

DAVE YATES DIABOLO

Dave Yates will build anything you ask for, within the confines of safety and his reputation. Riders with freaky body dimensions or those wanting weird braze-on appendages need only ask politely, define the boundaries of their wallet, sit back and wait. The wait should not drag into tedium because the Yates frame building workshop has got its act well enough sorted to cope with whatever comes their way, whether it be big orders from shops or diverse requests from those who feel disinclined to settle for the clone approach of the mass market.

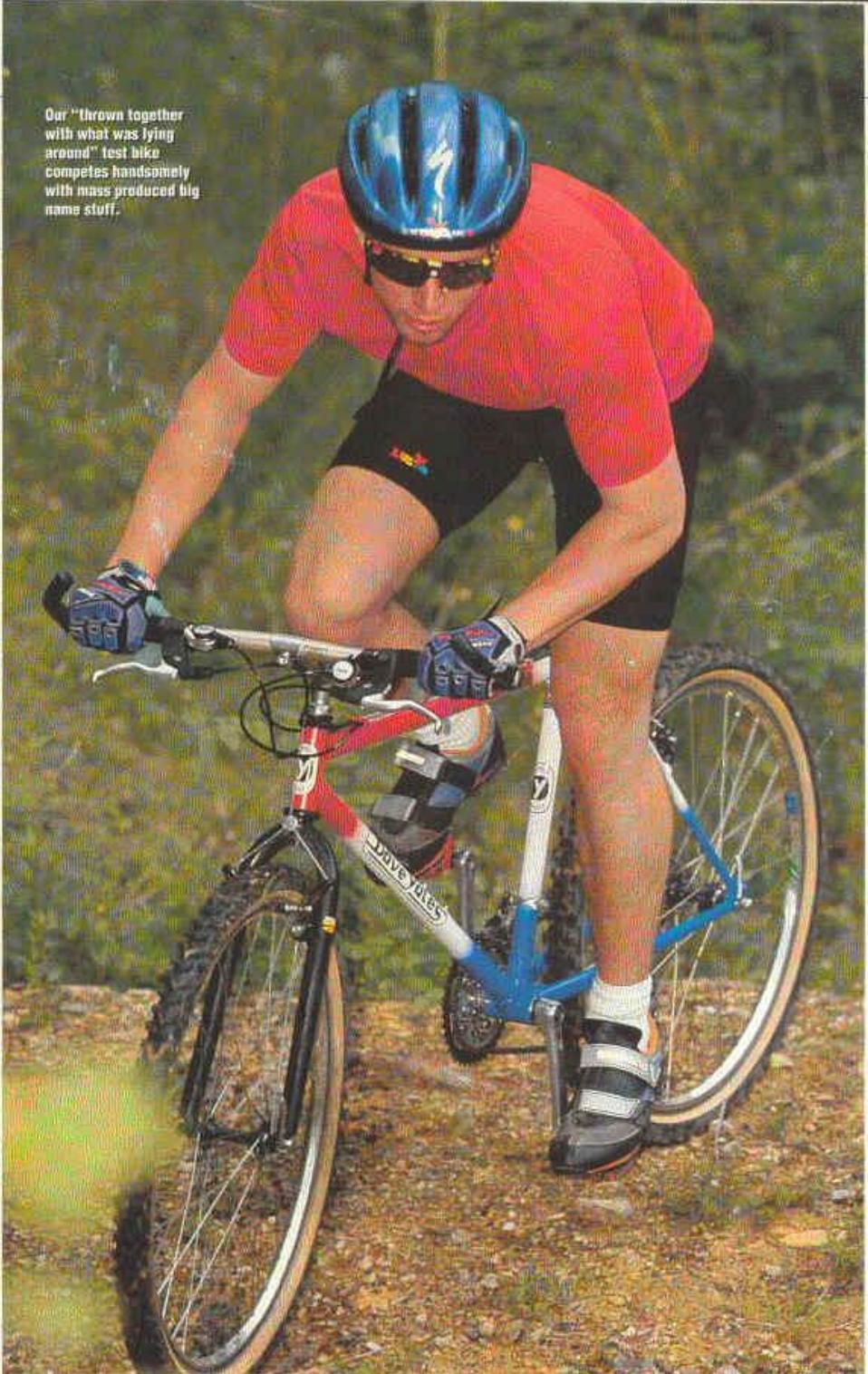
The Diabolo is the balanced sum of the most popular features on Yates' custom MTB frames. It's as near as he comes to mass production, batch built in the most popular sizes and utilising the reasonably priced Columbus Cromor-OR tubes. It's available as a frame, in two-colour fade, for £335 (plus £50 for a Kona Project Two fork), or as a complete bike with your own componentry preferences. Our test bike was, to quote Yates, "thrown together with what was lying around". Priced at around £900, it has all the hallmarks of a ready-to-hammer machine that, weighing in at 25.75lb and specced with mainly Dcore LX, competes handsomely with most of the mass produced big name stuff.

If you're looking for something with a little less weight or more individuality, the Columbus Cyber tubed version comes in at £450, or you can let Yates loose with his own Reynolds tube mix at the same price. The Diabolo Testim, in Columbus Max OR, is £519.

Frame & forks Columbus

Cromor-OR tubes are not among the lightest around, but they build into a classy looking, lively and strong frame that is at home on the race circuit or touring the world. The double butted mainframe weighed in at 5lb 4oz (17in). The head tube was immaculately fillet brazed into the top and down

Our "thrown together with what was lying around" test bike competes handsomely with mass produced big name stuff.



Immaculate fillet brazing is a Dave Yates trademark, not TIG welding that is common to most big production bikes.

tubes, with the other end of the top tube 'flowing' into a 3in reinforcement sleeve at the top of the seat tube. The bottom bracket was a plain lugged unit, responsible for a big chunk of the weight, seatstays were fairback design with an integral allen bolt at the seat cluster and a neat single arm slotted cable guide, and the chainstays had plenty of tyre room.

Triple slotted cable guides graced the top tube and there were eyelets for rack and guards on the rear dropouts, but no rack mountings on the seatstays and only one set of bottle cage eyelets. Yates can fit whatever extras you require. One moan – the inside of the seat tube was poorly finished, scraping lines in the seatpin as we adjusted it. The fork was the excellent



The Diabolo responds well to pedalling surges, and skips through singletrack as if it were on autopilot.

straight bladed Kona Project Two, one of the crispest handling forks around and reasonably light. Frame geometry was relaxed and pleasingly neutral, 70.5 degree head and 72.5 degree seat angles, with a long (23in) top tube on our 17in test bike and a slightly longer wheelbase than average (42.25in). **PRO RATING DESIGN 80%** **FINISH 90%**

Transmission The Diabolo took the mix 'n' match approach to



Touches like the neat single arm slotted cable guide are typical Dave Yates.

transmission. On a £900 bike, Shimano's Deore LX drivetrain componentry is simply average. The cranks were from a '94 group, with the new pattern 22, 32, 42 rings, at the time of writing still not replaceable because there are no spares in the shops. Gear mechs were from '93, fine by us, operated through Deore DX thumbshifters. The retro appeal of indexed thumbies never ebbs. We love the mechanical simplicity and the friction switch option for when something goes haywire, and it seems a great pity that they are slowly becoming extinct.

Last year's cassette sprockets may not offer the 11 tooth grinder gear, but they do omit that 15 to 18 tooth jump that has irritated us on '94 cassettes. Instead, the Diabolo offered 13, 16, 18, 20, 22, 24, 28. The 16 was a godsend for steady state riding, the rest were close enough for comfort apart from the bottom drop to a 13, again stressing that only eight-speed clusters can truly offer close ratios AND the full range. 22-28 was OK on the severe climbs, but 42-13 was too spinny for straight gravity drops. **PRO RATING 75%**

Braking There's not a lot to say about LX brake calipers with SLX levers. They're easy to set up, easy to adjust, dependable and efficient. We like the independent adjustment and replaceability of separate brake and gear levers. The combined Rapidfire Plus units are OK for most riders but it's not always easy to find spare parts if you sustain crash damage or if the internal workings of the shifters go on strike. **PRO RATING 85%**

Wheels Like the thumbshifters, the 36 spoke wheels were a bit of a retro touch in these days when 32

spokes seem to rule the roost. With Campagnolo Stheno rims and butted spokes, wheel weight was still low and the in-house build quality was superb. Specialized treads shod the hoops, a Cannibal on the back, Storm Control front, both particularly talented in the filthiest conditions, but perfectly at home over most terrain. **PRO RATING 80%**

Comfort & detail It's good to see a 23.5in handlebar in these times when narrow bars seem to be a way of cheating weight. The 144g bars, on Za ends and 269g Zoom stem

Summary: Dave Yates Diabolo

The Diabolo offers an all-round appeal that pure race thoroughbreds often lack. It's at ease over hill and dale, and excels on demanding singletrack. Dave Yates creations will always bear a slight weight disadvantage over similarly priced Taiwanese offerings, because he continues to use the fine art of brazing and filing, but we suspect the demands for his artistry will continue as long as the principles of 'intermediate technology' are respected.



made for a lightweight pilot control area that, combined with the Project Two fork, made the Diabolo eminently flickable through twisty singletrack. A long seatpost (350mm), the height adjustment of the stem and the long rail of the Concor Lite saddle combined to give excellent flexibility in ride posture, allowing riders from 5ft 8in-5ft 11in to feel at ease. The long top tubes of Dave Yates' MTBs emphasise high performance and the efficiency of a flat back posture. Riders looking more towards scenic cruising than trail blazing may prefer a shorter stem, but we liked it exactly as it was. The Diabolo componentry set-up felt ready to hammer.

PRO RATING 85%

Handling The Dave Yates Diabolo is one of those down-to-earth bikes

that makes you wonder exactly where all the performance is coming from! It's by no means the top bike in the Yates stable, but its trail performance is well up with the £1,000 plus machines from the big name ranges. At the price, you could get a better specced machine from a Taiwanese range, but we've rarely come across one that rides as well. If you're having a good day, it skips through the singletrack as though on autopilot. The neural frame geometry and crisp steering of the Kona fork create a directional stability that threatens to wake you up if your mind is tuned elsewhere. It's a stiff machine under power, responding well to pedalling surges, but feels surprisingly comfortable over the rough stuff, even when the terrain starts to call for suspension forks.

PRO RATING 90%

PACE RC-200 WORKS

Confronted by a Pace Racing machine for the first time, you might find it difficult to believe you're looking at anything other than a one-off concept bike.

The unique frame construction of the RC-200 sets it worlds apart from anything else on the market. Its engineered beauty goes way beyond the aesthetic and, when combined with the full Pace works kit of RC-35 forks, RC-20 chainrings and RC-SUB-130 bars, the end result is a no-holds-barred competition machine boasting one

of the most bombproof sub-4lb frames we've come across. (Perhaps I should declare an interest here. I have been riding a Pace RC-100 for the past four years and it's still my favourite bike.)

Pace have recently merged their engineering and admin operations into one large production unit, in a hilltop village surrounded by North Yorkshire moors and farmland. The aim is to increase efficiency and output, allowing them to up production from the current 10 frames and 150 forks a week. Over 50 per cent of their current output goes overseas, with the rest shared between 44 'Status One' UK dealers.

Pace are notorious for their inspired 'in the pipeline' projects, but the basic design of the RC-200 has only been subjected to subtle changes since its inception in 1996.

A grease port for lubing without disassembly improves already excellent forks.





For stopping power, Magura Hydraulic brakes are difficult to beat.

→ 1987. Our test bike, which is actually Richard Thackray's works machine, differs only slightly from the production versions, principally in the red anodised overkill. Magura brake specific frame fittings and one piece Pace stem/steerer.

Frame & forks RC-200 frames come anodised in four colourways: polished aluminium or the racing colours of Britain, France or those of our test bike, 'Rosso Competizione Italiano'. The building material is 7020 aluminium box section on the top tube, down tube and rear triangle, tubular on the seat and head tubes. Each section is drawn from dies designed by Pace, then 'load dedicated' by milling material away from the less stressed surfaces, effectively double butting the tubes externally and dialling in the desired combination of strength, light weight, shock absorption and high performance. The end result



is a mainframe that weighs in at 3lb 14oz (19in), although our 'works' test bike had shed another couple of ounces through additional surface milling.

The fine detail on the RC-200

XTR cranks, stripped and anodised to match the frame, turn Pace chainrings.

is superb. The head tube is internally butted and features vertical webbs on the back to help distribute shock loads away from the main tubes. The chainstays are shaped into a shallow double bend which gives maximum crank clearance without losing the space needed for big tyres and muddy conditions. The right hand seatstay is slightly offset at the dropout for improved chain clearance and alignment, and the detachable dropouts are fixed in place with chainring bolts. A unique detachable forward facing seatclamp bolts into a heavily reinforced machined section that tops off the join between the seat tube, top tube and mono stay.

We suspect that the RC-200 mainframe is among the strongest and best finished race frames on the planet. It's almost surprising that, for £1825, there was still enough budget left to warrant double bottle bosses with titanium allen bolts, an excellent three point adjustable anti-chainsuck guard and even bosses for a Crud Catcher (which comes as a standard fitting). A Mavic headset and Royce Racing titanium bottom bracket were also fitted. Both are among the lightest available.

We don't have enough space here to go into the technological attributes of Pace RC-35 forks. They're among the best elastomer forks on the market, superbly constructed and further improved in '94 by the addition of a grease port to lubricate the internal workings without disassembly. Our only gripe is a lack of mud room under the brace when a cantilever brake is fitted. **PRO RATING DESIGN 95% FINISH 100%**

Transmission It was interesting to take notes about drivetrain choices

BIKE TESTED	FUQUAY CUSTOM	DAVE YATES DIABLO	PACE RC-200 WORKS
Total weight	21.77lb	25.75lb	24.4lb
Price	approx £2,350 (frame only £675)	approx £900 (frame only £335)	approx £2,500 (frame only £825)
Distributor	Greg Fuquay 0473 652757	Dave Yates Cycles 091 234 4275	Pace Racing 0751 432929
Frameset			
Frame	Ritchey Logic Prestige chromoly (1820g/4lb 0.5oz)	Columbus OR double butted chromoly (2570g/5lb 4oz)	Custom Drawn 7000 Series Alu (1700g/3lb 12oz)
Forks	Fuquay Custom (855g/1lb 14oz)	Kona Project 2 (937g/2lb 1oz)	Pace RC35 Elastomer Suspension (1058g without steerer)
Headset	Dia-Compe Threadmad 1in (135g)	Shimano Deore DX 1in (180g)	Mavic 1in (115g)
Transmission			
Crankset	Middleburn 24,35,46 (600g)	Shimano Deore LX 22,32,42 (670g)	Shimano XTR, Pace rings 24,33,48 (683g)
Derailleurs	Mavic Short Arm rear (234g), Shimano XT front (120g)	Shimano Deore LX (rear 282g, front 136g)	Shimano Deore XT rear (127g), XTR front (118g)
Shifters	Gripshift 8-speed	Shimano DX thumbshifters	Denix XT thumbshifters
Freewheel	SRP Titanium	Shimano LX 7-speed	Shimano XTR 8-speed
Chain	Sedi MTB Light (316g)	Shimano	Sedi
Pedals	Look Moab (540g)	None supplied	Shimano SPD XT (501g pr)
Bottom bracket	Zero titanium (170g)	Shimano cartridge (320g)	Royce titanium (193g)
Wheels/Tires			
Hubs	Hope Technology	Shimano Deore LX	Rear Hugi 8-speed cassette, front Pace
Rims	Ritchey Vantage Pro 32-spoke	Campagnolo Streno 36 spoke	FIR M122
Spokes	Ritchey Logic	Stainless butted	GT Swiss stainless
Wheel weight	(Without tyres) Front 898g rear 1083g	(Without tyres) Front 958g, rear 1475g	(Without tyres) Front 334g, rear 1443g
Tyres/tubes	Specialized Shockmaster front (640g), Morn Extreme rear (645g) Tioga (170g)	Specialized Cannibal Storm Control 1.8in (775g) Butyl (195g)	Panaracer Smoke 1.8in rear (510g), Dart 2.1in front (603g) Butyl (177g)
Brakes			
Brakes	Pauls Cross Tops front, WTB Speedmaster rear	Shimano Deore LX (340g pr)	Magura HS22 (785g pr complete, inc levers)
Brake levers	Dia-Compe FOS (228g)	Shimano GLR	Magura
Fine detail			
Handlebars	Control Tech 23in (147g)	2014 alu 23.5in (144g)	Pace Rental RC-SUB-130 21.5in (142g)
Stem	Salsa chromoly 130mm (260g)	Zoom 130mm (269g)	Pace one-piece stem/steerer 110mm (425g)
Bar ends	X-Lite (120g pr)	on2a (165g)	None
Grips	on2a (74g)	Foam	Fred Salmon
Saddle	Selle Italia Mythos (268g)	Concor Lite (213g)	Selle Italia Flite (242g)
Seatpost	X-Lite 350mm (214g)	Zoom 350mm (335g)	Synchros 420mm (290g)
Seat bolt	Allen clamp (29g)	Allen bolt	Allen bolt (6g)
Geometry	Tested - 18in bb to top of top tube (fitted 11in)	Tested - 17.5in bb to top of top tube (fitted 11in)	Tested - 18.25in bb to top of top tube (fitted 19in)
	Standover height 30in • Head angle 71 degrees • Seat angle 73 degrees • Top tube length 23in • Wheelbase 41.5in • Rear end 17in • Bottom bracket height 11.75in	Standover height 30.25in • Head angle 70.5 degrees • Seat angle 72.5 degrees • Top tube length 23in • Wheelbase 42.25in • Rear end 16.75in • Bottom bracket height 11.75in	Standover height 31in • Head angle 71 degrees • Seat angle 74 degrees • Top tube length 23.5in • Wheelbase 42.5in • Rear end 16.5in • Bottom bracket height 12.25in

MTB PRO VERDICT

The Diabolo is our idea of the perfect 'budget' bike if you truly want to sample the best of mountain biking. There are plenty of excellent £500 mass production bikes, but sometimes it's just nice to know that your bike was built by an identifiable being whose inspiration overcomes the foibles and fallibility of anonymity.

All three test bikes are the products of inspired riders who practise and build what they preach. We chose Yates' Diabolo because it exemplifies particular aspects of the UK custom scene (fillet brazing, choice of add-ons, and so on) that have blossomed and developed with the progression of the MTB. Greg Fuquay

probably builds predominantly for the same market as Yates, but his preference for TIG welding sets him apart from most UK frame meisters and allows him to make full use of the short butted tubesets that typify the top level of Far East and US frame building. Pace have created a worldwide market for a whole series of unique products, of which the RC-200 frame and RC-35 forks are the centrepiece. Their example has spawned a whole new generation of UK component entrepreneurs and a handful of new frame builders. The RC-200 frameset has notched a relatively small but increasingly well established place in the world MTB market.

THE OTHER CONTENDERS

The home grown MTB frame market is relatively small compared to the plethora of road frame builders touting their long established trade. Like the big names, Raleigh, Dawes, Townsend and British

Eagle, most of the small scale UK builders have crossed over from the road scene, learning from their own and their rivals' experiences. Of those whose bikes we have ridden, there are a few that stand out, such as Chas Roberts, Dave Lloyd, Dave Hinde and Paul Donahue. Ozone have impressed us with their TIG welded E-

Stay aluminium frames, and they've just produced a 'standard' double triangle version. Formula One, in Surrey, have shunned the conventional approach, employing their skills in carbon fibre constructions to create a monocoque carbon mainframe with a Roberts built chromoly rear triangle.