

Velo Vision Sample Article



This PDF is a sample of the material in *Velo Vision* 49, Sep 2015.

To find out more about this unique magazine, please visit our busy website: www.velovision.com where you will find a guided tour, full subject/author indices, free sample articles to download and the online shop. Subscriptions are available in both print and digital format, and the digital package includes apps for iOS

and Android plus *full access* to all back issues!

We're also on Facebook:

www.facebook.com/VeloVisionMagazine

If you have any comments, problems or suggestions about the magazine in general, or this PDF in particular, please email me at howard@velovision.com

I hope you enjoy the read!

A handwritten signature in black ink that reads 'Howard Yeomans'. The signature is written in a cursive, flowing style.

Howard Yeomans

Editor and publisher, *Velo Vision* magazine.

Technical notes

This Acrobat PDF file should display correctly on almost any computer. If you encounter problems the first thing to try is to download the latest version of Acrobat reader from the Adobe website: www.adobe.com

If that fails, please send me an email and I'll try to sort it out.

Small print

I don't much like copy protection and legalese, but a few things need saying:

You are free to print the document out for your personal use, but not for resale or for anyone else. Please do not make it available online without permission.

To protect the copyright of *Velo Vision* and of our contributors, modification of this document, and copying of the contents, may have been disabled.

Words and images remain copyright *Velo Vision* and the original contributors. Please don't reproduce anything without express permission.

CONTENTS

SEPTEMBER 2015

Velo Vision is published by Howard Yeomans T/A *Velo Vision*. Subscription details and the forum can be found at www.velovision.com and regular news and updates on the Facebook page *VeloVisionMagazine*.

ISSN 1475-4312

Velo Vision, Freshfields, Main Street, Gayton le Marsh, Lincolnshire, LN13 0NS, United Kingdom.
Tel +44 7948 271 763
(from UK, 07948 271 763)
E-mail howard@velovision.com
Skype [howardyeomans](https://www.skype.com/name/HowardYeomans).

EDITOR AND PUBLISHER:
Howard Yeomans
CONSULTANT AND PHOTOS:
Peter Eland
COPYEDITOR: Heather Luna
ART DIRECTOR: Brian Holt
PRINTER: Stephens & George Magazines Ltd

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



COVER: Oliver Taylor of London Recumbents bearing the classic trike 'grin' while riding the Hase Kettwiesel Evo. Read all about it on page 28.

OPPOSITE: The Workhaus Artist's Bike on display at the Bespoked 2015 Constructors Challenge, designed and built by Duncan Henderson for his friend and artist Sam Hewitt. Read more in the Bespoked show report on page 37.
Sam Hewitt. samhewittpaintings.com

PHOTOS: Howard Yeomans.

4 News

Sinclair bike, Challenger velomobile relaunch, a striking 'tinplate' cargo trike, news, events and more.

10 SPEZI

A comprehensive show report from the German Special Bikes Show, including all that caught our eye from the manufacturers and home builders.

22 Review: 8 Freight

We test the esoteric cargo bike. Has a final move to modern manufacture brought out the best of the unusual design or diluted its characteristic appeal?

27 Short reviews

- RoadRing: the bright, amber indicator you wear on the finger.
- Yepp Cargo Cosmo: a large rubber basket with a one-second fold.

28 Review: Hase Kettwiesel Evo FS with Steps

Hase, a manufacturer renowned for thinking of everything, appear now to have built the trike with everything. We test the new Kettwiesel with full suspension and Shimano electric assist.

33 Book review: Bicycle Design

34 Bespoked 2015

Another report from the growing Bristol-based show. While the bikes get no less polished, new entrants on the fringe also shine a path towards more specialisation.

40 Readers' bikes

- 40 Separable Circe Helios: The 20-inch

tandem now splits in two. Read the designer's reasoning and how it works for the riders.

- 43 Ian Bloys Roulandt: A rust-covered discovery in Australia is returned to better-than-full health and to the continent from which it originated.

- 46 Lecicle: The wooden velomobile built like a boat to serve the mobility needs of a city-bound family.

48 Review: Loopwheels for trikes

We test a set of these in-wheel suspension wheels, fully redesigned for recumbent trikes.

51 Spin London

Mike Burrows endures a day in a disused underground car park at the capital's new urban bike show. He says it was so good, they already demolished the venue.

52 Dropping in on dealers

We visit the Cargo Bike Company, a custom-build manufacturer in Derby to see how a British builder delivers on cost and performance.

54 Letters

A selection of letters, including a reader's big wheel folding bike, a Noomad quad and surprise birthday wishes.

58 Subscribe to *Velo Vision*

How to subscribe, back issues and details of our distributors worldwide.

58 Advertisements

The first place to look for specialist products and services. Please support these advertisers, who support this magazine!

Fresh fields

My first issue is finished and 'under my belt'. We've had some busy months, relocating *Velo Vision*, virtually and literally, to pastures new – note the new contact address! May I first thank Peter for a great deal of support this year and, naturally, for his sterling work: first, in setting up this amazing publication and, second, for running the magazine. Fourteen great years – congratulations, Peter!

Peter and I attended two productive trade shows this year – SPEZI and Bespoked – where we gathered much material. Also, I was delighted to meet so many enthusiastic

readers at the York Cycle Rally in June.

To complement the news and reports, we also bring you the essential reviews. In future issues, I aim to maintain the established balance of content, unless you tell me otherwise – your opinion is the one that matters, so please do tell me what you think. Your inventions and designs, too, are always welcome, so if you want to share anything, small or large, please write in.

Finally, I'm sorry for the delay in publication. We're learning as we go, so we'll continue publishing at a rate of two issues per year. I'm working on Issue 50 already!

Howard Yeomans



BESPOKED 2015

The UK Handmade Bicycle Show returned to its Bristol roots this year, comfortably filling Brunel's 'Old Station' at Temple Meads. Now in its fifth year, the show melds together a mass of budding and established frame builders, plus a limited number of component and accessory suppliers.

A comfortable walk or cycle away, the Arnolfini gallery hosted an exhibition of cycling-themed artwork and many more exhibitors. Just before the show opens to the public, judges present awards to constructors in established bicycle categories. This year, however, a new "Constructors Challenge" competition was launched to reward new cargo and utility cycle makers, injecting practicality to the show. Here's a selection of what caught my eye.

Wheeldan titanium tandem and solo

Spotlit in one of the gloomier areas under the arches lurked the most beautifully finished titanium frame bikes from Daniel Pleikies, a German framebuilder. These two bikes, between them, exemplified some recurring themes of the show: hub gears, dynamo hubs, the Pinion 18-speed gearbox and the Gates Carbon Drive belt.

The childback tandem was built for Daniel and his son, who must be around four-feet tall. The main feature of the tandem bike was the integrated fork and rack with its swooping secondary blades rising to an upper steerer clamp. Appearing immensely strong and stiff, the tandem could easily cope with any reasonable amount of luggage and riding forces. Contrasting with the busy front end, the rear of the bike had no rack, encumbered by no more than an exquisite wooden mudguard made by Holzschutzbleche. These handmade fenders are the only wooden ones I've ever seen with a double curvature, created by building up layers of wood.



The frame is a direct lateral design, normally a tube configuration that is stiff enough for most adult weight riders, so it must be more than adequate with only 65 lbs of rear rider aboard. Together with the front-mounted luggage, any sensation of the 'tail wagging the dog' must surely have been absolutely minimised. Indicative price for the 'Double Happiness' prototype was €11,111.

The nearby 'Basilisk' solo bike was impressive for its components alone. Bringing together a Pinion P1.18 gearbox in a raw metal frame with a porter-style rack and dynamo lighting, the final package is modestly uncluttered. Cables and wires routed inside the tubes where possible; all

the dynamo wiring is internal to the frame and front rack. The rear light itself, a small array of LED lights, was embedded in the seat post. The wooden mudguards on this bike are by Woodys Fenders.

The rear 'rocker' dropouts on the solo frame are from Paragon Machine Works – a popular choice with other Pinion gearbox frame builders. They allow both the release of the belt from the frame and easy belt tension adjustment. To adjust, just slacken the bolts in the sliders, then bear weight on the bike until the belt has sufficient tension, then retighten bolts. The Basilisk was priced at €9888. www.wheeldan.de



Mather cargo bike

From a workshop in central Bristol, Robin Mather builds bikes, either from a portfolio of his own designs, or will start afresh to meet any unique requirements, as he did with this printer's bike. Robin and Nick Hand, a graphic designer, used crowd funding for a project to ride the bike to Germany, the birthplace of the 'letterpress' printing process, and to set up mobile print and writing workshops along the way. During the tour, they posted copies of the artwork back to the funders of the initiative. Nick now uses the bike to set up print workshops in and around the city.

Made from 4130 cromoly tubing, the printer's bike frame had to support the relatively small but heavy Adana cast iron press, panniers below, and all the ancillary items at the front of the bike. The straight-through main spar, with load platforms at either end, seems to go together with 20" wheels nicely, without making an excessively long machine. Robin has now made three more cargo bikes like this for general use. The frameset was priced at £2200.

www.robinmathercycles.co.uk



LEFT: The Mather bike with press on board. A front box full of printing blocks and paper complements the heavily laden rear.



Sword Cycles cargo trike

Tim Leicester, formerly a frame builder at Mercian Cycles, started his Sword brand two years ago. This particular cargo trike frame is a one-off diversion from their regular line of diamond frame cycles and it happened to be the only cargo trike in the main hall. A wide track gives a generous load bed width—great for large items. Tim acknowledged that, for smaller cargo, it might benefit from a box, or some form of containment.

The steered front wheels turn on their own kingpins with Ackerman geometry, a far more complex build compared to a centre-pivot cargo trike, but with distinct handling advantages. The front wheels overlap the load platform at full lock somewhat,



resulting in an irregular footprint for the usable cargo area. A pair of fully enclosing wheel guards is, however, in development, which will protect the cargo from interference issues with the front wheels.

www.swordcycles.co.uk



Mike Hickman cycle fit frames

More than a rolling jig for optimising rider ergonomics, the Hickman bike is a road-ready bike, intended for long-term use so a trial geometry can be more fully tested. The frame was designed to be highly adjustable, giving a greater range of saddle and handlebar positions than normally possible, without resorting to swapping out components like stems and seat posts. A single pivot behind the head tube and telescopic tubing allows the saddle to be adjusted fore-aft and up-down in relation to the bottom bracket, all firmly locked into position with pinch bolts. At the handlebar, a variety of custom parts in the handlebar 'stem' give a large range of positions for height and reach.

www.hickman.bike

Workhaus Bikes Rabinovich artist's bike

Duncan Henderson designed this bike specifically for artist Sam Hewitt, who wanted to travel by bike with

his equipment to paint canvas in oil. Workhaus is a small community of artisan workshops in Brighton, UK, where Duncan took inspiration from his colleagues and the creative environment to solve a transportation problem for Sam.

The dominant feature of the artist's bike is perhaps, obviously, the 70 x 50 cm wooden canvas case, which protects the artist's work from the elements and from touching anything else (the paint may remain damp for weeks). Frame tabs, opposite the case on the right side, are provided for mounting the chair. The outriggers, integral to the frame, are for strapping the easel and umbrella.

Despite some asymmetry, there is a balance between the left and right sides. The rider is situated a little further forwards than would perhaps suit a bike of this style to offset the weight of the wooden case. Duncan is hoping to design a 'long john' as his next project, perhaps for a really big canvas!

www.workhausbikes.co.uk



Teague separable bike

I nearly missed this prototype separable bike, so discrete is the union just forwards of the bottom bracket. Demonstrated on a lightweight touring bike, the intention was to make a bike that splits for air or car travel. Matt Teague has created a slender bayonet fixing built into the tubing during manufacture. To separate the frame, cables are split with Jtek couplers, then, after removing two bolts, the



LEFT: Painter's bike asymmetry balances out. The paints box fixes on the rack top.



frame is split with a gentle twist. Matt hopes to be testing the durability of the union next. He is currently working on the seat tube to chainstay join, where the two halves of the frame come together sideways. Thanks to Karl Sparenberg of AVD for pointing this one out to me.

www.teaguebicycles.co.uk

Cofa Engineering and Fresh Design Works Sustainabike

At the most affordable end of the wooden bike scale, the prototype Sustainabike is built around a set of steel 'lugs' and fork ends. Unbent sections of marine ply attach to the metal parts by screws, nuts and bolts, with, potentially, very fast and simple assembly, if the holes are predrilled.

The modular nature of the plywood sections make removal and replacement, perhaps because of damage or to modify the bike, straightforward. One can imagine changing the rear sections to ones with integrated racking and longer stays, perhaps, even, a longbike tail end.

Many users will find adaptability and customisation options much easier when working with plywood. Accessories can be attached with woodscrews without significantly affecting structural integrity; mistakes need not be costly.

I was rather attracted to the idea of making my own plywood sections, possibly enclosing a space within the frame for storage; ideas abound! The self-assembly and separable



ABOVE: Main frame comprises five steel assemblies and four plywood sheets. The fork is, as yet, steel.

nature of this bike will, I believe, appeal widely.

www.cofa-eng.co.uk & www.freshdw.uk



Peter Charnaud's wooden bikes

Several heavily-crafted wooden frame bikes made a showing this year, all using composites to a greater or lesser degree. However, Charnaud bikes lean squarely towards the joinery end of the discipline, made using mainly pinned half lap joints.

Each frame is built up in halves by bonding wooden parts together manually in sections, then routing out the inside for lightness and to pass

the cables. The left and right halves are joined into one, and then final exterior sections are applied for a harder and more attractive finish.

Three bikes were on display: a full-suspension mountain bike made from London plane with an exterior of walnut, and two road bikes of cedar and sycamore with London plane and elm exteriors. All wood is chosen and oriented to optimise natural material properties and arranged

symmetrically. All of the frames are strengthened with fibreglass mat around the aluminium inserts at the head tube and the bottom bracket.

The wooden forks, made from three laminations of elm and in each blade, have been extensively tested, said Peter. My pictures don't quite do it justice, as I couldn't capture the luminescent effect of looking into the varnished wood.

www.woodenbike.co



Rodford bread bike

Runner up in the Constructors Challenge was the Rodford baker's bike, the first example of a joint cargo bike project between Rob Bushill and Steve Bodiley. The bike is specifically fitted out for a bakery, sized to accept five or six special bread trays and a generous 800 mm overall width to allow parking inside the shop at night.

The frame and fork are both steel and claimed to be 3 kg lighter than its nearest commercial competitor, which, in the world of cargo bikes, is quite an achievement. Stiffness is perhaps more important than total weight, however. Being about a foot longer than a Larry vs. Harry Bullitt, the T45 grade steel frame should keep unwanted flex to a minimum.

Sunstar crank drive electric assist has been designed into the bike, accommodating a range of rider fitness



on the hilly Bristol delivery runs, making the machine accessible to all the company staff. The combination of crank drive and a NuVinci N360 hub gear is, Rob believes, a perfect combination. Indeed, the hub gear has a

proven record and its design prevents gear damage when changing gear under load. Further accessories, yet to be added, include a rear rack, lightweight lid, centre stand and dynamo lights.

www.rodfordbuilt.co.uk



ABOVE: NuVinci mounted in vertical dropouts for easier wheel removal and compact chain tensioner taking up the slack.

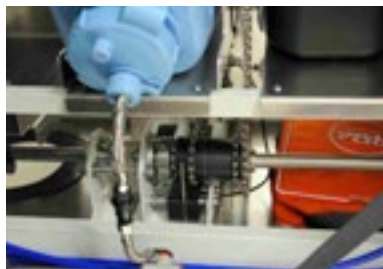
Velopresso coffee vending trike

This coffee-vending trike was the largest, and definitely the heaviest, cycle in the show at 170 kg, plus milk and water! Built around a substantial TIG welded steel chassis, the design incorporates more than 200 handmade components, most notably the unique pedal-powered grinder and gas-fired espresso machine.

Essentially, the machine is a three-speed, rear-steering tricycle built from Reynolds 631 plain gauge steel. All frame parts looked to have been built more for a long hard life on the road: medium-sized, 24" wheels turn on 20 mm axles, with a modified Halo downhill MTB fork at the rear. Bottom gear is a 25" ratio and said to be fairly easy to ride up gentle hills, fair enough perhaps for a machine that will spend more time vending than rolling.

When stationary, brakes are locked on, levelling jacks fitted to the frame, if required, and the handlebars are

The clutch switches between left wheel drive and onboard systems.



removed to clear the work surface; then coffee making can begin. A dog clutch transfers the power from the single driving wheel to the coffee grinder and water pump. The pump primes the espresso maker with fresh water and pressurises the on-board cleaning facility.

The really fun spectacle is the surprisingly quiet coffee bean grinding. The bench-top grinder running from a Gates drive belt achieves nearly the same speed as an electric equivalent. The energy required to boil water to complete the process, is, unsurprisingly, beyond the capacity of a single human without on-board energy storage, so natural gas is used for the water heating.

Further features include cool

storage, customer seating, waste disposal and protective covers for transit; nothing appears to have been omitted from the design. Velopresso batch-one machines retail at £9995 and are presently in production in a facility in Leighton, East London.

Seeing the machine in action was a real treat, not only for the appreciation of the engineering, but for the absence of electric motors, a refreshing contrast to the clatter and bustle expected of a coffee shop.

The superbly finished machine combined with 'off-grid' human power clearly appealed to the judges, who awarded it first prize. For even more technical information, see velopresso.cc.

Howard Yeomans



Storage for gas bottle and nested seats.