







Music

Audiobooks

Photos







Home movies

TV shows

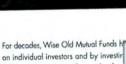
Music videos



You don't compromise your vision and neither does Epson.

Introducing the Epson Stylus® Pro 4800 Professional Edition. First impressions are important in any business, but in the graphic arts, they're everything. You know your designs will blow them away, but only if your vision reproduces exactly as you planned. Consider our revolutionary new 8-color Epson UltraChrome K3™ ink technology. It delivers unrivaled color accuracy for stunning prints that will dazzle even your most demanding clients. Print after print, day after day, meeting after meeting. For more information, call 1.800.241.5373 or visit www.epson.com/k3.





believe that these two factors lead to

approach has always been to look at

"I in equity growth funds by focusing es with strong management. We vestment choices. Our investment and the performance of our funds speak for themselves - no other mutual fund has done better over the last twenty years.



11





Rich blacks



Accurate spot color matching



Highly accurate photographic image quality

as specialized g in compan the wisest in the long-term

High resolution text and line-art

- Unique 8-color pigment-based ink system
- Extreme printing resolutions up to 2880 x 1440 dpi
- PostScript[®] Language Level 3[™] Compatible ColorBurst[®] RIP
- PANTONE® Licensed & SWOP® Certified Color
- Professional media handling, prints up to 17" wide
- * Built-in Ethernet for both Mac and Windows platforms











The Ultimate Sound Experience



a Ve





Get your iGroove on. Standalone, compact and wicked stylish, the two-channel, two-way iGroove™ delivers classic Klipsch power, detail and emotion everywhere you need it. Accepts all iPods and most other digital music players. Accept nothing less. See your Klipsch retailer or klipsch.com.

December 2005 www.macworld.com

MAC BEAT

Video iPods, new iMacs, and iTunes 6; .Mac updates; farewell to Macworld Expo Boston; Apple addresses nano blemishes; and more.









18 VIDEO iPODS



19 NEW IMACS



On the Cover Photography by Peter Belanger

OPINION

9 From the Editor's Desk

JASON SNELL

What a difference an announcement can make—the Apple video revolution has begun.

14 Feedback

Readers respond.

REVIEWS

32 Portable music players

\$\$\$\$\frac{1}{2}\$ 2GB iPod nano \$\$\$\$\$\frac{1}{2}\$ 4GB iPod nano

34 FireWire hard drives DESKTOP DRIVES

DiskGo 3.5-inch Portable Hard Drive, 400GB

*** Monsoon FW/USB2 HD, 250GB

*** G-Drive FW 800 & FW 400, 400GB

🛊 🛊 🛊 🕯 Black Series Triple Interface, 250GB

**** OneTouch II FireWire 800 & USB Drive, 300GB

**** Mercury Elite-AL Pro 7,200 rpm FireWire 800/400+USB2, 250GB

*** CrossFire Desktop, 160GB

*** Extreme Lighted Combo Drive, 320GB

PORTABLE DRIVES

*** FireWire ABS Plus for Mac, 100GB

*** G-Drive mini FW (FW 800), 60GB

2.5-inch Combo Quicksilver FireWire/USB 2.0. 100GB

*** Mobile Hard Drive, Design by F.A. Porsche 7,200 rpm USB and FireWire, 60GB

*** Mercury On-the-Go 7,200 rpm 8MB, 60GB

FireLite FireWire 1394b Hard Drive, 80GB

*** Dragon Drive 2.5-inch, 20GB

**** ComboGB, 60GB

MAC MINI DRIVES

*** mini FireWire 400 Companion Hard Drive, 250GB

miniMate 7,200 rpm FireWire + USB 2.0 Hard Drive & Integrated FireWire and USB Hub, 80GB

*** miniStack 7,200 rpm, 320GB

42 More Reviews

45 Game Room

PETER COHEN

Check out our reviews of X2: The Threat, Atlantis, Gold Miner Joe, Word Craft, and Gunroar.

52 Mac Gems

DAN FRAKES

Take screenshots of entire Web pages, easily erase rewritable discs, gain more control over your Mighty Mouse, install GarageBand in places other than your startup drive, and more.

58 Top Products

Macworld

COVER STORY

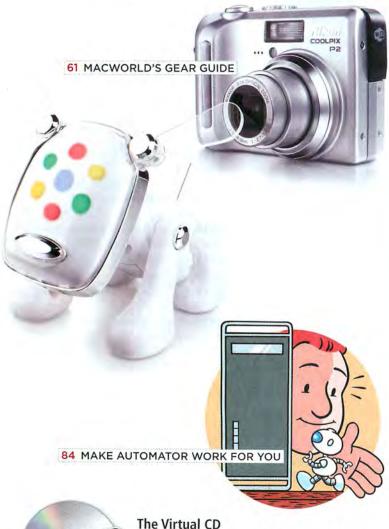
Macworld's Gear Guide

Looking for a gift or just a little something for yourself? We've got 44 great ideas, from the coolest new office gear and the latest laptop bags to geek-chic T-shirts and a cruise for Photoshop fans.

FEATURE

Make Automator Work for You

Why not let Automator—one of Tiger's juiciest new technologies—do your computing chores for you? We explain how Automator works, provide sample workflows to get you started, and offer tips on troubleshooting your workflows.



The Virtual CD

Macworld doesn't end on the last page. All magazine readers also have free access to a new virtual CD-ROM each month. To view this month's exclusive content, go to the following URL (broadband Internet recommended):

http://cd.macworld.com/2005/12/antenna-fan

SECRETS

99 WORKING MAC iChat Power Tips

ROB GRIFFITHS

Did you know that you can use iChat AV to send messages to a cell phone—or to see through the Web cam on a remote Mac? Take advantage of iChat's lesser-known features.

102 **PLAYLIST**

Make the Most of Podcasts

CHRISTOPHER BREEN

The latest version of iTunes supports Podcasts in a big way. We shed light on some of the more perplexing aspects of this new feature.

106 **DIGITAL PHOTO Automate Photoshop Chores**

BEN LONG

Put your Photoshop routines on autopilot with Tiger's Automator. We show you how.

110 MOBILE MAC Web Apps Work Anywhere

JASON COOK

From photo organizers to bookmark keepers, the Web is teeming with useful applications that you can access from any Internet-capable computer. Here are a few of our favorites.

113 **GEEK FACTOR** 5 Workflows for Geeks

ADAM GOLDSTEIN

Automator isn't just for scripting beginners. Combined with Unix commands, image handling, and AppleScripts, OS X's automation tool is quite powerful.

116 HELP DESK Mac OS X Hints

ROB GRIFFITHS

Save time assigning custom file icons, complement Spotlight with third-party launchers, pump up the volume on QuickTime movies, and monitor system activity.

118 Mac 911

CHRISTOPHER BREEN

Prevent DVD meltdowns, clone your iPod, simplify Spotlight searches, and more.

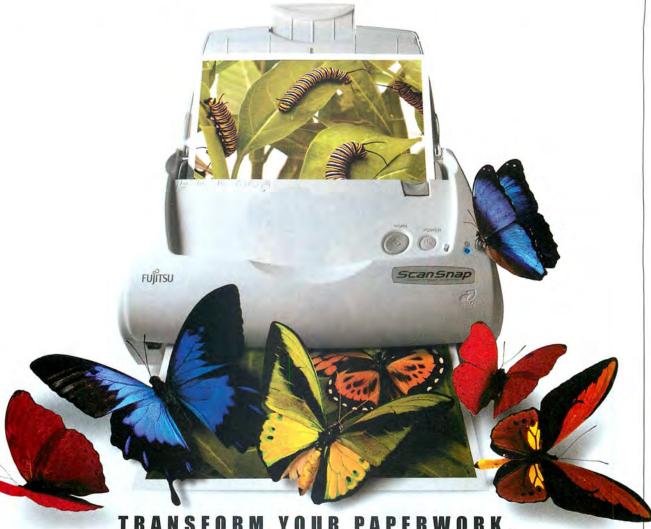
BACK PAGE

144 Hot Stuff

Check out our favorite new stuff.

IRTUAL CD

THE NEW SCANSNAP PAPER MANAGER



TRANSFORM YOUR PAPERWORK.

Give your administrative paperwork new life with the Fujitsu ScanSnap™ Paper Manager for Macintosh™. Its 50-page automatic document feeder quickly transforms a stack of paper into useful, easy-to-manage electronic files. It transforms double-sided documents into PDFs with one-button ease and automatically transforms documents into email attachments for faster, surer delivery than faxing. All on a scanner footprint smaller than a sheet of paper. Add Advance Exchange ownership protection for worry-free service. Now, that is a thing of beauty, Call 800-831-8094 ext. 9689 or see it in action now at www.fcpa.fujitsu.com/9689

Adobe Acrobat 7.0 Standard - Included









THE POSSIBILITIES ARE INFINITE

© 2005 Fujitsu Computer Products of America, Inc. All rights reserved. Advance Exchange upgrade of \$59 is sold separately and is not included in the \$495 cost. Service program and ScanSnap prices are subject to change. Fujitsu and the Fujitsu logo are registered trademarks of Fujitsu Ltd. ScanSnap and Advance Exchange are trademarks of Fujitsu Computer Products of America, Inc. Adobe, the Adobe logo and Acrobat are either registered trademarks or trademarks or Adobe Systems, Inc. in the United States and/or other countries. Mac and the Mac logo are trademarks of Apple Computer, Inc., registered in the U.S. and other countries. All other trademarks are the property of the their respective owner.

















YOUR NEW FIREWIRE 800 DRIVE: IT'S THAT FAST

Feed your need for speed with a drive fast enough to breeze through up to 300GB of humongous files. With award-winning OneTouch backup. A triple interface. Oxford 912 chipset. And Mac OS X bootability directly from the drive. Hold on tight. You're in for the drive of your life at Maxtor.com/FW800

Maxtor OneTouch" II FireWire 800 Edition

















MICRO CENTER PCConnection

Moving Pictures

About a week before Apple announced its fifth-generation, wide but thin, video-playin' iPod, I wrote my column for this very issue of *Macworld*. In that column, I complained about Apple's failure to enter the market for portable and downloadable video. What a difference one set of Apple product announcements can make (see *Mac Beat*, page 18).

I'll admit, I'm somewhat relieved that this column, a, shall we say, *creative* retelling of Dickens's *A Christ-mas Carol*—featuring Ghosts of iPods Past, Present, and Future—will never see the light of day. But what makes me happier is that Apple is finally a player in the video market, and that its first steps are so encouraging.

You're not going to watch a beautifully shot motion picture on one of these new iPods. But for TV shows, music videos, and the like, the small screen works just fine. Watching video on-the-go won't be for everyone, but anyone who has a long commute or spends a lot of time on airplanes will embrace it.

iTunes Does TV

In that column, I fantasized that iTunes 6 would add a Videos item to the Source list; this item would display a list of music videos, movies, and TV shows. As it turns out, my fantasy was pretty close to reality.

True, iTunes' video content—so far, music videos and five TV series—isn't as wide-ranging as I'd hoped. But there's no technical reason that Apple couldn't start selling feature-length films from its store tomorrow. Count on some enterprising movie studio to experiment with films on iTunes in the very near future.

I actually find it encouraging to see Apple turn to television first. For a long time, I've had the feeling that Steve Jobs doesn't really like TV. But Apple has now recognized that television—even more than movies—is the medium that can be transformed by digital downloads. Like I said, those five series are only a first step. Indeed, ABC was the only network Apple approached about this new service. I'm betting that Apple executives are already fielding requests from other networks and TV studios, and that we'll be seeing their wares for sale at the iTunes Music Store before too long.

Now all Apple needs to do to make my fantasy come true is to combine two of its recent features: Podcasting and downloadable TV shows. Imagine paying a monthly subscription for *The Daily Show* and having it downloaded, without commercials, to your Mac (and video iPod) the day after it airs.

Video on the iPod

I realize that many people might be skeptical about watching video on an iPod. After all, that's a *tiny* screen. But as I wrote a couple of months ago, I've been spending a lot of time on my commute watching TV shows on my Treo cell phone. The specs for the videos I've been watching are identical to those of the iPod—30 frames per second at 320 by 240 pixels, roughly half the resolution of standard TV.

A Dream Deferred

Apple's video announcements leave plenty of room for improvement. Half-TV-resolution videos are fine for an iPod, but not for high-resolution computer screens.

Thanks to the politics of the media business, I'm not surprised that Apple didn't integrate DVD into its new products. Yes, you can play a DVD back on a new iMac and control it via the new Front Row application. But there's no way to burn the videos you've bought to DVD, nor is there any Apple-approved away of converting the DVDs you've purchased into movies you can play on your iPod. (This is not to say that it can't be done. But Apple won't help you do it—the act of converting those DVDs into other formats is still, frustratingly, illegal.)

Video Everywhere but Here

There's another shoe that needs to drop here, and it's the one that wirelessly connects the TV set to your Mac, giving you a Front Row-style interface as you sit on your couch.

In my Apple-video fever dream, I saw it as a small plastic box, only a little larger than an AirPort Express, attached to a beautiful flat-panel TV set. This device would let me—via a snazzy Apple remote control—browse my iTunes music, movies, TV shows, and iMovies, and play them at full high-definition quality.

I'm not complaining. I think Apple will release a product like this eventually—whether it's based on the Mac mini and Front Row or is a slim AirPort Express-like device. With its latest hardware, Apple has put video in our computers and on our iPods. Now it must close the loop and let us connect those sources to the machines we use to watch our videos: our TV sets.

So—new iMacs, new iPods, and a new iTunes. What do you think? Let me know in our forums (macworld.com/forums), or send an e-mail to jason_snell@macworld.com.

Imagine life...

with all your information instantly organized and searchable.





StickyBrain[®]

Powerful note and information management.



All your information in one place. StickyBrain is like a really big drawer. You can store passwords, to-do lists, reminders, web clippings, recipes.... Find anything instantly.



Take your notes everywhere. Sync to your iPod or Palm handheld. Or transfer notes to your .Mac account. Your information will always be at your fingertips.



Grab web content with SnapNote.Take "snapshots" of web content including text, graphics & links.
SnapNote works in any application, even if StickyBrain isn't running!



FlashNote finds notes instantly. Use FlashNote to instantly search & view your notes from the menu bar in any application. Your entire digital life is only a click away.

Who uses StickyBrain?



CHRONOS

www.chronosnet.com

Download a free trial version today!







MICRO CENTER

Macworld

President Rick LePage
Editorial Director Jason Snell
Executive Editor Dan Miller
Senior How-to Editor Senior News Editor Jonathan Seff
Senior Reviews Editor Jennifer Berger
Lab Director James Galbraith

Senior Editor Scholle Sawyer McFarland Senior Associate Editor Jackie Dove

Contributing Editors Adam C. Engst, Jim Heid, Ted Landau, David Pogue, Terri Stone

Terri Stone

Managing Editor Charles Purdy

Assistant Managing Editor Sue Voelkel

Copy Editors Marla Miyashiro,
Gail Nelson-Bonebrake

Production Consultant Jennifer Werner

Art Director Rob Schultz
Designer Lori Flynn
Contributing Photographer Peter Belanger

Online Content Director Philip Michaels
Editor, Macworld.com News Jim Dalrymple
Senior Editor, Macworld.com News Peter Cohen
Senior Editors Christopher Breen,
Dan Frakes

Rob Griffiths
Online Managing Editor Curt Poff
Assistant Editor Cyrus Farivar

HOW TO CONTACT MACWORLD SUBSCRIPTION SERVICES

Access your subscription account online—24 hours a day, 7 days a week—at www.macworld.com/customer_service or http://service_macworld.com/com. You can use online subscription services to view your account status, change your address, pay your bill, renew your subscription, report a missing or damaged issue, get the answers to frequently asked questions, and much more.

To start subscribing, visit http://subscribe.macworld.com.

U.S. Mail Macworld Subscriptions Department P.O. Box 37781, Boone, IA 50037-0781 (If you are writing about an existing account, please include your name and address as they appear on your mailing label.)

subhelp@macworld.com
(Send your full name and the address at which you subscribe; do not send attachments.)

Fax 515/432-6994

Phone 800/288-6848 from the United States and Canada; 515/243-3273 from all other locations

The one-year (12-issue) subscription rate is \$34.97; the two-year rate, \$59.97; and the three-year rate, \$79.97. Foreign orders must be prepaid in U.S. funds; add \$10 per year for postage to Canada or \$25 per year for air freight to all other countries. Checks must be made payable in U.S. currency to Macworld. Please allow 3 to 6 weeks to receive your first issue or for changes to be made to an existing subscription.

MACWORLD EDITORIAL

December 2005, Volume 22, Issue 12

Macworld is a publication of Mac Publishing, L.L.C., and International Data Group, Inc. Macworld is an independent journal not affiliated with Apple Computer, Inc. Copyright © 2005, Mac Publishing, L.L.C. All rights reserved. Macworld the Macworld logo, Macworld Lab, the mouse-ratings logo, MacCentral.com, PriceGrabber, and Mac Developer Journal are registered trademarks of International Data Group, Inc., and used under license by Mac Publishing, L.L.C. Apple, the Apple logo, Mac, and Macintosh are registered trademarks of Apple Computer, Inc. Printed in the United States of America. logo, Mac, and Macintosh are registered trademarks of Apple Computer, Inc. Printed in the United States of America.

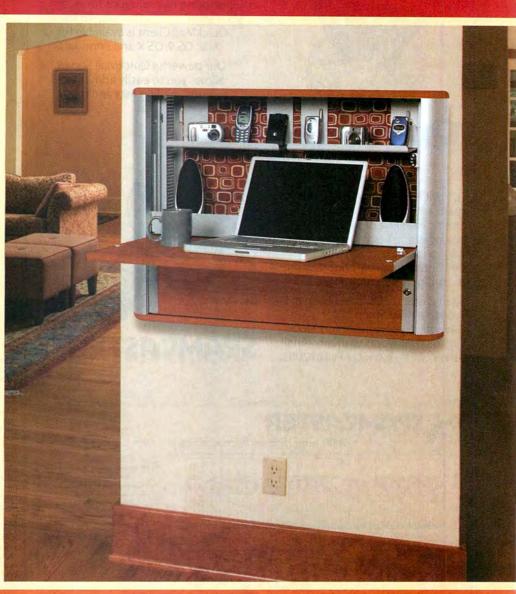


eNook

the new Wall-Mounted Charging Workstation







a Gas Station for your Gadgets and a Work Space for you

It charges, it stores and it fits where you don't have a lot of room. It's called eNook, and it's a very multi-talented workspace. eNook has channels for you to plug in and charge all of your electronic gadgetry, like your laptop, cell phones, PDAs and digital cameras. Flip it up to store your laptop and lock it out of sight. Or flip it down and you have a handy desk. eNook's fabric covered back panel even serves as a bulletin board. Choose different color and fabric combinations to match any décor. Hey, it looks like your gear just found a home.

ANTHRO
Technology Furniture

– Fast and Friendly!

Contact our friendly and knowledgeable folks at 800.325.3841 or anthro.com/eNook.

We make email better.



Outspring has solutions for all of your email needs. Our easy-to-use QuickMail Client is available for Mac OS 9, OS X and Windows.

Our powerful QuickMail Server allows you to easily administer accounts, mailing lists and more.

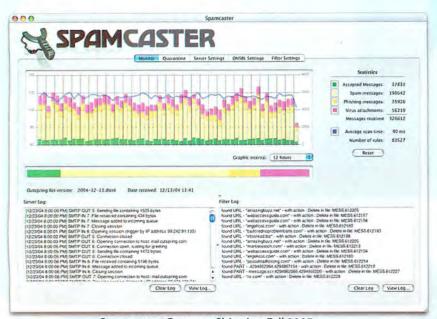


To fight the ongoing war against spam, we've created the new Spamcaster line of products. Spamcaster gives you a hassle-free way to stop spam and other unwanted email without training or configuration nightmares.

Spamcaster for QuickMail Server is available now. Spamcaster Gateway, a powerful stand-alone version that works with any email server, will be available Fall of 2005.



SPAMCAST



Spamcaster Gateway Shipping Fall 2005



Outspring Incorporated 707-523-7711 info@outspring.com www.outspring.com

©2005 Outspring, Inc. All rights reserved. QuickMail is a registered trademark of Outspring, Inc. Spamcaster is a trademark of Outspring, Inc.

Macworld

VP, Publisher Janet Ryan Eastern Advertising Director Paul Bonarrigo Eastern Advertising Manager Paul Zampitella Western Advertising Managers Scott Williams

(508/533-4020) (781/944-0528) (415/243-3509), Kent Wu

(415/978-3341) Account Managers Carol Johnstone (415/243-3691), (415/243-3664) Niki Stranz

Marketing Manager Kasey Galang Marketing Coordinator Amanda Cartier

Sales Associate Kenji Kawakami (415/243-3628) (415/243-3642) (415/978-3380)

Production Director Steve Spingola Prepress Manager Tamara Gargus Booking and Billing Manager Ricardo Sandoval

> IT Director Sean Greathouse Development Director Bill Cappel Web Developer Alexis Barrera

VP, Human Resources Kate Coldwell Human Resources Manager Carina Rivera Human Resources Representative Jenny Steele

VP, Consumer Marketing Shawne Burke Pecar Newsstand Director Holly Drawbaugh Associate Circulation Director David Cobb Director, Retention Marketing Lisa Radler Retention Marketing Coordinator Shavon Burden Senior Subscription Marketing Manager Linda Trinh Subscription Marketing Manager Simon Thaler

HOW TO CONTACT MACWORLD STAFF

Our offices are located at 501 Second Street, 5th Floor, San Francisco, CA 94107; phone, 415/243-0505; fax, 415/243-3545. Macworld staff can be reached by e-mail at firstname_lastname@macworld.com.

LETTERS TO THE EDITOR

Send comments about any aspect of Macworld to letters@macworld .com. Due to the high volume of mail we receive, we can't respond to each letter. We reserve the right to edit all submissions. Letters published in Macworld or Macworld.com become the property of Mac Publishing.

Send your questions or tips on using Mac computers, peripherals, or software to Macworld, Mac 911, 501 Second Street, 5th Floor, San Francisco, CA 94107; fax 415/243-3545; or e-mail mac911@macworld.com. Include your name, address, and phone number. To share tips and discuss Mac problems with other Mac users, visit the Macworld.com forums.

BACK ISSUES OF MACWORLD

Starting with the March 2003 Macworld, back issues can be downloaded in digital format, from www.zinio.com (\$6.99; Mac OS X 10.1 or later required). Print-format back issues (subject to availability) cost \$8 per issue for U.S. delivery, \$12 for international delivery; prepayment in U.S. currency to Macworld is required. Send a check or money order to Macworld Back Issues, P.O. Box 37781, Boone, IA 50037-0781; or phone 800/288-6848 (U.S. and Canada) or 515/243-3273 (all other locations).

REPRINTS AND PERMISSIONS

You must have permission before reproducing any material from Macworld. Write to Macworld, Reprints and Permissions, 501 Second Street, 5th Floor, San Francisco, CA 94107; include a phone number. To order reprints of your company's editorial coverage, call Reprint Management Services at 717/399-1900; fax 717/399-8900; or e-mail macworld@reprintbuyer.com.

MAILING LISTS

We periodically make lists of our customers available to mailers of goods and services that may interest you. If you do not wish to receive such mailings, please write to us at Macworld, P.O. Box 37781, Boone, IA 50037-0781, or e-mail us at subhelp@macworld.com. Please include a copy of your mailing label or your full name and address.

MACWORLD CONFERENCE & EXPO

As the flagship sponsor of Macworld Conference & Expo, Macworld encourages all subscribers to attend this exciting annual industry event. For information, please visit www.macworldexpo.com.

♥BPA



ACTUAL SIZE. THE SANYO XACTI E6 DIGITAL CAMERA.

Who says big things don't come in small packages?

Introducing the SANYO Xacti E6 -- the digital camera that will change the way you view digital photography. This camera features a full 3" LCD screen and it is small enough to fit in the palm of your hand. With 6 megapixel resolution and 3X optical zoom, you will be taking high-quality images in no time.

And speaking of time, the Xacti E6 features SANYO's exclusive Touch Sensor shutter release that adjusts focus and exposure instantly. Bigger screen, smaller size, easier to use - it's what you'd expect from the world's largest manufacturer of digital cameras and components - SANYO.

SANYO: Making Great Digital Photography Easy www.sanyodigital.com

©2005 SANYO Mobile Electronics. All rights reserved. Copyright © 2005 by PARAMOUNT PICTURES CORPORATION. All Rights Reserved. Screen and photo images simulated and do not represent actual quality.



FEEDBACK

Hidden Gems

Every month, grassroots software developers release dozens of new apps for the Mac. And every month, Senior Writer Dan Frakes reviews as many of them as he can in *Mac Gems*. But a monthly column just can't include all the worthy ones—hence our September feature "50 Mac Gems," in which Dan got to clear out some of his backlog. Many of you wrote in to complain about programs he'd left out. Not to worry: if Dan hasn't reviewed one of your faves yet, he'll add it to his check-'em-out list.

You Forgot

SCOTT BRENNER

I enjoyed September's "50 Mac Gems" article but was surprised that the fabulous open-source FTP client Cyberduck (cyberduck.ch/) was overlooked. You mentioned a few FTP clients but passed over the mature, feature-rich, and free Cyberduck. I think many *Macworld* readers would have benefited from knowing about it.

HENRY SCHAECHTERLE

In your September issue, you covered 50 low-cost applications for the Mac. I was surprised that you didn't include the NeoOffice office suite (www.neooffice.org). I think it's equal in every way to Microsoft Office, and it's basically freeware. You can use the entire suite without limitations or being nagged to register, but after I'd used it for a while, I made a \$20 donation to support the open-source project. It's now my office application of choice.

We didn't include Cyberduck because it was included in November 2004's roundup of bargain software, "Even More Software Bargains" (macworld.com/0829). Rob Griffiths mentioned NeoOffice in his May 2005 review of OpenOSX Office (macworld .com/0352). The September article wasn't intended to be-indeed, couldn't be-a comprehensive look at bargain software for the Mac. Rather, it was a snapshot of 50 gems that we hadn't been able to review previously but that we felt you should know about. There's a lot of great inexpensive software out there. We try to cover as much of it as we can in our monthly Mac Gems column, our Mac Gems Weblog (macworld.com/0830), and occasional features such as September's "50 Mac Gems."-Ed.

Repurposed Macs

STEVEN MINKLER

Thanks for the great tips about converting an old Mac into a jukebox ("Old Mac, New Tricks," September 2005). I work in a college media-production department with four other highly creative people. We've always enjoyed playing background music to make the day move along. We started with an FM radio nearly 20 years ago, and then upgraded to a CD changer. About 5 years ago, we decided to load up an old 266MHz Mac with iTunes and some of our favorite music. Over the years, we've accumulated nearly 4,200 songs (as well as sound bites from movies, comedy routines, old radio commercials, and self-recorded "promos," to make it sound like a real radio station), taking up 14.5GB of space. Visitors to our office comment on our eclectic music mix, not to mention the random iTunes visuals on the monitor. The only drawback is that the old G3 can't run OS X (even with XPostFacto), so we have to create all of our playlists "by hand." But it's still chugging along!

MICHAEL R. HOFFMANN

I have used X10 for many years now and must say that, after trying Smarthome's PowerLinc Controller USB, I'm about to give up on using my iMac to automate my home. The problem is that even with all the updates to Indigo and its drivers installed, even after upgrading to OS X 10.4.2, and even after reinstalling Indigo and connecting the controller directly to the USB port, Indigo finds that controller only about once in 20 tries—and usually only after a full restart. Having everything else (printer, external USB drives, and even my cable modem) off or disconnected seems to help. I have

e-mailed Smarthome a number of times and followed their recommendations each time, but with no improvement. The old PowerLinc USB worked fine, but who wants to leave their computer on all the time?

PETER MARMOREK

Foolish me! Here I've been giving my old computers to charities, Third World countries, or underfunded inner-city schools. But now you tell me that I could have used them for such valuable purposes as saving myself a walk upstairs to select a new playlist, or a walk across the room to turn lights on and off. Come on, *Macworld*: there are billions of people who would love the chance to do nonfrivolous stuff with an old Mac.

Who's the Thief?

KEN ALAN

With regard to your story about software activation ("Stop, Thief!" Mac Beat, September 2005): yes, there are software pirates out there-the monopoly software publishers. Thanks to dwindling competition (for instance, the recent merger of Macromedia and Adobe), we get buggy, crippled products, little innovation, products rushed to market with little usability testing, and, of course, inflated prices. It may be time for computer users to organize a software user association to set our own policies on how software publishers will do business with us. In business, the people who pay the money make the rules.

Mobile Surgery

CHRIS CLUCK

I thought the article "Laptop ER" (Mobile Mac, September 2005) was well

done, but it should have included a link to Safeware (www.safeware.com). This company specializes in insuring laptops. For as little as around \$200 a year, you can insure your laptop and all its accessories from theft, accident, out-of-warranty issues, and more, and that coverage extends around the globe.

RON SCHACHT

I've worked in the broadcast-engineering field for about 40 years and have seen just about every possible liquid spilled into just about every electronic device made. The most important thing to do is to immediately remove the power sourcein the case of a laptop, take out the battery. Even when the unit is off, several circuits are still "live." The liquid, especially if it isn't water (believe me, iced tea is the worst), will conduct, and the resulting electrolysis will etch away the foils on the boards, and the pins on the chips. Unplug the unit, take out the battery, and let it dry out (hint: put it in a warm attic for a few days). Then you can reinstall the battery and see whether it fires up.

Feedback on Feedback

BRAD MITCHELL

In September's Feedback, a reader commented on the fan noise of the 12-inch PowerBook. I had the same problem, especially after switching to Tiger. Looking at my SysStat widget, I found that Virex was eating up 60 to 85 percent of my CPU cycles. I erased Virex from my system (scary), and the heat and fan noise immediately disappeared. I'm whisperquiet now except when running several processor-intensive programs. All I need now is virus protection with Tiger that isn't such a CPU hog. Any ideas?

GRANT MUKAI

I've been reading your *Feedback* column for the past two years, and I've seen all sorts of comments about the magazine but nothing about the CD that comes with it. So I just want to say what a wonderful addition the virtual CD is to *Macworld*. Having all the applications mentioned in the magazine right in one spot is very helpful. I don't have to jump from one Web site to another to find the programs reviewed. The CD intros

are creative and (in most cases) hilarious. And I love the Breen's Bungalows and Lynda.com videos—they're really helpful.

Thanks for your comments. We're planning major improvements to the virtual CD over the next year. Check our table of contents each month for the link to that issue's CD.—Ed.

CORRECTIONS

September 2005's Mobile Mac misidentified the car owner who installed a Mac mini in his VW Golf GTI. The correct name is Matt Turner.

Post comments on our forums (www .macworld.com); send them by mail to
Letters, Macworld, 501 Second Street,
5th Floor, San Francisco, CA 94107; or send them by e-mail to letters@macworld.com.
Include a return address and daytime phone number. Due to the high volume of mail we receive, we can't respond personally to each letter. We reserve the right to edit all letters and posts. All published letters and forum comments become the property of Macworld.



PRODUCTIVITY BOOSTER FileMaker Pro 8 accelerates work ROCKET

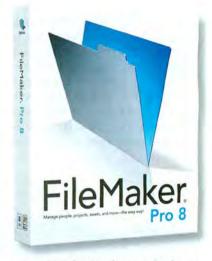
accelerates work and drives business benefits all the way to the bottom line.

THE CUSTOMERS OF TRUE NORTH PRINTED PLASTICS ARE AMONG THE most sophisticated manufacturers in the world, and they often demand virtually real-time updates on the status of orders from True North and other suppliers.

Thanks to FileMaker Pro, that is no problem for True North and its customers. That's because True North's employees regularly log the status of all ongoing work into FileMaker Pro: information like job completion percentage, estimated ship date of finished work, arrival date of the order, and so on. With simple Web access, True North's customers log directly and securely into these status updates, gaining vital information that helps them better plan their own manufacturing schedules. That's customer service, FileMaker style.

"It's been a godsend," says Andrew Struthers regarding FileMaker Pro. "There's just no other solution on the market that can provide the functionality, power, and ease of use of FileMaker Pro."

Struthers ought to know. As IT manager at Mississauga, Ontario-based True North, Struthers and his small IT team use FileMaker Pro to "run the entire facility." That means everything from sales quote requests to time and work management, barcoded inventory control, purchasing, contact management, contact event history, and the entire accounting system. And now True North is rapidly cutting over from FileMaker Pro 7 to the new FileMaker Pro 8 during



a transition that Struthers says has been "seamless."

Real solutions, real competitive advantage

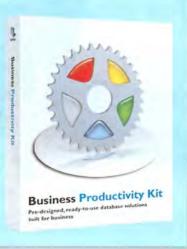
True North is among literally thousands of businesses that are leveraging the productivity-boosting power and customer-pleasing functionality of FileMaker Pro to gain that extra yard of competitive edge. Like a genie in a bottle, FileMaker Pro 8 is a high-performance solution to the most common and pressing information management challenges facing small businesses in virtually any market.

FileMaker Pro 8 has been built on the simple but powerful premise that information drives business success, and the easier information can be created, stored, and distributed, the more successful will be the business.

For example, True North's FileMaker

Try it free for 30 days

You can experience the real business benefits of FileMaker Pro 8 for yourself at absolutely no cost or obligation by downloading FileMaker's 30-day free trial offer at www.filemakertrial.com/sb. This trial offer comes fully loaded with the Business Productivity Kit, which is a set of ready-to-use essential business database solutions designed to immediately boost small businesses' productivity and profits.



Pro-based inventory control system gives employees up and down the organization accurate, real-time information not only on stocks of raw goods, but also on the status of current and pending shipments. "FileMaker Pro takes scanned barcode information on raw goods as we receive them," says Struthers. "Then as products are ready for shipment, FileMaker Pro confirms the shipments are correct and headed to the right customers, and they are correctly packaged. This has saved us tens of thousands of dollars."

Struthers says the biggest selling point of FileMaker Pro for True North is its ability to perform seamlessly in a mixed PC and Macintosh environment, something vital in a company like True North that operates engineering and design on Macs and everything else on PCs. FileMaker Pro 8 had one other immediate benefit for True North, namely the ability to reduce a package of some 57 databases containing virtually all mission-critical operational data to just two database files. The savings, says Struthers, "have been tremendous."

Sharing info = satisfied customers

One of the best demonstrations of the productivity-boosting personality of FileMaker Pro is its ability to fit into just about any type of business where organizing, storing, and then distributing information is vital. It is this power that helps the seven-person staff at Business Printers of San Diego function like a world-class company many times its size.

Company president J.E. de Sequera says he places very high premiums on keeping his customers completely informed and up-to-date on order status as well as project approvals, both of which FileMaker Pro 8 accomplishes. Business Printers used to generate reams of fax proofs of print projects for review, as part of a once-cumbersome and time-consuming process. Using PDF Maker in FileMaker Pro 8, the company "has taken an eight-step process and reduced it to two," de Sequera says. First employees generate a PDF of the proof. FileMaker Pro 8 then searches for the customer

How FileMaker Pro 8 will help your business realize greater productivity and profits

- Manage customer contact information by giving employees instant access to all contact details, exploiting FileMaker Pro 8's Fast Match feature that lets users quickly search data without the time-consuming burden of typing.
- Archive virtually any kind of data in any type of format in a virtually limitless data store for efficient retrieval of information.
- ✓ Automate the creation of client proposals filled with rich data and then quickly and easily publish these proposals for easy and instant review by the client.
- Eliminate cumbersome, expensive, and fragile paper forms once and for all.
- Control your inventory and downstream manufacturing processes with startling ease of use.
- Store and quickly access product and project details, replete with part numbers and digital pictures, then link this information to your sales order database, thus eliminating duplicate data entry.
- Create newsletters, catalogs, and any other customer information and distribute them electronically at

- super-low cost and ultra-high speed.
- Generate regular job status reports and develop job schedule files.
- Leverage FileMaker Pro 8's new scripting parameters to radically reduce the number of different databases you need to manage, immediately "creating" developer time that can be better spent on strategic development projects.
- Use the new Tab Control to save hours building layouts; now it's a single step using multiple tabs.
- ✓ Boost productivity for employees and customers alike who view FileMaker Pro information by creating easy-viewing Adobe PDF files with the new PDF Maker.
- Produce Excel files for data analysts in-house or at your suppliers' or customers' locations with the new Excel Maker.
- Perform email merge to send personalized messages to one customer or one thousand customers.
- Save even more time by instantly emailing the contents of any field in a FileMaker Pro database with the new FastSend feature.

contact information and sends out an email with the PDF as an attachment.

Business Printers also exploits the Tab Windows feature of FileMaker Pro 8 in some ingenious ways. As de Sequera's office assistant is visually impaired, FileMaker Pro 8 allows her to display all vital information she seeks on one screen, tabbing easily to a new screen for more information instead of having to slowly scroll from place to place to find what she needs. Of course, FileMaker Pro 8 does the other heavy lifting in the business as well, such as job entry, work

tracking, order tracking, job ticket printing, generating proof sheets, and many other operational tasks. What's more, de Sequera, who is not an IT professional, handles all the FileMaker Pro development and programming work himself.

The bottom line for de Sequera and Business Printers when using FileMaker Pro 8 is just that—the bottom line. "Costs are reduced due to instant access to information. We look like a big, organized company when we're really just seven people doing all the work."

Seven people, plus FileMaker Pro 8.

Video iPod Arrives

Fifth-Generation Model Adds Video to Its Repertoire













he iPod has been a hit since Apple released the original, 5GB model four years ago. But for almost as long, people have predicted and anticipated an iPod that could play more than music. With the iPod photo, Apple added a color screen and the ability to display photos and slide shows, but that didn't satisfy the desire for an iPod that could also play video. Well, put a big check mark next to that wishlist item, because the wait is over—a video iPod is finally here.

Apple's fifth-generation full-size iPod—introduced by Steve Jobs at a special event in October (just a month after the superslim iPod nano replaced the popular iPod mini)—is the next rung on the player's evolutionary ladder. In addition to its regular musical duties, the new iPod can play video on a bright 2.5-inch, 320-by-240 pixel, 260,000-color TFT display that's noticeably crisper than that of the nano. At first glance, the new iPod

appears wider than previous full-size iPods, but this is just an illusion produced by the extra half-inch of display. The display extends out nearly to the right and left edges of the iPod, but the player is still just 2.4 inches wide. Jobs did say that the new 30GB and 60GB models are thinner than the previous 20GB model (31 percent and 12 percent thinner, respectively).

The video iPod can play full-motion (30 frames per second) video files encoded in the MPEG-4 and H.264 formats (for Apple's complete specs, including information on which audio and video data rates and codecs are supported, go to macworld.com/0892). But where will that content come from? Jobs has said in the past that the big reason Apple didn't have a video iPod was that video content—unlike music—wasn't easily available. Apple has solved that problem by adding music videos, TV shows, and short films to the

iTunes Music Store for purchase and download (for more on the video content, see "iTunes 6 Makes Waves," page 22). You can also add your own iMovies and other videos to the iPod.

BIG CHANGES VIDEO IPOD PRE

	VIDEO iPOD	PREVIOUS iPOD 20GB, 60GB		
Capacity	30GB, 60GB			
Price	\$299, \$399	\$299, \$399		
Battery Life	14 hours, 20 hours	15 hours, 15 hours		
Dimensions (in inches)	4.1 (h) × 2.4 (w) × 0.43 (d), 4.1 (h) × 2.4 (w) × 0.55 (d)	× 0.63 (d),		
Weight	4.8 oz., 5.5 oz.	5.9 oz., 6.4 oz.		
Display	2.5-inch (color)	2-inch (color)		
Color	white, black	white		
Playback	music, photos, video (H.264, MPEG-4)	music, photos		

HOTOGRAPHY COURTESY OF APPLE

Thanks to the Ouick-Time 7.0.3 update, QuickTime Pro users now have a Movie To iPod (320x240) export option, and iMovie users can also create video files that will play on the new iPods. Navigating through videos (and configuring the iPod to play

those videos) is much like working with music and photos on the previous generation of full-size iPods.

The Basics

The new iPod comes in two configurations. A 30GB model that can hold 7,500 songs, 12,500 photos, or 75 hours of video costs \$299, while a 60GB model-with double the capacity for songs, photos, and video-costs \$399. For the first time with full-size iPods, users can now choose either white or black (just like with the nano). And Apple has discontinued another black iPod-the iPod U2 Special Edition. While Bono's visage appears on Web pages devoted to the new iPod, the iPod named after his band has disappeared from the Apple Store.

As with previous color iPods, Apple offers a \$19 Apple iPod AV Cable for connecting the new models to a TV. But this time around, that cable can also send videos instead of just pictures and slide shows. Unfortunately, because the iPod stores video at 320 by 240 pixelsone quarter the resolution of standarddefinition TV-videos you send to a TV set will be doubled in size, showing degradation and pixelation.

Apple has also added a \$39 iPod Universal Dock, which includes five inserts that work with several different iPod models, as well as an infrared receiver that works with the \$29 Apple Remote (the same one included with the new iMac) and lets you control your iPod from across the room.

Although it adds much, the new iPod also spells the end of several technologies. Like the nano, the video iPod syncs only with a USB 2.0 cable-goodbve FireWire—and Apple's remote port has vanished; accessory makers are now expected to use the iPod's proprietary dock connector. If you have older acces-



sories-microphones, FM transmitters, and remote controls. for examplethat depend on the remote port, you'll have to replace them. One hidden gem is that the iPod

now lets you choose settings for voice recording-a mono low setting or a CD-quality high setting-even though no product currently exists that can be used to record audio to the latest iPod.

Many people may have expected a more radical redesign of the iPod to turn it into a video player (a larger body, wide-screen format, and so on), and more content (including full-length movies) to be available at its launch. But Apple has taken something that many other companies have done, and-as it so often does-created a product with an elegance and design all its own. The video iPod is Apple's first stab at such a device, but by all indications, it's a pretty good first step.

Senior Editor CHRISTOPHER BREEN, freelance writer MATHEW HONAN, and Senior News Editor JONATHAN SEFF contributed to this story.

ALL-IN-ONE DESKTOP ADDS VIDEO CAMERA, REMOTE CONTROL

The New iMac

The release of the first generation of the iMac is widely credited-along with Steve Jobs's return to the company—with helping to save a financially troubled Apple in 1998. So it's fitting that the latest iMac, announced in October, brings new technologies and ideas to the Mac platform. This slimmer edition of Apple's all-inone iMac G5 is powered by faster processors and numerous new internal components, and it features two new integrated Apple software applications, an infrared remote control, and a built-in video camera.

The new iMac model includes several firsts for Applethe most noticeable of which is a built-in version of the popular iSight Web cam (which works with Apple's iChat AV); before now, the iSight was available only as an add-on peripheral (Jobs says that this version is in fact an upgrade to the stand-alone model). The iSight's lens is located at the top center of the iMac's front; to its right is a green LED that lights up when the camera is in use.

A new utility called Photo Booth lets you. take snapshots using the iSight and then add visual effects such as sepia tint, X ray, bulge, and squeeze. When it comes time to take the picture, Photo Booth counts down and then turns the entire iMac screen white, creating a "flash" effect that illuminates the subject. Once Photo Booth takes the picture, a Polaroidinspired icon of the photo slides into a tray near the bottom of the Photo Booth interface. You can then share the pictures using Apple's

Mail application or iPhoto, save them as icons for use in iChat or Address Book, or use them to represent your account on your Mac.

Media Center

The iMac's beautiful wide-screen display is ideal for viewing pictures, movies, and the like. Controlling your digital content used to mean parking yourself in front of the keyboard and mouse, but the new iMac ships with a sixbutton infrared remote control. The remote control's back is magnetic, and a small magnet is embedded on the lower right side of the iMac's case, giving users a convenient place to stow the remote. The iMac's infrared receiver is hidden behind the Apple logo on the center of the lower portion of the iMac's face.

During the iMac's October introduction,

continues





Jobs compared the iMac G5 remote to the remotes, littered with dozens of buttons, that are available with Windows Media Center–based PCs, and said, "I don't know if there's ever been a slide that shows what Apple's all about like this one."

Apple created a new application for use with the remote: Front Row. When activated, it takes control of your Mac's screen, sweeping the Mac user interface into the background and leaving behind four icons (representing movies, DVDs, photos, and music). Front Row gives you a large interface-which can be seen from a good distance away-that lets you play DVDs and navigate through DVD menus; browse and play back any QuickTime-compatible movies in your Movies folder; play back slide shows from iPhoto books, albums, and slide shows; browse and watch movie trailers streamed directly from Apple's Web site; and browse and watch music videos, movie shorts, and television shows purchased from the iTunes Music Store.

Although Front Row looks to be a powerful and simple way to view content on your Mac, the missing piece of the puzzle is a way to send movies, pictures, and music to a TV or stereo. It seems likely that Apple will create a product to let users move content beyond the Mac's screen.

Hardware Improvements

Like its predecessor, the iMac G5 is available in 17-inch (\$1,299) and 20-inch (\$1,699—\$100

less than before) wide-screen configurations. But under the hood, the systems use slightly faster processors: the 17-inch model has been bumped from 1.8GHz to 1.9GHz; the 20-inch, from 2.0GHz to 2.1GHz. Frontside-bus speed has gone from 600MHz to 633MHz on the 17-inch and from 667MHz to 700MHz on the 20-inch. The new iMac also has a more slender profile than its predecessor—up to a half-inch thinner and 15 percent lighter—and both models include a

DVD-burning SuperDrive (previously, only the 20-inch and higher-priced 17-inch models included a SuperDrive).

The iMac G5 is the first Mac model to feature PCI Express graphics—a growing standard on PCs that provides faster performance for graphics systems than the AGP interface on previous models. To power the graphics, Apple includes ATI's Radeon X600 Pro video card in the 17-inch iMac, and the Radeon X600 XT in the 20-inch model (both cards include 128MB of VRAM).

This iMac is also the first Mac model to support DDR2 SDRAM, a faster RAM technology than the standard DDR on other systems; both models ship with 512MB of RAM and have an open RAM slot that supports modules with capacities as large as 2GB. And it's the first to include Apple's multibutton Mighty Mouse in the box. Although it's a little unusual to find these hardware upgrades making their debut in a consumer Mac, you can expect them to find their way into the next revisions of Apple's other Mac models.

The iMac no longer includes an internal modem. For people who need one, Apple is now offering the Apple USB Modem as a \$49 option; it works at data speeds of up to 56 Kbps and fax speeds of up to 14.4 Kbps, and it supports caller-ID, wake-on-ring, telephone-answering, and modem-on-hold features. Considering everything that Apple added to the iMac—without upping the price—a modem seems a small price to pay for this nice upgrade.—PETER COHEN

MODEL	PRICE	RAM/ MAX RAM	HARD DRIVE	OPTICAL DRIVE	BUILT-IN WIRELESS	GRAPHICS PROCESSOR/ RAM	MORE INFORMA- TION
17-inch iMac G5/ 1.9GHz	\$1,299	512MB/ 2.5GB	160GB Serial ATA	8× SuperDrive	AirPort Extreme, Bluetooth 2.0+EDR	ATI Radeon X600 Pro/128MB	macworld .com/0890
20-inch iMac G5/ 2.1GHz	\$1,699	512MB/ 2.5GB	250GB Serial ATA	8× SuperDrive	AirPort Extreme, Bluetooth 2.0+EDR	ATI Radeon X600 XT/ 128MB	macworld .com/0891



Boujou bullet 2, from 2d3 (www.2d3.com): Software for automatic tracking and matchmoving adds support for 16-bit images, a new Target Tracker with zoom capabilities, and more-accurate target-shape definition (\$2,500; upgrade, \$999).

Maya 7 Personal Learning Edition, from Alias (www.alias.com): Software helps new users learn the ins and outs of Alias's 3-D—animation program (free).

Painter Essentials 3, from Corel (www.corel .com): Consumer app based on Painter IX lets users turn digital photos into paintings (\$99).

Portraits & Prints 2.1, from Econ Technologies (www.econtechnologies.com): Template-based photo-printing utility adds direct access to iPhoto digital photo libraries (\$30; upgrade, free).

Smasher, from Insider Software (www .insidersoftware.com): Font utility for OS X 10.3 and later lets users view fonts in suitcases, including legacy fonts from OS 9 (\$50).

Stitcher 5, from Realviz (www.realviz.com): Panorama software features improved user interface, live preview mode, manual control points, and import of Photoshop masks, among other additions (\$580; upgrade, \$250).



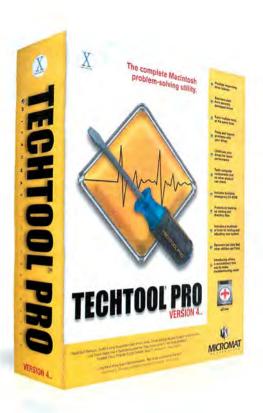
BBEdit 8.2.3, from Bare Bones Software (www.barebones.com): Update to the HTML- and text-editing application runs natively as a "universal binary" on PowerPC-based Mac hardware and Intel-based Apple machines (\$199; upgrade, free)

ConceptDraw Business Suite, from CS Odessa (www.conceptdraw.com): Collection of business visualization and brainstorming software for OS X 10.1.5 and later includes ConceptDraw V, ConceptDraw Mindmap, and ConceptDraw Project (\$499).

Delicious Library 1.5.1, from Delicious Monster Software (www.delicious-monster.com): Update to cataloging application improves lookup, import, and export results (\$40; upgrade, free).

SyncDeK 6.0, from WorldSync (www.worldsync.com): Tool for FileMaker developers that allows bidirectional data synchronization in FileMaker-based solutions adds compatibility with the FileMaker 8 product line (pricing starts at \$249 for the single-user engine).

Ultimate Reference Suite 2006, from Encyclopedia Britannica (www.britannica.com): Suite for OS X 10.3 and later includes three encyclopedias, the Homework Helpdesk for helping students complete papers, and the Britannica Brainstormer visual browser for simplified research (\$50).



Now Tiger compatible...

The complete Macintosh problem solving utility.



Diagnostics and Repair

TechTool® Pro includes options to thoroughly check various hardware components, drives, and other aspects of your computer system. One of the most important tests is the S.M.A.R.T. test, which checks for impending drive failure.



Optimization

This feature defragments the files on your hard drive and consolidates all the free space into one large block. Optimizing enhances the overall performance of your hard drives and simplifies file layout on the disk.



Data Recovery

TechTool Pro includes routines that can search a damaged drive and attempt to recover valid files to another location. Hence, even if a drive is damaged beyond repair, you may still be able to save important data that had not been backed up.



Safety

The Safety feature can be configured to protect your drives by automatically creating backups of critical drive directory data. It can also test the computer for developing problems and alert you, both onscreen and via email, if problems are detected.



eDrive

One of the most innovative features of TechTool Pro is the eDrive. This is a bootable Mac OS X partition containing TechTool Pro and a small copy of your system that you can use in an emergency. It is created on one of your hard drives without the need to reformat.







UPDATED MUSIC STORE ADDS TV SHOWS, MUSIC VIDEOS, AND MORE

iTunes 6 Makes Waves



Just five weeks after releasing iTunes 5, Apple updated its free music-jukebox software to version 6. The latest version adds several dramatic new features for the iTunes Music Store (iTMS)—including downloadable TV shows and music videos, and the ability to send music and videos as gifts.

The biggest feature, which goes with the introduction of the video iPod, is the addition of video to the iTMS.

Using iTunes 6, you can now purchase TV shows, short films, and music videos for \$1.99 each. Available for download are two very popular ABC series, *Desperate Housewives* and *Lost*, and the new ABC drama series *Night Stalker*; as well as two shows from the Disney Channel, *That's* So Raven and The Suite Life of Zack and Cody.

Whether iTunes users will be willing to spend money to download TV shows remains to be seen, but Apple's pricing should be enticing enough to get people to give it a try.

Also available are 2,000 music videos from hundreds of artists including Beastie Boys, Coldplay, Kanye West, Madonna, and U2, as well as six short films from Academy Award–winning Pixar Animation Studios (of which Steve Jobs serves as CEO).

iTunes 6 adds a new Videos item in the Source window, which contains any video content you buy from Apple or that is included as bonus material on purchased albums. Unlike the Library and Podcasts windows, the Videos area has a solid black background and shows a thumbnail (complete with reflection) of the video along with title and time information. A quick check of a recent *Desperate House-wives* episode showed the quality of Apple's downloads to be very good, albeit small—320 by 240 pixels.

Purchased videos employ Apple's Fair-Play digital rights management (DRM) scheme, so you can play them on as many as five computers or transfer them to as many video iPods as you like. One thing you can't do is burn them to a DVD. But considering that the resolution of Apple's content is half that of television, the results wouldn't be ideal anyway.

iTunes 6 includes expanded online gift options to giving specific songs, albums, music videos, and iTunes playlists as gifts. Previously, you were limited to sending gift certificates or setting up allowances.

Apple also added customer reviews and a public beta of Just for You, a personalized music-recommendations feature. Both of these are popular features on sites such as Amazon.com and Netflix, and are welcome additions to the iTMS.—MATHEW HONAN



LX7 Cordless Optical Mouse, from Logitech (www.logitech.com): Desktop mouse features a tilt scroll wheel, forward and back buttons, and "smart power management" for extended battery life (\$40).

USB Overdrive 10.4, from Alessandro Levi Montalcini (www.usboverdrive.com): Updated version of utility for extending the usability of input devices adds support for Apple's new Mighty Mouse multibutton mouse (\$20; upgrade, free).

V270 Cordless Optical Notebook Mouse for Bluetooth, from Logitech (www.logitech.com): Charcoal-gray mouse offers a 1,000-dpi optical sensor and multiple buttons with a scroll wheel (\$50).

V400 Laser Cordless Mouse, from Logitech (www.logitech.com): 2.4GHz cordless mouse features a tilting scroll wheel with zoom capabilities, programmable forward and back buttons, and a battery indicator (\$50).

X-Arcade Trackball, from Xgaming (www .xgaming.com): Gaming device features a center-mounted trackball accompanied by three buttons on either side (\$100).



Backup 3.0, from Apple (www.apple.com): Update to personal backup software adds preset backup plans for iLife content, automatic scheduling, and incremental backups (free with .Mac account).

Biggest S1S, from LaCie (www.lacie.com): Fourbay RAID system can transfer data at up to 80MB per second in RAID 0 configurations and comes in two capacities (1TB, \$1,699; 2TB, \$3,199).

Data Rescue II, from Prosoft Engineering (www.prosofteng.com): Data-recovery software for OS X 10.3 and later adds a new interface and more-robust file searching (\$99; upgrades, free for users who bought Data Rescue in 2005, \$65 for other users).

G5 Jive, from Sonnet Technologies (www.son nettech.com): Internal hard-disk mounting system lets users add three more Serial ATA hard drives to a Power Mac G5 (\$100).

Personal Backup X4, from Intego (www.intego .com): Updated backup, synchronization, and volume-cloning software for OS X 10.2.8 and later features faster backup and adds the ability to span multiple CDs or DVDs (\$70; upgrade, \$45).

Salvage Suite 4.2, from SubRosaSoft (www .subrosasoft.com): Update to file-recovery suite improves accuracy, adds more file support, and features faster shredding of sensitive files (\$90; upgrade, free).

TRY SAYING "JUST A SECOND, I'LL PRINT A LABEL" AND ACTUALLY MEANING IT.





LabelWriter

If you've had problems printing labels, take comfort. DYMO® LabelWriter® lets you print a perfect label in about a second. No wasted sheet labels. No wasted time. lust high resolution labels for envelopes, files, packages, barcodes and more - straight from your PC or Mac. Just use Microsoft® Word or your favorite program. Highlight, click. Print. No ink. No toner. No printer is faster. Race to www.dymo.com and see.

FEATURES

- · Prints labels right from your favorite applications
- · Prints up to 55 labels per minute
- · Prints up to 2.3" wide labels
- · Printing resolution of 300 dpi
- USB connection
- · PC and Mac compatible
- · System requirements: Windows 98/ME/2000 or XP, Mac OS 10.2.8 or later

when you purchase a LabelWriter 400 Turbo at participating dealers www.dymo.com (Ends 11/30/05)

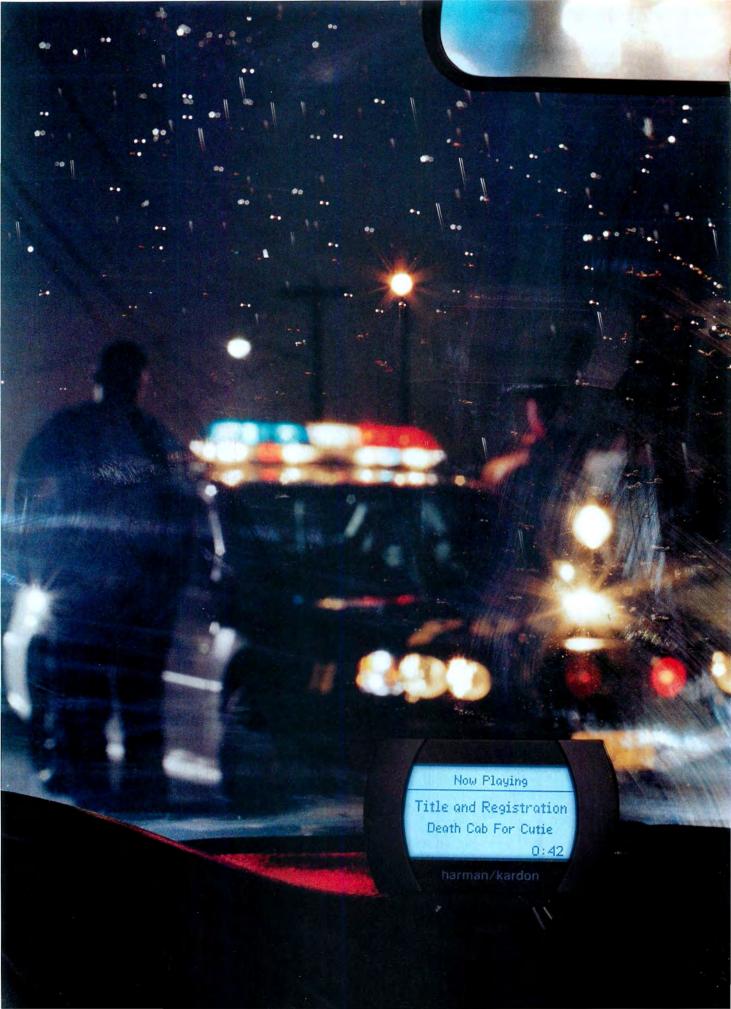
THE EASIER. THE BETTER

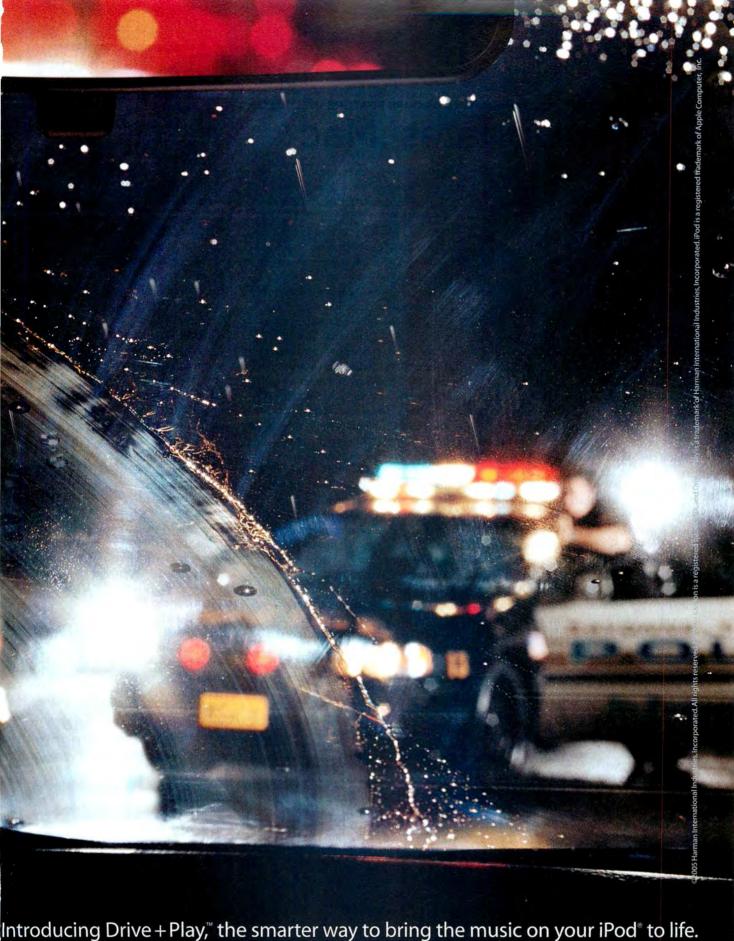
Available at



MacConnection TigerDirect.com

By Tesselte Corporation





Drive + Play, the smarter way to bring the music on your IPod to life.

Drive + Play is your in-car audio solution, giving you all of the music-browsing capability of your iPod without ever taking your eyes off the road.

Just mount the display for maximum visibility, position the controller within easy reach and plug in your iPod. With better control capabilities and continual battery charging, Drive + Play is music to your ears. For more information, visit us at driveandplay.com. harman/kardon

Apple Updates .Mac

When large Web sites such as Yahoo and Google started offering free e-mail accounts with huge amounts of storage, as well as online community features, Apple's .Mac (www.mac.com) began showing its age. But now Apple has updated its suite of e-mail, online storage, and Web-hosting tools with several improvements and new features.

Each \$100-per-year .Mac account now gets a total of 1GB (up from 256MB) of combined iDisk and e-mail storage, while the \$180 Family Pack—which includes a master account and five subaccounts—provides a total 2GB of storage. (Users can purchase an additional 1GB of storage for an extra \$50 a year.) Note that .Mac doesn't provide a connection to the Internet—you need separate high-speed or dial-up access to use it.

For people who share large amounts of content on their .Mac HomePages (small software developers, for example, or people with lots of movies), even more important than storage is bandwidth.

The latest version of .Mac includes 10GB of data transfer per month for individual accounts, up from 3GB (and members who purchase the additional 1GB of storage get a total of 25GB of data transfer every month).

Apple (like other companies that host data for customers) gives .Mac users a set amount of bandwidth for the transfer of data from an account per month. Hit the limit, and you can't transfer any more

data until the next month. Apple still doesn't give you any way to see how much bandwidth you have remaining, or a way to pay for more if you go over your limit, however.

.Mac also includes Backup 3, the latest version of Apple's backup utility. The update adds preset backup plans for iLife content (including purchased music), Home folders, and other essential files; automatic backup scheduling to CDs and DVDs; incremental backups; advanced file restoration; built-in Spotlight searching; and the ability to back up more than one Mac to your iDisk.

Another addition is .Mac Groups, a community feature that allows many .Mac members to connect with one another. Group members can e-mail everyone in a group with a single address; share iDisk space for posting images, movies, and other files; create group Web pages; and make shared iCal calendars.

Online retailers such as Amazon.com usually sell .Mac subscriptions at a discount—as low as \$78 at press time (you can also renew a current account this way).—JONATHAN SEFF

NEWS IN BRIEF

Apple Secretly Bumps Up Mac Mini

In response to reports on the Internet that some users who purchased a 1.42GHz Mac mini received a

received a
1.5GHz system
instead, Apple
confirmed
that "some Mac
mini systems may

contain components that slightly exceed the published specifications. There are no changes to the published specifications or part numbers."

iPhone On the Way?

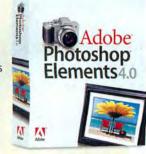
A few days after making disparaging comments about the iPod nano ("Screw the nano. What the hell does the nano do? Who listens to 1,000 songs?"), Motorola CEO Ed Zander told CNet News.com that "we know that they are going to build a smart phone—it's only a matter of time." Motorola's Rokr phone, the first with a version of iTunes built in, has faced a lukewarm reception

since its release in September 2005.

Photoshop Elements
Not Dead

Although Adobe released Photoshop Elements 4, the latest version of its con-

sumer-level image-editing application, only for Windows, the company says it has not killed the Mac version. An Adobe representative explained that unlike with

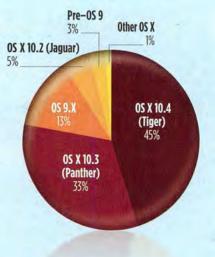


Photoshop and the Creative Suite,
Elements users tend not to work collaboratively and across different platforms—
so a simultaneous release was not as important. He added that, "our Mac customers are still very important to us," but would not say when the Mac version would be available.—MACWORLD STAFF

THE READERS SPEAK

OS Usage os x 10.2 (Jaguar)

Although Apple would love it if everyone ran out and bought the latest version of OS X the day it hit the shelves, many users are still running older versions, according to a survey of 294 people on the Macworld Reader Panel. Because each respondent was allowed to pick every OS version he or she was currently using, this chart represents the 412 total OS mentions in our survey.—JONATHAN SEFF



26 MACWORLD December 2005

IDG WORLD EXPO ENDS EAST COAST MACWORLD TRADE SHOW

Farewell, Boston

You didn't need psychic powers or a Magic 8 Ball widget to see that the end of Macworld Conference & Expo on the East Coast was coming sooner rather than later. IDG World Expo (www.idg worldexpo.com), which produces the Macworld Expo trade show, made the demise of the Boston show official in September. The underwhelming attendance and general lack of interest in

Macworld Expo Boston for the past two years said it all—not to mention Apple's conspicuous absence from the show.

There are plenty of reasons that IDG World Expo pulled the plug on the Boston trade show. Sure, Apple contributed by opting out of the show after Expo organizers moved the event back to Boston in 2004. But even before then, Apple's interest had seemed to wane. Remember the 2002 Macworld Expo in New York? Highlights of Steve Jobs's keynote included a seemingly endless presentation on processor efficiency, and the bad news that the previously free iTools services would now cost \$100 per year.

Of course, the reasons behind Macworld Expo Boston's demise are of little comfort to the people most affected by the development—Mac users on the East Coast who now find themselves without a major Mac event to call their own. Expo is about more than flashy product announcements and memorable keynotes—above all, it's a chance for users to meet, share ideas,

learn new tricks, and get acquainted with the cutting-edge technology that's either available to them now or on its way. Until you sit in a conference ses-

sion with hundreds of other Mac users who share your Mac-centric interests and passions, you're just not getting the same experience.

Apple is more or less unaffected by whether there's a Mac trade show on the East Coast; to a lesser extent, so is IDG World Expo. The same can't be said for Mac users from that region, unless they've got a lot of frequent-flier miles and a fair amount of time on their hands around the first week of January.—PHILIP MICHAELS



KeyCue 1.1, from Ergonis Software (www.macility .com): Updated menu-shortcut utility adds Tiger compatibility (\$15).

StuffIt Deluxe 10, from Allume Systems (www.stuffit.com): Updated data-compression tool adds JPEG compression technology, as well as new features for OS X 10.4, such as a Spotlight Importer (\$80; upgrade, \$30).

Virex 7.7, from McAfee (www.mcafee.com): Antivirus software adds support for OS X 10.4 (contact McAfee for pricing).

VirusBarrier X4, from Intego (www.intego.com): Virus-detection and -eradication program features new interface, e-mail analysis on send and receive, and the ability to define a secure zone for files (\$70; upgrade, \$45).

Widget Maker X, from LAJ Design (www .widgetmakerx.com): Application lets you create, modify, and manage Dashboard widgets in OS X 10.4 (\$17).



Cubase SE3, from Steinberg Media Technologies (www.steinberg.de): Entry-level music-production software adds a new audio engine, drag-and-drop capabilities for MIDI files, improved Hitpoint detection, and a redesigned Track Inspector (\$160).

EyeTV EZ, from Elgato Systems (www .elgato.com): USB 2.0-based TV tuner lets you hook up an antenna, cable, or satellite TV connection to view raw, uncompressed TV signals (\$149).

Griffin iFM, from Griffin Technology (www .griffintechnology.com): iPod accessory acts as inline FM receiver, iPod remote control, and audio recorder (\$50).

SoundBridge Radio, from Roku (www.roku labs.com): Wi-Fi-equipped network music player plays unprotected AAC or MP3 files over a wireless network streamed from a Mac or PC running iTunes; it also features an AM/FM radio (\$399).

How Drive + Play™ works.



iPod"

Just plug any model iPod into the Drive+Play "brain" and hide it in the glove box, under the seat or in any out-of-the-way place.



Display

Mounts on your dash. The backlit 124 x 64 pixel LCD will show you at a glance the iPod menus you're used to seeing in regular or large type. Between selections, it displays what's currently playing.



Controller

Rotate the controller to browse through your music library. Then push to select play, pause, skip-ahead, whatever. If you're familiar with the iPod Click Wheel, you'll be able to use the Drive+Play controller.

Visit driveandplay.com



harman kardon

All rights exerved Harman Kardon is a registered trademark and Drive - Play is a trademark of Harrisin International Industries, Incorporated, IPod is a registered trademark of Apple Computer Inc.

APPLE RESPONDS TO COMPLAINTS ABOUT SCRATCHED AND BROKEN SCREENS

Nano Problems

Replacing the iPod mini—the most successful iPod model to date-with the nano was a bold move on Apple's part, but one that began paying off as soon as it was announced. The nano has earned accolades from reviewers, industry analysts, and consumers alike (for our review of the iPod nano, see page 32). But not everyone is completely satisfied. Some customers have complained about scratched or broken nano screens, and one user even set up a Web site that highlighted the problems.

While complaining about a product is nothing extraordinary, getting Apple to respond to such complaints isn't as common. But Phil Schiller, Apple's senior vice president of worldwide product marketing, recently answered questions regarding both issues.

In addressing the problem of broken screens, Schiller says that Apple has tracked down the problem. "This is a

real but minor issue involving a vendor quality problem in a small number of units," says Schiller. "In fact, this issue has affected less than one-tenth of one percent of the total iPod nano units that we've shipped. It is not a design issue."

Schiller says that if customers have this problem, all they have to do is contact AppleCare for a replacement iPod.

Responding to the second issue, Schiller says that the screens on the iPod nano are made of the same material as those on the company's fourth-generation iPod-which, to date, is not generating many complaints.

"We have received very

concerned about scratching, we suggest they use one of the many iPod nano cases to protect their iPod."

Although Schiller's suggestion may sound like nothing more than a plug for vendors of iPod accessories, the iPod has always been scratch-prone, and protective cases are a good idea for all sorts of expensive devices.

For his part, nano owner Matthew Peterson-who set up the Web site

devoted to the problemsfeels vindicated. "I started the site to get Apple's attention. Mission accomplished," he said in a statement on the voluntarily deactivated Web site. "Apple did the right thing, and should be commended for doing so on their own. No one had to take them to court or threaten legal action."-JIM DALRYMPLE







Kerio MailServer

A groupware alternative to Exchange that syncs calendars, contacts and email with Entourage and Outlook. Integrated anti-spam and McAfee virus filtering provide secure, junk-free email for users on any platform.

Mac OS X · Linux · Windows







Epson Powerlite S3 Projector. 3LCD technology ensures accurate color even in well-lit rooms. Perfect for Home Theaters!



Microsoft Office for Student/Teacher.
Get ahead in school with the leading presentation, spreadsheet, word processing and e-mail software from Microsoft.



Groove Cube by Small Dog Electronics. This amazingly small, foldable speaker offers big sound in an easy-to-carry compact size (carrying case included).



Canon SD300 Digital ELPH
Camera. Ultra-thin design, high
resolution (4 Megapixel) digital
camera with all the superior features
you expect from Canon.



iPod Windshield Mount.

Easy to setup and use, the Small Dog Windshield Mount puts your iPod or iPod mini within easy reach!



Griffin iTrip LCD.

Wireless FM transmission from your iPod to your car or home stereo!



Hippod by Small Dog Electronics.
Unique and compact, our new Hippod is your all-in-one solution for a rugged carrying case and portable sound system!



EzQuest Monsoon Drives. Fast (7200RPM) and affordable, EzQuest's Monsoon drives feature both USB and FireWire ports.



iPod nano. 1000 songs. Impossibly small. Starting at only \$199!

Apple's smallest iPod yet. Delightful to hold, delightful to hear.

We also have 20GB U2 iPods at the super low price of \$265! We carry used, demo and factory refurbished models at substantially reduced prices.

Plus a huge selection of iPod accessories: everything from Burton iPod Jackets to speakers and much more!

he holidays are fast approaching and Small Dog Electronics has great gift ideas for you and your family. Visit us in Waitsfield, Vermont or call us at:

1-800-511-MACS

Online at:

smalldog.com

CELEBRATING

10 Years

OF SERVICE, SELECTION, & SAVINGS



1673 Main St., Waitsfield, VT 05673

1-800-511-MACS



GRIFFIN

Accessorize

US MT LX DX DX DX DX

ITrip

FM TRANSMITTER FOR IPOD

"SHARE THE MUSIC BEYOND YOUR HEADPHONES, AND EASILY CHANGE Made for iPod

THE STATION, AND MOOD, WITH THE TURN OF A





Uses any FM frequency — easily selected

Powered via iPod — no batteries required

WITH THE ITRIP'S CONTROL KNOB AND
ILLUMINATED DIGITAL DISPLAY
TOPMOUNT DESIGN ALLOWS FOR IPOD

CHARGING WHILE IN USE

- · Listen to FM radio on your iPod
- · Record FM radio to your iPod
- High quality omnidirectional built in microphone for recording voice memos



AirClick Remote Control for Mac, PC, IPOD and IPOD MINI

\$39.99





- Designed specifically for use with iPod & iPod mini
- Uses RF for control from up to 60 feet away
- · Control Keynote, iTunes, QuickTime, DVD player and more with AirClickUSB



SmartDeck Intelligent Cassette Adapter for iPod

\$29.99

- Control iPod navigation through your car stereo
- Intelligent level control for optimal input levels
- · Constructed of the highest quality components
- Seamless integration between iPod and car stereo



PowerJolt IPOD AUTO CHARGER

\$24.99



- · Charges ALL iPod models, including iPod shuffle
- Includes 20 inch USB to Dock cable
- Fused to protect against power surges



TuneJuice BATTERY BACKUP FOR IPOD & IPOD MINI

\$19.99



- Powered by a standard 9 Volt battery
- Provides up to 8 hours of additional play
- Compact and lightweight





OUTSTANDING: VERY GOOD: GOOD: FLAWED: UNACCEPTABLE:

Now Playing

The Journey Fatboy Slim Palookaville

MENU

-0:59

9 of 12

3:37



iPod Nano

Apple's Thinnest, and Quite Possibly Coolest, iPod Yet

BY CHRISTOPHER BREEN

iPods have been around long enough for people to take them for granted. Yes, they're small. Yes, they hold a lot of music. And yes, they're cool. So it takes some-thing special to break through our jaded iPod sensibilities. The iPod nano—with its tiny size, sleek look, colorful display, and responsive controls—is that special something.

The nano combines features of the iPod shuffle, the discontinued iPod mini, and today's full-size iPods. Like the shuffle, the nano uses flash memory (2GB or 4GB of it) rather than a hard drive. Like the 4GB iPod mini, the 4GB nano can hold roughly 1,000 songs. Also like the mini, the nano dispenses with some extras that are in full-size iPods: for instance, the nano doesn't let you play video, record audio, download photos directly from your digital camera, send those photos or videos to TVs or projectors for viewing, or install OS X and boot from it. But like those full-size models, the nano has a crisp color screen that displays album art and pictures you've downloaded from a

However, the nano isn't just an amalgam of previous iPod models. It was the first iPod to include a stopwatch, a Screen Lock feature, and multiple clocks (the new video iPod also has this feature). It was also the first iPod to include an unplayed-Podcasts indicator (a small blue dot that appears next to Podcasts you haven't yet listened to) and the Lyrics screen.

And as you might expect, it sounds as good as any other iPod you've owned.

It's Thin, All Right

At 0.27 inches from back to front, the nano is about as thick as six stacked credit cards. At 3.5 inches high by 1.6 inches wide, it fits neatly inside a business-card holder. And even though it weighs only 1.5 ounces, the

nano doesn't feel flimsy or delicate. (Some buyers have complained that the nano's exterior is easily scratched [we did not experience this problem]—see "Nano Problems," *Mac Beat*, page 28.) Despite the nano's small size, its Click Wheel is easy to use and its 1.5-inch display is good for viewing text and pictures.

Because of the nano's thinness, Apple had to move some standard iPod ports. The Hold switch is on top of the player, as on other iPods. But the nano's headphone port is on the bottom, next to the 30-pin dock port. The position of these ports is a prob-



lem only if you use accessories that have wide dock connectors. For example, my fat 1/4-inch stereo-plug-to-miniplug adapter wouldn't fit on the nano when the Dock connector was also attached. While longtime iPod users may initially be thrown by plugging headphones into the bottom rather than the top, doing so can be advantageous if you carry the iPod in your pocket: when you take it out, it's oriented in such a way that you don't need to flip it over to view the screen or use the controls.

Speaking of the dock connector, this iPod syncs only over a USB connection, though it can be charged via either a FireWire or a USB connection. Apple suggests that you can sync only via USB 2.0, but I was able to sync the nano (albeit very slowly) when it was plugged into my Power Mac G4's USB 1.1 port. There's no question that the lack of support for syncing via FireWire is going to be a problem for people with older computers, which don't have USB 2.0. If you fall



Given the lack of support for FireWire syncing, it's not surprising that Apple includes only a USB cable in the box (along with the usual Apple earbuds and foam covers, software disc, and documentation).

When connected by USB 2.0, the nano syncs faster than the iPod mini did. Syncing the same 903-track playlist to a 4GB nano and a 4GB iPod mini took 9 minutes and 15 seconds on the nano and 16 minutes and 13 seconds on the mini.

Fast as a Flash

The nano's Click Wheel is nicely responsive. You feel (and hear, in a quiet environment) a

REVIEWS YOU CAN TRUST Macworld rates only final shipping products, not prototypes. What we review is what you can actually buy.

definite "click" when you press the wheel and the center button. In fact, owners of other iPods may initially be thrown off by how quickly the wheel responds. At least one person who tried my nano thought it scrolled too quickly, making it hard to select items he was after. I felt the same way at first, but I quickly adjusted.

No one will be upset by the speed with which the iPod nano moves from screen to screen. This is particularly noticeable when you're viewing pictures. When I look at pictures on my 60GB iPod photo, there's a noticeable delay between when I select a thumbnail image and when I finally see the "large" view of that image. The larger iPod must spin up its hard drive before it can display the image. The nano's flash memory means that there's no hard-drive delay: images pop up almost immediately, and audio tracks begin playing instantly.

Regrettably, the nano's battery life isn't nearly as good as that of the second-generation iPod mini. In tests where I'd fully charged a 6GB mini, selected the first song in the mini's Songs screen, and pressed Play, the mini was able to squeeze out more than 26 hours of play time, even though Apple rated the mini's battery charge at 18 hours. Apple suggests that the nano can play uninterrupted for up to 14 hours. My first audio

play test fell short of that by just over an hour, but a subsequent test hit the 14-hour mark almost exactly. While playing slide shows, the nano performed a little better than advertised in terms of battery life: Apple claims that the nano can show slide shows for up to 4 hours; in my test of a looping slide show comprising 1,786 photos, the battery lasted for 4 hours and 36 minutes.

On Display

Although it's smaller than the display on the iPod mini, the nano's screen has greater resolution—offering a resolution of 176 by 132 pixels, versus the mini's 138-by-110-pixel resolution. The nano also has a very sharp display—at least when it's lit. And you can see title, artist, and album information on the Now Playing screen; the mini showed only the song title and artist. Unfortunately, it's not easy to see what's on the screen when it isn't lit, unless it's under a direct light (either an indoor lamp or daylight).

The smaller screen forces at least one compromise: When displaying a photoalbum screen, the nano shows fewer thumbnails than the full-size iPods: a 4-by-3 grid of thumbnail images instead of a 6-by-5 grid.

About the Extras

The nano was the first iPod to include a few extras: the Stopwatch, the Screen Lock feature, the Lyrics screen, and a new clock that lets you create multiple analog or digital clocks.

Given that a lot of people will use the nano while exercising, the nano's Stopwatch feature is perfect. I also like the new Lyrics screen in the iPod's Now Playing area; it lets you view the words for any track—as long as you've added them to the Lyrics tab of the Song Information window in iTunes 5. Unfortunately, the only way to add those words for now is by hand—songs sold through the iTunes Music Store don't have embedded lyrics (yet).

Other new features are less successful. Screen Lock is supposed to foil thieves by letting you seal the nano with a combination. But that lock-down isn't foolproof; a baddie could extract your nano's music and data simply by plugging it into his or her computer. And the new clock, which lets you



Teeny Tiny Here, the iPod nano is shown at actual size.

The Rokr



keep track of time for multiple time zones, seems merely gimmicky.

Value

If you're looking for the greatest bang for your gigabyte buck, the nano won't deliver. With the 2GB model, a gigabyte of storage costs about \$100; with the 4GB model, it costs a little more than \$62. (Cost per gigabyte is even higher for the iPod shuffle—at more than \$198 with the 512MB model.) Compare this with about \$6.65 per gigabyte on a \$399 60GB video iPod, and you'll see that people who want the most for their money may pass on the iPod nano's cool form and handy size in favor of the higher-capacity iPod.

Macworld's Buying Advice

The iPod nano has a clear color screen, responsive and manageable controls, photo viewing, and fast syncing. And it's impossibly thin, of course. The nano is a nearly perfect fit for the middle of the iPod lineup—it sounds great and mixes the best features of the shuffle, mini, and color-screen iPods. While you may be disappointed by the lack of support for syncing via FireWire, and may consider the price of admission comparably high, the decision to purchase this slick little iPod may ride on what you're willing to cough up for coolness.

RATING:

PROS: Responsive controls; clear and bright screen; support for photo viewing; syncs quickly; no skipping, thanks to flash memory.

CONS: No syncing via FireWire; no support for viewing pictures on a TV; can't be used to boot a Mac. PRICE: 2GB model, \$199; 4GB model, \$249

COMPANY: Apple Computer, www.apple.com

CHRISTOPHER BREEN is a senior editor at Macworld.

BY JAMES GALBRAITH

Years ago, when Apple shipped its first Macs with 1GB hard drives, I remember asking myself, "Who would ever need that much storage?" It didn't take me long to figure out who, especially now that the 80GB drive in my PowerBook is bursting at the seams with pictures from my multimegapixel digital camera and my ever-expanding library of audio files and movies.

Files and applications aren't the only things taking up precious storage space—OS X puts available disk space to work as virtual memory. My system, for example, uses 5GB as virtual memory with no applications running, and almost 9GB when running a lot of applications. This use of hard-drive space by the operating system means that your entire system can take a performance hit if you start running out of drive space.

If you're beginning to count down the remaining free megabytes on your hard drive, or if you're finally getting serious about backing up your data, you need more storage. You may choose to install a new drive inside your Mac. But for most Mac users, increasing storage means buying a new external hard drive that includes fast and convenient FireWire connections. Trying to consider all the factors when you're choosing a hard drive can boggle the mind, so here are the questions you should ask yourself when choosing a new drive, as well as Macworld's ratings of some of the latest external FireWire hard drives. (More reviews of FireWire hard drives are available at macworld.com/0580.)

Question 1: Which Connectors?

The main connectors you'll find on external drives are FireWire (also called FireWire 400), FireWire 800, and USB 2.0, and many drives include two or more of these interfaces. FireWire 400 is a Mac user's best bet.



It's fast and it's on all Macs that are less than about seven years old, and FireWire upgrades are available for many earlier systems. You can also boot your Mac from most FireWire drives in a pinch.

Apple introduced another, faster version of FireWire, FireWire 800, almost three years ago. It, too, can boot a Mac using OS X, but its speed and performance benefits are questionable. Although it's theoretically faster than FireWire 400, FireWire 800 is far from twice as fast. In fact, a portable FireWire 400 drive with a rotational speed of 7,200 rpm may outperform a FireWire 800 drive spinning at 4,200 rpm. FireWire 800 is also not as common as FireWire 400-only Power Mac G5s and 15- and 17-inch PowerBooks ship with FireWire 800 ports.

FireWire 800 compatibility may also be an issue if you don't have one of the Macs with a FireWire 800 port. FireWire 800 ports are compatible with FireWire 400 devices via a special FireWire 400-to-800 cable, but if you plug a FireWire 400 device into a FireWire 800 port, it will operate only at FireWire 400 speeds. If you're a video or audio pro, FireWire 800 is nice to have, but you'll want to make sure that the drive also has a FireWire 400 port, for maximum compatibility.

If you work across platforms, consider a drive that has a USB 2.0 port, because Windows PCs often don't have FireWire ports. USB 2.0 is also gaining popularity on the Mac side; more and more Macs include USB 2.0 ports. USB 2.0 is backward-compatible with USB 1.1 ports (no adapter needed), which have been included on every Mac sold since the introduction of the original iMac seven years ago. But USB 1.1 can be mindnumbingly slow for anything but the smallest file transfers, and you can't boot your Mac from a USB drive.

continues

Our Picks

Of the approximately 30 hard drives I've tested recently, three stand out as Macworld Top Products (see the tables in this review). The Iomega Black Series Triple Interface drive is our winner in desktop hard drives, thanks to its various connection options, very quick speed (especially in copying data to the drive) and low cost per gigabyte. Our runner-up in that category, by just a hair, is Other World Computing's Mercury Elite-AL Pro 7,200 rpm FireWire 800/400+USB2.

For a portable drive, you just can't go wrong with the LaCie Mobile Hard Drive, Design by F.A. Porsche 7,200 rpm USB and FireWire. Its only flaw is that it doesn't have a FireWire 800 port, but in some cases, it's faster than drives with such a port. Other World Computing's Mercury On-the-Go 7,200 rpm 8MB drive is the runner-up in the portable-drive category.

And as for a drive that goes perfectly with your Mac mini, you just can't beat Newer Technology's miniStack 7,200 rpm, with its FireWire- and USB-hub-like attributes and low cost per gigabyte.



Business at home never sounded so good.

The new iHome iH5™ makes your iPod® earbud free. So you can talk on the phone. Tackle paperwork. And hold meetings in your home office against a backdrop of incredibly rich, natural stereo sound from our iH5 Reson8™ speakers.

The iH5 has a digital AM/FM clock radio that will, should you snooze at work, wake you to the sounds of your iPod! And it does all this while charging your iPod, so it's ready to go when you are.











For all docking iPods®* including Nano!

iHome is a trademark of SDI Technologies Inc. iPod is a registered trademark owned by Apple Computer Inc. in the U.S. and in other countries.

*except iPod® shuffle

iH5

To order, visit

www.ihomeaudio.com

or call toll free

1.800.288.2792



If you can't decide between drives that have one or more of these interfaces, then don't decide at all. Just buy a drive that has all three connectors—there are many to choose from. They're called triple-interface drives, and they offer the ultimate in compatibility. Some hard drives include more than one of the same type of FireWire port. This makes it possible to connect another FireWire peripheral—a second

drive, say—to the first drive instead of taking up another port on your Mac. This is often referred to as *daisy chaining*.

Question 2: Portable or Desktop?

Now that you know what type of connectors you're looking for, you need to think about how you'll use your drive and how far from your desk you'll want to carry it. Fire-Wire cables carry data, but they can also

carry power from your computer to the device—enough to power smaller hard drives (like the ones inside laptop computers) that aren't plugged into an electrical outlet. For the purposes of this review, hard drives that are powered via FireWire are referred to as portable drives, because they tend to be smaller and lighter. And hard drives that require external power are

Campany	Edga Tash	E7Ouest	C Tachnology	lamagn	Mautor	Other World	CmartDick	Western
Company Product	Edge Tech DiskGo 3.5-inch Portable Hard Drive, 400GB	Monsoon FW/USB2 HD, 250GB	G-Technology G-Drive FW 800 & FW 400, 400GB	Black Series Triple Interface, 250GB ★	OneTouch II FireWire 800 & USB Drive, 300GB	Computing Mercury Elite-AL Pro 7,200 rpm FireWire 800/400+ USB2, 250GB	SmartDisk CrossFire Desktop, 160GB	Extreme Lighted Combo Drive, 320GB
Rating	***	****	****	****	***	****	****	****
Contact	www.edgetech corp.com	www.ezq.com	www.g-technology .com	www.iomega.com	www.maxtor.com	www.macsales.com	www.smartdisk .com	www.wdc.com
Price ^A	\$375	\$185	\$429	\$240	\$320	\$230 \$170		\$300
Price per GB	\$0.94	\$0.74	\$1.07	\$0.96	\$1.07 \$0.92		\$1.06	\$0.94
Connec- tors (Number)	FireWire 400 (2), USB 2.0 (1)	FireWire 400 (2), USB 2.0 (1)	FireWire 400 (1), FireWire 800 (2)	FireWire 400 (1), FireWire 800 (2), USB 2.0 (1)	FireWire 400 (1), FireWire 800 (2), USB 2.0 (1)	FireWire 400 (1), FireWire 800 (2), USB 2.0 (1)	FireWire 400 (2), USB 2.0 (1)	FireWire 400 (2), USB 2.0 (1)
Other Capacities	80GB, \$99; 120GB, \$120; 160GB, \$135; 250GB, \$200	80GB, \$109; 160GB, \$139; 200GB, \$165; 400GB, \$339; 500GB, \$469	160GB, \$189; 250GB, \$249; 500GB, \$569	160GB, \$180; 400GB, \$380	200GB, \$230	80GB, \$160; 160GB, \$200; 200GB, \$210; 300GB, \$270; 400GB, \$360; 500GB, \$480	250GB, \$250	120GB, \$180; 160GB, \$200; 250GB, \$250
Pros	Low price per giga- byte; can boot OS X using FireWire.	Can boot OS X using FireWire; inexpensive.	Fast; can boot OS X using FireWire; unique case design; FireWire 400 and 800 ports.	Fast; can boot OS X using FireWire; triple interface; includes Retrospect Express.	Can boot OS X using FireWire; triple interface; one-button backup via Retrospect Express (included).	Fast; can boot OS X using FireWire; triple interface; includes Retrospect Express.	Can boot OS X using FireWire; USB 2.0 and FireWire connectors; distinc- tive design; good FireWire 400 speeds.	Can boot OS X using FireWire; unique lighted design.
Cons	Very slow at boot- ing OS X via Fire- Wire; inconsistent speed performance.	No FireWire 800 ports.	No USB 2.0 ports; expensive.	None significant.	Slow performance when copying and duplicating files.	None significant.	No FireWire 800 ports.	Takes up more desktop space than most drives; no FireWire 800 ports.
Comments	This 400GB model is the only DiskGo drive that can boot OS X, and it does so very slowly. In fact, this drive's speed varied widely during our testing.	s the only DiskGo drive that can boot DS X, and it does so very slowly. In act, this drive's peed varied widely s lim drive, clad in anodized aluminum. It has both USB 2.0 and FireWire 400 ports, fast FireWire peed varied widely		The lomega Black Series is our top pick for desktop FireWire hard drives. You can't go wrong with its combina- tion of connection options, low price per gigabyte, and winning speed.	This triple-interface drive is designed for backing up. It ships with Retro- spect Express and has a program- mable button that can initiate backups.	The Mercury Elite- AL Pro is very fast, winning one of our three timed trials. It also has a slim aluminum case that complements a Power Mac G5.	This moderately priced drive features the same signature case design as other Smart-Disk drives—it's just bigger.	With its clear plastic case and two 5-inch tubes that glow and change colors, this moderately priced drive adds some fun to its function.
Macworl	d							
Copy 1GB to Drive	1:37	0:47	0:35	0:33	1:32	0:36	0:51	0:4
Duplicate 1GB on Drive	1:19	1:17	0:57	0:55	1:56	0:54	1:25	1:2
Low Memory Photo- shop CS Suite	1:47	1:37	1:32	1:33	1:28	1:34	1:48	1:4

BEST RESULTS IN BOLD (<Better). All Drives in this table have a rotation speed of 7,200 rpm. All prices shown are the manufacturers' suggested retail prices.

How We Tested All speeds are in minutes:seconds. We ran all tests with the FireWire drives connected to a dual-2.5GHz Power Mac G5 with Mac OS X 10.3.7 installed and 512MB of RAM. All drives were tested using FireWire 800, unless it was unavailable; in those cases, we used FireWire 400. We copied a folder containing 1GB of data from our Mac's hard drive to the external hard drive to test the drive's read speed. We then duplicated that file on the external drive to test both read and write speeds. We also used the drive as a scratch disk when running our low-memory Adobe Photoshop CS Suite test. This test is a set of four tasks performed on a 150MB file, with Photoshop's memory set to 50 percent.—MACYORED LAB TESTING BY JAMES GALBRATH AND JERRY JUNG

36 MACWORLD December 2005 www.macworld.com

Ele ate your mini

More performance, more ports and more hard disk storage gets more from your mini without adding clutter to your desk.

The NewerTech miniStack provides just what you've been looking for - more hard drive space, more FireWire and USB 2.0/1.1 ports, and more speed. Up to 500GB extra hard drive space with a 7200RPM drive available for as little as \$99.95.

Ted Silveira of MacInTouch.com says "...the miniStack provided a oticeable kick in everyday use.



EDITORS Macworld MacAddict RATED

500MB Copy Test miniStack 44.67 second

Compilete 80- to 500GB solutions with 7200RPM drive start at \$139.99 and ship wit cables, EMC/Dantz Retrospect and Intech HE Speedtools. All drives are backed by a two-year NewerTech limited warranty.

Plus many other features

USB 2.0/ Auto-Power turns on and off with your mini or manually switch it Assembled in the USA

Intelligent active cooling

Two-port **FireWire** 400 hub

Security slot for

anti-theft

Check out these other great mini accessories that are made in the USA:

echnology

NewerTech.com/macmini



NuClear mini



NuStand mini



NuShelf mini



NuBlue mini

MW 12 05 Other World Computing, Newer Technology, a part of New Concepts Development Corp., 1004 Courtaulds Dr., Woodstock, IL 60098 Prices, specifications, and availability are subject to change without notice. Items returned within 30 days may be subject to a restocking fee. No return

referred to as desktop hard drives. Desktop drives are larger and heavier, but they, too, can be carried around. However, you probably won't want to carry one far.

Because portable drives are built around physically smaller mechanisms, they're usually more compact and easy to tote around. One downside to these drives is that they're more expensive than desktop drives and provide less storage capacity. Currently, portable drives top out at between 100GB and 120GB, while desktop models can hold 500GB. Portable drives also tend to be slower (generally between

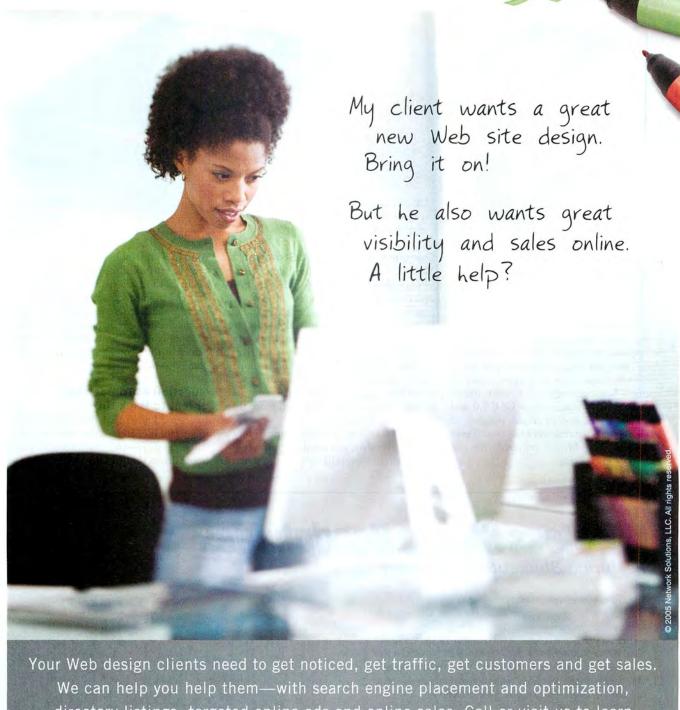
4,200 and 5,400 rpm) than most desktop drives (generally 7,200 rpm).

If you plan on moving your drive from system to system and place to place, then a portable drive is the way to go. If your drive will generally stay in one place and

Company	CMS Products	G-Technology	Kanguru	LaCie	Other World Computing	SmartDisk	US Modular	WiebeTech	
Product	FireWire ABS Plus for Mac, 100GB	G-Drive mini FW (FW 800), 60GB	2.5-inch Combo Quicksilver Fire- Wire/USB 2.0, 100GB	Mobile Hard Drive, Design by F.A. Porsche 7,200 rpm USB and FireWire, 60GB	Mercury On-the-Go 7,200 rpm 8MB, 60GB	FireLite FireWire 1394b Hard Drive, 80GB	Dragon Drive 2.5- inch, 20GB	ComboGB, 60GB	
Rating	***	****	****	****	****	****	***	****	
Contact	www.cmsproducts .com	www.g-technology .com	www.kanguru.com	www.lacie.com	www.macsales.com	www.smartdisk .com	www.usmodular .com	www.wiebetech .com	
Price^	\$319	\$299	\$300	\$240	\$250	\$250	\$99	\$250	
Price per GB	\$3.19	\$4.98	\$3.00	\$4.00	\$4.17	\$3.13	\$4.95	\$4.17	
Drive Speed (rpm)	4,200	7,200	4,200	7,200	7,200	5,400	4,200	5,400	
Connec- tors (Number)	FireWire 400 (1)	FireWire 800 (2)	FireWire 400 (1), USB 2.0 (1)	FireWire 400 (1), USB 2.0 (1)	FireWire 400 (2), USB 2.0 (1)	FireWire 800 (2)	FireWire 400 (1), USB 2.0 (1)	FireWire 400 (1), FireWire 800 (1), USB 2.0 (1)	
Other Capacities	20GB, \$219; 40GB, \$199; 60GB, \$229; 80GB, \$269	not applicable at 7,200 rpm	40GB, \$130; 60GB, \$160; 80GB, \$190	not applicable at 7,200 rpm	80GB, \$300; 100GB, \$360	40GB, \$150	40GB, \$149; 60GB, \$169; 80GB, \$199; 100GB, \$279		
Pros	Can boot OS X using FireWire; includes Bounce- Back Professional 5 backup software*; powered via Fire- Wire.		Can boot OS X using FireWire; FireWire buspowered. Fast; can boot OS X using FireWire; FireWire buspowered.		Fast; can boot OS X using FireWire; Fire- Wire bus-powered; includes Retrospect Express and other utilities; includes carrying case.	Can boot OS X using FireWire; Fire- Wire bus-powered; FireWire 800 con- nectors; includes FireWire 800-to-400 cable.	Can boot OS X using FireWire; FireWire bus- powered.	Fast; can boot OS X using FireWire; Fire- Wire bus-powered; compact; triple interface.	
Cons	No USB 2.0; no FireWire 800 port. high cost per gigabyte.		No FireWire 800 No FireWire 800 port.		No FireWire 800 No USB 2.0; no Fire- port; high cost per gigabyte.		Modest capacity, though other capac- ities are available; slow; no FireWire 800 port; high cost per gigabyte.	High cost per gigabyte.	
Comments	The only portable drive we've reviewed designed specifically for backups, this little red drive comes with CMS's own backup software but has only a FireWire 400 port.	ve we've iewed designed cifically for kkups, this little drive comes h CMS's own kkup software h has only a				Few palm-size portable drives offer FireWire 800, but the small Fire- Lite, in its distinctive case, does, and it pays off. This moder- ately priced drive also had the fastest read speeds in our tests.	The Dragon drive can do everything that these other portable FireWire drives can do—it just does it slower, and at a very high cost per gigabyte.	At a relatively high cost per gigabyte, the ComboGB offers a wide range of connection options and fast performance.	
Macworl									
Copy 1GB to Drive	0:54	0:49	0:56	0:45	0:51	0:47	1:12	0;50	
Duplicate 1GB on Drive	1:54	1:23	1:56	1:17	1:23	1:35	2:30	1:43	
Low Mem-	3:01	2:17	3:02	2:12	2:20	2:41	2:55	2:39	

BEST RESULTS IN BOLD (<Better). All prices shown are the manufacturers' suggested retail prices. Reviews, January 2005 (macworld.com/0816).

How We Tested All speeds are in minutes:seconds. We ran all tests with the FireWire drives connected to a dual-2.5GHz Power Mac G5 with Mac O5 X 10.3.7 installed and 512MB of RAM. All drives were tested using FireWire 800, unless it was unavailable; in those cases, we used FireWire 400. We copied a folder containing 1GB of data from our Mac's hard drive to the external hard drive to test the drive's read speed. We then duplicated that file on the external drive to test both read and write speeds. We also used the drive as a scratch disk when running our low-memory Adobe Photoshop CS Suite test. This test is a set of four tasks performed on a 150MB file, with Photoshop's memory set to 50 percent.—MACWORID LAB TESTING BY JAMES GALBRAITH AND JERRY JUNG



directory listings, targeted online ads and online sales. Call or visit us to learn more, and to find out all the ways we can help take your business farther.

Affordable Web Hosting Domain Registration Real-Person Customer Service™ »Online Sales & Marketing Tools SSL Certificates ... And More



Network Solutions.

Go Farther

Call or click: 1.866.455.2005 | www.networksolutions.com

you don't mind dealing with an additional cable and power brick, a desktop drive will be more affordable and faster. Desktop drives can even complement your workspace's decor-for example, there are several available desktop drives that resemble a Mac mini. Because Mac minis are hard to upgrade, an external drive-especially a drive that fits the mini both physically and stylistically—can be a very attractive option. Some of these external drives for the Mac mini also act as USB 2.0 and FireWire hubs, adding to the number of available ports your system has (see "Hard Drives for Mac Mini Compared" for our ratings of these drives).

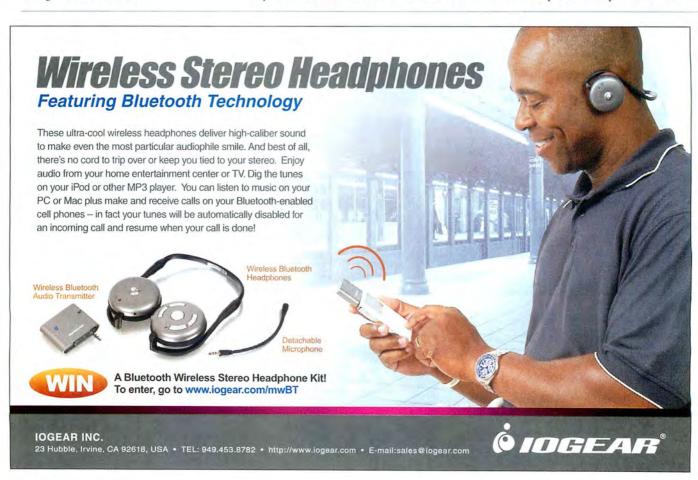
Question 3: How Much Storage?

Most of these FireWire hard drives come in multiple capacities. Typically, the most-expensive drives—measured in cost per gigabyte—are those with the lowest and the highest capacity in a line. Taking desktop drives as an example, many companies offer an 80GB drive as their least-expensive product. For about 25 percent more money, most companies will sell you a drive with twice the capacity, or for 50 percent more money, you can get a drive with more than three times the capacity.

For this reason, you may want to buy a larger drive than you need, even though it may seem like overkill now. As the sizes of your files and applications—as well as that of your music collection—get larger, you'll easily fill the extra space. Be aware, though, that the highest-capacity drives cost more because they represent the latest and greatest mechanisms available on the market. As the supply of these mechanisms grows, the prices of the products based on them will come down.

Question 4: To Back Up or Not to Back Up?

Everyone knows that they should back up important files and folders, but many people still don't do it—and you know who you are. Some drives ship with backup software such



as EMC Dantz's Retrospect Express. These applications make it easy to execute a backup strategy and protect against data loss. Some desktop drives, like the Maxtor OneTouch II, go a step further by including a programmable button on the front of the drive that can initiate a backup with one press. (See "Take Control of OS X Backups: Part One" at macworld.com/0581 for more on creating backup strategies.)

The Bottom Line

An external FireWire hard drive is an easy way to increase your Mac's storage capacity. Whether the right drive for you is a portable or a desktop depends on your individual needs. But in short, you can never really have too much drive space or too many connectors.



Other World Computing Mercury On-the-Go 7,200 rpm 8MB (portable)

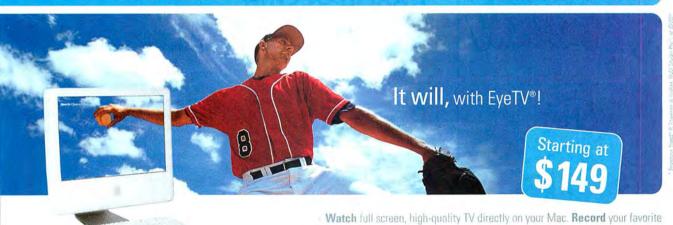
JAMES GALBRAITH is Macworld's Lab Director.

HARD DRIVES FOR MAC MINI COMPARED

* = Top Product.

Company	LaCie	MicroNet	Newer Technology
Product	mini FireWire 400 Companion Hard Drive, 250GB	miniMate 7,200 rpm FireWire + USB 2.0 Hard Drive & Integrat- ed FireWire and USB Hub, 80GB	miniStack 7,200 rpm, 320GB
Rating	****	***	***
Contact	www.lacie.com	www.micronet.com	www.newertech.com
Price*	\$200	\$135	\$260
Price per GB	\$0.80	\$1.69	\$0.81
Connectors	FireWire 400 (2)	FireWire 400 (3), USB 2.0 (4)	FireWire 400 (3), USB 2.0 (4)
Other Capacities	80GB, \$120; 160GB, \$150	160GB, \$170; 250GB, \$200; 400GB, \$545	80GB, \$140; 160GB, \$180; 250GB, \$220; 400GB, \$360; 500GB, \$480
Pros	Fast; can boot OS X using FireWire; very low price per gigabyte.	Can boot OS X using FireWire; integrated USB 2.0 and Fire-Wire hub.	Can boot OS X using FireWire; integrated USB 2.0 and Fire- Wire hub; large capacity; includes Retrospect Express; low cost per gigabyte.
Cons	No USB 2.0 ports.	Modest capacity, though other capacities are available; high cost per gigabyte.	None significant.
Comments	Unlike the other hard drives for the Mac mini, this hard drive isn't a USB and FireWire hub and a desktop hard drive. However, it gets the job done very well.	Its integrated USB and FireWire hub makes this a good, if expensive, drive for Mac mini owners looking to increase their disk space and gain more connection options.	Great features make the miniStack our Top Product pick of hard drives designed for the Mac mini. It has plenty of ports, as well as a fan that can be controlled via switches on the back of the unit.

Does your Mac do TV?



'All prices shown are the manufacturers' suggested retail prices.

watch record edit enjoy





shows simply by clicking on the listing in the online ty guide. Edit unwanted content and then burn your recording to DVD". EyeTV" - Sit back and enjoy. Watch what you want, when you want it.

Available at these and other authorized Apple dealers:

Apple Store

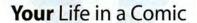
MacWall



For more information on our products, visit www.elgato.com

elgato

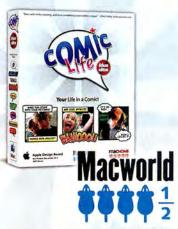
December 2005 MACWORLD 41











FREEVERSE

More Reviews

For complete reviews of the products listed here, visit www.macworld.com/reviews.



†††† DoorStop X 1.0 ▲ (\$49), from Open Door Networks (www.opendoor.com): DoorStop X 1.0 is an easy-to-use replacement for the software firewall built into OS X. It gives you more control over firewall configuration and logging. But it also lacks certain features that are common to other consumer-oriented, third-party firewall programs (macworld.com/0857).

***** FileMaker Pro 8 Advanced (\$499), from FileMaker (www.filemaker.com): Anyone doing database development in FileMaker should upgrade to FileMaker Pro 8 Advanced. This new version allows developers to write smarter scripts, build better user interfaces, and deliver databases faster (macworld .com/0855).

***** iCorrect Portrait 1.0 (\$100), from PictoColor (www.pictocolor.com): This skin-tone—adjustment program designed especially for photo portraits is a fast and easy way for both hobbyists and commercial photographers to dramatically improve bad photos and fine-tune good ones. PictoColor has perfected this Photoshop plug-in, and it works equally well on any skin color—something few programs can do (mac world.com/0858).



₹₹₹₹ Norton AntiVirus 10.0 ▲ (\$70), from Symantec (www.symantec.com): It's important for all computer users—even Mac users—to periodically check for viruses, and the latest version of Norton AntiVirus is an excellent program for that purpose. It's impressive, adding important elements such as full compatibility with Tiger and a Quarantine feature for infected files (macworld.com/0860).

FIND THESE REVIEWS AND MORE AT PLAYLISTMAG.COM

Cool iPod Stuff



‡‡‡‡ HomeDock ◄ (\$100), by Digital
Lifestyle Outfitters
(www.dlodirect.com):
iPod owners now
have two ways to
connect their
beloved devices

to their home stereos while retaining high-quality sound. Like Kensington's Stereo Dock (macworld .com/0870), the HomeDock provides audio output, iPod charging, and a remote control. But the HomeDock includes a few more features and some nifty design touches (macworld.com/0865).

****** mm50 (\$150), by Logitech (www.logitech.com): The Logitech mm50 is a welcome addition to the growing lineup of portable iPod speakers. It's slightly bigger than its competitors, but its design and sound quality are the best we've seen and heard in a truly portable speaker. At \$30 less than our previous favorite, the Altec Lansing inMotion iM3 (macworld.com/0871), it's a bargain (macworld.com/0866).

**** iTrip (\$40), Griffin
Technology (www.griffintech
nology.com): This radio transmitter for the iPod is impressive. It offers reasonable range and has intuitive controls. It
also sports a clear, readable LCD. Its ability to tune
to frequencies outside the normal range in the
United States will be a great help for people whose
radios can take advantage of that feature (mac
world.com/0868).

iPod nano Armband (\$29), from Apple Computer (www.apple.com): Apple's iPod nano Armband (available in five colors) lets you wear your iPod nano on your upper arm—a popular style for exercising. The band is perforated to let your skin breathe, and the Click Wheel is accessible through a clear vinyl window. The only drawback is that the armband strap can get caught on your body when you're running or moving your arms (macworld.com/0869).

Available at select Apple

resellers and online at

FREEVERSE.COM

**** PhoneValet Message Center 3.0 (\$200), from Parliant (www.parliant.com): This Mac-based phone-answering system adds new features such as call blocking and custom ring tones to its already excellent core (macworld.com/0861).



the Quicken 2006 ▲ (\$60), from Intuit (www.intuit .com): Quicken 2006 is a much better tool for tracking your finances than a paper register or a Microsoft Excel spreadsheet, and it's well worth its price. If you're already using Quicken 2005, you must decide whether the few new features are compelling enough to justify investing another \$60 (macworld.com/0862).



*** Site Soap 1.2 ▲ (\$13), from Talacia Software (www.talacia.com): If you receive Web pages and images that you need to clean up and optimize quickly before putting the content online, Site Soap 1.2 will serve you well. But it will prove superfluous if you're developing Web pages with commercial Web development tools such as Macromedia's Dreamweaver or Adobe's GoLive (macworld.com/0863).

***** Toast 7.0 Titanium (\$100), from Roxio (www.roxio.com): You won't find a better CD- and DVD-burning application than Toast 7.0.1 if OS X's built-in abilities aren't enough for you. This upgrade includes a data-spanning feature that automatically divides content across multiple discs. It also includes Roxio's Popcorn DVD-copying software and the DivX Pro 6 codec (macworld.com/0856).

**** Webstractor 1.5 (\$80), from Softchaos (www .softchaos.com): If using the Web for research is part of your life, Softchaos's Webstractor 1.5.3 is one Internet utility you should own. The program now automatically downloads updated versions of Web pages you've gathered and adds a handy search function (macworld.com/0864).

The switch is ON

Everyone is moving to FontAgent Pro...

"FontAgent Pro is a revolutionary product that has provided consistent success for my customers where other font management products have failed!"

Sam Litt, Author of the Mac OS X Bible, Tiger Edition

"FontAgent Pro is simply the BEST font management tool I've found for Mac OS X."

Ted Padova, Author of Adobe Acrobat PDF Bible Co-author of Adobe Creative Suite Bible

"Surpasses the others..."

Andrew Shalat, InDesign Magazine, June/July 2005

"It is nice to see a company that is responsive to the ever-changing needs of Mac users, especially when it comes to almost yearly system updates."

Mark Lamhut, Paul-Mark Printing

"Nothing compares to FontAgent Pro in speed, accuracy and reliability. It is the best."

Chuck Sholdt, Vice President, Weather Central

"Because of the ease of use and powerful feature set, FontAgent Pro is the 'designers' font manager. I give FAP a 5/5 for such a useful and easy to use product that makes our font headaches go away for good."

Colin Smith, Photoshop Café

"FontAgent Pro is so simple and straightforward in its design that we now plan to extend the move to OS X and run FontAgent Pro on all our Macs."

F. Hersperger, Vice-Director, ECAV School of Art and Design

"FontAgent Pro from Insider Software aims to be the most comprehensively useful font management tool a designer can have... It proved to be every bit as good as it was billed."

Keith Martin, MacUser 2005

Isn't it time you switched to the world's best Macintosh font manager?



www.macworld.com December 2005 MACWORLD 43



Devided for the COOS Workshald Come, in C. COOS Workshald Come, in C. Protoco COOS And An America a Date of sold in a Justice of sold of sold in the County of the America and America and

SEE MORE **GAME NEWS** AND REVIEWS!

Go to www.macworld.com/games.

News Feed





Zoo Tycoon Returns

Fans of the first Zoo Tycoon should keep their eyes peeled for Zoo Tycoon 2, which should be out soon, from MacSoft Games (not Aspyr Media, which produced the first Mac version of the game).



The Sims Go to School

Aspyr plans to have the first expansion pack for The Sims 2 out in November. The Sims 2 University takes your sims to college, where they can waste four sim years drinking too much and spending lots of simoleons on a degree they'll never use in real sim life.

Radeon and On

ATI used to have two Mac Radeon 9800 cards-one for G5s and one for G4s. Now the company is down to one card that works in both systems. The Radeon 9800 Pro Mac Edition costs \$299 and has 256MB of VRAM, just like the G5 card it replaces.





Space Cowboys X2: The Threat lets you make your fortune in outer space—when it's not busy crashing your system.

BY PETER COHEN

SIMULATION

X2: The Threat

Space simulations—open-ended adventures that let you make (or lose) your fortune out on the final frontier-have been in a state of steep decline over the past couple of decades. And the latest entry, Virtual Programming's X2: The Threat, certainly isn't doing the genre any favors.

You start the game as the captain of a minuscule spaceship with limited cargo space, slow performance, and unimpressive defenses. By combining your entrepreneurial and tactical skills, you can save money, buy bigger crafts, and decide how you want to proceed-as a captain of industry, a space pirate, or a military genius. Your success in your chosen role will determine your path and how well you fare with each of the six different races that rule space. Success can also backfire on you. Upgrade your ship with too many improvements, and you'll make it a tantalizing target for space pirates.

X2's game interface is extraordinarily complex. You'll need to spend a few hours poring over the manual and going through training simulations before even thinking about playing a real game. But while the simulations are helpful, they're not exactly straightforward. You'll often need to intuit what the spoken narration means in order to understand what to do. However, all of this training really pays off later in the game, when you'll need to control not only your own ship but also entire fleets.

Because X2 is an open-ended game, you can play forever, forging your own destiny. However, RATING: \$\$

PROS: Vast universe to explore; great graphics. CONS: Complicated interface; stability issues; lame

PRICE: £25 (about \$45 at press time)

COMPANY: Virtual Programming, www.vpltd.com

you'll have to suffer through a story line and a mission system that seem grafted on. The game includes laughably bad cinematic sequences with second-rate animation and poor voice acting.

Fortunately, the rest of the game looks fabulous, with 3-D graphics that appear to pop off the screen. Those effects require specific hardware; you'll need a 1.25GHz G4 or faster Mac and an ATI Radeon 9600 or Nvidia GeForce4 Ti graphics card or better for optimal results.

Audio is a major problem in this game. The music is forgettable, and the voice dialogue is bad. Even worse, the core technology that drives the audio seems to be unstable, at least in early versions of the game. As this issue went to press, Virtual Programming released version 1.42, an update that it says provides better stability and reliability for some users. But I recommend proceeding with caution, as past updates have not always been compatible with saved game files.

X2: The Threat is a single-player game. That's no great loss here—the game is incredibly deep and complex. But if your tastes veer more toward multiplayer games, you may be

continues



better off with Guild Software's Vendetta Online (***: macworld.com/0854).

The Bottom Line X2: The Threat is an ambitious but seriously flawed space simulation. Stability problems with the Mac version don't help.

PUZZLE

Atlantis

RATING: ***

PROS: Nice music and sound effects; smooth game

CONS: Too similar to MacPlay's Luxor.

PRICE: \$20

COMPANY: FunPause, www.funpause.com

If you want to know how I feel about FunPause's Atlantis, just read my review of MacPlay's Luxor, because they're fundamentally the same game (****; mac world.com/0833).

While Luxor's backdrop is ancient Egypt, Atlantis takes you to the 19th century, where you lead a team of explorers on a mission to unlock the secrets of the lost city of Atlantis. To do so, you must make your way through more than 80 puzzles. The goal is to prevent a string of colored spheres from moving down a serpentine track to the final destination; you do that by shooting your own colored balls at the ones on the track. If you line up three or more balls of the same color, those balls will disappear.

The audio and sound effects are well suited to the game, and the level design is challenging. Atlantis does have some original embellishments, such as the ability to use game credits to buy power-ups between levels. But in terms of actual game play, Atlantis is identical to Luxor. Picking one game over the other comes down to personal taste and aesthetics. Before spending \$20, you can download a demo and try it out for an hour to see if you like it.



Same Old Tune Atlantis adds a new backstory to a very familiar ball-matching puzzle game.



Strike It Rich Stuff your pockets full of gold while avoiding cavemen and other nasties in Mac Joy's Gold Miner Joe.

The Bottom Line Atlantis is pretty to look at and a competent puzzle, but it doesn't do much to distinguish itself in an already crowded genre.

ACTION

Gold Miner Joe

RATING: *** PROS: Fifty levels.

CONS: Repetitive music; sparse sound effects.

PRICE: \$20

COMPANY: Mac Joy, www.macjoy.com

Gold Miner Joe is a fun new platform action game by Mac Joy. In it, you command Joe, a bearded miner who must make his way through 50 levels of mines as he collects treasure and avoids foesincluding the pesky Kentucky brothers, who hide in barrels and try to shoot poor Joe right in the backside.

Joe runs and jumps from platform to platform. He can shimmy down poles, climb up ladders and ropes, run on moving conveyor belts, and more as he collects gold nuggets. Help him collect them all, and you'll fill up your Gold-O-Meter (a thermometer bar at the top of the screen) and move on to the next level. Since he's a cartoon character, Joe can fall great distances without injuring himself. However, he can't swim, so you'll need to be careful to keep him dry.

Each level includes checkpoints that serve as restart locations if Joe is knocked out of commission. You'll also come across Save maps, which present you with a pass code that you can use at the beginning of a game to save your starting point. While I would have preferred a more conventional saving system, this is an acceptable alternative.

Production quality in the game is excellent. Gold Miner Joe has an old-school,





This year, give something fun and useful.

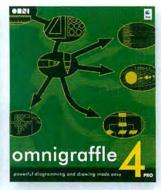
The Omni Group creates software that's a pleasure to use, and that gets the job done quickly and cleanly. We design our applications with the user in mind, so the interfaces are beautiful and the functionality is sensible—that's more than we can say about the tie.



Customize the entire internet with an intelligent browser.



Organize your words into elegant, logical outlines.



Convey any idea graphically in gorgeous diagrams.



See for yourself what a difference the right software can make Download a free trial at www.omnigroup.com/macworld12 16-bit console look. The music adds to the retro feel; it's upbeat, bouncy, and appropriately video game—ish—though it does tend to get repetitive after a while.

To play, you'll need a system with OS X 10.2 or later and OpenGL graphics support. The game also supports joysticks and game pads. Although you can opt to play in full-screen or windowed mode, I'd stick with full-screen mode. In windowed mode the graphics are a little too small (depending, of course, on the native resolution of your display).

The Bottom Line I never get tired of a good platform game, and Gold Miner Joe absolutely fits the bill.

PUZZLE

Word Craft

RATING: ***

PROS: Multiple difficulty levels; simple game play.

CONS: Grating soundtrack.

PRICE: \$20

COMPANY: MacPlay, www.macplay.com

Do you consider yourself a wordsmith? Put your skills to the test in Word Craft, a spelling game in which thinking on your feet is the key to success.

If you're familiar with the tabletop game Boggle, you have the basic idea of what to



Hot off the Presses Make words from moltenhot tiles in Word Craft.

expect here. Word Craft shows you letters on a five-by-five-tile grid. You have to create words from adjoining tiles. The longer the words, the more points you'll rack up.

Oh, if only it were that easy.

In Word Craft, you're up against the timer. The letter tiles are poured from molten metal. Every time you formulate a word, the game replaces the used tiles with red-hot letters fresh from the fire. If a letter sits unused for too long, it'll start to cool. When it turns ice-cold, you can use that letter only to start or end a word. This means that you'll be punished for letting hard-to-use letters such as Z sit and wait. When all the letters turn cold, the game is over.

continues

EVENYORE TO SECOND

RollerCoaster Tycoon 3 Ride the Rides!

*aspyR

FUN FOR ALL AGES!

MAC



Lego Star Wars: The Video Game > All the Characters, all the Action, all the Fun!



The SpongeBob SquarePants Movie Bigger, Better, More Absorbent! WWW.ASPYR.COM

indigen as a behavior of the 100 long. O 700 The 100 long TIM WOS and make properties as a followed in descenaes Copping to the recording to the off the industrial in right second to 200 and the control of the cont

Recently Reviewed

Myst V: End of Ages

****; Ubisoft, www.mystvgame.com; \$60

Myst V: End of Ages marks the end of the road for one of the most beloved adventure games of the modern era. The Myst series, created by Cyan, started life on the Mac, so it's only fitting that it reaches its end here, too.

This final chapter in the Myst series has much in common with the earlier games. You'll have to visit a variety of different ages and solve puzzles to move forward and ultimately win the game. The goal here is to collect a series of slates, which you can use to communicate with—and more important, to command—the Bahro, mysterious bipedal creatures who apparently possess a fair degree of elemental power.

Myst V is the most technically sophisticated game in the series, employing a real-time environment, gorgeous graphical effects, a stunning soundtrack, and mind-blowing attention to detail, right down to the leaves on the trees and the blades of grass in the fields. It's an

absolute masterpiece—although the puzzles themselves can be incredibly challenging, to the point of utter frustration.

To play, you'll need at least a 1GHz G4 with a 32MB video system. However, Ubisoft recommends a 1.6GHz or faster processor to keep up.

Mac players will need to buy the game on a hybrid (Mac and PC) Special Edition DVD. The DVD costs \$10 more than the Standard Edition CD that shipped for the PC, but it includes extras such as a soundtrack, a documentary about the game, and a strategy guide.



www.macworld.com December 2005 MACWORLD 49

The Season's Greetings from zCover



for iAUDIO® for iPod®mini shuffle

for Sony PSP

for BlackBerry® for Treo®650

If you get totally stuck, you can shuffle the tiles around (sort of like shaking the box in Boggle). You'll also occasionally find bonus tiles that can help get you out of a jam. A built-in Merriam-Webster dictionary makes sure that you aren't making up words.

You shouldn't have trouble finding a system that can run the game-any 333MHz G3 running OS X 10.1.5 or later should do the trick.

Word Craft is ideal for the road warrior or the busy executive or student looking to blow off steam in between meetings or classes. You just need a good knowledge of the English language and a desire to show off your wordcrafting skills. The game offers different levels of challenge to keep things interesting.

I liked Word Craft's industrial look, but found the accompanying soundtrack repetitive and quickly turned down the volume. You can play in full-screen or windowed mode.

The Bottom Line Word Craft makes wordsmiths race against the clock. It's a fun diversion for people who want to combine their love of words with their need for speed.

Macworld.com News Senior Editor PETER COHEN hasn't spent any time spelunking for gold, outside of gaming on his Mac.

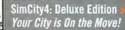
*aspyR

YOU RULE!



The Sims2: University Your Sims are Taking Over Campus!







WWW.ASPYR.COM

Top Downloads | Gunroar



Longtime readers know that I absolutely adore anything produced by Kenta Cho, a Japanese developer of offbeat and psychedelic shoot-'emups. His latest effort, Gunroar, hasn't changed my opinion at all.

Like Cho's previous games, Gunroar takes a tried-and-true arcade concept and adds wild, abstract vector-style graphics, a pumping electronic soundtrack, and varied game-play modes. Gunroar is an overhead, scrolling shooter that puts you in control of a small naval vessel as you blast other ships or guns mounted on land. You'll occasionally have to square off against ships and turrets that have multiple targets.

Although the game scrolls upward automatically, you can go faster by pushing your boat north on the screen and maneuvering around green and brown islands (defined as layers of simple polygons against the blue background of the water). The faster you push your boat, the more points you'll rack up.

An advantage of the game's stark vectorstyle graphics is that the design doesn't distract from the game play. The cascade of colors and shapes can get hypnotic, especially with the rhythm of the music pulsing away in the background, but your attention never wavers

from the action on the screen or what's happening around you. The design lends itself to a situational awareness that's somewhat unique to Cho's games, and it's one of their most appealing attributes.

One thing that makes Gunroar special is that you can fire in 360 degrees when playing in Twin Stick mode, which lets you press different keys to move and fire. This means you not only have control over which direction your boat is pointing, but also can direct your own gun turret to point in different directions, so you can face north while shooting south, for example. The action can get a little repetitive at times, but it's so much fun that I find the repetition an easy flaw to overlook.

As with Cho's past games, these Mac versions are bare-bones conversions—there are no niceties in here for Mac users. However, if you're handy with Terminal, you can launch the application with additional options, such as windowed mode, custom resolutions, sound, and luminosity.

You certainly can't beat Gunroar for the price—like all of Cho's goods, it's absolutely free.

The Bottom Line Gunroar distills basic shoot-'em-up action to its core and provides you with an interesting, if occasionally repetitive, 360-degree shooting experience.

RATING: \$\$\$

PROS: 360-degree turret control; abstract graphics don't distract from game play. CONS: Repetitive; players must use Terminal

to access options.

PRICE: free

COMPANY: ABA Games (download from

macworld.com/0834)

Mac Gens

GET MORE AND EXPANDED REVIEWS!

Go to www.macworld.com/macgems.

WEB-PAGE-SCREENSHOT UTILITY

Paparazzi 0.2.3

Taking screenshots of what you see on your screen is easy—but grabbing a picture of an entire Web page, including what's currently scrolled out of view, isn't so simple. Or at least it wasn't—the free Paparazzi 0.2.3 (****; www.derailer.org), from Nate Weaver and Johan Sørensen, has changed that.



Nice Shot Paparazzi lets you take a snapshot of an entire Web page.

To capture a Web page, you launch Paparazzi and enter the page's URL. Then you can enter the width, in pixels, of the browser window you want to simulate. This is useful if you're developing Web sites, as you can save shots of how a page will look on screens of different sizes. (Note that if a page has a designated minimum width and you enter a

width that is smaller than that, Paparazzi will use the page's minimum width.) You can also enter a minimum height, handy for short pages. Click on the Capture button, and Paparazzi displays a preview of the page (resizing the Paparazzi window also resizes the preview).

If you like what you see, click on the Save Image As button and choose the JPEG, PNG, or TIFF format; if you choose JPEG, you can also adjust the quality (and thus the file size) of the image.

OS X does let you save a page to PDF or use Safari's Web Archive feature to achieve similar results, but there are advantages to using Paparazzi. When you save to PDF in OS X, the resulting file often looks quite different from what you see on screen; plus, it's broken into separate pages, and each page has its own

header. And the Web Archive feature is useful only if you're planning on sending the resulting archive to another Tiger user; even then, the resulting archive shows only how the page would look on that user's computer, not, for example, how the page would look to someone with a lower- or higher-resolution screen. If you're a Web designer who wants to send a client a sample of the site you're working on, or if you just want a quick snapshot of what a Web page looks like at a given time, a Paparazzi screenshot can be quite useful.

REWRITABLE-DISC ERASER

QuickErase 1.5

Mac OS X's disc-burning functionality has improved with every release, but one task remains a hassle: erasing rewritable (CD-RW and DVD-RW) discs, which you can reuse as many times as you want. However, to reuse a rewritable disc, you must first erase it. In OS X, this means inserting the disc, launching Disk Utility, selecting the disc in the list of volumes, and then clicking on the Erase button in the toolbar.

If I can burn a disc directly in the Finder, why can't I erase it in a similar fashion? Evidently, Ivo van Willigen has asked himself the same question, because his free Quick-Erase 1.5 (****); www.vanwilligen.nl) does something very close. You do leave the Finder, but it doesn't seem as though you do. With a rewritable disc in your optical drive, launching QuickErase lets you opt to erase the disc "quickly" (prepare the disc so you can write over the data) or "completely" (securely overwrite the disc



Good As New With QuickErase, you get easy access to erasing rewritable optical discs—no trip to Disk Utility required.

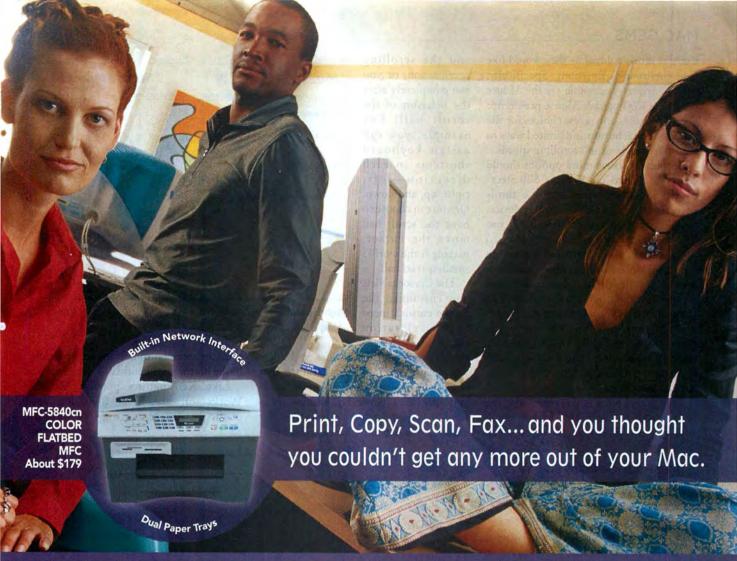
with zeros, which takes much longer)—
these are the same options available when
you use Disk Utility to erase a disc. The
freshly erased disc will appear in the
Finder when QuickErase is finished and
the disc is ready for use.

What I like best about QuickErase—and what sets it apart from similar utilities—is that it's designed to be accessed via a Finder window's toolbar. Open a Finder window with a visible toolbar and drag the QuickErase utility into the toolbar. (You'll have to hold it in the desired location for a few seconds before it will stick.) A QuickErase button will then be available next to the Finder's own toolbar buttons—in fact, it looks just like them. Whenever you want to erase an optical disc, simply click on the QuickErase button and choose an erase method.

MIGHTY MOUSE DRIVER

SteerMouse 3.0

There has been a lot of debate about Apple's new multibutton Mighty Mouse, and one of the most common complaints is that its software doesn't give advanced continues



Introducing output and imaging solutions as innovative as you are.

If you're ready to get more out of your Mac*—not to mention your day—Brother Printer and Multi-Function Center* products are ready to help. With Brother laser printers, you'll be happy to know we have a full range of monochrome or color laser models. Whether your needs are for a simple desktop or a network-ready model, each one will give you fast output and quality to make your best work even better.

Our Multi-Function Center* models deliver the ultimate in printing, copying, scanning, and faxing in one compact design. If you are looking for a color inkjet model that can print from digital camera media at up to 6000 x 1200 dpi*, or a monochrome laser model with print speeds up to 21ppm... Brother has it.

So no matter what kind of Mac* is in front of you, make sure you have a Brother printer or MFC at your side.



A variety of MODELS AVAILABLE AT: MacWarehouse, MacMall, MacConnection, MacZone, Microcenter, CDW, Office Depot, Staples, OfficeMax, Fry's, J&R Computer World, and Apple Stores (or www.store.apple.com) and other fine resellers.

At your side. At your side. R

users as much control as they would like over the mouse's functions. Specifically, Apple's driver—accessible via the Mouse tab of the Keyboard & Mouse preference pane—provides only a few choices for the actions of each button and limited ways to customize tracking and scrolling speeds.

People who crave more options should check out PlentyCom Systems' \$20 Steer-Mouse 3.0 (****; plentycom.jp), a third-party driver for Apple's new input device. (It also works with other mice, but it was designed primarily for the Mighty Mouse.)

You configure SteerMouse through the SteerMouse utility, which provides options for the Mighty Mouse's buttons, scroll ball, and cursor movement. The Buttons tab lets you assign actions to each of the Mighty Mouse's four buttons—left, right, wheel, and side. Options include click, double-click, triple-click, click-lock, control-click (or right-click), scroll, and cursor actions.

The Wheel tab lets you customize the behavior of the Mighty Mouse's scroll ball. You can adjust both the scroll speed and the scrolling acceleration, or you can completely alter the behavior of the scroll ball. For example, you can assign keyboard shortcuts to each direction—left, right, up, and down. Or you can choose to have the scroll ball move the cursor, making it the world's smallest trackball.

The Cursor tab lets you customize the mouse cursor's speed and acceleration much more effec-

tively than Apple's driver does, and it lets you enable Auto Move—a feature that causes the mouse cursor to move automatically to a particular location in a newly activated window or dialog box (for example, the default, Cancel, close, mini-



Mightier Mouse SteerMouse makes Apple's new mouse even better by adding a slew of additional features.

mize, or zoom button, or the resize handle in the bottom right corner of the window).

Like Kensington's popular Mouse-Works software, SteerMouse lets you configure different groups of settings continues

PROMISING PROSPECT

Rawr-jour 0.6b5

Thanks to OS X's Bonjour technology (formerly called Rendezvous), it's easy (at least in theory) to find Bonjour-enabled devices and services on your local network. For example, if two computers are running OS X with Personal File Sharing enabled, a user of one Mac should be able to connect to the other Mac simply by opening the Network view in the Finder and double-clicking on the other computer's icon. But Bonjour isn't just for file sharing; it also helps you connect to local Web servers, locate shared iTunes and iPhoto libraries, and much more.

There are just two problems. The first is that, as anyone who regularly uses the Network view in the Finder can attest, it doesn't always work perfectly—sometimes computers that you know are available don't show up. The second is that although Bonjour helps you access many types of services, you generally do so using a different interface for each: for example, local Web servers via Safari's Bonjour item, file sharing via the Finder, SSH via Terminal, and shared iTunes libraries via iTunes.

Although I can't help you with the first problem, you can solve the second by using Jeremy Knope's free Rawr-jour 0.6b5 (www.macsaresexy.com), a Bonjour browser (don't ask me where the name came from). When Rawr-jour is running, its Dock menu shows you a list of Bonjour-enabled services

Service Browser

Web

Apple File Sharing
iTunes
SSH
iPhoto

Remove from Dock
Open at Login
Show In Finder
Hide
Quit

Bonjour Buddy Rawr-jour lets you quickly locate and connect to Bonjour-enabled computers and services.

on your local network, along with all the devices, computers, and users offering those services. To connect to a service, you choose it from the appropriate submenu.

For example, choosing a computer via the SSH submenu launches Terminal and connects to that computer using SSH, with your current user name as the login name. Choosing a Web service launches Safari and opens the home

page for that computer or device. However, there are a couple of exceptions: the iTunes and iPhoto items show you shared iTunes and

BigBoy15 Senior iPhoto libraries, respectively, but choosing one doesn't open the library in your copy of iTunes

or iPhoto. (Nothing happens in the case of iPhoto libraries; for iTunes libraries, you get a streaming-audio bookmark.)

Which services appear in the menu depends on two things: which services you've enabled in the Rawr-jour preferences dialog box and which of those services are actually present on your local network. In other words, even if you've enabled Apple File Sharing in Rawr-jour's preferences, it won't appear in the menu if there are no computers on your local network with File Sharing enabled.

Although you can manually add services protocols via Rawr-jour's preferences, the preferences dialog box includes a pop-up menu containing the most-common Bonjour-enabled services; choosing one adds it to the list.

Rawr-jour is still a beta release, so it's got a few quirks. But I've been using Rawr-jour for a while now with few problems. And the developer has plans for additional features before the final release—which I'm looking forward to.

Why upgrade your systems? (Because great ideas deserve great technology.)





Apple° iMac° G5

- 2.0GHz PowerPC G5 Processor
- Memory: 512MB
- 160GB hard drive
- CD-RW/DVD±R SuperDrive™
- Built-in Bluetooth® 2.0 and AirPort® Extreme 802.11g
- 17" widescreen TFT display





Authorized



Konica Minolta Maxxum 5D

- · 6.1 megapixel digital SLR camera
- Maximum image resolution: 3008 x 2000 pixels
- AF 18–70 zoom lens with Advanced Distance Integration flash metering capabilities
- High-definition, 2.5" color LCD monitor
- Anti-Shake technology with exclusive CCD Shift mechanism reduces unintentional image blur caused by camera shake





HP PhotoSmart 3210 All-in-one

- Print and copy speed: up to 32 ppm black, 31 ppm color
- Photos as fast as 14 seconds
- View photos or digital video with 2.5" color display Built-in networking
- Printer-to-printer photo sharing with HP Instant Share
- Six color-individual ink tanks



The Technology You Need When You Need It.

When you're bringing ideas to life, your technology should work with you, not against you. CDW has all the top-name technology you need to improve workflow. Our account managers provide fast answers to your product questions. And with access to the industry's largest in-stock inventories, you'll get what you need when you need it. So why wait? Get new systems today and start creating tomorrow.



The Right Technology, Right Away.™ macwarehouse.com • 800.ALL.MACS In Canada, call 888.897.CDWC • CDW.ca

Processors eligible for trade-in include PowerPC G3, G4, G5, Intel Pentium II, III 4 or Intel Celeron; AMD processors do not qualify trade in values are estimates only, actual trade in values may vary from \$25 to \$500; all products must be in good vorking condition and have a fair market value; call your CDW account manager for details. Offer subject to CDWs standard terms and conditions of sale, available at CDW.com. © 2005 CDW Corporation for different applications—your Mighty Mouse can function one way in Adobe Photoshop and another in the Finder. And SteerMouse offers Panther users another welcome feature: while Apple's Mighty Mouse drivers work only with OS X 10.4.2 and later, SteerMouse also supports 10.3.9.

At \$20, SteerMouse may seem like a lot to spend when you've just shelled out \$50 for a new mouse, but if you'll use the additional functionality, it will surely be worth the investment.

GARAGEBAND INSTALLATION HELPER

GarageBand Anywhere 5.0.1

Apple's GarageBand is a killer app, but it's also a huge one—including all of its support files (loops, instruments, and so on), it takes up nearly 2.5GB of hard-drive space. (And that's not counting any additional loops or Jam Packs you download or purchase.) Because of these space requirements, you might think about installing GarageBand on a larger, non-

NOTIFICATION UTILITY

Growl 0.7.2

OS X has made multitasking an everyday occurrence for Mac users. But this capability has introduced a new problem: knowing the status of background tasks.



Heads Up Growl helps applications keep you informed.

Some software developers have altered their application's Dock icon so it indicates event status. Unfortunately, a Dock icon is very small and can convey only so much information. Other developers use dialog boxes, but these either interrupt you—by taking over your screen—or appear in the background so you remain unaware of their presence.

Enter Growl (****); growl.info), a free, open-source conduit for receiving event information from applications. Currently more than 120 apps work with it, including Adium, FlickrExport, GmailStatus, NewsFire, Skype, and Synergy. Others—including Safari, iChat, Mail, Microsoft Entourage, NetNews-Wire, and Salling Clicker—get Growl support through third-party plug-ins and monitoring add-ons.

Growl provides ten different notification styles, each with its own options. E-mail and speech notification are also available. You can extensively customize these alerts. For example, each application has its own set of events. You can turn each event on or off, use a different style or priority for each, and make them "sticky" (notification does not go away until you acknowledge it). You can even pick styles that are specific to individual applications. Growl also includes a Network feature, which sends notifications from one computer to another. The current implementation of this feature has a few flaws—Growl can hang if the computer to which you're forwarding isn't turned on and awake, and feedback loops can occur when two computers forward their notifications to each other.

That said, Growl is fully functional and very promising for software that's at only version 0.7.2. As new notification styles sprout and more applications add support, this software will become indispensable for any multitasker.—DERIK DELONG

THE CONQUEST

DiskWarrior is Now OS X Native

It's the indispensable utility that repairs problems such as disks that won't mount, files you can't trash, and folders that have disappeared. MacUser magazine said, "It's the fastest and safest data recovery utility you can buy."

Macworld magazine said, "DiskWarrior is by far the best disk utility available for the Mac; it can repair virtually any disk problem you may encounter...and it is likely to become the only tool you'll want to keep with you at all times."

David Coursey, ZDNet AnchorDesk, agrees in an article comparing disk utilities. He used it to fix a disk that no other utility could. "DiskWarrior is a great product, not just because it fixed a pretty serious screw-up, but because it showed me what it planned to do in minute detail before doing it."

But disk damage isn't the only threat to your data. As hard drives get older, the drive mechanisms

A L S O F T

Phone: 1-800-257-6381 Fax: 281-353-9868 Email: sales.info@alsoft.com Web Site: www.alsoft.com ©2003 Alsoft, Inc. DiskWarrior is a registered trademark of Alsoft, Inc. Other product names are trademarks of their respective companies.

Traveling Band With GarageBand Anywhere, you can install GarageBand on (or move it to) a non-startup volume.

startup drive. The problem is that the iLife installer won't let you put Garage-Band anywhere but on your startup volume. And although you can copy the application itself to another drive, the app is the smallest component of the package (around 50MB)—the real space hogs are the support files, which must reside in the /Library directory.

If you'd like to be able to stick your GarageBand files somewhere else, the easiest solution is David Hodge's free GarageBand Anywhere 5.0.1 (***); mac world.com/0814). This nifty utility can install GarageBand and its support files from the iLife '05 disc onto any volume. Alternatively, the Move GarageBand option can copy your existing application and support files to a new volume, moving the original files to a backup directory. In either case, the utility creates Unix links on your startup disk so that OS X treats GarageBand as if it were located on the startup disk.

In my testing on two computers, GarageBand Anywhere worked as advertised. In fact, it worked even when it warned that it might not: on one computer, it gave me a dire-sounding warning about a "link error" that might prevent GarageBand from finding its loops; however, that prediction turned out to be rather pessimistic, as the moved version of GarageBand worked fine.

GarageBand Anywhere does need better documentation. For example, it doesn't say whether there will be a problem updating GarageBand—when Apple releases new versions—after moving it or installing it on a different volume (the developer says no). And although the Help system provides a good deal of descriptive information about GarageBand Anywhere's options, a Read Me file would allow people to find out more about the app before launching it. (A Web site would also be useful—the application is currently available only via a VersionTracker product page.)

DAN FRAKES (www.danfrakes.com) is a senior editor at Macworld. Send your thoughts on this column, or on things you'd like to see in future columns, to macgems@ macworld.com.



begin to malfunction. Eventually, the malfunctions become so severe that the drive simply stops working. DiskWarrior can automatically test for hardware malfunctions, giving you the chance to back up your data before it's too late.

Be prepared. Don't wait until after you have a disk disaster to buy your copy of DiskWarrior. Bob LeVitus, aka Dr. Mac, said, "I feel naked without DiskWarrior." You can believe MacHome magazine when they said, "DiskWarrior is a quick, one-click solution to faster, more stable hard drives."















Top Products YOUR GUIDE TO THE BEST HARDWARE WE'VE TESTED

SEE MORE HARDWARE REVIEWS!

Go to www.macworld.com/reviews.

DUAL-LAYER DVD BURNER

RW 16× Fire-Wire with Double Layer (\$189), from LaCie (www.lacie.com):



This DVD burner can burn 8.5GB of data to dual-layer DVDs (which offer twice the capacity of single-layer discs). Although it has a relatively slow read speed, its performance is very good overall—it burns 2.4×-rated dual-layer media at 4×. Its excellent Mac compatibility includes support for OS X 10.4 (Tiger) and iLife (except for iDVD), and it comes with the full version of Roxio's Toast Titanium (April 2005; macworld .com/0313).

FLATBED SCANNERS

MIDRANGE SCANNER

that CanoScan 9950F (\$400), from Canon (www.canon.com):

This CanoScan offers improved scan quality and more-intuitive software controls. The 9950F tops its predecessor, the 9900F, in almost every way (macworld.com/0188).

LOW-END SCANNER

**** CanoScan 8400F (\$150), from Canon

(www.canon.com):

The 8400F has limited transparency support but is a great all-around scanner (mac world.com/0187).



MACS

Product	Processor	Display	Rating	More Information	Best Price*	Speedmark Score ⁸	
iMac	G5/1.8GHz	17 inches	****	macworld.com/0599	\$1,080		163
15	G5/2GHz	17 inches	****	macworld.com/0600	\$1,320		174
200	G5/2GHz	20 inches	*****	macworld.com/0601	\$1,730		174
eMac	G4/1.42GHz (Combo drive)	17 inches	***1	macworld.com/0602	\$790		140
	G4/1.42GHz (SuperDrive)	17 inches	****	macworld.com/0603	\$900		142
Mac mini	G4/1.25GHz	not included	***1	macworld.com/0316	\$494		100
	G4/1.42GHz (Combo drive)	not included	****	macworld.com/0321	\$580		115
	G4/1.42GHz (SuperDrive)	not included	****	macworld.com/0709	\$680		115
Power Mac	G5/dual-2GHz	not included	****	macworld.com/0604	\$1,675		205
	G5/dual-2.3GHz	not included	****	macworld.com/0605	\$2,225		226
	G5/dual-2.7GHz	not included	****	macworld.com/0606	\$2,798		250
PORTAB	LE						
iBo <mark>ok</mark>	G4/1.33GHz	12 inches	****	macworld.com/0705	\$927		106
	G4/1.42GHz	14 inches	***	macworld.com/0706	\$1,269		111
PowerBook	G4/1.5GHz (Combo drive)	12 inches	****	macworld.com/0398	\$1,305	not tested	
	G4/1.5GHz (SuperDrive)	12 inches	****	macworld.com/0399	\$1,550	not tested	
	G4/1.5GHz	15 inches	****	macworld.com/0400	\$1,645		123
	G4/1.67GHz	15 inches	****	macworld.com/0401	\$1,928	not tested	
	G4/1.67GHz	17 inches	****	macworld.com/0402	\$2,240		135

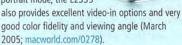
^From a PriceGrabber survey of retailers as of October 11, 2005. Speedmark 4 is Macworld Lab's standard test tool for benchmarking systems running Mac OS X 10.4 (Tiger). For information on Speedmark testing, go to www.macworld.com/speedmark.

LCD MONITORS

23-INCH DISPLAY

from Hewlett-Packard (www.hp.com):

Along with its outstanding value and ability to pivot to portrait mode, the L2335





**** MultiSync LCD2070NX (\$799), from

NEC Display Solutions (www.necdisplay.com):

The MultiSync LCD2070NX is great for people who want a moderately priced 20-inch monitor that can display bright, accurate colors (macworld.com/0636).

19-INCH DISPLAY

*** SDM-HS95P

(\$699), from Sony (www.sony.com):

This display lacks some of the features found on other displays (such as a

USB hub, speakers, or the ability to pivot), but the SDM-HS95P is a bright and nicely designed LCD that performs well (macworld.com/0638).



**** SDM-HS75P (\$450), from Sony (www .sony.com):

It's short on bells and whistles—no built-in USB support, speakers, or ability to pivot—but the SDM-HS75P is a good choice for people who have limited desk space and who want a bright and shiny, well-designed display (macworld.com/0637).

COLOR INK-JET PRINTER

**** Photosmart 8450 (\$250), from Hewlett-Packard

(www.hp.com):



This networkable ink-jet printer uses as many as eight dye-based inks to produce great-looking photos with or without your computer. Its LCD makes direct-from-camera printing easy, and this model produces some of the best-looking text we've seen from an ink-jet (macworld.com/0280).

58 MACWORLD December 2005

COLOR LASER PRINTERS

titi LaserJet 2550Ln (\$600), from Hewlett-Packard (www.hp.com):

This networkable printer offers crisp text and good color fidelity. It also sup-



ports Apple's Bonjour. But its paper capacity is only 125 sheets (macworld.com/0083).

ALSO RECOMMENDED:

*** Magicolor 2430 DL (\$499), from Konica Minolta (www.konicaminolta.com):

With accurate color prints and features such as PictBridge camera printing, this networkable printer could be good for your home or small office, but it's noisy and doesn't support Post-Script (macworld.com/0635).

MINIDV

**** Optura 60 (\$899), from Canon (www

The Optura 60 shoots excellent video (as long as

too (macworld .com/0621).

FIREWIRE HARD DRIVES

DESKTOP DRIVES

Interface, 250GB (\$240). from Iomega

(www.iomega.com):

Fast; many connection options; low price per GB: can boot OS X via FireWire (macworld.com/0580).

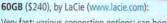
ALSO RECOMMENDED:

**** Mercury Flite-Al Pro 7,200 rpm FireWire 800/ 400+USB2, 250GB (\$230). from OWC (www.macsales.com):

Fast: various connection options: can boot OS X via FireWire (macworld.com/0580).

PORTABLE DRIVES

*** Mobile Hard Drive, Design by F.A. Porsche, 7,200 rpm **USB** and FireWire.



Very fast; various connection options; can boot OS X via FireWire (macworld.com/0314).

ALSO RECOMMENDED:

*** Mercury On-the-Go 7,200 rpm 8MB, 60GB (\$250), from OWC (www.macsales.com):

Fast; FireWire bus-powered; can boot OS X via FireWire; utilities included (macworld.com/0314).

For more on FireWire hard drives, see our review on page 34.

Black Series Triple



COLOR LASER PRINTER

*** Phaser 8500/DN

(macworld.com/0835).

(\$1,099), from Xerox (www.xerox.com):

The Phaser 8500/DN is a very good general-use color laser printer. But if you're will-

ing to sacrifice speed, there are comparably priced color lasers available that produce better-quality prints (macworld.com/0836).

MACWORLD LAB

high-resolution scans of both reflective and trans-

parent media. Although its colors tend toward

green on reflective scans at the default settings,

it did well at capturing fine detail and did a very

good job with color on slides and transparencies

Hardware Products

MIDRANGE SCANNER

*** Perfection 4490

(www.epson.com):

Photo (\$250), from Epson

Here's a fast, easy-to-use scanner that can create

We Tested This Month

COLOR INK-JET PRINTER

Pixma iP4200 (\$130)

from Canon (www.canon.com):

Though a little poky at high resolutions, the Pixma iP4200 is a great all-around ink-jet printer that excels in

printing both office documents on plain paper and high-quality, long-lasting photos on specialty media (macworld.com/0837).

LOW-END SCANNER

*** Perfection 3590 Photo (\$149), from Epson (www.epson.com):

This easy-to-use flatbed scanner is capable of scanning reflective media, as well as limited transparent media. The colors are a bit off at the default settings, but the Perfection 3590 Photo is nonetheless a solid entry-level scanner (macworld.com/0838).

17-INCH MONITOR

** LCM-17w7 (\$249), from Westinghouse Digital Electronics (www.westing housedigital.com):



Despite its appealing design, this display has a slightly washed-out appearance that's hard to correct. Its wide-angle aspect ratio and builtin speakers are both subpar (macworld.com/0839).

CAMCORDER

.canon.com):

you have enough light) with true-to-life, vibrant color. It also offers optical image stabilization, a true 16:9 wide-screen mode, and extensive manual controls for creative flexibility. It snaps decent still images.

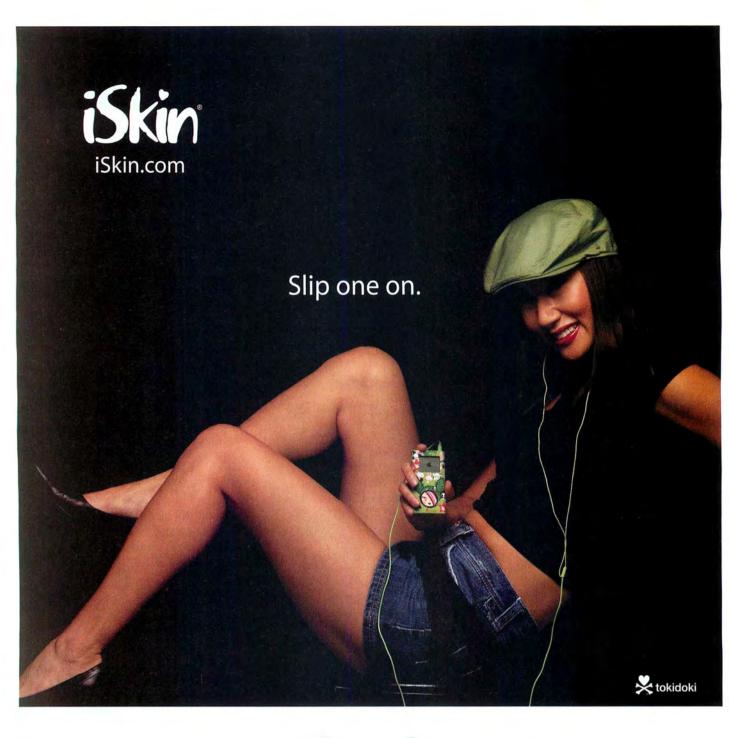
DIGITAL CAMERAS

Product	Rating	Price	Contact	Mega- pixels	Comments	More Information
Canon EOS Digital Rebel XT	*** *********************************	\$899	www.canon .com	8	Best digital SLR under \$1,000; good features and image quality; many lens choices.	macworld .com/0535
Canon PowerShot SD400	****	\$399	www.canon .com	5	Excellent images with accurate colors and good detail; noise in images above 200 ISO.	macworld .com/0634
Hewlett- Packard Photosmart M22	***	\$150	www.hp.com	4	Extensive help features; respectable images; low price; good for beginners.	macworld .com/0595
Konica Minolta Dimage Z5	****	\$649	www.konica minolta.com	5	Great images at low ISO; 12× lens; Super Macro mode.	macworld .com/0534
Olympus C-7070 Wide Zoom	****	\$600	www.olympus .com	7 .	Advanced features; good build quality; slow write speed.	macworld .com/0577



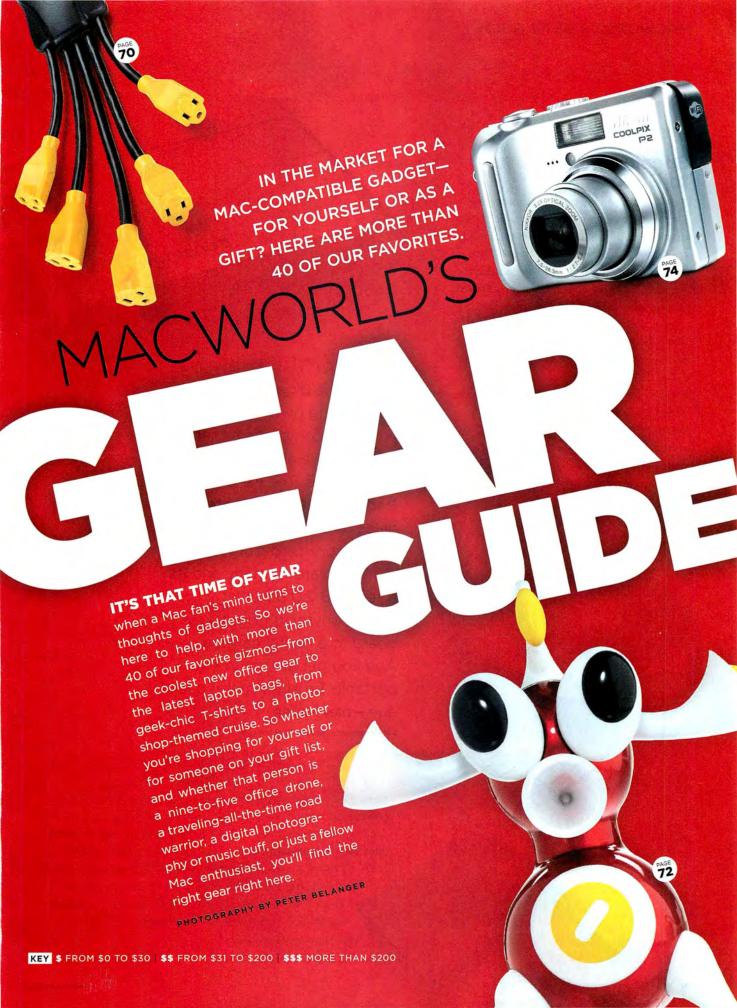
Top Products are those we've recently reviewed in a comparison of like products. As new products become available, we will update the list. For longer reviews of these products and for other product recommendations, go to www.macworld.com/reviews.

December 2005 MACWORLD 59 www.macworld.com





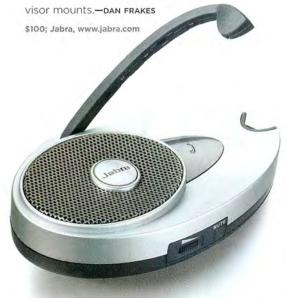
Protection for your iPod, iPod mini, iPod shuffle and iPod nano.



Road Warriors

Speakerphone to Go \$\$

A mobile phone may be the business traveler's most important tool. So why do so few models include that other necessity of modern business life, the speakerphone? (And even those that do won't win any awards for sound quality.) The solution is Jabra's **SP500**. This portable Bluetooth speakerphone has good sound quality, 20-hour talk time, and 480-hour standby time. A pivoting microphone makes sure everyone is heard, and a built-in DSP adjusts the volume to reduce background noise. For people who *must* talk while driving (we really wish you wouldn't), the SP500 even comes with window and





One of the biggest problems with relying on a laptop as your sole computer is that it doesn't have all the ports a desktop has. The Kensington

PocketHub Media Center

helps remedy that situation. Its memory-card slots read 15 different card formats, and its three USB 2.0 ports let you plug in anything from a keyboard to a digital camera. And you get all that in one portable, brushed-metal package.—DAN MILLER

\$50; Kensington, www.kensington.com



Itty-Bitty Backup \$\$\$

Three things a laptop-toting traveler should always bring along: a small drive for transferring files between computers, extra copies of important data, and a way to make a good backup. Targus's **40GB Ultra Slim Pocket Hard Drive** is your three-in-one tool: it's a spacious 40GB drive in a tiny package—a mere 3 inches square, half an inch thick, and just 3.2 ounces. Yet the USB 2.0 drive has

more than enough room for incremental, on-the-go backups of your important data.—DAN FRAKES

\$250; Targus, www.targus.com

Hybrid Power \$\$

If your portable computing environment encompasses planes, trains, and pretty much any other place with hard-to-find power supplies.

Kensington's Thin & Light 70

Watt AC/DC Notebook Power Adapter is for you. It lets you replace your PowerBook's AC adapter with one that plugs into any auto. airline, or wall AC outlet. It's thinner and lighter-although a bit longer-than the standard Apple AC adapter, so it fits into a laptop bag more easily. It also includes interchangeable tips that power your PowerBook, iBook, and iPod; tips for other laptops are available separately, and a \$25 attachment allows you to simultaneously charge your laptop and your mobile phone, iPod, or other peripheral.—DAN FRAKES \$120; Kensington, www.kensington.com



55 For toting a laptop around all day, you can't beat a backpack, STM's Sports model is one of the best. It has the usual padded laptop compartment, as well as pouches for your iPod, phone, and more. Ergonomic shoulder straps and ventilated back padding make it comfortable, even with heavy loads.-DAN FRAKES

\$75; STM Bags, www.stmbags.com

55 Timbuk2's Laptop Zip Briefcase is a hip professional take on the laptop bag. A padded compartment keeps your laptop safe; two large inside compartments and scads of gadget pockets and pouches hold everything else.-DAN FRAKES

15 Inch, \$100; 17 Inch, \$120; Timbuk2, www.timbuk2.com



\$55 Adobe and Medium Design Group have teamed up to create "the ultimate bag for creative professionals." The Adobe messenger bag holds all the trappings of a designer's mobile life inside a secure, rolltop main compartment.-pan Frakes

\$250; Adobe and Medium Design Group, adobe.medlumdesigngroup.com

owc (



COMPUSA

MacWall

amazon.com

Nine-to-Fivers

Save Your Hands \$\$

Anyone concerned about ergonomics-and that should be anyone who uses a computer-will want to know about Contour Designs' RollerMouse: it's a keyboard tray with its own built-in, programmable mouse-replacing roller bar. Roll that bar, and your cursor moves up and down. Slide it side to side, and your cursor does likewise. It makes the sideways mouse-grab a thing of the past, keeps your hands on the keyboard where they belong, and is easier to use than a trackpad.-DAN MILLER



Breath of Fresh Air \$\$

The biggest problem with the modern office environment isn't the fluorescent lighting or bitter coffee. It's the stale air-vou're probably breathing some right now. If you are, the MiniMax Tower Fan



could make your lungs a bit happier. Small enough to fit on a desktop but strong enough to air out a stable, it won't make recycled office air any fresher. But at least it'll move that air around a bit, and look really cool while doing so. - DAN MILLER

\$50; Brookstone, www.brookstone.com

GIFT WRAP YOUR MAC FOR THE HOLIDAYS AND BEYOND.

There's no question your Apple investment is worth every penny. At Targus we share your understanding of quality and style, so we've developed our elite line of Radius Portable Mac Cases and Apple Accessories. Designed with your lifestyle in mind, our products are tailored to offer superior fashion, function and protection.

Radius Portable Mac Cases Feature:

- · A Variety of Designs and Colors
- · Internal Protection
- · iPod Sleeves
- · Interior Document Pockets
- Mesh Design to Keep You Cool





amazon.com.



Buy.com

TARGUS:com

For more information on our full line of Apple Cases and Accessories visit Targus, com © 2005 Targus Inc. All rights reserved. All brands and product names are trademarks or registered trademarks of their respective companies.



TSMO15US \$119.99 Radius Leather Messenger Fits 15" Mac Portable



TSB016US \$69.99 Radius Backpack Fits 15" Mac Portable



TSMOO9US \$59.99 Radius Vertical Messenger Fits 15" Mac Portable



TNCOO4US \$24.99 Radius Mac Mini Case



AERO101US \$49.99 Remote Tunes iPod Accessory



AEAOIUS \$39.99 SoundUp

Making Your Mobile Life Easier®



DLO HomeDock for iPod



HomeDock Features







music throughout your house





DLO HomeDock is Available Now at iPod Retailers Nationwide

sound system with remote control.

Nine-to-Fivers

Desktop Big Screen \$\$\$

If you want to turn a Mac into an all-around media center, Westinghouse Digital's new HD-Grade monitor can help. This display has a single Digital Visual Interface (DVI) input, so it will work digitally with new DVI-equipped Macs. Its response time (15 milliseconds) is fast enough for games and movies,

and its 1,280-by-768 native resolution will make 'em look nice and sharp.-DAN MILLER

\$229: Westinghouse Digital Electronics. www.westinghouse digital.com

continues on page 70



self-powered microchip, Brookstone's SmartSet Alarm Clock always knows the right time, even if the power goes out. It also adjusts itself for daylight saving time and remembers separate alarms for weekdays and weekends. Unlike some of Brookstone's goofier gadgetry, this device could actually be useful.-DAN MILLER

\$35; with radio, \$60; with CD and radio, \$100; Brookstone, www.brookstone.com

Think Different Store

For All Your Mac and iPod Gear



Take \$5.00 off your order now through March 31, 2006. Use coupon code #46E353 when ordering online at thinkdifferenstore.com.



SkinTight Armband

- · Stylish, sporty look · Comfy, adjustable strap
- · Cord clips
- Armband + Skin keeps your nano protected while working out!



We offer a constantly growing line of cases and accessories...



Fun

Skin

nano Tough Skin

nano

iGuy



...for Apple's latest iPod, the iPod nano



nano Skin Tight

Create your holiday wish list and e-mail it to family and friends!

www.thinkdifferentstore.com



HEAR WHAT YOU'VE BEEN MISSING.

FSO HIGH DEFINITION EARPHONES

FUTURE SONICS

FS1 High Definition Earphones deliver richer sound than you've ever heard before. Featuring a professional-grade audio driver designed by Future Sonics, they utilize technology developed exclusively for live music performances. That means you experience outstanding vocal tones, crisp instrumentals and exceptional bass response from your music player, laptop, gaming system or portable DVD player.

ENTER TO WIN!

We're giving away 10 pairs of FS1 High Definition Earphones so you can hear what you've been missing. Register to win at: www.xtrememac.com/macworld

> COMPATIBLE WITH ALL IPOD MODELS

PROFESSIONAL GRADE, FULL-SPECTRUM AUDIO

OUTSTANDING SOUND AT LOW VOLUMES

WARM, RICH BASS RESPONSE

AMBIENT NOISE REJECTION

COMFORTABLE FIT OPTIONS



No purchase necessary. Void where prohibited. Please visit ou Web site a www.xtrememac.com/macworld for complete rules and details.



iTrip LCD

Sports a large, backlit LCD screen, a handy side knob makes it a breeze to select broadcast frequency, selectable LX or DX modes.



Boostaroo Revolution

Awesome portable audio amplifier & splitter gives you high-definition 3-D surround sound imaging for two higher-quality headphones.



Lilipod

A watertight, floatable, hardshell case that fits snugly around your iPod and keeps it safe, no matter what activity you partake in.



smartCharge

An all-in-one car charger specifically designed for the iPod shuffle. Includes built-in 3.5 mm (1/8") stereo audio jack.



Sportsuit Convertible -

Protection, flexibility, and a secret pocket for headphones, the Convertible also has options that allow car, bike, and belt mounting, in sporty style and fashion colors.



* * * * * * * * * *

NaviPro ex - Cut loose with wireless remote control for iPod. Enjoy mavigating through your favorite playlists, albums or audiobooks.







wu Ports

To 3 gar Revisit
Fare face to CD

To 4 gar Revisit
Fare face to CD

To 5 gar Revisit
Fare face to

iSkin Duo - unique Dual Layers combine for 360° protection for your iPod nano or shuffle. Includes Ultra-Clear Screen Protector, Wheel Cap click wheel protector, and a removable rotary belt clip.

iSkin



PocketDock - Charge and sync your iPod. Transfer data. The PocketDock family allows you to leave your iPod's dock at home while giving you a range of features in a tiny, pocket-sized adapter.











PRIE Ambassador nano

Genuine leather iPod case made from smooth ultra high quality genuine nappa leather. Includes removable hook attachment.





A tough, polycarbonate, watertight case with a versatile molded rubber compartment that's compatible with any iPod.



SportSuit Santa

Just in time for the holidays comes the perfect wrapper for all the new iPods under your tree.





MUSAK

This messenger-style laptop bag contains two built-in speakers and a hidden, battery powered amplifier to share your iPod tunes.



Adjust your earphone cord to cord manager.



BruddyClip

The protective exoskeleton provides easy access to all controls and allows for quick removal of the iPod shuffle.





SmartWrap

a preferred length with this easy-to-use silicone rubber



MP3Band-It

This simple, lightweight adjustable armband is designed to securely hold your shuffle while you're on the go.





EveTV EZ USB 2.0 TV Receiver

Simply connect your cable or antenna to EyeTV EZ and your Mac becomes a high quality television.



MicroSuit

These rich, velvety cases are perfect for use with existing lanyard caps, carrying in a purse, backpack or pocket.





Enjoy your iPod with your watersports. Includes a waterproof headset and silicon earplugs.





sumajin

elgato



Where Santa shops for all his Mac & iPod stuff

Nine-to-Fivers

Savvy Cephalopod \$

The people who make AC adapters don't seem to be communicating with the folks who make power strips: the former are so bulky that you can plug only a few at a time into the latter.

But the geniuses behind the PowerSquid have a solution: the **Outlet**

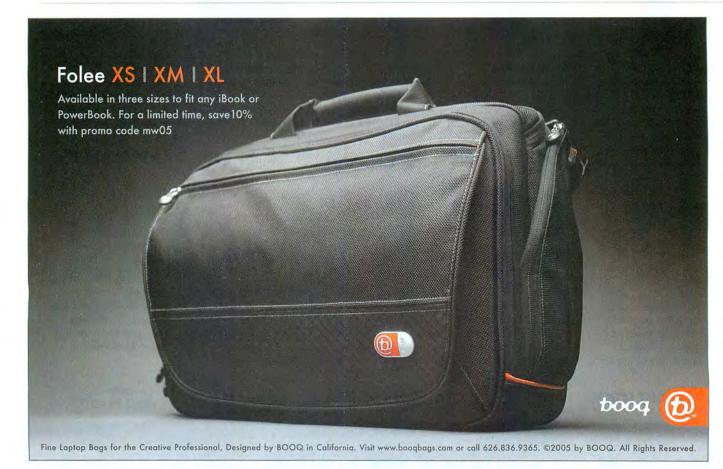
Multiplier. It lets you plug in five AC-adapter bricks at a time without sacrificing other outlets. It

also comes with keyhole slots on the back so you can mount it on a flat surface.—cyrus FARIVAR

\$15; ThinkGeek, www.thinkgeek.com

Laptop Desk \$\$

Do you use a laptop at the officeand then tote it home with you so you can work late into the evening? If you're one of the overworked masses, the surface, from edgeblur, could be your new favorite place to work. It's a highly configurable laptop desk that has side wings for your mouse and/or coffee cup, and adjustable supports in the back that tilt your PowerBook or iBook to a comfortable angle (and help it keep cool). You can use it in your favorite chair, in bed, or anywhere else you feel like working.-DAN MILLER clear, \$144; white, \$149; edgeBlur, www.edgeblur.com



Music Lovers

The Ears Have It \$-\$\$

If you're still using your iPod's stock earbuds, you owe it to yourselfand your ears—to upgrade to headphones that'll do your music some justice. Thanks to Sennheiser, you can do just that without abandoning Apple's stylish aesthetic or breaking the bank. The white-and-silver

MX 500 earbuds (***; macworld .com/0847) offer better sound (and, for many people's ears, a better fit) than Apple's own buds. And the lightweight PX 100 headphones (*****: macworld.com/0848) provide incredible sound quality in a clever design that folds up like a pair of eyeglasses (both include convenient hard carrying cases). Your ears will thank

YOU. - DAN FRAKES

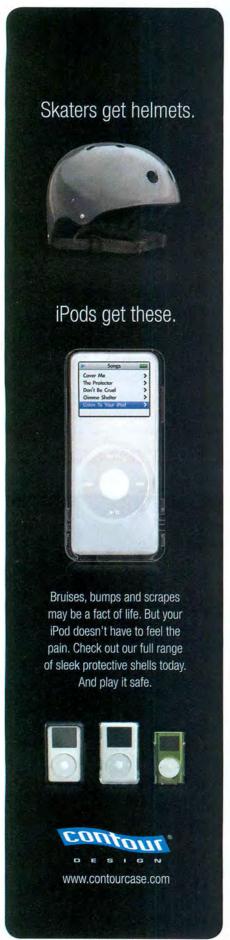
MX 500, \$20; PX 100, \$60; Sennheiser, www.sennheiserusa.com



\$79; M-Audio, www.m-audio.com

24/7 is for slackers. Meet myPower™ for iPod, the classic overachiever in a wireless world. Boasting a 32-hour playing time, it makes all other accessories look rather average by comparison. Combining the power of a rechargeable battery with the convenience of a portable dock, its remarkable versatility makes cutting loose easier than ever. Only from Tekkeon. And meet another brilliant member of the family: myTune FM, the FM transmitter and car charger made for iPod Just plug and play-no software required! Another smart choice from Tekkeon. Tekkeon myPower for iPod available at Apple stores nationwide. See our complete product line at www.tekkeon.com or call (888) 787-5888. Cut loose. Stay loose.

December 2005 MACWORLD 71 www.macworld.com



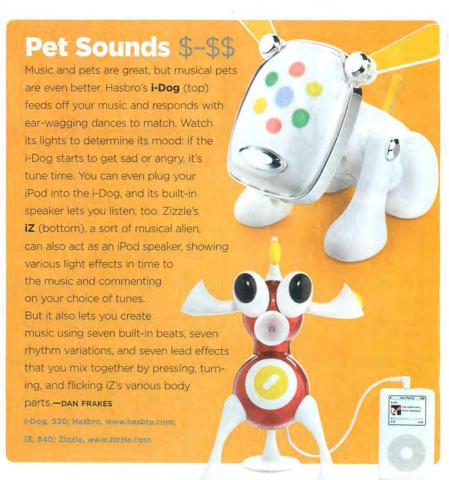
Music Lovers



Many of us watch DVDs on our Macs-but if vou've never done so in surround sound,

Logitech's new Z-5450 is a complete THX-certified, 5.1 surround-sound speaker system: five satellites, a subwoofer, and a hardware decoder (Dolby Digital, DTS, DTS 96/24, and more). The compact receiver's seven inputs let you use it with your Power Mac G5, iMac G5, DVD player, iPod, or PlayStation, while wireless rear speakers (they require only one nearby AC outlet each) save you from having to run cables across a room. Best of all, the entire system costs less than many AV receivers.-DAN FRAKES

\$500; Logitech, www.logitech.com



One-Man Band \$\$

You've been using GarageBand for a while now, and your musical creations are starting to sound a little stale. That's because you're using the same loops and instruments as everyone else. Spice up your songs with Apple's Jam

Packs. These four GarageBand add-ons-Instruments, Loops, and Effects; Remix Tools; Rhythm

Section; and Symphony Orchestra—contain more than 2.000 additional loops apiece, and some also offer new instruments, guitar amps, and effects presets. One caution: each of these massive collections consumes several gigs of drive space.-Jonathan seff



Rise and Shine \$\$

For people who need music to get going in the morning, iHome Audio's iH5 (****; macworld.com/ 0849) is the perfect nightstand com-

panion. It provides a charging

cradle for dockable iPods and great sound for its size, and will wake you with anything in your collection. (It also includes an AM/FM radio and a standard

buzzer alarm.) Stash the \$20 remote under your pillow, and you won't even need to roll over to hit the snooze button.-JONATHAN SEFF

\$100; iHome Audio, www.ihomeaudio.com

More for Music Fans

We just couldn't fit in all the audio gear we wanted to include in print. So we put some more suggestions for digital audiophiles online.

Hearing Aids \$5 Protect your ears with Etymotic Research's ER-20 High Fidelity Earplugs (macworld.com/0840).

Over Your Shoulder \$5 Want a stylish way to tote your iPod? Delarew Designs' hip Delapod

AccessPak may be just what you need (macworld.com/0841).

Perfectly Portable \$\$ Most iPod speakers trade sound qual-

ity for size. Logitech's mm50 doesn't

Get the Hookup SS Send tunes wirelessly from your iPod to your home stereo with Belkin's

TuneStage (macworld.com/0843).

Drive My Car \$5 Harman/Kardon's Drive + Play system may be the best way yet to play your iPod in the car (macworld.com/0844).

Musical Express \$55 For iPod audiophiles, Focal-JMlab's iCub combines a powered subwoofer, an integrated amp, and a digital-to-analog converter in a high-end digital audio system (macworld.com/0845).



Waterproof.

WWW.OTTERBOX.COM

Digital Photograph



Swag for **Shutterbugs**

If you have friends who are hooked on digital photography, you can help them feed their

habit with a gift certificate from online photo service Shutterfly. The gift certificates are available in \$10. \$25, \$50, \$75, and \$100 denominations (in electronic form or on paper), and they can cover any of Shutterfly's services, including photo storage, printing, and putting snapshots on note cards, mugs, T-shirts, calendars, and tons of other items.-JENNIFER BERGER \$10 to \$100; Shutterfly, www.shutterfly.com/photogifts/index.jsp

Cut the Camera Cords \$\$\$

The 5-megapixel Nikon Coolpix P2 makes it a snap to transfer pictures from a camera to a Mac. It's the first consumer camera with built-in Wi-Fi to hit the market. (Kodak is working on a Wi-Fi digital camera of its own, but its wireless connections will require a special card.) Connecting the P2 to your wireless network is easy: you build a network profile for your camera on your Mac and then sync it with the camera. The P2 can access that network any time you're within range. Once you're within range of the network,

your snapshots can go directly from the camera to your Mac; otherwise, the P2 will store them on a memory card and then upload them when you are in range. Oh, yeah, the P2 is also a decent point-and-shoot, with a responsive 2.5-inch screen and a 3.5x optical ZOOM.-KELLY TURNER

\$400: Nikon. www.nikonusa.com



74 MACWORLD December 2005 www.macworld.com



Camera? What Camera?

You want to carry your photo gear in a protective bag, but you don't like the look of those boring black cases that scream,

"Hey, I'm carrying around really expen-

sive photo equipment!" Crumpler's idiosyncratically named camera bags are a nice alternative. They provide lots of padding, many pockets for memory cards and other extras, and a removable divider that lets you customize the interior. The bags come in a wide range of sizes. The 4 Million Dollar Home model, for example, comfortably fits an SLR camera body and a lens (\$75).-KELLY TURNER

\$45 to \$115; Crumpler, www.crumplerbags.com



your family wants to escape winter on a sunny beach. You've got only a one-week vacation window for the whole gang. The solution: the Photoshop Fling 3 & MacMania IV Geek Cruise. Leaving San Diego, California, in early February, your ship heads to Cabo San Lucas, Mazatlan, and Puerto Vallarta-and returns on February 11. En route, you'll get to listen to Photoshop experts

explain special effects, color management, and more.

Photoshop Fling III

And your family will get to sit by the pool and explore sunny Mexico. (Note: Macworld is a coproducer of the MacMania IV Geek Cruise.)-JENNIFER BERGER

\$449 to \$3,792 per person; Geek Cruises, www.geek cruises.com



Parents/Kids

Check the Dailies \$\$\$

If you can't be close to the families and children you love, you can get the next best thing: high-

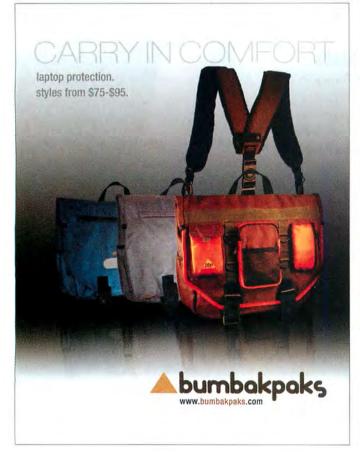
quality video footage of the most-important events in their lives. Give parents a DV camera and they'll have

> no excuse not to send you tapes or DVDs of first steps. loudest-burp

contests, and birthdays. The Canon Optura 60 (\$\$\$\$; macworld.com/0824), our current favorite, offers excellent color, solid still images, optical image stabilization, manual controls, and flexible features such as microphone and headphone jacks.-FRITH GOWAN

\$899; Canon, www.canon.com







866.822.3673



Listen like a pro. Shure, a leader in professional audio gear for over 80 years, steps offstage with its award-winning E Series Sound Isolating™ Earphones. Now stage-worthy, listen-like-you-live-it audio is available for anyone on the go. Shop www.shure.com for the full line of premium earphones and headsets for your music, movies, gaming, mobile phone, and more.

"These are the Mercedes of headphones." - Forbes.com, April 18, 2005

"High-definition drivers add bonus bass and extra bite

to raging guitar solos." - Maxim, "Top 25 of 2005," Scott Stein, May 2005

[&]quot;They're pure audio nirvana." - CNET.com, CNET Editors' Choice, July 2005











Geek Out Your Baby \$

Kids born today are going to know more about technology by the time they're ten than many of us adults do now. If you want to give your favorite infant a head start in the tech world, wrap him or her up in one of these cute onesies or T-shirts. The Newbie onesie and Geek in Training T-shirt (sizes 6 months to 4T) boldly proclaim a baby's technological proclivities, while the iPod My Baby onesie (sizes 6 to 18 months) is a bit more ambiguous. Sure, iPods are known for their elegant interfaces. Babies? Not so much.—FRITH GOWAN

Newble onesie and Geek in Training T-shirt, \$13; ThinkGeek, www.thinkgeek.com; IPod My Baby onesie, \$16; IPodMyBaby, www.ipodmybaby.com



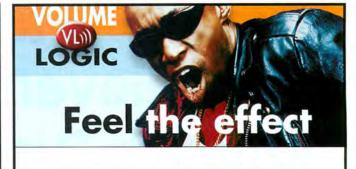
GREAT THINGS COME IN MANY SMALL PACKAGES.

The PENTAX *ist DL makes the perfect gift. Get an impressive 6.1 megabytes and a large 2.5-inch LCD screen in a compact body that earns its bragging rights. The kit with the body and 18-55mm lens is under \$800.00. Build your system by choosing from 17 different lenses, 3 flashes and many other accessories, which proves that more is definitely the merrier.



Go to pentaximaging.com now to find out more.

PENTAX *ist DL



Make iTunes Really Rock for \$15.

Hear your tunes as they've never been heard before

 All the detail and impact without the distraction of volume shifts or overdriven speakers. Any playlist sounds great with automatic volume matching.

Turbo charge your speakers

 Add the Volume Logic plug-in to maximize loudness without overdriving your speakers.

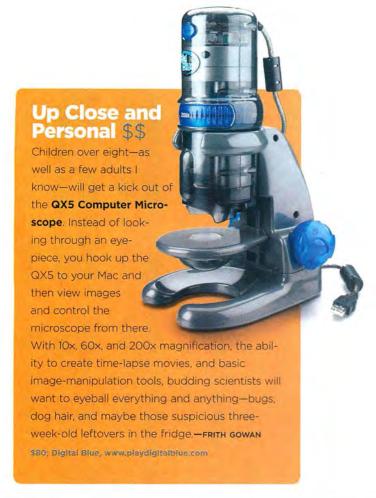
Experience your own Volume Logic Effect

 Download at www.volumelogic.com and use the coupon number* for special MacWorld pricing.

Download: www.volumelogic.com *Coupon Number: CPN6282565795



78 MACWORLD December 2005 www.macworld.com



No Chores Required \$-\$\$

Want to make a teenager happy all year long? An **iTunes allowance** lets you credit recipients' accounts monthly, so your favorite kids can stay hip to all the latest releases without demanding their own credit cards—or worse, borrowing yours. You simply choose a monthly dollar amount and enter the recipient's Apple account (or create a new one); Apple charges you automatically every month until you cancel.—FRITH GOWAN

\$10 to \$200 per month; Apple Computer, www.apple.com/itunes







www.macworld.com December 2005 MACWORLD 79

Gamers

Pharaonic Fun \$

Kinetic puzzle games are nothing new, but **Luxor** (****; macworld.com/0850) puts some new variations on the theme by mixing in a little bit of ancient Egyptian mythology. Long trains of brightly colored spheres descend on grooved



tracks through scenes inspired by the land of the pharaohs; you make them vanish by matching the colored spheres in your own shooter to what you see. Addictive,

fast paced, and beautiful, Luxor is fantastic for casual gamers looking for something a bit different.—PETER COHEN

\$20; MacPlay, www.macplay.com





Put On Your Rally Caps \$

Rally auto racing-high-speed racing on twisting on- and off-road courses—is huge overseas. Colin McRae Rally 2005 brings the excitement of the sport to the Mac. You'll learn its ins and outs by participating in 300 stages of competition-through nine international locations and driving more than 30 different 2WD and 4WD vehicles from Volkswagen, Toyota, Mitsubishi, Peugeot, and others.-PETER COHEN

\$22; Feral Interactive, www.feralinteractive.com







The Mac Ate My Brain \$\$

Some Bungie alums founded Wideload, and that heritage shows in the company's freshman effort, Stubbs the Zombie in Rebel Without a Pulse. You take control of a shambling zombie who can rip off his own arm to use as a remote-control weapon; eating peoples' brains reanimates them as part of your own zombie horde. Violent and bloody, the game is also rife with dark humor (think Shaun of the Dead, not Dawn of the Dead). Parents: check out the preview trailers before you stick this one in a voungster's stocking.—PETER COHEN

\$50; Wideload, www.stubbsthezombie.com







Full Service, Same Day **High Capacity Battery** Replacement

iPods!

1-877-Pod-Repair

www.macresq.com

December 2005 MACWORLD 81

STATEMENT OF OWNERSHIP, MANAGEMENT, AND CIRCULATION REQUIRED BY 39 U.S.C. 3685

- 1. Publication Title: Macworld
- 2. Publication Number: 0741-8647
- 3. Filing Date: October 3, 2005
- 4. Issue Frequency: Monthly
- 5. Number of Issues Published Annually: 12
- 6. Annual Subscription Price: \$34.97
- 7. Known Office of Publication: Mac Publishing, L.L.C., 501 Second Street, Fifth Floor, San Francisco, CA 94107

(Contact Person: David Cobb, 415/978-3255)

- 8. Complete Mailing Address of the Headquarters of General Business Offices of the Publisher:
- Mac Publishing, L.L.C., 501 Second Street, Fifth Floor, San Francisco, CA 94107
- 9. The Full Names and Addresses of the Publisher, Editor, and Managing Editor: Publisher: Janet Ryan, 501 Second Street, Fifth Floor, San Francisco, CA 94107; Editorial Director: Jason Snell, 501 Second Street, Fifth Floor, San Francisco, CA 94107; Managing Editor: Charles Purdy, 501 Second Street, Fifth Floor, San Francisco, CA 94107
- The Owners: International Data Group, Inc., Patrick McGovern, 5 Speen Street, Framingham, MA 01701
- 11. There are no known bondholders, mortgagees, or other security holders holding 1 percent or more of total amount of bonds, mortgages, or other securities.
- 12. Tax Status: Has not changed during preceding 12 months.
- 13. Publication Title: Macworld
- 14. Average 11/04-10/05: Last Published Issue:
- 15. EXTENT AND NATURE OF CIRCULATION: Average No. Copies Each Issue during Preceding 12 Months: A. Total Number of Copies (Net Press Run): 410,228; B. Paid and/or Requested Circulation: 1. Paid/Requested Outside-County Mail Subscriptions Stated on Form 3541: 295,197; 2. Paid In-County Subscriptions Stated on Form 3541: N/A; 3. Sales through Dealers and Carriers, Street Vendors, Counter Sales, and Other Non-USPS Paid Distribution: 40,536; 4. Other Classes Mailed through the USPS: N/A; C. Total Paid and/or Requested Circulation: 335,733; D. Free Distribution by Mail (Samples, Complimentary, and Other Free): 1. Outside County as Stated on Form 3541: 991; 2. In-County as Stated on Form 3541: N/A; 3. Other Classes Mailed through the USPS: N/A; E: Free Distribution Outside the Mail (carriers or other means): 3,084; E: Total Free Distribution: 4,075; G. Total Distribution: 339,808; H. Copies Not Distributed: 70,420; I. Total: 410,228; J. Percent Paid and/or Requested Circulation (15C divided by 15G times 100): 98.80%.
- 15. EXTENT AND NATURE OF CIRCULATION: No. Copies Single Issue Published Nearest to Filing Date: A. Total Number of Copies (Net Press Run): 399,907; B. Paid and/or Requested Circulation: 1. Paid/Requested Outside-County Mail Subscriptions Stated on Form 3541: 291,156; 2. Paid In-County Subscriptions Stated on Form 3541: 0; 3. Sales through Dealers and Carriers, Street Vendors, Counter Sales, and Other Non-USPS Paid Distribution: 35,902; 4. Other Classes Mailed through the USPS: 0; C. Total Paid and/or Requested Circulation: 327,058; D. Free Distribution by Mail (Samples, Complimentary, and Other Free): 1. Outside County as Stated on Form 3541: 0; 3. Other Classes Mailed through the USPS: 0; E: Free Distribution Outside the Mail (carriers or other means): 5,000; F. Total Free Distribution: 6,066; G. Total Distribution: 333,124; H. Copies Not Distributed: 66,783; I. Total: 399,907; J. Percent Paid and/or Requested Circulation (15C divided by 15G times 100): 98.18%.
- 16. This Statement of Ownership will be printed in the December 2005 issue of this publication.
- 17. I certify that the statements made by me above are correct and complete: Janet Ryan, Publisher; October 4, 2005.

MACWORLD'S GEAR GUIDE

Gamers

Welcome to the Monkey House \$\$

Zoo Tycoon 2 is that rarest of critters: a strategy game that's great for the whole family. You are the owner of a zoo, and it's up to you to keep your animals happy and healthy by providing appropriate habitats, while also staffing the park and maintaining its facilities well enough to keep paying customers coming back for more. The game features 3-D graphics as well as different game modes (including Zoo Guest, Zookeeper, and Photo Safari).—PETER COHEN

\$40; Blue Fang Games; macworld.com/0846





Play Your Cards Right \$\$\$

When it comes to delivering fast, intense 3-D graphics, this card is as good as it gets for Mac gamers right now. Designed specifically for the Power Mac G5, the ATI Radeon X800 XT Mac Edition features one dual-link DVI connector and an ADC connector, so you can drive a 30-inch Apple Cinema HD Display and an older 23-inch Cinema HD Display side by side.—PETER COHEN \$400; ATI, WWW.atl.com

Stocking Stuffers



Dust Buster \$

Yes, selling air is probably the biggest marketing ploy of all time. But a can of compressed air is a geek classic: it's the best way to keep dust, dirt, and other nasty stuff out of your Mac and keyboard. One blast will send dust mites and Krispy Kreme crumbs running for their lives.—cyrus farivar

\$7 and up: various

The Unkillable Pet \$

Fish are the perfect office pet: they don't need walks, they aren't emotionally demanding, and they come in all sorts of freaky colors. Too bad their tanks get so skanky. If you want to brighten up the life of someone who spends 18 hours a day in a drab beige cubicle, but you don't want to burden him or her with the care of live fish, check out this **USB Mini Desk-**

top Aquarium, in which the fish are made of maintenance-free plastic. When you plug the thing into any handy USB port, they



move around—a little bit.—cyrus FARIVAR

\$20; ThinkGeek, www.thinkgeek.com





Extracting a movie clip off of a DVD used to be a struggle. Not any more. With Cinematize you can quickly and easily extract audio and video clips of any length, from a fraction of a second out to an entire movie.

Create Versatile DVD Clips

Cinematize saves your extracted clips in formats ready for use in your favorite applications: QuickTime, iMovie, Final Cut, PowerPoint, Keynote, iTunes, even your iPod.

Give Your DVDs a New Life

With Cinematize, your DVD collection becomes a library full of exciting multimedia content.

- Incorporate movie clips into your presentations
- · Create favorite scene collections
- Replace a movie soundtrack with your own
- Remove commercials from recorded TV programs
- · Burn songs or sound effects onto CDs
- Listen to soundtracks with iTunes or your iPod
- · Share your movie clips on the web

And much more!





DVD MOVIE CLIP EXTRACTOR

Get your FREE Cinematize demo and Macworld special now at:

www.miraizon.com/mw12



info@miraizon.com 408-434-0959

www.macworld.com December 2005 MACWORLD 83

LEARN HOW

YOU CAN SAVE

TIME WITH

TIGER'S COOL

AUTOMATION

TOOLS

ure, you've probably heard of macros, Apple-Scripts, and other timesavers for Mac users. But who has the time to learn how to save time? You do, now that you have Tiger's Automator application. Using Automator is as easy as breaking a task down into its steps and clicking on Run. You can back up recent photos to CD, create a photo album, e-mail a song, convert files, and much more-all with the click of a button. You don't have to waste your time performing the same monotonous tasks over and

MAKE your time performing the same monotonous tasks over and over. Just let the robot do it. AUTOMATOR WORK FOR



ILLUSTRATIONS BY CHRIS GASH

More Automator Tips in This Issue:

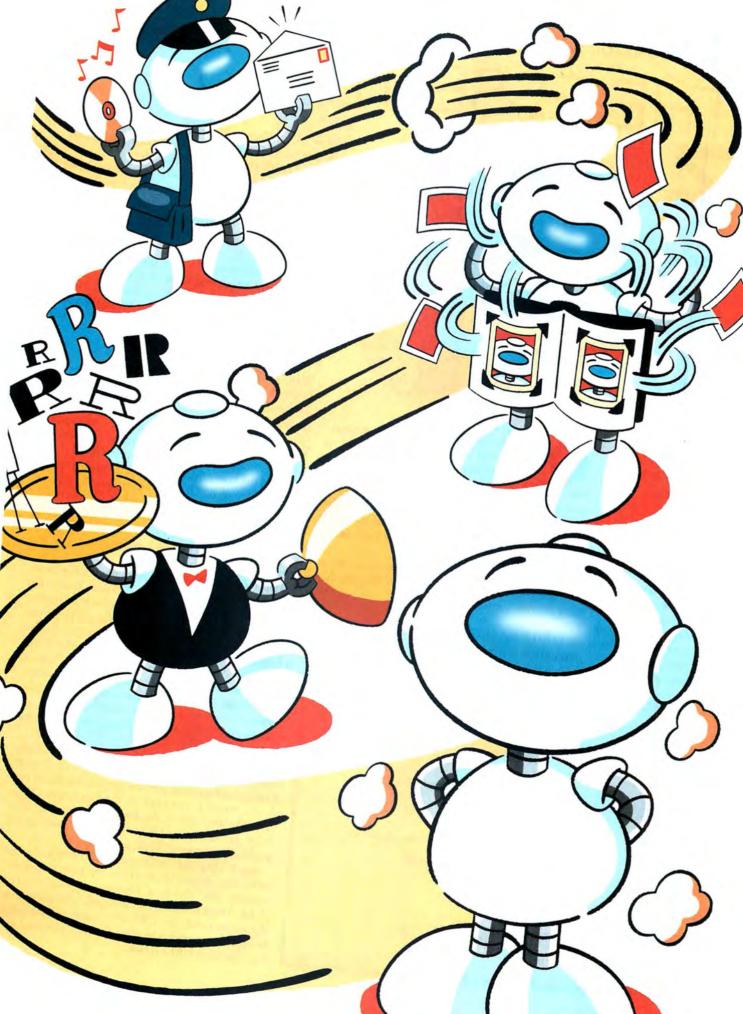
Automate Photoshop Chores p. 106

5 Workflows for Geeks p. 113









THE ESSENTIALS

BY ANDY IHNATKO

A Clean Slate The left side of the Automator window lists every action, organized by program, that Automator knows how to perform.

ne of Tiger's juiciest technologies—Automator—lets you teach your machine how to handle routine procedures on its own. Your Mac won't do anything as cool as taking over your appliances with an eye toward murdering you—but it will take on a measure of autonomy. Show your Mac how to do something once, and it can do that thing again and again at the press of a key—or if you prefer, without the press of any key.

Apple has designed Automator so that anybody can describe a series of actions to his or her Mac and then have the Mac perform it.

A LITTLE BACKGROUND

Automator is wired into Tiger, so you can make cool things happen with every application and service on

898 Untitled 2 -Search Library Applications
Address Book Find Fort Book Items Fine Mail Items DVD Player Find iCal Items Finder
Font Book find iPhoto items TE ICal Get Fonts from TextEd 10VD Get Selected Address B trnage Capture Photo Tunes Mail X PDf Get Selected Photo her Add Movie to IDVD Mer Q QuickTime Player Ask For Servers

Ask for Confirmation

Ask for Finder Items

Ask for Movies Drag or add actions here to build your workflow X System
y TextEdit Ask for Photos Ask for Songs My Workflows Ask for Text Combine Messages
Connect to Servers Getting Started To view the actions for an application, click the application. To show all the actions, click the Applications folder. To find an action, enter a word or phrase in the search field. To add an action to the workflow, drag it into the workflow To open a saved workflow from the library, double-click it

your Mac. When you want to teach your Mac to do a new trick, just open the Automator application, located inside your Applications folder.

The processes that Automator follows are called workflows. The basic concept behind creating a workflow is simple:

- > Think about the process that you'd like to automate, and break it down into a sequence of deliberate actions.
- > Choose those actions from the authoritative list of everything Automator knows how to do.
- > Snap the actions together, one beneath the other, just as you would Lego bricks. When the workflow runs, Automator starts at the top and goes step by step by step until it reaches the bottom.

BUILDING A NEW WORKFLOW

NASA has a megahypersupercool Web site named Astronomy Picture of the Day (APOD), which features a different photo every day. It might be a deep-space radio-telescope image, or imagery transmitted by a recent probe, or even a historical photo from the Gemini or Apollo days (macworld.com/0541). But whatever the image, it's always something interesting. And a folder of APOD pictures makes for a great screen saver or desktop image. So I decided to create an Automator workflow that downloads the current APOD photo, stashes it inside the folder where I keep my screen-saver images, and then sets it as my current desktop picture.

Step 1 Choose New from Automator's File menu to open an empty workflow (see "A Clean Slate"). On the left side of the window is an inventory of actions. The Library column lists all the applications Automator knows how to control. When you click on a Library item, the Action column fills with a list of everything Automator can do in that application. Click on an individual action, and a pane underneath the list explains what that action is and how it works.

Step 2 The first thing your workflow needs to do is access the APOD Web site. This looks like a job for Apple's Safari.

When you click on the Safari group in the Library column, the Action column changes to list all the tasty actions that Safari can perform for you. But which one do you want? If you click on the Get Image URLs From Webpage action, the description explains, "This action gathers image URLs from the content of the specified Web pages." Well, I'm sold.

Step 3 Drag the Get Image URLs From Webpage action into the workflow area on the right side of the window. But there's a problem. Notice the red "URLs" note at the top of the action. This shows that the action needs the URL of an existing Web page before it can perform its duty. For that, you need the Get Specified URLs action.

Step 4 Drag the Get Specified URLs action to the top of the workflow. Notice that it doesn't require input from any other action. Sweet.

Step 5 Next, you need to tell the Get Specified URLs action which Web page to grab. Double-click on the Address field of the action and type the URL for NASA's Astronomy Picture of the Day page: http://antwrp.gsfc.nasa.gov/apod.

The Get Specified URLs action then spits out the URL of the Web page it just grabbed, which is exactly what the Get Image URLs From Webpage action needs. It's a match made in heaven.

If you stopped here, the workflow would spit out a list of the Web addresses for each JPEG on the APOD Web page. But that won't do you much good. You need the workflow to download that list to your Mac.

Step 6 Drag Safari's Download URLs action to the bottom of the workflow. It has one setting: it needs to know where to save the file. Choose the Pictures folder from the pull-down menu, or create a new APOD folder to keep everything nice and tidy.

Step 7 Now you need to figure out how to set the file as the desktop image. But what if you're not sure which application to use for the task? Is it a Finder



thing or an iPhoto thing? Luckily, Automator is armed with the awesome power of Spotlight, Tiger's built-in megasearch technology.

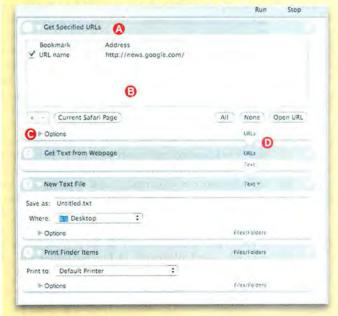
With Applications selected in the Library window, click on the search box and type desktop. The Set The Desktop Picture action sifts straight to the top

Final Results Your finished workflow finds images on the APOD Web site and turns them into desktop pictures.

ANATOMY OF AN ACTION

To build successful Automator workflows, you need to understand the user-interface doodads that are standard on all actions. Actions are divided into several different regions:

◆ Top Region The top region contains a number that indicates the order in which the action will be completed, the name of the action, and a close box. Clicking on the close box removes the action from your workflow.



Middle Region This is where you adjust the action's custom settings—either to modify the way the action behaves or to give the action some information it's going to need in order to complete its task. An action that prints a document, for example, needs to know which printer to use. This is where you clue the poor thing in.

Options, the action expands to offer you additional settings. These settings usually affect what the user experiences when the action runs. Some workflows function invisibly. But you may want a certain action to display a status window—for example, to clue the user in to the fact that it's about to print something.

The most common option here is Show Action When Run. If you click on this check box, the workflow will pause and present the user with the panel of custom settings in the middle region. This gives the user the opportunity to override your settings before he or she clicks on Continue and the workflow resumes where it left off.

The Most Important Bits When Automator executes a workflow, it starts at the top and works its way to the bottom. Most actions are in the business of taking something from a previous action, processing it, and spitting out something else. The results of one action automatically flow into the top of the next action. The item at the bottom of the action is the product that the action spits out. Every action has just one type of input and one type of output. The output of one action must match up with the input of the next one. If it doesn't—let's say you attempt to send an iTunes recording of Jerry Lewis's "I'm a Little Busybody" to TextEdit for printing—Automator colors the input of the printing action red, to let you know that it just ain't gonna fly.



By the Book This section of "Make Automator Work for You" is an excerpt from The Mac OS X Tiger Book, by Andy Ihnatko (2005; reprinted by permission of Wiley Publishing).

Plug It In When you choose Save Plug-In As from the File menu, Automator hands off your workflow to another application, such as iCal.

of the action list. Drag it to the bottom of the work-flow, and you're done (see "Final Results").

EXECUTING A WORKFLOW

Now you've got a working workflow. To make the magic happen, just click on the Run button at the top of the window. You'll see Automator perform the tasks from top to bottom. A process spinner appears in the bottom left corner of each action as it's performed, and is replaced with a green check mark when the action is complete.

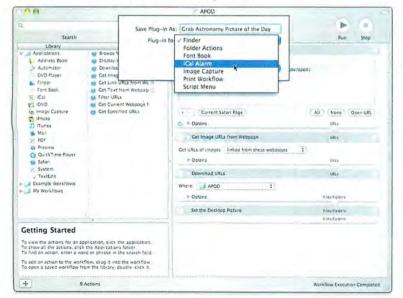
SAVING AND OPENING WORKFLOWS

The workflows you create in Automator are just like the documents you create in any other app. Once you finish snapping actions together, just select Save from the File menu. The only twist is that you can save a workflow in two different formats: workflows and applications.

Workflows When you save your result as a workflow, you're creating an Automator document. You work with a saved workflow just as you would work with any other file. To run a workflow document, you open it in Automator and click on the Run button. This is also what you do when friends, relatives, coworkers, and visiting clergy give you cool new workflows to assist you in your daily struggles through this mortal coil we call life.

Applications When you choose Application from the Save dialog box, your workflow becomes an ordinary application. When you double-click on it, it runs—you don't have to launch Automator itself.

Note that only Macs running Tiger contain the Automator architecture. So if you hand this application to someone running an earlier version of Mac OS, it flat-out won't work.



AUTOMATE FROM WITHIN

In addition to letting you schedule workflows with iCal, Automator can create plug-ins for the following applications:

- > Finder The workflow appears in the Action menu of every Finder window.
- Folder Action The workflow is attached to the folder you specify, and runs every time you open or modify that folder.
- > Image Capture Every time you import photos through your digital camera (or any other standard device that's compatible with the Image Capture utility), your workflow runs. Ultracool beans: plug in your camera and walk away. Automator independently loads all your new pictures into iPhoto, sends the tagged ones to your parents (for example) via e-mail, and then posts them all to your Web site as a photo gallery.
- Print Workflow The workflow appears as an option in the Print dialog box of every application. The upshot is that you can essentially create custom print commands. Wouldn't it be cool to have a Print With File Copy command that automatically saved a PDF file of everything you printed?
- Script Menu The workflow gets tossed into the systemwide AppleScript menu for easy access from the menu bar of any application.

TURN YOUR WORKFLOWS INTO PLUG-INS

OK. Wouldn't it be cool if a workflow could automatically run at the same time each day? Automator has a remarkable feature that lets you save workflows as plug-ins, which you can incorporate into the functions of other applications. Just select Save As Plug-In from the File menu, and the resulting pop-up menu shows you what's possible. (For an explanation of how Automator plug-ins interact with the supported applications, see "Automate from Within.")

For example, say you want to schedule your new workflow to run every morning. Just select iCal Alarm from the plug-in list (see "Plug It In"). Automator will create a new appointment for this workflow, denoting a time and a day when it's supposed to run. Since it's a standard iCal appointment, you can edit it to make it a daily event. The result is a new desktop picture every morning—and ultimately a big fat folder full of geeky pictures.

ANDY IHNATKO is the author of *The Mac OS X Tiger Book* (Wiley Publishing, 2005).





Macworld Conference & Expo is the #1 event for the Mac Community. Attendees can find the latest products as they are being announced and learn to run their Macs more efficiently no matter what their needs are.

Macworld Conference & Expo San Francisco 2006 has your next Mac solution with training to boost your Mac abilities on OS X Tiger, music and audio, video, graphic design, photography, digital imaging, gaming, and more. Recognized industry experts provide professional and comprehensive information, networking opportunities abound and you'll get to meet hundreds of companies supplying the Mac products, innovations and applications that you want to see.

CONFERENCES: JANUARY 9-13, 2006

EXPO: JANUARY 10-13, 2006

THE MOSCONE CENTER

SAN FRANCISCO

Flagship Sponsors:

Macworld Macworld.com







BY ADAM

GOLDSTEIN

A TRIAL RUN

hink Automator seems cool, but don't know where to get started? Here are five useful workflows you can try right now. First open Automator. Then click on the library item specified at the beginning of each step and drag the action that follows from the Action list into the Workflow pane below any previous actions. (The relevant library items and actions for each step are indicated in bold.)

E-MAIL A SONG FROM ITUNES

This workflow lets you send songs from your iTunes Library to anyone who has an e-mail address. The workflow will prompt you for the recipient and the subject line of the e-mail, as well as for the song (or songs) you want to attach.

- 1. Mail: New Mail Message In Options, select Show Action When Run so the workflow will ask you to specify the subject line and the recipient when you run it.
- 2. iTunes: Ask For Songs This action lets you pick the song (or songs) you want to send. If you think you might want to send more than one, select Allow Multiple Selection.
 - 3. Mail: Add Attachments To Front Message
 This action assembles the finished Mail
 message for you.

BURN A BACKUP OF RECENT PHOTOS

This workflow burns all iPhoto pictures you've taken in the past two months onto a blank CD or DVD.

1. Automator: Ask For Confirmation In the Message box, type a short description of what the workflow does; you can add a more elaborate description in the Explanation field. When you run your workflow, these

descriptions will appear in a dialog box.

- **2. iPhoto: Find iPhoto Items** In the Find pop-up menu, choose Photos. In the Whose section beneath, choose Date from the first pop-up menu and Within Last 2 Months from the second one.
- System: Burn A Disc In the Disc Name field, give your disc a descriptive name such as iPhoto Backup.

CREATE A PHOTO ALBUM FROM THE IMAGES ON A WEB SITE

This workflow copies images from a Web page in Safari to a new album in iPhoto.

1. Safari: Get Current Webpage From Safari This action gets the URL of the foremost browser window.

- 2. Safari: Get Image URLs From Webpage In the Get URLs Of Images pop-up menu, choose Linked From These Webpages so the workflow will download the images themselves, not dinky thumbnails. Just keep in mind that it'll download any and all graphics on the page.
- **3. Safari: Download URLs** Choose whatever folder you like from the Where pop-up menu; your Pictures folder is as good a place as any.
- 4. iPhoto: Import Photos Into iPhoto In the Options section, select Show Action When Run so you get a chance to give your new iPhoto album a name while your workflow is running.

GET A LIST OF EVERY FONT ENABLED ON YOUR MAC

This workflow creates a text document that lists all your fonts (it takes a while to run).

- 1. Font Book: Find Font Book Items Make sure Typefaces is selected in the Find pop-up menu; the lower menus should read Whose Enabled Is True.
- 2. Font Book: Get Font Info Leave only PostScript Name turned on; the other items will clog up your list with unnecessary information. You can also deselect the Add Labels option.
- **3. TextEdit: New TextEdit Document** This action launches TextEdit (if it isn't already running), creates a new text file, and dumps your list of fonts into it.

CONVERT AND RENAME BIG IMAGE FILES

This workflow shrinks selected images (space-hogging TIFFs, for example) by 50 percent, saves them as space-conserving JPEGs, appends the word (*small*) to their file names, and opens the new images in Preview.

- 1. Finder: Ask For Finder Items Make sure Files is selected in the Type pop-up menu. Specify the location where you want to start selecting, and select the Allow Multiple Selection option, which presents an Open dialog box where you can select the images you want to convert and rename.
- **2. Finder: Copy Finder Items** From the To pop-up menu, pick a folder (your Pictures folder will work just fine), to which the workflow will copy the original images before it modifies them.
- 3. Finder: Rename Finder Items From the top popup menu, choose Add Text. Type (small) in the text field, and select After Name so your workflow will add this suffix to the end of each image's file name.
- **4. Preview: Scale Images** Choose By Percentage from the pop-up menu and type 50.
- **5. Preview: Change Type Of Images** You can select any image format you want, but JPEG is a good option if you're planning to post the images on a Web site or send them by e-mail.
- Preview: Open Images In Preview This shows you the result of your workflow in Preview.

90 MACWORLD December 2005

SPECIAL OFFER

Subscribe to Macworld and get 10 FREE INSTANT E-GIFTS AND BONUS CD-ROM!



Don't miss out on this special offer! We'll rush you your first issue, and you'll receive 10 FREE downloadable Macworld Power Guides instantly. No need to pay now! We'll send you an invoice for only \$19.97, that's 76% off the cover price. Subscribe today and you'll get a Bonus CD-ROM with your paid order.

Only Macworld combines objective product testing with over 20 years of market experience to give readers the perspective, advice, and inspiration to get the most out of their Mac. Each issue is loaded with authoritative product reviews, expert hints and tips, in-depth feature articles and more!

Simply order online and receive your 10 FREE E-GIFTS INSTANTLY!

www.macworld.com/subscribe OR call 1-800-288-6848

Mention promotion code H5CSMCW95

YOUR WORKFLOWS

utomator is usually straightforward—drag the actions you want into whatever order you want, and then click on Run. When something goes wrong, though, you'll be glad to have the following tips on hand.

HUNT DOWN MISTAKES

If your workflow isn't working, there's a good chance that an action is at fault. Track down such an error with the Automator: View Results action. Just stick View Results after any other action, and when you run your workflow, View Results will show you the output of the previous action.

Say you've designed a workflow that uses the iTunes: Find iTunes Items action to find songs in iTunes. To test your workflow, insert the View Results action after the Find iTunes Items action. If you get back the result {} (an empty list) when you run the workflow, you'll know that the search isn't finding any songs

that it's time to broaden your search.

that match your criteria-and

BEWARE OF MISMATCHED ACTIONS

Typically, an Automator action sends its results to the following action in the workflow. Automator represents this relationship with a little arrow that points from one action into the next.

However, sometimes there *isn't* an arrow between actions; instead, the result of one action and the input of the next one both appear in red text. Consider this a warning: the type of information the first action produces may not be the type of information that the second action expects. Depending on your workflow, this input/result mismatch may cause problems—you should consider rearranging your workflow.

WHEN IN DOUBT, DISABLE

If an action seems to be holding up your workflow, don't delete the action—disable it instead. To do so, click on the number in its upper left corner and select Disable in the menu that appears. Automator will skip over that action while you troubleshoot your workflow. When you're ready to enable the action again, choose Enable from the same menu.

PAUSE A WORKFLOW

BY ADAM

GOLDSTEIN

If one of your workflows takes its sweet time, you might want Automator to notify you when some part

of it has completed. The trick is to insert the Automator: Ask For Confirmation action *after* the relevant part of the workflow, forcing Automator to pause the entire workflow at that point. (You can also use the Ask For Confirmation action to pause your workflow so you can make changes to whatever it's working on.) Just remember to enter something descriptive in the Message and Explanation fields: for example, "Hey there, the workflow just finished converting your images."

TRACK YOUR WORKFLOW'S PROGRESS

You can tell which actions in your workflow have run by the little symbols next to each one in the Workflow pane. A green check mark means the action has completed, a spinning progress indicator means the action

is running, and if neither is visible, the action hasn't run yet. But do yourself a favor—go to Automator and choose the View: Show Log menu item instead. A drawer

will open at the bottom of the Automator window. In it, you'll see not only which actions have run but also how long each action took—a great way to discover bottlenecks.

DODGE FINDER ACTION MIX-UPS

One of the easiest mistakes to make in Automator is using Finder: Get Specified Finder Items when you mean to use Finder: Get Selected Finder Items. Get Specified Finder Items lets you enter a list of files and folders for the work-

flow to use before you even run the workflow. (The only way to change the items is to go back and change the Get Specified Finder Items action in the Workflow pane.) The Get Selected Finder Items action operates on the files and folders selected in the Finder when you run the workflow. That's much more convenient, since you don't have to modify the action itself when you want it to work with different files.

TAKE PRECAUTIONS CHANGING IMAGES

Whenever you insert a Preview action that modifies images on your hard drive, Automator asks whether you'd like to insert *another* action—one that will make copies of the images—first. If you want to avoid image accidents, take Automator's advice. In the dialog box that appears, click on Add, and your workflow will use duplicate images instead.

ADAM GOLDSTEIN is the author of AppleScript: The Missing Manual (O'Reilly, 2005).

92 MACWORLD December 2005





Photoshop Fling 3 & MacMania IV scape to the good

Escape to the good life. Allow yourself to be pampered. Unwind. Have fun. Enrich your mind. And do it all aboard a luxurious cruise ship.

Speakers

Chris Breen

Jack Davis

Bruce Fraser

Janet Hill

Andy Ihnatko

Leo Laporte

Bob LeVitus

Deke McClelland

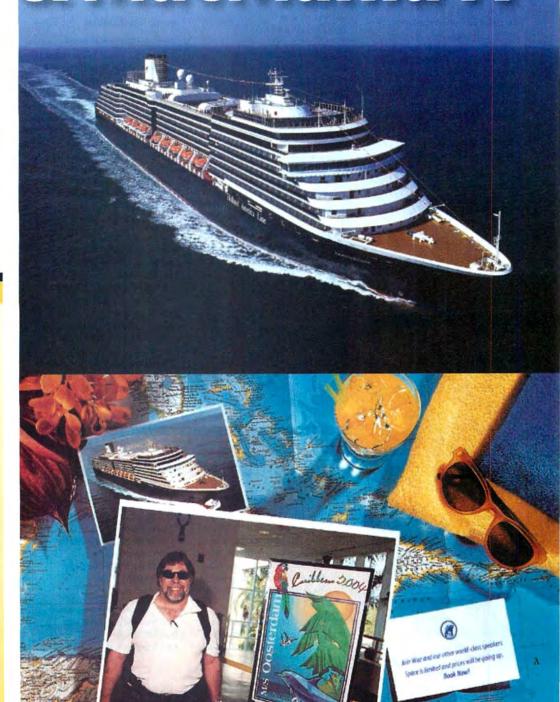
Bert Monroy

Sal Soghoian

Jason Snell

Mark Swain

Steve Wozniak



Photoshop Fling: Essentials

Photoshop Fling 3 / MacMania 4

During our cruise-conference, there will be four (4) three-day "tracks" offered at the

- Photoshop Flina: Essentials & Effects
- Photoshop Fling: Photography & Workflow
- MacMania: New User
- MacMania: Power User

Attendees may freely move between the tracks, at any time. For example, while Photoshop Fling and the Digital Photography Workshop are independent of MacMania, classes here may be counted toward your MacMania session total. Similarly, Photoshop Fling conference attendees may attend any of the MacMania seminars—at no charge.

Therefore, all attendees may choose any combination of full-day, half-day, or quarter-day seminars—from either MacMania or Photoshop Fling-for a total of three (3) days' worth of sessions.

The conference fee is \$795 and includes all courses, course materials, five evenings of entertainment, and the Bon Voyage Cocktail Party.

Adobe Photoshop CS2 One-on-One Sunday the 5th, 8:30am - Noon

Speaker: Deke McClelland

Photoshop is a vast and complex program. It does certain things very, very well, and it does others very, very strangely. Using the program effectively is a matter of knowing which tools work best and when best to use them. Attend this introductory class and learn how to use the right features in the right order and save yourself a lot of heartache.

- · What Photoshop can do
- · Workspace and navigation
- · Basic color management
- · Highlights, shadows, and midtones
- · Adjusting brightness levels
- · Fixing a color cast
- · Hue and saturation
- · Colorizing a grayscale image
- · Image size and resolution
- · Rotate, crop, and perspective

Filters and Masks

Sunday the 5th, 1:30pm - 5pm

Speaker: Deke McClelland

Newly enhanced in CS2, corrective filters rank among the program's oldest and finest capabilities. Besides permitting you to sharpen the contrast of an image, blur away the defects, and remove digital noise and JPEG artifacts, they can help you hone in on exactly those details that need help the most. Combined with Photoshop's Masking function, filters make it possible to separate even the most complex foreground subject from its background and composite that image into a new setting. Sound amazing? You have no idea.

- · Filtering basics
- . The new filters in Photoshop CS2

- · Unsharp Mask and High Pass
- · Removing motion blur with Smart Sharpen
- · The wonders of Remove Noise
- · Gaussian Blur and Median
- · Creating an Edge Mask
- · Using the Color Range command
- · Extracting image elements
- · Blue screen and sky
- · Full-on Masking

The Bold and the New in Photoshop CS2 Thursday the 9th, 8:30am - Noon

Speaker: Deke McClelland

Photoshop CS2 is the most ambitious, exciting, and downright seminal update to Adobe's flagship image editor in the past five years. Vanishing Point, envelope-style image warping, floating-point exposure, and the stand-alone Bridge all qualify as flat-out great. Then there's my favorite feature, smart objects, which let you do three things you could never do before: First, you can apply non-destructive transformations. Second, you can replicate a layer and edit all copies simultaneously. And third, you can adjust the composition of imported camera raw and Illustrator layers long after importing them. If flexibility and power appeal to you, join Deke and learn how to make them yours.

- · The new Adobe Bridge
- The revolutionary Vanishing Point plug-in
- · Combining multiple exposures into a single HDR image
- · Applying free-form distortions with warp and envelope
- · Making a smart object
- · Non-destructive transformations
- · Creating alias layers, all linked to a single
- Placing camera raw and Illustrator artwork
- · Modifying placed layers well into the future

& Effects

The Wow Factor: One-Click Solutions in Photoshop Thursday the 9th, 1:30pm - 5pm

Speaker: Jack Davis

Quick and easy ways to use Photoshop's built-in presets (and hundreds of complimentary Wow presets that will be provided in class) to create special effects on-time and on-budget.

- · The phenomenal power, flexibility, and speed of Layers Styles
- · How to create dimensional effects like chrome, rock, and glass (and beyond)—instantly and without filters
- · One-click framing and tinting techniques to tie disparate photographs togetherseparately or as a collage
- · Quick template-based collaging for weddings, groups, or editorials
- · Single image collages and ghosted backgrounds

Creating Special Effects with Photoshop Friday the 10th, 8:30am - 5pm

Speaker: Bert Monroy

Creating realistic textures, the effects of lights and shadows, and the ability to make an image jump off the page will be covered in this session. Filters? There are many of them in Photoshop. What happens when you use them for other than their intended purpose? What happens when you put a few of them together? You will create images that are more realistic than a camera could ever achieve.

The ability to bend things on a curve has been one of the most asked-for features, yet it has always been there. Bert will demonstrate the use of the Displace Filter to make controlled, fluid distortions. The Liquify Filter will also be explored for distortion effects. Distorting with the Transform function will be explored for perspective matching and the creation of realistic reflections.

- · Working with Filters
- · Using the Liquify command
- · Light and shadows
- Reflections
- Integrating Photoshop into other programs
- After Effects
- 3D software



The Evolution of Digital Art

Speaker: Bert Monroy

Bert Monroy embraced the Mac as an artistic medium with the introduction of the Mac 128 in 1984. In this evening talk, open to all, Bert will take you on a journey through the evolutionary transformation of the Mac from its beginnings with MacPaint to its current status as the preferred tool of graphic artist throughout the world.

A history lesson mixed with useful production techniques will leave you not only entertained but a little more attuned to the potential that lies within our favorite little box.

You will learn:

- · How the first computerized comic book was produced
- · How the Mac has revolutionized the graphic arts industry
- · How the Mac is used in the motion picture industry
- · Much, much more

You will leave this talk, not only with some new found skills, but with the inspiration to explore new avenues you never before considered.

Photoshop Fling: Photography & Workflow

Expert Color Management

Sunday the 5th, 8:30am - Noon

Speaker: Bruce Fraser

Learn everything you ever wanted to know but were afraid to ask about color management. We'll start with a look at the basic science that underpins color management—don't worry, the session is guaranteed equation-free—because doing so helps you understand not only how color management works, but also why it sometimes fails to do so.

Next, we'll look at profiles, and their relationship to the devices they represent, with a view to developing sound troubleshooting skills.

Last but not least, we'll delve deep into Photoshop's color management features, mine the mysteries of working spaces, and look at what it takes to build and maintain a complete capture-to-output workflow.

Real World Camera Raw

Sunday the 5th, 1:30pm - 5pm

Speaker: Bruce Fraser

With the advent of Camera Raw 3.0, I look at Photoshop as a plug-in for Camera Raw, rather than the other way around. In this session, you'll learn the many benefits of shooting raw. Then you'll learn to exploit the vast amount of information raw files contain by making use of Adobe Camera Raw's powerful features, so that when your images land in Photoshop, you'll have very little to do to them except press Save and choose a file format.

Possibly the greatest challenge that digital shooters face is the sheer amount of data they generate. You'll learn that the key to avoiding drowning in data is to master metadata and make it your friend. You'll learn how to build a complete digital raw workflow using Bridge, Camera Raw, and Photoshop using automation wherever possible so that you still have time to shoot, and to have a life.

Essential Photo Optimizing— Getting it Right

Thursday the 9th, 8:30am - Noon

Speaker: Jack Davis

The experienced user knows there are a million tools in Photoshop to adjust your images for maximum impact, but which ones work best, work fastest, and are most "photographer friendly"? In this session you will learn all sorts of workflow-enhancing techniques including: 101 uses for Auto Levels, how to create non-destructive dodge and burn layers, advanced gray-scale conversions, eyedropper color correcting, stained teeth whitening, red-eye neutralizing, blotchy skin unifying, and the only way to use Photoshop's healing brush—all with an emphasis on quality, flexibility, and speed.

- Which editing tools are best to use when fixing images—and which ones to avoid
- Quick tone and color adjustments that leave your original image intact
- How to quickly fix under and over exposed images using Photoshop features like Shadow/Highlight
- Creating nondestructive, fast, and flexible repair layers for fixing, dodging and burning, and color correcting
- Simplified levels, curves, and sharpening techniques
- Advanced gray-scale conversions using Channel Mixer

Editing Images in Photoshop

Thursday the 9th, 1:30pm - 5pm

Speaker: Bruce Fraser

Photoshop has so many image editing options that it's often hard to know where to start, and once you've mastered a few tools, you tend to use them for everything (when all you have is a hammer, everything starts to look like a nail).

We'll start with basic adjustments like Levels, Curves, Hue/Saturation, and Shadow/Highlight, possibly turning up some hidden goodies you may have overlooked. Then we'll progress to how these basic adjustments can be modulated and controlled using layers, layer masks, and blending modes.

We'll look at strategy as well as tactics. Do I build a monster layered file that lets me keep all my options open, or do I use History instead? Last but not least, we'll delve into detail control-dustbusting, blemish removal, and sharpening.

Please see previous and following pages for more info!

For complete travel and booking information see our website: www.GeekCruises.com/MacMania



Digital Photography Workshop

Speaker: Jack Davis

Learn the secrets of digital photography on our Mexican cruise. In this full-day class you'll quickly discover how to become a better photographer and tap the benefits of your digital camera. This Digital Photography workshop will give you the power to capture special moments and preserve precious memories—for snap shots to put in an album or oversized prints suitable for a gallery!

Part 1: Light, Camera, Action Friday the 10th, 8:30am – Noon

Light is the primary subject of all of our photographs. In this illuminating, four-hour session we'll discuss the properties of light (and how it relates to space, depth, and focus) and how to use an understanding of light plus the various camera controls and features to produce technically-proficient photographs from the subtle to the dynamic.

- · Understanding the properties of light
- · Effective use of traditional camera controls
- · Metering and exposure
- · F stop/depth of field
- Shutter speed/motion control
- · ISO
- · Understanding digital camera menus
- Resolution
- · File formats—RAW and JPEG demystified
- · White balance
- · Tone control
- Sharpening
- Putting it all together when shooting pictures

Learn how to:

- Tell beautiful, visual stories by capturing great digital photos
- · Use natural light and flash the right way
- Use your camera's menus and functions to optimize what your camera can do
- Tap the value of a digital camera's features such as exposure compensation, scene modes, and when to shoot RAW

Part 2: Making Better Photographs Friday the 10th, 1:30pm – 5pm

How do you put a little bit of soul into your pictures? Having control of your equipment is necessary, but only the first step. In Part 2 of this Workshop we will discuss how to move beyond technically well-executed documentation photography to exciting images that allow us to share, in an artful and memorable way, the experience of the moment we chose to record.

- · Human vs. camera vision
- · Perspective and point of view
- · Camera position and lens choice
- · Understanding the frame
- · Organizing the visual elements
- Keep it simple and the use of negative space
- Design tools for "drawing" the photograph
- · Clues to three-dimensionality
- · Exploring the subject
- · Photographing people
- Travel photography techniques
- Close-up photography techniques



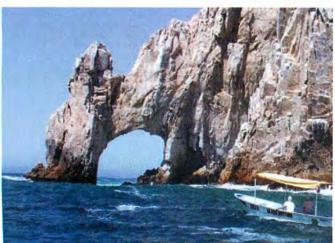
MacMania Ingenious Bar: The Near Genius IS IN!

(Every evening, 5pm to 6pm)

Apple stores may own the rights to the name "Genius Bar," but at sea our own near geniuses will be ready to help you get up and running on Macintosh at the MacMania Ingenious Bar. Leo Laporte, Cap'n Neil, and many of our onboard luminaries will gather to offer informal one-on-one assistance from 5pm to 6pm every evening in the Crow's Nest. If the MacMania seminars are leaving you feeling like a sub-genius, visit the Ingenious Bar for an instant upgrade. These sessions are also designed for spouses and family members who aren't yet Mac geeks but are ready to learn more in a friendly, nonjudgmental environment—so everyone is welcome.

The MacMania Ingenious Bar: no problem too small, no brains too big.





MacMania: New Users

The Ground Floor Guide to the Macintosh Sunday the 5th, 8:30am — Noon

Speaker: Andy Ihnatko

"Honestly, I don't know the first thing about Macs."

Oh, really? Sure, it's easy to brag about how little you know about these things, but so few people are willing to put their money with their mouth is. Attend this session and silence all the nay-sayers. How basic is this session? Turning the Mac on and off is lesson two. Sure, by the end, you'll no longer be a novice... but you'll be able to thrill and amaze people with your tales of compressing a whole month's worth of trial-and-error learning into one single class.

The Dilettante's Guide To Tiger Sunday the 5th, 1:30pm – 5pm

Speaker: Andy Ihnatko

There are American History books that spend 500 pages covering the whole thing from start to finish, and then there are the ones that cover just one thing in obsessive detail. The latter leaves you with ready answer to the question "So: the quill that Jefferson wrote the Declaration of Independence: what species of bird did it come from?" But the former approach leaves you with a broad understanding of absolutely everything, and the relationship between all of the various bits.

So the goal of this session is to make sure you know just exactly what Mac OS X is capable of, from user-level features that you'll use every day to aspects of Unix system administration that will make you glad that you're free to never ever ever touch that sort of stuff if you don't want to, not even with a ten-foot-pole strapped to a twelve-foot-pole.

Mac OS X Troubleshooting Thursday the 9th, 8:30am — Noon

Speaker: Christopher Breen

The Mac and its accompanying operating system are impressive accomplishments but even Macs sometimes get the blues. Join Chris Breen as he shows you how to keep your Mac and OS X on the straight and narrow and, should it stray from that path, how to get it back on its feet with the least amount of fuss. Along with preventive and troubleshooting strategies, Chris will offer tips for dealing with such common annoyances as spam, Mac/Windows interaction, and printing problems.

Life is Good...iLife Makes it Better! Thursday the 9th, 1:30pm – 5pm

Speaker: Janet Hill

If you are new to iLife, come see what happens when you take five best of breed multimedia applications—iTunes for managing music, iPhoto for digital photography, iMovie HD for editing digital video, GarageBand for creating your own music, and iDVD for creating your own DVDs—and integrate them so they work seamlessly. Suddenly it all connects!

Let your imagination soar: The iLife '05 software applications let you do fun, creative things with your pictures, music, and movies in ways that PC users can only dream about—then you share your joy with family and friends every which way from email and the internet to print and DVD. An you can do all these things and more, quite nicely, without thumbing through a manual.

A Day of iLife '05 Exploration Friday the 10th, 8:30am – 5pm

Speaker: Janet Hill

Learn why this suite of tightly-integrated applications continues to lead the digital-media revolution.

You have been using iLife for a while but what can you really do with this program? With iLife '05 you can easily create stunning softcover books; import, organize, and edit RAW photos; and stun them with fully-customizable slideshows using iPhoto 5. Edit high-definition 16:9 video from the newest camcorders and create movies automatically with iMovie HD's new Magic iMovie feature. Drag and drop video clips, pictures, and music into the new animated drop zones found in iDVD 5 templates. Or create multi-track recordings in GarageBand 2. Of course, iTunes seamlessly integrates with iPhoto, iMovie HD, iDVD and GarageBand and syncs with every member of the iPod family. Come spend a day exploring the many intermediate features of iLife '05.

Please see previous and following pages for more info!

For complete travel and booking information see our website: www.GeekCruises.com/MacMania

MacMania: Power Users

Power-User Productivity in OS X Tiger Sunday the 5th, 8:30am - Noon

Speaker: Bob "Dr. Mac" LeVitus

What is a Power User? According to Dr. Mac's Really Abridged Dictionary: Power User (pou'er yoo'zer) n. 1. Someone who uses a Macintosh better, faster, or more elegantly than you do. 2. Someone who can answer Macintosh-related questions you can't.

Don't miss this unique opportunity to spend some quality time with "one of the world's leading (self-proclaimed) authorities on Mac OS X," and the author of Mac OS X 10.4 Tiger For Dummies. The session will feature a myriad of tips, hints, tutorials, shortcuts, product demos, timesaving software recommendations, where to find what you need on the Web, and much more.

Automator

Sunday the 5th, 1:30pm - 5pm

Speaker: Sal Soghoian

Mac OS X version 10.4 Tiger introduces Automator, a new application that automates anything on your computer quickly and easily. Using the power of Mac OS X, Automator controls your applications and files, automating—in an instant—what you need done with them. Automator will change the way you use your Macintosh. There's no scripting or coding, it's drag-and-drop easy. It's truly "Automation for the rest of us!"

Automator Product Manager, Sal Soghoian, gives you a personalized tour of this innovative application and you'll learn when and how to use Automator to make automating complex or repetitive tasks a breeze!



Classic Jazz and Rock'n Roll
Performed by MacMania Speakers
Andy Ihnatko, Chris Breen,
and Bob LeVitus

AppleScript Fundamentals Thursday the 9th, 8:30am – Noon

Speaker: Sal Soghoian

Now that you can "automate" your tasks, are you ready to look under the hood? In this session, you will gain a thorough understanding of the fundamentals used to create real-world AppleScript scripts. Step-by-step, practical approaches and techniques are reviewed in detail with plenty of snippets to aid you in developing a solid foundation in script writing. Sal provides insight and examples gleaned from over a decade of scripting the Mac OS and its core applications. Special attention is paid to new AppleScript tools and abilities found in Mac OS X Tiger.

Living the iLife

Thursday the 9th, 1:30pm - 3pm

Speaker: Christopher Breen

There's a lot of power hidden under the placid exterior of Apple's digital media suite, iLife 05. Chris Breen goes beyond the basics and reveals his favorite iMovie, iDVD, iPhoto, GarageBand, and iTunes tricks. Among them, you'll learn how to use iMovie to add multiple playlists to your iPod shuffle, create an inescapable kiosk presentation with iDVD, manipulate iPhoto's expert sharing settings to make smaller (and better looking) slideshows, make GarageBand play the blues, and alter audio files in iTunes so they take up less space on your iPod.

Advanced iMovie: Beyond the Birthday Party Thursday the 9th, 3:30pm – 5pm

Speaker: Christopher Breen

We understand that with a minimum of effort you can import video from your digital camcorder into iMovie and string together enough scenes to make a darned fine home movie, but is iMovie nothing more than the means for making less-boring videos of your kid's 10th birthday bash? Hardly. In Advanced Movie: Beyond the Birthday Party, Chris Breen will show you how to bend iMovie to your will to make dynamic video vignettes that include blue screen effects, picture-in-picture tricks, and sound effects that add realism (and a heapin' helpin' of humor) to your work.

Final Cut Express and Final Cut Pro: A Step Up Friday the 10th, 8:30am — Noon

Speaker: Mark Swain

There is no doubt about it, iMovie is a quick digital editing solution with loads of features. However, if you have out grown iMovie's feature set, this is a great session that will take you inside the world of Final Cut. This guided tour starts off with getting you comfortable with the Final Cut interface and work flow. Learn the basics of non-linear editing, how to handle footage, and the ins and outs of video footage. Explore advanced editing tools such as ripple, roll, and slip edits. Also, figure out which version of Final Cut is right for you when we examine the differences between Express, and Professional versions. This session will take you from raw footage to finished video with little or no previous Final Cut experience.

GarageBand 101: So You Want To Be a Rock 'n Roll Star Friday the 10th, 1:30pm – 5pm

Speaker: Bob "Dr. Mac" LeVitus

If you want to make music with GarageBand, this session is the perfect first step. The premise is to record, mix, and master a complete rock and roll song—using guitar, bass, drums, and vocals—in 3.5 hours or less.

Along the way you'll discover cost-effective hardware products that make using GarageBand better; how Apple Loops can save you time and effort; how to record vocals and acoustic instruments that sound awesome; using GarageBand's software instruments effectively; and lots of other cool stuff guaranteed to help you produce better sounding music with GarageBand.



Other Evening **Entertainment**

The Woz Hour

Join Apple co-founder Steve Wozniak while he reminisces, answers your questions, and explores our future.

Macworld/Apple Q&A

Got a question about Apple or the Mac? This is your chance to get the real skinny from the experts! Macworld Editorial Director Jason Snell and Apple's Sal Soghoian and Janet Hill answer your questions with the benefit of their years of first-hand experience in the Mac world.

Andy Ihnatko—The Wild Side



Mac Gems Shootout with Leo Laporte, Bob LeVitus, and the Woz

Hold on to your hat and don't miss this a once-in-a-lifetime shootout featuring three of the most fanatical Mac maniacs in the universe—Leo, Bob, and Woz. Thrill as they demonstrate and praise their favorite and most-beloved shareware, freeware, and otherware. Then, once the smoke clears, grab a copy of any or all of these fabulous gems at the GeekCruises website. Don't miss it!

PRICING AND **BOOKING INFORMATION**

Course Fees: \$795. Only passengers booked through Geek Cruises will be admitted.

Deposit: \$400 per person, due at time of booking. Cruise Rate

cubin type	-	4136	Hute
Standard Inside	\$	799	(GS* available)
Better Inside	\$	899	(GS* 🕲 available)
Standard Outside	\$	999	(GS* 🕲 available)
Better Outside	\$1	,099	(GS* 🕲 available)
Outside w/ Balcony	\$1	,299	(GS* 🕲 available)
Mini Suites	\$1	,399	(available)
Superior Suite	\$1	,799	(available)
Full Suite	\$3	,299	(available)

Cruise prices are subject to change

3rd and/or 4th Person Rate:

ages 19 and older, \$549; ages 2 - 18, \$499; under 2 years old, \$449.

Single Occupancy:

Cabin Type

150% for inside and outside cabins and 200% for Outside with Balcony and above.

Port Charges and Taxes:

\$199 per person.

Full payment is due on November 1, 2005 (or, if you book after November 1, at the time of booking).

Foreign Shipping Fees and Additional Payment Information: There is a foreign shipping charge of \$60 (to cover the shipping of your cruise tickets, via FedX) per foreign residence (\$35 per Canadian residence). There is a \$25 charge for returned checks.

Air Add-ons: Airfare from most major cities is available through the cruise line. You can call our office for this pricing. (These rates include trans-fers to/from the dock/airport plus transfers to/from your hotel if we've booked the hotel as well.) In most cases, however, you will find better airfares on your own. Online travel sites such as Expedia.com, or Travelocity.com are excellent resources.

Pre- and Post-cruise Hotel Stays:

Sightsee San Diego! The hotel (Westin Horton Plaza San Diego) will be close to the dock. If we book your hotel, transfers from the hotel to the dock are included.

	1 night	2 nights	3 nights
Shared double	\$150	\$275	\$400
Single	\$275	\$525	\$775
3rd/4th person	\$50	\$80	\$110

Physically challenged available

*Guaranteed Share (GS) Fares: This plan is for passengers who are coming on a Geek Cruise by themselves and wish to share a cabin with another Geek Cruises passenger in an inside or outside cabin only. The prices are the same as the per person double occupancy rates. Share Passengers who smoke are not to do so in the cabin, unless okayed by fellow roommates. We try to match passengers with someone close in age, whenever possible. Note: Holland America will not accept any booking unless a fully completed Reservation Form is accompanied with a per-person deposit:

http://www.GeekCruises.com/booking/ mm04_booking.htm



DAY	PORT	ARRIVE	DEPART	CONFERENCE SESSIONS
Saturday, Feb 4	San Diego, Ca		5:00pm	7:15pm, Bon Voyage Cocktail Party
Sunday, Feb 5	At Sea		-	8:30am — 5:00pm & 6:00pm — 7:30pm
Monday, Feb 6	Cabo San Lucas, Mexico	7:00am	6:00pm	6:00pm — 7:30pm
Tuesday, Feb 7	Mazaltlan, Mexico	8:00am	6:00pm	6:00pm — 7:30pm
Wednesday, Feb 8	Puerto Vallarta, Mexico	8:00am	10:00pm	
Thursday, Feb 9	At Sea	i -	-	8:30am — 5:00pm & 6:00pm — 7:30pm
Friday, Feb 10	At Sea	=		8:30am — 5:00pm & 6:00pm — 7:30pm
Saturday, Feb 11	San Diego, Ca	8:00am		



Geek Cruises, Inc. 1430 Parkinson Avenue Palo Alto, CA 94301 650-327-3692 928-396-2102 fax www.GeekCruises.com neil@geekcruises.com CST# 2065380-40





WORKING MAC

iChat Power Tips

Whether the holidays have renewed your commitment to keep in touch with distant family or kept you busy finalizing plans for the office party, 'tis the season for using iChat AV. And with version 3.0, Apple greatly enhanced iChat AV, adding new features such as support for multipleperson audio and video chats. Of course, it's easy to launch iChat and start typing, but you can take your chats further with these tips.

Group Your Buddies

If you have five iChat buddies, finding one of them in a list is no problem. But if you have 50, 100, or more, you'll benefit from organizing your buddies into manageable groups. While groups aren't new to iChat, version 3.0 offers improvements that make them even more useful.

To start, use the View menu to select Show Offline Buddies, Use Groups, and (optionally) Use Offline Group. When you do so, all your buddies will appear beneath a gray divider bar, labeled Buddies, in the Buddy List window.

You can now click on the plus sign (+) at the bottom of the window and choose Add Group from the pop-up menu. Give the group a name and click on Add, and you'll see a new divider bar in the Buddy List window. If you have a lot of groups to create, click on the plus sign and choose Edit Groups instead of Add Group. This will let you add more than one group at a time, using a small edit window. Your groups will appear sorted alphabetically by name. You can control their order by placing spaces or numbers at the front of each group's name.

After you've created all your groups, the hard part begins-organizing your buddies. There's only one way to do this: drag and drop. Use the shift or # key to select more than one buddy at a time. If you want a buddy to appear in more than one group, simply option-drag the person's name from one group to another. When you're done, you can use the small triangles next to each group name to hide and show group members (see "Group Greatness").

Automatically Accept Chats

Normally, when a buddy initiates an audio or video chat with you, you have to accept the invitation before the conversation can begin. But you can use a hidden setting to make iChat automatically accept these invitations. You may wonder why you might want to do this (as visions of unexpected video chats in which you're wearing pajamas dance through your head): it's very useful to be able to accept chats automatically if you're using your Mac as a tool for remote monitoring.

For example, you could set up your home Mac with iChat and an iSight camera and connect to it from work, to check on your dog or to see whether someone left a package by your front door. Yes, you can do all of this with Webcam software, such as Evological's EvoCam (\$25; www.evological.com), but in a pinch, iChat makes a decent (and free) remote-monitoring tool.

To enable automatic video- or audio-chat connections, quit iChat, open Terminal (in /Applications/Utilities), and enter either or both of these commands:

defaults write com.apple.ichat AutoAcceptVCInvitations 1

continues



Group Greatness

You don't have to be a teenager to accumulate a massive-and overwhelming-list of buddies. Luckily, iChat 3.0's improved group features make it easy to separate your buddies into moremanageable subsets.

Stop Chat Mishaps



Most of the time, iChat just plain works. But there are times when it doesn't, and those times can be frustrating—especially when you're trying to have a video chat with grandma.

> Poor-Quality Multiparty Chats One of Tiger's most discussed features is iChat's support for multiparty audio and video chats—you can theoretically hold a four-person video chat or a ten-person

audio chat. I say theoretically because success depends on both the speed of the systems involved and the available bandwidth. If you're having trouble with multiparty chats (you can't start one for instance, or you get choppy video and dropped-out sound), it's more than likely due to one of those factors.

To launch a multiperson audio chat, you need at least a 1GHz G4, a dual-800MHz G4, or any G5, and at least a 128-Kbps connection (upload and download). Check with your DSL or cable provider if you're unsure of your connection speeds. Participants can be on any G3, G4, or G5 machine, as long as they have at least a 56-Kbps connection, which covers any Mac that shipped with a modem in the past few years.

As you might expect, multiperson video chats have more-stringent requirements. To launch such a chat, you'll need a dual-1GHz G4 or faster, or any G5 machine. You'll also need a 384-Kbps Internet connection, but you'll get better results with even more bandwidth. Participants must have a 1GHz G4, a dual-800MHz G4, or any G5, and at least a 100-Kbps Internet connection.

Apple has a nice chart at the bottom of its iChat page (macworld.com/0745) that lays out the requirements for all the various audio- and video-chat options.

- > Insufficient Bandwidth Does your Mac say you have "insufficient bandwidth" whenever you attempt to start a video chat—even if both chatters have high-speed Internet connections? Apple corrected this problem with OS X 10.4.2, so if you haven't upgraded from 10.4 yet, do so via your Software Update preference pane. Apple also says that McAfee Virex 7.5.X (www.mcafeesecurity.com) can cause this problem, and recommends removing it.
- Camera in Use Keep getting an error message stating that your camera is already in use—even though it's not? There's a simple solution. Just pull the plug on your camera, wait a few seconds, and then plug it in again. If this fails to fix the problem, try quitting all open applications. If that fails, you may need to restart your Mac.
- > Find More Help For more help with iChat, try Apple's iChat AV Support page (macworld.com/0746), which contains a list of the top support issues. If that's not enough information, visit Apple's iChat Discussions group (macworld.com/0747) and look for posts from other people who may have found solutions to problems like yours.

defaults write com.apple.ichat AutoAcceptACInvitations 1

The first command enables automatic video chats; the second one is for audio chats. When you relaunch iChat, it will automatically connect anyone initiating an audio or video chat with you. To turn this feature off, quit iChat again and repeat the above commands, but change the numeral 1 to 0 (zero).

Chat Anywhere

Just because you or your buddies are busy shopping doesn't mean you all can't still give and receive iChat messages. Use iChat's ability to communicate with mobile phones.

Send Messages to Mobile Phones Did you know that you can use iChat to send a message to any cell phone that's Short Message Service (SMS) enabled? Select File: New Chat With Person (or press %-shift-N). In the space reserved for the person's name, enter his or her phone number instead, formatted like this: +15035551212.

The +1 is necessary; then you just list the full phone number with area code. Click on OK and enter your message text as you normally would. When you press return, iChat will tell you it has sent the message to the phone. Depending on the service provider your recipient uses, he or she might be able to reply to your message from the cell phone.

Receive Messages on a Mobile Phone It's pretty easy to get all of your iChat messages while you're away from your computer. The trick is that you need an AIM screen name, not a .Mac account, to do so. If you don't have one yet, visit my.screenname .aol.com and sign up for a free account. Then configure iChat to use your AIM screen name, if it doesn't already, by visiting iChat: Preferences and clicking on Accounts. Click on the plus sign to add new account information. (You can switch between multiple accounts via the iChat: Switch To menu item; just choose the account that you want to use.)

Once you're logged in to iChat via your AIM screen name, visit AOL's MyMobile page, mymobile .aol.com. Click on Sign In To MyMobile and log in with your AIM screen name if necessary. When you reach the main MyMobile page, click on the My Mobile Settings button on the left side of the screen and follow the instructions. Once you enable forwarding, AIM will send all received iChat messages to your cell phone via SMS.

If you use a .Mac account for iChat, you can't take advantage of this feature directly. However, you can create a workaround using Away status messages. Create a new AIM account with message forwarding, but leave iChat set to use your .Mac account. When you want to use the forwarding service, click on the status message below your name and set up a custom Away message. Use something such as "Reach me via an iChat msg to ScreenName" (replace ScreenName with your AIM screen name). The message should be short because only 42 characters will show up on recipients' screens.

Keep in mind that your carrier may charge you for receiving text messages, so check your plan to make sure that you don't get an unpleasant surprise, such as a \$500 cell-phone bill.

Senior Editor ROB GRIFFITHS is the author of *Mac OS X Power Hound, Panther Edition* (O'Reilly, 2004), and runs the Mac OS X Hints Web site (www.macosxhints.com).



We Need a Few

Br 1.gh 7/ Apples

to Stay on Top of Our Game.

For over 29 years, Genentech has been at the forefront of the biotechnology industry, using human genetic information to discover, develop, commercialize and manufacture biotherapeutics that address significant unmet medical needs. A considerable number of the currently approved biotechnology products originate from or are based on our science. Genentech manufactures and markets multiple products in the United States, providing innovative treatments for cancer, heart disease, respiratory disease, growth disorders and other serious illnesses.

At Genentech, leading-edge biotechnology isn't the whole picture. All of our breakthrough biotherapeutics would not be possible without the exceptional Mac OS X professionals who deliver the critical links to our success. We need senior Mac OS X professionals who can lead cross-functional teams in a high-energy, fast-paced environment with product experience and technical engineering expertise in the following areas:

- Desktop client operating systems and applications for Mac OS X
- Unix/Linux
- Shell, Perl, command scripting and platform services development
- Systems management (imaging, patch deployment, software updates, application installation and configuration)
- Hardware device and peripheral integration with desktop software and platforms
- Cross-platform Mac and Windows application integration and interoperability

From the beginning, we have selected highly qualified people to join us and fostered a stimulating culture of openness, integrity and creativity. At Genentech we emphasize working hard, collaborating and sharing rewards. With a long history of helping busy people with busy lives, Genentech offers employees an array of outstanding benefits, including concierge services, on-site dry cleaning, on-site dental, take-out meals and sabbaticals. For more information and to apply, please visit **www.gene.com/careers**. Please use "Ad-MacWorld" when a "source" is requested. Genentech is an equal opportunity employer.



PLAYLIST

Make the Most of Podcasts

The latest versions of iTunes have helped Apple bring Podcasts—downloadable audio broadcasts that can be created by anyone with a microphone and something to say—to the masses. Only two days after Apple added a Podcast directory to its iTunes Music Store, users had subscribed to more than a million Podcasts.



Want more tips on digital music? For iPod- and iTunes-related expert advice and breaking news, as well as reviews of all the latest gadgets, check out playlistmag.com. The iTunes Music Store now offers upward of 15,000 Podcasts in areas as diverse as technology, sports, politics, and health. And iTunes 5 makes it easy to find and subscribe to Podcasts. But beyond that, details may get a little murky. Allow us to shed some light on the perplexing aspects of iTunes' Podcasts, with these helpful tips and tricks.

Not the Shuffle's Type

iTunes does its best to cram as much music as it can onto an iPod shuffle. So a shuffle doesn't play AIFF files (which tend to take up a lot of space), and iTunes' Autofill feature won't add audiobooks or Podcasts (which can also be meaty) to a shuffle—even if you've gathered those Podcasts into a playlist.

You can add Podcasts to the shuffle by dragging them onto the shuffle icon in iTunes' Source list. But if you convert the Podcasts (normally MP3 files) to a different format—AAC, for example—Autofill will have no objection to automatically pulling them over to the iPod (this causes iTunes to no longer see them as Podcasts for the purposes of syncing).

To perform that conversion, choose the encoder you'd like to use in the Importing tab of iTunes' Advanced preference pane, and then select Convert Selection To *encoder name* from the Advanced menu. With the right configuration—with AAC Encoder and the Setting pop-up menu's Spoken Podcast setting selected, for example—you can even create a file that's smaller than the original (see "Be a Convert").

Note that converting a file will remove both the chapter marks and the ability to bookmark the Podcast. But you can easily regain bookmarking functionality by using Doug Adams's Make Bookmarkable AppleScript (go to macworld.com/0761 to download the script).

A Library of Their Own

Speaking of bookmarks, you may discover that some of the Podcasts you download from sources other than the iTunes Music Store are not bookmarkable—your iPod can't keep track of where you last stopped playing them. Fortunately, iTunes 5 includes a feature to fix this issue. Just select an uncooperative Podcast, choose File: Get Info, click on the Options tab in the resulting information window, enable the Remember Playback Position option, and click on OK. iTunes and your iPod can now pick up interrupted Podcasts from where you stopped them.

The Podcast Shuffle

Once you have Podcasts on your iPod shuffle, be aware that those encoded as M4B files (that is, bookmarkable AAC files) won't play if you listen to your music player in shuffle mode. If you want to hear these Podcasts on a shuffle, check that your shuffle's back toggle switch is set to the first position (Play In Order) rather than the second position (Shuffle).

iPod Sync or Swim

iTunes' Podcasts preference pane gives you the option of keeping all unplayed Podcast episodes. But if you've configured your iPod to update Podcasts automatically, the iPod will treat a Podcast as though you'd listened to it even if you've only played a portion of it. When you next sync your iPod, the Podcast will vanish from both the iPod and iTunes.



Be a Convert If you reencode Podcasts, you will convince Autofill to put them on your shuffle.



Lasting Relationship Save partly enjoyed Podcasts from deletion by adjusting iTunes' Keep setting.

If you tend to leave unfinished Podcasts on your iPod—you listen to shows in multiple parts throughout the week, for example—it's a good idea to choose a setting that's likelier to maintain your partially played Podcasts. Choosing Last 5 Episodes from the Keep pop-up menu, for instance, gives you plenty of opportunity to finish older Podcasts without unexpectedly losing anything (see "Lasting Relationship").

Spread the Word

If you've come across a great new Podcast and want to alert your friends, there's no need to send them to the iTunes Music Store. Just select Podcasts in iTunes' Source list, choose the title of the show you want to share with your friends, and drag it to the desktop. You'll then find a tiny Podcast subscription file (with a .pcast extension) that you can simply e-mail to anyone you want. All the recipient needs to do is drag the file into iTunes or double-click on it to subscribe to the Podcast linked to that file.

Get (More) Info

Before downloading a Podcast (or even after listening to one), you may be interested in learning more about the subject, episode, or Podcaster. If the Podcast's creator has prepared its tags properly,



Go Deeper Use the Information icon or the Get Info command to find out more about a Podcast.

CHECK IT OUT



that work with any dockable iPod (it even charges the iPods when they're docked), as well as all the buttons and knobs you could want. The iDJ includes a ¼-inch microphone input with gain and tone controls and two stereo line inputs (one for each channel), as well as output jacks for master and record RCA, S-Video, and ¼-inch and ½-inch headphones.

The iDJ, which should be available by the time you read this, also provides USB connectivity so you can connect to a computer and load music on the iPods without removing them from the docks—a whole lot easier than digging through crates of LPS.—PETER COHEN

you should be able to get more information by clicking on the Information icon—a small letter *i* to the right of the Podcast's name in the iTunes Music Store or in your Mac's iTunes Podcast window (see "Go Deeper").

Another option is to visit the Podcaster's Web site. To do so when browsing for a Podcast on the main page of the iTunes Music Store, look underneath the Podcast description and click on the link arrow to the right of the word *Website*. If you've already subscribed to a Podcast, you'll find an identical arrow (without the helpful label) to the right of its name in iTunes' Podcast window. Either one of these methods will open your Web browser and take you to the Podcast's particular site.

Find What You Seek

Searching for Podcasts in iTunes can be tricky. If you've entered *Leo Laporte* time and again in the iTunes Music Store's Search field only to be frustrated at not finding his Laporte Report and TWIT (This Week in Tech) Podcasts, don't despair: you're just looking in the wrong place. You can search for Podcasts in two ways.

The first is to type your search term as usual in iTunes' Search field in the upper right corner of the iTunes window. When you see the message "Your search did not match any results," click on the Podcasts button in iTunes 5's new Search bar (above the message). The second option is to click on the Podcasts entry in the iTunes Music Store's main window, wait for the Podcasts home page to appear, and enter your search term in the search field in the middle of the page's left column.

Senior Editor CHRISTOPHER BREEN is the author of Secrets of the iPod and iTunes, fifth edition (Peachpit Press, 2005).

December 2005 MACWORLD 103





Johnny Cash, the Man in Black. At eMusic, you'll find his finest recordings, including his seminal work at Sun Records. In fact, at eMusic you'll find over 30,000 uncompromising indie artists. Like The New Pornographers, Miles Davis, Reverend Gary Davis, Arcade Fire, Charles Mingus, Jerry Garcia, Lucinda Williams, the Swan Silvertones and My Morning Jacket.

At eMusic, we've assembled the largest library of independent music ever. You can download titles for just 25 cents and it all works with your iPod. And right now receive 50 free songs, which you get to keep forever just for checking out the site.

For extraordinary music, just walk the line and visit emusic.com/johnny.



GET 50 FREE SONGS FOR CHECKING OUT EMUSIC.COM/JOHNNY

emusic

#1 Site for Independent Music



DIGITAL PHOTO

Automate Photoshop Chores

As a photographer, you tend to run through the same mind-numbing tasks over and over again: editing, resizing, saving, and so on—it's a glamorous life. Adobe Photoshop does offer some automation controls, but their powers are relatively limited. That's one reason I think Automator, Tiger's easy-to-use automation tool, is one of the most exciting parts of Apple's latest operating system.

More than just a macro program, Automator lets you create complex procedures that span multiple applications. And you can trigger Automator workflows from the Finder; you can't do this with the tools in Photoshop. Although Automator doesn't come with Photoshop actions built in, you can quickly add Photoshop CS and CS2 support to its repertoire.

Download the Actions

Automator ships with actions for many of OS X's built-in applications, including the Finder, iCal, Preview, and Spotlight (for a basic Automator tutorial, see "Make Automator Work for You," page 84). But if you scan the list of applications in the Library pane, you'll notice that there aren't any actions for Adobe Photoshop.

Fortunately, Apple has made it extremely easy for developers to add Automator support for programs. Because neither Adobe nor Apple has offered actions for Photoshop, I created my own—a suite of 42 actions for controlling Photoshop CS and CS2. You can download them for free from macworld.com/0762. Once you've downloaded and expanded the SIT file, drag the Action Pack item into your Adobe Photoshop folder. When you launch Automator, you should see an entry for Photoshop in the Library pane.

Build Your Workflow

Now that you've added Photoshop actions to Automator, you can string them together to accomplish any number of tasks. For example, say you've shot a few dozen pictures with your digital camera and you want to upload them to your Web gallery for viewing. This means resizing them based on their orientation (landscape or portrait), applying basic image correction, adding copyright information, and compressing the files (see "Do My Bidding").

Here's how you would build this basic workflow in Automator:

Step 1: Filter Your Files Before you resize a group of images, you need to separate the horizontal (land-scape) shots from the vertical (portrait) ones so you can apply different settings to each. In Automator's Library pane, choose Applications: Photoshop CS (or Photoshop CS2, depending on the version you installed). In the Action pane, select the Filter From Orientation action and drag it to the Workflow pane. Set the action's pop-up menu to Landscape.

By the way, orientation isn't the only option for filtering your images. You can filter by aspect ratio, color mode, size, and more. You can even combine these filters to create more-refined filters—for example, to choose only landscape gray-scale images shot at an ISO setting of 100 (use Filter From Orientation, then Filter By Color Mode, and then Filter From EXIF).

Select the Save Document List Before Filtering option to save a copy of the original list of files. This will let you return to the original list later so you can refilter for portrait-oriented documents. Now select None from the Close pop-up menu. This will leave all of the documents open in Photoshop, saving time.

continues

Do My Bidding

This Automator workflow sorts images, resizes them, and then applies corrections at the click of a button.



Are you a laptop person or a desktop person?



Join the Macworld Reader Panel to enter our "Mac Choice Sweepstakes" where the winner gets to choose between a G5 Power Mac or a 15" PowerBook†. As a panel member you will be invited to participate in online research surveys and discussions. And panelists get a chance to win every time they participate in online surveys. Participation in the Mac Choice Sweepstakes is open to all eligible Macworld readers. Whether you're a beginner, expert, switcher, notebook or desktop user—join the Macworld Panel and let your voice be heard. We're listening!

To participate, please visit: www.macworld.com/surveys/joinpanel/

NO PURCHASE NECESSARY TO ENTER OR WIN. Void where prohibited by law. Drawing is open to all eligible Macworld readers who complete the survey. We must hear from you by 10/31/2005 to be included in the drawing. Winner will be notified by email approximately one week after survey close, on or about 11/7/2005. For Official Rules, please visit www.macworld.com/surveys/panel/rules.cfm. All information provided will be kept completely confidential and only used in combination with other respondents. Personal information will not be sold, shared or used in any way outside the scope of this research. For more on privacy, visit www.macworld.com/surveys/panel/privacy.htm.

Macworld





Name That Photo Remove any doubt about who took that photo—water mark it with your name.

Step 2: Resize the Images Next, in the Action pane, select the Resize Image action and drag it to the Workflow pane, beneath the Filter From Orientation action. Make sure the Units menu is set to Pixels. Then enter 800 in the Width field and 72 in the Resolution field. Select the Resize Proportionally option to have Photoshop automatically calculate an appropriate height for your image.

Step 3: Unfilter the Batch Now that you've resized your landscape images, you'll want to turn your attention to the portrait ones. To return to the original batch of images, drag an Unfilter action to the bottom of your workflow.

Step 4: Filter for Portrait and Resize Repeat steps one and two—this time setting the Filter From Orientation pop-up menu to Portrait. Again, select the Save Document List Before Filtering option and set the Close menu to None. In the new Resize Image action, enter 600 in the Height field and 72 in the Resolution field, and select Resize Proportionally. Now you have a workflow that resizes images to dimensions appropriate to their orientation.

Step 5: Unfilter Again To ensure that the rest of the workflow will apply to your entire batch of images—not just to the portrait shots—drag another Unfilter action to the bottom of your workflow.

Step 6: Apply Correction If the images came straight from your camera, you might want to improve their contrast with Photoshop's Auto Levels command. Drag the Auto Levels action to the end of the workflow.

Step 7: Add Copyright Info When you put your images on the Web, it's a good

idea to give yourself a little ownership protection. Many file formats, including JPEG, let you include special bits of text called IPTC tags within files.

Drag the Edit IPTC Info action to the bottom of your workflow and put your name in the Author field. Set Copyright Status

to Copyrighted, and enter Copyright © 2005 and your name in the Copyright Notice field. You might also consider adding your Web site's URL in the © Info URL field, to ensure that people can find you.

Select Append to save changes only to the tags you've modified. (Leaving Replace selected will overwrite *all* existing tags.)

Step 8: Set the File Type Now you're ready to save your resized images. Drag the Save As JPEG action to the workflow. To keep the file size small, enter 7 in the Quality field. Click on the Destination button and choose a folder to save your images into. Open the Option menu and select Show Action When Run. When you run the workflow, it will stop at this action and give you the opportunity to enter a new file name and destination. If you leave the New Name field blank, the files will maintain their original file names. Alternatively, you can enter a new name, and the action will give all of the resulting images that name plus a sequential number. Finally, put a check mark in the Close After Saving check box.

Save Your Workflow

Once you've finished your workflow, choose Save As from the File menu. Set File Format to Application. Then give your Automator workflow a name such as Prep For Web and click on Save. You should see a new application icon on your desktop. Your workflow will process any images you drop onto this application.

Note that Automator doesn't take each image and run it through the entire

workflow. Rather, Automator performs each action on the entire batch before moving on to the next action. If you're processing a lot of images, this can cause your machine to bog down a bit. If that happens, process your images in smaller batches.

Actions within Actions

But what if you want to automate a Photoshop process that isn't included in the list of Automator actions? For example, you might want to add a watermark that stamps your name onto the processed images. In this case, you can call on Photoshop's own automation tools.

Open Photoshop and create a new 800-by-600-pixel document. Open the Actions palette and create a new action called Add Watermark. Save the action into the Default Actions set. Next, click on Record. Select the type tool, choose a color, type your name on the bottom edge of the document, flatten the image, and stop recording (see "Name That Photo").

Return to the previous Automator workflow. Drag a Do Action action into your workflow, just below the Auto Levels action. In the Do Action field, enter the name of the action you just created in Photoshop. This field is case sensitive, so be sure to type the action's name exactly as it appears in Photoshop's Actions palette. When you run the action, you should end up with resized images emblazoned with your Photoshop-generated watermark.

Access Other Applications

One of Automator's most useful features is its ability to control multiple applications within a single workflow. For instance, now that you've resized your images, why not have Automator transfer them to your Web server for you?

If you happen to use Panic's Transmit 3 (\$30; www.panic.com) for your FTP chores, you can set its Automator actions to do the trick. If you don't, OS X has a built-in FTP client—though you can normally access it only from the command line. To access it from within Automator, download Peter Dekkers's free Upload To FTP action (macworld.com/0763), which lets you transfer files via Automator.

Once you've downloaded the action, restart Automator and open your saved workflow. Scroll to the Save As JPEG action at the end of the workflow and select the Pass Saved Files Instead Of Originals option. This tells Automator to pass your new JPEG files, rather than your originals, to the next action.

Drag the Upload To FTP action to the bottom of the workflow and configure it with your server settings.

Now, at the click of your mouse, you can take your photos from the camera, run them through a basic editing routine, and plop them onto your server. If only Automator could also brew coffee, it would be perfect.

Frequent *Macworld* contributor BEN LONG is working on an Automator action that will write these articles for him.



to mouse click.



Introducing the Nikon Coolpix P1 and P2 Digital Cameras, the world's first compact cameras with built-in wireless.

With Nikon's Exclusive Feature System, Nikon owners can take great pictures and easily transfer them directly to their computer or printer, wirelessly. You can even create a real-time slide show while shooting.

Starting at \$399.95 MSRP. Visit nikondigital.com.

Just Scratching the Surface

In theory, my 42 Photoshop actions can be organized in 1.405×10^{59} combinations. Here are just a couple of the possibilities:

Organize After a Shoot Using the Rename From EXIF action, you can quickly rename an entire batch of photos using the data recorded by your camera—including date, time, ISO speed, and more. Then add the Finder's

Copy Finder Items action to the end of your workflow to back up your new files automatically to another volume.

Prep for Video If you regularly use Photoshop files in a DV workflow, the Change Pixel Aspect Ratio action will let you set an image's pixels to a rectangular aspect ratio. The NTSC Colors action will make your images NTSC-safe. The Deinterlace action will clean up stills that you've grabbed from video for use elsewhere.

www.macworld.com December 2005 MACWORLD 109

MOBILE MAC

Web Apps Work Anywhere

Most of us have used a Web-based e-mail service to check our inboxes. But such services aren't the only Web-based applications out thereothers offer credible alternatives to iPhoto, iSync, and even (for reading RSS feeds and maintaining lists of bookmarks) Safari itself.

No, using a Web-based application isn't the same as using a native Mac app. But Web programs do have one distinct advantage: they're available from any computer connected to the Net, whether that system (Mac or PC) is at a friend's house, an office, or an Internet café.

And your files are available, too: imagine that you've bookmarked a Web page on your home Mac, and you find yourself stuck at the office, unable to remember that URL. If you'd stored it using a Web-based bookmark app, you could just log in and find it.

If you own more than one Mac, Web-based apps are an inexpensive, easy way to keep your information in sync. The more you migrate your programs and data to the Web, the less you'll depend on any one computer.

And Web apps offer a bonus: the best of them can help you find out what other users are doing with similar information. They add a social dimension to computing that stand-alone Macs just can't match.

Bookmarks to Go

Using .Mac and iSync, you can already save your Safari bookmarks online, along with your Address

del.icio.us/tag/Apple 🔷 · 🧼 🥝 🥛 🛣 🔐 http://del.scio.us/tag/Aopie del.icio.us/tag/Apple " del.icio.us / tag / Apple bookmarks inbox post settings logout about popular find tags related tags e mester l'atter e [MSJ] for your addiction Apple.com - Apple Homepage Daring Fireball: The iTunes 5 Announcement From the Perspective of an Anthropomorphized Brushed Metal User QuickTime Pro: How to Edit Portions of a Movie Rogue Amoeba - Good Software With A Bad Attitude! - Exclusively For Mac OS X Widget Machine

In water society is worthern, and 168 coursecter, or 1515-05 in copy to the OSx86 Project - Home cking Aucka naryware & Frank by Jabecher - and 16 I street people . Showing 10 dems per page. Show 10, 26, 60, 100 dems per page of delicitions | about | blog | terms of service | privacy policy | dopyright policy | contact up

Book contacts. To see those bookmarks (in a pop-up window) on any Mac or PC, just go to www.mac.com and click on Bookmarks in the top navigation bar. But there's another bookmark application—the free del.icio.us (that's the URL: del.icio.us)-that takes online bookmarking to a whole new level.

The difference between del.icio.us and .Mac's bookmark syncing seems minor at first: del.icio.us lets you assign one or more keyword tags to each bookmark. But those tags are the crux of the app. In addition to helping you organize your own favorite links, they can help you find the favorites of other del.icio.us users.

For example, if you want to see sites other del.icio.us users have tagged with the keyword Apple or Mac, you could point your browser to del.icio.us/tag/apple or del.icio.us/tag/mac. So instead of having a mechanical search engine spit out a list of sites with the word Apple or Mac in their text, you can let other human beings tell you which sites they think are relevant.

These social connections go deeper still: when you add a bookmark to del.icio.us, it will tell you how many other users bookmarked the same page. It will also allow you to flip through their link collections. Find a user who shares your interests, and you're sure to find plenty of new and interesting Web sites.

At the moment, you can't import bookmarks into del.icio.us as simply as you can into .Mac and iSync. But a del.icio.us bookmarklet is available for Safari, Mozilla's Firefox, Opera Software's Opera, and Microsoft's Internet Explorer (see del.icio.us/doc/ about for details). After you've installed it, you can click on it to add the current Web page to your del.icio.us collection.

While the spartan, no-nonsense design of the del.icio.us Web site keeps things running fast, Mac users accustomed to a more polished interface should test-drive Sci-Fi Hi-Fi's Cocoalicious (free; macworld .com/0821). The Mac-only Cocoalicious puts an iTunes-esque front end on the del.icio.us engine, making bookmark organization even simpler.

RSS fans, take note: if you use Ranchero Software's NetNewsWire or NetNewsWire Lite to read your RSS feeds, go to the program's Preferences menu, click

continues

More Than a Spider

engines, del.icio.us uses

Instead of relying on

mechanical search

tags applied by real

relevant Web links.

human beings to find



Buy a NuPower battery from NewerTech Less worry - no hurry - with more run time between 'plug ins'.

www.NewerTech.com



Batteries available for:

- PowerBook G4 'Aluminum' 12/15/17"
- PowerBook G4 'Titanium' 15"
- PowerBook G3 Wallstreet/Lombard/ FireWire (aka Pismo)
- · iBook G3/G4

Ask your favorite Apple peripherals reseller or visit NewerTech.com.





Up To
50% More
BATTERY
CAPACITY



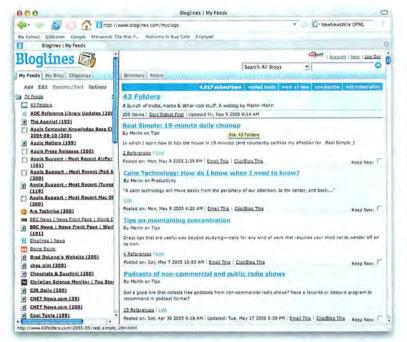
Charge and condition your PowerBook or iBook batteries with our new line of NuPower battery chargers. Always be ready to go! Conditioner refreshes and extends battery life too. Charges up to two batteries at a time. 2-Bay Charger with Battery Conditioner Now Available \$149.95

Newer Technology 65W AC Power Adapter for all models Powerbook G4 12/15/17 AL & Ti, Apple iBook G3/G4 \$49.95

Ask your favorite Apple peripherals reseller or visit NewerTech.com.



MW 12. 05 Other World Computing, Newer Technology, a part of New Concepts Development Corp., 1004 Courtaulds Dr., Woodstock, IL 60098 Prices, specifications, and availability are subject to change without notice.



RSS on the Road

Even if you're away from your Mac, you can use Bloglines to keep up-to-date on all your RSS feeds—and you can import them from your current RSS reader. on the Weblog Editor button, and select Cocoalicious from the drop-down menu. The next time you come across a good link in one of your RSS feeds, click on the Post To Weblog button at the top of the NetNewsWire Lite window to send the URL to Cocoalicious and, from there, to your fellow del.icio.us users.

RSS for Road Warriors

Speaking of RSS: having a customized stream of Web news delivered directly to your Mac is undeniably convenient. Thanks to Safari's built-in RSS support in OS X Tiger, more Mac users are collecting and reading RSS feeds than ever before.

One big reason RSS is so popular is that it makes keeping track of which stories you've read and which you haven't easy. Once you've read a story, it's marked as read. But what if you're a mobile user who hops from computer to computer? Your RSS reader can't keep up with where you've been or what you've read. Browsing RSS feeds on the Web eliminates that headache—and has a few other benefits.

Bloglines (bloglines.com) is one of the best online RSS tools around, and it's free. It lets you follow your favorite news feeds within a two-panel interface similar to that of stand-alone RSS readers.

While you can subscribe to feeds directly, Bloglines also makes it simple to import feeds from your current news reader—as long as your RSS reader exports data in the OPML format. In NetNewsWire Lite, for example, you go to File: Export Subscriptions, select a name and destination for your export file, and choose a format for the export—OPML (With Groups) will preserve whatever groupings you've created to organize your feeds. Then click on Save.

Back at Bloglines, go to the My Feeds tab, click on Edit, and then click on the Import Subscriptions link. In the pane on the right, fill in the path of your exported OPML file and click on the Import button. (Unfortunately, Safari doesn't export in OPML. But if you're comfortable using Terminal, you can use a shell script at macworld.com/0820 to export your Safari feeds.)

Like del.icio.us, Bloglines is more than just a convenient way to access an application when you're away from your Mac. It, too, has a social aspect to it. It will point out the day's most-linked-to topics on the Web. It'll also let you share your subscriptions with other people and allow you to check out feeds other users are subscribed to and the Web sites they enjoy. Again, chances are you'll stumble across something good.

The Online Shoebox

While the photo-sharing site Flickr (flickr.com) doesn't let you edit your photos the way iPhoto does, it can help you organize, save, and share even the heftiest photo collection. In fact, Flickr is better than iPhoto in a couple of ways.

First of all, because it's Web-based, multiple users can share a single account (a basic one is free). That makes it easy to trade and organize photos between, say, the family G5 at home and an iBook in a faraway dorm.

Second, like del.icio.us and Bloglines, Flickr is inherently social, thanks to keyword tagging. For families sharing a Flickr collection, tags are an easy way to find photos featuring, say, *baby* visiting *grandma*. If you make a picture public, other Flickr users can search against your tags, comment on your pictures, or even add tags of their own.

Why would you want to search someone else's snapshots? Say you're planning a trip to Rome. You could go to Flickr, search for the tag *Rome*, and get some ideas for sites you might want to see. Even better, you might get some travel tips in the attached comments. That's what makes Flickr so much more than a way to share snapshots.

With its Uploadr companion app for OS X, Flickr also makes it easy to upload photos via the Web or email (the latter is perfect for camera phones, since it bypasses the tedium of downloading images to your Mac first). But Flickr actually works best in conjunction with iPhoto. The free Flickr Export Plugin for iPhoto, developed by Fraser Speirs, provides the missing link between both applications, helping you copy your iPhoto library to the Web. (See "Share Your Photos on the Web" at macworld.com/0818 for details.)

Another way to quickly add a photo to Flickr is the Flidget Dashboard widget for Tiger (free; macworld .com/0819). It provides just enough of an interface for you to tag your photos and set their privacy level.

That integration between iPhoto and Flickr is how things should work: you can let your desktop apps do what they do best, while Web apps make your data available wherever you are, even if you're away from your Mac. Until we realize the dream of truly ubiquitous computing, Web apps will have to do.

JASON COOK is a freelance writer in Cambridge, England.

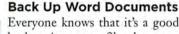
5 Workflows for Geeks

A robot programmed to do your bidding—who would pass that up? But many people think of Automator, Apple's newest Macautomation tool, as a tool for beginners who are too scared to learn how to use AppleScript. In fact, Automator can be quite powerful especially when combined with other OS X features, such as Unix commands, image handling, and even AppleScripts.

Here are five useful and fun Automator workflows bound to make you the envy of all the geeks in

Just open Automator (in your Applications folder) to get started. Click on the library item specified at the beginning of each step, and then drag the action that follows from the Action list into the Workflow pane below any previous actions. (The relevant library items and actions for each step are indicated in bold.)

If you'd like to save a workflow, choose File: Save. At that point, if you want to make the workflow a double-clickable Finder icon (so you can run it using iCal's alarm feature, for example), choose Application from the File Format pop-up menu in the Save dialog box.



Everyone knows that it's a good idea to back up important files, but many people forget to do it. This workflow makes backing up a cinch; when you run it, all

the recently changed Microsoft Word files in your Documents folder get compressed and then burned onto a CD. Run the workflow every week, and you're covered-you'll never lose more than a few days' worth of Word work.

1. Finder: Find Finder Items This action looks for all the files on your hard drive that match certain criteria. First, click on the Where pop-up menu and select Documents, so the action will search only in your Documents folder. Next, choose Date Modified from the Whose pop-up menu (lower left), and choose This Week from the pop-up menu to its right. Click on the plus sign (+) to add another criterion. In the new row of pop-up menus that appears, set the first menu to Extension. Set the next to Is Equal To and then type doc in the text field beside that menu. The action will now find files in your Documents folder that changed this week and that are Microsoft Word files.

2. Finder: Create Archive When you run your workflow, this action takes all the files found in step 1 and compresses them into a single ZIP file. Type a name such as Word files backup in the Save As field.

3. System: Burn A Disc This action puts the compressed file from step 2 onto its own blank CD (or DVD). Type a name such as Word Backup CD in the Disc Name field. and then select the Append Date option so the CD's name will indicate when you burned it.

4. Finder: Move To Trash This action moves the ZIP file created in step 2 to the Trash.

Other Ideas If you want this workflow to back up items other than Word files, just change the criteria in step 1; you can specify any file type you desire (HTML, for instance).

To make the workflow even more convenient, use iCal's alarm feature to schedule it to run automatically. To do this, save the workflow as an application, as described at the beginning of this article. In iCal, select File: New Event, select View: Show Info, click on the Alarm pop-up menu, and select Open File. In the dialog box that appears, select the workflow.

Get a Profile of Your Mac

Do all the Macs in your classroom have the latest version of OS X? Do you find yourself frequently on the phone with an Apple tech-support wiz, searching desperately for your

computer's RAM information? Although OS X includes the System Profiler utility for getting information about your Mac, it's hard to see all its statistics at once. This workflow fetches all the profile information from your Mac and turns it into a text file.

1. System: System Profile Click on Options and turn on Show Action When Run. When you run the continues

December 2005 MACWORLD 113 www.macworld.com

Get More Action(s)

Automator's builtin actions let you
do everything
from opening
Finder items to
activating fonts.
But as you explore
its limits, you'll
probably wish you
could do more.
Here's where to
look when you
can't find the
action you seek.
Some sites offer



both actions and complete workflows, almost all of which are free:

- > Apple's Automator page (macworld.com/0827)
- > Automator World (macworld.com/0831)
- MacScripter (automatoractions.com)
- Nyhthawk Productions' Automator site (automator.us)

Typically, new actions will automatically install in the correct place. In some cases, however, you'll need to drag the file into /your user folder/Library/Automator. If you don't see an Automator folder, create it yourself,—scholle SAWYER MCFARLAND

workflow, it will ask you which parts of your computer you'd like to have information about—software, printers, AirPort, and so on.

- 2. TextEdit: Filter Paragraphs Step 1 produces one big chunk of text filled with all the profile information you request—but that text contains a lot of blank lines. To strip them out, set the action's Return Paragraphs That pop-up menu to Are Not Empty.
- 3. TextEdit: New Text File This action saves the text from step 2 into its own file. Type Profile.txt in the Save As field, and then choose your Documents folder from the Where pop-up menu.
- 4. Finder: Open Finder Items This action opens the file for your inspection. Leave the Open With pop-up menu set to Default Application to open the file in TextEdit, or, depending on your needs, set it to another application that can read plain text, such as Microsoft Word or Apple Safari.

man page workflow

Faun

Teas*

What Unix command would you like to learn about today?

Unit of Advances

M Require an answer

Cancel

OK

Text

Shell (bin/bash

Fass Input as arguments

Post one

New TextEde Document

Fast

Text

Tex

Get Your Man The Unix command \(\to \) to the left of the divider bar (or pipe) gets the manual, or man, page for whichever Unix command you specify. The command to the right of the pipe formats the manual page for display in TextEdit.

Other Ideas When you're about to call Apple for tech support, print out the profile this action produces so you can refer to it. If you run a computer lab, use the text file each machine produces to compare system statistics.



Make Man Pages More Manageable

When studying the fine points of grep or uptime, the first place Unix aces turn for help is the manual

pages. This workflow spares you the trouble of opening Terminal and straining your eyes to read its unhelpful text formatting. Instead, you can open any man page in TextEdit and print or save the document for easy reference.

- 1. TextEdit: Ask For Text When you run the workflow, this action lets you specify the man page you want to see. In the Question field, type What Unix command would you like to learn about today? and select the Require An Answer option.
- 2. Automator: Run Shell Script Use this action to run a Unix command that retrieves and formats the man page for TextEdit. Choose As Arguments from the Pass Input pop-up menu. Then type the command man "\$@" | col -b in the big text field (see "Get Your Man").
- **3. TextEdit: New TextEdit Document** This action opens the man page in TextEdit.

Other Ideas Save a man page you use often (for a programming language such as Perl or Ruby, say) as a text file, and keep it in your Dock for easy access.



Set Up a Surveillance Camera

If you have a recent digital-camera model, there's a good chance your

Mac can make it take pictures on cue. (The camera must be able to take photos while it's plugged in via USB. The first action in this workflow will tell you if yours can't.) This workflow will tell the camera to take a picture every 10 seconds, shrink it down to a small JPEG, and repeat until you tell it to stop. This can be useful in many situations—when you're trying to figure out what your dog does while you're away from home, for example, or if you'd like to make a time-lapse video without buying add-on software.

1. Image Capture: Take Picture This action tells the camera to take a picture. If your camera's tight on space, select the Delete Image From Camera After Download option. If you have a capacious card in your camera, you might as well keep this option off so you have all your photos on both your camera and your Mac.

Note that this action automatically stores the snapshots in /your user folder/Pictures. If you'd like to store the pics somewhere else, add the Finder: Move Finder Items action to the workflow, and indicate where you'd like to save them.

3. Preview: Scale Images This action shrinks each picture's dimensions for even more space savings. You'll see the same warning dialog box when you insert this action in your workflow. Click on Don't Add again. Unless you need to see each picture at a high resolution, the default of 480 pixels is probably big enough.

4. Automator: Pause Add this action to make Automator pause before taking the next picture. Type 10 in the text field to make the workflow stop for 10 seconds. Before you go to the next action, save the workflow and give it a name.

5. Automator: Run Workflow To make the workflow take another picture, you need to make it repeat. This action starts it over again. From the Workflow pop-up menu, choose Other and then select the workflow you saved in step 4. Now save your workflow again.

To test your new workflow, click on the Run button at the top of the window. When you're done taking pictures, click on Stop at the top of the Automator window.

Other Ideas Once you stop the workflow, drag the pictures into iMovie to make a timedelayed movie.



Put a Stock Quote on Your Desktop

Your desktop can be a huge billboard for anything you like-even your favorite stock's price, in the case of this workflow. If your screen is big enough, you should be able to see the price from across the room.

1. Automator: Run Web Service Fill in the fields as shown in "Take Stock" (3, but substitute your favorite stock's ticker symbol for AAPL (Apple's ticker symbol). When the workflow runs, it'll go out on the Internet to get that stock's price.

2. TextEdit: New TextEdit Document This action puts the stock's current price into its own TextEdit

3. Automator: Run AppleScript Type the Apple-Script shown in the Run AppleScript field @. When



Take Stock The information in the Run Web Service action fields (B) lets Automator get the price of any stock. Just substitute your stock's ticker symbol for AAPL. The Apple-Script typed in the Run AppleScript field () enlarges TextEdit's window and text for maximum visibility.

you run the workflow, these commands will resize the TextEdit document to fill the screen, and zoom in on the text inside it.

4. Finder: Get Specified Finder Items For this step, you need a PNG image you don't care about. Press #-shift-3 to take a picture of your desktop. Find that file, which will be named something like Picture 1, and rename it Desktop_Picture.png. In Automator, click on the plus sign (+) in the Get Specified Finder Items action and select Desktop_Picture.png in the dialog box that appears. Automator will overwrite this picture with a screenshot of the TextEdit document from step 3. (This seems like a weird step, but it ensures that the next action will know where to save your screenshot.)

5. System: Take Screenshot This action takes a fullscreen picture-including the TextEdit document that's currently showing. Then the action saves the screenshot to the location you specified in step 4. (Ignore the fact that the Save To pop-up menu says Clipboard—that's a bug).

6. Finder: Set the Desktop Picture This final action takes a picture of your stock's price and makes it your desktop picture. Close any open windows (or press F11) to reveal it.

Other Ideas Change TextEdit's default font to something that looks more interesting-so the stock quote appears in the Rockwell typeface, for example. (Note: If this workflow appears to fail after you use it a few times, log out and then log back in again.)



GO TO WEB:

If you don't want to type, then let us automate part of the process for you. You can download all the workflows discussed in this article at macworld.com/0832.

ADAM GOLDSTEIN is the author of AppleScript: The Missing Manual (O'Reilly, 2005) and a coauthor of Switching to the Mac: The Missing Manual, Tiger Edition (O'Reilly, 2005).

HELP DESK

Mac OS X Hints

The Insiders' Tips You Won't Get from Apple



Have a hint? Go to the Mac OS X Hints Web site (www.macosx hints.com) to share it. This column was based on tips from Ben Hines, Benjamin Koe, and Kevin Morgan, Each month, the author of our favorite tip will receive a Help Desk mug.

Assign Custom Icons More Quickly

OS X lets you create custom icons for your files and folders, which is not only fun but also useful—you can, for instance, place a custom icon on all of a project's folders to make them easy to identify at a glance.

You can freely download countless types of icons (see "Indy Icons") from sites such as The Iconfactory (www.iconfactory.com) and InterfaceLift (macworld .com/0804). Or you can use an icon editor, such as Uncommonplace's Icon Machine (\$25; macworld .com/0805) or Mscape Software's Iconographer (\$15; macworld.com/0806), to create your own.

The problem is that assigning custom icons is rather tedious. First, you have to click on the file with the icon you want and choose File: Get Info (\mathfrak{H}-I) in the Finder. Next, you click on the small icon in the Get Info window and copy it (\mathfrak{H}-C). Then you click on the destination file, open its Get Info window, and paste the icon (\mathfrak{H}-V) into the right spot. That's a lot of clicks, especially if you're changing multiple icons.

So here's a time-saver (for those of you running OS X 10.3.3 or later): don't use the Get Info window when you're copying the custom icon. Instead, just select the source item in the Finder and press #-C to copy the icon. Now select the destination, press #-I



Indy Icons By using custom icons, such as this set from The Iconfactory, you can give your files and folders a look that makes them easy to spot among the background clutter.

to open the Get Info window, click on the small icon image, and press #-V to paste.

Play to Spotlight's Strengths

Yes, Spotlight can dig out the proverbial needle from a haystack (that is, a file), but it can also find and open applications on your hard drive with just a few keystrokes. Want to launch a somewhat-buried



CHECK IT OUT

Save Time When Scrolling

You probably scroll through windows and documents hundreds of times a day and use the scroll bar and scroll arrows much of the time to do it. Here are some tricks to make that easier.

First, if you use the scroll arrows at the bottom of the scroll bars to page through long documents, you can save yourself a mouse click when you want to reverse direction. Scroll bar arrows in OS X are sensitive to mouseover actions if another scroll arrow has already been activated. That means if you click and hold one scroll arrow, you can then move your mouse onto the opposite-direction arrow to immediately reverse. Before OS X, you had to first release the mouse button, move to the opposite arrow, click and hold that arrow, and wait for scrolling to commence again.

The scroll arrows need to appear together for this to be useful there's not much point to holding the mouse button down while you move the mouse pointer 10 inches down your screen. OS X does this by default, but the arrows appear only at the bottom of the scroll bar area, which isn't a lot of help if your pointer is at the top. With just a tiny bit of work in Terminal (/Applications/Utilities), though, you can have the best of both worlds—double scroll arrows at both the bottom and the top of the scroll bar.

Launch Terminal and enter the following command: defaults write "Apple Global Domain" AppleScrollBarVariant DoubleBoth

Press return to execute the command, and you'll have enabled double arrows at both ends of the scroll bar. Note that if you'd rather not use Terminal, you can use Marcel Bresink's freeware program TinkerTool (macworld .com/0810). Any newly launched programs will display two sets of arrows, but you must quit and relaunch any programs that were running for the change to take effect (or you could simply log out and log in).

If you ever tire of this feature, the easiest way to revert is to go to the Appearance preference pane, set the Place Scroll Bars option to At Top And Bottom, and then change the Place Scroll Bars option back to Together.





Pump Up the Volume When you need a little extra volume, QuickTime's preview player lets you "turn it up to 11." On the left, you see a clip with the normal volume-control slider. On the right, the same clip is playing with an enhanced volume slider.

application such as Disk Utility? Press \(\mathfrak{H}\)-space, type Disk Util, and wait a bit, and you'll soon see the Disk Utility application at the top of the results list. Click on it, and Disk Utility will open.

Unfortunately, the "wait a bit" portion of the process can get old quickly. If you have a big hard drive, you might wait several seconds, during which time Spotlight bores you by spitting out irrelevant results. That's where third-party launchers can help. The three best-known programs are Objective Development's LaunchBar (\$20 [for home use]; macworld.com/0807), Peter Maurer's Butler (\$18; macworld.com/0808), and Blacktree's Quicksilver (free; macworld.com/0809). These programs all work in a similar manner: you type a keyboard shortcut, enter a few letters of the application or document's name, and press return to open the highlighted item (or use the mouse to choose it from a list of results). Unlike with Spotlight, these searches happen nearly instantly-they don't try to maintain a live index of all files and their contents on your hard drive-so there's no annoying wait.

What these utilities generally don't do as well is look inside files for bits of data (some of them don't do this at all). In an ideal world then, you'd use Spotlight to search for information within files, and one of the launcher applications to open files and documents. (Make sure to remap any conflicting keyboard shortcuts—LaunchBar and Spotlight, for example, use the same one.)

No problem. After you've picked and downloaded your launch application, open the Spotlight preference pane, choose the Search Results tab, and deselect both the Applications and System Preferences options. Now Spotlight will no longer search for applications or system preference panes. What's more, you should see better performance when you use Spotlight for other searches.

Give QuickTime Previews a Volume Boost

You're probably aware that the Finder can preview QuickTime audio and video files—just click once on a QuickTime clip in column-view mode, and you'll



Watch System Activity in Real Time

Have you ever wanted more detail about what your system is doing? Perhaps your hard drive thrashes or a program crashes every time you run it. Perhaps you'd like to see which files get modified when you change a program's settings. Although there are no fool-proof methods for figuring this stuff out, one option is the Unix command fs_usage.

The fs_usage command reports file system activity in real time—in other words, it creates output as things happen. When launched, it starts filling your Terminal screen with output, unless you reroute the output to a text file. Here's an example of what might appear:

08:25:15 getattrlist

/Applications/iChat.app/Contents/MacOS/iChat 0.000044 MicrosoftMouse

In the first column, you see the time the system activity occurred. Next, you see the name of the file system command (in this case, getattrlist). (For descriptions of the various commands, go to macworld.com/0813 and scroll down to Section 2.) Then you see the file involved (often this space is blank), followed by the amount of time it took the command to execute (0.00044). Last, you see the name of the process that generated the activity. The two most interesting columns are the file involved and the name of the process. Those two values are what may help you figure out what's happening on your system.

Here's how I use fs_usage to track down a problem:

- 1. Open Terminal and type sudo fs_usage -w > ~/Desktop/usage.txt.

 You must run fs_usage as root; that's why you need to type sudo. You'll be asked for an administrator password before you can proceed. This command redirects the fs_usage output to a file, making it easy to search through when you're done.
- 2. Perform the activity you'd like to investigate—launch the app that crashes, use your machine until you hear the disk churn, and so on.
- **3.** After you've observed the behavior you were looking for, switch back to Terminal and press control-C to terminate fs_usage.
- 4. Switch to your desktop, and use a text editor to open the file usage.txt, which may be somewhat large. If you're looking for something related to an application, use your text editor's search feature to find that program's name. If you're trying to find the source of a lot of disk activity, look for a whole bunch of read and write entries in the output. Then look at the last column to see which program created them. If you want to find a preferences file that a program has modified, search for both the program's name and .plist.

Basically, fs_usage can help you do detective work. You get a detailed peek inside your system—what you see depends on what you do while the utility monitors your system. Type man fs_usage for more details.

see the movie appear in the Preview column, complete with QuickTime controller for easy playback.

But what do you do for those times when a video's audio is too quiet to hear? You could import the clip into iMovie and increase the volume, or reach over and crank up your speakers. But there's a simpler method: hold down the shift key before clicking on the volume-level icon. When you do, QuickTime gives the volume slider more range than it usually has (see "Pump Up the Volume"). (Bonus hint: #-click on the left-facing arrow at the end of the progress slider to see the video play backward.)

Senior Editor ROB GRIFFITHS is the author of *Mac OS X Power Hound*, *Panther Edition* (O'Reilly, 2004), and runs the Mac OS X Hints Web site (www.macosxhints.com).

www.macworld.com December 2005 MACWORLD 117

Mac 911

Solutions to Your Most Vexing Mac Problems

Media Meltdowns

I have converted many old VHS tapes to DVD-R, using namebrand media. When I tried to view one of my DVDs 18 months later, it stalled, skipped, and stopped dead in its tracks. I watched the DVD right after burning it, and it played perfectly. I thought that once I made a successful DVD, it would last basically forever. What's going on? Mike Volpe

Although the folks who manufacture DVDs claim that the discs can last for years, they base that claim on lab tests designed to simulate the aging process. When it comes to the real world, only time will tell.

Factors that can contribute to failing media are poor quality (not all DVDs are created equal), humidity, sunlight, and abuse. But you can lessen the impact of these factors.

To begin with, buy good media. Those in the know suggest that Taiyo Yuden's products are reliable and stable when treated well. A Google search will turn up American companies that sell this Japanese brand. Next, carefully store your discs in an environment that's as moisture- and sunlight-free as you can findfor example, in an airtight container with a silica gel pack, tucked away in a cupboard. And you should, of course, put discs back in their cases rather than leaving them atop a hot AV amplifier or letting your fiveyear-old use them as Frisbees.

TIP OF THE MONTH

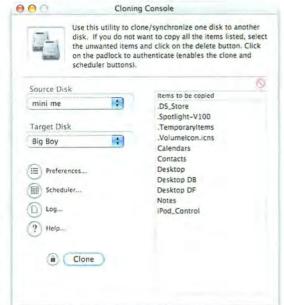
Wake the Sleeping Tiger

Before Tiger, you could configure OS X's security settings to require a password when the computer woke from sleep or from a screen saver. Unfortunately, that meant the computer's other legitimate users couldn't log in without that

password. Tiger offers a workaround.

First, go to the Security preference pane and select the Require Password To Wake This Computer From Sleep Or Screen Saver option. Then go to the Accounts preference pane. If necessary, click on the lock at the bottom of the window and enter an administrator password. Click on Login Options and select the Enable Fast User Switching option. Now, when the computer wakes up, the Authenticate dialog box includes a Switch User button. Click on this button to go to the login window, where

other users can enter an account name and password to use the Mac. Stephen Holland



Prone to Clone There's no need to worry about iPod accidents—you can use Carbon Copy Cloner to make a perfect copy of your data and restore your iPod for next to nothing.

Your tale of woe also demonstrates that one should never rely on a single backup to a particular medium. The more copies you make, and the more different media you use, the more likely it is that you'll be able to recover your data down the road.

iPod Insurance

I know that iPods suffer glitches with some frequency, and reloading all my tunes is quite a tedious and frustrating process. Is there an easy way to store a perfect clone that I can put back on the iPod in case of emergency? **Bob Marketos**

Mike Bombich's Carbon Copy Cloner (\$5; www .bombich.com) can do the job. Connect your iPod to your Mac and launch Carbon Copy Cloner. From the Source Disk pop-up menu, select your iPod. From the Target Disk pop-up menu, choose the hard drive where you want to store your backup (see "Prone to Clone"). Click on the Preferences button; in the sheet that appears, enable the Create A Disk Image On Target option. Click on Save, click on the lock # icon next to the Clone button, enter your administrator password in the resulting sheet, and click on OK

Have Tools, Will Travel

Having recently spent several weeks on the road talking up Macs and the voodoo they do, I thought I'd cover the troubleshooting tools and utilities I pack when traveling. When my bags pass through airport security, here's what shows up on the X-ray machine:

> iPod My iPod pulls double-duty when I travel—it not only holds enough music to get me through a couple of long flights, but also carries a bootable version of OS X, any applications and files I need for my trip, and the troubleshooting utilities required to fix my PowerBook if things go wrong. Creating a bootable iPod is no big deal. Your iPod should be 10GB or larger in order to hold a full installation of OS X and the files you need. To install OS X on the iPod, just treat it like any FireWire drive and follow the usual OS X installation procedure.

Bootable Utility and OS Discs | always travel with bootable Disk Warrior and Drive Genius discs, as well as a Tiger installation DVD. But since I don't dare risk damaging those discs while on the road, I bring copies. My original Disk Warrior disc isn't compatible with Tiger anyway, so I've downloaded the free DiskWarrior 3.0.3 CD Update (macworld.com/0759), which allows me to create a Tiger-compatible bootable copy of the Disk Warrior CD. As for the Drive Genius and OS X discs, I use Apple's Disk Utility to burn bootable copies.

To do so, insert the disc you want to copy, launch Disk Utility (/Applications/Utilities), select the disc in the left side of the Disk Utility window, and choose File: New: Disk Image From name of disc, substituting the name of the disc you've selected. In the Convert Image dialog box that appears, choose DVD/CD Master from the Image Format pop-up menu and None from the Encryption pop-up menu, and then click on Save.



Once you've created the image, select it in the left side of the Disk Utility window, insert a blank disc of the appropriate type (a CD-R if the original disc was a CD, for example), and click on the Burn button at the top of the window. In the sheet that appears, click on Burn again. When the disc is complete, it should contain an exact copy of the original, one that's capable of booting your Mac.

Cables The beautiful freedom of wireless networks hasn't yet reached much of the world, so my gear bag includes cables. Specifically, I carry a 6-foot Ethernet cable, a phone cable, two USB cables (one for standard peripherals and another with the kind of mini USB connector routinely found on digital cameras), and a 6-foot FireWire cable (helpful when I need to link my PowerBook and another Mac via FireWire Target Disk mode).

to dismiss the sheet. Click on the Clone button, and the program will begin cloning everything on the iPod to a disk image on the target drive.

If you need to restore this backup to your iPod, first erase the iPod by installing the latest iPod Updater (download it from macworld.com/0764). Then, on the target drive, double-click on the disk image to mount it. (It will be called name of iPod.sparseimage, where name of iPod is the name of your iPod.) Launch Carbon Copy Cloner, choose the mounted disk image as the source, and choose the iPod as the target. Click on the lock icon again. Once you've entered the required password, click on the Clone button. Carbon Copy Cloner will copy the data stored in the disk image back to the iPod. Once the process is complete, your iPod will regain all the music and data it had when you first cloned it. Naturally, it won't have any music or data you've added since then.

Another alternative should be available by the time you read this: ProSoft Engineering's TuneTech (\$59; www.prosofteng.com). ProSoft says that in addition to backing up your iPod, TuneTech will repair it, optimize its playlists so they're more efficient (meaning that your iPod's hard drive has to spin up less often, thus saving the battery charge), salvage some deleted files, shred data, duplicate the iPod's contents to another iPod, and scan the iPod's drive for damage.

Simpler Spotlight

Is there any way to make Spotlight search just document names and not the contents of the tens of thousands of files I have on my hard disk?

Ron Belisle

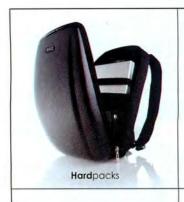
The best solution I've found is to enter your search term inside quotation marks. Although this doesn't narrow your search to just document names, it does narrow it to instances when those words appear together. For this reason, the closer you come to the file's full name, the more accurate your results will be.

For example, if I enter Mac 911 invoice with no quotation marks, Spotlight offers 151 matches (and would offer scads more if I used an e-mail client that Spotlight indexes, such as Apple's Mail). Some of these results contain those three magic words in the document's title. When I enter "Mac 911 invoice", with quotation marks included, however, I see 30 results, all of which have the words Mac 911 invoice in the title. But note that this trick works only when you enter entire words. If I enter "Mac 911 inv", for instance, I get bubkes.

Senior Editor CHRISTOPHER BREEN is the author of Secrets of the iPod, fifth edition (Peachpit Press, 2005) and The iPod and iTunes Pocket Guide (Peachpit Press, 2005).



Send your tips to mac911@ macworld.com. If we publish yours, you'll receive this dandy mug. All published submissions become the sole property of Macworld.







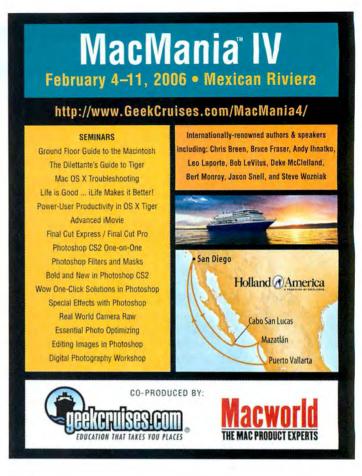


Powerbookcases

Softpacks

Products available at Apple stores, Apple online or axio-usa.com









www.lnsideMacRadio.com

ADVERTISERS AND PRODUCT INDEX Interact with the companies whose products and services are advertised in MacWorld.

ADVERTISER	INTERACT	PAGE NO.	PAGE NO.	ADVERTISER	GET-INFO
4D	4d.com	C3	HARDWAR	E	
Alsoft	alsoft.com	56-57	COMPUTERS		
Anthro	anthro.com/mac	11	C2-1	Apple Computer	apple.com
Apple Computer	apple.com	C2-1	DIGITAL PHOTO	A A CONTRACTOR OF THE PARTY OF	577.532.00
Aspyr Media		14, 47, 49, 51	108-109	Nikon	nikondigital.com
Axio	axio-usa.com	120	FURNITURE		
Battery Technology	batterytech.com	73	11	Anthro	anthro.com/mac
Booq	booqbags.com	70	HARD DISK STOR	RAGE	
Broadway Photo	broadwayphoto.com	124	65	DLO/Netalog	dlodirect.com
Brother	brother.com	53	8	Maxtor	maxtor.com
Bumbakpaks	bumbakpaks.com	76	MISCELLANEOUS		
CDW	800-ALL-MACS	55	120 73	Axio Battery Technology	axio-usa.com batterytech.com
Chronos	sohoseries.com	10	70	Boog	booqbags.com
Club Mac	clubmac.com	125	76	Bumbakpaks	bumbakpaks.com
Contour Design	contourcase.com	72	72 76	Contour Design Dension	contourcase.com densionusa.com
Dension	densionusa.com	76	68-69	Dr. Bott	drbott.com/local
DLO/Netalog	dlodirect.com	65	41 75	Elgato Systems Etymotic Research	elgato.com etymotic.com
Dr. Bott	drbott.com/local	68-69	75 101	Genentech	gene.com/careers
Dymo	dymo.com	23	30-31	Griffin Technology	griffintechnology.com
Emusic	eMusic.com	104-105	24-25, 27 40	Harman Kardon ioGear	harmankardon.com iogear.com/mwBT
Elgato Systems	elgato.com	41	60	iSkin	iskin.com
Epson	epson.com/k3	2-3	4	Klipsch	klipsch.com
Etymotic Research	etymotic.com	75	63 81	MacCase MacResQ	mac-case.com macresq.com
Filemaker	filemakertrial.com/sb	16-17	79	Mark/Space	markspace.com
Freeverse	freeverse.com	42	80 79	MarWare Metropolitan	marware.com metrovacworld.com
Fujitsu	fcpa.fujitsu.com/9689	7	74	Otterbox	otterbox.com
Geek Cruise	geekcruises.com	93-98, 120	78 78	Plantronics	volumelogic.com
Genentech	gene.com/careers	101	66	Pentax RadTech	pentaximaging.com radtech.com/mw
Griffin Technology	griffintechnology.com	30-31	13	Sanyo Corp.	sanyodigital.com
		24-25, 27	13 35 77 29	SDI Technology	ihomeaudio.com shure.com
Harman Kardon Hewlett-Packard	harmankardon.com hpshopping.com	C4 C4	29	Shure Small Dog	smalldog.com
			64	Targus Tekkeon	targus.com
Insider Software	insidersoftware.com	43	71 66	Tekkeon Think Different Store	tekkeon.com thinkdifferentstore.com
ioGear	iogear.com/mwBT	40	15	Wacom	tabletphotofun.com
iSkin	iskin.com	60	15 67	Xtreme Mac	xtrememac.com/macworld
Kerio Technology	kerio.com	28	50	zCover	zcover.com
Klipsch	klipsch.com	4	PRINTERS 53	Brother	brother.com
MacCase	mac-case.com	63	23 2-3	Dymo	dymo.com
MacConnection	macconnection.com/mw	126-127	2-3	Epson Hewlett-Packard	epson.com/k3 hpshopping.com
MacMall	800-321-7532	122-123	C4	Hewlett-Packaru	npshopping.com
MacResQ	macresq.com	81	SCANNERS	Fujitsu	fcpa.fujitsu.com/9689
MacSoft	macsoftgames.com	46		DER	repairajitaireoini 7007
Macworld Conference & Expo	macworldexpo.com	89	124	Broadway Photo	broadwayphoto.com
Mark/Space	markspace.com	79	55	CDW	800-ALL-MACS
MarWare	marware.com	80	125 126-127	Club Mac MacConnection	clubmac.com macconnection.com/mw
Maxtor	maxtor.com	8	122-127	MacMall	800-321-7532
Metropolitan	metrovacworld.com	79	37, 128-131	Other World Computing	macsales.com
Micromat	800-829-6227	21	SERVICE	S	
Miraizon	miraizon.com/mw12	83		OUCTS/SERVICES	
Network Solutions	networksolutions.com	39	39	Network Solutions	networksolutions.com
Nikon	nikondigital.com	108-109	104-105	Emusic	emusic.com/johnny
Omni Group	omnigroup.com/macworld12	48		CONVENTIONS	and the day and
Other World Computing	macsales.com	37, 128-131	93-98, 120 89	Geek Cruise Macworld Conference & Exp	geekcruises.com macworldexpo.com
Otterbox	otterbox.com	74	SOFTWA	D E	macwortacxpo.com
Outspring	outspring.com	12		N.L	
Pentax	pentaximaging.com	78	BUSINESS C3	4D	4d.com
Plantronics	volumelogic.com	78	16-17	Filemaker	filemakertrial.com/sb
		66	28	Kerio Technology	kerio.com
RadTech	radtech.com/mw		48	Omni Group	omnigroup.com/macworld12
Sanyo Corp.	sanyodigital.com	13	ENTERTAINMEN		aspyr.com
SDI Technology	ihomeaudio.com	35	44, 47, 49, 51 42	Aspyr Media Freeverse	freeverse.com
Shure	shure.com	77 29	46	MacSoft	macsoftgames.com
Small Dog	smalldog.com		FONTS		
Targus	targus.com	64	43	Insider Software	insidersoftware.com
Tekkeon	tekkeon.com	71	MULTIMEDIA	Curton	Care Note of Control of
Think Different Store	thinkdifferentstore.com	66	83	Miraizon	miraizon.com/mw12
Wacom	tabletphotofun.com	15	UTILITIES	Alcoft	alsoft.com
	xtrememac.com/macworld	67	56-57 10	Alsoft Chronos	sohoseries.com
XtremeMac			21 12	Micromat	800-829-6227
zCover	zcover.com	50	12	Outspring	outspring.com

December 2005, Volume 22, Number 12. Mocworld (ISSN 0741-8647) is published monthly by Mac Publishing, L.L.C. Editorial and business offices: 501 2nd St. 5th Fir., San Francisco, CA 94107, 415/243-0505, Subscription orders and inquiries should be directed to 515/243-3273. Subscription rates are \$34.97 for 12 issues, \$59.97 for 24 issues, and \$79.97 for 36 issues. Foreign orders must be prepaid in U.S. funds. Add \$10 per year for postage for Canada; add \$25 per year for air freight for all other countries. Canadian OST Registration #868421876. Periodicals postage paid at San Francisco, California, and at additional mailing offices. Canada Post Publications Mail Agreement No. 40683173. Returns: 4960-2 Walker Road, Windsor, Ontario, Canada N9A 6.J3. Postmaster: Send address changes to Macworld, Subscription Dept. P.O. Box 37781, Boone, IA 50037-0781, Printed in the U.S.A.

PRICE WAR!

100's of Prices Slashed! Call or visit macmall.com!



The NEW iPod nano

Even though the iPod® nano is 1/5 the size of the original iPod, it still packs incredible audio fidelity into a sleek and eye-catching design that's as thin as a pencil! It weighs just 1.5 ounces but holds up to 1,000 of your favorite songs or thousands of photos!

NEW! iPod nano starting at



The coolest iPod accessories!



















We'll beat any price!



Mac[®] mini G4 up to 1.42GHz

Up to 256MB SDRAM; exp. to 1GB Up to 80GB Serial ATA hard drive Combo Drive (DVD/CD-RW) or SuperDrive (DVD±R/CD-RW) 10/100BT Ethernet networking Optional AirPort* + Bluetooth 2.0

starting at

\$474!

eMac⁻⁻ G4 up to 1.42GHz

17" built-in display (16" vis.)
Up to 512MB SDRAM; exp. to 1GB
Up to 160GB Serial ATA hard drive
Combo Drive (DVD/CD-RW) or
SuperDrive (DVD±R/CD-RW)

starting at

\$794!

Finance for as low as \$20/mo

"WELL BEAT ANY PRICE or competitive promotion on any Apple computer. We may require proof of dealer's pricing. Competion must be an Apple Authorized Revealer. Product must be in stock at the competition. Advertised item must be identical to the one offered by MacMall and must be a new item in a factory scaled box. We reserve the right to limit organizity ordined. This offer does not apply to special, bonus or free offers, grand openings, special purchases or special boys, manufacturer's rebuses, closeous, clearance, or to dealers' one-of-a wind or other finited quantity offers. Nor does it apply to advertising errors made by any authorized dealer. Not open to dealers. Youl where probabled Sony, offer not valid in conjunction with other relate offers. On multiple time quoter. "Well Boar Any Frice" applies to the price of the price and the price of the price

The hottest software deals!







Mac OS® X Tiger™
#599201
#599201
FREE
Training
DVD!
Call for details







Save even more than our advertised price by shopping online or calling.

Prices are too low to advertise!

Look for the shopping cart symbol for models that qualify.

FREE Printer!' FREE 1GB RAM!'

With select computer purchase!

Hurry! Offers end soon! See below for details.



Authorized Reseller

Plus... shop online for the latest special offers!









iBook® G4 up to 1.4GHz

512MB SDRAM; exp. to 1.5GB
Up to 60GB ATA/100 hard disk drive
Combo Drive (DVD/CD-RW) or
SuperDrive (DVD±R/CD-RW)
AirPort® Extreme + Bluetooth 2.0

starting at

\$994!

Finance for as low as \$20/mo

iMac G5 up to 2GHz!

Up to 512MB SDRAM; exp. to 2GB
Up to 250GB Serial ATA hard drive
Combo Drive (DVD/CD-RW) or
SuperDrive (DVD±R/CD-RW)
AirPort® Extreme + Bluetooth 2.0

starting at

\$1,294!

Finance for as low as \$39/mo

PowerBook® G4 up to 1.67GHz

512MB SDRAM; exp. to 1.25GB
Up to 100GB Ultra ATA hard drive
Combo Drive (DVD/CD-RW) or
SuperDrive (DVD±R/CD-RW)
AirPort® Extreme + Bluetooth 2.0

starting at

\$1,494!

Finance for as low as \$45/mo

Power Mac® G5 up to 2.7GHz!

PowerPC" G5 dual processors 512MB DDR RAM; expandable to 8GB Up to 250GB Serial ATA hard disk drive 16X Dual Layer SuperDrive" Gigabit Ethernet networking

starting at

\$1,994!

Finance for as low as \$60/mo

entire order, oot individual line, items, Offer applies to pire taked prizes only. Offer wild only at raise of purchase, optimizes a private responsibility of the NAM OFFEIL-FREE in to 1GB total premium RAM for your educ or Mac after MacMail mail-in rebate. This offer is for a branded 512MS memory module. Total RAM stated is based on mintal RAM configuration of eMac or Mac. is the \$17MD imported A \$29.9% installation for is required. Price of RAM before rebate is \$55.5 FREE up to 1.5GB total premium RAM for your Power Mac after MacMail mail-in rebate. This offer is for a branded 1GB memory module. Total RAM stated is based on mintal RAM configuration of the view flows of 1900 and the 1GB upgrade A \$39.99 installation fee is required. Price of RAM before rebate is \$113.5 FREE up to 1.5GB total premium RAM for your Power Mac after MacMail mail-in rebate. This offer is for a branded 1GB memory module. Total RAM stated is based on the MacMail mail-in rebate. This offer is for a branded 1GB memory module. Total RAM stated is based on the NAM configuration on 190 memory module. The offer shade is \$119.5 FREE point CM-500 All in-One printer in free after \$29 MacMail mail-in rebate and \$29 and \$29 and \$29 and \$29 and \$20 and \$

The best selection of displays and accessories!



















Call MacMall today! 1-800-321-7532

Source Code: MACWORLD

Eroselysey Pholo

1-800-361-343

Holiday Hours: Mon-Thurs: 9am-12am · Fri: 9am-4pm · Sun: 9am-9pm · Sat: 6pm-10pm

Customer Service: Local & International: 24 Hour Fax Hotline:

718-338-3028 718-338-1800 718-338-3029

Email: info@bwayphoto.com

We specialize in Overnight Delivery ice Your Order by 7:00 PM EST and Receive Your Order by the Next Business Day! For an Additional







21 Day Satisfaction Next Day Air Available Worldwide Shipping No Surcharge on Credit Cards

Government & School PO's Accepted

Visit our website at: www.broadwayphoto.com

DIGITAL CAMERAS NIKON Coolpix 8400 NIKON D2HS NIKON Coolpix 8800 8.0 MegaPixels 4.1 MegaPixels · 8.0 MegaPixels 10 Opt/4x Dig Zoom 2.5" LCD Screen 10x Opt/4x Dig Zo 48999 230999 \$61999 8700.\$529.99 CP L1 ... P1....\$354.99 CP P2 ... OLYMPUS C7070 7.1 MegaPixels 1.8" LCD Screen OLYMPUS C-8080 NIKON D70-S 8.0 MegaPixels 5x Opt/3x Dig Zoo 2.0" LCD Screen 63999 44999 **OLYMPUS Evolt E-300** PENTAX "IST-DL PENTAX Optio WP · 5.0 Million Pixels 6.1 MegaPixels CCI 5.0 MegaPixel · 1x Opt./1x Dig Zo 2.5" LCD Screen · 2.0" LCD Screen \$52999 50499 \$21999 SONY DSC-H1 SONY Mavica CD SONY DSC-P200 · 1.8" LCD Screen 7.2 MegaPixels 3x Optical Zoom 299⁹⁹ 4.0 MegaPixels • 4x Dig./7x Opt. Z \$399⁹⁹ · 2.5" LCD Screen \$44999 CANON DIGITAL REBEL XT KIT CANON EOS 20D SONY DSC-T7 8.2 MegaPixels 6.8.03 Megapixel 5.1 MegaPixels 2.5" LCD Scre 1.8" LCD Screen 1.8" LCD Screen \$111999 71999 ebel Digital XT... CANON PowerShot SD550 CANON PowerShot G6 KODAK DX7590 5.4 MegaPixels 7.1 MegaPixels 3x Optical Zoom 7.1 MegaPixels 10x Opt./3x Dig. Zoo 249⁹⁹ · 4x Optical Zoom \$46999 541499 NEW ZS Z700\$159.99 EZS Z740 ZS Z730760, CALL EZS V530 SD450....\$319.99 CASIO EX-Z750 UJI FinePix S3 NEW 5.25 MegaPin 12.3 Mega Pixels 2.0" LCD 9.0 MegaPixels 10.7x Optical Zoo

\$29.95



\$16



Place

99 ⁹⁹	Special
/! XL-H1 .	CALL S3079.99

NEW! XL-H1	CALL
XL-2	\$3079.99
ZR-100	
ZR-200	\$279.99
ZR-300	5349.99
Special! ZR-400	\$374.99

JVC GZ-MC500 · 5.0 MegaPixels · 3x CCD



GZ-MC100	S604.99
NEW! GZ-MC200	\$629.99
NEW! GZ-MG20	\$529.99
NEW! GZ-MG30	\$609.99
NEW! GZ-MG40	\$609.99
NEW! GZ-MG50	\$629.99
JY-HD10U	\$2249.99

SONY DCR-VX2100 · 48x Digital Zoon

· 12x Optical Zoom

· 2.5" LCD Screen

\$194999



Special!	DSR-PDX10S1599.99	
Special!	DSR-PD170 \$2449.99	

SONY DCR-PC1000

2.7" LCD Scree

\$83999

DCR-PC55



1.33 MegaPixels

CANON ELURA 90 · 20x Optical Zoon

2.5" LCD Scree

\$47999



w	D	310		C	ALL
ira	85			539	9.99

JVC GR-DF550 · 1.33 MegaPixels

· 2.5" Color LCD

\$34999



GR-D250	\$249.99
Special! GR-D270	\$264.99
GR-D295	S269.99
GR-DF430	\$299,99
GR-DF450	\$324,99
NEW! GR-X5	\$849,99
NEW! GY-HD100U	\$429.99
GY-DV5000	\$3899.99
LOU DOLL NOT	

2.8 MegaPixels

• 10x Optical Zoom • 2.7" LCD Screen

\$129999

CANON OPTURA 500

2.3 MegaPixels 10x Optical Zoom

· 200x Digital Zoo · 2.5" LCD Scree

Optura 50	\$524.99
Optura 60	\$594,99
Optura 400	
NEW! Optura Sl	\$564.99
Optura XI	\$799.99
NEW! Optura 600	

SONY DCR-HC90

120x Digital Zo

. 2.5" LCD

\$68999



DCR-HC21	\$3	19	.99
DCR-HC32	\$3	89	99
DCR-HC42	54	29	.99

SONY DCR-DVD403

3.3 MegaPixels

10x Optical Zo
 2.7" LCD

67999



\$499.99

TRV280 \$264.99	
TRV480\$304.99	
HDR-FX1\$2599.99	DCR-DVD92
HVR-Z1 \$3999.99	Special/ DCR-DVI

PANASONIC PV-GS250

· 3.1 MegaPixels · 2.5" LCD Screen

DCB

NEW

566999



9	C A = 1 P	Ξ
C		
7	Steen	

AG-DV2500	\$1409.99
AG-DVC200	
PV-GS19	\$269.99
PV-GS31	\$299,99
PV-GS35	.5379,99
PV-GS150	\$499.99
PV-GS400	5979.99

PANASONIC AG-DVX100A

· 3-CCD Imaging

· 12x Optical

\$229999

AG-DVC7	\$889.99
AG-DVC30	\$1299.99
AG-DVC60	\$1749.99
NEW! AG-HVX200	CALL
NEW! AJ-HDX100	CALL
NEW! SDR-S100	CALL
VDR-M50	S469.99
VDR-M53	\$439.99
Special! VDR-M55	5439,99
VDR-M75	\$514.99
Speciall VDR-M95	\$649.99

Z3 \$244.99 Z5 \$304.99 Z10 \$134.99 X60 \$239.99 Max 7D \$879.99 Max 5D \$604.99

N FOCUS LP600 2000 Max Ansi Lumenss

CANON FS4000

USB

546999

3x Optical Zoom \$29499

8.0 MegaPixels 7x Optical Zoom

\$49999

MINOLTA Dimage A200

EX-Z10/Z120 P505.\$324.99 EX-P700.\$389.99 \$100.\$194.99 EX-S500.\$274.96

\$124999

	THE PARTY OF THE P
X2	\$699.99
	\$2099.99

OPTOMA EZPRO 739 · 2200 Max Ansi Lumenss

MINOLTA Dimage Z6

6.0 MegaPixels 12x Optical Zoom

\$141999

\$104999

EZPRO 758 \$1629.99 BENQ PB8120

ANASONIC DMC-E 8.32 MegaPixels 12x Optical Zoom 529⁹⁹

9 DMC-FX9, \$324.95

\$69999	-	٤
PB 6110	5699	98
PB 7230	\$1499	99
	\$1549.	

SCANNERS

NIKON LS50

5888 x 4000 pixels High Quality 4000 DPI Optical CCD Senso Resolution



NIKON Super Coolscan LS-5000

· 4,000 dpi Optical Re 2x-linear CCD · Multiple film format \$83999



SONY KDE-37XS955 NEW!

HDTV \$249999

	_	-
KDE-42XS955	.\$33	199.99
KDE-50XBR950	556	99,99
KLV-32M1	520	149.99
	_	_

PANASONIC TH-50PX500U

\$379999 TC-32LX50

TELEVISIONS

SHARP LC-32D7U Aguos Liquid

\$199999

EPSON Stylus 2200P

· USB/Serial Por · PC or Mac

· 6 Color Small Archival Links \$53999



EPSON Stylus 1280

\$39999

OLYMPUS P440 1.8" LCD

· USB

\$37999



Policy: Visa, Mastercard, Discover, American Express, Diners Club, Money Orders, Certified Check, (Personal Checks up to 14,000.00 with name and address imprinted on check). C.O.D. orders are also accepted. Orders by mail please print name address and phone number clearly. Shipping methods - in the Continental U.S.A. will be via Fedex, U.P.S. or Air Mail. Over size items via truck. Shipping and Handling are additional, 21 days for return or exchange (video & dia 12 days) with prior authorization only. (Call customer service for authorization expressed in the continent of the co

ClubMac®

Authorized Reseller

iPod nano.

Smallest, lightest and thinnest iPod ever! Holds up to 1,000 songs! 2GB and 4GB models.

FREE Engraving! FREE FM Transmitter!*

starting at *194.
*After mail-in rebate. Call for details.

MENTION CODE: CLUBMACWORLD





















PRICE WAR!

100's of Prices Slashed! Call 1-800-260-8549 or visit us at clubmac.com

FREE RAM! FREE Printer! With select Apple

Offers end soon!

Computer purchase!

Free RAM with select Apple computer purchase after ClubMac mail-in rebate and \$39.99 installation fee. Free Printer with any Apple computer after mail-in rebates. Printer may differ from model shown. Offer ends 12/31/05.

iBook G4 New models! Speeds

up to 1.42GHz!

FREE 1GB Premium

RAM!' FREE Printer!'

SEE Printer! SOGAL

starting at **After mail-in rebates. A \$39.99 Installation fee applies to RAM offer. Call for details.

PowerBook G4!



Speeds up to 1.67GHz! FREE 1GB Premium RAM!' FREE Printer!'

starting at starti

Power Mac G5!

Up to Dual 2.7GHz models! FREE 1GB Premium RAM!' FREE Printer!'

starting at 57,

*After mail-in rebates. A \$39.99 Installation fee applies to RAM offer. Call for details.





iMac G5!

Up to 2GHz! Up to 20" display! FREE 512MB Premium RAM! FREE Printer!

starting at

-\$**1,294!**

*After mail-in rebates. A \$39.99 Installation fee applies to RAM offer. Call for details.

6 Months Same as Cash!

 Easy online or phone application!

 ClubMac credit card —no annual fee!
 Call for details.



MacConnection[®]

the right tools for the right brain™

iPOD ACCESSORIES

Shuffle and Jive TuneBox for iPod shuffle

- Keeps the shuffle's clickwheel controls within easy reach
- Impressive sound in less than 4 square inches

ONLY \$2995 #6052725



GRIFFIN

NEW!

Stream, Line. iPod nano Lanyard Headphones

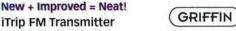
- Headphones are incorporated into lanyard
- Eliminates cable clutter

ONLY \$39 #6035896

iPod nano Armbands

■ Flexible and lightweight

ONLY \$29 #6035950



With LCD for iPod ■ Large, easy to read backlit LCD screen

- Set iTrip to either US or International tuning modes

ONLY \$2995 #6039993



Ø-

Logitech⁻

Portable System, Big Sound mm50 iPod Speaker

■ 3D sound processing system that "widens" the stereo effect







Your Favorite Songs to Go MONSTER'

Transmitter for iPod and shuffle ■ Transmits wirelessly to your car stereo using FM radio frequencies

iCarPlay Wireless FM

· Rapidly charges iPod, then switches to a trickle charge to optimize performance

ONLY \$7949 #5528453 (iPod)





iPod nano:

- Holds up to 1000 songs and full-color
- Holds up to 25,000 photos
- Only 3.5" x 1.6" x 0.27" and 1.5 oz
- Bright 1.5" color LCD display
- Up to 14 hours of battery life ■ Apple Click Wheel
- Charges and syncs via USB
- Accessory-compatible Dock connector
- Completely skip-free playback
- Works with Mac OS X or Windows 2000/XI
- Plays music, podcasts, and audiobooks
- Syncs contacts, calendars, and to-do lists

\$194 #6035853 iPod nano 2GB White iPod nano 2GB Black 194 #6035870 244 #6035861 iPod nano 4GB White 244 #6035888 iPod nano 4GB Black

NEW!



■ Store up to 240 songs STARTING AT \$94

20GB or 60GB iPod

- Store up to 5,000 songs
- Full-color photo capability

PERIPHERALS

STARTING AT \$294

Envious Friends Not Included Panasonic

42" Plasma ED TV

- 16:9 widescreen aspect ratio ideal for movies
- HDTV compatible, 4000:1 contrast ratio

ONLY \$1498 #5982648



Stand sold separately

Straight to DVD

DC10 DVD Camcorder ■ 1.33 MP; records to DVD

See www.macconnection

■ 2.5" super bright LCD screen

ONLY \$749 #6053672



Keyboard, Mouse: **Kensington**° No Strings Attached PilotBoard Wireless Desktop for Mac

■ QuickRF wireless technology connects keyboard and mouse without cords and hassles

■ Detachable wrist rest



Slinky Monitor, Sleek TV 19" 940MW Widescreen LCD Monitor /TV/FM Radio



■ 700:1 contrast ratio; 1440 x 900 (WXGA) resolution

ONLY \$599 #6080540





Now Playing

The Journey

Fatboy Slim

Palookaville

9 of 12

3:37



Music

Photos

Extras

Settings

Backlight

Shuffle Songs

W. 23.3

► 11

Only 3.5 x 1.6 x 0.27 inches and 1.5 ounces

> Apple Produc Save up to \$200!

Exclusive

on Select

Cash Rebat

*After \$50 manufacturer's mail-in rebate an Canon







Speed, Versatility and Simplicity

Stylus RX620 Photo Printer

- · Crop, resize, make reprints and enlargements, view, select, and print photos-all PC-free
- Scans, prints, and copies

ONLY \$29995



LACIE

EPSON

Design, Develop, Maintain Macromedia Studio 8.0

■ Includes the latest releases of Dreamweaver, Flash Professional, Fireworks, Contribute, and FlashPaper

Upgrade ONLY \$39995 #5945581

Full Version ONLY \$999







Complete Movie Studio-in-a-Box

Toast 7 Titanium

- Burn large files across multiple discs
- Compress and copy DVD movies
- Add over 50 hours of music to an audio DVD-with on-screen TV menus, shuffle play, and rich Dolby Digital sound

ONLY \$8295





Add Storage Capacity to Mac mini!

FireWire Mini Companion Hard Drive

- Store more photos, videos, music, and more
- Stackable for natural, cooling airflow

STARTING AT \$11995 80, 160, 250GB AVAILABLE



800.800.3333

www.macconnection.com/mw

MacConnection^a

the right tools for the right brain™



Other World Co

Serving the Mac Universe since

Excellent service Competitive prices Quality products

Memory

More Memory = Faster Mac

OS X Runs Better with More Memory Even upgrading from 384MB to 640MB or 1GB Makes a Noticeable Difference, even better than doubles performance for some operations.

PowerMac G5 & iMac G5

All Models up to Dual G5 2.5GHz 184 Pin DDR DIMM upgrades 512MB module \$52.99 1GB module \$119.99 1GB kits \$104.99 2GB kits \$239.00 2GB Samsung Original Kit \$259.00



All PowerMac G4, eMac G4 & iMac G3/G4 Models

SDRam or DDR Memory module upgrades 256MB from \$27.99 512MB from \$51.99 1GB from \$114.99



PowerBook G4 Aluminum & iBook G4 (all models)

All Models up to 1.67GHz 200 pin DDR SO-DIMM upgrades 512MB from \$51.99 1GB from \$139.99

1GB Samsung Factory Original \$165.00
Same Module installed by Apple for less than half



OWC Mercury Pro 16X DVD SuperDrive External FireWire/USB Solution \$139.99. Includes Dantz Retrospect, Dragonburn, 5 pieces of DVD-R media and 25 Pack CD-R media.





Run more Applications Faster Get more done faster with Memory Intensive Applications like Photoshop, OWC has over 17 Years Experience with adding Memory to Apple Computers. Speak to one our knowledgeable team members at 800-275-4576 or visit www.macsales.com/memory - and you'll get the right memory for your Mac! The Right Memory from OWC Makes the Difference!

SuperDrive Your Mac From Only \$45.00!

Make Music, Movies & More Add a Fast SuperDrive to your Mac to Burn CDs, DVDs, even 8.5GB Dual Layer DVDs!

Internal Options

For all PowerMac G3/G4/G5 Models, all eMac G4s, all iMac G4s:

User Installable, Internal SuperDrive upgrades from \$45 Pioneer SuperDrive w/16X DVD & 40X CD Burn Speeds + Dual Layer only \$57.99. Value Bundles complete with software and media from iust \$5 more.

All PowerBook G4 Titanium 15": G4 Aluminum 12/15/17" Models

OWC MercuryPBG4 8X DVD Burn & 24X CD Burn Speeds + Dual Layer Internal. Upgrade Kit - now \$139.99 with software and media bundle.





PC) with an available FireWire/USB 2.0 port.



iPhoto, iTunes, Discburner, etc; Roxio Toast; nearly any CD/DVD authorizing software available!



macsales.com/superdrive

media, cases & label

kits in stock tool



High Performance FireWire & USB Storage

All OWC FireWire/FireWire+USB2 Solutions proudly feature the latest custom designed, Oxford based bridge interfaces - for the best in performance and reliability.



OWC Mercury Elite-AL Pro 800 RAID Solutions



OWC Neptune

'Value Done Right' FireWire 400 solutions High performance, quality storage for less

80GB to 320GB from \$104.99

Popular Sizes:

80GB 7200RPM 8MB \$104.99 160GB 7200RPM 8MB \$139.99 250GB 7200RPM 8MB \$179.99 320GB 7200RPM 8MB \$229.99

NEW! 400GB 7200RPM 8MB \$299.99

MacAddict

OWC Mercury Elite Pro 'Classic'

Top Rated Solutions up to 400GB from \$129.99

Elite Pro FW400+USB2 Combo Solutions 250GB 7200RPM 8MB Buffer \$209.99 300GB 7200RPM 8MB Buffer \$269.99 250GB 7200RPM 8MB Buffer \$269.99

Combo Solutions 250GB 7200RPM 8MB Buffer \$239.99 400GB 7200RPM 8MB Buffer \$389.99

Title Pro TW800/400 Solutions 160GB 7200RPM 8MB Buffer \$189.99 250GB 7200RPM 8MB Buffer \$239.99 GB 7200RPM BMB Buffer \$289.99







newertechnology;

Foryour Mac mini! TrimiStack

From \$99.95 to \$499.99, new NewerTech miniStack provides OGB to 500GBs of high speed FireWire storage + provides integrated 2-Port FW400 and 3 Port USB2.0/1.1 Hub. Sleek in form, superb in function.





FireWire 400 Cable (All Models)
 FireWire 800 Cable (All Models w/FW800 Support)

- BMC/Dantz RetroSpect Backup
 - Intech HD Speedtools with Diagnostic Test Suite
 - Cool-Blue Read/Write Access & Power Indicator LED

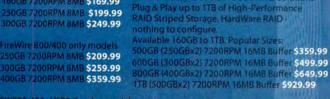
Pretested, Preformatted + Over 1GB of free software loaded

· USB Cable (All Models w/USB2 Support)

OWC's NEW Mercury Elite -SATA RAID Solutions

Available from 320GB to 1TB - Sustained Data Rates of over 100MB per Second!

2 Drive Enclosure Kit w/o Hard Drives \$99.95 500GB 7200RPM SATA RAID w/16MB Buffer \$339.00 800GB 7200RPM SATA RAID w/16MB Buffer \$649.00 1TB(1009GB) SATA RAID w/16MB Buffer \$979.00



FW800/400+U5B2 Combo models 250GB 7200RPM 8MB \$219.99 400GB 7200RPM 8MB \$369.99

FireWire 400+USB2 Combo Models

160GB 7200RPM 8MB \$169.99

FW400/USB2 Combo m

EDITORS'

MacAddict

OWC Mercury Elite-AL Pro Solutions -Same Award Winning FireWire/USB2

Interface Bridge as Elite Pro 'Classic' models, but with a brand new modern, aluminum housing design. Available 80GB to 500GB from \$129.99

500GB 7200RPM 8MB \$469.99

OWC Mercury On-The-Go 2.5" Portable Solutions

FireWire+USB2 Combo Solutions Reliable, High-Performance, Fits in your Shirt Pocket Sized 40GB to 120GB from \$129.99

80GB 5400RPM w/16MB Buffer \$195.99 100GB 5400RPM w/8MB Buffer \$249.99

NEW High Performance 7200R 80G8 7200RPM w/8MB Buffer \$239.99 80G8 7200RPM w/8MB Buffer \$279.99 100GB 7200RPM w/8MB Buffer \$349.99 Macworld MacSilon **** Photoshop User



Free OWC Tech Support

All Elite Models are covered by a 2 Year OWC Warranty
All On-The-Go Models are covered by a 1 Year OWC Warranty
Both Elite & On-The-Go Models are EMC/Dantz RetroSpect Backup Certified

All OWC Mercury Elite, Elite-AL, and On-The-Go Models Include:

See the full line of OWC FireWire solutions, as well as solutions by LaCie, EZ Quest, SmartDisk, and Weibetech online at macsales.com/FireWire

Hard Drive Controllers

Hard Disk Controller Cards SHG tac.

Serial ATA 4-Channel PCI-M \$79.95 CONNOT

Tempo ATA & SATA Mac PCI Controllers Tempo Trio FireWire/USB2/ATA-133 all in one PCI \$149.00

FirmTek

4-Channel SATA Controllers from \$119.95

SATA External Enclosures

NEW OWC Mercury Elite-AL SATA **DUAL BAY \$99.95**

FirmTek

Dual-Bay Hot Swap External Serial ATA Enclosure with SATA PCI Controller Card \$257.95

Sonnet Fusion 4-Bay SATA Kit \$549.00

Internal Hard Drives

Bulk up your computer by giving it higher capacity to perform for your needs. For iMacs, eMacs & PowerMacs

3.5" Plug & Play 80GB to 500GB _from \$59 -11



For PowerBooks, iBooks & Mac mini

2.5" 40GB to 120GB from \$69

ADD FIREWIRE & USB to vour Mac!

FireWire from \$9.95 FireWire+USB Combos from \$29.99

PROSOFT **Drive Genius**

Retail \$99.95 65.00 Maintains, Manages, Optimizes, Repairs. Keep your Hard Drives at their best. Recover data if disaster strikes!









iPod Replacement Batteries & Enrichment Products



newertechnology:

iPod Replacement Battery Kits

Easy to Install, Tools Included + Online Installation Videos. Get up to 78% more capacity & 20+ Hours Runtime!

NuPower CHIGHLY RECOM

0mAh for mini \$24.95 50 900mah for Photo \$29.95 28% more capacity 750mAh for 4th Gen \$25.95 20% more capacity 850mah for 3rd Gen \$25.99 30% more capacity.

1800mAh for 1st/2nd Gen \$19.99 "While Supplies Last" 46% more capacity 2100mAh for 1st/2nd Gen \$29.99 *While Supplies Last* 70% more capacity WEW! 2200mAh for 1st/2nd Gen \$34.95 78% more capacity

RoadTrip & RoadTrip Plus Listen to your iPod on-the-road!

Finally, an easy to use and GREAT sounding FM Transmitter for your iPod! Just plug, tune a single station and jam on without interruption. Easier to use and sounds better than products costing 2 times as much!

Road Trip! + B+ WHIGHLY RECOMM FM Transmitter + iPod Charger \$27.95

For iPod mini, 3rd Gen, 4th Gen, and Photo Models. Charges and broadcasts clean and

ROADTTID! B+ CHIGHEY RECOMMENDED

FM Transmitter for All Apple iPod Models \$14.95

Also works with any device with a headpho audio out jack. 19 The Differents

iPod cases



Tom Keating of TMCnet.com had this to say about the RoadTrip!+ The RoadTrip!+ FM Modulator worked flawlessly... and I was very impressed with the sound quality

OWC's full line of iPod Batteries. Accessories, and more online at acsales.com/iPod

Not comfortable opening your iPod? For \$39 + the cost of the battery, OWC installs it for you - iPod shipping Box and FedEx Overnight covered to and from!

macsales.com/iPodinstall





Audio Pow Manitors \$149.00



M-AUDIO

HITT DOMAN

Trigger Finger MIDI Ozone USB Audio Device \$199.00

Knobs \$249.00



for Mac \$41.99

Music on your Mac

contour

Shuttle A/V Controllers



Shuttle Pro v2 odXShuttle 15 programnable buttons) \$84.00



Shuttle Express \$39.99

elgato

EyeTV Video Encoder / TV Tuner/Digital Recorder \$149.99 EyeTV 200 \$295.00 EyeTV 500 High-Definition \$339.00

More rockin' accessories at macsales.com/music



Mac Improvement Laptop Accessories

newer

NuPower Batteries

PowerBook G4 Titanium 15' 4800mAh NuPower \$149.95 For all 400-1GHz Models, up to 42% MORE Capacity vs. Original Battery! NuPower batteries with up to 50% mor

Capacity also available from \$119.99 for PowerBook G4 Aluminum 12/15/17" Models PowerBook G3 Wallstreet/ Lombard/Pismo, All iBook G3 and iBook G4 Models.

Call or Visit macsales.com/NewerTech

Protect your screen! There's an OWC Laptop Screen Protector (LSP) product for your Mac.

PowerBook G4 17" \$17.99 PowerBook G4 15" \$17.95

PowerBook G3 15" \$14.99 iBook/PowerBook G4 12" \$13.95

The OWCLSPs are precision cut, glove soft leather protectors that prevent potentially permanent marks which can occur from the trackpad and keyboard while your laptop is closed.

aster Mac.net Pay less, Get more, Surf faster!

Mac-Only Internet

High-Speed Nationwide Dial-up and DSL Services -Free Tech Support & More from Mac Experts

Visit FasterMac.net or call toll free 800-869-9152 to learn more or to sign up.

Network Adapters D-Link

D-Link 10/100 Ethernet PCI Card \$9.99

PRAM Batteries

Is your Mac forgetting what time it is?



Logitech Cordless 'Click' Optical Mouse for USB SPECIAL \$25.99

O'Reilly Books
The latest Mac titles

from \$9.95 Over 30 Mag Titles In Stock!



Make your Mac mini even better!



Upgrade to 1GB only \$99.00 More Memory = Much Faster!

miniStack

29.10

From \$99.95

m 111 .

Get a Bigger & Faster Hard Drive from \$79.99 More Storage that's up to 43,8% Faster.

Burn DVDs & CDs for only \$149.95 8X DVD Burner is twice as fast as Apple's current S uperDrive option + supports Dual Layer DVD Burning!

Exclusive OWC Online Video shows how to install these Mac mini upgrades or for \$99 including overnight pickup and return delivery, OWC will do the Mac mini upgrades for you!

Call or Visit macsales.com/macmini

The Latest Enhancements



Village Tronic VTBook Add another CRT or Flat Panel Display to your Powerbook \$246,99

iLugger iMac cases for the iMac G5 or for Mac mini and/or up to 20" LCD Display 5 color combinations starting at \$99.95

Rain Design i360° A Turntable for your iMac G5 17 nd 20" 539.00





Eve candies for your iMac. Six to choose from

Apple OS X 11/1 Apple OS X 'Tiger' \$99.00 full retail box version OS X 10.2, 10.3 from \$17.99

macsales.com/osx """



ATI MacEdition Performance Video Cards

When your Mac is Fast, Don't let a SLOW video card hold you back!

PCI Video Upgrade for Performance or Additional Displays:

ATI Radeon 9200 w/128MB for any Mac with an Available PCI Slot

Up to 2048x1536 resolution. Compatible with up to 24" Displays!

High-Performance AGP Video Card Upgrades *All of the following support up to two displays

ATI Radeon x800 MacEdition with 256MB \$395.00

TOP OF THE LINE G5 VIDEO Card supports up to Apple's 30" Display! For PowerMac G5 Only.



For all PowerMac G4 Models:

ATI Radeon 9600 \$199.99

256MB of high-speed video memory 4x or 8x AGP Dual DVI

TV Out

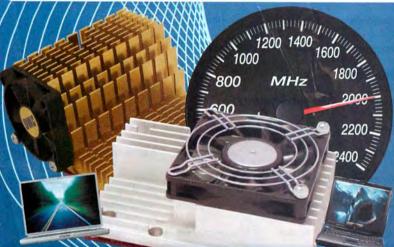
Built-in VersaVision™ for portrait displays Aupports up to 30" Displays - including Apple's Cinema 30"!

For PowerMac G4 Digital Audio, Quicksilver; All PowerMac G5 Models.



NEW! ATI Technologies RADEON < 9800 PRO MAC EDITION \$259.00

Ultra High Performance Dual Head Video Card W/ DVI, VGA and S-Video Ports, 256MB. New for PowerMac G4s.



Make the Mac you have today FASTER with up to G4/ 2.0GHZ Speed!

Why Upgrade

- More Speed for Less Cost
- · Use all your existing memory, peripherals, etc.
- Plug & Play and ZOOM
- · Works with the Latest Software & OS X Tiger too!
- · Makes your current Mac like new again!





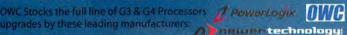


upgrades by these leading manufacturers:











G4 Single Processor Upgrades from \$195, 1.6GHz only \$269! G4 Dual Processor Upgrades from \$349, Dual 1.6GHz just \$429!

G4 Upgrades for PowerMac G3s, PowerMac G4s, Cube G4, PowerBook G3s Even Legacy PowerMac 7200-9600 Models!



OWC is the Apple Upgrades Expert! We know how to make your Mac a Faster Mac. And it's really amazing too - with a new processor, your Mac can be like new again - even better than new as it's possible for it to be FASTER than even a brand new Mac too.

Give us a call or check out our website. Right online at www.macsales.com/Faster - our compatibility guide will now just what options are right to make the Power Mad owerBook, Mac. etc. a Faster Macroday!



Money-Back on NewerTech, Powerlogix, and OWO brand upgrades!

30 Day

Other World Computing

Serving the Mac Universe since 1988

Excellent service Competitive prices Quality of visit macsales.com 800.275.4576

	Ma	cworld	Showcase	Feature	d Advertis	sers	
Develope	r Showcase	Rain Design	raindesigninc.com	40ver	4over.com	Powermax	powermax.com
Granite Digital	granitedigital.com	Contour Design	contourcase.com	Disc Makers	discmakers.com/mwmag	Data Memory Systems	datamem.com
Third Street SW	thirdstreetsoftware.com	Services S	howcase	TechRestore	techrestore.com	Inkfarm	inkfarm.com
Wiebe Tech	wiebetech.com	Copy Craft	copycraft.com	Mac of all Trades	macofalltrades.com	Mac Solutions	macsolutions.com
BookEndz ph	noto-control.com/bookendz	Biomorph	biomorph.com	Retractable Banners	retractablebanners.com	1-800-4-Memory	18004memory.com
Data Video Corp.	datavideo.us	FatCow	fatcow.com/mac	Drive Savers	drivesavers.com	Journey Education	journeyed.com
iProof	iproofsystems.com	Creative Juices	bigposters.com	Direct Sho	wcase	Journey Editorion	journeyearean
Macally	macally.com	EDG Graphics	edgmiami.com	MegaMacs	megamacs.com	Lind Electronics	lindelectronics.com
Acme Made	acmemade.com	Color City	color-city.com	Mac Solutions	macsolutions.com	Academic Superstore	academicsuperstore.com
SKB Cases	skbcases.com	Zoo Printing	zooprinting.com	MacPrices.com	macprices.com	Ramjet	ramjet.com
Mactallic	mactallic.com	Americas Printer	americasprinter.com	Mac Pro	mac-pro.com	SeafoodBy Net	seafoodbynet.com
Prosoft	prosofteng.com	Sharpdots	sharpdots.com	Your Mac Store	yourmacstore.com	Shreve Systems	shrevesystems.com

For more information, contact Niki Stranz or Carol Johnstone at (800) 597-1594.

SATA is fast, hot-swap, and more affordable!



- Hot-swappable... Unlimited storage.
- Affordable and up to 500 Gigabytes.
- Easy to use... plug and play.

Complete System incudes 1 Drive Tray, Shielded Cable, and 2 Channel Host Adapter... \$199

You supply the drive.





Complete System includes 2 Drive Trays, Shielded Cables. and 2 Channel

Host Adapter ...\$399

You supply the drives.

SATA is simply the fastest most affordable storage solution available. The mechanisms are rated at 150MB/s which means they can capture DV, AV, and preform backups faster and more efficiently than any other storage solution. Next add the ability to hot-swap drives in and out of your computer and you have a winning combination that can't be beat. The Granite SATA Systems offer unlimited storage capabilities... fill up a drive... then just keep adding drives. It doesn't get any better or more affordable than that!

Hot-Swap RAID / JBOD Systems offer unsurpassed value and reliability

Our RAID / JBOD Systems can be configured with any size drives and are truly Hot-Swappable. Now no matter what your storage or backup needs entail Granite Digital has the solution that fits the bill.



Providing Data Storage Integrity



Granite Gold Cables, Adapters, SCSI Terminators, and Components offer the ultimate in quality and reliability



Host









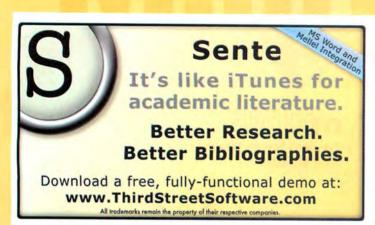


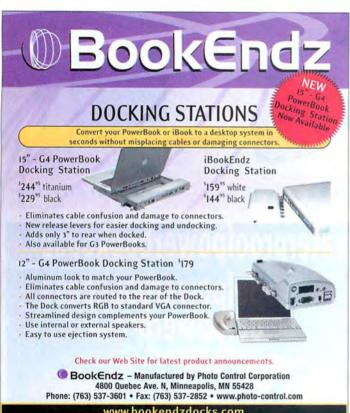
Bridge Boards

SCSI Cables

Get our catalog online at www.granitedigital.com

Granite Digital • 3101 Whipple Rd., Union City, CA. 94587 • 510-471-6442-tel • 510-471-6267-fax





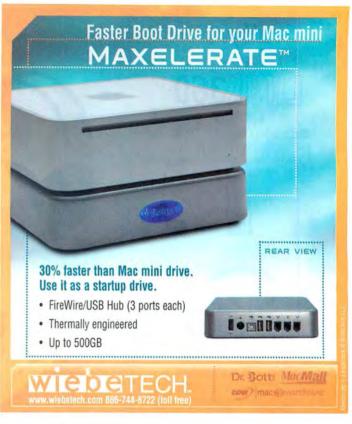


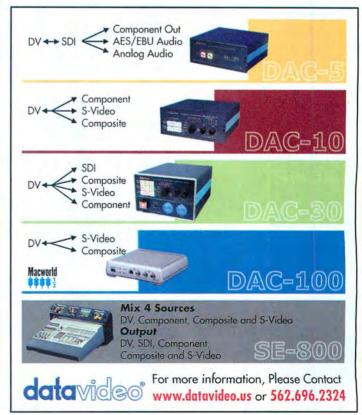
Check our website today for your printer model. www.iproofsystems.com Tel: 321-777-3910

Stylus Color 3000, Pro 5500,

Photo 1280, 1200, 2000, or

a new Stylus 2400 or 4800.







All New iPod Accessories





iPod 3D adaptors



Portable iPod Shuffle **Stereo Speakers**



Cordless Stereo Headset for

IP-P111





Portable iPod Stereo Speakers with Built-in Microphone

Call us for dealers near you 1.800.644.1132 or visit us at: www.macally.com

SAN FRANCISCO EST. 2002 USA

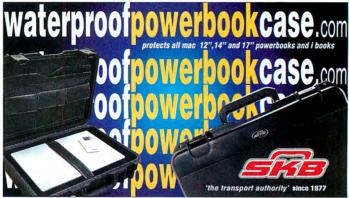
USB





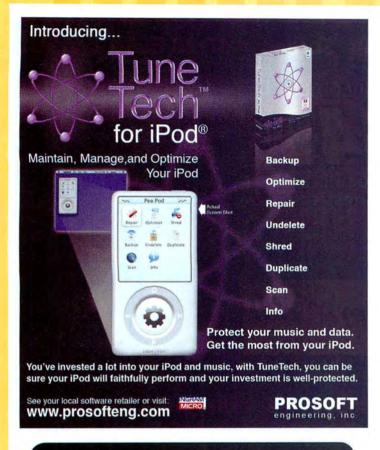
modern products for a modern lifestyle.

acmemade.com





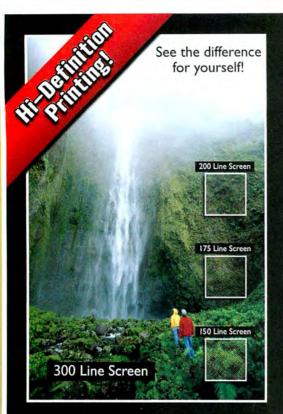








Furniture Hardware Printing Web Hosting



300 Line Screen WATERLESS Printing





Business Cards

Postcards

Letterheads

Envelopes

Catalogs

Posters

Brochures

Calendars

Presentation Folders

www.copycraft.com · 800.794.5594





Put Your Site Where Your Brain Is Left Brain Pricing. Right Brain Hosting.

Get a FatCow

- g of disk space
- · 30 Gigs of monthly transfer
- · 100 email boxes
- · WebMail
- · Spam & virus filtering
- · SiteDelux Site Editor



Get a MiniMoo

- · Domain parking
- · 1 email account
- · Spam & virus filtering
- · Customized coming soon page

-Shopping Cart -CGI, PHP Toll-Free Support Website Statistics



www.fatcow.com/mac Toll Free1.866.506.9572















a new, fast workflow system from your friends at sharpdots.com

FAST, GO FUL



2-3 Business Day Turnaround for the following products:

Business Cards Postcards 4x9 Rack Cards **Flyers** & Now 8.5x11 Brochures

PDF or TIFF Artwork Only

MACWORLD READERS: Prices Are Now Lower Than Ever!

\$40 For 1,000 Full Color Business Cards - 4/0 \$85 For 1,000 4x6 Postcards - 4/1

Visit Our Website & Select RapiDots For More Print Savings!

point your browser today at www.sharpdots.com

or call 1-877-742-7789 for more information

te Details. Ail Products Printed From Your Press Ready Digital Artwork Prices Subject To Change Wishout No.



3 NEW ways to Buy Printing

Our standard 1-2 day turnaround.

"grouping" your clients together

on the same paper stock. With this

buying feature, AmericasPrinter

customers can receive up to 50%

When PRICE is the driving factor for your clients, Value Ordering is your best solution.... Learn the

in's & out's of how we build our press sheets and the "value" of

long press runs to increase your

EXPRESS ORDERING:

COMBO ORDERING: Maximize your profit potential by

discounts on our pricing.

VALUE ORDERING:

profit potential....

Check out our completely redesigned website that features our new LOWER pricing!

> **Business Cards** Starting at \$39

> > **Postcards** Starting at \$79

Sales Sheets Starting at \$91

11"x17" Posters Starting at \$185

Tri Fold Brochures Starting at \$179

> 4 Page Catalog Starting at \$349

8 Page Catalog Starting at \$698

> Presentation Folders Starting at \$629

> > All Full Color. All Premium Stock.

- Over 2,000 products in our price guide....
- We Service over 11,000 Customers Nationwide
- Full Commercial Heidelberg Printshop
- Print & Ship Anywhere in the USA

800.552.1303 714.521.1100 CA | 714.521.5650 fax

6910 Aragon Circle, Buena Park, CA 90620 www.AmericasPrinter.com



I print all my designs through Americas Printer.com

December 2005 MACWORLD 137 www.macworld.com



TRADE PRIN

Printing Services offered for Print Brokers, Designers, Photographers, Publishers, Print Shops, and Design Agencies.

Nationwide Leader in Low Pricing

Highest Quality Guaranteed

Fastest Turnaround

Out of this World Prices... Right Here on Earth!

Next Business Day Turnaround Available!



Free Upgrade!



Now Available!



5th Color Pantone 877C

WE'LL MATCH ANYBODY'S



DIRECT

1-877-782-2737

1-877-972-9117

5900 SAN FERNANDO RD. UNIT B **GLENDALE, CA 91202**

SERVICES/DIRECT showcase

Data Recovery Duplication Systems & Peripherals Trade Show Materials

www.macofalltrades.com



and Selling Used Macs Your Solution for Buying

Mac of All Trades

The words Mac and Elite

of redundant, aren't they?

Disc Makers MacElite automated CD and DVD

DISC MAKERS

Call 1-800-237-6666 or go to www.discmakers.com/mwmag

for your free catalog.

duplicators and printers - starting at \$2,990.

in the same sentence are kind

tradeshow-stuff.com your discount source for everything displays table top displays retractable banner displays

PowerBook Repairs & Upgrades OVERNIGHT - WORLDWIDE: 1-888-5-PB-Repair

FREE Nationwide Overnight kun & Diagnosisl

8x Dual-Layer SuperDrive Upgrades \$149 - For PowerBook G4 And iBook G4 Series

Hard Drive Upgrades For PowerBooks & iBooks Includes Data Transfer, Round-Trip Overnight Shipping And 24-Hour Repair!

60gb - \$229 80gb - \$239 100gb - \$279 120gb - \$359 100gb 7200 RPM Upgrade - \$449!

Add \$39 To Have Your Old Drive Put In An External USB/Firewire Enclosure

Overnight Stainless Steel Hinge Replacements \$299 Includes Round-Trip Overnight Shipping

Overnight LCD Repair for PowerBooks & iBooks Includes Round-Trip Overnight Shipping - From \$399

iPod Repairs & Upgrades OVERNIGHT - WORLDWIDE: 1-877-For-iPod

FREE iPod Repair Estimatel For Details Visit: iPodRestore.com

Overnight 1000mAh Battery Upgrade - \$69 50% longer on 4th Gen. 38% longer on Color iPods Self Install Kits - \$29

iPod Battery Freedom

Upgrades:

1st Gen. 5gb to 20gb \$149 2nd Gen. 10gb to 20gb \$129 3rd Gen. 15gb to 40gb \$189 4th Gen. 20gb to 60gb \$219 Includes Round-Trip

Lifetime Battery Replacement \$99 Overnight Shipping

DATA RECOVERY: 800-440-1904

7 great reasons to choose DriveSavers:



"We Can Save It!"

 Fast, advanced, proprietary techniques.

- Recommended and certified by all hard drive manufacturers.
- All operating systems; Mac, Windows, OS/2, Netware and UNIX.
- All storage devices including SAN, RAID and NAS systems.
- Instantly retrieve recovered data with DataExpress™.
- Government Contracts and High Security Service.
- Featured on MacWorld, MacAddict. CNN, BBC. and others.



Visit DriveSavers at www.drivesavers.com 2003 DRIVESAVERS, INC. 400 BEL MARIN KEYS BLVD., NOVATO, CA 94949 INTL 415-382-2000

Mac Logic Board & Power Supply Repair Overnight - Nationwide: 1-877-34-Repair



24-Hour Power Supply Repairs For ANY Mac \$129 24-Hour Logic Board Repairs Starting At \$149 For Details Visits MacRestore.com

PowerBook & iBook Blowout

G4/ 667, 256MB, 30GB, Combo Drive, 15" \$889 G4/867, 128MB, 40GB, Combo Drive, 12" \$899 64/800, 256MB, 406B, Combo Drive, 15" \$969 64/867, 256MB, 40GB, Combo Drive, 15" \$999 G4/1GHz Ti, 512MB, 60gb, SuperDrive, 17" \$1199 64/16Hz Al, 512MB, 60gb, SuperBrive, 17" DVI, With Airport Extreme Wireless Card \$1599

G3/700, 256MB, 20gb, Combo Drive, 12" \$499 63/800, 256MB, 30gb, Combo Drive, 12" \$549 700, 256MB, 30gb, Combo Drive, 14" \$549





Office 2004 Standard Retail \$249 Bundle**/Upgrade~ \$189/\$169

9



Express v.1~

Studio** NewVersion

Pro HD"

iLife '03~ / '04 \$9/32 iLife '05 CD~/DVD~ \$44/59







Intego Internet Family

Edition

Virus Barrier Content Barrier

\$39 S99 MSRP

Professional Edition

- Virus Barrier Personal Backup
- \$129 MSRP

Express HD**

Get all for \$39 (save \$29!)

Appleworks 62- Ouicken 2002 DLX, fax STF, Poalc 2, Deimos Rising

Games CD~ Bugdom, Nanosaur and CroMag Raily! Mayo Family Health / World Book Encyclopedia~

Classic Software

Apple Moviv v2.01 (DM CO (Vidoo) 54
Parazer General (Game) 54
Full Throtille (Game) 54
Full Throtille (Game) 54
Full Throtille (Game) 54
US Altas & Almanace 5.0 (Reference) 55
Chestmaster 3000 (Game) 55
Mark Blaster 1st Grade (Educational) 55
Cosmopolitam Makeover (Graphic) 55
Adobe Photoshop Elements 1.0 CD (Graphic) 59
Motrosoft Office 4.2.1 (Business) 579
Microsoft Office 4.2.1 (Business) 579

vis USB Gamepad 59 Apple Pro Mouse- 52
PCI Card's ante 10/100: \$11
JSB 2.0FW 5 port 200m 55k modem \$33

use 10/100: \$11 USB 2.0/FW 5 port

Bodyworks 5 / Britannica Ready Ref-

Myth / Photosoap SE

\$57 G4 733Mhz \$699^t \$145 Dual 867Mhz \$899 MD 1.2Ghz \$979 \$459 Dual 1.2Ghz \$1149t



\$4/4

iMacs

G3 333Mhz \$89† G3 Slotload \$1991 G4 700/15"LCD \$499







Jam Plug







1GB 256MB PC 133 SDRAM 512MB PC 133 SDRAM 579

The Mouse



Tiger OS X 10.4

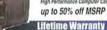
Retail \$98 w/ iLife '05 DVD- \$148



Apple Wireless Accessories

Pro Keyboard

Pro Mouse Brenthaven



Profile 15"/ Oversize Mobility One Blue/Black



Apple Specialist

"Refurbished it Pre-owned w30 day warranty -OEV." Ungrade with previous version

Maxtor

iPod

Batteries

1-2nd Gen \$24

HHHHH

MiniMate 400GB wFW USB hub 160 GB Monsoon 200 GB Monsoon

250GB 7200 RPM SATA Drive- \$119

MiniMate 80GB wFW USB hub MiniMate 160GB wFW USB hub MiniMate 250GB wFW USB hub

250 GR Monsoon 500 GB Monsoon

Ext. Porsche P3 250GB FW Ext. SATA 400GB

ASTA 400GB 541 megamacs.com/lacie FREE ground shipping on LaCie drives! ;;

Applecare



Panther OS X 10.3 DVD~ \$29

CD~ \$47 OS X 10.3 Server

Unlimited Client ~\$179

More Mac OS X.2 **~ 8.1 \$59 8.5~\$79 X.2^~ \$24 9.1~\$49

Powerbook G4 Check out our online clearance deals!

see www.megamacs.com

IBM TravelStar 40gig 2.5" Notebook HD 5400 rpm ATA 100 \$82

G5 1gb/2gb Kit

Mac Mini 1_{9b} iMac G5 1gb /512mb

iMac G3/G4 256/512mb/1gb PwrBook/iBook 512mb/1gb G4 Tower 256mb/512mb

AIRPORT CARD SPECIAL!!!



AirPort® Extreme Card \$Call! quantities limited



Genuine Apple Laptop Batteries

All Models only \$99



PowerBook G4 Titanium iBook 12" White/Snow iBook Clamshell models iBook 14" White/Snow

The Drives You Need to Succeed!

iBook & PowerBook A106 4x DVD-R \$ 39 available now A110 16x DVD-R

Capacity RPM Capacity Cache 100gb 7200 \$309 250ab 8mb \$ 115

400ab 8mb

500gb 8mb

MAC TRADE-INS WELCOME!



800-873-3726

120gb 5400

100ab 5400 179

MacSolutions.com

MacPrices.com



- Find the lowest price!
- Get the best bundles!
- Prices updated daily

www.macprices.com





The Mac Experts!

Located in Oregon, the land of forests, friendly people and no sales tax

Great Gifts for the Holidays!

Make that special some one's Christmas extra special with a gift from this great line-up of products from PowerMax.



12-inch iBook G4/1.33GHz 512/40/combo/AP/BT.....\$994 14-inch iBook G4/1,42GHz 512/60/super/AP/BT \$1294



Apple iPod carrying case w/ belt clip\$39.98 Apple iPod Shuffle reconditioned \$78.99 Dr. Bodelin's Wireless iPod Auto Adapter Kit ... \$79.99





Apple's latest MP3 player is thinner and more powerful than ever. Pencil-thin and feather-light, the iPod nano comes with Apple's patented click-wheel. Available in your choice of 2GB (500 sonas) and 4GB (1,000 song) capacities.

Make's a great gift!

2GB iPod nano black or white\$194.88 4GB iPod nano black or white

.....\$244.88

Get the most out of

Look What **PowerMax** Customers Are Saying!

i are the Luke Skywalker of apputers. Mission accomplished. And yes I do realize how nerdy that Star Wars reference was. Thanks again...- T.S.

Thank you so much for your help with the bidding, ordering process. Your grace and patience are very appreciated: - P.S.

It was very nice to be contacted by a real person who answered all of my questions, as simple as they were, quickly and knowledgeably. - L.T.

PowerMax Certified Pre-Owned Macs

PowerMax is the web's largest Certified Pre-Owned Mac dealer. We have a massive selection

of quality, pre-owned PowerBooks, iBooks, iMacs and PowerMacs. Choose from over 1200 configurations. All

Certified Pre-Owned macs are thoroughly cleaned, inspected, bench-tested and come with a 90-day warranty.



Super Holiday Mac Specials! We've attained an exclusive allocation of Apple Certified Refurbished computers at fantastic, low prices. Order today and avoid the holiday rush!

Mac mini G4/1.25GHz 256MB RAM/40GB HD/Combo \$409
Mac mini G4/1.42GHz 256MB RAM/80GB HD/Combo \$479
20" iMac G5/1.8GHz 256MB RAM/160GB HD/SuperDr \$1388
eMac G4/1.42GHz 256MB RAM/80GB HD/Combo \$729
eMac G4/1.25GHz 256MB RAM/80GB HD/SuperDr \$749
12" iBook G4/1.2GHz 256MB RAM/30GB HD/CD-ROM \$788
15" PwrBook G4/1.5GHz 512MB RAM/80GB HD/Combo . \$1699
15" PwrBook G4/1.67GHz 512MB RAM/80GB HD/Super . \$1899
G5 Pwr Mac G5/1.8GHz 256MB RAM/80GB HD/Super \$1299

Bumpers

just \$19.99!

A must-have for



Does Your Computer **Break Your Heart?**

Come check out the PowerMax

MatchMaker!

If you and your computer have lost that lovin' feeling, it might be time to look into a new Mac. In order to ease the transition, PowerMax created MatchMaker. All you need to do is answer a few questions and MatchMaker will provide an increasingly refined selection of Macs for you to choose from. With Match-Maker, you'll never get stuck with the wrong computer again!

Dr. Bodelin's Optical Mouse only \$14.99



Trade-In Your Mac!

Thinking of upgrading to a new

Mac? You can trade in your

Mac11 for credit toward a

out how easy it is to recy-

cle your old machine!

brand new one. Call us today or go online to find

Fast, accurate optical technology. Choose from three styles!

Apple Refurbished



23" Display\$1299 30" Display\$2588



Dr. Bodelin's Just In! Dr. Bodelin's iPod Accessories Laptop

your iPod with these

Wireless iPod/iPod Mini Auto Adapter Kit Listen to the iPod over your car stereo via digital FM transmitter. Adjustable mounting arm and aux. output! \$79.99

Wireless iPod Shuffle Auto Adapter Kit Same functionality as above,

but for the iPod shuffle! \$29.99

iPod Shuffle Portable Audio System

Your shuffle becomes a boombox with these compact speakers. iPod Boom Box also available!.....\$38.99

Silicon iPod Shuffle Skins These protective skins come in a variety of colors. \$8.99 Retractable Sync Cable for 30-pin iPod.....\$13.99 Retractable Sync Cable for USB iPod......\$13.99 Car Charger Adapter for 30-pin iPod......\$13.99 Car Charger Adapter for USB iPod \$13.99





LaCie is breaking the limits of hard drive capacity with their new Big Disk Extreme!

OGB Mobile FW/USB	\$119
OGB FW F.A. Porsche Design	\$119
60GB FW F.A. Porsche Design	\$139
60GB d2 Extreme with Triple Interface	\$179
50GB d2 Extreme with Triple Interface	\$219
00GB d2 Extreme with Triple Interface	\$399
.OTB d2 Extreme with Triple Interface	\$799
DVD+/- RW 16x DL FW Light Scribe	
vith Toast 7 Titanium	\$189

WER

Authorized Reseller

800-613-2072

Local: (503) 624-1827 • Fax: (503) 627-1635

Email: sales@powermax.com

www.powermax.com

- Personal Financing
- Fast P.O. Approvals
- Business Leasing
- Daily Specials on our Web Site

Prices subject to change without notice. Credit card orders strictly verified against fraudulent use. With use of credit card as payment, customer acknowledges that some products are subject to final sale. Many prices are limited to stock on hand. All brand names are registered trademarks of their respective holders. Not responsible for typographical errors, 'after mail-in rebate(s) †excludes mac mini ††some restrictions apply

December 2005 MACWORLD 141 www.macworld.com

MEMOR

Best Quality Service & Price

DMS Certified Memory

Register online to win monthly Free Giveaway

Call TOLL FREE • 800-662-7466





Memory for all Macs and Legacy Mac models. Online Memory Configurator

· Best prices | Best Quality | Best Service

ACCESSORIES | BATTERIES | CABLES | CAMERA MEMORY | CDRW | CPU UPGRADES | DVD | FLASH MEMORY | HARD DRIVES | FIREWIRE | MEMORY | NETWORKING | PRINTER MEMORY

DMS

Since 1987

www.datamem.com

800-662-7466





We've got all the memory solutions you need for:

Power Mac • PowerBook • iBook iMac • eMac • Mac Mini Samsung memory available!



다임시다

You need 'em?



We've got 'em!

Note: Prices are subject to change. Quantities limited to stock on hand. School P.O.'s welcome

MEMORY for PC and Apple, Laptops, Digital Cameras, MP3 Players and more ...

WE CAN BEAT Crucial, Kingston, Comp-USA, ANYONE! AND, WE GIVE YOU

3 (13) SHIPPING!

- We Manufacture Our Memory Using the Highest Quality Components
- Lifetime Warranty
- **Compatibility Guaranteed**
- Free Technical Support
- ✓ Experienced Sales Staff Since 1994

1-800-4-MEMORY

1-800-463-6679 http://www.18004memory.com students | faculty | teachers > savings up to 85% OFF commercial SRP! > thousands of titles! > delivered to your door! SAVEUP JourneyEd.com Requesta FREE catalog! www.JourneyEd.com

1.800.874.9001

Power Accessories 101 Mobile Computing



Lind adapters feature:
• Fault protection circuitry with Automatic reset
• Durable ABS housing
• Nylon carrying case

Auto/Air Power Adapters for all Titanium G4s & iBook models

Replacement Mini **ACAdapters** for all Titanium G4s & iBook models (65 Watts max.)



- Mini AC adapters feature: 100 240 auto switching input Fold away outlet prongs Convinient cable wrap with Velero™ Strap 4.1 x.1.6 x.1.1"

LiIon Auxiliary Power Packs

For all Ti G4s & iBooks Extend your laptop runtime 3 to 4 times longer Lightwieght 2.4(MP60)lbs - 3.4(MP90)lbs Size - 11.25 x 8.5 x .5"



MaxPower 60(95WH) & MaxPower 90(140WH)

Order online at: www.lindelectronics.com or call #800-897-8994 to order

Lind Electronic

Software Savings for Students, Teachers, and Schools!

Get up to 85% off retail software prices on the brands you know and use...



Adobe® Photoshop CS2 Save! 53% Order Today! Get the Best for Less!



Macromedia® Studio 8 Save! \$710 Only! \$289.95 Brand New Version!



Quark® QuarkXpress 6.5 Save! \$756 Only! \$189.95 The Industry-Standard!



Wacom® Intuos3 6x8 Save! \$40 Only! \$289.95 **Great Graphics Tool!**

We carry thousands of industry-leading software and hardware products at huge discounts for students, teachers and schools. These special prices are ONLY for the academic community. And our prices are typically \$10-\$20 lower than most college bookstores! Call or visit us online today and start saving!

Adobe®

Acrobat Pro 7Save	69%
Creative Suite 2Save	69%
Video CollectionSave	55%

Maya 7 Complete Student..\$289

FileMaker®

FileMaker Pro 8\$149

Macromedia®

Flash Professional 8	\$239
Dreamweaver 8	\$189
Contribute 3	\$89

Microsoft®

Office 2004 Student/Teacher .. \$149

Sibelius®

Sibelius 4......\$239

We carry many of the products featured in this issue!

Intuit Quicken 2006 Deluxe\$69 Roxio Toast 7\$79 Symantec Norton AntiVirus 10....\$49 LaCie 160GB Porsche Firewire .. \$134 Maxtor OneTouch II 300GB\$249

Hey Parents!

"You are eligible to buy for your students at home or away at school."

Give us a call toll free! 1-800-218-7455

MW.AcademicSuperstore.com

High-Performance Mac Memory



iMac G5

256mb - \$39 512mb - \$69 - \$149



256mb - \$45 512mb - \$75

iBook G4

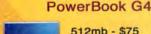
- \$179



PowerMac G5

512mb - \$69

1Gig - \$259



512mb - \$75 1Gig - \$179 - \$349 2Gig



eMac DDR

256mb - \$39 512mb - \$69



G4 DDR

512mb - \$69 1Gig - \$135 1.5Gig - \$199

WWW.RAMJET.COM

Speak to a Mac Expert: 1-800-831-4569



Ramjet, Inc. has served the Macintosh community since 1996. Offering top quality components and genuine Mac expertise,
Ramjet is frequently cited as the top Macintosh memory company.
Being geared toward the professional user, Ramjet performs stringent compatibility and performance burn-in tests to assure maximum reliability. This quality control, coupled with an easy and generous warranty, makes Ramjet the smart choice.

Professional, Fast, Dependable

SeafoodByNet.com

Fresh from the sea to your doorstep!

Join our free Fresh Club Newsletter for daily fresh deals! Visit

www.SeafoodByNet.com or call 815-337-4028

Your store for restaurant quality seafood and meats.



Over 25 years in business!!

We buy, sell & trade macs & mac parts.

800-227-3971

1200 Marshall St., Shreveport LA 71119

hreveSvstems.com

December 2005 MACWORLD 143 www.macworld.com

Hot Stuff

Our Favorite New Stuff

FROM THE EDITORS OF MACWORLD



iBALL

Many speakers are designed for use with the iPod, but they all require that you dock your iPod with the speakers (or, even worse, connect it via the headphone port). Oregon Scientific's \$300 iBall, a transmitting iPod dock and charger paired with an 8-inch wireless receiving sphere that has three speakers inside, uses 2.4GHz adaptive frequency hopping to provide clear sound from up to 100 feet away (it works with any dockable iPod). The sphere includes a built-in remote for controlling your iPod from across a room (www.oregonscientific.com).—JONATHAN SEFF



OneLook

I've met plenty of digital dictionaries and thesauruses. But none of them has wooed me away from my trusty stack of reference books—until now.

When I enter a term in OneLook, this elegantly simple (and free to use) Web site returns a brief definition and links to entries in several online dictionaries. Plus, it provides results from thesauruses, a rhyming dictionary, Wikipedia, and many other resources. If you enter a word OneLook can't find, it'll suggest words that are spelled similarly. Even better, the site lets you search using wild cards (a crossword aficionado's dream come true) and perform reverse lookups. OneLook isn't flashy or animated (and its ads are generally unobtrusive); it's as sedately helpful as

a dictionary should be. I'm glad I've finally discovered it (www.onelook.com).—CHARLES PURDY



Graphire4

For aspiring digital artists, Wacom's latest entry-level tablet bundle means there's no excuse not to get

in the game. The Graphire4 tablet has two programmable keys and a scroll wheel, the pen has 512 levels of pressure sensitivity, and the wireless three-button mouse has a rubberized grip. But the included software—Adobe Photoshop Elements 3, Corel Painter Essentials 2, and nik Color Efex Pro 2 GE—really makes the Graphire4 shine. The 4-by-5-inch USB model costs \$100; the 6-by-8 USB model, \$200; the 6-by-8 Bluetooth model, \$250 (www.wacom.com).—JACKIE DOVE

7 2 5 7 2 2 7 2 3 8 9 5 9 6 2 5

MacSudoku 2.1

Sudoku, the fiendishly addictive number puzzle, became a hit in Japan 20 years ago. And now it's available on the Mac. Using Rosborough Technology's \$10 Mac-Sudoku, I can do all the "what-if" work without all the scribbling and erasing. It lets me work on puzzles from my local paper (I enter the starting numbers by hand) or solve one of its built-in games (ranging in difficulty from Easy to Fiendish), using a simple interface. But it won't make the game too easy-you have to do the work yourself (www.ros boroughtech.com).-DAN MILLER

WHAT'S HOT

Brought to you by John Moltz of the Crazy Apple Rumors Site (www.crazyapplerumors.com)

- During an interview, Motorola CEO Ed Zander says, "Screw the nano." Zander's comments followed on the heels of his "To hell with printers" tirade and his "Damn toaster burned my bagel" keynote address.
- 2 IDG World Expo cancels Boston's Macworld Conference & Expo. As it turns out, a Mac trade show without Apple didn't really work very well after all.
- Microsoft announces desktop "gadgets"—small, easily accessible applications that are strikingly similar to Dashboard widgets. Does Microsoft even have an R&D department?
- 4 Apple quadruples storage space for .Mac accounts to one gigabyte. The company explains that the world truly needs more pictures of your cat.



DISC STAKKA

Do you hate those stacks of CD and DVD jewel cases piling up everywhere? Meet Imation's Disc Stakka, an automated carousel that stores your discs and retrieves them when you need them. You can store as many as 100 discs in a Stakka and stack as many as five units. So how do you find a disc when you need it? The \$150 Disc Stakka includes OS X cataloging software and a USB connection, so you search by title, keyword, directory, or file name; when you find the disc you're looking for, the carousel delivers it to you (www.imation.com).—PETER COHEN

144 MACWORLD December 2005 www.macworld.com

no more auction management headaches.



INDICATIONS: For rapid relief from monthly fees, disorganization, and lost sales. Aids in listing, inventory management, email marketing, trends analysis, customer retention management, and other activities associated with selling profitably on eBay.

DOSAGE: One installation. Subsequent updates are automatic.

DIRECTIONS: List. Sell. Repeat.

ACTIVE INGREDIENTS: automation. scheduled events. custom actions. offline capability. import from turbolister, excel, and databases. ledger. groups. cash flow analysis. support for eBay stores and eBay motors. custom reporting. html editor. bulk listing, ending, revision. relisting. free scheduled listing. offline listing preview. ad templates. image management. watermarks. spell check. consignment management. profiles. vendor management. auto reorder. product sales analysis. questions and feedback management. spam control. fraud management. email templates. invoicing. dispute management. email marketing campaigns.

WARNING: Side effects may include increased sales, higher efficiency, and euphoria.



please visit www.marketblast.com for a free sample.







It's the only compact photo printer that prints color 5x7s.

Plus it stores up to 1,000 photos and prints 4x6s for as little as 24¢ each.* The HP Photosmart 475 Photo Printer. \$279.** hpshopping.com or 1-800-HP-PHOTO

©2005 Hewlett-Packard Development Company, L.P. Simulated images. *Bosed on estimated retail price of HP 95 series 200-sheet 4x6 Photo Value Pack, three-ink printing. Actual cost may vary based on printer used, images printed and other factors. **Prices may vary.