

SPELEO-TECHNICS NOVA [FX-ION]



BATTERY: (FX-ion Option) Lithium ion
ORIGIN: UK
COST: £229.00 inc charger
WEIGHT: 410g inc battery
OUTPUT: 290 Lux at 5m

Issue 39 included a Review of the Petzl MyoBelt headtorch, one of a number of new LED lights on the market. It's a fine headtorch, extremely well made and functional but very much now one of a host of similar models. This headtorch on the other hand, the NOVA, is different. It looks different, it's operation is different and it can rightfully claim to be a whole new concept in LEDs. Speleo-Technic's NOVA will certainly stand out in a crowd, and not just because it's the brightest LED on the planet!! What the Nova lacks in aesthetic beauty it makes up for in unusual design. We've been looking at the FX-ION a NiMH lithium-ion rechargeable and one of a range of power options for the Nova intended for the rigorous demands of the caving fraternity. And if equipment can survive the cavers' tender loving care it can survive anything.

CONSTRUCTION

Nova is a helmet mounted battery pack short wired on a two-pin plug to the articulating headpiece/LED assembly. The battery housing is intended to hang with the plug on the bottom facing down, though it will just as easily orientate the other way. The integral red plug is classic SpeleoTechnics FX moulded plastic with a pin and two holes. It takes either the two-pin grey moulded plug attached to the headpiece wire or the mains charger. The headpiece



plug is square with a flat top channel over which the securing web strap passes (and stays firmly in place). The headband is a standard elastic and it lacks

much adjustment range (though Speleo have now improved this). It's the headpiece that draws the eye - an aluminium back-plate acts as a heat sink for the LED which, contrary to popular belief does generate significant heat over time. This plate can consequently get a little warm. The single LED occupies a central position beneath a very simple domed polycarbonate lens. Very tough. Beneath that is the unusual magnetic switch mechanism. This has a section of flexible moulded plastic (red) shrouding a magnetic contact. The switch is flicked forward with the thumb to switch on then provide 5 levels of illumination. When 'flicked' and held clear of the housing for a couple of seconds the Nova switches off. The headpiece articulates forward in one plane.

The rechargeable battery input is regulated by a microprocessor controlled step-up inverter providing 5 levels of brightness. These will sequence from high to low to high each time the switch is flicked or until switched off. Speleo-Technics can supply a range of power options for the Nova including standard alkaline cells though lower brightness levels need to be used. Ours is the FX-ion (Lithium-ion) cell which doesn't provide the low power warning flash of the NiCad cells but does supply 3.5 hours at full power (level 5), 7 hours at Level 4, 10 hours at level 3, 17 hours at level 2 and 21 hours at the lowest power level.

The FX-ion battery is much quicker to charge at 6 hours than the 16 hours of the NiCad and has much better cold temperature durability. It is smaller and lighter than Speleo-Technic's FX2 and FX3 but provides duration (depending on the light source being powered)

IN ACTION

To be brutally frank the Nova is never going to win any awards for stylishness and a pristine finish. It needs to be handed over to the italians for an image upgrade but in practical terms it's a rugged workhorse. It has three unusual features: the halo-like heat sink plate, the large single LED and the most bizarre switch we've ever come across. It takes



Although we've chosen the FX-ion Nova can be powered by a range of batteries

a few trials to get used to but you soon realise the very real advantages of this rather imprecise feeling mechanism over every other switch mechanism - it actually is precise and certainly the easiest switch mechanism on the market. More importantly it will operate under the coldest, wettest, muddiest conditions without seizing up and still be simple to turn on/off with gloved or 'frozen' hand. The mechanism is a magnetic switch which doesn't require direct conductive metal contact and the head can operate to a depth of 50m underwater. The same can't be said for the FX-ion powerpack however, it is waterproof but you'll need an FX2 or 3 for true submersible use. Remember the powerpack option needs to be specified at the time of purchase, only the FX-ion and alkaline cell adapter is interchangeable.

On the head, balance between battery pack and headpiece is very good. The larger battery packs have to be belt mounted but the FX-Ion is no compromise since it is as powerful as the larger rechargeables. Activation of the switch is probably personal preference but we've found it much more efficient to place the thumb on the bottom plate and use the index finger to push the switch forward. The back of the headlamp does indeed get quite warm, hence the heat-sink plate. The light output is enormous in relation to standard LED headtorches, it still lacks the range penetration of a focusable beam torch but immediate area illumination is impressive.

TR

FOR:

Bright, very, very bright.
 Adjustable power levels
 Robust construction
 Water and mud resistant

AGAINST:

Bulky headpiece

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