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Personal Technology

Ten O'Clock Tech: Hours Of Power

[Arik Hesseldahl](#), 04.19.01, 10:00 AM ET

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NEW YORK - In the world of laptop computers, there are two evils that designers and manufacturers must constantly guard against: heat and fleeting battery life.

One of the main reasons laptop performance lags behind that of desktop machines is rooted in the fact the main processor chip inside a laptop is not as easily cooled as in a desktop PC. And just as a PC chip's performance improves, so does its appetite for electrical power--and that means shorter battery life.



Electrofuel's PowerPad: hours of power, for a price

All three major chip companies who make chips for laptop PCs--**Intel** (nasdaq: [INTC](#) - [news](#) - [people](#)), **Advanced Micro Devices** (nyse: [AMD](#) - [news](#) - [people](#)) and **Transmeta** (nasdaq: [TMTA](#) - [news](#) - [people](#))--have attacked the battery life problem by making smarter chips that can regulate their power consumption at different times. But for the most part, the technology of laptop batteries has yet to reach any major breakthroughs. If you want to work on a laptop for the duration of a cross-country flight, you'd better be packing extra batteries.

Or you might try carrying a PowerPad from a Canadian company called **Electrofuel**. It's a lightweight external battery that can fool certain laptop models into thinking they're connected to a wall socket. The device plugs into the AC power intake on the laptop, and a single charge can keep you working for between 12 and 16 hours, long enough for some international flights--and then some.

Its dimensions are about the equivalent of one of the free magazines you'll find on the shuttle between Boston and New York. It weighs in at 2.5 pounds, is about 11 inches long, 8 inches wide and 3/8 of an inch thick, and is packed into a titanium casing. A light indicator on the top of

the battery tells you how much of a charge remains, and the cord is long enough that you can leave the PowerPad in the laptop's carrying case while you work.

Electrofuel, which publicly trades on the Toronto Stock Exchange, has developed its own battery technology, which it calls lithium-ion SuperPolymer. Based in part on the conventional lithium-ion batteries used in most laptops, lithium-polymer batteries are made with a gelatinous material that allows them to be manufactured in shapes other than a rigid rectangle. The company claims its batteries can store 435-watt hours per liter. In the case of the PowerPad 160, that translates into 160-watt hours of power capacity.

Before buying, you'll want to make sure you get the right version of the PowerPad. It comes in an "A" version that is compatible with machines from **Acer**, **Compaq Computer** (nasdaq: [CPQ](#) - [news](#) - [people](#)) and **IBM** (nyse: [IBM](#) - [news](#) - [people](#)), and a "B" version that works with machines from **Gateway** (nyse: [GTW](#) - [news](#) - [people](#)), **Panasonic** and **Toshiba**. You'll want to double check the compatibility of your machine and make sure you get the proper connection cords as well.

The company also has its eye set on other applications where battery life, or lack of it, is a problem, such as mobile phones. It already has a battery in development for mobile phones from **Nokia** (nyse: [NOK](#) - [news](#) - [people](#)) that it says will deliver 2.5 times more talk and standby time than do the batteries that presently come with the phone.

All that extra power does come at a price. The "A" version costs about \$500, while the "B" version runs about \$530. The difference in prices apparently has to do with whether the unit includes its own charger or uses the computer's internal charger. It's currently available through mail order from the online electronics retailer FiveStarAdvantage.com

But if the company's manufacturing plans are any judge, the prices should come down soon. Earlier this month it opened a 156,000-square-foot manufacturing facility in Mississauga, Canada, that when running at full capacity next year, will be able to turn out about 60,000 PowerPads a month.

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