



Disregarding restrictive legislation, Cat-Eye showed their extraordinarily bright, expensive, heavy and short-lived Stadium lamp. The Micro Halogen demonstrated alongside was much more practical. This packs four AA batteries and a special 2.4W halogen bulb into the smallest possible space. It will be interesting to see how well the light is distributed from a lens only 25mm square. Options for alkaline or nicad power, an auxiliary battery-pack and 6W bulb upgrade put this tiny lamp at the heart of a versatile system.

Modolo Morphos

This combined brake and gear lever, for dropped handlebars, operates on a completely different principle. Instead of wrapping around a drum, the gear cable is ratcheted to and fro in a straight line. The ratcheting element has three sides and can be turned, simply with a screwdriver, to work with either Campagnolo or Shimano 8-speed indexing systems, or to provide a finely ratcheting non-indexed mode. And the left lever provides a choice of spacings suitable for double or triple chainsets. Thus, at last, we have the benefits of fingertip control without sacrificing our insurance against heavy-handed baggage handlers. Speaking of which, the sheltered, inboard location of the up and down shift triggers and simple, robust design of the brake

lever makes damage much less likely. Further versatility is promised by Modolo, since by changing the ratchet element one can simply adapt the lever to any system that may come

along – even the latest 9-speeds. The braking part is also a little unconventional. Modolo told me that by changing one piece they may be able to make it pull more cable – enough for low-profile cantilevers – maybe even for V-brakes. Now that would be handy.



Cranky ideas

There are always a few people who think they can get more power out of the human body, for less effort, by making the legs, arms etc move in some other way. My favourites are those which try to side-step the laws of physics by making the crank longer and shorter as it goes round. There's nearly always one of these and this year's Rubber Crank award goes to Mecanique Concept, of Montpellier, France.

A slightly more sensible cranky idea was available to make your cranks longer or shorter upon demand. The Trimatic pedal spindle (available for Look, Time and Shimano clipless pedals) contains an eccentric clutch that positions the pedal centre slightly further from or nearer to the bottom bracket in response to a half or quarter turn back-ped-

alling. The idea is to have longer cranks to lever yourself slowly up steep hills, normal ones to pedal along the top, then shorter ones to spin down the other side. A decent range of gears sounds better to me, but this is one quick way for shorter people to get a shorter crank. Trimatic offer several different eccentricities, including $\pm 2.5\text{mm}$ (Road), $\pm 5\text{mm}$ (MTB) and even one that is $+12.5, -2.5$, so $+0, -15$ ought to be possible. The special spindle does not increase width (Q-factor).

Some of the cranky ideas can be a lot of fun. Take the Shuttle-Bike Kit from SBK. This 9.4kg kit of parts comes out of a small back-pack and in ten minutes (they claim) converts your bicycle into a catamaran! There's a roller on the back tyre powering an outboard-motor style pro-

peller unit strapped to the front wheel via a flexible drive (so you can steer it – and raise it in shallow water simply by releasing the brake) and a pair of inflatable floats. You can even plug the same drive into a small pump that blows up the floats as you sit on the beach and pedal! A cruising speed of 3.5 knots (6kph) is claimed. I wonder if it's true? They also say it's easy to get on the bike again after bathing. But this is not the best time of year to find out if the bathing is voluntary.



Synchro Shift

No matter how easy Shimano make the physical process of shifting gear, there are some people who still cannot get their minds around this left and right, front and rear shifting business. For them there's a new thing called Synchro Shift by EGS, that moves both cables from a single twist-grip control. Internal cams provide the correct sequence of front and rear shifts to take you all the way from top to bottom gear. Even expert riders must admit that they sometimes forget what gear they are already in and inadvertently select less efficient 'cross chain' combinations of ring and sprocket. All this is neatly avoided.

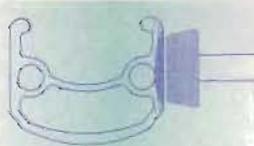
I heard about this before IFMA and met people who had seen it on a stand somewhere, but try as I might I could not find it. The show is that big. Maybe they'll send me a sample so we can see if it really works.

Alesa Safety Line

Remember you read it here first, in February 1993, about the new danger of exploding rims. This occurs to all modern hook-edged designs of rim, because the brake blocks wear away at the thin metal below the hook – the thickness of which conceals this wear. So before you know it the flange becomes too weak to retain the tyre which blows it away. I have a file of letters reporting such incidents, some

involving injury, e.g. the chap who was stabbed in the back of the leg by a thin shard of rim – just before losing control.

I said at the time that there were some rims that would wear through in another place first. These were old designs and have since been withdrawn. Alesa, meanwhile, have picked up on this issue and rediscovered the solution, calling it Safety Line. Rims with this feature should wear through to the pinning hollow before the flange becomes dangerously thin. Actually I doubt that they always will, but it's a step in the right direction and makes it harder for the trade to



keep up a pretence that there isn't a problem with these hook-edged rims.

Mudguard safety was another CTC Technical Department exposé. Subsequent articles in the German press led ESGE to introduce their Secu-Clip and now SKS have a similar device they call ASR – Automatic Stay Release. The stay ends are neatly moulded into a snap fitting that holds your mudguard secure enough, but lets it go when something nasty (like a stick in the wheel) gives it a hard tug. ASR will be available shortly on

the Bluemels range of guards made in England by Spencer Manufacturing.



Tubeless tyres

Motorists dispensed with the inner tube long ago. Now cyclists can too, thanks to a development by Rigida. The tubeless system involves special designs of rim section, rim-tape and tyre which seal against one another. The key to the system is the way the thick rubber rim tape (which contains the valve) mates with the tyre and rim.

Punctures can be mended from the outside using a special tool and rubber plugs (a miniature version of the car-tyre method) or by applying a normal tube patch inside the tyre, which has a thin lining of airtight rubber. This lining is lighter and more compliant than a separate inner tube, so the tyre rolls more easily and provides extra comfort. And of course a patch applied inside will not blow off.