards are a plus for commuters and light tourers too.

The Substance is without doubt a comfortable machine, with laid-back steering, fat Continental Cyclocross Speed tyres and a decent saddle. Only the stiff aluminium bar wrapped in skinny tape becomes wearing after a few hours riding, but shelling out for better-quality tape is a relatively cheap and easy fix.

How does it feel?

The Equilibrium's more relaxed riding position sits well with the general smoothness of the ride overall, which is in no small part due to the plush Clement Strada LGG tyres. Good-quality contact points help too, and the overall impression is that this is a very nice place to spend a few hours riding.

SPECIFICATION
Weight 11.95kg (56cm)
Frame Aluminium
Fork Aluminium
Gears Shimano 105 (48/36, 11-32)
Brakes TRP Spyre SLC
Wheels Shimano RX
Finishing kit Cosine saddle, Cosine alloy seatpost, stem, bars, Continental Cyclocross Speed 35mm tyres, Shimano RS500 chainset

On the road the near-12kg bulk makes for ponderous progress, especially on the hills. It's easy to correct in slippery conditions off-road, however, and is responsive at speed on bumpy gravel.

Hard to handle?

The Equilibrium's stable handling doesn't have quite the precision of its Genesis stablemate, the Volare. Still, it's not difficult to hustle it up to speed on fast descents and hold your line.

The spec sheet includes Shimano discs, (mainly) 105 components, great tyres and TRP's Spyre cable disc brakes. That's excellent for £750, it's just a shame Verenti couldn't keep the weight down.

Worth the money?

Value-wise, the 10 offers a great frame and top drivetrain, with decent wheels and tyres. Only the mudguard-friendly long-drop brakes disappoint – they're powerful but feel a bit wooden

SPECIFICATION
Weight 9.9kg (58cm)
Frame Moljinor seamless chromoly steel
Fork Carbon
Gears Shimano Tiagra (50/34, 12-28)
Wheels Alex AT470 TCS rims on Joytech hubs
Brakes Promax long drop
Finishing kit Clement Strada LGG 25c tyres, Genesis road compact bar, stem, seatpost and saddle

Image Russell Burton

Satori

S M A R T



Check your power on any device

A basic trainer with just that little bit extra: read your power, cadence and speed on multiple devices simultaneously, to monitor and measure your fitness. Compatible with smartphones, tablets, bike computers and sports watches and via an upgrade even with computers.



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THE HUB

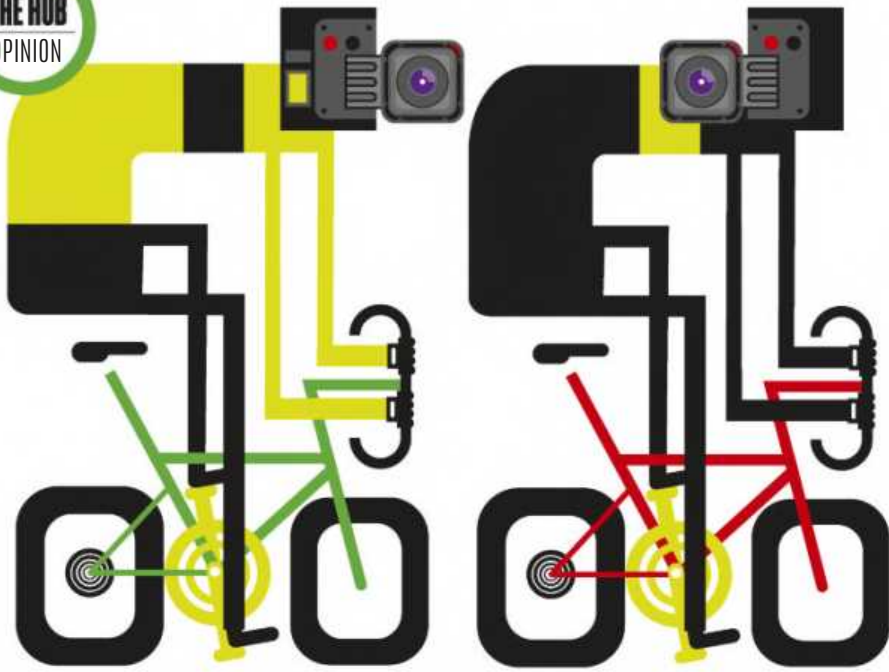
RIDING > NEW GEAR
OPINION > BIKES

THE BIG PICTURE RACE THE WORLD...

Team Garin's Robert Todd and Rab Wardell take on the steep climb up to New Mexico's 2500m Emory Pass. This is during stage 4 of November's Race the World, in which teams rode across the USA from LA to Miami, supported by the likes of Schwalbe, Wilier and Britain's dhb, which supplied the much-needed waterproofs – and we thought New Mexico was desert...

Image: Whit Richardson





THE SPIN

A DIFFERENT SPIN

Helmet cam user 'DrMorocho' responds to issue 307's column that was critical of camera 'vigilantes'...

I started recording my rides to work in London after I was hit by a driver who pulled out from a side street straight into me. The police refused to do anything due to a lack of witnesses. While looking online for information on how the legal system works, I came across the videos of CycleGaz, TrafficDroid and CyclingMikey, from whom I learnt a lot about riding safely. I decided to get a camera to protect myself in future.

'Confronting' drivers is often the result of an adrenaline rush, when your life is put in danger. Too many drivers don't seem to realise the danger of their actions on others, so we try to get their attention. When your word alone seems to mean nothing to the police, you need evidence to support you. Anyone can make a mistake, but unfortunately the 'mistakes' of those driving a vehicle recklessly can easily cost the lives of vulnerable road users. The bigger your vehicle, the greater the responsibility you have on the road.

The reason we tag a vehicle registration number in some videos is to make them searchable. Through this, we have already managed to identify certain patterns and catch repeat offenders.

There isn't a war between motorists and cyclists. Most drivers are respectful and considerate towards cyclists. If nothing dramatic happens during a ride, the ride is more enjoyable. It's nonsense to say we go

'looking for trouble'. It's only a tiny minority of recorded rides, perhaps one per cent, that make it on to YouTube.

Of course I give drivers the benefit of the doubt, that's why out of hours of recorded footage only a few minutes of video make it online. I ride every single day, and have three cameras on me, yet sometimes weeks have gone by without me posting anything online, especially nowadays since I try to be more selective and I've got used to some of the drivers' 'mistakes', as *Cycling Plus* called them.

Out of hours of recorded footage only a few minutes of video make it online

The reason I posted the video of the ambulance ('Crazy Ambulance Driver? St. Johns LK12 FPT') was because of the aggressive tooting and the fact he drove straight at me. I was not aware of the direction of the sirens until I had already entered the roundabout. I was expecting an emergency vehicle coming from the right of the roundabout not from behind. Most cyclists don't carry mirrors, so they can't see what is coming behind. Shoulder checking is not always an option if you are riding into a roundabout which already requires your whole attention ahead, plus a bus engine next to you can easily muffle any other sound around.

I do not hate drivers, nor am I against cars (unlike other hardcore cyclists). In fact, I have a driving licence, I love driving and I love cars. For the record my videos are not only of drivers behaving recklessly but also inconsiderate cyclists/bikers – see my #BloodyCyclists series as proof. **PLUS**



PEDAL-O-METER

Sometimes the wind's at your back, sometimes it's all uphill



MARKED MAN

Mark Cavendish's move to MTN already had the feel of getting the old HTC band back together and that was reemphasised with their signing of Rolf Aldag, the Etixx-QuickStep manager who's been a near constant in his pro career.

DOUBLE YOUR MONEY

After Vulpine founder Nick Hussey turned down private funding to crowdfund its development, he'd have pinched himself two weeks later in doubling his £500k target.

OFF COLOUR IN YELLOW

Chris Froome revealed he raced the final stages of the Tour with an infection and refused to ask for medicine to treat it. "I'd be there with a burning sensation to cough... I didn't want [my rivals] to see I was battling with this."



CHANGING GEAR

In something of a surprise move, clothing maker Rapha confirmed it will be parting company with Team Sky at the end of 2016 once their current four-year deal ends.

DOPE!

More gran fondo doping buffoonery as the winner of the 2015 Campagnolo Granfondo New York, Colombian Oscar Tovar, was DQ'd after testing positive for synthetic testosterone in an in-competition control.

STEELY MAN

Pioneering Scottish cyclist Ian Steel died in October, aged 86. He won the Peace Race in 1952, the first and only UK winner in its 59 editions, and was British national champ that same year. He was also part of the first British team to race the Tour de France in 1955.

saddleback
ELITE PERFORMANCE PRODUCTS

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TEAM | sky

OFFICIAL SUPPLIER

STAGES
CYCLING

WHY YOU WANT BONTRAGER TRANSMITR LIGHT SET

£215 > Wireless lights are go

1 Light to the touch

Bontrager's Transmitr remote control allows you to control up to seven compatible lights – including the excellent Ion 700 RT front – thanks to ANT+ wireless connectivity. Sounds like the answer to a question no-one has ever asked but...

2 Instant reactions

...it means no fumbling for a hard-to-find/press button on your light (or lights) when you need to quickly adjust your beam.

3 Back's on track

Lights on the remote give you an indication of the power left in your USB chargeable lights. We've found this especially useful for the rear Flare RT – when running low on constant we've been able to switch to battery-saving flashing without dismounting. It's the small things.

4 Blinkered vision

If you want to run two Flares on the rear you can configure the remote so that they act as indicators. Of course, this does rely on the following traffic knowing that you've done this...



Gain control of your rear light from your handlebar

WHY YOU NEED

KNOG MILKMAN COMBI £19.99

THE MILKMAN IS ideal for a mid-ride café stop, its four-barrel setup giving 10000 combinations. The 90cm steel wire and shackle provide just enough security for when your bike's in sight.



X-LITE CRS | A PASSION FOR RACING
available from 1,655.57 £

TOUR (05/15) | GRADE 1,5

Verdict: „The lightest bike in the test with luxury equipment including Di2 shifting system and high-grade Mavic R-System wheels. [...] The test riders were thrilled by the bike's agile behaviour. The contact points on saddle and handlebar were also highly praised.”

This test relates to the X-LITE CRS-3100.

ROSE

CYCLE YOUR WAY



CUSTOMIZED | INDIVIDUAL | COMPETENT

WE BUILD YOUR DREAM BIKE.



LOCAL KNOWLEDGE STIRLINGSHIRE, TROSSACHS & THE OCHILS

The Gateway to the Highlands, the city of Stirling is a stone's throw from Glasgow and Edinburgh, offering challenging yet peaceful roads with plenty of climbing for the brave of heart and strong of leg. From the River Forth to Rob Roy's grave there are plenty of opportunities to take in some of Scotland's finest history. Routes start from Stirling Railway Station.

ROUTE ONE

In Millar's Footsteps 77 miles If it was good enough for Robert Millar...

On the rivet from the beginning with Tak Ma Doon, followed by The Crow Road out of Lennoxtown – two roads used by Robert Millar to harden his legs in preparation for his 1984 Tour de France. A fast northerly descent is followed by the climb up to 'The Top of the World'. Later on, the Dukes Pass is sure to test your tiring legs.

Get the route
tinyurl.com/cplus-millars

ROUTE TWO

The local Glen 47 miles Scenic but with enough climbs for a good ride

A leg-sapping ride north through Dunblane towards Gleneagles and on towards the exposed climb up Glen Devon. A drop down towards Yetts, and you're at the same elevation as the Wallace Monument. On towards Dollar, you can stop for a coffee or snack before the final sting of the Dollar Beg climb.

Get the route
tinyurl.com/cplus-localglen

ROUTE THREE

The best of the Carse 33 miles Never mind the Trossachs...

Through the Bridge of Allan, then hang a right along the Carse of Lecropt, taking you to Doune. Deanston Road and the Braes of Greenock give you a taste of what the Trossachs have to offer. The drop down to Thornhill gives you the option of a cafe stop before quiet roads return you to Stirling.

Get the route
tinyurl.com/cplus-thecarse

INSIDER TIPS

HAVE BREAKFAST

Toast Stirling
Fresh cooked food and a bustling atmosphere, you won't find better scrambled eggs in the vicinity and there's coffee that'll knock your socks off.
Where Forthside Way, Stirling

STOP FOR CAKES

Corrieri's Café
Perfect for a post-ride coffee or one of their famous calzones if you need something a bit more robust. Their homemade ice creams are an absolute treat.
Where Alloa Road, Stirling

GET SPARE TUBES

Velocity 44
On the spot repairs and a showroom that offers everything from cyclo-cross to fat bikes and custom carbon. Just round the corner from Stirling Rail Station.
Where Barnton Street, Stirling

FANCY A PINT?

Allanwater Brewhouse
On-site micro-brewery with real ales and other beers. Brewery tours available and it's all close to Bridge of Allan railway station.
Where Bridge of Allan

THE FAMILY?

The Battle of Bannockburn
Learn how the Scots defeated Edward II's army. Take part in the interactive battle game and wander the battlefield memorial site.
Where The Battle of Bannockburn

▶ FOIL



WIN EVERY RIDE



NO SHORTCUTS

With the finish line in sight, you find yourself amongst the giants of the sport. Every movement, every thought, every ounce of preparation leads to one ideal- victory. When racing, there is no second place.



BIKE CURIOUS PEGORETTI DUENDE

Dario Pegoretti is the framebuilder that other legends look to for inspiration. His bikes always blend classic road bike design with state of the art steel tubing and, more often than not, one-off paint schemes that are pure expressions of Italian style. The Duende is built from a Pegoretti-specification Columbus Spirit tubeset – not many framebuilders have the kudos to get Columbus to custom-make tubing for them! It's designed to be responsive but not overly stiff, in other words it's a bike that's been designed to be ridden all day, every day. The Duende is considerably cheaper than either the

race-ready Marcelo or fantastically named Big Leg Emma, but is no cheap imitation.

It's built every bit as perfectly as its stablemates, but its specially designed socketed dropouts require only one end of the chainstays and seatstays to be mitred, and the savings from cutting back on this expensive and time-consuming process are passed on to the customer. Like all Pegorettis, you can opt for standard sizing or full custom at the same price of £2150, or you can add a further £485 for the 'Ciavete' finish and get something truly unique, such as the Jackson Pollock-inspired drip-and-splash finish here.



1



2



3



1 The 'Ciavete' edition is hand-painted by Dario Pegoretti himself

2 "I can sing a rainbow, sing a rainbow, you can sing one too"

3 We think it says something like 'Super Dario was here', in Italian...

TECH IS OUR PASSION



ARCTIC JACKET

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EVENT DVSTRETCH WINDPROOF
AND WATER RESISTANT MEMBRANE

FIRST-RATE BREATHABILITY:
SWEAT EVAPORATES TWICE AS FAST
AND IT'S INSTANTLY EFFECTIVE



EXTREMELY STRETCHABLE:
UP TO 35% AND FULL RECOVER

WEAR IT WITH

FAHRENHEIT ARCTIC 2 GTX



KOM HITHER
Is small beautiful
when it comes to
computers?

JUST LANDED LEZYNE MINI GPS

We all like to log our rides, but that doesn't mean we need to monitor pages of data as we pedal. The tiny Mini GPS from Lezyne measures just 33x51x23mm and weighs a barely noticeable 30g. The unit costs £109.99 and it's compatible with sites like Strava.



ON THE RADAR BIKE TECH OF THE NEAR FUTURE



ONES TO WATCH

BikeRadar's US editor Ben Delaney reveals his top 5 bikes for 2016, including the Trek Madone, Cervelo R3 Disc and Specialized Venge ViAS. You can't buy them yet but you definitely want to check them out.

SHINING A LIGHT

A light that pairs wirelessly with your bike computer and controls output based on speed? That's Garmin's new Varia, which connects with Garmin's Edge devices and points further up the road the faster you go.

UN-ZIPPED

Zipp has revealed a new subcategory of wheels called NSW, starting with the new 808 clinchers. Zipp claims they have better aerodynamics, reduced side force and improved braking over the current model.

FOR ALL THE LATEST BIKE & GEAR NEWS VISIT



Any road, every day
Designed for year-round performance



Designed and built to withstand whatever the weather or the road throws at you, Whyte's supremely versatile RD-7 disc-brake road bikes promise year-round comfort and reliability. BikesEtc magazine recently reviewed the range-topping Cornwall. "Matching versatility with light weight, Whyte's carbon all-rounder is county class" and, fitted with the optional mudguards they said "we'd happily ride this every day" awarding it 9/10 for versatility and common sense and 10/10 for confidence.

Whyte Cornwall

Bikes Etc May 2015

Rating
CONFIDENCE
VERSATILITY
COMMON SENSE

OVERALL
9
10



whyte.bike

WHYTE
PERFORMANCE BY DESIGN



REAL RIDER

Lee Fancourt, 38, from Devon has smashed the Trans-Europe record, battling rain, saddle sores and a cracked rib

The Trans-Europe Challenge is definitely the hardest ride I've taken on to date. I'm trying to break 15 world records and I managed to knock 24 hours off of the Trans-Europe one.

"I began the 4,200-mile journey at Nordkapp in Norway - the northernmost point of mainland Europe. I rode through Finland, Russia, Estonia, Latvia, Lithuania, Poland, Czech Republic, Germany, Switzerland and France. I finished in 21 days, 14 hours and 29 minutes at Punta de Tarifa in Spain.

"I planned the journey while recovering from a broken back after a mountain bike crash, but still figured I could sheer days off the existing record. I set off with the bike, a pump, cold-weather clothing, a tent and an iPod filled with tunes. I'd cycle all day and sleep by the road at night, grabbing food when I could.

"I suffered dehydration in Finland when I couldn't find anywhere to get water. But in the Baltics, Russia and most of Poland I had more water than I could ever want - unfortunately it was falling from the sky. Russia has the most treacherous roads I've ever ridden. I ended up cycling on the motorway - getting soaked from the rain and the spray.

"Being constantly wet meant I got eight really nasty saddle sores. In Poland my sat-nav packed up and my crank arm snapped. In Switzerland an old knee injury flared up, the sores got worse and I dumped most of my clothing and camping gear to lighten the load.

In Spain I rode for 29 hours straight after just two hours sleep in order to break the record. So far the Guinness Book of World Records has accepted six of my record attempts. Right now I'm doing Land's End to John O' Groats and back - aiming to break the speed record.

In Spain I rode for 29 hours straight after two hours sleep in order to break the record

THIS MUCH I KNOW

YOU NEED TO SLEEP

"The Russian roads slowed me up. In a bid to stay on track I skipped sleep but it caught up with me when I dozed off, fell asleep in the saddle, crashed and cracked a rib."

YOU NEED SOME LUCK

"I also suffered a major mechanical in Poland too - but by a stroke of amazing luck a client of the cycle shop I work at was based nearby and managed to get me a replacement crank arm."

YOU DON'T NEED ENGLISH...

"In Poland I unwittingly trespassed, but the farmer whose land I camped on made me an amazing breakfast despite neither of us speaking the other's language."

Lee raised over £4,500 for the Hollie Gizzard Trust promoting awareness of the dangers of knife crime see holliegizzard.org

BRITAIN'S BEST CLIMBS HILLS YOU NEED TO HAMMER



KIRKSTONE PASS

Readers familiar with Kirkstone from the Fred Whitton Challenge perhaps won't have such dreaded memories of it, at least not compared to the other climbs in the sportive.

As the first major test, you tackle it fresh and by the time you hit the lower slopes of Hardknott Pass,

Kirkstone feels but a mere pimple. But it's far from that, and at almost 1500ft at the summit it's the highest road pass in the Lake District.

In the Fred Whitton you pass from Ambleside over the A592 and down towards Ullswater, which at 4% over 5.3 miles is

the easiest way up (the average is misleading, given its unevenness).

The toughest way to get over the summit is aptly known as 'The Struggle' - a back road over Kirkstone, averaging 8.2% over a shorter 2.9 miles. One for climbing purists only!

Share your favourite climbs - email cyclingplus@immediate.co.uk



Wrap it up

with great gift ideas from your favourite brands.

Stocking fillers or the latest clothing, workshop kit or a brand new bike. Delve into a world of top tech or take inspiration from our best selling products.

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www.chainreactioncycles.com

Going the Extra Mile



2

HOW TO...

GET YOUR XMAS LIST RIGHT

Open the port, set fire to the Xmas pud, watch *The Great Escape* and have the joy of opening these cycletastic gifts

1

1 Bianchi Café Espresso set £40

Bianchi's classic limited edition espresso cup and saucer set is an exclusive design, with fine silver detailing made in finest bone porcelain by Germany's world-renowned Villeroy & Boch.

2 Meandmysport retro wallet £17

A classic flip wallet with six card slots and two bill-folds made from real leather. The design is finished with a colour early-90s sprinting photo for that real retro feel.

3 Occasional Human Voiture Balai T-shirt £25

The Citroën H van is synonymous with the *voiture balai*, or broom wagon – the vehicle that 'sweeps up' riders who've been dropped by the peloton. The illustration is hand-screen printed in Yorkshire onto 100 per cent cotton T-shirts made in Portugal to the highest environmental standards.

4 We all love socks for Xmas! £14.99/£17

Endura's Baa Baa Merino socks are anatomically designed and made

from 75 per cent merino wool for softness and odour control and 25 per cent elastane for a secure fit (£14.99 gets you two pairs). Castelli's Diverso is a warm winter sock that comes in a variety of designs for £17 a pair.

5 Below the Belt grooming gift set £19.95

Below the Belt's gift set comprises a chamois cream infused with mint, geranium, orange and lemon for fresh, friction-free riding, and a pair of tubes of post-ride creams: one for post-shower use and the other a waterless cleanser.



THERMAL JERSEY



Staying warm isn't cheating, it just makes sense — that's why we designed this super warm long sleeve thermal jersey which is equally adept on a chilly Autumn morning or layering up in the deepest Winter.

CHAPEAU.CC



au sommet!!!', etc). One says simply and eloquently 'NO VOMITO'.

I'd started out at 7.30am and had the way up all to myself, but by the top the post-breakfast shift had caught up. So instead of the transcendent Everest-like solitude I was hoping for, the atmosphere at the top was more like a rush-hour ASL at the Elephant and Castle. A troupe of lithe, retired dentists from Clermont-Ferrand in full wasp-man road gear were Facebooking summit selfies. Cycling does indeed keep you youthful...

That said, the summit is the highest thing for miles around so the views are awesome. There's a restaurant, gift shop and car park, plus the iconic transmitter that's half North Korean police HQ, half party popper. My bike, panniers full of French picnic and bidon full of wine in homage to Tom, was less likely to be carried away by the summit hurricanes than those featherlight carbon frames.

I'd taken three leisurely hours to reach the top. Lance used to do it in under 59 minutes, though in my defence he was on more powerful stuff than you can get from Sault's patisseries.

The swoosh back downhill to Sault was fabulous. Virtually no pedalling, but never steep enough to risk flash-frying the brakes. By this point hundreds of cyclists were toiling up, in twos or threes or groups, most on mid-market road bikes – plus a large minority on hired full-suspension MTBs unsullied by any trace of mud. I was the only one with panniers, down-tube shifters, sunhat and M&S shorts.

Back at the Promenade Bistro it was all very sociable, us cyclists overlooking Ventoux in the sunset, celebrating our conquests over pichets of Côtes du Ventoux. ('you've done the hill, now try the wine.')

The French were philosophising. Ah, said one sagely, climbing the Géant de Provence has a life lesson for us. You think you won't make it, but you can. The power of the peloton! Together we are strong! Santé!

I wasn't convinced.

Thousands of us emailed Eurostar to protest against its recent policy change that no longer allows dismantled bikes. It had no effect.

The conclusion is, of course, that there's no conclusion. Ventoux has to be done because it's there. I didn't 'find myself' or push any envelopes or gain any new wisdom. I just had a feel-good, memorable, convivial day out on the bike. Now it's back to lobbying Harrogate council: safe routes to schools, stations, shops... now there really is a mountain to climb.

LIFE CYCLE

THE HIGH LIFE

Rob Ainsley swaps hauling himself around Harrogate for venturing up the Ventoux...

Climbing Mont Ventoux? Piece of cake. Plus two pains au chocolat, three bananas, a baguette, a paving slab of pâté and a custard flan... at least that's what I got through when I did it last September, anyway.

Of all the Tour peaks, it's Ventoux – back in the route for 2016, polka-dot fans – that every self-respecting cyclo wants to bag. It's not the highest: at 1911m it's Dutch compared to the Col d'Iseran's 2770m. But that weird, bleached, lunar summit attracts legend as surely as it attracts gale-force winds. And Belgian campervans that cut you up on the final hairpins.

Legends like that of Tom Simpson, who died of exhaustion near the top during the 1967 Tour. A memorial marks the spot. Amphetamines, alcohol, diarrhoea, and pushing himself beyond his limits were the factors. Only one of those remotely poses a threat to me, or two if the pâté stays opened too long in the panniers.

From the Promenade Bistro in the launchpad town of Sault, Ventoux's summit looks deceptively small and easy. But – like the wood-fired pizzas from Bruno's wagon, across the boules pitch – it's bigger and takes longer to complete than you expect.

The Ventoux is one of the Tour's toughest climbs – at least if you do it their way, the 'proper' way, from Bédoin: 1620m of climbing over 22km at an average gradient of 7.5 per cent. I did it the easier way, the tourist's way, from Sault: 1210m over 26km at 4.5 per cent; a trundle through woods and picnic tables.

At least up to the final bizarre, extra-terrestrial 6km, anyway. There, kilometre markers don't just tell the distance, they also entertain you with gradient and altitude information. The road surface has the traditional fan messages spray-painted to riders ('Allez Guigui! BEERS

The atmosphere at the top was more like a rush-hour ASL at the Elephant and Castle



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Introducing the Hiplok SUPERBRIGHT high visibility, high security wearable lock series. Featuring an ultra-reflective sleeve over hardened premium steel chain and Hiplok's patented wearable fastening, Hiplok SUPERBRIGHT locks are designed to protect you and your bike.

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We don't talk about motorbikes. We talk about how we're going to get the Classics streamed to Qatar

I'M A RIDER BRADLEY SMITH

From conquering the Tourmalet to meeting Mark Cavendish, Britain's MotoGP star Bradley Smith loves swapping 16.5in tyres for 23mm...

MotoGP riders are all serious cyclists too
I am based in Oxford and Andorra and I normally ride four times a week to stay fit. During a 45-minute MotoGP race my heart rate is about 180-190bpm and I can lose two litres of sweat. Cycling is perfect for training because it's low-impact; our bodies take enough of a battering anyway.

It's best not to get your knee down on a road bike

On my Yamaha YZR-M1 I get a maximum lean angle of 55 degrees on a bend, but I have to remember that I can't carry that angle on my road bike during a descent. If I do, it means I didn't do it right.

I am a proper cycling fan-boy

Even when I'm at a MotoGP race, I am always nipping inside the truck at 4.30pm to watch the final 20km of the Tour or Giro. We don't talk about motorbikes. We talk about how we're going to get footage of the Classics streamed to Qatar.

I love anything with two wheels

When I was a kid I was always skidding around the garden on a BMX, convincing my mum that I needed to dig holes and make little jumps. That progressed to dirt jumping, bike parks, downhill mountain biking and road cycling.

My first road ride was a nightmare

I was at the MotoGP Academy in Spain in 2005, when I was 14, and I was handed a training programme that read: 'cycle 60km.' I did my sums and realised, Jesus, that's 37 miles! I rode at 11mph and it took me three and a half hours so by the time I had finished I hated cycling with a passion. But once I got hooked, I loved it.

Stokenchurch is my favourite training climb in the Chilterns

I cycle there from Oxford and climb it from three or four different directions. They're not long climbs, about 12 minutes, but four efforts is tough.

Mark Cavendish saw me crash in Italy

I met him in Mugello in 2013 - he's a big fan of MotoGP. He was with (American former motorbike racer) Randy Mamola when I went flying through the air. My finger is now permanently bent after the accident. Randy told me he had never seen anyone so worried. Cav wanted to visit me in the medical centre. When I see him, the first thing he asks is: "how's the finger?"

Orica-Greenedge cyclist Simon Gerrans is my neighbour

He lives near me in Andorra so in the Vuelta I was cheering him on when they came down the mountain past my house. I also live across the road from (fellow Orica-Greenedge rider) Leigh Howard.

The Pyrenees are harder than the Alps

The climbs there are much longer, often 12-mile efforts. In the Pyrenees I have done the Tourmalet - from both sides, the Hautacam and the Col d'Aspin. In the Alps I have done the Madeleine, the Col de la Croix de Fer, and I even did an Alpe d'Huez triathlon three or four years ago.

My best climbing lesson is: pace yourself

Sometimes I'm breathing so hard I forget to put the food and water in, then two hours later I am knackered.

Cycling is a key part of my race routine

On the Thursday before a race I will ride around the track to sight it and maybe do some intervals, finishing off with a 20-minute cool-down on the rollers.

I've given up on power training

I used to have an SRM but I got rid of it. My trainer said: "Listen, 20 watts is not going to make the difference for getting you on the podium at a MotoGP." So I scrapped it. Now I still ride hard, but for fun.

It's important to ride fast and look fast

I bought a Cervelo S3 with my bonus money a few years ago and after my podium in Misano (in September) I might buy a new Cervelo S5. If I look like I know what I'm doing, I'm happy.

QUICK FIRE

Best snack? "I'm not into energy bars, so I take dried apricots and natural bars made of figs and bananas. I like high-fat breakfasts like eggs and avocado too."

into MotoGP means he stands out. The idea that a top rider like him knows who I am is seriously cool."

Best kit?

"I must admit I'm a sucker for Dura Ace Di2 gear shifters. I just love touching the button and seeing the gears move along."

Fave rider? "I have met a lot of pro riders over the years but for me the fact that Mark Cavendish is really



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ROAD
TEST

GERMAN LESSONS

We're buying more bikes from Germany than ever, but what is it that makes us love them so? We put six of the best on test to find out

Photography Russell Burton





Vorsprung durch Technik – well, that's got that first cliché out of the way...

Bikes are just one of many products onto which we like to project our national stereotypes. While we characterise Italian cars as being infused with passion and history, we imagine Chinese electronics will invariably disappoint us in clouds of smoke. Anything German, meanwhile, is seen as the clinically efficient, solidly-engineered-but-dull option – be that appliances, cars, or indeed bicycles. Is this fair? Perhaps not, but then stereotypes exist for a reason.

With that in mind, we're testing six German bikes to see if they possess some common characteristic beyond their shared heritage. Is there a defining feature of a German bike? Are the stereotypes true?

As you can probably guess from our huge price range, this isn't a straight shoot-out where we delve



YOUR TESTERS

This month's test is brought to you by the combined legs and brains of tech writer Matthew Allen and production editor/bike guru Simon Withers. Former shop mechanic Matthew has committed more Shimano product codes to memory than you've had hot meals just because, while Simon has cycling in his bones, and has ridden every bike ever made. Literally. Probably.

into the minutiae of bike specs to decide which walks away with the crown. Instead, it's a chance to explore the diversity of what's on offer from a country whose bike brands are going from strength to strength. Bikes are a multi-billion Euro industry in Germany and with markets like our very own in the UK lapping up their products, companies are having to adjust to the needs of different audiences.

Once upon a time, German road bikes reflected a slavish devotion to domestic media's preoccupation with lab test data, sometimes at the expense of real-world ride quality. After all, stiffness numbers are moot if a bike ends up being unridably firm on the road. This test is a chance to see how things have progressed. Have we moved beyond the men-in-white-coats approach to bike design? We know German bikes can be good, but are they fun, or lovable?

RATINGS EXPLAINED

★★★★★

EXCEPTIONAL

A genuine class leader

★★★★☆

VERY GOOD

One of the best you can buy

★★★☆☆

GOOD

It'll do the job very well

★★☆☆☆

BELOW AVERAGE

Flawed in some way

★☆☆☆☆

POOR

Simply put, don't bother

THE BIKES ON TEST



CANYON ENDURANCE AL 7.0 £1049

+

Canyon always delivers on spec and the Endurance is no exception, with a full Shimano Ultegra groupset, dependable Mavic Aksium One wheels, and good quality finishing kit. The frame is aluminium and fairly simple looking, but Canyon knows a thing or two about metal so we're more than happy to let it prove itself. Can this bland-looking machine win us over or is it just too 'safe' a spec?



BOMBTRACK HOOK 2 £1599.99

+

One-time fixie specialists Bombtrack supplies the wildcard entry with its do-it-all cyclo-cross bike. The Hook 2's pretty frame is made from decent quality Columbus Cromor steel. Stopping comes courtesy of TRP's excellent Spyre mechanical disc brakes, while gearing is a one-mech affair thanks to SRAM Rival 1. Versatility is the name of the game here – has Bombtrack made a bike for all occasions?



SILVERBACK SIRELLI 2 £1919.41

+

Silverback was originally from South Africa but decamped to Stuttgart a few years ago after building up a reputation in the southern hemisphere. The company has big ambitions for the next few years. Its Sirelli 2 features a full Shimano Ultegra build, Fulcrum Racing 3 wheels – good to find at this price – and a raft of carbon kit. The weight's impressive too. But can it deliver the goods on the road?



CUBE LITENING C:62 £1999

+

Cube's new Litening has a lot in common with the Silverback. They have the same groupset, predominantly carbon components and wheels from Fulcrum, though these are the Racing 44 Aeros with Schwalbe One tyres. The weights are similar too. So can this 'carbon 'n' green' creation overhaul the black and lime green Sirelli and the rest of the largely black opposition? And can it live up to the Litening name?



FOCUS CAYO DISC 3.0 £2299

+

The Cayo ticks an awful lot of boxes on paper with a racy carbon frame, hydraulic disc brakes from Shimano, and clearances for respectably large tyres. Throw in clever thru-axles, quality DT Swiss wheels that can be run tubeless and Shimano's ever-impressive Ultegra shifting kit, and it seems like an easy sell. Does it have the ride quality to match though, or would that be asking just a bit too much?



STORCK SCENERO DISC £2549

+

High-end bike purveyor Storck's take on the disc brake-equipped road bike comes with Shimano 105 kit, the same company's hydraulic brakes and DT Swiss wheels that like the Cayo's can be run tubeless – though tyres bigger than 28mm are a no-no. The frame features front and rear thru-axles, which along with the brakes may make you think sportive. But the geometry has an aggressive slant to it.

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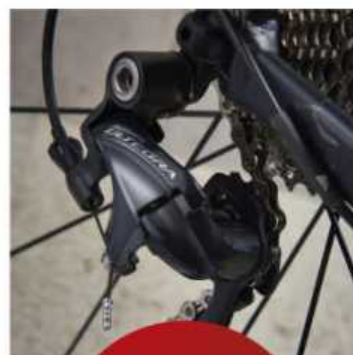
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SRP £84.99

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+ **↓** **Below** Spacers above the stem give you a bit of adjustability
Bottom A shade over a grand and full Ultegra – minus chain – is great to see



Despite the understatedness of the package visually, it's a thoroughly competent one

CANYON ENDURANCE AL 7.0

£1049 > Gorge yourself on another stunning spec from Canyon

At times Canyon bikes can be a headache for reviewers, because the builds it offers seem to be almost unreasonably affordable.

Still, more kit for less money is always a good thing, right? To a point yes, and if strict value for money is your primary concern, you're unlikely to be disappointed with a Canyon. But then, if everyone took that approach we'd all be riding the same bikes, and that would make life terribly dull, wouldn't it?

The Endurance AL takes the entry-level mantle from Canyon's outgoing Roadlite model, but

borrows its geometry from the carbon Endurance CF. As the name suggests, this is not a bike aimed at racers (unlike the Ultimate series) but rather, it's a straightforward sportive-style thing built around a simple aluminium frame.

Said frame is refreshingly devoid of the 'acronym-Tourette's' that blights many modern machines, and in design terms it's gloriously conventional. Granted, the gear cables run inside the downtube, but the bottom bracket is a threaded unit, the head-tube and the steerer are un-tapered and of standard dimensions, and overall there isn't a gratuitous curve in sight.

SPECIFICATION

Weight 7.86kg (S)
Frame Aluminium
Fork Carbon, alloy dropouts
Gears Shimano Ultegra 50/34, 11-28
Brakes Shimano Ultegra
Wheels Mavic Aksium One
Finishing kit Canyon stem, bar and VCLS carbon seatpost, Fizik Ardea VS saddle, Continental Grand Prix 4000s II tyres

In fact, you could almost accuse the Endurance of being wilfully inoffensive to look at – a judgement not helped by the regulation grey-on-black paintjob that's interrupted by only the most innocuous of red highlights.

Despite the understatedness of the whole package from a visual point of view, it's nonetheless a thoroughly competent one. Shimano's Ultegra groupset is as boringly brilliant as ever, and it's complete aside from the KMC chain, so we've no complaints there. The gearing is ample too, and Mavic's Aksium One wheelset is a solidly trustworthy companion, →

The Endurance AL is about as much bike as you could reasonably expect for the money



particularly when it's fitted with proper tyres like the Continental GP4000S IIs here.

The riding experience is as unsurprising as everything else and, as with most Canyons, it's extremely pleasant. The Fizik Ardea VS saddle proved a hit, and it's sat atop a carbon seatpost, again emphasising how Canyon hasn't cut corners in spec'ing this bike. Unless you count omitting mudguard eyelets – which seems as much a philosophical decision as anything else.

With no component niggles to speak of, we might hope for some glaring flaw in the bike's handling to provide some tasty review fodder, but none manifested itself. The Endurance isn't quite the equal of its carbon-killing Ultimate AL sibling – our erstwhile Best Race Bike (2014) – but it manages to marry more than a modicum of comfort to a lively and engaging ride. On 25mm rubber we

HIGHS

Smart spec with no cut corners, low weight, no upgrades needed

LOWS

Boring looks, some competitors will take mudguards

BUY IF

You want maximum value for money and a bike that's good to go with no mods

were content to trundle over the odd small pothole and despite the absence of press-fit – this and oversized – that, the bike did everything we asked of it, leaving us satisfied and ready for more. Its slightly taller head-tube (160mm on a size small) will suit those looking for a more relaxed position, but it would be unfair to pigeonhole this a comfort machine only.

The fact is, it's a thoroughly good road bike that's decently light and a pleasure to ride. In fact, it's about as much bike as you could reasonably expect for the money. As long as you don't want mudguards.

THE VERDICT

The Endurance is near as damn it the perfect entry-level road bike



Also consider...



FOR A LITTLE MORE CANYON ENDURANCE CF 7.0 SL £1399

An extra £350 gets you the carbon fibre version of the Endurance, with the same kit and wheels and a weight around 7.6kg. It also looks good value.



FOR A LITTLE LESS CANYON ENDURANCE AL 6.0 £799

For £250 less, the 105-equipped 6.0 might just be the pick of the Canyon bunch for maximum value, with a spec that's almost identical otherwise. →

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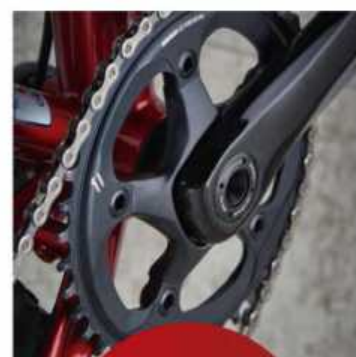


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+ **↓** **Below** The rear rack mounts promise versatility...
Bottom ...but though the single ring works well it limits the gear range slightly



Although the gear range is generous, it doesn't quite extend low enough for off-road climbing

BOMBTRACK HOOK 2

£1599.99 > Hook, line, and sinker?

Since entering the market at the height of the fixed gear craze, Bombtrack has diversified from its achingly cool roots, with its range now including everything from conventional road bikes to a sort of 29-er BMX thing. The Hook 2 is pitched as a jack-of-all-trades: part winter bike, part light tourer... and part cyclocross or gravel machine for good measure.

Aesthetically, the bike is a blend of old and new. The skinny Columbus Cromor steel frame with its near-horizontal top tube tends towards the former, while the beer

can head-tube and press-fit bottom bracket are more from the latter school – as are the substantial carbon-legged fork and disc brakes.

Look a little closer and the left shift paddle seems to be missing, but that's because the Hook has a one-by-eleven SRAM Rival 1 drivetrain, meaning the left lever is for braking and braking alone.

One-by setups are all the rage in 'cross circles, and with no front derailleur, fettling gears is a cinch. The fancy X-Sync chainring and clutch rear derailleur do an excellent job of keeping the chain in check, and shifting across the wide 11-32t cassette is no different to any other

SPECIFICATION

Weight 10.1kg (S)

Frame Columbus Cromor chromoly
Fork Carbon/alloy disc

Gears SRAM Rival

1, 42t ring, 11-32

Brakes TRP Spyre

Wheels DT Swiss

R23 db Spline

Finishing kit

BT Bikes stem, bar,

seatpost and

saddle, 35mm

Continental

Cyclocross Race

tyres

SRAM DoubleTap groupset, with just a little extra noise in the biggest cog where the chain is at its most extreme angle.

Having said that, we can't help feeling that a more conventional two-ring setup would be more in keeping with a broader design that seems predicated on versatility. Although the gear range is quite generous, it doesn't extend low enough for proper off-road climbing, or for carrying any significant load. You could fit a smaller chainring, but then of course you'd be limiting the top end.

Back to the frame, the stylishly bowed seatstays add some spring →

The Hook is a good-looking, pleasant-riding bike but with a somewhat premium price tag



out back and, along with the fork, they sport bosses for mudguards or a rack of some sort – hurrah!

Overall, the spec is a thoughtful one. The DT Swiss R23 Spline wheels are a solid choice with moderately wide rims, tubeless compatibility (with an appropriate rim tape), and a respectable weight in the 1600g range. TRP's Spyre disc brakes are outclassed by full-on hydraulic callipers, but their dual-piston design puts them at the top of the mechanical tree – there's no better option if you're sticking to cables.

Being all things to all men does carry certain risks. The Continental 'cross tyres are adequate for most purposes, but not optimal for any. On tarmac and dry dirt we'd rather just have a fat, fast-rolling slick, and for actual mud, more specialised rubber would do a better job.

That said, the bike is quite content cruising on or off-road.

HIGHS

Looks, smooth ride quality, top notch wheels

LOWS

Weighty, over-g geared, expensive, and not quite the Swiss army knife it claims

BUY IF

You want an elegant steel all-roader and you're not counting grams

It doesn't particularly appreciate being hustled – the frame isn't laterally stiff enough for that – but settle into a rhythm and the miles will tick by happily. The tyre volume on offer means comfort need not be a concern, and the option to run fairly low pressures for bridgeway excursions is always there.

The Hook is a good-looking, pleasant-riding bike but with a somewhat premium price tag, which makes it a hard sell in this company. It would be simple enough to switch tyres to suit your riding discipline, but the choice of gearing means it's not as versatile as it should be, and it could be lighter too.

THE VERDICT

A pleasant all-rounder that's priced on the high side, and isn't as versatile as it could be



Also consider...



FOR A LOT MORE BOMBTRACK HOOK 3 £2869.99

For more than a grand more, you can have a racy full carbon frame with SRAM's Force 1 groupset, which includes proper hydraulic brakes.



FOR A LITTLE LESS BOMBTRACK HOOK 1 £1299.99

The cheapest Hook gets SRAM's entry-level Apex groupset and the same TRP brakes. It's built around a more basic 4130 chromoly steel frame. →

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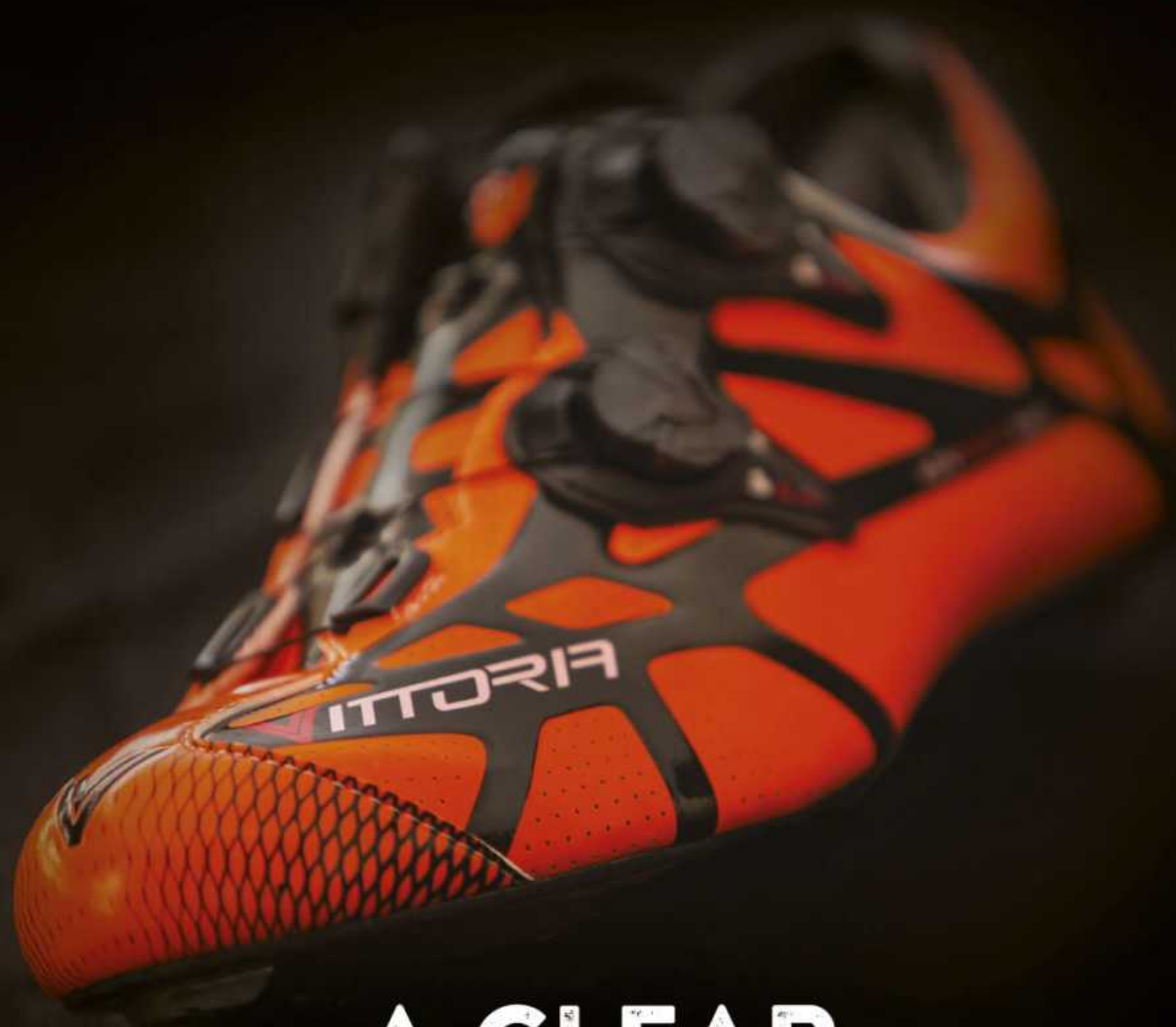
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+ **↓** **Below** Dropped seatstays and a carbon seatpost promise comfort
Bottom There's no messin' about with this big is beautiful bottom bracket shell



While the ride is swift and Germanically efficient, comfort is more than adequate

SILVERBACK SIRELLI 2

£1919.41 > Lightweight carbon flyer from an ambitious newcomer

Silverback's South African-born founder Deon Retief certainly isn't short of ambition: "I want the Silverback brand to be the Apple of the bicycle industry," he says of the company that now has its Global Development Centre in Stuttgart (after six years in South Africa).

We like a man with ambition, but that's big cojones by any standards, although the Silverback Sirelli's figures do make for a bold start.

A good whack under two grand is impressive given the level of equipment, as is the 7.25kg weight. And while Shimano Ultegra is the

go-to groupset at around £2000, the wheels and accompanying kit are both at the higher end of the component spectrum. The Fulcrum Racing 3s are light, tight and quick to get up to speed, and our experience suggests they're pretty durable too. The tyres are Vittoria's Rubino Slicks in a supple 25mm width.

Other treats include a carbon fibre handlebar and 27.2mm carbon seatpost. We preferred the flattened profile of the Cube's handlebar tops, but these were both welcome, helping with the comfort and keeping weight to a minimum.

The frame may not be groundbreaking, but it has all the

SPECIFICATION
Weight 7.25kg (56cm)
Frame Carbon
Fork Carbon
Gears Shimano Ultegra, 50/34, 11-28
Brakes Shimano Ultegra
Wheels Fulcrum Racing 3
Finishing kit Sector stem, saddle, carbon bar and carbon seatpost, 25mm Vittoria Rubino Pro Slick tyres

features you'd expect in a modern performance-orientated road bike. The down-tube and bottom bracket junction are big and beefy, the head-tube is short for a head-down position and tapered for responsive handling. Frame angles are on the steepish side, again emphasising its racy – rather than casual – inclination. But the seatstays are pencil slim and meet the seat-tube below the top-tube junction, so while the ride is (to slip into lazy national stereotyping) swift and Germanically efficient, comfort is much more than adequate, helped by the carbon bar, stem and carbon-railed saddle. It's very good over big →

Not only does it climb with an air of nonchalance, it descends and sprints like a demon



HIGHS

Generous spec, low weight for price, ride quality

LOWS

Boring paintjob, muck-magnet white hubs, gearing favours the strong

BUY IF

You want a properly specced, lightweight racer that won't batter you to death

bumps, and decent over cracked, chattery surfaces too.

The Sirelli does at least come with a few spacers on the steerer if you don't want the bar slammed directly on to the top of the headset, but this isn't a machine for dawdling.

The low overall weight meant that the 11-25 cassette proved low enough for our tester, who'd usually go for a 28-tooth bottom gear. Not only does it climb with an air of smooth nonchalance, it descends and sprints like a demon – its sub-metre wheelbase making it eminently chuckable. If you're looking for a fast machine for potentially challenging sportives this is a good fit.

There's good attention to detail too, and it's nice to see features such as a chaincatcher, as well as size-specific stem, bar and crank length. Our dislikes are minimal: we'd have preferred thicker bar tape, and the Fulcrum's white hubs were tough to

keep clean even during a few days' testing, so who knows what they'll look like by the end of the winter?

And Silverback can't resist a bit of tech-speak, either. The phrase 'Advanced Dynamics' turns up a few times on the 'Aston Black' and 'Aventador Lime' frame (black and green to the rest of us). But that's countered by a quality frame decked with quality kit, for a bike that delivers a fast and fluid ride.

Perhaps it's not yet the Apple of the bike-building world, as there's little genuine innovation going on, but on this basis Silverback is still a name worth watching.

THE VERDICT

Not stunningly innovative or jaw-droppingly pretty, but a thoroughly sorted, racy machine



Also consider...



FOR A LITTLE LESS SILVERBACK SPACE 1 £1378.01

Built more for distance than racing, the swooshy-looking frame is still decked with Ultegra components and Fulcrum Racing 5 wheels.



FOR A LITTLE MORE SILVERBACK SIRELLI 1 £2536.95

Sirelli No 2's big brother loses the lime-green colouring but gains Shimano Dura-Ace at the same time. We think it's a fair swap. →



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+ **↓** **Below** Slimline seatstays meet elegantly just before the down-tube **Bottom** You're not going to be able to alter the height of the handlebar



Our experience suggests that Cube's talk of 'adding comfort' is not just marketing speak

CUBE LITENING C:62

£1999 > Does the newest incarnation of the Litening live up to its name?

At first glance it would appear that the designers of the Cube Litening C:62 went to the same engineering school as the Silverback Sirelli's creators – perhaps Bauhaus-influenced, given the utilitarian appearance compared to Cube's oft-multicoloured range.

The 'carbon 'n' green' colour scheme (Cube's description) adorns a frame with a chunky down-tube, deep chainstays and a hefty bottom bracket shell with slimline seatstays. Ultegra 11-speed does its usual first-rate job, and even the wheels are similar to the Sirelli's.

The similarities don't end there, either, as their overall weights are also very similar. You can just about detect the 113g difference when you lift the bike down from the rack; you can't feel it on the road. Frame angles differ a little, but wheelbase and chainstay lengths have a lot in common, and while the Cube has a 1cm taller head-tube, there are no steerer spacers and the bar sits flush to the top of the headset. This is very much for the prospective racer or, at the very least, the wannabe fastman (or woman) looking to hit Strava KOMs or sportive PBs.

But as with the Silverback, the Litening balances the need for speed

SPECIFICATION
Weight 7.38kg (56cm)
Frame C:62 carbon
Fork C:62 carbon
Gears Shimano Ultegra 50/34, 11-28
Brakes Shimano Ultegra
Wheels Fulcrum Racing 44 Aero
Finishing kit Syntace stem, Cube carbon bar and carbon seatpost, Selle Italia X1 saddle, 25mm Schwalbe One tyres

with a desire for comfort – much more so than German bikes from a decade or so ago.

They achieve this in different ways, though: the Cube does have pencil-thin seatstays, but it has a more compact frame with a slimmer top-tube than the Silverback, designed to 'introduce a degree of controlled flex, adding comfort to the ride experience', as Cube would have it.

Our experience suggests it's not just marketing speak, though it's hard to separate the influence of the frame from the very good contact points. Our tester is a big fan of handlebars with flattened tops, →

The short wheelbase and steep angles make it sharp when it comes to changes of direction



and the Cube's carbon bar is a favourite, especially combined with sumptuous bar tape, the 27.2mm carbon Motion Post seatpost and a decent Selle Italia saddle.

The Cube comes with Schwalbe's fast, grippy and comfortable 25mm One tyres, which are faster and more comfortable than 23mm tyres, and can be run at a lower pressure too.

Perhaps not surprisingly, the Cube is a similarly nifty performer to the Silverback. The wheels are a fraction heavier, so acceleration is theoretically slower, but over measured sections there was little detectable difference, and it descends every bit as sure-footedly as the Silverback.

The short sub-metre wheelbase, steep angles and tapered head-tube make it just as sharp when it comes to changes of direction, too. The Shimano Ultegra brakes, drivetrain and shifters worked flawlessly as

HIGHS
Low weight, smart spec, sharp handling and overall ride quality

LOWS
Uncompromising position won't suit all

BUY IF
You want a capable speed machine that doesn't need any upgrades

ever, though the Cube's wider, less racy 11-28 cassette will have a wider appeal than the Silverback's.

We found it hard to fault either the performance or the comfort of the Cube. The new C:62 frame and fork pairing is fast and light, the drivetrain is excellent, and the contact points very good. The wheels may not be as light as those on the Silverback, but are still good for the price. And a lot of care has been taken with the little things, such as the large metal plate on the bottom of the down-tube, designed to stop an unshipped chain damaging the precious carbon frame.

THE VERDICT

The Litening doesn't disappoint, backing up a great spec with an exciting ride



Also consider...



FOR A LITTLE MORE
CUBE AGREE C:62 RACE £2199

The endurance-friendly Agree has a distinctive-looking frame for 2016. This model comes with Ultegra kit and Mavic Cosmic wheels.



FOR A LOT MORE
CUBE LITENING C:68 £4499

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+ **↓** **Below** Thru-axles and hydraulic brakes form a great pairing
Bottom The Focus features neat split seatpost for extra comfort



Everything about the Cayo Disc is slick and modern and it's well suited to British riding

FOCUS CAYO DISC 3.0

£2299 > Pin-sharp Focus

Focus launched the original Cayo a decade ago and it rightly earned a spot in the budget hall of fame, becoming a benchmark for affordable carbon bikes. In 2014, the company revamped the design completely, bringing out both disc and non-disc versions.

While the Cayo Disc 3.0 is unashamedly mid-range compared to its sibling, the Izalco Max Disc, it can still claim some impressive numbers. It's built on a frame that Focus says weighs an average of 890g across all sizes, a penalty of only 20g over its rim brake

counterpart. The full carbon fork is equally feathery at just 380g.

Everything about the Cayo Disc is slick and modern. Its gear cables and hydraulic hoses are fully internal, with both entering the frame at the head-tube via the 'Cable Routing Plate'. This clever little insert can be swapped out to accommodate wiring for electronic groupsets, so future upgrades will pose no issue.

In place of conventional skewers, the bike has mountain bike-style thru-axles, with a standard 15mm up front and a 142x12mm rear. These use Focus's own RAT (Rapid Axle Technology) open standard,

SPECIFICATION

Weight 8.14kg (S)

Frame Carbon

Fork Carbon

Gears Shimano

Ultegra 50/34,

Shimano 105 11-28

Brakes Shimano

BR RS685

Wheels DT Swiss

Finishing kit

CPX carbon stem,

Concept EX carbon

bar, CPX Plus

carbon seatpost,

Fizik Aliante

saddle, 25mm

Schwalbe Durano

folding tyres

and they are about as quick to operate as standard quick releases, with the advantage of consistent hub and disc rotor alignment. This limits aftermarket wheel choices slightly, but most mainstream brands are now making road hubs with interchangeable end-caps, so it's not really an issue.

In some ways, the Cayo is ideally suited to the UK. It's designed to take tyres up to 28mm wide, but we've gone as high as 30mm without ill effect. That's almost entering into (shudder) gravel territory, and places the bike in a select group that possess both reasonably racy geometry and some rough road →



The Cayo is a well-balanced design with enough stiffness in the right places to be exciting

capability. With our terrible road surfaces, fatter tyres and lower pressures are of real benefit, and the Cayo's DT Swiss wheels offer a fairly wide profile that will make the most of your tyres. They can also be converted to run tubeless.

On the other hand, while it's a well-balanced design with enough stiffness in the right places to be exciting, the Cayo's frame isn't as compliant as some of its rivals here. Focus must think so too, because this year's version has a funky 'comfort' seatpost in the form of the company's new Concept CPX Plus (see page 82 for a full review), which certainly helps the case somewhat.

Last year's bike featured quirky flared drops which offered confidence on poor surfaces or sketchy descents, but took away from the Cayo's otherwise racy personality. Focus has opted for a more conventional shape for 2016,

HIGHS

Well-judged ride, newly refined finishing kit, generous tyre clearances

LOWS

It's an eyelet or two short of being perfect

BUYIF

You want the power and convenience of disc brakes along with racy geometry

leaving us little to criticise. In fact, the only limit on versatility is the omission of mudguard eyelets, something UK bike journalists lament but to which the rest of the world seems largely indifferent.

Regardless, as a package the Cayo Disc is very good indeed. Shimano's Ultegra is unimpeachably consistent, and the braking is consistent (unless your pads get contaminated, like ours did), powerful, and well modulated. The Cayo handles like a racer, but stops like a mountain bike. If you're in the market for a racy carbon disc machine, it should be on your shortlist.

THE VERDICT

The Cayo Disc 3.0 is smartly specced, surprisingly versatile, and fairly priced



Also consider...



FOR A LITTLE MORE
FOCUS CAYO DISC ULTEGRA DI2
£2599

Fancy going electronic? £300 more gets you Di2, but you're also stuck with a lesser set of Fulcrum wheels, so it's not a total bargain.



FOR A LITTLE LESS
FOCUS CAYO DISC RIVAL £1999

If it's SRAM that rocks your boat, save yourself a few quid and you can have yourself some Rival 22, along with house brand wheels.

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+ **↓** **Below** Shimano's hydraulic brakes were nigh-on faultless
Bottom The thru-axles and stem require a T25 Torx key, and this is where it lives



Discs may have found a home on gravel bikes, but the Scenero is at the racier end of the spectrum

STORCK SCENERO DISC

£2549 > Disc brake-equipped but the Scenero is no gravel bike

Cast your gaze back but a few years and the very thought of a disc brake-equipped road bike would have been anathema. Now they're 10 a penny.

Okay, given the price of this Storck perhaps they're not quite that common, but they're certainly going to be part of the future. Even the never-knowingly forward-looking UCI has sanctioned their use in road races. So, what advantages do disc brakes have?

Well, quite a few. They may not win the low weight battle, but when it comes to braking the discs have it

– every time and in all conditions. They also enable the rim to do away with the braking track, leaving it free to concentrate on strength and aerodynamics, which greatly improves wheel lifespan.

While disc brakes have found a natural home on gravel and endurance bikes, Storck's Scenero is at the racier end of the road bike spectrum. Take a comparable Specialized Tarmac, for example, and while the steepish frame angles are similar, the Scenero is lower and longer at the front, with a shorter head-tube; it's even shorter than the Silverback or Cube's. The chainstays are also short – but that

SPECIFICATION

Weight 8.03kg (55cm)
Frame Carbon
Fork Carbon
Gears Shimano 105 50/34, 11–28
Brakes Shimano BR RS785
Wheels DT Swiss R23 Spline Disc
Finishing kit Storck stem, carbon bar, Storck 31.6mm seatpost, Selle Italia SLS saddle, 28mm Schwalbe one tyres

makes the tight rear end easy to throw about. However, larger-footed riders might want to check heel clearances with the beefy chainstays, and the frame won't take tyres wider than our bike's 28mm Schwalbe Ones.

The frame itself is big even compared to some of the other bikes here, with a massive tapered head-tube, huge down-tube and sizeable bottom bracket shell with press-fit bottom bracket.

Front and rear thru-axles also make for a great connection with the wheels (the front axle neatly housing the required T25 Torx key). And though the seatstays are very →



As a speed-orientated disc-braked road bike, the Storck Scenero is up with the top tier

thin where they join the seat-tube, they quickly flare out further down in order to cope with the forces created by the disc brakes.

The result is a fast-handling machine that majors in firmness and efficiency. The reasonably light wheels mean it climbs pretty well, while the disc brakes allow you to brake a little later on the declines. Power and control are there in abundance with minimal effort at the lever, while the slightly larger lever hoods offer a decent handhold.

The carbon bar is slightly swept-back with comfortable, slightly flattened tops and 'pistol grip' drops, though we'd have preferred thicker, plusher bar tape.

Gear shifts from the combination of Shimano 105 derailleurs and the hydraulic/STI levers isn't quite as smooth as Ultegra, but any marginal deficiencies are more than made up for by the excellent braking from

HIGHS
Stiff and efficient ride, smart and secure thru-axles

LOWS
Firm ride won't suit all, tyre clearances relatively tight for a disc bike

BUY IF
You like your riding rapid and your stopping power consistent

the Shimano hydraulic disc system with 160mm rotors. The compact chainset and 11-28 cassette combo is well suited for fast riding over varied conditions; the tubeless-ready DT Swiss wheels feel very stiff, complementing the frame well.

The Scenero is a beautifully engineered bike, though it favours performance over comfort. Good contact points and wide tyres help, but you're always aware of the efficient beast beneath you. If you like a 'softer' ride, the Scenero won't be your scene, but as a speed-orientated disc-braked road bike it's up with the top tier.

THE VERDICT

Firm, fast and with first-rate brakes, but this is a pretty much a road-only machine

★★★★★

Also consider...



FOR A LOT MORE
STORCK VISIONER 20TH £3549
The price may not look that much more expensive, but this is for the frameset only – designed to celebrate two decades of Storck goodness.



FOR A LOT MORE (2) AERO
STORCK AERFAST PRO £3999
Storck's take on the aero road bike costs a smidge under four grand with Ultegra kit, and we're testing one of these next month.



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WINNER

Focus Cayo Disc 3.0 > Up-to-date tech in a well-rounded package

We set out to demonstrate the breadth and variety of German bikes on offer and with steel, aluminium, and carbon all represented, as well as both disc and rim brakes, we feel we've succeeded.

There's certainly no sense that German bike makers cater to just one sort of rider – we've got everything from a quirky 'cross bike and an entry-level aluminium distance machine, up to full-on racers in a variety of flavours.

Our all-road wildcard from Bombtrack didn't quite gel for us, but suggests at least some

appetite for bikes that don't bow to convention. Storck's offering is a compelling one, but discs or no, its stiff chassis is more in the mould of the uncompromisingly efficient German bikes of old.

The Cube and Silverback are so similar we sometimes struggled to differentiate between them. Both are excellent examples of their kind, though, and neither will disappoint. Canyon, meanwhile, has continued its tradition of being boringly brilliant, and the Endurace is another example of good quality aluminium trumping entry-level carbon.

However, it's the Focus Cayo Disc 3.0 that takes the win, a wonderfully

rounded bike that combines the latest technology with a solid frame. It also leads us back to our original question: is there a characteristic that defines German bikes?

It pains us to admit it, but sober, sensible engineering really is the common factor. The Bombtrack aside, none of these bikes are what you'd call colourful or outlandish. German bikes are often great value for money, but we still feel more could be done on the intangible side of things. We know you've got the engineering chops Germany, now how about showing us your curves, and dazzling us with a splash of paint here and there?

The Cayo Disc is a wonderfully rounded bike that combines the latest technology with a solid frame

NEXT MONTH

The aero road bike is one of cycling's more recent phenomena, dating back only 15 years or so. But these wind-cheaters are becoming ever more popular and these days are winning multiple races on the road. We test six of the newest examples of the breed to see whether they deserve a home in our racing bike stables.

	CANYON ENDURACE £1049 ★★★★★	BOMBTRACK HOOK 2 £1599.99 ★★★	SILVERBACK SIRELLI 2 £1919.41 ★★★★★	CUBE LITENING C:62 £1999 ★★★★★	FOCUS CAYO DISC 3.0 £2299 ★★★★★	STORCK SCENERO DISC £2549 ★★★★★
Size tested	S	M	L	56cm	S	55cm
Sizes available	XS, S, M, L, XL, XXL, XXXL	S, M, L, XL	XXS, XS, S, M, L, XL	50, 52, 54, 56, 58, 60, 62cm	XS, S, M, L, XL	47, 51, 55, 57, 59, 63cm
Weight	7.86kg	10.1kg	7.25kg	7.38kg	8.14kg	8.03kg
Frame	Aluminium	Columbus Cromor double-butted chromoly	Carbon	C62 Carbon	Carbon	Carbon
Fork	Carbon, aluminium dropouts	BT Bikes Hook 2 carbon/alloy disc	Carbon	C62 Carbon	Carbon	Carbon
Frame alignment	Head-tube good, fork and rear dropouts perfect	Head-tube good, fork and rear dropouts perfect	Head-tube and fork droouts perfect, rear dropouts good	Head-tube, rear dropouts and fork dropouts good	Head-tube, fork dropouts and rear dropouts good	Head-tube, fork dropouts and rear dropouts good
TRANSMISSION						
Chainset	Shimano Ultegra 170mm 50/34t	SRAM Rival 1, 42t	Shimano Ultegra 175mm 50/34t	Shimano Ultegra 172.5mm 50/34t	Shimano Ultegra 50/34t	Shimano 105 172.5mm, 50/34t
Bottom bracket	Shimano Hollowtech	SRAM GXP	FSA BB-386 EVO, 24mm reducer for Shimano Hollowtech II spindle	Pressfit	Shimano	Pressfit
Cassette	Shimano Ultegra 11-28	SRAM 11-32	Shimano Ultegra 11-25	Shimano Ultegra 11-28	Shimano 105 11-28	Shimano 105 11-28
Chain	KMC	SRAM	Shimano	Shimano	Shimano Ultegra	Shimano
Derailleurs	Shimano Ultegra	SRAM Rival 1 rear	Shimano Ultegra	Shimano Ultegra	Shimano Ultegra	Shimano 105
Gear levers	Shimano Ultegra	SRAM Rival 1	Shimano Ultegra	Shimano Ultegra	Shimano ST RS685	Shimano ST RS685
WHEELS						
Front and rear	Mavic Aksium One	DT Swiss R23db Spline disc	Fulcrum Racing 3	Fulcrum Racing 44 Aero	DT Swiss R24 Spline disc	DT Swiss R23 Spline disc
Tyres	Continental GrandPrix 4000s 700x25c	Continental Cyclocross Race 700x35c	Vittoria Rubino Pro Slick 700x25c	Schwalbe One 700x25c	Schwalbe Durano Folding 700x25c	Schwalbe One 700x28c
Wheel weight	F 1.18kg R 1.59kg	F 1.46kg R 1.92kg	F 1.08kg R 1.57kg	F 1.15kg R 1.6kg	F 1.42kg R 1.86kg	F 1.26kg R 1.66kg
COMPONENTS						
Stem	Canyon V15 90mm 31.8mm clamp	BT Bikes forged alloy stem 115mm, 31.8mm clamp	Sector Radius, 3D Forged 6061 100mm 31.8mm clamp	Syntace F149 110mm, 31.8mm clamp	CPX Carbon, 31.8mm clamp	Storck ST115 115mm, 31.8mm clamp
Handlebar	Canyon H17 Ergo Alu 31.8mm clamp 40cm	BT Bikes T6 butted, 9° flared bar 41.1cm	Sector Arc Carbon 31.8mm clamp, 42cm	Cube WingRace Bar 31.8mm clamp, 37cm	Concept EX 41.5cm	Storck RBC 180 31.8mm 40cm
Headset	Tange IS22AE-SCT integrated	FSA	FSA	FSA	FSA	Storck
Saddle	Fizik Ardea VS	BT Bikes Team slim padded rail seat	Sector, Superlight Foam, CRN-Ti Rails	Selle Italia X1	Fizik Aliante manganese	Selle Italia SLS Storck
Seatpost	Canyon S23 VCLS, 25mm setback	BT Bikes 620 alloy micro-adjust	Sector Level Carbon 27.2mm	Cube Performance Motion Post, 27.2mm	CPX Plus carbon	Storck MLP135 Platinum Ed 31.6mm
Brakes	Shimano Ultegra	TRP Spyre	Shimano Ultegra	Shimano Ultegra	Shimano BR RS685	Shimano BR RS785

Canyon

Cockpit 64cm
Standover 78cm
BB height 27cm
Fork offset 4.75cm
Trail 6.9cm



Silverback

Cockpit 69cm
Standover 80.5cm
BB height 28cm
Fork offset 4.25cm
Trail 6.6cm



Focus

Cockpit 69.5cm
Standover 78cm
BB height 28.5cm
Fork offset 4cm
Trail 7.2cm



Bombtrack

Cockpit 64.5cm
Standover 78cm
BB height 29cm
Fork offset 4.75cm
Trail 6.4cm



Cube

Cockpit 68.5cm
Standover 78cm
BB height 28.5cm
Fork offset 4.5cm
Trail 5.1cm



Storck

Cockpit 68.5cm
Standover 81cm
BB height 27.5cm
Fork offset 4cm
Trail 6cm



NEW
KIT



**MOST
WANTED**

FIZIK ALIANTE 00

★★★★★ **£279.99** > The best-selling endurance saddle gets another high-end edition

RIGHT, LET'S GET THIS OUT the way. This version of Fizik's longstanding endurance saddle costs nearly 300 quid. Is any saddle worth that?

The 00 features the same lightweight carbon hull as the Aliante R1, which was the first major overhaul of the Fizik range since its debut in 1999. This has been stiffened where it needs to be while being flexible enough to offer ample comfort. The 00, however, also gets a new variation of the single-piece Mobius rail found on Fizik's Kurve models. Fizik has lightened the rail for the 00 and, as you'd expect for the price, it's made from carbon fibre – in one continuous piece.

The Mobius design anchors at the nose, and here it's bonded rather than bolted. The flattened plate under the nose seamlessly blends into the squared-off oversized 7x9mm rail – which means you'll need to make sure it's compatible with your seatpost clamp. While the Kurve's Mobius rail features a bridge across the rails, Fizik has refined the design for the 00, losing the bridge to save a few grams.

This transition isn't just a styling feature, the new one-piece rail also makes the most of carbon fibre's natural spring, resulting in one of the most comfortable lightweight saddles we've ever tested. The 00's microtex upper weighs very little and attaches to a double-shelled top. Two layers of stiff, lightweight carbon sandwich a layer of high-density padding, a neat manufacturing technique that results in smooth, clean lines on the saddle's underside as well as on top.

The shape at first appears as familiar as any of the many Aliantes we've used over the years. The distinctive swoopy profile holds you in place perfectly, with the combination of flex in the hull's wings and the high-quality padding making it a supremely comfortable saddle.

But the shape has in fact changed – and for the better. The nose is slimmer and it stays slimmer further down its flanks, providing plenty of friction-free clearance for those with sprinter-sized thighs without ever feeling overly narrow.

HIGHS
Comfort in spades, light and beautifully made

LOWS
It's very pricey

At the rear there's a sharper kick in the tail, which is now topped with a suede-like material. It means you can really push back into it on steep in-the-saddle climbs, where the textured surface prevents you slipping.

The 00 test saddle we have weighs 176g (against a claimed 165g) which is 9g lighter than the

R1 we tested. This is heavier than range-toppers like Fabric's ALM Ultimate (£225, 120g) and San Marco's Aspide Super Leggera (£295, 105g) but lighter than ProLogo's £199.49 Nago Evo Nack CPC (214g).

Its quality and comfort do go a long way towards justifying the price, but it's still hard to justify the cost over Fizik's £219.99 R1 and its £189.99 Kurve Bull when their performances are so very similar. Should you simply have to have the best, the Aliante 00 might well be it. If your pockets are deep enough...

WE SAY
Fizik's classic endurance saddle gets a restyling for 2016

SHORTLIST



**FIZIK ALIANTE R1
BRAIDED £219.99**

★★★★★

The first major redesign of the venerable Aliante after 15 years was a major triumph. It retained the swoopy curved shape so loved by endurance riders worldwide, yet Fizik also managed to slim the nose down a little, trim a fair few grams and retain the flexible comfort-giving carbon/nylon hybrid base. At 185g you can find lighter saddles – but it'll be hard to find one that offers you more comfort.



**SELLE SAN MARCO
ASPIDE SUPER
LEGGERA £295**

★★★★★

Sub-150g saddles aren't known for their comfort, so the fact that the Super Leggera is so comfortable at just 105g is very impressive. High-density padding is topped with thin hand-applied leather, and with a carbon fibre base and unique crossover rails, it flexes much more than most carbon-hulled saddles. It's seriously pricey, but still a fine achievement.

NEW
KIT



WE SAY
The 3T offers fine-grained adjustment but in every other respect the Focus is better

CYCLING PLUS
BEST ON TEST

HEAD
TO HEAD

3T IONIC 25 TEAM COMFORT

★★★★★ £108

Design and specification

The Ionic 25 Team Comfort is a variant on 3T's standard mid-level carbon seatpost that adds a vibration-damping device to the head. This takes the form of a polymer ring encircling the clamp, which effectively isolates it (and the saddle) from the rest of the bike. A 350mm long, 27.2mm diameter post weighs 268g, which is nothing special at this price.

Practicalities

The Ionic's most ingenious feature is also its most frustrating one. The Difflock clamp system uses splined cylinders that sit within one another to give a precise, repeatable saddle angle adjustment. It's

a nice idea, but means even minor adjustments require a full disassembly of the clamp, and if your saddle has oval rails you'll need to buy alternative clamps because there isn't room in the standard ones. If you're a bit of a fiddler, the novelty will quickly wear thin.

Ride quality

We'd never expect a seatpost to transform your ride, but the 3T could have done more to impress us. In use, it feels like any other decent carbon post.

It does a decent job of soaking up road buzz, but doesn't provide anything resembling suspension, and for our money, we'd prefer something a bit lighter or more noticeably compliant.

HIGHS
Smooth ride quality, micro-adjustability

LOWS
Expensive, slow to adjust, heavy

FOCUS CONCEPT CPX PLUS

★★★★★ £112

Design and specification

Focus' entry into the comfort seatpost market is undeniably strange-looking, but we rather like it. It's like a standard carbon post, but below its head is a large cut-out, which means the saddle is effectively only connected to the bike by two narrow sections of material, allowing for a good deal more flex than a conventional post. A 350mm long, 27.2mm diameter post weighs in at a respectable 199g.

Practicalities

There's nothing complicated about the CPX Plus, and its two-bolt clamp arrangement is conventional and straightforward. Saddle angle adjustment is a case of alternately tightening and loosening the bolts, and there's no compatibility

issue with different types of rails. With care, you can actually swap saddles without removing the bolts, which saves time and faff.

Ride quality

Like the 3T, the Focus is not going to turn a boneshaker into an endurance machine, but it does absorb the high-frequency vibration of broken road surfaces well. Seatposts come a long way down the list of priorities in getting a bike to feel right, but if you're

looking for a marginal gain in comfort, or simply a good-quality lightweight post, the Focus is a solid choice.

HIGHS
Low weight, smooth ride, ease of adjustment

LOWS
Not cheap, looks polarise

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NEW
KIT



UPGRADE

ABUS TEC-TICAL PRO V2

★★★★★ £99.99 > As worn by the Bora-Argon 18 team

IT'S NOT OFTEN you see a professional team wearing a helmet that's not at the premium end of things – just check the prices of Team Sky's Kasko, Etixx's Specialized lids, or Garmin Cannondale's POCs.

That makes the Tec-Tical's Pro V2 mid-price point of just shy of £100 all the more impressive – after all, it's up against some serious tech when it comes to the pro peloton.

Abus already has a reputation for quality, and when it comes to locks there is little to touch them. Helmets, though, are a more recent endeavour for the company.

The Pro V2 does have some good things going for it, and not just the price. The EPS core is multi-density, so maximum protection can be provided where it's needed while a few grams can be saved in less critical areas. That helps keep the weight down to a respectable (though by no means light) 315g in the case of our large test sample.

The rounded shape is well protected by its in-moulded shell and with 20 inlet holes and 11 outlets at the back,

it's certainly well vented. Hugely deep internal channels help keep things very airy, too.

The retention system is quite a simple affair, and the 2.5cm diameter dial is easy to adjust even with full-finger winter gloves, while the click-to-movement ratio allows for plenty of fine adjustment. We'd like to have seen some vertical adjustment, though.

The straps are fairly thick – we'd describe them as middleweight – but the woven construction includes a central mesh channel to allow moisture transfer, and the hi-viz stitching adds a touch of quality. The minimal washable-antibacterial pads are matched with a soft-touch chin piece, which covers the click fix buckle. It's clear that plenty of thought has gone into the Tec-Tical's construction.

Like Abus's locks, the Tec-Tical helmet isn't glamorous – it doesn't come with any 'bells and whistles', and it isn't steeped in marketing hype. But if you're after a well-made helmet that does its job effectively and will last, it's worth considering.

WE SAY
A well made helmet that performs well and won't break the bank

HIGHS

Very well made, good performance too

LOWS

No vertical adjustment, not the lightest around

BENCHMARK



LAS DIAMOND £90

★★★★★

Italian firm LAS has a reputation for making top-quality, no-nonsense head protection, and the Diamond is just such a lid. Its angular design and understated finish bely a surprisingly good fit, with masses of adjustment available and a comfy and cool feel on the bike backed up by every safety standard you can think of. It's a helmet you can really depend on when you most need it.

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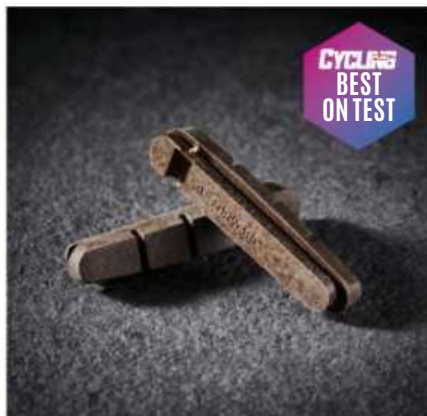
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DISCOBRAKES CARBON

★★★★★ £4.39 (pair)

Despite their budget price tag, these pads delivered strong but predictably progressive braking power on both older Syncros rims and Zipp's, and were impressively responsive in the wet too. Glazing wasn't an issue even when we dragged them deliberately, but rapid heat build-up and wear means we'd be wary using them with cheaper rims or in high mountain/heavy load situations.



AZTEC ROAD CARBON INSERT

★★★★★ £7.99 (pair)

Aztec's red brick pads are attractively priced but feedback is limited from a very flat, rather than progressive, braking performance. Whether it's the compound or the plain flat surface isn't clear, but stopping power drops off to panic levels in the wet and they're snatchy on older rims as they dry out. Limited heat creation at least reduces potential rim damage.



FIBRAX GREY

★★★★★ £10.99 (pair)

Fibrax's grey compound pads are made to work with both carbon and alloy rims but their soft compound makes them hard to fit into brake shoes. They also screamed violently on our older Syncros test rims in wet and dry. Otherwise, braking performance is good, with quick progression to healthy bite, and they're less affected by wet rims than most sets here.



BBB CARBSTOP

★★★★★ £16.95 (pair)

BBB's distinctive white brake pads aren't the most powerful but their very hard compound makes for notably clear and precise control of the power you do have. You need to really haul on the levers in the wet, but feedback was precise and pulse-free on both test rims. Low heat levels and lack of residue reduce potential rim issues too.



SHIMANO R55C3

★★★★★ £19.99 (pair)

Shimano's pads definitely need care, as braking power is nearly non-existent until they've got some heat into them for the first time. Power builds rapidly through use, though, and they mature into a rich, touchy-feely pad with consistent control in wet and dry. They self-clean in filthy conditions too, so are well suited to UK riding conditions – if you survive the first descent.



SWISS STOP BLACK PRINCE

★★★★★ £22.49 (pair)

In total contrast to the Shimano pads, the Swiss Stops have outstanding initial power, with a ton of control in the narrow band between lever touch and wheel lock. They're predictable in the wet when new, too. They react really badly to getting dirty, though, with dramatically reduced power and squeal on older rims unless you keep them clean – not always easy in the UK.

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Scope
About disability

NEW
KIT



1

1 CLUTCH KNOB

This large yellow knob controls the pressure of the tyre on the precision-machined alloy roller

2

2 ADJUSTABLE FEET

Plastic feet on the rear supporting bar can be rotated to help level and stabilise the turbo on uneven surfaces

3

3 WIDE STANCE

The foldable front legs extend out to a width of 78cm to give the SuperMagneto great stability in use

Inside
Information



RESISTANCE

No, not the shady overcoat-wearing French temptress who frequented Rene's Café in *Allo Allo*, but a description of the force that allows you to train effectively indoors on your bike. The original turbo trainers used a pair of fans, which gave non-adjustable, jerky resistance and excessive noise. Flywheels helped smooth things out, and while air resistance remains the cheapest option, today's most advanced trainers use either magnetic or fluid resistance.

Magnetic resistance comes from drag caused by the eddy currents created by a metal disc spinning within a magnetic field, whose strength can be varied mechanically or electromagnetically. They're pretty quiet, but performance can be affected by the heat they generate, and they typically populate the low- to mid-end of the market. Fluid resistance usually involves an impeller turning within an oil reservoir, and gives the quietest and smoothest ride. They can offer great resistance adjustability too, although their added complexity means they can be more expensive.

CUTTING EDGE

CYCLEOPS CLASSIC SUPERMAGNETO

★★★★★ £300 > A turbo trainer to marvel at?

IT'S THAT TIME of year again when riding indoors occasionally seems preferable to venturing outside, so here's a new and relatively inexpensive turbo trainer from CycleOps.

Using its trusty Classic folding frame, the SuperMagneto takes minutes to assemble, measures just 49 x 52 x 29cm when folded, and weighs 8.38kg complete, which is less than some bikes. It's easy to transport and store, rapid to set up, and has a lifetime warranty.

Simply swap your rear quick release skewer, locate the non-drive side, and turn the opposing spring-loaded bolt-action lever to secure the bike. It's designed for most bikes with quick release wheels and rear dropout spacing of 120mm, 130mm or 135mm, and 650B, 700c, 26, 27 or 29in wheel sizes with tyre widths up to 2.25in. You'll need a front wheel riser block to avoid slipping forward on the saddle, and we'd definitely advise using a specific indoor trainer tyre.

The SuperMagneto offers four resistance settings via the large rubberised grip on the outside of the flywheel enclosure. These can only be

adjusted between sessions; the only way to alter resistance while riding is by using your gears.

Easy setting allows you to spin easily and warm up your legs, Road mode is for smooth, steady riding over extended sessions, with a decent ride feel thanks to the large flywheel. Interval setting increases resistance, and is handy for those on fixed-wheel, while Mountain setting feels far more draggy, as if you're riding on a gradient.

The SuperMagneto is a stable training platform, even during leg-busting intervals. It's not whisper-quiet, but the claimed 69-70 decibels at 20mph isn't excessive - though that figure could vary depending on location and tyre used.

There is a tiny amount of slip from the precision-machined alloy roller during sprint efforts, but it doesn't interfere with your pedalling. It's not the most road-like turbo, but does a decent job overall, and is definitely good enough for most riders.

Plus, if you trade in your old turbo (regardless of brand), CycleOps will throw in a free Joule computer and speed sensor worth £120.

WE SAY
Smooth, simple and satisfying to use, the SuperMagneto is a smart choice

HIGHS

Ease of use, smooth ride, stability

LOWS

Riser block and turbo tyre are extra

ALSO CONSIDER



CYCLEOPS CLASSIC FLUID 2

£285 ★★★★★

Much like the SuperMagneto, this fluid trainer eschews the bells and whistles to offer solid all-round performance without the distractions of resistance adjustment or any external connections. For no-nonsense, beautifully smooth, top-quality training, with easy portability and a lifetime warranty, look no further.

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NEW
KIT



UPGRADE

NORTHWAVE FAHRENHEIT ARCTIC 2 GTX

★★★★★ £179.99 > Big name, big protection

WE SAY
Expensive for a single-season item, but these will outlast numerous pairs of overshoes

NORTHWAVE SAYS THAT ITS GTXs offer the ultimate in winter protection, with thermal qualities to keep the chills out – down to a claimed -25°C – and materials to keep the dry in.

They are built upon Northwave's NRG carbon-reinforced sole, which is suitably stiff with only the slightest discernible flex when stomping through a sprint out of the saddle. What surprised us about the sole was its mesh insert vent sections, when you'd expect a winter boot to be as well sealed as possible. But sandwiched between the upper's outer and lining, and sitting between the insole and sole, is 'Pique', a sock-like membrane from Gore-Tex. The range-topping, water-resistant-yet-breathable material works very well.

Your feet stay warm when it's chilly, but the breathability means you don't get that boil-in-the-bag feeling that can be the case when you wear waterproof overshoes with

standard road shoes. A lace covering flap, which also forms part of the adjustable neoprene cuff, helps to keep things in place and stop water getting in – especially from running off your legs into your shoes. But the upper's large mesh swathes do retain moisture when they get wet, and the windchill can be a little over-cooling, though it never gets uncomfortable. The micro-fibre lace and push-button retention system means you can get the fit right, but we found the laces too long, and so we ended up stuffing the excess wherever we could fit it.

HIGHS
Great fit, masses of protection

LOWS
Overly long laces, not that cheap

The 928g weight isn't light, but is comparable to a pair of mid-range road shoes paired with waterproof overshoes. Unlike overshoes, however, we'd expect to get a few winters' wear out of the Arctic. They may be expensive for a single-season item, but if you're serious about winter riding you could do a lot worse than these tough high-performance boots.

BENCHMARK



NORTHWAVE EXTREME GTX WINTER BOOTS

£220 ★★★★★

Northwave's range-topping foul-weather footwear uses a full-carbon sole offering optimal stiffness for those who take their winter training seriously. Twin Northwave-designed SLW2 (Speed Lace Winch) dials handle the upper fit, with adjustable neoprene ankle cuffs to seal out the elements. The finish is a little more muted than the Arctic 2's scream-from-the-rooftops high-vis design, and they're a little lighter too – 888g compared with 928g.

Perfect Partner

DEFEET WOOLIE BOOLIE 2 £16.99

Thick yet soft wool-blend socks from the masters of sports stocking design. The Woolie Boolie 2 stays warm in winter even when wet – making them the perfect complement for your cold-weather riding.

ALSO CONSIDER



COLD COMFORT SIDI HYDRO GTX BOOTS £249.99

★★★★★ These use a Gore-Tex membrane from sole to cuff. They don't have the same level of ventilation as the Arctic, but are designed for seriously cold weather, so there's plenty of room to get thermal socks inside.



A TOUCH OF FROST MAVIC FROST BOOTS £160 ★★★★★

The Frosts feature a fibreglass-reinforced sole that provides a reasonable level of stiffness. The upper combines mesh, PU leather and a Gore-Tex liner, which provides good coverage from all but the most torrential of storms.



COVER-UP CASTELLI DILUVIO SHOECOVER £35

★★★★★ Overshoes are the cheapest way to keep feet dry and warm, and the neoprene Diluvios are some of the best. They get wet but you don't get cold, though you'll only get a season or two out of them with heavy use.

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NEW
KIT

WE SAY
The Fraxions are solid all-rounders rather than suited to racing or big climbs

UPGRADE

VITTORIA FRAXION

★★★★★ £899 > Tyre maker's hoops

VITTORIA HAS BEEN in the bicycle tyre business since 1953, so the introduction of its new range of wheelsets is in many ways a logical progression for the Italian company. There are six road wheelsets in the lineup, with the Fraxion situated near the middle.

The hybrid Fraxions match an alloy rim bed and braking track to a structural carbon fairing that provides the seat for the spokes, and also adds stiffness, strength and an aero profile to the wheels. Of course, a hybrid rim won't be as light as one that's all carbon fibre, but the Vittorias acquit themselves fairly well on the scales. The 45mm deep front wheel is 818g, and the 50mm rear 1003g, totalling 1821g, which is much more than the 1698g claimed. Adding the QR skewers and rim tapes increases the total to 1982g, which is considerable.

Vittoria's Ultimate hubs are Italian-made, and the rear features the company's SwitchIt freehub body. Cassettes mount on a sleeve that can be quickly removed from the hub without any tools, so there's hardly any need to get your hands dirty should you replace it with another containing a Campagnolo cassette, for example, or lower ratios. An oversized 80mm-

diameter hub flange and just seven of the rear wheel's 21 straight-pull Vittoria Aero Lite spokes on the non-drive side help equalise drivetrain forces, as does the asymmetric rim.

Wider rims are generally faster and more comfortable, and Vittoria's WSR design is 22mm wide, and optimised for 23-28mm rubber. Fitted with 25mm tyres, the Fraxions gripped and handled well, showed obvious solidity and felt very sturdy, giving good drive when standing on the pedals.

Their rigidity makes them efficient climbers, if not the most rapid, but their performance belies their mass. On a blustery day, a fast descent held no fears for the blunt rim profiles, as they weren't flustered at all, maintaining good stability. Braking on the alloy track was as reliable and consistent as expected, and will always trump all but the loftiest carbon rims.

HIGHS
Build quality, rigidity, aerodynamics

LOWS
Overall weight, not mountain-friendly

Acceleration is decent but not earth-shattering, and sustaining flat speed is helped by the aerodynamic effect. Gradients slow progress, but for flatter and rolling riding the Fraxions are a sensibly priced, up-to-date and reliable choice for riders looking for strength, looks and aerodynamics.

ALTERNATIVELY



EXTRA ZIPP

ZIPP 60 £1140 ★★★★★

Zipp's 60s use the old non-Firecrest rim profile, and are hybrids, offering aluminium braking track security with Zipp's dimpled toroidal rim profile. At 1807g they aren't feathery, but they offer a decent ride quality and maintain speed efficiently.



3T OR NOT 3T

3T ACCELERO 40 TEAM STEALTH £999.99

★★★★★

We found it hard to find fault with this pair of wheels, though like many wheelsets with carbon aero fairings they are very loud. They were slightly underwhelming at their £1000 RRP, but look a better buy at the prices you can get them for now.



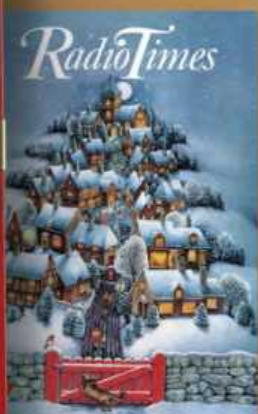
SUPER SLICK

FULCRUM RED WIND H50 XLR £1399.99 ★★★★★

Spinning on the optional friction-reducing CULT bearings - rounder and harder with precise races that only require a little oil for lubrication - the aluminium and structural carbon rim is a 21mm-wide V-shaped affair. The 1700g overall weight is reasonable, they feel stiff and fast but stability on the limit could be better.

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TECH STYLE

CASTELLI CROSS PRERACE JACKET/PANTS

★★★★★ / ★★★★★ £189.99/£109.99

Warm stuff, dry stuff, carrying stuff, cycling stuff...



Castelli's sponsorship of Belgium's Telenet-Fidea cyclo-cross team means it has created some specific warm-up clothing. The Pants have tapered ankles and calves to clear the drivetrain, shaped knees and are very weatherproof, with water beading on the surface. Dozens of plastic poppers on tough webbing down the outside of each leg allow them to be ripped off in seconds just before the start. The stretchy Torrent 3-layer fabric

isn't restrictive when riding and insulates effectively, keeping you as comfortable as possible. The Jacket's water-repellent PrimaLoft 60 insulation on the front, upper back and arms is extremely warm, with a tall, snug collar for cold days, and Nanoflex water-repellent fabric elsewhere. Three rear drop pockets and a large zipped front pocket for your race numbers or gloves make it really practical, but it looks so good you won't want to get it muddy.

CASTELLI GEAR BACK PACK

★★★★★ £130

Castelli's 26-litre backpack isn't cheap, but it's well thought out, with water-resistant material and zips, two main compartments with internal sleeves for a laptop and tablet, multiple smaller pockets and a generous front-zipped pocket. There's an external bottle pocket and loops to attach your helmet, a reflective logo, and hidden waist belt and adjustable shoulder and sternum strap. Weight distribution is great, making it comfortable to carry, and it swallows a day's kit without looking too bulky.



DEXSHELL WATERPROOF COOLVENT SOCKS

★★★★★ £25.95

DexShell's serious-looking socks are properly waterproof and their mid-weight membrane fabric is fairly warm, best suited to temperatures below 10 degrees. A high cuff makes it easier to keep water from trickling in the top, but if it does get in it's staying there – we'd recommend combining these with decent waterproof longs. A size large was slightly baggy on skinny size 9 feet, so if possible, try before you buy.



SANTINI GUARD 2.0 JACKET

★★★★★ £159.99

The Guard's 'Monica' fabric is both wind- and water-resistant and the fabric's silver-infused hydrophilic membrane allows the material to breathe well. The fit is astonishingly good, as the fabric has huge amounts of stretch. It's close-fitting but moves superbly with you as you work on the bike. Features are kept to a minimum but we do like the large twin pockets protected by a storm flap. A little more reflective, high-vis detailing wouldn't go amiss, though.

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OUR BIKES





SANTA CRUZ STIGMATA CC

Frame price £1999 Distance ridden 700km

CURRENT WEIGHT 7.945 kg (17.5lbs) **FRAME** Santa Cruz CC full carbon disc, PF30, 142x12mm Maxle Lite axle **FORK** Helium SL, 60T-40T-30T HM unidirectional carbon **GEARS** SRAM Force CX1 40T cranks, shifter, mech, chain and PG 1170 11-36T cassette **BRAKES** SRAM Force CX1 with 160/140mm rotors **WHEELS** Easton EC90 SL Disc with Panaracer Comet Hardpack 700x38mm tyres **FINISHING KIT** Zipp Service Course SL 70 Aero 440mm bars, Zipp Service Course SL 110mm stem and Zipp Service Course 27.2mm seatpost. SDG Circuit MTN Carbon saddle, Shimano XT SPD pedals, Zipp Service Course Cyclocross bar tape with Supacaz end plugs



Whether it's an album, a new favourite jacket or a fresh ride, sometimes something arrives that suddenly sours all the other

options you could reach for. That's precisely what's happened in my first few months of life with Santa Cruz's Stigmata CC.

At just under £2k for frame and fork it should be pretty damn special. And just as well – a paint job like this (there's also a tamer black/white option) is likely to get badly bullied if it can't fight its corner. Even among a regular stream of very tasty test bikes, the Stigmata has always been first off the hook at the slightest excuse for the past few months.

At under a kilo for the frame and only a fraction over the UCI minimum road race limit at 6.99kg (15.4lbs) in 'Stig SL' guise – with brutally stiff DT Swiss RC28 carbon wheels and Maxxis tubeless tyres – it's set or equalled all my local hillclimb Strava PBs.

As 'Fat Stig' [1], with 38mm Panaracer semi-slicks that are nearer 41mm on the Easton EC90

SL disc wheels at 25-30psi, it'll happily blast up and down red grade mountain bike trails or float across field-edge bridlepaths like a hovercraft. Then there's 'Zipp Stig' [2], with Zipp's new uber-fast 28mm tyres on Firecrest 202 wheels, which cruises like a limousine in a pack of aero road bikes before punching clear as soon as we hit the steep.

In short, it rips a grin across my face and keeps it there from the first muscular surge through the SRAM carbon cranks to the final feedback-rich squeeze of the disc brakes, however grim the weather or whatever company or parours are in store.

Even the frame set-up process was bliss thanks to internally routed brakes and easy cable access under the PF 30 bottom bracket. It comes with open or closed inserts for Di2 or double-chainring running, but using a single ring set-up for multipurpose use has been a revelation. With an 11-28t block, the 40t chainring will spin out at around 55kph but attack a prolonged 1-in-4 without ever being on the ropes. With an 11-36 and fat tyres, it'll hold an efficient



HIGHS

Lightweight, versatile and fun, whatever the course or conditions

LOWS

Bright orange paint job might be too loud for some

TESTER'S CHOICE



SCHWALBE AIRMAX PRO PRESSURE GAUGE
£11.99

Hyper-accurate tyre pressures are crucial to finding the perfect balance between traction and speed for 'cross racing and my trusty Schwalbe digital gauge is far more accurate than most track pump dials. It's still on its original battery after years of knocking round the workshop too.



SIDI DRAKO CARBON SRS VERNICE
£300

These Draco Carbons are perfect for the Stigmata. The carbon sole and twin dial closures are phenomenally stiff and secure for smashing the steepest road climbs but brass cleat fixtures and aggressive tread make them filthy CX course-compatible.

spin up a heavy cyclo-cross climb without straining your knees. The lack of ring, front mech and left-hand shifter saves weight and makes the Stigmata look super-clean too, and overall it's easily one of the favourite bikes I've ever ridden, with plenty of performance tweaking still planned.



My upgrades

Wheels Easton EC90 SL Disc £2299.99
Tyres Panaracer Comet Hardpack 700x38mm £59.98

Wheels Zipp 202 Firecrest Clincher disc £1825
Tyres Zipp Service Course 700x28mm tyres, and tubes £98

Total spend £4282.97



TESTER'S CHOICE



RAPHA LOMBARDIA JERSEY £160

Rapha's commemorative Lombardia jersey is not only gorgeous, but fits the adventurous aesthetic of the Trek. Sportwool maintains warmth and great comfort as the sun sets, and its buttoned pockets are practical too.



PEARL IZUMI ALL-ROAD III £79.99

As a warm-weather off-road touring shoe, the All-Road III has been perfect. Light, well-ventilated and supportive, with low weight and good all-day comfort, thanks to its triple Velcro straps, and a grippy rubber sole.



TREK 920

Original price **£1375** > Distance ridden **847 miles**

ORIGINAL BUILD **WEIGHT** 12.56kg [12.9kg incl. pedals and cage] (54cm) **FRAME** 100 Series Alpha Aluminium **FORK** Alloy Adventure **GEARS** SRAM X7 Type 2 rear mech, X5 front mech, TT500 bar-end shifters, SRAM S1000 170mm cranks, 42/28 rings, 11-36 cassette **BRAKES** TRP Hylex hydraulic with 160mm rotors **WHEELS** Trek Duster Elite TLR Tubeless Ready 29in, 15mm/12mm thru-axles **FINISHING KIT** Bontrager Elite Blendr 100mm aluminium stem, Bontrager Race VR-C aluminium bar, Bontrager gel cork tape, FSA headset, Bontrager 27.2mm SSR aluminium seatpost, Bontrager Evoke 1.5 saddle, Bontrager XR1 Comp 29 x 2.00in tyres, Bontrager BackRack Deluxe, tubular alloy front rack, Time ATAC XC6 pedals, Lezyne CNC cage



LAST SUMMER WAS far busier than hoped, so with limited opportunities, outings on the Trek 920 were restricted to some lengthy day rides, rather than the multi-day expeditions I'd hoped for. Even so, it's a bike that just begs to be released into the wild at every opportunity, and it's been a lot of fun.

Preferring not to change parts without a clear need to, my upgrades have been minimal. From the outset, this was never going to be a light bike, and trying to fashion one would be a pointless exercise. The 920 is all about riding possibilities, and my main aim has been to enhance those, if possible broadening its usability.

With its 29in wheelset, the original 2in rubber was the obvious place to start, and a pair of **Challenge Gravel Grinder Open Race 38mm tyres** [1] plus

suitable Schwalbe tubes was an easy swap. Their central file tread rolls much more efficiently on the road, and along with the aggressive shoulder knobs, there's plenty of grip off the beaten track too, at least until hitting deep mud. It took a while to get used to the skinnier look, but that now seems normal, and a major bonus is the 300g rotational weight saving, which does make a difference when going uphill.

Another quick change has been the saddle, switching the Bontrager item for **Fabric's unique Cell saddle** [2] with its running shoe-like air pockets – it seems an ideal fit for lengthy, bumpy rides. Apart from a few knee scuffs, the bar-end shifters haven't been any sort of handicap, although if the TRP Hylex brake levers weren't so comfortable, they might have already been upgraded. Watch this space.

HIGHS
Smile-inducing ride experience

LOWS
Not enough summer expeditions

My upgrades

- TYRES** Challenge Gravel Grinder Open Race 38mm x2 £70
- INNER TUBES** Schwalbe 28-42c x2 £13.98
- SADDLE** Fabric Cell £49.99

Total spend **£133.97**

CHRISTMAS GIFT GUIDE

Get your cyclist what they really want this Christmas with the Cycling Plus gift guide



ITHLETE

1 Every cyclist needs this app! Improve training effectiveness by knowing when to train, how hard to train and when to rest. A 60 second reading with the exclusive Finger Sensor delivers personalised recommendations based on heart rate variability (HRV), a reliable indicator of fitness and recovery. Use code CYCLINGPLUS to get your iThlete Finger Sensor for £39.99. www.myithlete.com www.facebook.com/ithlete

CYCLEMILES

2 Cycling Santa Christmas tree decoration. A proper glass Christmas tree decoration of Santa riding a bicycle. Beautifully made and hand painted in iridescent red, white, black and silver. 65mm x 80mm x 20mm. A cycling Christmas tree treasure for £5.95. This and many more gifts for cyclists available from CycleMiles. cyclemiles.co.uk 02392 455 355

2UNDR

3 2UNDR™ featuring the Joey Pouch™, a specialised, soft and comfortable pouch which houses and protects your package from unwanted skin-to-skin contact for reduced chafing and a perfect fit. Featuring premium materials for superior comfort, the Joey Pouch™ holds and uplifts, to naturally enhance your most valuable assets. www.2undr.eu 03333 583151

Hiplok DC

4 Give peace of mind this year with Hiplok's tough wearable mini D-lock and cable duo. Rated "Best Value Lock" by bikeradar, the DC's slim profile and integrated clips allow easy carrying on belts, bag-straps and in pockets. Reflective detailing protects the rider while the Sold Secure rated D-lock keeps your bike safe from thieves. www.hiplok.com 01926 298 747





WORDS JOHN WHITNEY

ILLUSTRATION DAVID DESPAU

DOES HEART RATE TRAINING STILL HAVE ITS PLACE IN 2015 OR ARE POWER METERS NOW ESSENTIAL TO SUCCESS? WE INVESTIGATE...

Q:

WILL A POWER METER IMPROVE MY RIDING?

Used correctly, in most cases, the answer is yes. A: They can eliminate guesswork in your training, help you train more specifically and help track your performance over time, but they're certainly no magic bullet.

In a perfect world, an investment of upwards of £3000 on an SRM power meter paired with top-end cranksets would make you go faster instantly. But unlike the latest state-of-the-art aero bike or lightweight carbon hoops, a power meter only offers only the potential for speed.

"It's easy to expect too much and it's something we see relatively often," says Elliot Lipski, physiologist and cycling coach at trainSharp (trainsharpcyclecoaching.co.uk). "At the end of the day, the only way to get better is to put in hard

work. It's up to the rider to produce the power themselves – unless, of course, you have a motor in the bike!"

Q:

ARE POWER METERS ESSENTIAL TO SUCCESS IN CYCLING IN 2015?

It depends on who you ask. Among A: elite cyclists, those not using power meters are few and far between. However, they have both the access to the expensive devices through teams or sponsorships and, crucially, the coaching expertise necessary to analyse the data.

But as an aspirational amateur, do you need one? If you're a racing cyclist, the answer is yes, according to Lipski. In training they can benefit everyone, he says, while in racing it's more discipline-specific: vital in time trials, where success and failure depends on following pacing strategies; less so in a road race, where going with attacks might be necessary regardless of whether 'computer says no'.

For coach Ben Wilson of Personal Best Cycling Services (personalbestcycling.co.uk), power meters are a "valuable addition to an amateur cyclists' toolkit", but are by no means essential. "It's easy to get caught up in technology but for most of my clients cycling is a hobby and, as such, should be fun," he says. "There is no substitute for getting out on the road and riding a bike."

Q:

I HAVE A HEART RATE MONITOR. WILL THAT STILL HELP ME?

There's a popular belief that heart A: rate training is 'old school' and power training is 'new school'. Lipski, for example, says that those using heart rate as opposed to power – assuming it's not a financial decision – are likely to have an "old school mentality", while coach Nick Thomas (theendurancecoach.com) refers to heart rate as "dated training."

In Hunter Allen and Andrew Coggan's revered power meter book *Training and Racing with a Power Meter*, they go as far to say that going off heart rate alone could easily "mislead you about your performance or even undermine your confidence".

Since heart rate is influenced by so many other factors, such as hydration, stress and lack of sleep, they argue that sometimes you're better off simply using perceived exertion, or "feel".

But that old school tag is unfair, according to Dr Iñigo San Millán, an exercise





physiology professor at the University of Colorado School of Medicine, who has tested riders on the Cannondale-Garmin pro team for the past six years. While an advocate of power meters, he says that without heart rate data to complement power data you're not getting a true picture of the physiological cost of your training: "[A power meter] is a great tool, but I think people are going to the extreme by saying heart rate is old school. It's not at all. You still see in sports like track and field, running and rowing athletes still training with heart rate in a very scientific manner. With heart rate you're actually using a physiological parameter. Watts are the end product of the physiological and metabolic events [in the body]."

Q:
**CAN A HEART RATE STRAP BE AS VALUABLE
A TOOL AS A POWER METER?**

A: When asked to choose either a power meter or heart rate monitor to coach their clients, both Lipski and Wilson opted for a power meter – Lipski for its ability to target training exactly to the relevant zone and energy system, Wilson because training can be quantitatively tracked through software like TrainingPeaks WKO4 and because heart rate data can be, as per Allen and Coggan, unreliable.

While all are in agreement that the perfect world option is to train with power and heart rate, San Millán says he'd choose heart rate training over power. Perhaps he is coming at it more from an athlete wellness rather than performance perspective, but his view goes back to a trend he's noticed when it comes to cyclists and power meters: overtraining syndrome.

"Watts are not watts" is a phrase he repeats a lot. By this he means the watts figure, as measured by a power meter, is the end product and doesn't take into account

the metabolic responses in the body. Power training plans, he adds, often assume that the same wattage over time presents a constant metabolic response, which, according to his own research, isn't the case.

"Let's say your coach tells you to train at 250W in zone two for four hours. They're assuming your metabolic response is going to be the same throughout that four-hour period, but that's not true in many cases."

He cites his own study from the University of Zaragoza (San Millán, Gonzalez Haro, Irazusta and Gil), which put two groups of cyclists, elite and recreational, through a 15-minute ergo test at fixed power outputs of 80 per cent and 75 per cent peak power respectively. They found that, even though power output was kept steady, physiological parameters (HR, lactate and VO_2 max) changed over time.

Physiological stress increased as the test went on and, they concluded, should be taken into account when drawing up power-based training plans. Training to inaccurate zones, over a prolonged period of time without appropriate rest, can lead to a plateauing or drop in performance and motivation.

Q:
**IS OVERTRAINING STILL POSSIBLE WHEN
USING HEART RATE AND POWER TOGETHER?**

A: Not if you're working as part of an effective coaching unit, according to San Millán. Power data is a complex equation, even more so when paired with heart rate, so having an expert evaluate the data is vital. Both he and Lipski agree that it's important not just to have a coach, but that your relationship is closer than just firing over the occasional email.

With heart rate data, says Lipski, "you can spot early onset signs of illness and fatigue through combining the data [with a power meter]. This, along with subjective measures and a good rider-coach relationship, means that we can monitor performance and fatigue effectively."

A Spaniard teaching in the US, San Millán's experience of seeing burnt out cyclists has come mainly in his adopted country. "In Europe we have more of a tradition of physiology and a scientific approach to cycling. In the US there isn't that sophistication. A lot of cyclists buried their heart rate monitor a decade ago."

That, as he's already made clear, is a recipe for disaster. "[With a HRM] you might know you go up a climb [at a certain power] at 175bpm, but that on a given session you can't get it over 155. That's a typical sign of overtraining. If you bury heart rate, you will never see that."

Ultimately, believes Lipski, the key

■ ■
**IT'S IMPORTANT
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FIRING OVER THE
OCCASIONAL EMAIL**



to avoiding overtraining is a strong relationship between rider and coach, where both learn to understand how the cyclist reacts to exercise and are able to quickly adapt training to suit their needs.

Q:

IS THERE ANY OTHER TOOL IN DEVELOPMENT THAT MIGHT SOON MAKE POWER METERS SEEM 'OLD SCHOOL'?

A: The ultimate goal, says San Millán, would be to train with a lactate meter. Lactate is a byproduct of glucose utilisation in muscle cells during exercise and its accumulation in blood increases with exercise intensity. Hydrogen ions, which build up along with lactate, may interfere with muscle contraction and inhibit performance. Lactate threshold describes the point at which lactate production exceeds the body's capacity to clear it, leading to a drop in performance.

In San Millán's study, lactate levels were found to increase directly with heart rate, so being able to measure lactate gives a clear picture of the body at the metabolic level.

Don't expect to see lactate meters in everyday use anytime soon, however, as testing is only possible in the lab for now. "We're working on some possibilities," says San Millán. "Maybe in a decade [we'll see something]. I've been talking to biosensor companies, but we're not there yet."

A few years ago *Cycling Plus* rode the Fred Whitton sportive, and regular blood samples were taken through a thumb prick and analysed in the lab. Future technology, such as biosensors, will be faster, more sophisticated, and less painful. The first human tests were reported in the journal *Analytical Chemistry* in 2013 and were applied to the skin like a temporary tattoo.

THERE'S NO DENYING THAT A POWER METER, USED ALONGSIDE HEART RATE, IS THE BEST WAY TO TRAIN FOR MOST CYCLISTS

while power meters are persuasive, a heart rate monitor "has done the job in measuring my performance and helping structure how hard I ride during different sessions."

Even at WorldTour level, Cannondale-Garmin boss Jonathan Vaughters supports riders who choose not to use power as part of their training. "[Power] is a great tool, if used correctly, he says. "But if over-used and over-simplified, power measurement probably hurts training."

There's no denying that a power meter, used alongside heart rate, is the best way to train for the majority of cyclists, allowing you to create a training diary, track improvements and spot fatigue. But this information is only useful in the right hands. If you don't have the expertise or motivation to really tap into the device, power meters are at best an expensive curiosity, at worst a shortcut to burnout.

If power training isn't for you, however, fear not. As with Rowe & King and Pranker, Nick Thomas has seen his clients "massively improve" their power (by around 50W over 16-20 weeks) using only heart rate training, with power feedback only coming during subsequent tests.

"If you're training to just heart rate," adds Lipski, "you should still make significant improvements. It's dependent on the sessions you complete and the rider-coach relationship to ensure that the training is progressing in the right direction with the correct management of fatigue." **PLUS**

Q:

IF I DO BUY A POWER METER, THEN WHAT?

Getting tested will give you the **A:** training zones that you should be working to. This is best done in the lab, says San Millán. "Problems such as overtraining occur when you don't dial [Zones] in very well. You might end up thinking you're training in Zone 2 when in fact you're in 3," he says.

As already mentioned, it's best not to go it alone. James Llewellyn, a 24-year-old cat 3 racer and recent power meter convert, "played about" for months before getting in touch with Rowe & King (roweandking.com), the coaching company set up by pro cyclists Luke Rowe and Dani King.

"If you don't understand the figures, a power meter is pointless," Llewellyn says. In five months working with them he's raised his Functional Threshold Power (FTP), or hour power, from 245W (2.88W/kg) to 320W (4.1W/kg) and says hitting the prescribed numbers and sending it to his coach is a huge motivation. "It's nice to have an experienced coach," he adds, "but I like having an understanding of what the data means myself. It helps when discussing future [training] sessions."

Q:

BUT IF I CHOOSE TO TRAIN WITH A HEART RATE MONITOR, I'M NOT GOING TO GET LEFT BEHIND?

Heart rate training on its own still **A:** has a place in 2015. James Pranker, a 27-year-old NFTO Race Club rider and another of Rowe & King's clients, has had great results from such a programme in the 18 months he's been cycling. He says

THE PLAN

IN A SESSION CALLED 'OVER AND UNDER', ROWE & KING COACH COURTNEY ROWE EXPLAINS HOW YOU CAN USE BOTH POWER AND HEART RATE TO IMPROVE YOUR FUNCTIONAL THRESHOLD POWER.

POWER

HEART RATE

TRAINING DETAIL	COACHES NOTES		TRAINING DETAIL	COACHES NOTES
<p>Progressive warm-up, working through your Zones. Ride for 10 minutes with your power in the following Zones; 2 minutes Zone 1, 3 minutes Zone 2; and 5 minutes Zone 3. Then reduce your power, riding steadily for 3 minutes in Zone 2 with 1 x 6-second max sprints during each minute. 2 minutes in Zone 2. Make a note of the max wattage for each of the sprint efforts.</p>	<ol style="list-style-type: none"> 1. Warm up should be progressive 2. Gently work your way from Zone to Zone (working from the lower to the top of each Zone). 3. The max sprint efforts are both part of the warm up, and a training discipline in themselves – so commit fully to them. 	Warm Up	<p>Progressive warm up, working through your heart rate Zones. Ride for 10 minutes with your HR in the following Zones; 2 minutes in Zone 1; 4 minutes in Zone 2; and 4 minutes in Zone 3 (through each Zone, try to progress steadily from the lower to the top end of the Zone, creating a constant increase in effort). 2 minutes easy in a light gear (HR is not important). 3 minutes at Zone 2 with 1 x 6 second max sprint during each minute. 2 minutes in Zone 2.</p>	<ol style="list-style-type: none"> 1. Warm up should be progressive 2. Gently work your way from Zone to Zone (working from the lower to the top of each Zone). 3. The max sprint efforts are both part of the warm up, and a training discipline in themselves – so commit fully to them.
<p>Ride for 5 minutes at your threshold wattage. For the last 15 seconds of each minute ride as hard as you can – this is a max effort sprint each minute. Do not rest after each 15-second max effort – maintain your threshold wattage.</p>	<p>Make an note of your average wattage for your 5-minute block. You can look at your first effort as a PB. From then on it is for you to challenge yourself and set new PBs which will show improvement.</p>	Set 1	<p>Ride hard for 45 seconds with the aim of hitting your threshold heart rate towards the end of the 45 seconds. Then sprint as hard as you can for 15 seconds. Drop back into the pre-15 second sprint intensity. Allow your HR to drop back to threshold over the next 45 seconds then repeat the max effort. Continue this 45/15-second effort for a total of 5 minutes.</p>	<p>Due to the lag between effort and HR update there will have to be an element of feel with this session. The HR monitor is a guide only. An excellent indicator of fitness is how quickly your HR drops. Make a note of the drop during the first 1 minute between sets. Calculate this as a percentage of the HR at the end of the set.</p>
<p>4 minutes very easy (Zone 1).</p>		Recovery	<p>4 minutes very easy (HR in not important).</p>	
<p>Ride for 5 minutes at your threshold wattage. For the last 15 seconds of each minute ride as hard as you can – this is a max effort sprint each minute. Do not rest after each 15 second max effort – maintain your threshold wattage.</p>		Set 2	<p>Ride hard for 45 seconds with the aim of hitting your threshold heart rate towards the end of the 45 seconds. Then sprint as hard as you can for 15 seconds. Drop back into the pre-15-second sprint intensity. Allow your HR to drop back to threshold over the next 45 seconds then repeat the max effort. Continue this 45/15-second effort for a total of 5 minutes.</p>	
<p>5-10 minutes easy spinning. Use a light gear and spin the legs. This will help flush out the lactic acid from your muscles and start the recovery process.</p>		Warm Down	<p>5-10 minutes easy spinning. Use a light gear and spin the legs. This will help flush out the lactic acid from your muscles and start the recovery process.</p>	

VIB

VERY IMPORTANT BIKE

CERVÉLO MTN-QHUBEKA P/B SAMSUNG S5

£9999 > Stage-winning, money-raising aero road bike

+ CERVÉLO PRETTY MUCH INVENTED the concept of the aero road bike back in 2001 with its groundbreaking, race-winning Soloist, and the Canadian company is showing no sign of turning its back on the concept now. The MTN-Qhubeka S5 is about as near as you'll get to the Tour de France machines ridden to a stage win by Brit Steve Cummings and to temporary ownership of the polka dot jersey by the Eritrean climber Daniel Teklehaimanot.

The radical-looking frame with Shimano Di2 components is claimed to save 21.3 watts over the previous S5, with the head-tube, fork and bottom bracket all claimed to be stiffer than before.

There are also aerodynamic gains from the new Cervélo handlebar, while the Ceramic Speed headset and bottom bracket should keep unwanted friction to a minimum. The **frame features a dedicated carbon seatpost and radical cutaway seat-tube (1)**, while both the seatstays and down-tube have been lowered. The seatstays shield the rear brake callipers, while Cervélo claims the dropped down-tube reduces drag by 'taking into account the interaction between the front wheel and the frame'.

Even the paint is high-tech, featuring a process normally used in F1.

As for the lines on the fork and seatstays, these are 'heatwaves cutting through the sunrise in South Africa', or so says Cervélo graphics guru Tom Briggs, while the five colours of the South African flag (other than white) adorn the lower side of the down-tube.

As you'd expect for a machine with a 10-grand price tag, the kit is seriously swanky. The **Rotor 3D+ In-Power chainset (2)**, with round chainrings, powers the gold KMC chain – unfortunately not real gold, we reckon – with Shimano Di2 taking care of essentials like braking and electrically powered shifting.

The **ENVE SES 4.5 carbon clincher wheels (3)**, developed by former F1 aerodynamicist Simon Smart, have rims of different depths. The front rim is shallower to improve stability, which is less of an issue at the rear where aerodynamics are more crucial. These are clincher rims, whereas the MTN-Qhubeka riders use sprint rims with tubular tyres – the only difference between this and the team machines. The build is finished off with Lizard Skins tape and a Team Edition Selle Italia SLR saddle with titanium rails.

Finally, for every one of these bikes sold, Cervélo will donate a super-tough 'Buffalo Bike' to the Qhubeka Foundation's BicyclesChangeLives campaign (bicycleschangelives.com).

As you'd expect for a machine costing 10 grand, the kit is seriously swanky

SPECIFICATION

Weight 6.87kg (56cm)
Frame Carbon
Fork All carbon
Wheels ENVE SES 4.5 carbon clincher
Gears Shimano Dura-Ace Di2, Rotor InPower 3D+ NoQ 52/36 chainset, 11-25
Brakes Dura-Ace
Finishing kit 3T Arx Team stem and Ergosum carbon bar, Lizard Skins tape, Cervélo seatpost, Selle Italia SLR saddle, 25mm Schwalbe One tyres





PRO FOR A DAY

WORDS
Stephen Chidley

PHOTOGRAPHY
Joolze Dymond

Ever wondered what life is like on a pro team? Stephen Chidley joined One Pro Cycling for a day to find out



For the first time in hours I glanced down at my Garmin and wasn't filled with a sense of dread. It showed 109 miles done – further than I'd ever ridden before, and boy did my body know it – but, crucially, it meant I had just six miles left to go, or about the same as my daily commute.

The Lee Valley Velodrome was so close I probably could have seen it – if I'd had time to look. Immediately my legs felt stronger. You could call it a second wind – though in reality it was more like the fifth or sixth – but whatever, the point was in 15 minutes or so it would all be over... and then my whole world came crashing down.

I've rubbed wheels with a rider in front before, and it's always a heart-stopping experience. But this was altogether different: desperate to leave as little fresh air between me and One Pro Cycling's Josh Hunt in front of me as possible, I made the fatal mistake of overlapping wheels.

A quick change of direction from Josh to find a better route through the choking London traffic and there I was, lying on the ground all but welded to my bike thanks to over-zealously tightened Look pedals.

I immediately became the focus of an entire professional cycling team (as well as the three fastest amateurs I've ever met). Thankfully my cheeks were already well blushed, as the thought of this →





experiment faltering at the last because of me was more than a little embarrassing.

I use the word 'experiment' loosely, since Mary Berry probably applies more science to judging a blueberry buckle cake than we did to this, but I probably learned more about cycling in those five hours than I had in all the time I'd owned a road bike until then.

At this point I should probably quantify my cycling experience and how I managed to end up in this fine mess. As younger men, Jamie Wilkins of *ProCycling* magazine and I used to mess about on motorbikes in the name of journalism. He discovered the joys of cycling a long time ago, but it eluded me until towards the end of 2014. Since then I've thrown myself at it as much as anyone with a full-time job and two kids can, racking up 4,000-odd miles, including a couple of sportives and a hot July day spent climbing Mont Ventoux three times.

Still, I'm a relative novice for whom averaging 20mph over any distance feels like a victory. Luckily for me, *Cycling Plus*

“Mary Berry probably applies more science to judging a blueberry buckle cake”

decided it would be interesting to see how fast an average cyclist could be dragged around a Grand Tour stage by a pro team.

With ex-England wicket keeper Matt Prior's One Pro Cycling team and super-handly amateurs Rob Pears and David Janes on board, the target Jamie and I chose was the Etape London by Human Race, a sportive that takes in most of the route covered by stage 3 of the 2014 Tour de France. When asked if I fancied playing GC rider for the day, it didn't take me very long to answer.

▲ 'Hmmm... maybe that banana wasn't a good idea after all...'

▼ Taking on London's streets with a team of professional bodyguards

ONE PRO CYCLING

I could give you a list of facts and figures about one of Britain's most exciting new race teams but it's nothing you couldn't find on Google. What the internet won't tell you is the remarkable atmosphere inside the outfit. I've met a lot of 'professionals' in my life, but few have been as approachable and down to earth as the guys I met that day in London – and I mean the whole team, not just the

guys on the bikes. No sooner had they finished dragging my body over the course than they were hard at work making other people's days too. They were still handing out medals and interacting with the 4,000 people we had shared the road with long after I had gone home.

Of course, that doesn't matter if they don't complete their primary goal of winning, but the team's strong showing in the

2015 Tour of Britain proves their competitive edge isn't blunted by spending a bit of time with ordinary riders, and their performances over the year secured them Pro-Continental status – pro cycling's second tier – another step towards their goal of competing in the Tour de France. I for one will support them any way I can, starting with buying some of their classy team kit (oneprocyling.com).





"Seriously, 50 quid and it's yours, mate"

As the big day drew near, however, I'd be lying if I said I didn't have moments of regret. I'm not the strongest of the regulars I ride with, but I'm far from back-of-the-pack either, and there's a certain comfort in the anonymity of being average. Here, though, I was going to be the weakest link in this little chain gang – by no small margin.

The day before, while attempting to watch the F1 qualifying from Suzuka, I got lost in a 1000-yard stare for about an hour. The enormity of the task was taking its toll, much to my wife's amusement.

D-day arrived, and the plan was to have breakfast on the team bus, followed by a briefing on the route and how best to drag me round it. Climbing aboard, I was met by the sight of Tour legend Bernard Hinault casually chatting to the young professionals who were about to pull my legs off.

FEELING EMPTY INSIDE

Resplendent in my newly acquired *Cycling Plus* team kit, I've never felt so out of my depth, and as a result of my nerves I was struggling to get anything meaningful down my neck. A mouthful of porridge and most of a banana was all I managed, and I knew that wouldn't be nearly enough.

The briefing got under way, and I tried hard to listen as team manager James McCallum went over the route, but in truth most of it went in one ear and out the other. Two things did stick with me, though: that we were riding on open roads and must obey the Highway Code at all times, and that they'd be riding at 300 watts at the front.

That meant I'd need to pump out around 220W for 115 miles riding on their wheels. Thinking back to the solitary 'century' I'd ridden before this, and how endless it had seemed, I started to fear I'd be seeing that banana again very soon. While everybody else was all smiles, looking forward to a relaxed bimbles with the boys, I felt sick to my core. God only knows how *actual* GC riders perform under this kind of pressure.

Of course, once under way the physical act of staying upright and neatly in the draft engaged sufficient grey matter that my nerves quickly abated to a manageable level. Starting in the first wave, we probably had less to deal with than most others on the day, but there was still a lot of stop-start before we got to the leafier parts of Essex.

A combination of respect and the assumption that sooner or later the 'pros at the front' would pull the pin kept the 500 souls in our wave in tow for quite a while – little did they know that our pace was actually being pegged by muggins here. Eventually, however, the less patient among them decided to add a touch of spice to →



One Pro's Pete Williams demonstrates some of the drafting techniques used in the pro peloton



proceedings, and not in a good way. The stop-start of city traffic had now been replaced with some very choppy riding up front. On more than one occasion I actually had to brake on an incline, less than a third of the way through I was starting to feel the effects more than I'd hoped – despite the quality of the help I was receiving.

But things were about to get a lot worse.

In an instant, my temporary teammates decided it was time for a comfort break, and abandoned the peloton. Once back on the

“I looked down to see 41 miles on the clock. I was seriously worried and close to a complete bonk”

move, and now riding in single file instead of two abreast, the race was on to catch them up again. And it was a race.

The speed was incredible, ridiculous even. I was riding full gas just to stay in the draft, barrelling along at over 30mph on the flat. At one point I saw we were doing 27mph up a slight rise. Within a couple of miles I was effectively toast. I got spat out the back and watched as my ship sailed off towards the horizon. If I'd had any spare breath I might have shouted, but I didn't.

Luckily, fellow mere mortals Rob, Dave and Jamie came to my rescue and together we managed to claw our way back to the peloton. However, by the time they'd got me reattached, it was a serious effort just to ride at the 22mph average required to stay there. I looked down to see a mere 41 miles

on the clock. I was seriously worried and close to a complete bonk.

Recognising the gravity of the situation, James pulled the One Pro team car over at the next feed station and for the first time that day I got some proper grub in me: olive bread to the rescue!

POETRY IN MOTION

On our own again and back riding two abreast, the pros got to work, and their efficiency was something to witness. Nestled in the middle, the miles finally began to click off – I was still hurting a lot at points but at other times I was comfortable enough to chat with my adopted teammates as they rolled around me. Compared to the mania of the large peloton, in this super-smooth, well-drilled group I was able to cover ground faster and with less effort.

I was just starting to feel confident of the outcome, even buoyant, when the next major crisis came. Applying a little extra power up a long drag, my right calf flickered with cramp. My heart sank – along with my derriere – the odometer showing 86 miles covered. I've had to deal with the almost debilitating effects of cramp before, and



Reeling in the peloton after an impromptu comfort break



▲ Clockwise from top left: the Cycling Plus foursome of David Janes, Jamie Wilkins, Rob Pears and writer Stephen Chidley

assertive confidence instantly made me feel stronger, and with careful management the cramp never got worse than a twitch.

After all of that, you can imagine how gutting it was to jump up from my impromptu break-dancing session just six miles from home, to find my rear mech only still attached to my bike by the cable and chain. Surely it wasn't going to end like this?

HERE, TAKE MY BIKE...

Of course not. Once the team was satisfied that I was okay, which I was, the question came "do you want to carry on?", and it was the easiest question I've ever been asked. Without hesitation, Pete Williams offered me his bike and jumped in the car – the same Pete Williams who had just clinched the sprinter's and climber's titles in the Tour of Britain. It was slightly surreal if I'm honest.

The final miles were hardly blistering due to the fact I really didn't want to crash Pete's bike with its continental brakes amidst the heavy traffic. Even still, we finished with an average moving speed of over 22mph, which isn't bad considering we stopped at every red light, junction and roundabout. It was the furthest I'd ever ridden – and the fastest I'd ever ridden regardless of distance.

But that was the least memorable part of the day. Just being able to experience riding amongst those guys, along with an old friend and a couple of new ones, will stay with me far longer than anything Strava may or may not have said. I hope they know how grateful I am for their help and in return how hard I tried for them, even if I simply couldn't pull my weight at the front.

It's easy when entering sportives, especially with your mates, to turn it into something competitive, but that really is missing the point. Whether you're helping or being helped, it's the commitment to your fellow riders and the subsequent shared memories you take away with you that represent the biggest rewards. **PLUS**



learned that you can ride around it, but if it really set in the dream of a decent average speed would be as knackered as I was. One Pro once again rallied round me, the team car supplying me with fresh bottles and gels.

At one point cresting a small climb I felt a hand on my back; it reminded me of being a child again, such was its effect on my speed. I turned to see One Pro rider Sam Williams with a reassuring smile across his face as he uttered the words "nearly there big fella". He's almost 20 years my junior but, as with all his teammates that day, his calm and

▲ Keeping out of the wind just like a real GC rider would

◀ "You should see the other guy..."

HUMAN RACE

Britain's premier mass participation sporting event organisers, Human Race has been around for more than a quarter of a century and from my limited experience of these matters, they're getting pretty good at it. The logistics involved in getting 4,000 cyclists out of London then back again without closing the roads (which, let's be honest, is never going to happen if the city won't

even do it for the Tour de France 2017) is no mean feat. The level of detail and the richness of the experience provided for the lucky Etape London participants shows they're not just looking to cash in on our desire for all things exhausting, but are genuinely trying to make their events something to remember. Visit www.humanrace.co.uk and wonder at the myriad ways you can beast your body.

GEAR GUIDE

THINGS TO CONSIDER...

1

BREATHABILITY

Wicking is the process by which your body's sweat, produced by the heat of riding, is pulled away from the skin and through the fabric to the exterior of the garment for evaporation. The rate of this will vary depending on the fabric and its intended use.

2

CHAMOIS PAD

Chamois pads are designed to provide comfort but the quality of these varies depending on price. Better pads also offer greater airflow to keep you dry and irritation-free. Pad thickness differs and is deepest around the sit bones. Flatlock stitching is the norm for added comfort.

3

FEATURES

Pockets are useful for your riding essentials but they do add a little weight and bulk. A waterproof pocket for your phone can be useful. Reflective detailing is invaluable at night and on low-light winter days. Sealing zips and zip flaps help to keep the elements out.

4

FIT

A fitted cut reduces noise in the wind and is more efficient in terms of aerodynamics, breathability and comfort. A less-fitted cut allows for layering and usually looks better off the bike. A high collar and sealed cuffs help to keep the elements out, while a dropped tail offers spray protection.

SOFTSHELL JACKETS & BIBTIGHTS

We test eight of the best softshell jackets and cold weather tights to tackle whatever the elements deliver this winter

There's no escaping the fact that the British winter can offer less than favourable pedalling conditions. That said, there's no excuse for

not putting in the miles over the coming months with winter kit being better than ever before. Someone once said that champions are created in the winter. While pedalling through the cold months might not win you races, it will make you a stronger cyclist.

With new technical fabrics the days of dressing with lots of layers and looking like a sweaty Michelin Man are long gone. Softshell fabric found in a wide range of jackets offers outstanding performance, but not all softshell jackets are created equally.

These range from lightweight almost jersey-like tops for fast training and milder conditions, through to heavier-weight jackets aimed at the coldest conditions winter can throw up.

Price is often a starting point when looking for jacket. Cost isn't always an indicator of how warm a jacket will be, but usually the more you pay the higher performance you'll get, especially in terms of breathability and fit. In most instances features such as pockets, waterproof fabric or taped seams add to the outlay.

When it comes to the lower half of the body bib tights are king because of the fit they provide and how they keep you warm around the midriff. Like a good pair of shorts it's worth spending what you can

because comfort in the winter means you're more likely to stick with your riding plans. Like the jackets winter tights come in various guises from those that offer differing degrees of warmth through to those that are windproof and provide greater levels of water-resistance.

The type of riding you do is also important to take into account. Some jackets and tights work better for shorter intense sessions where breathability outweighs the need for warmth. On the flipside, longer steady pace rides require something a little more substantial to keep you toasty. Your build type will also have an influence with low body fat racing snakes requiring something warmer than those with a little more personal winter insulation. →



6

WATER-RESISTANT VS WATERPROOF

Many tights and jackets have a water-resistant coating that keeps the rain off but you will end up damp in the end. Waterproof products are designed to keep dampness out entirely. This can add weight and doesn't always breathe as well.

5

TEMPERATURE CONTROL

Most jackets and tights breathe better than ever thanks to new fabrics. Zipped vents on jackets, useful for harder efforts, increase temperature control but usually adds to the price.

WE SAY
Castelli's Nanoflex bibs are great for winter, offering the most protection of any tights here

**CYCLING
HIGHLY
COMMENDED**

CASTELLI

Top-end winter combo from pro peloton favourites

Alpha Wind Jersey

★★★★★ £175

Weight 305g **Sizes** S, M, L, XL, XXL, XXXL
Colours Blue, red, yellow

The brightly coloured and stretchy

Alpha, which features a neat zip-up inner section, offers jacket-like protection with the freedom of movement and top-level breathability found in a winter jersey. Its long tail provided the best rear coverage on test and the three back pockets are easy to use on the fly. Castelli says the Alpha will keep you toasty down to 8°C, making it ideal for milder winter riding or faster sessions, but we were fine a few degrees below this. Its tailored fit is ideal for the racing snake though most of us mortals will probably need a size larger. It's hard not to love the high performance of this jersey, but it's not exactly cheap.

HIGHS

Breathability, colour, comfort, features

LOWS

Price, waterproofing in heavy storms

Nanoflex Pro Bib Tights

★★★★★ £160

Weight 355g **Sizes** XS, S, M, L, XL, XXL, XXXL
Colours Black

These are a great choice for foul-weather riding thanks to the Nanoflex fabric, which combines a warm fleecy inner that stretches perfectly while pedalling, with a water-repellent outer. This Pro version has a layer of Nanoflex Lite around the knees, thighs and backside for extra protection. They're not completely waterproof but offer the best protection of all our test tights. A waterproof reflective band on the calf also keeps wheel spray at bay. Add in the superb Progetto X2 Air pad, airy mesh bibs and reduced seam construction for a high-performing pair of winter tights.

HIGHS

All-round winter performance

LOWS

Not exactly cheap

ALTURA

British-based king of well-priced cycling kit

Peloton Windproof Jacket

★★★★★ £69.99

Weight 340g **Sizes** S, M, L, XL, XXL
Colours Black, blue, red

Despite the low price it's good to see Altura hasn't ignored the styling of its racy-looking Peloton jacket. This lighter-weight fitted top offers jersey-like comfort, windproof panels on the arms and front and breathable thermal fabric on the rear panels. An internal zip flap takes care of draughts, while three large rear pockets and a zipped chest pocket with earphone port

look after storage. Neat reflective trims increase visibility. The Peloton is a solid performer on milder winter days or for faster training, but when the temperature falls below 10°C you'll need to look elsewhere.

HIGHS

Light and stylish and Altura's usual good value

LOWS

Not as warm as some jackets here

Peloton Night Vision Windproof Bib Tights

★★★★★ £79.99

Weight 250g **Sizes** S, M, L, XL, XXL
Colours Black

The Peloton tights feature Altura's Night Vision technology that offers superior 360-degree reflectivity for maximum visibility. This is great at night or in the low light typical of winter riding, and also makes them ideal for commuting, especially with plenty of reflective detailing. Inside the ProGel pad looks simplistic but offers good comfort considering the price. The upper airy mesh bib sections did a good of holding everything in place while still wicking effectively. Thanks to Altura's water-resistant Shield technology, and windproof panels that cover the knees and front thighs, these lightweight bibs offer sufficient protection for autumn and spring.

HIGHS

Good price, smart looks

LOWS

Simplistic-looking chamois pad

WE SAY
Altura delivers its usual excellent value, though its combo is probably best suited to milder winter days

INSIDE INFO

Keep it clean...

To keep modern fabrics – especially those with a water-resistant coating – working at their best it's important not to just sling them in a hot wash after a dirty ride. Follow washing directions carefully. With a jacket it's usually better to wipe them clean and avoid constant washing to retain performance.

Tights will need to be washed but consider what they go in the machine with. Also beware using fabric conditioners because this can play havoc with breathability. Similarly, certain strong detergents can reduce the water-resistance. Some garments recommend reactivation using a steam jet, cool iron or a cool tumble dry.





photo :: © Will Matthews

PAIN IS IN THE EYE of the beholder

SRAM.

- › This is Jeremy Powers. He is grimacing because he is in pain. His legs are on fire because he needs to be the first into the turn. He doesn't care how fast he's going. Not because he's crazy. But because he knows his **SRAM HydroR** disc brakes can help him to control his speed, no matter what. So Jeremy rides as fast as he can. Always.

ENDURA

Movistar's Scottish kit supplier's winter warmers

Windchill II Jacket

★★★★★ £75.99

Weight 470g **Sizes** S, M, L, XL, XXL
Colours Black, blue, green, red

With a more generous cut than most the Windchill II works well across a wide spectrum of cycling disciplines and rider sizes, also allowing you additional layers beneath it if required. The front features a heavier-weight waterproof fabric with the trade-off that it's less supple than some. This combines with a breathable thermal Roubaix rear to make the Windchill ideal when the temperature drops into single digits. Pit zips allow for further temperature control and even greater versatility. There's plenty of easy access storage on the rear along with a concealed chest pocket featuring an earphone port and glasses wipe. This is a well-thought-out multipurpose jacket offering good winter protection and superb value.

HIGHS

Waterproof front, warm, bright colour

LOWS

Heavy, less supple than some softshells

Windchill Biblong

★★★★★ £99.99

Weight 340g **Sizes** S, M, L, XL, XXL
Colours Black

Endura's Windchill bibs are more substantial tights thanks to a windproof and breathable membrane in the front legs, crotch and ankle areas. Combined with a Teflon HT treatment, this not only makes them good in a downpour but they stay warm even when they get wet. Inside, Endura's 600-Series anti-bacterial Silver Dry multi-density stretch pad is a great addition to tights of this price. Ankle zips and a zip on the chest make fitting and removal that much easier, especially after a cold or wet ride. These are a great value choice for colder, damper conditions.

HIGHS

Windproof, water-resistant, price

LOWS

Weight, not as supple as some

WE SAY
A versatile jacket that can be used throughout the winter matched with great value tights



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VALUE

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Quest Pulse 2015
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RRP: £1249.00






Quest Phase 2015
New for 2015, competitively priced full carbon race frameset with tapered head tube and oversized down turn to give ultra stiff and efficient riding comfort.
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THE COMMUTER'S CHOICE

CYCLING
BEST
VALUE

WE SAY
The Sportive is a great value, high-performance softshell packed full of features

MADISON

Can the wallet-friendly offerings deliver on quality?

Sportive Softshell Jacket

★★★★★ £79.99

Weight 380g **Sizes** S, M, L, XL, XXL
Colours Black, red

The Sportive – with its sleek cut, soft-feeling fabric and fine performance – punches above the level its price would suggest. Windproof and water-resistant front panels keep the harshest winds at bay and we had no issues keeping warm in a light shower. On the rear the warm Roubaix panel breathes well, and along with pit zips meant we were never left in a sweaty mess. The addition of a front zip flap keeps out draughts as does the tall fleece-lined collar and silicone-lined waist hem. This great value performer is finished with plenty of useful storage and reflective detailing.

HIGHS

Performance garment, great value

LOWS

Not completely waterproof

Sportive Fjord Bib Tights

★★★★★ £74.99

Weight 280g **Sizes** S, M, L, XL, XXL
Colours Black

Madison's Sportive Fjord tights might be the cheapest on test but their multi-panel design and quality 4G-RACE gel chamois ensure a smooth ride. Italian thermal Roubaix fabric takes care of heating duties without leaving you overly sweaty. Even at this price a water-resistant coating has been added and this fends off a light shower. The fitted cut works well in the cycling position although we found these tights a little longer in the leg than most. Being lighter weight makes them ideal for autumn and spring, or for faster sessions, but you'll need something more substantial on colder or wetter days.

HIGHS

Panelled design, good value

LOWS

Not the warmest tights out there

ASSOS

High-end oddly named clobber from Swiss kit guru

iJ.shaqUno

★★★★★ £211.99

Weight 440g **Sizes** S, M, L, XL, XLG, TIR
Colours Black, red, white

Assos uses a different approach to the other jackets with its two separate layers. The inner uses a soft warm stretchy fleece fabric that provides insulation while wicking well. The outer shell – which is windproof and water-resistant – is not bonded to the inner but strategically attached, creating an air chamber to help regulate body temperature. It's well sealed with a flap-free racing cut and comes into its own when the mercury falls towards lower single digits, but can be a little warm on milder days. This is a quality cold-weather jacket – but you pay a premium for it.

HIGHS

Warm, well-tailored cut

LOWS

Price, breathability in milder conditions

LL.milleTights_s7

★★★★★ £175

Weight 335g **Sizes** XS, S, M, L, XL, TIR
Colours Black

These are Assos's everyday tights, with any unnecessary frills removed, designed for cyclists in a rush. They are stretchy, which does save a few seconds putting them on. But performance hasn't been ignored, with Assos's water-resistant RX Heavy fabric offering a warm, snug ride, especially with the double layer fabric around the knee and thigh. The Mille pad, which looks unfinished because it's not completely sewn in, is designed to float between the rider and saddle. It looks crude but works well on the road. We love the ride and feel of the LL.milleTights_s7 – but they're not cheap.

HIGHS

Quick fitting and warm

LOWS

Nearly 200 quid is expensive for a pair of winter tights

WE SAY
A quality cold-weather jacket at a premium price paired with comfortable water-resistant tights



CYCLING
BEST
ON TEST

WE SAY
The Windstopper softshell is a thoroughbred winter jacket that delivers on the road

GORE

Can the high-tech expert weather the storm?

Oxygen Windstopper Soft Shell Jacket

★★★★★ £189

Weight 400g **Sizes** S, M, L, XL, XXL
Colours Black, blue, yellow

Gore's Oxygen is a dark horse because it performs at a much higher level than such a soft, fitted and free moving jacket would have you think. The Windstopper fabric with its warm and cosy brushed inner is superbly breathable. Zipped front vents provide further temperature regulation for when you lift the pace, while the long tail – along with well-sealed collar and cuffs – keeps the elements out. All the small details including six pockets, a front zip draught flap and reflective details have been included. This is a thoroughbred winter jacket that delivers on the road – if you have the money.

HIGHS

Top performance and fit

LOWS

Not the lightest jacket here

Oxygen Windstopper Softshell Bibtights+

★★★★★ £159.99

Weight 340g **Sizes** S, M, L, XL, XXL
Colours Black, yellow

Gore's heavier-weight Oxygen tights handle colder and wetter days better than most. This is thanks to Gore's breathable Windstopper fabric that's used in abundance in the legs. It does a top job of keeping the wind out, and while not completely waterproof sheds water well even in more prolonged showers. The trade-off to this level of weatherproofing is the fit, which made them tighter around the legs and body – so do try before you buy. As a consequence we found they offered less pedalling flexibility and at times bunched behind the knee. Gore's Oxygen pad is thicker than most but we found it worked well.

HIGHS

Top weather resistance

LOWS

Suppleness and stretch around legs

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SPORTFUL

Sporty Italian kit but is it full of winter-fighting features?

Fiandre Extreme NeoShell Jacket

★★★★★ £250

Weight 330g **Sizes** S, M, L, XL, XXL, XXXL
Colours Black, red

The **Fiandre Extreme** is the ultimate all-conditions jacket to beat the cold and rain when temperatures drop below 10°C. The Polartec NeoShell fabric with taped seams is windproof and fully waterproof yet remains highly breathable. This stretchy material provides a race-like fit and the sizing is small, but it retains a remarkable performance level. Even on the coldest days we were warm enough with just a base layer.

Our only minor gripe is the pockets are a little high and not angled for easy access. That said, it remains one of the best all-in-one winter jackets but it comes with a price to match.

HIGHS

Superb performance whatever the weather

LOWS

Initial expense, high pockets

Fiandre NoRain Bib Tights

★★★★★ £125

Weight 310g **Sizes** XS, S, M, L, XL, XXL, XXXL
Colours Black

Sportful's **Fiandres** feel plush and body-hugging yet restriction-free from the first pedal stroke. Insulation is provided by a brushed inner with an extra layer of fabric around the thighs, knees and back. Sportful's NoRain water-repellent coating does a good job when conditions take a turn for the worse. Inside, the TC Pro chamois pad did its job so well it was more about what we didn't notice. The mesh upper bib section breathes well and we liked the addition of zipped ankles with reflective stripes. Sportful's Fiandres are classy bib tights offering high-end performance at a mid-level price.

HIGHS

Performance, value and weather resistance

LOWS

Little to fault at this price

CYCLING
HIGHLY
COMMENDED

WE SAY
One of the best all-in-one jackets and a very classy pair of bib tights form an impressive winter pairing

CYCLING
BEST
ON TEST

WE SAY

The Beta jacket feels like a jersey, offering a good balance between weight, fit and performance



SANTINI

Slim-fitting Italian designs with a racy edge

Beta Jacket

★★★★★ £149.99

Weight 305g **Sizes** S, M, L, XL, XXL, XXXL
Colours Black, red, yellow

Santini has employed Gore's Windstopper XFree 210 fabric that features a highly windproof and water-resistant membrane. We rode this down to 6°C with just a base layer yet had no overheating issues at 13°C. We like the fitted cut combined with comfortable collar and double thermal cuffs, though drainage holes on the three rear pockets did mean we had to ziplock electronic equipment in the rain. The Beta jacket feels like a jersey, offering a good balance between weight, fit and performance. The drop-tail rear is welcome but we think this could be longer to make this jacket a true knockout.

HIGHS

Light, warm and water-resistant

LOWS

Drop tail could be longer

Acquazero Vega Tights

★★★★★ £129.99

Weight 285g **Sizes** S, M, L, XL, XXL
Colours Black/red, black/yellow

The Italian made Vegas are good-looking and versatile brushed-fabric winter tights that work well across the cooler British seasons. Santini's Acquazero water-resistant treatment does a good job of repelling moisture, helping to keep you dry and warm for longer. Inside the GIT pad looks understated and is less airy than some but does a solid job. Rear mesh bibs help with temperature regulation, while elasticated ankles seal out the elements, although we missed zips here when removing after colder rides. The Vega tights fit, perform and ride well but score lower purely on price compared with some of their rivals.

HIGHS

Stylish and warm bib tights

LOWS

Pad ventilation and price



A WINTER'S TALE

Old-school meets new-school in a wintry sub-£1000 head-to-head on some of Britain's wettest roads

WORDS MATTHEW ALLEN PHOTOGRAPHY JESSE WILD

As the days shorten and the weather worsens, Britain's road cyclists are resigned to their fate. Club secretaries issue stern warnings about remembering to bring lights, and admonish those who fail to fit full mudguards. Road salt suddenly coats everything, and components seem to rust audibly. It's about at this point where proper winter bikes come in.

At its best, winter cycling is the triumph of

man over nature. It's confronting adversity head-on, and overcoming it with overshoes and sheer grit. Traditionally, the onset of winter means hanging up the shiny racing steed. It's not that expensive bikes can't take inclement weather, it's more of a philosophical position. Your summer bike gets the best of everything. It wears that gorgeous groupset that you saved up to buy, and it's cleaned lovingly on sunny Sunday afternoons to a soundtrack of leg muscles singing quietly from the morning's →



BIKE TEST



efforts. Sure, you could subject it to the depredations of winter, but even if you could afford the cost of consumables – would you really want to?

It's not just that those Super Record chains cost the Earth, or that your FireStrike carbon rims don't appreciate the abrasive qualities of winter's muck – it's that they deserve better. Why wreck a £120 cassette when you could do the same to one costing a fifth as much? After all, you're going to be weighed down by layers of winter kit in any case, so this really isn't the time for marginal gains.

You can of course ride through the winter on whatever takes your fancy, but there's satisfaction to be gained from using something that's ideally suited to the task. This month we're putting two possible approaches to winter cycling head to head: the resolutely traditional option from Dolan, and a more modern take on the idea from Giant. Do bikes like the Dolan still have a place? Is the Giant actually up to the task?

As luck would have it our testing coincided with a period of exceptionally wet and windy weather, and our local roads were carpeted with a thick layer of mud and leaves that gave them the friction properties of an ice rink. Puddles so deep you could drown in them lurked round corners, providing a perfect proving ground for our winter warriors. We chose a route on our doorstep that offers a few flat miles to warm up, including the delights of crossing the ancient Hawkesbury Common. It then hits you over and over with a series of short, sharp climbs, the first of which takes you up to the Somerset Monument. Various twists and turns deliver you to the wonderfully posh Cotswolds town of Tetbury, where there are ample opportunities to seek refreshment, and then it's a case of heading west then south to loop back home.

Dolan out the pain

Bikes like the Dolan Preffisio are the bread and butter of the UK winter cycling scene. Under the Dolan name or others, you'll be familiar with the formula: a stout aluminium frame with long and low traditional geometry; full mudguards bolted securely in place; and standard rim brakes.



DOLAN PREFFISIO £749.99



SPECIFICATION

Weight 10kg
(inc. guards, 50cm)
Frame Aluminium
Fork carbon legs,
alloy steerer
Gears Shimano 105
50/34, 11-28
Brakes: 105
Wheels Shimano
RS-010
Finishing kit: Deda
Zero1 stem, RHM01
bar, Alpina alloy
seatpost, Selle Italia
X1 saddle, Vittoria
Zaffiro 25mm tyres

HIGHS

Huge
customisability;
value for money;
high-speed handling

LOWS

On the heavy side;
unrefined ride
quality

BUY IF

You want a timeless,
dependable and
customisable all-
weather machine to
rack up the miles



There's an inherent rightness to a simply styled bike with mudguards and no gimmicks

Dolan lets you spec the Preffisio however you want it, and builds start at an incredible £612.99 for a Shimano Sora-equipped bike. We requested what we think is likely to be one of the most popular options – full 11-speed 105 with 25mm tyres and mudguards, the latter costing an additional £19.99 if you don't want to fit them yourself. 105 feels like the sweet spot in Shimano's groupset range for utility – it shares features with its shinier siblings Ultegra and Dura-Ace, but consumables like chains and cassettes are vastly more affordable, and the finish is low-key enough that you won't feel too guilty for marring it.

In this day and age, 25mm tyres should be a given – in fact, we'd be tempted to go bigger were it not for the fact that the Preffisio's standard brake callipers will make things very tight if you try, at least with mudguards fitted. And speaking of mudguards, the Flinger units Dolan supplies are the real deal, offering full coverage and better yet, mudflaps both front and rear. Your club-mates will revel in the lack of spray, as will your feet.

The Preffisio's 7005 aluminium frame is as straightforward as they come. It's all straight lines and chunky tubes, joined together with welds that are mostly neat, but completely undisguised. The paintjob is just the right side of retro: it has a distinctly British flavour and a touch of the old-fashioned that makes it obvious you aren't looking at a big brand machine, but it's tastefully done and pleasing →





to the eye. Dolan keeps things traditional on the tech side too. The bottom bracket is a standard threaded unit and the fork steerer is metal and straight. There's isn't a single non-standard part on the whole bike – you'll certainly never want for spares.

As a complete package, the Dolan is just so *tidy*. There's an inherent rightness to a simply styled bike with proper mudguards and no gimmicks. It's like Marmite and the shipping forecast: you don't necessarily fantasise about them, but you're so glad that they exist, and you never want them to change.

The Dolan's road manners are similarly honest; it's not an especially sophisticated ride. At 10kg dead, it trundles rather than skips across tarmac, and it provides solid feedback from the road beneath your tyres. It won't batter you to smithereens, but nor will it cosset or cradle; this is an analogue experience. Don't expect race-bike spring out of the saddle either; the Preffisio is willing enough but it lacks the fizz of more refined offerings.

If you're looking to replicate your position from an all-out racer, this might be the bike for you. Steep seat angles across all sizes make for long reach, and the head-tube is tiny – just 105mm on our 50cm test bike. For all but the most flexible of riders, that's likely to mean a small tower of spacers under the stem, but if you need a low front end, it's certainly not hard

to achieve. Handling is thoroughly confidence-inspiring, however, and we were impressed with how stable the bike feels when descending at high speed.


However, the ultimate question is: did we like the Dolan? We may have cursed its slight heft as we toiled up some of Gloucestershire's steeper climbs, but we appreciated it for what it is, and that's a thoroughly useful and versatile bike that can be customised to the needs of the rider without undue expense.

Acts of defiance

The Giant Defy has been with us for a while now, and it's a favourite entry-level offering that has consistently impressed us with the roundedness of its ride quality. For 2016, it's gone disc and that, along with its mudguard-friendliness, has put it firmly on our radar as a potential winter winner.

A note about mudguards: the ones pictured are Giant's Speedshield Universal model, which Giant sent us in error. As the Defy has proper mounts, it will take the full-coverage version of the Speedshield, which mounts more securely and also looks rather tidier.

Anyway, the Defy ticks the right boxes for all-weather riding, and it's specced the way a winter bike should be, with 105 shifting kit that does the job beautifully. Giant doesn't quite give you the full groupset – the chainset is non-series – but the important stuff is all there. The headline news is of course the brakes, which are TRP's proven Spyres – essentially the best disc



GIANT DEFY 1 DISC £999

★★★★★

SPECIFICATION	HIGHS	LOWS	BUY IF
Weight 9.3kg (inc guards, small)	Wonderful ride quality; all-weather braking ability; low weight	Mechanical discs require more maintenance	You want a comfortable and lively mile-eater that's ready for all seasons
Frame Aluminium			
Fork Carbon/alloy			
Gears Shimano 105 50/34, 11-32			
Brakes TRP Spyre			
Wheels: Giant PR-2 Disc			
Finishing kit Giant stem, bar and saddle D-Fuse seatpost, P-SL1 25mm tyres, Speedshield mudguards			





In terms of fit, the Giant is the diametric opposite of the Dolan



callipers you can get short of going hydraulic (or semi-hydraulic). The arguments for disc are well trodden already, but we can safely say they're a good choice for winter weather.

In terms of fit, the Giant is the diametric opposite of the Dolan, embracing the comfort-oriented approach of the modern sportive machine. Our small bike sported a 145mm head-tube for a fairly upright position, although as always with these things, it's perfectly possible to size down and fit a longer stem if more saddle-to-bar drop is required.

The frame couldn't be more different either, employing Giant's signature compact geometry to produce something thoroughly modern-looking. The seatstays are dropped for extra compliance, and the seatpost is a non-standard affair with a cross-section that's flat on the rear. This means no saddle alignment faff, and we suspect it contributes to the impressive comfort levels of the rear end by allowing additional flex.

Our Cotswolds pothole extravaganza is a great test for comfort, with some absolute beauties waiting to knock you off-line on steep, sketchy descents. The Giant proved to be exceptionally capable as well as a nice place to sit on our ride despite the loathsome Arionelike saddle that suffered from excessive softness. The inherent flex from the frame and seatpost do a really remarkable job of smoothing out poor roads, and yet during hard efforts the bike feels taut and ready for

anything. Generous gearing will haul you up the steepest of climbs and despite its disc brakes, the Defy is actually a good deal lighter than the Dolan overall.

Laurels for the bardy

It's only when you ride the two bikes back to back that you realise how far we've come with aluminium as a material. The Dolan is by no means offensive, but the experience in the saddle is a good deal harsher than that of the Giant. As a complete package, the Giant is unquestionably better, but does that mean the Dolan has had its day? We think not.

For starters, it's still incredibly good value, and if you completely destroy the frameset you can replace it with a brand new one for just £200. The sheer customisability simply cannot be matched by the big brands and while rim brakes may not be the cool kids' choice any more, they have an appealing simplicity, particularly when you compare them to mechanical disc callipers that require frequent fettling for safe operation.

The Giant Defy Disc is a fabulous bike that represents truly excellent value for money. We'd recommend it any day, but there's still a place in our hearts for the Dolan Preffessio – long may it prosper. **PH**

GEAR GUIDE

THINGS TO CONSIDER...

1

BRAIN

The 'smart' trainers here offer everything from ultra-accurate wattage monitoring to wireless connectivity, but always check what devices it's compatible with and whether you need extra sensors to use all its functions.

2

DIRECT DRIVE

Direct mount trainers use their own cassette and axle to replace your rear wheel. That removes tyre wear and improves handling and the larger flywheel gives a smoother, 'richer' ride. They're often heavy and pricey, though.

3

AXLE CLAMP

The appearance of different axle standards can impact on turbo trainer choice. Most direct-mount or wheel-driven trainers can cope with 130 or 135mm QR axles, but 142x12mm-compatible trainers are still quite rare.

4

WHEEL DRIVE

The traditional wheel-driven trainer uses a metal or urethane roller pressed against the rear tyre. They're generally cheaper than direct-mount designs but wear tyres out quickly and are generally noisier and slightly less stable.

5

FRAME

Whether you go for a wheel or direct drive design, you want a frame that's heavy and stable enough to lock your bike in place securely and not wobble or wander around if you're giving it full gas out of the saddle. However, bulkier frames are inevitably harder to store and transport.

6

BRAKE

Most brakes use a metal disc and magnet to create contact-free resistance. Fluid brakes use a paddle or impeller in an oil tank that naturally increases resistance the harder you pedal. Flywheels add the momentum you need to stop pedalling feeling jerky.

SMART TRAINERS

We put a dozen data-rich, power-sensing, avatar-racing smart trainers through their paces



It started with phones, moved to TVs and now it seems like everything has to be 'smart' these days, including turbo trainers.

Having something to distract, entertain or inspire you while you're slogging your guts out on your own makes sense. And having accurate feedback on your speed, cadence, heart rate and power is invaluable training.

But what companies mean by 'smart' can vary. Some units are ANT+ so need a dongle to connect to your tablet, phone or PC but can link to most bike computers. Some are Bluetooth only so can connect to electronic devices without a dongle – but can't connect to most cycle computers. The CycleOps comes in either ANT+ or Bluetooth. Others are smart enough to communicate in both protocols so you can marry up Bluetooth cranks with a dongle-equipped PC and ANT+ heart rate belt as well as your phone via Bluetooth, so you can see exactly what your heart rate and power output are while texting to fellow riders around you on the real-time online racing platform Zwift.

So, just what are the realities of smart trainers? First things first. When it's already a struggle just to drag yourself into

a cold pain cave for a session on the trainer, any interruption is the last thing you need.

Set-up or mode-changing seems deliberately secretive or obstructive? Bluetooth won't connect? Wattage out of whack, dongle gone dodgy? Your avatar keeps buffering, or your session won't start because it's waiting for Miguel in Madrid? All of this happened to us during testing.

And even when your smart trainer is working as it should, bike-mounted sensors and software can provide much of the same data and 'entertainment' (to borrow a phrase from the excellent sufferfest.com video series) for less money. And because they're bike-mounted they'll do it whether you're in your garage or on an actual ride.

In other words, we started this test needing a lot of convincing that smart trainers are worth prices that can nudge £1000. So which of these units managed to convince us they are indeed clever enough to justify their price tag? Read on to find out.

In all cases wattage was calibrated using the same bike and Stages power meter. Noise levels were measured at the handlebar in decibels and spin-down times are from 200W to stationary (on the lightest resistance setting, where applicable). →







WE SAY
User-friendly essential intelligence that shames many more expensive trainers

CYCLING BEST VALUE

TACX SATORI SMART

★★★★★ **£259.99** > Basic user-friendly smart training at a bargain price.

Wattage deviation -10 **Roll down from 200W** 13 secs **Noise level (200W)** 90dB

The Satori Smart does everything you need to hook up with the latest training software or just tech up your sessions. Like most budget trainers, the metal-sheathed roller can slip under sprint loads until you get the tension right, and it's noisy at high speeds. The splayed leg base is stable, the cam-axle lock-and-roller engagement is quick and secure and it comes with a front wheel-levelling block. Ride feel is smooth and balanced, and there's a mechanical remote lever to add resistance.

HIGHS
Essential smart connectivity, accurate, affordable

LOWS
Noise, potential wheel slip

It self-generates ANT+ and Bluetooth Smart signals so doesn't need a mains hook-up, and effortlessly syncs

power, speed and cadence data to iOS, Android and Windows PCs. The free training software is intuitive, and it's compatible with Zwift or other online simulators.

INSIDE INFO

Software
While connectivity and data generation separates 'smart' trainers from their 'dumb' brethren, it's the software you link them with that makes them worth having. There's an ever-increasing array of software and web resources out there, from the likes of trainingpeaks.com and trainerroad.com, which

offer ultra-detailed post-ride analysis, to virtual ride programs such as kinomap.com or the more sociable Zwift.com. We'll be testing the leading sites and software in an upcoming issue, but always do your research before shelling out for a subscription – however smart your trainer is, it's how you train on it that determines the results you get.



MINOURA LR340

★★★★★ **£199.99**

Wattage deviation n/a **Roll down from 200W** 7 secs **Noise level (200W)** 80dB

Minoura's entry-level smart trainer is accompanied on the Minoura site by ANT+ and Bluetooth Smart icons and it's described as being compatible with Live Training App and other software. What they don't say is that it doesn't actually have built-in (or bolt-on) connectivity of its own, depending instead on aftermarket bike sensors. That's a bit cheeky, and otherwise it's just an okay rather than an outstanding budget trainer. The single handle-axle clamp works well and it runs at a quiet hum, but we had a couple of wobbles when sprinting. Run-on is limited too, and even the lowest setting on the six-position remote lever is quite firm.

ELITE VOLANO



Low price, high resistance, direct-drive bargain

Wattage deviation -5 **Roll down from 200W** 7 secs **Noise level (200W)** 85dB

Elite's easily smart-upgradeable Volano is a decent affordable direct-drive trainer, so long as you're fine with a slog rather than a spin. It's light for a direct-drive trainer, though its reduced flywheel mass can make for a choppy, slightly rough ride. The non-adjustable fluid drive brake is very firm too, giving an indicated 24kph at

200W compared to the 30kph average. You'll need to factor in a spare cassette, however, and the smart slot in Elite's Misuro ANT+/Bluetooth transmitter costs an extra £59.99.

HIGHS

Excellent value, powerful direct drive

LOWS

Labourer, high-intensity feel



ELITE QUBO DIGITAL SMART B+

★★★★★ £299.99

Wattage deviation +/- 10 **Roll down from 200W** 7 secs **Noise level (200W)** 87dB

The folding Qubo frame uses the bike's weight to create friction on the fat urethane roller for a realistically 'bouncy' and rhythmic ride feel. The big cam lever gives a solid axle connection and it's stable outside the 'allowed' movement. The mains-powered brake uses ANT+ and Bluetooth Smart transmission for cross-platform connectivity. The 16 finely graded resistance levels can be controlled through your phone or tablet too. You get a six-month free subscription to the Mytraining App (normally \$9.99 per year), which was tricky to set up but offers extensive training data, testing protocols, online racing and user videos, with pro videos available to buy.



WE SAY
Hard work but accurate, and impressively priced for a direct-drive trainer



TACX VORTEX SMART

★★★★★ £374.99

Wattage deviation -5 **Roll down from 200W** 11 secs **Noise level (200W)** 85dB

The Vortex Smart builds on the Satori Smart's simple set-up, easy connectivity and user-friendly apps by electrifying the brake. This means you can alter resistance via adjustable power or gradient settings on the excellent free Tacx app (or any other virtual training software). The resistance tops out at 950W or a seven per cent slope, so really powerful riders will overrun it, but for the rest of us it'll be fine. It creates a really smooth feel with realistic road-like momentum and the power settings are very accurate, if slightly slow to update compared to our Stages cranks. You can also run it as a fluid-feeling progressive trainer when not 'smart'-connected.



JETBLACK WHISPER DRIVE

★★★★★ £429.99

Wattage deviation +/- 10 **Roll down from 200W** 17 secs **Noise level (200W)** 81dB

The trainer-to-app syncing is basic but otherwise the Whisper Drive offers the advantages of direct drive at a keen price. It's heavy, but the wide folding arms make it easy to store and stable to use, and it comes with adaptors for all axle types. The manual remote lets you set brake resistance from easy spin to serious grind, and it's the cheapest option here to offer noticeably extended spin momentum. But you have to zip-tie and screw the £35 Bluetooth sensor into place, and you'll need to add a cassette. Crank and brake wattage readings didn't always line up, but otherwise syncing was easy and the free Jetblack app offers plenty of pre-defined training sessions. →

WE SAY
Big and pricey, but gives a unique 3D-floated ride with maximum momentum

HIGHS
Luxuriously smooth and sustained 3D realism

LOWS
Very heavy and bulky



KINETIC ROCK & ROLL 2 INRIDE

★★★★★ £465

Go green for a uniquely 3D-realistic feeling ride

Wattage deviation +0-10 **Roll down from 200W** 19 secs **Noise level (200W)** 80dB

The RnR II has a massively heavy and bulky lower frame that attaches to the bike and brake mount section, and sits on a large rubber block that allows you to lean as you corner and the whole device to swing during out-of-saddle efforts. It definitely needs the dedicated swivelling front-wheel mount (£44.99) to naturally correct sideways flop, but it feels surprisingly realistic, particularly when used with a POV ride simulation or race footage. Add a massive flywheel and fluid brake and you've got the smoothest, longest-spinning and most natural-feeling trainer here. The £80 inRide pod turns it smart with a reasonably accurate wattage reading plus cadence, speed and other data using the free Kinetic app or other synced software.



BKOOL PRO

★★★★★ £449.99

Wattage deviation 0 **Roll down from 200W** 13 secs **Noise level (200W)** 90dB

BKool's Pro uses the bike's weight to maintain roller tension, which makes it easy to set up and gives reasonable stability, while its plastic foot and brake mount minimises vibration, though it is still noisy. Its ANT+only transmission means it only works with dongle-equipped devices (a USB dongle is included), and we found the website content potentially glitchy even with a very fast broadband connection; it also seems about 25 per cent faster for a given wattage than other simulators. Positives include a huge array of workout videos, single- or multi-player virtual ride/race or trainings sessions, plus has a lifetime warranty too.



WAHOO KICKR SNAP

★★★★★ £649.99

Wattage deviation -10 **Roll down from 200W** 16 secs **Noise level (200W)** 83dB

Wahoo's new Snap mounts a similar smart brake to the groundbreaking Kickr on a conventional roller-driven frame for £300 less. Maximum resistance is slightly lower and it's a tad noisier than the Kickr – but it's still quieter than most. The inertia from the massive flywheel does result in tyre slip on standing starts, but helps it sustain speed too. Despite having the same type of frame as some sub-£200 trainers we've tested, it's stable even when sprinting. Wahoo's free, multi-screen app is easy to use and comprehensive in terms of data and it links directly to virtual ride or other software via Bluetooth. However, the price is high, and we had the odd power level hiccup.



TACX I-GENIUS SMART

★★★★★ £749.99

Wattage deviation +15-20 **Roll down from 200W** 7 secs **Noise level (200W)** 85dB

Tacx's Genius trainers use a motorised brake to increase rolling speed on simulated descents, but also tops out at 1500W or a simulated 20 per cent climb for the most brutal workouts. Once the brake is bolted on, syncing to the free app is as easy as with the other Tacx units on test, thanks to the splayed-leg frame and cam lever-controlled roller-and-axle engagement. Its large roller also means you get a more consistent connection during low rev/high torque efforts. Power readings were less accurate than the cheaper Tacx units, though, and the motor had occasional rogue surges unexpectedly.



WAHOO KICKR

★★★★★ £949.99

If Apple did a turbo trainer would this be it?

Wattage deviation -5 **Roll down from 200W** 12 secs **Noise level (200W)** 79dB

Wahoo's Kickr has plenty of competition these days but it's still the ultimate user-friendly benchmark in smart training – if you have the budget and can carry its 20kg bulk. It comes complete with a cassette and is ready to ride once you've unfolded the legs. The extra-long quick-release lever creates a secure anchorage and is compatible with all axles. The direct-drive feel is excellent, with a great speed sustain, realistic resistance and power readings that are responsive and precise. Syncing to Bluetooth or ANT+ devices (including PCs/Macs and laptops) is simple, the free Wahoo app is comprehensive, intuitive and works

with third-party software. Its super-heavy build makes it a reliable long-term workhorse and while it's pricey, the Kickr delivers an experience as easy and enjoyable as any trainer we've tried.

HIGHS
Premium performance, user-friendly

LOWS
Very high weight and price



CYCLEOPS POWERBEAM PRO

★★★★★ £825

Wattage deviation 0 **Roll down from 200W** 18 secs **Noise level (200W)** 82dB

CycleOps' PowerBeam Pro uses a rock-solid frame with a wide stance, and comes ready to ride. An adjustable 'hoof' makes it easy to level, and the roller tension and axle clamps have an automatic clutch for guaranteed security. The massive flywheel can mean the occasional wheel-slip at low revs, but overall the PowerBeam is so smooth and quiet that it's easy to overpace yourself. You can control the power via an app, or link it to virtual ride software, and CycleOps's durability is legendary. ANT+ and Bluetooth versions are separate, however, which potentially compromises the future-proofing and versatility of what is an expensive investment to begin with.

VERDICT

Mixing bikes with electronics can be complicated and frustrating, and our testing sessions were patience-stretching and rich in profanity. The result was a lot of units that were good in theory, but more niggly than we'd expect for the price of a perfectly serviceable winter bike. Exceptions included CycleOps' fool-proof PowerBeam Pro, the oddBall Kinetic Rock and Roll II and Wahoo's new (but pricey) Kickr Snap. The original (even pricier) Kickr is still hard to beat, though, and earns our Highly Commended title for its super-accurate results across the board.

For user-friendly smart training that won't strain your wallet, Tacx's Satori delivers surprisingly accurate and smooth-feeling training to take our Value honours. The overall title also goes to Tacx. Its Vortex Smart is refreshingly user-friendly, it feels great and provides an impressively immersive 'virtual' ride online, while still working very effectively offline.

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* Availability of cover subject to medical history and cover chosen



**FREE
HEALTH
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WHEN YOU JOIN
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**For a no obligation quote visit axapphealthcare.co.uk/cyclingplus
or call AXA PPP healthcare on 0800 048 1197**

Lines are open 9am to 8pm weekdays. Calls may be recorded and/or monitored for quality assurance, training and as a record of the conversation.

TERMS AND CONDITIONS ** Offer available to new AXA PPP healthcare members only, joining between 1st October 2015 and 30 June 2016. The offer is one free Lifestyle Health Assessment for one person covered by the plan. To be taken at a Nuffield Health facility offering a Lifestyle Health Assessment. See <http://www.myactiveplus.com/lifestyle-assessment.html> for full details. This offer is non-transferable and cannot be substituted for a cash alternative. We will request a valid email address from you to redeem your health assessment. Your free health assessment does not affect any of your standard terms and conditions that apply as part of your membership and will not affect your subscriptions or any no claims discount you may have. Cancellation policy applies to health assessments booked but not taken up – full details provided upon booking. We'll send you details of how to book your free health assessment within 28 days of receiving your second month's subscription payment. Offer may be withdrawn at any time or substituted for an equivalent health assessment offer.

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HOW TO

TRAINING > SKILLS
FIXES > NUTRITION

KEEP TRAINING OVER THE HOLIDAYS...

Don't let the festive season put the kibosh on your cycling - maintain your fitness levels and still enjoy the holidays with these tips from strength and conditioning coach Dan Roberts

SEE INTO THE FUTURE

» Motivation to train can drop over the winter in general and especially at Christmas. "So having a big challenge to do early in the New Year can be a great motivator to maintain a decent ride routine," says Roberts. "Set a target segment to train for or check out your local and national cycling events with last-minute entry available or even look to train during an overseas break."

MAKE LIFE EASIER

» Use all those tricks that take the effort out of training. "Have your winter ride clothing laid out and ready to go so there are no excuses, agree to train with a friend or investigate new routes with team-mates. Focus on training quality rather than quantity - test your sprints on shorter rides and targeting aerobic fitness over longer endurance runs," says Roberts.

MAGIC UP SOME TIME

» Retaining your regular ride routine can work if you're able to reschedule it. "While work commitments may reduce over the holidays, family commitments usually ramp up," says Roberts. "Switching to doing your training earlier is one way of juggling family and fitness. Make every day a training day - even if it's just bodyweight workouts, it all adds up."

REWARD AND RE-IGNITE

» It's a time for giving and, whether you're treating yourself or buying gifts for others, look to include some 'motivational' toys to play with on Christmas morning and beyond. "Trying out new gear you've been given, or taking some time to upload new routes or training programmes, can be a useful spur to up your training when it's on the wane," says Roberts.



NUTRITION

SURVIVE THE XMAS ONSLAUGHT...



British Cycling chief nutritionist Nigel Mitchell on keeping fighting fit through the festive fun

KNOW THE NUMBERS

“On average, people put on an additional two kilos over the Christmas period,” says Mitchell. “I advise cyclists to make sure the entire festive season isn’t spent overindulging – for starters, look to have twice as many ‘dry’ days as ones where you drink alcohol.”

KEEP A CLEAR HEAD

“Sure you’re going to be partying at times and the spirits will be flowing but you can still limit the damage,” says Mitchell. “Beers with 5–6% abv alcohol can pack around 300–350 calories with the additional sugars. If you’re having the odd

tipple, go for dry white wine or the clear spirits that aren’t so calorific. If you’re having beers then squeeze a glass of water or low-cal soft drink in between them.”

FAYRE’S FAIR

“Much of the traditional Christmas Day meal is pretty good – it’s the ‘trimmings’, the cakes, nuts, sweets and desserts along with the booze that can really cause havoc. Avoid arriving at a party hungry – get a solid, low-GI meal inside you beforehand. You’ll reduce the risk of grazing on high-salt nibbles and rocketing your calorie intake.”

TAKE SEASONAL ADVANTAGE

“The weather may not be on your side but the time off work, reduced traffic and emphasis on social interaction make it an ideal for time cycling,” says Mitchell. “Mark the calendar with training rides, on the road or turbo, in between parties and shopping.”

WATCH FOR MERRY XTRAS

If you’re weight-watching, buffets can be a problem. “Fill your plate once, and don’t go back for more,” warns Mitchell. Load a few choice items on your plate and beware overly fatty foods.

INSTANT EXPERT

Showing them the brakes first will ease any nervousness that might lead to mistakes



KNOWLEDGE

TEACH YOUR KIDS TO RIDE...

ISLABIKES FOUNDER ISLA ROWNTREE ON TEACHING KIDS THE BASICS OF CYCLING

1 BRAKING BASICS

“Show them the brakes first so they can learn how to control their speed. That will ease any nervousness that might lead to mistakes,” says Rowntree. “Teach them where to

It’s the 16 mince pies you ate first that are the problem



Getty



position their feet for cornering – with the outside pedal down. This helps build confidence, as does being able to stand on the pedals and the ability to shift weight forward and back over bumps.”

2 CHECK THE HEIGHT

“Early riders should be able to place the balls of their feet comfortably on the floor when sat on the saddle,” says Rowntree. “But more confident riders can have the saddle slightly higher with their toes touching the floor.” Learning to start and stop out of the saddle is very useful.

3 COVER YOUR KID

“Never put a child on a big saddle – it won’t fit between their thighs due to their narrower sitting bones and pelvis. Don’t worry about gender-specific saddles until puberty as changes in hip structure only occur then,” Rowntree says “Ensure your child wears a light, airy helmet that’s stable on the head and correctly adjusted.”

4 ADD ROAD SENSE

“To get an older child used to riding around roads, start in an area that isn’t built up,” Rowntree says. “This enables them to do lots of stops and watch how traffic behaves, and lets you practise manoeuvres with you riding as the leader and ideally another adult behind. Avoid common ‘sins’ like riding with low tyre pressures, putting too much oil on the chain, and riding with the saddle too low.”

5 DO SOME DRILLS

“To build up experience and confidence, use a shepherding style by riding alongside your child so they feel protected, and cars can clearly see that you are teaching children to ride safely,” says Rowntree. “Train their balance with simple drills like rolling down a grassy bank while standing up on the pedals. And to build their confidence in riding in traffic, do short sessions – an hour max – to keep focused on the riding.”

Riccardo Guasco



Tim de Waele

PERFECT YOUR POSITIONING WHEN RIDING ON THE DROPS...

Team Sky cyclist Luke Rowe, from Rowe and King Coaching, gives us the low-down on riding on the drops

GO HEAD FIRST

1 “The key benefit to riding on the drops is to get more ‘aero’,” explains Rowe. “It also gives you more control, especially when descending.” Drop handlebars are designed for surety of steering and upper body support, and riding on the drops uses up to 20% less pedalling power than riding at the same speed on the tops.

CALL TO ARMS

2 “Along with saddle height, the fit of your handlebar is vital to your bike set-up,” says Rowe. “A poor fit affects your performance, but can also increase the risk of injury and muscle strain issues.” Ideally, ride with your elbows tucked in, your torso lower and flatter than when you’re on the tops, and your heels flatter through the top of the pedal stroke so your knees don’t press against your chest.

TAKE REGULAR DROPS

3 “Regular riding on the drops helps strengthen areas put under most strain by this position,” says Rowe. “Your neck should be relaxed, with your head raised to spot potholes on the road and follow the right lines. Your arms should be able to support your weight but should be relaxed enough to absorb shocks from the road.”

Rowe And King are official coaching partners for the 2016 Dragon Ride www.dragonride.co.uk



The best roads are paved with more than just good intentions

KNOWLEDGE

MAKE RESOLUTIONS YOU'LL STICK TO...

The new year is full of the rusting wheels of good intentions. Performance psychologist Bill Beswick (billbeswick.com) suggests ways to ensure your resolution lasts...

COMMIT TO PAPER

» Decide what your goal is and why you're doing it, then write it down with a deadline for you to achieve it. Make sure you'll regularly see your list of goals – create a diary reminder on your phone, for example, or stick it to your fridge as a constant spur to keep it fresh in your mind. It needn't be your action plan as such, just the eventual target, whether it's a specific ride you're working towards or a weight or fitness target. This will serve to motivate you when you're flagging or possibly tempted to go 'off plan'.

CREATE AN ACTION PLAN

» Break your resolution into micro-manageable steps that are realistic yet challenging. These have their own dates and targets on a smaller scale. If you're training for a major race, this will be your weekly ride schedule – distances covered, times achieved plus comments on how you feel. Set relevant benchmarks for where you want to be after one month, three months and six months, say – or by a next birthday, or the start of the Tour. In the case of weight management, this could be a food diary and body fat record.

SOME INSPIRATION FOR MOTIVATION

» Have a few motivational ploys to hand for when your progress hits a plateau. In the case of weight loss targets, studies have found that the most effective plans are those where participants have to part with cash if they don't meet their goals. Alternatively, set targets in tandem with a fellow cyclist. You're more likely to stick to a planned training ride if you know you'll be letting a mate down by skipping it – or giving him the advantage by leaving him to train when you're not.

START MEASURING THIS MONDAY

» Don't let your resolution rule your life – set aside specific days to focus on planning and progress updates. According to researchers from John Hopkins University in the US, Monday is the most effective day of the week for kick-starting resolutions, evaluating progress and setting micro-goals for the coming week. Mondays act as a weekly call to action within your calendar – helping to periodise and update your training plan. Also, set aside days for celebrating your success once you hit your targets.



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TRAINING

CREATE A SPRING SPORTIVE TRAINING PLAN

Elite cyclist and coach **Jacob Tipper** (ontherivetcoaching.com) suggests a plan to hit form for a springtime sportive

VARY THE LOAD

1 “It’s important to build up gently and not do too much at once,” says Tipper. “Allow yourself time to adapt to the training, and make sure to get ample rest. Mix the training up between long steady rides, tempo intervals where you should be working hard, and short, very high-intensity intervals to prepare for any challenge that may arise on the ride.”

BE SURE TO GET CROSS

2 “Cross training may be more beneficial at the start of the plan. Gym work should be focused on building strength, not muscle,” advises Tipper. Do this by keeping the reps low and weights high. “Strength training is also great on the

bike and can be done with some five-minute big-gear intervals at 60–70RPM.”

SCRATCH STARTS

3 “If you’re coming from no training at all, doing five to six hours a week in the first few weeks with a few steady one- or two-hour rides will be beneficial,” says Tipper. “As you build up to your event, there’s no need to be doing more than 10 hours a week including a regular three-hour ride. You should be doing basic 2 x 20-minute interval sessions (two 20-minute periods going hard with five minutes easy in between) or 4 x 5-minute routines of 20 seconds on, 10 seconds off. These are beneficial without taking up too much time.”

TURN TO THE TURBO

4 Depending on how busy you are, four days a week may be enough time to train. “Time on the road is ideal, but shorter turbo sessions can keep you on track over the winter. Sessions should be structured using drills such as intervals where you can measure progress and avoid boredom.”

TIME TO DIGEST

5 “Training your gut is also important,” says Tipper. “If you plan on using gels/energy bars or drinks in your sportive, try them in training first, replicating your nutrition strategy for the day in advance. You don’t want to discover that gels don’t go down well halfway round the course.”



12-WEEK TRAINING PLAN

A STEP-BY-STEP ROADMAP TO GET YOURSELF FIGHTING FIT

Week 1: 2 x long rides (1–2 hrs), 1 x interval session (2 x 20 minutes), 2 x cross training (1hr), 2 rest days

Week 2: 2 x long rides (1–2 hrs), 1 x interval session (2 x 20 minutes), 2 x cross training (1hr), 2 rest days

Week 3: 2 x long rides (1–2 hrs), 1 x interval session (2 x 20 minutes), 2 x cross training (1hr), 2 rest days

Week 4: 3 x long rides (1–2hrs, 3+hrs), 1 x interval session (2 x 20 minutes), 1 x cross training (1hr), 2 rest days

Week 5: 3 x long rides (1–2hrs, 3+hrs), 1 x interval session (2 x 20 minutes), 1 x cross training (1hr), 2 rest days

Week 6: 3 x long rides (1–2hrs, 3+hrs), 1 x interval session (2 x 20 minutes), 1 x cross training (1hr), 2 rest days

Week 7: 2 x long rides (2 x 2.5hrs), 2 x indoor/outdoor 1hr ride, 1 x interval session (2 x 20 minutes), 2 rest days

Week 8: 2 x long rides (2 x 2.5hrs), 2 x indoor/outdoor 1hr ride, 1 x interval session (2 x 20 minutes), 2 rest days

Week 9: 2 x long rides (2 x 2.5hrs), 2 x indoor/outdoor 1hr ride, 2 x interval sessions (2 x 20 minutes), 2 rest days

Week 10: 2 x long rides (2 x 3+hrs), 2 x indoor/outdoor 1hr ride, 2 x interval sessions (2 x 20 minutes), 2 rest days

Week 11: 2 x long rides (2 x 3+hrs), 2 x indoor/outdoor 1hr ride, 2 x interval sessions (2 x 20 minutes), 2 rest days

Week 12: 1 x long ride (3+hrs), 2 x 1hr ride indoor/out, 1 x interval session (2 x 20 minutes), 3 rest days

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KNOWLEDGE

GET A BARGAIN BIKE...

Get yourself a great bike for a knockdown price this Xmas with some insight from those who strike deals every day...

TIME YOUR BUY

» “From September onwards is a great time to buy a bike as that’s when you see offers on models that have just been superseded,” says David Patten of Chain Reaction Cycles Ltd (chainreactioncycles.com). Most brands introduce new models in the autumn and retailers sell off their existing stock to make room. “Don’t wait too long to buy the older models, as because they’re discounted they’re usually snapped up quickly.”

BE BIKE MINDED

» “Do your research before shopping,” says Matt Toplis of The Bike Rooms (Bikerooms.com). “Read reviews and talk to fellow riders about different frames. Also, look around for cycle shops that are running promotions. Either way, go

for the best frame you can afford.” Ensure the salesman has your best interests in mind and fits you properly to the bike. “Be clear with them what type of riding you’re mainly going to be doing.”

TAILOR TO YOUR NEEDS

» “Beyond the frame the key decisions are disc brakes (for better braking performance) and wider tyres (for more comfort and grip). Both not only improve your cycling experience but also make it more versatile,” suggests Patten. “There’s nothing wrong with standard calliper brakes, but think of the type of cycling you do before making a final choice. Also, think about whether you’ll want to fit mudguards or pannier racks, and if so make sure the bike you’re interested in buying can accommodate them.”

STRIKE A DEAL

» “Once you have a shortlist of bikes, look around online for the best deals, and for interest-free credit offers to spread your payments,” suggests Patten. “While you can’t see the bike before you buy, online deals are often the most attractive – plus the bike arrives built, tested and ready to ride.”

CHECK THE SMALL PRINT

» “Consider on-going maintenance costs,” adds Toplis. “You may have got a fantastic deal on a frame, but if servicing and parts are expensive that could be a false economy. Check the warranty too, as some brands offer longer warranties than others. Don’t be afraid to ask about free servicing, clothing or accessories, the retailer may be willing to throw in too.”



Getty

BEAT THE FLU THIS WINTER

Keep riding this winter and ward off the dreaded flu

WHAT IS IT?

Many bugs can cause flu-like illnesses, but flu itself is caused by one of three types of virus – Influenza A, B or C. Influenza A is the worst strain, and the most common. Symptoms include a fever (38–40 deg C), sweats, muscle and joint pains, a dry cough, sore throat, sneezing and a headache. Symptoms are usually at their worst after 1–2 days then gradually ease, but the cough can persist for up to a week.

HOW TO TREAT IT

Stay at home, take ibuprofen or paracetamol and drink plenty of fluids. If you have even the inclination to ride your bike, you probably haven’t got flu! Symptoms such as a rash, stiff neck, worsening headache or persistent vomiting may suggest something more serious and you should seek medical help immediately. Antibiotics don’t help flu, but antivirals may be offered to at risk groups (see below). Wait until the fever and muscle aches have subsided before getting on your bike again.

HOW TO AVOID IT

Given that flu will keep you off the bike, it’s best to prevent it hitting in the first place. If you’re in an at risk group i.e. you’re over 65, have an underlying health condition (particularly respiratory or cardiac), are pregnant or have a weakened immune system, you may be eligible for a flu vaccination on the NHS (see bit.ly/1CRWECz for more information). Good hygiene can also prevent infection: wash your hands regularly, and keep surfaces like your keyboard, phone and door handles clean.

Andy Ward, GP and cyclist
@awkwardcyclist



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PARIS



PARIS

BREST

To ride 1200km non-stop across northern France is asking a lot. But the oldest cycling event still regularly held on the open road offers a great deal in return...



Y

ou have to be a certain type of person to be attracted by the notion of riding 1200km from Paris to the western tip of Brittany and back again in a single event, and for most of my adult cycling life I've existed on the fringes of this group.

I'm by no means a seasoned mile-muncher, but while most of my colleagues and friends scoff at the very

idea of riding Paris-Brest-Paris, I've always been intrigued – not so much by the huge distance, but rather by the thought of being a part of history. A very small part of a very particular history, for sure, but even in the 21st century, to be an *ancien* of Paris-Brest-Paris – an event that dates back to the 19th – still means something.

I'd researched the event in the past so I knew, in pure statistical terms, what I was up against. To qualify to ride PBP you have to complete a set of sanctioned qualifying rides of 200, 300, 400 and 600km between January and July leading up to the race, after which there is just the small matter of completing the event itself.

It's also worth noting that PBP takes place once every four years – like the Olympics – so if I didn't commit to it in 2015, who knows where life would have taken me by 2019? Plenty of people have ridden multiple PBPs, but for me it felt like it was now or never, and I knew I'd end up regretting never.

Perhaps the biggest initial wake-up call as to the sheer scale of what I'd undertaken came when I submitted my entry for my 600km qualifier – Windsor-Chester-Windsor. First I had to come to terms with the fact that, yes, it really was *that* Chester. Then came the realisation that riding all the way from Windsor to Chester and back represented only half of the distance I would eventually be riding in France.

I decided to take myself off to meet Nick Thomas of The Endurance Coach in Lancashire. While seasoned long-distance riders might like to describe PBP as 'just a bike ride', I had never ridden further than 300km in one go – and that only once. This was clearly something that I was going to have to train for. Seriously.

But whether it was the gruelling month-by-month training plans Nick delivered, or the increasingly arduous qualifiers, the one thing that kept me



Fresh-faced at the start: just 1200km to go!

going was the thought of being a part of Paris-Brest-Paris. And come mid-August, there I was in a hotel on the outskirts of the French capital, a handful of kilometres from the new national velodrome in St-Quentin-en-Yvelines and less than 24 hours away from beginning a bike ride that would last from Sunday evening until Thursday morning.

Drawing a 1230km radius on a map reveals that the distance I would ride on PBP could take me from my home in Bath to Prague, as the crow flies. But then, in a world of ever more extreme challenges, where triple-Ironman events aim to out-tough transcontinental bike races or desert ultra-marathons, Paris-Brest-Paris remains aloof and in a class of its own.

First run as a race back in 1891, it was PBP's success that inspired the first Tour de France. Now in its 18th edition (and 72nd year) as a Randonneur event, it is so much more than an endurance suffer-fest.

Of course, there are times during the 1230 hilly kilometres across Brittany when riders have to dig deep into their resolve. What do you do when it hurts to sit in the saddle and hurts to get out of it?

When you're physically and mentally tired and the next control is still 80 night-time kilometres away? But it seems no one is here to prove anything to anyone but themselves – six thousand people with the same goal: to reach Paris, and with almost as much

interest in ensuring those around them make it as they have in making it themselves.

We counted riders from Japan, China, New Zealand, Australia, Brazil, Canada, USA, Malaysia, Singapore, Colombia and more amongst our fellow travellers, and just about every country in Europe was represented (or in the case of a team from the Serb-speaking part of Bosnia-Herzegovina, some areas that aren't even countries).

They had gathered from all corners of the globe to ride this historic event in one of cycling's greatest heartlands. In effect, this is a cycling World Cup – a World Cup in the sense that it brings together like-minded communities from all over the globe in celebration of their passion, not in the sense that it then pits them all against each other to decide who is the 'best'. Paris-Brest-Paris is pure festival, run by cyclists for cyclists, with the profit motive non-existent. In its purity it may just be the greatest cycling event on the planet (although, yeah, the Tour de France and Tour of Flanders are pretty good too).

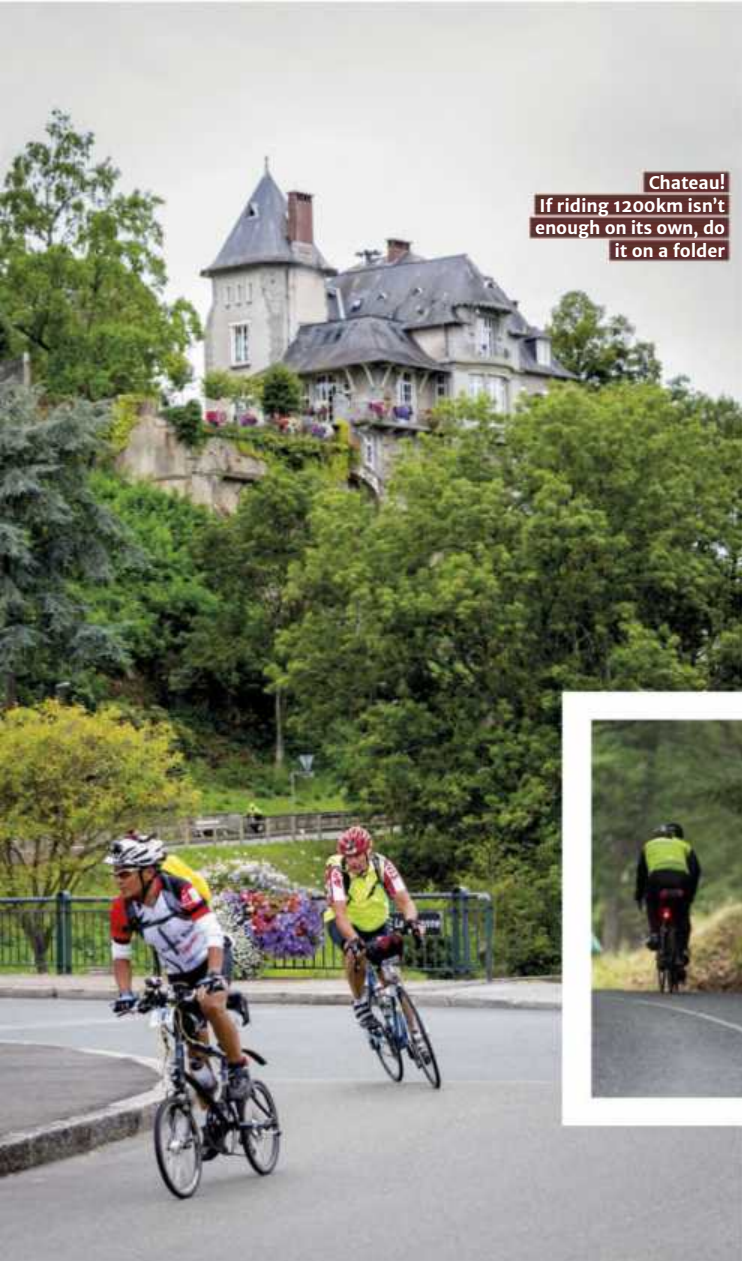
The ride began from outside the national velodrome as evening fell on Sunday 16 August and, although riders had begun leaving two hours before my group rolled out, the crowds still lined the streets as we made our way through the Parisian suburbs and out into the countryside. It is a deliberate ploy of the organisers to keep largely to the French equivalents of B-roads as they

This was clearly something that I was going to have to train for. Seriously.



Light entertainment: riding through the night is just one of PBP's challenges

Chateau!
If riding 1200km isn't
enough on its own, do
it on a folder



The first night and day of riding went to plan – to the extent that I had one



darkness, and when I think back to how long and arduous the latter part of my 200km qualifier had felt

wind the riders coastwards, avoiding most signs of the modern world as the villages and small towns of rural France roll by.

Not only does this make for a pleasant route, but it also means the event visits places that don't usually see much 'action'. These are the places that will make a week-long festival of a fleeting visit from the Tour, but once every four years they become the centre of the universe to a particular breed of cyclist, and they respond in stunning fashion.

Not a single village or farm turns its back on the riders of Paris-Brest-Paris, with families offering support and coffee in equal measure at their front gates and decorated towns hosting 24/7 refreshment and good humour.

The first night and day of riding went to plan – to the extent that I had one. It was a long 140km run to the first refreshment stop at Mortagne, but arriving in the dark to find a giant outdoor grilled sausage stall meant tasty topping up of energy levels was possible in short order and before long we were on our way again towards the first control at Villaines-la-Juhel.

That came after 220km of mostly

back at the start of March (see issue 302) it seems incredible that we have all but coasted here, each rider one small link in a chain of red rear lights blinking their way to the horizon.

Villaines itself is quiet and dark as we roll into the control with food, coffee and getting the first precious stamp on our brevet cards foremost on our minds. It will look very different when we return in the opposite direction on Wednesday.

Having ridden all night, our next objective is... to ride all day. The 'plan' that I referred to a little earlier involved me making it to Carhaix, 526km into the ride, before getting my head down for a few hours. There are a couple of bail-out options before then, but taking one of them would inevitably have meant falling back into 'the bulge' – the main body of riders that quickly clog up a control adding time to every aspect of your stop and making the idea of getting a camp bed for a few hours little more than fantasy.

I make it, however, coaxing myself to press on from first Loudeac and then Tinteniac to reach Carhaix in the early hours of Tuesday morning to secure a bed

until 6am. It comes with a bedsheet, but no blanket, and the room is far from warm. The army of volunteers that make PBP possible deserve the unstinting appreciation of every rider, and appreciate their efforts I do, but that appreciation doesn't stop keep out the cold, and in the end I spent the four hours resting rather than sleeping.

Leaving Carhaix on schedule, knowing that the next stop is Brest, is a huge boost to my morale. As always seems to be the case with out-and-back audax rides, however, the turnaround leg is a monster: 90km out to the coast, and 90km back means that I'll be riding 180km just to end up standing exactly where I am now. You could, of course, make the same argument for the whole endeavour, but for me that notion of working very hard to go absolutely nowhere always tends to hit me hardest at the turn, and in the case of PBP it doesn't help that this leg also includes the longest climb and some of the busiest roads of the whole event.

In the midst of all that, however, comes one of the event's highlights, the crossing of the old bridge into Brest to arrive at the control in a huge local school, knowing that the signs you will be following from now on will all say 'Paris' on them. It has taken me longer than I had hoped to get here, though, so I have no time to wallow in the satisfaction of a job half done.

I do know, however, that I will be able to break the journey back to Carhaix with coffee and cake outside a small butcher's shop opposite the old abbey in the beautiful village of Sizun. I know this because I broke the outward journey there too, basking in the warmth of the sunshine, the locals and my fellow cyclists.

In such moments, divorced momentarily from the pressures of maintaining forward momentum, it is possible to see Paris-Brest-Paris in its true context. A small village in a tucked-away corner of France is alive in a way it might not be again for another four years. Cyclists sit on every wall and kerb eating and drinking, locals line the streets proffering food and drink and the village café spills out into the middle of the road beneath the bunting as children rush around making the most of the fact that, for about 36 hours at least, their home is also home to people from across the globe.

The attraction of PBP to those who line the streets is that it gives them the opportunity to be part of something bigger, to witness ordinary people doing extraordinary things first hand. →



Racing through the dark: teaming up at night can be a thrill

While everyone nods approvingly at the news that the first rider has made it back to Paris in 42-and-a-half hours, more respect will be afforded to those riders who decide to push through the final night in an attempt to reach the finish line before the 90-hour cut-off time.

These are the true heroes of Paris-Brest-Paris – in the same way London Marathon audiences take far greater interest in those challenging themselves in the main field than they do the elite runners setting records at the front.

By now, however, a couple of things become increasingly impossible to ignore – my feet are starting to hurt from the constant pressure of the pedals, and time is marching on. Back at Carhaix we are already well into the afternoon and it quickly becomes apparent that my original idea of getting to Tinteniac – another 170km away – in time to grab another four hours of shut-eye is hopelessly optimistic. Instead I will need to ride through the night if I want to get back on to a schedule that allows me some sleep on the final night before returning to Paris.

Having pushed on to Loudeac I join the masses in looking for somewhere, anywhere, to get my head down for an hour. I settle for sitting in a chair with my head on the table from which I have just eaten. It won't be the last time tonight, either; these snatched moments of rest will carry me through to the breaking of the dawn of my last full day on the road.

I had heard many stories before arriving of exhausted, sleep-deprived riders hallucinating or even dozing off on their bikes and toppling over during the long PBP nights, but fortunately my worst moments are not being able to discern which side of the road an approaching tractor was on (okay, that could have ended



All roads lead to Paris – after 600km anyway

badly) and subsequently seeing the white lines in the road as a fence, which given the tractor incident was probably more a defence mechanism than anything else.

The night's endeavours set me back on course, but by this stage my legs are tired and my contact points with the bike are far from happy. I brought two pairs of shorts with me (a change of kit safely stowed away in my trusty Carradice) and I'm now wearing them both. I am also loosening off my left shoe constantly in an attempt to alleviate the increasing pain in the ball of my foot. I have the same pain in my right foot, but thankfully to a lesser degree. Out of the saddle, into the saddle, out of the saddle, into the saddle... mine is not exactly a wheel to follow.

My other technique for lessening the pain is to press less hard on the pedals, changing into lower and lower gears and going ever more slowly as a result. As it has before, however, company saves me. After eschewing the control food in Fougères in favour of a bar outside selling sausage crepes, on the next leg my spirits are restored by striking up a conversation and suddenly realising that I am riding at the same speed as my companion with no ill effects.

Indeed, it is a mark of long-distance cycling that form can desert you and return without warning or explanation with peculiar regularity. This is where your PBP qualification events will stand you in good stead, as you will learn as your

Out of the saddle, into the saddle... mine is not exactly a wheel to follow

distances increase that if you can just keep going during the tough times, even if you're reduced to pushing your easiest gear, you will hit the heights again. There were times during PBP when I thought I would never see the big ring again, only to be hammering along once more within half an hour.

Leaving Mortagne for Dreux on the final night is my leap-of-faith moment. My plan (which has proven beyond me once already) was to get to Dreux, just 64km from the finish, before sleeping, but my fall-back was to sleep at Mortagne. Although time is on my side to press on, I am tired and in considerable pain. But I have arrived at enough controls on my knees now, only to leave them with renewed vigour, to trust that I can do it again, and the difference between facing a final 64km in daylight tomorrow and 141km having to start in darkness is such that I decide to step back out into the night for one last big effort, praying that my lights and legs still have enough charge for the challenge ahead.

An inherently pessimistic person, I have increasingly found that life actually rewards optimism – and so it was that Paris-Brest-Paris rewarded my act of belief by presenting me with some of my best moments of the whole event. At least, that's what happens after I really commit to the challenge, having descended into



Hotel Audax: Any time, any place, anywhere when the need for sleep strikes



Bench warming: a lone rider layers up before attempting to sleep



Heads down: even a short nap can be a big help

what I imagine to be a thickly wooded valley and begun to climb out again wondering what the hell I am doing out here on my own, chasing down random blinking lights in the dark.

Firstly I come across one of the Italian riders I had seen at the sign-on on Saturday, dressed head to toe in vintage woollen cycling kit and riding a bike that predated the First World War.

As we drop into a small streetlit village, I find him with his feet on the handlebar, pedals spinning unaided thanks to his fixed gear, approaching two marshalls with widening eyes, to whom he calls out, “Bella vita, boys, bella vita” as he sweeps around the corner they are manning. It is the most stylish piece of cycling I have ever seen. I would see him again back at the National Velodrome in Paris and, with no mutual language, I shook his hand and gesticulate enthusiastically to him. He probably thinks it was to congratulate him on completing the whole ride on a bike almost as old as the event itself, and I suppose it was, but mostly it was for that moment, a highlight of my entire PBP and an image I’ll never forget.

The next wonder of the night is the spontaneous formation of a multinational group of Spaniards, Seattlites and a Brit

that eats up the kilometres despite the Brit still having to constantly switch between standing and sitting in an effort to manage the ever-increasing pain. Barrelling through the pitch dark with just our bike lights to illuminate the way is a thrill ride, and gets us to Dreux in time for me to sleep.

Sleep, again, is a generous description of the rest I get on the dormitory floor (the beds are full), but nothing can dampen my mood now. My overriding thought from the moment I set off four nights ago was to be here, now. I’ve had my first Paris-Brest pastry and a mug of hot chocolate and I’ve got four hours before I need to get up, eat breakfast and roll into Paris.

Barrelling through the dark with just our bike lights to illuminate the way is a thrill ride

Come morning, the control has become considerably busier as those who have ridden through the night file in, eat, and fall asleep where they sit. They also look wet, and indeed the first rain of the week has arrived for the final kilometres. Nothing can dampen the spirits now, though, and anyway, I’ve got mudguards.

One of said mudguards comes

a bit loose after 20 or so kilometres, and I ask an American rider if he can have a look as we ride to check it’s nothing serious. As we strike up a conversation my new companion Wei’s bar bag falls off in front of his wheel but he skilfully avoids disaster and we both set about our fixes and ride to the finish together. Crowds await us as arrive at the velodrome, but the overriding sensation is one of relief rather than joy, and we’re both aghast to discover that we have arrived too early for beer to be on sale.

A short ride to a nearby pub soon rectifies that situation, and it is here, reflecting on a momentous 87 hours, that an overwhelming sense of satisfaction starts to kick in. It doesn’t take much to make a sleep-deprived cyclist that’s just ridden 1200km tipsy, especially when the beer is Belgian, but we indulge in a couple before wobbling back to our hotels with smiles, memories and a sense of achievement for company. **PBS**



SPECIAL THANKS TO:

Madison, Genesis and Garmin for my trusty Equilibrium Stainless bike and Garmin 1000 and Vector pedals; **The Endurance Coach**, and in particular Nick Thomas, for the guidance and support throughout eight months of training; **Carradice** for the stylish and practical Pendle saddlebag that contained my life for 90 hours – as British as James Bond; **Audax UK** for all their help and for the entries to my qualifying events





Go your own way

Words Paul Robson Illustrations Dry British

*As Britain's most famously stylish cyclist, and the only UK rider to have worn all three Grand Tour leaders' jerseys, we thought David Millar was just the man to guide us through *The Rules* as handed down by the mysterious Velominati... and tell us which of these hallowed strictures we should be breaking!*

Having retired from pro cycling after a career famed for the high and lows so typical of a racer of his era, David Millar is becoming more and more like the rest of us. A 'gentleman' cyclist for whom riding is a form of social relaxation rather than an endless cycle of training and racing. And he likes it that way.

"For racers, cycling is a very individual sport from a very young age," he says when we meet in Bath's Francis Hotel. "If you want to be a great racer you have to be very self-obsessed and specific about things.

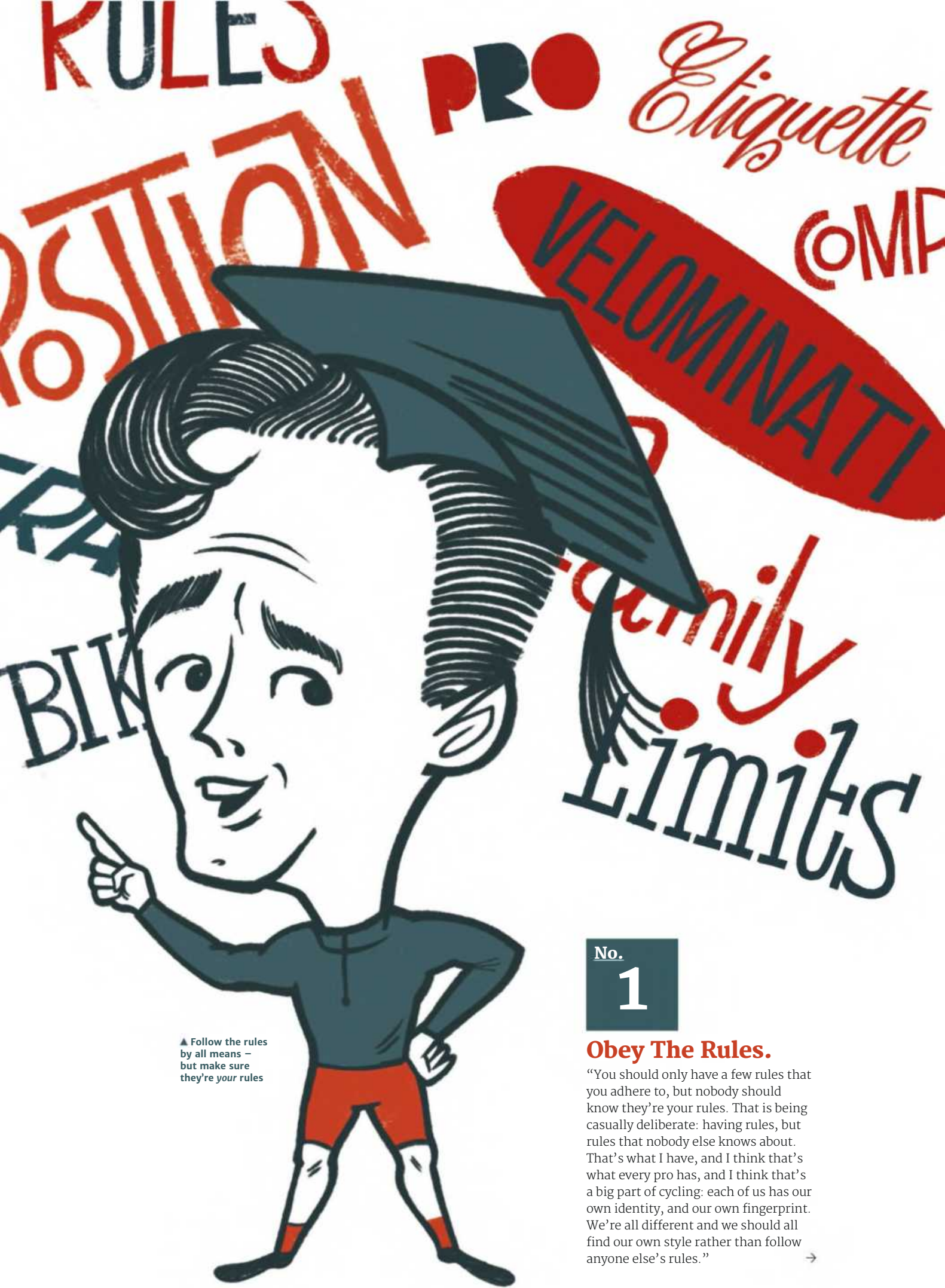
"When I lived in Biarritz in my 20s, for those seven years I trained on my own every day. But when I moved to Girona for the second part of my career there was always somebody to train with, and that's where it began to become more social. Especially with the now-retired pro Michael Barry – he really taught me the art of just going for a bike ride, and I really started to appreciate it.

"After that I started my own club, and as you see most ordinary riders getting more and more serious with power meters and Strava and stuff, I've gone the other way and stripped my

bike of all gadgetry and just want to go and ride with friends."

In his new book *The Racer*, in which Millar gives a fascinating insight into life in the peloton during his final year as a professional, he describes himself as two riders: one the racer, the other the gentleman.

It is the gentleman Millar that we ask to walk us through 'The Rules'. This 'sacred text' of arcane cycling decrees appeared on *Velominati.com* in 2009, and in book form, *The Rules: The Way of the Cycling Disciple*, in 2013. But surely rules are there to be broken, right? Well, some of them anyway...



▲ Follow the rules by all means – but make sure they're *your* rules

No.

1

Obey The Rules.

“You should only have a few rules that you adhere to, but nobody should know they’re your rules. That is being casually deliberate: having rules, but rules that nobody else knows about. That’s what I have, and I think that’s what every pro has, and I think that’s a big part of cycling: each of us has our own identity, and our own fingerprint. We’re all different and we should all find our own style rather than follow anyone else’s rules.” →

No. **4** **It's all about the bike. It is, absolutely, without question, unequivocally, about the bike**

"What does that even mean? I don't understand that. Of course it's about the bike, but it's about so much more than the bike."

► Thinking on the bike is fine, but you're probably better off keeping your eyes open



No. **6** **Free your mind and your legs will follow. Your mind is your worst enemy. Do all your thinking before you start riding your bike. Once the pedals start to turn, wrap yourself in the sensations of the ride – the smell of the air, the sound of the tyres, the feeling of flight as the bicycle rolls over the road**

"I've always thought the opposite – on the bike is where you start thinking. A bike ride is a way to make time to think, it is where you can have some of your best chats.

"And then racing is totally different because you're thinking about the race the whole time – the effort, the tactics, the technicalities of the race."

No. **8** **Saddles, bars, and tires shall be carefully matched**

"It's nice to have a certain symmetry to your bike, for sure, but it doesn't have to be completely the same. I mean, obviously you should have two matching tyres. When it comes to saddles I'm all Brooks now, with cotton bar tape."

No. **14** **Shorts should be black. Team-issue shorts should be black, with the possible exception of side-panels,**

No. **5** **Harden The F**k Up**

"That's a very personal thing... until recently young riders joining a club would be taken on an 'initiation' ride of 80-100 miles on one of their first rides, and then get left out there in the middle of nowhere, which was almost a 'harden the f**k up' kind of challenge – this is what our

sport is like. No wonder it took so long for us to get good at it, because we had youngsters put off by the fact the older riders had just smashed them, as well as being intimidated by chain gangs and reliability trials or just a simple club run.
"But you do need to learn your limits,

which is where data collection does come in, and you have to go pretty deep to discover your limits. And the point of cycling, the point of competing as we discussed earlier, is not to win but to find your limits and take yourself to places you wouldn't go otherwise. And the more you do that the

more it can be enjoyable, but you can't force that on other people: each of us has our own limits and we find them in different places and different conditions.
"But part of the joy of cycling is going that deep and teaching yourself to harden the f**k up, so it's an individual's life lesson."

which may match the rest of the team kit

“Nope. That’s a colour I’ve banned from the Chpt. III collection [Millar’s clothing range], it’s one of the rules: we don’t use black.”

No. 16 Respect the jersey. Championship and race leaders’ jerseys must only be worn if you’ve won the championship or led the race

“If you want to wear a world champion’s jersey, become a world champion.”

No. 17 Team kit is for members of the team

“Team kit is a bit more nuanced than a champion’s jersey. I mean, you can look like a bit of a wanker these days because there are so many other options out there, but in the old days you wore team kit because there wasn’t much else around, so team kit was the best kit and it was the kit you would see for sale in bike shops. I think it’s different now.

“But then again, if you’re at a bike race and you want to support your team, if you’re that much of a fan, then you might as well wear the kit, go full geek. They sell it for a reason.”

No. 24 Speeds and distances shall be referred to and measured in kilometres. This includes discussing cycling in the workplace with your non-cycling co-workers, serving to further mystify our sport

“I always use kilometres, but

“If you’re going to go on a proper bike ride, go full-on boy-scout”

that’s because I’ve been on the continent for so long. It does allow for universal comparison. Miles go by quite slowly as well.”

No. 28 Socks can be any damn colour you like. White is old school cool. Black socks are cool too, but were given a bad image by a Texan whose were too long

“That’s become a trend now, hasn’t it, crazy socks? And I do like crazy socks, always have done. So I’m going to agree with that, although I would have thought they would have pushed for white socks if they are such sticklers...”

No. 29 No European posterior man-satchels. Saddle bags have no place on a road bike [which leads on naturally to no 31]

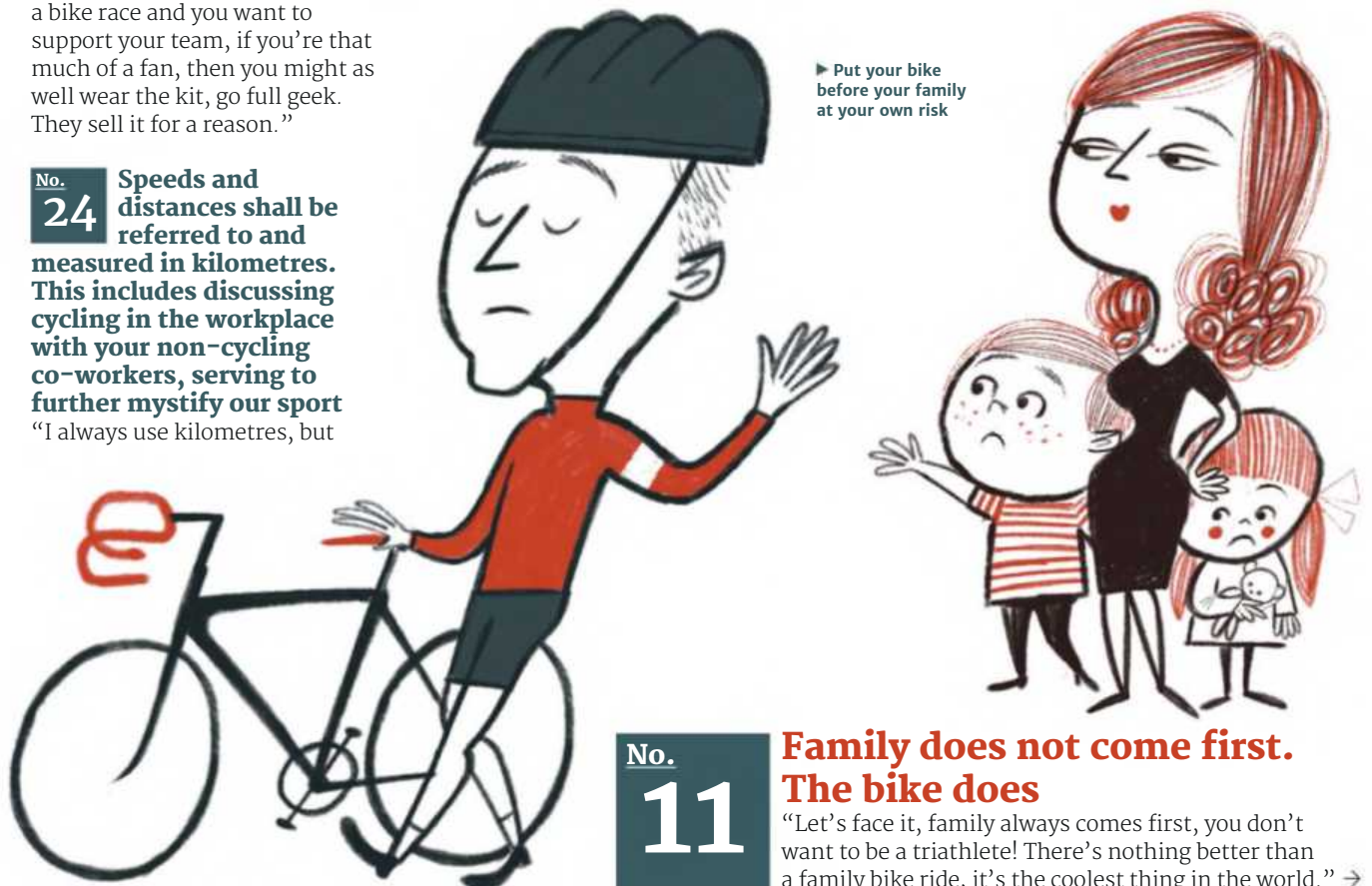
No. 31 Spare tubes, multi-tools and repair kits should be stored in jersey pockets. If absolutely necessary, in a converted bidon in a cage on bike

“That’s ridiculous, it’s the most stupid thing I’ve ever heard. That is the last thing that a pro would do. Every pro has a saddle bag, every pro has a pump.

Cannondale-Garmin’s Ryder Hesjedal has a saddle bag, pump, and in his pocket he carries his ‘MacGyver’ pack, which has every tool for every single possibility of what could go wrong, so he can get himself out of any situation. And that’s what you should do, go full-on boy-scout.

“If you’re going to go on a proper bike ride you’re going to take yourself to places where you have no phone signal, and anything can happen, so you should be prepared for that.

“I always have two tubes in my saddle bag, gas canisters, pump, and a multi-tool. Why would I want to carry all that in my pockets? It would look stupid, too.”



No. 11 Family does not come first. The bike does

“Let’s face it, family always comes first, you don’t want to be a triathlete! There’s nothing better than a family bike ride, it’s the coolest thing in the world.” →

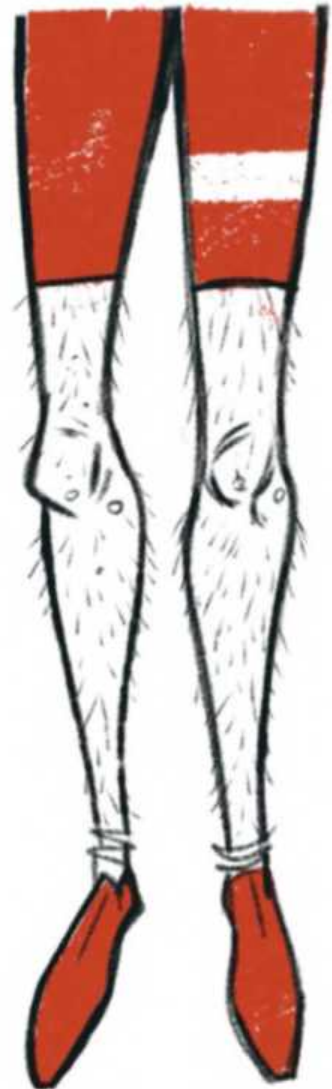
No. 33 **Shave your guns. Legs are to be carefully shaved at all times**

“I don’t shave my legs any more, although I have to if I’m doing a photo shoot or an advert. But I did a bike ride with

Pavé bike shop in Barcelona, their moustache ride, and out of the 20 guys that turned up I was the only one with unshaven

legs. Everyone looked so much more pro than me. “It does look better when you’ve got shaved legs, and maybe if I start

riding regularly again I will, but... or maybe I’ll just try to ride in cooler conditions when I can just chuck on my leg warmers.”



No. 37 **The arms of the eyewear shall always be placed over the helmet straps. No exceptions. This is for various reasons that may or may not matter; it’s just the way it is**
 “Yes, over the straps, always.”

No. 38 **Don’t Play Leap Frog. Train Properly: if you get passed by someone, it is nothing personal, just accept that on the day/effort/ride they were stronger than you. If you can’t deal, work harder. But don’t go playing leap frog to get in front only to be taken over again (multiple times) because you can’t keep up the pace. Especially don’t do this just because the person overtaking you is a woman. Seriously. Get over it!**

“That’s basic etiquette, and unless you’re having a fun race then you should never worry about other people when you’re out riding.”

No. 45 **Slam your stem. A maximum stack height of 2cm is allowed below the stem and a single 5mm spacer must always – always – be stacked above. A ‘slammed down’ stack height is preferable; meaning that the stem is positioned directly on the top race of the headset**
 “Yeah, I slam my stem, but I have to. You should do what your position requires. With modern bikes you do have to slam the stem quite often because they have such tall head tubes because they’re not catering to pros.
 “A bike does look better with

a slammed stem, but your bike has to fit you. I have a longer back compared to my legs so I need a slammed stem, other people don’t. I still have my old position, so I have a 150mm stem, and although that might change a little over time I don’t think it will very much. You don’t want to change what you’re used to too much.”

No. 70 **The purpose of competing is to win. End of**
 “That’s not the reason for competing at all. The reason for competing is to push yourself and test yourself because ultimately that’s who you are competing against. It’s an old adage, but the taking part is more what counts, only one person can win.
 “For the majority of pro racers, they are paid to race but not to win, that’s the reality.

“Maybe I’ll just try to ride in cooler conditions when I can just chuck on my leg warmers”



fun part is when you can manage the ride yourself.

“It’s great that so many people have got into cycling in the last few years but I think they’ll follow a natural curve, albeit slightly more accelerated than mine, in that at the beginning part of the fun is learning and getting into all the gadgetry – downloading, uploading, sharing data, but I think that gets old for everybody eventually and I think we’ll see a bit of a rebellion against that in the next few years.”

No. 80 Always be Casually Deliberate

“I think that’s cycling, very much along the lines of don’t sacrifice style for speed, so I can definitely endorse that, but it almost goes against their rules...”

No. 85 Descend like a Pro. All descents shall be undertaken at speeds commonly regarded as ‘ludicrous’ or ‘insane’ by those less talented

“No, even pros don’t descend fast outside of a race. I mean, we don’t race each other on descents either, except very rarely. If we’re training as a group of pros and some guy clips off, everyone

else just thinks what an idiot.

As pros, even when we’re going down descents in training we’re still riding two by two at a safe speed, we’ll still be able to talk to each other and stay in formation. So in that sense, yeah, descend like a pro, but like one that’s training. Full-on descending is only for racing, no one wants to crash.


“I think descending always came naturally to me, and as a junior it was something I enjoyed, and I lived in Hong Kong where there were crazy descents and cars everywhere. I learned on my mountain bike really, then descending on a road bike was easy after that. You have to enjoy it, that’s the first thing, and then you treat it as part of the sport.

“It is as much a part of cycling as riding on the flat or uphill, so you should teach yourself, and there are basic principles that you can learn on fairly easy descents before tackling tougher ones: always stay on your side of the road, choose the lines, braking points and acceleration points. It’s actually one of the easiest things in cycling, as long as you’ve got the mind for it. A crash or two does take the edge off...”

And one more, for the road...

The Cycling Plus/David Millar/Geraint Thomas rule that is notable by its absence in Velominati’s list: acknowledge your fellow riders!

“That’s something I always still do, although it is something that seems to have gone... maybe it’s just the sheer volume.

“I always used to compare it to going out in a boat, you’d always wave to the other boat, you’re both just out there cruising along sharing in that sense of fun, and cycling is just like that, you’re out sharing the same experience, and one that is a bit different. I always do it, and all of my friends who are pros do it, and if the other person doesn’t do it back... ‘what a dickhead’.” 

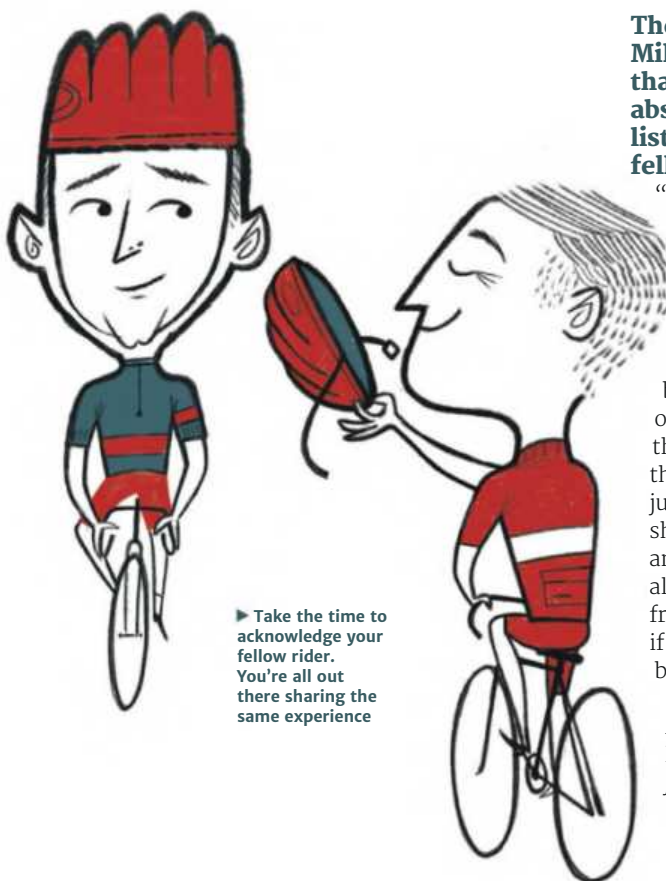
David Millar’s latest book, The Racer, is out now priced £20 from the Yellow Jersey Press

Most guys will go through an entire career never winning a race, so that’s definitely not what competing is about.”

No. 74 Forego the data and ride on feel; little compares to the pleasure of riding as hard as your mind will allow. Learn to read your body and learn to push yourself to your limit

“I can do that through years and thousand of kilometres of experience in the days before data, but I think now for people getting into cycling, they should maybe use the data and learn from it, and then start to learn to ride without it.

“But I do think it would be useful to begin with, because most people don’t have as much time to develop that sense. But you should use it as an educational tool, and then the



► Take the time to acknowledge your fellow rider. You’re all out there sharing the same experience

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“Stelvio, Stelvio!
Wherefore art
thou Stelvio?”
Read all about our
Italian Alpine
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ON THE ROAD

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THE BIG RIDE

Heaven & Hell...

WORDS JOHN WHITNEY PHOTOGRAPHY MATTEO CAPPE

Your reward for getting through the first 130km of the Grandfondo? The 25km Stelvio



The Granfondo Stelvio Santini might be all beauty on the surface but beneath lies a devilish beast



The high mountains of Grand Tours are what capture the imagination of pro cycling fans. Seeing riders gallop up the Galibier or vault over the Ventoux makes you dream of getting out there and claiming a piece for yourself.

Occasionally, however, I'll come across a climb on TV where I'm glad I'm seeing it from my sofa.

The Mortirolo Pass is one such pass, a climb that exasperates and infuriates even the world's best. It's best known from the Giro d'Italia furniture, but it's also a key climb of the Granfondo Stelvio Santini. And while the more famous Passo dello Stelvio gets its name in lights for the Granfondo, it's the Mortirolo that steals the show.

I ended up riding up it almost accidentally on the morning before the event, and I'm glad I did, because leaving it for a race day surprise would have been a mistake. It has another name – the Passo della Foppa – but Morte, which means death in Italian, is a much better fit.

It's said to measure 11.3km from the classic Mazzo di Valtellina side but my GPS measured 12km – probably from all the zig-zagging

I did on my way up. This thing is steep, 12 per cent – average steep, with some sections at over 20. In other words, it's an absolute horror.

Rich pedigree

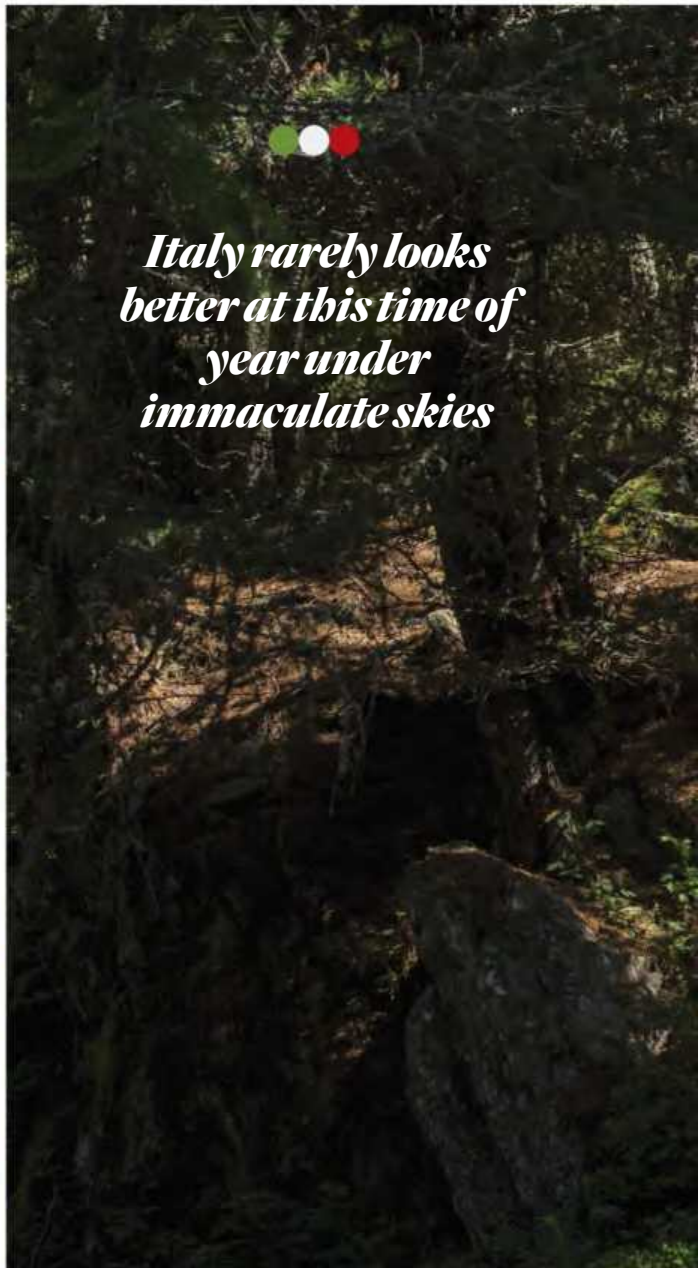
The Granfondo Stelvio Santini feels like it has existed for decades, but the first race was actually staged as recently as 2012. It's based in the Italian town of Bormio, which in a sense is the Italian equivalent of Bourg d'Oisans in France. Where the latter is surrounded by famed climbs like Alpe d'Huez, the Galibier and the Croix de Fer, Bormio has on its doorstep the Stelvio, Gavia and Mortirolo. As it happens, the town is actually twinned with Alpe d'Huez (you could argue identically twinned, all things considered).

It was a 2012 Giro d'Italia stage that spurred the local authority in Bormio to establish the granfondo. Won by a soloing Thomas de Gendt, it remains one of the most memorable Grand Tour stages in recent years, and the Granfondo largely mimics its route. But rather than starting in Val di Sole, as in the Giro, the route is a Bormio out-and-back of sorts. The climbing begins with the sharp Toglio, followed by the Mortirolo, then the long drag back up the valley to Bormio and the

climb to the finish atop the Stelvio, 22km above the town at an altitude of 2758m.

Saturday in Bormio was a fondo tune-up day for both bike and body. Italian former pro Andrea Ferrigato, a Giro stage winner →

While the more famous Passo dello Stelvio gets its name in lights, the Mortirolo steals the show



Italy rarely looks better at this time of year under immaculate skies

in 1994, was my guide for the day and, unbeknown to me, the Mortirolo was our destination, 30km down into the valley with its summit standing at 1854m – more than 1300m above the village.

Get in tune

Ferrigato has more previous than most with the climb: he was in a group not far behind legendary Italian climber Marco Pantani when he put Miguel Indurain to the sword during the Giro d'Italia's visit to the climb in 1994. He says it's the hardest climb he's ridden, in a race or otherwise.

In his pro days they had a totally different approach to gearing. Firstly, compact chainsets didn't yet exist, but the prevailing tendency towards using higher gears didn't help either. Ferrigato says in 1994 riders did make concessions to lower gears for the Mortirolo, but only to a maximum of a 25t cog on the back, while many still ran 42t small front chainrings. These days, it's no

Top left Providing just one public toilet for 3000 riders was perhaps a mistake

Above The hills are alive with the sound of cycling

longer taboo to use low gears – look at the way Alberto Contador spun his way up the Mortirolo this year, for example. Technology has changed, but so too have attitudes.

I'd come to the Granfondo with the intention of riding the longer of the two routes, which includes both the Mortirolo and Stelvio, but the way I slogged my way up the Mortirolo told me I had neither the gears (a 36–28t bottom gear was nowhere near enough) nor the conditioning to climb it during the race. The recce took me one hour 51 minutes at a near-walking pace of 4mph.

Ferrigato believes many people underestimate the Mortirolo, and judging by the number of riders eyeing up cassettes the size of dinner plates in the bike shops on Saturday afternoon, it seems word had got out.

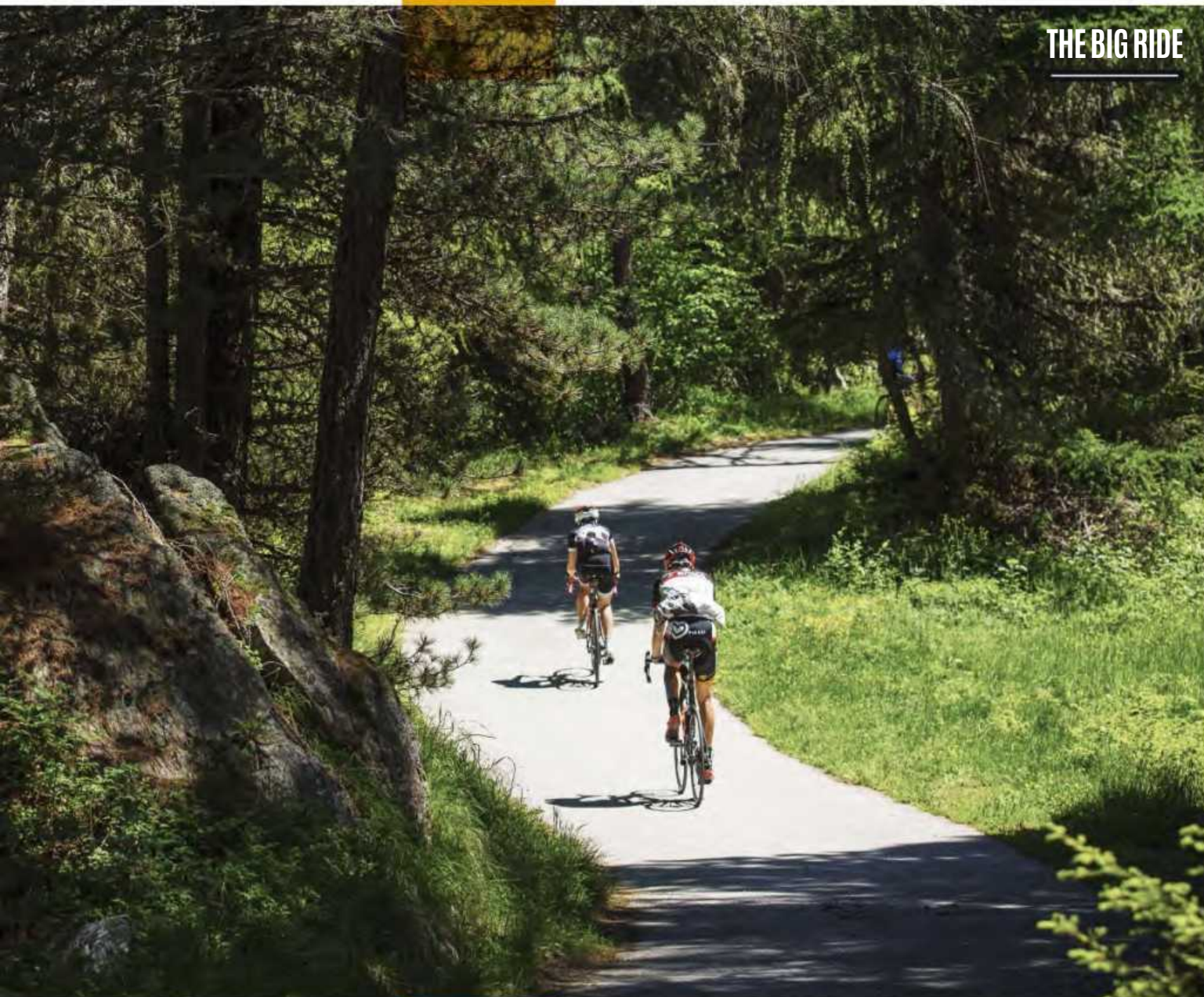
The next morning, 3000 riders made their way into town for the 7.30am start, all beaming smiles thanks to the blue skies above – this

was early June at some of the highest altitudes in Europe and it can get damn cold even at this time of year if the conditions are unfavourable.

Being an Italian gran fondo, everybody bar an elite group of 50 at the front started en masse, which made the opening 30km down the valley to the first climb extremely nervy. Even races are controlled at the start, but these gran fondos are contested hell-for-leather right from the get-go.

Early start

The first serious climb at Teglio couldn't come soon enough. The field needed some distance put into it, though the wall-like Teglio, which climbs 400m in 4km on rake-thin roads not dissimilar to the Mortirolo, probably wasn't the ideal candidate. It only took one rider to unclip for a domino effect to take hold and before long hundreds were on foot, and it was 200m before the gradient eased enough to clip back in.



The Giro d'Italia markets itself as the 'world's toughest race in the world's most beautiful place', and if you think that sounds a touch hyperbolic, you haven't been to this part of Italy. The section of the course from Teglio to the base of the Mortirolo is stunning and rarely looks better than at this time of year under immaculate skies.

The split for the 138km medio fondo and the 151km gran fondo route came at a feed stop just before the Mortirolo at the 80km mark.

I had decided the night before that I wasn't climbing the Mortirolo but for many the relative lull in proceedings after the Teglio perhaps gave too much room for second thought. Going up the Mortirolo adds just 13km to the route but could easily take another two hours and lead to incalculably more fatigue come crunch time on the Stelvio.

Whether you stick the crampons on and head up the Mortirolo or crank up the diesel engine and begin

Main picture
It could be just your average weekend amble through the park...

Right ...But the climbs on the Granfondo aren't to be taken lying down

Right "Any chance of a bacon sarnie while you're at it?"

the slow drag back up to Bormio, from here on out you're in for a rough ride. The final 60km is on an entirely upward trajectory, from an altitude of 500m all the way to the Stelvio summit, one of the highest passes in Europe at 2758m.

It's just five kilometres on the shorter route before those brave souls who have gone up the Mortirolo rejoin the field, which meant – for a time, anyway – that the elite riders were mixing it up with lesser mortals like myself on the same piece of tarmac. It was astonishing to see the speeds these competitors were riding, and a rare insight into the effort required to be a contender in these races. I still had my red 'long route' number on my jersey, but nobody was in doubt as to which group I really belonged.

Italian gran fondo racing isn't known for being the cleanest of pursuits. Races are typically contested by amateurs looking for glory or out-of-contract pros



THE BIG RIDE



looking for a break, at the kind of speeds you'd normally associate with the WorldTour.

Cycling's bete noire Riccardo Riccò pitched up to race in 2012, to the ire of then-UCI president Pat McQuaid, who was in attendance (Riccò was swiftly given his marching orders). Few gran fondos have doping control, a problem mentioned in passing within the UCI's recent CIRC report. Yet there's little reward, financial or otherwise, to be had here – all the winner of the Granfondo Stelvio gets to take off the mountain is a salami – so it makes you wonder why they even bother.

At a couple of points on the route I actually had straight-faced Italian riders ask me whether I had a motor in my bike (my chain was catching on my front derailleur cage, making a noise that could pass for a small motor). We're supposed to be having fun with these gran fondos, guys!

In the end, all you can do is ride your own race and strive for your own goals.

Above Surely there must be easier ways to get yourself a free cap...

With that in mind, I got my head down and made for my next checkpoint in Bormio, where I had a cold shower and prepared for a final push up the beastly Stelvio.

Closing roads for cycling events in Britain isn't easy, but Italian authorities seem to be much more persuasive. Even with a pass as crucial and widely used as the Stelvio, they don't hesitate to shut it down for cycling races if they see it as important for the local area. So while the rest of the course was on open roads, the Stelvio was a cyclist-only zone for the day and what a magnificent scene it was looking down from near the top.

There were those coming up, a constant stream of worn-out riders strung out along its entire 22km length, and those heading back down, having collected their cap from Pietro Santini, founder and president of the Santini clothing dynasty and a key backer of the race. →



LOCAL KNOWLEDGE

NEAREST STATION
Milan Malpensa/
Milan Bergamo

WHERE TO STAY
We stayed at the Larice Bianco in Bormio, close to the start line and registration, courtesy of Sports Tours International, (sportstoursinternational.co.uk). Cost this year was £559 for 4 days half-board, which included transfers and gran fondo entry, but excluded flights.

FOOD AND DRINK
Evening meals are

provided at the hotel, as well as a post-ride pasta party in the registration area in Bormio.

BIKE SHOPS
Bormio is a hub for cyclists with a huge choice of bike shops throughout the town.

TOURIST INFO
www.bormio.it

EVENT INFO
www.granfondostelviosantini.com
Cost €45
Distances 60km/
138km/151km

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The Telegraph

Meet the team at telegraph.co.uk/teamtelegraph

THE BIG RIDE



Above Not the worst place in the world for a bike ride

Top right Light at the end of the tunnel? Nope, just more climbing

Middle right “What do you mean 900 riders have already finished?”

Bottom right Sometimes sleep is the only remedy

The Stelvio is an animal even on its own, but with 130km in your legs it's a real monster. Fortunately the gradients are shallow enough that I could spin up at my own pace – but for many who'd tackled the Mortirolo it was a different story. James Buchanan and his Amphill CC teammates had been riding hard in the Bormio valley to make the 2.30pm cut-off for starting the Stelvio, and the cumulative fatigue pushed them to the edge.

“Cramp, sickness, desperate to turn round... I've never felt so bad in my life. But the summit was my aim since I'd signed up in November and the months of training had to count for something. It made it quite emotional when I did get there. It's my first gran fondo, and first time in the Alps. A fantastic experience.”

For James and myself, and many others, the brutality of the race and the effort required to finish gives an equal reaction of satisfaction and pride in the aftermath. Have we been to heaven or hell? I guess it's a matter of perspective. **WATTS**

Distance: 86 miles (138 km) **Grade:** Very hard, whether you choose to ride the Mortirolo or not
Download: mapmyride.com/routes/view/822536177

1 Leaving Bormio, head down the valley road through Piazza, Cepina and Grosotto until you reach Lovero. Bear right and carry on down the valley with the Fiume Adda river on your right.

2 Turn right just after the town of Tirano onto Via Alla Polveriera then left onto the SS38 through BIANZONE.

3 Climb to Teglio and descend down the SP21 and loop back round the valley following signs for Bormio.

4 In Tresenda cross the river and continue onto SS39 to Motta and continue back up the valley through Stazzona towards Bormio on the left-hand side of the Adda river.

5 At Mazzo di Valtellina, take the road up the Mortirolo or carry on up to Bormio. If you take the Mortirolo, you will ride back down an alternate road on the same side of the mountain and rejoin the valley road.

6 In Bormio, you will pass through the



town and follow signs for Passo dello Stelvio (SS38), which is well signposted. The climb is 13 miles long uninterrupted, with few places to refuel on the way up.

7 At the summit, turn round and descend back down into Bormio.

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BIKE OXFORD

13 September 2015 > 80 miles >
3981ft climbing

This is the sister event of Bike Bath, now in its second year. The choice of 20, 50 and 80-mile routes made for a great inclusive feel, with plenty of young riders, sportive first timers, and female riders making up nearly a third of the field.

My start group included all of the above, and I found myself in a small, fast-moving group riding around the colleges through the back streets of Oxford at a frenetic, criterium-like pace, which left little time to admire the sights.

Things settled down as we headed northwards into the Cotswolds. The well-signed route took us onto quiet roads and a smorgasbord of pretty villages. Although the scenery was bucolic, the parcours was deceptively tough – a real

sawtooth profile. I clocked nearly 1,400m of elevation – surprising since there were no really noticeable climbs.

Despite the blistering early pace, any thoughts of Strava records went out of the window at the first feed stop at the fabulously quirky Victorian Hook Norton brewery, and my first encounter with the cheese. Great chunks of cheese it was, followed by a fabulous treacle-drenched flapjack and washed down with a sparkling rhubarb drink.

I headed back towards Oxford via another time-robbing cheese stop to the finish and yet more cheese – this time at the event's relaxing 'village green' accompanied by a terrific lounge singer and, finally, a well-earned beer.



The choice of 20, 50 and 80-mile routes made for a great inclusive feel







LOCAL KNOWLEDGE

NEAREST STATIONS
Penzance (Land's End) and Wick (John O'Groats)

FOOD AND DRINK
Each stage has a couple of pit stops serving food and drink, usually after 35 and 75 miles. Breakfast and dinner are served on site.

WHERE TO STAY
Camping is a key part of the Ride Across Britain experience, on a mixture of greenfield sites, race courses and school grounds.

BIKE SHOPS
Mechanical support is available every step of the way, with free labour on all repairs and service. Twenty-five loan bikes are available for riders with muddlesome mechanicals.

WEBSITE
rideacrossbritain.com

RIDE ACROSS BRITAIN

10-18 September 2016 Land's End to John O'Groats: The sportive!

1 END TO END

Every British cyclist worth their salt has LEJOG (Land's End to John O'Groats) on their bucket list. There are many ways to do it – you could go it solo, tackle it with friends or attempt some sort of bonkers record – but Ride Across Britain is surely one of the more sociable and hassle-free.

2 FOLLOW MY LEADER

Your luggage will be transported each day and ride leaders will guide you through stages. On top of that you'll have all the usual sportive benefits, like signage and feed stations.

3 CLIMB SOME MORE

You'll understand just what a hilly nation Great Britain is. Over the 966 miles and nine days you'll climb over 50,000ft – not much less than the figure you'd ride in a week of Etapes du Tour. The toughest day is the first to Okehampton, which climbs around 7000ft in 107 miles.

4 UNDER THE STARS

Almost every night you'll get your much-needed shut-eye in tents but don't let that put you off: you'll have an inflatable mattress and the tents will already be set up when you arrive.

5 NOT BY HALVES

If you don't have time or fitness for the full route (£1600), there are also half-distance 'England' (five days, £1150) and 'Scotland' (four days, £950) packages available.

6 ONE FOR ALL

The event mantra is 'more is in you'. It's in response to questions organisers get from riders concerned that riding 110 miles a day for nine days was beyond them. This mantra aims to show people that they'll be surprised what they're capable of.



TRAINING TIP

"There is no substitute for saddle time, but we recommend adding strength training for the legs. When legs run out of power, riders start rolling side to side on the saddle, which means chafing. Some basic lunges and squats can make the difference between a glorious experience and a week of wincing."
Julian Mack, event organiser

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Five of Britain's biggest and best organised rides to aim for in the new year



CALENDAR

BEST OF 2016

Take a look at our pick of the events to tackle next season

1 WELSH WANDERER Velothon Wales June

The first edition this summer was a bona fide belter, despite a minority of the natives revolting and causing tack-attack shame. While the pro race didn't attract the calibre of field that RideLondon did, the closed-road sportive was, for our money, the better event. At around 12,000 riders it had only half as many as RideLondon (which is no bad thing), as well as a tougher course. Up and over The Tumble was a highlight of the season for us. humanrace.co.uk

2 A DAY OUT IN GOD'S OWN COUNTY Maserati Tour de Yorkshire Ride 1 May

British Cycling may have turned down the professional race's request to

extend from three to four days, but it's still one of the highlights of next year. This sportive is a very big part of that, its route kept under wraps until the race is launched, but it will coincide with the race's third and final stage. velothon-wales.co.uk

3 THE MOOR THE MERRIER Dartmoor Classic 26 June

Mid-Devon Cycling Club pull out all the stops each June with this epic through the wilds of Dartmoor National Park. You'll register more than 10,000ft of climbing over its 107-mile route that starts from Newton Abbot. dartmoorclassic.co.uk

4 SMALL NUMBERS, BIG RIDE The Monster 9 July (provisional)

Perhaps an antidote to the huge events

elsewhere in this preview, this intimate, 100-rider sportive on a long (195km), hilly (4,200m) and technical course in Llangadog, South Wales is targeted at experienced sportive riders. acycling.com

5 THE BIG ONE! Deloitte Ride Across Britain 10-18 September

It's Land's End to John O'Groats: the sportive! LEJOG is an ambition for almost every single cyclist in the country and Ride Across Britain takes the hassle out, ferrying your bags so you can crack on and concentrate on overcoming the 966-mile, 15,000-metre, nine-day ride. Mind you, this won't be any mollicoddled luxury – eight of the nine nights involve camping (though an inflatable mattress is provided). rideacrossbritain.com

1. rb-creator; 2. Maserati; 3. Seb Rogers; 4. Anthony Pease; 5. Threshold Sports

RIDING AWAY



CALIFORNIA DREAMIN' Eroica California 8-10 April

The famed Italian vintage bike race made it to US shores last spring for an event on the gravel roads around Paso Robles. The spirit of the original remains the same, with bikes built in the style of 1987 or earlier, toe straps and wool clothing. eroicacalifornia.com

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RACE NUMBERS*

*Okay, we know it's not meant to be a race!

VÄTTERNRUNDAN

WHEN 17–18 June 2016

WHERE Motala, Sweden

DISTANCE 100/150/300km

PRICE 1,350 Swedish Krona (approx. £108) for the 300km route.

WEBSITE vattnrundan.se

Sweden's Vätternrundan isn't just one of the largest sportives in the world, it's also one of the longest, with a 300km loop of Lake Vättern starting in the town of Motala. The ride sets off in the evening and continues through the night, but don't worry, there isn't much of it at this time of year! It is one of six events run by the World Association of Cycling Events, along with the likes of the Etape du Tour and RideLondon.



15

Hundred litres of blueberry soup quaffed. It's a popular Swedish dessert that can be served hot or cold. Probably cold at this time of year...

Thousand litres of energy drink handed out to the riders last year, which drowns out the 1250l of beer.

4

Thousand paid volunteers helping out along the route.

20

The number of hours of darkness you can expect at this time of year in Sweden. Vätternrundan takes place a week before Midsummer, the traditional start of their summer holidays.

1

1 1/2

A whopping half a million people have completed the 300km Vätternrundan since it began back in 1964. That works out at a combined 156m kilometres – the distance from Earth to Mars, three times over.

Nations represented at last year's event.

47

3

Hardy cyclists have completed the 300km route in every single event since 1964.

Where Lake Vättern ranks on the list of Europe's biggest lakes. At 1893km², it's dwarfed by Lake Ladoga in Russia (17,700km²).

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Print 42,871
Digital 5824

The ABC combined print, digital

circulation for Jan-Dec 2014 is

48,695

Printed in the UK by William Gibbons & Sons on behalf of Immediate Media Company Bristol Limited. Distributed in the UK by Seymour Distribution Ltd, 2 East Poultry Avenue, London EC3A 9PT. Tel: 020 7429 4000

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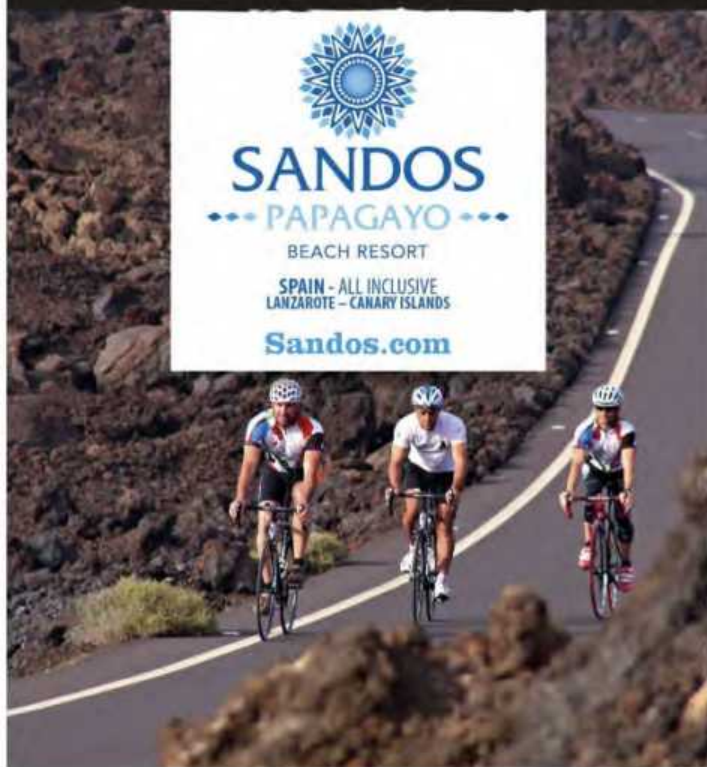
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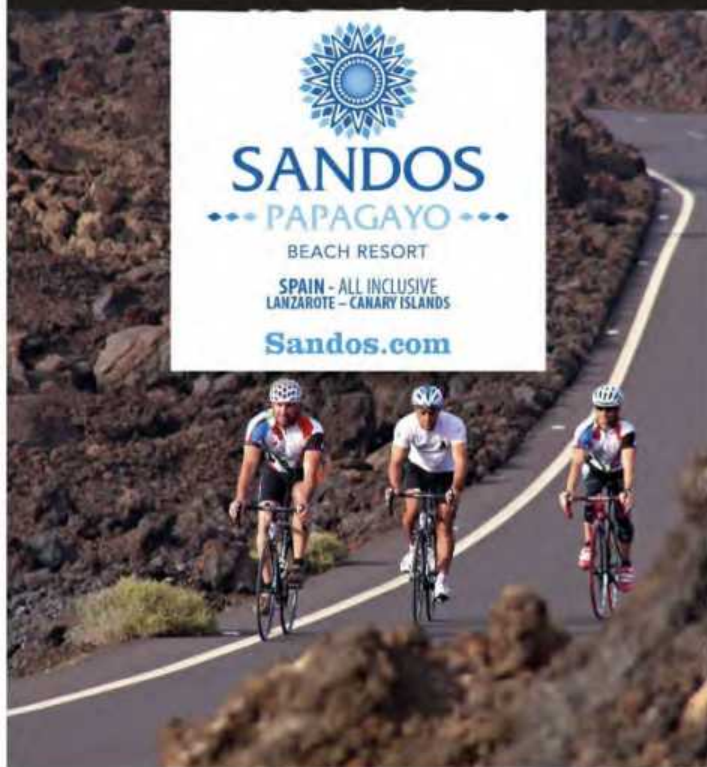
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NED BOULTING EASTERN PROMISE

CHINA'S E-BIKE REVOLUTION IS AN UNEXPECTED BREATH OF FRESH AIR...

Visiting China recently proved to be a rather thought-provoking event. It was challenging in all sorts of unexpected ways, the first of which involved being attacked by a ridiculously under-proportioned dog while out for a run one morning in the industrial nightmare of Haimen City on the banks of the Yangtse river delta.

Now, not many Chinese people run. This is partly because they work their fingers to the bone, and have better uses for their free time than plodding up and down pavements in the vainglorious pursuit of fitness. It is also because the air their government expects them to breathe is foul to the point of actual poisoning. So, why inhale this toxic cloud any more urgently than required?

But anyway, back to the dog. It came flying at me from across the road, baring its stupid little sharp teeth and growling in Mandarin. It was about eight inches long, and about three inches tall.

Now, I should explain that I'm terrified of dogs, having been bitten three times – once in Devon, once in Norfolk, and once on the arse. I was not intending to add Jiangsu Province to that list. So I shrieked like a One Directioner and leapt in the air, but the little mutt, undeterred, nibbled my ankle. As I stood there bleating my distress, salvation came in the form of a very elderly Chinese lady, in classic Maoist blue overalls and a straw hat (I kid you not), who smacked the beast so hard with a stick that it retreated, whimpering, into whatever hellish portal it had emerged from.

I ran off, humiliated, to the delight of the collected workers whose grinding labours prop up the world's second largest economy. Even the kids were laughing, huddled in their puffa jackets, on their way to school. I like kids, so their derisive cackling stung a bit.

China's a hard-nosed place to grow up in,



The air their government expects them to breathe is foul to the point of actual poisoning

under the paternalistic eye of a state determined to grab prosperity, partly for all the right reasons, but also for plenty of the wrong ones. For despite its burgeoning hyper-capitalism, China is still a land where you do what you are told. These days its streets hum with BMWs, Porsches and Range Rovers, with blacked-out windows and lung-blackening exhaust fumes. A devilish brew of cronyism and Communism holds the place together in all its wonder and stink, but at a hell of a price.

And yet, even in a country seemingly hell bent on hurtling into a pre-stressed concrete Armageddon, there is much to learn about that most exciting of subjects: sustainable transport. Yes, that old rib-tickler.

Don't get me wrong – the sight of the Chinese proletariat streaming to work to the accompanying creak of poorly oiled chains is no more. Just like everywhere else, the bicycle's appeal in China withered when motorised travel made it possible to eat a sandwich, smoke a fag, and still get to work sitting down.

But all is not lost. As we near the end of Communist China's Twelfth

Five Year Plan, this marvellous, massive land has unexpectedly shown us a glimpse of an emission-free and genuinely revolutionary future, amidst the stink of its blackened urban canals.

As I ran back to my hotel, feeling humbled and sorry for myself, I suddenly became aware of the sheer volume of electric bikes on the road: noiseless, nippy, nice-looking, and driven by Grandma as well as Mum, Dad and Uncle. Some were modelled to look like a Brad Wiggins Vespa, others like kiddies' scooters. Some were seriously bulky, others slender. Some carried passengers, others boxes. But all of them were silent-running and vapour-free.

Most of all, I liked the half-asleep schoolkids, huddled up against the backs of their trusted adult pilots, as their E-Steeds sped along the wide, ghastly avenues of China's self-important, countless metropolises.

What a way to get to school! What a way to avoid ferocious, yapping dogs!

So I return to these shores converted to the cause. I have glimpsed the future! The revolution starts here! The bicycle is dead!

Long live the E-Bike!

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Ryan Scott smashed 40 minutes off the same Sportive one year later after a winter's training on a Wattbike

Image © NotChilllee

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Electrical engineer Ryan Scott took 40 minutes off the same Sportive after replacing most of his 'winter' training on the road with shorter, higher quality, Wattbike sessions.

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customer service and believe that our tailored advice to you as an individual will give you a dream bike that will meet your exact requirements. We're happy to chat over the phone, via email or, if you come to our boutique stores in Oxford and Brighton, with a fresh coffee and with a one to one conversation.

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GEAR GUIDE

2016



he more things change, the more they stay the same. This is true in cycling as in so many fields. So the coming year's kit is lighter, stiffer and more carbon-y than ever. Apart from the clothing, which is more 'breathable and waterproof'. Don't believe us, check out the six pages of clobber from page 10, including new kit from Evans. Carbon wheels, meanwhile, are getting down to a level more of us consider 'affordable' (p6), tools are becoming integrated into bikes (p24) and SRAM's shifting is going wireless (p28). Cycling owners' clubs (p20) and cycling's entrepreneurs (p30) show that our pastime (or obsession) isn't all about gear, it's also about people...

Warren Rossiter, Senior Technical Editor

WHEELS



A strip of copper underneath the rim's carbon skin helps minimise heat buildup

FAST FORWARD FFWD F3 £2016

The Dutch FFWD outfit has earned a worthy reputation for the build quality of its wheels. Each and every set is fully handbuilt at its base in Zwolle. But just because these are traditionally built doesn't mean they lack cutting-edge tech. FFWD's all-new F3 rim features a copper strip embedded beneath the braking surface. "Copper?" you ask. Well, the metal is an

excellent thermo-conductor, which means heat can be dissipated from the rim more quickly than with the usual all-carbon construction. You'll feel the difference most on long descents when heat build-up can become an issue – making the F3s an ideal choice for climbing wheels. The weight? An impressively light 1195g per pair.

ENVE 2.2 SES TUBULAR £2900

At just 1225g a pair, Enve's latest carbon creations are the ideal companion for big climbs. The weight is kept low by the use of Enve's new carbon hubset. Even though it's a shallow profile wheel it has still been aero-optimised in the Mercedes-Petronas F1 windtunnel to ensure that you get a true advantage on the road. The 2.2s also debut Enve's new moulded-in textured brake track for a 30% improvement in brake performance over the previous model, so that makes a wheel that's fast going up, down, and stopping too, which makes them a winner in our book.



Their low weight and innovative brake track tech mean there's plenty to like about Enve's 2.2s

CORIMA 35MM MCC S-PLUS £1319.99 [r], £1139.99 [f]

French brand Corima is one of the original innovators in carbon-fibre wheels, and the company's latest lightweight climbing wheels match a wider aero-profile 32mm rim with a minimal quota of just 12 spokes both front and rear. The net

result is a set of wheels that tip the scales at just 630g for the rear and 460g for the front. They may look insubstantial and fragile, but they've already helped propel Fabio Aru and his Astana teammates to victory in the 2015 Vuelta de Espana.



MAVIC KSYRIUM PRO CARBON SLT £1425

Mavic's Ksyrium has been the default for performance wheelsets for as long as we can remember. For 2016 they've been revolutionised with an all-new wider carbon rim, and at 1190g a pair these are the lightest Ksyriums ever. Mavic has also developed a new TgMAX brake track system that consists of several high-tech resins that are heat-treated to create the highest resistance to heat build up. Like all Mavic wheelsets these come with tyres fitted, in this case the all-new super supple 25mm wide Griplink/Powerlink combination.

Mavic's 2016 Ksyriums comes with a wider carbon rim, are lighter than ever and a new brake track system.



LIGHTWEIGHT MEILENSTEIN OBERMAYER

£4199

Low-weight, high-price wheels from Germany's purveyor of high-end hoops. The Obermayers feature 47.5mm deep rims and a unique full-carbon construction that takes in rims, hubs and even spokes. This edition of the Obermayers is 25g lighter than its

predecessor, which may not sound like much but when you're dealing with a rear wheel that weighs just 625g and a front that comes in at a featherweight 475g, it's not to be sniffed at. Trying to build the ultimate low-mass bike and have deep pockets? Look no further...



COSINE 45MM CARBON CLINCHERS

£600

Wiggle's relentless quest for world domination has now extended to wheels with the launch of the in-house Cosine brand. These new clinchers have 45mm deep blunted aero rims made from high-grade carbon, complete with a special heat- and abrasion-resistant resin. The 23.4mm internal rim width gives a great platform for 25mm tyres. The 1700g weight is competitive and the price is about the least expensive you'll find for carbon wheels anywhere. For the same price you can also get Cosine wheels with 30mm or 55mm rims, weighing 1580g and 1775g respectively.

In a nutshell: the lightest and most rigid carbon wheel on the planet


HUNT 55 CARBON WIDE AERO TUBELESS

£1099

New British outfit Hunt's value-packed offerings have been making serious waves in the wheel world, and these 1549g wheels, with their 55mm-deep, 26mm-wide rims, look to continue that trend. Their cutting-edge design forgoes the traditional 'hook' of a clincher (or tubeless) rim, allowing Hunt to reduce rim weight and increase the strength of the braking wall. The Toray T700/800 carbon rim features a 'Griptec' basalt ceramic fibre brake track for more consistent braking performance and faster heat dissipation, and the price includes quick releases, tubeless tape and valves, spare spokes and a spoke key – plus Schwalbe's excellent Pro One 25mm tubeless tyres. That sort of value is hard to beat.



Going deep is obvious for aero gains, wide rims with a U-profile provide great handling and reduce drag across multiple wind yaw-angles



Zipp's 808 NSW was developed using more than 40 concept studies using CFD (Computational Fluid Dynamics) and involving multiple wind-tunnel trips

**ZIPP 808 NSW
CARBON CLINCHER**
£2350

Zipp's original Firecrests revolutionised aero wheel design. Now, following on from its awesome 404 Firestrikes, Zipp has improved on the profile of its 808 rims. Zipp claims that the new NSWs offer a 3-4 watt saving over the 808

Firecrest, which is worth around 90 seconds at 40kph over the 112 miles of an Ironman triathlon, say. They come with a new Cognition hub, which disengages the ratchet mechanism when you're coasting in order to reduce drag.

CLOTHING



The Recon Wool Long Sleeve Jersey mixes merino wool with nylon and spandex for a comfortable fit.

VELOCIO WINTER RECON

The Recon range comes in men's and women's versions and is designed as warm-up gear for 'cross racing – though it's suitable for any kind of cold weather riding.

RECON WOOL LONG SLEEVE JERSEY £129

Constructed from a soft-touch fabric that blends 45 per cent merino wool, nylon and spandex, the wool jersey is more figure-hugging than standard wool tops. It has numerous reflective details and three large pockets protected by a storm flap. Add in double-thickness cuffs, collar and a wind-baffle-backed zip and you've got some seriously luxurious winter wear.



HELEN WYMAN SIGNATURE RECON OVERPANT £153

British cyclo-cross legend Helen Wyman designed these Italian-made warm-up specials with the Velocio team. From the outset it needed to cope with cold, wet and muddy conditions for riding and warming up. The front features windproof Polartec Power Shield Pro alongside water-resistant panelling and a DWR water-repellent coating over a warm winter-weight Roubaix fabric. Unique click-fix braces and full-length zips on the outside of the legs allow you to whip them off in a flash.

X-BIONIC WINTER

X-Bionic is the pioneer of woven-technology cycling kit, with countless design and technology awards to its name. It has taken the 'simple' art of sportswear design to a whole new level. It is designed to work in conjunction with its companion pieces, and not only is it designed for comfort, it's also claimed to optimise your potential performance.



X-SOCKS WINTER BIKING £15

Probably the most complex socks we've ever seen, the X-Socks are made from a combination of hollow-core Robur fibre and natural merino wool. The wool keeps unwanted odours to a minimum, while the Robur helps to keep the heat in and reduce pressure. The heel design helps to support your ankle joints while the 'Transverse Airflow Channel' ventilates the sole by moving moisture away from your skin, thus reducing friction and potential chafing. That's quite a sock...



WINTER SPHEREWIND LIGHT £218

The Spherewind jersey-cum-jacket uses X-Bionic's '3D BionicSphere' technology, which means there's a full-length panel running from between the shoulder blades downwards. This has deep parallel ridges that wick moisture out while creating pockets of air between you and the jacket's outer - insulating when it's cold and providing cooling when you're working hard.



THE TRICK BIKING PANTS £203

These super-high-tech bib tights use X-Bionic's patented 'thorny devil' technology, which is designed to channel sweat away as efficiently as possible, which it claims has a highly beneficial effect on your performance. Want more? Well, alongside the cooling centres X-Bionic has incorporated 'ISO-Pad' technology, providing insulation where you most need it, helping your body retain its heat and protecting cold muscles from contracting and cramping.



ENERGISER MK2 BASELAYER £150

The Energiser is designed to be used with X-Bionic's mid and outer layers and features the same 3D BionicSphere technology along with X-Impact, which uses graduated compression effects throughout the 3D-knit construction. It supports your muscles and joints as you work, and is claimed to aid endurance and high-energy performance. Wearing this with the other layers helps keep your body temperature regulated too.

X-Bionic's 'ISO Pad' technology provides the insulation, while 'thorny devil' gets rid of sweat



EFFEKTOR BIKING POWERSHIRT £150

X-Bionic's research shows that your body's optimal temperature is 37°C - so the Effektor's weaves and textures are designed to keep your torso running at that temperature. Meanwhile, a series of 1mm wide ridges

in key areas provides partial compression, reducing the vibrations of your muscles and saving valuable energy. 3D BionicSphere tech helps keep airflow constant, helping regulate your body temperature.

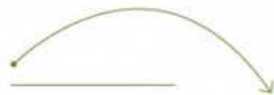
DHB AERON WINTER

Wiggle's in-house clothing brand continues to offer pro-level kit at everyday prices. Its Aeron range is based around range-topping fabrics designed to keep you comfortable come hail or high water. (Yes, we know it's hell not hail, but even in Britain we don't expect *that* in winter).

AERON WINDSLAM LIGHTWEIGHT GILET £75

This has been designed with input from Wiggle-Honda team riders and is light enough and compact enough to be stuffed in a pocket, while still offering excellent wind protection, thanks to the

Windslam layer sandwiched at the front. Side-entry openings on the rear allow you access to your jersey pockets and a wide silicone gripper keeps it in place even in the biggest gusts.



The warm yet breathable Roubaix jacket is equally at home being worn on its own or under a rain jacket.

AERON ROUBAIX LONG-SLEEVE JERSEY £80

The Aeron's super-warm yet breathable Roubaix fabric makes this a jersey you can wear on its own or as a mid-layer underneath a rain jacket. The traditional three rear pockets are joined by a weather-protected zipped security pocket.



DHB AERON BIB TIGHTS £80

The Pro-Roubaix fabric used in these bibs provides plenty of warmth, while Cytech's Tour Air pad provides form-fitting four-way stretch protection for long winter training rides. The braces blend into a full-length mesh back for extra warmth. The legs feature large reflective panels on the thighs, with long ankle zippers making them easy to get on and off.



The form-fitting Aeron bib tights come with four-way stretch protection for long winter rides.



CANNONDALE WINTER

Cannondale isn't just content with making some of the most popular road bikes around – over recent seasons it has made serious inroads into components, accessories and clothing too. With its winter kit, it aims to showcase the same spirit of innovation that you'll find in its frame designs



The arm and shoulder sections of the Morphis Evo jacket are held in place by magnets.

MORPHIS EVO JACKET

£89.99

The new Morphis features water-resistant front and rear panels to the main body, with the arms and shoulders constructed using a fully waterproof material. The trick – the clue is in the 'Morphis' name – is that the arm and shoulder sections

are held in place by magnets and can be removed. Stow this section in your pocket and the main section will continue to do its work as a windchill-beating gilet, then if the weather turns you can go waterproof in an instant by snapping it back on.



PERFORMANCE 2 BIB TIGHTS

£99.99

The Performance 2 tights feature strategically placed thermal panels to ensure your temperature stays regulated, with Cannondale's top quality SAVE pad at their core. Those textured thermal sections feel more compressive against the skin, with the rest of the material bunch-free for maximum pedalling mobility. Subtle branding is matched by understated reflective detailing for increased night-time visibility.

The Elite 1 jersey's 'berserker green' colour is accentuated by plenty of reflective detailing.

ELITE 1 HEAVYWEIGHT JERSEY

£99.99

Cannondale's pro-fit figure-hugging jersey features a water-repellent outer layer with a fleece-lined inner for some serious cold-weather protection, so much so that it'll double up as a jacket. The 'berserker green'

colour is very visible without being high-visibility, and is complemented by plenty of reflective detailing. The tail has twin poppers for a secure connection with the matching bib tights, creating a perfect seal against the elements.



FWE WINTER CLOTHING

Evans Cycles has launched a new clothing range under its own FWE branding – designed in the UK by an in-house team. The aim was to create stylish understated practical kit at an affordable price.



The LTR jersey's soft-touch fabric is fast-drying, and the concealed zip helps keep the heat in.

LTR JERSEY £39.99

Taking its name from the Evans team's highly competitive 'lunch time rides' this long-sleeved bold yellow top has a slightly more relaxed cut than a full-on race jersey, and as with the rest of the range it's chock-full of subtle

reflective detailing. The rear features the traditional three pockets plus a zipped security pocket. The soft-touch fabric was chosen for its fast-drying properties, and its full-length zip is backed by a baffle to keep you snug on frosty rides.



COLDHARBOUR THERMAL TIGHTS £59.99

These classic Roubaix tights are made from Italian fabrics, with a quality Coolmax chamois. Their elasticated and zipped ankles keep them securely in place while plenty of reflective detailing helps you to be seen at night.



Comfortable and close-fitting, the King of the Downs Softshell jacket has a windproof front with reflective trim.

KING OF THE DOWNS SOFTSHELL £69.99

Named after Evans Cycles' tough early-season sportive, this close-fitting top features stealthy reflective trim, a draught-protected full-length zip and

a windproof front. The soft, fast-wicking weather-resistant material should keep you comfortable whatever the conditions.

SUGOI WINTER WEAR

Canada's Sugoi should know a thing or two about keeping you warm through winter rides



SG 14 ZAP JACKET
£99.99

Probably the safest and driest way to ride in the rain, the waterproof fabric is treated with a print made up of micro-glass beads that shine like tiny cat's eyes when hit by light at night.

The waterproof front zip, fully taped seams and long dropped tail keep the water out, while the large rear pocket, which is covered by a storm flap, will keep your essentials dry.



RS ZERO GLOVE
£44.99

The RS Zero – unlike most winter gloves – is designed to cut down on bulk, so you can still feel brake levers and easily find Di2 shifter buttons. They're pre-curved for a more natural fit without bunching or creasing, with Thinsulate backs to keep the winter windchill out.

FIREWALL BOOTIE
£34.99

These are designed for water-resistance and wind protection, with the material flexible enough to slip over your cycling shoes without the usual herculean efforts. They even allow you to adjust your shoes once they're on.



RPM WINDBLOCK BIB TIGHTS
79.99

Sugoi's wind-blocking bibs use the same firewall 180 material as the Zero jersey (below) to provide maximum wind protection during chilly rides. Despite the insulation, Sugoi's flexible but supportive ZeroPlus fabric is used in the back panels and the waist for maximum mobility while you're riding.

Sugoi's Firewall 180 material keeps you protected from the wind, while flexible fabric on the back panels aids mobility.



RS CORE BASE LAYER
£49.99

The RS Core is a super-soft close-fitting baselayer that features thermal properties and a fast-wicking action to keep you dry and regulate your temperature. Low-profile flat seams help keep things comfortable even when it's combined with a pro-fit jersey like the RS Zero.

SUGOI RS ZERO L/S
£79.99

The RS Zero features Sugoi's own Firewall 180 windproof panelling on the chest and the front of the sleeves, while the remainder of the construction uses mid-zero thermal insulating

fabric that keeps the warmth in while being breathable enough to let moisture out.



HELMETS



The Lazer Z1 Lifebeam features a heart rate sensor in the headband.

LAZER Z1 LIFEBEAM

£249.99

Lazer's premium Z1 helmet is designed for maximum ventilation and protection, especially for your temples. You can enhance the aerodynamics of this minimalist design by fitting the included aeroshell – but the Lifebeam has an even bigger trick under its skin: its headband includes a heart rate sensor that does away with the need for a traditional chest strap, which transmits in both ANT+ and Bluetooth, so you can pick up your heart rate data on a compatible head unit or computer.

MET MANTA HES £170

In addition to the aero-flavoured Rivale (see below), Met also produces the Manta HES, which it claims is the fastest aero road helmet around – saving you a mighty 10 watts at 50kph.

Large frontal air intakes should keep you cool, and the Manta certainly won't weigh you down – our medium-sized model tipped the scales at just 200g.



ORBEA R10 £150

Orbea has developed the R10 with the goal of improving airflow and aerodynamics while reducing mass – exactly what you'd expect of a top-level lid. It's considerably slimmer than most helmets and sits low on your head, while a lower foam density has allowed Orbea to

reduce the overall weight by as much as 15 per cent. Its 29 large vents provide a light and airy feel, but if you want to prioritise speed – or keep the rain out – you can clip in its UCI-legal aeroshell for an even bigger boost to its aerodynamics.



MAVIC KSYRIUM ELITE £80

You've tried the wheels, so why not try the Ksyrium lid (or the clothing or shoes)? The Ksyrium line sits below the Cosmic and CXR ranges, and the Ksyrium Elite helmet, which majors on comfort

and adjustability, is aimed at the sportive and distance rider. The Ergo Hold SL retention system offers plenty of vertical adjustment, and it's micro-adjustable so you can get the perfect fit.



Orbea's R10 is all about airflow, and its 29 large air vents help keep the overall weight down too.



MET RIVALE HES £110

The Rivale made its debut with MTN-Quebeca at this year's Tour. And while it may look like your average multi-vented helmet, the Rivale HES is still made with aerodynamics in mind. Met claims it offers a 3W saving at 50kph over a standard road helmet. The vents are designed to push air over the surface of your head, which Met says offers improved cooling without a cost to aerodynamics and while still adhering to international safety standards.



SPECIALIZED AIRNET £100

Showing that aero needn't cost the earth, Specialized's new Airnet features a low-volume close-fitting design mated to the rear-end exhaust-port design borrowed from the

high-end S-Works Evade. Nice details like lightweight straps, micro-adjust retention system and merino wool-based pads add quality to this value-packed lid.

GEAR



**LIGHTWEIGHT
URGESTALT
WEISS**
£3999

Lightweight doesn't just make superbly engineered wheels, the German outfit also makes this precision engineered carbon fibre frame. The Weiss edition of the Urgestalt uses a special metallic-white paint to enhance the livery, and it lives up to the Lightweight name too. The frame comes in at under 800g, and add in a proprietary fork and seatpin and it's still only 1340g. A special bike, yes, and with a price to match...

The frame is 'design optimised for a consummate flow of power', say the guys at Lightweight...



FABRIC SCOOP ULTIMATE
£169.99

The Scoop has fast become one of our favourite saddles – not only because of the simple and elegant construction with its smooth lines and fuss-free, easy-to-clean shape, but also because it's offered in three variations. There's a 'Flat' model for a more aero riding position, 'Shallow' for endurance riders

and the 'Radius' for a more upright position. The range starts at just £39.99, though we've chosen the Ultimate edition with its unidirectional carbon base, and carbon fibre rails topped with a matt-finish microtex cover with high-density padding. It weighs just 169g but offers impressive levels of comfort.

Companies are always trying to reinvent the saddle – Scoop's range has managed to do it better than most



BROOKS CAMBIUM C13 CARBON
£TBC

Brooks' standard Cambium saddle offered class-leading comfort thanks to its vulcanised rubber-infused cotton base construction. This naturally flexible top gives hammock-like levels of compliance. The downside was the use of metal rails, which added weight. Now the designers at Brooks have

partnered with their Fizik colleagues to bring the Italians' experience of carbon fibre to bear – the result is this 259g carbon-railed version. It's still in the testing stages at the moment, with *Cycling Plus* chosen as guinea pigs, but so far it looks as if tradition and technology have been melded together well.

LIGHTWEIGHT KOMPACTBÜGEL BAR
£335

The Kompactbügel is Lightweight's first endurance-specific carbon bar. As light as you'd expect at just 196g (42cm), the Kompactbügel pairs aero-ovalised tops for a comfortable handhold with a shorter reach and shallower drop. The shape of the drop has been designed to offer ample clearance even for larger hands.



BONTRAGER RACE LITE XXX AERO BAR AND XXX CARBON STEM
£249.99/£149.99

Bontrager's range-topping cockpit combo combines a 142g stem (110mm) with a 239g handlebar (44cm) to create a seriously lightweight pairing. The wide-bodied XXX stem provides rock-solid stiffness for the superbly shaped bar. The bar combines a cut-off Kammtail top section with a semi-compact drop that fits your hands comfortably as well as cutting through the air efficiently. Want some serious weight-saving bling for your bike? Well, you could do a lot worse than this XXX-rated combo.



GEMINI XERA 950L FRONT/IRIS REAR
£79.99, £59.99

For such a tiny front light the Xera delivers impressive illumination – a mighty 950 lumens for 90 minutes (950 lumens is very bright). Other pre-programmed modes of the five on offer give you the option of up to 10 hours of lighting.

The matching Iris rear offers 200 lumens from its array of three LEDs, with up to 90 hours from a single USB charge. If one of the four standard settings isn't for you, then you can program your own settings from five to 100 per cent.



SPOTLIGHT



It's a beautiful day to ride a bike. The sun is shining, it's Friday afternoon, and a small group of cyclists have knocked off early to thrash up and down some Welsh hills. The riders could be from any local cycling club, but in fact they're members of the BTwin Road Bike Owners' Club

That's right, the BTwin Owners' Club. Bike snobs may scoff at the idea of a club based around the French budget brand owned by Decathlon, but the BTwin club has gone from zero to a membership of over 2100 in little more than two years.

I'm meeting up with two of the club's longest-standing members, Toby Jefferies and Rob Sims, to ride one of their favourite routes. We're going to cross the Severn Bridge then head north to Tintern Abbey, before climbing up to St Briavels Castle.

It's early afternoon by the time I arrive, and as I take my borrowed BTwin Triban 520 from the back of the car we get chatting about how the club has grown from a post on a cycling forum at the start of 2013 to a big internet-based club with members all over the country – and the world.

That original thread is still going – it now runs to some 157 pages – but the club has moved on. The thread led to the start of a forum for owners of the Triban T3, which was then opened up to riders of any Triban model. Now the club is for owners of any BTwin road bike, and its members aren't just connected by the internet. A couple of

weeks after our chat the club's riders came together for an organised ride in the New Forest – as you can see from our pictures.

Today, though, we're rolling through the South Gloucestershire countryside towards the Severn Bridge. The drivers queuing at the tolls don't know what they're missing as we head over the bridge's cycle path under blue skies.

As the miles roll by one of my misconceptions about BTwin riders is soon

dispelled. These aren't just beginners' bikes, and they're not just ridden by beginners either.

Toby and Rob are taking turns to share the pace, and we're holding well over 20mph on the flat. When the road kicks up towards Chepstow racecourse, Toby jumps away and Rob grabs his wheel. I grind up the hill a distant third. BTwin owners 1 Undertrained journalist 0.

We regroup and there's time to catch my breath as the road climbs more gently to the village of St Arvans.

Rob is following Toby's wheel on his T3, the bike that inspired the club. As we ride on at a steadier pace, he tells





The New Forest equivalent of the Severn Bridge

me how he came to own it. "My bike was stolen when I was a teenager and I never bothered with cycling again until about two and a half years ago. I borrowed a mountain bike to ride the seven miles to work. I was worried I wouldn't make it so I gave myself about two hours. I ended up at work an hour and a half early!

"I then started looking around for a bike and the Triban 3 seemed like the best value. It was £299, which was all I could afford at the time, but it's

served me well. I commute on it, I've ridden Bristol to London a couple of times and I clip some tri-bars on it and race club TTs."

The T3 was also Toby's first BTwin, bought in the wake of Bradley Wiggins's 2012 Tour de France success. "I was into mountain biking, but with the arrival of my family I took about a decade off.

Then in 2012 when Wiggins

did his thing I thought I'd give road bikes a try but I didn't want to spend a lot of money until I knew how it would pan out. So I went for the Triban. I started to ride longer distances, and I was one of the first to join the Triban forum, and everything has expanded from there."

"I think we all started out the same," says Rob. "We were all a bit unfit,

hadn't ridden for years, and the Triban was a cheap starter bike. Now Toby has upgraded to a carbon BTwin, I've upgraded my wheels, and instead of going out for 20 miles we're doing a couple of century rides each year."

Conversation is put on hold as we drop down towards Tintern Abbey, speeds nudging 40mph as we make the most of the sinuous, sweeping road. The Abbey is a stunning backdrop in any weather, but looks especially

beautiful in the July sunshine and we stop to take some photos. Toby and Rob take the opportunity to give the new Triban 520 I'm riding a once-over. They're keen to know what I think of it, the short answer to which is that it's a cracking bike for £450. They nod with approval when they see the bike has fittings for full mudguards and a rack and plenty of clearance under the brake callipers.

"BTwin does listen to feedback and

BIANCHI OWNER'S CLUB UK

While some may be surprised by the fact that there's a BTwin Owners' Club, what raises eyebrows most about the Bianchi Owner's Club is that it only launched at this summer's Eroica Britannia festival.

The club has grown out of Twitter and Facebook, but is now on a formal footing as a limited company, with active support from Bianchi UK.

John Mollart is one of the club's founders. Back in 2012, John and fellow Bianchi enthusiast Mark Halpin used Twitter to organise a ride for Bianchi owners. "About 10 of us turned up, and we had some jerseys produced which everyone bought. People came from all over the country."

What John and Mark didn't realise at the time was that one of Bianchi UK's reps was

on the ride. This led to a meeting with Bianchi UK's country manager, Andrew Griffin. "I was already interested in the idea of a Bianchi owners' club, but we didn't have the manpower to run one ourselves and I wanted any club to remain independent and credible. So we met up with John, and he seemed really keen to promote the brand and had some good ideas."

The club now holds four rides a year, each free to enter. From the 10 riders on the original meet, rides now typically attract 40 or more riders. Routes are kept secret so everyone has to stay together, encouraging a sociable club-run feel rather than the more competitive atmosphere of a sportive. Bianchi UK supports the rides with demo bikes, mechanical support and a broomwagon.

The club now has its very own website (bianchiownersclubuk.co.uk), and an annual subscription for members.

"We have two membership options," John explains. "We don't want to make it too expensive, so for £25 you get a credit-card style membership card and a Bianchi cap. £45 gets a membership card, a cap, a musette, and a Bianchi espresso cup. Members also get discounted insurance."

In the future, the club plans a members-only section of the website, and more exclusive events such as new-model previews and factory visits.

"It's amazing to think the club has grown from a Twitter conversation to a formal company with a management structure in three years," says John. "It's been a lot of work!"

"I THINK WE ALL STARTED OUT THE SAME. WE WERE ALL A BIT UNFIT, HADN'T RIDDEN FOR YEARS, AND THE TRIBAN WAS A CHEAP STARTER BIKE"



THE GUVNORS' ASSEMBLY

You couldn't get further from the segment-chasing mentality of the Strava-generation than The Guvnors' Assembly. The club is for owners of the Pashley Guvnor, a faithful revival of Pashley's 1930s Path Racer. As Adam Rodgers, one of the founders of the club, explains, "you can't take yourself seriously on it".

Which is not to say Guvnor riders don't make an effort, but it's more likely to be sartorial than physical. "Even if we're just going out for a quiet ride we like to wear tweed and a shirt and tie. If we do a sportive we've got woollen jerseys and three-quarter leggings."

The club grew out of the tweed run scene, which has been mixing retro fashion and vintage bikes since 2009.

Adam was talking to Mark Fairhurst (who designs art deco-inspired cycling posters) about a Guvnor group on Facebook that was disappearing. "We thought it would be a shame to lose everything, so decided to start The Guvnors' Assembly."

Does the bike come first, or are most members first and foremost into the vintage scene? "It's roughly 50/50 between regular cyclists looking for something different, and others who maybe haven't ridden for years but just see the Guvnor and just think 'I have to have it'," Adam explains. "It's a very light-hearted way of getting around."

In the space of a few years, the club has grown to around 500 members, who have joined for free through theguvnorsassembly.com.

improve the bikes," says Toby. Rob agrees, and reckons the mudguard mounts and brake clearances on the new 520 are good examples of feedback from the owners' forum being heeded. I ask Toby and Rob about the club's relationship with BTwin.

"We have contact with BTwin and I've come to know some of the people behind the brand well. But if the club became affiliated to BTwin I would have to step away. As things stand we can be impartial - we're critical friends," Toby explains.

It's something that comes across loud and clear on the club's forum, where most members come across as enthusiastic about their bikes but not blindly fanatical.

We roll down the road to The Filling Station Café for a coffee and a slice of cake. It's a popular stop-off for local cyclists, but on a Friday afternoon most riders are still at their desks, so we have the place to ourselves.

I ask Toby what he thinks is the secret behind the club's rapid growth from a thread on a forum to having well over 2000 members in just over two years. "We try to keep it fun," he says. "Humour goes a long way and there are plenty of characters. But the discussions are grown-up and educated rather than the ranting you get on some sites." Politics, religion and anti-car tirades are all no-nos, and moderators will close threads that stoke controversy for its own sake.

Toby and Rob also put the club's success down to the hard work of its

more prominent members, and rattle off a long list of names who have worked on the website, gone out of their way to help members, or helped organise rides like the one in the New Forest.

Toby says that it was also simply a case of being in the right place at the right time to cater for the swell of new riders that have taken to cycling recently, and are looking for an affordable bike and friendly advice.

Not everyone comes to the forum to help or be helped, though. "We've had some trolls in the past who wanted to wind us up," says Toby. "We do get looked down on sometimes, by the kind of people who will always look down on something they perceive as not as good as whatever they want to buy."

Toby clearly doesn't have a lot of

time for brand snobs waving their wallets around. "We strongly believe in developing the engine rather than just spending money on kit."

The benefits of that philosophy become apparent on the climb up to St Briavels Castle. Rob and Toby are again setting a tough pace, although at least this time I manage one or two turns on the front before the summit.

With evening approaching we head back towards the Severn Bridge, Toby promising each hill is the last before remembering another climb just around the corner. Every uphill grind is followed by another descent, though, so I'm not complaining. Nothing beats riding with some like-minded friends, whatever club you belong to, and whatever bike you ride. **PLUS**

"WE STRONGLY BELIEVE IN DEVELOPING THE ENGINE RATHER THAN JUST SPENDING MONEY ON KIT"



TOOLS



**TOPEAK
FLASHSTAND
SLIM**
£28.99

This pocket-sized stand is ideal for standing up your pride and joy without fear of it falling over. The polymer-lined U-channel is designed for Shimano road cranks to slip into, with the flip-out feet providing a solid platform. If you don't like leaning your best bike up against a wall then this is the ideal solution.

The Flashstand is also available in a 'FAT' version for chunkier mountain bike cranks



FWE MINI TORQUE WRENCH
£39.99

This compact torque wrench comes complete with its own carry case, inside of which you'll find 10 tool bits – 2, 3, 4, 5, 6 and 8mm hex keys, plus T25, T30, PH1 and SL4 – and three

torque sleeves for 4, 5 and 6Nm. The pocket-sized package weighs just 250g so you can easily carry this on a ride or tour, knowing any adjustments will be safe and secure.



TOPEAK NINJA TC8
£TBC

The Ninja TC8 is a lightweight thermoplastic bottle cage with a fliplock housing built into the base. Inside you'll find the T8+ mini-tool, which includes 2, 2.5, 3, 4, 5 and 6mm hex keys, a T25 Torx key and a Phillips screwdriver.



Clug claims that its bike clip is the 'world's smallest bike rack' – and we think it might be right...

CLUG BIKE CLIP WALL MOUNTS
£15.99

Clug's stylish award-winning mounts are available in three sizes: Roadie size for 23-32mm tyres; Hybrid for 32-42mm tyres; and Mountain

Bike for 1.75-2.5in tyres. You just fit the U-shape mount to the wall and the space-saving Clug holds your bike in place vertically.



TOPEAK NINJA TOOLS
£TBC

The all-new for 2016 Ninja range is an innovative line from Topeak. This allows all your essential tools to be stored on – or within – your bike, so you'll never leave home without cover for all mechanical emergencies.

The Ninja P is a 90g mini-pump that's rated to 160psi. It fits inside your bike's seatpost (27.2, 30.9 or 31.6mm diameter) and is kept in place by a rubber

mounting ring. It even comes with a seatpost height indicator ring so you'll always get your saddle back in the perfect spot.

Finally the Ninja C is a pair of bar-end plug replacements – with neat carbon caps – that are actually two pieces of a fully featured chain tool. The tool works with any 11-speed chain, even Campagnolo, thanks to the integral rivet anvil.

FABRIC CO₂ LEVER KIT
£19.99

Fabric's mantra of keeping things simple continues beyond its smooth-lined saddles into this neat CO₂ pack. The foam-covered cartridge is topped with a lightweight head that's interchangeable between Presta and Schrader valves. It uses a silicone band to strap neatly to your bike's seatpost and includes a pair of glass fibre-reinforced tyre levers. Neat.



CARS



HONDA CIVIC TOURER ACTIVE LIFE CONCEPT

£N/A

We don't store our best bikes by tying them to the outside of our house, but we're happy to transport them by simply strapping them to our cars. That could all change if Japanese motoring giant Honda takes the brave step of

introducing this gorgeous – if quite impractical in reality – cycling-friendly Civic estate. If it does, you and a mate can carry your carbon in comfort and be the envy of everyone else in the sportive car park.



What's in the box? The Civic's on-trend aero roofbox is the place to put your kit.

Honda shows that Skoda isn't the only car company that wants cyclists to have nice warm feelings about its four-wheeled products

Rarely do car and bicycle come together so well as in this Civic Tourer Active Life concept car from Honda. Unveiled at the Frankfurt motor show in September, the Tourer uses a unique central fuel tank layout that allows for secure and well-organised storage of two bikes plus plenty of other clever, cycle-focused integrations.

Pop the hatchback of the two-seater Tourer – sorry kids, you're not getting a ride in the new car, as there's no back seats we're afraid –

and, along with a cavernous 1668 litres of space, there's an extra low loading height which allows you to access a built-in double bike rack. A retractable arm can then be extended from the rack, forming a makeshift workstand for mechanical duties – a section of the tailgate can even be pulled out to provide shade cover when doing so.

Further occupying the void where you'd usually find back seats are an integrated pump, a retractable bench and a toolbox. The immense



TOP GEAR



VAUXHALL FLEX-FIT £450

Vauxhall's rather neat Flex-Fit bike rack has been around for six years and is available as an option on models including the Corsa and Mokka. The system is clever and easy to use – lift a handle in the boot and the rack slides from inside the bumper. Pull it out fully, lock it in place, fold out mounts for wheels, slip on the extra rear lights and attach bikes using clamps. Adaptors are available to add extra bike-carrying capacity.

ALONG WITH A CAVERNOUS 1668 LITRES OF SPACE, THERE'S AN EXTRA LOW LOADING HEIGHT WHICH ALLOWS YOU TO ACCESS A BUILT-IN DOUBLE BIKE RACK

storage doesn't stop inside the vehicle either, with Honda also including an aero roof box to accommodate further luggage – okay, maybe the kids can come along for the ride after all...

Even the huggiest of tree huggers will find it hard to knock the Honda for its efficiency too – the production Civic Tourer fitted with Honda's i-DTEC 1.6l diesel engine just picked up a Guinness World Records title for its fuel efficiency, achieving 100.31mpg (2.82l/km) over an 8387 mile (13,498km) drive across 24 European countries.

As with most concepts, we don't expect many of the Civic's features to make it into production – but it's nice to see Honda putting in the effort. And we hope that it acts as a nudge to other car makers to think about two wheels as well as four.



VOLVO LIFE PAINT £10

Okay, ranty bit out of the way first – it seems a bit rich for a car company like Volvo to be telling cyclists that they need to make themselves more visible to avoid getting hit. How about telling drivers to pay more bloody attention? That said, while bad drivers are still on the road, making yourself as visible as possible isn't a bad idea. Spray Lifepaint on your clothes and and it's invisible until lights hit the transparent glue and reflective glass microspheres that make up the paint. Then it gives off a ghostly silvery glow.

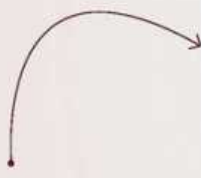


SRAM ETAP

SRAM ETAP REAR MECH

£420

Look, no cables, or wires – which should make installation straightforward. And if the battery fails, you can swap the one from the front mech to help get you home



The front mech is designed to 'overshift' slightly but during testing we found its performance was totally flawless

Does SRAM's eTap electronic shifting system herald a new golden age of wireless?


Shimano's game-changing Di2 transformed cycling when it brought electronic gear shifting to the masses in 2009, with Campagnolo's EPS following a few years later. But SRAM's eTap might – just might – be an even more radical departure, with an even more profound effect. Why? Well, it's wireless.

That may not seem like much of a difference, but it could prove a major advantage to both bike manufacturers and consumers alike. Manufacturers won't have to drill bikes for Di2, EPS or mechanical cabling. In fact, they won't need to drill any holes for gear cables at all. This means frames can be made more quickly and at less cost, with potentially lower weights, as holes in carbon frames need to be reinforced. And if you've ever tried to wire up a Di2 bike (or retrofit Di2), you'll appreciate the extra simplicity.

Only sleeping

Both of the eTap derailleurs use the same interchangeable battery, which can be recharged via USB in just 45 minutes. And despite the small size of the batteries, SRAM says they should last for around 1000km or 60 hours of constant use. The levers house widely available CR2032 button batteries to send shift commands, and these should last a couple of years. This battery life has been achieved thanks to the use of accelerometers within the derailleurs, which allows them to enter a sleep mode when not in use. As soon as the bike moves the system wakes and is ready to operate.

According to Brian Jordan, SRAM's advanced development manager, other electronic shifting systems "were the electrification of a mechanical system. We believed that this was an opportunity to reinvent shifting. The number one failure in wired electronic systems is



The SRAM 'BlipBox' eTap controller and a couple of 'blip' satellite shifters, which weigh just 6g each and can be placed in numerous locations on your handlebar

connectors/connections. On wireless if the signal doesn't send you can just press the button again, on a wired system you need to check the whole wiring loom to find the problem."

Do it yourself

Rather than relying on buying in technology, SRAM did all the development in house, putting in 45 'man years' of development over five years and more than a million kilometres of testing, according to Jordan, including making sure that multiple systems in a peloton don't start shifting gears on competitors' bikes.

Testing continued apace in the peloton in 2014 and 2015, with 100 systems in the field. This included stage wins for Axel Merckx's Bontrager team in 2014, with AG2R La Mondiale riding eTap-equipped bikes in this year's Tour de France, surviving a battering over the cobbles and picking up a stage win.

It's not only in being wireless that eTap differs from both Di2 and EPS, as

Brad Menna, SRAM product road manager, explains: "Shifting is simple, the left paddle handles upshifts, the right paddle downshifts and pressing both together shifts the front mech to its alternate position." It's also easier to fit than mechanical systems – no cables, no tape, no zip ties. In fact, it takes longer to take the old components off than it does to install eTap.

Road tested

Our first impression is that the eTap hoods are slightly slimmer than existing Red models, with the carbon levers retaining the same reach. There are large paddles behind the lever, which feel as familiar as SRAM's DoubleTap, and though movement is much reduced there is still a solid 'click'. Our setup also came with remote satellite shifters called 'blips', which are about the size of a 10p piece and can be fitted underneath or on top of the bar tape; on our test bike they were under the tape on the bar tops. This allowed us to roll up long climbs in a comfortable hands-on-tops position while still being able to change gear without moving our hands.

Shifting from the levers and the blips is smooth and incredibly precise. It does give the impression of being a little slower than mechanical Red, but that's possibly down to having much less throw on the paddle than the swing of a DoubleTap shifter. Holding in either paddle allows the system to shift the whole way across the block. This has been designed to sync with the 'gates' in the Red cassette, so that each individual sprocket is engaged as the chain moves across it, rather than the – albeit faster – chain chattering up and down the cassette you get from rival systems.

In practice we found it performed perfectly. During two three-hour-plus rides, the eTap drivetrain never missed a shift in spite of our efforts to deliberately wrong foot it by trying under-pressure front shifts and out-of-saddle rear shifts on steep climbs. The front mech actually overshifts – moving fractionally outboard of the chainrings before moving back – which SRAM claims ensures a much smoother shift.

We expect to see SRAM Red eTap in stores and on bikes in spring 2016, with a groupset priced at £2059. The future's bright, the future's Red eTap.

SRAM DID ALL THE DEVELOPMENT IN HOUSE, PUTTING IN 45 'MAN YEARS' OF DEVELOPMENT OVER FIVE YEARS AND MORE THAN A MILLION KILOMETRES OF TESTING

GEAR GUYS

How do you make a million in the bike trade? Start off with two million. It's an old joke, but there is still money to be made in cycling...

Picture the scenario: you clock in, do your best, then clock out again, but you know this career just isn't for you. Sticking pins in a doll of your boss to deal with the stress isn't working any more. And germinating somewhere in the back of your mind is a great idea for a cycling business, something that would really make people sit up and take notice. The question is: should you risk a steady job and a regular pay cheque to start a new career as a cycling entrepreneur?

In truth only you can answer that question, but to give you some food for thought we've spoken to four keen cyclists who did take the risk and are now reaping the rewards.

SIMON SAYS

Simon Mottram turned his back on a 15-year career as a brand and marketing consultant to found Rapha, the upmarket clothing company that's the official kit supplier to Team Sky. Indeed it was partly that success that inspired Nick Hussey to ditch a successful but highly stressful career in the film industry to start his own clothing brand, Vulpine.

And then there's Craig Middleton, who has lived a rollercoaster life of highs and lows, which include him founding Onix Bikes and then selling

it on but deciding to stay within the bike industry regardless. Sam Alison, meanwhile, started Singular Cycles primarily to build the bikes he wanted to ride but nobody else was making, initially juggling two jobs before focusing full-time on Singular. All four have very different stories to tell, but between them their knowledge and advice could provide valuable insight to anyone looking to make a similar leap themselves.

For Nick and Craig, starting their own company meant escaping careers they no longer enjoyed. After managing nightclubs – “I had a gun put to my head and wore a bulletproof jacket” – and then a spell as a wine merchant, Nick switched to the film industry, where he worked as a director's representative.

“I would go and sell high-end directors to advertising agencies and music companies,” he says. “I ended up running film companies and became very well paid to do something I hated. There was an awful lot of politics and it was taken incredibly seriously when really it's just fluff.

“It got to the point where I was working seven days a week, getting back at 10 o'clock at night. My wife

“IT GOT TO THE POINT WHERE I WAS WORKING SEVEN DAYS A WEEK. I'D WAKE UP SHAKING BECAUSE THE JOB WAS SO STRESSFUL. SO I DECIDED TO LEAVE.”

Emmalou would stick dinner on my lap and put a whisky in my hand, then I'd get up and do it again. I'd wake up shaking because the job was so stressful. So I decided to leave.”

It helped that he already had an idea for a new cycle clothing company in his mind. “I'd been obsessed with cycling clothing since I was a kid, and I was one of the early adopters of Rapha,”

Nick says. “But I wanted my brand to be much more inclusive and encourage more people into cycling.” After a month gathering thoughts and ‘hibernating’ he threw himself into Vulpine.

Nick turned his back on his old job in December 2009, which coincidentally was almost exactly when Craig Middleton was making his own dramatic career change. And Craig was more than ready to leave his old career behind. “I'd worked my way to the top of the print trade, but I hated the day-to-day job pretty much from the start.”

After 22 years in the trade, he decided he wasn't prepared to carry on for another 20 years or more and decided to put his passion for cycling into his own bike brand. “My naivety was my strength. If I'd known then what I know now I probably wouldn't have done it,” he admits.

A SINGULAR DECISION

Of course, not every cycling entrepreneur makes abrupt and drastic career changes in choosing to pursue their dream. Sam Alison, for instance, started Singular Cycles while still holding down a day job in financial services. And he only started it because he couldn't find anyone who could build him a 29er mountain bike made to his own specification.

“I spoke to some custom builders but they always had their own ideas,”



Nick Hussey of Vulpine and Sir Chris Hoy



Sam explains. “But I knew exactly what I wanted, and I just needed someone to build it.”

He found Taiwanese manufacturers were more open to his ideas. “I had some ‘samples’ made, really just as a cheap way to get a couple of frames made to my own design. They arrived in the summer of 2006 and people really took to them.”

And so what started as a way to get the bike he really wanted became an idea for a bike company. “I put together what small savings I had and ordered 100 frames. I really had no idea of what I was getting into but thought it was worth a try.”

When Simon Mottram founded Rapha in 2004, meanwhile, it was more a natural progression than a sudden change. “As a consultant I worked on brand strategy and positioning. A lot of that work was with luxury brands. I took all the things that I’d been advising clients about and applied them to Rapha.

It was almost a continuation of that career, but this time for myself and for my own brand.”

Simon chose to start a cycling business because “cycling was the thing I liked best in the world after my family and my career”, and because “as a customer I wasn’t being well served”.

Although he felt the whole cycling industry needed to up its game, Simon saw cycle clothing as particularly lacking. “This was where the problem was most stark. What you wear very much becomes part of your identity. I went into bike shops with money to spend and came away having not spent it.”

Having the idea is one thing, though, and ditching the day job quite another. Especially when the biggest



Rapha now supply kit to cycling style icon Bradley Wiggins's own team

“I HAD SOME ‘SAMPLES’ MADE, REALLY JUST AS A CHEAP WAY TO GET A COUPLE OF FRAMES MADE TO MY OWN DESIGN. THEY ARRIVED AND PEOPLE REALLY TOOK TO THEM.”



Simon Mottram founded Rapha in 2004

challenge of all is still to come: getting together the backing to launch a company is something else again.

“You need perseverance and determination,” he adds. “It took 200 meetings to get the seed funding to start Rapha.”

A WAITING GAME

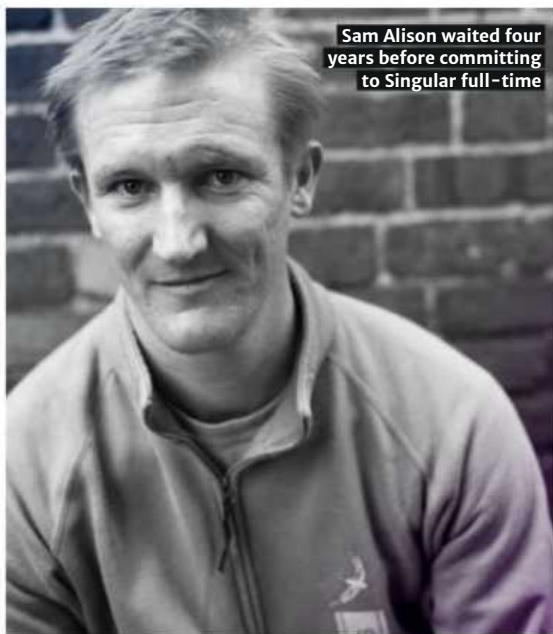
Even with the money in place, there's then the scary wait while you develop a product and bring it to market, which can take months or even years, during which time all the cash is going in the wrong direction. It can lead to some pretty dark moments.

Craig Middleton went through some tough times to bring the Onix brand to market. “I was on a downward spiral for about a year and a half. At one point all the money had gone out to pay our bills and we had £90 left for the rest of the month.”

Someone less determined might have done a U-turn and gone back to their old career, but Craig chose to tough it out. “When you're in that situation you find a way because you've got to. I didn't want to go cap in hand to anyone so I went and emptied the garage and put it all on eBay. That managed to raise enough money to put food on the table for the rest of the month.”

That was the lowest point financially, but he had plenty of other setbacks to overcome. “Although I'd found a place to source the bikes, I couldn't find a distributor willing to sell me components because I didn't have a bricks and mortar shop. The industry wouldn't let me in.”

After bombarding cycling commentator David Harmon with tweets during 2011's Tour de France, Craig had a call from Harmon with an offer to get involved. Doors began to open. Harmon put Craig in touch with pro cyclist Rob Hayles, who came on board to help develop the bikes, and



Sam Alison waited four years before committing to Singular full-time

Onix Bikes started taking off.

The ability to overcome periods of difficulty and prove the naysayers wrong is something these cycling entrepreneurs have in common. Nick Hussey also had his share of nervous moments over the first few months.

“We had to remortgage twice and borrow every bit of money we could. A comfortable middle-class existence was very quickly reduced to a very



“YOU FIND A WAY BECAUSE YOU'VE GOT TO. I DIDN'T WANT TO GO CAP IN HAND TO ANYONE SO I WENT AND EMPTIED THE GARAGE AND PUT IT ALL ON EBAY.”

uncomfortable middle-class existence.”

It takes a thick skin, as well as a willingness to take financial risks, to be successful, Nick reckons.

“If I'd listened to 98% of the advice I received, I'd have given up.”

NOT-SO-RISKY BUSINESS

One way to keep the level of risk down is to keep up the day job until the business starts to take off. That's the route Sam Alison took with Singular Cycles, keeping a regular income and reducing the stakes of the financial gamble any new business takes.

“It was a risk, but not one I was massively invested in. I put in a lot of time, and what to me was a significant amount of money. But I was still working in a good job, so it wasn't like I needed it to succeed in order to

pay the rent.”

Sam did go full-time at Singular Cycles, but not until 2010 – some four years after that first batch of 100 frames arrived. “It was becoming increasingly difficult to do both things at the level I wanted to. Fortunately the company went through a major period of restructuring and I was offered the possibility of redundancy at a time when

I really needed to devote more effort to Singular, so it worked out quite well.”

It was, and continues to be, a one-man business. “My goal was never to create a large company with lots of employees and the need for management associated with that. The intent was to try to outsource where it made sense and to just focus on the elements of the business which I enjoy and am good at, to build a business of a manageable size that provides a decent income.”

Going the other way and looking to expand a business, taking on



For Craig Middleton, selling Onix was in many ways a weight off his shoulders

employees and buying more stock, means raising additional cash. “You need more and more money,” says Nick. “We’ve been through a number of rounds of investment. People think that as companies get bigger they need less [investment], but you need more. So you have to manage your growth.”

It’s certainly helped that since Vulpine’s start the company has gone from strength to strength, linking up with Sir Chris Hoy in 2013 to launch the Hoy Vulpine brand last year and more recently raising £500,000 in five days through crowdfunding. Nick describes the link with Sir Chris as “an incredible turbo boost” and says there’s also “a lot of interest from the USA and Asia, which is interesting. We want to expand the range out fully, then see what’s next. It’s built very fast so far!”

As for the half-million raised via the general public, that’s “a resource for the company, to be spent right... a massive affirmation of what we are doing from the public. Incredible.”

HARD CHOICES

As Onix Bikes grew, Craig realised the company needed more money.

“Launching the Rob Hayles Signature bikes elevated the brand massively, and to the outside world the brand was doing amazingly well. But I knew we were still on life support cashflow-wise. We got to a point where sales were going up but weren’t generating enough cash to develop the range. I knew I had to get an investor.”

Craig made the difficult decision to sell the company in order to secure the cash it needed. “We were three years down the line, and I’d put my family through a hell of a lot. I still wasn’t earning anything out of the business because everything needed to go back in to keep things moving forward. I had to do the right thing for my family.”

Onix Bikes was sold at the end of 2012. Under new ownership, the

company relaunched as Beacon Bikes, and after six months or so working with the new owner Craig left the company. This wasn’t the end of his career in cycling, though, and he is now a shareholder running NRG4 Distribution, and has started his own social media consultancy business.

“I’m immensely proud of what I achieved at Onix,” he says. “Through all of that time things were incredibly hard, but I’ve never been happier. Now I feel the same way about NRG4 – the difference is now I’m earning a decent salary.”

So to sum up, if you want to launch your own cycling brand expect tough times, but exciting ones.


But what does it take to come through those rough patches still standing and make a company

“YOU HAVE TO TOTALLY UNDERSTAND WHO YOUR TARGET CUSTOMER IS AND KNOW EVERYTHING ABOUT THEM. IT’S NOT JUST ABOUT HAVING THE RIGHT PRODUCT.”

successful in the long run?

“The most important thing is customer insight,” says Rapha’s Simon Mottram. “You have to totally understand who your target customer is and know everything about them. Build your whole business around that insight. It’s not just about having the right product.”

For Nick Hussey, it takes more than a love of cycling and the desire to make a career change to achieve success. “Drive and passion isn’t enough. You need to be able to run a business,” he says.

Attracting investment and managing cashflow will certainly help keep a company afloat, but Nick says ultimately it all comes back to that light bulb moment, and that bulb had better burn brightly. “You need a great idea – just good won’t cut it.” 

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