



Off-road lights

With just about every manufacturer significantly upgrading its lights again this year, we investigate the options, budget and performance of 'bar-mounted daylight'

Words and photos: Andy McCandlish

LOOK OUT FOR...

Nowhere is the old statement 'power is nothing without control' more relevant than off-road lighting. You can have all the power in the world, but if it isn't pointing where you are looking, it isn't going to

be helpful. A good spread is required for slow, technical riding. If it's backed up by a strong mid to long-range capability then you've got a good package. The ideal set-up includes a bright bar light to give shadow to the

obstacles on the trail, backed up by a lower powered head lamp, to let you see round corners without blowing out those shadows. With that in mind we discovered that you don't have to break the

bank to get an effective lightset. We have split the test into three categories: budget, performance and money-no-object lights. In at least one case the budget light could double as a helmet light too.

£££ UNDER £200



EAGLETAC P20A2 £48.95

There are plenty of these excellent torches on the market these days and, like LED lighting in general, the technology improvements are coming in leaps and bounds. We picked up this 230-lumen offering from Eagletac with a view to using it as a budget helmet light with the option of keeping it stashed in our pack as an emergency back-up.

However, any doubts about its ability to do duty as a 'proper' light were soon dispelled — it turned out to have enough of a light spread to be a superb budget bar light, especially if you spend £100 and get two for a directional spread. As we initially suspected though, its main strength was as a helmet light using the superbly simple LockBlock mount. OK, it was a little on the heavy side, but once the bezel was rotated into 'turbo' mode the sheer volume of light was enough to make you forget any such minor drawbacks.

We found the single click on and off function — once you had set the power with the rotating bezel — refreshingly simple, and the advantages of cheap and easily sourced AA batteries helped cement the Eagletac P20A2 as an almost indispensable back-up or budget light.

Weight: 154g (with NiMH AA batteries)
Burn time on max: 1hr 55min w/Duracell 2,650mah NiMH
230 lumens
Battery type: 2xAA in torch body
Brightness settings: 3 + flash
Bar mount £6.95 extra
Contact: www.flashaholics.co.uk



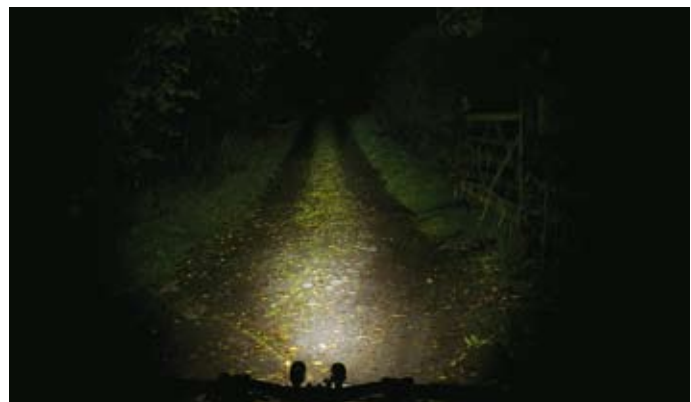
ELECTRON TERRA2 £99.99

The first thing that caught our eye with the Terra2s was the quality. They are exceptionally robust and well made light units powered by a compact and tidy Li-Ion battery. Great first impression, then. Mounting them to the bike was also a breeze with the excellent tool-free bar mounts, both of which allowed accurate pointing of the spot and flood beams. So far, so good.

On the bike the run time was staggering. We got a red warning light after about five hours, but they just kept burning on beyond seven hours, although it was hard to determine if the brightness had waned at all. This was mainly because the light output itself wasn't great. Electron had to make allowances for the price tag somewhere, and the light output is where the saving shows. The Terra2 did cope with our regular night ride, but our speed was much reduced and we really felt we were straining to see anything, even in the middle distance. Bloodshot eyes were the result after about 40 minutes in the saddle.

At the end of the day they just aren't bright enough for any kind of serious off-road use, and while they are well made and perfectly effective for commuting, that isn't what we are looking for here.

Weight: 344g
Burn time on max: 7hr
240 lumens
Battery type: Velcro on hardcase
Brightness settings: 2 + flash
Comes with bar mount
Contact: www.madison.co.uk



£££ £200-£300



FOUR4TH £235 (W/HELMET MOUNT)

Boasting a very tidy and compact head unit, and a battery that opens up the possibility of both helmet or bar use, most of our test riders took well to the Four4th. With loads of power on tap and a very impressive burn time, it was certainly looking good on paper.

However, in the field we found that the helmet mount didn't work well with certain helmets, the vent spacing causing all sorts of bother to the rubber band fitment. The head unit rattled annoyingly on the trail, whether attached to the bar or helmet mount, and the ball-bearing control of the side-to-side swing made it difficult to accurately aim the beam.

The light itself was excellent on the trail — we had the 10° spot that was more at home on the helmet, where it put the smooth spotlight pattern to good use. The large button was easy to press with gloves on and, combined with only two brightness settings, it was exceptionally easy to use. A wide choice of lens spreads and battery formats are available so you can easily tailor the system to your own requirements — another point in this light's favour.

Weight: 460g
Burn time on max: 4hr 15min
1,200 lumens
Battery type: Neoprene bag
Brightness settings: 2 + Flash
Comes with helmet mount
Contact: www.four4th.co.uk



LUMICYCLE LED3 XPG ELITE £275

We criticised Lumicycles' mounting system last year because we felt it let down what was an otherwise excellent system. The mount hasn't changed at all for this year — although we are told that an improved, retrofittable one is in the pipeline — but this time we are willing to cut Lumicycles a little slack.

The reason for our leniency is the sheer grunt of the new XPG LEDs. Controlled in a smooth spread of light that pools in all the right places, everyone that strapped the light on was impressed. It's a very flexible and usable off-road light, at home on your bars or your helmet thanks to the compact and lightweight head unit. In essence it punches far above its £275 price tag.

Our minor gripes focus on the mounting hardware, which is still very fiddly to adjust between bar sizes, and the battery gauge/power readout. A steady colour indicates battery condition, with the power setting colour flashing around once a second which made for difficult assessment on bumpy ground. Not a big deal and it doesn't detract from a superb light with a superb burn time, all at a great price.

Weight: 404g
Burn time on max: 3hr 34min
1,340 lumens
Battery type: Velcro mount bag
Brightness settings: 3 + flash + 3 minute boost
Comes with bar mount and helmet mount
Contact: www.lumicycle.com



LUPINE PIKO £299

If you are on the lookout for the most compact — but off-road worthy — light on the market, this must surely be on your shopping list.

Taking up no more space than a small box of matches, the Piko's head unit sports twin 4W LEDs that somehow manage to push out a very respectable 550 lumens in a fairly tight spread. With the battery not a whole lot bigger than the head unit, it all adds up to a cracking helmet light with the added appeal of being highly versatile — you can either strap the battery on to your helmet or use the provided extension lead to throw it in your pack. We tried it mounted on the bars but found the spread was just a little too directional for our needs, lacking enough coverage to make it an effective off-road light in all but the tamest of conditions.

In use we found the on/off button a bit hard to locate on your head through the added bulk of winter gloves — the button could do with standing a bit more proud of the unit so you know where to press. Other than that it really was one of the best helmet lights out there, with plenty of burn time and oodles of power. It's just a little on the pricy side for effectively a helmet-only unit.

Weight: 196g
Burn time on max: 2hr 40min
550 lumens
Battery type: Velcro mount hardcase
Brightness settings: up to 3 (programmable)
Comes with bar mount and helmet mount
Contact: www.zyro.co.uk



SUPERNOVA E3 TRIPLE £245 (DYNA WHEEL, £129)

We must admit to being quite excited at the prospect of the E3 triple. A dynamo powered off-road light giving the potential for limitless riding? 680 lumens power drawn solely from the turn of your wheels? Sign us up.

Today's Shimano dynamo hubs are quiet, free-spinning affairs that you wouldn't even know you were powering, and combined with a head unit of this quality and light output, you could be on to a winner.

Our initial worries that the dynamo wouldn't pump out any light at low speeds were calmed by Supernova, who assured us the lightset had some kind of storage capacitor that could run the light for up to 12 minutes in the event of slowing down.

Unfortunately this didn't turn out to be quite the case; below about 5mph the light begins to flash as the dynamo slowly pulses power. At a standstill, once the flashing had mercifully stopped, the standby light also turned out to be no brighter than a small keyring torch. Great idea, great light with a very usable spread but it needs a healthy five-minute-plus battery back-up in there for serious off-road use.

Weight: 138g
Burn time on max: N/A
680 lumens
Battery type: dynamo
Brightness settings: 1
Contact: www.amba-marketing.com



All lights were shot static, so this is what you see with the light on reserve. Once up to speed, the Supernova has a similar spread and power to the Lupine

£££ £300+



AY-UP V4 ADVENTURE KIT £320

We have long been a fan of the Ay-Ups, with their one-box-of-tricks-does-it-all approach to off-road lighting. For your £320 you get two head units: one for the bars and one for the helmet, three batteries for 12 hours lighting and a flexible twin-channel battery charger. Not to mention red filters so you can have a rear light for that last stretch home on the road. This year the V4 lightset is the same, but the LEDs have enjoyed an upgrade to over 400 lumens per set from the previous 340.

They don't quite cut the mustard in this day and age as standalone units, but combine the bar and helmet mounts and you still have a winning combination that puts light wherever you want it, and in plentiful proportions.

Other lights have raised the bar for power and spread so much this year we haven't awarded them the full marks they received before, but that doesn't mean they still aren't the light of choice for many of our testers when it comes to parting with their own cash. Lightweight, simple, robust and highly recommended.

Weight: 344g (w/3hr batteries)
Burn time: 3hr 20min (3 hour battery) or 7hr 15 min (6 hour battery)
400 lumens per light (800 total)
Battery Type: Neoprene bag with Velcro strap
Brightness settings: 2 + flash
Comes with 3xbatteries, 2xred filters, 2xbar mounts, car charger, helmet mount, headtorch mount and cable extension
Contact: www.ayup-lights.com



EXPOSURE 6PACK £450

There is no denying the impact of firing up a 6Pack on the trail. Double-click the power switch and watch as everyone squints and turns away with drawn-out expletives. It is pure muscle power in a relatively lightweight, cable-free package.

On the bars it is probably bulkier than we would have liked, but then that is the price you pay for such power and battery life. Three hours at 1,800 lumens is stunning, but even more amazing is the perfectly rideable mid option (the same power as the Maxx D on full bore) that lasts for 10 hours.

We liked the mounting system, the new USB charging capability (same on all Exposure lights this year, opening up commuter or car charging possibilities) and a system back-up that includes plug-in rear lights, battery extenders and remote switches as optional extras. You can even buy a cable to charge your mobile phone or iPod from.

The only gripe we had was with the beam pattern. With so much power being thrown down the trail, we felt it had left the close-in, just-in-front-of-the-tyre area relatively lacking in illumination. Other than that, the light was all-encompassing, allowing a detailed assessment of the trail ahead to give you enough confidence for flat-out night riding.

Weight: 460g (with bar mount)
Burn time on max: 3hr 22min
1,800 lumens
Battery type: integrated
Brightness settings: 3 + flash
Comes with bar mount
Contact: www.exposurelights.com



LIGHT AND MOTION SECA 1400 £499

Judged on a combination of light power and placement, the Seca 1400 was definitely the favourite light among all our testers. Although it packs only 1,400 lumens compared to the 6Pack's 1,800, the intelligent placing of the Seca's beam actually makes it the better light off-road.

A mixture of a long-range clear lens with frosted-lens close-quarter LEDs gives the perfect light shape for trail riding, throwing most of the beam where you need it most. The near and middle distance are smoothly illuminated with brilliantly bright, wide-angled soft light, and while the spot can't quite match the 6pack's power, it's more than adequate in isolation.

The battery pack Velcros securely in place and a rubber band quickly and simply wraps around the bars for a swift yet very secure fastening, which can be easily removed without leaving any unsightly clamps on your handlebars.

The only obvious drawback to the Light and Motion is that price. Five hundred notes is an awful lot to cough up for a set of lights — cheaper than last year's models despite being more powerful, but still pretty salty unless your name's Richie Rich.

Weight: 496g
Burn time on max: 2hr 40min
1,400 lumens
Battery type: Velcro on hardcase
Brightness settings: 3 + flash
Comes with bar mount and helmet mount
Contact: www.madison.co.uk



NITERIDER PRO 700 RACE £399.99

Another superbly well-made light unit from those experts in the USA. The excellent low-profile mount sits nicely in the centre of your bars and is easily tightened into place while the (fairly hefty) battery is easy to Velcro onto the top tube.

Download the software and you can easily, and effectively, programme the head unit's button function. Preset up to six power levels per programme, anywhere between 50 and 700 lumens at full poke. We felt it was just a novelty at first, but were pretty pleased to have the facility once we had tinkered a while.

On the bike the low-slung mount looked sleek and purposeful, and the fuel gauge on the top of the light was easy to read on the fly. Most testers, however, felt the beam was a little sharply focused and cut at the edges, rather than softening nicely like most of the others. It also had a hotspot in the centre — while it wasn't a problem it could have been more intelligently diluted. Would serve better as a helmet mount, but it's hellish expensive for that duty alone in our opinion.

Overall though a very effective light, just a little on the dear side for the light power and spread.

Weight: 570g
Burn time on max: 2hr 38min
700 lumens
Battery type: Velcro on hardcase
Brightness settings: programmable, up to 6
Comes with bar and helmet mount
Contact: www.2pure.co.uk



VERDICT

This is where it gets tricky. With so many excellent lights coming through, or being developed from last year's models, the competition is really hotting up.

For out-and-out riding performance there is no question that the Seca 1400 wins hands-down. With a superb, smooth placement of its 1,400 lumens it was nothing short of daylight on the trail. The Exposure 6Pack came a very close second, only losing out with its poorer close-quarters light spread. You might prefer the cable-free design and Exposure system back-up, and if you opted for the 6Pack on that basis you won't be disappointed.

For a combination of value for money and trail coverage however, the Lumicycle couldn't be beaten. At just over half the price of the 6Pack and Seca it is one of the star buys of the test, alongside the Ay-Up V4 kit.

Vying for that 'star buy' status of course is the great little Eagletac torch. With 230 lumens of punch and a very effective bar and helmet mount available it would make a great addition to anyone's kit, whether that be as a helmet light or spare 'get me home' light in the pack. At £55 including the mount, it is a no brainer. Combine it with the Lumicycle and you have a real trailburning kit for £330.



A good button is crucial for those on-the-move power switches — something large enough for easy operation with heavy winter gloves, and with a positive click so you know you have made contact. A built-in power gauge is handy too.



The ability to add the light to your bar or helmet securely and remove it easily is a godsend if you are regularly mixing up day and night riding. Who wants to ride during the day with half a kilogramme of useless light during the day because it is too much of a faff to remove? It also makes it easy to swap between bikes.



A good lens can make or break even the most powerful lightset. You can have all the light in the world, but if you don't direct it properly it could end up wasted. Good coverage round the front wheel is essential for low-speed techie riding, while you still need those mid ranges covered for normal riding. High speeds demand more light thrown up the track. To get a light with all these can be expensive of course.



	PRICE	BRIGHTNESS (LUMENS)	WEIGHT	BURN TIME (MAX)	BATTERY	CONTACT	OVERALL RATING
Eagletac P20A2	£48.95	230	154g	1:55	AA batteries	www.flashaholics.co.uk	8
Electron Terra2	£99.99	240	344g	7:00	Hardcase	www.madison.co.uk	5
Four4th	£235 inc mount	1,200	460g	4:15	Neoprene Bag	www.four4th.co.uk	7
Lumicycle LED3 XPG Elite	£275	1,340	404g	3:34	Nylon Bag	www.lumicycle.com	9
Lupine Piko	£299	550	196g	2:40	Hardcase	www.zyro.co.uk	7
Supernova E3 Triple	£245	680	138g	N/A	N/A	www.amba-marketing.com	5
Ay-Up V4 Adventure Kit	£320	800	344g	3:20 or 7:15	Neoprene Bag	www.ayup-lights.com	9
Exposure 6Pack	£450	1,800	460g	3:22	Integrated	www.exposurelights.com	9
Light & Motion Seca 1400	£499	1,400	496g	2:40	Hardcase	www.madison.co.uk	10
NiteRider Pro 700 Race	£399.99	700	570g	2:38	Hardcase	www.2pure.co.uk	7