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Hydrogen-powered outdoors charger wins trade show Novel prize for Brunton

Bob Smith, Editor

Monday 09 September 2013 11:55 PM GMT

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The Brunton Hydrogen Reactor with a core and the hydrolyser recharging station

One of America's oldest outdoor companies scooped the top award at a British trade show for its innovative gadget that uses hydrogen to recharge walkers' electronic gear.

Brunton's Hydrogen Reactor system provides a safe portable hydrogen fuel cell that the company said will provide at least five recharges of a smartphone.

The lightweight recharger won the accessory category and was also judged overall winner in the Novel Awards at the Outdoor Trade Show, the gearfest where big and small brands showcase new equipment and clothing that will hit the High Street in the near future.

The Hydrogen Reactor uses a fuel cell canister that plugs in with a USB output to provide up to 8,500mAh from each 'core'.

Brunton said one core will also deliver enough power to

recharge one tablet PC.

The gear is aimed at outdoor enthusiasts tackling ventures where they expect to be away from mains electricity sources but still need to recharge items such as phones, cameras and other outdoor gear with a USB connection.

The cores store the energy as safe hydrides, meaning there is no risk of explosion, and Brunton said the canisters could even be thrown on to a camp fire safely.

They are approved by IATA for carrying on to aircraft with hand luggage up to a limit of two, but anecdotes suggest some airport security staff will need some education to allow them on.

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The unit weighs 216g and measures 11.4cm x 7.2cm and is 3.2cm thick.

Brunton said: The Hydrogen Reactor delivers a maximum of 2.1A and emits nothing but water vapour and a gentle fizzling.

When the capacity of 8,500 mAh is exceeded the re-chargeable hydrogen core can be replaced and the power production starts anew.

The process can be stopped or interrupted by simply removing the hydrogen core.

This is how the fuel cell works: small cartridges contain pure hydrogen as the cell's source of energy.

Inside the device the hydrogen reacts with the oxygen from the ambient air. The Hydrogen Reactor delivers up to 8,500 mAh per core sufficient to charge an iPhone up to five times.

When the core is empty, a refill is really simple. Brunton offers two different charging stations: one for specialist retailers and one for DIY users.

Both stations just need water and electricity to produce pure hydrogen. Filled cartridges can be taken along in checked-in baggage with most airlines."

When the Hydrogen Reactor arrives in shops next year, it will retail at £130, including two cores.

The hydrolyser recharger will cost £225, though Brunton expects many users will simply take their empty cores to their retailer to exchange for a charged canister.

For DIY users, it will take about three hours to fully recharge a core. Extra cores will cost £12.50 each.

The Novel award was judged by a panel of: outdoor writer and photographer and TGO gear tester Chris Townsend; Adventure Travel magazine editor Rosie Fuller; Camping and Caravanning Club director general Robert Louden; Outdoor Industries Association chief executive Andrew Denton and Neil Hallissey, deputy editor of Country Walking magazine.

There were 20 other shortlisted final products in the OTS Novel Awards.

Brunton was established in 1894 by DW Brunton. The company is one of the oldest outdoor brands in the world. The brand still produces compasses in its headquarters near the Rocky Mountains in Riverton, Wyoming. Beside navigation instruments, the product range also includes portable solar panels and power devices as well as optics.

More details about the company's products are on the [Brunton website](#).

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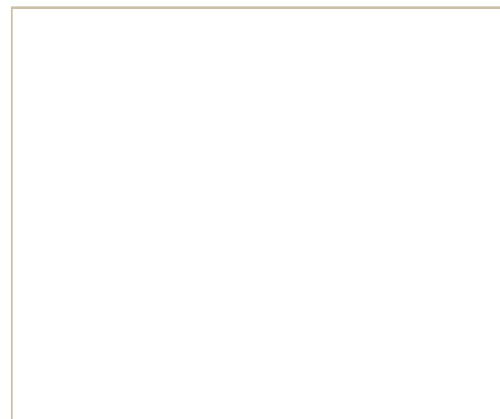
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