### **Letter from the Editor**

Well looking at the list of events coming up in the second half of the year (Not including the Olympic games) it looks like it will be a busy time for many. Why don't you plan it so you can attend at least one of the OzHPV major events.

I've been reading the minutes (http://home.vicnet.net.au/~vichpv/) of the meetings to organise the Challenge in November and there's plenty of preparation going into it - should be a great event. Posters available soon!!

**Timothy Smith** 

### **Bits and Pieces**

\* Just a note to say the BHPC are running the IHPSC around Brighton UK, 2nd to 5th Aug. 2001. Info on our website **bhpc.org.uk** - as it comes in.

#### Jonathan Woolrich

\* Just in from the HPV Cantebury web site(NZ): We have heard from the Fringe Games organiser that these will not proceed this year, due to a lack of sponsorship, which is rather a shame. However, since "this is much too good an idea to just let go", he is still hopeful of getting it to happen at a later date. Given the scope for some interesting HPV activity in these Games, we will keep an eye on developments.

The Fringe Games® is an International Festival of new and experimental sports. The first International Fringe Games was expected to take place in Christchurch, New Zealand from the 8th to the 11th of September 2000, a week before the Olympic Games.

http://www.fringegames.org/index.html

Continued on page 5

### Solar & HPV 12 hour

We have had interest from several solar cycle teams, plus some fast HPV teams that intend to show that pure human power is fastest... The 12 hour race for solar cycles and human powered vehicles will be held in Canberra on 23 and 24 September 2000. The race is run for 6 hours each day on a closed circuit and the winner is the vehicle that completes the greatest distance over the two days. (If the V8 super car people can run two 100km and one 200km races in Canberra and call it the GMC 400, I don't see why we can't call two six hour races a 12 hour race!)

The race is open to both solar cycles and human powered vehicles and we expect an interesting range of faired and unfaired recumbent bikes and trikes as well as solar cycles.

The event is organised by OzHPV who have held events in Canberra for the past dozen or so years. For the past two years we have held a six hour race for human powered vehicles. This year we are doubling the time period and opening the race to solar assisted cycles as well as pure human powered vehicles.

The circuit is a 1.5km bitumen driver training track on Majura Rd, outside Canberra. For those that know the Sutton Rd circuit that has been used by OzHPV in the past, this one is much flatter! Also, you can see the whole circuit from anywhere around the track.

Like all the OzHPV events in the past, while there is an element of competition, I hope this race will have an air of fun and friendship associated with it.

The dates for this race coincide with the final weekend of Olympic soccer in Canberra, so accommodation might be harder to find. There are some basic facilities for camping at the track and I expect some teams will stay there.

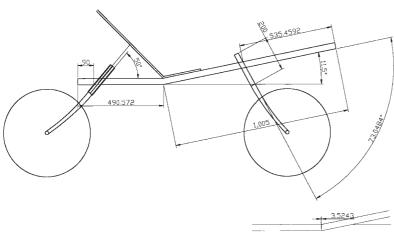
Please contact me for an application form or if you need any more information. **Chris Curtis**, 5 Caddy Pl, Florey ACT 2615, 02 6259 2560, **ccurtis@sba.com.au** 

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# **Recumbent Bike by Steve Nurse**

"Here are a few photos and drawings of my latest bike. The ideas for it came after fiddling round with making frontwheel-drive, twisting chain design bike.



remove 7mm of material

This type of fwd design minimises distortion of the fork by placing a pulley at the top of the fork (the chain compresses the fork). Why not do the same thing on the back wheel instead?

A dodgy prototype and a bit of sketching later and I am ready to order parts for the bike. I always find that spending some money on a bike project forces its completion, if you don't finish it your money is down the gurgler! Eventually the parts were ready and I went down to Michael Rogan to pick them up. A 3 speed Sturmey Archer AW hub on a rear wheel and a new front wheel, both with comp pool types and velocity rims, 3 lengths of chain, forks and v-brakes were among the goodies.

The drawings show the way it ended up. 20" fork on both front and back wheels, a derailleur in the middle of the bike, seat supported by a piece of handlebar and some door-stoppers mounted on a long handlebar stem, back part of the frame horizontal to support a corflute fairing.

The tube used to make the bike is square, and in two sizes which are a size-to-size match, so there is no jigging required. (Refer to page 14 of Huff, Jan '99).

The back fork is held tight by:

- \* The bolt the pulley is mounted on A clamp at the top.
- \* A 'no bearing headset assembly' which makes the fork a knock-out-fit. (i.e. it doesn't rotate).

The back of the bike is loaded less than the front which is just as well, "Recumbent Cycling News" says, "unsupported rear frame stays .... flex with each bump ...

(and ) will eventually fatigue". My design has a hole drilled through the back fork as well, (something that weakens the fork) but what the hell its my bike and I'm happy with it.

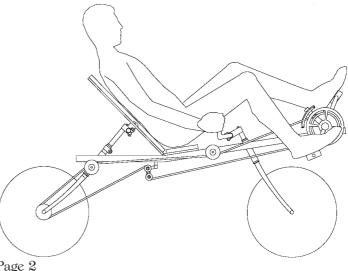
The bike has 52 + 40 teeth on the front and 16 on the back, with the sturmey gears, the 'equivalent teeth' on the back are 12, 16, 21.3.

> Wheel diameter is 50cm so development is 678, 512,383, (521), (393) 295 cm or equivalent wheel diameter is 85, 64, 48 ( ) ( ) 37 inches. (RCN recommends 120+ to 20 inches.) The range on my bike is modest with only 4 useful gears however there are heaps of options for upgrading i.e. bigger range on the chaining, 7 speed hub gear all the way up to Rohloff 14 speed

> Reference: RCN March/April 2000: How to buy a recumbent Bicycle by Bob Bryant."



On test near Warburton, Jeremy Lawrence left, new bike and Steve Nurse right. Photo by Rodney Williams.



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# **HPVelotechnik Streetmachine GT**

On the recent Melbourne Recumbent Riders weekend tour, I had the opportunity to test ride the new HPVelotechnik Streetmachine GT. The ride was on the Lilydale to Warburton rail trail, and Harry Gordon did an excellent job of organising it and acting as the tour leader. Paul Sims had the pleasure of piloting the Streetmachine for the weekend, courtesy of the

Australian importers, Greenspeed.

The bike is a c l a s s i c European high bottom bracket SWB, with a c o n t o u r e d "hard" seat and direct under seat



steering. If you squint, you can tell that it's design draws quite heavily from Steve Nurse's range of homebuilt SWB's. Notable features were the Magura Louise front disk brake, and the springy plastic open weave mesh seat lining, which did much to improve the comfort of the hard seat. Full suspension was provided by Ballistic forks and a rear swingarm. This Streetmachine is the new GT model, which has an improved pivot point location for the rear swingarm, producing a "no squat" design.

My ride confirmed the lack of pedal induced bob, but this may have been because the rear shock was incorrectly set for my meagre weight. Paul Sims is a good deal taller (and thereby heavier) than me. The seat was comfortable, especially with the steep recline angle, and the handlebars suitably ergonomic. From the rear of the bike, the handlebars appear very similar to ones on Greenspeed trikes. The steering appeared quite

heavy, but the stability was so good that minimal input was required to steer the bike. I could just rest my hands and "think" my way around gentle corners. The trail must really be dialled in. This observation should be considered in the context that I had just hopped off my homebuilt CLWB, which has very twitchy steering, and almost zero trail!

The amazing thing about the Streetmachine GT was that I was able to perform balanced, controlled rear wheel lockups and slides. The Lilydale-Warburton trial is hardpack



Paul Sims on the Street machine

gravel, with some sections loose gravel. I was experimenting with the rear brake, and started to slide, but found that as the bike was sliding, I was still perfectly balanced. Excellent!

The front Magura Louise disk brake seemed a bit soft, and I couldn't manage to lock up the front wheel, but then again I didn't try extremely hard. Paul Sims also noted that it seemed a bit soft, but perhaps it was a new brake that just hadn't bedded in yet.

Overall, this is a very nice bike. See you on the next ride.

Jeremy Lawrence Mechanical Engineer



### For Sale

\*20/60" Greenspeed copy (no front brakes) (also a buyer may be interested in a 16/16" trike he has) \$500

Stewart Strik, Dapto NSW, 02 4261 4088

- \* Recumbent Bicycle (ED. Similar to Peer Gynt I think), long wheel base, 21 sp, GC -\$700 Chelmer 3379 8569 or (0418) 960 450, Queensland.
- \* Brand new Greenspeed touring trike, only ridden twice. Royal blue frame. Top of the line components, including Campy bottom bracket, and crankset, Suntour brake levers, bar-end shifters, computer. Brand new rear wheel (never been used) \$3,500 aus\$. On display at Col's Bike shop in Canberra. Call **Brad Saindon** Day:6214-1031. Night 6253-0005.
- \* A Dutch built Rolandt Superb, in excellent condition, painted silver, 5 speed derailleur with a two speed hub. Its got 26 inch rear wheel and 16 inch front but I have the original metric wheels as well, it has a glass fibre bucket seat with a sheepskin cover and I am open to offers. Alan Naber Perth WA Ph 089 332 3956.
- \* Greenspeed short wheelbase bike, rare mid-drive, Sachs New Success pro road double derailleurs and crankset, 35 speed wide range/ close ratio gear system, Sachs alloy-hub drum brake system front and rear, above-seat steering, all-Reynolds 531 custom frame with powdercoating and mesh 30-degree seat, excellent condition, retail price is \$3700, make reasonable offer. How does half price sound? This is a very responsive, fast and sporty bike; lighter, more aero and more practical than a trike. Private sale. Grant Sellek Adelaide. grant.sellek@transport.sa.gov.au

# **Ackerman Steering Compensation**

...The idea of having the steering arms intersect at the centre of the rear axles is only a rough approximation which MIGHT be appropriate for certain (traditional?) steering linkages, given certain other (traditional?) factors. IMO, the use of this scheme, in ignorance of the Ackermann principal, is asking for trouble.



Ackermann steering is very simple in principal. All you have to do is make sure that the projected axis of both the rear wheel(s) and the front wheel(s) meet at one point, when the wheels are turned at some angle for steering, in plan view.

This requirement is completely fulfilled by a simple "billy cart", "soap box" or "stage coach" type steering where the front axle is pivoted at it's centre.

However this type of steering gives the worst "kick back" on bumps, and the most violent pull with front brakes and uneven braking, thus the development of "stub axle" steering.....

A trike with two rear wheels and one steering front wheel will also satisfy the Ackerman principal, which is why that type of format is used - the steering is easy to produce - a bike fork will do!

To design an Ackermann type steering with stub axles you really need to calculate or plot the steering wheel angles as the steering is turned, and adjust the linkage angles accordingly.

Bob, the forward facing, cross over steering I designed for the Greenspeed trikes, and which has been copied by a number of other manufactures, has the arms facing IN, not OUT!

In this type of steering, just like conventional steering linkages, the Ackermann compensation is achieved by having the angles on one side approach a right angle, while the angles on the others side depart further from a right angle. This has the effect of speeding up the turn of the inside wheel, while at the same time, slowing the turning of the outside wheel.

The actual angles used will depend on a number of factors, like the position of the handle bar pivot, the length of the rods and arms, and the track and wheel base dimensions. Thus our solo trikes have quite different steering geometry to our tandems trikes! And is different again on our hand trikes, where the

pivot is in front of the cross member.....

For people who want to built a trike, but can't be bothered with all the physics and maths, we offer our plans - see our web site for details:-)

Ian Sims, Greenspeed

# New Greenspeed GTO Touring Trike

While I've had no problems sticking my GTR Touring trikes oncar roofs, or on board planes when I've had to travel with them, we

have had customers who would prefer to put them IN their small cars, and people who would sooner front the airport check in counter with suitcases, rather than a bulky trike.

We've also had customers like Zach Kaplan, complain that the GTR does not corner at high speed as well as the GTS Sports Tourer.

We've also had a few complaints about the \$700AU necessary to air freight our trikes to the USA and Europe, due to the volume they occupy.

So, sitting beside me in the office, waiting to have it's photos taken in the morning, is the new Greenspeed GTO Touring Trike!



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Last year when Paul Sims raced at the National HPV Challenge, in Canberra, he decided the best all round machine to use for the many different races, including the off road race, would be a lowered GTR trike, with just a nose cone fairing. So he built just that, and was rewarded with overall 1st place!

The GTO is virtually this machine with the addition of one S&S Bicycle Torque Coupling, which enables it to be packed down into two suit cases with enough room for all your clothes as well.

We have used the dropped frame of the GTS to give even better road holding and handling than the GTR, yet retained the high backed seat of the popular GTR to give more comfort, than the short seat of the GTC.

And for those interested in speed, but who prefer the more upright seat of the GTR, I can tell you, that with the nose cone, you will be at least 5kph faster than with the bare GTR.

Perhaps the best news is the GTO is only \$250AU more than the GTR...

So now you can have your cake and eat it! A touring trike with the performance of the GTS, the comfort of the GTR, and packing of the GTC.

Maybe now is the time to plan that holiday you've always promised yourself in exciting far off lands :-)

Happy riding!
Ian Sims
ian@greenspeed.com.au
http://www.greenspeed.com.au

# Renewable Energy Fair/2000 Bayer Solar & Advanced-Technology Boat Race

29th April 2000

Canberra in autumn is a beautiful city. The temperatures are moderate and the brilliant displays of changing leaf colours are inspiring. As I motored to the site with a trailer load of recumbent display materials, I had less regard for the fog. It was thick, cold and moist - my bikes which I had so carefully washed yesterday were a blanket of dew and dust which dried during the day into an apparent film of neglect. Meeting With fellow Ozhpver Chris Curtis we quickly set up our stuff on the bushed site inside the fog beside lake Burley Griffin. Not the most auspicious start to a solar boat race.

The event kicked of properly when celebrities Julie McCrossin and inspirational solo sailor Jesse Martin were winched from onboard a naval helicopter into the Sunboat II. Quite a chase as the downdraft kept pushing the light watercraft ahead of the copter. After the celebrity drop the helicopter dropped some divers to blow up a mine that was anchored off the shore happens all the time in Canberra so we just politely looked the other way, sipping our cuppacinos, as the macho blokes got on with the demolition. Soon afterwards the boats streaked or crawled off (depending on their power and tactics for the 5 hour endurance race.

By this time the fog had lifted into a perfect coolish calm sunny day. Apparently this is ideal Photovoltaic Weather. Duncan Cleland arrived with his hpv tandem as the crowd start to mill around the many displays of hardware and corporate information. As part of the Science Week program, there were displays from the Australian national University, the CSIRO Double Helix Science Club and the Questicon Science circus. Other industries and small businesses on the way up provided hot water panels, inverters, commercial solar boats, monitors and other strange and wonderful devices that will soon grace all our houses. The Australian GreenhouseOffice, SOLARCH. Solar Systems, ACTEW were there as were lobby and scientific groups like Sustainable Energy Association, Aust and New Zealand Solar Energy Society

We were positioned between the Electric Vehicle Association and the RACV Energy Breakthrough - so we had two electric assist HPVs, one pure electric racer and three pure hpvs in front of our array of books, magazines and displays. Duncan took several interested visitors for a ride on the back of his (Kotzur) recumbent tandem. The questions we were asked seemed more genuinely (instead of how fast does it go?) intrigued, and we had a good time.

The enthusiasm of the day made the ACT chapter of OZHPV decide to proceed with our hazy idea for a two day endurance event for HPVs, pure electric and Solar-assist vehicles during the September holidays. The course is booked for 23/24th September. It will be at the Majura Road Police Driver Training Course (a new course to the previous Challenges), which is a smaller flatter course set over a gentle slope, so all parts of the course are visible. It offers very good facilities, and camping will be encouraged.

Contact Wayne Kotzur for more information

Continued from page 1 - Bits and Pieces

\* MR Components (Swift trike) now have a new Internet web site at

http://www.peninsula.starway.net.au/~mrogan/

\* Andrew Hooker has just started up a new Internet Yahoo Australian Recumbent Club. Check it out at:-

http://clubs.yahoo.com/clubs/australianrecumbent

# **Australian Speed Attempt Update**

25/5/2000 - Fairing is still a plug mold. We have yet to make a female mold and then male product so no weights yet....People working on it to this stage are Peter McManus, Tony Jack, Ian Humphries, Ken Wilson, Mike Buick, Giles Puckett.

Two shots by Mike Buick of the new fairing plug:



Being shaped by designer Peter McManus (it's based on his uncompleted solar/electric/HPV)

It's been shaped to fit my laid-back low racer SWB (sorry about the perspective) Any comments? (apart from it will be difficult to see through the windscreen with it at such a steep angle - we know that!) It is hoped this will be fast enough to set an Australian speed record or several with a good rider.....The rear half will eventually be modified so we can make some nice (tall) tailboxes to suit other low racer SWBs. And then a new front



top section will be remodelled / lowered so as to have head / knee bubbles and better forward viewing....

### Ian Humphries

# New 6 hour World Record

Axel Fehlau covered 356.929km in 6 hours, an average of 59,49km/h, at the Opel AG test track in Dudenhofen on 7th May 2000.

Axel Fehlau, already the holder of several HPV world records, has set another milestone. On the 4.778 km long course he beat

the previous record of 329km (54.9km/h), set by Ymte Sybrandij of Holland, by more than 27km.

The record was made possible by the "White Hawk" a fully-faired recumbent bicycle developed and built by the Institut für Kunststoffverarbeitung (IKV) at the RWTH Aachen, in cooperation with the Vector Racing Team and under the direction of Guido Mertens. Last summer the same vehicle was used by professional cyclist Lars Teutenberg to set a new one-hour speed record of 81.158 km/h.

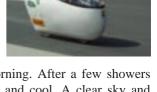
Guido Mertens and the riders of RSC Speedbike BGL e.V. used the winter to further develop the vehicle, in particular the airflow and tyres.

Know-how also came from the firm Continental, which has developed special tyres for HPV record attempts, optimised to



reduce roll resistance.

Under the watchful eyes of IHPVA observer Martin Staubach, Axel Fehlau set off



on the track at 6.03 in the morning. After a few showers overnight, the day started fine and cool. A clear sky and comfortable temperatures characterized the first two and half hours of the record attempt. With the sunshine came rising temperatures which peaked at about 25 degrees Celcius, while the humidity sank to a comfortable 30%. Within the vehicle, however, a subtropical climate was developing.

As Axel Fehlau climbed out of his vehicle after 76 laps, the temperature within the fairing was 38 degrees Celcius, and the relative humidity 100%.

Text by Stefan Goroncy, edited by Bernhard Graf. Photos by Stefan Goroncy.

Further information about the 6-hour Record and the RSC Speedbike Bergisch Gladbach e.V. can be found at http://www.speedbikebgl.de

### **Coming Events**

### **Melbourne Recumbent Riders**

VIC DOWNHILL DAY, Sunday July 9, 2000

The next Melbourne Ozhpv ride will be a downhill day, i.e. riders and cycles will be driven to the top of a big hill, then let go for a fast ride down, we should get in 4 or 5 downhill runs in the day.

\* For Safety reasons, the ride will not be held if its going to rain, I can be reached on my mobile on 0409 836271 on July 8 and 9 to let you know if its a goer.

\*There will be a cost of \$10.00 per rider to cover the cost of trailer hire and petrol. Because of the costs, we need at least 10 paying participants before we go ahead.

Please register you interest as soon as possible by email so I will know numbers.

Please let me know if you can offer lifts during the day, use of a trailer, or have a gutsy towing vehicle.

Costs will be reimbursed.

\*Phone 94818290 for meet time or see http://home.vicnet.net.au/~vichpv/

\*Note that there will be an entry form for the day, by signing the form you will acknowledge that the ride contacts cannot be held liable for any injury or damage resulting from any ride activity. Riders under 16 should be accompanied by a cycling adult.

### **Sydney Recumbent Riders**

Sunday August 6th (This date has been brought forward) because I'll be touring later that month. It will be a Centennial Park meeting - starting at NOON and there will be a 80-90km ride happening before the meeting - starting in Newtown heading south via the airport cycle route to Brighton, Sutherland and Waterfall and back through the Royal National Park. Please contact me to confirm the details of the ride and meeting \_at least\_ one week prior to the ride. Gatherings cancelled if raining at 8am. Ian Humphries 9550 2805

August-September-Sydeneee OzHPV's three week recumbent tour of the WEST - that's west of Adelaide mind you. Yes Sydney OzHPV goes very very west. I have 4 very 'bent people signed up already for a 3 week unsupported ride from Perth to Adelaide to help me overcome thesis blues. Limited numbers. Fast, experienced tourists on recumbents only for this one. 2700km = 140-200km per day. Contact me asap if you are interested, capable and fun to ride with ;-). Ian Humphries 9550 2805 IanH@nch.edu.au

July 29th - A fun ride with BikeNorth, alongside Bike North's Keith and Fran and maybe Kevin on their Greenspeeds....Decorate your HPV and get out there! I'm going to try to get there too.:-) Carolyn New wrote: Yes, Bike North will once again participate in the Hunter's Hill Moocooboola Festival and Parade. So, everyone, put this date in your diaries now, SATURDAY, 29 JULY!!!!! I'm coordinating our participation in this event so if you have any further queries please contact me. Festival itself is from 10am

to 4pm. Detailed information on the parade is not available as yet but to assist your planning here is some preliminary information. More details much closer to the date: The parade itself will start at 11:30 am with the official assembly at 11:00 somewhere in the Peninsular area i.e. parade will not go over the road over-bridge. The Bike North paraders will plan a much earlier assembly time and there is a proposal to ride around the surrounding area before the parade. Kids will be welcome for the parade itself but probably best not on the preliminary ride. **carolynn@ihug.com.au** 

#### WA HPV

The meeting place for Fremantle recumbent riders is every second Sunday at 9:00 AM at Gino's Cafe on South Terrace, Fremantle (it's on the cafe strip). If you are in the Perth area and have a recumbent or are interested in recumbents, be there! We're there a couple of hours eating breakfast, drinking cuppacino and talkin' bents. E-mail Geoff Law geofflaw@bigpond.com or Gary King ocean@wantree.com.au if you have queries.

### **Tasmanian Recumbent Enthusiast Group**

We still haven't really got any activities planned as quite a few of our members have been spread over the State. If you're touring Tassie feel free to drop in - we'd love to see other HPV'ers and may be able to get out a little with you. Contact Timothy Smith 143 Upper George St, Devonport Ph 0364234559 or Ph 0362787247 Richard Hoad in Hobart.

### The Australian International Pedal Prix

Scrutineering: Friday 8th September 24 hour Endurance race: Saturday 9th, Sunday 10th September Held at Sturt Reserve, MURRAY BRIDGE, S.A. http://www.nexus.edu.au/TeachStud/aipp/

### OzHPV 12 hr & Solar Challenge

23-24 September: The race will be open to human powered vehicles and solar cycles with teams of up to six riders. The 12 hours of competition will be made up of six hours racing each day.

The race will be held at the Majura Rd driver training track near Canberra. This is a different track to the one used for previous HPV events in Canberra. It is a bit shorter - 1.5km - and much flatter.

Further details and draft regulations can be obtained from http://www.ozemail.com.au/~jcurtis/12hour or call Chris Curtis on 02 6259 2560.

The Sydney fully faired speed record machine will hopefully have its debut at this race.

#### The Australian International Pedal Prix 6 Hr

Sunday 5th November: 6 hour Sprint race held at Sturt Reserve, MURRAY BRIDGE, S.A.

http://www.nexus.edu.au/TeachStud/aipp/SPRINT/welcome.htm

### **OzHPV** Challenge

11th-12th November: After 10 years at the Sutton Rd. Driver training centre, the annual Hpv Challenge is on the move, and Ian Knox has started a small committee to organise next year's event at DECA (Driver Education Centre of Australia) in Shepparton. This is a closed road centre with skid pan, undulating road circuits, dirt roads, on site barbecue and plenty of room for come and try sessions and sponsors tents, car-parking etc. The circuit is not hilly so no hill-climb event is possible. Mark has given permission for us to use the mall for Sundays events i.e. (shopping race, twin drag, criterium, slalom). The mall has a P.A. System and a small stage for presentations etc. This stage and traffic management would be handled with the assistance of Shepparton Council Staff at no cost to Ozhpv. Plans are at a very early stage, any ozhpv members are encouraged to participate in this committee, sets of meeting minutes are available, just email Steve Nurse. Some meetings will be held during Melbourne HPV group rides and will include Vic. group business, i.e. next month's ride, coming events. Next Organisation Meeting held on Monday 10.7.2000 at Jeremy Lawrence's house, 71 Wellington Street, Richmond, 7.00 p.m. Phone No. AH (03) 9428 7554 Please make own arrangements for dinner.

Melbourne HPV riders have been meeting regularly over the last few weeks to organise the challenge.

We have a rough schedule of events, including a few that will have prizes but won't score points in the Challenge overall. More info at

http://sunsite.anu.edu.au/community/ozhpv/aboutchallenge.htm http://home.vicnet.net.au/~vichpv/

#### **Tentative Schedule**

### Sat 4: Deca, Shepparton

- 9.30 Time Trial
- 10.30 Road Race
- 11.30 Off Road
- 12.30 Skid Pan Race (not for points)
- 1.30 200m drag
- 2.30 200m sprint
- 3:30 Mystery race (not for points)

#### Sun 5 Maude St. Mall, Shepparton

- 9.30 Dual slalom
- 11.00 Criterium
- 12.30 Slow Race (not for points, trikes may enter if they stay on 2 wheels)
- 1.00 Expression Session (not for points)
- 1.30 Shopping race
- 2.30 Devil take the hind most / Last Man Out (not for points)

### The Death Wobble

By Steve Seller (The guy that does the photo's)

You may remember Orange Roughie as ridden by Ian Knox at the '97 HPV Challenge at Canberra. You may also remember Ian crashing Orange Roughie in the endurance race.

After some straightening and touch-ups Ian offered the frame for sale; I couldn't resist. In an excited rush to get my new machine going I decided to give it a test run with no webbing on the seat and no brakes.

With a debilitating pain of the seat frame pushed to the back of my mind I prepared for flight. Less than a metre across my shed floor my ride quickly came to a halt. In an attempt to regain my balance I planted my right foot firmly on the floor but it was to no avail. With the concrete quickly approaching I planned my decent. A combination of no shirt, plenty of sweat and a graceful roll, left a layer of dirt attached to my back. My girlfriend's mother and 4 year old sister both found the whole event quite amusing.

We all know how hard it is to balance a 2 wheel recumbent. Add to this a disabled right arm, 2 week legs and poor balance and you can understand my bikes new name" 'The Death Wobble'.

If this Newsletter cannot be delivered please return to: OZHPV Inc Post Office Box 1053 Auburn NSW 2144

