

# Cycling answers

Your technical, legal and health questions answered by CTC's experts

## 8-SPEED ON 9 OR 10?

### GEARING

**Q** I remain faithful to my touring bike fitted with a Campagnolo Chorus 8-speed set up, as in ten years it has never let me down. I am currently buying spares so as to avoid moving to Campagnolo 10-speed as parts wear out and become more difficult to find.

My query regards chainsets. Can I use a 9-speed Campagnolo chainset (e.g. the racing triple), and if not what would you recommend as a chainset so that I can retain all my other 8-speed Campagnolo components?

Simon Gardner, Brough, Yorks



**A** All chainsets nowadays have the same 8mm ring-to-ring spacing, so that they work with all the various front indexing systems, road and mountain, Campag and Shimano alike. The differences between chainsets labelled 8-speed, 9-speed and/or 10-speed, are to do with the dimensions of the chain that goes with that many rear sprockets.

More speeds (in the same space) entail a narrower chain, so the corresponding chainrings have slimmer teeth, but are thickened lower down on the inward-facing side – to stop that narrow chain dropping into the between-rings gap.

These differences are pretty small however, with overlap in the tolerances of adjacent sizes, so third-party road chainsets (e.g. TA, Stronglight etc.) are nowadays usually made to suit both 9- and 10-speed, with less toothy chainsets, for mountain and trekking bikes, being optimised for 8- and 9-speed chains.

I wouldn't try to run a 10-speed chain on an 8-speed chainset, as it might jam on the thicker teeth or in the between-rings gap – but that's not what you or most people want to do.

An 8-speed chain on a 9- or more-speeds chainset is a far more common desire, and fortunately you can expect that to work – with a couple of provisos. Firstly: the wider chain will have scope

to deflect slightly more side-to-side on those thinner teeth, and that'll entail a bit more trimming of the front mech position in response to rear shifts. This sideways slop, plus the overall width of the chain, will bring it closer to the thickened flank of the next larger chainring, especially when sprockets at the high gear end of the rear cassette are engaged with middle and inner rings. So you can also expect that one or two more of those cross-chain gears will become unusable due to noisy chain rub.

That Campag 9-speed chainset is likely to be a slightly better fit with 8-speed chain than one that also suits 10-speed, so that'll be good to go – although I think standard road chainsets are really too big for touring. According to Campag's website Q&A, it should also be possible to use a 9-speed chain on a Campag 8-speed cassette. It's what you'll have to do when your 8-speed mech wears out, since 8-speed chain won't fit your only remaining option of a Campag 9-speed mech: another reason, if one be needed, to select a 9-speed chainset.

A note for those remaining faithful to something slightly older: 8-speed chain will also run on 7, 6 or even 5-speeds, and Shimano 9-speed mountain-bike mechs etc. all accept 8-speed chain.

Chris Juden

## DROPOUT DILEMMA

### FRAME DESIGN

**Q** I have just recently ordered a new audax/touring bike from Mercian in Derby. I was offered a choice between vertical dropouts and the more established sloping horizontal type. On previous bikes I have had both. Do you have any advice?

David Davies, by email

**A** The two advantages of vertical are:

1. No risk of wheel pulling over, which is only a risk if you're big and strong and/or want to use some fancy

## THE EXPERTS



**CHRIS JUDEN**  
CTC Technical  
Officer and  
qualified engineer



**DR DOUGLAS  
CARNALL**  
Cycling doctor, MB  
ChB MRCGP



**PAUL KITSON**  
Partner at CTC's  
solicitors, Russell,  
Jones & Walker

lightweight external cam skewers that don't clamp the hub as securely as the standard internal cam Shimano or Campag ones.

2. Positive wheel location, so quicker and easier to put the wheel back in – no need to align it in the chainstays.

The advantages of horizontal-ish slots are:

1. Can alternatively use single-gear, hub-gear or fixed.
2. Can re-align wheel if buckled.
3. Does not call for as much manufacturing precision (hence really cheap bikes always have them).

Chris Juden



## SLIPPING BARS

### COMPONENTS

**Q** I have a 15-year-old road bike with the traditional stem and alloy drop bars. The stem has a single bolt to clamp the bars. The bars have a pattern of engraved grooves in the area of the stem clamp but they are probably smooth now as the corresponding grooves in stem and bars don't seem to engage.

I tighten as much as seems possible, with an allen key on a multi-tool, but the bars slip albeit a tiny amount each ride but enough to make me look for a more secure fix if possible. Is there a solution?

Ian Farthing, Ascot, Berks

**A** Those grooves are not intended to engage with one another like gear teeth. In fact, I don't know what they really do at all except indicate the middle of the handlebar where the stem goes, which doesn't explain the stem grooves I know. Maybe they are supposed to indent the bar slightly? Whatever: there are plenty of completely smooth but otherwise similar designs of bar and stem and they seem to work just as well. Or not!

One likely problem is the number of very similar but different diameters that dropped handlebars and stems come in, or used to come in: 25.4, 25.8, 26.0, 26.4 mm. Two of them, 25.8 and 26.0, have sort of merged and are now two names for the same nominal size. Differences of 0.2mm are apparently within the tolerance of road stems and bars, but that doesn't mean one will always clamp the other. And if 0.2 is near enough, 0.4 might also seem okay when it isn't really. So perhaps you have a 26.0 bar in a 26.4 stem, so most of the clamp force is going into bending the stem rather than pressing on the bar. But some stems are so stiff that this can be the case even with nominally compatible sizes.

There's another thing to beware of. The main cause of handlebar breakage is fatigue cracks initiated by score marks at the edge of the stem caused by the bar twisting in it. You've had a lot of this twisting. Your handlebar is therefore suspect. I think it's time to get a new handlebar, and if you're not too sure exactly what size it's meant to be, a new stem too. Front opening is a much better design anyway, so I'd go for that. Fit a quill-to-threadless adapter if you can't find a front-opening quill stem.

Chris Juden

#### BIKE CARRIERS & TRAILERS **LEGAL**

**Q** Over the last year I have noticed more and more cars carrying bikes on the roof or on the back of the vehicle. I have also noticed more and more cyclists using trailers attached to their bicycles to transport both goods and children.

**What is the legal situation and insurance ramification if a bike were to accidentally break away from a carrier on a car and fall into the road? Similarly, what would happen if a cyclist riding with a cycle trailer were involved in an accident? Is it any different from just riding one's bike by itself?**

Steve Carpenter, Jersey

**A** The revised 2007 edition of the Highway Code makes it clear that motorists must not overload their vehicle or trailer. The load must be secured and must not stick out dangerously (see rule number 98).

If a bicycle were to accidentally break away from a carrier and fall into the road causing an accident then the motorist would, on the face of it, be negligent. It is the responsibility of the driver to ensure that the load is properly secured to the vehicle. During the course of a long journey bicycles on even good quality bicycle racks can begin to work themselves loose. It is important that motorists check their loads at regular intervals.

The legal position is identical for cyclists who are riding with a cycle trailer. A cyclist riding with a cycle trailer owes a duty to road users to ensure that he rides his bicycle with consideration to other road users and that any passengers or goods are safely secured to the bicycle.

Paul Kitson



#### TOURING CHAINSET **GEARING**

**Q** I have a Raleigh Royal touring bike that's about 12 years old. I wish to replace the bottom bracket and chainset, but it seems nowadays they are made mainly for racing and mountain bikes. I would ideally like a triple 46-36-26 and don't mind about the cost. What would you recommend?  
Richard Spotwood, Northampton

**A** It's true that most chainsets are not optimum for touring, and it's a shame that most cycle shops don't sell those that are. Medium-sized chainsets do still exist, and others can be customised to suit, but this kind of service nowadays seems to be confined to a small number of specialist retailers.

I'd recommend a Stronglight Impact chainset from Spa Cycles (tel: 01423 887003). For £58 (plus £10 for the bottom-bracket) this comes with exactly the chainrings you want and in a choice of four crank lengths from 165mm to

## OVER TO YOU

### AN AID TO PEDESTRIANISM

You may be interested in a Scottish Legal decision in the 1930s, which was reported (at my request) in the Scots Law Times Law Reports, in which the Court of Session held that a bicycle was not a vehicle, but that a pedal cycle was only an aid to pedestrianism, when it came to consider whether a bicycle could use a pedestrian right of way.

A cyclist on a pavement is therefore only using his cycle as an aid to his pedestrianism! But I am sure the Road Traffic Acts would view this differently.

Lord Mackay declared: 'The age old distinctions of the civil law, via, inter, actus, and the not quite corresponding distinctions in our Scots law, viz: cart road, bridle road, footpath, loaning, were not developed out at the date when a velocipede or any such wheeled contrivance existed. Probably then they did not contemplate such a monster. But the expression "horsedrawn vehicle", or the expression "vehicle" itself as use in right of way cases, is, in my opinion apt to express a sharp distinction between machines for carrying passengers over the country by some sort of motive power which precludes them from using their own legs for the purpose, and, on the other hand, any form of contrivance, such as a skate or roller skate or ski or snowshoe, which merely facilitates the use of the individual's own muscle to cover the ground more quickly. Accordingly I take the view that the pedal cycle is only an aid to pedestrianism. I think it would be unfortunate in Scotland to take any other view, for otherwise tracks which had only been used by the comparatively innocuous two wheeled pedal cycle might be appropriated by the public thereby to all purposes of traffic.'

Crispin Agnew QC, Edinburgh

175mm. These chainrings are the old standard 110/74mm bcd – like your original Sugino Fuse 500 chainset. So unless there's something wrong with the cranks (unlikely), you could just replace the rings and save £28. According to my catalogues a 115mm Shimano UN53 bottom-bracket should also suit.

Chris Juden

### CARE OF S&S FRAMES

#### TRANSPORTATION

**Q** As an occasional frame builder I was interested in the Thorn Nomad approach to making a portable touring machine using S&S couplings.

I have read several articles/reviews of frames built using S&S couplings but all of them failed to ask one obvious question: what happens to the unsupported halves of the

frame in transit? My fear is that the unsupported top and down tubes would be very vulnerable and liable to damage. We have all read stories of bikes damaged by our friendly airport baggage handlers. What might happen to a bike, split like that and placed in a bag, I dread to think!

I have seen photos of frames built with a coupling with a coupling at each end of both the top and down tubes, whilst being very expensive suggests that the frame builder realises the possibility of damage occurring with only one coupling per tube. The same method is also used by some tandem frame builders.

Ellis Rudd, Bolton, Lancs



**A** I agree: simply bagged as shown the bike is highly vulnerable to damage if handled by a third party, especially if mechanical handling systems are used, at an airport for example. It would be easy to collapse the front triangle by tugging at the uncoupled ends of those tubes. This article was primarily concerned with the minimal packing required for a bike to remain under the supervision of its owner on a train etc. However, it's good advice to watch out for the ends of those tubes.

Couplings at both ends of a tube is not also but mainly a feature of tandems, since it's the only way to fit that long frame in a normal-sized suitcase. Solo bicycles rarely have that many couplings, since at present most purchasers of such bicycles are intent on packing the bike in a suitcase for travel by air. And in that case (sic) it should not be possible to tug on the ends of those tubes.

It would possibly weigh and cost less than an extra pair of couplings, but effectively stabilise the ends of those tubes, to add a bracing strut – either welded in the frame or bolted on as required – but I don't know of anyone who's done that.

Chris Juden

### BRAKES FOR CHILDREN

#### FAMILY CYCLING

**Q** I have two grandchildren aged four and five. They both have bikes which they can ride fairly well. However, they both share a problem with the braking systems. Due to the distance between lever and handlebar, their small hands struggle to reach the lever to be able to brake effectively. I imagine this is a common problem with small children's bikes. Should the manufacturers be addressing this problem?

John Scully, by email

**A** It is a problem, particularly with the rear brake as it requires more hand strength (due to cable friction) and uses the (usually) weaker hand. Some manufacturers do address the problem and fit small, adjustable brake levers. It's worth replacing the brake levers on other bikes. Get ones with a reach adjuster – a screw that pushes the lever toward the handlebar. Two-finger adult brake levers will work if you can't find suitable children's levers.

Even better is a bike that has a hand-operated front brake and a back-pedal rear brake. This lets small children use their legs to slow down. It's intuitive and gets around the problem of limited hand strength for the rear brake.

Small bikes available with back pedal brakes include the Islabikes Cnoc 14 and Cnoc 16 ([www.islabikes.co.uk](http://www.islabikes.co.uk)); the Puky ZL16, ZL18 and Crusader 20-3 ([www.amba-marketing.com](http://www.amba-marketing.com) – or win one on page 73!); and the Trek Jet 20 ([www.trekbike.co.uk](http://www.trekbike.co.uk)). For more on what to look for in children's bikes, see The CTC Guide to Family Cycling (page 40)

Dan Joyce

## CONTACTING THE EXPERTS

Each issue, Cycling Answers addresses a selection of questions that we receive. We regret that Cycle magazine cannot answer all unpublished queries – in particular, medical ones. Please note, however, that general and technical enquiries can also be made via the CTC Information Office, tel: 0870 873 0060, [cycling@ctc.org.uk](mailto:cycling@ctc.org.uk). And don't forget that CTC operates a free-to-members advice line for personal injury claims, tel: 0870 873 0062.

Medical and legal enquiries for possible publication should be sent to the Editor (see p84). Technical enquiries can be sent to the Editor but will get there quicker if they go direct to Technical Officer Chris Juden (same address as the Information Office).