

being a comfy figure for a 26in front wheel. This design was represented in our test by the Simoncini. The Orbit uses a 26in front wheel, but retained the steeper 73° head angle.

When it comes to wheels, you've got a specialist choice, at specialist prices of course... Disc wheels are popular, but not the perfect choice - you tend to get batted sideways in a crosswind. That's not really so much of a problem with aero spoke wheels (like the Mavic 3G fitted to the Simoncini), which use three or more wing-shaped spokes moulded in carbon fibre to minimise drag. Or there's another design of aero wheel, which has as few as 12 spokes, of a blade or teardrop profile, laced to vee-shaped rims to minimise turbulence, such as the HED fitted to the front of the Argos. Time triallists still tend to favour tubulars rather than wired-on tyres for their outstanding speed and responsiveness. For a start, they're easier to change when you puncture than high pressure tyres.

You need a narrower range of gears to maintain your cadence over a level course. A straight through seven- or eight-speed cassette or freewheel of 12 through to 19 teeth is popular amongst short distance specialists, though a minimum of 21 or 23 teeth will mean you're not caught out on the hilly courses. Chaining sizes vary, though a 52 or 53 is the norm, together with a 42 to 46 tooth inner ring. It's best to use the bigger of these rings for flat courses, as this ensures a smooth transition for your pedalling when you're changing between chainrings.

We've the triathletes amongst us to thank for the canonisation of the tri bar. Even more than disc wheels or low profile frames, they've contributed to better finish times. They encourage a smooth airflow around the body by placing your arms in an aerodynamic position, and the armrests provide a natural position for upper body support.

And you'll need a cycle computer to pace yourself. Get one which reads down to tenths of a mile per hour, and make sure the model you choose includes manual switching of the stopwatch so you can halt it as you cross the finish line. Time trial frames are traditionally built with shorter wheelbases and steeper frame angles in the belief that this formula minimises energy loss by being stiffer and of course, it saves a few grams. There's a popular myth that steep frame angles are right for all time-trial frames. But a specialist frame builder will specify seat angles to suit your dimensions and recommend a tubset according to the type of time trial you intend to ride.

The final verdict

All three bikes are designed for one purpose - to make you faster. They cover a wide price range and had a surprising number of detail differences, but when thrown into competition, they performed remarkably similarly...



THE SIMONCINI

The name invokes everything that's special about owning an Italian bicycle, and a small front wheel gives it the look of a classic short-distance machine.

Gears

Just after a sign for Rockhampton, I reach one of the fastest parts of the course which indicates 28mph on my cycle computer - but I feel I could have used a 12 tooth sprocket here to take advantage of the Simoncini's long cranks to obtain even more speed.

Speed

The downhill start of U18 was helped by a prevailing wind that allowed me to use a 52/16 starting gear and the Simoncini accelerates away with ease. The low and stretched-out riding position heightens my impression of speed. It also makes the most of my approach speed before the exposed part of hill near the bottom, where my speed is cut by 25% to 25mph.



Comfort

After the downhill start straight, I take a deep breath to maintain my oxygen levels. The stretched-out riding position allows me to do this without having to move myself rearward, as I had to do on the Orbit.

Gears

The final climb before the finish straight involves several shifts of the rear gear to maintain my speed. Changes are clunky as the Aris block protests a bit with the chain.

Brakes

Through the village of Cambridge, I scrub off some speed for a tractor exiting from my left. The Simoncini's brake levers are sited perfectly for my hands, though I feel disappointed with the braking power on the Mavic rear disc wheel, and I have to apply more pressure to the front brake to compensate.

Handling

The Simoncini's steering is tested to the full during a fast 26mph straight after a layby. Just before the garage, there's a pair of awkwardly placed manhole covers. The steering's quick here - I was able to flick the handlebars just like a road race bike to avoid them and then settle down perfectly.

Speed

A mile past a sign for Dursley, my speed's touching around 22mph on the approach to the climb before the auction rooms. I'm able to accelerate a little better here, partly because of the lighter wheels, and I get a better approach speed before a rise in the road.

Handling

The Simoncini holds a good line when cranked over at the roundabout, though the long crankarm dug in as I power through.

Comfort

A mile after Cambridge, I've spent 40 minutes in the saddle. I don't feel as saddle sore as I'm used to, confirming the shock absorbent qualities of the Rolls saddle and dispelling my doubts about the comfort of the Mavic composite wheel.

13.1m

Fromebridge

Long uphill

Cambridge

Gears

A mile from the turn on the return, I'm over the crest of the rise past the garage. The Simoncini shifts over to the big chainring with ease, though it doesn't change as quickly as the Argos and Orbit's Shimano front mech.

Speed

There's a long, steady climb two miles from the turn, which brings my speed down to around 21mph. The Simoncini feels quick here. The long 175mm crankarms help me to power my way over the crest of the rise to ready me for the 26mph leg to the roundabout.

Gears

Seven and a half miles into the course comes a sign for Purton, and a gradient as you pass the car auction rooms on your left. This needs a shift to the small chainring, but the shifting's slow. As I was powering up the gradient, I'm aware of the Campag front mech's inability to derail the chain from the big ring when I'm pedalling hard. It needs a soft pedalling action to complete the shift on to the small ring.

Frame and Component Quality

The Simoncini uses Columbus SL tubing throughout, chrome-plated before it gets a coat of paint. The beautiful metallic paint proved remarkably resistant to chipping in spite of the plated surface underneath. They get a short wheelbase by using a curved seat tube. The bottom bracket shell is slotted to save weight; the downtube is star-shaped (allegedly for added stiffness), and rounded at the tube ends to mate within the headlug and the cast bottom bracket.

The frame alignment was excellent, and the build quality was good, with clean and tidy brazing throughout. It used an excellent taper roller headset from Miche.

The Shimano Ultegra gears provided seven ratios to shift over a Sachs Aris screw-on freewheel. The rear Mavic 3G wheel was beautifully made and featured, like all Mavic hubs, adjustable cartridge bearings. To get an uncramped riding position, I needed to raise the handlebar stem a little and its length allowed me to stretch out to obtain a flat back when I was positioned on the tri bars and cowhorn bars. I moved the Rolls saddle as far rearwards as possible on the Campag Chorus seatpost to obtain a similar position to my road bike. General comfort was excellent, almost as comfy as the Argos.

MANUFACTURER: Cycles Clement, New Street, Ledbury, Hereford, HR8 2EJ ☎ 0531 632213

Price: £1150
Price frame alone: £410

FRAME AND FORKS

Size tested: 59cm
Sizes available: 48-60cm (c to c) in 1cm jumps
Colour: metallic pink
Weight tested: 10.1kg (22.2lb)
Frame material: Columbus SL Multi-shaped
Frame construction: brazed
Bike dimensions:

Top tube: 21.5in (54.6cm)
Seat tube: 23in (58.5cm)
Chainstays: 14.75in (37.4cm)
Wheelbase: 37.25in (94.6cm)
Head tube angle: 71°
Seat tube angle: 74°
Fork offset: 1.8in (45mm)
Fork material: Columbus SL
Fork construction: brazed
Frame weight: 1.9kg (4.18lb)
Fork weight: 0.6kg (1.32lb)
Brazing: one pair of bottle cage bosses and chainkeeper

FRAME ALIGNMENT

Head/seat tube: perfect
Rear triangle: acceptable
Fork: excellent

COMPONENTS

Chainset/crank: Campagnolo Chorus
Chainring: 52/16
Chainrings: 42/53T

Bottom bracket: Campagnolo
Freewheel: Maillard Arts 7-speed freewheel
Cog sizes: 13, 14, 15, 16, 17, 18, 19
Chain: Sedis SL
Rear derailleur: Shimano 600 Ultegra
Front derailleur: Campagnolo Chorus
Gear levers: Shimano 600 Ultegra
Pedals: Campag Look compatible clipless
Sprocket size (teeth)

13	14	15	16	17	18	19	
53	100	100	04	08	08	70	74
42	80	80	74	70	65	82	58

Gear ratios (inches)

WHEELS

Rims: Mavic Mach 2CD2 sprint 26in front, Mavic 3G tri-spoke rear.
Spokes: 28 14g stainless
Hubs: Mavic 506
Tyres: Continental Comp 26 front, Continental Comp GP rear
Weight front wheel: 1.02kg (2.24lb)
Weight rear wheel: 1.18kg (2.6lb)
Handlebar stem: Cinelli 1A 12.5cm
Headset: Campagnolo Chorus

OTHER COMPONENTS

Saddle: Rolls
Seat post: Campagnolo Chorus 27mm
Brake: Campagnolo Chorus
B/b height: 26.5cm (10.4in)
Standover height: 78cm (30.7in)