



**SUPERNOVA TRIPLE**

£245 plus dynamo wheel

Reviewed by Technical Editor Chris Juden

The Supernova E3 Triple is a dynamo headlamp from Germany intended for mountain biking. The factors that made dynamo lighting a non-starter off-road have been answered one-by-one by new technology.

Dynamos have too much drag and slip on muddy tyres? Not when they're in a hub. 3W isn't enough power? It can be with more efficient light sources. The light dims just when you need it to negotiate an obstacle? True for a bulb, where the spectrum shifts to invisible infra-red, but LEDs don't do that and although output falls, a dynamo-LED system at half design speed produces more than half as much light, so you'll still see at least 70% as far. But you'll be completely in the dark if you stop? Not with today's electronic technology, to extract, store and release extra power.

The Supernova E3 Triple packs all of those answers into a lamp that's shown several champion 24-hour MTB racers their route to victory. But real riding is different from racing and I was keen to see how it would compare with the brilliant mains-rechargeables employed by my fellow nightriders.

Up to walking speed just one LED came on, giving ample light to get started. It wasn't so good for picking the smoothest path up a steep hill, but sufficed. Above 3mph the other two kicked in and things got steadily

brighter. Meanwhile a little power was diverted to a super-capacitor that boosted the initial LED for a while if I slowed right down again and provided enough light to see where I was if I stopped. This 'standlight' dims with time, but lasted for 7 minutes (12 without a rear lamp). Unfortunately the standlight remained on when I switched off the power, wasting light and drawing unwelcome attention to the parked bike.

Back on the trail and now going faster than 8mph, the lamp came into its own. Apparently some electricrery hoodwinks the alternator into delivering considerably more than its regulation three watts, boosting total light output to a claimed maximum of 680 lumens. That's a lot brighter than my old halogen bulbs, but not as brilliant as some of the rechargeable LED or HID systems I've seen. Up to speed, the Triple is well bright enough for familiar trails or those not too narrow and twisty. But unlike the predictable circuit of a 24h race, real trails are often neither familiar nor open, so I tried to get lost in the local woods. And I succeeded!

When the speed drops, output falls to something like my old halogens. And whilst the beam is wider than a typical dynamo lamp designed for road use, it doesn't shed as much light to the sides

as a flood. For exploratory riding I'd combine the E3 triple with a headtorch – which is useful anyway in case of mechanical problems.

I'll certainly not be reverting to batteries. I appreciate the autonomy of generating power myself: the freedom from recharging batteries and to ride as long as I like off-road too. The only snag with the Triple is dazzling oncoming drivers. You'll need to shade it with a hand. (Supernova make other E3 lamps for mainly road use.) The optional rear lamp is incredibly neat and bright and comes in two versions: to fit EU standard rear carriers or seatposts. I bodged it to fit a seat stay.

You might be wondering about the 'heavy' dynamo hub. I used a Shimano Alfine. It weighs 220g more than a regular XT front hub, plus 180g for the lamp with cables & bracket. My old rechargeable battery alone is 690g. Admittedly you can now get 4-hour Li-ion systems half that weight, but a SON-delux hub would also save 100g, run as long as your legs keep moving and be guaranteed for five years. So no worries about the E3 Triple being light enough, in both senses of the word!

**Details: £245, plus the cost of a dynamo wheel. Optional rear lamp is £40. See [supernova-lights.com](http://supernova-lights.com). UK Distribution by [Amba Marketing](http://Amba Marketing), [amba-marketing.com](http://amba-marketing.com)**