

EXPEDITION BIKES

Even if you're not touring the world at breakneck pace, a heavy-duty rough-stuff tourer has advantages. Dan Joyce tests bikes from Thorn and Santos



Some things seem inescapable when you start talking about expedition bikes: 26-inch wheels and the Rohloff Speedhub. While they're not necessarily required, in the back of beyond durability is.

A 26-inch wheel is about 10% stronger than a 700C wheel, other things being equal, and the ISO 559 tyre diameter is a more common size worldwide than 622. The 14-gear Speedhub, meanwhile, has a well-deserved reputation for reliability compared to derailleurs, requiring only the odd oil change to keep running as well as it ever did.

When you add sturdy-tyred 26in wheels and a 1.7 kg hub to a reinforced

frame that's suitable for carrying big loads, you end up with a bike that inevitably feels fairly tank-like. The extra weight is negligible once you've added panniers weighing as much as or more than the bike itself, but it's something you're aware of when riding with lighter loads.

So the first question is: do you want this kind of bike? Both the Thorn Nomad Mk 2 and Santos Travelmaster 2.6 Alu are overkill for First World tarmac-only touring. They're meant for lugging everything you need over dirt roads and tracks. That could mean rough-stuff cycle-camping in the UK just as much as South American *ripio* ('rubble roads').

I tested the bikes on a mix of bridleways and minor roads with four panniers weighing total of 16.5kg,

(Opposite) The deeply socketed dropout is neater than a chainstay torque arm

(Right) The eccentric bottom bracket allows chain tensioning



which is more than I carried on my last cycle-camping tour but a lot less than either bike *could* carry.

Frame and fork

The Thorn Nomad is steel throughout: 531 for the fork and chrome-moly for the frame. It's specifically designed for the Rohloff hub, with a deeply socketed dropout (instead of a chainstay mounted torque arm) to stop



the hub rotating during gear shifts, and an abundance of guides to keep the twin gear cables neat and tidy. An eccentric bottom bracket enables chain tensioning.

There are bracing struts between the chain- and seat-stays, to support and stiffen the rear triangle for a heavy load and/or to cope with the stress of a rear disc brake, for which there are frame mounts. The fork is reinforced

steel version is also available. There are 700C options too – the Travelmaster 2.8 alu or 2.8 crommo – as well as Alfine, belt-drive, and derailleur versions. As with the Thorn, an eccentric bottom bracket tensions the chain. Here the Speedhub has a short torque arm that's braced on the left-hand seat-stay. While there's no dynamo mount, there are fittings for a nurse's lock and a down-tube-mounted mudguard.

The Santos is nominally slightly bigger than the Thorn. In practice the contact points ended up in the same place. An adjustable stem – which I like less than steerer spacers for an

They're meant for lugging everything you need over dirt roads

too: it has a double-crown. The fork steerer is very long. Some people don't care for Thorn's trademark poker-chip stack of washers on top of it but I'm indifferent. The handlebar was exactly where I wanted it: high enough to take the strain off my hands and lower back and to lift my gaze from the ground. In this respect, the detailed sizing information on Thorn's website was very useful.

Thorn make much of the advantages of steel. Yet the more ready reparability compared to aluminium is seldom an issue for most cyclists, and both bikes are so solidly built that there was exactly no difference in comfort between the steel Thorn frame and the aluminium Santos. The biggest difference between the frames is weight, with the Santos being noticeably lighter even accounting for mudguards. This difference does become moot, however, when you fit panniers.

While this Santos Travelmaster is aluminium with a steel fork, an all-

expedition bike – put the bars just where I wanted.

The chain-stays are somewhat shorter on the Santos. I didn't clip my (UK8) heels on the panniers, but if you've got bigger feet or bigger panniers, or just want to fit bigger tyres, the Thorn gives you more room.

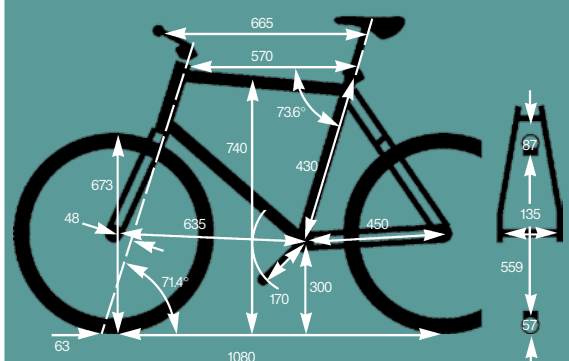
Equipment

Rohloff's Speedhub is an impressive piece of engineering that you may have seen discussed on internet message boards. There are 14 evenly spaced gears with ratios of: 0.28, 0.32, 0.36, 0.41, 0.46, 0.53, 0.60, 0.68, 0.78, 0.88, 1:1, 1.14, 1.29 and 1.47. The Speedhub has a great track record for toughness but there are some shortcomings that its more fervent fans prefer to overlook.

Firstly, it's only available for 32 spokes. Since the wheel isn't dished, it will be stronger than a comparable derailleur-gear wheel. But why not 36 or even 40? There's plenty of room on that hub flange, and if 10% stronger

TECH SPEC

Bike	Thorn Nomad Mk2
Price	£2150.99 as tested (from £1899)
Weight	16.5kg (inc pedals & accessories)
Size	560M (17in)
Sizes available	510M, 540L, 560M, 560L, 590L, 620L (see website for details)
Frame and Fork	Thorn '969' chrome-moly steel with socketed dropout for Rohloff hub, eccentric bottom bracket, and fittings for three bottles, rear disc brake, rear carrier, mudguard. Reynolds 531 steel fork with double-crown and fittings for low-rider carrier, mudguard, dynamo.
Wheels	Schwalbe Marathon Extreme 57-559, Rigidra Andra 30 rims, 32x3 spokes, Shimano Deore front hub, Rohloff Speedhub rear.
Transmission	Thorn triple alloy crankset 170mm, 38T chainring, Shimano UN54 bottom bracket, KMC Z chain. Rohloff 16T sprocket, Rohloff twistgrip shifter and Speedhub. 14-speed, 18-93in.
Braking	Shimano Deore V-brakes
Seating and Steering	Ergon GP1L grips, SJSC Ergo Control bar ends, 580mm Thorn aluminium flat bar, 105mm FSA 25.4mm clamp stem, FSA Orbit XLII threadless headset, Velo Deluxe Sports saddle, Thorn aluminium micro adjust seatpost.
Accessories	Thorn Expedition steel rear carrier, Thorn MkV steel low-loader front carrier, Profile Design Kage, SKS P65 chromoplastic mudguards, bell
Contact	www.thorncycles.co.uk, 01278 441500





is worth having (an argument for 26in wheels over 700C) why not have 10% more spokes too? Even if you're only buying peace of mind (and if you're a big rider or have a big load, it could be more than that), the weight penalty would be peanuts.

Secondly, there's noticeable noise and loss of efficiency in the bottom seven ratios – which are the top seven ratios repeated via a reduction gear. The hub does run in and get quieter. And the longer you ride with a Rohloff, the less you notice the sound of the hub anyway – your ear tunes it out.

On the plus side: everything else. The internal gears are protected from weather, dirt or damage. Cable tension is less critical because the 'indexing' goes on inside the hub. And being able to go from a high gear to a low gear – or vice versa – with the twist of one wrist is useful. Any glitches can usually be cured with an oil change.

To stop you, Santos use Magura hydraulic rim brakes whereas Thorn use Deore V-brakes. There's no real difference in outright stopping power: you can lock the wheels with either. The hydraulic brakes provide better modulation and require less grip strength, to the extent that you can

confidently brake with one finger. They're harder to fix if something does go wrong, but that's unlikely. The Thorn has its front V-brake mounted behind the fork; I didn't notice any differences in noise or braking performance.

What is annoying about the Thorn's brakes is that the levers have been mounted too far in board of the grips. That's because standard Ergon grips have been used rather than the shorter twistgrip-compatible versions fitted to the Santos. I could reach the levers but it was an awkward stretch from where my hands naturally rested on the grips. I'd cut them to size to fix this.

Both bikes have strong carrier racks front and rear. The Santos rear mounts the panniers several centimetres below the top of the rack. That gives the panniers a lower centre of gravity. I was using Carradice Carradry bags, which sit quite low anyway, so it was lucky that there was no rear mech to foul with the bottom of the right-hand pannier.

Our Santos came with a surprisingly useful kickstand. This is strong enough to hold the bike up with four panniers on. It didn't come with mudguards, which the Thorn did, but it's worth



The Travelmaster is available in steel as well as aluminium, and in 700C wheel versions

(Above) A shortened Ergon grip means the brake lever is kept in easy reach

noting that both bikes have a huge list of *à la carte* options.

The ride

Riding either bike unladen up a steep hill in gears 1-7 is a joyless experience. To an incessant clockwork whirr, you do whatever the opposite is of dancing on the pedals. (Groveling?) Add panniers and it's less of an issue. Off-road with panniers, where there's more riding noise and more to keep your mind occupied, it's a trivial annoyance.

Both bikes have flat bars, which makes steering easier off-road. There is a cost: even with the broad platform that the Ergon grips provide the single hand position of the Santos becomes

uncomfortable – not just for your hand, which is stuck in one position, but because this position locks out your elbows so any shocks come all the way up your arms. Ergonomic bar ends like the Thorn's are the answer. Here comfort on the bar ends is compromised slightly by the raised metal clamp on the Ergons; I'd keep the bar ends and switch grips.

The Thorn's Schwalbe Marathon Extreme tyres (an option on the Santos) cope well with rough, dirt tracks. Conversely, the Marathon Supremes of the Santos are quicker running on tarmac but don't offer the same level of grip or toughness off it. Given the strengths of this kind of bike, tougher, grippier, slower tyres make the most sense.

The only place either bike really

bumpy and soft surfaces – exactly the terrain you'd expect to encounter on a rough-stuff bike. It's true they're not as strong – unless they're built better, use better components, or have more spokes – but I'd take my chances with tyre availability as I think you gain more than you lose, especially for rougher but less remote riding. (For which I'd use a 29er MTB with a big saddlebag and maybe a bar bag.)

Saddles are personal, but I didn't get on with the Terry Riviera on the Santos. Plus it absorbed rain like a sponge.

Summary

These are both very good quality heavy-duty touring bikes. As well as for rough-stuff riding, you could use either for general purpose touring and commuting – with the proviso

that they're at their best when they're carrying a decent load (two or more substantial panniers).

Minimalist tourers and tourers who mostly stick to

tarmac should look elsewhere.

There's not a lot to choose between them. The Travelmaster has the odd high spec component that this Nomad lacks (e.g. the Chris King headset, hydraulic brakes and tungsten-carbide treated rims), but these don't come close to offsetting the £700 difference in price. That would buy a ticket to *anywhere*. So in a straight choice, I'd pick the better-value Thorn Nomad. I'd like it even more if, like the Santos, it were also available in a 700C option.



TECH SPEC

Bike	Santos Travelmaster 2.6 Alu
Price	£2845 as tested (from £2545 with Rohloff)
Weight	15.1kg (inc pedals & accessories)
Size	19in
Sizes available	15, 17, 19, 21, 23in
Frame and Fork	Aluminium frame with eccentric bottom bracket and fittings for three bottles, rear carrier, mudguard, down tube 'crud guard' and nurse's lock. Chrome-moly steel fork with fittings for low-load carrier and mudguard.
Wheels	Schwalbe Marathon Supreme 50-559, Rigida Tungsten Carbide aluminium rims, 36x3 spokes (front) 32x2 spokes (rear), DT Swiss 340 hub (front), Rohloff Speedhub (rear)
Transmission	Truvativ 5D 170mm chainset, 42T chainring, Truvativ bottom bracket, Rohloff SLT99 chain. Rohloff 17T sprocket, Rohloff twistgrip shifter, Rohloff Speedhub. 14-speed, 18-94in
Braking	Magura HS33 hydraulic rim brakes with Evo 2 adaptor
Seating and Steering	Ergon GP1 Rohloff-compatible grips, 580mm aluminium flat bar, 90mm Ritchey Pro adjustable stem, Chris King headset, Ritchey alu micro-adjust seatpost, Terry Riviera saddle.
Accessories	Tubus/Santos Pack Rack (rear), Tubus Ergo rack (front), ESGE/Pletscher kickstand, bottle cage.
Contact	www.msgbikes.com, 01903 752308

Over choppy surfaces and loose gravel I missed 700C wheels

struggled was on a narrow dirt track that had been used by off-road motorcycles or quad bikes. With deep ruts and wheel troughs half full of water it looked like an African back road after heavy rain. The sheer weight of the loaded bikes made it hard to negotiate this section. I walked.

Where I was riding over choppy surfaces and through loose gravel I missed 700C wheels, which even my mountain bike has. Bigger wheels roll better, particularly on these sorts of

Other options



TouT Terrain Panamericana
From £2850

Full-suspension 26in-wheel German touring bike that also suspends the luggage via bespoke carriers. Available in derailleur options or (for more money) with a Rohloff. Reviewed Cycle Feb/Mar '09. www.bikefix.co.uk



Salsa Fargo
From £1600

Rough-stuff tourer with 29er wheels – that's 700C with wider rims and fatter tyres. It'll take 2.4in tyres or 2.1 with guards. Drop bars, disc brake only, with carrier mounts and fittings for six bottles. www.ison-distribution.com



Van Nicholas Pioneer
From 3251 Euros

Flat-bar titanium expedition bike with 26in wheels, Rohloff gearing and a wide choice of components. Comes with mudguards and a kickstand as well as the expected carrier racks front and rear. www.vannicholas.com

