

From: "David Grosf <[REDACTED]> on behalf of David Grosf <[REDACTED]>"
To: "jeevacation@gmail.com" <jeevacation@gmail.com>
Subject: Fwd: Circuits: Cameras With Time-Machine Powers
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This camera looks like a lot of fun -- enabling everyone to do Harold Edgerton explorations into high-speed dynamics and also special types of surveillance/monitoring.

Cheers,
David

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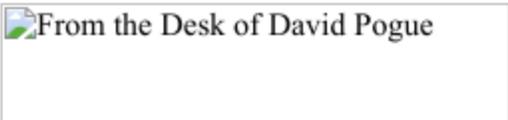
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The New York

April 10, 2009

Circuits

From the Desk of David Pogue

[Cameras With Time-Machine Powers](#)

By DAVID POGUE

I had so much fun reviewing the Casio EX-F1 last year. Here's what I said about it:

"The Exilim EX-F1 (\$1,000 list price) is the world's fastest camera. It can snap -- are you ready for this? -- 60 photos a second. These are not movies; these are full six-megapixel photographs, each with enough resolution

for a poster-sized print.

"After such a burst, you're offered three options: delete all 60 shots, keep all 60, or review them and pluck out the individual frames worth keeping.

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"So who would ever need to take so many pictures in one second? Sports fans, of course. But there are many other times: when your subjects are wildlife (including children), explosions, splashes, bouquet tosses, celebrity glimpses, broadening smiles and so on.

"(As I experimented with the FX1, I couldn't help feeling that my great-uncle Harold Edgerton would have approved. He was the M.I.T. professor who, in the late 1930's, pioneered the art of high-speed photography: the bullet piercing an apple, the splash of a milk drop, and so on.)

"In pre-record mode, you half-press the shutter button when you're awaiting an event that's completely unpredictable: a breaching whale, a geyser's eruption or a five-year-old batter connecting with the ball. The camera silently, repeatedly records 60 shots a second, immediately discarding the old to make room for the new.

"When you finally press the button fully, the camera preserves the most recent shots, thus effectively photographing an event that, technically speaking, you missed.

"Then there's the motion detector. In this mode, you put the camera down on something steady, press the shutter button and back away. It sits there, waiting for hours if necessary, until it detects movement in the scene -- at which point it auto-fires 60 burst shots. That could come in handy when you're trying to photograph a hummingbird approaching a flower, a bird arriving at its nest or an unauthorized household member raiding the cookie jar.

"As a final time trick, the FX-1 can display, on its 2.8-inch screen, a slow-motion version of what the camera is 'seeing.' Your preview falls farther and farther behind real time -- but you now have the luxury of patience as you decide precisely when to snap the shot.

"The FX1's movie mode is one of the most powerful ever. This camera can film at outrageously high frame rates: 300, 600, or even 1,200 frames a second. The result is incredibly smooth, extremely slow motion, like something in an Imax nature movie. No still camera has ever offered anything like this feature.

"The downside, alas, is that at faster rates, you get smaller movies. At 1,200 frames a second, you're dealing with a Triscuit-sized video in the center of your TV screen, surrounded by oceans of black margin.

"Still, when you're trying to pinpoint problems with your golf swing, your tennis serve or your industrial equipment, slowing time down to this extent is like a keyhole into a previously invisible world. You might not care about the size of the keyhole."

OK. So why did I just copy-and-paste half my Times review of a year-old digital camera?

Because despite all of its miraculous time-machine powers, the FX1 is big, bulky and expensive. It looks like an SLR, in fact, and costs \$1,000.

Imagine, though, how cool it would be if you had all of those features in a shirt-pocket camera--for \$350.



Believe it or not, Casio has done it. Two new models are sleek, compact versions of that ground-breaking FX1. There's the EX-FC100 (5x zoom, 2.7-inch screen, image stabilizer, \$400) and the EX-FS10 (3x zoom, 2.5-inch screen, \$350). Both of them do all that crazy time-machine stuff.

You can snap 30 frames in one second (not 60, but who cares?); each frame is a six-megapixel still--amazing. You can capture full-frame hi-def video, or you can shoot high-frame-rate (slow-motion) video at smaller frame sizes. At maximum, you're catching 1,000 frames per second--tiny, 224-by-64-pixel frames--which is so slow, it's pretty much like staring at a still photo. The larger slow-mo movies (210 frames per second, 480 by 360 pixels) are plenty slow.

(You can see my video about the FX1 here-- <http://bit.ly/JTkk> --or look at what some other people have done with Casio's high-speed cameras. Lighting: <http://bit.ly/7vXoS>. Geese: <http://bit.ly/K8Fc>. Dogs: