

A look at the most versatile and long-lasting charging units as portable power gradually gets lighter and less cumbersome.

BY RON EGGERS

Charge it

POWER UP ON THE ROAD

The average photographer probably has half a dozen or more electronic devices with proprietary batteries that need to be charged regularly in addition to the gear and gadgets powered with standard batteries. Charging units are often heavier and bulkier than the devices themselves, so when traveling, you want to tote only the essential devices and chargers. And then you can't always count on finding a compatible power outlet or staying in one place long enough to get a full charge.

Wouldn't it be nice to always have a universal power system without having to plug in anything? Universal charging systems aren't all that new. For example, I bought a multi-function **MAHA MH-C777Plus-II** to charge a wide variety of devices I'd lost the chargers for. It charges a range of batteries, regardless of the manufacturer, connector configuration or voltage, and it accommodates battery packs for digital cameras, cellular

MAHA MH-C777Plus-II



phones, camcorders and numerous other portable devices.

Adjustable connectors, reversible polarity, and automatic variable output make it possible to charge and recharge batteries. It supports 1.2 to 14.4 volts for NiMH and NiCAD batteries, and 3.6 to 14.4 volts for lithium ion. Digital SLR camera voltage is generally about 7 volts.

When the device has external charging connectors, like those with a charging cradle, it can usually be laid right onto the charger. Because there are no tips or plug connectors on devices without external charging connectors, you must remove the battery and use the charger's internal discharge connectors. There's an optional unit for charging AA and AAA batteries.

Though it does charge numerous battery types, the MAHA has a couple of drawbacks. It's cumbersome to use. If the unit or detached battery isn't placed just right, it won't charge. You get cryptic error messages. And it has to be plugged into a

conventional AC current or 12-volt DC vehicle to work. But MAHA is particularly handy if you have several devices with burned-out or missing chargers. The list price, \$79.95, isn't that much more than an individual charger. (www.mahaenergy.com)

A universal charging system is nice to

have, but portable power for a variety of devices is better. The auxiliary power system **MFuel Digital Power Solutions 9200 mAh Universal Power Pack (UPB)** from Blackstone International can provide both high power for such things as laptops, and low power for personal devices like compact digital cameras and cell phones. It's a little wider and considerably heavier than a palmtop computer.

The instructions are a little confusing. The part on charging the device comes *after* the instruction to turn on the unit and start



MFuel Digital Power Solutions 9200 mAh Universal Power Pack

plugging in devices, but the unit doesn't work until it's been charged. Some of the LCD status displays are mentioned on the packaging, but the instructions don't mention what they mean or why they're important; the LCD provides tons of information, but you have to figure out what it means on your own. It would be nice if the MFuel unit had a comprehensive set of information rather than all the disjointed instruction sheets and compatibility charts that come with it.

Documentation shortcomings aside, the unit performs well. It has two color-coded "power pucks" that are plugged into the

appropriate high/low power outlet. Low power output is 3 to 12 volts, high power output 16 to 24 volts. It ships with 15 low-power (yellow) plug adapters that accommodate a variety of devices, including USB, and 12 high-power (red) plug adapters for laptops and other power-hungry devices.

You can charge two devices at once (one low power and one high power). The UPB comes with a universal adapter plug, called a World Jack, that's compatible with North American, European and Australian outlets. According to the specs, the UPB can provide 10 to 12 hours of extra power for laptops and notebook computers, depending on the model's power drain. It can provide up to 100 extra hours of power for low-power devices, again depending upon the device. Those figures are probably over-optimistic.

I drained the power from the battery in a full-size laptop until wouldn't turn on, then plugged in the fully charged power bank. The laptop functioned as if it were running on AC power. About a half-hour later, the screen dimmed, indicating that the internal battery was charged sufficiently to power the laptop. After about two hours, the UPB still had 60 percent capacity; if the rate of discharge remained consistent, that would provide five hours of back-up power.

Charging the unit requires carrying your laptop charger to use as the power source. A unit with an MSRP of \$399.99 should be self-contained, but if it's going to be a backup battery for your laptop, you'd have that charger with you anyway. (www.mfueldirect.com)

The **Solio Classic Universal Hybrid Charger** stores power from the sun or socket. It only works with low-power devices up to about 5 volts, but it deserves a look. It can replace numerous chargers. Though it can be recharged by plugging it in, it doesn't have to be plugged in to work. It can recharge on sunlight. About the size, shape and weight



Solio Classic Universal Hybrid Charger

of a cordless mouse, it folds out like a fan to reveal three small solar panels. It takes about six hours to collect a full charge when plugged in. A solar charge takes up to two full sunny days.

The Solio can mount to a window with a suction connector to be protected from the elements. It will charge on a partly cloudy day, but for best results, should be placed in a window with direct sun exposure. The documentation is minimal, primarily illustrations, but understandable.

The Solio comes with a half-dozen charging tips that work with many popular cell phones, compact digital cameras and MP3 players. Additional tips for other devices are available from the company online. The unit is ideal for traveling with devices that require power from a USB port when there's no laptop available. In testing, it took about as long to fully charge my Nokia cell phone as it does with AC current. It also worked well on my MP3 player. It's small enough to keep in your camera case all the time. At \$99.95, it's affordable. (www.solio.com)

There are scores of chargers available for rechargeable AA and AAA batteries. Now most are NiMH, rather than NiCd. There are various things to consider when charging those types of batteries, but the main thing is to match the charger to the batteries. The right charger can make a considerable difference in the long-term performance of those batteries. ■