

BIKE TEST



CANNONDALE SYNAPSE WOMEN'S CARBON 5 (105) | SYNAPSE CARBON 6 (APEX)

His & hers road bikes

Road bikes aren't just for racing. **Chris** and **Helen Juden** review two sportive- or audax-ready Cannondale Synapses – the Carbon Apex and Carbon 105 respectively

» **CANNONDALE'S SYNAPSE RANGE** comprises the sort of road or racing bike increasingly bought not for racing, but for audax and sportive rides, club runs, keep-fit, long road commutes, and even touring. It's a popular concept and most manufacturers offer something similar. Cannondale (and some others) even sell enough of this sort of bike to women to justify a few women-specific models. So here are my two reasons to review this pair of bikes: to examine how competently they fill the more practical roles (than racing) that so

Cannondale say their Synapse road bikes offer 'race-level performance and all-day comfort'

many customers find for them; and to see if women really get what women want – beyond a shorter stem, wider saddle and a pastel paint job.

Few people actually race, but when riding this kind of bike they nevertheless like to imagine themselves in the Tour de France. Such dreams sell bikes and the Liquigas-Cannondale team do actually ride Synapses – but not in the TdF. They choose this model for the likes of Paris-Roubaix, which takes place on Flemish cobbles and poorly surfaced minor roads. Roads that, in other

words, are rather like those we usually have to ride upon in this country!

Save your a***!

The Cannondale Tesoro trekking bike we reviewed last year also had 'SAVE' flattened chain-stays, to flex vertically but not sideways, and kinky seat-stays that might give to allow that bending. Cannondale endeavour to put even more spring into the rear triangle of the Synapse range with 'SAVE-Plus'. It sounds good, but does it work? In these Synapses, with carbon fibres that can be laid different ways for



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different properties, I think it does. It's not suspension as we know it, but it's probably worth one or two tyre sizes in terms of comfort on rough roads. Size for size, Synapse frames also have slightly taller head tubes and shorter top tubes, which facilitate a suitable position for long rides at less than eyeballs-out effort.

A modicum of comfort is, however, this frame's only concession to practicality. There's neither provision to bolt more than a couple of bottle cages onto it, nor the clearance for proper mudguards. It's a shame that those who have a few things to carry and want to keep clean on mucky roads are denied such a lightweight and comfortable bike.

The seatpost also says SAVE on it. Apparently the carbon fibres are arranged in a special way that is 'Multiflex'. Certainly it's unlike any seatpost I've ever had, being ovalised inside the frame and offering only a centimetre of adjustment. You set the saddle height by careful measurement of this and your existing bike, then remove the saddle clamp (which can also be slid up and down a bit) and saw off the top! Fortunately, the person who tested this bike before me was

much taller. If you get it wrong, new Multiflex SAVE-Plus shafts are available in two grades of springiness. For my weight I could have done with the softer one, apparently.

The bottom bracket is also a Cannondale special, one they are keen for others to adopt: the BB30 standard, in which a pair of 42mm diameter cartridge bearings are simply pressed into the frame. FSA are one of several brands of crank that cater for this option. Other crank designs can be fitted via an adaptor.

The Apex option

Of the six carbon Synapses, I picked model 6 because it comes with a Sram Apex groupset, which I'd never tried before. Some bike manufacturers specify Apex just to save money and model 6 is the least costly, but I chose it because Cannondale fit the optional wide-range Apex rear mech and cassette, thereby providing a better range of gears.

There seems to be an unwritten rule: if you want carbon, you can't have a third chainring. Given a 32 sprocket however, the 34 tooth inner of a compact double gives the same bottom gear as a stock road triple's



Top left: The bigger the better?

Below left: I learned to double-tap as quickly as the bar tape turned grey

Above: Wide-range Apex derailleurs and cassette

30/28. The wide-range cassette also makes a 50-tooth outer more useful. Normally with a compact double, I'm shifting rings whenever the road goes up or down, which is annoying, but with this cassette I can stay on the outer unless it gets really steep.

Another thing I noticed is the Apex front mech has a second attachment hole, 9mm above the usual one. So if you want a genuinely compact double – a 46-28 like we had before triples became the norm – here's a mech that'll work it on frames like this, where the 'braze-on' appears too high for anything under 50 teeth.

There's only one question: can you learn to 'Double-Tap' – Sram's own special shifting technique? It doesn't sound intuitive to press the paddle a little way for fewer teeth, a long way for more. You'd think it would be easy to get wrong and so I did, but not often. Soon I was double-tapping like Brucie!

The brakes are also Sram and they work fine; it's just a pity Sram don't cater for frames with better clearances. And all these components are finished in white to match the frame, which looks really smart on hard and shiny surfaces. But soft tape and hoods are not so easy to clean and the



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handlebar soon looked grubby. Shimano RS10s are a reliable choice thanks to straight pull spokes and an offset rear rim to reduce dish. They're shod with Schwalbe Lugano tyres, which rolled well enough and more smoothly than you'd expect from only 23mm, thanks to the frame.

Cannondale put their own branding onto all the other bits, which do their jobs just fine. The saddle felt comfy enough and the handlebars are a good shape for long rides, with a short reach and shallow drop.

What women want?

Catalogue dimensions for the regular 48cm Synapse and women's model are exactly the same, as are the 51cm options. They don't compute! With those angles and fork, the top-tube must either be shorter or the front centres longer than they claim. By my measuring it's a bit of both, which is all to the good.

Perhaps the sexes do not really need different frame designs. Provided the top-tubes are short enough already, a shorter stem and saddle may be all it takes to make a bike suitable for women. It's a very neat short stem, the saddle was comfortable, and my wife, Helen, enjoyed riding the women's 105 Carbon Synapse as much I liked the

regular Apex. She singled out the handling for special praise, finding the Synapse remarkably stable for such a light bike, not only at speed on rough roads but also on slow climbs, when it gave her the confidence to keep on pedalling. Some designers make frames smaller by raising the bottom-bracket. It's a mean trick, which makes it even harder for short legs to reach the ground. Cannondale, on the other hand, lower the bottom-bracket on smaller frame sizes, which is the way things ought to be and may be part of what made this bike feel safe as Helen approached stalling speed. She also liked the colour: white and midnight blue, with pale turquoise flashes.

Apparently, there's a women's version of every model in the regular Synapse range. But at time of testing, the only women's carbon Synapse we could find on Cannondale's website was the 105 equipped model 5. And of course it doesn't have a triple. A light bike nevertheless helped Helen cope without her usual low gears, but she didn't use the big ring very much and would want a few alterations before venturing anywhere more rugged than Surrey. One of those alterations would be shorter cranks. FSA offer the crankset in 165mm and that's what Cannondale should fit on a bike this small. Ubiquitous 170mm may be okay

Top left: This mech will go no lower

Below left: Bendy seat-stays absorb shocks

Above: A short stem, wide saddle, and pastel paint job

for most people, but £2,000 ought to buy better than merely okay.

Size matters

It's a light bike, but not much lighter than our cheaper and very much larger companion model. Given that the rider of a 48cm frame will likely be 25cm shorter and only three-quarters the weight and strength, you'd think that their bike could be better than 3% lighter – especially when it costs more. But thanks to one-size-fits-all safety standards (such as EN14781), bikes get lighter only by the amount that their frame tubes get shorter. Petite women are lumbered with stronger and heavier bicycles than they need, so that big men don't suffer too

Also consider



1) Trek Madone 4 £1775

Trek's top women's specific carbon sports (i.e. not race) bike comes with a 50-39-30 triple and a 12-30 cassette. trekbikes.com



2) Specialized Roubaix Elite Compact £2000

105-equipped carbon bike with a taller front end. Women's version is Ruby (geddit?) Elite. specialized.com

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many breakages. It's a significant penalty for short riders, who must either work harder than their taller companions or spend far more on equipment.

A few components (in addition to the stem) are scaled down. This frame size gets the softer Multiflex seatpost, the handlebar is narrower, and the levers come with reach-reducing spacers already fitted. And the seatpost comes with an in-line saddle clamp, which suits a woman's tendency to sit further back on the saddle. It also has turquoise stripes to match the frame.

Reliable and lightweight Shimano 105 components need no introduction or explanation. But now we know the Apex-equipped Synapse model 6 also exists in a women's version, we'd pick that for its lower gears.

Aksium is Mavic's basic wheelset, equipped with their Aksion tyres, but even at entry level you get straight pull butted and flattened spokes – and Mavic is sure to satisfy the clubroom bike snob. What you don't get, however, is anything to reduce the effects of dish, so I'd favour Synapse model 6 also for its wheels. Another couple of minor Mavic minuses: the rear Aksium comes with a truly pie plate-sized spoke protector and a noisier-than-Shimano freewheel.

Conclusion

We like Cannondale carbon Synapse bicycles. We'd like them better if the frames had more clearance and there were one or two with triples,



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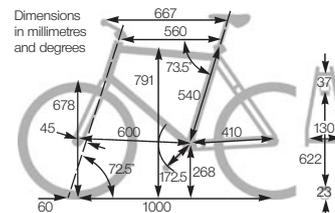
Both bikes are comfortable and lightweight, although the much smaller women's size weighs only 3% less despite having a 25% lighter rider

but it seems that combination isn't on the menu at any of the usual establishments. Cannondale are a reliable brand, and in contrast to carbon frames that come with notices implying self destruction if you so much as look at them funny, Cannondale carbon is guaranteed for the lifetime of the original purchaser.

We also reckon the women's models are well designed and probably as specific as it gets, despite a lack of difference in the frame. We'd like less weight, shorter cranks and lower gears in the smaller sizes, but that's the same story everywhere and Cannondale does a better job than most in scaling down a frame.

In conclusion: nice bikes, especially the Apex equipped model 6, which also looks excellent value when you consider the lifetime warranty on a full carbon job.

Tech specs



Cannondale Synapse Carbon 6 (Apex)

Price: £1800

Weight: 8.58kg

Sizes: 48, 51, 54, 56 (tested), 58, 61cm

Frame & Fork:

Carbon fibre composite, fittings for 2 bottles, BB30 bottom-bracket.

Wheels: 23-622

Schwalbe Lugano tyres on Shimano RS10 wheelset

Transmission: 20

gears from 28 to 121 inches. FSA Omega 50-34 chainset, Sram

Apex gears, 11-32 cassette

Braking: Sram Apex short dual pivot

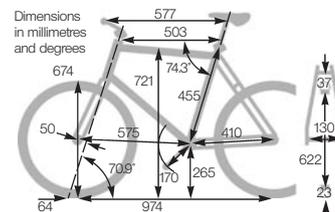
Steering & seating:

Cannondale integrated headset, ED 6° 100mm stem, 430mm drop bar. Cannondale Stage saddle on Multiflex seatpost.

Accessories: none

Contact:

cannondale.com, 01202 732288



Cannondale Synapse Women's Carbon 5 (105)

Price: £2000

Weight: 8.32kg

Sizes: 44, 48 (tested), 51, 54

Frame & Fork:

Carbon fibre composite, fittings for 2 bottles, BB30 bottom-bracket.

Wheels: 23-622

Mavic Aksion tyres on Mavic Aksium wheelset

Transmission: 20

gears from 32 to 121 inches. FSA Gossamer 50-34 chainset, Shimano

105 gears, 11-28 cassette

Braking: Shimano 105 short dual pivot

Steering & seating:

Cannondale integrated headset, C2 6° 70mm stem, 410mm drop bar. Prologo Kappa saddle on Multiflex seatpost.

Accessories: none

Contact:

cannondale.com, 01202 732288