

HUFF



July-August 2001 - Volume 4 - Issue 4

From the Editor

We're going for something a little different this HUFF and including plans for a trike. What would you like in following editions? We're looking for some feedback. What do you think of the use of recycled paper? (it does cost more) Are you happy with it stapled instead of a folded A3 sheet? Bernard Weir does the printing at no charge to OzHPV so once again thank you Bernard.

In following editions we expect to have an article on a home built tandem, a Reflex trike and possibly a power assist article or two. Keep sending those articles in!

Timothy Smith

6 Hour Event?

Amongst the friendly chat which took place on top of Mt Stromolo last Sunday there was a suggestion that the Canberra section of OzHPV organise a 6 hour event later in the year as a warm up to the OzHPV Challenge which is early in December. I'm interested in taking this further and will make some enquiries regarding course availability. The thing is are YOU interested in helping with getting such an event going???

So far the lack of response to my suggestion has not been encouraging. Anyway, via the ACT Veteran Cyclists I have been able to obtain contact details for booking the Majura Lane venue if we ever want to organise an event there. It costs \$380 approx. per day, so we would need to be sure of attendance of sufficient entrants before we went ahead. There is a possibility of sharing the venue for half a day with ACT Veterans as well - they think the fee is high also.

If anybody feels inspired, I am planning on riding out there for a look when the ACT Vets have a wedgie race on Saturday 14th July. Probably leave Acton Ferry terminal about noon. Call to confirm.

Pete Heal - Ph 0409605101

Logo Recumbent Trike

The other day I had the pleasure of trying out, albeit briefly, the latest trike to be engineered by Martin Arnold of Western Australia's LoGo Trikes.

The design is constantly being fine tuned and, I believe, is now developing into a real contender in the "Home Grown" Trike stakes. This is Martin's first excursion into CroMo and I must say the finish of the welding is 1st Class. The cross tree has been revamped and is now straight, which lifts the rider to closer that of the motorists eye level. The steering geometry has been infinitesimally tweaked and now boasts a much tighter turning circle, under 4 metres, I shouldn't wonder. Also it appears to be much more responsive to small deflections of the handlebars, helpful when trying to avoid glass or potholes in the road. Another change over previous models is the extension of the seat mesh forward over the down-turn in the seat tubes.

This might sound insignificant but the difference to the comfort at the back of your legs certainly isn't. All in all, one heck of a machine, well done Martin, stand up and take a bow!

Mike (Trike) King.....long time owner/driver of GTR2020 / #170



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And from Martin Arnold...

I began as a tradesman fitter/welder about five years ago by building handpowered trikes, both tadpole and delta, and selling them through the local disabled community. I haven't built any now for a number of years as they are very slow sellers, complex and time consuming to make. Each one had to be made for the clients specific physical disability. I had very little in the way of facilities and tools (something which was the case until very recently) and I just ran out of steam making them.



I bumped into Mike King about three years ago and the first thing I asked him was if the thing he was riding was a 'Speedy'. I'd never seen a Greenspeed but I knew I'd seen something in a mag somewhere. One thing led to another and I found myself building Logo# 1, the yellow one. Andrew Hooker pinched it to do a hack around for 1700 km over east and then being enthralled with the thing, did a write up which ended up in OzHPV. From this very humble beginning I went on to build trikes for locals until I got to #007 (Andrews). I wasn't really enjoying it, my facilities and tooling hadn't improved and the whole thing was a drudge. Domestic pressures were becoming intolerable, and I gave the whole thing away late last year.

As luck, or circumstances would have it, a few months ago, I came up with a few bob and encouragement from an unexpected direction, and this, coupled with the relentless ear bashing I was getting from the fraternity about continuing production, prompted me to restart the engine.



So, this is where we are now. Registered as a business, new equipment, commitment to 4130, new designs, and the possibility of a future in the manufacture of HPVs. We have just one model at the moment, a tourer/commuter model, but there are other ideas in the pipeline. A four wheel full off road machine, a 'lean trike' and some sort of low racer, are all things

we have discussed. In the meantime of course, we will be offering our standard model, and try to cater for specific requirements.

We want to offer a complete package to HPVs - anything from a metre of 4130 to a complete trike and beyond. Its taken Ian Sims 10 years of hard push, and I don't suppose it will be much different for us, assuming that we even get close! The HPV movement is gathering pace and these funny looking machines are at last becoming acceptable. Our job, as manufacturers, is to make HPVs not just acceptable, but a highly desirable statement of awareness. Governments world wide, some more than others, are waking up to the fact that cycling and in particularly



'recumbency' isn't going away, and that it would be a handy vote-puller to build a few more cycleways instead of a few more motorways. This might still be a dream now, but what of the future???

Martin Arnold
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Email:

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Human Powered Vehicle World Championships

To be held in Brighton in the UK 2nd to 5th August Info: www.bhpc.org.uk/ Last week, the HPV World Championship event organisers emailed details of the vehicle classes at that event. They will be the same as the British Human Powered Vehicle Club rules which means that, importantly and for the first time, there will be a MULTI-TRACK (or TRIKE!) unfaired class at the World Championships!! On ya trikes lads and lassies!!!!

And just before the HPV-World Championships there are a few other events that will be worth attending, including "Spokefest" which is a large UK cycling festival (July 28 and 29). And for those into Audax riding (like me ;-)) there is also the 1400km tour of London-Edinburgh-London just before that! Fun fun fun!

It'd be great to see a few other Aussie trikers at these events!

Ian Humphries

DART Handcycle

This is not a fairytale or a contrived story from the imagination, this is about one lone warrior who has risen from the ashes, who sits upon a hilltop at sunrise, flag flying, nostrils flared, an air of triumph. It is I Ray, on his DART a handcycle conceived from a desire to be free, designed and built by Michael Rogan of MR Components at Hastings Victoria.

Let me take you back ten years, bewildered and frustrated, what to do! what to do! With the help of dear friends and family, we made our first recumbent from old bicycle frames and parts, crude but serviceable. Venturing on to make 3 more I was hooked. Unfortunately they all had a Scare Factor especially going downhill.

The Realisation! That professional help was needed. I looked what was around in the market place , it was either too big or too pricey.



That's when I found Michael in my own hometown, I couldn't believe my luck. After a few discussions and some weeks later I'm riding safe and secure, exploring parts of Victoria I would never have been able to see "walking".

The DART is a 16" wheel trike with quick release wheelchair hubs on the rear wheels for easy fitting into the back of my 3 door hatchback. The front drive wheel has a 3 speed internal hub and 7 cog cassette, the chainring has 32 teeth with option a 24

teeth for the steepys, 42 gears all up. Brake and shifters in easy reach and not too far, a Quench away. Foot and crank give great steering, under 3, metre turning circle. Mirror to see the past, horn to warn the future, great for a body work-out (move over Arnie!!)



Many thanks to Michael Rogan for his generosity of time. There's always a solution, move forward.



Specifications

- Turning circle** - 2.5 m
- Weight** - 13.5 kg in steel (63 speed)
Aluminium model expect 11.5kg
- Track width** - variable 550mm - 700mm

Raymond Searle

Bits & Pieces

◆ I will be away cycle-touring for a few months using up my long service leave.....so August and October Sydney OzHPV group meetings will be co-ordinated by "Tailbox" Tony Jack!! He can be reached at 9845 6857 between 10am and 5pm or email: Tony_Jack@wsahs.nsw.gov.au

If you want to reach me in the future by email please write to me at ianrjhumphries@hotmail.com as I'll be jobless but hopefully not destitute when I return from OS.....

Ian Humphries

◆ Do you think it a good idea to register the OZHPV.ORG.AU name on the Internet? I've got no idea how much it costs but it could be a good move for the future.

Peter Heal

OzHPV Canberra 'Family Ride' 1/7/2001



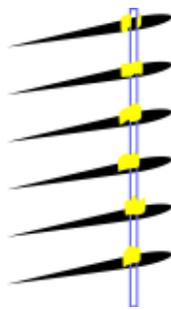
A Safety Sail for producing thrust

This article details my efforts at making an aerodynamic safety sail. It's wise to use safety flags when riding recumbent vehicles. Recumbents present a smaller profile to traffic and are below the drivers line of sight when reversing. The flags have a disadvantage - they're not aerodynamically efficient. Quite frankly, I find the flapping of two flags quite annoying.

What if we could present a large visible surface with minimal wind resistance? I was motivated by the fin on the 'Carcycle' to design this safety sail. Even though it's small, this fin also produces thrust on windy days. This was my first and I'm in the process of building a larger improved version.

A word of warning: You must decide on the size of fin that will not destabilise the trike in cross winds. I added front wheel discs to balance the side thrust. Experiment in areas with no traffic before exposing your rig to the streets.

Choose an airfoil, decide the size you want for your safety sail and accurately cut six to eight ribs from corflute. The centre spar is an aluminium tube - round or square. You'll have a rib at the top and bottom and the remainder equally spaced. I used six ribs on a one metre spar.



On my 'Swift' tadpole the first sail was 1/3rd of a square meter. Experience suggests that double this will be most effective without overpowering the trike. That's about 1.2 metres tall and 500mm wide.

To make the sail follow the wind direction strongly, mount the tube through the forward part of the ribs. An easy way is to mark one rib, stack them and push a sharp point (awl) through all of them. Cut a cross with a Stanley knife centred on the spar. Cutting a cross rather than a hole helps hold the rib on the spar while you line it up.

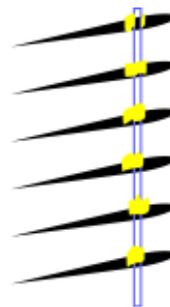
The top and bottom ribs need to be reinforced. I found this out after I'd built my prototype. Drill a hole below the top rib and above the bottom rib to take a thin piece of aluminium tube or square. Ensure that the holes are lined up with each other - run a pencil line down the tube.

Make it a tight fit and to length as shown. This tube will take the pressure applied by the sheet. You can make the bottom tube longer and flatten the end to take a clip. You can fix it by drilling and screwing a thin self tapping screw through the spar and tube. I suggest you do this at least for the bottom rib.



Sail rib detail

Slide the ribs onto the spar, line them up by sighting along the trailing edge. Squirt a small amount of expanding foam around the spar above and below each rib. Try to get it through the cuts in the rib, so it joins up, top and bottom. Don't worry about excess, you can trim it with a hacksaw blade or knife when it's set. The foam won't stick to the corflute at all and won't stick very well to the aluminium. It forms a physical 'boss' that holds the rib in alignment. Once the cover is on, the ribs can't move out of position, so the fact that they're not strongly fixed to the spar doesn't matter. Except for the aforementioned top and bottom rib. If you want to make the rib/spar connection stronger, drill the spar and rib and tie with light wire before you apply the foam.



Leave it to set, preferably overnight.

Next job is to cut the covering to size. I cut it oversize, top to bottom, so I could trim it later.



Sail covered

I cut the corflute so the corrugations ran top to bottom with the intention that it should be stronger between the ribs. If you cut it the other way, it may 'suck' in between the ribs.

To get a good leading edge, carefully cut through the inner lamination only with a Stanley knife. The blade will naturally follow down a groove; you don't need to press. Now fold it, then place it flat, position the leading edge of the ribs along the fold and pull the corflute back around. I pierced the cover over the second rib and pushed a long cable tie right through it.

On the other side I threaded another cable tie and ratcheted it snug. It's easiest if you use temporary ties to hold the cover first. Then open the trailing edge enough to get the foam can nozzle in and give a squirt along both sides of each rib. Try to judge the foam so it won't expand too much or you'll get bumps. You want the foam to expand and join side to side but not fill up the space between two ribs causing pressure and bulging.

A square of duct tape will hold the trailing edges together as you work up and down, or you can staple them with an ordinary office stapler.

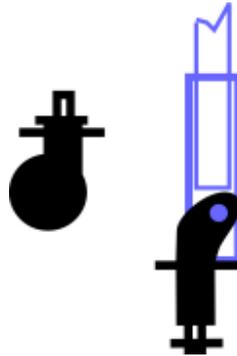
Once the cover is on and neat, pierce the trailing edge about 15mm in and rivet it with bifurcated rivets. Trim the trailing edge if it's not even and cover it with duct tape. Always make the duct tape too long, then trim it later.

Tomorrow the foam will have set and you can trim the top and bottom edges of the cover. You can cut them at an angle if you

want. A raked fin will have to be cut at an angle on the bottom edge to allow clearance as it swings.

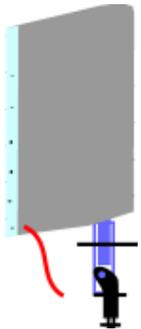
Cut a rib to cover the top. Use tape or light wire ties to hold it in position while you run a bead from a hot glue gun around it or just tape it with duct tape.

To mount the safety sail you need a swivel and a socket for the spar. I used a metal ball bearing caster wheel. I chose one that had a wheel somewhere near the thickness of the spar. Cut 200mm of tube that either fits over or in the spar tube for a socket. Remove the wheel, then push the tube into the wheel mount, drill it and fix it in position with the bolt that held the wheel. Use another self tapper or two into the bottom of the tube to stop it tilting back. I thought the bolt would hold it, but the wind pressure soon dragged the socket back. It needs quite strong fixing, there's a lot of leverage.



Sail Swivel

Almost there. The caster is mounted upside down into something solid. My choice was the pannier rack shelf. Good idea but once again I quickly learned that you can't argue with Archemides. The lever effect is very strong and with the sail just mounted into the thin metal of the pannier it flexed too much. Bolt a square of aluminium plate or three ply to the pannier and mount through that. Check that the pannier itself is mounted strongly enough. Drop the spar into or over the socket, drill through the two tubes and make a pin from coat hanger wire to hold it in place. Catch hold the top of the sail and move it around. The trike should move, not the panniers.



Sail Mounted

The final step is to restrict the sail swing with light bungee. Attach it to the trailing edge and to the centreline of the trike. Choose a cord that's light enough to hold the sail loosely fore and aft with no wind while allowing it to swing freely out to 30 degrees in a light breeze. I'm going to use two cords, the light one and a heavier cord that comes into play at about 35 degrees. It will act as a strong buffer in gusty winds.

A safety sail is primarily for visibility. My design tries to gather some thrust as well. It isn't a land yacht with adjustable sheets so the sail has to be 'set and forget.'. The idea was triggered by discussions on the newsgroups about thrust from tail boxes; Bob Stuarts 'Carcycle' Safety Sail; the Amick vehicle; my sailing days and too many years reading Popular Science.

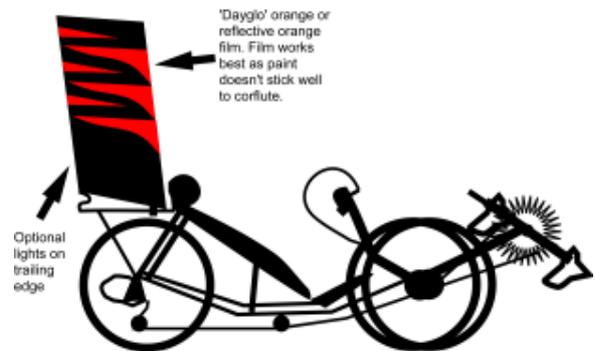


Sail Operation

The highest thrust is generated by side winds, just like a yacht. As vehicle speed increases in a side wind, the 'apparent' wind moves forward. Using bungee cord helps adjust the sail to give thrust - if it just swung freely, you'd only ever get thrust in wind directions more than 30 degrees off the beam.

Wind resistance in head winds should be negligible, depending on the efficiency of the airfoil section you've chosen. You'll get a boost in acceleration from tail winds until road speed equals wind speed. You'll be able to determine this by the position of the sail. If it's pointing fore and aft, then you're travelling faster than the wind, thus creating your own 'apparent' wind and causing the sail to feather.

I 'tested' the sail by positioning the trike on a level surface at various angles to the wind. Beam winds made the trike move forward. Tail winds ditto. Head winds blew it back.....curses.... there's not enough room in one lane to tack up the highway.....



Sail on Trike

The above ramblings are a description of my project. Proceed at your own risk etc. etc. Don't try out the sail in traffic, find a quiet spot and see how and if your vehicle behaves. My first 1 metre by 350mm sail didn't overpower the trike. A larger sail might. One possible danger is a very strong tail wind breaking the sheet and locking the sail against the seat.

You may consider secondary control lines to pull the sail fore and aft or some other cunning method like a breakaway mount. I have considered this and a simple mount could be made by cutting two rectangles of ply with the swivel mounted on the top rectangle and the two rectangles held together by elastic loops. Very strong gusts would separate the rectangles, tilting the sail and spilling wind.

Be careful and have fun.

Paul Worden

paulworden@winnet.com.au

Lean Mean and Hungry

The point of this trike was to get as low, light and narrow as possible. By reducing the seat height and ground clearance to a bare minimum it's possible to narrow the track without compromising cornering stability.

The frame has no central tube; it's basically a seat with wheels attached. All the tubing in the frame is the same diameter (1.375") and was bent up at the local exhaust shop. Extra stiffness was found necessary around the boom and in the bends under the seat. It's surprising what a difference the chain line makes to stiffness on a trike, too: it should be as nearly parallel as possible to the force you exert with your foot on the pedal.

Having obtained Greenspeed-modified Sachs brake hubs, the kingpins were made up with the kingpin below the axle. This allowed a straight front cross member at a nice low level, and also suspension by sliding the kingpin in its bushes. Light weight was not really achieved; it is only 1kg lighter than my other trike, but I like having front brakes.

The dimensions labelled "to suit" are to be adjusted to fit different rider sizes, and the length and angle of the boom will obviously change to suit different riders' leg lengths. It is also variable to suit how high you like to pedal, whether you like to touch the ground with your heel (a la Windcheetah) and to keep the chain passing just above the cross member. Don't forget the last point!

The rollers for the chain are supported from one side. They can be from Greenspeed or else made up from skate wheels. The return chain is guided through a bit of PVC tube. The clearance from the rollers and chain to the seat fabric is too tight on the prototype; I'll be fitting larger rollers soon to fix this.

Not shown in the diagram is the stiffeners at the lowest bend in the frame. They were found necessary to keep it from straightening at this point under power. The exhaust pipe benders tend to "neck" the tube on the inside of a bend, and a little gusset in here stiffens it up nicely without making the tube much thicker.



The frame is made up of two long bent bits. Each has two bends, and they are not in the same plane, so it may be a little tricky to visualize. On the next page is the plan you take to the exhaust bender.



The dropouts are made by bending the last bit of tube, cutting the faces off parallel and brazing on a plate. It is a good idea to drill a little hole in the middle of this plate for pressure relief.

The steering tubes are 7/8" (22mm) handlebar-sized tube with 5/8" bushes pressed in. This is standard Greenspeed practice and the bushes are available from them.

Now for the kingpins. They are probably the trickiest part of the trike to make. They are in the shape of a "7" and take Greenspeed-supplied Sachs VT drums with the 12mm bearing pressed in.



The included angle is 11 degrees, the same as that of the steering tube on the cross-member, so the axles are dead horizontal. At the top of each kingpin is a bell crank.

The steering assembly is best seen in the photos. Also shown are additional braces for the boom.

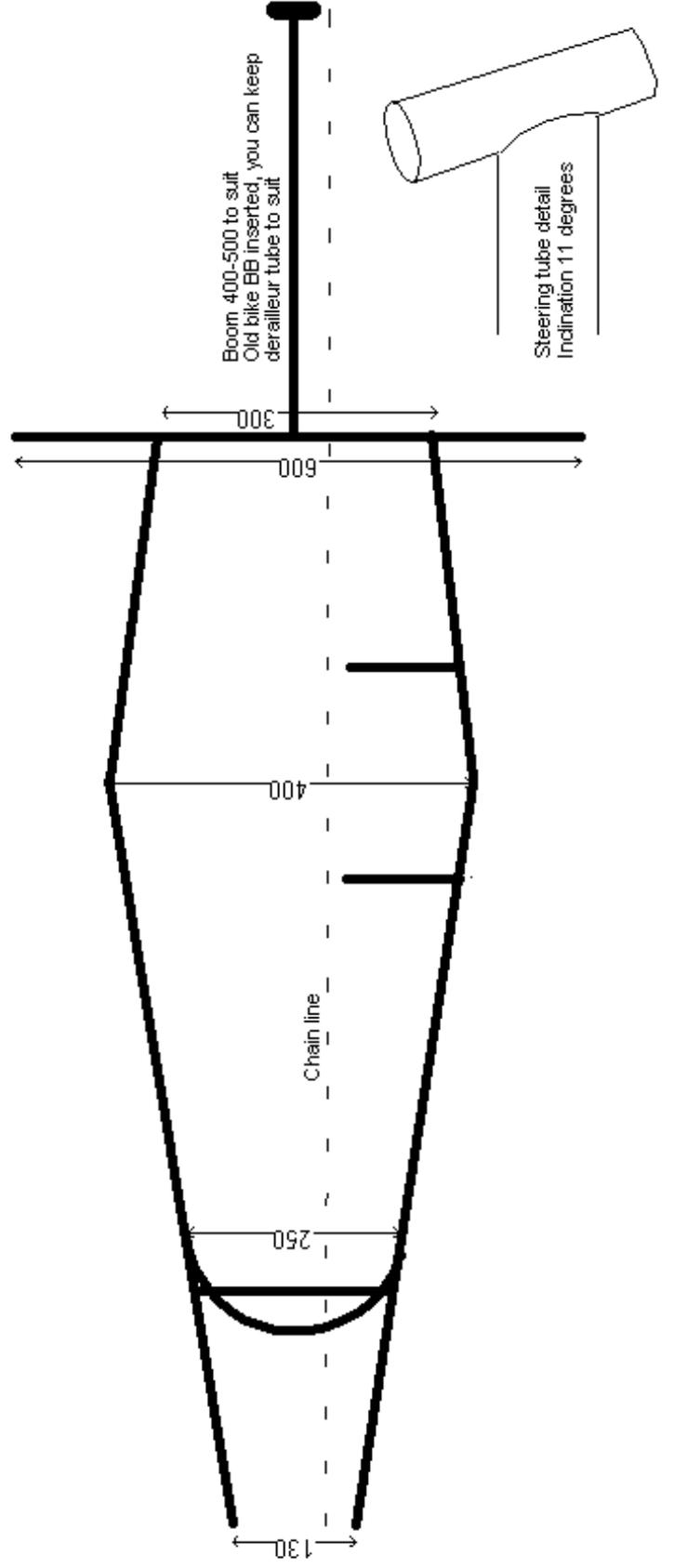
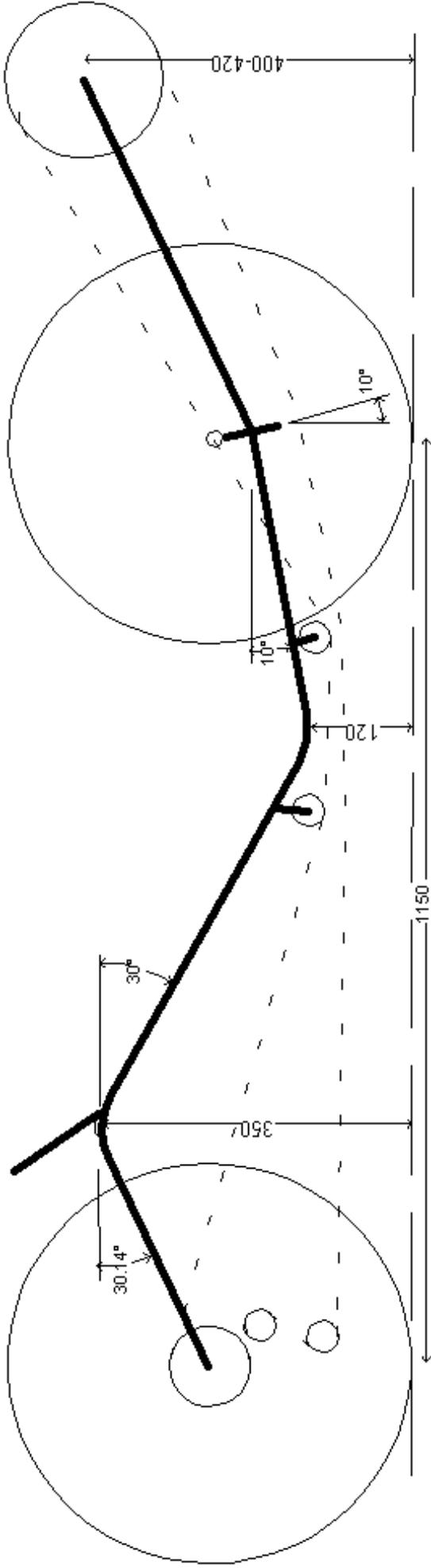
Part 2 of this article to come next edition.

Giles Puckett

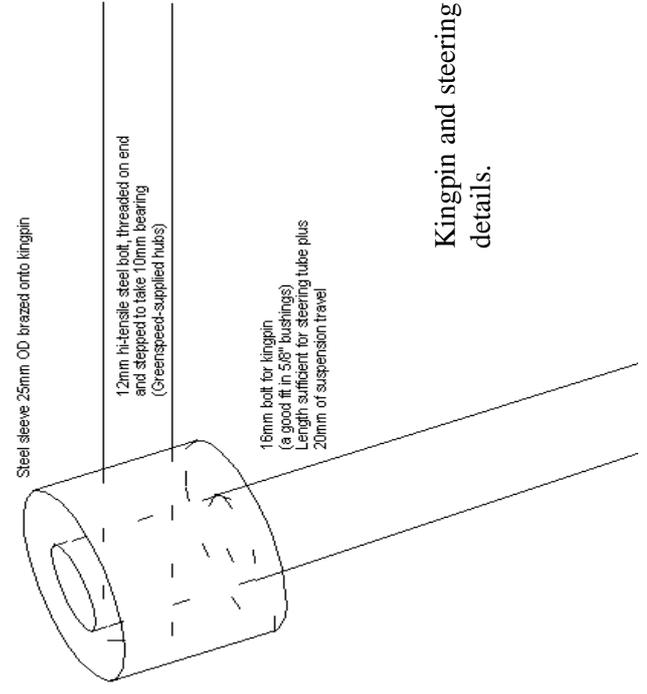
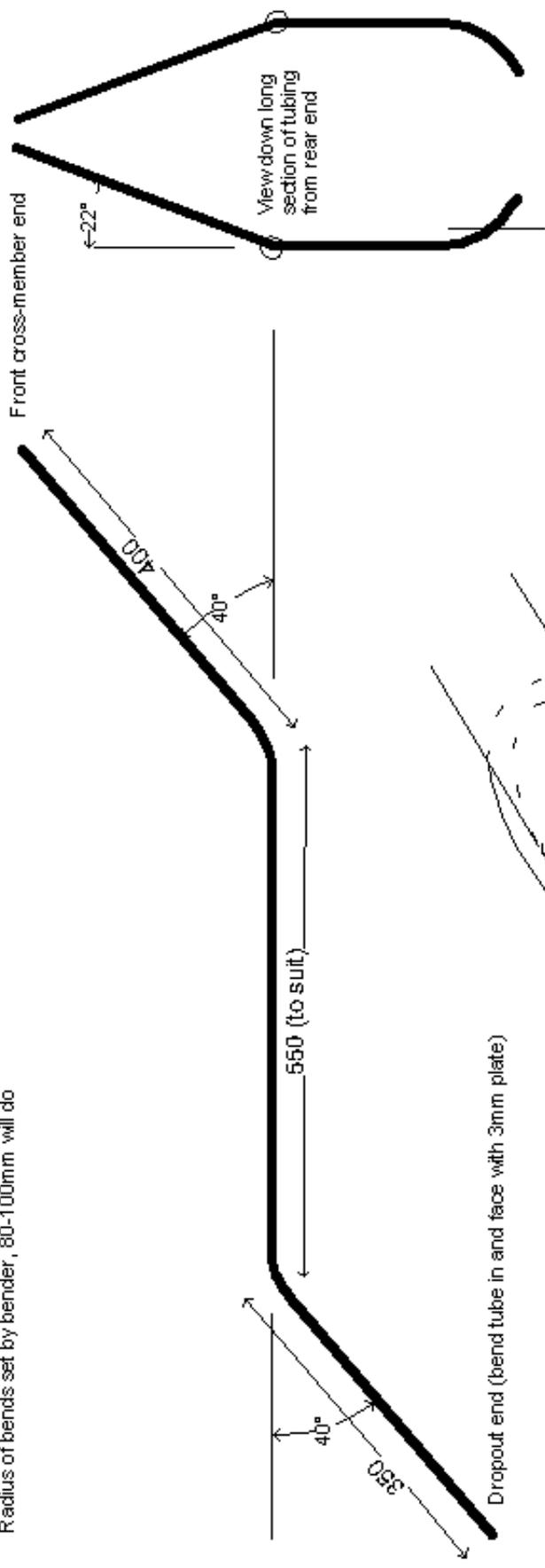
<http://recumbents.com/giles/lmh-plans.htm>
aegidius@ihug.com.au



LMH Trike drawings
 Wheels 20" Wheelbase 1150mm Track 680mm
 Tubing 34mm x 1.2mm wall mild steel

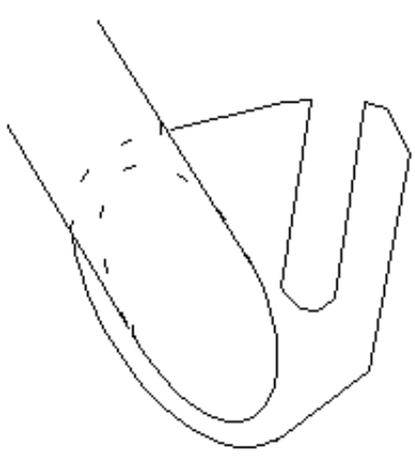
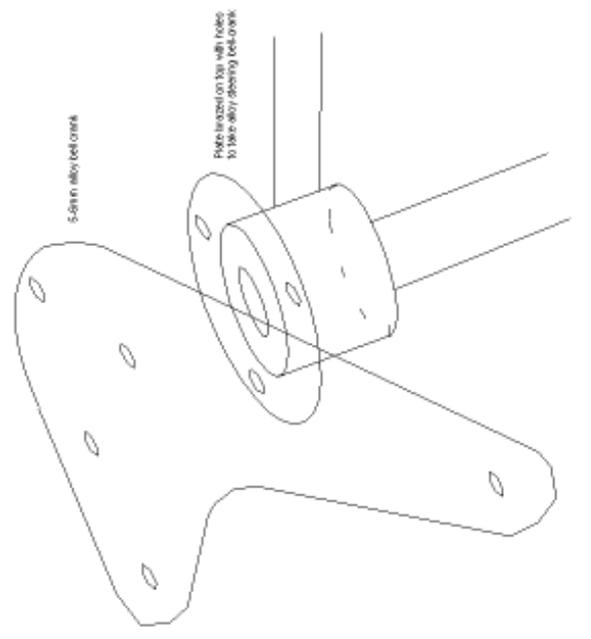


LMH Trike drawings
 Tubing 37mm x 1.2mm wall mild steel
 Radius of bends set by bender, 80-100mm will do

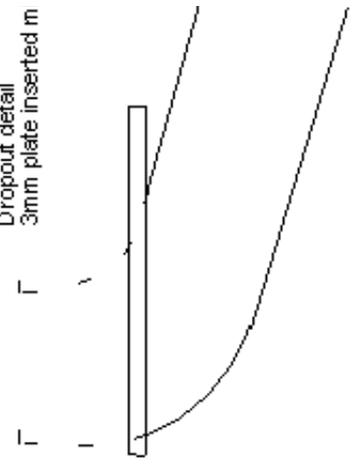


Kingpin and steering details.

Cut off mid-bend dropout



Dropout detail
 3mm plate inserted in



Commuting the Trike way

No doubt different people feel comfortable on different machines. Some years ago I rode to the City of Melbourne, 30kms away along Burwood Highway, and Victoria Street, the main and most direct route to the city of about 3 million, and quite busy. I rode an early GTR 2026 Greenspeed touring trike with a 45 degree seat, and my son rode his low racing trike with track of 1,000mm and a 17 degree seat, with only one calliper brake on the rear wheel.

About 1/4 of the way into the ride, I got cramps in my legs, probably as a result of trying to keep up with a much younger person on a much lighter machine, so we changed over. I was a little apprehensive of using such a low machine in heavy traffic, but I found there was no difficulty at all, and really enjoyed the ride. I found the low, light race trike was a lot faster than I would have expected, and was the inspiration for me designing and building the GTS, with 20" wheels all round, from which the GTR was developed.

I used to sometimes take one of my SWBs to the city, if I went on the train, as it took up less space in busy times. However I did not feel as safe on the road, as you only need a dropped water bottle under your wheels to come down, or an oily/sandy/wet patch, and then I think then you really are more likely to go under some motorised wheels :-)

So now if I go to the city by train, I either go on foot, or I stick my trike on the train. In fact after having a couple of customers bring their SWBs back to me, and trade them in on trikes, we decided not to make our SWBs any more.

Last year, I even removed our SWB bikes from our web site. I had thought that people might have used recumbents bikes as a stepping stone to visit our site, and expected the hits to go down afterwards.

In fact the reverse has been the case. In May last year when the SWBs were still featured we got 170,097 hits, and in April this year we got 269,697 hits, according to our Webtrends reports.

Of course I'm not saying that Trikes are better than SWBs, just that *I* prefer them in traffic, and that they seem to be becoming more popular :-)

I am also working on reducing their weight and width further. The GRL Race Trike has a track of 700 mm, and width of 780 mm, V the 800 mm track and 900mm with of the disc brake GTR or GTO. We are also making some a few GTOs with 16" wheels and 700mm tracks.

I heard some motorists say they can't see me on the road, or have nearly run over me, but they seem to manage to see the white line on the road, and avoid the odd brick on the road. Maybe they just get a fright seeing something different to what they expect on the road, and want to have a winge about it.

I find most drivers, give me more respect on the road than if I'm riding an ordinary bike (which is very rare), and that the truck drivers are the best of the lot, often giving me a whole lane to myself when they overtake, or waiting patiently behind if there is not room to overtake.

I initially started of building SWBs, but did not really feel safe on them, and when I changed over to riding trikes, it was very much like changing from driving a truck to driving a low sports car. At first the loss of vision in traffic seems to be a real problem, but after a couple of weeks, you automatically compensate for it, the "problem" disappears.

I really don't think trikes are suitable for all people. The main thing I think is to get a good ride on as many machines as possible, and talk to as many owners as possible - then you should be able to find the machine which suits YOU. Still prefer my GTS, but most of our customers are now buying the GTO.

Ian Sims, Greenspeed

Three Wheels, Two Continents, One People

One of my favourite customers is Jeff McLean. Jeff bought his Greenspeed Trike way back in 1991, the 1st year we started building trikes for sale. It was an early GRT 20/26 Tourer with a 26" rear wheel, and an adjustable seat. Number 10 in fact.

Jeff used it on a number of Great Victorian Bike Rides, of about 600kms over nine days. With about 4,000 riders these rides had their own radio station, Bike FM, which was set up at each camp site, and Jeff was the Disc Jockey. During the day he rode his trike with a ghetto blaster on the back, to encourage riders, when the going got tough.

Jeff is one of those people who always seems to have a smile on his face, and in 1997 he bought a one way ticket to Ho Chi Minh City, and set off with his trusty old trike to ride right across Asia and Europe to London, U.K.

Three Wheels, Two Continents, One People is a story about his epic ride through countries that most of us only dream about. I found the book an absorbing read, and whole heartily recommend it to anybody interested in touring in Asia.

I've put a couple of pics. from the book on the Greenspeed Web Site at:- <http://www.greenspeed.com.au/public.htm>
We have copies available for \$25AUD plus postage.

Enjoy!

Thanks to the many people who have send best wishes to Mick for a speedy recovery from pneumonia. He is getting better, and we are hoping to have him back at work with us this week.

Ian Sims, Greenspeed

Coming Events

Melbourne Recumbent Riders

Sunday 8th July: By train & bike to check out the Victoria University of Technology Hopper's Crossing Track where the 2001 Greenspeed OzHPV Challenge will be held. The Footscray Cycling Club will be racing on the course from 10am so it's a good chance for us to watch & see the course in action. Details of train times to follow. Ride contact: **Steve Nurse**, Mobile 0409 836271

August 5th: Hawthorn Bike track. Meet at 9:30AM for 10AM start. A short ride, into the city and back using bike tracks on both sides of the Yarra, maybe a visit to the Herring Island sculpture park on the way back. Ride contact: **Steve Nurse**, Mobile 0409 836271

September 8th or 9th: **Robert Waryszak** is organising these rides. Phone: 03 92481268

e-mail: robert.waryszak@vu.edu.au

<http://home.vicnet.net.au/~vichpv/>

OzHPV Canberra Recumbent Riders Group

Sunday 1st July. This time something a little bit different. A Family Ride. Meet 1.00pm at Kambah Adventure Playground, Off Springett Street Kambah (Yellow Pages Map 21 Ref L3). Bring some afternoon tea a cup and coffee, folding chairs or trikes, etc and we will arrange a gas urn for some hot water. Riders go off for a lap of nearby Lake Tuggeranong. On return the adults can sit around and talk about bikes while the kids burn off excess energy on the flying foxes, swings and slides...

Sunday 8 July. "To the Flat & Back". A 95 km out and back ride from Queanbeyan to Captains flat and return. Organised by Pedal Power ACT. No entry fee. Self supported ride. Usually about 20 riders taking part. Meet at Queanbeyan (Queen Elizabeth Park, on Collett St side) at 8.30 am. I'd like some

company on one of these rides! If you want more info log on to the Pedal Power web page at:

<http://sunsite.anu.edu.au/community/pedalpower/about/rides.htm>

Contacts: **Peter Heal** 0409605101

Email: heal@cyberone.com.au

Duncan **Cleland Duncan**@CES.com.au

The All Schools Pedal Prix Championship Queensland

Friday 3rd and Sat 4th August: The Pedal Prix for 2001 is at the Nerang Cycling Complex, 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

Email: indtech@merrimacshs.qld.edu.au

<http://www.recumbents.com/qldpprix/pprix.htm>

Sydney Recumbent Riders

Sunday August 19th - Centennial Park, meet at 10am at the usual spot outside the cafe for chat and coffee. Then short cruise to Bronte leaving 11:30am for lunch and a quick (optional ;-) winter dip. Anyone wanting to ride from the inner west contact me - leave my place at Annandale at 9am. Contact: **Tony Jack** 02 9845 6857 (w) 02 9518 8252 (h)

Email: Tony_Jack@wsahs.nsw.gov.au

<http://sunsite.anu.edu.au/community/ozhvp/srriders.htm>

Greenspeed OzHPV Challenge 2001

I have received confirmation that Greenspeed will again be the main sponsor of the: Greenspeed OzHPV Challenge 2001 which will be held 1-2 December 2001 (Hoppers Crossing VUT track SN) Note: As main sponsor of the 2000 event, they were offered first right of refusal for the 2001 event. Thank you to Greenspeed and welcome aboard for another year.

Jeremy Lawrence - OzHPV President

If this Newsletter cannot be delivered please return to:
OzHPV Inc
 10 Abbot Grove
 Clifton Hill Vic 3068.

