



rack, trailer and recumbent seat & boom. The frame has attachment points at the ends for holding another frame or extras, a tube that acts as a static handlebar mount, and tubes that can support pulleys for a front-wheel drive mechanism. The seatpost doubles as a mount for the recumbent seat, as do the bottle mount bosses on the top tubes. I have taken care to ensure that the extra features on the bike don't look scrappy when unused – for example a plastic plate can fit



MODULAR CYCLING

Reader Stephen Nurse from Australia describes his do-it-all modular bike system.



“Modular: constructed with standardized unit or dimensions allowed flexibility and variety in use.”

In 1986 I travelled to Germany and saw a newspaper article about a home built recumbent bike. I resolved to make one myself, and have been making them ever since. As well as recumbents, I have made several

tandem HPVs: my son Ewan has pedalled on a string of tandems since the age of 4. He is now 14, and about to overtake me in height! In 1987 I joined OzHPV and started to meet many other HPV builders: I am forever grateful for their camaraderie, friendship and advice.

A few years ago, I built a tandem bike from two Malvern Star folding bikes found on a rubbish pile. The tandem was built with an ‘insert’ between the two halves. I really liked the bike, but started thinking that something better or different would be possible.

My modular bikes are the result of this thinking. The bikes are designed from the ground up to be assembled as tandems, recumbents and load carrying bikes.

The aim is to make these bikes more affordable by using a cost-effective modular construction.

This construction includes standard frame units with extras such as a suspended rear triangle, steering link,



over the front attachment points.

The latest bike design uses NC routing, laser-cutting, steel tubes and flats, plastics and timber seats. These are all processes and materials I'm comfortable with in my job as a mechanical engineer. Mark IV will probably use investment cast lugs and lighter, thinner tubes. Maybe by Mark VII the frame will be moulded from a single piece of carbon-nanotube reinforced plastic!

Quite early on I thought of the commercial potential for the design and applied for a patent which was granted late last year after much CAD drafting, letter and specification writing and fee paying. Hopefully all the hard work will pay off!

I'm interested in hearing from people who'd like to buy a bike or make one using my designs or parts. (I have some more Mk III framesets). If you want more info go to my website: www.typing2000.com.au/bikes. My email contact details are also there. Otherwise phone Australia (03) 94818290 or write to me at 10 Abbott Grove, Clifton Hill 3068, Vic, Australia.

See you out there on a modular bike!

Stephen Nurse