

MadisonPhotoPlus the Photo Summit e-Photo Newsletter

February, 2007

Powering Your Camera ... and Other Stuff, too

It seems that the care and maintenance of rechargeable batteries has a lot of people confused. Let's take a couple of minutes to see if it can be simply explained.

There are only a few types of rechargeable batteries to deal with, the oldest of which is lead acid. The battery in your car is a lead acid battery. Every time the car is driven the battery is charged regardless of whether it needs charging or not. This type of cell should never be allowed to fully discharge, or it is ruined.

Weather conditions affect a battery. All batteries are designed to work within a limited temperature and humidity range. Extreme heat or cold will sap the battery of its strength, as exhibited by how difficult it can be to start a car on a very cold day. Sometimes a jump start is needed, but on occasion the battery may already be fully discharged and a jump won't work. Time to buy a new battery.

Early camcorders and video lights used lead acid batteries, easily recognizable because they are quite heavy, and say lead or Pb on them. It is not safe to discard them with garbage because of the high amount of heavy metal and caustic acid they contain.

The next type to come along was NiCad (Nickel - Cadmium). NiCads became very popular with the advent of 8mm and VHS-C camcorders. These batteries, by and large, were much smaller and lighter than their predecessors. They delivered more power per pound, and were also available in new sizes, such as the popular AA cell. A drawback to the NiCad chemistry, however, was that if you topped them off, they were ruined. Before they could be recharged, they had to be run down to almost dead (if they went to 100% dead, they stayed that way).

A typical complaint from a camcorder owner was "My battery won't hold a charge any more". This was because the owner shortened its service life. Let's say he had a NiCad battery that would power his camera for 1 hour. He only used it for 10 minutes, then recharged the battery. The battery "thought" it was almost depleted when it was plugged in, then took only a little bit of charge before it was full. That cell was no longer a one hour battery, its "memory" was altered making it a 10 minute battery from then on. (Sometimes this condition could be remedied through a long, drawn out procedure.) This created many disgruntled battery users.

Next in line came the NiMH (Nickel Metal Hydride) batteries, which are still in widespread use today. These cells are similar to NiCad batteries, but don't have the memory problems - they are safe to top off. They can also put out more electricity for their size and weight than NiCads, and can be charged faster. Some AA chargers, for example, can fully recharge 4 spent batteries to full charge in 15 minutes or less! These chargers can also recharge NiCad batteries, but the NiMH batteries require "smarter" chargers than were available when NiCads ruled the battery world. These smarter chargers won't overcharge a battery or let it overheat.

The latest type of batteries are Lithium Ion cells. These can charge very quickly, lose capacity very slowly, work at a cooler temperature, and (at least in theory) aren't as bad for our environment. In general, they are also considerably less expensive than any of the earlier types of rechargeables, but do not come in popular sizes such as AA, C, etc. They can be topped off safely and do not exhaust to a point where they can no longer accept a charge.

One more word about rechargeables in general: even within the same size battery, different amounts

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of power are available. Most batteries going into electronic applications are measured in terms of mAH (milli-amp hours). This rating expresses how much electricity it puts out over how long a time. For example, a 1500 mAH battery will power a device longer than a 1200 mAH battery. In AA sized batteries, for example, most rechargeable NiCad batteries delivered between 750-1200 mAH; today's NiMH AA cells are between 2000 - 2700 mAH and cost less!

For more about recharging batteries, visit this web site: <http://michaelbluejay.com/batteries/charging-tips.html>.

Consumer Reports Distorts

The February 2007 issue of *Consumer Reports* tests and rates photo quality inkjet printers. The printers are split into 3 basic categories: Inkjet All-In-One Printers, Inkjet Printers, and Snapshot Printers. In the first two categories, most of the highest rated printers were Canon and HP models.

In the Snapshot Printers sections, *Consumer Reports* says, "Two models stood out in our latest tests: The Epson PictureMate Snap, \$180, and the Epson PictureMate Pal, \$130." The only other printer mentioned was a HP.

In the All-In-One section, 2 Epsoms were mentioned, but only 1 (the Stylus Photo RX700) is a photo quality printer - the other is a document printer. In the (conventional) Inkjet printer category, no Epson is listed.

Why mention this? Because this omission, by chance or design, suggests that Epson does not offer high quality printers comparable to the brands mentioned. For a supposedly objective organization to totally ignore one of the top three companies in a product type being rated is a disservice to its membership. Why was this allowed to happen?

Classes

The spring course offerings of our Better Imaging Photo School are attached. We thank those of you who have attended for your support and kind comments.

Cold Weather Camera Considerations

Digital cameras and images are especially susceptible to static electricity. Just like the spark created by shuffling across a carpeted room, static can corrupt all images on a memory card, even if it is in the camera. When changing and storing memory cards, be sure you or the camera is grounded. If you have several memory cards, invest in a rubber lined case for them. If possible, do not insert or remove cards in the dry, crisp out of doors. Avoid using the USB download cable that was supplied with the camera - use a card reader instead.

Film is also susceptible to static. When using an older 35mm or roll film camera, advance and rewind the film slowly. As the film moves faster, it increasingly creates static, which would show up as "crow's feet" on the negative or slide.

Keep in mind that batteries release energy more slowly as temperatures drop. Some batteries freeze at 20-25°F, making the cameras unusable. Keep the camera inside a coat as much as possible to keep the battery warm as long as possible. If possible, have a second battery in a warm pocket and switch it with the one in the camera as needed. ALL rechargeable batteries will exhaust faster in very cold weather. Older mechanical cameras did not have these limitations. Ain't progress grand?

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Thanks again for your input of what you'd like to read about in this newsletter. Have a great February and enjoy taking pictures.

Lynne & Jerry

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This photo by Wally Orlowsky should remind us that it's really not very cold here in New Jersey.

