CYCLOPEDIA Knowhow

Making sense of commonly misunderstood subjects

DAN JOYCE
Editor

Dan is glad that EveryReady lights with D-cells are long gone

Lighting

What lights do I need?

The best choice of lights for seeing and being seen while cycling at night will depend on how and where you ride.

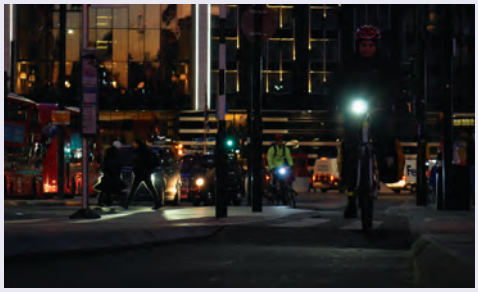

Photo: Robert Spanring

UNDER STREETLIGHTS

The primary role of your lights here is to make you conspicuous; you don't need a strong beam. Flashing or pulsing lights work well under streetlights. Other road users can still track your position thanks to the streetlights, and they're more likely to notice you initially.

Since traffic will be travelling slower – e.g. 30mph – being seen from a huge distance away isn't vital. But there will be junctions so it's important that your lights are visible through a wide arc front and rear, not just directly in front or behind. Dynamo lights need a standlight as you'll likely be stopping and starting often.

UNLIT ROADS

Without streetlights, your front lamp must have a beam powerful enough to light the way further ahead than your riding speed's stopping distance. Avoid the temptation to fit a mountain biking light that will dazzle other road users. A road-specific light with a focused beam and around 300-500 lumens should be sufficient. If you want brighter, look for a beam cut-off at the top of the lens and/or the facility to switch to a lower output to instantly 'dip your headlight'.

The rear light needs to be bright enough to be seen from far behind as traffic may be travelling fast. Look for 30-50 lumens or more. Avoid using a flashing rear light unless you also use a steady one. A flasher won't signpost your trajectory or proximity in the dark.

OFF-ROAD TRAILS

Mountain biking at night requires lots of lumens. Most dynamo setups won't produce enough – although the Sinewave Beacon 2 (p20) and Exposure Revo may, depending on your riding. As a rule of thumb, you'll want at least 800 lumens from your main light. More is better. A broader beam that gives you peripheral vision is helpful, as is a secondary light with a tighter-focused spot on your helmet.

For the rear light, saddle rail mounting is useful as it doesn't preclude a dropper seatpost.

Lighting law

To ride on the road legally between sunset and sunrise, your bike (not you) must be fitted with an approved white front light and an approved red rear light. (You also need a red rear reflector and amber pedal reflectors.) Lights that can *only* flash – hardly any – must emit at least 4 candela (~50 lumens). Lights that have a steady mode must be marked as conforming to BS6102/3 or an equivalent EC standard. In practice, it's difficult to find approved lights in the shops... unless you run dynamo lights, which usually meet the German StVZO standard. A small number of battery lights also do and are marked as such. Having said that, you won't be stopped by the police as long as you fit bright lights of the correct colour that don't dazzle. **cyclinguk.org/lighting-regulations**

Shining examples

A short list of good lights.

Under streetlights (battery)

Exposure Trace & Tracer Mk2 Daybright set, £85. **exposure-use.com**

Under streetlights (dynamo)

Front: Busch & Müller Avy T Senso Plus, £50. Rear: B&M Flat S LineTec Plus, £25. **ambadistribution.com**

Unlit roads (battery)

Front: Ravemen PR1600, £139.99. **bob-elliot.co.uk**. Rear: Lezyne Strip Drive Pro 300, £52. **upgradebikes.co.uk**

Unlit roads (dynamo)

Front: Supernova E3 Pro 2, £200. Rear: Supernova E3 Rear Dynamo Light 2, £60. **ambadistribution.com**

Off-road trails

Front: MagicShine Monteer 3500, £190. **magicshineuk.com**. Rear: CatEye Rapid Micro, £19.99, plus RM1 bracket, £9.99. **cateyecycling.co.uk**