

RECENT POSTS

Stellar Seasonal Bargain: Sony A7III
Open Mike: Wasaaaaaah! (Wasabi)
A Fictional Fable About a Spottie and a Hottie
David Turnley Christmas Print Offer
The Best Battery Jumper: Update to the Update, and I Promise This is the Last of This
UPDATE: Auto Emergency Preparedness! Or, O Happy Day
Be of Good Cheer (OT)
Breakage
If You Want to Be a Portraitist...
The Writing Life (OT)

+ SPONSORS

RESOURCES

About Us
The Old Site
Advertising Information
Comment Guidelines
Publisher's Statement
Contact

« [Alex Soth Does the Hardest Thing](#) | [Main](#) | [Gordon Lewis's Nikon D7000 Review](#) »

Wednesday, 08 December 2010

Computer Product Tests

By Ctein

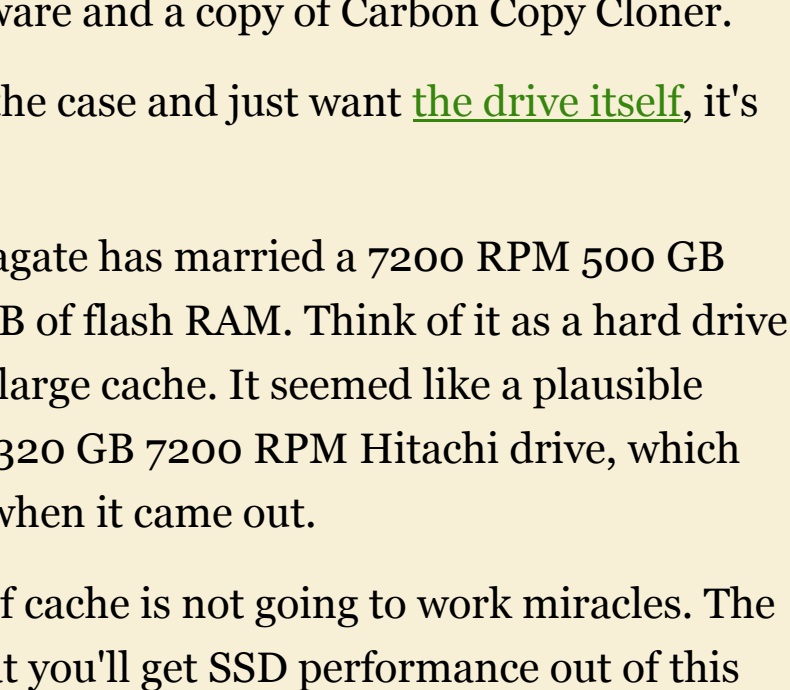
Products tested:

- OWC's 500GB Seagate Momentus XT 2.5" SATA 7200RPM/SSD Hybrid Drive + On-The-Go FW800/USB 2.0 bundle
- NewerTech 7 Port USB 2.0 Hub with 3.5 Amp Power Supply

Since we're in the midst of gift buying season, I thought it a good time to review a couple more products that I can recommend to people. This column is a bit long, because I want to get in everything while sale prices are still good.

The bundle

In my never-ending quest to improve laptop/Photoshop performance (most recently, see ["The Saga Continues,"](#) and before that [this column](#) and [this one](#)) I asked Other World Computing to send me one of their 500GB Seagate Momentus XT [do-it-yourself upgrade bundles](#). That combines the Seagate drive with a FireWire 800 On-The-Go external case for about \$200, currently. OWC throws in a small toolkit for doing the drive swap on your laptop, as well as a disk containing backup software and a copy of Carbon Copy Cloner. If you don't care about the case and just want [the drive itself](#), it's currently about \$140.



The drive's unusual; Seagate has married a 7200 RPM 500 GB mechanical drive to 4 GB of flash RAM. Think of it as a hard drive with an extraordinarily large cache. It seemed like a plausible upgrade to my existing 320 GB 7200 RPM Hitachi drive, which was a speed champion when it came out.

Understand that 4 GB of cache is not going to work miracles. The advertising suggests that you'll get SSD performance out of this unit, but that's only going to be true under rather limited circumstances. If you're the sort of person who shuts down their computer whenever they're not using it or closes applications as soon as you're done with a task (and I do know people like that), you'll see the most benefit from this puppy. With the new drive installed, my MacBook Pro booted in two-thirds the time it used to. Applications like Photoshop CS4 and CS2 and Eudora also launched in only two-thirds the time. Relaunching the same applications was incredibly fast; they took less than half the time to relaunch than they did with my old 320 GB drive.

But those are the exceptional cases, and those kinds of numbers are only going to hold true so long as you're not moving enough information around to purge the cache of the old data. Personally, I don't use my machine that way; my computers are always awake or at most asleep. I do have occasion to close and immediately relaunch an application (usually to clear out pernicious memory leaks), but it's not the norm for me.

Certainly some of my upgraded MacBook Pro's peppiness can be straightforwardly attributed to the higher density of the drive. It should be able to transfer data 50% faster than my old drive did, and sure enough that's what Lloyd Chambers' DiskTester reports. The fast sectors click along at about 100 MB per second (very respectable) while the slowest part of the drive is down around 65 MB per second (the top speed of my old drive). But, system performance does not usually improve in direct proportion to drive speed any more than it does to CPU performance; it's a combination of all the factors involved in the machine's operation.

That a 50% improvement in throughput translates into a genuine one third reduction in boot/launch times tells me that the large cache is definitely making a difference.

But will that difference translate to an improvement in Photoshop? Sometimes yes, sometimes no. I partitioned the drive so that the fastest 30 GB or so would be available as scratch; the second, much larger partition held all the stuff I'd ported over from my old drive. That ensured that the Photoshop's scratch performance would benefit from the fastest disk performance. (For those who are wondering, in every test I've run, with every drive I've tested, there was a negligible difference in performance between having a dedicated scratch partition at the front of the system drive and having that same drive as a separate, dedicated scratch drive. Disk access and seek times simply aren't a large component of the overhead.)

Well, to my surprise, I did see a modest improvement in Photoshop scratch performance. Honestly, I wasn't sure I would; Photoshop is inefficient enough that most of the time it isn't pumping data to the scratch partition at anywhere near the drive speed transfer rate. But the "Lloydmedium" benchmark showed a modest improvement of about 15% reduction in runtime on average, although I got varying results from run to run. Similarly, trying it on an assortment of panoramas that generated scratch files anywhere from about 10 GB up to 30 GB, I saw improvements ranging from 20% reductions in time down to insignificant.

In other words, when it comes to disk- and data-intensive Photoshop operations, the "hybrid" part of the hybrid drive isn't going to buy you all that much. What gains you will get are more likely because it's an overall faster drive than your old one.

But make no mistake, it is a fast drive, one of the fastest 2.5" drive on the market. And in some circumstances it is a very fast drive.

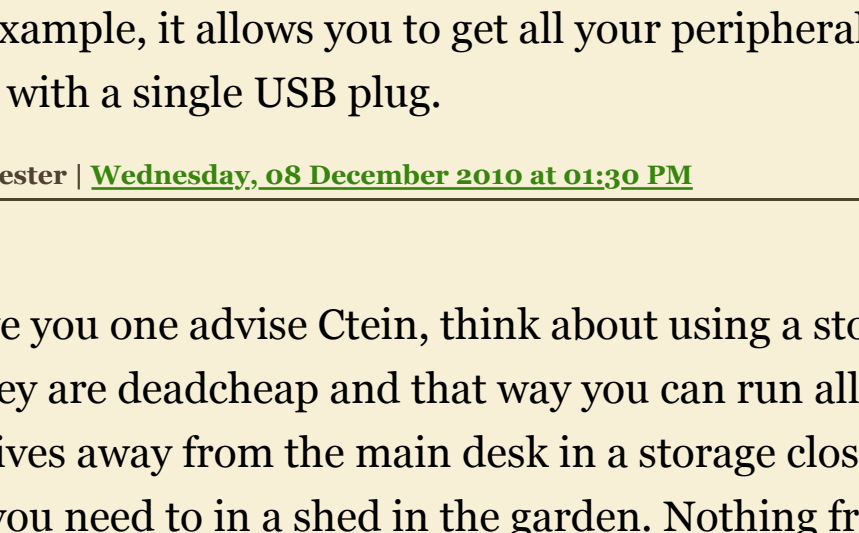
For those of us who still find large-capacity SSDs too rich for our blood, I think this is a worthwhile and cost-effective upgrade.

As for the On-The-Go external case, OWC offers a variety of external cases. For very little money, you can get a USB2-only case, but why anyone would want to hobble their performance that much is beyond me. At the other extreme they offer a case that provides eSATA I/O; the only reason I didn't go for that one is that not all my computers have eSATA, but they all have FireWire 800. The drive case I got has two FW800/400 ports and a USB2 port. You can get an AC adapter for it, but it'll power itself off a FireWire port.

FireWire 800 suits my old 320 GB drive just fine. It can't really pump data faster than FW800 can handle; my benchmarks on this drive in its external case are very similar to how it checked out installed in my system, running directly off of SATA. A nice portable chunk of external storage with fast enough throughput that I'm not going to be twiddling my thumbs waiting for data to go from hither to yon.

NewerTech 7 Port USB 2.0 Hub with 3.5 Amp Power Supply

OWC tossed a NewerTech 7 Port USB 2.0 AC-powered hub (\$26) into the box, as a reviewer's freebie if I liked it*. Truth be told, I expected to return it. Most of my I/O goes through FireWire or eSATA. This seemed like yet one more unnecessary gadget have to plug in. Still, I gave it a bit of thought. I realized that it would be awfully handy having a set of USB ports on the front of my desk instead of behind my computer, to plug in thumb drives (sneakernet is still a big part of my life), and to make it easy to plug in my Intuos 3 tablet when I'm using it on the iMac instead of my MacBook Pro. Then I thought about the USB teacup warmer I have that wants to suck down its full share of power. No, it doesn't keep a cup hot, but it will keep it warm and drinkable, so it's my friend, but there's usually no good place to plug it in. And, not too long ago I picked up an LG external DVD drive that also demands a full share of USB power; it won't power off of my laptop, for example.



So, I find myself using this little gadget every day in ways that distinctly improve the ease and quality of my life. Heck, for \$26, I'd have bought one, had I but known.

One niggling complaint: there is no indicator light on the hub to show that it is actually powered up. A very minor matter, but it would be nice to know that it's plugged in without tracing lines.

Ctein

*As Mike has mentioned many times, TOP does not condone the cheap "pay for play" practices that some sites and some reviewers engage in. And neither does OWC. But as both Mike and I have written, manufacturers don't even want a super-cheap item like this back; it costs them more to recycle or refurbish it than they'll get out of it. No quid pro quo, here; if I hadn't found the hub particularly useful, I'd not have written a word about it.

Ctein's regular weekly column now appears on Wednesdays on TOP.

<

Posted on Wednesday, 08 December 2010 at 09:17 AM in [Ctein](#) | [Permalink](#)

Unlque contents copyright © 2010 by Ctein and the commenters

Comments

Have you considered going with a dual-drive setup in your MacBook Pro? Put in a 750GB or 1TB for data and install whatever sized SSD you consider large enough for OS/Apps while still being affordable (i.e. a 60 or 80GB)?

Also, the Seagate Momentus XT 500GB should be less than \$140. More like \$125ish, though my store is currently selling them for \$110.

\$26 for a 7-port USB hub is pretty steep too, but a powered USB hub, like you say, can be an unforeseen godsend in ways beyond multiplying your USB ports. For laptop users who go from desk to desk, for example, it allows you to get all your peripherals plugged in and out with a single USB plug.

Posted by: Chester | [Wednesday, 08 December 2010 at 01:09 PM](#)

Let me give you one advice Ctein, think about using a storage router. They are deadcheap and that way you can run all your backup drives away from the main desk in a storage closet in the attic or if you need to in a shed in the garden. Nothing frustrates more then a lost file and I have become fashionably lazy so easing up the backup effort to me is paramount. I unload the raw data of the SD card uncited on the internal HD and on the backupdisk on the storage router. Then I edit my files and send the edited files to the storage router as well. That means I can use any system I like (battered HP desktop or ancient HP Desktop Replacement PC) and have the edited files accesable at any location. Sometimes I even double the backup of the edited files (since these contain more effort).

Posted by: Ed | [Wednesday, 08 December 2010 at 01:02 PM](#)

No indicator light? My local Poundland has a string of seasonal USB powered star lights for the price of... you guessed it.

Tony Collins

Posted by: Tony Collins | [Wednesday, 08 December 2010 at 01:39 PM](#)

Computers can be like cameras; a big hole to throw your money in. Heck I like throwing my money in holes and OWC is one of the best. Good stuff, reasonable prices, top notch customer service. I've been using them for years, never disappointed.

Posted by: Eric Steinberg | [Wednesday, 08 December 2010 at 02:49 PM](#)

I got one of the cheap multicolored usb ports. It wasn't long before the plug on the power cord broke. I just got one of the newer tech ports - and I'll see how it goes.

Steve

Posted by: Steven Balzer | [Wednesday, 08 December 2010 at 02:59 PM](#)

Anyone thinking of buying the Seagate overpriced, underpowered kludge should take a look at a recent review by a very reliable publication - PCPro: <http://www.pcpro.co.uk/reviews/hard-disks/569301/seagate-momentusxt-500gb>

Posted by: roy clarker | [Wednesday, 08 December 2010 at 04:29 PM](#)

Dear Chester,

I've thought about the small SSD / large HD option, but it'd mean losing the CD/DVD drive, and I'm not quite ready to do that. It doesn't get a lot of use, but it does get used.

~~~~~

Dear Ed,

Been thinking about it--there's about eight external drives floating about the office, and a central router would reduce the clutter. Plus the sneakernet.

But I'd need at least a 10 Gbit/sec network, or I'd still be using too many local HDs for performance-critical tasks. Don't got one of those, yet. Some day, though.

pax / Ctein

Posted by: ctein | [Wednesday, 08 December 2010 at 05:08 PM](#)

Dear Roy,

I have no idea how the drive will perform in a Windows system. I saw consistent improvements in real-world performance on my MacBook Pro. They got lousy boot times; I got great boot times. Shrug.

Testing a drive by copying a large file to and fro has very little to do with how a drive will perform as a system drive. It's an easy test to run, but it ain't useful... unless that's just what you plan to use the drive for.

pax / Ctein

Posted by: ctein | [Wednesday, 08 December 2010 at 07:28 PM](#)

Okay, can someone help me here? I've been thinking about getting an SSD for my iMac in order to use it as a scratch drive for PhotoShop... both to be able to stitch large files and then work on those files. I'm not really worried about the speed of opening a single file.

But the iMac doesn't have eSATA capability, so if the SSD is external, that means firewire 800 at best. Does that even make sense, then?

Or, as Ctein alludes to, could I take out the CD/DVD drive, move that external, and get a faster read/write speed there?

Any help or references would be appreciated. I think I know just enough to be aware of the fact that I don't really know anything...

Thanks,

Mark.

Posted by: Mark Hessewhide | [Wednesday, 08 December 2010 at 08:26 PM](#)

Ctein: does your optical drive get use when you're on the go, or not from your desk? If you only use it at home, or if you don't mind an extra gadget, you can pretty easily either (a) put the optical drive in an external case or (b) buy a cheap (and probably faster) external optical drive.

I just pulled the trigger on a fast SSD + big HDD in the optical drive bay upgrade; it all should arrive in the next couple days and I'm pretty heavily looking forward to it.

Posted by: Jacob | [Wednesday, 08 December 2010 at 08:37 PM](#)

Will the NewerTech hub charge an iPad? (I know of no powered-hub that will.)

--Marc

Posted by: Marc Roehlfeld | [Wednesday, 08 December 2010 at 09:13 PM](#)

Dear Mark,

Putting an SSD in a FireWire enclosure is a waste of money. A good, fast conventional hard drive will max out FireWire 800. Instead of spending \$100 for a 40 GB SSD, you might as well spend the same amount of money on a large capacity hard drive, partition off the first 40-50 GB for your scratch disk, and have all the remaining space for whatever else you want.

On the other hand, if you have a 2010 27-inch iMac, OWC can install an external SATA port for a modest sum.

Current-model iMacs are NOT user serviceable. It's easy to disassemble a MacBook Pro and swapping out drives. Doing the same on an iMac is a job for trained professionals.

~~~~~

Dear Jacob,

My optical drive doesn't get a lot of use when I'm traveling, but it gets just enough use it it would be extremely annoying not to have it available when I need it. Probably in four or five years I'll decide it's an entirely dispensable device, but not today.

pax \ Ctein

[Please excuse any word-salad. MacSpeech in training!]

~~~~~

-- Ctein's Online Gallery <http://ctein.com>.

-- Digital Restorations <http://photo-repair.com>.

~~~~~

Posted by: ctein | [Wednesday, 08 December 2010 at 11:15 PM](#)

Dear Marc,

A full-power (500 mA) USB port can recharge an iPad if it's not awake. It'll take about 12 hours. If your iPad's awake the port can't provide enough juice to run it and recharge it, but it'll cut the drain rate on the battery by about a factor of two.

pax / Ctein

Posted by: ctein | [Thursday, 09 December 2010 at 01:00 AM](#)

Dear Ctein,

There is a sweet difference between performance critical storage (which should be as close to the processor core as physically possible) and storage critical which should be as far removed from the processor core as physically possible (another solar system would be ideal in order to prevent data loss in case of nova). But sneaking around is risky business since it prevents a flow from happening and thus creates dataloss hazards of the unacceptable kind. I have lost countless pictures due to this malpractice when I (in a hurry) formatted a backupdrive and experienced a headcrash the day after. Since the day to day production of a healthy photographer is no match for any other medium then disk these days, and disks are not solid state but have moving parts extra care should be taken. So my setup contains 2 drive in my main machine. A 250 Gb drive which contains Windows XP (always the oldest supported version of Microsoft which guarantees the least problems as NASA and NATO doctrine state so nicely) and a 1 Tb lightning fast drive for storage. If the 250 ppeps I will lose no per month. Each drive contains all the photos ordered per camera and per month. The third directory has several subdirectories which are labeled "bewerkt.JPG" for pictures that have been edited from JPG and "bewerkt RAW" for pictures that have been edited from RAW (needed for extended EV range and CA corrections). Furthermore a directory labelled "RAWJPE" in which the data of the camera are stored as they come from a full chip. Every camera is "staffed" with 2 SD cards (not more, not less) one is in the camera, the other is in the bag. That way I have at least 200 pictures ready at any time. When a chip is full it gets unloaded into the RAWJPEG directory and on the backup drive. Editing JPG I do using a old HP Linux Laptop (The Gimp in native) and store that local and on the backup. Hope to have cleared your 10 Gb ethernet question.

And as for 10 Gb ethernet, it is a question of waiting for costs to come down. So lets pray to saints Bill and Steve, for More's law to work :-).

Greetings, Ed

Posted by: Ed | [Thursday, 09 December 2010 at 04:00 AM](#)

Ctein,

Well, thanks for the heads-up. It's an older iMac, so no realistic upgrade path. Better to look for a secondhand tower and then add a more accurate display anyway, I guess.

Thanks for your time and expertise.

Mark.

Posted by: Mark Hessewhide | [Thursday, 09 December 2010 at 04:08 PM](#)

Drat it, Ctein, I'm blaming "you"! Barely a week after I read this article, my machookpro's hard-drive is showing i/o errors indicating end of life, and - here's the suspicious part - I know just the article to go to for a recommendation on a replacement! Your fault!

Or good timing on your part, I guess.)

Posted by: Tim | [Monday, 10 December 2010 at 06:00 AM](#)

The comments to this entry are closed.

PORTALS

Support
Sustain
Contribute
via Patreon

SEARCH

Google

WWW
T.O.P.
Google Search

CATEGORIES

Around the Web (220)
Baker's Dozen (20)
Blog Notes (563)
Bon Mots (10)
Book of the Week (15)
Books (521)
Camera Reviews (138)
Cameras, new (776)
Cameras, old (253)
Carl Weese (23)
Collecting (53)
Computers (91)
Ctein (370)
Digital Techniques (72)
Eamon Hickey (2)
Editing and Portfolios (75)
Exhibits (84)
Film and Darkroom (127)
Followups (147)
From the Archives (38)
Geoff Witting (2)
Gordon Lewis (15)
Interviews (7)
Jim Hughes (31)
John Camp (8)
John Kennerdell (17)
Ken Tanaka (11)
Kirk Tuck (8)
Legal and social issues (112)
Lenses (216)
Mini-Portfolios (5)
Morning Coffee (32)
Music Notes (105)
News and Occasions (473)
Obituaries (81)
Off-topic posts (489)
Open Mike (337)
Oren Grad (1)
Past Blasts (23)
Peter Turnley (66)
Photo equipment (343)
Photo industry (169)
Photo industry (221)
Photographers, current (240)
Photographers, historical (163)
Photographic aesthetics (219)
Photography businesses (26)
Photojournalism (85)
Poils (16)
Print Offers (261)
Printers and Printing (466)
Quote o' the Day (95)
Random Excellence (246)
Random Snaps (123)
Reader Prints (7)
Recommended Cameras (14)
Reflections (198)
Reviews (19)
Roger Overall (2)
Sarge (1)
Satire Alert! (25)
Shooting Skills and Camera Handling (6)
Shooting techniques (157)
Software (75)
Sunday Support Group (73)
TOP contents (6)
TOP's Own Books (10)
Visual Culture (270)
Websites and links (141)
Weekend Exercises (5)
Workshops (19)
Your Turn (6)

ARCHIVES

December 2023
November 2023
October 2023
September 2023
August 2023
July 2023
June 2023
May 2023
April 2023
March 2023

More...