"It's All Geek to Me" Show Notes

Episode 1: Digital Cameras!

Welcome to David Pogue's show notes for episode 1, all about digital cameras!

In these show notes, I'll provide a little more detail on stuff you see on the show. It's kind of like the way cooking shows post the recipes online.

Avoiding shutter lag: The "Half-press" technique works on ALL digital cameras. It's especially important to learn this for pocket cameras, because their shutter lag (the delay between pressing the button and capturing the shot) is especially bad.

Blurry low-light photos: Don't buy a digital camera today unless it has built-in *image stabilization.* The self-timer trick I showed you on the episode is one way to solve the blurriness. But getting a camera that stabilizes its own sensor is even better. It compensates for the little handheld jitters that, in low-light photos, results in blur.

Digital SLRs (the fireworks guy on the street): This is a big deal, one I wish I'd had more time to cover in the show. Those big black heavy digital SLR cameras make you look like a tourist dork, I know, but *man* do they take great pictures. No shutter lag, ever. Batteries that last a month instead of two days. That sharp-foreground, blurry-background effect.

Seriously consider one of these (like the Nikon D40, about $500). The shirt-pocket cameras are incredibly convenient. But when photo quality counts, they can't touch a digital SLR.

Editing programs. Here's the link for the free Picasa photo-editing program for Windows: *http://picasa.google.com/download/thanks.html*

The Mac program we used on the show, iPhoto, comes preinstalled on every Mac.

Of course, there are lots of other great digital shoebox programs — Photoshop Elements is great, too — but I like these because they're free!

Albums. In both iPhoto and Picasa, you create a new "photo album" by clicking the little + button at the left side of the screen.

Cropping. The cool part is that, in both iPhoto and Picasa, all your changes are *nondestructive.* At any time, months or years later, you can return the photo to its original uncropped, unedited state. (Each program secretly memorizes how the original photo looked.)

In iPhoto, highlight the photo and then choose Photos -> Revert to Original. In Picasa, highlight the photo and choose Picture -> Undo All Changes.

Photo blankets. These are *awesome.* It costs $100, but your photo is actually woven *into* the blanket — not just printed on. I ordered mine from *www.customcreationsunlimited.com.* We gave one to my parents (with a photo of the whole family tree on it), and one to my son's third-grade classroom teacher (with a photo of the class). We're talking *unforgettable!*

Megapixel challenge. There's a terrific followup to this story. After we filmed this segment in New York City's Union Square Park, I wrote up the results on my New York Times blog.

Critics descended, challenging the method of the test. So, off the air, I re-did the entire challenge, this time under the supervision of the technical editor of *Professional Photographer* magazine. Turns out... the results were exactly the same.

(You can read the whole story in my New York Times column about it here: *http://www.nytimes.com/2007/02/08/technology/08pogue.html?ex=1179633600&en=ccbce4fb0721d154&ei=5070*

So I'll say it again: *five or six megapixels is plenty, even if you make big poster-size blowups.*

In a pocket camera, 10 or 12 megapixels can actually produce *worse* photos, because they're cramming tinier and tinier sensors into the same space, so they have less light-gathering ability.

Having some extra megapixels to spare is *occasionally* useful in one situation: when you want to crop. If you have a many-megapixel print, you can crop out a huge percentage of the photo, and still have enough resolution left for a big print.

Overall, though, there are *much* more important aspects of a digital camera than how many megapixels it has. An image stabilizer is much more important. Shutter speed, lens, zoom ability.

If you really want one spec that will suggest the camera's photo quality, it's the *size of the sensor*.

After all, it's undisputed that a 6-megapixel Nikon D40 digital S.L.R. takes better pictures than a 10-megapixel shirt-pocket camera, because its sensor is relatively gigantic. Its individual pixel sensors can be larger and soak in more light, even if there are fewer of them.

Unfortunately, the camera makers and salespeople aren't going to help you out here. You're not going to see starbursts in the ads saying, "3/4-INCH SENSOR!" But you should.

In fact, the industry seems to go out of its way to prevent you from knowing what the sensor sizes actually are. It reports digital S.L.R. sensor dimensions in millimeters, like 23.6 x 15.8 mm.

Consumer cameras' sensors, meanwhile, are reported as a ridiculous fraction, like 1/1.8"-and that's the *diagonal* measurement. Not only does that mean you have to do a lot of math in your head, but it's also counterintuitive. The measurements with a bigger denominator actually represent *smaller* sensors. A 1/2.5" sensor is actually smaller than a 1/1.8" sensor.

And how does that relate to a 23.6 x 15.8 mm digital S.L.R. sensor? Only Einstein knows.

If you can do the math-you can find sensor sizes reported at camera-review Web sites, like *steves-digicams.com*, *dpreview.com*, and *dcresource.com*, you'll be well rewarded. There are a million factors to consider when you buy a camera, but this one's a fairly good predictor of picture quality.

Questions? Feedback on the show? Email me! I'm pogue@nytimes.com.

And don't forget—you can watch the show in glorious, widescreen HIGH DEFINITION, starting June 7 on the Discovery HD Theater channel!