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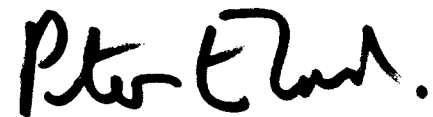
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I hope you enjoy the read.



Peter Eland  
Editor and Publisher,  
*Velo Vision*

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### Small print

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VELO VISION AND VELO-VISION  
We weren't first with the name. *Velo-Vision* (note the hyphen) is a progressive HPV-friendly bike shop in Körten, near Bergisch-Gladbach, Germany, who also make their own recumbents. *Velo Vision* magazine is working in friendly harmony with *Velo-Vision* in Germany.

*Velo Vision* is printed on paper produced from sustainable forests to Nordic Swan standards.



**COVER PHOTOGRAPH:** Riding the Esprit. Photo by Peter Eland.

**OPPOSITE:** No fare dodging for *Velo Vision*! Waiting for a train, Tikit at the ready (sorry!) at Berwick-upon-Tweed station. Photo by Peter Eland.

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### BUILDING THE FUTURE

Ample proof this issue, if any were needed, that the instinct for innovation is as strong as ever in the cycling world. We have clever, novel and functional solutions in all of our test bikes and accessories, particularly perhaps the Bike Friday Tikit with its ingenious cable-actuated folding system.

Then there are the reader contributions: people who, having come up with an idea, haven't just talked the talk, they've actually gone and built bikes to put their concept into practice. And then boldly shared the

details with us, for the feedback of fellow cyclists and designers. Each stage of the process requires some determination, some get-up-and-go, some skill and a certain bravery, and for this alone they deserve our congratulations and thanks.

Whether the ideas 'catch on' or not, we're all richer for the experience. It's a privilege that so many innovative designers have chosen *Velo Vision* as the forum to share their ideas, and we'll keep on doing our best to do them justice.

Peter Eland

# RIDE THE ROUGHEST ROADS



**Experienced cycle tourist John Isles tries out the Tout-Terrain Panamericana, the full-suspension touring bike he wishes he'd had for the washboard roads of outback Australia...**

**BACKGROUND**

While most cycle touring takes place on relatively smooth surfaced roads, there are some souls who yearn to get off the beaten track. This might be on specialist trails, but it most often means riding long distances on rough corrugated dirt roads carry camping gear, plus food and water for several days. While you can do this sort of trip on any

sufficiently sturdy touring bike, and some riders have also successfully used single-wheel trailers, German company Tout-Terrain have now come up with a full suspension machine specifically designed for the purpose: the Panamericana. I first thought about a full-suspension touring bike while on tour about 10 years ago. The goal of our year-long trip around the

Australian continent was to visit as many national parks as possible. Most of these parks were in out-of-the-way places, often accessible only by four wheel drive vehicles – or two-wheelers. The roads out to those parks were often long and rough: heavy 4WDs chop up dirt roads into wavy washboard corrugations, which leave your kidneys aching at the end of a days riding. Sometimes



the waves are so large that it is difficult even to walk over them.

The contents of our panniers were slowly destroyed by the constant bumps. The pages of my diary would turn into white paper powder and our cooking pots would grind into metal filings.

There had to be a better way: a full suspension bike with the luggage suspended. Alex Moulton did it years ago with small wheels – what we needed was to have it packaged into a robust bike with a world-wide available tyre size. But only in the past couple of years have bikes like this been available for sale. The Tout-Terrain Panamericana is quite possibly the most serious attempt yet at building this type of machine. They seem to have taken a maximum performance, spare no expense approach.

The bike, and others in their range, is imported by Bikefix in London. For details of dealers in other countries, see the Tout Terrain website. UK prices for the Panamericana start at £2350 complete, and four frame sizes are available. There are also two component levels, and the option of a Rohloff transmission rather than derailleurs.

Our bike came with a specification which may not exactly match the current models – for instance the suspension fork has now been updated. But it's still very close to the current 'Rohloff Silver' package, an additional £450 on top of the base price, for a total of £2800 as tested.

**FIRST IMPRESSIONS**

There is no doubt that this is one solid looking bike! Large diameter steel tubing, large hydraulic disk brakes and big tyres give the impression of a sturdy steed. Sitting on the bike confirms that this is no illusion. Pulling and pushing on the handlebars produces no discernable flex. The handlebars are quite wide and have a fair degree of sweepback. They are mounted with a VRO Syntace clamp and stem, which gives a wide range of easy adjustability with two hex bolts. I had the bars adjusted for a fairly upright riding position, but I can imagine it would be useful to lower the bars right down for those

times when you are riding into a big headwind for days on end. The downside of this type of clamp is that it gets in the way of fitting my Ortleib handlebar bag. I did it in the end, but the bag was off-centre from the bike by two or three centimetres. No big deal.

The frame is beautifully TIG welded from Columbus Nirvacrom Zona tubing for the main triangle with a custom-butted Dedacciai seat tube. All the welds are smooth and even. The rear half of the bike is welded from stainless steel tubing, so that scratches caused by pannier bags won't cause rust. All fittings such as cable guides are also in stainless steel. The front rack is rated at 16 kg, the

rear rack is rated at 40 kg, and the bike itself is designed to carry 160 kg in total (rider and luggage).

A neat feature of the frame is a handlebar stop which prevents the bars from turning more than ninety degrees. This alleviates the problem of the handlebars hitting the top-tube if they 'flop' when parking the bike. It also means that the cables don't get stretched and they can be cut shorter and neater. The prevention of cable damage is especially important for a bike such as this with hydraulic lines for the disk brakes. The stop has another advantage – you can loosen and turn the stem, or even remove it completely for transport, and the



**ABOVE LEFT:** Tidy welding and a robust swingarm pivot.

**ABOVE CENTRE:** The massive rear rack, with braze-ons for a rear light and holes (here sealed with aluminium plugs) for internal dynamo lighting cables.

**ABOVE RIGHT:** A steering limiter keeps the bars from flopping round.

**RIGHT:** It's no mountain bike, but the Panamerica is just the thing for forest tracks or rough roads.





The Faiv rack keeps your front luggage suspended, while at the rear the suspension is tucked away discreetly behind your panniers. There's a lockout for the rear shock, and for 2008 the front fork will have one too, making out-of-the-saddle riding more efficient.



headset adjustment is not affected.

The rear of the frame is quite unique in design. The rack supports the full weight of the machine, rider and baggage. The result of all the triangulation in strong stainless tube is a large weight-carrying capacity without flex. This has to be the most serious rack I have seen on a bicycle!

There are eyelets to mount mudguards, a tail light and even holes for internal dynamo wiring through the rack, so no clips or

cable-ties are needed. The frame has provision for three water bottles. It is all finished off in a subdued and subtle paint scheme.

Despite the unusual look of the rear frame, with panniers mounted the bike looks like a fairly normal touring bike and should not attract too much attention – an important factor in some parts of the world where the attention you get just from being a tourist can be draining enough without also riding an unusual bike.

### SUSPENSION

The front of the bike is suspended by a RockShox MTB air fork, with the addition of a Faiv tubular steel rack. The rack is suspended with the bike, so the front wheel moves independently of the pannier bags. The air pressure can be quickly adjusted with a pump, and rebound damping is also adjustable. One omission is the lack of a lockout feature on the fork, which would be useful for

riding out of the saddle and for fast getaways from traffic lights. I'm told 2008 bikes will have Rockshox Recon SL forks with lockout.

Tout-Terrain are working on a new design for a front fork with integrated racks, which was displayed at Eurobike 2007 (see Issue 27 for a photo), but this is still under development.

The rear of the bike uses a DT Swiss gas shock-absorber with adjustable damping. Again the air pressure can

be easily adjusted to accommodate varying loads. A lever is provided to lock the suspension, but it can be difficult to get to without removing the right-rear pannier bag. But the lockout will be a useful feature if you have a long stretch on well-surfaced roads between rough sections.

No fewer than 12 pivot points adorn the suspension linkages, all running on sealed bearings, as does the swingarm pivot. As you'll see from the pictures, all of the suspension parts are robustly made, mostly in CNC-milled aluminium.

Despite the obvious mountain bike look of the suspension, the frame is optimised for touring, with appropriate head and seat-tube angles. The bottom bracket is lower than most mountain bikes as well, making putting a foot down easier.

### THE RIDE

You immediately notice the inertia of the heavy Schwalbe Marathon XR 2.01 tyres. They hinder the bike's acceleration, but once moving they roll along well with only a very minor buzz from the tread. The big advantage of these tyres is that they are very durable and puncture resistant. They also provide good grip in variable terrain and are widely regarded as an excellent long-distance expedition touring tyre.

Loading the bike up with 20 kg of luggage in four panniers hardly changes the feel of the bike at all. There is no flex in the frame or racks, and the handlebars, which seemed a little wide initially, provide welcome leverage for manoeuvring the bike in tricky situations.

The suspension provides a predictably plush ride, and it works even better with a heavy load on the bike. Another effect of the suspension is that without the panniers shaking and bouncing on bumps, the bike is very silent. Testing the bike over the roughest cobblestones I could find, the bike felt very sure-footed and comfortable. Rather than staring at the road, watching out for hazards, I found that I could freely look around and enjoy the scenery, while the bike just soaked it all up – very confidence inspiring.

Without a front fork lock-out,

standing on the pedals can cause a bit of suspension 'pumping'. The bike really encourages a sit-down and spin-smoothly style of riding, which suits me just fine.

The suspension largely obviates the need to lower tyre pressure for comfort on rough surfaces, so you don't have the penalty of a sluggish



ride on smooth sections of track, or the need to constantly adjust tyre pressure. The suspension also sidesteps the traditional design compromise of having a frame that is stiff enough for strength, good handling and load-carrying, yet compliant enough for comfort. With suspension, you can make the frame brutally stiff and strong, and let the suspension take care of the comfort.

The Shimano LX hydraulic disk brakes were very powerful and well modulated. Although heavier and more complex than rim brakes, they avoid the issues of rim wear and tyre and tube failure due to overheating on long descents. Some riders may prefer the maintainability of mechanical disks, and your dealer can no doubt arrange them to be swapped over if so.

Unfortunately, the *Velo Vision* budget did not allow me to go to Africa to test the bike on real washboard roads, but riding down a series of small steps was a reasonable simulation! I can't think of another bike I would be so comfortable doing this on carrying 20 kg of water on the rear rack.

As is to be expected, the Rohloff hub provided a smooth gear change, with a wide range of 14 evenly spaced gears. I found the ratios a little high and would have preferred a lower first gear. This can easily be changed either by fitting a smaller chainring or a larger rear sprocket. The hub was very quiet, contrary to many reports about Rohloff hubs. It could be that a steel-framed

bike such as this one does not amplify sounds in the same way as an aluminium frame with large-diameter tubes. As my own touring bike has proved, the Rohloff provides many many miles of trouble-free shifting, requires no adjustment and just keeps getting smoother and better with age.

### REPAIRABILITY

Some people have expressed concerns about the repairability of the hydraulic brakes and air suspension units in the back-of-beyond. With the brakes, if the hydraulics fail the worst-case scenario is simply to fit a replacement V-brake to the fork (the mounts are there).

Worst-case scenario with the suspension is that you blow the seals and lose the air. The bike would still be rideable, but not exactly optimal. *In extremis* you could replace a failed rear air-shock with a piece of wood with two holes drilled in it!

### CONCLUSION

There is no doubt that this is a specialist bike, designed for long

distance self-supported tours over rough terrain. Where the bike would really shine is on corrugated washboard dirt roads which cover large parts of world, such as in Africa and outback Australia. Long distance off-road trails, such as the Great Divide Ride in the USA or the 5500 km National Trail in Australia would suit this bike admirably.

The superb comfort and ability to let you watch the scenery rather than the road is a big advantage. It certainly is a complex machine, but it makes up for that in its ability to cover rough ground with a heavy load in comfort.

The design, finish and components are top-of-the-range, as is the price. However, if you have that big adventure planned, this just might be the best bike to do it on.

John Isles

### AVAILABILITY

Manufacturer: Tout-Terrain. Tel +49 761 58997 44 or see [www.tout-terrain.de](http://www.tout-terrain.de)  
UK importer: Bikefix. Tel 020 7405 1218 or see [www.bikefix.co.uk](http://www.bikefix.co.uk)

### SECOND OPINION

I've not much to add to John's excellent review of the Panamericana, and would agree with all of his comments. Aside from the price, it's hard to find any real criticisms of this bike: as John says it performs superbly in the specialised function for which it is built. Perhaps it's overkill for less demanding terrain, but if you want just one bike to do it all, it's certainly a strong candidate.

Of course the longevity of the relatively complex suspension is an open question, and one that a short review can't practically address, but the apparent build quality certainly inspires confidence, and it can presumably be easily reconditioned with new bearings if any play eventually develops. I was also impressed at the suspension's rigidity. Even with some heavy bags on board there was no sense that those linkages at the back were allowing the rear wheel to squirm or flex sideways.

Other design details which caught my eye include the solid kickstand, which is firmly bolted to the large alloy plate which forms the left-hand dropout, and the tidy double-mudflap arrangement over the rear wheel to allow the suspension to move through its travel.

Just a few other minor points to note:

- It comes without pedals, so I fitted the Pedalite models reviewed elsewhere in this issue.
- The battery lights seen in some of the pictures were also added by me.
- Overall weight as tested was 18.8 kg.

Peter Eland