

OBTAINABLE TITANIUM

Titanium is ideal for long-distance road bikes. Dan Joyce tests budget models from Van Nicholas and Spa Cycles

Whether it's the explosion in popularity of sportives or the emergence of the MAMIL (middle-aged man in lycra), there's a good demand these days for road bikes that aren't really meant for racing, that are better for big days out than bunch sprints. For while you can do a sportive on a racing bike, and those chasing fast times will, the non-competitive rider will be better served by a bike with lower

gears for the inevitable hills and a more comfortable, less head-down riding position.

Many manufacturers now have an 'endurance' or 'sportive' range among their road bikes for this reason. Rather fewer offer audax bikes, which are also designed to tackle century rides and which have long occupied the 'recreational' territory that road bikes are drifting into.

This issue's test bikes come from either end of the sportive spectrum. Both are budget-priced

titanium bikes with frames built in China, perhaps even in the same factory. Yet they've been drawn up differently. Van Nicholas say their Mistral is 'designed with all-day saddle occupancy in mind'. Spa Cycles don't beat about the bush with the purpose of theirs: it's called Audax.

Frame and fork

Both bikes have titanium alloy frames (with small percentages of aluminium and vanadium) and carbon fibre forks.

Put simply, titanium is about half as dense and stiff as steel and just as strong. So an identical Ti frame could be half the weight without risk of breakage. But it would be far too whippy – and in the past some were! Reputations stick even though designers of modern titanium frames, like both of these, have learnt to use somewhat fatter and thicker-wall tubing to get the balance of stiffness and flexibility that we appreciate in a good steel frame,

Our test model was one of Spa Cycles' first Audax bikes, which they've just launched along with titanium touring bikes



climbs. What I ultimately wanted was a 53/39 chainset – and a revised set of riding expectations.

The wheels underscore the differences between the two bikes. The Mistral has race wheels, the Audax light-touring wheels. They're good in different ways. The 30mm deep-section Easton aero wheels will provide a small aerodynamic advantage, in part thanks to the small number of bladed spokes (20 front, 24 rear). And they're fitted with tyres you could happily ride a road race on. They're light too, saving almost half a kilo over those of the Audax.

On the other hand, the wheels of the Audax will be more durable. They're expertly handbuilt, using 36 Sapim spokes apiece and tough, eyeleted Rigida Chrina rims. The 700x25C Schwalbe Durano tyres aren't just more shock-absorbing than the Mistral's 23mm Vredesteins, they're also harder wearing.

Both bikes, and more so the Audax, understandably make some economies when it comes to things like the saddle, seatpost,

handlebar and stem. It's nothing you notice when you're riding, only if you want to save weight.

The ride

No doubt some of the comfort that wallet-lightened owners ascribe to titanium bikes is a placebo effect. 'I'm on a titanium bike that I paid X for; it must be more comfortable!' I can't honestly say that either was *significantly* more comfortable than my winter training bike (Reynolds 520 frame, carbon fork). But both were certainly comfortable, purring softly enough over frost-cracked winter roads. With its longer wheelbase and fatter tyres, the Audax was the more comfortable of the two, although I would happily do a century ride on either without changing anything except the Mistral's saddle.

I thought I'd end up riding a fair bit quicker on the lighter Mistral. Not so. I never rode flat out on either bike and average speeds were much the same. I only noticed the difference on climbs,

and I think that's less to do with the lower weight of the Mistral and more to do with me being more inclined to attack the climbs on this racier-feeling bike.

Both bikes have shallow drops. They're just what you want on a sportive bike: you end up using the drops much more, simply as an alternative hand position rather than a last, back-aching recourse when you're battling into the wind.

Crank length wasn't an issue on either bike. I didn't notice that the Audax had 165mm cranks and the Mistral 172.5mm until I measured them. The shorter cranks would make a useful upgrade for the Mistral, in fact, as my toes would then just clear the tyre.

Summary

The Mistral is a nice, lightweight, good value road bike that's unlikely to lose its lustre. If that's what you're after and you don't miss mudguards or mind toe overlap, you'll like it. It's not the all-rounder that I was expecting, due to its tight clearances, lack

If it had a 53/39T chainset instead of the compact, you could race on the Van Nicholas Mistral – it's very much a road bike. But as with many road bikes, there isn't room to fit mudguards and the front centres distance is very short



of frame eyelets and limited gear range. Ultimately, this is a race bike – albeit one that is comfortable enough to ride a long way on.

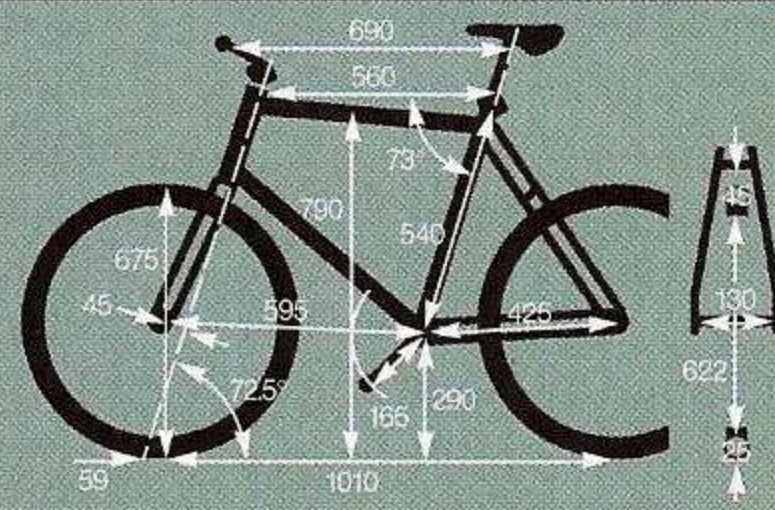
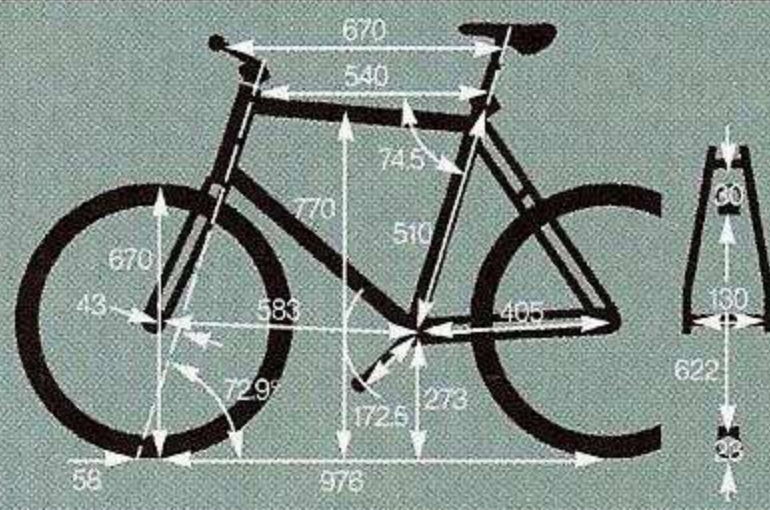
Van Nicholas do make an audax bike: the Yukon. That is more versatile but it's another £400. Versatility is just as valuable in a cheaper bike – more, in fact, because if you've got less money to spend you're less likely to have bikes for specific purposes.

The Spa Cycles Audax looks and is more utilitarian than the Mistral. Mudguards, toe clearance, 'maximised' mid-drop brakes, wide-ratio gears, and the facility to fit a rear rack might not cut it with the sportive Mafia, but help make this bike both practical and versatile. It's equally good value and there's nothing to fault with the ride quality. I preferred it overall to Thorn's similar-priced Audax Mk3. It would top my current shortlist if I were looking to spend up to £1500 on one road bike for sportives/audaxes, club runs, winter training, and even commuting and light touring.



SPECIFICATIONS

Model	Van Nicholas Mistral	Spa Cycles Audax
Price	1699 Euros (approx £1410)	£1350
Weight	8.15kg (no pedals)	9.68kg (inc accessories, no pedals)
Size	54cm	54cm
Sizes available	48, 50, 52, 54, 56, 58, 60cm	52, 54, 56, 58cm
Frame & Fork	Van Nicholas 3Al/2.5V titanium frame, with fittings for 2 bottles. Easton EC70 carbon fork with aluminium steerer.	Spa Cycles (3Al/2.5V) titanium frame with fittings for 2 bottles, rear carrier, mudguard, frame-fit pump. Carbon fork with aluminium steerer, with fittings for mudguard and enough drop for 57mm sidepulls.
Wheels	Vredestein Fortezza TriComp 23-622 tyres, Easton Aero wheelset comprising: Easton aero rims (30mm deep), bladed spokes, 20 radial (front) 24 radial/x2 (rear), Easton hubs	Schwalbe Durano 23-622 tyres, Spa Cycles handbuilt wheelset comprising: Rigida Chrina eyeleted rims, 36x3 Sapim spokes, Shimano 105 hubs
Gearing	Truvativ Elita GXP compact crankset 172.5mm 50/34T, KMC X10 10-speed chain with Powerlink, Shimano 105 12-25T 10-speed cassette. Shimano 105 derailleurs and shifters. 20 speed, 36-110 inches	Sram Apex GXP compact crankset 165mm 50/34T, Sram PC1051 10-speed chain with Powerlink, 11-32T 10-speed Sram PG1050 cassette. Sram Apex derailleurs and shifters. 20 speed, 28-121 inches
Braking	Van Nicholas VNT dual-pivot callipers, Shimano 105 STI levers	Miche dual-pivot sidepulls (57mm drop), Sram Apex levers
Steering & Seating	42cm Van Nicholas VNT shallow drop road bar with 31.8mm clamp diameter, Van Nicholas VNT Stem 110mm, FSA Orbit MX headset 1 1/8in. Van Nicholas VNT leather saddle with Ti rails, Van Nicholas VNT 27.2mm aluminium seatpost	42cm Deda Fluida shallow-drop bar with 31.8mm clamp section, 100mm BBB aluminium stem, Stronglight O'light R headset. Passport saddle, EX System 27.2mm aluminium seatpost
Extras	none	SKS mudguards, 2 x Blackburn bottle cages
Contact	vannicholas.com, +31 0186 657718	spacycles.co.uk, 01423 887003



RIVALS



Genesis Equilibrium £1300

Reynold 725 steel frame, carbon fork, Shimano 105 20-speed. With 57mm-drop brakes it will take full mudguards. genesisbikes.co.uk



Enigma Etape £2007+

Ti audax bike with carbon fork, Campag Veloce groupset, and Fulcrum Racing 7 wheels. Lots of build options. enigmabikes.com



Thorn Audax Mk3 £1699

Reynolds '858' custom steel audax bike with room for 28mm tyres and mudguards. Lots of à la carte options. thorncycles.co.uk

whilst still saving appreciable weight. And, of course, titanium doesn't rust.

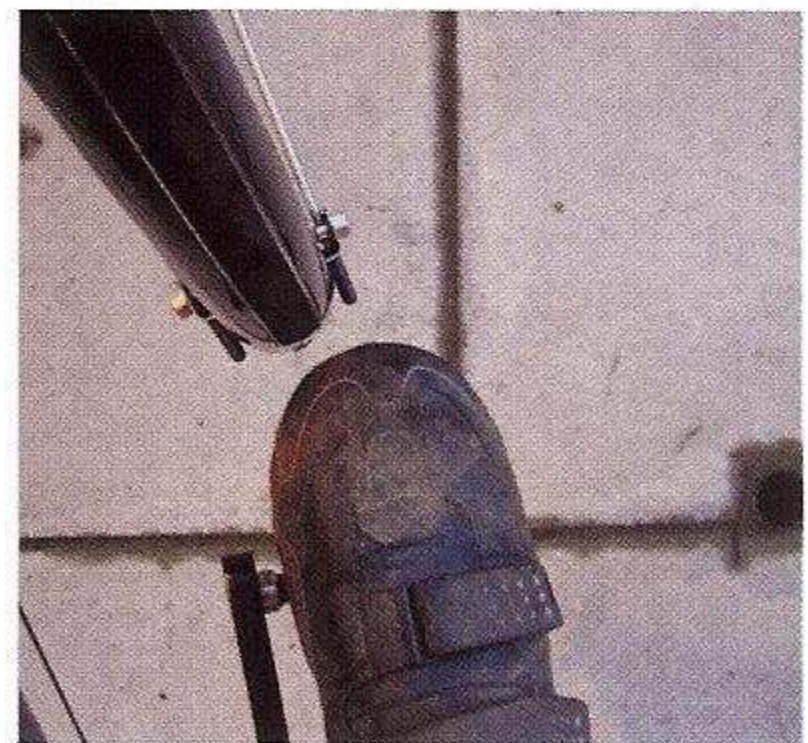
How come neither bike has a titanium fork? Economics, primarily. Straight tubes are easy compared to a fork blade that tapers in diameter and wall along its length, and to invest in the tooling to make one just the right amount fatter and thicker to match the properties of steel is too great a risk for the small companies selling Ti frames. Mass-produced carbon forks, on the other hand, already provide an even better balance of comfort, stiffness and weight – at an economical price. The only snag is the limitations on frame design imposed by a lack of variety in ready-made fork dimensions.

Despite those limitations, and being made for a similar purpose from the same material, there are notable differences in the design of these two frames. The Audax has toe clearance – even with the mudguard – whereas the Mistral has toe overlap with the tyre. Some of this is down to crank length: the Audax has 165mm cranks to the Mistral's 172.5mm, but mostly it's down to longer front centres on the Audax. This bike also has longer chainstays, which means its rear carrier eyelets aren't token additions.

The Audax is designed to take mudguards, and as well as eyelets it has *room* for them. The bottom-of-the-slot brake shoes show that both frame and fork provide as much clearance as possible underneath a 57mm calliper. There's ample space for a mudguard over its 25mm tyre; you might even fit 28mm.

Conversely the Mistral's frame and fork are designed for short-drop (49mm) brakes, and the mid-slot brake shoe shows that the clearances are even closer than they could be. There's less room under the fork than on my time trial bike! I wouldn't recommend tyres bigger than 23mm and wouldn't fit even Crud RoadRacer guards, let alone the full 'guards that it lacks eyelets for. SKS RaceBlades would be okay.

The frame geometry of the



The Audax has toe clearance even with the mudguard; the Mistral has overlap with the tyre

(Clockwise from above) Sram's Apex 11-32T cassette is a perfect match for a compact double chainset, widening the range significantly. The Audax's frame and fork have been designed to utilise all the drop available from 57mm brakes. That's a size 8 shoe and it's a 54cm frame.

Mistral is steeper and shorter, as you might expect. I didn't notice the miniscule difference in steering trail out on the road, although the Mistral's steeper seat angle does shift you forward a bit. That's great for accelerating when you're on the drops, not so good for cruising on the brake hoods.

Where the Mistral's frame scores over the Audax is in terms of aesthetics. It lacks the cut-out detailing of more expensive Van Nicholas bikes but still has neat cowed dropouts and a lovely brushed titanium finish, on which is easier to buff out marks.

Equipment

Both bikes use 20-speed compact double gearing, Shimano 105 for the Mistral, Sram Apex for the Audax. These days a Shimano 105 mech will cope with a cassette that goes to 28T. This one doesn't, bottoming out at 25. Sram Apex works with cassettes up to 32T,

which is what Spa Cycles spec. It gives the Audax a gear range as wide as most road triple groupsets, and it meant that I generally had a gear or two in reserve on even the steepest hills encountered during the test.

The Sram shifters felt hesitant to change gear after the crisp, instant shifts of Shimano STI, an issue compounded by my lack of familiarity with Sram's 'Double Tap' shifting. You press the gear lever a little bit to go to a smaller sprocket or chainring and further *in the same direction* to go to a larger sprocket/chainring. Slower shifting would annoy me in a race but on a recreational ride I don't mind. The same goes for the larger steps between rear gears that a wider-ratio cassette brings.

My cadence was spoiled only by the big jump between chainrings that a compact chainset makes inevitable. I had to click up or down a sprocket or two at the rear after shifting the front mech. This felt like a bigger deal on Mistral. Maybe the smaller steps between gears meant I was shifting an extra sprocket to correct my cadence compared to the bigger-stepped Audax. But I think mostly it was the fact that the Mistral felt like a racer. At first I thought I would want lower gears on it for