

March 2017 Volume 20 Issue 1 - Number 89

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From The Editor – Stephen Nurse

Hello, and welcome to the March Huff.

This edition has reviews of several books available through the British Human Powered Club website. When “From Bicycle to Superbike” came out I finally cracked it and ordered it as well as “So You Want to Build an HPV” and “Human Power The Forgotten Energy”. Reviews of some of the books by Helen Curtis and Tim Marquardt are the result – Thanks! As I type, Jeffrey Nielsen and Tim Marquardt are completing laps of the Edithvale Velodrome and look certain to pass the current WHPVA record for distance travelled in a multi-person vehicle in 24 hours. This is only one of the record attempts ozhvp has officiated at and provided support for. Many thanks to the Ozhvp volunteers who make the record attempts possible.

Some details of bike builds, regular and upcoming events are included here as well. It helps if you join Facebook to stay in touch and the OzHvp facebook page is at <https://www.facebook.com/groups/OzHPV/> . Happy Reading!

Vale Velovision



Velovision staff Peter Eland, Sue Archer and Howard Yeomans, Bob Thompson and his Tbike

Velovision Magazine, the best bike magazine in the world has gone kaput, and unless an angel comes to resurrect it, Velovision's last issue was in November 2016. Velovision lasted 52 issues and was first published in 2000 by Peter Eland, and right since the start they have covered electric bikes, recumbents, tandems, trikes and folding bikes and gave space to experimenters and dreamers as well as commercial firms. In 2015, Howard Yeomans took over, however Velovision wasn't paying his bills forcing its closure.

The last issue of Velovision featured Bob Thompson and his treadle drive system. He had made a 3 speed hub gearbox for his bike but planned to make a 9-speed and is nothing if not highly technically capable and ambitious (www.tbikes.co.uk). Reviews of 1.5W dynamo lights, a Performer Highracer and the Azub titanium-suspension trike were also included.

Thanks to Howard, Peter and reporter Sue Archer who made Velovision possible. On the practical side, if you received Velovision through Greenspeed and paid your 2017 subscription, you should ring them for a refund.

DT Recumbents Australia



OzHpv member James Ditton wrote for us in the last edition of Huff. He has an aviation trade background, and after a recent change in his work schedule has started DT Recumbents Australia in Redcliffe. He's the only specialist recumbent seller in Brisbane, and sells Bacchetta bikes and Performer bikes and trikes. He has accessories and some short wheelbase Barchettas in stock and other HPVs are available ex Taiwan and the USA.

Good luck with the business, James. DT Recumbents can be contacted through their website <http://dtrecumbents.com.au> or facebook page <https://www.facebook.com/DTRecumbents/>.

Huff Advertising Policy

We don't accept paid advertising in Huff and won't carry paid ads for the foreseeable future. But if you are an OzHpv member and have an HPV related business or service to talk about, we're happy to write a short article like the one above. If you have used recumbents or parts for sale, head to <https://www.ozhpv.org.au/forsale/forsale.html> (Ozhpv for sales or <https://www.facebook.com/groups/1414095042160537/> (Ozhpv facebook) Likewise if you're looking to buy!

Monash Human Power Team



Piyath Dissanayake and the bare HPV, testing the bike fit, with Steve Nurse at Monash, the team practising starts and gathered at the December Speed trials, Ford Proving Ground Lara.

For about 2 years now, I have been researching and designing Human Powered Vehicles at Monash University Caulfield and several kilometres away and on the Clayton campus, the Monash HPV team (their Facebook page is <https://www.facebook.com/MonashHPT>) have been patiently working away, trying to build and ride the fastest Human Powered Vehicle in the world. Finally, last Tuesday I caught up with the team, riding my trike to Clayton to meet Piyath and his team.

Streamliners are quite hard taskmasters. Their only purpose is to go fast and to do this, the rider is cocooned in an aerodynamic, possibly claustrophobic shell, and then the rider is meant to pedal their guts out. Breaking records is one of the main goals of the streamliner team and its quite hard! Team Monash has made a good start and their next outing is at Easter under the auspices of OzHpV. Good luck guys!

Team Aerovelo (<http://www.aerovelo.com/eta-speedbike>) are the current HPV 200m record holders with their ETA speedbike and a speed of 144kph, and amongst student teams, Team Delft (<http://ddream.tudelft.nl/en/teams/human-power-team/>) are very highly considered.)

Steve Nurse

Book Reviews (all available through <http://shop.bhpc.org.uk/books>)



Review: So you want to build an HPV

By: Mike Burrows, British Human Power Club

Reviewed By: Tim Marquardt

I suspect this 48 page booklet is aimed at first time members of the British Human Power Club (BHPC) as an introduction to making their first laid back (LB). Apparently recumbent is just not quite the right word! So, despite the fact I've made about 20 bikes/trikes for myself, I'll put on an imaginary "let's try making an HPV" hat. Would this booklet help me?

Probably not. BUT, it would give you a good idea of the many possibilities of LB you could make. The many "Inspiring Examples" photos show a tremendous range of 2, 3 & 4 wheel vehicles, faired, partially faired & fully faired, so the beginner might have some idea where to begin. And the logical breakdown of subject areas also helps with the process: design, aerodynamics, frame construction, fairing construction, rules (not quite so relevant) & suppliers (irrelevant, all UK based).

So, what does it give you? Lots of possibilities, but little in the way of How To. I guess it'd help me plan & implement my first build. But it would also require me to consult someone who had the skills I needed, be they metal, composite or corflute related. In short, I'd have a read, but would expect it simply leads to a far greater amount of research & chit chatting. I give it a bare pass; 5.5/10.

Review: From Bicycle to Superbike

By: Tony Hadland, Mike Burrows

Reviewed By: Steve Nurse

This book is an illustrated biography of Mike Burrows focussing on his bike making and designing. My copy was ordered through the BHPC, and for my trouble, it arrived signed by both authors, complete with a grubby paw mark from Burrows.

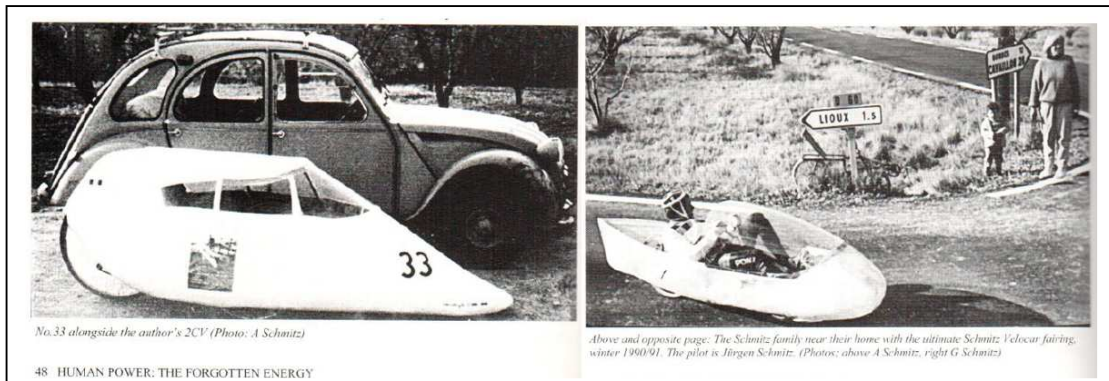
Most of Mike's building is focussed on Human Powered Vehicles, and he has built 9 or 10 carbon lowracers with fairings at the back and complicated steering, mostly just for the joy of it and a pursuit of excellence. When Mike rolls out a new model, he often sells the old one to his mate Andrew Sidwell, aged 60 now: Mike is in his mid 70's and still

building bikes, and Andrew calls himself one of the Romans, or “Recumbent old men actively negating senility”.

The first part of the book is a biography and has his friends and associates talking about him, but thankfully it's not all gushing praise. It goes into some of Mike's jobs and early hobbies which included aero and railway modelling, cars and sailing. Aside from recumbent bikes, Mike has designed mountain bikes, racing bikes, town bikes, streamliners, velomobiles, tadpole trikes and load carriers, and they are all illustrated in the second half of the book.

In the mainstream cycle world, Burrows is most famous for his Monocoque track bike on which Chris Boardman won an Olympic Gold Medal, and there are plenty of examples of these bikes shown. But for me some of Mike's town bikes are just as good. He makes serious attempts at very low maintenance town bikes and near the end is the “Gordon” townbike which has one sided hubs for easy puncture repair and hides a Pinion gearbox between the pedals. This bike is described as a “shiny treat for himself” and shows his obvious passion for cycling, building cycles, and not caring what the rest of the world thinks.

A few of my non bike riding friends were quite fascinated by “Superbike” and never knew such a variety for cycles existed. For me it's a nice book to have around and browse through and it's a keeper.



Review: Human Power the Forgotten Energy

By: Arnfried Schmitz with Tony Hadland

Reviewed By: Helen Curtis

‘The fools and the daydreamers have got it right.’

‘Where did all those fantastic machines come from?’

This book is an autobiographically focussed meander through the history of European unfaired and faired recumbent cycles, with a theme of the energy efficiency of the power of pedalling.

It was quirky. The author is frank in his opinions. It made me laugh out loud quite a few times and it's a combination of research, history, anecdotes, documentary evidence, 3rd party and eye-witness accounts, as well as the author's direct involvement, experience,

opinions and musings. It has plenty of photos of various bikes, trikes, fairings and HPV enthusiasts.

The book brought together a number of things that I have crossed paths with (actually and virtually) at some point - HPV rallies and races, solar car races, conversations with non-recumbent riders about the recumbent cycle, 'eccentric' bike builders, inability to get out of a crashed faired recumbent bicycle, M5 bikes, Graeme Obree....

I even managed to cope with the technical detail about different bike, trike and fairing design and materials that was included - there is probably enough to keep you interested if you want that detail, but not too much if you don't really understand what effect different rake angles have...

The author looked at the links between aeroplane and early HPV design as well as the history of French pedal cars. He describes the UCI banning recumbent bikes from competing in UCI velodrome events (which then flowed on to all UCI races) so I now know about Francis Faure and his achievements.

Two of the author's sources of history and inspiration for his building and participation in the HPV community were Frenchman Georges Mochet (whose family built 6000 pedalcars between 1925 and 1944, and 800 recumbent bikes between 1932 and 1940), and German Wolfgang Gronen, who was a writer for Le Cycle, and an experienced cycling coach who becomes involved with IHPVA.

Here are examples of the kind of history the author recounts:

- the successful hour record attempt by a faired bicycle (Paris, 1933) by Marcel Berthet in a 'Velodyne' as told by Georges Mochet. Mochet wrote to Berthet the following day: 'I am happy about your success. I was sure you would make it. The fools and the daydreamers have got it right.'
- The Velo Velocar, a (low rider) unfaired recumbent which was being raced on the velodrome by Francis Faure was given provisional approval and record recognition by the UCI in 1933. (There is a sketch of the design and photos with Faure and others on the track.) But provisional approval was dependent on the definition of a racing bicycle as determined by the French cycle trade association. That was published on 1 April 1934. The result was bad news for most recumbents which failed to meet the definition.

The author takes a trip through the early years of design, racing, and just plain riding of different types of faired bicycles, velocars, and recumbents from the 1910s through to the 1940s. He looks at the misinformation about 'dangers', and how the curiosity factor developed which in fact prevented the take up of recumbents amongst racing cyclists and ordinary folks. The author laments this.

Things go quiet during the 50s to the 70s, although the author tells us a bit about his (short) racing career on a vertical bike, but also describes the joys of riding.

He then takes us to the 80s and 90s where we get a lot of his first hand experiences in the world of recumbent building and racing. He reads about new speed records in the USA and sees photos of 'streamliners'. He reads a report about 'the fastest bikes in the

world' at an event in Brighton in 1980 and with his son wonders why they were not there and 'where did all those fantastic machines come from'?

The author finds out when the next races are on, he starts building bikes and fairings and he and his son and daughter attend HPV events in different locations. He gets to meet Georges Mochet (of early pedal cars fame, now somewhat elderly but obviously still very active) and Wolfgang Gronen (writer for *Le Cycle* and IHPVA Director for France).

We then read about Peter Selby (sometime HPV event organiser), Mike Burrows (of Windcheetah and Chris Boardman winning bike design fame) as well as the dominant American Vector (a fully faired trike that could go pretty fast) and the 3rd British Open Human Powered Vehicle Championships in Brighton in 1982. We get to meet Bluebell and Poppy Flyer. And then an event in Numbrecht, Switzerland, in 1984 where the author's first home built high-speed bike gets a run.

There are some funny descriptions of travelling around from the south of France to the various events with recumbents in trailers and on roofs of cars - and some photos to accompany them. Most notable is the photo of the tiny Renault 5 with a trike and cabin trunk on the roof, and a trailer with 2 trikes and fairings (and 3 passengers inside).

The author mentions from time to time the 'dilemma' about the quality of the rider of an HPV (and does it make a difference?) and describes some of the semi-professional or top amateur riders that raced HPVs. Gerhard Scheller (a West German 'amateur' multiple national track champion who came 5th at the Los Angeles Olympics in the 1k sprint) was one rider who rode regularly for Wolfgang Gronen in an American Vector (which was a faired tricycle dominant in racing during the 1980s.)

The author tells us of his various experiments in building recumbents and his frustrations with not being able to generate enough interest to be able to sell some of his prototypes instead of cutting them up for parts! He laments that 'people want a revolutionary bike that is totally different; they don't know what it should look like but they only know it shouldn't look like mine'.

I really enjoyed the chapter about the author and his son participating in the Swiss Tour de Sol event - a stage-race across Switzerland by solar cars, which in 1989 included pedal vehicles for 3 of the stages. (Having participated in a couple of Australian solar car and cycle events with my brother Chris, it brought back good memories!)

And finally the book wraps up with a bit of a mention of the creation of the France HPV association and a report and photos of the first HPV event they hold in Paris in 1992.

As the book is a memoir, it can be a bit unclear about dates and people and wanders through some history in a bit of a confusing way - but once I got past worrying about that I got into the spirit of his musings. I really enjoyed it for the social history, the history (although not comprehensive) about the development of different types of pedal vehicles as well as the stories about the various HPV events. I also think that there is enough technical detail in there for those who are keen on building HPVs.

So although I was initially sceptical about whether I would be able to review a book about HPVs that Steve Nurse thought would be interesting ;-), I really enjoyed it.



March 4 at Geelong Criterium Track, Clockwise from main: Rob Leviston's moving bottom bracket bike, the mob, Simon Watt, some relaxed riding.

Geelong HPV Meetups and Simon's Albatros

Since January, Simon Watt has been hosting a recumbent get together on the first Saturday of the month at the Belmont Criterium track off Barwon Heads Road. The track is 2.2k long and closed off to cars. On the day I went along about 7 or 8 recumbent riders were gathered and we only had to compete with a pedal prix trike and a few road cyclists for space. As well, the car park was gloriously empty, with none of the crowd it gets on Sunday for a car boot market. The course is quite flat and it's fairly easy to fall in with someone else for a chat while riding along.

Ian Boehme, Rob Leviston, Steve Rowlands, Simon Watt, Dave Ellis, Dave Cooper and Kim Tolhurst were the mob I can recall from the March meet up. Steve Rowlands had ridden from Lara on his Performer highracer to the gathering, he is training for the London Edinburgh London (a lazy 1400k) ride later in the year. Rob Leviston bought along 2 bikes and I had a try on his front wheel drive bike. Quite a bit of fun but it wasn't set up for my size and I couldn't really judge it well.

Simon is commissioning his home-brew front wheel drive bike. It is a moving bottom bracket type, has dual 26" wheels and is based on the designs of a few Frenchmen, in particular, the Albatros bike. Simon sourced tube for the bike from repurposed diamond frames, the main 2" frame tube from a car exhaust centre, and Pete Heal did the machining, assembly and brazing to turn it into a rolling bike in Canberra. For now, it's a working prototype, but it works quite well, and folds neatly to fit inside Simon's car. Once all the bugs are ironed out the plan is to build another version from scratch, and the new one might even get a drop or two of paint!

From here, Simon takes up the story.....

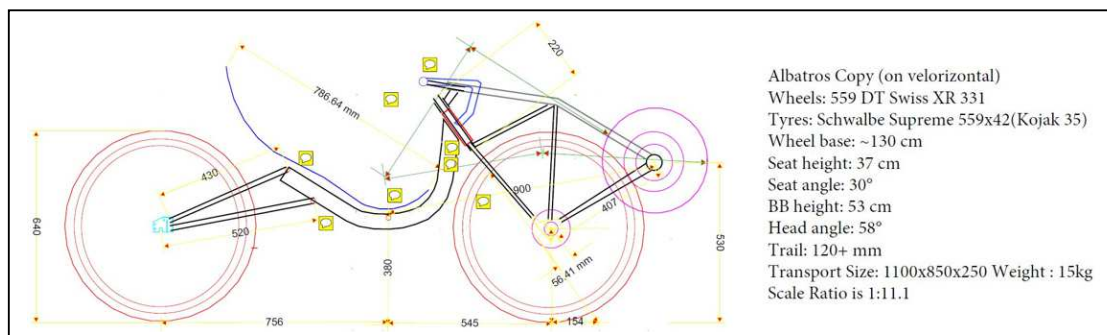
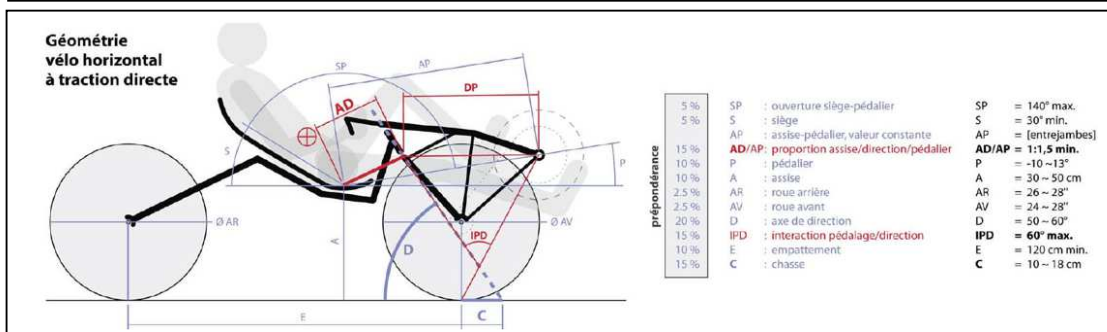
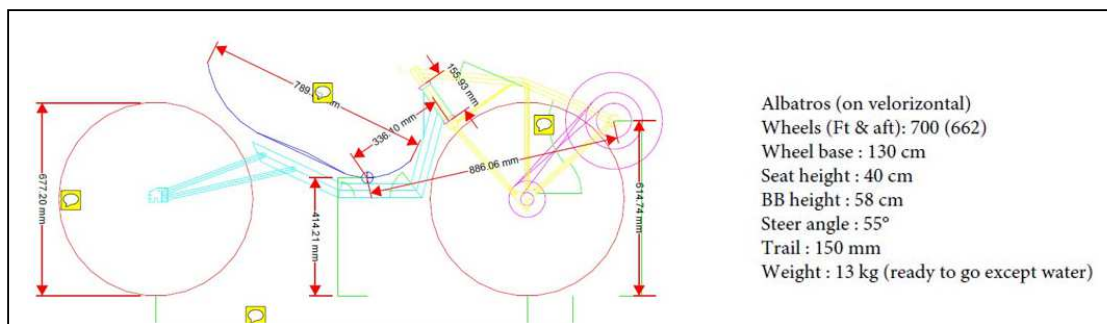
Why a new bike?

My lowracer Optima Baron is my only recumbent experience, and it's an excellent, very stable all-rounder, great for Audax and a superb touring bike. It is among the high end

of aero layouts, though anything with a large lug like me on it is already somewhat aero challenged. The few issues I have with it are, in no particular order are the different wheel sizes, it's awkward to transport and it's not very good on loose surfaces

After a 3 week tour including rail transport and 100km of unsealed roads, I was prompted to think about alternatives. Some French "Albatros" designs I'd seen seemed to offer a similar seat height, competent investigation and development, and I liked the possibility of building a more compactable versatile tourer with simpler drive train, easier luggage loading and an expectation of much improved performance on gravel with 559 wheels and more than 120mm of trail. Possibly it could be an even better all-rounder than the Baron.

All that is with the big proviso that I can ride a moving bottom bracket bike (MBB), and be happy on one. There's nothing for it but to build one and find out.



Original "Albatros" elevation with dimensions marked up, Geometry summary of Albatros by "Velorizontale" bulletin board members, members. Adapted plan for "B2" using 559 wheels and my x-seam size.

Planning started with a couple of sheets of butcher's paper, lots of measuring and re-measuring, and quite a bit of armchair thinking and planning and lots of gathering of parts. The main frame is a section of 2" exhaust pipe bent by the supplying exhaust centre

in the largest former he had, 230mm radius. Fortunately, that was within a few mm of my planned bend – excellent.

Pete Heal did all the building, I arrived with a flat pack of tubes and a plan, and stood back while he fused them together. Practical considerations and time meant a couple of finer points were glossed over and will be there to implement in Mk II :) I also need to mention that the bike is somewhat of a community project with mates donating various components, and most of all, Pete's three days of welding, lathework, fettling, accommodation and supply of parts which converted it all into a rideable thing.

My knock kneed body form is a bit of a restriction for fork widths and frame thickness etc. so the seat height of my "B2" ended up at a very acceptable 37cm, and I doubt I could go lower without an extremely custom built front end to accommodate my knees. 37 is just fine.

I've modified the frame (with a vice – the benefits of exhaust tube as a main frame) so it is now 39mm wide and 62mm deep where the thighs pass. Bends in the closest "fork legs" and a new, longer stem improve shin clearance as well and that'll have to do for now.

The bike is built as a one person machine, with little seat adjustment and a pretty fixed x-seam. It seems to work pretty well. My friend Duncan McDonald is a long time rider and MBB bike fettler. He rode B2 and gave it his blessing. His feedback was very useful for a beginner, to know I was learning to ride a competent version of an MBB. I'm on the positive side of it now, but not ready for the open road and traffic management yet. My longest ride to date has been 50 odd km around the Criterium track in a single session, at an average of around 24kph, so pretty pleased with how it goes and handles.

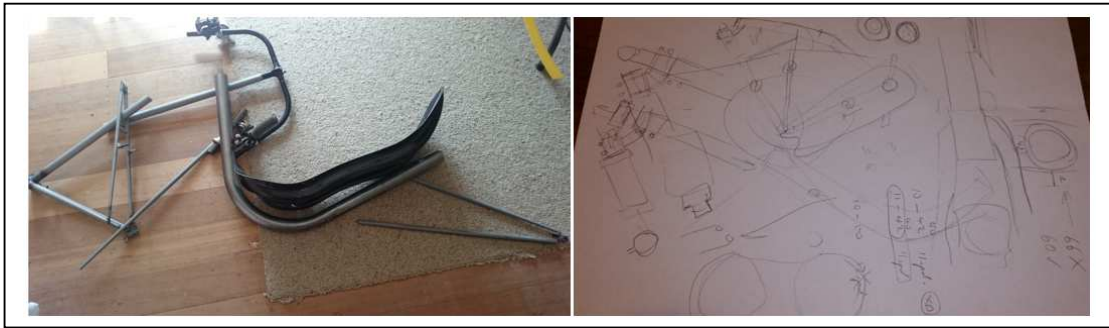
The issues for me are that while I can ride quite proficiently once mobile, my starts are still fickle, particularly on the right leg, but not too bad. Also, I'm still focussed on riding rather than my surrounds, and that's not a good way to be in traffic. I've ridden maybe 200km in total so far. My next venture will be the Rail Trail with mixed surface and the potential for an 80km round trip - a significant step and a fine riding experience.

On the bad side, I found the limits of front wheel adhesion on one of the tighter corners at the crit track – I know it's not new information, but lycra and buttock skin, while moderately effective as braking media, are just not that durable. The lycra doesn't grow back, but the skin is almost refurbished.

I think it's going to make a pretty versatile machine, and time and kilometres continue to improve my ability and riding enjoyment riding. It's been a great adventure so far and I'm looking forward to more.



It's easy to reduce the bike's size and it fits comfortably in the back of my recently acquired Honda Jazz.



.....so Pete, it should go a bit like this.....and this.



Frame construction, nearly ready and practising on the track

Some specifications:

Geometry:

- 130cm Wheelbase
- 37cm Seat height
- 559 wheels
- 30 degree seat angle
- 58 degree head angle
- 120mm trail

Parts:

- The front fork is a bottom bracket, seat tube stub and chainstays from a diamond frame bike finished with extra seat stays and a seat tube
- An ancient HPV project from the attic was sacrificed for its frame tubes.
- 2" (51mm) exhaust pipe bent to a supplied template by friendly exhaust outlet. Yep, 2", it's only 50 years since metrification, but ...
- Some 16mm tube I had from another project made the rear fork stays
- Cut down head tube with spacer rings turned down to size
- 1" steerer and 1" A-Head headset.
- Flevobike handlebars originally supplied with my Optima Baron
- Ex Performer fibreglass seat donated by Steve Rowlands.
- A disk hub for the front donated by Peter Mathews
- A front wheel for the rear loaned by Ian Boehm (yes, it can get confusing! Ed.)
- SRAM Rival 180 compact crankset 50/34 and 11-32 9spd cassette
- Shimano XT Shadow cassette derailleur, FD 443 chainring derailleur
- TRP Spyre mechanical disk front brake, 180mm rotor, Tektro V brake on the rear.
- Stelvio 559x28 tyres

More parts on the way or waiting to be fitted:

- 2 DT Swiss XR 331 tubeless rims, 32 spoke
- 2 Schwalbe Supreme 559x42 tubeless tyres, going tubeless will be an experiment.
- TRP Spyre mechanical disk rear brake, 140mm rotor.



As sampled above, there are some of the great photos of the Albatros at <http://beauxdebris.free.fr/Albatros/> , and a long discussion of the Albatros on the Bentrideronline discussion board is headed “so you want to design a MBB, the French experience“ at this link <https://www.bentrideronline.com/messageboard/showthread.php?t=57760>.

Speed Trials at Ford Proving Ground – Dec 28, 29 2016

Late last year, speed trials were held at the Ford proving ground at Lara, and most of the action took place on day 2 of the event. Tim Corbett takes up the story: Unperturbed by the looming threat of storms, the teams from Phantom, Trisled and Monash arrived bright and early at 6:30am on the hope that conditions would be improved from the day before.

Riders were greeted with still weather and a 200m speed trap that had been set up the day before. After a brief delay to get track spotters on course, riders were underway with some early success.

After this, the timing setup was quickly reverted to 1hr/6hr speed attempts, and the longer duration attempts were underway by 8:15am. The speeds were fast for several hours until the sun load proved difficult with most retiring for the afternoon to shelter from the heat and mid afternoon storms. A smaller group returned to the track at 6pm to re-attempt the hour and flying 200m attempts.

The Monash team spent the best part of the day on the inside track practicing launches and catches, but managed to get out onto the CST for a complete lap of the circuit with a chase vehicle in their preparation for Battle mountain later this this year, with more launches and catches with their complete fairing and video camera setup on the main CST course during the afternoon after the rain storm passed.

Provisional results (in chronological order)

Flying 200m trials

Rhys Bartlett - Phantom Mini-T - 87.5 km/hr (new aust record)

Jack Marshall U17 - Trisled - 75.7km/hr (new aust record)

Tori Barnes - Trisled CO3 - 74.8km/hr (new aust womens record)

Lochy Evenden U17 - Trisled - 72.7km/hr

Taiki Skipwiph U17 - Trisled - 79.1 km/hr (illegal wind)

1hr and 6hr attempts

Unfaired multitrack attempts

Brenton Hassett - Trisled Barely Overzealous - 42.104km (new WRRRA world record)

Rhys Bartlett - Mini-T chassis - 40.864km

Jeffrey Nielsen - Trisled Barely Overzealous - 42.189km (new WRRRA world record)

Faired attempts

Jack Matthews u17 - Trisled - 56.505km

Aaron Pankhurst - Trisled - 50.497km

Ned Volk - Phantom mini-T - 67.1km (1st hour of his aborted 6 hr attempt)

Evening Flying 200m attempts

Tori Barnes - Trisled CO3 - 76.0 km/hr (new Australian womens record)

Gareth Hanks - All Overzealous - 93.2 km/hr (new Australian mens record)

Tim Corbett - Phantom Mini-T - 77.9 km/hr

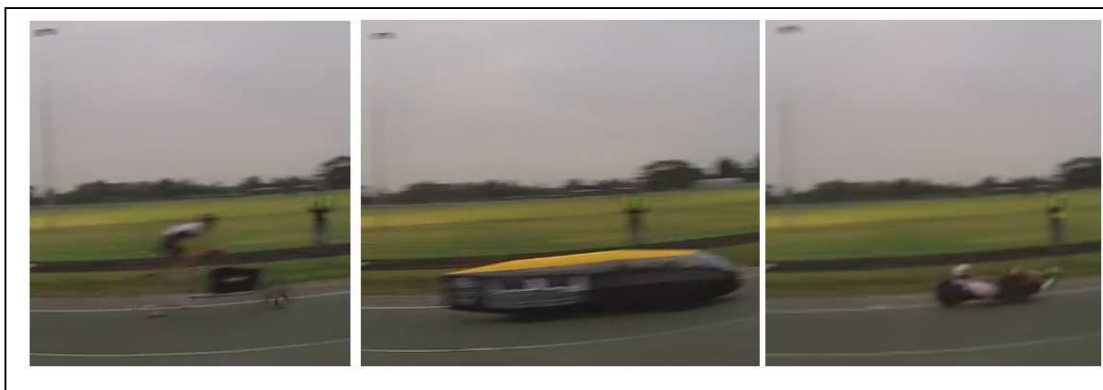
A great 2 day meet, with possibly:

3x world unfaired multitrack records

5x new Australian flying 200m records

All records mentioned at this stage are yet to be ratified.

Edithvale Velodrome Record Attempts



Morgan Hayes, Tim Marquardt / Jeffrey Nielsen, and Ned Volk at Edithvale velodrome, pics from video by Rob Leviston via OzHpv facebook.

In almost perfect, still, warm Autumn weather several riders attempted HPV records at the Edithvale velodrome on March 17 and 18. Records were sponsored by Trisled and OzHpv officiated with timing by racetiming.com.au. The records still need official ratification, but congratulations, guys!

Tim Marquardt and Jeffrey Nielsen finished 1015.8km in 24 hours in a back to back faired tandem quad, beating the existing 910k (<http://www.whpva.org/land.html#382>) multiple rider record by a considerable margin. We look forward Tim's report for the next edition of Huff.

With 424km covered in 12 hours, Ned Volk beat the 12 hour unfaired trike record published on the WRRRA website (<http://www.recumbents.com/wrra/records.asp>) and was a few km outside the WRRRA unfaired 12 hour HPV record.

Morgan Hayes broke the world cargo bike hour record on a Trisled Cargo Bike with a distance of 37.7km, a 26kg steel plate as cargo and a total bike weight of 42kg.

Easter Record Attempts at Ford Proving Ground, Lara.

From Tim Corbett

We have again secured the use of Ford facilities for speed trials on Easter Saturday and Sunday, April 15 and 16, and combinations of flying 200m, 1hr, 6hr and 24hr attempts are being accommodated.

Timing will be provided by Will Reid and while we have Rob Leviston and Jon Pendlebury on board as observers, we could do with several more if anyone is keen to come along and join the action. Observers will be reimbursed reasonable travel and accommodation expenses!

So far we have Glenthebuze Velonaut, (Glen Lacey) who has booked flights from Perth to make an attempt on the WRRRA masters 1hr multitrack record. Ned Volk showed particular form last week with a great mark in the unfaired 12hr solo multitrack, and will be attempting the outright WHPVA solo record over the weekend. Kyle Lerich will be attempting the WHPVA 6hr record. Tori Barnes and Gareth Hanks will be looking to improve their outright flying 200m marks and also to improve the Australian 1hr marks. Monash will again be attending, along with a strong indication that the newly formed Macquarie University team will be attending.

Rhys Bartlet is also keen to make another attempt at the unfaired 1hr multitrack, along with the flying 200m unfaired multitrack. There have been several other inquiries so we may see further items added to the schedule, and it should be an exciting 2 day event.

Anyone interested in competing or volunteering should indicate their intention ASAP so that we can ensure they are included in the schedule. We have increasing security requirements with entry at Ford, so it is difficult to accommodate last minute entries.

For competitors, the entry fee will be \$100, covering riders for any record or PB they may want to attempt. 24hr attempts will attract a higher fee due to the increased resources required. With the current number of entrants, we are expecting to cover costs, travel reimbursements, pay for one off equipment costs from the December runs and make a small profit for OzHpv.

Please contact Tim Corbett, tscorbet@yahoo.com

Varibike



Varibike from Germany have just started selling HPVs and are offering a range of machines with arm and leg power and with an ambitious range including indoor trainers, tandems and road bikes, mountain bikes and front wheel drive scooters and trikes. Their website <http://varibike.com/> is interesting if only for the wide range of technologies on offer. As well as “arm assist” handlebars, bikes have additional standard handlebars and seem to use lean steer when driven using arm assist. One reviewer recommends not using them in traffic! Prices in Germany start at about \$4200 or 3000 Euro.

40 is the new 34 by Steve Nurse

My latest cycling purchase makes my HPV simpler and I'm a big fan of that..... For a while now, mountain bikes have been available with wide range gearing relying on a single chainring for their gear range and the current king of the heap is the Sram Eagle 10-50T cassette and gear system, and this is reviewed on the Vital MTB Website (<http://www.vitalmtb.com/features/First-Look-First-Ride-SRAM-Eagle-1x12-Drivetrain-The-Front-Derailleur-Killer,1335>) Its good to have simple controls on serious mountain bikes because the primary focus can be on not smashing into a tree, and thinking about what front cog you want to select can be a bit difficult at times!

The Eagle is an expensive 12 speed system and needs special parts and a narrow chain. But there has been a trickle-down effect, and now wide range cassettes are available as standard, not too expensive parts. (For a long time, the largest cog on standard cassettes was 34t) The one I bought is an 8 speed 11-40t “CSM680” cassette from Sunrace, and this comes from the range of Sunrace cassettes listed on their MTB cassettes website (<http://www.sunrace.com/en/products/cassettes-mtb>) If you go up to 11 speed, you can get a 46t largest chainring in the same product range, and the largest 10 speed is 42T. A google search on the Sunrace part number came up with a few suppliers, and Alibaba looked the best one for me. Cost was \$US 15 plus postage of \$US 20 and it arrived two weeks or so later, no problems.

Anyway, I fitted the cassette without the 13T, 2nd smallest cog because there was not enough space for it on the spline, giving my trike a 20 - 94 inch gear range with its 20" front wheel and 52T chainring. A few teething problems involving the chain derailing from the chainring were fixed by replacing the chainring for a sturdier model with aluminium trouser guards / chainplates. It now runs well on my FWD recumbent leaning trike with 7 speeds, and a single friction shifter is the only control. This trike has a custom, long derailleur hanger, which might be part of the reason it actually works. Wolftooth (<http://www.wolftoothcomponents.com/collections/derailleur-optimization>) in the USA offer derailleur extenders which might make the equivalent on other bikes.

The previous "solution" I had for low gears on this trike was a Schlumpf mountain drive. This is expensive, but on this particular trike it didn't work that well either! It allowed for very low gears, but those gears were too low and produced a very high cadence on steep hills. And slightly higher gears produced ok cadences but also a stressful pedal steer affect which made it hard to balance.

I am keen to try the 1x gearing system on one of the longer Audax rides that involve hills (not ready for mountains yet or possibly ever) Anyway, I got to test it out on a small tour recently, and it got me up a few hills I've walked up in the past, like the Great Ocean Road through Anglesea and Sebastapol-Mount Clear Road in Ballarat.

A Short Tour by Steve Nurse



Gary on his tour, my trike in the train, roadside blackberries.

For a few years, I have been travelling to Ballarat in February and taking part in a Lake Wendouree ride raising money for cancer research. Last year I rode with an ozhvp group the day before the ride, and a few years ago, rode part of the way to Ballarat. This year, I tried combining the ride to Ballarat, the ozhvp riding and the Lake Relay.

Weeks before starting off, I had advertised it as an OzHvp event and teed up with Rob Leviston to ride with him on the Saturday. I had no interest from others until late in the piece when an acquaintance from Robert W's B Spon rides, Gary H. emailed me and said he wanted to come. Then at the last minute Gary pulled out, he had been on a short tour and drank some bore water which upset his stomach, and he was flat out for the next few days. So it was to be mostly a solo trip for me, but Gary sent me a photo and a video link (<https://www.youtube.com/watch?v=cJ6yJlgHvS0&feature=youtu.be>) from his tour. Hope to ride with you again soon, Gary.

I started the trip riding from home to Southern Cross station where I caught the train to Geelong. Disassembling the trike into 2 bits made it fit into the space allocated for bikes and surfboards and kept the conductor happy. At the new Waurn Ponds station I headed

off. A few weeks earlier I had plotted a route which avoided the Princes Freeway and a large unfriendly hill, but I had forgotten all about that and got onto the Anglesea road via a considerable detour. But only a problem in hindsight, the rest of the day's trip to Airey's Inlet was uneventful and the only real stop was to gather some roadside blackberries.

The first 20 k of the next day's ride were challenging. The drive wheel of my trike is at the front and doesn't have much weight on it so any combination of uphill and gravel makes the wheel slip and you need to get off and push. Just getting on with it is the best thing to do. Beyond Bambra the road got much better. There were huge and massively expensive road works near the Princes Highway but otherwise things went fairly smoothly. For the most part I just kept going and only stopped for lunch in Rokewood.

About 6 I got in to the Pax hill scout camp near Ballarat and stayed in one of the cabins there for the next few nights. Not stopping much certainly helped progress. There's a milk bar with take-away food about a k from the scout camp, and I got take away food from there both nights to avoid hillclimbs and general exhaustion.



Ballarat milkbar, Rob's Lowracer, Caped heroes in the Lake Relay, Rob and his velomobile.

Next day I met Rob quite early and we rode about 60k. Rob had his lowracer and was a bit quicker than me. There was a bit of rain coming in to Ballarat and it got cold. We had lunch, Rob headed off, and I spent some time looking for Ballarat op shops before heading back to the camp for a quiet night passed innocently watching the TV and reading.

On Sunday, the rain from the previous day threatened again, and I packed up my (not much) stuff and paid the scout camp (again not much) and headed off to the start of the Race Relay which is a 2 hour ride around the lake as an individual or with a team of up to 12 people. This was a pretty damp affair, and cold for me because I was a dumb ass and didn't pack wet weather gear. Drizzle turned to rain about halfway through, but the flat course around the lake was quite a lot of fun. I was able to line up the corners created by the multiple roundabouts and bang it through with considerable speed, and pass most riders on the course who were, after all sometimes small children accompanied by their parents.

After the ride, I caught up with Rob Leviston and his velomobile, which was the perfect vehicle for the day. He stayed warm and dry inside, and was able to listen to MP3 tunes on his stereo as he pedalled. This trike is a wonderful creation, and the front wheel suspension is made from discarded snow skis. Unfortunately for the organisers not many people hung around for post-ride celebrations despite the live music, beer on tap and bike displays.

There was still more rain, so I didn't hang round much either and headed to the station for some food to warm me up and the train trip home. On this trip the conductors

weren't overly fussy and I left my trike intact for the trip. This was fortunate, in my wet and cold state I wasn't much in the mood for bike wrangling. Overall it was a good trip, and it was nice to have the trike prove itself over some interesting terrain.

Greetings from Europe

Tilman Rodewald writes from the Swiss HPV Association and has just joined OzHpv as a member.

“Hi, I am a board member of the swiss HPV association "Future Bike CH“, responsible for public relations as well as magazine editor of the German/Swiss HPV „Information Bulletin“ –short InfoBull or IB – I'd love working with you and maybe even share some articles and events sometime.

I'd appreciate you stopping by our web (<http://www.futurebike.ch/>) and facebook (<https://www.facebook.com/futurebikech/>) pages as I just have with yours.

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Ride Groups and Coming Events

Geelong Recumbent Riders: Meets first Saturday each month at the criterium track, Barwon Heads Road, Belmont, Geelong. Noifications via [ozhpn facebook](https://www.facebook.com/groups/OzHPV/) (<https://www.facebook.com/groups/OzHPV/>)

Adelaide Recumbent Riders next ride is March 26, details via ARR facebook (<https://www.facebook.com/groups/1536252520007893/>)

NSW Recumbent Riders next ride is March 25, details via NSWRR facebook (<https://www.facebook.com/groups/519493954898058/?fref=nf>)

Perth Recumbent Riders can be reached via their facebook page. (<https://www.facebook.com/groups/498654353665784/>)

Coota Bike Festival (<http://www.cootabikefestival.com.au/schedule.html>), Cootamundra New South Wales An ozhpn rally is being planned to coincide with this festival on the weekend of October 28 and 29, 2017.

An OzHpn Challenge is planned for early December 2017 in Bendigo Vic. Details to be confirmed in the coming weeks.

20 Year Anniversary for OzHPV

Checking the Incorporation documents, OzHPV were officially incorporated on 12 May 1997. Maybe we can organise particular OzHPV events to occur on the Saturday 13th May 2017 in the various key centres where we have members such as Canberra, Melbourne, Sydney, Perth, Brisbane (and Howlong)?

This could be a big ride, a race day etc. OzHPV Committee could stump up some money for advertising or pizzas.