Q&A

Cycling answers

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

THE EXPERTS

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ALARM LOCKS — SECURITY

Q **I was interested to read the article about security in the Feb-Mar issue of Cycle. In addition to the types of lock described in the article, one can also buy 'alarm locks', typically a cable lock that emits a loud noise if the cable is cut. How cost-effective do Mr X and Mr Y think alarm locks are? Is it better to spend £25 on an alarm lock, or £25 on a stronger unalarmed lock?**

David Rhead, by email

A If you look at most alarm locks, the 'speaker' is almost always exposed, even if it's integrated into the lock. Have a look at this, where the speaker is under the 100db sticker:

www.fahad.com/pics/100_decibel_lock_alarm.jpg

Such alarm locks have four weaknesses that I am aware of.

1) They can be silenced considerably by pushing hard onto the speaker with a thumb or covering it with your hand.

2) A bradawl or sharp screwdriver will make short work of such a speaker.

3) An electrical discharge such as that from a taser or modified disposable camera flash will fry the innards in no time.

4) The cable can be stripped and bridged on the alarm side of your intended cut, thus keeping the circuit complete and the alarm quiet.

You've seen how long it takes to cut cables. Personally I'd wrap an alarm lock in a damp cloth to kill the sound, then cut the cable and leave sharpish.

Whether it's better to spend more money on a 'better' cable lock is a moot point. I wouldn't even touch cables. I'd be looking at spending my money on something like a decent D-lock or a chain.

Mr X

SMALLER TYRES, MORE PUNCTURES — TYRES

Q **In a previous issue of Cycle, Chris Juden asserted that smaller tyres puncture more often. Why?**

Bob Wells, Cranfield, Beds

A This is something I often hear about from those who use both small- and large-wheeled bikes, and these reports are sometimes accompanied by theories as to why it should be so. Here's a summary of the most plausible.

Punctures seldom arise from first contact with a sharp object: it usually has to be hammered home by repeated impact with the road surface. That's why it helps to check your tyres for embedded debris from time to time and that's how the thick layer of very bouncy rubber works in Schwalbe 'Plus' and similar tyres of other makes: by expelling these objects before they receive a second hit.

The smaller the tyre, the shorter its circumference and more frequent the hammer blows. Sharp objects are bashed in more rapidly, with less chance of being shaken free or found and removed by the rider, before causing a puncture.

Two possible other factors include the manner in which contact width and tread flex are influenced by diameter. To support the same weight with the same pressure, a smaller wheel has a shorter and wider contact patch. So it sweeps a wider swath, slightly increasing its chance of encountering something nasty. And its more tightly curved tread undergoes a greater change of shape as it enters and leaves the flattened area of contact. Distortion of the rubber, coincident with a sharp object being pressed into it, seems likely to assist penetration and could also explain the counter-intuitive puncturing tendencies of under-inflated tyres.

Chris Juden

AND REAR WHEELS TOO — TYRES

A An even more commonplace item of cycling folklore is that rear wheels puncture more often than front. Yes they really do, according to a survey by Chris Mills, who recorded all of the punctures suffered during 2006 on rides (twice weekly) of the Forty-plus Cycling Club in Essex. Riders suffered a total of 45 rear punctures and 25 front, showing that rear wheels puncture almost twice as often. These rides totalled about 90 thousand rider miles, from which we can conclude that the average rider went about 1300 miles between punctures.

Mills's data also tends to confirm that narrow tyres are also more puncture prone. The average Forty-plus

rider went three times as far before puncturing a Schwalbe Marathon tyre (i.e. 2,440 miles), compared to his more sporty-minded clubmates on Continental Gatorskins (865 miles). Are the sporty tyres worth it? Probably: I calculate that they'd only have to roll 0.5% easier to save more time than the 15 minutes it could take to fix each of their extra flats. But only if you ride alone: nobody else in a group benefits from your easier rolling tyres, whilst everyone is delayed when they puncture!

The most impressive tyres of all were the Continental Top Tourings used by Chris himself (and a few others) which totalled some 9,000 miles with only one puncture! But small numbers can be flukey. In 2007 Chris tells me he had three further flats in those tyres, which had he still been recording would have deflated that statistic!

Why do rear wheels puncture more often? Probably for some of the same reasons as smaller tyres: wider contact and more distortion. It's interesting that the observed front-rear puncture ratio matches the typical weight distribution on bicycle wheels.

Chris Juden

Left: courtesy of Matt Hodges

HYDRAULIC HOSE REPAIR BRAKES

Q I have a Saracen mountain bike fitted with hydraulic brakes. If the tube got cut is there any way of re-connecting them temporarily. And if I had to replace the tube following a cut, can the connectors in the brake unit be re-used or do I need to get spares on hand?

Michael Bryan, Halifax

A Brake hoses are pretty tough, even when they're just fibre-reinforced plastic tube. I've yet to see one cut on any of our local mountain bike rides, but if that happened you would be up the creek with only one brake. I've never heard of a temporary repair kit, probably because you'd also have to carry enough fluid and other tools to re-fill and bleed the system, and nobody's going to take all that on a day-ride. It's really a workshop job, where a whole new hose will always be more appropriate.

But if you want to make such an event even less probable, you could fit hoses with a protective braided stainless steel wire jacket like the Fibrax FCB3110, which comes complete with end fittings for most types of brake.

You can re-use the fittings, but you'd probably need new 'olives' (rings that compress onto the hose when you tighten the fitting).

Chris Juden

PASSING DISTANCE LEGAL

Q I was very interested in the letter you published in Oct-Nov Cycle, titled 'Passing Distance'. I commute along residential roads with cars parked on both sides, and only enough room for a cyclist and motorist to pass if the cyclist rides close enough to the parked cars to risk being knocked off by an opening door. I ride further out. I assume that if I did get hit, the oncoming motorist would be responsible? Some further questions:
1. Are there any circumstances in which I could be penalised for riding 3-4 feet from parked cars?
2. If the oncoming motorist arrives at the narrow stretch of road before me, am I obliged to stop and wait, or can I continue assuming that he/she is obliged to stop ASAP and give me as much room to pass as possible?
3. If, when forced close to the parked cars, I then get knocked off by an opening door, am I partly responsible?
4. What about on a very narrow country lane in which there is not enough room for a cyclist and motorist to pass. Can the cyclist rightly expect the motorist to stop or back up?

Dave Rowell, Exeter

A Paragraph 152 of the Highway Code states that a motorist, 'should drive slowly and carefully on streets where there are likely to be pedestrians, cyclists and parked

OVER TO YOU

DIY SHORT-REACH LEVERS

Regarding the query about short-reach brake levers in the April-May issue: You used to be able to get them, e.g. from GB and Weinmann, but they died out. Having a short wife with short fingers, I had to find a simple answer. I solved the reach for her, some 40 years ago, with a tube fitted inside the lever, around the cable. No, the tube has never jammed against the housing, and it worked perfectly.

Mick Davey, by email

cars. In some areas a 20 miles per hour (32 km/h) maximum speed may be enforced'. It goes on to state that motorists should be on the, 'look out for… cyclists'.

On narrow roads it is important that all road users have respect for fellow users of the highway. Where there is very little room for a cyclist and a motorist to pass each other safely it is important that both the motorist and the cyclist proceed very cautiously.

As a London cycle commuter I am familiar with the difficulties that are raised by Mr Rowell. As long as a cyclist acts responsibly when facing an oncoming vehicle it is highly likely that the motorist would be regarded as negligent if he/she were to collide with the cyclist.

Mr Rowell also raises supplementary questions:-

1. Sometimes riding a few feet from parked cars is often safer. Experienced cyclists are only too aware of the dangers of a car door being opened immediately in front of them, or a pedestrian stepping off a pavement without looking. I have pursued many personal injury claims for cyclists injured in such circumstances. Whether or not a cyclist would be partly responsible for an accident if they were riding too close to the centre of the road depends on the circumstances of the case. Each case turns on its own facts.

2. If the motorist is already travelling along a narrow stretch of road then the sensible course of action would be to stop and allow the motorist to pass. This is really a matter of common sense. If two road users approach each other on a narrow stretch of road then the sensible course of action is to allow the road user who first reached the narrow section of road to pass through. In these circumstances if a cyclist fails to stop and a collision ensues then there is a likelihood that a judge would hold the cyclist partly responsible for the accident as it would have been avoided had the cyclist given way.

3. I have handled many cases for cyclists who have been knocked off bicycles by doors being opened. In none of the cases that I have handled has an insurer successfully argued that the cyclist was riding too close to the parked car. Whilst the Highway Code at paragraph 67 states that a cyclist should, 'leave plenty of room when passing parked vehicles and watch our for doors being opened' it would in my view be a harsh judge who finds that a cyclist is partly responsible for the accident in such circumstances.

4. On a very narrow country lane where there is not enough room for a cyclist and a motorist to pass each other it is clearly the responsibility for the motorist to stop. A motorist would be negligent if they simply continued driving ahead and collided with a cyclist who was in front of them. In this situation road users should show courtesy to each other. It might be easier for a cyclist to lift their bicycle off onto the kerb to allow a motorist to pass than for a motorist to reverse up a very narrow lane. There is a danger that such a manoeuvre could be more hazardous as they may collide with a vehicle travelling in the same direction.

Paul Kitson

LIGHTWEIGHT & LOW GEARS?

BIKE CHOICE

Q I am a 78 year old of reasonable fitness who took up regular cycling eight years ago. I'm looking for a light bike with flat bars, a bottom gear of 20 inches or less and a top not much over 100 inches. I have a target figure of £500. I don't want a hybrid: I already have a satisfactory off-road bike. I am looking for a road-specific machine that meets my old person's needs. There must be others like me.

Kevin Corrigan, Reading

A You're right, there must be others, but if you want something light, the presumption seems to be that you must be a young and sporty person not in need of really low gears! There are nowadays plenty of flat bar road bikes in the catalogues, but I cannot find any that has a bottom gear like 20 inches. To get that with a 700C wheel you need a mountain-bike cassette and rear mech, and smaller chainrings than road triples come with (see my review of the Dawes Super Galaxy last December). It should be easy to swap the roadie transmission on any 27-speed flat-bar racer for same price components from the mountain-bike stable, but may be hard to find a dealer who'll do that.

You may do better to look at so-called urban mountain-bikes: the modern, sporty and much lighter equivalent of your old iron. Check out the Scott Sub

20. It weighs 24.4lb, and with 26×1.3 tyres the wheels actually measure 24.7 inches, so its 11-32 cassette and 26-36-48 chainset deliver the 20–108in gear range you desire. And at £470 it's right on the money. Some recommended upgrades would be to swap that stiff alloy fork for comfy carbon fibre, when the cassette wears out get an 11-34 and when 80+ legs demand even lower gears, put 22-32-44 rings on the chainset.

Chris Juden

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. 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. And don't forget that CTC operates a free-to-members advice line for personal injury claims, tel: 0870 873 0062.

Enquiries for possible publication should be sent to the Editor (see p80). 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).

Cycle is looking to recruit a medical correspondent. Interested and qualified parties should contact Dan Joyce: editor@ctc.org.uk.