EUROPE BIKES BACK!

Tested: Campag's MTB groupset on the Roberts Phantom

Photos by Gene Hallson

The first all-European mountain bike ever is a classic, stylish machine at the leading edge of modern technology. As much of a joy to own as an Aston Martin or an Alpha, it is proportionately expensive. A pricey prototype, but one which hints that the Europeans are tooling up to put the great Japanese manufacturers on their mettle.
TOM BOGDANOWICZ reports.

There is a European style and the *Phantom* has it all. Graceful lines, meticulous finishing, engraved crests, a thoroughbred look. You think of Ferrari, Aston Martin and Yves St Laurent. The first all-European mountain bike has the engineering too – variable-section ovalised tubes, indexed gears, biofit brake levers, superlight handlebars, hard-anodized rims, monoplane U-brakes – a worthy reply to the japanese domination of the MTB market.

The Phantom is the product of British, Italian and French engineering. Some of the best known names in cycling pooled their talents to produce this prototype. *Chas Roberts,* of Croydon, one of this country's foremost mountain bike designers, built the fillet brazed frame. The giant Italian tube manufacturer *Columbus,* supplied the oversize, ovalised *MAX OR* tubes. *Campagnolo,* a name that is a legend in road racing components, produced the innovative Euclid groupset. Even the lesser ingredients are European: *Mavic* rims, *Christophe* toeclips, *Italmanubri* bars and stem, *Zefal* MTB pump and "doohicki."

"The tube's variable ovalised profiles are oriented to resist both lateral movement at the bottom bracket and vertical movement at the head tube"

THE FRAME

Tubing

The growing popularity of aluminium and composite frames has forced steel tube manufacturers to come up with new ideas. *Columbus,* whose white dove adorns many classy steel tubed bikes, have introduced two innovations in their top-of-the-range *MAX* tubing. First, a new Nivacrom steel alloy which has a tensile strength similar to *Reynolds 753* (MAX 1280 N/mm²: 753 1315 N/mm²) but which is *not* a heat treated steel and is therefore easier to repair. Second, butted tubes with variable ovalised profiles oriented to resist both lateral movement at the bottom bracket (a trick favoured by Tom Ritchey, the American MTB builder) and vertical movement at the head tube.

MAX OR has oversized butted tubes designed for off-road abuse: top tube 0.8-0.5-0.8mm thick, down tube 0.9-0.6-0.9, seat tube 0.9-0.6. It has bent chainstays to accept 2 inch tyres and a unicrown fork. *The Phantom* was built with round bladed forks; *Columbus* now supply *MAX OR* with a round-oval-round Koski-type fork.

Although light in weight this tube set builds into an exceptionally stiff frame best suited for headbangers, heavy riders or touring loads. For lighter riders and pure competition *Columbus* offer a new "lite" version of *MAX OR* with tube walls that are 0.1mm thinner (we'll bring you a report as soon as we test it). I found that the *Phantom's MAX OR* tubes combined with the wide flange hubs give a very firm ride, not unlike *Cannondale* bicycles. The Phantom is stable and predictable on downhills rather than bouncy like bicycles built with Tange Prestige.

Frame Design

There is little doubt that *MAX* tubing looks at its best on an MTB: the wide tubes complement the fat tyres, and the downward slope of the *Phantom's*

top tube follows the line of the changing tube profile. On a road bike the wide chainstays look clumsy, on an MTB they look perfect. One unexpected benefit of ovalised tubes is that they make the bike comfortable to carry.

Chas Roberts has done a magical brazing job on the *Phantom* – the lugless frame hasn't a single blemish. The horizontally orientated oval top tube runs into the seat stays to create a sleek line. Like a Rolls Royce limo the *Phantom* has a refined, discreet finish – deep metallic black. An interesting innovation of Chas's is reinforcing gussets brazed onto the seatstays to reduce flex when braking.

The geometry of the bicycle is a variation on the established competition design 73.5° seat angle, 70.5° head angle, 16.9in seat stays, 42in wheelbase, 1.75in rake. The 70.5° head gives a little more comfort on descents than the typical 71° angle used for racing. As the mudguard eyes confirm the *Phantom* is a Grand Tourer rather than a pure racer.

"How does *Euclid* perform in the dirt? Here's the first British on and off-road test"

Photos by Gene Hallson

GROUPSET

Campag Euclid

Campag's *Euclid* groupset has been often seen but rarely ridden. All the mountain bikes enthusiasts at the Cologne bike show were seduced by *Euclid's* style. The silvery sheen, the curved lines and the immaculate finish of the new groupset are unrivalled. Coupled with the sleek lugless design of the *Phantom* frame *Euclid* is a mouthwatering vision. Customers drooled over the cycle when it was displayed at **Cycleogical** in London's West End.

But how does *Euclid* perform in the dirt? Here's the first British on and off-road test.

The Works

Campag have gone to the trouble of producing a *complete* groupset including a seat pin, headset, chainset and derailleur guard (it seems that the Italians like a selection of heavy accessories on their MTBs). They have also produced two versions of some of the components: there is a multi-adjustable seatpin and a plain record-type pin; there is a "biofit" brake lever and a plain one; large flange and small flange hubs; and wide and narrow band versions of the front mech. This concept of a component system is an excellent idea: it enables different riders to select a package that suits their purpose and their ability.

One common characteristic of all the components is plain no-nonsense construction. You can take everything apart, and put it back together again, using the same tools that you have always used for your road bike. *Euclid* does not feature any cassette bearings. Home mechanics will be delighted.

Brakes

The most distinctive components in the *Euclid* set are the U-brakes and the brake-gear levers. It is clear that **Campag** did not choose simply to copy the successful **Shimano** *Deore XT* U-brakes.

The levers are of the combination type (like **SunTour** *XCD)*: the gear lever slots into a hole in the brake lever. The degree of adjustment is almost infinite: tiny allen key bolts (9 per lever – don't loose them: use Locktite) move the levers backwards, forwards, up and down. On the biofit version you can rotate the lever end to select either two-finger control or maximum leverage.

Campag describe the *Euclid* caliper as 'mono-planner' which means that the arms operate in one plane: one slots into the other producing even pressure on the rim. Although this system works very well it has the downside of restricting the quick release opening to 1.75in – 1.95in tyres have to be deflated for removal. It is also extremely difficult to fit mudguards when using seatstay-mounted *Euclid* brakes.

The cable yoke is a new design which is both highly convenient and functional. Another welcome design improvement are the new brake bosses with wide bases.

I found the levers comfortable and the brakes extremely effective – no shudder, just powerful controlled braking. Top marks for performance. Racers, however, may be reluctant to pay the weight penalty of *Euclid* brakes and levers: about 50 per cent more than *Deore XT*. You can save a few grams by ordering *Euclid* without the cumbersome lever-mounted quick release facility: but then, along with the QR seat pin (see below), they do give the bike that Cadillac look.

Chainset/Bottom Bracket

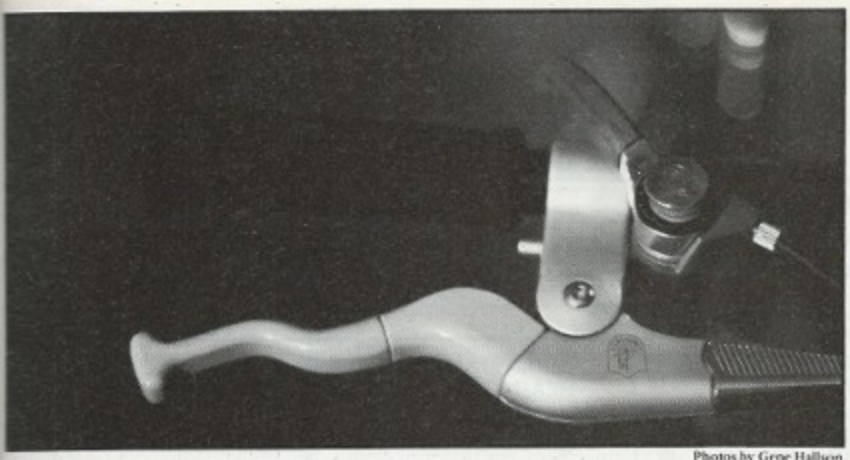
Classic **Campag** perfection! The chainset is beautifully styled, very stiff and highly polished. The chainrings are round, in keeping with **Campag's** general policy of no ovalisation (the pros don't like it, they say).

The bottom bracket has rubber O-ring seals and a hollow axle which allows the bearings to be re-greased without dismantling everything.

Gears

Full indexing on both front and rear derailleurs and optional friction shifting is the *Euclid* format. You switch from indexed to friction mode by unscrewing the engraved lever cap and moving the ring below it.

The front mech is almost identical to the well established **Shimano** *XT* and



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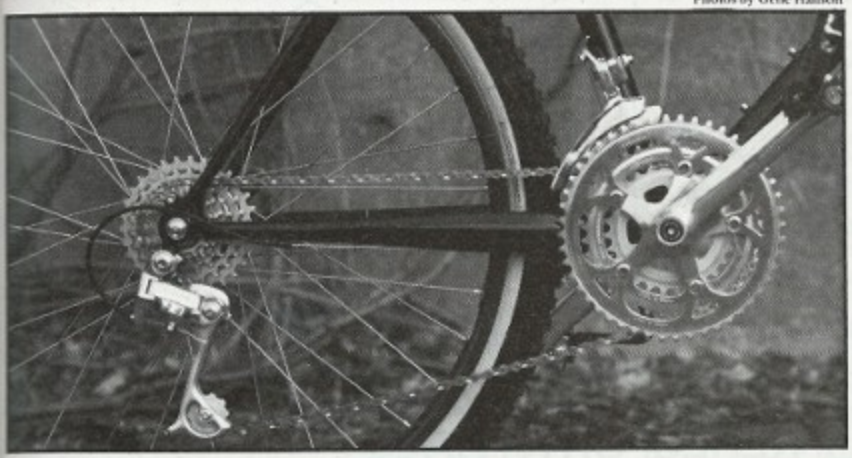

works just as well. I prefer the friction mode to indexed because it's kinder to the chainset.

The rear mech follows the now well established slant parallelogram design. Indexed changes felt very similar to **SunTour***XCD*. I was surprised to note that upchanges were smoother than down changes. By yet another allen key bolt you can adjust the return spring tension.

Too much!

QR Saddle adjustment, Seat Pin, Derailleur Guard and Half Toe Clips – I group these components together because they all fall into the category of over design: solutions looking for problems. Why did **Campag** bother to make them? The simple answer is that **Campagnolo's** home market, Italy, loves MTB extras: the more the better. I doubt if any serious British rider will want to carry an extra pound of weight for what amounts to little more than decoration.

Fortunately, **Campag** have agreed to supply the group with a lightweight plain seat pin if requested. (How about a cantilever brake, mini-brake levers and competition pedals Mr Campagnolo?).

Hubs

In contrast to the brakes *Euclid* hubs are lighter than anything else on the market. Like the chainset they are plain and simple with rubber seals, steel ball bearings and, of course, they are beautifully finished. You can fit most index type freewheels as with **Campag** *Synchro*. The rims fitted to the *Euclid* hubs are the increasingly popular **Mavic** *Paris-Dakar:* popular for the simple reason that they are damned good.

Pedals

The pedals are one of my favourite items in the *Euclid* set: highly polished alloy body with a steel spindle. If you avoid deep river crossings they should last a lifetime. The *Phantom* includes the well made **Christophe** *MTB* toeclips, a competitively priced refinement of the **Specialized** design, rather than the amusing *Euclid* half-clips.

Headset

Chas Roberts fitted the *Chorus* headset to the *Phantom* to cut weight. For durability, however, you should stick to the all-steel *Euclid* headset. It includes a fine alloy cable guide.

Other bits –

Campag do not supply bars, stem, pump or doohicki with *Euclid* so Roberts fitted the latest **Italmanubri** bars and stem and the **Zefal** MTB pump. The **Italmanubri** bars are so light (200gms) that I feared that they would bend, but so far – so good. They are made of a special high quality aluminium alloy. The **Zefal** *MTB* plus pump has no rivals that I know of and features a reversible Schraeder presta adaptor. The doohicki? – it's a clever plate which holds the pump in place behind the seat tube and deflects mud at the same time.

CONCLUSIONS

I think that **Campag** deserve credit for an excellent first try: *Euclid* looks superb and works extremely well. The full group is on the heavy side for competition use but it will undoubtedly find its way onto the frames of affluent casual MTB riders and MTB tourists (and even regular cycle tourists). Yes, you do have to be affluent because Euclid will cost about £600. Beauty doesn't come cheap.

The *Phantom* with its **MAX** tubing and *Euclid* groupset represents the most exciting step in mountain bike design since indexed shifting was introduced two years ago. This is Europe's first real effort at a homegrown mountain bike, and it's an achievement to be proud of.

The price of the *Phantom,* around £1,500, is more than four times the price of a *Courier* or *Rockhopper.* But that's what you have to expect of a bicycle which is at the leading edge of available technology. If the top designers did not produce innovative bicycles then there would be no progress at the lower end of the market. You may never be able to afford a Phantom but, in a year or so, the imitations may fall within your budget.

Look out Japan – the Italians, the British and the French are coming.

Specification	**Roberts** *Phantom*
Tubing	**Columbus** *MAX OR*
Seat tube	20 in
Top tube	22 in
Head angle	70.5°
Seat angle	73.5°
Chainstays	16.9 in
Bottom bracket height	12 in
Weight	30.5 lbs
Chainset	28, 38, 48, 175mm cranks
Chain	**Sedis**
Pedals	*Euclid*
Mechs	*Euclid*
Freewheel	*Shimano* (Regina to be substituted)
Brakes and levers	*Euclid* QR
Seat Pin	*Euclid* QR
Bars and Stem	**Italmanubri**
Headset	*Euclid*
Hubs	*Euclid*
Rims	**Mavic** *Paris-Gao-Dakar*
Tyres	*Ground Control* 1.95 (Vittorio tubulars to be substituted)
Headset	*Chorus*