

GROUPTEST

CYCLING JOURNALIST **STEVE WORLAND** REVIEWS BRAKES

Disc brakes for drops

Disc brakes are becoming more common on drop-bar bikes. Cycling journalist **Steve Worland** explains why and tests four cable-operated callipers

DISC BRAKES offer more predictable performance than rim brakes because there are fewer variables. Discs are not affected by damaged or dirty rims and are hardly affected by wet conditions because water on the rotors disappears instantly when the pads touch. Good discs need less grip strength to apply, and once you're used to their 'bite', braking becomes a more casual affair: you can brake later with less risk of locking the wheels. Also, discs don't wear out rims.

We're looking at mechanical disc brake callipers designed to work with normal drop-bar levers, including combined brake-shift levers. Hydraulic options have arrived but are costly. Cable discs are likely to remain popular because they're cheaper, easy to fit and maintain, and can be used with auxiliary bar-top brake levers.

2 Rotors:

160mm diameter disc rotors are ideal for road use; 140mm ones are usually okay. Bigger rotors offer more powerful braking. Rotor size is limited by the frame or fork mounts, but adapters are available.

3 Mounting:

It doesn't matter if your frame and fork have post mounts (bolts screw straight in) or IS (bolted from the side); most brakes come with adaptors. Mechanical discs stick out more than hydraulics. Check clearance for rack or pannier (seatstay mounted) or heel (chainstay).

1 Cables:

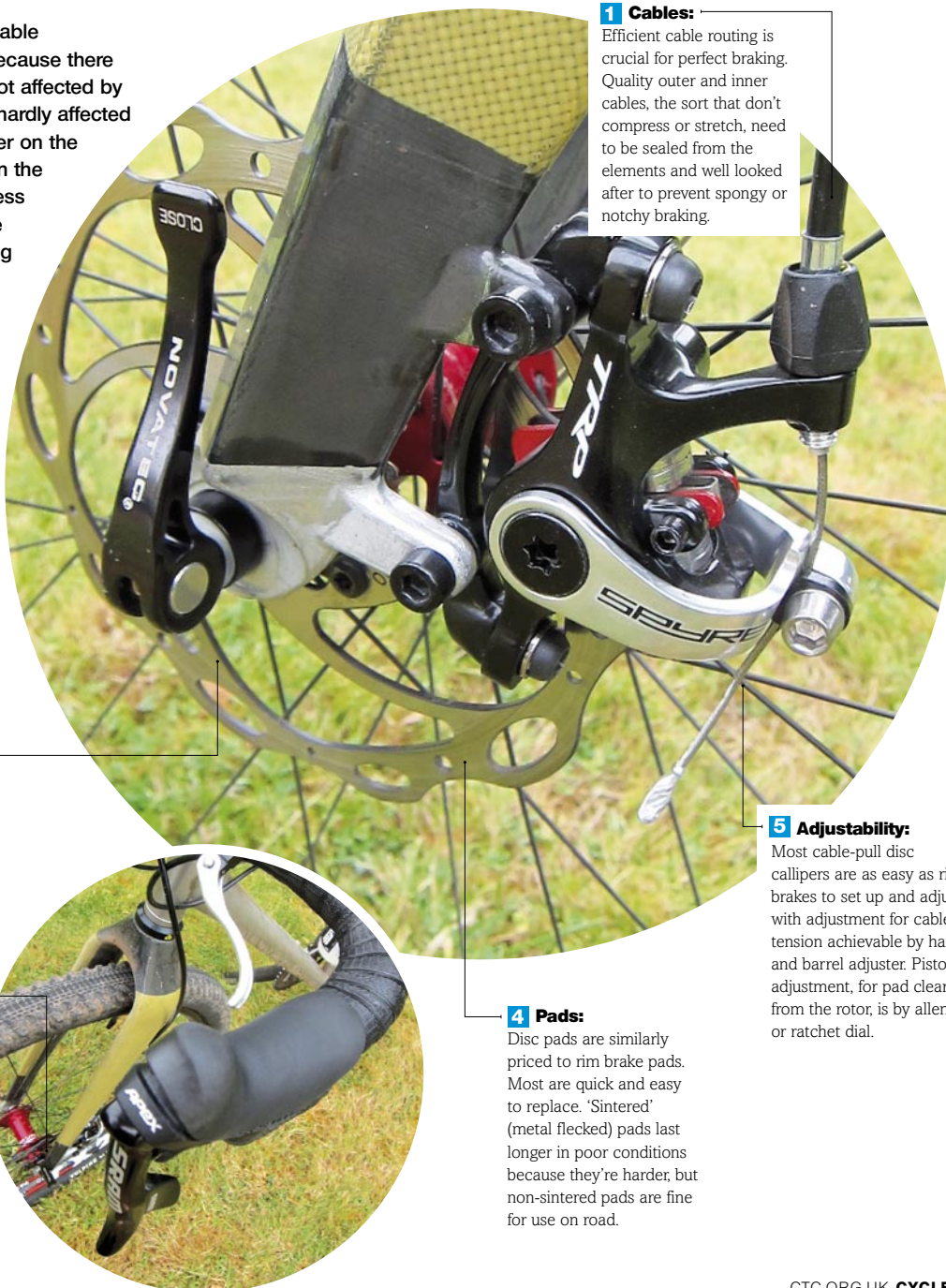
Efficient cable routing is crucial for perfect braking. Quality outer and inner cables, the sort that don't compress or stretch, need to be sealed from the elements and well looked after to prevent spongy or notchy braking.

5 Adjustability:

Most cable-pull disc callipers are as easy as rim brakes to set up and adjust, with adjustment for cable tension achievable by hand and barrel adjuster. Piston adjustment, for pad clearance from the rotor, is by allen key or ratchet dial.

4 Pads:

Disc pads are similarly priced to rim brake pads. Most are quick and easy to replace. 'Sintered' (metal flecked) pads last longer in poor conditions because they're harder, but non-sintered pads are fine for use on road.



OTHER
OPTIONS

The brake callipers tested here are designed to work with the cable pull of drop-bar brake (or brake/gear) levers. Mountain bike disc callipers look very similar but require linear-pull levers, just like V-brakes do. You can't simply mix and match.

Some manufacturers nevertheless make drop-bar, linear-pull levers – notably Tektro with their RL520 ones. But you would then need separate gear shifters, such as bar-end levers. There are other calliper options too: TRP's HyRd uses a hydraulic calliper linked to normal brake cables. Look out for a review next issue.

**TRP SPYRE £69.99 per brake**

This lightweight offering from Tektro Racing Products is among the few cable disc brakes that has both pads moving to the rotor. This helps to make initial fitting and adjustment almost as easy as the pad adjustment dials on the Avid BB7s, with easy cable pull adjustment through the cable tension barrel. Pads tend to wear more evenly on dual-push brakes too. Power and modulation is close to, but not quite up to, the standard of Avid BB7s. The semi-sintered pads are Shimano compatible, so they're easy to find, reasonably priced, and quick to fit. The slim profile and centred cable routing of the calliper means a bit more heel clearance, which is important on some frames, especially when a brake is between the chainstay and seatstay. Price includes 140 or 160mm rotor, bolts and bracket. Weight: calliper 158g, 160mm rotor 102g.

upgradebikes.co.uk

Light, efficient and relatively powerful braking at a good price

**AVID BB7 ROAD SL £129.99 per brake**

These are Avid's lightest disc callipers. The price includes lighter-than-normal rotors, titanium bolts and cable tension adjusters that fit to your cables rather than to the callipers; this involves extra outer cable trimming. Standard BB7s cost about half as much and only weigh about 25g more per brake, and BB5s are just a few grams heavier and cheaper again. All offer the same single pad motion but the BB7s have ratchet dials for both pads, which is good for exact pad adjustment. Standard BB7s would be the rational pick for most riders. The 'Tri Align' bolt and washer system ensures that fitting and centring is easy (other manufacturers now use similar set-ups). Braking performance both on and off road is powerful, simple to adjust and durable. The pads are easy to swap. Price includes 140 or 160mm rotor, bolts and bracket. Weight: calliper 160g, 160mm rotor 96g.

fisheroutdoor.co.uk

Still the performance benchmark. Standard version is better value

**HAYES CX-5 £54.99 per brake**

The chunkier build of the CX-5s, compared to the lighter Avid and TRP offerings, results in the mechanical workings being slightly less prone to mud ingress, which is obviously more relevant in off-road situations. The cable tension is adjustable and operates one pad. The other is set in place but can be adjusted in and out with a 5mm allen key for precise re-positioning as the pads wear. Set up or adjustment is easy and quick and the braking power and lever modulation feel is superb. Also, it has to be said that the polished hunk of aluminium that shields the internal workings makes for very tidy aesthetics even if it does add a little heft. Pad replacement is the quickest and easiest of any brakes here: you just use needle pliers to pull them off a magnet that holds them in place. Price includes 140 or 160mm rotor, bolts, bracket and cable. Weight: calliper 197g, rotor 119g.

hotlines-uk.com

Well priced, very nicely built, easy to set up and powerful in use

**GENETIC MECH DPM £44.99 per brake**

Genetic is a house brand of UK distributor Ison. These DPM callipers are new to the market. They're a bit heavier than most of their performance rivals, but also cheaper, and the Gusset rotors are the lightest on test. The fixed inner brake pad can be adjusted with a 5mm allen key to accommodate pad wear and the whole calliper body floats as you apply the brake. This allows both pads to contact the rotor at the same time. Initial rub-free set-up is a bit fiddly, but we like the fact that the floating calliper allows a small amount of pad rub on slightly distorted rotors without slowing the wheel. The pads are Shimano compatible and semi-sintered. They're easy to change and once they bite the braking is powerful and well modulated. Price includes 160mm rotor, bolts and bracket. Weight: calliper 217g, 160mm rotor 90g.

ison-distribution.com

A bit fiddly to set up, but powerful and very well priced