

# HUFF



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## From the Editor

Sorry for the late delivery of the newsletter. My computer has had several crashes with viruses that made me well behind in it's production. Enjoy!

Timothy Smith

## Road Tests

From mid 1998 to mid 2000 we lived in Gent, Belgium, a beautiful medieval city. I was working for Bricnet, a software company developing architectural modelling software. One of my work colleagues, Bert Bruynooghe, had a Challenge Focus and introduced us to recumbents. He organized a couple of ride days where we all hired bikes from the local recumbent shop "De Ligfiets" and rode along the Schelde river to a cute little café/pub and back. In 1999 and again in 2000, we drove up to Lelystad in Holland to attend Cycle Vision. Well, we got hooked!

### Sarah's M5 Speedliner 'Blue Glide'

We bought this bike from De Ligfiets in Gent in 1999. Although it's a classic M5 model, the frame was built by Speedliner. I think this was an outsourcing experiment that M5 later abandoned, and this bike was more or less a 'runout special'.

Its an elegant cruiser, with steel frame, 20/26 inch wheels, ASS, rear suspension. The front wheel has radial spokes. Some pretty curves are formed by the typical

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## Roadtest: M5 Shockproof

M5 has been a leading name in recumbent manufacturing and racing for 19 years. The Shockproof is a dual 20" short wheelbase bike. It is their 'quazi lowracer' model. This category of bike is intended to provide nearly the performance of a lowracer in a road friendly package. Over the ten days I had this bike to test I covered around 200kms of commuting in Sydney.

### Components

The model on test is the base dual-suspension Shockproof which is all chrome-moly steel. The drive-train consists of Campagnolo Veloce cranks and triple front derailleur with Campagnolo Mirage 9 speed rear derailleur, and SRAM Rocket 9.0 half-pipe shifters. The suspension is courtesy of M5's own 'Duoshock' headtube suspension at the front and a DNM-550 coil-oil damped unit providing the bounce for the rear swing-arm. The brakes are Tektro V on the front and Tektro mini-V on the back. Both wheels are the 451mm 20" size (slightly larger and much less common than 406mm 20" BMX size wheels which can also be used on the bike) with 22mm wide eyeletted Sumo ADX-MS rims, Campagnolo Mirage hubs laced with 36 plain gauge stainless steel spokes. The tyres are the narrow high performance IRC Roadlite 20x1 1/8".



Shockproof as tested except with 406mm wheels fitted.

A deep rim "aero" wheelset with just 18 or 24 spokes is optional. It is also fitted with a custom rear rack which comes complete with a flashing LED rear light. The seat is moulded carbon fibre bolted to the main tube with an additional pad of open weave filter material encased in a cotton cover attached using velcro straps around the back of the seat.

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## Aesthetics

The bike is a beautiful thing to behold – I thought I was used to the level of comment a recumbent generates, but riding this bike has brought a whole new level of comment which is now uniformly positive. Pictures don't really do it justice. The curve of the main tube under the seat and the rear swing-arm are particularly striking.

## Build quality

All of the welds and general fit and finish are exemplary. The metallic green paintwork is beautiful and lustrous - a high grade finish with double metallic powder coat with protective clear coat on top. There were a couple of minor flaws on the test bike however - the cable stop for the front derailleur was slightly off-line and there was a very small blemish in the paint on the top of the front derailleur tube. I



Shockproof with 'monoblade' suspension fork, 451mm aero wheels, and no rack fitted.

have not noticed any such flaws on the four other M5 frames I have seen, so I assume they are not commonplace, but they are unexpected in a bike of this quality. These are however small quibbles that do not effect the function or longevity of the bike.

## Seat

My first impression on sitting on this bike is that it is built for speed since the seat angle adjusts between 20 and 35 degrees. The seat is nicely contoured providing plenty of lumbar support and the shoulder support necessary to be able to pedal powerfully at these seat angles. The seat padding is firmly supportive and very comfortable, since your weight is well distributed over your back. This combination makes for excellent power transfer with the trade off that it is a little warmer than a mesh seat. The well shaped seat meant that I did not feel I needed a headrest even at this reclined angle, but M5 do offer one as an option.

## Handlebars and Handling

The most controversial aspect of the bike for most people will be the handlebars. They are very narrow tiller bars – ie the stem comes back towards the rider with the bars themselves a small

upside down "V" – the two sides of which are just wide enough to accommodate the grip shifters, brake levers, bell and bike computer. The effective rear vision attaches neatly to the stem. Rapidfire shifters will not fit elegantly, but bar-end shifters would also work well. With these handlebars your upper arms are by your sides and your forearms more or less vertical and hands close together on the bars. This is the position used by most low racers as it is more aerodynamic and hence faster than either standard "n" shaped bars with the arms out in front of you or the wider under seat steering. The bars also make the bike very narrow (the widest point is the pedals) which makes getting through narrow gaps and storage a breeze. Visibility is unimpeded by the bars which sit just below the line of sight. On

the down side they make getting on and off the bike just a little awkward. This was the first time I had ridden a bike with this type of handlebar and, although it felt strange at first, after 4 days of riding I felt just as comfortable as I do on my U bar ASS SWB in nearly all situations, the only exception being riding below 5km/

h, which was nonetheless achievable. U bars or a wider version of the V bars are offered as an option, however I think the standard bars are more in keeping with the character and purpose of this bike, and once you have adapted to them feel just as natural.

Overall the handling is fast and very responsive, but quite predictable and feels better the faster you go.

## Suspension

Calling your bike a 'Shockproof' raises high expectations about the suspension and this bike delivers. Not only are the lumps and bumps dealt with, high speed stability is improved and you can take corners at speed with much greater confidence than on an unsuspended bike. It's not quite a magic carpet ride – you are still aware of the larger bumps, but there is no jarring or discomfort despite the narrow high performance tyres fitted. I found myself looking at my surroundings more since I no longer had to worry about the road condition and going faster since I didn't have to slow down or even stop pedalling for the bumpy bits, even large speed humps. There is no noticeable pogo, probably due to the drive side chain idler being integral with the swingarm pivot.

## Weight

The down side to suspension is, of course, added weight – the bike as tested weighed 16.8kg (including rack, front and rear lights, mirror and computer). The weight M5 claim for the chrome-moly bike is 14.8kg with rear rack but without front suspension (which adds 300-600g) which seems quite possible by specifying lighter components and a monoblade front fork. They also offer a titanium version of the bike which is claimed to get the weight down to 10.5kg using lightweight components and fixed monoblade front forks. So there are options to reduce weight and improve hill climbing available, naturally at a cost. The lighter monoblade forks will only accept calliper brakes and need a one-sided mudguard support arm.

## Brakes

The brakes, relatively humble Tektro Vs, work fine, and are more than adequate, although they lack do not have the power of modern disk brakes. Unfortunately M5 do not offer disk brakes as an option on the Shockproof, supposedly because disks add extra weight (extra spokes, stiffer forks, extra disk brake weight). To provide more heat dissipation than the two 20" rims afford you could fit an additional Shimano roller drum brake hub to the rear wheel, operated via thumbshifter, if you plan to do heavily loaded touring on a Shockproof in hilly areas.

## Speed

Even without a tail-fairing this is a very fast bike. I think that it only fractionally slower than a low-racer on the flat, but if you throw in bad roads, speed humps etc. it might be even faster. I can't think of a bike without a fairing that would be faster, while still putting you at eye height with drivers.

## Luggage Capacity

Custom 'top' bags of 17 and 27 litre capacity are available. These slip over the back of the seat and rest on the rack, and the larger one will hold all that most people need for commuting and day rides. Sitting behind the rider means that there is no aerodynamic penalty for these bags. The smaller bag has backpack straps which makes it a breeze to carry off the bike.

For more substantial loads M5 manufacture 54 litre capacity side bag panniers. These are held on by adjustable straps which slip over the seat and rest against the side of the seat and the rack. They are a tapered aerodynamic shape with a long zip around the top of the bag. Even fully laden, with most of the weight mid-bike, they have little effect on the balance of the bike and minimal additional aerodynamic drag – very clever. The flat design should make both packing and retrieving items from your luggage easier than conventional panniers, it will also make them more difficult to fully waterproof effectively.

With a total 81 litre luggage capacity the Shockproof must qualify as the fastest light-moderate weight touring bike around.

## Conclusion

I'm sure it's clear by now that I liked the Shockproof very much. It is certainly my kind of bike, although not perhaps for everybody – the laidback seat and responsive handling will not appeal to some and the standard narrow handlebars require a short period of adjustment. However if you want one of the fastest, most comfortable and most attractive road machines around, then you should definitely consider the Shockproof. For racing you could also buy the M5 carbon-fibre tail-fairing for additional speed, while if you want to use the bike as a tourer or commuter then you could use the wider 406mm tyre option, dual leg front forks, front mudguard and V-brakes. With the seat and front boom easily removable and with the rear swingarm folded under the main tube it also can be packed down very small for travel. For pure speed at any cost a tricked out titanium Shockproof would be hard to beat.

M5 bikes are imported to Australia by Flying Furniture cycles.  
<http://www.flyingfurniture.com.au/m5.html>

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### *Continued from Page 1 - Road Tests*

M5 banana swingarm and the chromed carry rack. Front and rear derailleurs are worked by GripShifters and give a range of 29-113 gear inches. It weighs 17kg. It has very narrow chromed steel rims, and tasty red V-brakes.

This bike has a pogo problem. Climbing hills was really laughable because the suspension is soft and the chain-pull was really lifting the rear suspension at each stroke. I removed the idler wheel under the seat to bring the chainline closer to the swingarm pivot but then the chain started banging against the brake pivot on the swingarm. I've now put the chain into a plastic irrigation tube that runs from right near the rear cluster all the way to the front chain rings. This tube still touches the brake pivot but the chain runs quietly inside. Maybe the chain will wear through this tube in time but plastic tube is very cheap.

The bike is extremely comfortable, and very stable at low speeds. I don't like the feel of it at higher speeds. Mainly the rear suspension is too soft – hitting big bumps at speed can really upset the bike. But Sarah loves it as it is so I have no intention of 'improving' it.

### **Claire's MR Components 'Swift Special'**

We bought Claire's little trike last year - second-hand from a young bloke in Red Hill – I've forgotten his name sorry!. It was a trike built by Michael Rogan and raced at a 24-hours in Murray Bridge many years ago. Subsequently, Michael lowered the seat angle as an experiment, but later retired the frame as a bit heavy (22 kg) and hung it up in his shed. So years later he sold it to our vendor. I suspect he attached whatever cycle parts



fell to hand – it has Shimano biopace cranks (elliptical chainrings!) and very low gearing of 15.4 – 81.5 gear inches. Michael tells me the wheels were his ‘destruction testing’ wheels. Whenever he developed a new frame and wanted to really test its strength he would put these wheels on it and ride



Claire's MR Swift Special

it over cliffs! So they aren't new.

The seat is low and it really needed a headrest so I put a tall ‘roll bar’ on it – this makes a good place to mount the lights. Just before last year's Challenge at Werrabee, we found big cracks in the rear chainstays. I took it down to Michael who rebuilt the whole back triangle for us.

This trike is a blast to ride. Its so low! Its not as fast as my Hurricane (I mean it takes more effort to push along), but its sure corners and stops. It's a strong stable platform for training.

## Joan and Frances' Flevobike - aluminium symmetrical two-part tandem “Back to back”.

This ‘ultimate weapon’ was evolved by genius engineer Johan Vrielink (and I think Ymte Sijbrande) for competing in the Paris-Amsterdam Audax events. An asymmetric back to back tandem was found to have many advantages such as:

- \* A better aerodynamic shape by siting the riders' torsos close together.
- \* Good communication as the two heads are close together
- \* A deep strong frame in the middle where the bending moment is highest.
- \* Independent peddling, coasting and gear changing through two separate transmissions.
- \* Breaks down into two parts without disturbing the chains.
- \* The stoker can provide ‘rear vision’ which is sometimes handy in racing situations.



Bike tandem for sale CycleVision 2000

Later, the design was cleaned up and made more symmetrical. Flevobike published the plans, and sold the bike in kit form. In 1999 an aluminium distributor in Holland sponsored high schools and tech colleges to build and race these bikes. Teams of one boy and one girl raced the tandems in distance and criterium races at Cycle Vision in June 1999. It was awesome for us to see these monsters racing around tight corners and 12% hills in the criterium events. At that time we didn't own any recumbents and our eyes were bugging out at all the weird machinery there.

In June 2000 we returned to Cycle Vision as owners of two recumbents (the Hurricane and Blue Glide) and we were interested in buying more. We briefly investigated the awesome German Speedbike tandem but it was way too expensive. In the ‘Big Tent’ there were some second-hand bikes for sale and one of them was ‘Number 121’. Well I rode it up and down the entrance road for an hour before I convinced myself it was a workable bike. Anyway we bought it! The vendors were Jorgen Schellemans and Paddy Milford who were students at TU Delft. Paddy owned 14 bikes and was living in a one room bed-sitter. He had bikes winched up against the ceiling of his room and needed to get rid of some! Since the Flevobike is 3.2 metres long it was an ideal candidate for sale!

Paddy and Jorgen arranged to deliver the bike from Delft to Gent for us and a few weeks later they rode it down one Sunday, taking about 12 hours. They had to rush off and catch a train home almost as soon as they arrived!

The construction is a bit like a surfboard – a polystyrene foam core with aluminium sheets glued and riveted around it. The art nouveau shape is very pretty. Front and rear steel subframes carry the wheel and drive assemblies. Magura hydraulic rim brakes are mounted with a quick release for when the bike is broken in two. Every detail is clever and simple. The bike weighs about 30kg.

The tandem is scary to ride with a strong stoker on board. It is rather flexible and the steering has a delayed reaction. You put on some steering lock and have to wait a second for the bike to react. If you get impatient and crank on a bit more lock you can easily start a cycle of overcorrections that will end in the bushes! It's a bit like riding a horse – it will do what you want, but not necessarily *when* you want! The bike only has single chainrings and seven-speed clusters so the range is a fairly woeful 45 – 98 gear inches. On the flat its enough, but we have to walk up almost every hill! The rim brakes are probably not good enough for a long downhill either.

What's it like to ride backwards? I have only tried it a few times – Joan doesn't like riding it with me on the back. But it feels strangely natural. You don't know what danger you might be in, and you can't steer or brake anyway so you just relax and work on the pedals. You don't have

to balance – just sit still and be a motor! The team quickly learns to communicate through the frame – you can feel when the skipper is pushing or coasting. The tail-gunner position is useful in traffic - you can make eye contact with the driver behind. Frances likes to wave and blow kisses with both hands.

One time in Gent Joan picked me up from work on the tandem. I took the stoker seat. On the way home we drove right through an intersection where we usually turned left. I said ‘What happened?’ Joan explained that a car driver had stopped in the middle of the intersection with his jaw dropped open just gawking at us. He was blocking the road so she couldn’t turn the corner!

The tandem was designed to have a single spring-shock unit in the middle of the frame. Ours has a rigid alloy strut which suits me fine – the bike is too flexible already without adding a hinge in the middle! It works its wheels pretty hard – you need to check the spokes every day and keep the tyres pumped up hard. The riding positions are comfortable, and you can really work hard on this bike. In the right conditions it’s a fast bike, but its hardly practical. For us its mainly a memento of our time in Europe and a little piece of HPV history. Its an adventure every time we take it out. Everyone we pass has a comment, except for some people who just burst out laughing!

### Damian’s Challenge Hurricane

We bought this at the same time as Sarah’s M5, from Manu at De Ligfiets in Gent. What can I say? This bike is wonderful! The short wheelbase means the handling is twitchy at walking pace, but it’s rock solid at speed. Its so small it can seem like a kid’s toy bike rather than a ‘serious’ bicycle. A Sachs 3x7 hub (GripShifters) gives a good gear range while keeping the pointy end very simple and clean. Magura hydraulic rim brakes are strong and predictable. I’ve ridden quite a lot of recumbents including the Challenge Taifun semi-lowracer, but when I get back on the Hurricane its like coming home.

It has rear suspension but no front – later model Hurricanes sit a little higher which would make room for some wheel travel, but on mine there’s no room for front suspension. The rear is very stiff and I only notice it’s suspended if I ride off kerbs or other big bumps. The bike has no pogo or ‘biopace’ effect.

This is a ‘series model’ – red steel frame, mudguards and lights. Its pretty heavy, but I couldn’t afford an alloy one at the time we bought it. Anyway I weigh 95kg. I figure I should lose some weight before I bother spending money on exotic materials! I commute into Melbourne on it most days and ride it most weekends. I did Around The Bay on it last year (a leisurely 12 hours and 41 minutes!), and I love it! The Hurricane is a good commercial success and has been in production for 8 years – when Cycle Vision held a Hurricane-only race, they got 80 entries and had to run them off in heats. We would often see lived-in old Hurri’s parked in apartment doorways or chained to lamp-posts around Gent.

Last weekend the bottom bracket bearing broke! It’s a pressed-

in cartridge made by Kinex in Slovakia. We’ll try to replace it with a Shimano cartridge. Apart from that the bike has given no trouble.

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Should we buy this bike?



A very tasty tandem at Cyclevision - home-built I think.



Me on the Hurricane, Gent June 2000



# A Bonza Tail of a Bike

By Bernard Weir.

In 1990, Greenspeed took over my then local bikeshop, and with my father's stroke started an idea of a trike for convalescence. I could not afford one then, but later research through GS uncovered Encycloepedia, then the IHPVA trikes email list and ideas for a more appropriate bicycle for my needs, particularly: lightness and smallness for bike-train-bus-bike trips, storing under my desk, easy interchange of parts, wide gear range, towing a BOB Yak trailer, high reliability and low maintenance. I played with "crazy" drivetrain ideas for opposing triples and trombone chains, but finally settled on a Rohloff mid-drive like the Predator Pursuit, to overcome the wheelsize limits of the Rohloff and Yak.

There were by 2001 no folding small bikes with Rohloff hubs, but at the Sydney Bike Show, Cavello Imports displayed a "Velociraptor" from Taiwan ("Onza" in the UK) which was a high-quality gearless mini base with enough room between the seat post and rear 12" wheel for a Rohloff, so I bought the first one available (\$A400). Then my cumbersome hybrid bike's 22" frame fractured, so rather than buy a new hybrid frame or bike, with old custom parts and old problems (\$A1500), I started to research and buy the parts to upgrade the minibike:

- \* QR hub without torque arm (Rohloff Australia, \$A1400);
- \* Mid-drive Rohloff adaptor (Lahar mountain bikes, New Zealand, \$A400)
- \* Two Sachs Quicklink chains (Engadine Cycles, \$A40)
- \* Shimano two-sided SPD pedals (Clarence St Cyclery, \$A100)
- \* Better BMX freewheel (Clarence St Cyclery, \$A30).

After some pessimistic responses from framebuilders in Sydney, I went to Melbourne in January and persuaded Michael Rogan (MR Components) to take on the challenge, which had by then become: to install a QR Rohloff with Quicklinks, to switch between the bike and a future trike; and thus to rebuild the rear triangle, to put the QR Rohloff in perpendicular dropouts and add BOB Nutz above the seat stays, and reinforcing stays below to the chain stays to take the pedalling torque.

Michael came up with the ingenious solution of making the

seat stays parallel and slightly offset, and adding a crossbar behind the seatpost. It was indeed a difficult job to get the chain lines and crossbar to fit in the tiny space between the heel clearances. He also added new shorter wider cranks, filed to just clear the crossbar, and a new front sprocket wheel. I have been fortunate to have had his expertise; and all the expert mechanics who have seen the bike have commented on the outstanding quality of his aluminium framebuilding.



Israel at Clarence St Cyclery Sydney provided helpful advice, parts and reassembly. Bob at Stanmore Cycles Sydney provided the Yak (1999) and disassembly/reassembly of the front steel fork for painting (silver for now, to match the bare aluminium, the original red paint having been brushed off for the welding).

As the final drivetrain matched my initial design brief so well, there were a few parts I had bought which were not needed, such as chain tensioners from Rohloff (\$A93) and Clarence St (\$A150) and Rohloff dropouts (\$A200) from PBW Folding Bikes USA.

The bike's drivetrain's gear ratios are about 20" to 110", courtesy of a 48-tooth to 13-tooth front linkup and a 24-tooth to 16-tooth rear linkup. On top of the usual low-percentage power losses in the Rohloff, I probably lose an extra 1% for the 13-tooth and 1% for the right-angle in the drivetrain, but a bit more conditioning covers that.

Riding the bike is a delightful change from past experience: the gear-shifting is so easy I can think about other things instead.

If I hang my (full) backpack forward of the handlebars I can take off at the lights without doing a wheelie. The chunky tyres and springy saddle are all the suspension I need, even on potholes, and I can lean into corners like a motorcyclist. At any obstacles I can switch between cyclist and pedestrian modes with ease, given the low step-through height. It is tiny enough to fit on buses and tough enough to tow a week's groceries.



And it is a great conversation-starter in public, its size being so "cute" and style so "gadget"-looking, that people (mostly

males) from toddler age to old age are irresistibly curious about it, and I have had many requests from boys to test-ride it. It just needs a more catchy colour scheme than silver/black. I will use the bike to encourage students at my school to think about bike safety, with a colouring competition next term to add dazzling 3M Scotchlite light-reflective coatings to it and to their own bikes and clothing. I also hope to promote cycling as against

the current predominant "hot car" young male culture.

My next project (Michael's?) will be a Yak-based toddler velomobile trike with steering handle which will double as a mini shopping trolley. Eventually I hope to have a tandem-single convertible trike with a low racer front setup, removable overhead malibu rack, the option of an adult or child rear seat module, and towing the Yak/trike. This will use a removable drivetrain with the QR Rohloff and a MD in reverse setting. Maybe one day I'll even get Dad to have a go on it.

I was going to call it a tyke or tike, meaning little kid, but my Macquarie Dictionary tells me that that term's a bit sectarian in the UK corner of the world, so in empathy I'll skip it.

## Broadford - a new home for the Challenge?

After the end of the racing at last years Challenge (at Werribee) we had our AGM. Lots of people suggested improvements for next year's Challenge, but by far the main request was for camping by the track. So back in February, I approached the Victoria University folks and asked about the possibility of camping at Werribee. They were cooperative but brought up many questions to do with safety as they are not really set up for camping. In particular they have some deep retarding basins on site which could be a drowning hazard for children, and they have no showers or toilets near the proposed camping area. I made some enquiries about hiring portable showers and toilets or borrowing the Bicycle Victoria shower truck, but everything seemed very expensive.

Also these portable units all need mains water and power which would be a problem at Werribee. The main advantage of Werribee was its cheapness, but installing water and power, toilets and showers and safety fences was all looking a bit too hard and expensive.

Also I was unhappy with the fact that Werribee is in Melbourne.

Melbourne people (like me) went home on the Saturday night instead of staying with the interstate visitors. So I made some other inquiries.

Last weekend Steve Nurse, Struan Little and I visited the Broadford motorcycle complex and I think we've found a nearly PERFECT answer.

The Victorian Motorcycle Sports Complex at Broadford was created over the last 25 years as a venue for motorcycle racing. Its owned by Motorcycling Victoria, a consortium of about 80 clubs. It has a 2.7km road race circuit and 8 other off-road circuits. It has ample camping areas, toilets and showers, large covered pit bays and officials sheds.

Later this year it will host a round of the international SuperMotard championship, so they are busy improving the place even further. The entrance road will be sealed and there will be more pit sheds. Normally Broadford would cost about \$3000 to hire for a Sunday, but a condition of their planning permit is that they must have one noise-free weekend every month. So they can give us the whole complex for a full weekend for about \$1000 (it may vary - still to be confirmed). That's midday Friday to Monday morning.

Broadford is about 100km north of Melbourne just off the Hume highway, so it's easy to reach from interstate. Broadford train station is about 4 km from the circuit. The site is very hilly with some great views.

The actual road circuit is also very hilly and demanding. The start-finish straight is close to the pits, about 400m long and very wide. We could run slaloms and drags there. After the start there is a steep climbing right-hander onto the long back straight. I had to walk the tandem up this hill - its really pretty steep, but then the tandem has rather limited gearing. The 700m back straight rises and falls and rises again to the highest point on the track. Here it turns right into a great downhill series of ess-bends and a fast, tricky right-hander.

Another climb around a left hander and we're back to the start-finish line.

I think this circuit will really sort out the strong riders from the rest of us. I was knackered after one lap! It will test climbing ability, top speed, fast cornering and braking. So be warned and install those Rohloff hubs and Mountain Drives before March - you're gonna need them! Actually the biggest hill is on the entrance road - its a mountain!

Steve Nurse is organising some day races for July so we can all familiarise ourselves with the place. I hope everyone who can get there makes the effort to check it out. Its a heroic roadrace track, a bewildering choice of dirt tracks, great facilities and CAMPING. So next year after all the racing is done, we can sit around and natter all night. I can't wait for it. We're tentatively booked in for March 1-2 2003.

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## Incorporation - Good News

Just had a call from the ACT Registrar General after I dropped in the paperwork required to get OzHPV re incorporated.

Apparently the paperwork has been accepted and reincorporation will take place in the next few days.

Go forth and organise fellas.

Peter Heal - [heal@cyberone.com.au](mailto:heal@cyberone.com.au)



# Bowral Track Racing and Rally Weekend 4<sup>th</sup> & 5th May 2002

Following the fairly successful track-racing day at Queanbeyan in March, a similar event was held at Bowral in the NSW Southern Highlands in May.

Once again the concept of racing recumbents on a banked velodrome style track proved popular although the Sydney mob was somewhat notable due to their absence. I would have thought the opportunity for some racing and riding with other HPVers so close to Sydney would be too good to miss.

In all there were 4 Canberra OzHPV riders, 2 from Sydney. 1 from Newcastle and 2 from Queensland (yes Queensland!!!).

The Bowral track is more steeply banked than Queanbeyan and perhaps not the best for our three wheeled brothers who found it difficult to counter steer against gravity if they went too far up the banking. The two wheelers on the other hand lapped it up and riders were swooping up the banking in true track racing style. The surface of the track was rather rough being weathered bitumen, but for the hire price (free) it was a bargain.

Ian Humphries convinced his parents they needed a day in the country and somehow fitted, Ian's lowracer (including tail box), Bec's SWB and a Green M5 into the falcon along with three passengers. Mr & Mrs Humphries were sent home by train!

The day followed the same highly organised program (what do you guys want to do now?) which included a 200metre time trail, a last man out race, a 1,000km time trail, a handicap race, a slalom and a 10 minute lap race. All good fun.

Peter H just managed to only just hold on to his flying 200 metre dominance from a very long legged Malcolm from

Matt Heal



Sydney, an out of form Ian H (world champion) and David Mc Cook finding his wings on the Ian's M5. The results of the 1,000m came out in the same order. With less than a second between Peter and Malcolm. In the 10 minute sprint, the three fasties, Ian, Malcolm and Peter were averaging around 42-45kmh and taking turns in the lead using the banking to change positions.

As the sun gradually set on the track, we made our way back to various forms of overnight accommodation and arranged to meet up for a feed at the busy Mittagong RSL. After devouring the salad bar, the crowds started to thin and talk got to more serious things, like the future of OzHPV.

Sunday morning after a cold night turned on the sunshine again and the group now somewhat expanded by the arrival of Bec and some of the Mc Cook clan, made it's Wacky way to Berrima on a busy back road. If the road was busy, then most were heading to Berrima with its historic village appearance, craft shops, cafes and THE BAKERY. Needless to say we spent some time at the bakery drinking eating and talking. The road back to Bowral over Oakley Hill was less trafficked and had a very nice although bumpy downhill into the town. Despite best efforts the group was unable to find the start of a nice bike path along the river, which was sighted the day before, and it was necessary to ride the wide kerbside lane on the busy main road connecting the highland towns.

A quick stop at the velodrome again for Bec to record some times and then it was back to Moss vale where bikes were loaded and we said our goodbyes.

It was a very successful weekend, I feel and a great pity not more members could have taken part. Thank you to all those that came and I hope you enjoy your complimentary supplies of OMO flavoured Isosport..

On my way back to Canberra, I stopped in Goulburn to check out yet another country town velodrome – very nice it was too. Maybe I'll organise something in Goulburn next time.

Peter Heal - [heal@cyberone.com.au](mailto:heal@cyberone.com.au)

Ian on M5 Shock proof







Gail on the birdy folder



**BOWRAL TRACK RACING 4TH MAY 2002**

Name	200m TT	Last man out	1,000m TT	Handicap	Slalom	10 min race place	10 min laps
Ian Humphries (Low racer)	14.63	3	89.05	6	12.5	2	19
Ian H (M5)	15.49				12.7		
Giles Puckett (Low Trike)	18.99	5	113.19	3	12.3	6	3
Chris Curtis (SWB)	17.65	6	110.75	4	12.5		
Chris C (M5)	16.85						
Rudolf Werner (GS Trike)	21.12	7	118.68	2	13.45		
Rudolf W (Birdy Folder)	23.29				13.6		
Malcolm Butler (SWB)	14.39	1	87.63	7	13.1	1	19
Malcolm B (Birdy Folder)	19.49						
Peter Heal (Low racer)	14.19	2	87.35	5	28.9	3	19
Matthew Heal (SWB) Junior	21.09	8	143.72	1	16.8	5	12
David Mc Cook (Kotzur SWB)	17.05				13.3		
David Mc C (M5)	14.39	4	92.42			4	17
Bec Gibb (SWB)	18.8		106.6				

## Wheelbase and stability

If one increases the wheelbase by moving the front wheels forward, as in the case of a LWB trike, compared to a SWB trike, then the easier the trike will tip, if all other variables at kept constant. This is why trikes like the old LWB Slingshot will tip easier than most SWB designs.

If on the other hand, one increases the wheelbase by moving the rear wheel back, then the lateral stability will increase due to the fact that the tipping line between the rear and front wheels is moved further from the CG, in plan view. This will also slow the steering, if the ratio is kept constant, and will be at the expense of extra frame weight, and reduced rear wheel traction.

Then when you talk about the GTT Tandem Trike, I believe you are moving into a different case all together, as you are talking about a tandem machine, rather than a solo, and also a lower trike.

The first tandem I designed was a four wheeler, which is what I thought I would need to make the machine stable enough. However pressure of work prevented it getting further than 1/2 way through the frame stage.

Then when a school asked for a passenger tandem for a severely disabled boy, I had another look at the design. I found that by stretching our solo design, I could still use a trike design, and have the necessary stability. This was done by using the lower seat height of the GTS design, rather than the GTR design.

This machine turned out even more stable than I had expected, and the big shock was the slowness of the steering, compared to the solos, which was due to using the same steering ratio with a much longer wheelbase. In fact the wheelbase was DOUBLE that of some solo trikes, thus the steering was approx. twice as slow!

The track was the same as on the solos at 800 mm. I decided to increase it to 900 mm on future tandems, not to increase stability, but to allow more wheel lock, to reduce the turning circle.

To increase the speed of the steering, the steering ratio was reduced from 1.12 to 0.77. The caster was also reduced to lighten the steering with the extra weight of two riders. This resulted in an even more stable machine, which I felt was easy to steer, and rock steady at 80 kph, which is as fast as I've been on one so far...

Ian Sims, Greenspeed - [ian@greenspeed.com.au](mailto:ian@greenspeed.com.au)  
<http://www.greenspeed.com.au>

## Disk Brakes Revised

While most bicycle brakes may be sold front or rear, not ALL cycle brakes are sold as "front" or "rear". Both the early Sachs disc brakes were interchangeable front to rear, and left to right, as are the No. 1 Hope callipers which we use.

Likewise the Sachs/SRAM TOP drum brake hubs make esp. for wheelchairs and trikes, are not made for bikes, and are made "Left" or "Right". Likewise the Sturmey Archer wheelchair drum brake hubs, which are now made by Sun Race Sturmey Archer, and are again made in "Left" and "Right". Furthermore they are convertible by changing the handed brake arm, which is a "rear" or "front" arm of the bicycle drum brakes.

Some trikes use two front, which results in one up and one down, some use two rear, again with the same problem, some have used one front and one rear, and some use universal ones, and some use left and right, depending both on the trike, and the brake used.

And no doubt other people can think of even more possibilities ;-)

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<http://www.greenspeed.com.au>

## LoGo Trikes and HPVs

Check our website for our new LoGoV2 tandem trike. Just a picture at present, but full details to follow. Anyone wanting advance info, please email us as usual.

Martin Arnold - [info@logotrikes.com](mailto:info@logotrikes.com)

<http://www.logotrikes.com>



## 2003 Masters Games

Hands up everybody over 30 years old. Hands up everybody that would like to race their recumbent at the 2003 Masters games in Canberra.

Possibility has arisen to run Recumbent cycling events in conjunction with the games. Need a minimum number of participants to have an event. The entry fees are not cheap.

Check out the web site for the Victorian games in 2002 to get an idea. The Canberra Masters are on in October 2003.

Peter Heal - [heal@cyberone.com.au](mailto:heal@cyberone.com.au)

## An Australian HPV Speed Record Course?

I did an excursion to the Old Hume Highway at Bredalbane (near Goulburn NSW) recently. This section of road has been bypassed by the Hume freeway a couple of Ks to the South. The town of Bredalbane is very quiet - even the Pub is closed up.

There's a section of road here that is very straight and very flat (well it appears to be) and I measured it yesterday as 2,000m before it gently rises at the start and end. The road is nice and wide and the surface quite smooth. There is very little traffic - we saw three cars and 2 motorbikes in half an hour.

If this section of road was used for a flying 200m record attempt, would 1800m run up be sufficient from a standing start?

I think it possibly would for our first attempt. What do others think? Are there any surveyors amongst the membership who could verify the length and slope of the course? Is anyone interested in participating in such an event this side of October? Would it be better held later this year or next year?

It is also possible to combine this event with a velodrome flat track event at Goulburn to make it a full weekend.

Peter Heal - [heal@cyberone.com.au](mailto:heal@cyberone.com.au)

## Flying Furniture cycles

A brief note from Flying Furniture cycles: Australia's only recumbent retailer with a complete range of great bikes and trikes available for test rides.

Currently I have a few of the fabulous M5 bikes for test rides and the popular Optima bikes will arrive within a week or so. Flying Furniture sells only the best designed bikes and trikes!

Check out the photos of the unique Flying Furniture designs, made in Australia, of which there are currently three:

1. The TOUR - an expedition ready SWB with unique steering geometry and good slow speed handling. It features a removable mesh seat and boom for easy travel on planes, trains and buses and underseat pannier racks and underseat storage space. The aero rear tailbox is integral to the design and can be used with the panniers for a most efficient, fast and easy to ride touring bike package. The tailbox folds for travel too. The TOUR model has optional "head tube" front suspension (retrofittable) and optional disk brakes.

Flying Furniture



2. The LadyBug (and BUG) - a fast and lightweight SWB design optimised for the shorter rider with lower seat height and appropriate crank lengths. A fast and optimised design suitable for shorter people. It has the underseat "rocket pannier" racks, underseat storage space and aero rear luggage tailbox of the TOUR model too.

3. The "PBP special" - A design similar to the Tour with tailbox and underseat racks but more optimised for speed and fast long distance riding.

Handling and aerodynamics have been further optimised so it is as easy as possible to ride on the longest of Audax events (even after 50 hours without sleep!). The first is being built now and I'll have photos for the web page soon. It will make any riding easier and more comfortable!

Of course I also sell and support the Australian made trikes from Greenspeed, MR Components and Tri-Sled and can help you with independent advice on the best trike and component choices for YOUR needs! Demo models from Greenspeed, MR Components and Tri-sled available for side-by-side test rides soon! You'll pay no more than buying direct from these manufacturers but will still get great service and independent advice!

My new email address is: [ian@flyingfurniture.com.au](mailto:ian@flyingfurniture.com.au)  
<http://www.flyingfurniture.com.au>

Ian Humphries

The M5





# Coming Events

## OzHPV Canberra

Would anybody like to ride Saturday 6th July? We could do the ride out to Red Belly Black on Mt Stromlo. Lets say meet Acton ferry terminal at 1.00pm. For more details contact Peter Heal Ph 02 62884103 - [heal@cyberone.com.au](mailto:heal@cyberone.com.au)

Sunday July 7th: There is an event at Peat's Ridge just north of Sydney that is run by the Australian Time-Trial association - held the first Sunday or every month There is some talk of a few recumbent riders turning up to 'ave a go at the 25km time trial next time. All standards are welcome apparently and the entry fee is small about \$5 or thereabouts - (less than \$10 anyway). I'd been up there a few years ago and Glenn Drury rode there recently on his Optima Baron but wants to have another ride now that he has more of the "bent legs" stuff. If anyone is interested contact Tony Jack 02 9845 6857 (w) 02 9518 8252 (h) or Ian Humphries (02) 9550 2805 (home) NOTE: Tony is organising a velodrome meet here in few weeks time - on a nice shallow banking 'drome suitable for triking etc There is a suitable 'drome at Hurstville and Lidcombe (\$33/hr or \$187/day) - anyone know of any others? (Tempe is too steep for trikes and the Camperdown one is closed and too steep!)

August 2002: Speed weekend for record setting. Flying 200metres, 1,000m, etc. Possibly at Bredalbane (near Goulburn) on the Old Hume Highway. Get your fairings and lowracers ready for this one. There is also the possibility of incorporating an afternoon of velodrome track racing at Goulburn to make the weekend more appealing to those travelling from locations other than Canberra or Sydney. For more details contact Peter Heal Ph 02 62884103 - [heal@cyberone.com.au](mailto:heal@cyberone.com.au)

## Sydney Recumbent Riders

Sunday August 18th - Contact Tony\_Jack 02 9845 6857 (w) 02 9518 8252 (h) [Tony\\_Jack@wsahs.nsw.gov.au](mailto:Tony_Jack@wsahs.nsw.gov.au) or Ian Humphries (02) 9550 2805 (home) [srr\\_ozhvp@yahoo.com.au](mailto:srr_ozhvp@yahoo.com.au)

Sunday August 18th - Recumbent social ride. More info to come. Contact Tony\_Jack 02 9845 6857 (w) 02 9518 8252 (h) [Tony\\_Jack@wsahs.nsw.gov.au](mailto:Tony_Jack@wsahs.nsw.gov.au) or Ian Humphries (02) 9550 2805 (home) [srr\\_ozhvp@yahoo.com.au](mailto:srr_ozhvp@yahoo.com.au)

## The All Schools Pedal Prix Championship Queensland

2nd-3rd August: The Pedal Prix for 2002 is likely to be at the Gold Coast City Cycling Complex Nerang, Gold Coast Queensland. Contact John Careless at Merrimac State High School Dunlop Court Mermaid Waters QLD 4218 Phone: 07 5572 2700 Fax: 07 5572 8450

[indtech@merrimacshs.qld.edu.au](mailto:indtech@merrimacshs.qld.edu.au)

<http://www.merrimacshs.qld.edu.au/pedalprix/index.html>

# For Sale

\* Dual suspension Bike-E FX model. \$1900 ono, Melbourne area. For info contact: Harry at [travellingspirit@yahoo.com](mailto:travellingspirit@yahoo.com)

\* Having been lured into one of IanH's new FF machines, it is time to part company with my trusty SWB. This was designed and built by Ian. It has above seat steering, 20/26 wheels and a solid seat, and adjustable boom. Just been overhauled with lots of new parts . It comes complete with: Custom underseat racks (which take 'front' panniers), Blackburn expedition rear rack, Sachs drum brake on the front (also has brake bosses for rim brakes), cantilever on back, bar end shifters, custom 21 bottle holders, mudguards, dynamo mount, new corflute tailbox and 45 degree seat. Currently 21 speed. 26"-118" gear range. Very easy upgrade to 8 speed rear - just change the cluster. Just about to be powder coated (get in touch quickly if you want it any colour other than black) This is a fast (4th at the 2000 OzHPV challenge - will happily see off the roadies), comfortable commuter and tourer. Very good handling. Aesthetically a little rough in spots, but structurally very sound. Asking \$1500. ph (02) 9518 8252 (AH), (02) 9845 6857 (BH)

If this Newsletter cannot be delivered please return to:  
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1 Court Street  
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