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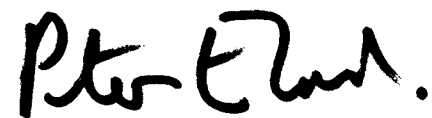
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Peter Eland
Editor and Publisher,
Velo Vision

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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 Strida. Photo by Peter Eland.

OPPOSITE: The *Velo Vision* trailer is usually used to move bike boxes around York, but here it's helping some friends move a sofa. Photo by John Isles.

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EUROBIKING

I hope, dear reader, that you will excuse the late appearance of this September issue – as last year, we delayed publication so as to include the report from Eurobike, which takes place in early September. It really is the focus of the European cycle industry, with many manufacturers timing their R&D effort to have their latest and best ready to exhibit to the thousands of dealers, journalists and distributors at the show.

As a journalist, I'm privileged to have perhaps the best job of them all: seeking out the interesting and the new, without having to get into the nitty-gritty of buying and selling. The manufacturers and designers are keen to tell me about their work, and I try to repay their enthusiasm and hard work by reporting their innovations as fully as possible. Perhaps the most difficult part of the process is the editing: cutting down the masses of photographs and notes to a length which won't overwhelm the rest of the magazine. I've done my best, as ever, and I hope the report will let you enjoy a vicarious visit to perhaps the greatest cycle show on earth.

Peter Eland

ABOARD THE ANURA

As Australian trike maker Greenspeed venture boldly into the 'two wheels at the back' market, we test one of their first production Anura trikes. They wouldn't approve, but we have to ask: is it a Kettwiesel killer?

BACKGROUND

For some years now the market for two-wheels-at the back (or 'delta') recumbent trikes has been dominated in Europe by the Hase Kettwiesel – we reviewed the AL version in Issue 25. Other European delta trikes, for example from Sinner in Denmark and van Raam in the Netherlands, have had a lower profile. In the USA, machines from Easy Racers and Sun Bicycles also compete, often at a lower price point.

Now Greenspeed, one of the major manufacturers of 'tadpole' (two wheels at the front) recumbent trikes, are entering the delta market. Their Anura aims to offer an appealing alternative to those who value the advantages of the delta layout: easier entry and exit, a better view from the higher seat, and great manoeuvrability.

Greenspeed say that their aim is to expand the recumbent market with their new trike, complementing rather than competing with other brands. But for a European buyer looking at this style of trike, comparison with the Kettwiesel is inevitable. And as we tested one just a few issues ago, we won't shy away from putting the two trikes head to head.

The Anura was designed with a 'focus group' of customers who collaborated with the Greenspeed design team by email, providing feature requests and feedback. An internet competition also helped them choose the name. As it's not a tadpole trike, the project codename was 'Frog' – and Anura is the biological name for the order of amphibians which includes the frog.

Our test trike was one of the very first off the production line, shipped



direct from the manufacturers. We received the 'standard' length frame, to suit riders with an in-seam measurement of 41.5" to 48.5", which I believe equates roughly to rider heights from 5'4" upwards. A smaller frame version is under development, and also an extra-long boom for the very tall.

As we go to press available accessories include mudguards and a hitch to turn two Anuras into a tandem. In the next few weeks there will also be a luggage rack. Also to come are a trailer hitch, rear luggage bag and frame bags, matching front fairing and hub dynamo lights. They are also working on a lockable rear box, computer/GPS mounts, and a quick length adjust chain system.

Price in Europe is expected to be around €2990 (about £2050). Supplies to the EU countries will be via Greenspeed Europe, their partnership with AZUB in the Czech Republic, again through dealers.

FIRST IMPRESSIONS

The Anura arrived in a remarkably small box (about 125 x 31 x 74 cm), a useful indication that if necessary,

it disassembles into a series of fairly flat, short sections for transport. We had rather more assembly to do than a typical customer: the trike would usually be provided complete via a dealer.

It all went together very nicely. Assembling a bike is a good way to get a feel for the production quality. Here it was all good news: everything fitted well, and fasteners were good quality: stainless steel throughout, with all of the bolts provided with a little dab of pre-applied threadlock to minimise the chance of anything vibrating loose in use.

The frame is all neatly-welded aluminium, rectangular section for the main boom, with round tubes supporting the rear wheel, and square-section for the brace around the differential at the back. I found the look chunky and clean, perhaps a bit utilitarian, but all in proportion and set off with the striking yellow powdercoating.

The front boom is also aluminium, powdercoated black and with a serial number stamped under the bottom bracket. It slides smoothly in the main frame, and a 'ruler'



scale printed on the bottom helps keep track if different riders need to move it regularly. A standard headset supports an aluminium fork which, for some unknown reason, had a disk brake mount on both fork legs. This is unlikely to persist long in production machines, although Greenspeed did point out that it can be used as a nice solid mudguard mount!

Steering is via angle and width-adjustable bars, fitted with a turn limiter under the main frame. The steering feels solid and light-action. It's linked to the front wheel via a push-rod which is of course adjustable (for when you push the boom in and out).

The front wheel, like the rears, is fitted with Greenspeed's own Scorcher 16" (40-349) slick tyres, stainless spokes and alloy rims. Both front and rear wheels have Avid BB5 mechanical disk brakes: that's the well respected model we tested on the Catrike last issue (and the Kettwiesel AL uses BB5s on its rear wheels, too). The front brake is controlled by the left-hand lever, while the right lever pulls two cables for the rear brakes, with individual barrel adjusters to help keep them balanced. Both brake levers have 'parking brake' buttons – you push in a spring-loaded rod to hold the brakes on. A further squeeze lets the rods spring back out of the way when you're ready to move again.

The seat is of the foam base, mesh back type and is provided for Greenspeed by US recumbent makers RANS. It's a tidy seat, with the mesh tensioned by strong elastic and with a gentle lumbar curve. The top rail across at the back is curved, but pending development of an official Greenspeed luggage system I managed to attach an Ortlieb pannier there without too much persuasion. The pannier then hangs easily against the telescopic seat stays, which adjust via a 4 mm Allen key over a wide range of seat angles. I did wonder whether some triangulation might be an idea in this area. The seat is fixed with a large bolt through the bracket at its base (there's a choice of two holes to set the height), and this takes pretty much all of the sideways load. It's actually very rigid, so I shouldn't

RIGHT: Accessories available soon: front mudguard and frame bag.

FAR RIGHT: Parking the Anura.

BELOW: More accessories available shortly: carrier rack, rear mudguards and tandem coupler.

BELOW RIGHT: Solid chain guards and chain tubes keep the 'cockpit' clean. Note the 'Easy Shift' plates on the cranks for the Speed-Drive.

BELOW FAR RIGHT: A double-pull brake lever, with parking button.



really complain, but if the rear support were also rigid in the sideways direction it would be rock solid! The rack, as pictured above, will add some bracing.

No separate flag holder or hole is provided, but you can thread a flagpole into a seat mesh eyelet.

BELOW LEFT: The rear wheels come off leaving the disk brake in place. Just undo the axle end bolt and slide it off.



On then to the drive train. Starting at the front, the Anura does without a front derailleur post in favour of the Schlumpf SpeedDrive bottom bracket gearing system. This Swiss-made unit replaces the conventional bottom bracket with an epicyclic gearing system which allows two

BELOW RIGHT: The differential provides quirk-free handling. Note also the replaceable derailleur hanger.



ratios: direct drive and an overdrive of 1.65:1 – meaning the chainrings turn faster than the pedals. You switch gear by tapping one of the plates on the crank arms with your heel as you pedal. This presses a button on the crank axle end, performing the shift. To shift back, just tap on the other side.

The main benefit of using this system is that it avoids the need for a very large chainring to compensate for the small wheels.

That keeps the drivetrain tidy, and builds on one of the strengths of the delta design – the easy access. Using the SpeedDrive also saves an extra chainring, front derailleur mech, gear cable, handlebar shifter, and even a bit of chain – so it's simpler, and probably weight-neutral.

The chain is almost completely protected in the 'cockpit' area, with heavy duty side-plates on the 38T chainring and then plastic chain tubes top and bottom. These take the chain to an 8-speed, 13-28T cassette attached to the differential unit, which distributes the drive between the two rear wheels. This system, as used on cars, lets the wheels rotate at different speeds as you corner – the outside wheel has further to go than the inside one in a bend. Using a differential does also mean that if one wheel loses grip it will tend to spin, and drive will be lost on the other wheel. That's rarely going to be a problem in normal riding, but it means that should you feel like some stunts, you can't really keep the Anura up on two wheels for very long.

The drive is taken from the differential to the rear wheels by solid drive shafts which pass within the rear frame tubes, supported by sealed bearings. At the outboard end a flange supports the disk brake rotor, with a stub for the wheel to slide onto, where it's then secured by a bolt threaded into the axle end. The wheel is locked to the disk brake rotor (and the drive shaft) by the heads of Allen bolts which are screwed into the wheel's disk mount – and these then engage in holes in the drive shaft flange. It's a clever system which lets you remove the rear wheels without disturbing the brakes. You'd probably only do this for transport or storage, but it's definitely a benefit.

At the back of the frame is the boss for the hitch which will let Anuras link together to form tandems, triplets or more. It will also be the location for mounting trailer hitches.

Overall width is 28.3" (72 cm), which should get through many doors. There also a 'parking' position for space-saving storage with the trike upright.

Weight as tested was 19.55 kg.

THE RIDE

With a seat height of around 43 cm (17"), the Anura is easy to get into and out of. The benefit of the delta layout is that there aren't any cross-beams or front wheels to get in the way of the seat. You don't even need to step over the boom – just swing the bars to one side and sit straight down. So there's no need to balance on one leg at any point – a great bonus for the less agile and strong.

With that highish seat, I found myself sitting at about the same height as many car drivers – which means that in traffic, I could see through car windows and out the other side. It's a small improvement in the view, but it does help.

But the seat isn't so high up that it felt tippy or unstable. It felt solid and secure, and I really struggled to lift a wheel even deliberately. That said, I'm not naturally a stunt rider, so tend to rein in as G-forces rise.



And it's very easy to generate some seriously sharp turns on the Anura. The steering can swing that front wheel through quite an angle with little effort, and it'll pull the trike around almost on a sixpence. The manoeuvrability is a delight if you're used to tadpole trikes.

One lighter rider mentioned that he thought the seat was less than secure when cornering hard – the base lets you slide off it rather than sitting 'in' the base of an all-mesh

seat. I didn't find that to be the case for me, but I'm a bit heavier so I guess I sink into the foam rather more, and I found it comfortable. As always it's best to try recumbent seats for yourself if at all possible.

It was noticeable that the Anura showed none of the handling quirks displayed by the one-wheel-drive Kettwiesel AL we tested. Hard acceleration would push you in a straight line, and the limited hills we could find around York were also straightforward, with none of the 'front wheel hop' of the Kett.

The gear range, with 23" bottom and 82" top gears, should be fine for all but the most hilly terrain. Shifting was straightforward both on the derailleur gears via the bar-end shifter and with the Speed-Drive: you can click it as you ride along and it'll shift even under load – quite handy sometimes if you need to shift down on a hill or after a sudden stop.

In the lower Speed-Drive range (23" to 49") the bike did seem a bit quieter and smoother than with the drive in top gear: in that lower range it's in direct drive, so none of the internal gearing is engaged. In the higher range (38" to 82"), which was what I used most of the time around flat York, there was a very little extra 'thrum' noise and perhaps a little drag detectable when you're pushing hard. But while it might make a difference if you intend to do time-trials, it matters very little for normal leisure and utility riding, and it's almost unnoticeable if you're just pedalling normally rather than hard.

I did use top gear a fair bit, but I didn't often spin out, which with an 82" top gear indicates that speeds were generally modest. I think it's fair to say that the Kettwiesel did feel somewhat faster overall, perhaps due to its slightly larger 20" wheels and straight derailleur drivetrain.

Braking was predictable and easy to modulate: the front wheel will do most everyday stopping, but if you jam it on really hard the lightly-

loaded front wheel could well lock up or skip. But with both front and rear brakes applied the Anura will stop pretty sharply. I didn't have a tadpole trike handy to repeat the test we did with the Kettwiesel, but I would think that with a skilful rider the front brake on the Anura would give it the edge over the Hase trike.

CONCLUSIONS

The Anura looks like a strong contender as compared to its established competitor, the Hase Kettwiesel. Sure, just now it's lacking the accessories (some of which many riders might count as essential), the range of models and the sheer 'polish' of its rival, as well as the 'one size fits all' adjustability.

But what it has going for it isn't to be sneezed at: a differential as standard for quirk-free riding, the Schlumpf drive, disk brakes all round, bar end shifter...

It all adds up to a package with a good deal of 'tech' appeal. And it seems a full range of accessories is on the way, too, to help it match the Kettwiesel's versatility.

At the Euro equivalent of £2050ish, it is a bit pricier than the Kettwiesel, which starts at £1565 in the UK. But that's the Kett without the differential... If you want a diff it's £400 more, putting the two trikes fairly level on price.

So it looks like Greenspeed are now offering a strong delta trike alternative, especially as the design matures. The trike's performance is good, and it brings out the benefits of the delta layout. Clearly they have work to do on accessories, but if a delta trike is what you're after, you just can't ignore the appeal of the Anura.

Peter Eland

AVAILABILITY

Available via Greenspeed dealers worldwide. See www.greenspeed.com.au for details. In Europe, the distributor will be Greenspeed Europe, but see the main Greenspeed website for a full dealer list.

In the UK, the only dealer currently is Westcountry Recumbents: Tel 0870 7401227 or see www.wrhpv.com