

Velo Vision Sample Article



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I hope you enjoy the read.

Peter Eland

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* is a bike shop in Körten, near Bergisch-Gladbach, Germany. *Velo Vision* magazine exists in friendly harmony with *Velo-Vision* in Germany.

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



COVER: Zaynan Lythgoe of Practical Cycles rides near the windmill at Lytham.
Photo: Peter Eland

OPPOSITE: Hardy Siebecke and co-pilot Timmy test the Tangeroo.
Photo: Heidi Waizmann

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Interesting times

As you'll see when you turn the page, these are interesting times at *Velo Vision*. As if we weren't already busy enough with this magazine, we've decided to launch another! I'm confident that with a little extra work, and the resources the new magazine will bring in, both magazines will be able to flourish at the level of quality which we're proud to have achieved with *Velo Vision* over the years.

This issue seems to have ended up chock full of reviews and new designs: testing them all out has been interesting indeed through one of the most snowy and icy winters we've had here for years. Next issue let's hope for blue skies and sunshine!

Peter Eland

ADVENTURE ON THREE WHEELS



ABOVE: The chainring guard is part of the optional 'Flex Pack'.

ABOVE RIGHT: Neat welding on the main frame. This also shows the quick-release for the handlebars.

RIGHT: The black bracket between frame and upper seat support can be assembled at four different angle settings. The frame hinge is visible below the seat.

FAR RIGHT: The busy right-hand handlebar assembly. Note the neat in-line cable adjusters for the gears.



We test the Adventure 3FS, the flagship 2010 touring trike from Cornwall-based manufacturers Inspired Cycle Engineering. Full suspension and a fast fold are key new features – but how well do they work?

BACKGROUND

ICE have revamped their range for 2010, with three basic models on offer: the speed-oriented Vortex, the all-rounder Sprint, and the touring Adventure. Within each of these models different 'editions' are available at various price-points, starting from £1899. Full details are available from dealers or via the ICE website, which also has an interactive price calculator for a running total as you add accessories and options.

Two major features introduced this year are the front suspension and the new quick fold. All of the new frames feature the fold, while only some of the standard versions add the suspension. These front suspension units will be available separately later this year, to be retro-fitted to 20"-wheeled ICE trikes from 2002 onwards, at a cost of around £615 including replacement headsets.

There are many more options available than I have space to list

here. Our test trike (base price £3069) was fitted with the 'Flex Pack' (£311), comprising front and rear mudguards, the rear rack and the chainring guard. In addition it has a head rest (£70.50) for an overall price as tested of a few pence over £3,450. Standard colours are red, black or blue.

The trike came to us direct from ICE, and was collected after the review by Laid Back Bikes in Edinburgh, who will have it available for demo and sale.

FIRST IMPRESSIONS

The trike arrived at *Velo Vision* in a surprisingly modestly-sized box. The pieces inside were tightly but carefully packed.



Most customers will receive the trike fully assembled via a dealer, but if you do get a trike direct, assembly is fairly straightforward. The instructions included are very clear, and if you're generally confident

with normal cycle maintenance then you should have no problems. It took me a few hours, going carefully and in a rather cramped workspace.

Assembling the trike does give you a good feel for how it goes together, and it's also a chance to look at the components in detail. As with all of the ICE models I've tested over the years, the fit and finish were hard to fault.

The main frame is steel, smoothly welded where tubes join. The powdercoating finish is really excellent with a deep lustre.

At either end of the trike, though, the steel gives way to aluminium, and the characteristic scalloped welding associated with this metal. The front boom is hard-anodised black where it slides in the main

frame, so that repeated movement shouldn't cause the finish to deteriorate. A useful scale on the side should make setting the boom back easier when swapping between riders. Note also the bottle cage bosses on the derailleur post – also handy for mounting lights.

Towards the back of the main frame is the folding hinge, and the section aft of that is all aluminium too. A large hollow pivot supports the rather sculped-looking rear swingarm, and suspension is provided by an elastomer unit (available in several hardness levels). The rear of the frame also supports the seat via a black bracket which can be assembled into four positions according to the seat angle required. A quick-release secures the seat

itself, with several 'notch' settings to fine-tune the angle. At the bottom the seat sits in a 'half tube' base to which it is secured using plastic clamps with small handwheels to tighten or release. The seat is a typical mesh type, with straps to adjust the tension.

Under the seat front lurk the handlebars: a central section is connected via a chunky stem to the frame-mounted pivot. Into this slide some elaborately shaped risers for each side, locked in place with quick-release alloy collars, and with scales so you can set both sides equal. The curves of the bar on each side are intended, say ICE, to give the maximum possible steering lock before they hit the seat or your legs. A Mirrycle rear view mirror is fitted

as standard on this model, mounted to a neat bracket which also provides a mounting point for a bell and possibly a cycle computer.

On then to brakes and gears. The main (front) brakes are Gator hydraulic disks – it's not a high profile brand but they've been around for a while now. The levers are joined to the callipers by a tough-looking braided hose.

There's also a V-brake on the rear wheel (an upgrade to a disk is possible at extra cost) for use as a parking brake. This is operated by a thumb-shifter fitted low on the left-hand handlebar.

Gearing employs ICE's wide-range derailleur system, with a 9 to 32T rear sprocket and 26-36-48 chainrings. All are top quality

parts on this machine – get the full details from their website if you're interested. The gearing range is an impressive 15.7" - to 103.5" – that's really all you're ever likely to need, even for loaded touring.

The rear rack deserves a special mention. It's supplied flat packed, but cunningly assembles to fit onto the rear of the trike via steel pins, which slide through the bushings on the rack into sockets on the frame, where they're secured with grub screws. As you'll see from the pictures, the lower support point is on the moving swing-arm, which might make you think that the luggage will be rattled by the suspension movement. In fact there's no perceptible movement of the rack as the suspension is compressed, as the geometry of the various moving links almost perfectly cancels out the motion. Very clever.

The rack sides offer good support for panniers, with a nice low rail to hang them off. But panniers do ride quite far back, not ideal for stability, and meaning that there seemed to be a lot of spare space between the seat and the bags. ICE said that they'd put the rack that far back to allow the full range of seat angle adjustments. They also mentioned that if you wanted to use that space, the Radical side-bags which they sell to go with the mesh seat would fill the space perfectly. They also offer a side-mount handlebar bag.

Finally the bit you may have been waiting for – let's look at the front suspension.

It's rather discreetly tucked away behind each front wheel, so it's not really shouting out its presence to the casual onlooker. This is perhaps a result of keeping it all as compact as possible, to make it possible to fit to older trikes without altering the ride height excessively.

The suspension unit comes in three major parts: the frame attached to the kingpin curves round and back, supporting the two links which constrain the suspension's motion. At the other end of these links is the axle and brake calliper support, and this is also joined to the kingpin by an elastomer suspension element,



hidden behind the rubber 'boot'. Travel is just 40 mm.

Technically minded readers will find much to admire in this system – there are no track changes with suspension action, and steering geometry is unaffected (as it's all above where the suspension acts). And the linkage builds in an anti-dive effect under braking. It no doubt adds a bit of weight (I didn't take it apart to find out exactly how much!) and there are various moving parts to eventually wear out, but it does look substantially made and durable.

I did check with ICE about the danger of water pooling in the gap between the lower kingpin bearing and the suspension frame on each side – they'd thought of that of course, and there's a drain hole I'd overlooked.

THE FOLD

The Adventure can be folded and dismantled in several stages, depending on how small you want it. Wisely, perhaps, ICE have concentrated on making the 'fast fold' as quick and easy as possible. I certainly find that it's a disincentive to using a particular bike if it takes too long, or is too fiddly, to get it ready for action or stowed away.

The first stage of the fold is simply to remove the seat – one quick release at the top, and two little knobs underneath to undo. Then, you can use the quick-releases to fold the handlebars down flat.

Now all that remains is to undo the large lever at the frame hinge, swivel it clear and lift a little to release. Then the whole rear end lifts over, swivelling flat as it does so, and it tucks between the front wheels. ICE supply a pad to go between the two halves – I didn't get one, so in the photo I used an empty pannier.

The process is unaffected by mudguards or rack, and the chain stays safely contained in the flexible tubes and won't dirty your hands. I got it under 30 seconds easily enough.

The result is still a substantial package but it's of car boot size for the vast majority of cars, I'd imagine. To make it smaller you could first push in the front boom. After that you'll probably need to

look at removing wheels...

Re-assembly is just as quick and painless – flip the back end over, do up the hinge, raise the bars and refit the seat. Done!

THE RIDE

With a relatively high seat (around 12.5" at the base) the Adventure is quite easy to get in and out of, certainly more so than many lower trikes. A higher seat also gives you a better sight-line over walls, hedges and the like, and it's often useful in traffic too.

Set off pedalling and my first impression was of a very quiet trike: chain noise is very muted and there are no rattles at all. It all just feels very solid and stable. The drivetrain clicks through the gears without fuss, and it scoots forward smartly enough.

If like me you're busy adjusting the rear-view mirror, chatting to friends and looking where you're going it may be a few minutes before you actually remember you're riding a full-suspension trike. At that point, of course, I started aiming for every available pothole to test it out...

The suspension does visibly move on any substantial bump or drop, but you do still feel the unevenness of the road. What it does is dull the impact, rather like the parallelogram seatposts reviewed elsewhere in this issue (which have a very similar construction).

So instead of a sharp jolt you get a gentle push, and instead of harsh rattling there's just a 'thrum'. Going over cobbles it worked remarkably well: you could still feel them, but it wasn't the horrible juddering I've experienced on a hard-tyred, unsuspended machine.

I wouldn't want to overplay the role of the front suspension in all of this. The Adventure has reasonably wide tyres, and a mesh seat which will do a fair bit of cushioning of itself. The rear suspension also does a lot of work, supporting as it does the back of the seat which in turn supports the rider's spine and head – where you sense vibration or shock most keenly.

It's also worth saying that on basically smooth roads it was hard to detect any suspension motion at all

most of the time, even (rashly) putting a finger across the linkage to try to feel any action. On an average road-based ride around York I'd say that the suspension really made a difference only a small percentage of the time, even with this winter's bumper crop of potholes.

The last full suspension trike we tested (the Pirol in Issue 33) struggled rather on corners: the suspension would wallow badly. The ICE is completely different: there is just detectable roll but it's extremely limited by the short suspension travel, and remains very controlled. If you're busy leaning into the corner anyway I don't think having front suspension made a noticeable difference.

The Adventure's cornering is limited by its seat height more than anything: you can go pretty fast round tight turns but pushing it without a lot of body lean will eventually lift a wheel if you try hard enough – but if that's your sort of riding one of the other lower models might be a better choice. For normal touring riding, including high speed descents, the Adventure is perfectly capable.

The brakes were really very good indeed, stopping the trike powerfully and with a very nice feel. Each brake lever controls one front wheel, so you squeeze both for maximum stopping. Braking with just one of them will stop or slow the trike

with almost no sideways pull at all – handy while indicating.

I also found the parking brake very handy – it prevents the trike rolling away when parked on a slope.

CONCLUSIONS

The Adventure 3FS is a luxurious ride, and the suspension is effective at dampening the shocks, but without excessive side-effects like pedal bounce or roll. But it's hard to say whether the benefits over just using an unsuspended trike with slightly fatter, softer tyres are worth the cost: perhaps they are if you regularly ride on really rough roads or are particularly sensitive to harsh vibration. For riding on mostly smooth tarmac, I would say the front suspension is nice, but by no means a must-have.

The fold is also very useful, and ICE have applied their usual refined level of detail design to the trike. The only thing I can mildly criticise is the rear rack being so far back, although the addition of Radical side bags to 'fill the gap' behind the seat largely answers that.

With a retail price over £3400 equipped as shown, our test trike is at the high end of the trike market. The main competitor model with full suspension is probably the HP Velotechnik Scorpion FS which also folds: but in the UK at least the price with accessories will likely somewhat exceed that of the 3FS. Other possible competitors include Challenge's folding Alizé trike with 'flexing frame' suspension and a number of other models available in mainland Europe but less easy to find in the UK, for example from Bike Revolution. Sadly the Pirol full-suspension trike reviewed in Issue 33 is no longer in production.

Overall, a very polished performance from the latest ICE.

Peter Eland

AVAILABILITY

Available via ICE dealers worldwide: see www.icetrikes.co.uk for full details, or call them on 01326 378848. The Adventure FS3 which we reviewed is now with Laid Back Bikes in Edinburgh: Tel 07981 430 159 or see www.laid-back-bikes.co.uk

