APPLE UNVEILS iTUNES & iDVD

Make Your Own CDs and DVDs with Apple's Cool Tools, page 36

Macworld

03.2001

Think Thin

The New Titanium PowerBook G4

- Ultrawide Screen
- 1 Inch Thick
- Only 5.3 Pounds

REVIEWED

Netscape 6.0
Can AOL Reinvent the Web?

Speedy Graphics Cards
We Lab Test 6 3-D Powerhouses

Norton Utilities 6.0
Keep Your Mac Safe and Sound

StuffIt Deluxe 6.0
An Old Favorite Gets an Upgrade

733MHz Power Mac

Forget Floppies—
Apple's New G4
Writes CDs and DVDs

The Best Mac Stuff

We Pick the Top
Software, Hardware,
and Web Sites

$7.99 U.S./$9.99 Canada

03>

0 14024 06924 0

Get Smarter www.macworld.com

Disturb the peace. Tranquility is highly overrated. Earsplitting high-
SoundSticks speaker system, is most definitely not. For more seismic details,

H A Harman International Company. ©2000 Harman Multimedia. Harman Kardon and SoundSticks are trademarks of Harman International. Toll-free 877-266-6202.

fidelity sound, like the kind you'll get from our new 40-watt, USB-enabled
check out www.harman-multimedia.com. **harman/kardon**

Circle 3 on card or go to www.macworld.com/getinfo

CanoScan D660U Scanner

CanoScan N656U Scanner

CanoScan N1220U Scanner

BJC-85 Printer

Peripheral

Take a quick look around. You'll find a Mac®-compatible Canon peripheral for just about any purpose you could imagine. From high-resolution printers and scanners to the world's best-selling portable printer, we've got what it takes to keep Mac users smiling. And with

Mac

The Canon Think Tank System™

The S400, S450 and BJC-8200 printers all feature individual ink tanks to reduce ink waste and save you money. Plus, the ink sensor system alerts you when you're running low.

Award-Winning Portable Printer

Need a traveling companion for your iBook™ or PowerBook® G3? Our 3.1 pound* BJC-85 Color Bubble Jet Printer was named "Best of Show" at the Macworld San Francisco 2000 Expo.

©2001 Canon U.S.A., Inc. Canon, BJC, Bubble Jet, Canon Know How, CanoScan, Canon Think Tank System, MultiPASS and Z-Lid are trademarks of Canon Inc. Mac and the Mac logo are trademarks of Apple Computer, Inc., registered in the U.S. and other

Vision

more than sixty years of imaging expertise built into every single detail, the term "state-of-the-art" is somewhat of an understatement. Come and see for yourself. Visit us on the Internet at www.ccsi.canon.com/macfriendly or call 1-800-OK-CANON for more information.

Canon KNOW HOW™

Advanced Flatbed Scanners

Our new CanoScan® family showcases a host of innovative features including our Z-Lid™ Expansion Top (on select models) and a built-in 35mm film adapter on the CanoScan D660U Scanner.

Superior Multifunction Printers

Print. Fax. Copy. Scan. After introducing the world's first Mac-compatible multifunction printer, we've taken technology to a new level with our MultiPASS™ C555 Multifunction Printer.

countries. All other product and brand names are trademarks of their respective owners. Specifications subject to change without notice. *4.5 pounds with AC adapter and optional battery pack. In Canada, call 1-800-263-1121.

Circle 23 on card or go to www.macworld.com/getinfo

March 2001

Macworld

www.macworld.com

Incorporating MacUser

Opinion

9 The Vision Thing
ANDREW GORE Apple's recent announcements make an impression.

19 Feedback
Readers respond.

107 The Game Room
ANDY IHNATKO Nostalgia ain't what it used to be—but it's still pretty good.

170 The Desktop Critic

Buzz

26 PowerPC Speed Bump; Alton Brown of the Food Network's *Good Eats*; the iMacQuarium; the Stinger Stylus; and www.K10k.com.

How-to

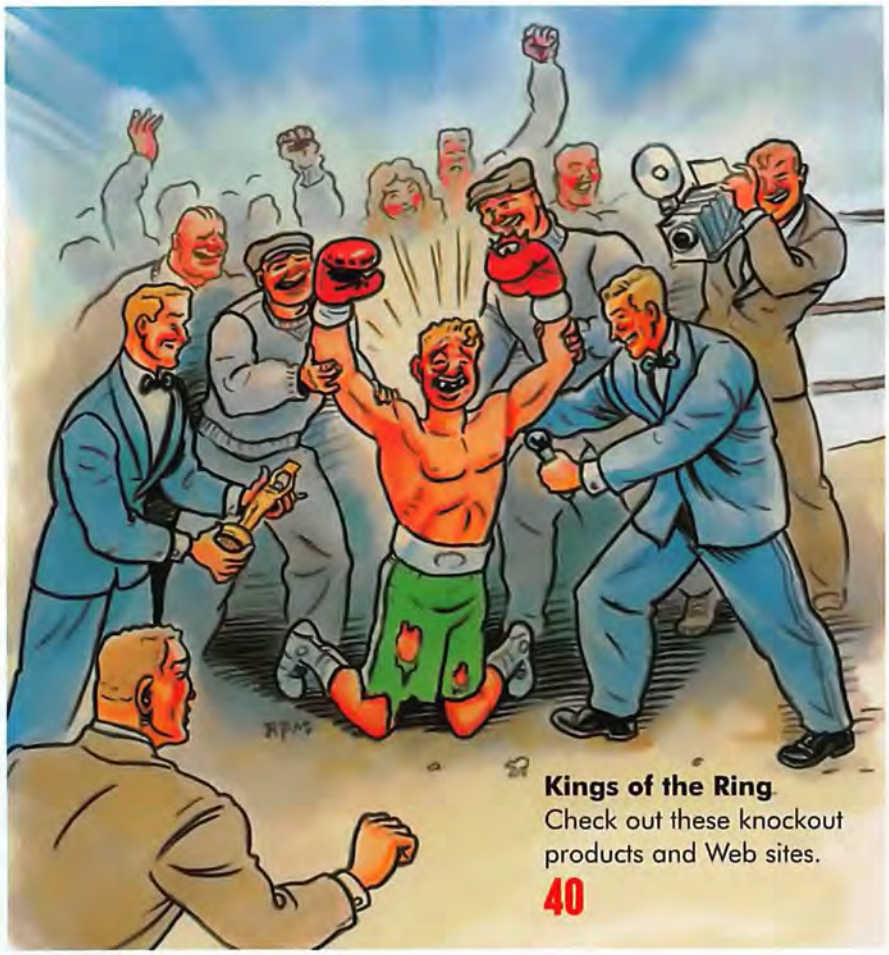
66 Web Design for Both Sides of the Brain

74 Painless Pop-up Menus
LISA LOPUCK Macromedia Fireworks 4 helps you make the most of screen real estate with this new feature.

76 Track Your Progress with Excel
JAMES BRADBURY Entering formulas and generating graphs in Microsoft Excel is a cinch in this simple project.

80 Revive Your Files
TED LANDAU There's often no need to cry when you lose unsaved, overwritten, deleted, or damaged files.

85 Mac 911
CHRISTOPHER BREEN Learn how to take control of the fonts on your desktop, HotSync a Palm device and a PowerBook, and more.



Kings of the Ring
Check out these knockout products and Web sites.
40

The 16th Annual Editors' Choice Awards
Macworld editors present their picks for the most-innovative products of the year.
45

The Macworld Web Awards
Our editorial staff highlights some of its favorite Web sites.
59

BUZZ EXTRA

Macworld Expo
Faster Power Macs, the new PowerBook G4 Titanium, new multimedia software, and more: read the hot news from Macworld Expo.
36

The Desktop Critic
Amazon.com's wiles may not amuse its customers.
170

Macworld.com
Catch more in-depth coverage of the goings-on at January's Macworld Expo, exclusive online reviews, and more.

Web Design for Both Sides of the Brain
JASON SNELL Whether you prefer writing every line of HTML by hand or working entirely in a visual interface, Macromedia Dreamweaver 4 has the tools you need to create top-notch Web sites.
66

Multifunction Printers
Get printing, scanning, and copying—from one machine.
90

Reviews

Accounting software
88 ♦♦♦♦½ MYOB AccountEdge 1.0

Multifunction printers
90 ♦♦♦½ Brother MFC-7400C
♦♦♦ Canon MultiPass C555
♦♦♦♦ Hewlett-Packard OfficeJet G85

Graphics cards
92 ♦♦♦♦ 3dfx Voodoo4 4500 PCI
♦♦♦♦ 3dfx Voodoo5 5500 PCI
♦♦ Appian Graphics Jeronimo 2000
♦♦♦♦ ATI Radeon Mac Edition
♦♦♦½ Formac ProFormance 3 Plus
♦♦♦ ProMax DH-Max

Troubleshooting suite
95 ♦♦♦½ Norton Utilities 6.0

Web browser
97 ♦♦ Netscape 6.0

Statistics software
98 ♦♦♦♦½ SPSS 10

File-compression utility
100 ♦♦♦♦ StuffIt Deluxe 6.0

Four-megapixel camera
101 ♦♦♦♦ Olympus Camedia E-10

Electronic whiteboard
103 ♦♦♦♦ Virtual Ink mimio 1.0

File-conversion utility
105 ♦♦♦♦½ Documents to Go Professional Edition

Auto-restart utility
105 ♦♦♦♦ Kick-off

More reviews online
105 Macworld.com Reviews

On the Cover
Photograph by Stan Musilek

With ordinary printers, you see the trees.

YOU'VE GOT TO SEE IT IN EPSON COLOR.

The ladybugs are the clue. See all six? Of course you do. And once you have, you realize what you thought were giant trees are actually small bonsai. Thanks to a tiny detail, the whole picture changes. It's just one example of the extraordinary image quality you get from an Epson printer. With 2880 dpi, there's no color or nuance so subtle it goes unnoticed. And just as you see here, it's those quiet little things that often speak the loudest. Only Epson color ink jet printers have: 2880 x 720 dpi • Micro Piezo technology, for a cleaner, smaller droplet – as small as 3 picoliters • Fast print speeds – up to 13 PPM black/ 10.5 PPM color (with the Epson SC 980) • Quick-drying inks • PC/Mac/USB compatibility. And remember, only Epson supplies guarantee Epson quality. For more info, call 1-800-GO-EPSON or visit www.epson.com.

Epson Stylus Color Ink Jet Printers. Sheer brilliance starting at $99.

Epson, EPSON Stylus and Micro Piezo are trademarks/registered trademarks of Seiko Epson Corp. © 2000 Epson America, Inc.

Think More.

Need more space? Get the OnStream Echo. A whopping 30GB of space in a wicked fast FireWire tape drive. Perfect for backup, Echo has endless storage space for your MP3s, digital photos, DV files, and all the other stuff that can't fit on your Mac. And with our patented ADR technology, Echo is the most reliable tape technology on the market. Think more. Think Echo.

THE ULTIMATE BACKUP SOLUTION FOR MACS

- 30GB compressed/15GB native capacity
- 2MB/second native transfer rate
- Quick and easy backup and restore
- Available in USB, SCSI, FireWire
- 30GB Tape Cartridges $44.95 (sold separately)

Echo 30GB FireWire includes
Dantz Retrospect® Desktop Software

$499 (approximate street price)

OnStream echo™

OnStream

www.onstream.com/think
for product reviews, comparisons & additional info

© 2001 OnStream, Inc. All rights reserved. The capacity and backup speed will vary with file and system configuration. OnStream ADR cartridges sold separately. OnStream, ADR, OnStream Echo, Advanced Digital Recording, the OnStream logo and the ADR logo are trademarks of OnStream, Inc. All other trademarks are properties of their respective owners.

ANDREW GORE

Apple Goes Platinum

IT'S GREAT TO SEE APPLE NOT JUST THINKING DIFFERENT BUT THINKING BETTER

The Beatles' *Sergeant Pepper's Lonely Hearts Club Band*, Genesis's *The Lamb Lies Down on Broadway*, Brian Eno's *801 Live*, The Who's *Tommy*, Alanis Morisette's *Jagged Little Pill*: in the history of music, there have only been a few perfect albums.

That's not to say there haven't been many perfect songs. Just look at the file list in my MP3 library at home, a folder that's 20GB and still growing, and it becomes readily apparent that at least in my musical universe the perfect song is not that hard to find. But the perfect album, a collection in which not just every song is perfect, but even the way the songs fit together is perfect—that's a rare commodity indeed.

At Macworld Expo in January, Apple delivered what has got to be the computer industry's equivalent of the perfect Album. iTunes and iDVD, plus the does-it-all SuperDrive make it not only possible, but incredibly simple, for users to become personal media publishers. And, of course, my personal favorite, the PowerBook G4, is sex, drugs and rock and roll carved out of a wafer-thin titanium shell.

Mobile Mercury

Like a portfolio formed of pure mercury, the new PowerBook G4 is so very different than those that came before: Barely an inch thick, this portable comes with a 15.2-inch wide aspect ratio active-matrix screen, DVD-ROM drive, a 400- or 500-MHz G4, 128 MB or 256 MB of RAM, and it weighs five pounds. *Five pounds!* I mean, I've got hard drives that weigh more than that.

It's a no compromise, all-in-one portable that requires no dongles to do things like play DVD movies . . . or CD-ROMs, for that matter. It has an enormous screen perfect for viewing movies, and it's even thinner than the Vaio Z505. Take that, Sony!

The industrial design is brilliant. The PowerBook G4 is the first portable actually made of titanium, stronger than steel and lighter than aluminum. Apple has addressed many quibbles users have had about past Mac portables, too. The new keyboard is crisp and precise, and is connected to the internal superstructure using magnets—no more spongy, bowing keyboards. The battery slides in underneath instead of on the side, eliminating the chance of premature power ejection, and the headphone port is on the side again.

They even got the logo on the cover right. When you flip up the lid, the crystal Apple is no longer upside down. Right on!

My only disappointment with the PowerBook G4 is Apple has left me nothing to complain about. This is the PowerBook I've been asking Apple to make for eight years.

Eine Kleine iTunes

It's true that Apple missed the revolution this Holiday by not getting CD-RW drives into their computers. But with Dylanesque timing, the company has now leapt ahead of the competition by not only bundling CD-RW in all G4 desktop Macs, but by making the process of burning CDs so much easier.

Apple learned an important lesson with iMovie: that hardware technology is basically worthless without seamless inte-

continues

Get everything you're looking for:

Macworld Get ⌘i info

www.macworld.com/getinfo

Macworld's Reader Service

"Get Info" with options! Now you can get information on all the products and services you see in *Macworld*. And get it faster. Simpler. Better. Easier. All you need to do is visit one Web site:

www.macworld.com/getinfo

Then select the products, the categories or advertisers for whom you want to receive information. That's it. You can have the information delivered to you by e-mail, snail mail or even telephone. Or you can click on a link that will take you to the vendor's Web site in one easy step.

PLUS! In this issue, the return of the hard card! A traditional perforated card that allows you to circle your product-info choices as you read Macworld on the train, on the plane or where-ever you are. Then drop the card in the mail and it's on the way!

Macworld

gration with software. Let's face it: we've been able to burn CDs on the Mac for years. But the combination of applications required to pull it off meant that only those dedicated to the process were ever going to bother.

And there were critical things missing from the process, especially a searchable library of music files. As mentioned above, I have a lot of music on my computer. And I use that music to burn CDs for my car or to download music to my MP3 player for when I run. And being the fickle audiophile that I am, I change those playlists often. The process of compiling a new playlist from the hundreds of songs on my hard drive used to take hours. Now it'll take minutes. And I'll be able to concentrate on the important stuff, like musing about if Pink Floyd's "Interstellar Overdrive" really does sound good following ELP's "Toccata."

And the process of going from MP3 to CD is so, so simple in iTunes, that shortly I won't need to wait for someone else to create my perfect album; I'll just do it myself.

Media Magnate

Probably the most easily misunderstood new product announced by Apple in January is iDVD. In the simplest terms, iDVD will be to DVD-R what iTunes is to CD-RW: it transforms an intriguing but difficult-to-use technology into something that anyone with a need can easily do.

Burning DVDs that can play on standard home DVD players is hard, not because the burning process itself is all that complicated, but because consumer DVDs require their own custom interfaces to operate. Building these interfaces used to be the purview of programmers; it was not unlike building a web page in HTML.

iDVD changes all that. Just point, click and drag, and you've got a DVD that's got your iMovie of trip to Hawaii, slides of the kids, and a cool QuickTime movie of little Emily's recital on a disc your mom can pop into her DVD player and enjoy on the living room TV.

This means on a computer that costs less than just what the DVD-R burners were costing a few months ago, you can publish images and motion with an interface you can create yourself with just a few clicks. This is the kind of stuff that not only will sell a bunch of computers, but can change the landscape of the marketplace.

Mark my words, the PC market will be playing catch-up on this one for years to come.

Double Platinum

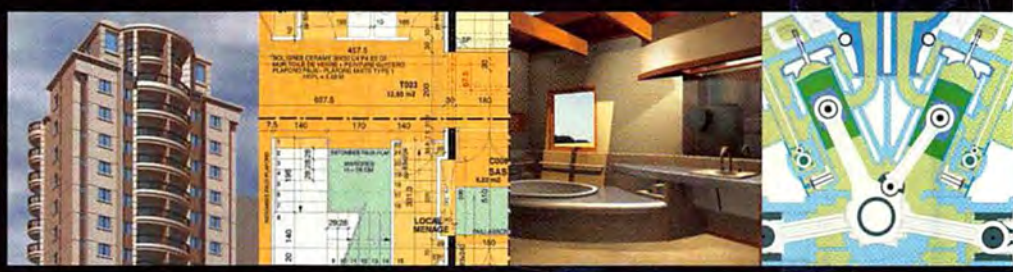
It seems, then, that the trick to creating the perfect album is understanding what you, as an artist, are really good at. Apple finally understands what it takes for them to have a hit . . . and it's not to invent new technology, which Apple has rarely done successfully. Rather, it's to take other people's inventions and make them so that *everyone* can enjoy and take advantage of them.

ANDREW GORE is editor in chief of *Macworld*. To comment on this column, please visit the Vision Thing forum at www.macworld.com/columns/visionthing/.

www.nemetschek.net
1-888-646-4223

VectorWorks

Object-Based CAD for Professionals



Design is ever changing, dynamic. From initial concept, through production and revisions, the entire process becomes faster and easier with VectorWorks.

Productivity of Object-Based Design

VectorWorks' next-generation Object technology accelerates the design process. Now, creating common design elements is effortless. Objects such as doors, windows, nuts and bolts can be created and edited with a simple mouse click.

Strength and Proven CAD Technology

The Best Selling CAD software on the Mac and, an emerging standard on Windows, VectorWorks provides everything you need for 2D drafting and 3D modeling. But, that's not all. An integrated database tracks costs and materials, and built-in presentation capabilities can literally help you sell the job.

The VectorWorks Advantage

With VectorWorks you get it all–The productivity of Object-Based Design combined with the flexibility and control of proven CAD technology.

Giving you an extra edge, VectorWorks ships FREE solutions for Architecture, Landscape, DTM, Theatre Lighting and Mechanical Engineering among others. And, VectorWorks' built-in scripting environment makes creating custom solutions, and automating routine tasks easy. No other CAD program offers so much for so little!

Add-on Products Expand VectorWorks Core Capabilities

RenderWorks–Bring you designs and animations to life with realistic textures and dramatic lighting and shadowing effects.

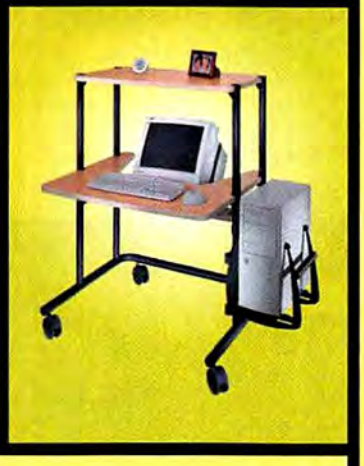
VectorWorks ARCHITECT–The ultimate in architectural CAD. Integrate Design, Production and Project Management into a system delivering unparalleled productivity.

NEMETSCHEK
NORTH AMERICA

Circle 46 on card or go to www.macworld.com/getinfo

BREAKTHROUGH STUDY REVEALS

STARTLING NEW DATA :



PEOPLE AREN'T THE SAME SIZE.

Most furniture is built around the average person. But, darn, we've never met one. So we build workstations to fit you - your legroom, your reach, your equipment. To learn more about our sized-to-fit AnthroCarts, lifetime warranty and passion for service, visit our website. It's more fun and comprehensive than your average trip down cyberspace.

ANTHRO®
TECHNOLOGY FURNITURE®

AVAILABLE AT:
WWW.ANTHRO.COM
or 1-800-325-3841

Macworld

VP OF CONTENT/EDITOR IN CHIEF Andrew Gore
EXECUTIVE ASSISTANT TO THE VP OF CONTENT Shane Clark
EDITOR, MACWORLD.COM Jason Snell
EXECUTIVE EDITOR Scholle Sawyer McFarland
SENIOR EDITOR, BUZZ AND NEWS Philip Michaels
SENIOR EDITOR, HOW-TO Terri Stone
SENIOR EDITORS, REVIEWS Linda Comer, David Weiss
SENIOR EDITOR, MACWORLD.COM Lisa Schmeiser
ASSOCIATE EDITORS Lotus Abrams, Jennifer Berger, Mathew Honan, Kelly Lunsford, Jonathan Seff
ASSISTANT EDITORS Brett Larson, Adrienne Robillard
EDITORIAL ASSISTANT Bonnie Huie

CONTRIBUTING EDITORS

Henry Bortman, Christopher Breen, Adam C. Engst, Bruce Fraser, Jim Heid, Ted Landau, Deke McClelland, Tom Negrino, Nancy Peterson, David Pogue, Stephan Somogyi, Franklin N. Tessler

LAB

DIRECTOR OF PRODUCT EVALUATION Kristina De Nike
TEST MANAGER James Galbraith
SENIOR LAB ANALYST Jeffy K. Milstead
LAB ANALYST Gil Loyola
ASSOCIATE TECHNICAL ANALYST Ulyssis Bravo
LAB ADMINISTRATOR Jason Cox

COPY EDIT

MANAGING EDITOR Jennifer Scholl
ASSISTANT MANAGING EDITOR Charles Purdy
COPY EDITORS Diane Ollis, Sue Voelkel

ART AND DESIGN

DESIGN DIRECTOR Sharon Anderson
ART DIRECTOR Marlene Sezni
ASSOCIATE DESIGNER Jackie Goodman
DESIGN ASSOCIATES Amy Conger, Alissa Mach
PREPRESS CONSULTANT Stephen Sugg
CONTRIBUTING DESIGNER Jennifer Steele

MACBUY.COM

ASSISTANT PRODUCER Cathy Begien

INTERNATIONAL EDITORS

Steven Noble, Australia; Bernard Le Du, France; Andreas Borchert, Germany; Enrico Lotti, Italy; Yoshio Moriya, Japan; Tomasz Bitner, Poland; Daniel de Blas, Spain; Nils Holmlöv, Sweden; Anderson Huang, Taiwan; Bahattin Apak, Turkey; Simon Jary, United Kingdom

Upgrading your memory doesn't have to be complicated.

You need Crucial RAM.

The right memory at the right price. Just one reason why the world's leading computer manufacturers buy their memory from us. Upgrade factory-direct from Crucial.com and get top-quality RAM for up to 60% less than our leading competitor.

MORE THAN 49,000 UPGRADES
PC Makers' CHOICE
OVER 10,000 SYSTEMS

$59.39 **128MB PC100 SDRAM**
for today's most popular systems

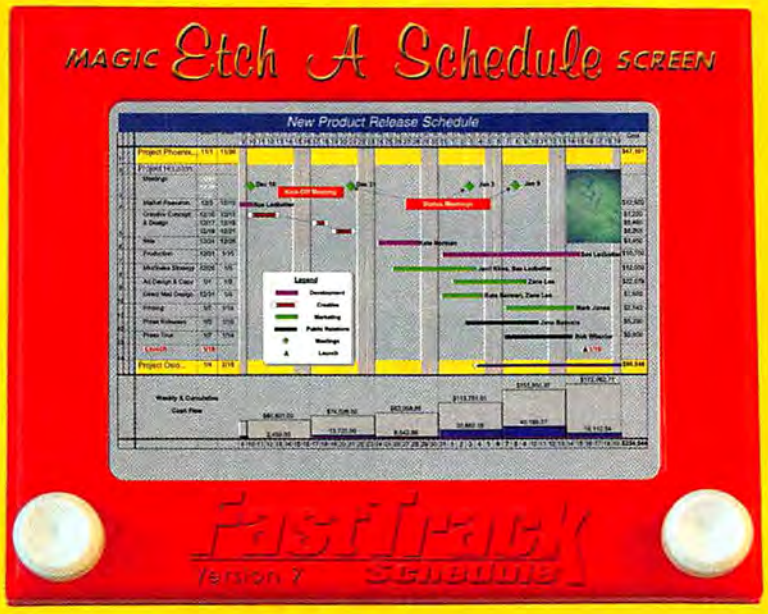
Price reflects an automatic 10% discount for ordering online. Prices were taken on 12/21/00 from Crucial and Kingston Web sites; however, prices can (and do) change daily. Prices may vary according to specific system requirements.

©2000 Micron Semiconductor Products, Inc. All rights reserved. Crucial Technology and the Crucial logo are trademarks of Micron Technology, Inc., and Micron is a registered trademark of Micron Technology, Inc. All other brands and names used herein are the property of their respective owners. Crucial Technology is a division of Micron Semiconductor Products, Inc. Phone 208-363-5500. Fax 208-363-5501. E-mail crucial.sales@micron.com. Crucial Technology is not responsible for omissions or errors in typography or photography.

Order online:
www.crucial.com
or call toll-free 1-888-363-3082

crucial TECHNOLOGY
A Division of Micron
The Memory Experts™

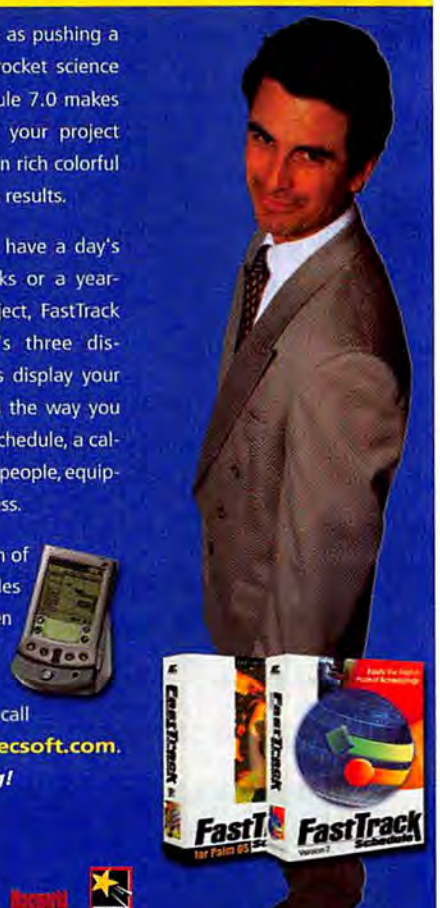
Think this is the only way to make project scheduling easy?



Think again.

So maybe scheduling a project isn't as simple as pushing a button or turning a knob. But it's also not rocket science when you use the right tool. FastTrack Schedule 7.0 makes it easy to organize, track, and manage all your project details. In minutes, project plans come to life in rich colorful schedules that are sure to turn heads and get results.

Whether you have a day's worth of tasks or a year-long project, FastTrack Schedule's three distinct views display your information the way you want—as a schedule, a calendar, or as a resource graph that tracks the people, equipment, and materials essential to project success.



And with our new compatible Palm OS version of FastTrack Schedule, you can sync schedules between your desktop and handheld. So even when you're on the go, you're schedules are right at your fingertips for easy viewing and editing. For a free demo version or to order, call us today at **800.450.1982** or visit **www.aecsoft.com**.

Easily the best in Project Scheduling!

AEC Software

© 2000 AEC Software, Inc. All rights reserved. Corporate names and trademarks stated herein are the property of their respective owners. Outside the United States, please call 1.800.450.1980 for information. The Etch A Sketch® product name and the configuration of the Etch A Sketch® product are registered trademarks owned by The Ohio Art Company.

Circle 84 on card or go to www.macworld.com/getinfo

Macworld

PRESIDENT AND CEO	Colin Crawford
VP/CHIEF OPERATING OFFICER	Stephen Daniels
DIRECTOR OF FINANCE	Eos de Feminis
ACCOUNTING COORDINATOR	Ronda Bittner
BILLING MANAGER	Ricardo Sandoval
VP OF HUMAN RESOURCES	Sue Murphy
HUMAN RESOURCE MANAGER	Su-Tsen Wu
CHIEF INFORMATION OFFICER	Lynn Heiberger
NETWORK SERVICES MANAGER	Sean Greathouse
HELP DESK MANAGER	Jim Uomini
IT MANAGER	Jennifer Torres
IT SPECIALIST	Jose "Peps" Jara
RECEPTIONIST	Cheryl Richardson
OFFICE ASSISTANT	Marvella Simpson

DISPLAY ADVERTISING SALES

VP OF SALES/PUBLISHER	Steve Plevin (415/243-3509)
ASSOCIATE PUBLISHER, EAST	Cynthia Ramsey (973/243-1197)
SALES BUSINESS MANAGER	Gabrielle Lindsley (415/243-3578)
SALES & MARKETING COORDINATOR	Kasey MacMullen (415/243-3642)
NATIONAL ACCOUNTS MANAGER	Paul Bonarrigo (508/533-4020)
ACCOUNT EXECUTIVE	Jo Zottarelli (516/277-4134)
NATIONAL ACCOUNTS MANAGER	Sara Culley (831/768-8472)
ACCOUNT EXECUTIVE	Margaret Level Green (415/243-3582)
REGIONAL ACCOUNTS MANAGER	Coretta Wright (415/243-3615)
ACCOUNT EXECUTIVE	Michelle Davis (415/243-3577)
SALES ASSISTANT	Jim DeCleene (415/243-3662)
SALES ASSISTANT	Janecke Hausken (415/243-3583)
SHOWCASE ACCOUNT MANAGER	Niki Stranz (415/243-3664)
SHOWCASE ACCOUNT MANAGER	Carol Johnstone (415/243-3691)
SHOWCASE SALES ASSISTANT	Franck Zamora (415/243-3628)
ONLINE SALES MANAGER	Doug Detlefsen (415/243-3598)
ONLINE ACCOUNT EXECUTIVE	Derek Song (415/243-3557)

MARKETING

DIRECTOR OF MARKETING	Hilary Weber
MARKETING COMMUNICATIONS MANAGER	Sharon L. Cordesse
MARKETING SERVICES MANAGER	Tara C. Gibb
ONLINE PROGRAMS MANAGER	Joe Raffetto
MARKETING COORDINATOR	Bryan Irwin

PRODUCTION

PRODUCTION DIRECTOR	Steve Spingola
PRODUCTION MANAGER	Lewis Lee
PREPRESS MANAGER	Alan Anzalone
AD COORDINATOR	Megan Matteoni

ONLINE

SENIOR TECHNOLOGY DIRECTOR	Paul Forrester
SENIOR WEB PRODUCER	Christina Gonzales
ONLINE PRODUCTION MANAGER	Ron Neal
WEBMASTER	Michael R. Evans

Macworld is a publication of Mac Publishing, L.L.C. *Macworld* is an independent journal not affiliated with Apple Computer, Inc. *Macworld*, *MacUser*, *MacWeek*, *Macworld Interactive*, *Macworld Shopper*, *MW*, *MW Lab*, *MW Shopper*, *The Desktop Critic*, *Expert Graphics*, *Quick Tips*, *Star Ratings*, *Buyers' Tools*, *Streetwise Shopper*, and *Conspicuous Consumer* are registered trademarks of Mac Publishing, L.L.C. Apple, the Apple logo, Mac, and Macintosh are registered trademarks, and MacLetter and PowerBook are trademarks, of Apple Computer, Inc. Printed in the United States of America.

Copyright © 2001 Mac Publishing, L.L.C. All rights reserved.

Machines That Do Everything.

Affordable Multi-Function Center® Models—one less thing you'll have to wait for, thanks to our Mac compatible MFCs. Fact is, we've developed some very smart all-in-one solutions. That's right, all-in-one, as in printing, copying, scanning and even faxing—all in one compact unit. Plus, your MFC is available in zippy 12 page per minute laser, color inkjet, flatbed and sheet-fed models. When it comes to multi-function, think better... think Brother.

For Machines That Mean Everything.

Various models available at: MACWAREHOUSE, CDW, MACZONE, J&R COMPUTER WORLD, OFFICE DEPOT, OFFICEMAX, FRY'S, MACCONNECTION AND STAPLES

At your side.

brother®

© 2000 Brother International Corporation, Bridgewater, NJ • Brother International Corporation, Nagoya, Japan
For more information please call the Brother Fax-Back System at 800-521-2846 or visit our web site at www.brother.com

All brand and product names are registered trademarks of their respective companies.

Attention:

Road Warriors.

Portable!

FireWire
Bus Powered!

VST FireWire
CD-R/RW

SMARTDISK™

Simplifying The Digital Lifestyle™

SmartDisk Personal Storage Systems
125 Nagog Park
Acton, MA 01720
sales/service: www.vsttech.com
corporate: www.smartdisk.com

Circle 74 on card or go to www.macworld.com/getinfo

Macworld

HOW TO CONTACT MACWORLD

Subscription Information and Services

Phone	800/288-6848 or 850/682-7624, from the United States and Canada 303/604-7445, from all other locations
U.S. Mail	Macworld Subscription Services P.O. Box 54529, Boulder, CO 80322-4529 (Include a mailing label with correspondence.)
World Wide Web	http://service.macworld.com (for service) or http://subscribe.macworld.com (to order)
E-mail	macworld@neodata.com (Send your full name and the address at which you subscribe; do not send attachments.)
Fax	850/683-4094, from the United States and Canada 303/604-0518, from all other locations

Subscriptions

The one-year (12-issue) subscription rate is $34.97 in the United States and $54.97 for all other countries. The rate for a one-year (12-issue) subscription with the monthly CD-ROM is $54.97 in the United States and $74.97 for 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.

Back Issues of Macworld

Back issues (subject to availability) are $8 per issue for U.S. delivery ($12 outside the United States); prepayment in U.S. currency to *Macworld* is required. Send check or money order to Back Issues, *Macworld*, P.O. Box 53131, Boulder, CO 80322-3131.

Reprints and Permissions

You must have permission before reproducing any material from *Macworld*. Write to *Macworld*, Reprints and Permissions, 301 Howard St., 16th Fl., San Francisco, CA 94105; 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; e-mail sales@rmsreprints.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 54529, Boulder, CO 80322-4529. Please include a copy of your mailing label.

Macworld on Microfilm

Macworld is available on microfilm and microfiche from UMI, 300 N. Zeeb Rd., Ann Arbor, MI 48106-1346; 734/761-4700.

Macworld Editorial

The editors of *Macworld* welcome your tips, compliments, or complaints. Stories and product reviews from past issues can be located at www.macworld.com. We are unfortunately unable to look up stories from past issues; recommend products; or diagnose your Macintosh problems by phone, e-mail, or fax. Contact Apple toll-free at 800/538-9696, ext. 500, for information on user groups in your area.

Our offices are located at 301 Howard St., 16th Fl., San Francisco, CA 94105; phone, 415/243-0505; fax, 415/442-0766.

LETTERS TO THE EDITOR Direct all comments and suggestions regarding any aspect of the magazine to letters@macworld.com. Due to the high volume of mail received, we can't respond personally to each letter. We reserve the right to edit all submissions. All letters published in *Macworld* or Macworld.com become the property of Mac Publishing.

MAC 911 Send your questions or tips on how to use Mac computers, peripherals, or software to *Macworld*, Mac 911, 301 Howard Street, 16th Floor, San Francisco, CA 94105; fax 415/442-0766; or e-mail mac911@macworld.com. Please include your name, address, and telephone number. To share tips and discuss Mac problems with other Mac users, visit the Mac 911 Forum (www.macworld.com/subject/mac911).

MACWORLD EXPO As the flagship sponsor of Macworld Conference and Expo, *Macworld* encourages all subscribers to attend this exciting biannual industry event. For more information about registration, exhibitor lists, conference schedules, dates, and much more, please visit www.macworldexpo.com.

BPA

APC introduces the best protection available for your Mac.

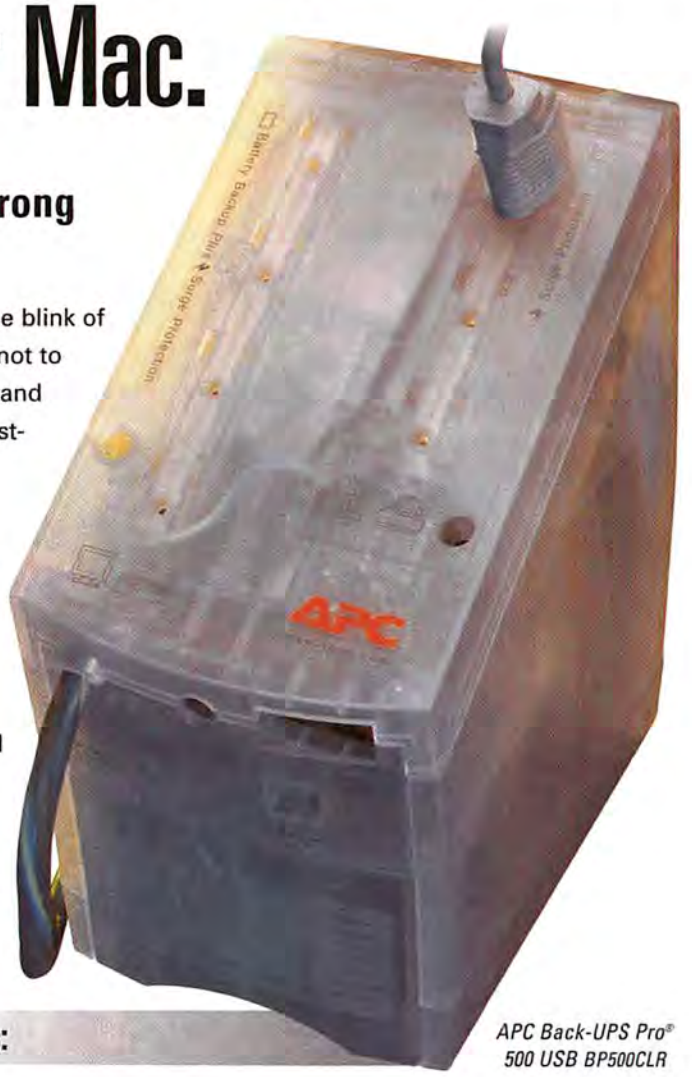
8 million computer users can't be wrong about APC power protection

Don't let a lightning storm destroy your Mac system in the blink of an eye. Your hard drive, modem and RAM are all at risk, not to mention peripherals like your zip drive, scanner, monitor and printer. Rely on an APC Back-UPS Pro® to save your investments from high voltage surges.

APC power protection also provides clean, continuous power that lets you function without frustrating interruptions, unlike cheap power strips that don't prevent any of the power problems that can cause keyboard lock-ups, systems crashes, and lost Internet connections.

And if your system is ever damaged by a surge, even lightning, APC's Lifetime Equipment Protection Policy will pay up to $25,000 to replace your equipment.
* *(see policy for details)*

Discover why 8,000,000 customers trust in APC's Legendary Reliability and protect your Mac system with an APC power protection unit today.



APC Back-UPS Pro® 500 USB BP500CLR

An APC Back-UPS Pro 500 USB provides:

- Emergency battery power for continuous uptime to help save your data through brief power outages
- Auto-shutdown software that saves your files and data, even when you're away from your computer
- Audible and visible alarms alert you to power events as they occur
- $25,000 Equipment Protection guarantee
- 2 year comprehensive warranty
- iMac colored configurable speaker guards to match your computing environment

A-LIST PCComputing

APC Back-UPS Pro® 500:
"APC's latest plugs into a USB port, making it completely painless to protect your PC from power snafus and electrical spikes."
- PC Computing 4/99

USB UNIVERSAL SERIAL BUS

Mac

APC®
Legendary Reliability™

Enter to win a clear APC Back-UPS Pro® 500 for your Mac!

Enter to win APC's legendary power protection for your Mac, a $179.99 value! All entrants will also receive an "Are You at Risk" Kit. *(See APC's Web site for complete promotion details)*

Enter now: Visit *http://promo.apc.com* Key Code x871z • Call 888-289-APCC x4021 • Fax 401-788-2797

©2001 American Power Conversion. All Trademarks are the property of their owners. APC1DØEF-USa • PowerFax: (800)347-FAXX • E-mail: apcinfo@apcc.com • 132 Fairgrounds Rd., West Kingston, RI 02892 USA

MacSOHO™? It rocks!

If your small office has a Mac and PC that need to share files, then you need MacSOHO, from Thursby Software. MacSOHO is the easiest, most cost effective way for your Macs and PCs to become best friends. It's fast, really fast, and secure and it's so simple to use and easy to install on your Macintosh, you'll think it rocks! MacSOHO, the perfect solution for your home or small office.

Download a free evaluation today.

THURSBY Software

The File Share Folks™

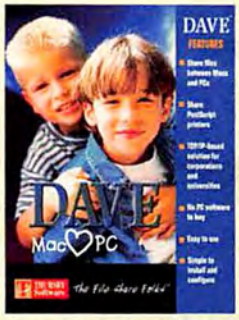
www.thursby.com

© 2000 Thursby Software Systems, Inc.

Circle 124 on card or go to www.macworld.com/getinfo

THURSBY SOFTWARE has the perfect file share solution to meet your needs.

The ideal solution for the small office where Macs & PCs need to share files.

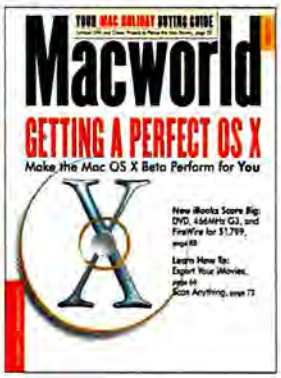


The fast, easy way to share files and printers between PCs and Macintosh systems.

Achieve true NFS connectivity between your Mac and UNIX systems.

Windows users can access files on any Mac workstation or AppleShare server.

Feedback



The Great Debate: Mac OS X

The topic of Mac OS X is white-hot. Our mailboxes and online forums are overrun with arguments for and against the next generation of Mac OS. If you want to speak your mind, visit our Mac OS X subject page at www.macworld.com/subject/macosx.

Beta Blues

Henry Bortman's discussion of the Mac OS X public beta was very disappointing ("Classic Confusion," in "OS X–Beta Survival Guide," December 2000). Of *course* Mac OS X was not meant for daily use. Apple released a *public beta* so users could test it out and send feedback, bug reports, general comments, feature requests, and the like. I think this is a great step—it's better than having to sit around and hold your breath.

Considering that users get protected memory, preemptive multitasking, and rock-solid Unix underneath the operating system, it seems Bortman was quick to judge the Mac OS X public beta.

Simone Manganelli
Mountain View, California

Apple gets my applause for the changes it's making to the design of the user interface in OS X. Every day, I help casual Mac users through the trials of operating a computer. This new operating system is a clearer, more logical approach to computing.

However, I use a Mac every day for my own work, and I see the new OS as something that won't help my productivity—its interface changes will clutter my screen and make it more difficult to do what I need to.

At this point in computer development, it's ludicrous to expect one OS design to be the best both for novices and professionals. I hope Apple recognizes this fact.

Thomas Payne
Waverly, Iowa

Shh

David Pogue is reckless and irresponsible to dismiss the threat that increasingly invasive electronic surveillance plays in our lives (*The Desktop Critic*, December 2000). In an age when our children are subjected to ads in the classroom, in their textbooks, and on the playing field, we shouldn't be asking for "targeted" Web ads—we should be demanding *less* advertising! And the Web pages I visit—naughty or not—are, quite simply, none of anyone's business. I can also assure Pogue that his friend who pays cash is *not* being hurt by his paranoia—he's simply not receiving [the credit card company's] 2-percent reward for being a good little unquestioning consumer. In the long run, I'd wager, he's better off.

Pogue sounds as though he has surrendered to the system and is desperately trying to find some rationalization for his lack of outrage. I recommend visiting the Electronic Frontier Foundation (www.eff.org) for a healthy injection of inspiration.

Eric Hoffsten
Brooklyn, New York

Pogue hit the nail right on the head in his excellent column on Internet privacy. I have been quite exasperated by the mindless reports on this issue, and govern-

continues on page 22

For 1,000,000 Web developers, it's The Word.

©2000 Macromedia, Inc. All rights reserved. Macro

MACROMEDIA® DREAMWEAVER® may not be the standard for hotel rooms, but it is the standard for 70% of professional Web developers who use visual tools. And the new Dreamweaver 4 Fireworks® 4 Studio allows both beginners and professionals to create the most amazing sites on the Web. Not only does it tightly integrate text and visual elements, it generates code so clean you could eat off of it. Add to that over a million developers sharing and exchanging extensions and, well, you see the light.

macromedia.com/go/studio

macromedia® *what the web can be.*™

Macromedia logo, Dreamweaver, Fireworks, and "what the web can be" are trademarks or registered trademarks of Macromedia, Inc. in the United States and/or other countries.

continued from page 19

ment involvement is especially worrisome. The government should not restrict the information that companies can obtain about my surfing habits (without authorization). Frankly, I *want* information gathered about what I like and what I don't. Is that so wrong?

A company's ability to tailor its site to specific individuals would be greatly restricted under many of the Internet-privacy measures that have recently been proposed. Pogue took *Macworld* readers beyond the surface to take a look at what is really occurring behind the scares.

Stephen Dean
via the Internet

Panic?

While I agree with Andrew Gore that it's too soon to panic about Apple's future (*The Vision Thing*, December 2000), I disagree that the G4 Cube can not be the "something new for consumers" he says is needed. The Cube's unique style makes it immediately attractive to many consumers. Unfortunately, it is way too expensive as currently configured. Today's average consumers have firm budgets; it's difficult to lure them to more-powerful and more-expensive models. Trying to sell $1,800 Cubes to iMac customers is a losing battle, even with a $300 rebate.

Daniel Gonneau
Astoria, New York

Corral Corel

Philip Michaels lets Corel off much too easily ("Corel Draws Up Mac Battle Plan," *Buzz*, December 2000). Corel Spokeswoman Meredith Dundas would have us believe that Corel is "a company with a reputation for strong Mac products." I find that to be an odd statement, considering that Corel purchased WordPerfect—really the only solid competition Microsoft Word has ever had—from Novell, only to let it rot on the shelves. If I were a user of Corel Painter, Bryce, KPT, or KPT Vector Effects, I would begin an immediate evaluation of replacement products.

Zeph Bender
Los Angeles, California

Letters should be sent to Letters, *Macworld*, 301 Howard St., 16th Fl., San Francisco, CA 94105; via fax, 415/442-0766; or electronically, to letters@macworld.com. Include a return address and daytime phone number. Due to the high volume of mail received, we can't respond personally to each letter. We reserve the right to edit all letters. All published letters become the property of *Macworld*.

CORRECTIONS

In our review of FireWire CD-RW drives (*Reviews*, November 2000), the drives' speeds are listed in the following order: write, rewrite, and read. **m**

The Feedbag

Coke versus Pepsi. The Sharks versus the Jets. Al Gore versus George W. Bush. And now, we can add to that pantheon of great rivalries the struggle between Apple Pro Mouse users and partisans of the old hockey-puck–shaped mouse. After all, when something new comes along, it's only natural to complain about how great things *used* to be.

Take Macworld.com forum poster "Greg," who likes the puck mouse because it "alleviates soreness that can happen for us *full-time, pistol-packing, Windows-dissin', baby-kissin' Mac users.*" Presumably, after typing those words, Greg spiked his keyboard, downed a six-pack, and spit purposefully.

His words made forum poster Andrea Pergo conclude that Greg is the type of person who would say, "OS X was developed by aliens from Vulcan with pointed ears."

We're assuming you haven't seen photos of the OS X development team, Andrea.

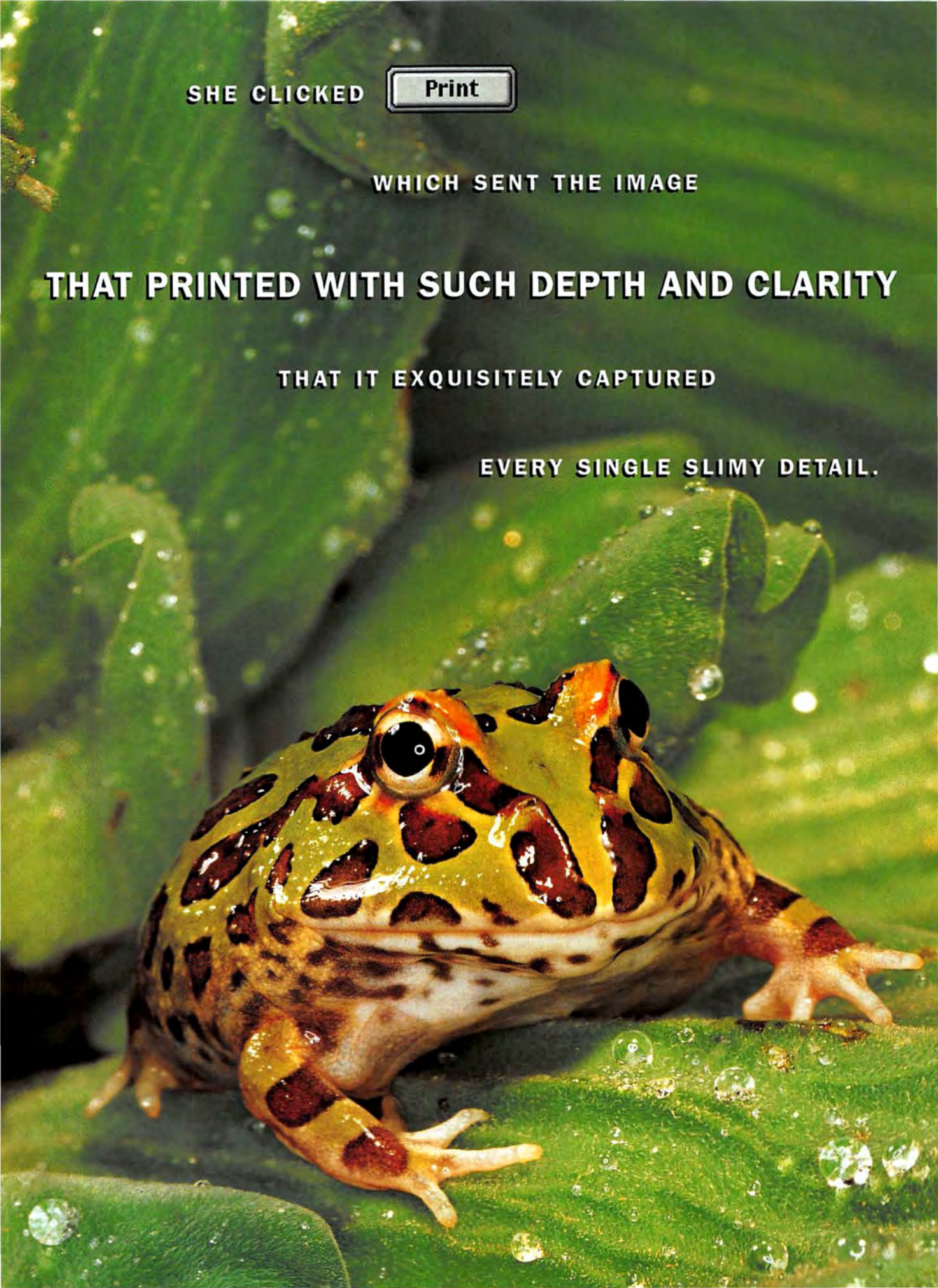
But the Macworld.com forums aren't just a place for mouse users to settle their blood feuds. You can also get handy advice from readers such as "Mblackmore," who says that problems with the PowerBook TrackPad jerking back and forth could have something to do "with static electricity" and that when he grounded himself, "the problem would always go away." Yikes! Our mamas taught us to never ground ourselves in public.

Meanwhile, the OS X controversy rages on, and some readers are even threatening to get rid of their Macs. But don't go tossing out that new G4 just yet. Another "Greg"—not the pistol-packing, Windows-dissin' Greg we've already met—has generously offered to "pull [his] car up to your door" and "take your piece-of-trash G4." He'll also take any of those old-style $20 bills off your hands, freeing you to fill your wallet with the new, stylish twenties that are so popular with the kids today.

The LaCie PocketCD-RW™. Compatible with Windows and Mac OS, and equipped with both USB and FireWire™ connections, the LaCie PocketCD-RW is portable, yet durable enough to read and write CDs from home or away.

LACIE Made for ideas.

lacie.com PocketCD-RW™ and the LaCie logo are trademarks of LaCie, Ltd. Patent pending. ©2000 LaCie, Ltd. All rights reserved. FireWire and the FireWire logo are trademarks of Apple Computer, Inc. registered in the U.S. and other countries. Other product and brand names may be trademarks or registered trademarks of their respective companies.


SHE CLICKED
Print
WHICH SENT THE IMAGE
THAT PRINTED WITH SUCH DEPTH AND CLARITY
THAT IT EXQUISITELY CAPTURED
EVERY SINGLE SLIMY DETAIL.

Xerox Phaser® 790 Tabloid Color Laser
$6199*

XEROX PRINTERS MAKE IT HAPPEN.

Photographic-quality color so realistic, it's startling. Introducing the Xerox Phaser® 790 Tabloid Color Laser printer, the next generation in the award-winning Tektronix Phaser line. Built specifically for graphic designers, it has advanced color management tools and a broad range of colors for flawless continuous tones. Add auto duplexing, full color printing at 6 ppm, and paper handling up to 13 x 18, and you've got a printer as spectacular as its output.

Xerox now has a full line of color and black and white printers for whatever your work demands.
To see what a difference realistic color can make, call 1-877-362-6567 ext. 1788 or visit us at
www.xerox.com/officeprinting/frog1788

DIGITAL
THE DOCUMENT COMPANY
XEROX

XEROX
NETWORK PRINTERS

Copyright © 2001 XEROX CORPORATION. All rights reserved. Xerox®, The Document Company® and Phaser® are trademarks of XEROX CORPORATION. Tektronix® is a trademark of Tektronix, Inc. licensed to XEROX CORPORATION.
*Estimated U.S. retail starting price. Reseller price may vary.

THE YEAR AHEAD

MAC TO THE FUTURE

Time to break out the Ouija boards and predict what's in store for Apple in the next 12 months. Our panel of experts includes *New York Times* Senior Writer John Markoff, *San Francisco Chronicle* Technology Reporter Henry Norr, TechTV Host Leo Laporte, and *Macworld* Contributing Editors Henry Bortman, Christopher Breen, Adam C. Engst, Tom Negrino, and Franklin N. Tessler.

WHAT WILL BE THE BIGGEST HARDWARE PRODUCT IN 2001?

Norr says it will be a major iMac makeover, while Laporte and Breen insist it'll be faster desktops. "Unless consumers see Macs branded with a GHz rating by the end of 2001, I'm afraid Apple is going to lose more market share," Breen warns. Markoff expects a lighter, faster laptop; both he and Engst think Apple could unveil a subnotebook—a scaled-down version of its portable products. And don't rule out new processors. "We may see the first Mac powered by a non-Motorola CPU," Tessler says.

WHAT ABOUT SOFTWARE?

Nearly all of our panel says that Mac OS X will be the biggest software story in the coming year. "Everything depends on the success of OS X," Breen says. But Bortman says Carbonized applications such as Microsoft Office 2001 will be the real story: "OS X won't have much real meaning to most users until Office ships as a set of native apps."

WHEN WILL A FINISHED VERSION OF OS X SHIP?

Before Steve Jobs's Macworld Expo announcement of a March 24 release date, our panelists' predictions ranged from spring to September. Engst, who'd bet on July, offered a caveat: "If I'm wrong on the late side, I'll make like a PC journalist and claim that Apple rushed the first finished version out the door."

AND THE MOST IMPORTANT NEWS TO COME OUT OF APPLE THIS YEAR?

OS X, contend Bortman and Breen. Laporte foresees an OS X–for–Intel-processor scenario. "Don't think of me as a PC bigot," he says. "Think of me as a poor fool who has invested in a bunch of PC hardware and is still looking for a usable OS." Like Tessler, Markoff thinks Motorola's PowerPC chip may have some company. "Apple will add a second-processor architecture," he says, "and it will be from an unexpected source." Negrino doesn't know what Apple will do, but he thinks it needs to "broaden the Apple brand and make some inroads into the business market." Engst says that could mean forays into consumer electronics. Norr, meanwhile, guesses that the biggest Apple news won't be a product at all, but "the resignation of Steve Jobs." Apple without Steve Jobs? Talk about a grim future.—PHILIP MICHAELS

More Info:
www.macworld.com/2001/03/buzz/predict.html
See our panel's complete predictions for what Apple might do in 2001.

LINK

KIM STRINGFELLOW

BUZZ

News, Views, and Chatter from the World of Macs

What Can You Do with Your Aging iMac? GO FISH!

Nine years ago, Macworld columnist Andy Ihnatko published detailed instructions on how to turn a Mac Classic into a fish tank. Since the first-generation iMac is turning three this year, we asked Andy if it was time for the 233MHz Bondi blue machine to join its older sibling and become the world's most colorful aquarium.—Ed.

My original Bondi blue iMac is by far the most reliable of the half-dozen Macs operating round-the-clock in my office. Maybe that's because it's the only one I haven't inflicted some sort of bizarre pre-alpha operating system upon.

But I think its consistent performance is due to the fact that it sits on the same table as my iMacQuarium Prototype C. It steals nervous glances at this identical iMac, whose brains and guts have been ripped out, and it suddenly thinks, "You know, maybe this stack-override error I'm experiencing isn't *really* worth throwing a whole Restart hissy-fit over."

I had to build an iMacQuarium. The whole top naturally lifts off like a cake stand's for easy access! It's already empty inside—no cutting or slicing necessary! And with all that inside volume, there's enough water for a few tropical fish and a heater!

Still, an iMacQuarium isn't the same beast as a MacQuarium. When I developed the original MacQuarium plans, Mac Classics were good for little more than becoming fish tanks. An original iMac is still a credibly swift G3 Mac. And with so many nonprofits subsisting on computers made of twigs and dried animal skins, it's hard to rip up a perfectly functional iMac without imagining that karma is filling a sock with nickels and eyeing a spot just behind your left ear.

Still, I'm on my third prototype, working toward a design that's so simple to build, anyone can slap one together. Will I feel guilty about iMacs potentially going early to their reward? Maybe. Or I could just focus on the fact that every iMac destroyed instead of passed on is another new iMac that Apple can sell to someone's disappointed friend or relative.—ANDY IHNATKO

More Info:
www.cwob.com
Visit Andy Ihnatko at his online home.
LINK

CHIP SIMONS

BUZZ

The Year in Macs

DECEMBER 1999

- **This product brought to you by Microsoft:** Stung by the success of the free Microsoft Outlook Express e-mail client, Qualcomm releases a free, ad-supported version of Eudora.
- **Somewhere, Kai Krause weeps:** MetaCreations announces it will sell off Painter, Bryce, and other applications to focus on 3-D Web graphics.
- **And just in time for the holidays, too:** Intuit discontinues its MacInTax for Business software.

JANUARY 2000

- **The search process must have been grueling and extensive:** After two-and-a-half years as Apple's interim CEO, Steve Jobs takes the job on a permanent basis.
- **Forget OS X; *this* is the future:** At Macworld Expo, Jobs unveils Apple's iTools, which include online greeting cards.
- **You've got merger:** America Online snaps up Warner Brothers in a $190 billion deal.

FEBRUARY 2000

- **That's great, Steve, but tell us some more about the greeting cards:** Apple unveils changes to its PowerBook and iBook models.
- **Didn't we report this last year?** After a Motorola processor shortage delayed its fall 1999 debut, the 500MHz G4 desktop is finally released by Apple.
- **You'd think Adobe and Macromedia were rivals or something:** Adobe unveils its "Flash killer" Web animation tool, LiveMotion.

MARCH 2000

- **Act now and we'll throw in an Arby's coupon:** Adobe lets some InDesign users upgrade to version 1.5 for free, after they balk at the upgrade price.
- **Scary stuff:** Simon & Schuster publishes Stephen King's *Riding the Bullet* in electronic form only, but Mac users wait two weeks for a Mac-friendly version of the novella.
- **We're getting the band back together, man:** A cadre of Apple vets team up at Eazel to build a user-friendly interface for the Linux operating system.

continues

COOL STUFF

Fantastic Plastic

The colored plastic casing and stand-at-attention antennae make it look like something you might find hidden at the bottom of your favorite breakfast cereal. But the Kima, from Akoo.com (708/583-9600, www.akoo.com), is a tad more sophisticated than the free decoder ring that came with your corn flakes. Kima's base unit transmits audio wirelessly from your computer—or any audio source with an eighth-inch stereo mini-jack—to the device's remote unit. Place the receiver next to a stereo up to 1,000 feet away, and tune it to one of the two FM frequencies Kima supports. Your stereo will belt out that MP3 playlist of thrash-metal polkas you've been storing on your Mac. At $150, Kima costs a bit more than running a cable from you computer to your stereo. But its dancing lights will give your party guests something to enjoy long after the nachos run out.—JONATHAN SEFF

JEANENE SCOTT

CLICK HERE

Desktops on Display

You spend more time staring at your computer screen than anything else—friends and loved ones included. So why shouldn't your computer desktop reflect your personality, instead of just your bleary-eyed expression? **K10k.com,** also known as Kaliber 10000, gives you a peek at what others are staring at when they boot up. Renowned for its irreverent discussion of design, K10k's On Display section highlights a vast collection of customized desktops from around the world. You'll find screens designed by everyone from minimalists to abstractionists, neat freaks to file misers. If your desktop's appearance has evolved from the default Mac OS's into a form of creative expression, consider contributing to the exhibitionism by submitting your creation to the collection.—LISA BAGGERMAN

www.K10k.com

The Year in Macs

APRIL 2000

- **Well, they did a great job with WordPer . . . oh:** Corel buys Painter, Bryce, KPT, and KPT Vector Effects from MetaCreations.
- **Upon hearing the news, Kevin Costner immediately bought a G4 to finish *The Postman II*:** Apple makes iMovie available as a free download.
- **Bet you they end up calling it Entourage:** Microsoft says that its upcoming Office update will include a new PIM application.

MAY 2000

- **Lars Ulrich for the plaintiff, Your Honor:** Metallica asks Napster to ban users of the file-sharing service who illegally download songs.
- **It slices! It dices! It offers preemptive multitasking!** Apple unveils a preview version of Mac OS X with a more Mac-like finder and tweaks to the Aqua interface.
- **Mourners should send flowers to Corel:** Switching its focus to graphics programs, Corel ends development of WordPerfect for the Mac.

JUNE 2000

- **And then write *I will not abuse my monopoly power* 100 times:** Judge Thomas Penfield Jackson orders Microsoft to be split in two.
- **When it rains in Redmond, it pours:** Sun Microsystems says it will put out a Mac version of StarOffice, its free productivity suite.
- **Why let that antitrust thing slow you down?** Microsoft purchases longtime Macintosh gaming developer Bungie.

JULY 2000

- **Anyone want to buy a warehouse full of tangerine knickknacks?** Apple ditches its old iMac flavors for new colors—indigo, ruby, sage, and snow.
- **And, may we add, it looks really cool:** Apple unveils the G4 Cube, a 450MHz machine that takes up very little desk space.
- **Not that this is a warning sign the stock will plunge in a month or two:** Apple's third-quarter profits of $200 million fall short of analysts' expectations.

Waiting for Motorola

Since Apple introduced the first Power Mac G4 generation—and the PowerPC MPC7400 processor inside—more than a year ago, Mac users have watched as Pentium and Athlon processor speeds soared to more than 1GHz. So has anything new happened on the PowerPC front during that time?

Not really.

Sure, Apple added a second MPC7400 processor to the dual-processor systems. But under Mac OS 9, most applications—not to mention the OS itself—don't take advantage of that second CPU. Mac OS X will change that, but for the foreseeable future, dual processors won't be of much benefit to the majority of Mac users.

The PowerPC MPC7410, which Motorola announced in September 2000, is little different from its older sibling, except for lower power consumption. It, too, goes no faster than 500MHz.

Still, megahertz aren't everything. The PowerPC G4 generation can still hold its own, computationally speaking, against 1GHz processors from Intel and AMD.

But if PowerPC chips can compete with processors running at twice their speed, why aren't they running at the same speed and offering more than twice the performance?

If Motorola could make faster G4 processors, it almost certainly would. But since those faster chips aren't available, Occam's Razor tells us that Motorola is having problems making them.

Motorola is almost pathologically vague about its future plans. It claims to have a 75XX series in the works (the vaunted, mythical G5), but the company steadfastly refuses to even hint at when it will ship. Add to this IBM's apparent lack of interest in AltiVec—Motorola says IBM has a license to make chips with the performance-boosting technology, but chooses not to—and it looks as if Apple may have painted itself into a corner. By killing the clone business, Apple made itself the only major desktop PowerPC customer. Rarely are single customers enough to keep companies the size of IBM and Motorola interested for long.

The PowerPC is not out of the race yet, but it does lag a bit behind. It's hoped that the G5, whenever it appears, will make up for lost time and will arrive before Intel and AMD have a chance to build a real performance lead.—STEPHAN SOMOGYI

More Info:
www.macworld.com/2000/11/features/mp_mac.html

Are two brains better than one? *Macworld* examines Apple's dual-processor G4s.

LINK

BUZZ

AUGUST 2000

- **But we're still waiting for our Mac-friendly copy of *Riding the Bullet*:** Electronic books dominate the news at the Seybold San Francisco conference.
- **Marbury versus Madison, Brown versus Board of Education, and now this:** Adobe sues Macromedia for allegedly violating a patent on tabbed pallets.
- **And in minor product upgrade news:** Adobe releases Photoshop 6, adding a new Options tool bar and integrated vector drawing tools to the flagship application.

SEPTEMBER 2000

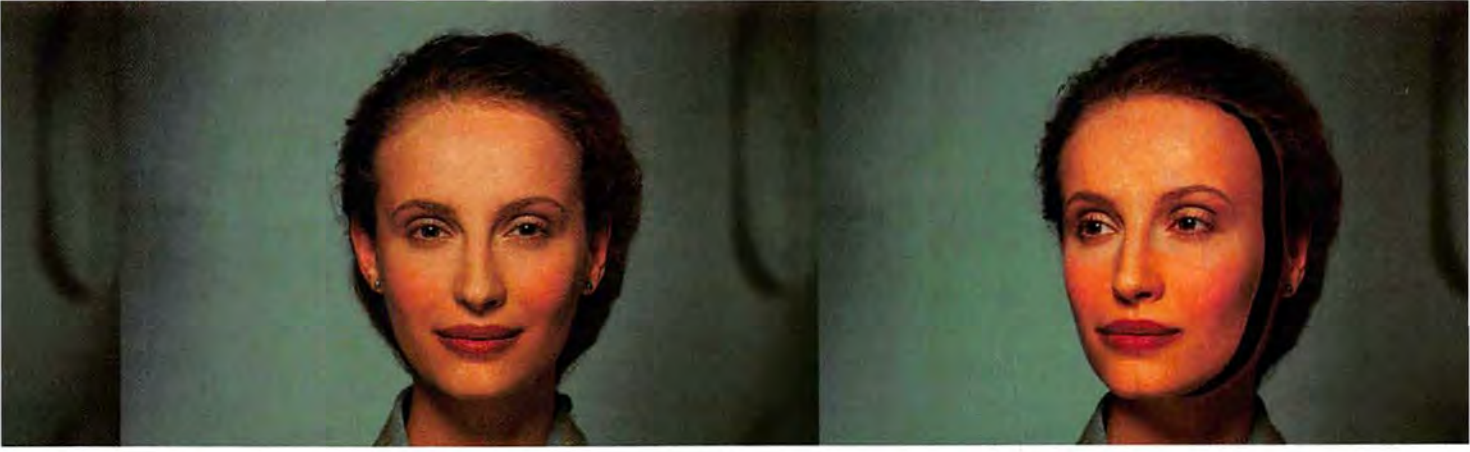
- **Imagine the reaction when a finished product ships:** Within the first week of the OS X beta's release, Apple takes more than 80,000 orders for the operating system.
- **What's green and white and revved all over?** Apple beefs up its iBook line and adds a new color—the eye-catching key lime.
- **But enough about my day—how was your afternoon, Mr. Jobs?** Apple's stock plunges by 52 percent in one day.

OCTOBER 2000

- **Well, the *Venus de Milo* has no arms, and they call that art:** Some G4 Cube owners complain about faint lines that appear in the computer's plastic casing.
- **Steal music different:** A Mac version of Napster debuts.
- **The saddest Denver retirement since John Elway's:** Quark founder and chairman Tim Gill steps down from the desktop-publishing-software company.

NOVEMBER 2000

- **Then they linked arms and sang an illegally downloaded version of *Kum Ba Yah*:** Napster reaches an agreement with music publisher Bertelsmann.
- **Let's see . . . lawsuit, lawsuit . . . ah, product updates:** Macromedia's upgrades of Fireworks, Dreamweaver, and Dreamweaver UltraDev sport a common interface and tighter integration.
- **And if that doesn't work, we can always bring back the Newton:** Apple offers rebates to spur slow hardware sales.



Knock. Knock. Can your imagination come out and play?

ADOBE WEB TOOLS: Your creative mind is free to romp and run rampant with Adobe® web design tools. Because the back-and-forth between applications. Which means more time spent on the joy of creating. As opposed to the

©2001 Adobe Systems Incorporated. All rights reserved. Adobe, the Adobe logo, tagline "Inspiration becomes reality," Adobe Premiere, After Effects, GoLive,

GoLive™ software allows you to easily optimize and resize Photoshop® images for the web, eliminating hassle of re-creating. Find out more today at www.adobe.com/webtools. **Inspiration becomes reality.™**

Adobe

GoLive™

Photoshop®

LiveMotion™

After Effects®

Adobe® Premiere®

Illustrator®

Illustrator, LiveMotion and Photoshop are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.

PRO FILE

Add Apples for Flavor

Q&A with ALTON BROWN

Alton Brown took a backward approach to finding fame as the host of a TV cooking show—he spent ten years as a cameraman and TV-commercial director before going to cooking school. "I watched a lot of television shows about food and decided that I thought they were all rotten," Brown says. "I went to culinary school specifically to get the background to make the show that I make." The result? Good Eats, *the Food Network program Brown hosts and writes—with the help of his 366MHz iBook SE.*—CHRIS RYWALT

Q: *How does the Mac figure into production of* Good Eats?

A: Well, here in my office is a souped-up 9600; my iBook; and my wife's iMac, from which she runs our company—so I'm about as entrenched in Macintosh technology as I can be. If I have a brand loyalty, it's to Macintosh. And maybe that's because my computer skills and the way my life has changed through my ability to use computers have been so attached to Macintoshes that . . . I feel about them the way a lot of farmers feel about Ford trucks. You've got certain tools that you have to have, and so you're very, very picky; and once you make up your mind about what you're going to go with, you stick with it.

Q: *What purpose does your iBook serve for you on the show, aside from being where you write?*

A: Well, for me that's a pretty huge thing. A huge amount of my research runs through that computer, certainly Internet stuff. I really like using Sherlock for research. It helps me weed through the Web very quickly, and it's fast and reliable. I also use Final Draft, which is kind of an industry-standard screenwriting program. And the other thing I really like about the iBook is that it was an extremely affordable machine. I've got the Special Edition graphite, which is perfect for me, and it cost $1,700. I could spend almost four grand for a full-blown PowerBook, but to tell you the truth, I don't need that. And I like the fact that the iBook's got a handle on it—I can toss it around; it's extremely durable physically. It's got a great screen, I don't need a floppy drive, it's got CD-ROM, and I'm a huge USB fan. I never did understand all those plugs. We use some digital photos on the show, so I'll be downloading digital photos in Photoshop from my Olympus camera while I'm backing stuff up on a Zip drive, and I've got maybe ten things plugged up to that iBook all at one time, which is really pretty spectacular. And the other thing about the iBook is that it's just cool looking. The more I like the looks of a tool, the more likely I am to use it.

More Info:
www.macworld.com/2001/03/buzz/brown.html

Alton Brown says he's a nerd at heart. Find out why in our extended interview.

LINK

WEIRD STUFF

Watch Where You Point That

Back in the day, simply owning a personal digital assistant was the expressway to geek cred—you whipped out that Newton, and folks knew you were someone to contend with. But now, with everyone from high-school students to presidential candidates slinging Palm Pilots, the true nerd needs a little something extra—such as an adjustable plastic finger nipple, say. The three-for-$4.95 Stinger Stylus, from Orbit Industries (973/324-9896, www.stingerstylus.com), lets you tap away on your PDA with a small stylus that attaches to your finger. The Stinger not only eases hand strain, stores effortlessly, and comes in a variety of colors, but also sets you apart as the biggest geek in the room.—GREG KNAUSS

FROM THE LAB

Fire Drill

Most people lack the intestinal fortitude to try a stunt like this, but late one evening we decided to gather up every FireWire device in the building and see just how many we could connect to a single port. We had a stack of 18 hard drives, an iMac in FireWire Target Disk mode, a CD-R drive, and a camera hooked up before the system choked.

In setting up this monstrosity, we discovered that one drive doesn't always equal one device. We found that some hard drives—the VST, for instance—take up two device IDs. And each device requires its own external power brick.

The moral of the story? You may never need to approach FireWire's theoretical limit, but it is possible to wind up with 520GB of storage—and one hell of a mess to clean up.—JAMES GALBRAITH AND GIL LOYOLA

What's HOT

A QUICK LOOK AT THE WORLD OF TECH

1. **Stephen King stops work on his pay-per-installment online novel, *The Plant*, after sales slump.** *But watch for King's next macabre tale,* The Terror of the Web-Surfing Deadbeats.
2. **Microsoft appeals last year's antitrust ruling.** *To prove that it isn't a monopoly, the company offers to abandon its hotels on Park Place and Boardwalk while selling off the Water Works.*
3. **Apple may open a chain of Mac retail stores.** *Its slogan: "Our prices aren't just insane—they're insanely great!"*
4. **Intel ships the 1.5GHz Pentium 4 chip.** *Not to be outdone, Motorola engineers step up work on faster, more resilient breed of hamster.*
5. **Steve Jobs brings down the house with his Macworld Expo keynote.** *Though things got awkward after the Apple CEO claimed an Electoral College victory and started picking cabinet members.*

MAC STUFF

Boys and the Hood

When there's a disputed call in a pro football game, the ref heads to a canvas-covered monitor for a private screening of the replay. That hood, from Hoodman (800/818-3946, www.hoodmanusa.com), cuts glare from sunlight or the pale skin of shirtless fans. Hoodman also makes smaller models for cameras and laptops. The $40 E-2000 fits easily over iBooks or PowerBooks—perfect for Mac users who cart their laptops around the great outdoors or wish to privately watch their own videos.—ANTON LINECKER

Product WATCH

RELEASED

- Voice-recognition software from MacSpeech (603/672-9100, www.macspeech.com): **iListen** lets users dictate documents and use voice commands to control applications and edit scripts. The software sells for $99 without a headset and $139 with one. Version 1.1 should ship in early 2001, priced at $129, or $169 with a headset.
- A Palm OS version of FileMaker from FileMaker (800/325-2747, www.filemaker.com): **FileMaker Mobile** lets users synchronize data between **FileMaker Pro** databases and Palm OS–based handhelds. It sells for $49.
- Mac OS X drivers from Newer Technology (316/943-0222, www.newertech.com): The **Newer MaxPowrX** drivers allow Newer G3 ZIF and PCI upgrades to support the OS X public beta in the Power Mac G3, 7500, 8500, 9500, 7600, 8600, and 9600 models. The drivers work only with Newer upgrade cards and the OS X beta.

UPDATED

- **Kiplinger TaxCut Deluxe** from Block Financial (818/779-7223, www.taxcut.com): The Tax Year 2000 Edition adds enhanced planning features, a streamlined interview process, and a new navigation tool. The software sells for $20.
- Virtual Ink's mimio (877/696-4646, www.mimio.com): **mimio 1.5** is new companion software for the electronic whiteboard. It adds plug-in support and the capability to export mimio files to QuickTime. Version 1.5, which will ship in the first quarter of 2001, is free to current mimio owners. The electronic whiteboard costs $599.
- Virtual PC from Connectix (800/950-5880, www.connectix.com): **Virtual PC 4.0 for Windows 98** offers faster performance than version 3 and the ability to run multiple operating systems. It sells for $199; users can upgrade from previous versions for $79.

ANNOUNCED

- A bankruptcy filing by Lernout & Hauspie (781/203-5000, www.lhsl.com): The Belgian parent company of speech-recognition–software maker Dragon Systems filed for Chapter 11 bankruptcy protection in the United States. Dragon announced in February 2000 that it would not make a Mac OS 9 version of its NaturallySpeaking software and that it would wait until OS X's release to decide if it would continue to develop for the Mac.—Compiled by PHILIP MICHAELS

Apple Gives PowerBooks a Faster Processor Inside, a Shiny New Look Outside

Rewriting the BOOK

When you look at Apple's new Titanium PowerBook G4, your first instinct may be to compare it with its predecessor, the PowerBook G3. But Apple would like you to measure it against subnotebooks—such as the Sony Vaio—instead.

That's because Apple considers the new laptop to be more than just an upgrade to its venerable PowerBook line. It's a shot across the bow of makers of subnotebooks—tiny laptop computers that lack the functionality of a full-bodied portable. With the PowerBook G4, Apple seems to be saying that you can have a slim laptop without sacrificing power.

"We have the most powerful notebooks in the world," Apple CEO Steve Jobs said. "But [Sony] has the [sex appeal]. We want both."

The result is a PowerBook that comes in two standard configurations—a 400MHz model that sells for $2,599 and a $3,499 500MHz version. Both PowerBooks, which should be shipping by the time you read this, feature 8MB of graphics RAM, an ATI Rage Mobility 128 chip, two USB ports, and one FireWire port.

More Power, Less Book

How do the new G4 PowerBooks stack up to their predecessors? Take a look at the numbers.

	PROCESSOR SPEED	BUILT-IN RAM	STORAGE	SIZE (IN INCHES)	DISPLAY SIZE	MAXIMUM RESOLUTION	WEIGHT	INTRODUCTORY PRICE
PowerBook G3 (September 2000)	400MHz	64MB	10GB	10.4 × 12.7 × 1.7	14.1 inches	1,024 × 768 pixels	6.1 pounds	$2,499
PowerBook G3 (September 2000)	500MHz	128MB	20GB	10.4 × 12.7 × 1.7	14.1 inches	1,024 × 768 pixels	6.1 pounds	$3,499
Titanium PowerBook G4 (January 2001)	400MHz	128MB	10GB	13.4 × 9.5 × 1.0	15.2 inches	1,152 × 768 pixels	5.3 pounds	$2,599
Titanium PowerBook G4 (January 2001)	500MHz	256MB	20GB	13.4 × 9.5 × 1.0	15.2 inches	1,152 × 768 pixels	5.3 pounds	$3,499

More important, the PowerBook's G4 processor comes equipped with Velocity Engine, allowing it to render, encode, and calculate faster than a G3 can—provided you're running an application that's been modified to take advantage of it. It remains to be seen whether a G4 processor can run cool enough to not overheat a PowerBook—a model we got our hands on in January was quite hot to the touch.

Gone is the heavy, black plastic of the old PowerBook, replaced by a sleek, silvery titanium case. Just an inch thick, the PowerBook G4 also includes a 15.2-inch wide-screen–

"We have the most powerful notebooks in the world . . . but [Sony] has the [sex appeal]. We want both." —Apple CEO Steve Jobs

format display—by far the largest display ever seen on an Apple portable.

The differences between the new PowerBook and the old models are stark (see "More Power, Less Book"), but compare the new PowerBook with Sony's Vaio Z505, and things get tick-tight. The Vaio has a smaller display than the PowerBook and a thicker frame, for roughly the same price. But the Vaio also weighs 3.75 pounds, noticeably lighter than the new PowerBook. In any event, Apple's full-performance computer in a sleek, slender package can give any subnotebook on the market a good fight—and it leaves laptops in its own weight class on the canvas.—PHILIP MICHAELS

G4 Desktops

The 700MHz Club

Two complaints have shadowed Apple's Power Mac G4 desktops. First, the computers have topped out with PowerPC processor speeds of 500MHz, while rival chips have soared above 1GHz. Second, unlike most PCs, desktop Macs don't ship with built-in CD-RW drives.

So how did Apple answer these criticisms? By unveiling a new line of desktops with clock speeds as fast as 733MHz and drives that can write to CDs—and, in one special case, to DVDs.

The new G4s feature processor speeds of 466MHz, 533MHz, 667MHz, and 733MHz. The first two models began shipping in early January; the latter two may be available by the time you read this. "You know as well as I do that we've been coasting along at 500MHz for 18 months," said Apple CEO Steve Jobs. "That's way too long." (See "Waiting for Motorola," *Buzz*, elsewhere in this issue.)

But the speed boost comes with an apparent step backward—no dual-processor machines like the one introduced by Apple last summer. Apple says there aren't enough chips to make multiprocessor 733MHz G4s in a timely fashion. It plans to make a dual-533MHz configuration available soon as a build-to-order option.

All of the new desktop machines will come standard with CD-RW drives. "We're late to this party, but we're here," Jobs said. The 733MHz G4 comes with a different attraction—something Apple has dubbed "SuperDrive." It lets users write CDs *and* write DVDs that can be played back in consumer DVD players.

With the new CD-RW drives, Mac OS 9 formats blank CDs automatically. Users can drag and drop files onto the disk, writing them onto the CD either by selecting Burn Disk from the menu bar or by ejecting the CD from the drive.

"You shouldn't be applauding," Jobs told the Macworld Expo crowd as it cheered the simplicity of the drive. "This is how it ought to work."

Nvidia graphics processors will be included in the three fastest G4s (see "Four of a Kind" for more information on configurations). Each machine also adds a fourth PCI card slot to go with its AGP 4× graphics slot.—MATHEW HONAN

"You shouldn't be applauding. This is how it ought to work." —Apple CEO Steve Jobs

Four of a Kind

	MEMORY	STORAGE	GRAPHICS	DRIVE	PRICE
466MHz Power Mac G4	128MB	30GB	ATI Rage 128 Pro	CD-RW	$1,699
533MHz Power Mac G4	128MB	40GB	Nvidia GeForce2MX	CD-RW	$2,199
667MHz Power Mac G4	256MB	60GB	Nvidia GeForce2MX	CD-RW	$2,799
733MHz Power Mac G4	256MB	60GB	Nvidia GeForce2MX	SuperDrive	$3,499

COMING SOON

March 24: X-Day

If you've followed Apple's efforts to bring a next-generation operating system to the Mac, then circle March 24 on your calendar—that's when Apple begins selling the finished version of Mac OS X for $129. And while the ship date may have been the flashiest OS X news out of Macworld Expo, it pales in importance beside the changes Apple is making to its operating system.

Apple Menu: In the OS X public beta, the Apple logo in the menu bar was just a monochromatic lump plopped down in the center. The logo has moved back to the left side of the screen and regained some functionality, with commands such as Sleep, Restart, Shut Down, and Log Out, as well as shortcuts to Dock preferences, the System Preferences panel, and Location Manager.

Finder: The tool bar atop Finder windows is smaller. Users also can modify tool bars. Clicking on a new, white button on the far right of a window collapses the tool bar entirely, leaving an old-fashioned Finder-style window. With the tool bar closed, the Finder opens new windows just as it did in Mac OS 9.

The Dock: Pop-up menus now appear when you click on and hold an icon in the Dock, replicating some of the functionality of OS 9's Control Strip. Clicking on a folder or drive icon, for example, lets you navigate through its contents via menus. Clicking on the Display Preferences icon lets you reset your monitor's resolution and bit depth on-the-fly.

Apple CEO Steve Jobs expects an "avalanche of Mac OS X apps" to appear in July. That's good news, because starting this summer, Apple will ship hardware with Mac OS X preinstalled—taking Mac users into the brave new world of OS X, whether they like it or not.—JASON SNELL

Apple's iDVD

DISC WARRIOR, COME OUT TO PLAY

SURE, iMOVIE IS GREAT—but after you've spent hours editing a digital video masterpiece, it *hurts* to transfer it to a lousy analog videotape. Apple's new iDVD software may ease the pain.

Using iDVD—a simple DVD-authoring application that will ship with the Power Mac G4s that have Apple's new SuperDrive—you can quickly create DVD interfaces for your digital videos, as well as slide shows of digital images. It all happens via a drag-and-drop interface; iDVD will even encode your movie in MPEG-2, the video format required by DVD players. Apple will also sell certified DVD discs for $10 a pop.

You can customize the appearance of the DVDs you create by setting font, button, and background styles for each disc. You can even drag pictures into iDVD to use as backgrounds for your DVD pages.

Compressing DVD-quality video takes a lot of horsepower. But Apple says that iDVD encodes at a rate of 2×—this means that an hour of video takes only two hours to encode. But iDVD can fit only an hour of video on a disc—Apple probably decreased iDVD's compression rate in order to speed things up.

For professional customers who need to author DVDs, Apple also announced DVD Studio Pro, a $995 professional product due at the end of January; it's meant as a companion to Apple's Final Cut Pro editing software.—JASON SNELL

RELEASED

- Removable disks from Iomega (888/446-6342, www.iomega.com): The **Peerless** drive system, which includes a base station and disks in 5GB, 10GB, and 20GB capacities, is roughly the size and shape of a PDA. It offers up to ten times the performance of CD-RW, DVD-RAM, DVD-RW, and DVD+RW drives. The drive, with interface module, sells for $249, while Peerless disks will sell for $129, $159, and $199. It will ship in mid-2001.
- A cross-platform networking application from Connectix (800/950-5880, www.connectix.com): **DoubleTalk** lets Mac users link up to Windows networks without PC-networking knowledge. DoubleTalk sells for $99.
- A combination hard drive and removable-media drive from QPS (800/559-4777, www.qps-inc.com): The **Que D2 Dual** is available with a built-in LS120/LS240 SuperDisk or a 640MB MO drive. Users can access the hard drive and removable-media drive through a single FireWire cable. It's priced at $499 for the LS120/LS240 configuration and at $599 for the MO combination.
- A suite of products from Casady & Greene (831/484-9228, www.casadyg.com): **MacCare Unit** features seven utilities, including Conflict Catcher 8, Chaos Master, Copy Agent, DiskWarrior, PlusOptimizer, Net Barrier, and Virus Barrier. It sells for $130.

UPDATED

- Mac OS from Apple (800/692-7753, www.apple.com): **Mac OS 9.1** adds a Startup Disk control panel, a new process manager to speed up switching between applications, and new looks for both the General Controls and Sound Control panels. The update is free to Mac OS 9 users.
- InDesign by Adobe (800/833-6687, www.adobe.com): **InDesign 1.5.2** adds non-PostScript printing capabilities and integrates more tightly with standard prepress applications including Artwork Systems ArtPro, ScenicSoft Preps, and TrapWise, as well as hardware from Agfa, CreoScitex, Heidelberg, Harlequin, HP, and Xerox. The downloadable update is available free to existing InDesign users.

OS X NEWS

- An updated PIM for OS X from Power On Software (800/344-9160, www.poweronsoftware.com): **Now Up-To-Date & Contact 4.0** for OS X adds an Aqua-like interface and new features. The $100 software will be available once OS X ships.
- Graphics-tablet support for OS X from Wacom Technology (800/922-6613, www.wacom.com): The maker of the **PL400** and **PL500** LCD pen tablets will release free drivers once OS X ships.
- A Carbonized version of **FastTrack Schedule** from AEC Software (800/346-9413, www.aecsoft.com): An OS X–ready version of the project-management software will ship after OS X's public release.
- A suite of OS X tools from Stone Design (505/345-4800, www.stone.com): **Stone Super 7 Suite** applications offer layout, Web publishing, photo-management, time-tracking, PDF-conversion, file-compression, and Web animation tools. It will sell for $499 through March 1 (list price, $1,295).—Compiled by PHILIP MICHAELS

iTUNES

Apple's Music Man

First came iMovie, which brought easy video editing to the masses. Now here's iTunes, another slick, free Apple program—this one devoted to MP3 playing and CD burning.

With iTunes, you can convert audio from your CDs into MP3 files to store on your hard drive. iTunes will even look up track listings via the Internet.

The program's interface is a single, brushed-aluminum–style window dominated by a playlist, with a tool bar at the top and a Source pane (for Internet broadcasts, portable MP3 players, audio CDs, and playlists) on the left. You can browse your collection by artist or album, or filter your list by entering text in a search field. The iTunes main window can also be collapsed to a tiny, floating player window.

Once you build a playlist, you can click on the Burn button, and iTunes burns an audio CD. However, the current version supports only the CD-RW drives bundled with

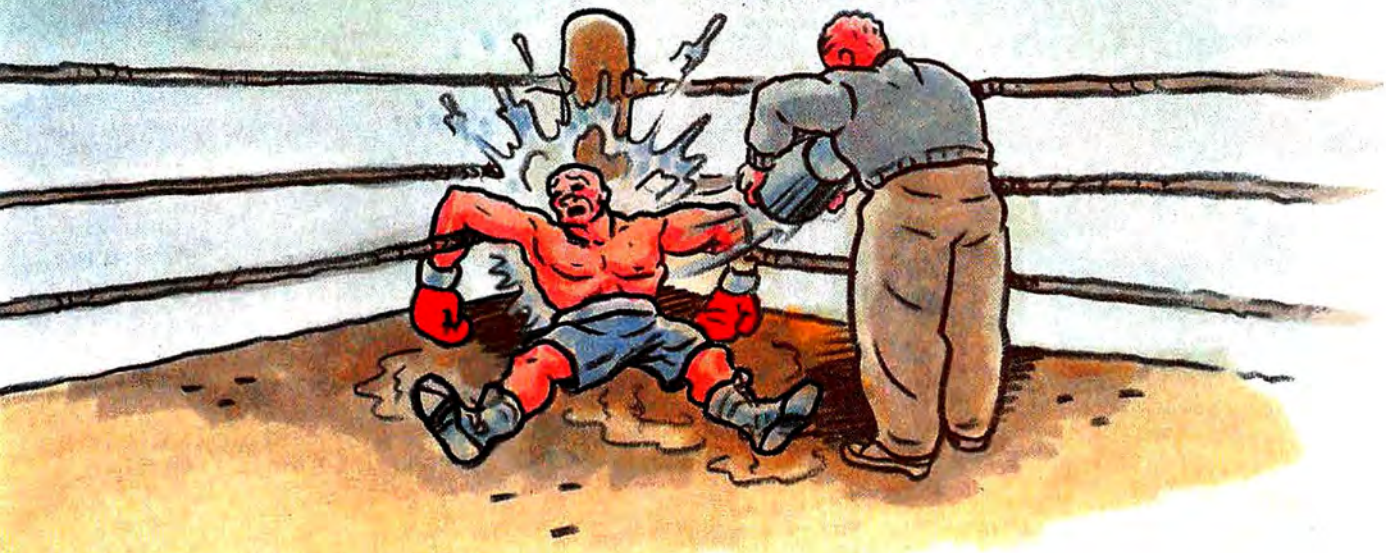
Apple's new systems. Plug-ins for popular CD-RW drive models should appear on Apple's Web site soon.

The software also supports connections with many popular MP3 players, including Creative Labs' Nomad II, Nomad II MG, and Nomad Jukebox; SonicBlue's Rio 500, Rio 600, and Rio 800; Nike's PSA/Play; Nakamichi's SoundSpace 2; and USB player Iomega HipZip.—JONATHAN SEFF

KINGS OF

THE RING

Macworld Editors Choose the Best Products and Web Sites of the Past Year



ILLUSTRATIONS BY ROSS MACDONALD

ONCE AGAIN, IT'S TIME TO REVEAL *Macworld*'s picks for the best products of the year—both hardware and software—as well as our special awards for the people and products that have had the greatest impact on the Macintosh community.

And now that so much can be done for free or inexpensively on the Web—things that used to require buying software—we thought it was time to share some of our favorite Web sites as well. (We did not consider any sites owned by Mac Publishing, L.L.C., *Macworld*'s parent company.)

Join us as we salute the Macintosh products and services that make our lives easier, better, and more fun.

Adobe GoLive lets you leave the phrase "You can't do that" to traffic cops and referees.

ADOBE GOLIVE: The most extraordinary web ideas come to life with ease thanks to Adobe® GoLive™ software. faster. What's more, the 360Code™ feature helps ensure the integrity of your code for a seamless journey from your

©2001 Adobe Systems Incorporated. All rights reserved. Adobe, the Adobe logo, tagline "Inspiration becomes reality," 360Code, Adobe Premiere, After Effects, GoLive,

Because GoLive, Photoshop® and Illustrator® all share a common interface so you can get up to speed head space to cyberspace. Find out more at www.adobe.com/webtools. **Inspiration becomes reality.™**

Adobe

GoLive™

Photoshop®

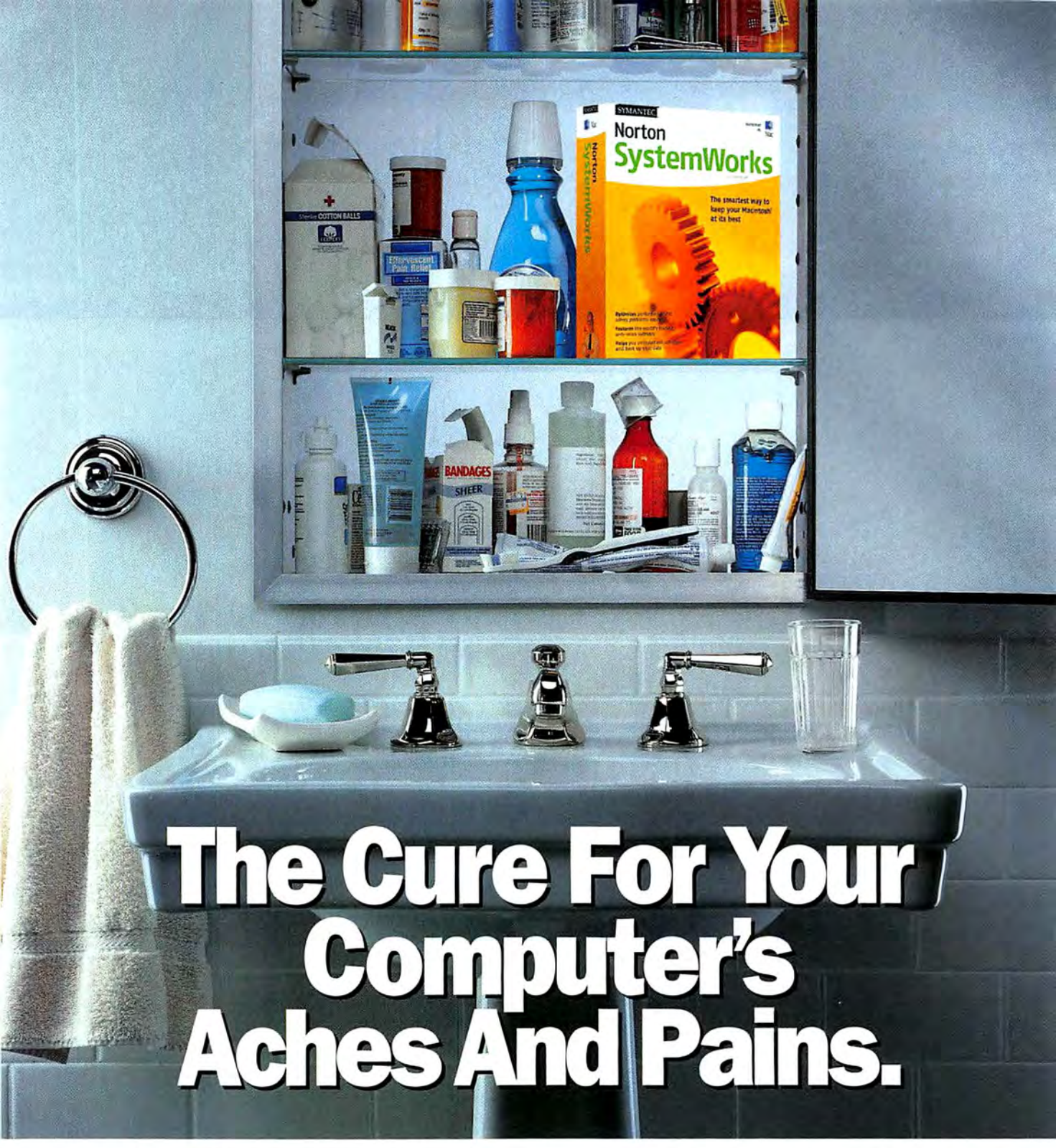
LiveMotion™

After Effects®

Adobe® Premiere®

Illustrator®

Illustrator, LiveMotion and Photoshop are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.



The Cure For Your Computer's Aches And Pains.

Has your Mac® seen healthier days? Maybe it caught a bug. Is badly congested. Or suffers from hardware headaches. Fortunately, there's a simple remedy for such ailments.... Norton SystemWorks™ for Macintosh®.

Norton SystemWorks gives your entire Macintosh a complete check-up. Then, cures what ails it. Plus, it inoculates your computer against viruses, while preventing it from getting sick in the first place.

So to keep your Mac out of the infirmary, here's our diagnosis: Take the all-in-one cure, Norton SystemWorks for Macintosh. You'll find it over the counter at your nearest software store, or visit **www.symantec.com/mac**.

Compatible with Mac O/S 8.1 or greater.

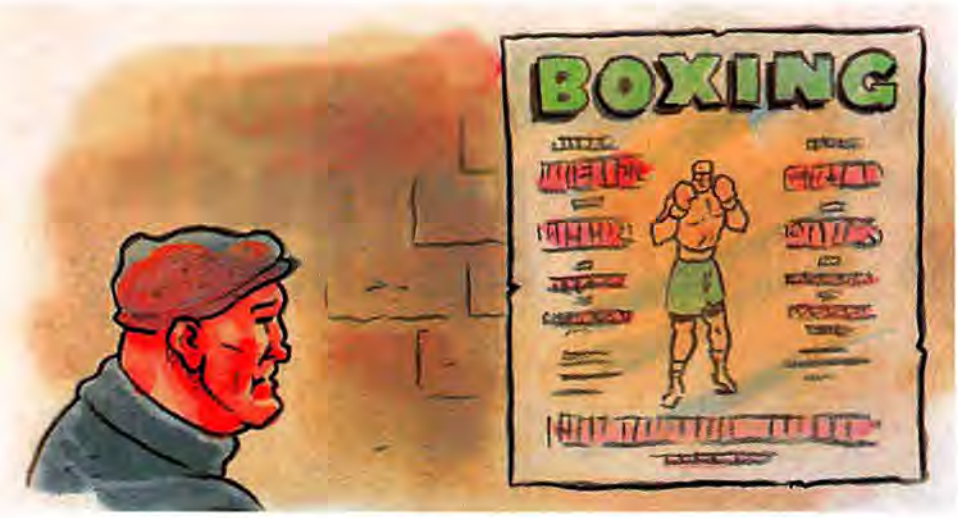
symantec™

Symantec and the Symantec logo are U.S. registered trademarks of Symantec Corporation. Norton SystemWorks is a trademark of Symantec Corporation. Mac and Macintosh are registered trademarks of Apple Computer, Inc. Copyright © 2000 Symantec Corporation. All rights reserved.

THE 16TH ANNUAL KINGS OF THE RING EDITORS' CHOICE AWARDS

MAC USERS BURST INTO THE YEAR 2000 ENERGIZED AND CONFIDENT—with good reason, as it turned out. The year brought breakthrough Mac products such as AirPort, Font Reserve Server, and Voodoo5 5500, as well as impressive updates to programs such as the already well-established Microsoft Office suite and Adobe Photoshop.

The editors of *Macworld* are pleased to recognize this innovation and excellence with our annual Editors' Choice Awards. We surveyed every Mac product released between November 1, 1999, and November 1, 2000, to determine our nominees and winners in each category. These are the products that will inspire the next millennium.



creative/publishing

Publishing Software

WINNER Managing fonts for a large team was always a headache until DiamondSoft released this breakthrough product. The TCP/IP-based **Font Reserve Server** ($1,200, server software; $130 per client; www.diamondsoft.com, 415/381-3303) eliminates font conflicts, manages access privileges and font licenses, and lets you create font sets that users can work with almost instantly. The server software is Windows NT–based, but the administration and client software is Mac-only.

RUNNERS-UP **ImagePort 1.0** ($100; www.alap.com, 888/818-5790), from A Lowly Apprentice Production, is the only XTension out there that lets you tweak the layers, channels, and paths of most Adobe Photoshop files without leaving QuarkXPress. If PDF files are part of your prepress workflow, look to **Adobe Acrobat InProduction 1.0** ($699; www.adobe.com, 888/724-4508). It combines PDF preflight and color-correction tools formerly available only in several separate third-party applications, and introduces a few new aids.

Graphics Software

WINNER **Adobe Photoshop 6.0** ($609; www.adobe.com, 888/724-4508) is one of the strongest upgrades this standard-bearer graphics program has seen in years. Previous versions of Photoshop specialized exclusively in bitmapped image editing, but version 6 introduces a new set of vector tools for creating precise shapes that remain editable. Designers will also appreciate the vastly improved text controls, layer effects, and color-management tools.

RUNNERS-UP For Web-graphics designers, **Macromedia Fireworks 3** ($199; www.macromedia.com, 800/457-1774) was the best tool to choose (a new version is now available). It offered an improved interface, better control of bitmapped image editing, and a History palette that allowed you to undo any number of steps in a single click and quickly turn your actions into executable scripts for reuse. **Adobe Illustrator 9.0** ($399; www.adobe.com, 888/724-4508) makes an impact with the most-powerful and most-complete set of transparency tools around.

3-D–Graphics Software

WINNER From its speedy renderer to its manipulation of NURBS (Non-uniform Rationalized B-Splines), Maxon's **Cinema 4D XL Version 6** ($1,695; www.maxoncomputer.com, 877/226-4628) packs enough bells and whistles to make more-expensive 3-D applications envious. Notable improvements include a highly customizable interface, new interactive polygon-modeling tools, improved bones and deformation tools, a construction history, a rewritten lighting system, and even a sound-editing capability.

RUNNERS-UP From Newtek, **LightWave 6** ($2,495; www.newtek.com, 800/862-7837) remains a must-have for 3-D–production and –animation professionals. It boasts numerous new features and tools, including UV texture mapping, radiosity rendering, new surface and graph editors, and powerful morphing. Ashlar's **Vellum Solids 2000** ($3,995; www.ashlar.com, 800/877-2745) is the only game in town for serious industrial design. It excels at working with the curvy free-form solids and surfaces prevalent in today's industrial designs.

Audio Software

WINNER Casady & Greene's **SoundJam MP Plus 2.5.2** ($50; www.soundjam.com, 800/359-4920) is the best and most approachable application for Mac users who want to play and encode their own MP3s. This time around the company added an impressive list of features, including Internet broadcast and an automatic timer, as well as support for MP2 and WAV files, more hardware MP3 players, and multiprocessing. There's even a karaoke function that lets you drop the vocals from most MP3s and sing your heart out.

RUNNERS-UP With **Peak 2.53 VST** ($499; www.bias-inc.com, 800/775-2427), Berkley Integrated Audio Software has made an already great two-track editor even better. Version 2.53 includes support for the widely used VST plug-ins (it comes with 25), has an improved interface, and ships with ASIO drivers. Best of all, you no longer need a pesky floppy-disk key to authorize the program. Mark of the Unicorn's **Digital Performer 2.72** ($795; www.motu.com, 617/576-2760) takes MIDI and audio sequencing to the next level with its new drum editor, additional audio effects, and very accurate MIDI time stamping.

Digital-Video Software

WINNER Apple's **iMovie 2** ($49; www.apple.com, 800/692-7753) revolutionizes digital video by bringing video-editing power and a host of user-friendly features to the home-movie set at an unheard-of price. QuickTime transitions and the Timeline Viewer feature make for marked improvements over the last version. iMovie 2 also lets you layer two soundtracks for voice-over-background-music capability. No longer is video editing the domain only of professionals with expensive equipment.
RUNNERS-UP Terran Interactive's **Cleaner 5** ($599; www.terran.com, 800/577-3443) is an excellent upgrade to what was already an excellent product—Media Cleaner Pro. Cleaner 5's superb compression algorithm, support for many formats, ease of use, and thorough documentation make it a necessary part of any video producer's tool kit. Pinnacle Systems' **Commotion 3.0** ($1,995; www.pinnaclesys.com, 888/484-3366) is more than a fabulous rotoscoping tool for video producers who want to create special effects: the program also facilitates workflow and includes new compositing features.

Digital-Video Camera

WINNER When choosing a MiniDV camcorder, you'll usually pay more for portability. The Canon **ZR10** ($999; www.canondv.com, 800/652-2666) is exceptional because it's both tiny *and* affordable. The Canon is the perfect introduction to the new MiniDV format—it even gives you an analog line so you can convert your old tapes to MiniDV.
RUNNERS-UP Optical image stabilization and a Progressive Scan photo mode make the Canon **Optura Pi** ($1,799; www.canondv.com, 800/652-2666) a great mid-priced MiniDV camera. Helping to nurture the world of nascent filmmakers, the **Sony DCR-VX2000** ($3,199; www.sony.com, 800/222-7669) is a standout, with entry-level 3-chip quality. This camera lets average folks produce professional-looking films.

Consumer Digital Camera

WINNER The number of features Canon packs into the 3.5-by-2-by-1-inch metallic body of the **PowerShot S100 Digital Elph** ($499; www.usa.canon.com, 800/652-2666) is definitely groundbreaking. You get a 2.11-megapixel CCD for brilliant shots, a 2x optical/4x digital zoom to get in close, multiple shooting modes, and a bright LCD screen. The S100 is the perfect combination of compact size, ease of use, and excellent image quality.
RUNNERS-UP The **Coolpix 990** ($1,000; www.nikonusa.com, 800/645-6689), from Nikon, continues to balance quality, ease of use, and price. The latest model boasts a 3.34-megapixel CCD and a 3x optical zoom lens. Olympus's **Camedia C-211 Zoom Digital Printing Camera** ($799; www.olympusamerica.com, 800/622-6372) is a hit at any party, with a built-in printer for instant Polaroid shots. In QuickTime mode, the Camedia can capture up to 15 seconds of movie footage.

Professional Digital Camera

WINNER Canon's **EOS D30** ($3,599; www.usa.canon.com, 800/652-2666) is the most advanced digital camera on the market today. Canon successfully implements a

continues

Impact Award

If 1999 was the year of the MP3, then 2000 was surely the year that Internet file sharing got its turn in the limelight. And nothing had a bigger impact on file-sharing technology than Napster, the online service that lets users search for and download music directly from each other's computers.

The software that Napster founder Shawn Fanning wrote in his dorm room at Northeastern University has revolutionized the way people exchange—or pirate, as some argue—music across the Internet. Napster may have raised the ire of the recording industry, but it has done more in the past year to change the course of digital music distribution than any closed-door corporate board meeting.

Hardware Product of the Year

The newest generation of iBooks has graduated from cute to kick-ass. Our favorite is the 466MHz **iBook Special Edition** ($1,799; www.apple.com, 800/692-7753). This time Apple has added FireWire ports and powerful perks such as ATI's Rage Mobility 128 graphics chip. The improved iBook line features a 12.1-inch screen, a 10GB hard drive, 64MB of memory (expandable to 320MB), and a 56K modem. The iBook SE goes even further with a 466MHz G3 processor with 256K of on-chip level 2 cache and a DVD-ROM drive. And each iBook comes with iMovie 2, AppleWorks 6, and other titles. While we're picking our favorite model, we'll let you pick the color of the year: key lime or graphite?

Software Product of the Year

In the realm of Mac software, 2000 was the consumer's year. But no program broke new ground quite like Apple's **iMovie**, the first program to make digital video editing both easy *and* affordable.

This year Apple started to sell the program, in addition to bundling it with new Macs. iMovie 2 ($49; www.apple.com, 800/692-7753) offers sophisticated movie-editing capabilities, including insert edits, audio edits, and QuickTime effects. Add the plummeting price of digital camcorders and storage, and we'd say there's a revolution in the making.

3.25-megapixel CMOS sensor for crisp images and outstanding color reproduction. On top of that, Canon adds 11 shooting modes, 3-point auto-focusing, a 1.8-inch color LCD, and IBM Microdrive support.

RUNNERS-UP The only 4-megapixel camera with a custom-designed lens for digital imaging, the **Olympus Camedia E-10** ($1,999; www.olympusamerica.com, 800/622-6372) has great image quality and many top-level features. Professional film photographers will feel at home with Nikon's first professional camera, the **D1** ($5,900; www.nikonusa.com, 800/645-6689), since it shares many features with its 35mm counterparts.

Display

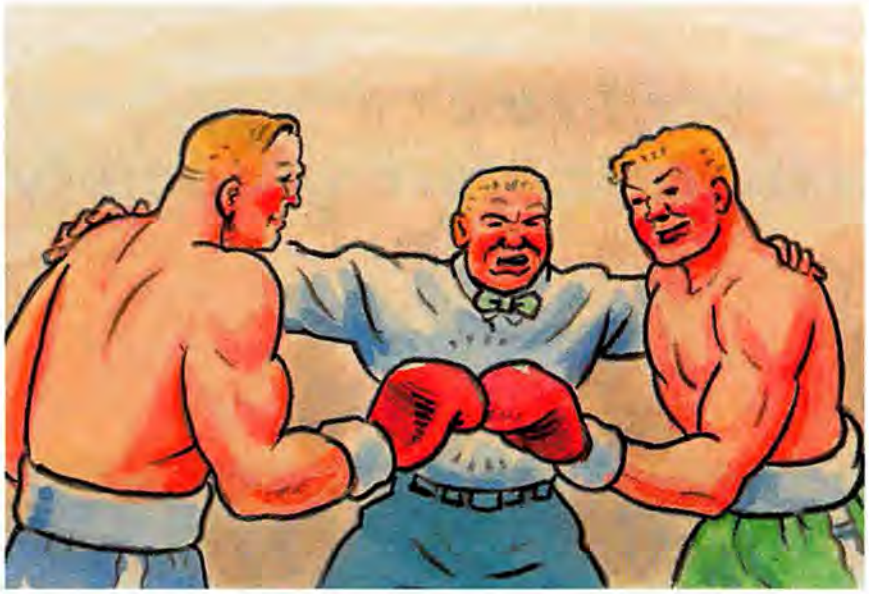
WINNER The world of LCD computer displays is getting wider, thinner, lighter, and brighter. Nothing demonstrates this better than the amazing **Apple Cinema Display** ($3,999; www.apple.com, 800/692-7753). This 22-inch LCD monitor weighs only 25 pounds and takes up very little space on a desktop. It also features super-wide viewing angles, 1,600-by-1,024-dpi resolution, and a single cable that handles monitor power, video signal, and USB connectivity.

RUNNERS-UP The bright and stylish 18.1-inch **Senergy 850** LCD display from Princeton Graphic Systems ($2,999; www.princetongraphics.com, 800/747-6249) gives users both digital (DVI) and analog (VGA) connections, with a DVI-out connector for mirroring displays or connecting to a projector. The **Wacom PL 500** pen-tablet system ($3,999; www.wacom.com, 800/922-9348) combines the abilities of a pen tablet with the instant feedback of an LCD screen. Yes, that means you can draw right on your screen. This new version of the pen tablet provides millions of colors, and at 15.1 inches, it's large enough to be your primary display.

Printer

WINNER This year, color ink-jet printers plummeted in price without losing quality. Our choice for best in overall print quality is Hewlett-Packard's **DeskJet 932C** ($199; www.hp.com, 800/752-0900). For less than $200, you can enjoy photo-realistic prints and sharp black text from its 2,400-by-1,200-dpi print resolution.

RUNNERS-UP The **Olympus P-400** ($999; www.olympusamerica.com, 800/622-6372) has a convenient LCD panel for previewing and selecting images from SmartMedia, PC Card, Compact Flash, or Memory Stick. It uses dye-sublimation technology to produce photo-quality, full-size prints. The Epson **Stylus Photo 1270** ($499; www.epson.com, 800/873-7766) features six-color printing as well as solid black text with resolutions as high as 1,440 by 720 dpi. It offers a maximum print area of 12.76 by 43.76 inches for banner-size prints.



general

Utility Software

WINNER PGP Security's **PGP 7.0 Desktop Security Enterprise Edition** ($74; www.pgp.com, 888/747-3011) is more than just an encryption utility. The latest version provides—among other features—e-mail and volume encryption, a personal firewall, and intrusion detection. Most important, it's the only Mac client to support the IPsec network encryption standard for Virtual Private Networks.

RUNNERS-UP Connectix's **CopyAgent 1.0** ($39; www.connectix.com, 800/950-5880) resurrects the most compelling feature of Connectix's old Speed Doubler 8, namely, the ability to duplicate only new or changed items. CopyAgent goes further to offer speedy network copying. Intego's **NetBarrier 1.6** ($70; www.intego.com, 877/946-8346) offers comprehensive firewall protection for individual users. NetBarrier filters incoming traffic, and it is the first utility to check outgoing traffic as well, to protect your personal data from theft.

Business-Productivity Software

WINNER Even hard-core Microsoft haters will have to admit that **Microsoft Office 2001 for Mac** ($499; www.microsoft.com, 800/426-9400) is a top-notch Mac product. Containing Word, Excel, PowerPoint, and Entourage, it remains the only serious choice for serious business use. From the applications' uniform interface to a host of Mac-only features, this Office clearly laps its competition.

RUNNERS-UP AEC Software's **FastTrack Schedule 7.0** ($299; www.aecsoft.com, 800/346-9413) is simple enough to make first-time users productive but feature-rich enough to keep sophisticated users happy. Voice recognition on the Mac platform still needs some work, but IBM's **ViaVoice for Macintosh, Enhanced Edition** ($141; www.ibm.com, 800/825-5263) improves on the original ViaVoice by adding direct dictation into any Macintosh application, AppleScript support, and a USB-ready headset.

Data-Management Software

WINNER After a five-year absence from the Mac market, SPSS's **SPSS 10.0** ($999; www.spss.com, 800/543-2185) returns with a vengeance. No other program can compete with SPSS in terms of the number-crunching power that it brings to your desktop. SPSS includes a wealth of statistical and charting options, extensive help, and excellent tutorials.

RUNNERS-UP **MYOB Accounting Plus Version 9** ($199; www.myob.com/us, 800/322-6962) remains the best accounting program for small and midsize businesses. Enhancements include multiuser support, recognition of foreign currencies, and improved search functions. AEC Software's powerful **Details 3.0** ($299; www.aecsoft.com, 800/346-9413) is a specialized project-tracking database that serves novices and experienced users alike.

Education Software

WINNER Every desk needs scissors, tape, and **Grolier's Multimedia Encyclopedia 2001 Deluxe Edition** ($30; www.grolier.com, 800/353-3140), from Grolier Interactive. Multiple navigation options make it easy to search for and find what you want. And the program supplements the extensive information on its two CD-ROMs with links to the Internet.

RUNNERS-UP With guided tours of 25 rooms and 3,000 images and illustrations, Montparnasse Multimedia's **Louvre: The Virtual Visit** ($50; www.montparnasse.net, 800/843-2665 for Barnes&Noble.com distribution) is the next best thing to seeing the French museum in person. The DVD-ROM software is easy to navigate and offers a wealth of information about art and history.

continues

Now that your hand-coding can be done quickly and easily, Dreamweaver® UltraDev™ presents:

Your Guide to Re-Entering Society

Yes, this is actually money. It got redesigned a couple of years ago.

This is your mom and dad. By the way, you have a little brother now. (His name is Steven.)

MACROMEDIA® DREAMWEAVER UltraDev 4 software can help eliminate some of the grunt work involved in building data-driven Web applications. Dreamweaver UltraDev allows you to create reusable objects to minimize repetitive tasks. And you can train Dreamweaver UltraDev to write code exactly as you would by hand. In the end, you'll get your work done quicker and, finally, up to your standard. Welcome back. We missed you.

macromedia.com/ultradev

macromedia® *what the web can be.™*

This is your girlfriend. She's dating Mark Warren now.

This is the sun. It provides heat for the entire planet. Cool, huh?

Dreamweaver, UltraDev, and "what the web can be" are trademarks or registered trademarks of Macromedia, Inc. in the United States and/or other countries.

I'd heard a lot of buzz about ATI's new RADEON™ MAC EDITION, it's stunning 3D acceleration, 32MB DDR graphics memory and flexible display support. I wondered, would this graphics accelerator really make designing, easier and faster? Wow! it didn't take long to find out. RADEON™ MAC EDITION, rendered the most complex 3D elements faster than I'd ever seen, even when working in 32-bit true color! My projects literally sprang to life with incredible detail and realism. But RADEON™ MAC EDITION isn't all work and no play. The 3D gaming — on my lunch break of course, is just as incredible with noticeably faster frame rates. With the fastest rendering speeds available, animations are fluid and life-like. Plus, I can hook up to a TV for a big-screen experience. 3D rendering performance, awesome gaming and display flexibility make RADEON™ MAC EDITION one wicked card!

ATi RADEON GRAPHICS™

"Overall the most advanced 3D and video graphics chip to date for the Mac." www.xlr8yourmac.com, October 16, 2000

32MB PCI & AGP

ATi®

Visit ati.com

Copyright 2000 ATI TECHNOLOGIES INC. All rights reserved. ATI and RADEON are trademarks and/or registered trademarks of ATI Technologies Inc. All other company and/or product names are trademarks and/or registered trademarks of their respective owners.

Circle 114 on card or go to www.macworld.com/getinfo

Edmark's **Talking Walls** ($80; www.edmark.com, 800/362-2890) successfully blends text, audio, and video to teach kids history; topics range from cave painting to the Vietnam War.

Resource Software

WINNER Writers with visions of Oscars and Emmys couldn't ask for a better resource than Screenplay Systems' **Movie Magic Screenwriter 2000** ($269; www.dramatica.com, 800/847-8679). In addition to a wealth of sample scripts, the program offers useful tools such as a character-name bank and a chat feature that lets you work with a remote writing partner.

RUNNERS-UP For people who make their living writing, producing, and creating, Official Software's **Official Copyright 1.5** ($71; www.officialsoftware.com, 888/325-5445) is a straightforward and informative tool for protecting intellectual property. ISI ResearchSoft's **EndNote 4** ($299; www.isiresearchsoft.com, 800/554-3049) is an improvement on what was already the best bibliography-management application available. This version adds some welcome interface changes and beefed-up search functions.

Game

WINNER Few games have generated as much buzz—or have proven to be as addictive—as Aspyr Media's **The Sims** ($50; www.aspyr.com, 888/212-7797). There's a reason for that: the game combines a seemingly endless variety of situations and characters with great sound effects and fun graphics. The Sims is the first game to re-create real life with this much detail. Some people find it more compelling than their own lives.

RUNNERS-UP Surpassing the original Diablo might seem like a nearly impossible task, but Blizzard Entertainment's **Diablo II** ($45; www.blizzard.com, 800/953-7669) pulls it off. This sequel improves upon the original's lush graphics and adds new adventures and characters. Activision's **Quake III Arena Mac** ($46; www.activision.com, 800/656-5426) doesn't reinvent the wheel, but it is a masterful first-person shooter game. Great graphics and network play help this game stand out from the crowd.

Storage Product

WINNER Storage area networks have been primarily the realm of server clusters and graphics professionals with lots of dough. All that changed with MicroNet's **SANcube X-stream** ($4,099 for 270GB; www.micronet.com, 949/453-6100), which uses your Macintosh's built-in FireWire port to connect as many as four users to a six-drive RAID array.

RUNNERS-UP EZQuest's **Boa CD-RW 12×10×32× FireWire PM** ($369; www.ezq.com, 714/694-0031) takes the fear of ruining discs out of CD-R burning by using a Plextor mechanism with BURN-Proof technology. Microtech International's **IBM 1GB Microdrive** ($499; www.microtechint.com, 800/626-4276) is impressively small on the outside but big on the inside. IBM introduced this PC Card–size drive last year, but pushing it to an amazing 1GB capacity this year puts it in a class of its own.

Personal Digital Assistant

WINNER Our winner, Handspring's **Visor Prism** ($449; www.handspring.com, 888/565-9393), boasts a processor that's significantly faster than its predecessors, plug-and-play expandability via its Springboard expansion slot, and the ability to display more than 65,000 colors. The unmatched screen quality and built-in photo program make the Prism a great portable photo album.

RUNNERS-UP The **Palm m100 Handheld** ($149; www.palm.com, 800/881-7256) is an outstanding value, offering almost everything its more expensive competition does (except mail and expense software) at an entry-level price. It's bundled

continues

Lifetime Achievement Award

Without Tim Gill, our Mac world would be a much different place. Gill launched Quark in 1981 with a $2,000 loan from his parents. In 1987 Quark released the product with which it has become synonymous, QuarkXPress. XPress created and enabled the desktop-publishing revolution. While it has had competition over the years, it has remained without equal. This year Gill stepped down as chairman and chief technology officer in order to devote his energy to the Gill Foundation, a nonprofit agency he started in 1994. The Gill Foundation funds work in education and supports gay and lesbian rights. We're pleased to honor this legendary Macintosh figure.

with Mac desktop software and a Mac adapter. For those who crave Internet access, the **Palm VIIx Handheld** ($449; www.palm.com, 800/881-7256) is a dream come true. With it, you can surf the Web using text-only Web clippings. You can also send and receive e-mail through a Palm.net account or access POP accounts using third-party software.

Acceleration Product

WINNER Though two of the companies in this category had some financial troubles last year, they made some stellar products that deserve recognition. With its debut product for the Mac, the **Voodoo5 5500 PCI Card** ($229; www.3dfx.com, 888/367-3339), 3dfx expands the horizons of graphics professionals and 3-D gamers alike. Pixel-processing horsepower makes for smooth game play and quick redraws. The card's full-screen antialiasing feature provides stunning 3-D graphics at the highest screen resolutions. Support for new DVI flat panels and standard monitors has made it this year's coveted card.

RUNNERS-UP The Newer Technology **iMaxpowr G4** ($699; www.newertech.com, 877/605-0010) is the only way to turn an iMac into a G4 with the Velocity Engine. The **ATI Radeon Mac Edition 32MB DDR AGP** ($279; www.ati.com, 905/882-2600) makes a leap in graphics-card speed and power. This card will inspire a new generation of games and 3-D–design applications.

Input Device

WINNER Kensington Technology's **TurboRing Trackball** ($136; www.kensington.com, 800/235-6708) seamlessly blends form and functionality. The TurboRing offers easy scrolling, while its companion software allows you to customize the trackball's cursor response and configure its three buttons. What's more, the angled ball and ring reduce arm and wrist strain.

RUNNERS-UP Apple wised up and ditched the crippling round input device that shipped with its computers, in favor of the **Apple Pro Mouse** ($59; www.apple.com, 800/692-7753). With high precision, the sleek-looking optical mouse glides across any surface, and it makes mouse pads obsolete. **Microsoft Trackball Explorer** ($75; www.microsoft.com, 800/426-9400) was the first trackball to use optical technology. It comes equipped with Microsoft's excellent Intellipoint mouse software.

internet & development

Internet Client Software

WINNER With Internet Explorer 5 Macintosh Edition (free; www.microsoft.com, 800/426-9400), Microsoft has given the Mac community the most standards-compliant browser available. It fully implements HTML 4 and CSS-1 standards, has a sleeker new look, and loads pages noticeably faster than its predecessor.

RUNNERS-UP In addition to traditional chat tools, **AOL Instant Messenger 4.1**, a free utility from America Online (www.aol.com, 800/827-6364), offers voice-chat and file-transfer capabilities and the ability to send images and sound files instantly. **AvantGo Mobile Internet Service for Macintosh 3.3** (free; www.avantgo.com, 888/884-8812) lets you take the Web anywhere by downloading Web content to any Palm OS handheld.

Web Publishing Software

WINNER **Macromedia Dreamweaver 3** ($299; www.macromedia.com, 800/457-1774) was a Web tool that appealed to both visual designers and code purists (a new version is now available). It featured near-infinite customization abilities via JavaScript, excellent integration with Macromedia graphics tool Fireworks, and the Easy Undo tool. Add the site-administration features, and you have an award-winning product.

continues

SONNET™

SIMPLY FAST™

Don't let another opportunity fly by. Add a Sonnet processor card to your Power Macintosh or PowerBook and instantly work faster. Depend on Sonnet for simply fast upgrade products. To learn more, call 1-800-786-6260 or visit our website at:

www.sonnettech.com/mwus

Circle 133 on card or go to www.macworld.com/getinfo

RUNNERS-UP Why *pay* for a program to build, post, and update your Web site when you can use Pyra Labs' **Blogger** (free; www.blogger.com, 415/538-8404)? **Lasso Studio 1.5 for Dreamweaver 3** ($349; www.blueworld.com, 425/646-0288), from Blue World Communications, gives users without database knowledge an easy way to add database functionality to Web sites; Lasso includes a wizard for building a new database or connecting to an existing one.

Web Motion Software

WINNER **Macromedia Flash 5** ($399; www.macromedia.com, 800/457-1774) makes designing interactive Web content much less painful. Its streamlined interface speeds up simple tasks, and its new programming language and scripting tools add professional power and flexibility to the program. The new Movie Explorer and Shared Libraries features help you keep track of complicated projects in large work groups.

RUNNERS-UP Newcomer **Adobe LiveMotion 1.0** ($299; www.adobe.com, 888/724-4508) is the first program to let you produce animations in the Flash file format (SWF) without the steep learning curve of Macromedia Flash. The multimedia-authoring application **iShell 2** (free to individuals, varying prices for commercial use: $975 for Silver membership and $2,750 for Gold; www.tribeworks.com, 800/807-4458), by Tribeworks, combines object-oriented design with QuickTime media and allows you to create custom interfaces for streaming media.

Networking Product

WINNER With Apple's **AirPort Base Station** ($299; www.apple.com, 800/692-7753), you can dial into your ISP from the backyard, get 11-Mbps wireless access to your office network, and share an IP address with multiple users. This silvery hub is endowed with a 56K modem and an Ethernet port and can support as many as ten remote computers wirelessly.

RUNNERS-UP The **Linksys EtherFast 4-Port Cable/DSL Router** ($179; www.linksys.com, 800/546-5797) is easy to install and easy on the wallet. It also has four auto-sensing, 10/100 ports. Dartware's **InterMapper 3.0** ($295, up to 10 devices; $1,995, unlimited; www.dartware.com, 603/643-2268) is the best network manager for the Mac—or maybe for any platform. It gives you an instant visual representation of your network.

Development Software

WINNER Late Night Software's **Script Debugger 2.0** ($189; www.latenightsw.com, 888/999-3210) adds tools that make advanced AppleScript users even more productive and lower the barrier to entry for novices. It can debug local variables and, through its unique Dictionary Explorer, give you unprecedented insight into the innards of AppleScriptable applications.

RUNNERS-UP Already a popular environment for HTML developers, Bare Bones Software's **BBEdit 6.0.1** ($119; www.barebones.com, 781/687-0700) is also an excellent editing tool for Java and JavaScript, PERL, PHP3, WAP, XML, C, and C++. And it's faster than its predecessors. Metrowerks' **CodeWarrior for Mac OS, Professional Edition, v.6.0** ($499; www.metrowerks.com, 800/377-5416) updates this multilingual integrated development environment for Mac OS with more standards-compliant compilers. Most important, CodeWarrior 6 lets developers create applications for Mac OS X. **m**

Director of Product Evaluation KRISTINA DE NIKE managed this year's awards.

Technology of the Year

With impressive engineering and a shockingly low price, Apple transformed a wireless technology standard with a daunting name—802.11—into a friendly, low-cost way to network without wires: **AirPort** ($299; www.apple.com, 800/692-7753).

The AirPort family provides speedy network connectivity without wires. You can surf the Net at full speed from your backyard, and people with difficult-to-wire homes can set up far-flung networks without having to trip over Ethernet cables.

At the heart of the AirPort is the versatile AirPort Base Station, but this award also recognizes Apple's $99 AirPort card, as well as the company's efforts to make all currently shipping Macs AirPort-compatible.

Think Storage

(then think lots of storage for lots of users)

Introducing the first Ethernet SAN for the Mac, the 3ware NSU. The Network Storage Unit delivers consolidated, scalable storage that can be accessed by all your MAC users. Now you can keep all your data online – not stored on CD's, Zip cartridges or tape. From 240 GB to terabytes if you need it, the 3ware NSU provides high performance, reliable storage that's easy to install and manage. What could be more simple?

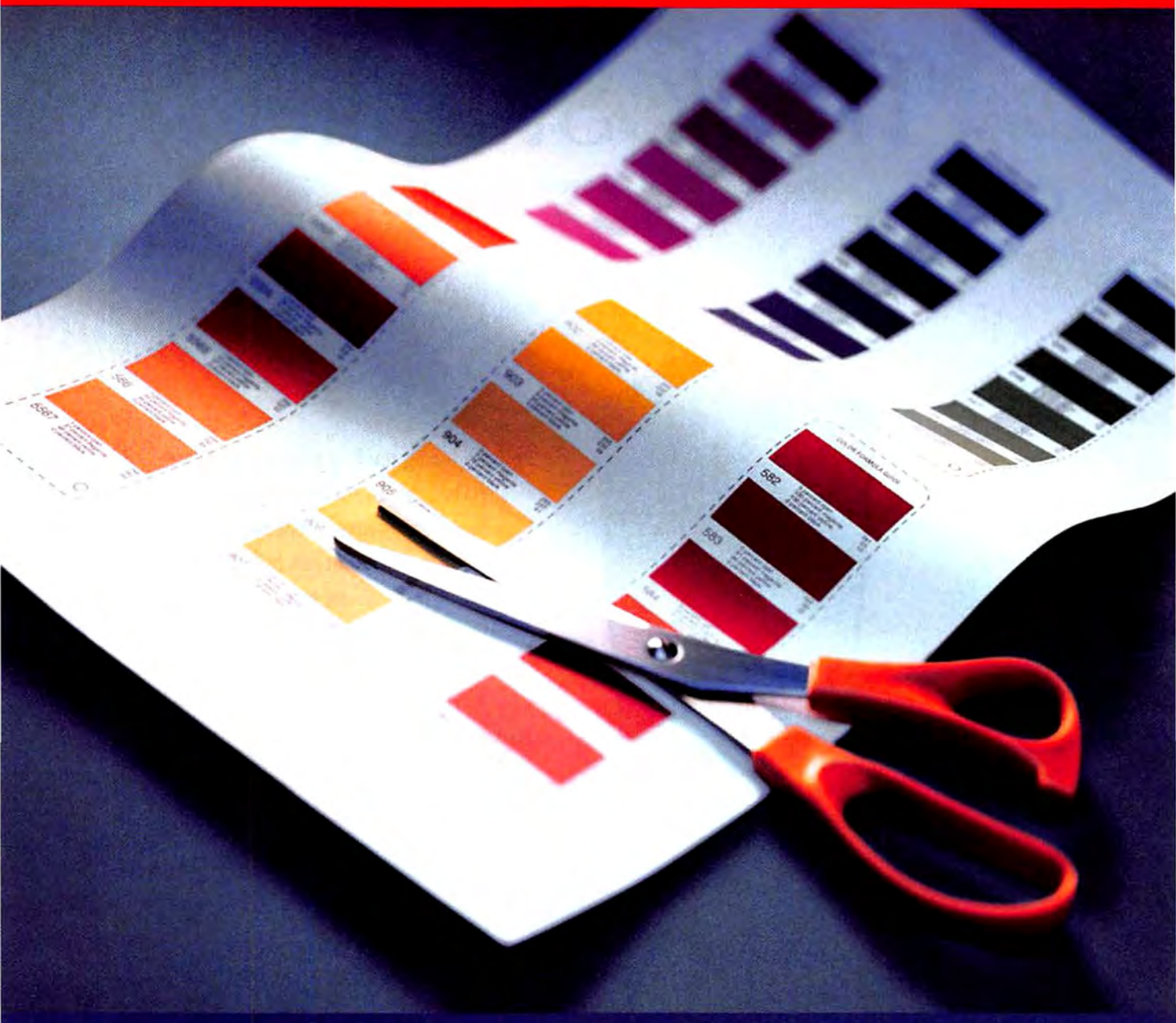
When you think storage, think 3ware.

3ware

1.877.283.9273 • 1.650.327.8600 • www.3ware.com

©2000 3ware, Inc. All rights reserved. Products mentioned herein may be trademarks of their respective companies.

++ www.theessentialsofimaging.com ++ www.theessentialsofimaging.com ++ www.theessentialsofimaging.com ++ www.theessentialsofimaging.com +



Just how accurate is the MINOLTA-QMS magicolor® 330 laser printer?

The MINOLTA-QMS magicolor® 330 color laser printer was designed with the most particular people in mind—designers. You folks set the standard for "picky." And we are happy to oblige. The magicolor 330 produces 11"x17", full-bleed color printing at 1200 dpi x 1200 dpi and is ICC-compliant with the most popular color management systems, including Apple ColorSync® and Windows® ICM. An integrated network interface delivers up to 4 ppm color and 16 ppm monochrome and the 330's manual duplex capabilities make two-sided designs effortless. And with each magicolor 330 you purchase, you'll get a set of PANTONE® color tables, automatic density control, and Colorific® monitor calibration software.

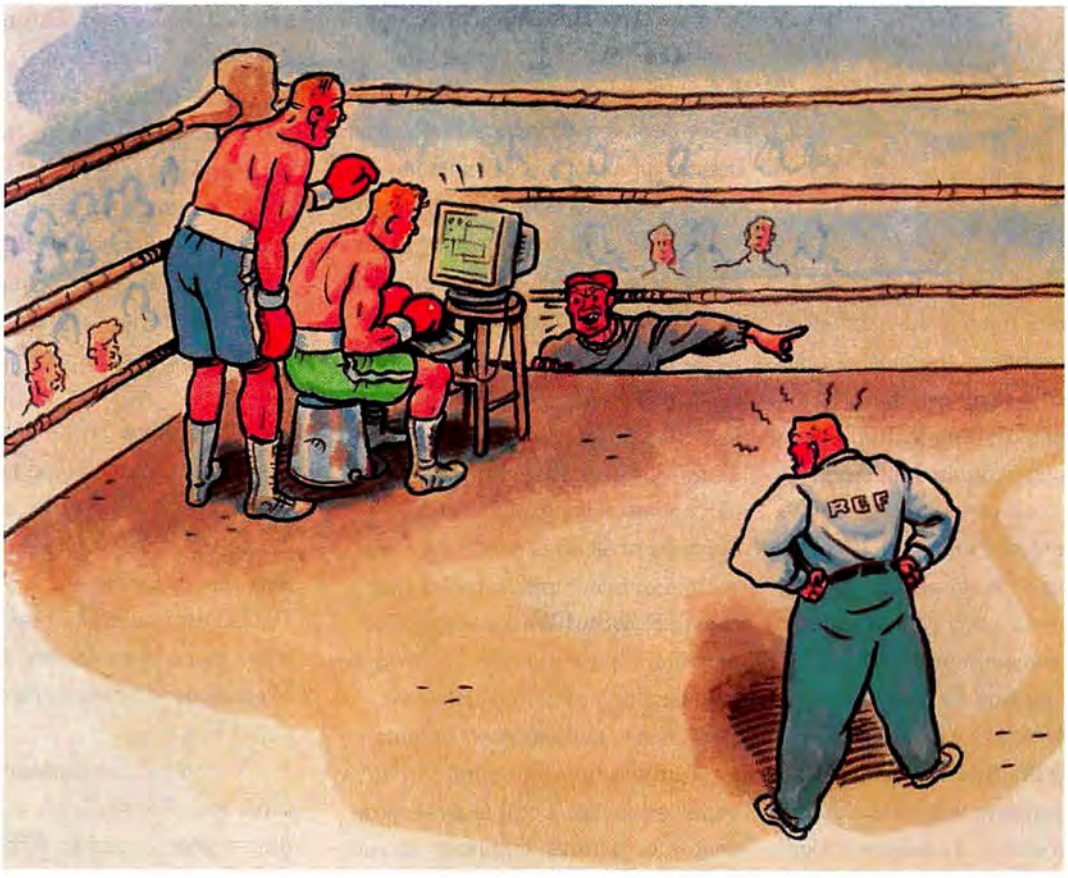
In your business, the printed piece is often the final representation of your work. When designing the 330, we kept that in mind. For more information about the 330 or the complete family of MINOLTA-QMS printers, visit us at www.minolta-qms.com or call 1-800-435-0965.

The essentials of imaging

MINOLTA QMS

© 2000 MINOLTA-QMS, Inc. All rights reserved. The MINOLTA-QMS logo and magicolor are trademarks or registered trademarks of MINOLTA-QMS, Inc. Minolta Co., Ltd., Osaka, Japan. All other trademarks are the property of their respective owners.

THE MACWORLD WEB AWARDS



WE *MACWORLD* EDITORS SPEND A LOT OF TIME ON THE WEB. We go online not only for pleasure, like millions of others, but also as an important part of our jobs. Whether it's through keeping up with rumors about future Apple products or, once in a while, playing a Flash-animated game or checking our stock portfolios, we have experience with many sites.

We've assembled a list of some of our favorite sites from around the Web for home, work, play, and technical use. This list is by no means comprehensive, and it isn't meant to represent the be-all, end-all best of the Web. Rather, it's a list of sites we've come to know and love. We're betting that you'll find many of these sites surprisingly useful, entertaining, or both—just as we *Macworld* editors did when we came together to pool our lists of Web favorites.

home

Apparel

Sure, those hot-pink pants look fantastic on the Web, but will they actually fit you? This is one of the most agonizing questions we face when buying clothes online. With **My Virtual Model** (www.myvirtualmodel.com), you can try out clothes on an eerily accurate simulated image of yourself—just answer a simple questionnaire about your body type or enter your exact measurements.

If you're looking for that hard-to-find bright-red corduroy jacket, head over to the **Interactive Custom Clothes Company** (www.ic3d.com), where you can buy duds from supercool to traditional, all made-to-order. Or send in your favorite jeans and IC3D will make their mirror image, minus the holes and rips.

Even glasses get online treatment at **Eyeglasses.com** (www.eyeglasses.com). Upload a photo of your face and virtually try on the huge selection of frames. You may even decide not to switch to contacts.

Community

Forging your own community has never been easier than it is at **eGroups** (www.egroups.com), the site that makes mailing lists simple to join and manage. Choose from thousands of groups based on interest or location, or start a new list.

Since 1995, **PlanetOut** (www.planetout.com) has been *the* online resource for the gay and lesbian community. With news, advice, personals, message boards, shopping directories, and even a pets section, PlanetOut provides an online meeting place.

Likewise, **ThirdAge** (www.thirdage.com) is a community site targeting a specific demographic: baby boomers. ThirdAge gives visitors health, financial, news, romance, and travel resources tailored for the aging boomer. The site's community forums let participants share personal advice or meet others with similar interests.

Education

Ever wondered how a car's engine works? Or pondered the inner mechanics of your refrigerator? Students of all ages can learn about such fascinating topics at Marshall Brain's **HowStuffWorks.com** (www.howstuffworks.com). Get the lowdown on everything from artificial-snow machines to nuclear power plants.

Familyeducation.com (www.familyeducation.com) is a resource center for parents, teachers, and students in grades K–12. Teachers can put their grade books online and give students and parents password-protected access to their grades. The site also offers homework help, educational games, and project ideas.

When it comes time to leave the nest for the hallowed halls of higher education, you'll want to check out **Embark** (www.embark.com). Embark leads you through the entire process of applying for college, from finding a school that fits your personality to footing the bill. You can even apply directly to many schools online.

Family

Digging up your roots is easier than you'd think with **FamilyTreeMaker.com** (www.familytreemaker.com). The site includes research advice, database searches, and an online community of others seeking their ancestors.

Whether you're considering starting a family, parenting a ten-year-old, or watching your youngest leave for college, you'll find good advice and helpful resources at **iParenting.com** (http://iparenting.com). You can join the online parenting community and get lots of invaluable information about mom- or dadhood.

A bit more daring is the offbeat and brutally honest site **Hip Mama** (www.hipmama.com), where birth stories, music reviews, forums, and articles round out the superhip coverage.

Food and Wine

Need an obscure recipe fast? **SOAR** (http://soar.berkeley.edu/recipes), the Searchable Online Archive of Recipes, probably has it. With nearly 70,000 user-submitted recipes, SOAR is the place to go for everything from Mississippi Mud Pie to Moroccan Chick Pea Soup.

To find out the perfect wine to serve with Peking Duck at your next dinner party, head to **WineToday** (www.winetoday.com). The online wine magazine, from New York Times Digital, provides reviews and information on specific wines, wine storage, and wineries. It also has useful features for wine newbies, such as a glossary that tells you what the heck tannin is.

Epicurious (www.epicurious.com) is a more general food and wine resource. Shop for specialty food items, prepare a meal from one of the many gourmet recipes, or read a review of the best American bourbons, all in one convenient place.

Health

For consumers and health professionals alike, **Medlineplus Health Information** (www.medlineplus.gov) is a comprehensive reference tool for all your medical questions. You can look up arcane medical terms and more than 9,000 prescription and over-the-counter drugs. The information is up-to-date and authoritative, drawn from the National Library of Medicine—the world's largest medical library.

Had a bad experience with a physician and want to warn others away? At **Health Grades** (www.healthgrades.com) you can share ratings of your experiences with physicians, hospitals, nursing homes, and more. Or, look up individual health-care providers in your area to find information such as board certification and any record of sanctions.

Specializing in alternative medicines, **WholeHealthMD.com** (www.wholehealthmd.com) provides a more holistic approach to your health. You can search for remedies according to health condition, find healing recipes, ask for advice from experts, and search for a local practitioner.

Home Repair and Decor

Your home may be your castle, but even castles need occasional remodeling. **DoItYourself.com** (www.doityourself.com) is the first place to go if you're feeling handy. The site has planning and how-to information on all aspects of home repair and improvement. Some of the projects even have short, illustrative video clips. For jobs you can't handle by yourself, the site helps you find a contractor and get an estimate.

If you're looking for some good advice about a home project, go to **Ask the Builder** (www.askbuild.com). Based on Tim Carter's nationally syndicated column, the site offers detailed instructions on home-improvement projects, all delivered with Tim's homespun charm.

Better Homes and Gardens (www.bhg.com), the Web site for the popular monthly magazine, has a bit of everything. There's an excellent gardening section, with a complete garden planner and a guide to trees and shrubs. Other great resources include a how-to encyclopedia of projects.

tech

Customize/Hobbyist

If you're itching to customize the look of your desktop, make sure to check out **ResExcellence** (www.resexcellence.com). This site includes themes, icons, start-up screens, and lots of other goodies that will give your Finder a whole new look. You can even submit a snapshot of your own desktop to show off to the world.

For a total makeover of your Mac, stop by **Applefritter** (www.applefritter.com). Covering inventions from a 21-inch iMac to the Macquarium, this site has tons of information on how to decorate your old Mac.

Want to add another hard drive or change your existing CD-ROM drive? Explore **AccelerateYourMac** (www.xlr8yourmac.com), with its huge compatibility databases of hardware that works on a Mac. The site also includes news and forums about readers' experiences with both hardware and software.

Glossary/Reference

It calls itself an "IT (Information Technology) resource," but don't let that frighten you—**WhatIs?com** (www.whatis.com) is an in-depth dictionary of technology terms. With a quick search, you'll soon know the difference between "Gigabit Ethernet" and "Fast Ethernet."

An impressive resource of Internet-related terms is **Webopedia** (www.webopedia.com), where you can finally learn what "DNS" stands for and what the heck it means.

The **ComputerUser.com High-Tech Dictionary** (www.computeruser.com/resources/dictionary/), formerly the Computer Currents Dictionary, is an old standby. It's got definitions for a vast assortment of confusing computer terms from both sides of the Mac-PC fence.

Mac Resource

Mac news junkies start the day right, fortified by links from **Mac Surfer's Headline News** (www.macsurfer.com). This one-stop shop corrals the best of Macintosh news, providing an at-a-glance digest of the day's top stories from all the Mac news sites that matter—as well as from a few that don't. Links to computer and technology articles of potential interest to a broader audience round out this site's Mac-centric mission.

A comprehensive and easy-to-use site from the United Kingdom,

continues

Computer Arts (www.computerarts.co.uk), is rife with rated reviews, forums, and tutorials. It also offers very practical information for graphic artists. Print, Web, and 3-D media are represented, along with handy, downloadable tutorial files useful to beginners and more-advanced users alike.

Helping to nurture real-world skills among the Macintosh creative crowd is **Creative Mac** (www.creativemac.com), a source for breaking news, tips, and weekly reviews. How-tos for print and motion graphics, along with a smattering of professional-grade video tutorials, help balance this relatively new site.

work

Searching

With **Google** (www.google.com), you're certain to find what you're looking for. It searches more than 1 billion URLs; has a simple, uncluttered interface; and offers an advanced search feature for even more-specific results. If you're "feeling lucky," try an option that will take you directly to the Web page that's Google's top match to your query.

Go2Net (www.go2net.com) scans more than ten search engines, including AltaVista, Excite, and Infoseek, to find your results. It offers helpful tools, such as a Yellow Pages guide and classified ads. You can even customize the content to keep track of your stock portfolio and the local weather.

The intuitive **LookSmart** (www.looksmart.com) lets you explore the Web either by keyword or by topic (*entertainment, work,* or *money,* for example). For a more personal approach, pose your question to other users, or take a stab at answering their questions.

Creative Tools

Creative professionals know that the key to finding work is getting your portfolio into the right hands at the right time. At **portfolios.com** (www.portfolios.com) you can share your portfolio online, and the site attracts people looking for specific talent.

If you're desperately seeking an elusive stock photograph, stop by the Random Eye **Image Grabber** (http://imagegrabber.randomeye.com), which searches through more than ten major photography shops with one click and delivers your results in tabbed pages, with thumbnails.

For fonts, look no further than **MyFonts.com** (www.myfonts.com). It offers links to all of the major foundries, and it also identifies fonts you've scanned and uploaded—no more guessing whether that ad you saw used Desdemona or Funky Fresh.

Financial Resources

Sites that offer stock-market tips are a dime a dozen, but few make investing as accessible and fun as the online home of **The Motley Fool** (www.fool.com). Featuring lively user forums, Fool.com gives you news, opinion, and investment strategies—all written clearly enough to benefit both novice investors and experienced traders.

Finding a home or apartment can be an ordeal. But finding your way through **Realtor.com** (www.realtor.com) is a much easier pursuit, thanks to links for everything from mortgage and finance information to moving-expense calculators. The site's Real Estate 101 links are especially helpful to first-time buyers and sellers.

Although some of **Quicken.com**'s (www.quicken.com) online tools won't work in Mac OS, it's still an extremely useful site for Mac users tracking their finances. Tight integration with Quicken 2001 Deluxe and TurboTax add value to this personal-finance resource.

Freelancing Resources

If you're a freelancer who works at home, some might say you have it easy—you get to roll out of bed when you want, work in your sweats, and spend quality time with your cats. But occasionally you must confront such issues as marketing your services, itemizing deductions, and insuring your PowerBook. For wisdom on these and other matters, stop by **Entrepreneur.com** (www.entrepreneur.com), a voluminous resource with access to assorted experts and other freelancers.

Another well-equipped freelancing resource is **guru.com** (www.guru.com) Not only will it help you find projects, but it also will help project managers find you.

And if you're new to working on your own, or thinking of taking the plunge, check out **Free Agent Nation** (www.freeagentnation.com). It has practical information, lists of helpful resources, and other support.

Job Search

Working your way through a giant job-hunting site can be time-consuming and daunting. But **WetFeet .com** (www.wetfeet.com) lets you perform extensive research on employment fields as well as companies, so you can find out exactly what "excellent opportunity for building communications skills" means in different jobs.

The **InternetSourcebook.com** (www.internetsourcebook.com/jobs/) offers an uncluttered, simple way to find job openings in specific fields and locations. It searches the employment pages of a variety of sites, giving you an idea of who's hiring and what they're offering.

JobWeb (www.jobweb.com) caters to the relocation-minded. Its simple interface and plain-text listings lead users to geographically specific job listings sorted by job type.

Nonprofit

Looking for volunteer opportunities in your area? **VolunteerMatch** (www.volunteermatch.org) is a free service from Impact Online that helps you find what you're after, using just a ZIP code and answers to a few simple questions. And if you can't carve out time to leave the house, check out the Virtual Volunteering section for ways to help by doing work on your computer.

You can locate articles on nonprofit fund-raising, managing, and training at **PhilanthropySearch.com** (www.philanthropysearch.com). Use the Speed Search links to find information about organizations you're interested in or to discover new ones.

Whether you manage a nonprofit or just have some spare time to offer, **idealist** (www.idealist.org), from Action Without Borders, is where you can find or post jobs and learn about upcoming events. Its Tools for Nonprofits section has information on running your organization smoothly and using the Internet to become more visible.

Online Tools

For online storage, it's hard to beat the 300MB of space offered for free by **Myspace.com** (www.myspace.com). Besides dwarfing what rival sites give away, Myspace makes it easy to share files with other members.

Many online calendaring applications suffer from clutter—but not **MyPalm** (www.palm.net), which has a clean interface and simple-to-use commands.

With **eFax.com** (www.efax.com), you can get voice mail and faxes by e-mail—a useful tool for PowerBook-toting business travelers who want to stay in touch while on the road.

play

Games

Looking for game news, previews, and reviews? Check out **Inside Mac Games** (www.imgmagazine.com). The site also offers juicy tips, hints, and cheats. If you want to talk with other enthusiasts, turn to the forums.

When you're itching to play games online, head to **Shockwave .com** (www.shockwave.com), featuring arcade classics such as Spy Hunter and Robotron. You can also play newer games, such as South Park Snowballs or Deer Hunter. First-time users must download the Shockwave plug-in before enjoying the site—a small price to pay for hours of free fun.

The myriad games at **flipside .com** (www.flipside.com) include some inspired by current Hollywood films, plus networked games you play over the Internet. Registering on the site allows you to rack up points, which can be redeemed for prizes.

Movies

If you have the bandwidth to view movies on the Web, click over to **AtomFilms** (www.atomfilms.com). You'll be able to watch a variety of short films and animations, ranging from Academy Award nominees to obscure gems from around the corner or around the world. Filmmakers note: if AtomFilms accepts your submission, you get paid!

Owners of DVD players will find **DVD Review** (www.dvdreview.com) to be a gold mine of information. You can check on upcoming releases, read reviews, and even chat with other DVD owners. Our favorite part of the site reveals the hidden features, or "Easter eggs," in some DVDs.

When you want your entertainment on the big screen, **Moviefone** (www.moviefone.com) delivers the goods: you can check show times and buy tickets for movies at this site. But in case you're not yet ready to venture outside, Moviefone also provides reviews, star gossip, made-for-the-Web movies, and chat rooms.

continues

Music

You might want to set aside some time before checking out the **All music guide** (www.allmusic.com). Use a band's name as a search term to get a biography page with links to all the members, other bands they've played with, their influences, discographies with reviews, track listings, credits, and more.

If it's live music you seek, then **Tourdates.com** (www.tourdates.com) is a must. Search for shows by city, date, club, or artist. You can post scene reports for your area; sell, swap, or beg for tickets; and read reviews of shows headed your way.

If you'd rather make your own music, launch Netscape and go to Thomas Dolby's site, **Beatnik** (www.beatnik.com). Beatnik's MixMan software allows you to remix popular songs. Now you can hit Pat Benetar with your best shot until you get it right. After recording your mix, send it to your friends with Beatnik's Netscape plug-in.

Online Dating

Hundreds of sites offer online dating—as long as you're willing to pay. But if you're saving your money for that first dinner date, check out these free sites that cover all the basics. **Yahoo! Personals** (http://personals.yahoo.com) has a good interface that lets you narrow your search for a dream date to within four miles of where you live.

Love@AOL (http://love.aol.com) features an in-depth search-criteria engine, and you can choose to view only listings with pictures—to narrow your search even further and sneak a peek at your potential new squeeze.

If all this is new to you, **Way Too Personal** (www.waytoopersonal.com) will show you some prizes and pitfalls of online dating. It has examples of scary responses people have gotten, as well as sage online-dating advice, chat rooms, and links to help you find your virtual soul mate. Good luck!

Online Magazines

Can a site's navigational tools be *too* good? Visit **Salon.com** (www.salon.com), and find out. Each polished, well-researched story offers plentiful (and irresistible) links to related stories, and the inviting design encourages visitors to settle in and stay awhile. With sections devoted to politics, media, sex, and breaking news, this addictive site has something for everyone.

Less well-organized but worth a daily visit is **Feed** (www.feedmag.com), a collection of consistently well-written, in-depth reports and essays on culture, science and technology, and entertainment. A daily feed keeps you current on the latest happenings; special issues focus on topics ranging from open-source software to DNA.

Francis Ford Coppola's literary magazine, **Zoetrope: All-Story** (www.zoetrope-stories.com), will appeal to both aspiring writers and anyone who appreciates the short-story genre. Listen to a live reading, download a PDF of the latest issue, or submit your own story for critique—possibly by an agent or producer. Great community features give this site a homespun feel, while big-name contributors (David Bowie art-directed one issue) give it an edge.

Sports

The **NHL**'s home site (www.nhl.com) is a fantastic resource for hockey fans. It contains up-to-date information on players and teams, and you can even listen to the home and away teams' radio broadcasts for the season in RealPlayer format.

If you're into the nitty-gritty of football, **NFLFans.com** (www.nflfans.com) carries the latest buzz and stories, as well as chat rooms and links to fantasy football sites.

If those don't cover your sports interests, **ESPN.com** (www.ESPN.go.com) will fulfill your needs. Whether it's golf, horse racing, or high-school sports, ESPN has coverage of almost every sport imaginable. If you don't find what you need on the main page, try the links to more-specific sports areas such as soccer ("football," to the rest of the world), extreme sports, and boxing.

Travel

Where can you find a four-and-a-half-pound steak that's free if you eat it in less than an hour? Or a building that's shaped like a shoe? At **roadsideamerica.com** (www.roadsideamerica.com), these offbeat tourist destinations and many others are listed. Ideal if you're planning a road trip or simply have a penchant for the unusual.

The **Travel Channel**'s Web site (www.travel.discovery.com) caters to anyone interested in travel—in the United States or abroad. Impressive photography shows you what to expect at a variety of destinations, and live Web cams broadcast from a number of locations, including Loch Ness in Scotland and the Little White Chapel in Las Vegas.

Whether you want to know what's going on where you live or to plan a trip out of town, **citysearch.com** (www.citysearch.com) is a comprehensive Web site that covers major cities in the United States and abroad, from San Francisco to St. Louis and Reykjavik to Rio. Listing restaurants, movie show times, and much more, citysearch.com is expansive and easy to navigate. **m**

digital color

32 million colors on demand.

PRINT

COPY

1-800-63 RICOH

ricoh-usa.com

STORE

FAX

When it comes to dependable color output, depend on *DEPENDABLE DIGITAL™* color printing. The Aficio Color® 6000 series delivers unsurpassed Ricoh color with sizes up to 13 x 19 and stock up to 140 lb. index.

© 2001 Ricoh Corporation

We're in your corner.

RICOH®
Image Communication

WEB DESIGN FOR BOTH SIDES OF THE BRAIN

WHETHER YOU'RE A CODE CRUNCHER OR A GRAPHIC DESIGNER, DREAMWEAVER 4 HAS THE TOOLS YOU NEED

BY JASON SNELL

EVERY CREATIVE FIELD HAS ITS PURISTS. SOME PHOTOGRAPHERS scorn digital retouching; some actors insist on doing their own stunts; and some television writers . . . well, OK, maybe not *every* field.

When it comes to Web design, the purists are hand coders—HTML mavericks who distrust any code generated by software instead of a human brain. Of course, their suspicion is easy to understand. Early WYSIWYG Web design programs did a decent job of approximating basic Web designs, but they generated HTML code that was junky, complicated, and sometimes just plain wrong. Although today's advanced Web design tools are much smarter when it comes to writing HTML, most serious Web coders still refuse to rely solely on a visual page editor.

The new Macromedia Dreamweaver 4 ($299; 800/457-1774, www.macromedia.com,) appeals to both sides of a Web designer's nature: the part that needs hands-on editing of HTML, and the part that appreciates easy-to-use visual tools for building complex

IN THIS SECTION:
74 PAINLESS POP-UP MENUS
76 TRACK YOUR PROGRESS WITH EXCEL
80 REVIVE YOUR FILES

JOSH GOSFIELD

border="0" bgc
olor="#ffffff"
><tr><td width
="6%"><img sr
10"cellpaddi
Value

designs. Dreamweaver 4 has a load of new features that make page design easier even if you never look at a single HTML tag. But if you *are* concerned with code, it also gives you the control you crave.

Integrated Code

In previous versions of Dreamweaver, the only way to view and edit a page's HTML code was to pop open the floating Code Inspector window. Although it was useful, this code view had some limitations. First, you could examine only one document's code at a time. And since the common window-closing keyboard shortcut ⌘-W didn't work for the Code Inspector window, designers sometimes closed their documents by mistake.

Dreamweaver 4 provides a new option for accessing your code. You can mix Code and Design views in a split-pane view that shows the HTML code in one half of the window and the graphical representation in the other, so you can readily observe what effect one is having on the other (see "A Code with a View").

This split view is a real boon to designers who like to code pages by hand but also appreciate Dreamweaver's visual approach to page design. However, it does have constraints: for one, it requires a large display. At a screen resolution of 1,024 by 768 pixels, the combination of Dreamweaver's main window and all its floating panels (the new term for palettes) already crowd the monitor. Now imagine that editing window cut in half—only a sliver of your Web page is visible at any given time.

In addition, when you're editing code, the Design view doesn't update the display automatically to reflect your work—you must either click on the Refresh button in the Properties Inspector window or press the F5 key. (Modifications you make in the Design view appear automatically in the Code view, so you can watch Dreamweaver write code as you work.)

Quick Coding Help

With code, the devil is in the details. And there are a *lot* of details. But Dreamweaver 4's tool bar includes a collection of new features that will be welcome relief to anyone without a photographic memory.

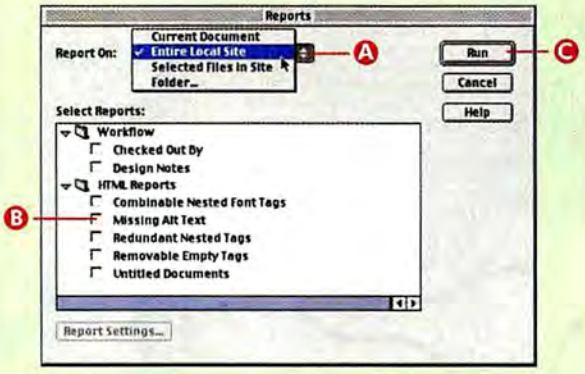
If you ever struggle to remember the precise syntax for a JavaScript command or the difference between cell padding and cell spacing in

REPORT Your Web Site

CREATING SITES THAT ARE ACCESSIBLE TO PEOPLE who are blind or visually impaired is a growing responsibility for Web developers (see "Create a Barrier-Free Web Site," *Create*, August 2000). And one of the easiest steps to creating an accessible site—using the **alt** tag to add text descriptions to images—is also the easiest to overlook. But with Dreamweaver 4's new Site Reports feature, you can quickly locate missing **alt** tags (plus several other troublesome code gaffes) throughout your Web site.

To get the most out of your site reports, make sure to first define a local site in Dreamweaver. This advanced site-management option will keep track of your site's files and simplify updating and link management.—DAVID SAWYER MCFARLAND

1 Create Your Report To start a new report, open the Site menu and select Reports. In the Reports window, specify which page or pages you want to examine. To have Dreamweaver check all of the pages in your site, select Entire Local Site from the Report On pop-up menu A.



Next select the type of report you wish to generate. You can include as many criteria as you like for each. To find images that are missing a text description, click on the Missing Alt Text check box B. Generate the report by clicking on the Run button C.

HTML tables, you'll appreciate Dreamweaver's new Reference panel. It's stocked with three reference guides from the coding geek's favorite publisher, O'Reilly & Associates. This panel provides context-sensitive information about the proper use of HTML, Cascading Style Sheets (CSS), and JavaScript.

Say you're creating an HTML form and you can't recall what code to write so the form data display in the URL, rather than being sent invisibly. You simply type **<form** in the Code view, and then either press shift-F1 or click on the Reference button in the tool bar. Up pops the Reference panel with useful details on the **<form>** tag, including the code you seek: **method=get**. Even better, the guide explains that you're not supposed to use **method=get** anymore, because it's frowned on in HTML 4.0. That's a lot of information at your fingertips.

The new tool bar also provides quick access to other common tasks, including shortcuts to upload and download commands, browser previews, and all three view options. You can open the new in-browser JavaScript debugger to test your script for errors (it works only with Netscape Navigator on the Mac). The tool bar even has a Title box, so you can name your page without having to choose Page Properties from the Modify menu.

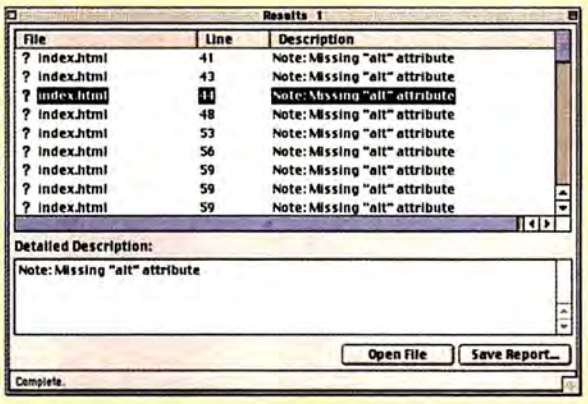
Tables in a Hurry

Perhaps Dreamweaver 4's most intriguing new feature is the Layout view. Activated from the Objects panel, the Layout view lets you create HTML tables—the design building blocks for almost every page on the Web—simply by drawing them on your screen. Layout view actually incorporates two different tools: the Draw Layout Table tool, with which you define the boundary of your table, and the Draw Layout Cell tool, which you can use to add cells to those tables in free-form fashion. As you add cells, Dreamweaver rejiggers the number and size of rows and columns in the table to accommodate what you draw (see "Setting Your Table").

While in the Layout view, you can specify the width of each column. For a more fluid approach, you can instead set column widths to *Autostretch*. Then columns will resize on-the-fly based on the width of the viewer's browser window—so your

continues

2 **Get the Results** Dreamweaver will scan all of the selected files and list its findings in the Results window. For each instance, the report includes the file name, the line number, and a description of the problem.

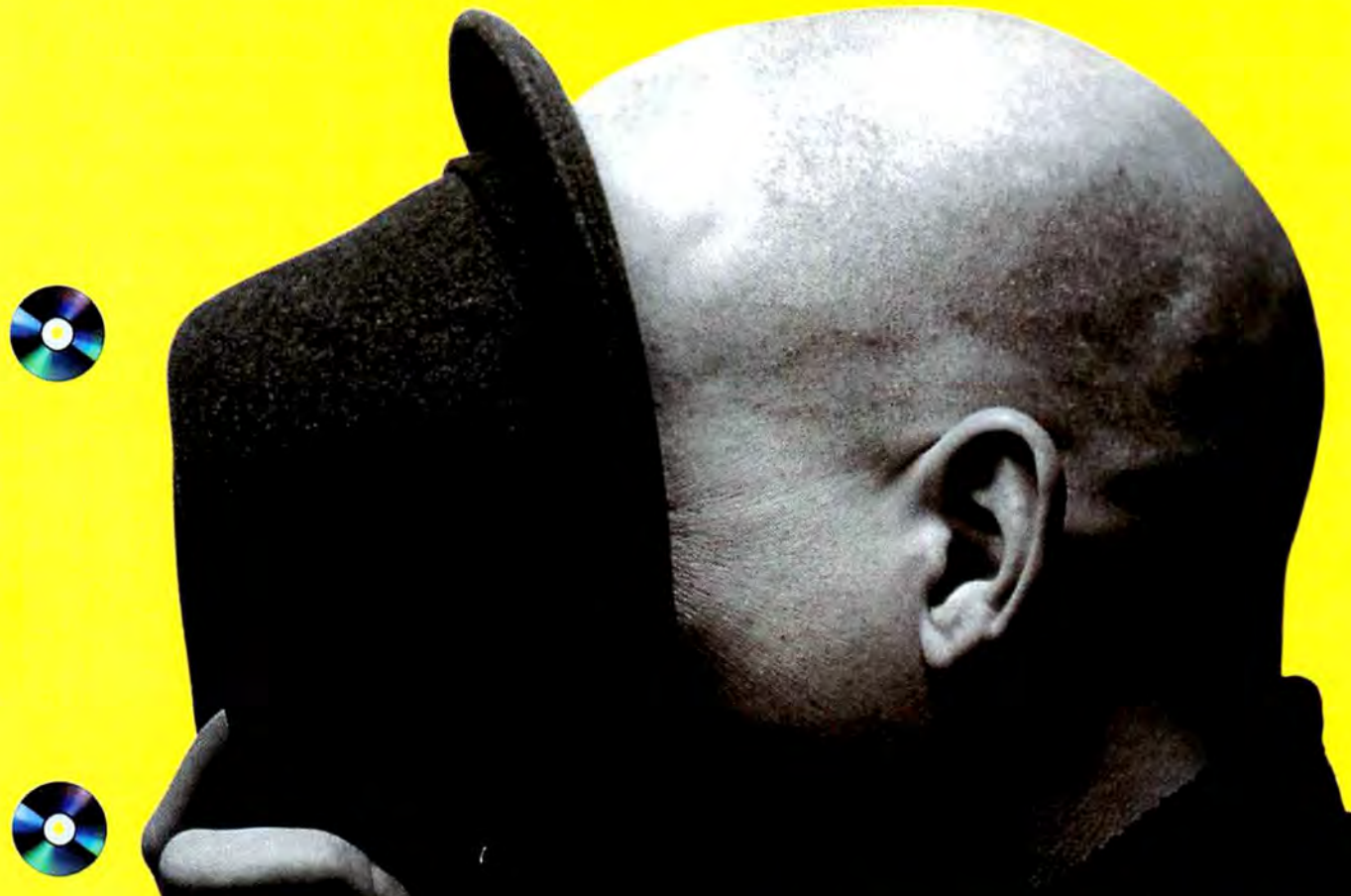


To fix the missing **alt** text, double-click on the corresponding line in the report.

3 **Repair Missing Tags** Dreamweaver opens the errant file with the offending image Ⓐ already selected. Type a description for the image into the Alt field Ⓑ of the Property Inspector.

TIP: If you use small, transparent images to help control the layout of your page, type in a single space for **alt** text. This will help your pages comply with accessibility guidelines, but it won't confuse users with unnecessary descriptions.

PORTRAIT OF OUR IT GUY, PRE-POWERFILE.



CD/DVD CHAOS. THAT'S WHAT IT WAS.

THEN HE BOUGHT THE POWERFILE C200™ AND PULLED A GENIUS OUT OF HIS HAT.

Digital asset management doesn't have to be messy or expensive. Now with the PowerFile C200 CD/DVD Jukebox, you can enjoy central access to all of your archived data across your existing PC or Mac network. No more shuffling through piles of discs. Store, manage, and retrieve data through a simple, easy-to-use interface.

And for a price that will make you look like a genius.

Be a genius and order the PowerFile C200 Jukebox today. 1-877-8-DVD-NOW (1-877-838-3669)
www.dvdjukebox.com/mw

PowerFile™

©2001. All trademarks mentioned herein are the property of their respective owners.

page will look good when displayed at any window width or resolution.

Meticulous table designers will probably find the Layout view a needless complication. But anyone who's ever gotten a headache trying to organize myriad rows and cells to get a table's design just right may find Dreamweaver's new alternate approach useful. Even if you prefer to manually specify your table widths in Dreamweaver's standard view—or in the code itself—you can use this approach to generate the fundamental structure of tables in a hurry, freeing you to sweat the details.

A Code with a View Dreamweaver 4's new two-in-one view lets you peruse your Web site's visual design and the underlying code simultaneously.

Flash . . . without Flash

Macromedia's Flash allows designers to create bandwidth-efficient, vector-based animations and embed them in Web pages. Until recently the only way to build even the simplest Flash files (which use the SWF file format) was to buy—and learn—a Flash animation program such as Macromedia Flash or Adobe LiveMotion. Now Macromedia makes it easier, with two tools built into Dreamweaver's Objects panel.

Setting Your Table The Layout view offers a simple click-and-drag interface for creating complex table designs.

The first, Insert Flash Button, lets you create animated, clickable buttons in SWF format. You simply enter the text, choose the button's destination link, and pick a template from a catalog of more than 50 styles. Your choices range from hypnotic, pulsating buttons to finely beveled designs. (Flash users can also make new templates by saving Flash Generator format files to the Flash Templates subfolder within Dreamweaver's Configuration folder.)

The second is Insert Flash Text, which generates text in the SWF format. Traditionally, you couldn't be absolutely sure that type would display correctly on your Web page unless you either used one of a handful of commonly available typefaces (Arial, Helvetica, and Times are the usual suspects) or saved the text as a GIF image file. But because Flash uses vectors, Insert Flash Text lets you embed text files that are smaller than comparable GIF images and that stay true to their original font—as long as the browser on the other end can display SWF format.

And that's the catch with both of these new features. For all the advantages of Flash, it's a data format that you can't view without a plug-in. Given that GIF images aren't that much bigger—and that file size is becoming less of a concern as Internet connections continue to speed up—adding Flash buttons and text to your Web site may not be worth the risk of compatibility problems.

Work with Fireworks

Among the other changes in Dreamweaver 4 is tighter integration with Fireworks 4, the latest version of Macromedia's Web graphics application. (To learn what's new in Fireworks 4, go to www.macworld.com/2000/11/13/fireworks.html.) You can now pass graphics files and their accompanying HTML code between the two programs seamlessly.

For example, let's say you've created a complicated layout in Fireworks, divided the image into slices, and imported these slices into Dreamweaver. You then deleted several placeholder images and replaced them with text, or perhaps you modified the hyperlinks for some of the images. In previous versions of both programs, once such modifications were done, it was impossible to reconcile the current version with the original Fireworks file. This created problems if you needed to return to Fireworks to tweak the original design.

But version 4 lets you transfer items back and forth between programs without losing any changes. When you're editing a table that was generated by Fireworks 4, Dreamweaver's Properties Inspector includes an Edit In Fireworks button. When you click on this button, Fireworks opens and displays a version

continues

of your table—including all the changes you've made within Dreamweaver—beneath a text banner that reads, "Editing from Dreamweaver." When you've finished your editing, simply click on the Done button and the changes you've made in Fireworks are automatically sent back to Dreamweaver.

This all adds up to a major change in graphics and Web workflow. If you need to modify an image long after a graphic designer has passed off the work to you, reconciling changes made in Dreamweaver with the original Fireworks file is no longer an arduous process.

Other New Features

Dreamweaver 4 also contains a raft of small but useful additions that will improve the way you work. The new Assets panel, for example, offers a convenient way to organize and access your site's vast and unwieldy assortment of images, colors, and hyperlinks. You can even group your most commonly used assets into a list of favorites so you don't have to search the entire haystack every time you need one. Other improvements include a new Site Reporting feature that scans sites for errors (see "Report Your Web Site"); an improved window-management system that places windows out of the way of floating panels; and a command that automatically integrates nested tables into the structure of their parent tables.

The Last Word

Dreamweaver 4 is a major update with a mix of subtle and snazzy new features. Some items, such as Flash Text and Buttons, are heavier on style than on substance. But when it comes to geeky additions—such as the Code view, the Layout view, and online reference materials—Dreamweaver 4 has taken great strides. The program is a serious tool for serious Web designers—even those designers who would never admit to using anything but a plain old text editor. **m**

Macworld.com Editor JASON SNELL has been publishing on the Internet since 1991 and covering Web publishing since 1993.

EXPANDING Dreamweaver's Horizons

DREAMWEAVER IS SO EXTENSIBLE and customizable, users have written hundreds of Dreamweaver extensions to add features or quick workarounds for otherwise tedious tasks. And these chunks of downloadable code aren't little add-ons relegated to a Scripts or Plug-ins menu: Dreamweaver extensions are fully integrated into the program. In fact, most of Dreamweaver's *built-in* features are actually extensions themselves.

At November's Thunder Lizard Dreamweaver Conference 2000, we asked several of the gathered Dreamweaver users and conference panelists for their favorite extensions. Here are five top picks, all offered as free downloads at Macromedia's Exchange Web site (www.macromedia.com/exchange):

FAVORITES MENU This extension lets you access important and often-used files from a Favorites menu in Dreamweaver. The Favorites menu works just like your Web browser's Favorites bar, allowing you to quickly add and organize menu contents.

OBJECT MAKER You can cut down on redundant tasks by saving bits of code—for example, table designs—as reusable objects. This extension takes any selection from a Dreamweaver document and places it in your Objects panel for quick access.

CREATE LINK FROM TEXT With this extension, you can turn a word into a hyperlink without having to retype it. You need to determine only the appropriate prefix (such as *http://www.*) and suffix (*.com*).

RESOLUTION REDIRECT This extension takes some of the uncertainty out of the viewer's experience by inserting a script into the document's Head content. The script detects the viewer's screen resolution and redirects users to pages designed specifically for that resolution.

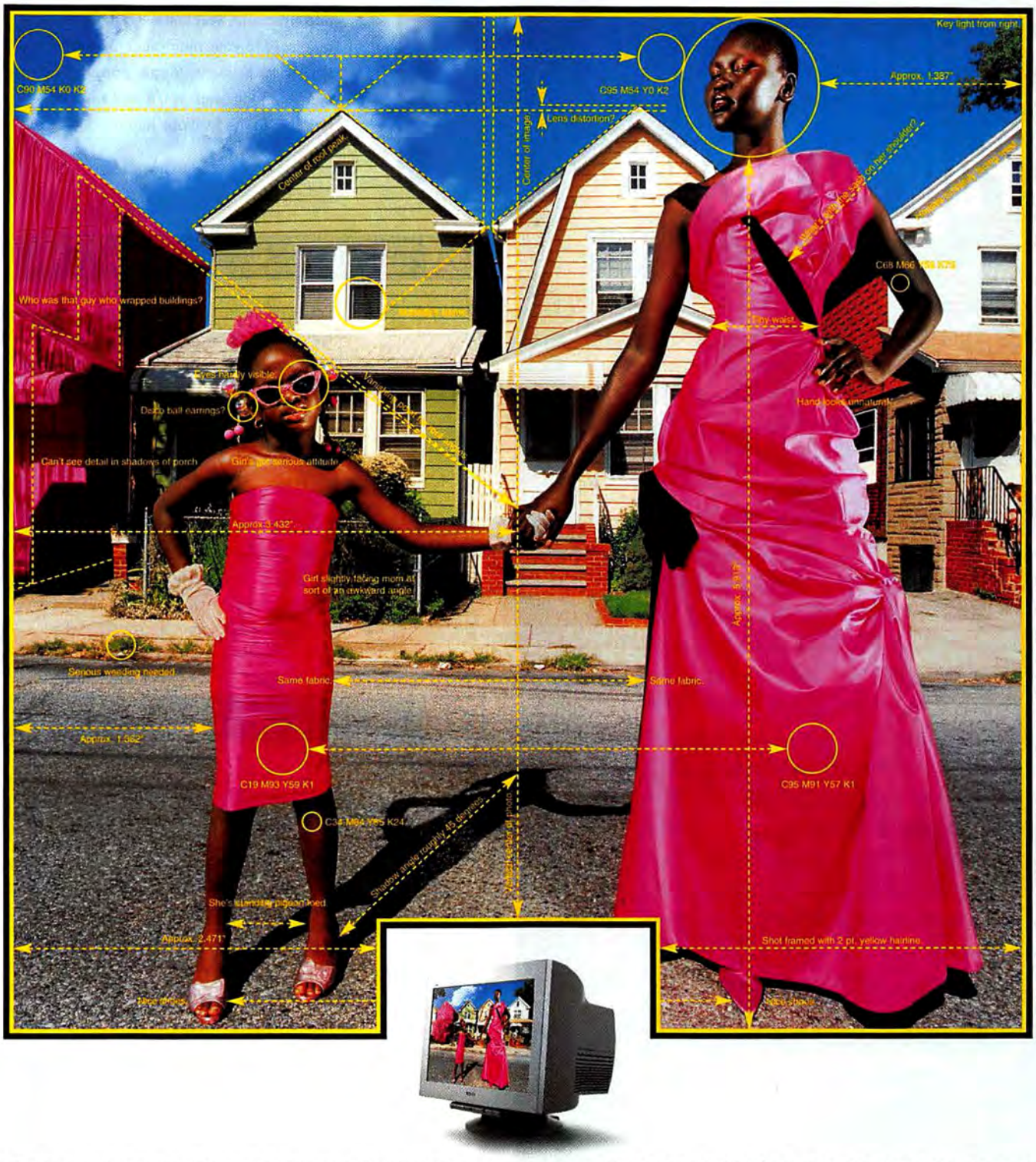
CHECK PAGE FOR ACCESSIBILITY Federal law now requires government Web sites to be accessible to users with disabilities. This extension checks for potential accessibility troubles, and generates an accessibility report with links to problem areas in the page's source code.—KELLY LUNSFORD

More Info:
www.macromedia.com/exchange

LINK

Download hundreds of useful (and some not-so-useful) extensions to Dreamweaver, ranging from new Objects panel items to entire menu commands.

SONY



See in ultra-vivid, pixel by pixel detail just how crazy you're driving yourself.

It's not easy being obsessive. But most good designers are, and the last thing you need is a distorted image. Fortunately, Sony's FD Trinitron® displays feature a virtually flat screen, high-contrast coating and an ultra-tight aperture grille. Which produces enhanced image definition and astonishing detail. And now, with the Multiscan® FW900 and its 16:10 double page display, you have even greater opportunity to obsess. You can thank us later.

©2000 Sony Electronics Inc. All rights reserved. Reproduction in whole or in part without written permission is prohibited. Sony, the Sony logo, Multiscan and Trinitron are trademarks of Sony. Screen image is simulated. DSPM00460

FD Trinitron
www.sony.com/obsessed

LISA LOPUCK

Painless Pop-up Menus

Fireworks 4 Writes the JavaScript for You

Web pages can scroll on forever, but that does not mean your readers will. A savvy designer makes the most of screen real estate. Pop-up menus are one way to pack a lot of information into a small space; when visitors to your site mouse over a button that hides a pop-up menu, a new group of buttons or text links appears with additional menu options.

Pop-up menus can also streamline your users' interactions, allowing them to quickly jump to the pages they need. Say you're developing a nutrition Web site illustrating the Food Guide Pyramid. You build six buttons representing the food groups. When a visitor mouses over a button, such as the one for the Grain group, a pop-up menu appears with additional choices, such as Rice and Pasta. The visitor can scroll down to one of those menu items and go directly to that page.

Macromedia's Fireworks 4 (800/457-1774, www.macromedia.com) makes it easy to create pop-up menus. You create the images for the buttons, and then Fireworks automatically writes and exports the JavaScript that powers the buttons. In just three steps, you can use Fireworks 4 to create a working Web-page interface with a space-saving pop-up menu. **m**

LISA LOPUCK is an author, Web designer, public speaker, and founder of eHandsOn (www.ehandson.com), an online training company for the professional Web and creative developer.

1

Inserting Hotspots To insert a pop-up menu, you first need to add a *hotspot* to your main button. These interactive elements trigger pop-up menus. In this step, you'll add six hotspots to the fictitious nutrition site.

Ⓐ

Select the Rectangle tool, and create six rectangles, which will become your buttons. With the Text tool, enter the descriptive labels ***Fat, Oil & Sweets****;* ***Dairy****;* ***Meat****;* ***Vegetable****;* ***Fruit****; and* ***Grain*** *Ⓐ. For detailed instructions on using the Rectangle and Text tools, see www.macworld.com/2001/03/howto/fireworksbutton.html.*

Group each text label with its rectangle by holding down the shift key while clicking on both the text label and the rectangle, and then choosing Group from the Modify menu. Click on the background to deselect the group. Repeat this for each button.

Ⓑ

Select all six buttons with the Pointer tool by holding down the shift key while clicking on each label. Choose Insert: Hotspot from Fireworks' main menu. The window that appears asks whether you want a single large hotspot or multiple ones. Click on Multiple. You should now have six hotspots of the exact size of your buttons Ⓑ. Click once on the background to deselect them.

More Info: www.webstandards.org

Not all browsers support JavaScript, so check this site to see which versions can properly display your pop-up menus.

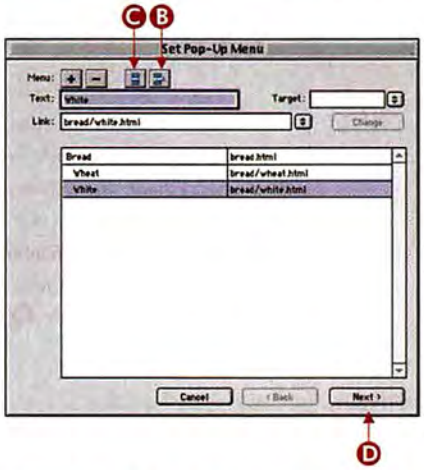
LINK

2

Inserting a Pop-Up Menu With all six hotspots in place, you can add a pop-up menu to each one.

*Select the hotspot for the Grain button and choose Insert: Pop-Up Menu from the menu bar. In the Set Up window, type the first item for the menu, **Bread**, in the Text field, and then enter a link in the Link field—here it's **bread.html**. To add the item to the menu list, click on the + icon* Ⓐ.

*Now enter the additional choices you want under Bread. Type **Wheat**, add a link (here **bread/wheat.html**), and click on the + icon. With the Wheat menu item highlighted, click on the Create Menu icon* Ⓑ *to make Wheat a submenu of Bread. Wheat will then be indented below Bread. Now type **White**, enter **bread/white.html**, and click on the + icon. To move an item up in the pop-up hierarchy, click on the Promote Menu icon* Ⓒ.

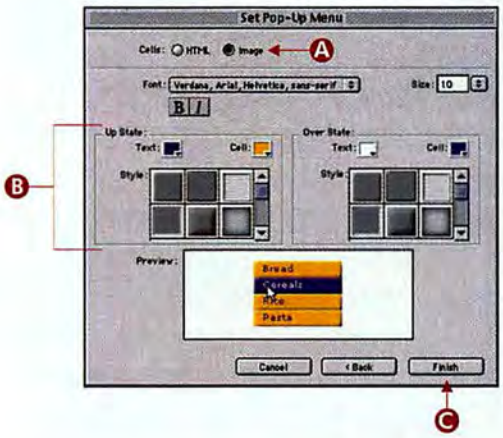


Continue in this way until you've completed all the submenus for the Grain category. Click on the Next button Ⓓ *to continue.*

3

Finishing and Previewing Your Pop-Up Menu The last step is to fine-tune the pop-up menu's appearance. Fireworks gives you a choice of an HTML or a "button-like" look and lets you control the font and font size.

You can apply various format settings to your pop-up menu. Select the Image option Ⓐ. *Choose a font style from the font list, and change the font size to whatever looks best with your typeface. If you feel adventurous, play with the image and color options* Ⓑ. *Otherwise, click on the Finish button* Ⓒ *to return to your document.*



Back in the document, you'll see a light-blue outline representing your pop-up menu. With the Pointer tool, click and drag it to where you want it to appear Ⓓ.

Ⓓ

Repeat steps 2 and 3 to add pop-up menus to the remaining five buttons. To preview your buttons, choose File: Preview In Browser. Then just admire your Fireworks handiwork Ⓔ.

Ⓔ

JAMES BRADBURY

Track Your Progress with Excel

Formulas and Graphs Are at Your Fingertips

How-to

Microsoft Excel

By Microsoft's own admission, Excel gets more use as a simple list-management tool than as a real spreadsheet. Why is that? It's as if millions of people bought four-wheel-drive SUVs just to drive to the supermarket—but maybe that's a bad analogy.

We can't help you justify your SUV, but if you're one of the millions of Excel owners who have never entered a formula or generated a graph, here's a chance to road test Excel 2001's interface with a simple project. It's actually a complement to a spreadsheet called Daily Food Diary, which Microsoft ships with Excel. The idea is that if you're trying to lose a few pounds through a sensible diet, it helps to record your progress, keep yourself motivated, and make sure you aren't losing weight too fast. This spreadsheet will let you do all of those things—and teach you some Excel skills you can apply to other tracking projects, financial or otherwise. You'll see how using formulas is both more interactive and more fun than simply making a list. Of course, you have to do the weighing yourself—USB-equipped scales are still on the drawing boards. **m**

JAMES BRADBURY is the former editor of *MacUser* and a shadow of his former self.

1

Create a New Worksheet Office 2001 ships with a Project Gallery that's full of useful templates. We're going to modify one called Daily Food Diary, an Excel template designed for keeping track of what you eat.

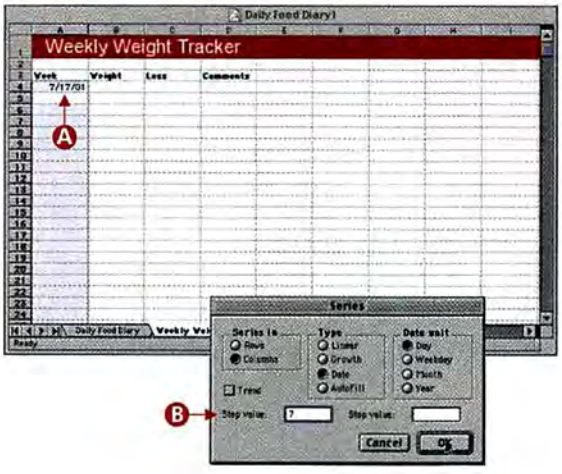
First, open the Project Gallery. Under the File menu, select Planners: Meals-Diets: Daily Food Diary. Insert a new worksheet into the file (Insert: Worksheet). By default, Excel places the worksheet's tab before that of the Daily Food Diary and labels it Sheet 1. Double-click on the tab to rename the worksheet. You can change the order of the worksheet tabs by clicking and dragging to new positions. Save this new workbook (which is what Excel calls a file) under a new name with the File: Save As command.

For consistency of style, select, copy, and paste the main header of the Daily Food Diary worksheet into cell A1 of your new worksheet. Then change the wording by double-clicking on the cell and typing ***Weekly Weight Tracker*** *A. In the same manner, enter the four column headings in their cells as shown B. Select and style them as bold.*

2

Get Your Fill The Fill commands (listed under Edit: Fill) are some of the most powerful time-savers in Excel. They automatically copy the contents of one cell to a selected group of adjacent cells, whether those contents are text, data, or a formula.

In the first column, you'll use Fill: Series to set up a weekly schedule. Start by typing the first date you'll weigh yourself under the Week heading, in cell A4 Ⓐ.



Then, select cells A4 through A25 by drawing a marquee with the cursor (selected cells will be outlined). Choose the Fill: Series command from the Edit menu. Enter **7** *(for days in a week) in the Step Value field* Ⓑ*, and click on OK. Excel then automatically generates weekly tracking dates.*

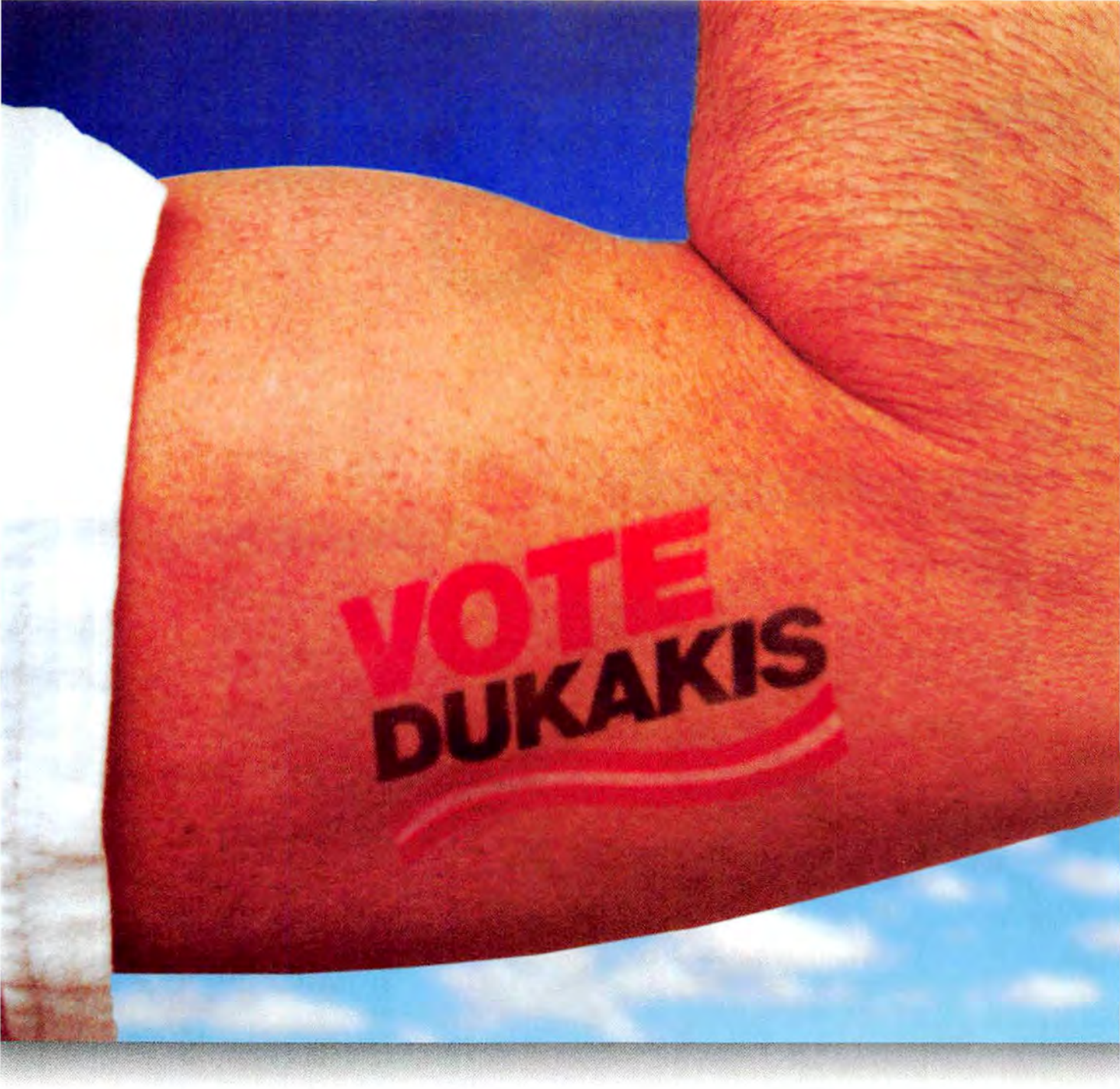
3

See You Later, Calculator The Calculator, which is new to this version of Excel, makes creating even complicated formulas easy. But first we'll try it out on something simpler.

For the Weight column, enter your starting weight in the first cell (B4) Ⓐ*. Then highlight the next cell down (B5) and click on the Calculator in the Formula tool bar. (If you don't see the Formula tool bar, you can turn it on under the View menu.)*

With the Calculator showing, click on cell B4 in the spreadsheet so that the formula displayed in the Calculator result window becomes **=B4** Ⓑ*. Click on OK to close the Calculator. Cell B5 should now have the same value as cell B4. Click on B5 and drag your cursor down to the bottom of B25 so that B5 through B25 are highlighted. Use the Edit: Fill: Down command to copy the formula in B5 to the rest of the cells.*

continues



Some content is hard to update.

Updating some kinds of content will always be painful. But now updating Web site content doesn't have to be. With siteyard from zapwerk, it's simple to create and manage Web content and keep it up-to-the-moment. At a fraction of the cost of any comparable solution on the market. What's more, siteyard gives employees, contractors, customers–even business partners–the tools to update content at any time. No HTML expertise, design skills, or special software required. Only a standard browser to access siteyard's dynamic Web-based system. Sound too good to be true? **Call 888.552.2114, or email us at sales@zapwerkUS.com for a free demo.** Once you've seen siteyard in action, we'll bet anything it will get your vote.

<siteyard>

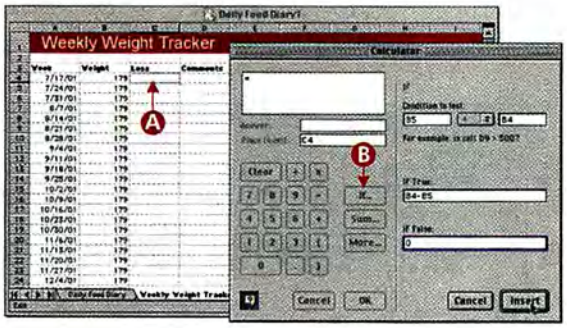
BECAUSE CONTENT COUNTS.

Circle 50 on card or go to www.macworld.com/getinfo

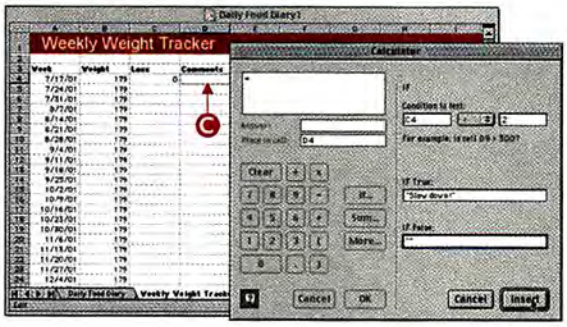
4

Get in Condition One big difference between a boring list and an interactive spreadsheet is the use of conditions. That's where the smarts of this spreadsheet reside.

For the Loss column, click on cell C4 Ⓐ and open the Calculator. Click on the If button Ⓑ to enter a conditional formula, and fill out the windows to the right as shown. This will cause the difference to appear only if your weight goes down. Click on Insert and then on OK to insert the formula.



For the Comments column, you'll use a text string in a conditional statement. Click on cell D4 Ⓒ and fill out the Calculator window as shown after clicking on the If button.

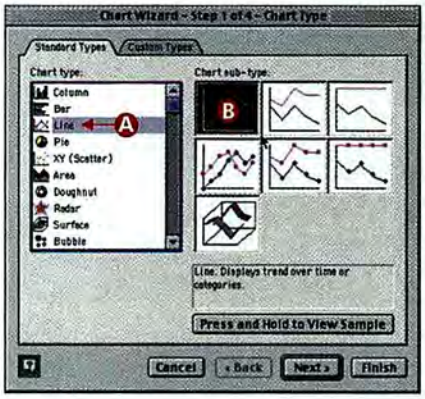


Use Edit: Fill: Down again to copy both of the formulas in this step to the rest of their respective columns. Now, if you're losing weight too quickly, the Comments column will remind you to slow down.

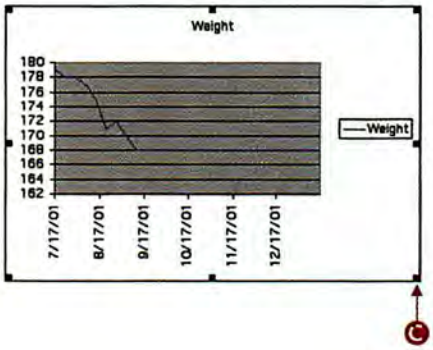
5

Seeing Is Believing Tracking your weight as it goes down (or up) will be a lot easier if you can see it graphically, and Excel is a great graphing tool.

To create a simple graph that follows your weight over the time period covered in the Weekly Weight Tracker spreadsheet, click on cell A3 and drag your cursor to cell B25 to select the data in rows A and B. Then select Chart from the Insert menu. When the Chart Wizard dialog box appears, select Line for both the chart type Ⓐ and subtype Ⓑ.



Click on Finish to automatically create the chart. You can make it bigger by dragging the lower right-hand corner Ⓒ.



More Info: www.macworld.com/2001/01/reviews/office.html

Learn more about the capabilities of Microsoft Excel 2001.

LINK

TED LANDAU

Revive Your Files

Bring Overwritten, Unsaved, Deleted, or Damaged Files Back to Life

It's a cold day in January, and your car won't start. There's not even a hint of life. Fortunately, with the help of a neighbor's car and a pair of jumper cables, you get the engine rolling again. Similarly, there are tools you can use to restore Mac files you've given up on.

Your best defense against data loss can be summarized in two words: *save* and *backup*. If you hit the Save button frequently, you'll probably never lose more than a bit of unsaved data. And if you regularly make backups of your documents to media other than your hard drive, you won't have to worry about losing your backups.

Frequent saves and regular backups will provide a good deal of security, but you can still lose data. For instance, your Mac may crash before you have a chance to save a file, or you may write over a version of a document and then want the original version back. Before you throw up your hands and start over, remember that there's hope for recovering what you've lost.

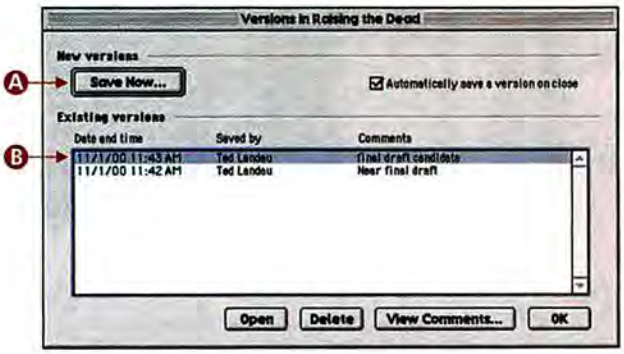
Which recovery method you use depends on how you lost your data. Here's a guide to determining the right method for your specific circumstances. **m**

Contributing Editor TED LANDAU heads up the MacFixIt Web site (www.macfixit.com) and is the author of *Sad Macs, Bombs, & Other Disasters*, fourth edition (Peachpit Press, 2000).

1

Overwritten Suppose you open a previously saved document, make changes to it, and resave it. Too late, you realize that you need that earlier version. You can get it back if you've planned ahead.

If you work in Microsoft Word, the best defense is to use its Versions feature to save each version of a file that you think you may need later. Select Versions from the File menu and click on the Save Now button Ⓐ. *When you reopen the document and select the Versions command, you'll get a list of all the versions you stored. Select the one you want and click on the Open button, and you're back in business* Ⓑ.

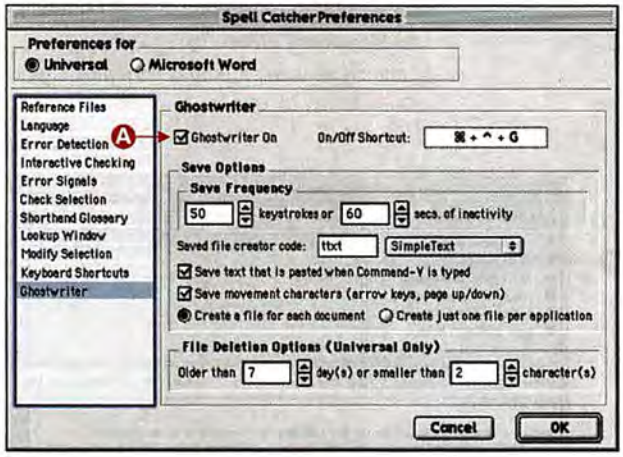


For other applications, utilities such as Aladdin Systems' FlashBack ($30; www.aladdinsys.com/flashback) and Power On Software's Rewind ($100; www.poweronsoftware.com) can serve the same purpose.

2

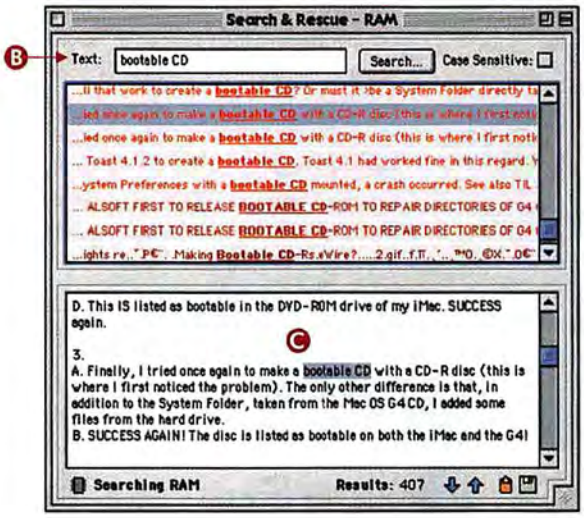
Unsaved When you lose an unsaved file, you may think it's lost forever. There's hope for at least a partial recovery, though, if what you lost was text.

Your recovery chances are greatest if you use a text-capture utility before disaster strikes. For example, the Ghostwriter feature of Casady & Greene's Spell Catcher ($49.95; www.spellcatcher.com) records your keystrokes as you type. To enable it, open the Spell Catcher Preferences dialog box, choose the Ghostwriter tab, and select the Ghostwriter On option Ⓐ.



Then if you lose unsaved text, just find the files containing your unsaved data in the Ghostwriter Files folder. Go to that folder (System Folder: Application Support) and look for the folder with the current date. Inside it will be another folder with the name of the text application you were using (for example, "AppleWorks"); inside that will be one or more files containing your unsaved text. Don't expect miracles—the recovered text is unformatted, and any text you deleted while typing will be interspersed with the text you want. But for times when any recovery is better than none, Ghostwriter does the trick.

If you use Microsoft Word, you have built-in help. It saves copies of open files periodically as long as you use the Auto Recover option (to turn it on, go to Preferences and click on the Save tab). The copies that Word saves are temporary; the program deletes them when you close the file. But if Word crashes or a power failure occurs before you close, all of the Auto Recover files will appear when you relaunch Word.



If disaster strikes before you take any of these precautions, give Thomas Riley's Search & Rescue ($15; www.kagi.com/tjriley) a try. It scours your Mac's RAM, recovering any text it finds—even from unsaved files. Just enter a phrase from the missing text into Search & Rescue's Text box Ⓑ *and click on Search, and the program will list all locations in RAM where it finds that phrase along with some surrounding text* Ⓒ.

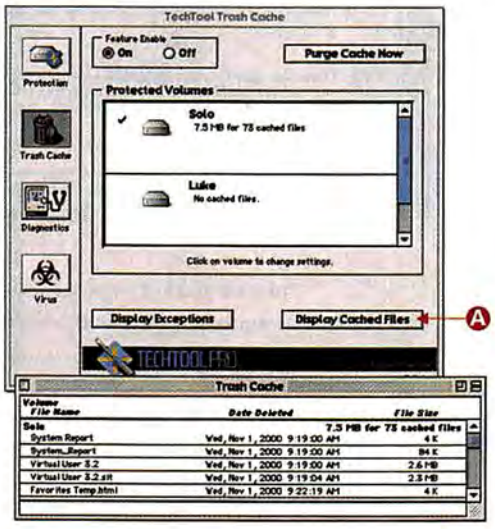
continues

3

Deleted You just selected Empty Trash to delete a file, and now you want it back. Don't despair. The file is still there, even though the Finder doesn't show it. But you have to act quickly, or the file will soon be overwritten, never to be seen again.

As before, you'll have the most success if you're prepared. In this case, install and enable either the FileSaver feature of Symantec's Norton Utilities ($102; www.symantec.com) or the Trash Cache feature of Micromat's TechTool Pro ($98; www.micromat.com). (Power On Software's Rewind will also recover deleted files. The product was not available for this article.)

To recover deleted files with Norton Utilities, select UnErase from the window that appears at launch, and then click on the Quick Search button. In the resulting window, look for the name of the file you want back, select it, and click on Recover. Your chances of getting an entire file back are best if you enabled FileSaver before you deleted the file, but UnErase may work even if you didn't.



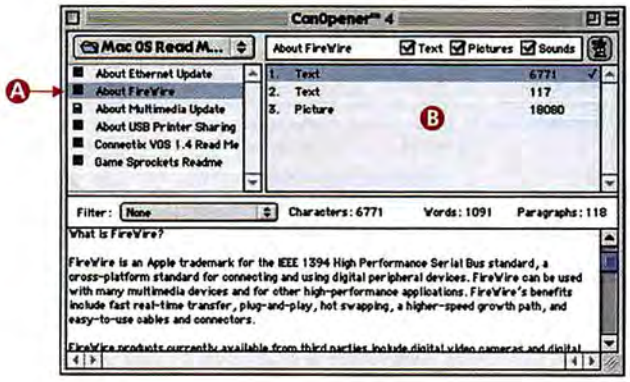
For TechTool Pro, enable Trash Cache from the TechTool Protection control panel. To recover a lost file, return to the control panel's Trash Cache window, click on the Display Cached Files button A, and drag the file you want from the list that appears.

4

Damaged A file may unexpectedly refuse to open, with your Mac complaining that the file is damaged. If the document can be accessed through more than one application, try them all. One may succeed where the others failed. Otherwise:

Try to import (or place) the contents of the damaged file into a new document. This can work with any application that has an Insert, Import, or Place command. For example, if an AppleWorks document is damaged, try the following: Open a blank word processing document. Choose Insert from the File menu. In the dialog box that appears, select the unusable document, and click on Insert.

If your problem is specific to QuarkXPress, try Markzware's MarkzTools ($190; www.markzware.com). It repairs corrupted QuarkXPress files.



As a last resort, try to salvage text or graphics from a document via a data recovery utility such as Abbott Systems' CanOpener. Launch CanOpener ($65; www.abbottsys.com) and select the damaged file in the upper left pane of the CanOpener window A. A list of the file's text and graphic resources will appear to the right B. You can view or recover any item in the list by clicking on its name and then selecting View or Save As from the Item menu.

are you digital yet?™

©2000 Canon U.S.A., Inc. "are you digital yet?", PowerShot, ELPH and Canon Know How are trademarks of Canon Inc.

Any camera can be digital. Only one can be an ELPH.

PowerShot S100
DIGITAL ELPH

- The world's smallest, lightest, 2 megapixel digital camera with zoom lens.
- High-speed USB interface and video out.
- Comprehensive software bundle, fully compatible with Mac and PC.
- Accepts Type I CompactFlash™ memory cards.
- Built-in flash.
- All-glass aspherical Canon 2x zoom lens and 4x digital tele-converter.

www.powershot.com

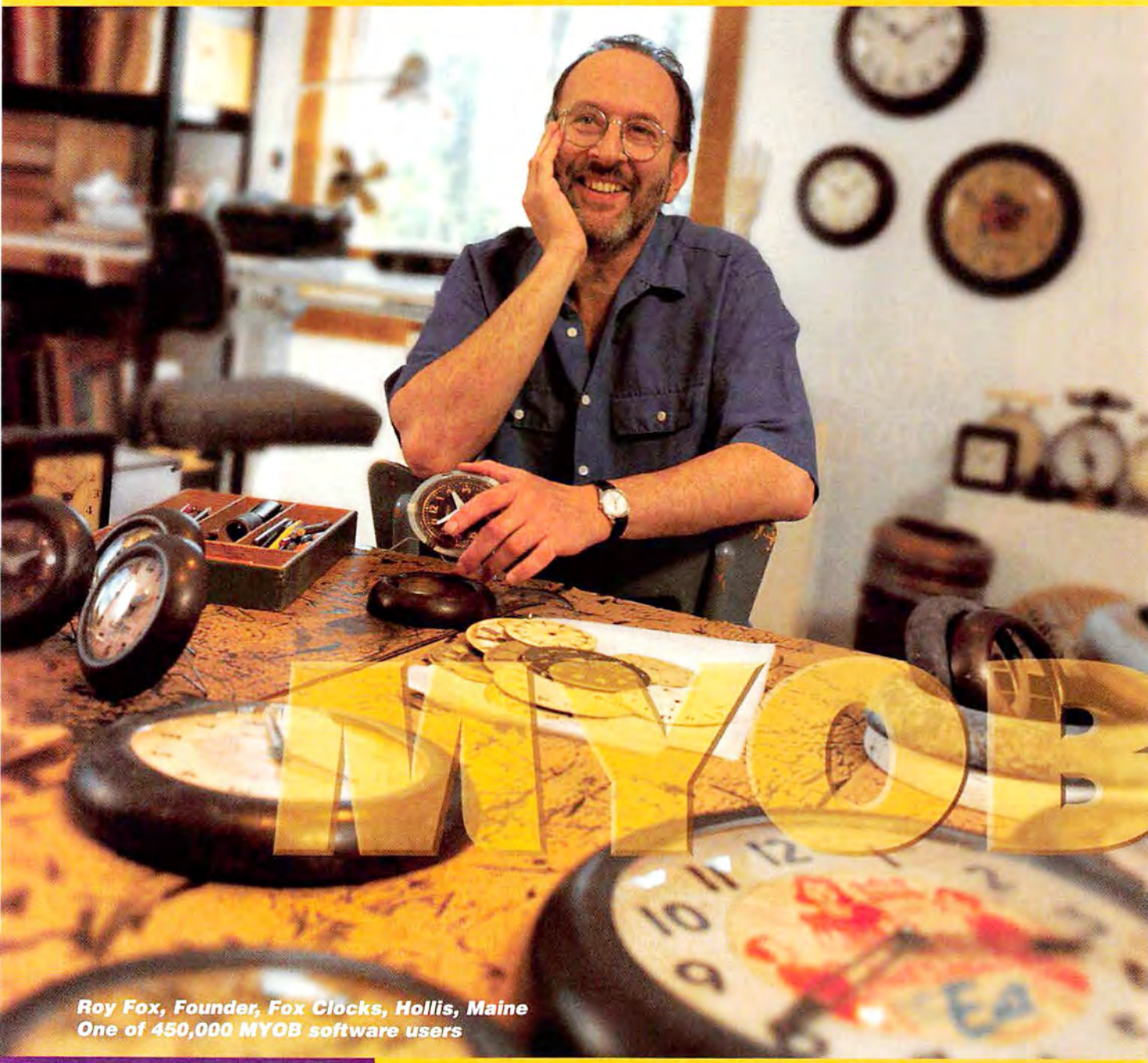
Canon KNOW HOW™

Circle 23 on card or go to www.macworld.com/get info

DESIGNED FOR THE WAY YOU WORK

I'd rather create clocks than invoices.

If I wanted to keep books all day, I'd have been an accountan



Roy Fox, Founder, Fox Clocks, Hollis, Maine
One of 450,000 MYOB software users

MYOB

Small Business. Smart Solutions.[SM]

800.322.MYOB

myob.com/us

MYOB software is the simplest, most powerful, most complete solution for managing my company on the Mac, from the day to day to the bottom line.

Antique frames. Quartz movements. That's my business. MYOB software works for me.

Circle 171 on card or go to www.macworld.com/getinfo

CHRISTOPHER BREEN

Mac 911

One thing last November's election tells us is that the simplest matters—determining which candidate to plunk down in the Oval Office for the next four years, for example—can be confounding when one or two little things go awry. While I would have been no help in the recent political kafuffle (after all, how many Floridians would appreciate my suggestion that they rebuild their desktops on a regular basis?), I can do a little something right here and now to clear up these other simple matters: broadening the capabilities of the Appearance control panel, wirelessly synchronizing data between a Palm and a portable, curing a PowerBook's sleep apnea, and setting new defaults in the Page Setup dialog box.

Alternate System Fonts

Speaking of elected officials, I was surprised to learn that the International Christian Fellowship Church of Japan has a minister of dance. This undoubtedly fleet-of-foot officer, Gustavo Tozzo-Jaime, is having trouble displaying a particular font in menus and dialog boxes. Mr. Tozzo-Jaime runs the North American version of OS 9 and a fair sprinkling of Japanese software on his Mac. His difficulty is that while items on his Mac's desktop display the Osaka font correctly, the text that appears in menus and dialog boxes is garbled. Ideally, he'd like to configure the Appearance control panel so that his entire system uses Osaka, but this font fails to appear in the Appearance control panel's pop-up menus.

There's no way to dance around this other than to say that OS 9's Appearance control panel has some unfortunate limitations. One such limitation is that it offers precious few choices in the System Font pull-down menus. Happily, there's a remedy that works not only for toe-tapping ministers, but also for other Mac users.

Anyone seeking to increase the capabilities of the Appearance control panel need only download a copy of Weedhopper Press's (www.whpress.com) $9 shareware utility, AppearanceHopper. With AppearanceHopper, you can assign any installed font—yes, even the Osaka font—as the large or small system font, the small heading font, or the Finder views font (see "From All Appearances").

IM Confused about IR

Mac 911 Forum visitor Jim Calais was interested in HotSyncing his Palm IIIc to his PowerBook via the Palm's and PowerBook's infrared ports. He reports that a Palm representative told him it couldn't be done, which is, as you'll soon learn, utter hogwash.

Of course you can HotSync the two machines wirelessly. Palm has made this procedure easier with recent Palm models by including the software you need on the CD that ships with Palm devices. Unfortunately, your IIIc didn't ship with this software. Therefore, you must:

Take a trip to Palm's FTP site (ftp://ftp.3com.com/pub/palm/downloads/macos) and download the approximately 18MB extras.bin file. Once expanded, this file turns into the Palm Extras folder. Inside this folder is the IrDA folder. Inside the IrDA folder are two additional folders: one that contains files that must be downloaded to the Palm, and another containing files that must be installed on your

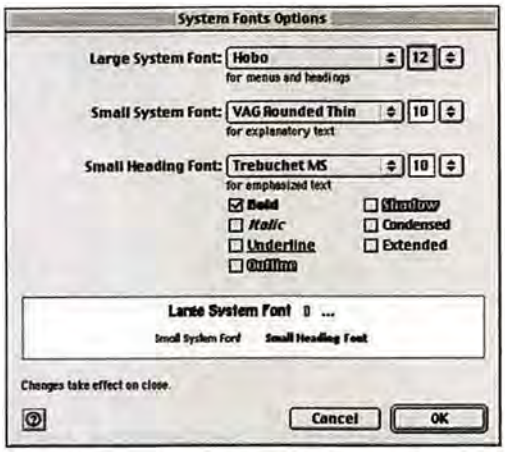
continues

Mac's hard drive. Install these files, perform a soft reset of the Palm, and restart your Mac.

Next, open the Palm's Prefs application, select Connection from the upper right menu, and choose IR To A PC/Handheld from the available configurations. If you click on Edit, you should see that the connection method is IrCOMM To PC. In the HotSync application, make sure that IR To A PC/Handheld is selected.

On the PowerBook, select Infrared (IrDA) from the Connect Via menu in the AppleTalk control panel. Close and save.

Now choose Setup from the HotSync menu. In the HotSync Software Setup window, make sure HotSync is enabled and click on the Serial Port Settings tab. In the Local Setup portion of the window, select As Fast As Possible from the Speed menu and Infrared Port from the Port menu. Cozy the infrared ports of the two devices up to each other and initiate the HotSync process on either machine. The two should sync like a couple of stones.



From All Appearances With Weedhopper Press's AppearanceHopper, you can configure your Mac to display any font in menus, dialog boxes, and windows.

Sleep Depraved PowerBook

Another Mac 911 Forum visitor, Lindsey, wondered why his or her PowerBook G3 refused to issue any alert sounds after waking from sleep—although the modem continued to screech loud and clear when called upon to do so. Fortunately I was able to lend assistance (and look like a real smarty-pants in the process) by dredging up an old Macworld Daily Tip that explains how this behavior can occur when STF Technologies' Faxstf 5.0 software is installed and switched on.

The way around this problem is to launch the Fax Browser application, select Settings from the Edit menu, click on the Fax Modem icon, and choose Never from the Answer On pop-up menu. Now put the PowerBook to sleep and, once it's dozed off, rudely awaken it by pressing any key. Alert sounds should once again pour forth from the PowerBook.

Of course, this deprives you of the ability to receive faxes, so it's best to take these steps only when you don't intend to receive faxes with your PowerBook.

Page Setup Predicament

Laura Yalem, who hails from the Show-Me State, would like to be shown how to change and save default settings such as paper size, orientation, and scaling in the Page Setup dialog box. After all, if you change the paper size on one print run, invariably the paper size switches back to the default on the next.

Laura, it's pretty easy to change this—if you know the trick. And that trick is to invoke the Page Setup command under the File menu from within your current application, make the changes you want, and then hold down the option key while clicking on the OK button. When you do so, another dialog box appears, asking "Save the current Page Setup settings as the default settings?" at which point you acknowledge your "You betcha!" by punching the Save button. When you next select Page Setup, the settings you last saved will be waiting for you. **m**

Contributing Editor CHRISTOPHER BREEN is *Macworld*'s tip czar—a self-appointed, rather than elected, position.

Tip of the Month

If you experience computer slowdowns and generally odd behavior with **Microsoft Entourage**, you may need to rebuild the program's database. To do so, just hold down the option key when you launch Entourage. You'll see a dialog box that offers two options: Typical Rebuild, for simple repairs and compacting of the database, and Advanced Rebuild, for more-extensive problems. First try the Typical Rebuild option, since Microsoft warns that you could lose data by choosing Advanced Rebuild. But if Typical doesn't work, make sure you back up your files, and then give the Advanced Rebuild option a try.

Lewis Whitney
Rancho Mirage, California

Share tips and discuss Mac problems with other Mac users in the Mac 911 forum (www.macworld.com/subject/mac911). Also send tips by e-mail to mac911@macworld.com. We pay $50 for tips selected for publication in *Macworld*. All published submissions become the sole property of *Macworld*.

Shareware and freeware mentioned in *Mac 911* are available from ZDNet's Macdownload.com (www.macdownload.com).

"If someone tells you it takes only 5 minutes to install up to 240GB on the network, DON'T BELIEVE IT."

"I did it in 43.55 seconds."

Don Knisley, Network Engineer, US Air Force

Snap Servers are engineered for one purpose: file sharing. That's why Don could have a Snap Server 2000 up and running on a LAN in 43 seconds! "If I had the choice of installing an NT server for network storage or a Snap Server, I'd pick the Snap Server," says Don. "It's fast, easy and the browser configuration tool is very intuitive." To read Don's story and virtually install a Snap Server yourself, visit **www.snapappliances.com/install** today.

For a fraction of the cost of an NT file server, a Snap Server easily adds up to 240GB to your clients' LAN – ideal for desktop publishing, multimedia production or as a graphics/image library. According to a recent PC Data report, 4 out of 5 workgroup network attached storage (NAS) servers sold are Snap Servers and they are also the most awarded NAS product on the market today. So go with the industry standard. Snap Server.

Version 3.0 Upgrade Delivers Even Greater Performance, Control and Security

Ease of Use
- Auto-sensing 10Base-T/100Base-TX Ethernet
- Automatic recognition of network types/clients
- Supports DHCP, BOOTP and RARP
- Configuration via Web browser

Features
- Embedded OS (unlimited user license)
- Pentium-class processor
- Ultra ATA hard drives
- RAID 5, 1 or 0
- Easily supports 100 or more clients

v3.0 Disk space quota set by administrator

v3.0 Full functioning FTP server

v3.0 SNMP support

Compatibility
- Simultaneous support for Windows 2000, NT, NetWare, UNIX, Linux and Macintosh networks and clients across TCP/IP, IPX, NetBEUI and AppleTalk networks

v3.0 Complete NFS 3.0 protocol support, symbolic linking of files and directories, Network Lock Manager and rpcinfo command support

Network Backup
- Compatible with Windows and NetWare backup software, including Veritas Backup Exec, Computer Associates ARCserveIT and Microsoft backup software for Windows 95/98/NT/2000

v3.0 SMART predictive disk failure analysis

Network Security

v3.0 Set access permissions at file and directory level
- Integrates with Microsoft Domain Controllers or local user list

Guarantee
- Unconditional 30-day money-back guarantee, plus 3-year parts and labor

Price (MSRP)

Model 4100 (240GB)	$4,499
Model 4100 (160GB)	$2,999
Model 2000 (80GB)	$1,599
Model 1000 (40GB)	$799
Model 1000 (20GB)	$499

Snap! appliances

PC Magazine Editors' Choice — Feb. 2000

Network World Blue Ribbon — Apr. 2000

Macworld 4½ — Apr. 2000

A-List PCComputing — May 2000

www.snapappliances.com
1.888.343.SNAP

© 2000 Snap Appliances, Inc. All rights reserved worldwide. All other product names are trademarks of the respective companies. Leadership sales claim based on PC Data report, June 2000 for hard disk workgroup NAS products under $5,000.

MYOB AccountEdge 1.0

Mac Accounting Package Streamlines Interface, Adds Contact-Management Features

MYOB ACCOUNTEDGE 1.0

Rating: ♦♦♦♦½

Pros: Best, most complete set of accounting tools on the Mac; improved interface; built-in contact-management capabilities; greatly improved e-mail tools.

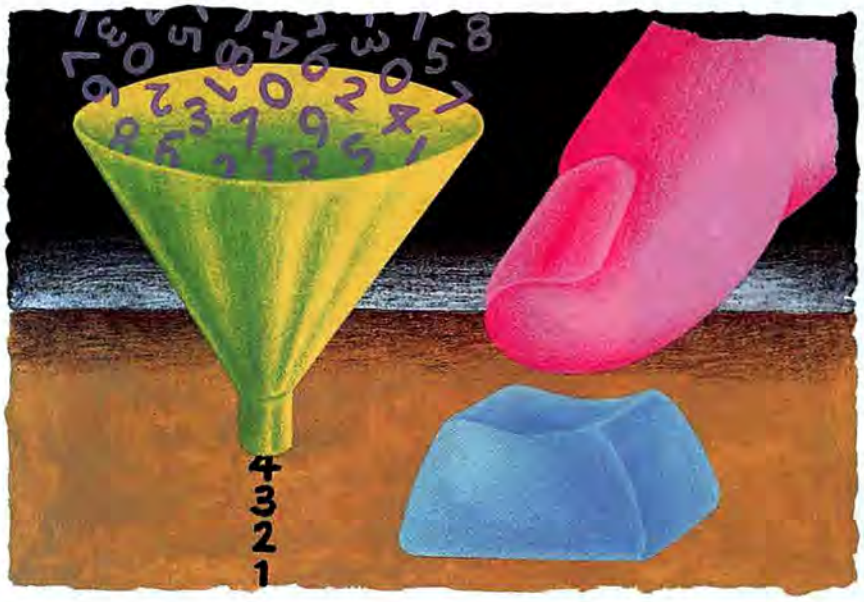
Cons: Bare-bones HTML-based manual; password-based security is limiting.

Company's estimated price: $249; each additional license, $99

Company: MYOB, *800/322-6962*, **www.myob.com**

MACWORLD'S BUYING ADVICE:

MYOB AccountEdge 1.0 is a powerful accounting package with enough high-end features to satisfy the pickiest accountants, yet it remains accessible to the average user. Although the documentation could be better, MYOB has improved the program to the point where even businesspeople with no background in accounting should master it with relative ease.



GENE GREIF

MYOB Accounting has long been the most well-rounded small-business accounting package available for the Mac. With a wide range of high-end features, the program has always pleased accountants far more than QuickBooks Pro has. But while number crunchers have found MYOB a pleasure to use, the Mac version has always failed in two areas: it sometimes intimidated users who lacked an accounting background, and it couldn't match the features of the Windows version.

MYOB AccountEdge 1.0 is poised to change all that. Newly redesigned to be easier to use and to take advantage of the best features of Mac OS X, AccountEdge not only matches but surpasses the Windows version of MYOB, making it the best accounting package on any platform.

Refreshing Look

Right out of the box, AccountEdge is profoundly different from MYOB Accounting. Even running under Mac OS 9, the program has a decidedly Aqua air: the buttons are larger and photo-realistic, and the whole program looks softer and less intimidating. And while AccountEdge still has a flowchart-style interface, text descriptions make the buttons easier to understand, and the flowchart progression is more in line with typical accounting practices. For example, earlier versions of MYOB allowed you only to create sales and print invoices. But most companies create quotes first and then turn quotes into orders and invoices. AccountEdge now follows the same process.

AccountEdge has also improved when it comes to helping you collect

money from clients and make deposits. Earlier versions assumed that you were depositing money in the bank the moment you received it. But most people typically deposit groups of checks, not individual checks, so the way MYOB recorded deposits bore no resemblance to what they actually looked like on a bank statement. AccountEdge now allows you to receive payments and group them as undeposited funds until you deposit them, reflecting the way you actually do business.

If you need to track inventory or bill your customers on an hourly basis, AccountEdge is up to the task. The inventory module supports multiple pricing levels, so you can give your customers price breaks when they purchase products in large quantities. Because AccountEdge supports foreign currencies, you can include them in your standard pricing schemes. And if you're accustomed to combining many inventory items into a single item—say, a Summer Sand Package comprising a beach ball, pail, and shovel—AccountEdge can create your package using the Auto Build function while managing individual inventory items behind the scenes.

Like the inventory module, AccountEdge's time-billing module lets you create a multitude of billable items for varying dollar amounts. Unfortunately, the program doesn't currently integrate with any Palm-based time-tracking programs, an option that would make managing time-billing as simple as syncing.

Refined Features

AccountEdge also improves on earlier versions' rudimentary contact-management capabilities. You can store up to five separate contacts for a single company, with complete, individualized details for each contact. You can log conversations with clients, compose e-mail or letters, and have AccountEdge remind you when it's time to contact your clients again. You can also review up to seven years of sales information for any client stored in your database.

MYOB has made vast improvements in AccountEdge's e-mail capabilities. The program can convert anything from a quote to a customer statement into a PDF file and attach it to a message in your favorite e-mail program. You create the body of your message in AccountEdge, pulling the e-mail address of your primary contact from that customer's contact card. Unfortunately, there's no way—short of typing it manually—to select the address of anyone other than your primary contact within the e-mail module, even if the address is stored in the database. And when you want to add a signature, you must either type it in or open the message in your e-mail program and add it.

Another drawback is that MYOB has converted the documentation from paper to HTML, with disastrous results. While the paper manual tended to be obtuse, you could still find the information you needed; the HTML-based version on the CD lacks detailed information and includes no diagrams or screen shots. You should use MYOB's continuously updated, searchable, Web-based manual.

Ready for Real Work

Like the last several versions of MYOB, AccountEdge is fully networkable and shares the same file format as its Windows-based sibling. If you're in an all-Mac environment, you can use AppleTalk, but a better choice is TCP/IP-based networking. If you plan to run AccountEdge in a multiuser environment, be aware that the program has a minor shortcoming when it comes to security. Although you can limit user access to specific portions of the program, access is granted on a password basis, not by individual user. This means that if you want to break access into several groups, such as sales, shipping, and accounting, everyone in each group will have the same password. You can work around the problem, but managing access this way gets cumbersome with large workgroups.—JEFFERY BATTERSBY

Aqua Velvet MYOB AccountEdge's streamlined interface offers a clean look, intelligent navigation tools, and easy access to powerful accounting features.

Multifunction Printers

Versatile Printers Wear Many Hats, Show Improved Quality and Speed

MACWORLD'S BUYING ADVICE:

These are all good MFPs, and they performed as expected relative to their prices. The Hewlett-Packard OfficeJet G85 offers the best image quality, speed, and features. Of the two less-expensive units, you'll probably want to go with the Brother MFC-7400C—it provides better print speed and quality than the Canon MultiPass C555 does, and though some of its features don't work on the Mac, it has a few useful connection options for working with digital images.

The Hewlett-Packard OfficeJet G85

GIBSON

Macworld LAB TEST

When desk space is at a premium, a multifunction printer (MFP) may be just the ticket. We looked at three color ink-jet MFPs that can scan, copy, fax, and print—the Brother MFC-7400C, the Canon MultiPass C555, and the Hewlett-Packard OfficeJet G85. Though you can still get better results—and a lower overall price—from separate dedicated devices, the output from these units was much improved over that of the MFPs released a year ago.

Setting Up Shop

If you've had any experience setting up a fax machine or an ink-jet printer, you'll have no trouble with any of these units. All three use plain paper for faxes and can accommodate glossy paper for printouts. Setup entails little more than installing the drivers, plugging the printers into your computer, and loading them with paper and ink. In fact, for copying and faxing, none of these models needs to be connected to your Mac—each has touch-button features for these purposes.

Both the MFC-7400C and MultiPass C555 look like large fax machines. You feed originals into the top, and faxes, copies, or printed

pages drop into a tray on the bottom. A flatbed, the OfficeJet G85 is by far the largest of the three. If the MultiPass C555 and MFC-7400C could be mistaken for fax machines, the OfficeJet could be mistaken for a copier.

Each comes with cartridges that deliver roughly 800 to 900 pages (where the ink covers about 5 percent of the page), and the cost per print for each printer falls between 1 and 5 cents per page. When printing black only, the MultiPass is the least expensive, at about 1 cent per page. Printing color, the MFC-7400C is also quite inexpensive, at about 3 cents per page.

These printers connect via USB cables, but for the OfficeJet, Hewlett-Packard also sells a $250 JetDirect 300X Print Server, which provides Ethernet connectivity for printing and scanning over networks.

Here's Looking at You, Kid

All three models offer decent print output, but if you want exceptional, photographic output, you'll be better served by a higher-quality, dedicated printer. In our tests, when printing both Microsoft Excel spreadsheets and Word documents, the OfficeJet fared the best in terms of speed and image quality. Similarly, when we scanned a color photo and printed it (that is, when we made a color copy) the OfficeJet's gradients were by far the smoothest, its dots were the least visible, and colors were bright, accurate, and well saturated. The MFC-7400C provided serviceable color photo output. But with 720 by 360 dpi, the MultiPass has the lowest print resolution, which was apparent in its clearly visible dots, rough gradients, jagged text, and very poor rendering of details.

Multitalented Machines

Macworld LAB TEST

Best results in bold. ▬ Shorter is better. ••• Excellent •• Acceptable • Poor

	MICROSOFT WORD 98	COPY COLOR PHOTO	MICROSOFT EXCEL 98	COLOR PHOTO PRINT
Brother MFC-7400C	5:06	8:33	••	••
Canon MultiPass C555	7:32	8:32	••	•
Hewlett-Packard OfficeJet G85	**3:55**	**5:06**	•••	•••
	◀ Better	◀ Better		

We printed a 20-page black-and-white Word document in normal mode and copied a full-page color photo in best-quality mode on each MFP. Scores are in minutes:seconds. We compared color copies and Excel documents produced by each MFP with text and color graphs, and we rated them on sharpness, detail, and color reproduction. The test system was an iMac SE 500MHz with 128MB of RAM and Mac OS 9.0.4 installed.—**Macworld Lab testing by Gil Loyola**

Do You Copy?

We were pleased to see that even though they're multifunctional, these units don't scrimp on features. As stand-alone color copiers, all three pack a range of sophisticated options. For example, the MFC-7400C, offers 25- to 400-percent resizing in 1-percent increments, and the OfficeJet has special copying modes such as mirror-image and margin-shifting. But in the end, the OfficeJet's superior print quality makes it the best copier.

All three printers are also well endowed in the faxing and scanning departments, offering color faxing, fax broadcasting, page buffering (for those times when you're out of ink but need to receive faxes), and automatic OCR. When combined with the JetDirect server, the OfficeJet can send scans to any machine on the network. The MultiPass C555 is able to automatically send scans and faxes to your e-mail or OCR software. Both the MultiPass and the OfficeJet have one-touch scan capability, but the MFC-7400C's one-touch scan feature works only on PCs. The MFC-7400C offers the fewest advanced fax features but still includes all the standard ones, such as fax detection.

The MFC-7400C comes with a telephone handset, which is a very useful addition. It also has a video-in port for printing images from your camcorder or from the video-out port of a digital camera. Unfortunately, you can't bring video into your Mac using this port. If you do a lot of printing from a digital camera, you'll appreciate that the MFC-7400C also comes with a flash-card drive.—BEN LONG

Multifunction Printers Compared

COMPANY	PRODUCT	MOUSE RATING	LIST PRICE	CONTACT	ESTIMATED COST PER PRINT	COMMENTS
Brother	MFC-7400C	🖱🖱🖱½	$400	800/284-4357, www.brother.com	3 cents, color; 2 cents, black only	Good feature set and design; average speed and quality.
Canon	MultiPass C555	🖱🖱🖱	$199	800/652-2666, www.canon.com	4 cents, color; 1 cent, black only	Lower-quality output; small and inexpensive.
Hewlett-Packard	OfficeJet G85	🖱🖱🖱🖱	$799	800/527-3753, www.hp.com	5 cents, color; 3 cents, black only	Excellent features and design; pricey.

Graphics Cards

Latest Crop of AGP and PCI Video Cards Is a Mixed Bag

MACWORLD'S BUYING ADVICE:

Perky performance (2-D and 3-D) makes ATI's Radeon Mac Edition our top pick in 3-D graphics cards. The 3dfx cards are a solid choice for those with PCI Macs and a desire for reasonable frame rates at higher resolutions. Gamers looking for a set of 3-D gaming glasses that really work should test-drive the Formac ProFormance 3 Plus. And if you need dual-monitor support from a single card, the ProMax DH-Max is worth a look.

Clockwise from left: the 3dfx Voodoo5 5500 PCI, ATI Technologies Radeon Mac Edition, and 3dfx Voodoo4 4500 PCI

ARNOLD TIOSEJO

Macworld LAB TEST

Not terribly long ago, Mac users could purchase any add-on graphics card they liked—as long as it was made by ATI Technologies. All that is changing: while you still lack the wealth of graphics card options your PC-packing contemporaries enjoy, you now have viable alternatives to the graphics card that shipped with your Mac.

To determine just how viable those alternatives are, Macworld Lab tested six offerings: 3dfx's Voodoo4 4500 PCI and Voodoo5 5500 PCI, Appian Graphics' Jeronimo 2000, ATI's Radeon Mac Edition, Formac's ProFormance 3 Plus, and ProMax Systems' DH-Max. Although none of the cards delivered the kind of performance you see from their counterparts running on a fast PC, our tests indicate that selecting the proper graphics card—which typically costs around $200—can significantly improve your Mac's performance.

Slots and Specs

The current crop of desktop G4s includes AGP slots, but graphics card manufacturers have hardly abandoned the venerable PCI slot. After all, the Mac users most likely to benefit from fast 3-D graphics cards are those with older PCI Macs. Of the cards we tested, only the Radeon and the DH-Max are AGP compatible; the rest are PCI cards. And of the AGP cards, only the DH-Max fits inside a Power Mac G4 Cube.

The cards also differ in their dual-monitor capabilities, output connectors, support for 3-D hardware-acceleration standards, and DVD-player support. Both the

Jeronimo and the DH-Max sport two video ports, allowing you to run two monitors from a single card; the other cards support one monitor. The DH-Max also includes a cable with Composite and S-Video outputs for sending your Mac's video to a television or VCR, although only one of the card's ports supports those outputs, via an included add-on cable. Likewise, the Radeon supports Composite and S-Video output. The ATI and 3dfx cards include both VGA and DVI connectors, but none of the cards include the Apple Desktop Connector found on all current Apple monitors. (None of the cards support video capture, so they lack video-input ports.)

The ProFormance also has a port for connecting the bundled ProCyber 3D Glasses—the only glasses we've seen that produce convincing 3-D (without producing a crashing headache) in games such as Pangea's Bugdom and MacSoft's Unreal Tournament.

Regrettably, neither the Jeronimo nor the DH-Max card offers 3-D hardware acceleration, making them inappropriate choices for gamers. However, the ATI and Formac cards support the OpenGL and Rave 3-D standards, while the 3dfx cards support those and 3dfx's own Glide standard. Because Apple refuses to release the information necessary for third parties to support DVD playback on a Mac, only ATI—an Apple partner—offers DVD-player compatibility.

Better Performance Is in the Cards

Macworld LAB TEST

Reference system in italics. **Best results in bold.**
Shorter is better. Longer is better.

	ACROBAT READER 4	MICROSOFT WORD 98	QUAKE III	
	Scroll	Scroll	Normal	High Quality
3dfx Voodoo4 4500 PCI	41	24	40	38
3dfx Voodoo5 5500 PCI	40	24	41	40
Appian Graphics Jeronimo 2000	52	79	N/A*	N/A*
ATI Technologies Radeon Mac Edition	**37**	22	**50**	**49**
Formac ProFormance 3 Plus	38	**14**	41	33
ProMax Systems DH-Max	42	41	N/A*	N/A*
ATI Rage 128 AGP (built-in)	*39*	*19*	*44*	*32*
	◀ Better	◀ Better	Better ▶	Better ▶

Scroll times are in seconds. Quake III scores are in frames per second. We set displays to 1,024 by 768 pixels and 24-bit color. The test system was a Power Mac G4/500 running Mac OS 9.0.4, with 256MB of RAM and virtual memory disabled.—Macworld Lab testing by Ulyssis Bravo

* N/A = not applicable. These cards do not support OpenGL.

By the Numbers

To test 2-D performance, we timed how quickly we could scroll through Adobe Acrobat and Microsoft Word 98 documents on our 500MHz Power Mac G4. In both tests, the Radeon and the ProFormance were the best of the bunch; the ProFormance performed particularly well in the Word 98 test. The DH-Max, due to its unoptimized drivers, performed poorly—though not as poorly as the underpowered, expensive Jeronimo. The 3dfx cards turned in less-impressive results in our 2-D tests than the ATI Radeon and our baseline ATI Rage 128 AGP card, but the difference was barely noticeable in actual use.

The results of our Quake III tests indicate that gamers with AGP-compatible Macs may want to consider ATI rather than 3dfx. In our normal Quake III test, the Radeon cranked out nine more frames per second than the top-of-the-line Voodoo5 5500 PCI. In our high-quality Quake III test, the Radeon maintained its edge over the Voodoo cards. The ProFormance turned in frame rates similar to those of the Voodoo cards in our normal Quake III test, but performance fell off sharply in the high-quality Quake III test.—CHRISTOPHER BREEN

Graphics Cards Compared

COMPANY	PRODUCT	MOUSE RATING	LIST PRICE	CONTACT	PROS	CONS
3dfx	Voodoo4 4500 PCI	♦♦♦♦	$170	888/367-3339, www.3dfx.com	Great for Glide games; good choice for those with PCI Macs; affordable.	No DVD-player support.
	Voodoo5 5500 PCI	♦♦♦♦	$230	888/367-3339, www.3dfx.com	Great for Glide games; good choice for those with PCI Macs.	No DVD-player support.
Appian Graphics	Jeronimo 2000	♦♦	$799	800/727-7426, www.appian.com	Dual-screen support.	Slow; expensive. No DVD-player support.
ATI Technologies	Radeon Mac Edition	♦♦♦♦	$280	905/882-2600, www.atitech.com	Excellent performance; video out; DVD player support.	Not compatible with Power Mac G4 Cube.
Formac	ProFormance 3 Plus	♦♦♦½	$229	800/216-2763, www.formac.com	Fast 2-D performance; includes 3-D glasses.	Poor frame rates at higher 3-D resolutions. No DVD-player support.
ProMax Systems	DH-Max	♦♦♦	$299	800/977-6629, www.promax.com	Dual-screen support.	No 3-D support. No DVD-player support.

FireWire 6-Port Hub

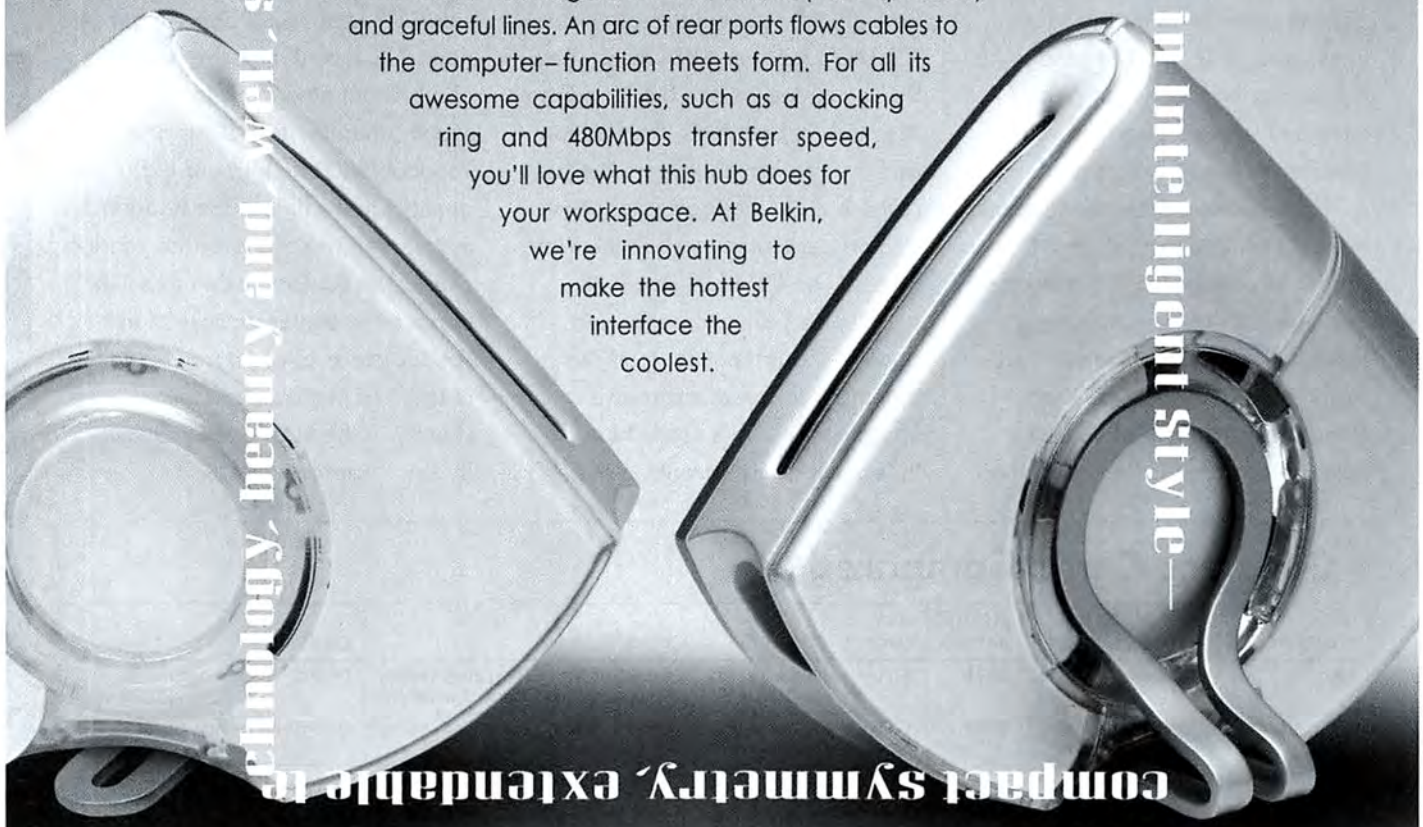
From BELKIN

Six

The Next Wave in Intelligent Style—

technology, beauty and well, speed.

Intrinsic cable management meets compact symmetry and graceful lines. An arc of rear ports flows cables to the computer–function meets form. For all its awesome capabilities, such as a docking ring and 480Mbps transfer speed, you'll love what this hub does for your workspace. At Belkin, we're innovating to make the hottest interface the coolest.



compact symmetry, extendable re

BELKIN

©2001 Belkin Components. All rights reserved. All trade names are registered trademarks of respective manufacturers listed.
FireWire is a registered trademark of Apple Computer, Inc. registered in the United States and other countries, used under license. 20AD364-MW-Mrch

Norton Utilities 6.0

Utility Adds a Handful of New Features, OS X–Beta Support

With the release of Mac OS X looming, it's heartening to witness the issuance of such mainstay utilities as Symantec's Norton Utilities for Macintosh (NUM) in OS X beta–compatible form. You might wish, however, that Symantec had included features likely to tempt those who have no immediate plans to run OS X. Unfortunately, NUM 6.0 offers very little beyond the troubleshooting suite's standards—DiskDoctor, a diagnostic and repair utility; UnErase and Volume Recover, for recovering deleted files; and Speed Disk, a disk-optimization application.

New and Improved?

The value of the few new features is difficult to discern. Volume Recover now lets you rebuild a disk's directory—which, according to Symantec, increases the chances of recovering your data—yet we had no more luck recovering data from a corrupt Zip disk than with the previous iteration. And while the latest version of UnErase did manage to recover about 33 percent more files from our Zip disk than did UnErase 5.0.3, few of the recovered files contained usable data.

The updated Speed Disk is more flexible, allowing you to select from a few optimization profiles. For example, the Multimedia setting quickly maximizes adjacent free space without optimizing or defragmenting other files on the drive; you can also defragment only recently used files. These settings do speed up the optimization process, but once the volume is optimized, you probably won't notice a performance gain from the drive.

On a positive note, NUM now scans, repairs, and optimizes OS X–beta volumes when booted under OS 9. In our tests, NUM was able to correct thousands of creation and modification dates on an OS X volume, as well as optimize the volume.

Old Standby

While version 6.0's new features may not compel many current NUM 5.X users to upgrade, NUM remains a worthwhile utility. Alsoft's DiskWarrior (www.alsoft.com) continues to handle low-level corruption more capably, but NUM has its uses. With FileSaver enabled, the program improves your chances of recovering lost files; Speed Disk is an able disk-optimization program; and DiskDoctor can put many ailing volumes and files back on their feet.—CHRISTOPHER BREEN

What's Up, Doc? Norton Utilities 6.0's DiskDoctor scans and repairs Mac OS X–beta volumes.

NORTON UTILITIES 6.0

Rating: ♦♦♦½

Pros: Compatible with OS X beta; does a decent job of repairing, recovering, and optimizing.

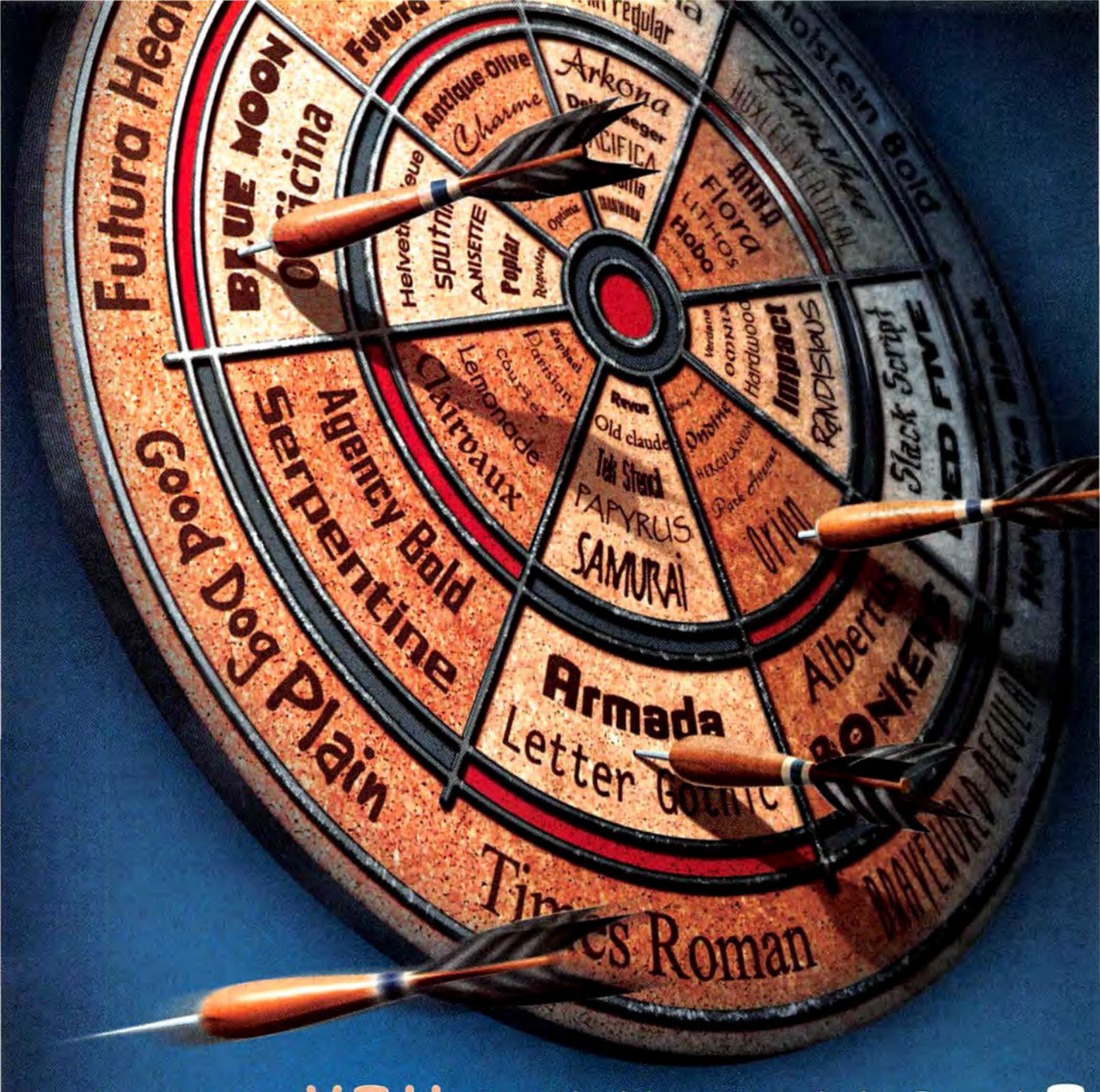
Cons: New features are uninspired.

List price: $102

Company: Symantec, *800/441-7234*, **www.symantec.com**

MACWORLD'S BUYING ADVICE:

If you're new to Norton Utilities for Macintosh, or you're running the Mac OS X beta and seek the kind of protection NUM can provide, version 6.0 is worth a look. If you already use NUM 5.0.3 and have no desire to run OS X, the $50 upgrade fee might be a bit steep, considering the short list of new features.



how do YOU find the right font?

Working with fonts can be hit or miss. Whether you have ten fonts or ten thousand, it's tough to find the one you need. Suitcase 9 takes the guesswork out of choosing fonts. It's the fastest, easiest way to preview fonts, put them into convenient sets, and activate them with one click. With Suitcase 9 Network Edition, members of your workgroup can use the same set of fonts — whether they're across the room or around the world. Improve your aim. **Get Suitcase 9.**

Get Extensis Suitcase 9 online at:

MW www.extensis.com/mw

Extensis™ Products Group

Copyright 2000 Extensis Products Group, Inc. All rights reserved. Extensis, the Extensis logo and Suitcase are trademarks of Extensis Products Group, Inc. All other trademarks are the property of their respective owners. Extensis Products Group, 1.800.803.6921, 503.274.2020, Fax: 503.274.0530. Extensis Europe, Unit 3, Bouverie Court, The Lakes, Northampton NN4 7YD, United Kingdom, tel: +44 (0)1604 636 300, fax: +44 (0)1604 636 366, info@extensis.co.uk

Netscape 6.0

Latest Version of Browser Frustrates Users, Offers Few Useful Features

Sequels are often scrutinized to see if they live up to the brilliance of the original, and software is no exception—particularly if it's a high-profile Web browser. Given Netscape's early lead in the browser wars, the latest version should be much better than it is. Version 6.0 signals the beginning of Netscape's new role: a way to load and launch software applications. However, most Web users aren't expecting their browser to be a surrogate operating system; they just want something they can surf the Web with, and on that score Netscape 6.0 falls down on the job.

Overextending the Browser's Role

Netscape 6.0 is the first version to be based on Gecko, a rendering engine that offers smooth, if slow, page rendering and rigorous standards compliance. This version also mimics AOL's technique of squeezing several applications into one window. That's fine for people who want their e-mail, instant-messaging client, WYSIWYG editor, and browser in one package, but users who prefer to keep their applications streamlined and specific will find Netscape's entangled suite of components frustrating.

The browser window is an ersatz AOL environment: click on an icon, and an application pops up; click on MySidebar, and you can do everything from read headlines to check stocks. But MySidebar is plagued by performance quirks—for example, even if you select an option that hides the sidebar, it occasionally slides into view. Worse, keyboard shortcuts are implemented inconsistently, and imported information, such as bookmarks and e-mail, is poorly organized.

A Matter of Preference

A bigger shortcoming is that users control little of their overall experience in Netscape 6.0. Although the browser lets you choose a general appearance, it doesn't let you alter the window's appearance. Seeing so much space eaten up by unalterable interface features can be vexing.

Also, Netscape and its assorted extras take up 28MB of hard disk space, and the program takes longer to start up than its predecessors and the current version of Microsoft Internet Explorer.—LISA SCHMEISER

Lost in the Crowd All of Netscape 6.0's extra features may diminish the one thing users want to see in a browser—the Web page they've loaded.

NETSCAPE 6.0

Rating: ❤❤

Pros: Easy access to component applications; lets you compose e-mail, chat, check a calendar, and create Web pages.

Cons: Slow; interface discrepancies; inconsistent menu behavior and keyboard shortcuts; difficult to import information.

List price: free

Company: America Online, *650/254-1900*, **www.netscape.com**

MACWORLD'S BUYING ADVICE:

Skip this sequel. It's bloated and frustrating to use, and it lacks the well-thought-out user preferences and application shortcuts of Microsoft Internet Explorer. Future versions of Netscape might meet Web surfers' needs; this one certainly doesn't.

SPSS 10

Powerful Research Tool Gains Muscle, Flexibility, a Higher Price

SPSS 10

Rating: ★★★★½

Pros: Excellent help facilities and tutorials; advanced statistics; extensive statistical and charting options.

Cons: Expensive; lacks some features of Windows version.

List price: $949; additional modules, $499

Company: SPSS, *800/543-2185*, **www.spss.com**

MACWORLD'S BUYING ADVICE:

Having this much number-crunching power on a desktop computer is mind-boggling. The interactive graphics, support for OLAP cubes and pivot tables, and new Production Facility add considerably to SPSS 10's power and flexibility. And with new statistics added to the base version, you may not even need the additional modules.

Want to do some serious computing? Formerly a mainframe application found primarily in university and corporate computing centers, SPSS has succeeded in making the transition from a command-language application to an interactive, dialog-box– and menu-driven package for desktop computers. This powerful, option-rich program lets statisticians, market researchers, and scientists perform sophisticated statistical analyses on personal and corporate data sets. Version 10 improves on earlier versions, with new statistics options, customizable tool bars, interactive graphs and pivot tables, more-flexible output, and better handling of large data sets, although it comes at a higher price.

New Features Abound

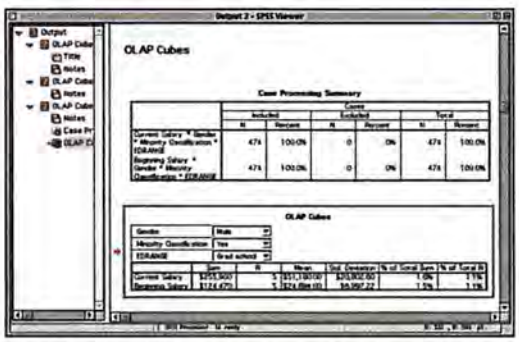
The revamped Data Editor lets you enter and edit data and define variables in a single window. To generate statistics and charts, you choose menu commands and set dialog-box options. Although you're still restricted to eight characters for variable names, you can now display descriptive labels.

All output is conveniently routed to a single, scrolling window. You can selectively show results and rearrange them via drag and drop. Version 10 lets you direct text output to the new Draft Viewer window, and you can export results to HTML. If you need to repeat an analysis, you can save the command syntax and run it from the new SPSS Production Facility. And you can create OLAP (online analytical processing) data cubes and slice them using any combination of values from your grouping variables.

Requirements and Limitations

The Mac version, which requires Mac OS 9 and at least a 233MHz G3, lags behind the Windows version in some respects. It won't run as a client under the SPSS Windows NT server (a Mac server and an OS X version are being developed), OLE support is limited, and you can't run multiple simultaneous sessions. And although it ran superbly on my G4, SPSS wouldn't launch on an older Mac upgraded with a G3 card.

SPSS 10 is a dream program for statisticians, but it does require a statistics background. It won't prevent novices from performing inappropriate analyses, confusing dependent and independent variables, or misinterpreting the results.—STEVE SCHWARTZ



OLAP Cubes When generating an OLAP-cube report, you can choose any combination of grouping-variable values to display exactly the information you want.

If it had wings, it would be

a Stealth Fighter.

REMOVABLE STORAGE REDEFINED. The Fujitsu 1.3 GB DynaMO® Drive. Magneto-Optical cartridges are fully rewritable, with 30+ year archival life and unparalleled durability. Comes in FireWire,® USB, SCSI and IDE models. Step up to tomorrow's removable storage today at **www.fcpa.com** or contact us at 1-800-831-8094, ext. 304

FUJITSU

THE POSSIBILITIES ARE INFINITE

©2000 Fujitsu Computer Products of America, Inc. All rights reserved. All statements herein are based on normal operating conditions and are not intended to create any express or implied warranty. Fujitsu Computer Products of America, Inc. reserves the right to modify at any time without prior notice these statements, our products, and their performance specifications. Fujitsu and the Fujitsu logo are registered trademarks of Fujitsu Ltd. DynaMO is a registered trademark of Fujitsu Computer Products of America, Inc. FireWire is a registered trademark of Apple Computer, Inc. All other trademarks are the property of their respective owners.

COMPRESSION UTILITY CLEANS UP INTERFACE, ADDS OS X COMPATIBILITY

StuffIt Deluxe 6.0

Rating: ♦♦♦♦

Pros: New interface; OS X–beta compatibility.

Cons: Many features not available under OS X beta; ArchiveSearch feature needs work.

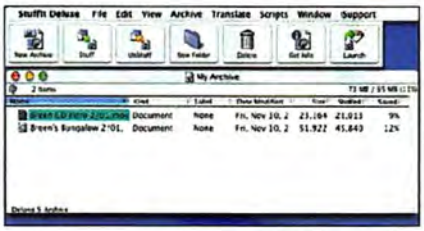
List price: $80

Company: Aladdin Systems, *800/656-5443,* **www.aladdinsys.com**

Macworld's Buying Advice: StuffIt Deluxe remains a capable and full-featured compression utility. Although its new features are intriguing, we're far more interested in seeing StuffIt's best elements brought to OS X.

Aladdin Systems' venerable compression utility, StuffIt Deluxe, celebrates turning 6.0 with a redesigned interface, compatibility with the Mac OS X public beta, and a handful of new features. But although we're pleased with the update's ability to run under OS X, it's only a first step. The desktop-based features—such as the ability to compress and expand files by appending or deleting filename suffixes, and Magic Menu, a Finder menu for accessing common StuffIt commands—aren't available under OS X.

To realize StuffIt Deluxe 6.0's greatest benefits, you must run it under the Classic environment. When doing so, you'll probably encounter StuffIt's most visible new features: Return Receipt and ArchiveSearch. Return Receipt lets you tag an archive so that anyone who opens it with version 6.0 of StuffIt Deluxe or StuffIt Expander will be prompted to e-mail you an acknowledgement. ArchiveSearch searches for files within archives. Under OS X, however, ArchiveSearch failed to find a number of archived PICT files on our test drive.—CHRISTOPHER BREEN



A New Face StuffIt Deluxe 6.0's new interface (seen here running under the OS X beta) makes creating archives easier.

DiskWarrior® has than

1999 Macworld Editors' Choice Awards
Winner, Utility Software. "DiskWarrior is an excellent ax to add to your disk-repair and -maintenance arsenal. DiskWarrior's ease of use, speed, and new method of fixing disk problems make it a powerful disk-maintenance product."

1999 MacUser Awards
Best Utility/Enabling Software. "For providing a new, easier to use, safer, and often more successful alternative to more bloated recovery applications, the judges felt DiskWarrior deserved top billing..."

1999 Apple Design Awards
Most Innovative Product, Runner-up Best New Product

5 Out Of 5 Stars
"Every Mac on the planet can benefit from DiskWarrior!"

Repairs disk problems such as disks that won't mount, files you
Now with DiskShield™ to prevent damage to your disks before it

FOUR-MEGAPIXEL CAMERA NARROWS CONSUMER-PROFESSIONAL DIVIDE

Olympus Camedia E-10

Olympus's latest digital offering, the four-megapixel Camedia E-10, should find as many devotees among professional photographers as among consumers. Although it doesn't offer a large stable of interchangeable lenses, when compared to the $3,500 EOS D30, the E-10 offers good value—and the option to add auxiliary lenses. But what's unique about the SLR-style E-10 is its 9–36mm zoom lens: the manual zoom control lets you switch between wide angle and telephoto with a twist of the lens barrel. You can pop out the 1.8-inch LCD and rotate it, so you can hold the camera over your head and still see what you're capturing.

ARNOLD TIOSEJO

The E-10 generates 11.4MB images that you can save at one of several JPEG compression levels and at five resolutions. In our tests, the camera did well with both SmartMedia cards and CompactFlash Type I and Type II cards (but not IBM's Microdrive). The quick shutter release and excellent color fidelity will appeal to professional users, although the images do show evidence of noise problems.—RICK OLDANO

Rating: ♦♦♦♦

Pros: Fast zoom control; two storage media options.

Cons: Noisy images.

Company's estimated price: $1,999

Company: Olympus USA, *800/622-6372*, **www.olympusamerica.com**

Macworld's Buying Advice: Although the Camedia E-10 can't match the flexibility of Canon's EOS D30 and its stable of 55 interchangeable lenses (see *Reviews*, February 2001), pros new to the digital medium will find that the E-10 can capture images faster and take advantage of larger storage cards. Both pros and amateurs ready to step up from consumer models will appreciate the E-10's flexibility.

won more top awards
any disk utility ever.

mac today EDITORS' CHOICE '98
Mac Today 1998 Editors' Choice Awards
Outstanding Disk Rescue Product. "DiskWarrior belongs in the arsenal of every Mac owner!"

MacHome MACnificent
MacHome - Five Apples, MACnificent Award
"DiskWarrior is a deceivingly simple yet incredibly powerful disk repair utility, which is able to fix your disk problems with zero effort."

Macworld 2000 Finalist
"DiskWarrior comes to the rescue..."

2000 Home Choice Awards MacHome Journal
MacHome 8th Annual Home Choice Awards
Best Utility. "Got lots of votes for repairing and preventing damage to hard disks so well. DiskWarrior 2.0 is a quick solution to faster, more stable hard drives."

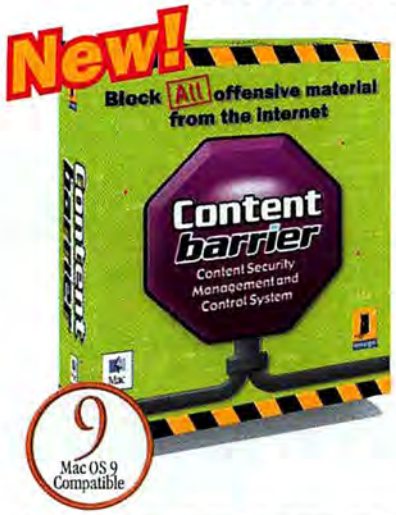
can't trash, and folders that have disappeared.
occurs. Visit www.Alsoft.com for details.

WWW.ALSOFT.COM
ALSOFT
1-800-257-6381

© 2000 Alsoft, Inc. Alsoft, DiskWarrior, DiskShield are trademarks of Alsoft, Inc.

You think your kids are safe on the Net. Think again...

ContentBarrier. The new Parental Control solution for your Macintosh.



You don't let your kids read just anything, do you? Well, when they surf the Internet, they can see whatever they want, unless you're there to watch over their shoulders. With ContentBarrier, the Internet is a safer place for your children.

ContentBarrier sets up a protective wall around your computer. Its pre-defined categories let you choose what you don't want your children to see, and you can also create your own custom categories. Inappropriate web sites are blocked, shielding your children from things they are too young for.

ContentBarrier blocks adult web sites, sites with subjects not fit for children, and even blocks chats when predatory language is used. It blocks all offensive content coming from the Internet.

ContentBarrier works with multiple users; if you have several children, you can set different criteria, corresponding to their age or maturity. You can choose whether they have access to newsgroups, e-mail, or whether they can download files. You can set the program to let them only use the Internet at certain times, and on specific days. The program can even send you e-mail, automatically, when certain events occur.

ContentBarrier keeps a complete log of all web sites visited, whether blocked or not. This allows you to have a full record of exactly what your children are doing on the Internet. You can also take an inventory of your children's computer, and find all pictures, movies, music files and web pages.

ContentBarrier makes the Internet a safer place for your children.

Licences available
5, 10, 20+

www.intego.com

intego

ContentBarrier is fully compatible with Intego's acclaimed NetBarrier and VirusBarrier

CDW 800-509-4239	Now sold at ClubMac www.clubmac.com 800-258-2622	@DEPOT 800-622-3381	JBR 800-221-8180	MacMall 800-217-9492
MacWAREHOUSE 800-255-6227	macZone 800-436-0606	Outpost.com 877-688-7678	COMPUSA MICRO CENTER www.microcenter.com buyonet www.buyonet.com	MacNN ★★★★ Macworld MACGENERATION APPLE WIZARDS ★★★★

Mac and the Mac logo are trademarks of Apple Computer, Inc., registered in the U.S. and other countries. Outpost.com™ is a trademark of Cyberian Outpost, Inc. All other trademarks belong to their respective owners. Illustration Mona Daly ©2000 Artville Stock Images.

COLLABORATION TOOL DELIVERS SOLID PERFORMANCE, EASY OPERATION

mimio

Electronic whiteboards that let you print out your notes or transfer them to a computer are popping up all over—but many models either lack full Mac functionality or force you to pony up thousands of dollars. Enter Virtual Ink's mimio, an electronic capture bar that fastens to your existing whiteboard. It's a great way to turn a classroom or office whiteboard into an electronic note-taker without scrapping the equipment you already have.

Setting up and using mimio is easy—just install the software, attach the plastic bar to any whiteboard, connect it to your Mac (a USB cable is included), and start scribbling. The capture bar transmits your notes to your Mac screen, where you can save, edit, and replay pen strokes. You can export whiteboard sessions as JPEG or PICT files, or drag and drop images from mimio into another application. Unfortunately, mimio's editing capabilities are limited, and the Mac version doesn't yet support the plug-ins available for its Windows counterpart.—PHILIP MICHAELS

MARK JOHANN

Rating: ♦♦♦♦

Pros: Innovative; easy to set up and use; portable.

Cons: Limited editing tools; lacks features available in Windows version.

List price: $599

Company: Virtual Ink, 877/696-4646, **www.mimio.com**

Macworld's Buying Advice: If the price doesn't deter you and you have a USB-ready Mac, mimio is the electronic whiteboard system for you. It's portable and easy enough for a novice to master, and it doesn't require you to buy special equipment.

Go from "No Way" to Know-How.

Remember the first time you set type on a computer? Manipulated a photo? Created an interactive Web design? Remember that "No Way" feeling before you conquered the new skill?

Your Mac gave you the power, but the inspiration, unbiased opinions, expert technique, and the answers to questions you didn't even know to ask probably came from Macworld.

So what is Macworld saying now about digital video? MP3? OSX? The know-how you need is at your fingertips monthly in Macworld. Read it and get even smarter.

Macworld

Hey! Look What Else You Can Do.

www.macworld.com

©2000 Mac Publishing, L.L.C. Macworld.com are trademarks of Mac Publishing. Macintosh is a registered trademark of Apple Computer, Inc.

Until StuffIt conquers the Windows world, Here's a suggestion.

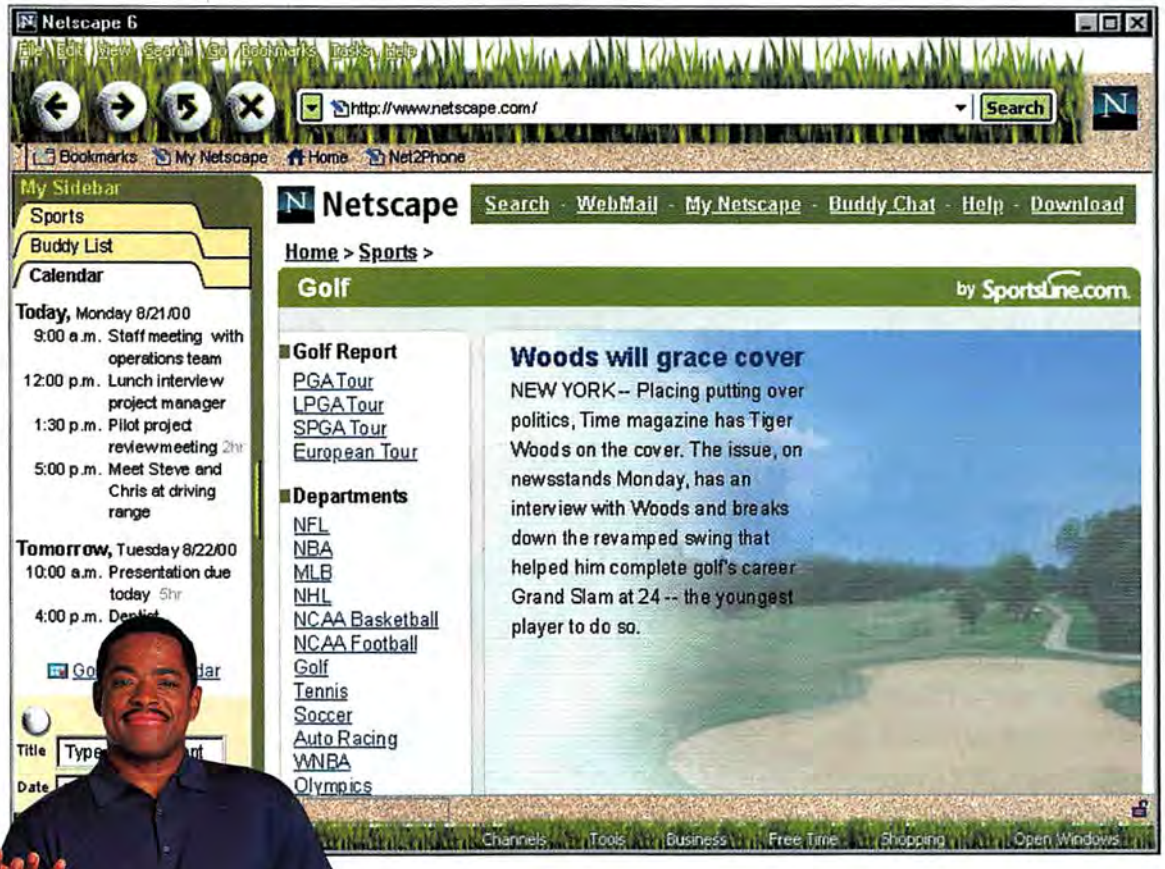
Sending files to Windows users from your Macintosh used to be difficult, but not anymore. **StuffIt Deluxe 6.0** can easily send files to Windows machines in a format they'll understand. Upgrade today, or better yet, buy them StuffIt for Windows and hasten the day a Macintosh standard rules all.

To upgrade to **StuffIt Deluxe 6.0** for Mac or purchase StuffIt for Windows, call (888)245-1723 or visit your favorite retailer.

Aladdin Systems
www.aladdinsys.com

Copyright © 2001 Aladdin Systems, Inc. All rights reserved. StuffIt, StuffIt Deluxe, the StuffIt Clamp Logo, Aladdin Systems, and the Aladdin Systems logo are trademarks of Aladdin Systems, Inc. All other trademarks are the property of their respective owners.

Personalize your Internet with Netscape®



Gary Walker is head of operations at a telecom company and a passionate golfer. He can use Netscape to help him be more productive on the Internet. With new Netscape 6, Gary can keep his most important information conveniently displayed in his browser – like his personal calendar, his buddy list, or even his sports scores. And at Netscape.com, Gary can quickly find news and business information related to his fast-paced job. Other great Netscape features like search, email, and a personalized home page can help him streamline his work tasks (so he has more time to perfect his putt). But Netscape is not just for golfers. Try Netscape today and see what it's like to experience the Internet your way.

Visit Netscape.com today. It's free.

Netscape

The power of the Internet made simple

© 2000 Netscape Communications. Netscape and the Netscape logo are registered trademarks of Netscape Communications. Other trademarks are properties of their respective owners.

EDIT WORD AND EXCEL FILES ON YOUR PALM

Documents to Go Professional Edition

Rating: ♦♦♦♦½

Pros: Lets you work in word processing and spreadsheet documents on the Palm OS.

Cons: Not all document formatting can be maintained on a handheld.

List price: $50

Company: DataViz, *800/733-0030*, **www.dataviz.com**

Macworld's Buying Advice: Documents to Go Professional Edition offers a nearly seamless way to edit Word, Excel, and other documents on Palm devices.

Documents to Go Professional Edition gives you the ability to edit Microsoft Word and Excel documents and other files on handheld devices with Palm OS 3.0 or later installed (the previous version allowed you only to view files). Modified documents are easily synchronized back to your Mac, and they can also be beamed to other Palm OS handhelds. (Handhelds without Documents to Go cannot then HotSync to a desktop, however.) When copied to a handheld, files retain most formatting, including bulleted sections and tables in Word, but Palm OS doesn't support multiple fonts. Although the small Palm screen can make working with spreadsheets awkward, the software makes navigating cells easy.—JEFF CARLSON

PHOTOGRAPH BY GIBSON

WATCHDOG LETS YOU SURVIVE CRASHES

Kick-off

Rating: ♦♦♦♦

Pros: Easy installation and configuration; intuitive interface; application restarting; event logging.

Cons: Incompatible with most USB hubs; does not work with iBooks.

List price: $179

Company: Sophisticated Circuits, *425/485-7979*, **www.sophisticated.com**

Macworld's Buying Advice: Kick-off is an unobtrusive, heroic product that helps your Mac to revive quickly if it dies on the job.

When your Mac server absolutely has to stay running through rain, snow, sleet, and gloom of night, you need more than Apple's Restart After Power Failure feature. Sophisticated Circuits' Kick-off is a lot more. This clever add-on for USB-capable Macs can automatically detect an OS or application crash, and it then restarts your server or the failed application. Kick-off does all this painlessly, with reliable hardware and intuitive software.

Kick-off continuously monitors your Mac's health through a small module connected to your USB port. Moreover, it logs reliability problems and the events leading up to them. The module has status lights—a very handy feature if your monitor is turned off.—MEL BECKMAN

ONLINE REVIEWS

Macworld.com

For these reviews:

www.macworld.com/2001/03/reviews/online.html

LINK

Portable printers
- ♦♦♦♦ Canon BJC-55
- ♦♦♦ HP DeskJet 350Cbi

Optical mice
- ♦♦♦ Contour MiniPro Mouse
- ♦♦♦♦ Kensington Mouse in a Box Optical
- ♦♦♦♦ Kensington Mouse in a Box Optical Pro
- ♦♦♦½ Logitech MouseMan Wheel
- ♦♦♦½ Logitech Wheel Mouse
- ♦♦♦ Macally ioptijr.
- ♦♦♦½ Macally ioptinet
- ♦♦♦♦ Microsoft IntelliMouse Optical
- ♦♦♦♦ Microsoft Trackball Optical

Fine-art large-format printer
- ♦♦♦½ Epson 7500

Large-format printer
- ♦♦♦♦ HP DeskJet 500

USB game pads
- ♦♦♦♦ CH Products USB Gamepad
- ♦♦♦½ Gravis Destroyer Tilt
- ♦♦♦♦ Gravis Eliminator Aftershock
- ♦♦♦♦ Gravis Eliminator GamePad Pro
- ♦♦♦♦½ Saitek P750

Weather-tracking utility
- ♦♦♦♦ EarthBrowser 1.3.5

System utility
- ♦♦♦♦♦ Power Windows 2.4.3

Alarm clock
- ♦♦♦½ Chronomenon 3.1

Game
- ♦♦♦♦ David's Backgammon 3.9.2

HTML debugger
- ♦♦♦♦ VSE Web Site Turbo 4.0

FileMaker plug-ins
- ♦♦♦♦ oAzium cc Authorize
- ♦♦♦♦½ oAzium Charts
- ♦♦♦♦ FileMaker Mobile
- ♦♦♦♦ Troi Dialog
- ♦♦♦♦ Troi File

Reviews You Can Trust

RATINGS

OUTSTANDING:	♦♦♦♦♦
VERY GOOD:	♦♦♦♦
GOOD:	♦♦♦
FLAWED:	♦♦
UNACCEPTABLE:	♦

portfolio: it serves them right

Here they come – the hungry mob. They need logos, photos, movies, audio clips and more – and they need them now. That's why you need Portfolio 5 Network Edition. It's the visual catalog that's easy to use, so everyone can get exactly what they need when they need it. For even bigger parties, Portfolio 5 Server gives everyone access to digital files whether they are across the room or around the world. And optional SQL Connect links to larger, more powerful databases. Get them to serve themselves. **Get Portfolio 5.**

Get Extensis Portfolio online at:

www.extensis.com/mwp

Extensis™
Products Group

Copyright 2000 Extensis Products Group, Inc. All rights reserved. Extensis, the Extensis logo, Extensis Portfolio, and Extensis Portfolio Server are trademarks of Extensis Products Group, Inc. All other trademarks are the property of their respective owners. Extensis Products Group, 1.800.803.6921, 503.274.2020, Fax: 503.274.0530. Extensis Europe, Unit 3, Bouverie Court, The Lakes, Northampton NN4 7YD, United Kingdom, tel: +44 (0)1604 636 300, fax: +44 (0)1604 636 366, info@extensis.co.uk

ANDY IHNATKO

The Game Room

The other day I had an awkward moment. A pal of mine excitedly thrust his recently acquired mint-in-mint-package *Charlie's Angels* fashion doll into my hands, and before I had a chance to smile and say, "Hey, that's neat," I had thrown it to the floor and started jumping up and down on it, yelling, *"I . . . hate . . . '70s . . . television!"* as I did so. He got kind of mad about that and sputtered out something about how much he'd paid for the thing on eBay, and I'm sorry to say that I did little to cool him down by grabbing him by the collar, dividing the dollar figure by 1.77, and spelling out to him how many starving children Sally Struthers could have fed with the money he'd wasted.

I'm just not much for nostalgia. Still and all, the rise of game emulators is an incredibly cool development. Game systems that have been out of date for years can be re-created within your Mac's memory, to run exactly as they did lo those many years ago.

Hit Me with Your Best Shot

Hop on over to www.emulation.net, John Stiles's love letter to Mac emulation. The site is so exhaustive, I can assume only that he's an alien sent to collect all this stuff so it'll survive when Earth is consumed in the upcoming invasion and Armageddon. There are emulators for Game Boy, Nintendo Entertainment System (NES) and Super NES, Atari, ColecoVision, Intellivision—honest, you read the list and you can almost hear a Pat Benatar tape playing somewhere.

These emulators are little more than curiosities, though. The quality of emulation is pretty spotty, and it's hard to locate a solid range of compatible games to play on 'em. But the primary problem I have with them is, I mean, if you want to play the Atari 2600 version of Frogger, you can find a console and a shopping bag full of tapes for next to nothing at a garage sale, on eBay, or at the curb on trash day.

But MacMAME (www.macmame.org) is the real deal. A Mac version of Multiple Arcade Machine Emulator, it rolls emulators for every significant piece of coin-op arcade hardware into one piece of software. And as a free, open-source project, MAME runs on almost every computing platform you can name. That means there's a unified demand for the original game software, and therefore there are easily found, openly operated central sources for locating them.

Oh, yeah. The ROMs. See, obviously none of these emulators can play Track & Field without the game software itself. Normally the code would be burned onto a cartridge or onto some ROM chips on the arcade's motherboard. At some point an owner of a Track & Field machine must have copied the contents of said ROMs into a file and posted them somewhere, begging the question (he said, looking over his shoulder first and then whispering) *Is this legal?*

Well, no, not as such. These games are still copyrighted by someone, after all. Nintendo goes after Web sites that offer ROM images of Nintendo games for downloading. In the case of a game that hasn't been produced for 15 years and was available only in coin-op

continues

form from a company that went out of business during the Reagan administration, the question "Well, what difference does it make?" comes readily to mind. But for God's sake don't ask that aloud when Mom's in the room, because she'll tell you that right is right and ROM is . . . well, wrong.

Arcade Classics 1980s supergroup Journey (left) and Tapper (right) can come to your Mac.

Virtual Song

Connectix's Virtual Game Station can be run guilt-free. The second question people ask about it is "How can it possibly be legal to sell a product that emulates the Sony PlayStation?" Well, it is, and Connectix has the court findings to prove it. The first question is, of course, "Does it work?" and the answer has been upgraded from a qualified and fidgety yes to a somewhat more confident one.

Earlier versions were limited by slower Mac speeds and a rather hypothetical understanding of compatibility requirements. Once the threat of lawsuits was done away with and it became clear that Virtual Game Station would be a continuing, viable product, it matured in a big hurry. At first it played like a Macintosh doing its best under trying circumstances, but now, thanks to version 1.4 (and admittedly, today's faster Macs), it plays like a PlayStation. Still, you're advised to consult Connectix's list of games that have been tested and judged playable before you buy any expensive games.

Speaking of expense, Virtual Game Station costs $50—not that much less than the price of a PlayStation, and it's no less expensive at all if you don't already have a game controller. So why even mention it? Two words: *travel* and *PowerBooks*.

Poor PC Performance

I'm hopeful that a Second Age of Mac Gaming is upon us. Still, there are a lot of Wintel-only titles, and some of them are tempting. A PC emulator such as Connectix's VirtualPC or FWB's SoftWindows is a handy app to have on the shelf, just as a balanced part of this nutritious breakfast, but emulators can be disappointing for spinning PC games. Obviously there's the built-in performance hit, but in general a G4 runs like a credibly modern Wintel box. The problem is that most of the Wintel games worth having rely heavily on features of the Pentium processor—features that work slowly in emulation and that are constantly evolving. Many modern games just won't work at all on a Mac.

As a rule of thumb, if a game requires a Pentium II rated in the low 200MHz, it'll run fine under emulation. Otherwise, it's an exceedingly dicey proposition.

Nostalgia Trip

It's not until you wrap up a long session of Tapper or Crazy Climber or, Lord forbid, that video game based on the adventures of '80s supergroup Journey, that the significance of emulation really hits you. In the '40s, the primary engine of nostalgia was music. In the '50s and '60s they added cars, and in the '60s and '70s they added movies.

But growing up in the '80s gave future fogies a new means by which to rehash the past on a rainy day: video games. When I imagine Leonard Nimoy's voice, it's not from a *Star Trek* episode or movie—it's from Spock's opening welcome to the vector-image Star Trek video game. I can Name That Tune for any decent game soundtrack within seven notes, and the sentence "Stop the humanoid . . . stop the intruder" and a million similar details can instantly put me back inside a candlepin bowling alley in suburban Boston. For a moment, all of the things I was thinking and feeling when I was in junior high are fresh again in my memory.

Nostalgia is a powerful waster of time, potential, and brainpower—and so it's no surprise that it would one day get tied up with modern computing. It's a combination as natural as the Home Shopping Network hooking up with the porcelain-weeping-clown industry. **m**

Longtime Mac columnist ANDY IHNATKO doesn't have a nostalgic bone in his body. Oh, but back in the day. . . .

Mark your
Calendar Today!

Macworld
Conference & Expo™ ahead

Save these Dates!

Jacob K. Javits Convention Center
New York City, NY
July 17 – 20, 2001

Moscone Convention Center
San Francisco, CA
January 8 – 11, 2002

For more information, visit
www.macworldexpo.com
Call Toll Free
1·800·645·EXPO

Owned and Managed by
IDG WORLD EXPO

Bookmark ***www.macworldexpo.com***
for event information and continuous updates!

© 2000 IDG World Expo.
All rights reserved. All other trademarks contained herein are the property of the respective owners.

INDEX TO ADVERTISERS

Interact with the companies whose products and services are advertised in Macworld

ADVERTISER	INTERACT	PAGE NO.
3ware	3ware.com	57
Adobe Systems, Inc.	adobe.com	30-31
Adobe Systems, Inc.	adobe.com	33-34B
Adobe Systems, Inc.	adobe.com	42-43
AEC Software	aecsoft.com	14
Aladdin Systems	aladdinsys.com	103
Alsoft	800-257-6381	100-101
American Power Conversion	888-289-APCC	17
Anthro	anthro.com	12
APS Technologies	800-950-2015	134-135
ATI Technologies	ati.com	52
Belkin Components	belkin.com	94
Brother	brother.com	15
Canon Computer Systems,Inc.	ccsi.canon.com	2-3
Canon USA		83
CDW Computer Centers	800-509-4239	132-133
Creativepro.com	creativepro.com	96, 106
Crucial Technology	crucial.com	13
Epson America, Inc.	800-BUY EPSON	6-7
Fujitsu	fcpa.com	99
Harman Multimedia	877-266-6202	C2-1
IDG Expo	macworldexpo.com	109, 113
Intego	intego.com	102
J&R Computer World	800-221-8180	136
Kensington	kensington.com	BC
La Cie	lacie.com	23
MacMall /Creative Computers	800-222-2808	115-123
Macromedia	macromedia.com	20-21
Macromedia	macromedia.com/ultradev	50-51
MacZones	maczone.com	124-131
Megahaus	800-786-1184	137
MicroMat	800-829-6227	171
Minolta/QMS	qms.com	58
MYOB	800-322-MYOB	84
Nemetschek North America	nemetschek.net	11
Netscape	netscape.com	104
OnStream, Inc.	onstream.com/backup	8
PowerFile	dvdchanger.com	70
Quantum	snapappliances.com	87
Ricoh	ricoh.com	65
Sonnet Technologies	800-786-6260	55
Sony CRT	sony.com/obsessed	73
Symantec	symantec.com	44
Thursby Software Systems	thursby.com	18
VST Technologies, Inc.	vsttech.com	16
Xerox Network Printers	xerox.com	24-25
[zapwerk]	zapwerkUS.com	78

PRODUCT INDEX

Looking for a specific product? Simply use Macworld's product index to find the page or the advertiser of the products which interest you. Then simply log on at www.macworld.com/getinfo and receive all the product information you need.

ACCESSORIES

FURNITURE

PAGE NO.	ADVERTISER	GET-INFO
12	Anthro	–

HARDWARE

COMPUTER SYSTEMS

PAGE NO.	ADVERTISER	GET-INFO
115-123	MacMall /Creative Computers	132
124-131	MacZones	72
16	VST Technologies,Inc.	74

HARD DISK STORAGE

PAGE NO.	ADVERTISER	GET-INFO
57	3ware	–
134-135	APS Technologies	56
13	Crucial Technology	–
99	Fujitsu	–
23	La Cie	–
137	Megahaus	108
8	OnStream, Inc.	139

MISCELLANEOUS

PAGE NO.	ADVERTISER	GET-INFO
17	American Power Conversion	73
94	Belkin Components	64
13	Crucial Technology	–
C2-1	Harman Multimedia	3
BC	Kensington	1
23	La Cie	–
70	PowerFile	60

MONITORS/ GRAPHICS BOARDS

PAGE NO.	ADVERTISER	GET-INFO
52	ATI Technologies	114
55	Sonnet technologies	133
73	Sony CRT	–

NETWORKING PRODUCTS

PAGE NO.	ADVERTISER	GET-INFO
94	Belkin Components	64
87	Quantum	–

PRINTERS

PAGE NO.	ADVERTISER	GET-INFO
15	Brother International Corporation	119
2-3	Canon Computer Systems,Inc.	23
6-7	Epson America, Inc.	–
58	Minolta/QMS	105
24-25	Xerox Network Printers	101

SCANNERS & DIGITAL CAMERAS

PAGE NO.	ADVERTISER	GET-INFO
83	Canon USA	23
84	Ricoh	–

MAIL ORDER

PAGE NO.	ADVERTISER	GET-INFO
134-135	APS Technologies	56
132-133	CDW Computer Centers, Incc.	2
136	J&R Computer World	57
115-123	MacMall /Creative Computers	132
124-131	MacZones	72
137	Megahaus	108

SERVICES

INTERNET PRODUCTS/SERVICES

PAGE NO.	ADVERTISER	GET-INFO
96, 106	Creativepro.com	14
102	Intego	86
104	Netscape	–

TRADESHOWS/CONFERENCES

PAGE NO.	ADVERTISER	GET-INFO
109, 113	IDG Expo	–

SOFTWARE

BUSINESS/PRODUCTIVITY

PAGE NO.	ADVERTISER	GET-INFO
14	AEC Software	84
65	MYOB	171
11	Nemetschek North America	126
18	Thursby Software Systems	–
78	[zapwerk]	50

GRAPHICS/DTP

PAGE NO.	ADVERTISER	GET-INFO
30-31	Adobe Systems, Inc.	–
42-43	Adobe Systems, Inc.	–
20-21	Macromedia	–
50-51	Macromedia	–

MULTIMEDIA

PAGE NO.	ADVERTISER	GET-INFO
30-31	Adobe Systems, Inc.	–
42-43	Adobe Systems, Inc.	–
20-21	Macromedia	–
50-51	Macromedia	–

UTILITIES

PAGE NO.	ADVERTISER	GET-INFO
103	Aladdin Systems	8
100-101	Alsoft	141
171	MicroMat	37
44	Symantec	128

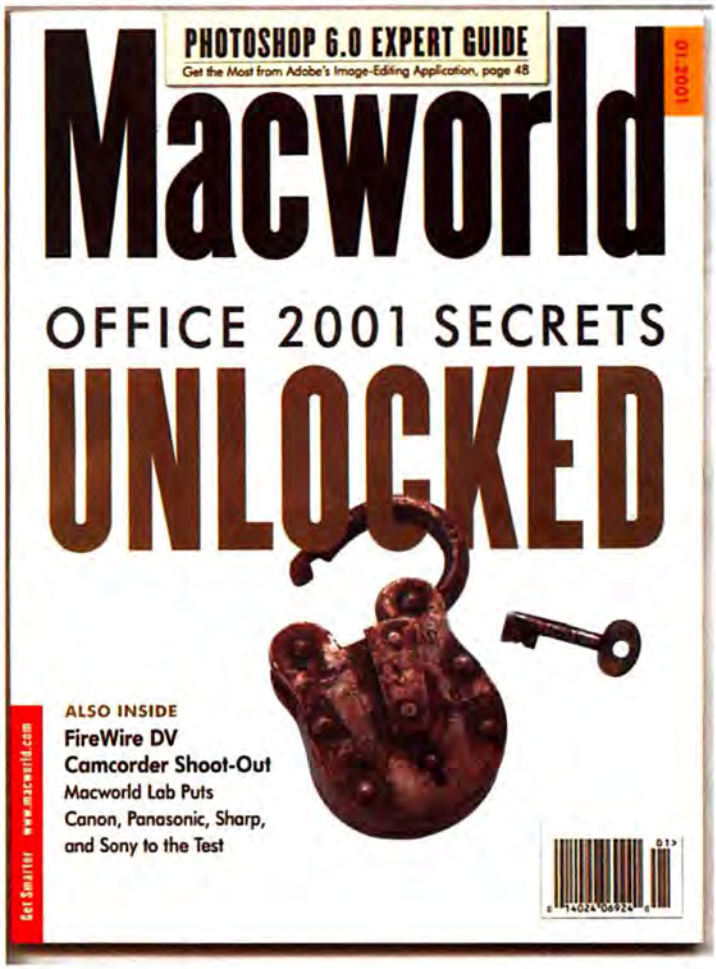
March 2001, Volume 18, Number 03 Macworld (ISSN 0741-8647) is published monthly by Mac Publishing, LLC. Editorial and business offices: 301 Howard St., 16th Fl., San Francisco, CA 94105, 415/243-0505. Subscription orders and inquiries should be directed to 303/665-8930. Subscription rates are $34.97 for 12 issues, $59.97 for 24 issues, and $79.97 for 36 issues. Foreign orders must be prepaid in U.S. funds with additional postage. Add $20 per year for postage for Canada, Mexico, and all surface mail to foreign countries. Add $70 postage for air mail to foreign countries. Periodicals postage paid at San Francisco, California, and at additional mailing offices. Postmaster: Send address changes to Macworld, P.O. Box 54529, Boulder, CO 80328. Printed in the U.S.A.

Macworld REPRINTS

Professional reprints are highly effective marketing tools that will enhance your promotional efforts.

Use reprints as:

- Presentation materials
- Trade show handouts
- Direct mail pieces
- Sales tools



Call today to order digital or hard copy reprints from Reprint Services:

717-399-1900

Mark your
Calendar Today!

Macworld
Conference & Expo™ ahead

Save these Dates!

Jacob K. Javits Convention Center
New York City, NY
July 17 – 20, 2001

Moscone Convention Center
San Francisco, CA
January 8 – 11, 2002

For more information, visit
www.macworldexpo.com
Call Toll Free
1·800·645·EXPO

Owned and Managed by
IDG WORLD EXPO

Bookmark **www.macworldexpo.com**
for event information and continuous updates!

© 2000 IDG World Expo.
All rights reserved. All other trademarks contained herein are the property of the respective owners.

Who says you can't teach an old dog new tricks.

Macworld has been here for you since the first Macintosh came on the scene. Since then, your Mac has has changed -- and Macworld has changed right along with it.

Still the faithful companion, Macworld remains your source for expert opinion, unbiased lab reviews and cutting-edge How-to articles. But now it's reorganized and streamlined, with a clean new look.

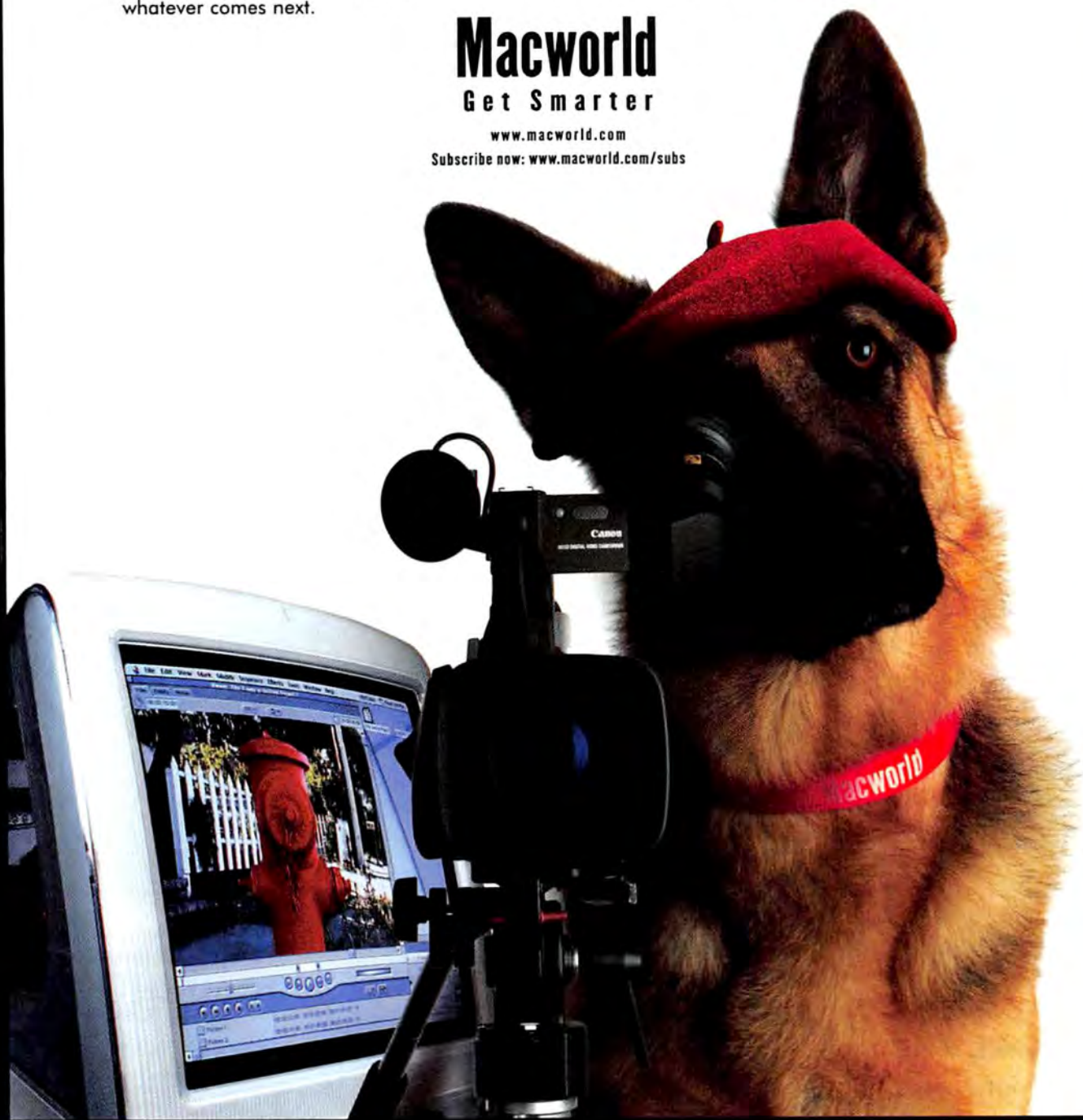
That's the type of loyalty you need to take advantage of the Web, the DV revolution, and whatever comes next.

Macworld

Get Smarter

www.macworld.com

Subscribe now: www.macworld.com/subs



©2000 Mac Publishing, L.L.C. Macworld and Macworld.com are trademarks of Mac Publishing. Macintosh is a registered trademark of Apple Computer, Inc.

What's New from MacWorld?

Call 1-800-217-9492 or visit www.macmall.com and be the first one to get the latest products!

MacMall
Since 1985

Get up to 128MB FREE Extra RAM!

With CPU purchase.
Call for details.

Just Announced!

NEW PRICE DROPS!

Plus...get up to an **Extra 128MB RAM FREE!**

Power Mac G4s starting at $1,294!

Dual Processor Power Mac G4s
450MHz $1,994 + EXTRA 128MB RAM FREE!
500MHz $2,394 + EXTRA 128MB RAM FREE!
Display sold separately. Call for details.

Plus...get an **Extra 128MB RAM FREE!**

PowerBooks starting at $1,994!

PowerBooks
400MHz $1,994 + EXTRA 128MB RAM!
500MHz $2,194 + EXTRA 128MB RAM!
Call for details.

Handspring Visor Deluxe Ice #9552103 NEW! only $249!

Stylus Color 880 Printer EPSON #951049 FAST! only $149.99!

100MB USB Zip Drive #851263 NEW! only $99.99!

Palm m100 Organizer #951523 only $149!

Que!Fire 12x10x32 Ext. FireWire CD-RW Drive #951699 Price after $30 mfr. mail-in rebate. only $299.99!

Hitachi CM715 19" Display HITACHI 22 dot pitch! #72554 Price after $30 MacMall instant rebate. While supplies last! only $299.99!

up to 128MB RAM FREE!

Only at MacMall!

On any Mac computer. *Call for details.*

Save $300!
Plus get an extra 64MB FREE!
Power Mac G4 Cube
$1,494!
Call for details. Display sold separately.

We'll Beat Any Price!

On any Mac computer. *Call for details.*

Norton SystemWorks 1.0 #852776 Price after $50 mfr. mail-in rebate. Call for details. SYMANTEC. as low as $39.99!

Office 2001 Upgrade Microsoft #849861 only $254.99!

Adobe Photoshop 6.0 Upgrade Adobe #951597 only $178.99!

1-800-217-9492 macmall.com Fastest Overnight Delivery! Order today—Get it tomorrow! FedEx Federal Express

MacMall

We'll Beat Any Price on Any Mac Computer!

Call for your best price!

Everything and Anything for Your Mac and More!

Hot Peripherals!

OLYMPUS

D-490 Zoom Digital Camera

your price $499 #951256

DCR-TRV20 Digital Camera

SONY

only $1,699 #80282

Call for best price!

---

harman/kardon

Soundstick 3-Piece USB Speakers

only $189.99 #952775

Apple® Pro Mouse and Pro Keyboard

Now Available Here at MacMall!

your choice $59 each

#953968 (Keyboard)

#953969 (Mouse)

MacMall Exclusive!

Bundle for only $149.99* #954279

Complete your system with this great bundle and save on these name brand peripherals when you purchase any new Mac. Supplies are limited so order now!

*Price reflects $20 mail-in rebate.

Price Drops! Save

Plus Get up to 128MB Extra

Single Processor G4!

The creative dream machine!

The G4 runs Mac OS 9 and performs best at processor-intensive tasks, like large image renders, real-time data streams and conversions—and professional video editing. All these features plus Final Cut Pro video editing software make the G4 any creative person's dream machine.

Features:

- 400MHz PowerPC G4 processor
- 1MB Backside Level 2 cache
- 64MB SDRAM; expandable to 1.5GB
- 20GB Ultra ATA hard disk drive
- DVD-ROM with DVD-video playback
- ATI RAGE 128 Pro graphics card

Monitor sold separately.

Extra FREE 64MB RAM

Power Mac G4 400MHz

only $1,294!

Ask for #952688

Own this Power Mac G4 400MHz for as low as $37/month with the **MacMall EZ Payment Plan!**

Monitor sold separately.

Dual Processor G4!

An affordable movie studio!

The Power Mac G4 is the most affordable professional desktop movie studio. It includes iMovie 2 and Final Cut Pro to enable you to handle editing, transitions and animations.

Features:

- 400 to 500MHz Dual PPC G4 processor
- 1MB Level 2 cache per processor
- 128 or 256MB SDRAM; exp. to 1.5GB
- 30 to 40GB Ultra ATA hard disk drive
- DVD-ROM or DVD-RAM with DVD-video playback
- ATI RAGE 128 Pro graphics card

Extra FREE 128MB RAM

Power Mac G4 Dual 450MHz

for as low as $1,994!

Ask for #952689

Own this Power Mac G4 Dual 450MHz for as low as $56/month with the **MacMall EZ Payment Plan!**

Order	MHz	RAM	FREE RAM	TOTAL RAM	Hard Drive	DVD Drive	Modem	USB Ports	FireWire Ports	Price	or low as
#952688	(1) 400	64MB	64MB	128MB	20GB	ROM	56K	2	2	$1,294	$37/mo
#952689	(2) 450	128MB	128MB	256MB	30GB	ROM	56K	2	2	$1,994	$56/mo
#953099	(2) 500	256MB	128MB	384MB	40GB	ROM	56K	2	2	$2,394	$67/mo
#952690	(2) 500	256MB	128MB	384MB	40GB	RAM	56K	2	2	$2,494	$70/mo

Upgrades for Your Power Mac G4!

VIKING COMPONENTS

Have your RAM professionally installed by one of our factory-trained technicians for only $30. Ask for #2214. Visit our Web site: macmall.com for more Viking memory. Prices are valid at time of press & are subject to change due to market fluctuations. Please call for most current pricing.

#813179	64MB SDRAM DIMM	$72.99
#813177	128MB SDRAM DIMM	$118.99
#813178	256MB SDRAM DIMM	$245.99
#58576	512MB SDRAM DIMM	$799.99

What's New from MacWorld?

Go to www.macmall.com or call us today for all the HOT new products!

$1,000! to FREE RAM!

Power Macintosh G4 Cube!

Monitor sold separately.

Unbelievable horsepower!

It gives you more than enough horsepower for the most demanding uses—from desktop publishing to making Desktop Movies, and from playing ultra-realistic 3D games to enjoying the latest DVDs.

Amazingly, we figured out how to cool this enormous G4 power without a fan. The Power Macintosh G4 Cube runs in virtual silence to let you concentrate.

Blast your music!

This also lets you appreciate the pristine audio quality of the pair of Apple-designed Harman Kardon stereo speakers that bring hi-fidelity sound to your movies, music and games.

There's a first for everything!

The G4 Cube is also the first computer to come standard with the Apple Pro Keyboard and Mouse.

The keyboard comes with 15 full-size function keys, full document navigation controls, full-size inverted T cursor keys, audio control keys and a disk-eject key. The mouse comes with optical tracking engine that tracks movement 1500 times per second for pinpoint cursor control.

Features:

- 450MHz PowerPC G4 processor
- 1MB Backside Level 2 cache
- 64MB SDRAM; expandable to 1.5GB
- 20GB Ultra ATA hard disk drive
- DVD-ROM with DVD-video playback
- ATI RAGE 128 Pro graphics card
- 1000BT Ethernet • 56K modem
- 2 USB ports • 2 FireWire ports

Extra FREE 128MB RAM

Power Mac G4 Cube

was ~~$1,794~~

now $1,494! Ask for #952691

Own this Power Mac G4 Cube for as low as $42/month with the **MacMall EZ Payment Plan!**

Get Advanced Display Technology from Apple!

Apple 22" Flat Panel Cinema Display

your price

$3,999 #951070

New Apple 15" Flat Panel Studio Display

- 1024 x 768 resolution
- Sleek and elegant

your price

$999

#950991

New 17" Apple® Flat Screen Studio Display

- 1600 x 1200 @ 65Hz res.
- .25mm dot pitch

your price

$499

#951071

Upgrade to G4 Power!

Crescendo G4— 450/200MHz PCI Upgrade Card

Features a 1MB backside cache!

only

$499 #59435

Order Any Time! Open 24 Hours! Order Today by 10p.m. EST—Get it Tomorrow by 10:30a.m.!

macmall.com 1-800-217-9492

AOL Keyword: MacMall *Mention your Priority Code: #ZMWD133*

MacMall

MacMall

We'll Beat Any Price on Any Mac Computer!

Call for your best price!

Everything and Anything for Your Mac and More!

Great Add-Ons!

Internal Zip Drive
For 1999 and new 2000 model PowerBook G3s!
only $199.99 #57669
with CPU purchase.

PowerBook G3 Battery (Apple)
only $149.99 #47086

PowerPrint Mobile Edition
FREE! Delorme Street Atlas, retracting phone cord and Ethernet cable.
only $89.89 #76252

HP DeskJet 350C Portable Printer
- 600 x 600dpi res.

only $269.99 #61359

iBOT™ Desktop FireWire Video Camera
only $149.99 #880451

Que!Fire 12x10x38 FireWire CD-RW
your price $299 #951639
After $30 mfr. mail-in rebate.

Upgrades for Your New Apple® PowerBook! VIKING COMPONENTS

#57816	64MB SDRAM DIMM	$88.99
#57817	128MB SDRAM DIMM	$158.99
#57818	256MB SDRAM DIMM	$510.99

Have your RAM professionally installed by one of our factory-trained technicians for only $30. Ask for #2214. Visit our Web site: macmall.com for more Viking memory. Prices are valid at time of press & are subject to change due to market fluctuations. Please call for most current pricing.

Now Get an Extra 64MB FREE RAM!

iBook 366MHz

Quickly and easily create your own desktop movies!

There's never been a notebook in its class that's so powerful, so easy to use, especially with features like professional-quality 3D graphics and iMovie 2 software.

Share your movies with friends!

iMovie 2 lets you make movies on the go. It also allows you to transfer video clips from your digital camcorder to your hard disk, using the high-speed (400Mbps) FireWire port. You can edit and arrange your clips and even add music and visual effects.

The iMovie Export feature lets you select from a range of predefined QuickTime formats for creating and sharing your movies.

- 12.1" TFT SVGA display
- 366MHz PowerPC G3 processor
- 64MB SDRAM; expandable to 320MB
- 10GB Ultra ATA hard disk drive
- 24X maximum speed CD-ROM
- 8MB video graphics memory
- 56K internal modem • 10/100BT
- USB port • FireWire port

Extra FREE 64MB RAM
Apple iBook 366MHz
only $1,494!
#953211 Indigo #953992 Lime
Own this Apple iBook 366MHz for as low as $42/month with the **MacMall EZ Payment Plan!**

iBook 466MHz

Built for speed and power!

Snap open the new iBook and check out the tremendous speed and processing power you now have right at your fingertips.

Pulse-pounding 3D graphics!

The turbocharged ATI RAGE Mobility 128 graphics accelerator provides awesome 3D graphics, faster games and enhanced movie playback.

Tons of preinstalled software!

The software comprises quite a package. Because in addition to Mac OS 9, you get Microsoft Internet Explorer, Microsoft Outlook Express, Netscape Navigator, Palm Desktop Organizer, Adobe Acrobat Reader, FAXstf, QuickTime 4 and AppleWorks 6 and the award-winning iMovie 2.

- 12.1" TFT SVGA display
- 466MHz PowerPC G3 processor
- 64MB SDRAM; expandable to 320MB
- 10GB Ultra ATA hard disk drive
- DVD-ROM with DVD video playback
- 8MB video graphics memory
- 56K internal modem • 10/100BT
- USB port • FireWire port

Extra FREE 64MB RAM
Apple iBook 466MHz
only $1,794!
#953212 Graphite #953994 Lime
Own this Apple iBook 466MHz for as low as $50/month with the **MacMall EZ Payment Plan!**

What's New from MacWorld?

Go to www.macmall.com or call us today for all the HOT new products!

Save up to $800!

Get 128MB Extra FREE RAM!

PowerBook 400MHz

The PowerBook has factored in the strengths and capabilities you'd need in a portable computer in years to come. These include the ability to make desktop movies—and to surf the Internet wirelessly—from wherever you happen to be

Create and edit desktop movies!

The PowerBook comes loaded with iMovie 2, the latest version of the video editing software that anyone can use. It also includes Final Cut Pro, the award-winning post production studio in a box.

- 14.1" TFT SVGA display
- 400MHz G3 with 1MB Level 2 cache
- 64MB SDRAM; expandable to 512MB
- 10GB Ultra ATA hard disk drive
- DVD-ROM with DVD video playback
- 8MB video graphics memory
- 56K internal modem • 10/100BT
- Two USB ports • Two FireWire ports

Connects easily to Plug-n-Play FireWire and USB devices!

Authorized Reseller

Includes video output port for connecting to TVs or VCRs!

PowerBook 500MHz

With a PowerPC G3 processor delivering speeds of 500MHz, plus room for 512MB (half a gigabyte) of RAM and 3D graphics acceleration, AirPort wireless capability, FireWire and desktop movies to go, the future's built right into this slim powerhouse.

Awesome performance package!

The PowerBook delivers uncompromising performance in a stunning—and stunningly lightweight—package: just 5.7 pounds with the battery and weight-saving module installed, and 6.1 pounds with the battery and DVD-ROM drive installed.

This portable movie studio comes with enough built-in muscle, up to 30GB of hard disk space, to put most digital video projects into overdrive. In fact there's enough memory, cache and raw processing power in this lightweight portable to enable you to create a whole new medium

Features:

- 14.1" TFT SVGA display
- 500MHz PowerPC G3 processor with 1MB backside Level 2 cache
- 128MB SDRAM; expandable to 512MB
- 20GB Ultra ATA hard disk drive
- DVD-ROM with DVD video playback
- 8MB video graphics memory
- 56K internal modem • 10/100BT
- Two USB ports • Two FireWire ports
- Up to 10 hours of battery life through dual lithium-ion battery capability

Extra FREE 128MB RAM
Apple PowerBook 400MHz

only $1,994!

Ask for #953151

Own this Apple PowerBook 400MHz for as low as $56/month with the **MacMall EZ Payment Plan!**

Extra FREE 128MB RAM
Apple PowerBook 500MHz

was ~~$2,994~~

now $2,194!

Ask for #953152

Own this PowerBook 500MHz for as low as $62/month with the **MacMall EZ Payment Plan!**

Order Any Time! Open 24 Hours! Order Today by 10p.m. EST—Get it Tomorrow by 10:30a.m.!

macmall.com 1-800-217-9492

AOL Keyword: MacMall ***Mention your Priority Code: #ZMWD133***

MacMall

MacMall

We'll Beat Any Price on Any Mac Computer!

Call for your best price!

Everything and Anything for Your Mac and More!

Great Savings!

Microsoft Office 2001
upgrade as low as
$254.99 #849861

#849799 Office 2001 $425.99

Spressa 10x4x32 FireWire CD-RW Drive SONY

only $309.99 #57282
While supplies last.

Visit our site!

- Featuring all the new products from Apple!

And Much More!

- Fastest overnight delivery!
- 100% Apple Gold Certified, best trained sales staff!
- $2 billion in available inventory (over 125,000 products)!
- Custom configuration—we will build your CPU to your specifications!

MacMall EZ Payment Plan!

NEW! Payment terms up to 48 months!

Now you can have low fixed monthly payments on consumer purchases of $750 or more with the new MacMall EZ Payment Plan. It's fast and easy to apply for, and there are no application fees or prepayment fees. Call your Account Manager today, or apply online! You can complete your purchase in just minutes—and have your order tomorrow!

Financing available on approved credit arranged through MBNA America Bank, N.A. Payment does not include shipping charges and sales taxes if applicable. Estimated monthly payment is based on approximate 48-month term at an Annual Percentage Rate (APR) of 14.99%. Your APR may be higher. There are no transaction fees for MacMall purchases billed directly to your account. There is a transaction fee of 3% of the U.S. Dollar amount of each advance check you write ($5 min/$30 max), but there is no obligation to use advance checks.

Get 64MB Extra

iMac 350MHz

The Internet is at your service!

The iMac comes with Mac OS 9 installed. One of the biggest advantages of having Mac OS 9 on your iMac could be the free suite of Internet services you get to enjoy (including your own exclusive mac.com email address). As an iMac customer, you can immediately start using popular services like iReview and iCards, as well as iTools.

Features:

- 350MHz PowerPC G3 processor
- 64MB SDRAM; expandable to 1GB
- 7GB Ultra ATA hard disk drive
- Slot loading 24X CD-ROM
- ATI RAGE 128 Pro graphics card
- 10/100BT Ethernet networking
- 15" display (13.8" viewable)
- Apple Pro Keyboard and Mouse
- 56K internal modem • 2 USB ports

Extra FREE 64MB RAM
Apple iMac 350MHz

only **$799!**

#953100 Indigo
Own this iMac 350MHz
for as low as $23/month with the
MacMall EZ Payment Plan!

iMac DV 400MHz

Super fast FireWire!

The iMac DV has super fast FireWire built-in, so you can easily connect to high-speed devices like your digital camcorders and external disk drives.

The iMac DV comes loaded with Apple's easy to use iMovie 2 software. With iMovie 2 software, you're ready for action. And just in time, because the era of Desktop Movies has arrived!

Features:

- 400MHz PowerPC G3 processor
- 64MB SDRAM; expandable to 1GB
- 10GB Ultra ATA hard disk drive
- Slot loading 24X CD-ROM
- ATI RAGE 128 Pro graphics card
- 10/100BT Ethernet networking
- 15" display (13.8" viewable)
- Apple Pro Keyboard and Mouse
- 56K internal modem • 2 USB ports
- 2 FireWire ports • Airport ready

Extra FREE 64MB RAM
Apple iMac DV 400MHz

only **$999!**

#952681 Indigo #952680 Ruby
Own this iMac DV 400MHz
for as low as $28/month with the
MacMall EZ Payment Plan!

Upgrades for Your iMac & iMac DV!

VIKING COMPONENTS

Have your RAM professionally installed by one of our factory-trained technicians for only $30. Ask for #2214. Visit our Web site: macmall.com for more Viking memory. Prices are valid at time of press & are subject to change due to market fluctuations. Please call for most current pricing.

#52913	64MB SDRAM DIMM	$69.99
#52914	128MB SDRAM DIMM	$115.99
#52915	256MB SDRAM DIMM	$218.99
#58576	512MB SDRAM DIMM	$799.99

What's New from MacWorld?

Go to www.macmall.com or call us today for all the HOT new products!

RAM FREE!

Authorized Reseller

iMac DV+ 450MHz

Includes the new iMovie 2!

The iMac DV+ comes loaded with Apple's easy to use iMovie 2 software and a slot-loading DVD-ROM drive and a brilliant 15-inch built-in display.

Cutting-edge wireless networking technology!

Every iMac DV+ comes AirPort-ready with a built-in antenna. With AirPort, you can surf the Internet through solid brick walls—without cables, additional phone lines or complicated networking hardware.

Features:

- 450MHz PowerPC G3 processor
- 64MB SDRAM; expandable to 1GB
- 20GB Ultra ATA hard disk drive
- DVD-ROM with DVD video playback
- ATI RAGE 128 Pro graphics card
- 10/100BT Ethernet networking
- 15" display (13.8" viewable)
- Apple Pro Keyboard and Mouse
- 56K internal modem • 2 USB ports
- 2 FireWire ports • Airport ready

Extra FREE 64MB RAM
Apple iMac DV+ 450MHz

only $1,294!

#952682 Sage #952685 Ruby #952684 Indigo
Own this iMac DV+ 450MHz
for as low as $37/month with the
MacMall EZ Payment Plan!

The new Apple Pro Keyboard features full size cursor keys!

High-precision Apple Pro Mouse requires no maintenance!

iMac DV SE 500MHz

Watch the classics on DVD!

With the iMac DV Special Edition, you can slip the latest DVD title into the slot-loading drive and watch it on a brilliant 15-inch built-in display. With new Theater Mode, your viewing experience is positively cinematic.

Make the classics with iMovie2!

iMovie 2 comes pre-installed on every DV iMac—and it has all the makings of a blockbuster. you can turn your DV iMac into a personal movie studio and be ready for action.

Listen to the classics in style!

Your favorite music comes through loud and clear on the Harman Kardon Odyssey audio system. From CDs to MP3s, it'll be music to your ears!

- 500MHz PowerPC G3 processor
- 128MB SDRAM; expandable to 1GB
- 30GB Ultra ATA hard disk drive
- DVD-ROM with DVD video playback
- ATI RAGE 128 Pro graphics card
- 10/100BT Ethernet networking
- 15" display (13.8" viewable)
- 56K internal modem • 2 USB ports
- 2 FireWire ports • Airport ready

Extra FREE 64MB RAM
Apple iMac DV SE 500MHz

only $1,494!

#952687 Graphite #952686 Snow
Own this iMac DV SE 500MHz
for as low as $42/month with the
MacMall EZ Payment Plan!

Go Wireless with Airport!

- Surf the Net or network wirelessly
- Up to 150' range lets you roam!

Airport *now only* $299 #57373

#57369 Airport Card $99

Up to 10 times faster than the most popular home networking.

Order Any Time! Open 24 Hours! Order Today by 10p.m. EST—Get it Tomorrow by 10:30a.m.!

macmall.com 1-800-217-9492

AOL Keyword: MacMall ***Mention your Priority Code: #ZMWD133***

MacMall

MacMall

Call for your copy of the latest Mac Software & Accessories Buyers Guide!
Featuring all the new releases from Macworld 2000, New York. Call 1-800-217-9492

NEW from Macromedia!

Flash 5 Upgrade

Design and deliver distinctive, low bandwidth Web sites with Macromedia® Flash™ 5, the standard for creating high-impact Web experiences, used by over half a million Web authors worldwide.

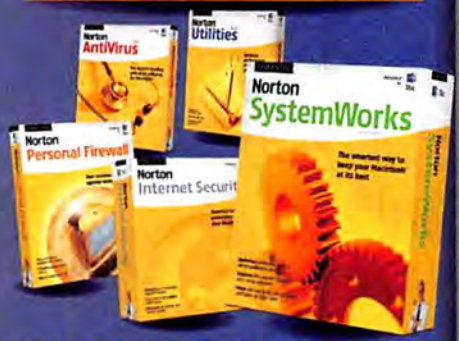
upgrade for only $138.99 #950401

Dreamweaver 4 Fireworks 4 Studio Upgrade

Dreamweaver 4 Fireworks 4 Studio allows you to create, edit and animate bitmap and vector Web graphics. It adds advanced interactivity and pop-up menus in the Macromedia® Fireworks® professional environment.

upgrade for only $188.99 #953745

NEW from Symantec!



#852776	Norton SystemWorks 1.0	$69.99*
#852775	Norton Utilities for Mac 6.0	$44.99*
#852774	Norton AntiVirus 7.0 for Mac	$9.99*
#852815	Norton Personal Firewall 1.0	$34.99*
#852777	Norton Internet Security	$59.99*

*Price after rebates. Call for details.

Hot New Software Titles!

Techtool Pro 3.0

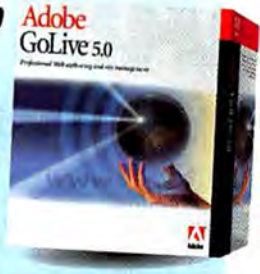
No other program tests as many different aspects of your Macintosh as thoroughly as Techtool Pro 3.0. The key to maintaining a healthy Mac is to install it before you have problems!

only $88.99 #30489

Adobe GoLive 5.0

Professional Web Design!

Industrial-strength Web design, production & management for professional, dynamic, database-driven Web sites!



upgrade only $98.99 #950150

ViaVoice for Mac, Enhanced Edition

The most advanced speech recognition technology ever! Includes an innovative, Plug-n-Play, USB microphone!

only $124.99 #841920

Illustrator 9.0

The standard in vector graphics creation software just got better!

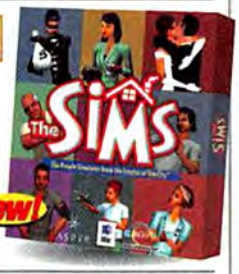
upgrade for only $139.99 #58042

#58038 Illustrator 9.0 Full version $388.99

The Sims

Build a simulated neighborhood and run or ruin the lives of the people that live there! The fate of a Sim, for better or worse, rests in your hands.

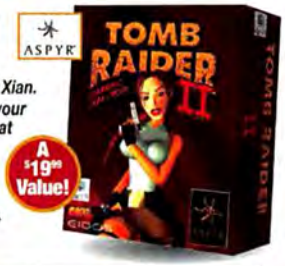
- *Hours of unlimited, open ended gameplay*



only $44.89 #82299

Tomb Raider II

The Saga continues! Join Lara Croft in her quest for the dagger of Xian. With Lara's agility and your skill there is no prize that will go unclaimed!



only $5.99 #954454
With any purchase. While supplies last.

Mac OS 9.0.4

Make your Mac more powerful and more Internet-friendly than ever before. Improve audio, video and graphics performance and more!

only $88.89 #74850

FileMaker Pro Upgrade

Manage your data from desktop to Web!

- *Enhanced Microsoft Excel file conversion*

as low as $138.89 #812611

Stuffit Deluxe 6.0

The #1 compression software used by millions worldwide! Just one-click or Drag-and-Drop! Open virtually all compressed files on the Internet. Send your files faster!

as low as $24.89 #953839
Price after $50 mfr. mail-in rebate.

It's Tax Time Season!

TurboTax Deluxe for Macintosh

Guides you through your return and gives you money saving advice for additional tax savings!

only $49.95 #954861
*Free State Tax via mfr. mail-in rebate.

MacMall Exclusive!

Stuffit Deluxe 6.0 and DiskWarrior 2.0 Bundle

MacMall Exclusive!

only $89.99 #953849
Save over $48 on these powerful Mac utilities when you buy this bundle.

Quicken 2001 Deluxe Mac

Packed with powerful features and enhancements that let you see the complete picture of your finances.

as low as $29.95 #849561
When purchased w/Turbo Tax above.

Order Any Item in 4 Easy Steps
1. Go to www.macmall.com
2. Click on "Shopping Cart"
3. Enter part# in "Catalog Express"
4. Click on "Proceed to Checkout"

CATALOG EXPRESS

macmall.com 1-800-217-9492

Accessories

The Best Prices on USB and FireWire Peripherals for the iMac, iBook, PowerBook G3, Power Mac G3 & G4!

Stylus® Color 777i Printer
EPSON
- 8ppm black; 3ppm color
- 2880x720dpi

New!

only $99.99 #953315

Stylus® Color 980 Printer
EPSON
- 13ppm black; 10.5ppm color
- USB and parallel

New!

only $249.99 #951946

Lexmark Z52 Color Printer
LEXMARK
- 14ppm black; 6.5ppm color

only $99.99 #66198
After $80 mfr. mail-in rebate and purchase of a Umax Astra 3400 Scanner.

OfficeJet G85 Printer, Scanner, Copier, Fax All-in-One!
hp
- 36-bit color scan
- 12ppm black; 10ppm color

only $799.99 #63480

4 Port USB Hub
BELKIN
Provides you with instant expandability that's simple as plugging in a USB connector!

only $29.99 #54763

Intuos 6"x8" Special Edition Tablet
WACOM
Includes cordless mouse & pressure sensitive pen.

only $299 #950761

Que! 12x10x32 FireWire CD-RW Drive
- 1 YEAR WARRANTY

only $299 #951639
Price reflects mfr. mail-in rebate.

Sony Spressa 10x4x32 Firewire CD-RW Drive
SONY
Flexible, high performance data storage!

only $309.99 #57282
While supplies last!

D-490 Digital Camera
OLYMPUS
- Includes 8MB SmartMedia card
- 2.11 Megapixel
- 1280 x 960 res.

only $499.99 #951256

Coolpix 880 Digital Camera
Nikon
- 3X Zoom-Nikkor lens, plus 4X stepless digital zoom
- 3.34 Megapixel CCD
- One year warranty
- USB interface

$649.99 #952107

ZR10 Mini DV Camcorder
Canon
- 10X optical and 200X digital zoom
- 2.5" color LCD display

only $769.99 #59847

Perfection 1240U Scanner
EPSON
- 1200 x 2400dpi
- 42-bit color
- USB connectivity
- PC & Mac compatible

only $199.99 #953564

LaCie 16x10x40 FireWire CD-RW Drive
LACIE
Best Seller!

only $379.99 #954310

Soundsticks 3-Piece USB Speakers
harman/kardon
- 40-Watt self-powered system

only $189.99 #952775

External USB Floppy Drive with Color Panels
CVST
FREE! Color Panels!
Hot swappable USB interface; no AC adapter required.

only $77.99 #54835

HipZip MP3 Player
iomega
- 12 hours continuous play
- Anti-skip design
- Drag-and-Drop file transfer
- Fast USB connectivity

only $299.99 #851266

Great Peripheral Deals for Your Serial and SCSI Macs!

LaCie Ext.12x10x32 SCSI CD-RW Drive
Create music and data CDs.
- 12X record speed
- 2MB data buffer

only $349.99 #954311
LACIE

Astra 1200S Scanner
UMAX
- 600 x 1200dpi resolution
- 9600dpi interpolated
- 30-bit color

only $49.99 #94312

Epson Stylus Color 3000 Printer
- Present full-bleed 13" x 19" designs at 1440 x 720dpi
- Adobe PostScript L2
- Optional internal Ethernet

EPSON
$899 #43863 Mfr. recond.
1 YEAR WARRANTY
While Supplies Last!

Epson Stylus 740 Printer!
EPSON
only $78.99 #43626 Mfr. recond.
- 1440 x 720dpi
- Serial and USB interfaces

Iomega® Zip® 250MB Ext. SCSI Drive
iomega
only $139.95 #41332
1 YEAR WARRANTY

Order Any Time! Open 24 Hours! Order Today by 10p.m. EST—Get it Tomorrow by 10:30a.m.!

macmall.com 1-800-217-9492

AOL Keyword: MacMall *Mention your Priority Code: #ZMWD133*

MacMall

macZone
a division of Zones.com

Save up to $1000

Mac Zone Cube Package Deals

FREE 64MB MEMORY!
with Apple G4 Cube purchase.
$1494.98
#124926

FREE 128MB MEMORY!
with Apple G4 Cube and Apple Studio 17" purchase.
$1989.98*
#124985

FREE 128MB MEMORY!
with Apple G4 Cube and Apple Studio 15" purchase.
$2489.98*
#124971

*A $30 installation fee applies. Not valid with any other Mac Zone offer. Offer subject to change. Available for a limited time only.

Power Mac G4 Cube™

Starting At

$1494.98

Enjoy an all-time low price on the world's most compact and attractive supercomputer, winner of numerous design awards. Then put the money you save towards an Apple Studio Display, and get a whole new outlook on personal computing.

AppleCare G4 Protection Plan
Low Zone Price $249.96
#722601

	Cube	G4	G4 Dual	G4 Dual	G4 Dual
	$300 Price Drop!	$300 Price Drop!	$500 Price Drop!	$800 Price Drop!	$1000 Price Drop!
Processor	450MHz	400MHz	450MHz	500MHz	500MHz
Hard Drive	20GB	20GB	30GB	40GB	40GB
RAM	64MB	64MB	128MB	256MB	256MB
Optical Drive	DVD	DVD	DVD	DVD	DVD-RAM
FireWire	2 Ports	2 Ports	2 Ports	2 Ports	2 Ports
GB Ethernet	10/100	Yes	Yes	Yes	Yes
Backside Cache	1MB at 225MHz	1MB at 200MHz	1MB at 225MHz	1MB at 250MHz	1MB at 250MHz
Was	$1794.98	$1594.98	$2494.98	$3194.98	$3494.98
Price Drop	-$300	-$300	-$500	-$800	-$1000
Low Zone Price	$1494.98 #124926	$1294.98 #124920	$1994.98 #124921	$2394.98 #740288	$2494.98 #124922

Upgrade Your Power Mac!

ValueRAM BY KINGSTON

Power Mac G4 Memory

#674339	64MB	$44.99
#123842	128MB	$59.99*
#715574	256MB	$149.99**

*After $15 mail-in rebate. Low Zone price: $74.99. **After $20 mail-in rebate. Low Zone price: $169.99. Rebates valid through 2/28/01. Prices subject to change.

Professional Power Mac Upgrades!

Top speed for work and play
ATI Radeon 32MB AGP Graphics Card
#126501 $249.99

Supports up to 4 internal ATA drives
Sonnet Tempo Card
#119180 $99.99

Add an external SCSI port to your new Power Mac
Adaptec Internal SCSI Card
#99496 $89.99

Gigabit Ethernet
Asanté FriendlyNet 7108 8+1 Gigabit Switch
#102751 $829.99

NO SURCHARGE ON CREDIT CARDS

Credit cards are not charged until the order is shipped. Most products ship the same day (barring system failure, etc.). Shipping options include Ground, 2nd Day and Overnight delivery. Freight is based on average product weight. Handling extra. Insurance available. Special orders may require special shipping and handling charges. Call for international shipping rates. Prices and product availability subject to change without notice. Specials and promotions may be limited to stock on hand. Not responsible for typographical errors. All products sold by Multiple Zones, Inc. (MZI) are third party products and are subject to the warranties & representations of the applicable manufacturers, including but not limited to Y2K compliance. Accordingly, MZI makes no representation or warranty with respect to Y2K compliance of product sold. ©2001 Multiple Zones, Inc. All rights reserved. Unauthorized duplication is a violation of applicable laws. Apple®, the Apple logo, Macintosh® and PowerBook® are registered trademarks of the Apple Computer, Inc.

on Power Macs

Authorized Catalog Reseller

Mac Zone Exclusive!

FREE 128MB MEMORY!

With select G4 purchase. While supplies last. Offer subject to change. Call for details.

Power Mac Dual G4™

Starting At

$1994.98

Combine their two Power PC G4 processors with their high-powered ATI RAGE 128 Pro graphics card, built-in USB and FireWire ports, the latest Ultra ATA/66 hard disk drives, built-in Gigabit Ethernet and huge expansion potential. Then add your own skills and abilities, and you have everything you need to render complex images, perform massive scientific calculations, build Web sites and more.

LOWEST PRICES EVER!

ValueRAM BY KINGSTON

512MB RAM

$559.99*

*After $35 Mail-in rebate. Low Zone price: $594.99. Hurry offer expires 2/28/01.

SAVE $300 with Power Mac G4 purchase!

You Pay ONLY **$699.99*** #130202

Adobe Web Collection 3.0

- Adobe GoLive
- Adobe Photoshop
- Adobe Illustrator
- Adobe LiveMotion

*Adobe Web Collection and PowerMac G4 must be purchased together. Call for details and to place your order.

Graphics Pro

FREE *Image Port – $99 Value*

QuarkXPress 4.1

#128395 **$789.98**

Four sets of Photoshop plug-ins! Save $345!

Extensis FX Power Pack

#127105 **$249.99**

Universal document exchange

Adobe Acrobat 4.0

#93952 **$224.97**

Web Professional

Build ASP, JSP or CFML Web applications faster!

Macromedia Fireworks 4 Ultra Dev 4 Studio

#128340 **$649.99**

Robust multimedia authoring

Director 8 Shockwave Studio

#112193 **$384.98**

Professional Web development

Macromedia Dreamweaver 4

#128332 **$269.98**

Digital Video Pro

Professional digital video editing

Adobe Premiere 6.0

#130218 **$549.97**

Easy video batch processing

Terran Cleaner 5

#740321 **$579.99**

FREE Video Training Series $400 Value!

Cutting-edge video production

Apple Final Cut Pro 1.2

#124984 **$999.99**

Apple Displays

Panoramic DVD viewing

Apple Cinema Display

22" Diagonal TFT LCD

#124925 **$3999.98**

Truly desk-saving design

Apple Studio 15 Display

15" Diagonal TFT LCD

#124924 **$994.98**

Attractive value, quality and style

Apple Studio 17 Display

16" Viewable Natural Flat Diamondtron CRT

#124923 **$494.98**

★★★★★ *from* **Photoshop User Magazine**

WACOM

The ultimate graphics tool

Wacom Intuos Special Edition 9" x 12" USB Tablet

#124923 **$429.99**

Corporate bids welcome!
Fax to 1-888-239-2591

A **NASDAQ® COMPANY** Ticker Symbol: **MZON**

Source Code MW031

Order by Phone
1.800.436.0606

Order Online Today
www.maczone.com

macZone
a division of Zones.com

Save up to $1300

Apple® PowerBooks™

Authorized Catalog Reseller

Starting At

$1994.98

Get a top-of-the-line, mobile power-user's dream machine for a bargain-shopper's dream price. Now a super value at $1300 below its original price, Apple's PowerBook 500 eliminates the classic "mobile user's compromise" by packing the speed and power of a desktop computer into a system small enough to fit easily into a briefcase. Communication is easy, with built-in Ethernet, a 56K modem and optional AirPort wireless networking. Take advantage of this price/performance breakthrough today!

FREE 128MB MEMORY!

with SELECT PowerBook purchase. Call for details.

A $30 installation fee applies. Not valid with any other Mac Zone offer. Offer subject to change. Available for a limited time only.

AppleCare $329.96 #722604 PowerBook Protection Plan

	PowerBook	PowerBook
Processor	400MHz	500MHz
Hard Drive	10GB	20GB
RAM	64MB	128MB
Optical Drive	DVD	DVD
FireWire	2 Ports	2 Ports
Modem	56K	56K
Backside Cache	1MB L2	1MB L2
Was Price Drop	$2494.98 -$500	$3494.98 -$1300
Low Zone Price!	$1994.98 #124941	$2194.98 #124942

handspring

Starting at $179.99

#126598

- Fully USB compatible for Macintosh out of the box
- An exclusive Springboard expansion slot and a wide range of modules can turn your organizer into a digital camera, music player or even a phone

Deluxe – *comes in 5 colors*

Handspring Visor PDA's

#126598	2MB PDA	Graphite	$179.99
#126600	8MB Deluxe	Ice	$249.99
#130300	8MB Deluxe	Blue	$249.99
#130299	8MB Deluxe	Green	$249.99
#130298	8MB Deluxe	Orange	$249.99
#130296	8MB Platinum	Silver	$299.99
#130297	8MB Prism/full color	Cobalt	$449.99

ValueRAM BY KINGSTON

Upgrade Your PowerBook!

Kingston TECHNOLOGY

For PowerBook 400/500

#116658	64MB	$49.99
#116659	128MB	$79.99
#116022	256MB	$329.99
#116023	512MB	$1199.99

Memory available for other PowerBook models. Prices subject to change.

NO SURCHARGE ON CREDIT CARDS

Credit cards are not charged until the order is shipped. Most products ship the same day (barring system failure, etc.). Shipping options include Ground, 2nd Day and Overnight delivery. Freight is based on average product weight. Handling extra. Insurance available. Special orders may require special shipping and handling charges. Call for international shipping rates. Prices and product availability subject to change without notice. Specials and promotions may be limited to stock on hand. Not responsible for typographical errors. All products sold by Multiple Zones, Inc. (MZI) are third party products and are subject to the warranties & representations of the applicable manufacturers, including but not limited to Y2K compliance. Accordingly, MZI makes no representation or warranty with respect to Y2K compliance of product sold. ©2001 Multiple Zones, Inc. All rights reserved. Unauthorized duplication is a violation of applicable laws. Apple®, the Apple logo, Macintosh® and PowerBook® are registered trademarks of the Apple Computer, Inc.

on PowerBooks

CALL
For the LATEST Macworld Announcements from San Francisco!

Best Selling PowerBook Accessories

Fuji 100MB Zip Mac Disks

#37185	10-Pk	Color	$10 rebate..... $79.99*
#54009	20-Pk	Color	4-FREE $169.99**
#86292	2-Pk	Gray	$3 rebate..... $16.99†
#35459	5-Pk	Gray	$10 rebate..... $39.99††
#37186	10-Pk	Gray	$10 rebate..... $79.99‡

*After $10 mfr. mail-in rebate. Low Zone price $89.99. **Free disks by mail. Coupon in box. †After $3 mfr. mail-in rebate. Low Zone price $19.99. ††After $10 mfr. mail-in rebate. Low Zone price $49.99. ‡After $10 mfr. mail-in rebate. Low Zone price $89.99.Limited time offers.

Internal Zip® 250 drive slides right into your PowerBook
VST Zip 250 Drive
#116684 $279.99

SAVE with Fuji brand CD-Rs 40¢ per disc
Fuji CD-R 50-Pack
16x80 minute discs
#113568 $17.99

Extended power anywhere, anytime
Apple PowerBook G3 Battery
#622731 $139.99

Portable CD Burner 20X4X4 speed
VST CD-RW Expansion Bay
#685244 $379.99

Huge storage capacity, small price
QPS External 12x10x32 CD-RW FireWire Drive
#113595 $299.99* $30 Rebate
*After $30 mfr. mail-in rebate. Low Zone price: $329.99.

Protect your notebook and accessories
Targus Leather Notebook Case
#91934 $74.99*
*With notebook purchase.

Mobile Computing Accessories

Speakers to go
iWave
#115356 $49.99

Tiny, portable microphone
iVoice
#115360 $249.99

Easily add a keypad
iVoice
#657682 $39.99

Record MP3 on Clik! disk
Hip Zip
#733779 $299.99

Color that fits in your pocket
Palm IIIc
#684239 $329.99

SAVE $300
with Power Mac G4 or PowerBook purchase!

Adobe Web Collection 3.0
- Adobe GoLive
- Adobe Photoshop
- Adobe Illustrator
- Adobe LiveMotion

You Pay ONLY $699.97*
#130202
*Adobe Web Collection and PowerMac G4 must be purchased together. Call for details and to place your order.

FREE Video Training Series $400 Value!

Award-winning digital video editing software – a movie studio in a box!
Final Cut Pro 1.2
#124984 $999.99

3 CCDs deliver better resolution and color
Sony DCR-TRV900 Digital Camcorder
#111848 $2299.99

3-CCD Technology for brilliant colors
Canon GL1 Mini Digital Video Camcorder
#111853 ~~$2499.99~~
Call for price!

Professional performance in every feature
Canon XL1 3CCD Digital Video Camcorder
#111851 ~~$4499.99~~
Call for price!

Professional Printing

44" wide photo quality color
Epson Stylus Pro 7000 InkJet Printer
#722324 $3995.99

Full bleed tabloid printing
Epson Stylus 3000 InkJet
#76985 $1299.99

Laser for your growing business
HP LaserJet 2100M Printer
#102384 $769.97

Professional Scanning NEW

1600 x 3200 dpi 42-bit color
Epson 1640SU Perfection USB & SCSI Scanner
#743909 $299.99

Includes full version of Photoshop $600 value!

1200 x 2400 dpi optical resolution
UMAX PowerLook III
#691468 $999.99

Graphic arts edition scanner 12.2" x 17.2" scanning area
Epson Expression 1640XL
#737657 $2699.99

Professional Input

Includes Intuos Pen and 4D Mouse
Wacom Intuos USB 9"x12" SE Tablet
#121929 $429.99

Apple Pro Keyboard
#124980 $59.99

Apple Pro Optical Mouse
#124979 $59.99

Full size upgrade by Macally
Graphite iKey Keyboard and 2-button Scrolling Mouse
#117675 $49.99 $90 Value

Professional Software

Totally rebuilt for the Mac
Microsoft Office 2001 Upgrade
#729141 $259.97

Manage and share information
FileMaker Pro Upgrade
#656948 $139.98

$30 Rebate

Save on 4 Mac utilities
Norton SystemWorks
#127129 $79.99*
*After $50 mfr. mail-in upgrade rebate. Low Zone price: $129.99. Limited time offer.

Corporate bids welcome!
Fax to 1-888-239-2591
A NASDAQ® COMPANY Ticker Symbol: MZON

Source Code MW031

Order by Phone
1.800.436.0606

Order Online Today
www.maczone.com

macZone
a division of Zones.com

Made for the

Apple® iMac™

Starting At

$794.98

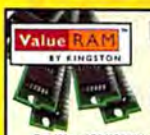
Since it was first introduced, the "i" in "iMac" has stood for "Internet," and, more than ever, everybody from grandparents to home business entrepreneurs are getting on the Internet with the personal computer that makes it so easy and fun. Creating and sharing digital photos and small home movies over the Internet has become even easier – and a heck of a lot faster – than writing and sending postcards. And you never have to lick stamps or worry about running out of them.

Mac Zone Exclusive!

FREE 64MB MEMORY!

with select iMac purchase.

A $30 installation fee applies. Not valid with any other Mac Zone offer. Offer subject to change. Available for a limited time only. Call for details.



Upgrade Your iMac or iBook!

For iMac 350/400MHz		
#674339	64MB	$44.99
#123842	128MB	$59.99*
#715574	256MB	$149.99**

For iBook		
#674337	32MB	$39.99
#715586	64MB	$44.99

*After $15 mail-in rebate. Low Zone price: $74.99. **After $20 mail-in rebate. Low Zone price: $169.99. Offer expires 2/28/01. Prices subject to change.

AppleCare
iMac Protection Plan
#722602 $149.96

NO SURCHARGE ON CREDIT CARDS

Software aisle built-in. But, in addition to its powerful hardware, over a dozen software titles make the iMac much more than an Internet-only appliance. You get everything you need to create movies, design a Web site, balance your bank accounts, apply for a home loan, chat with friends on the Internet, visit a museum online and take on dinosaurs and hot-headed fire ants. The complete software package includes AppleWorks 6, QuickTime 4, Earthlink Total Access, Microsoft Internet Explorer, Microsoft Outlook, Netscape Communicator, Quicken Deluxe 2000, Bugdom, Nanosaur, Palm Desktop, FAXstf Pro and Adobe Acrobat. And all iMac DV, DV+ and Special Edition models come with iMovie 2.

	iMac	iMac DV	iMac DV+	iMac SE
Processor	350MHz	400MHz	450MHz	500MHz
Hard Drive	7GB	10GB	20GB	30GB
RAM	64MB	64MB	64MB	128MB
Optical Drive	CD	CD	DVD	DVD
FireWire	No	2 Ports	2 Ports	2 Ports
AirPort Ready	No	Yes	Yes	Yes
iMovie 2	No	Yes	Yes	Yes
Low Zone Price	$794.98	$994.98	$1294.98	$1494.98
	Indigo #124912	Indigo #124913 Ruby #124914	Indigo #124915 Ruby #124916 Sage #124917	Graphite #124918 Snow #124919

Credit cards are not charged until the order is shipped. Most products ship the same day (barring system failure, etc.). Shipping options include Ground, 2nd Day and Overnight delivery. Freight is based on average product weight. Handling extra. Insurance available. Special orders may require special shipping and handling charges. Call for international shipping rates. Prices and product availability subject to change without notice. Specials and promotions may be limited to stock on hand. Not responsible for typographical errors. All products sold by Multiple Zones, Inc. (MZI) are third party products and are subject to the warranties & representations of the applicable manufacturers, including but not limited to Y2K compliance. Accordingly, MZI makes no representation or warranty with respect to Y2K compliance of product sold. ©2001 Multiple Zones, Inc. All rights reserved. Unauthorized duplication is a violation of applicable laws. Apple®, the Apple logo, Macintosh® and PowerBook® are registered trademarks of the Apple Computer, Inc.

Web and More

Authorized Catalog Reseller

CALL For the LATEST Macworld Announcements from San Francisco!

Cool iMac Stuff

3-piece speaker system
harman/kardon SoundSticks
#127797 **$199.99** *Requires Mac OS 9.0.4

Trade in your mouse for a pen – great for beginning designers
Wacom Graphire USB Tablet
#121927 **$99.99**

Now available separately at Mac Zone!*

*FREE with new iMacs. Now available separately for iBooks, PowerBooks, and other USB-equipped Macs!

Apple Pro Keyboard
#124980 **$59.99***

FREE with new iMacs!

Apple Pro Optical Mouse
#124979 **$59.99***

Gaming

Free your game control from your desktop
Macally AirStick USB Motion-Sensing Midair Joystick
#662246 **$34.99**

Plunge into your games
Macally iShock USB Programmable Game Controller
#106162 **$29.99**

Top Selling Games!

The Sims	#702664	$44.99
Madden NFL 2000	#111576	$19.99
Scrabble	#735107	$29.99
Baldur's Gate	#625850	$39.97
Age of Empires	#111565	$19.99
Tomb Raider III	#111573	$29.99
The Big Kahuna	#108263	$49.99
SimCity 3000	#111560	$44.99
Total Annihilation Gold	#111567	$24.98
ChessMaster 6000	#653212	$34.99
Quake III Arena	#112118	$44.98
Unreal Tournament	#111907	$32.99
Bugdom 3D for the Family	#114493	$29.99
Mac Fun Pack	#675767	$19.99
Deus Ex	#701823	$39.99

Removable Storage

250MB of removable storage
Iomega USB Zip 250 Drive
#119675 **$179.99**

Use floppies with your iMac
VST USB Floppy Drive
#112789 **$79.99**

Blazingly fast CD-burner
QPS 12x10x32x FireWire CD-RW Drive
#113595 **$299.99*** *After $30 mfr. mail-in rebate. Low Zone price: $329.99. Good through 3/31/01.

NEW

Fast, reliable optical storage
LaCie 16x10x40 CD-RW FireWire Drive
#128430 **$379.98**

Printers & Scanners

Amazing iMac colors! 8 ppm Fast - 2880 x 720 dpi
Epson Stylus 777i InkJet Printer
#124636 **$99.99**

For prints that last a lifetime – and beyond
Epson Stylus Photo 870 Printer
#113865 **$249.99**

Mac Zone Exclusive Offer!

$130 in REBATES with Combo Purchase! $149.98* #124655

*After $80 mfr. mail-in rebate with purchase of a UMAX Astra 3400, 42-bit scanner and Lexmark Z52 Color JetPrinter. $50 Zones rebate Low Zone price $279.99. Offer good through 1/31/01.

Music To Go

MP3 Player

Rio 600 64MB of memory
#701451 **$169.99**

Personal

Panasonic SL-SW880 Shockwave CD Player with Brainshaker Headphones
#733681 **$159.99**

Visor – *the next generation of handhelds!*

Visor Deluxe Blue
#130300 **$249.99**

Visor Graphite
#126598 **$179.99**

handspring

- Solely Mac/USB-compatible out of the box
- The most Mac-friendly handheld ever
- Complete selection of Visor handhelds available
- Its cool looks are just the beginning
- An exclusive Springboard expansion slot and a wide range of modules can turn your organizer into a digital camera, music player or even a phone

FREE* TurboTax State

Quicken TurboTax Deluxe for Mac
#127143 **$49.95** *with mfr. mail-in rebate in box.

$30 Rebate*

Quicken Deluxe 2001
#727334 **$49.95** *with purchase of Quicken and TurboTax.

Mac Zone Exclusive!
Yamaha 3-Piece Speaker System YMSTS30 refurbished
#117664 **$29.99** While supplies last.

Remix club-quality music
Mixman DJ Megamix
#725187 **$24.99**

Create your own CDs
Toast 4
#658850 **$79.98**

iUPS Power Surge Protection and 11 minutes of back-up battery power
#111999 **$79.99**

Corporate bids welcome!
Fax to 1-888-239-2591
A NASDAQ® COMPANY Ticker Symbol: MZON

Source Code MW031

Order by Phone
1.800.436.0606

Order Online Today
www.maczone.com

macZone a division of Zones.com — iBook Headquarters

Apple® iBook™

Starting At

$1494.98

As always, the iBook's 12.1" active matrix display provides crisp on-screen graphics, and its convenient, foldaway handle makes it easy to take along wherever you go. But now they come with FireWire, faster processors and bigger hard drives. Plus the iBook SE includes a DVD-ROM drive.

Mac Zone Exclusive!

FREE 64MB MEMORY!

With select iBook purchase. Printer purchase not necessary for FREE 64MB; no coupons or rebates. While supplies last.

Apple® iBook™

"Surprisingly fast, feature-rich, great value...the best value (Apple) has ever offered in a portable package..."

– Andrew Gore, Macworld, December, 2000.

Macworld 1/2 December 2000

Authorized Catalog Reseller

	iBook	iBook SE
Processor	366MHz	466MHz
Hard Drive	10GB	10GB
RAM	64MB	64MB
On-chip cache	256K	256K
Optical Drive	CD	DVD
FireWire	1 Port	1 Port
AirPort Ready	Yes	Yes
Ethernet	10/100BT	10/100BT
Modem	56K	56K
Low Zone Price	$1494.98	$1794.98
	Indigo #124939	Graphite #124940
	Key Lime #124977	Key Lime #124978

Business Leasing Available: Call 1-800-611-9751 for details.

Upgrade Your iMac or iBook!

ValueRAM by Kingston

For iMac 350/400MHz

#674339	64MB	$44.99
#123842	128MB	$59.99†
#715574	256MB	$149.99††

For iBook

#674337	32MB	$39.99
#715586	64MB	$44.99

†After $15 mail-in rebate. Low Zone price: $74.99. ††After $20 mail-in rebate. Low Zone price: $169.99. Offer expires 2/28/01. Prices subject to change.

AppleCare iBook Protection Plan

$229.96 #722603

iBook Indigo

$1599.99
#124939
iBook + printer=128MB FREE

iBook SE Graphite

$1899.99
#124940
iBook + printer=128MB FREE

iBook SE Key Lime

$1899.99
#124978
iBook + printer=128MB FREE

No Rebates • No Coupons

NO SURCHARGE ON CREDIT CARDS

Credit cards are not charged until the order is shipped. Most products ship the same day (barring system failure, etc.). Shipping options include Ground, 2nd Day and Overnight delivery. Freight is based on average product weight. Handling extra. Insurance available. Special orders may require special shipping and handling charges. Call for international shipping rates. Prices and product availability subject to change without notice. Specials and promotions may be limited to stock on hand. Not responsible for typographical errors. All products sold by Multiple Zones, Inc. (MZI) are third party products and are subject to the warranties & representations of the applicable manufacturers, including but not limited to Y2K compliance. Accordingly, MZI makes no representation or warranty with respect to Y2K compliance of product sold. ©2001 Multiple Zones, Inc. All rights reserved. Unauthorized duplication is a violation of applicable laws. Apple®, the Apple logo, Macintosh® and PowerBook® are registered trademarks of the Apple Computer, Inc.

Great Mac Add-ons!

Authorized Catalog Reseller

CALL For the LATEST Macworld Announcements from San Francisco!

Upgrade Cards – complete selection available!

Super-charge your graphics
ATI Radeon 32MB PCI Graphics Card
#126597 **$229.99**

Add a fast Ultra ATA hard drive controller to your Mac
Sonnet Tempo Ultra ATA/66 PCI Card
#119180 **$98.99**

Get the reliability of RAID storage
Sonnet Tempo RAID TAT-066R PCI Card
#126536 **$199.99**

Add more ports to PCI Macs
Sonnet Tango ADB, USB and FireWire PCI Card
#119197 **$129.97**

Take your iMac to a new level
Newer Technology MAXpowr G3 466MHz with 1MB Cache
#733166 **$499.98**

Put a G3 in your PB 1400
Sonnet Crescendo PowerBook 1400 G3 333MHz with 512K Cache
#115344 **$294.99**

Displays

Affordable perfection
NEC AccuSync 75F 17" (16" viewable)
#126503 **$249.99**

PerfectFlat for less than $300
ViewSonic EF70 17" Color (15" viewable)
#686106 **$279.99**

Flat-face CRT for sharp images
Hitachi CM771 19" ErgoFlat (18" viewable)
#696886 **$449.99**

3D action based on the show
Star Trek Voyager: Elite Force #741352 **$49.99**

Send files faster over the Web!
Aladdin Stuffit Deluxe 6.0
#127137 **$24.99***
*After $50 mfr. mail-in upgrade rebate. Low Zone price: $74.99. Limited time offer.

Great clip art collection
Nova Print Explosion
#104517 **$39.95***
*After $10 mfr. mail-in Competitive Upgrade rebate. Low Zone price: $49.95. Limited time offer.

Go Wireless

AirPort Base Station

- Surf the Net or network wirelessly*
- Up to 150' range lets you and the iBook roam around the home or classroom

#115919 **$294.98**

*Requires the AirPort Card, Base Station and a computer that is AirPort Card ready.

Cameras

Professional-quality images
Sony Cybershot DSC-F505V Digital Camera
#713817 **$899.99**

1.3 Megapixel and 3X zoom
Olympus D-460 Zoom Digital Camera
#117050 **$399.99**

Full-featured, ultra-compact and affordable!
Canon ZR-10 Digital Video Camcorder
#117041 ~~$899.99~~ **CALL**

Gaming

Play games in mid-air!
Macally Motion-Sensing Mid-Air Joystick
#662246 **$34.99**

3-piece speaker system
harmon/kardon SoundSticks
#127797 **$199.99**

Full MP3 player and encoder
SoundJam MP Plus Digital Audio Software
#700920 **$49.99**

Great for iBook users
Mouse-in-Box Optical Pro
#722368 **$39.99**

New! Stores an hour of tunes
Rio 600 USB for Mac
#701451 **$169.99**

USB to IR remote control for DVD, CD, QuickTime or MP3 player
Keyspan Media Remote
#111113 **$49.99**

Connectix Virtual Game Station Bundle
#701178 **$44.98**

Turn your iBook into a portable game station!

Great for PlayStation gaming!
iShock Programmable Gamepad
#106162 **$29.99**

Complete system protection
Symantec Norton SystemWorks
#127129 **$79.99***
*After $50 mfr. mail-in upgrade rebate. Low Zone price: $129.99. Limited time offer.

Top Games

Baldur's Gate	#625850	$19.98
Descent 3	#625849	$19.99
Madden NFL 2000	#111576	$19.99
Total Annihilation Gold	#111567	$24.98
Bugdom 3D for the Family	#114493	$29.99
Tomb Raider III	#111573	$29.99
Age of Empires	#111565	$29.99
Sims Expansion Pack	#741351	$29.99
Rainbow 6	#111566	$34.99
ChessMaster 6000	#653212	$34.99
Unreal Tournament	#111907	$34.99
SimCity 3000	#111560	$44.98
Sid Meiers Alpha Centauri	#111574	$44.98
The Sims	#702664	$44.98
The Big Kahuna	#108263	$48.99
Quake III Arena	#112118	$49.99

Corporate bids welcome!
Fax to 1-888-239-2591

A NASDAQ® COMPANY Ticker Symbol: MZON

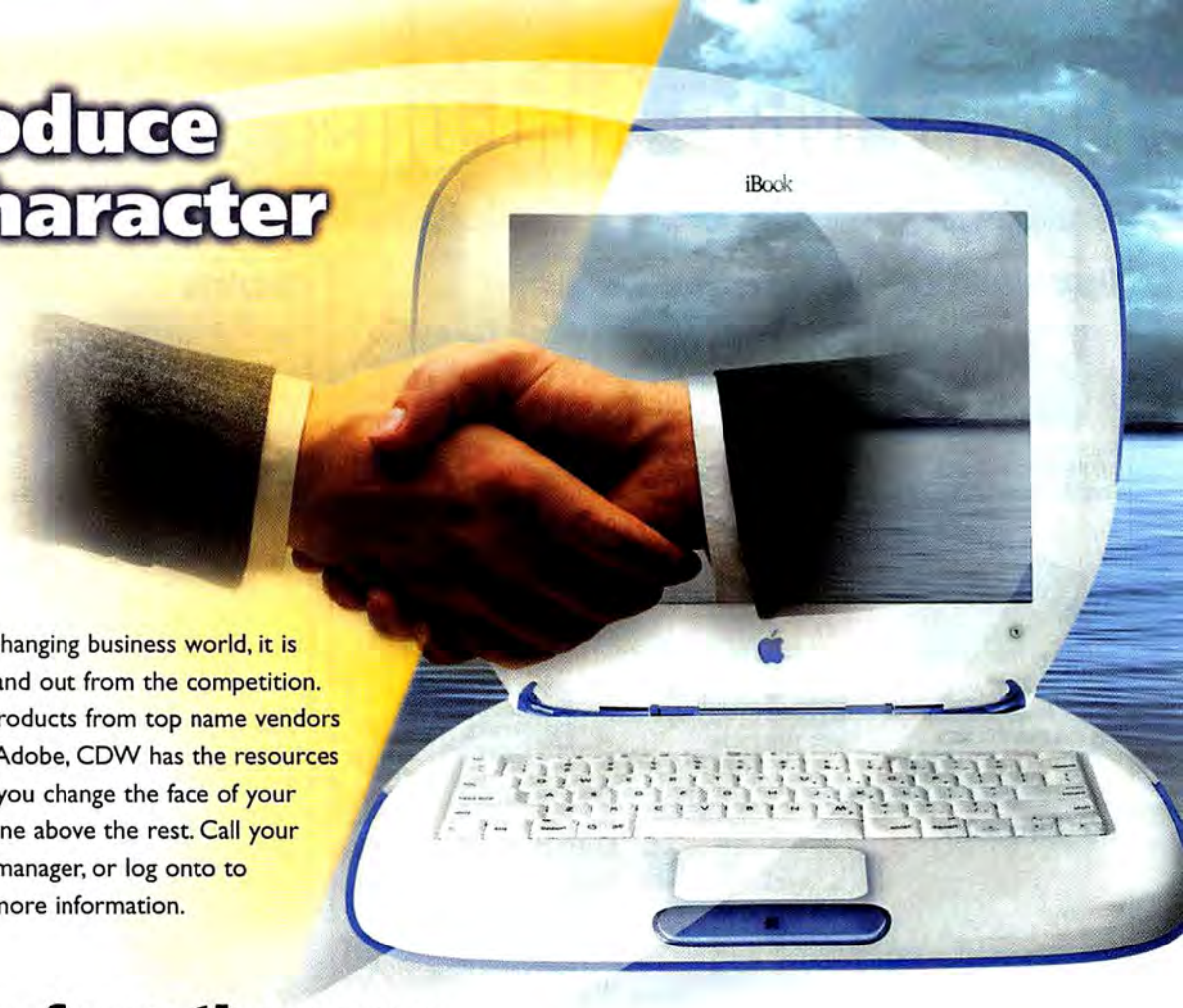
Source Code **MW031**

Order by Phone
1.800.436.0606

Order Online Today
www.maczone.com

Circle 72 on card or go to www.macworld.com/getinfo

Introduce character



In today's ever-changing business world, it is important to stand out from the competition. With creative products from top name vendors like Apple® and Adobe, CDW has the resources which will help you change the face of your business and shine above the rest. Call your CDW account manager, or log onto to CDW.com for more information.

Deviate from the norm

Apple iBook™

- 366MHz PowerPC G3 processor
- RAM: 64MB std., 320MB max.
- 10GB hard drive
- 24X Max CD-ROM drive
- Mac® OS 9
- 12.1" active-matrix display
- Includes: Apple iMovie 2 Software

Indigo $1495.00 CDW 245225

Apple iBook Special Edition

- 466MHz PowerPC G3 processor
- RAM: 64MB std., 320MB max.
- 10GB hard drive
- 6X Max DVD-ROM drive
- Mac® OS 9
- 12.1" active-matrix display
- Includes: Apple iMovie 2 Software

Graphite $1795.00 CDW 245226

Apple PowerBook®

- 400MHz PowerPC G3 processor
- RAM: 64MB std., 512MB max.
- 10GB hard drive
- 6X Max DVD-ROM drive
- Mac® OS 9
- 14.1" active-matrix display
- Includes: Apple iMovie 2 Software

$1995.00 CDW 245222

Apple PowerBook

- 500MHz PowerPC G3 processor
- RAM: 128MB std., 512MB max.
- 20GB hard drive
- 6X Max DVD-ROM drive
- Mac® OS 9
- 14.1" active-matrix display
- Includes: Apple iMovie 2 Software

$2195.00 CDW 245224

CDW carries the full line of Macintosh and Macintosh compatible products.
Call your CDW account manager or visit us at www.cdw.com for more information.

Authorized Reseller

Apple, iBook, Mac, Macintosh, iMovie, Power Book, Mac OS and Power PC are registered trademarks of Apple Computers, Inc.

Harbor a design

Apple iMac DV

- 400MHz PowerPC™ G3 processor
- RAM: 64MB std., 1GB max.
- 10GB hard drive
- 24X Max CD-ROM drive
- 56Kbps modem
- 10/100BASE-T Ethernet port
- AirPort ready

$995.00

Indigo CDW 235688
Ruby CDW 235689

Apple iMac DV+

- 450MHz PowerPC G3 processor
- RAM: 64MB std., 1GB max.
- 20GB hard drive
- 4X Max DVD-ROM drive
- 56Kbps modem
- 10/100BASE-T Ethernet port
- AirPort ready

$1295.00

Indigo CDW 235690
Ruby CDW 235691
Sage CDW 235694

Apple iMac DV Special Edition

- 500MHz PowerPC G3 processor
- RAM: 128MB std., 1GB max.
- 30GB hard drive
- 4X Max DVD-ROM drive
- 56Kbps modem
- 10/100BASE-T Ethernet port
- AirPort ready

$1495.00

Graphite CDW 235696
Snow CDW 235698

Mitsubishi Diamond Pro 900u

19" CRT with 18" viewable image size

Combinining sharp picture quality and simple onscreen controls, Diamond Pro 900u flat-faced monitor includes the patented DIAMONDTRON™ NF CRT for natural looking images with less reflection and glare. Also included is a USB self-powered hub with two upstream and three downstream ports.

$629.00 CDW 130067

Simple Technology memory upgrade

64MB SDRAM 168-pin DIMM for Apple iMac PC 100

Simple Technology is one of the industry's leading manufacturers of first-to-market memory upgrades for notebooks and desktops. Simple Technology utilizes quality DRAM components to ensure operability and compatibility. That's why every Simple Technology memory upgrade features:

- 100% compatibility with your system
- Lifetime warranty
- Unlimited toll-free technical support

$59.17 CDW 190765

Apple Power Macintosh® G4

- 400MHz PowerPC™ G4 processor
- RAM: 64MB std., 1.5GB max.
- 20GB hard drive
- 4X Max DVD-ROM drive with DVD-video playback
- 56Kbps modem
- 10/100BASE-T Ethernet connection

$1295.00 CDW 235684

Apple Power Macintosh G4 Cube

- 450MHz PowerPC™ G4 processor
- RAM: 64MB std., 1.5GB max.
- 20GB hard drive
- 4X Max DVD-ROM drive with DVD-video playback
- 56Kbps modem
- 10/100BASE-T Ethernet connection
- AirPort ready with built-in antennas

Less than 8" high

$1495.00 CDW 235622

Authorized Reseller

NEC/MITSUBISHI ELECTRONICS DISPLAY
SEE MORE.

Simple TECHNOLOGY

All pricing subject to change. For all prices and products, CDW® reserves the right to make adjustments due to changing market conditions, product discontinuation, manufacturer price changes or typographical errors in advertisements. All products sold by CDW are third party products and are subject to the warranties and representations of the applicable manufacturers. Please refer to www.cdw.com for additional terms and conditions.
©2001 CDW® Computer Centers, Inc. 200 N. Milwaukee Avenue, Vernon Hills, IL 60061 MW6731AB 2/01

CDW®
Computing Solutions Built for Business®
www.cdw.com
800-509-4239

APS TECH Innovation, performance,

With APS Tech FireWire Plus, you don't have to choose.

APS Tech is proud to offer a breakthrough interface solution. FireWire Plus technology gives you FireWire (IEEE 1394) and USB support on one device, so you don't have to choose between interfaces. Delivering cross-platform, dual support and automatic configuration, FireWire Plus is the ultimate, universal connectivity solution. Look for APS Tech FireWire Plus products in this ad and order yours today.

Dually Noted

APS CD-RW 16x10x40 FireWire plus

- Speedy CD-RW drive with FireWire (IEEE 1394) and USB interfaces
- Hot-swappable for sharing among workstations

FireWire USB UNIVERSAL SERIAL BUS

$349.95 APS Pro2

APS CD-RW FireWire plus Drives

Model	Price
APS CD-RW 8x4x32 FireWire Plus Pro2	$249.95
APS CD-RW 12x10x32 FireWire Plus Pro2	299.95
APS CD-RW 16x10x40 FireWire Plus Pro2	349.95

USB UNIVERSAL SERIAL BUS

$219.95 APS Pro2

APS CD-RW 4x4x24 USB

- Convenient USB interface, perfect for iMacs, G3s, G4s, other USB computers
- Hot-swappable to switch among workstations
- Winner, MacAddict "Spiffy!" Award, July 2000

APS CD-RW SCSI Drives

Model	Price
APS CD-RW 12x10x32 SCSI Pro2	$299.95
APS CD-RW 16x10x40 SCSI Pro2	349.95

Mass storage

FireWire USB UNIVERSAL SERIAL BUS

$699.95 APS Pro2

APS 4.7GB DVD-RAM FireWire plus

- Rewritable DVD discs for archiving or digital video storage
- Back up 4.7GB (9.4GB compressed) with FireWire & USB interfaces

APS DVD-RAM Drives

Model	Price
APS 4.7GB DVD-RAM FireWire Plus Pro2	$699.95
APS 4.7GB DVD-RAM SCSI Pro2	599.95

FireWire USB UNIVERSAL SERIAL BUS

$289.95 APS Pro2

APS 40GB FireWire plus Hard Drive

- Easiest connections ever – hot-swappable, no terminator or device ID
- Ideal for personal video storage and editing, large-scale imaging/graphics
- FireWire (IEEE 1394) and USB interfaces

APS FireWire plus Hard Drives

Model	APS Pro2
APS 20GB 7200 RPM FireWire Plus Hard Drive	$229.95
APS 40GB 7200 RPM FireWire Plus Hard Drive	289.95
APS 60GB 7200 RPM FireWire Plus Hard Drive	329.95
APS 75GB 7200 RPM FireWire Plus Hard Drive	599.95

APS Ultra2 Wide / Ultra160 LVD SCSI Drives

Model	RPM	*Internal	APS Pro
APS ST 9GB Ultra160 LVD	7200	$209.95	$279.95
APS ST 18GB Ultra160 LVD	7200	289.95	359.95
APS ST 18GB Ultra160 LVD	10,000	349.95	419.95
APS ST 18GB Ultra160 LVD	15,000	479.95	549.95
APS ST 36GB Ultra160 LVD	10,000	629.95	699.95
APS ST 73GB Ultra160 LVD	10,000	1,139.95	1,209.95

Drives listed above carry a five-year warranty.

APS Ultra SCSI Drives

Model	RPM	*Internal	APS Pro
APS ST 9GB	7200	$229.95	$269.95
APS ST 18GB	7200	289.95	359.95

Drives listed above carry a five-year warranty.

** Internal configuration does not include a mounting bracket. Intended as a replacement internal SCSI drive.*

USB UNIVERSAL SERIAL BUS

$189.95 APS Pro2

APS 20GB USB Hard Drive

- Ultimate combination of compatibility and convenience
- Hot-swappable, no SCSI or IDE setup hassles

APS TECH GUARANTEE *Drives on these pages are covered by the APS 30-Day Money-Back Guarantee.*

Visit our closeout page at: www.apstech.com

Source Code: MW0301

value: new FireWire® plus.

Protective Measures

APS HyperDAT® III LVD

- 12GB native backup for high-end workstations, entry-level networks
- Reliable DDS-3 tehcnology

$749.95

APS Pro2 case with Retrospect software for Mac and PC

APS AIT+ FireWire Pro2

- 35GB (native), 70GB (compressed) backup for video, 3-D, graphics workstations
- Native SCSI adapted for FireWire

$1,529.95

APS Pro2 case with Retrospect software for Mac and PC

APS Tape Backup

Model	Price
APS HyperDAT® III (DDS-3) LVD Pro2	$799.95
APS HyperDAT® IV (DDS-4) LVD Pro2	999.95
APS DLT8000 LVD	3,899.95
APS AIT Plus Ultra Wide Pro 2	1,479.95
APS AIT II LVD Pro2	3,299.95
APS AIT Autoloader Ultra Wide	2,999.95
APS AIT II Autoloader LVD	4,999.95
APS DDS-4 Autoloader LVD	3,499.95

Ships with Retrospect software for Mac and PC

Canon ZR10 Digital Video Camcorder

- 10X optical/200X digital zoom lens
- IEEE 1394 (FireWire) terminal
- Analog line-in for preserving originals, making copies

$899.95

(Call for current price)

Digital Video Camcorders*

Model	Price
Canon XL1	CALL
Canon GL1	CALL
Canon Optura Pi	CALL
Canon ZR10	$899.95
Canon Elura2	CALL
Canon Elura2MC	CALL

Canon S100 ELPH Digital Camera

- Smallest 2X zoom camera from Canon
- Advanced Photo System, drop-in film loading
- Fully-automatic with built-in flash

$499.95

Digital Cameras*

Model	Price
Canon Powershot S100 ELPH	$499.95
Sony Digital CyberShot DSC-S30	479.95
Sony Digital CyberShot DSC-S50	599.95
Sony Digital CyberShot DSC-S70	799.95
Sony MVC-FD73 Mavica	499.95
Sony MVC-FD85 Mavica	699.95
Sony MVC-FD90 Mavica	799.95
Sony MVC-FD95 Mavica	999.95

Power play

Back UPS-Pro

Power Management

Model	Price
APC Surge Station Pro 8	$32.95
APC Surge Station Pro 8 w/ 2 Tel	37.95
APC Net 8 Surge Station	33.95
APC Net 8 Surge Station w/ Net P	47.95
APC BackUPS Pro 280S APC	134.95
APC BackUPS Pro 420S APC	199.95
APC BackUPS Pro 650S APC	269.95
APC BackUPS Pro 1000S APC	389.95
APC BackUPS Pro 1400S APC	499.95
APC BackUPS Office 350	84.95

* *These products are not covered by the APS 30-Day Money-Back Guarantee. Products are covered by their manufacturer's warranty.*

LaCie photon18 blue

- Pivotting 18" landscape & portrait perspectives
- Precise natural color for the graphics professional

$2799.95

Displays*

Model	Price\
LaCie Monitors & Accessories	
LaCie electron19blue II	$599.95
LaCie electron22blue	1,179.95
LaCie photon18blue LCD	2799.95
LaCie blue eye	599.95
Sony Monitors	
F-Series Monitor 21" Sony GDM-F500R	$1,929.95
G-Series Monitor 19" Sony CPD-G400	639.95
G-Series Monitor 21" Sony CPD-G500	1,199.95
Sony LCD Displays	
Sony Multiscan CPD-M151 15"	$999.95
Sony Multiscan CPD-L181A 18"	2,569.95

* *These products are not covered by the APS 30-Day Money-Back Guarantee. Products are covered by their manufacturer's warranty.*

Mac OS, FireWire and the FireWire logo are registered trademarks of Apple Computer, Inc. APS and APS Tech are registered trademarks. Other brand or product names are registered trademarks or trademarks of their respective holders.

- *30-day money-back satisfaction on all APS brand drives and accessories. Your risk is the cost of shipping. Monitors and 3rd party products carry warranties from their respective manufacturers.*
- *SCSI cables may be purchased separately.*
- *APS' warranty is a pass-through of the mechanism manufacturer's warranty which will be serviced by APS for one year. APS warrants APS branded enclosures, brackets and power supplies for a period of one year from the date of purchase and will, at its discretion, replace or repair products found to be defective according to the specific terms of the warranty accompanying the product.*
- *Refused orders subject to 20% restocking fee.*
- *International customers must pay for all shipping charges.*
- *Prices and specifications are subject to change without notice.*
- *Not responsible for typographical errors.*
- *Your APS Drive unit may contain one or more components that were in prior use, but which have been inspected and repaired or rebuilt as necessary. These components, if any are covered by the same warranty provisions, exclusions and limitations to the same extent, and on the same terms as otherwise "new" components.*
- *© 2000, APS Tech. All Rights Reserved.*

Call 800 - 354 - 1213

Corporate Sales (800) 395 - 5871 • International (503) 844 - 4600

5am - 10pm, Monday - Friday, 6am - 8pm Saturday - Sunday, Pacific Time

Circle 56 on card or go to www.macworld.com/getinfo

APS TECH

Advanced tools for digital visionaries™

J&R COMPUTER WORLD

WALK IN Park Row NYC | **PHONE IN** 800-221-8180 ANYTIME | **LOG IN** www.jandr.com AOL Keyword: J&R

Iomega® Zip® Drives

Iomega® 100MB USB Zip® Drive
•Easy to connect- plug & play without turning off your computer •Uses 100MB disks •USB connection •For Windows® 98 USB-enabled PC & Mac computers •Zip® disks sold separately
$84.99 (BER ZIP100USB)
Get a J&R $15 Instant rebate

250MB Zip® USB Drive
•USB port for PC or Mac® (BER ZIP250USB) **$159.99**

250MB Zip® Disks - 4-Pack
•For Mac® (BER MAC2504PACK) **$49.99/4-pack**

CD-ReWriteable Drives

QPS™ Que! FIRE DRIVE 8x4x32x External CD-ReWritable Drive with FireWire® Interface
•Max: 8x-write/4x-rewrite/32x-read •2MB buffer memory •Store to 650MB data/74 min. audio •For iMac™ DV, G3/G4 & IEEE 1394-equipped PCs •Software: TOAST for Mac®, Easy CD Creator for PC •Carrying case •Bondi blue
$279.99 (QPS RW8432FEMG3)

Que! Drive 4x4x8 Ext.CD-ReWritable Drive for the iMac™ •Max: 4x-write &rewrite/8x-read •USB (QPS QP448IMAC) **$239.99**

Que! Drive 4x4x8 Ext. CD-ReWritable Drive •Max.:4x-write & rewrite/8x-read •USB (QPS QPCDRW448) **$229.99**

Macintosh® Software

Connectix Virtual PC™ 4.0 with Windows 98
•Share files, access PC networks, use Windows® programs, access Windows®-only Internet applications
$199.99 (CNX VPC4-C)

Kiplinger Tax Cut 2000 Deluxe Macintosh Edition
by Block Publishing (BOA TC2KD-C) **$19.99**

Quicken® TurboTax® Deluxe
by Intuit •FREE TurboTax® State Software after Mail-In Rebate! (IUM TT2KD-C) **$49.99**

DreamWeaver™ (4.0)
by Macromedia® (MNM DREAM4-C) **$279.99**

Office 2001 Macintosh Edition
by Microsoft® (MSM OFFICE2K1-C) **$429.99**

Norton AntiVirus (7.0) by Symantec •Get A $30 Mail-In Upgrade Rebate (SMM NAV7-C) **$64.99**

Mac® Entertainment

Midiman® Audiophile PCI Digital Recording Interface With MIDI
•24 -bit, 96kHz, 4-in/4-out PCI interface •Bit-for-bit accurate digital transfers •Digital mastering via S/PDIF •Built-in digital mixer with control •For Windows®/Macintosh®

midiman
$149.99 (MAM AUDIOFILE)

Hoyle® Casino Games 2001
by Sierra (SRB HOYLECS21-C) **$24.99**

LINKS LS 2000
by MacSoft® (GTA LINKSLS2K-C) **$39.99**

Starry Night - Backyard
by Space.Com (SSK BACKYARD-C) **$39.99**

Cubase VST (5.0) – Music Creation & Production System
by Steinberg (SBG CUBASE5-C) **$249.99**

Apple® Macintosh® Computers!

Apple® G3 iMac™ Computers!

Apple® G3 iMac™/350 64/7GB/CD All-In-One Computer
•350MHz PowerPC™ G3 processor •64MB SDRAM •7GB HD •24x max. CD-ROM •10/100BASE-T •V.90 modem •15" color display •Mac® OS 9 •Indigo
$799.99 (APP M7667LL/A)

Apple® G3 iMac™ DV/400 64/10GB/CD/Ethernet All-In-One Computer
•400MHz PowerPC™ G3 processor •64MB SDRAM •10GB HD •24x max. CD •Digital Video •iMovie2™ •10/100BASE-T •V.90 modem •15" color display •Mac® OS 9
$999.99 indigo (APP M7639LL/A) Ruby (APP M7706LL/A)

Apple® G3 iMac™ DV+/450 64/20GB/DVD/ Ethernet All-In-One Computer
•450MHz PowerPC™ G3 processor •64MB SDRAM •20GB HD •4x max. DVD-ROM •Digital Video •10/100BASE-T •V.90 modem •15" color display •iMovie2™ •Mac® OS 9
$1299.99 indigo (APP M7647LL/A) Ruby (APP M7652LL/A) Sage (APP M7676LL/A)

Authorized Reseller

Apple® G3 iMac™ DV Special Edition/500 128/30GB/DVD All-In-One Computer
•500MHz PowerPC™ G3 processor •128MB SDRAM •30GB HD •4x max. DVD-ROM •Digital Video •10/100BASE-T •V.90 modem •15" color display •Mac® OS 9
$1499.99 Graphite (APP M7651LL/A) Snow (APP M7709LL/A)

Apple® iBook™ G3 Computers!

Apple® iBook™ G3/366 64/10GB/CD Notebook Computer
•12.1" TFT SVGA •366MHz PowerPC™ G3 processor •64MB SDRAM •10GB HD •24x max. CD ROM •8MB VRAM •V.90 modem •10/100BASE-T
$1499.99 Indigo (APP M7721LL/A) Lime (APP M7722LL/A)

Apple® iBook™ Special Edition G3/466 64/10GB/DVD Notebook Computer
•12.1" TFT SVGA •466MHz Power PC™ G3 processor •64MB SDRAM •10GB HD •6x max. DVD ROM •8MB VRAM •V.90 modem •10/100BASE-T
$1799.99 Graphite (APP M7720LL/A) Lime (APP M8245LL/A)

PowerPC and the PowerPC logo are trademarks of International Business Machines Corporation, used under license therefrom.
©2001 Apple Computer, Inc. All rights reserved. Apple, Apple logo, Macintosh, Power Macintosh, iMac & iBook are registered trademarks of Apple Computer, Inc. All other trademarks are the property of their respective owners. All Apple products designed to be accessible to individuals with disabilities. Prices & promotions may not be combined with any other prices & promotions. Offers good while supplies last. PowerPC & the PowerPC logo are trademarks of International Business Machines Corporation used under license therefrom.

Order from www.jandr.com AOL Keyword: J&R

J&R CORPORATE SALES BUSINESS LEASING:
No Money Down, No Payments for 30 Days!
*Call J&R Corporate Sales for details at 1-800-221-3191 or 1-212-238-9080
J&R CORPORATE SALES

Olympus

Olympus Camedia E-10
SLR Digital Camera
•4 megapixel •Up to 2240 x 1680 •4x pro glass zoom lens •1.8" color LCD •SmartMedia™/CompactFlash™ slot •NTSC out capability •USB •Windows®/Mac®
$1999.99 (OLM E10SLR)

D360L Digital Camera •1.3 megapixels •1280 x 960 •8MB SmartMedia™ •1.8" LCD color monitor •6-mode flash •Sequential mode •Fully auto •Mac®/Windows® (OLM D360L) **$279.99**

D-490 Zoom Digital Camera •2.11 megapixel •3x optical/1.6x, 2x & 2.5x digital zoom •1600 x 1200 res. •1.8" color LCD •Precise TTL autofocus •8MB SmartMedia™ •7-mode flash (OLM D490ZOOM) **$449.99**

C-2100 Ultra Zoom Digital Camera •2.11 megapixel •Up to 1600 x 1200 •10x-optical zoom/2.7x digital zoom •Image stabilizer •16MB buffer •1.8" TFT LCD •0.55" TFT EVF-SLR viewfinder •USB/serial (OLM C2100ULTRAZ) **$899.99**

CANON Digital Camcorders

Canon GL1
Digital Camcorder
•3CCD image sensors •20x Fluorite-optical/ 100x-digital zoom •Optical stabilizer •2.5" LCD view screen •Color viewfinder •IEEE 1394
CALL FOR PRICE! (CAN GL1)

ZR10 Digital Camcorder •2.5" color view screen •Color viewfinder •10x-optical/200x-digital zoom •Image stabilizer •Digital photo mode •IEEE 1394 (CAN ZR10) **CALL!**

SONY Digital Camcorders

Sony DCR-TRV20
Digital Camcorder
•DSC function with 4MB Memory Stick® •3.5" SwivelScreen™ •10x-optical Carl Zeiss®/ 120x-digital zoom •Color viewfinder •iLINK™
CALL FOR PRICE! (SON DCRTRV20)

Sony DCR-PC100 Digital Handycam® Camcorder •1,070K pixel CCD •10x-optical/120x-digital zoom •2.5" SwivelScreen™ •Color viewfinder •NightShot™ •Digital photo mode •iLINK™ (SON DCRPC100) **CALL!**

Scanners

Canon CanoScan® N1220U
Flatbed Color Scanner
•42-bit •1200 x 2400 dpi •Z-Lid™ expansion top •High-tech, metallic champagne finish •Ultra slim
$199.99 (CAN N1220U)

UMAX® Astra 4000U 42-Bit Color Scanner •USB for Mac®/PC (UMX ASTRA4000U) **$199.99**

Get A $20 MFR Mail-In Rebate –Thru 02/28/01!

Microtek ScanMaker® 4700 Flatbed Color Scanner (MTK SCANMK4700) **$199.99**

HP ScanJet 5370Cse 42-Bit Color Flatbed Scanner •1200-dpi color •Transparency adapter •USB/Parallel •Mac®/PC (HP C8472A) **$299.99**

EPSON Perfection™ 1640SU Color Scanner •USB/SCSI •Mac®/PC (EPS 1640SU) **$299.99**

To Order Toll Free and Receive a Free Catalogue
24 Hours, 7 Days, Anywhere In The USA
800-221-8180
PARK ROW • NEW YORK • NY • 10038 FAX: 1-800-232-4432

All Major Credit Cards Accepted
Overnight Delivery Available!
Order Code: MWM0301
(Prices Good Until 03/15/2001)

Not responsible for typographical or pictorial errors. Merchandise is brand-new, factory-fresh & 100% guaranteed! +Except where noted! Some quantities may be limited.

Circle 57 on card or go to www.macworld.com/getinfo

Since 1987
MEGAHAUS
Everything High Tech
All Under One Roof

BEST BUY AWARD WINNER!

We've been satisfying customers for nearly 14 years!

Here's this month's hot features. Check out more at www.megahaus.com/mac

Monitors

ViewSonic
18" Pro
"Plus N Play"
(PF790) **$509**

See our complete selection on our website under the "Monitors" listing.

Digital Cameras

SONY *Take your pic!*

- Hi-speed auto focus, floppy storage, 640 x 480 pixels (MVC-FD73) **$495**
- LCD display, 6X Digital Zoom lens, floppy storage, 1280 x 960 pixels (MVC-FD85) **$695**

USB & 1394 Stuff

USB 4x4x6 CD Rewritable for PC or Mac (CRX100E/X2)	$299
USB 250MB Zip Drive w/Software (ZIP250USB)	$169
USB to SCSI Adapter (USBSCSI)	$69
USB External Hard Drives w/Cable:	
10GB or 15GB (USB10/15GB)	$179/$189
20GB or 30GB (USB20/30GB)	$205/$219
1394 PCI/Mac Board Kit (70HTL13941)	$89
1394 Hub (70HTL00030)	$89
1394 Repeater: (70HTL00020)	$45
1394 15 Ft. Cable: 6pin to 4pin (70CAB13943)	$28
1394 Sony 10x4x32 CDR-W (CRX145E/XI)	$349

Hard Drive

Quantum.

18.4 GB $365
SCSI Ultra 160
Int. (TY318400LW)
Ext. $435
(TY318400LWX)

CD-Rewritable Drive

YAMAHA
16x10x40 ***SCSI CDR-W***
w/Mastering Soft. & 1disk
Int. (YCRW2100S) **$319**
Ext. (Includes 5 disks) (YCRW2100SX) **$459**

Hard Drive

Seagate

9.2 GB $265
SCSI Ultra 160
Int. (ST39204LW)
Ext. $395
(ST39204LWX)

250MB ZIP Drive

250MB ZIP Ext. Drive iomega

(ZIP 250) **Just $149**
SCSI Mac or PC
250MB disks $17 each (ZIP250C)

HARD DRIVES

Quantum *(Call for deals on our externals)*

				Int.
ULTRA 160 SCSI				
9.1GB	7200	4MB	XC309100LW	$189
9.2GB	10,000	8MB	TY309200LW	$209
18.3GB	7200	4MB	XC318400LW	$315
18.4GB	10,000	8MB	TY318400LW	$365
36.7GB	7200	4MB	XC336700LW	$525
36.7GB	10,000	8MB	TY336700LW	$605
73.4GB	10,000	8MB	TY373400LW	$1125
IDE ULTRA ATA/66				
10.0GB	4500	128K	QML10000LD	$105
10.2GB	7200	2MB	QMP10200AS	$115
20.0GB	4500	128K	QML20000LD	$118
20.5GB	7200	2MB	QMP20500AS	$135
30.0GB	4500	128K	QML30000LD	$129
30.0GB	7200	2MB	QMP30000AS	$149
40.0GB	4500	128K	QML40000LD	$149
60.0GB	7200	2MB	QMP60000AS	$268

IBM

ULTRA 160 SCSI				
9.1GB	10,000	4MB	07N3220	$235
18.3GB	10,000	4MB	07N3210	$345
36.4GB	10,000	4MB	07N3200	$579
IDE ULTRA ATA/100				
15.0GB	7200	2MB	07N5637	$115
20.0GB	7200	2MB	07N5638	$138
30.0GB	7200	2MB	07N5639	$159
45.0GB	7200	2MB	07N5640	$189
61.4GB	7200	2MB	07N3933	$319
76.8GB	7200	2MB	07N3935	$429

WESTERN DIGITAL Call for WD Firewire drives!

IDE ULTRA ATA/100				
10.0GB	5400	2MB	WD100EB	$95
20.0GB	5400	2MB	WD200EB	$119
20.0GB	7200	2MB	WD200BB	$128
30.0GB	7200	2MB	WD300BB	$169
40.0GB	7200	2MB	WD400BB	$199

FUJITSU

IDE ULTRA ATA/100				
10.2GB	7200	2MB	MPG3102AH	$107
15.3GB	7200	2MB	MPG3153AH	$125
20.4GB	7200	2MB	MPG3204AH	$135
30.7GB	7200	2MB	MPG3307AH	$Call

Maxtor

IDE ULTRA ATA/100				
10.2GB	2MB	7200	M51023H2	$109
15.3GB	2MB	7200	M51536H2	$115
20.0GB	2MB	7200	M52049H4	$135
30.0GB	2MB	7200	M53073H4	$159
40.9GB	2MB	7200	M54098H6	$199
61.4GB	2MB	5400	M96147H8	$249
81.9GB	2MB	5400	M98196H8	$289

We Are #1 For Maxtor Drives

If you ever see a lower price, call us! We'll show you why we are the best place to buy Maxtor.

HARD DRIVES

Seagate *(Call for deals on our externals)*

				Int.
ULTRA SCSI				
9.2GB	7200	2MB	ST39216N	$229
18.4GB	7200	2MB	ST318416N	$339
ULTRA WIDE SCSI				
9.2GB	7200	2MB	ST39216W	$229
18.4GB	7200	2MB	ST318416W	$339
ULTRA 160 SCSI				
9.1GB	10,000	4MB	ST39204LW	$265
9.2GB	7200	2MB	ST39236LW	$225
9.2GB	7200	4MB	ST39236LWV	$239
18.2GB	10,000	4MB	ST318404LW	$365
18.4GB	7200	2MB	ST318436LW	$335
18.4GB	7200	4MB	ST318436LWV	$349
18.4GB	15,000	4MB	ST318451LW	$509
36.7GB	10,000	4MB	ST336704LW	$615
36.7GB	10,000	16MB	ST336704LWV	$645
73.4GB	10,000	4MB	ST173404LW	$1115
73.4GB	10,000	16MB	ST173404LWV	$1159
IDE ULTRA ATA/100				
10.2GB	5400	512k	ST310211A	$99
20.4GB	5400	512k	ST320413A	$122
30.0GB	5400	512k	ST330621A	$138
40.8GB	5400	512k	ST340823A	$159

Visit our website under www.megahaus.com/sea for the hottest deals on Seagate drives.

2.5" IDE LAPTOP

6.0GB	9.5mm	Toshiba	MK6014MAP	$133
10.0GB	9.5mm	Toshiba	MK1016GAP	$157
20.0GB	9.5mm	Toshiba	MK2016MAP	$239
5.0GB	9.5mm	IBM	07N4391	$117
10.0GB	9.5mm	IBM	07N4390	$148
20.0GB	9.5mm	IBM	07N4388	$229
32.0GB	12.5mm	IBM	07N4138	$489
6.0GB	9.5mm	Hitachi	DK23BA60	$125
10.0GB	9.5mm	Hitachi	DK23BA10	$149
20.0GB	9.5mm	Hitachi	DK23BA20	$219

We also carry desktop publishing laptops. CALL.

MAKE IT REMOVABLE

Turn your drives into removables with these high quality DataPort™ drive cartridges and frames. *Ultra Security.*

DataPort VI - *COMPLETE KIT - Platinum Finish*
Includes 1 frame, 1 cartridge, mounting screws, & 2 keys.

Ultra SCSI	$108	(DP2200SM)
Ultra Wide SCSI	$128	(DP2200UWM)

Extra Cartridge/Frame *Kits also available in a Black Finish*

Ultra SCSI	$61/$54	
Ultra Wide SCSI	$75/$61	

Visit our website at: megahaus.com/dataport

With all the talk about drive shortages, you'll probably find it at MegaHaus - so call us - we are #1 in the US!

We have more than 90 power backup solutions and can create custom configurations to suit your networking and data backup needs. Call us. *Protect Your Data!*

CD ROM

• SCSI Internals •				
Teac	CD532S	32X	85ms	$72
NEC	CDR3010	40X	85ms	$69
Plextor	PX40TS	40X	85ms	$89
Kenwood	UCR415	52X	90ms	$143
• WIDE SCSI •				
Plextor	PX40TSUW	40X	85ms	$99
Call About Our SCSI External Drive Deals				
• IDE •				
Teac	CD540E	40X	85ms	$43
Mitsumi	CRMCFX48X	48X	65ms	$41
Toshiba	XM6702B	48X	85ms	$47
Acer	CD650P	50X	85ms	$41
Creative	SBCD52	52X	100ms	$40
Kenwood	UCR421	72X	90ms	$110
• CD CHANGER •				
Pioneer 24 X6 Disc Ext. SCSI (DRM6324X)				$395

We appreciate your business!

TAPE BACKUP

Capacity Native-Compressed	Max. Speed		Be Safe Back Up!
		• 4mm DAT •	
2-4GB	66MB/min	Seagate STD24000N	$419
4-8GB	30MB/min	Seagate STT28000N	$219
4-8GB	66MB/min	Seagate DDS-2 STD28000N	$529
4-8GB	90MB/min	Sony SDT7000AI	$429
4-8GB	60MB/min	HP C1599A1	$519
12-24GB	144MB/min	Sony DDS-3 SDT9000AI	$569
12-24GB	120MB/min	HP DDS-3 C1554A1	$695
20-40GB	288MB/min	Sony DDS-4 SDT11000AI	was! $829
48-96GB	66MB/min	Seagate DDS-2 STL496000N	$1669
72-144GB	120MB/min	HP 6 tape load DDS-3 C5648A	$1669
		• EXABYTE 8mm DAT •	
7-14GB	120MB/min	ELIANT820	$1199
20-40GB	360MB/min	EXB8900	$1969
140-280GB	180MB/min	EZ17SWK	$4569
		• QUANTUM DLT •	
20-40GB	180MB/min	DLT4000	$1285
40-80GB	600MB/min	DLT8000	$3639

Check out the hot tape media deals on our website.

ZIP, JAZ & OPTICAL

Iomega	
100MB Zip Int. SCSI/Ext. USB	$89/$99
250MB Zip Ext SCSI for PC or Mac	$149
2GB Jaz Internal SCSI	$299
2GB Jaz External SCSI	$339
1GB Jaz disk 2-4/5-9/10+	$80/77/75
2GB Jaz disk 2-4/5-9/10+	$85/80/77
Sony Magneto Optical	
5.2GB SCSI-2 Int. 4MB buffer (SMOFS51)	$1399
5.2GB SCSI-2 Ext. 4MB buffer (SMOFS51X)	$1539
5.2GB optical media (SMAX5.2) 1-4/5-9/10+	$83/80/77

Para Llamadas en Español:
1-800-786-1174

MegaHaus is THE industry leader. Since 1987, we've been providing unlimited technical support & manufacturer's warranties on all products Questions? Call us. We're here to earn your business.

CD MEDIA

Nobody Beats MegaHaus on CD Media Pricing.... *NOBODY!*

CD RECORDABLE MEDIA	
12X Max Speed	5/20/50/100 Pack
[CDR74B-5/20/50/100]	$5/$18/$42/$78
80 MINUTE MEDIA	
12X Max Speed	5/20/50/100 Pack
[CDR80-5/20/50/100]	$4/$13/$32/$59
CD REWRITABLE MEDIA	
4X Max Speed Budget	5/20/50/100 Pack
[CDR74WB-5/20/50/100]	$6/$24/$56/$104
4X Max Speed	5/20/50/100 Pack
[CDR74W-5/20/50/100]	$12/$45/$107/$199
CD-R PRINTABLE SURFACE MEDIA	
12X Max Speed Budget	5/20/50/100 Pack
[CDR74PB-5/20/50/100]	$4/$15/$35/$66
12X Max Speed	5/20/50/100 Pack
[CDR74P-5/20/50/100]	$7/$26/$62/$115
CD RECORDABLE PLATINUM MEDIA	
12X Max Speed	5/20/50/100 Pack
[CDR74PA-5/20/50/100]	$6/$24/$57/$106

SCSI CDR-W's

Sony 10x4x32 ReWritable •
Packet write, 4MB buffer, tray loading.
Int. [CRX145S] / Ext. [CRX145SX] $279/$339

Plextor 12x4x32 ReWritable •
Packet write, 2MB buffer, tray loading.
Int. [PXW1232B]/Ext. [PXW1232BX] $289/$349

Hewlett Packard 12x8x32 ReWritable •
Packet write, 4MB buffer, tray loading.
Int. [C4506A] /Ext. [C4506AX] $339/$399

Plextor 12x10x32 ReWritable •
Packet write, 4MB buffer, tray loading.
Int. [PXW1210TSB]/Ext. [PXW1210TSBX] $289/$349

Yamaha 16x10x40 ReWritable •
Packet write, 4MB buffer, tray loading.
Int. [YCRW2100S]/Ext. [YCRW2100SX] $319/$379

SOFTWARE

Macromedia Dreamweaver V3.0	
for Mac OS 8.1 or later (DWM30D01)	$295
Macromedia Flash V5.0	
for Mac OS 8.5 or later (FLM50D01)	$369
Macromedia Dreamweaver 3.0 w/Fireworks 3.0 Studio	
for Mac OS 8.1 or later (WBM30D01)	$399

This is just a sampling of our software. Call us or visit our webstore for complete listings.

Since 1987
MEGAHAUS
Everything High Tech
All Under One Roof

1-800-786-1184

Sales lines open: M-F 7-8, Sat 9-3, CST

www.megahaus.com

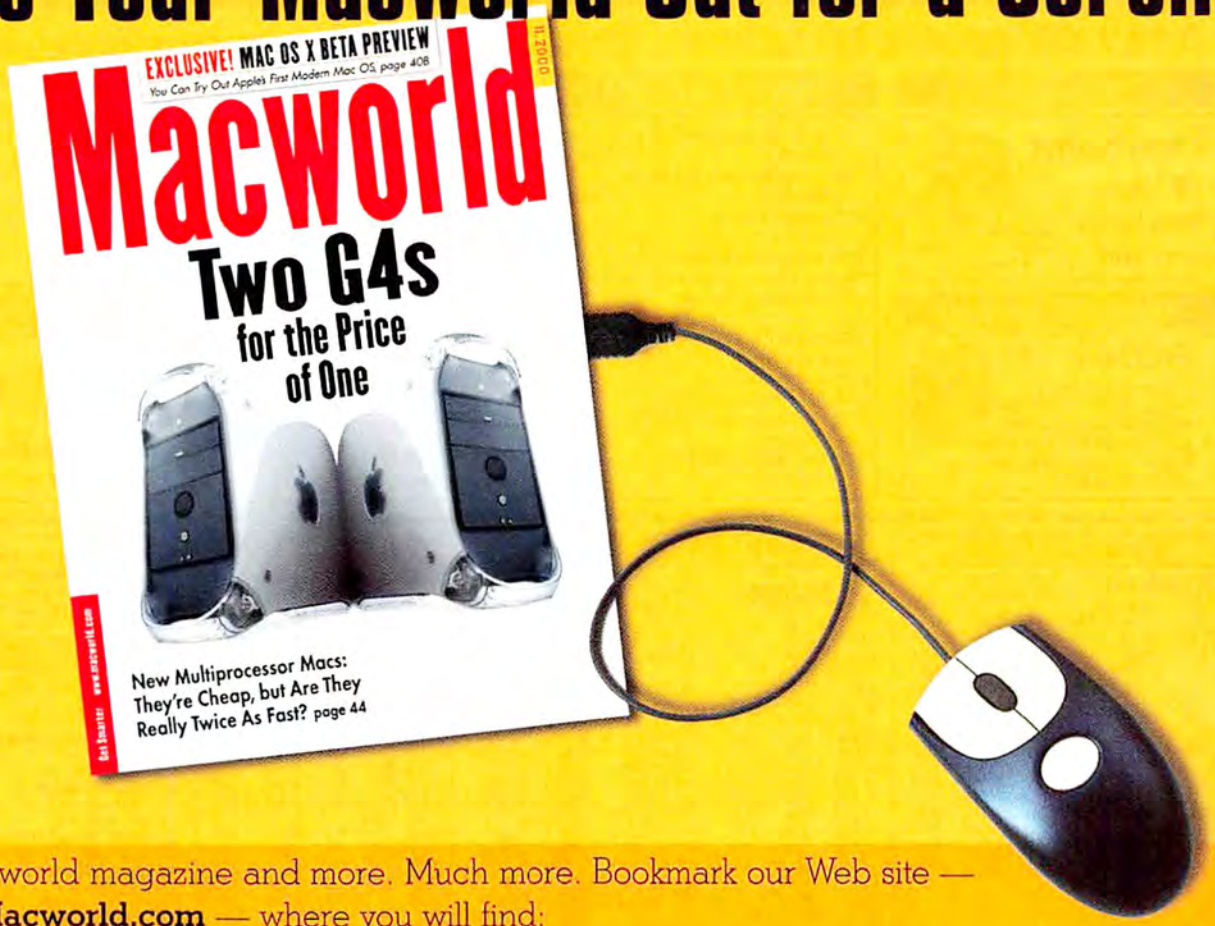
Secure Ordering • Daily Specials • #1 Drive Store on the Web!

2201 Pine Drive, Dickinson, Texas 77539
(281) 534-3919 Fax: (281) 534-6580

Prices & specifications subject to change without notice. Shipping charges are nonrefundable. Returns must be in new condition and in original packaging. Defaced items may not be returnable. No refunds on software or special orders (items not listed in ad.) All refunds subject to 15% restocking fee. All trademarks are registered trademarks of their respective companies. Personal checks held for clearance. We reserve the right to refuse any sale for any reason. Bundle price good only if sold at ad price. All warranties listed are manufacturer's warranty only. For complete terms and policies, see our website's checkout stand. ©2001 MegaHaus, Inc.

Circle 108 on card or go to www.macworld.com/getinfo

Take Your Macworld Out for a Scroll.



It's Macworld magazine and more. Much more. Bookmark our Web site — **www.Macworld.com** — where you will find:

Mac 911
Get immediate help when you need it from Mac 911, where you can interact with Macworld editors as well as more experienced users to discuss specific technological problems.

The Macworld PriceFinder
The Macworld PriceFinder is your comprehensive resource for choosing the best Mac products at the lowest prices from a wide variety of vendors.

Macworldexpo.com
Get all the latest information on Macworld Conference & Expo San Francisco -January 9 -12, 2001.

Affiliate Program
By adding Macworld.com or Macworld PriceFinder links, buttons, and banners to your site you can earn money for every visitor and new Macworld magazine subscriber you send to Macworld.com.

Free e-Newsletters
Sign up to receive the information you need before you have to search for it. Get Daily Tips, the latest News and Reviews and more-- including our new OS X edition!

Subjects
Find everything Macworld has written on a particular topic such as Photoshop, Quark, Digital Music, iMovie, Mac OSX, Games, and MS Office.

Bookmark your favorite Macworld.com theme page:

Get Inspired – Let Macworld add fuel to your creative fire!

Get Connected – Make the Web work for you.

Get Working – Macworld will show you how to improve your efficiency and get the most of your Mac.

Get Smarter – Learn how to repair your Mac and select the right hardware, software and peripherals.

Get a Life – Don't just work your Mac — use it to have some fun!

www.Macworld.com

Welcome to the Apple OS X Showcase

Macworld magazine, in conjunction with the Apple Developer Connection, built this very special Mac OS X Showcase section to keep you, our valued reader, apprised of the hottest products built especially to take advantage of Apple's new operating system. You can rest assured that this new section will grow with each passing month, spotlighting the coolest new products for Mac OS X. Be sure to check the Mac OS X Showcase monthly for a wide variety of new and innovative solutions that will make your Macintosh and Mac OS X experience as enjoyable as possible.

Top Rated Asanté Cable/DSL Router "Best Value"

Macworld

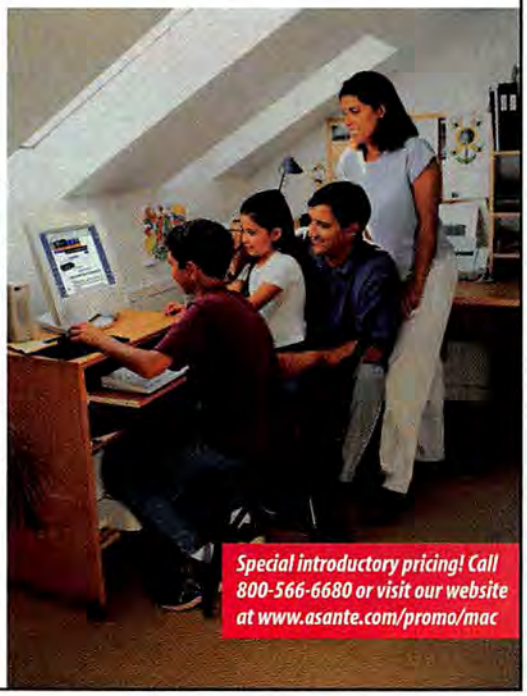
Asanté's new FriendlyNET™ routers are ideal for sharing high-speed Internet connections in your home or office. Just connect multiple Macs and PCs to share your cable modem or DSL Internet service. Advanced firewall security with integrated 4-port 10/100 switch gives you the power and flexibility to start or expand your network.

FriendlyNET Cable/DSL Router with web-based configuration

Macworld "For price and features the best value." – *Macworld Magazine*

PC WORLD BEST BUY *FriendlyNet FR3004LC January 2001* Asanté broadband router "easier to configure" – *PC World Magazine*

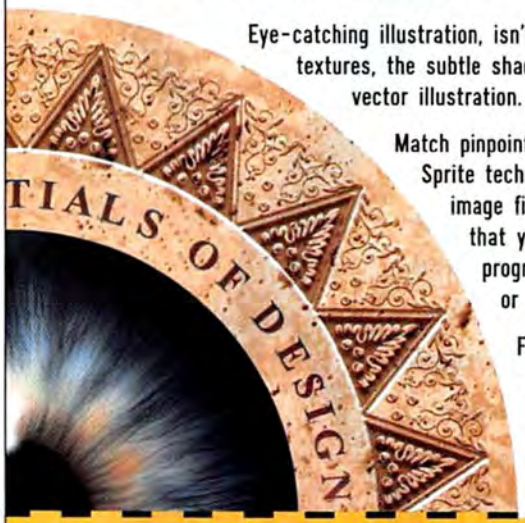
Feature Comparison	Asanté FR3004LC	Linksys BEFSR41	Netgear RT311
Web-Based Configuration	Yes	Yes	Command line required for many features
Ideal for Mac/PC networks	Yes	No	No
Advanced Security:			
Log intrusion attempts	Yes	No	No
Ports open on-demand	Yes	No, always open	No, always open
Group security	Yes	No	No
Physical security	Yes	No	No
Backup Modem Port	Yes	No	No
Print Server	Yes*	Add $170 for 1 port (PPSX1)	Add $245 for 3 ports (PS113)
Performance	Best	Slower††	Slowest††



ASANTÉ
www.asante.com

© 2000 Copyright Asanté Technologies, Inc. Asanté is a registered trademark of Asanté Technologies. The Asanté logo and FriendlyNet are trademarks of Asanté Technologies. All rights reserved. * Asante FriendlyNET Router model FR3004LC. †† Practically Networked benchmarked the Asanté FriendlyNET FR3004 series to be significantly faster than the Linksys (up to 25% faster) and Netgear (up to 42% faster) routers.

Illustration never looked so good.

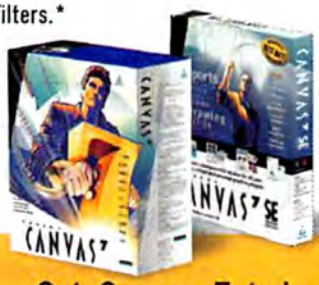


Eye-catching illustration, isn't it? And yes, despite the glistening highlights, the realistic textures, the subtle shading, and the soft air-brushed effects, this is a completely vector illustration. And it's only possible with Canvas 7.

Match pinpoint precision with painterly strokes through Canvas 7's exclusive Sprite technology. Blur vector lines, paint transparency effects, apply image filter plug-ins to vectors, text and images. It's hard to believe that you can draw like this – never mind in one, attractively priced program. When you're done, prepare your creative visions for print or web with an incredible array of over 40 file format filters.*

Feast your eyes on Canvas 7 today, and get a whole new outlook on illustration software.

DENEBA



Now available in Professional and Standard Editions

DENEBA CANVAS 7

www.deneba.com/macworld
800.7DENEBA

No comparison.

Get Canvas 7 today!
Professional Edition $375
Competitive Upgrade $199.95
Standard Edition $99.95

© 2000 Copyright Deneba Software. This ad was created using nothing but Canvas 7. *40 file formats available in Canvas 7 Professional Edition only.

Intelligent Web site Monitoring and Analysis Software

FUNNELWEB

now for the Mac OSX

New features:
- pdf Output
- Incremental Analysis
- Cluster Analysis
- Streaming Media Analysis
- Clickstream Analysis
- Solutions available from $399

Any Server, Any Platform, Any Time

Download Free Demo today: www.funnelweb4.com

Toll free 1800 551 5282 info@activeconcepts.com

hp invent

Visit
www.hp.com/go/mac-connect
for HP Mac OS X information

Are you Carbonized?

Place your ad in the OSX Showcase today.

Call Now!
1-800-597-1594

Macworld Showcase Featured Advertisers

Developer Showcase

Century Global	centuryglobal.com
Granite Digital	scsipro.com
FireWireDirect.com	firewiredirect.com
ADS Technologies	adstech.com
Orange Micro	orangemicro.com
Ratoc Systems	ratocsystems.com
Adesso	adessoinc.com
Contour Design	contourdesign.com
Keyspan	keyspan.com
Griffin Technology	griffintechnology.com
Mace Group	macally.com
BellStor	bellstor.com
Aten	aten-usa.com
EZQuest	ezq.com
Worth Data	barcodehq.com
InteliTech	maclabel.com
Photo Control	photo-control.com
iProof Systems	iproofsystems.com
Lind Electronics	lindelectronics.com
Marathon Computer	marathoncomputer.com
On A Dime	onadime.com
Strydent	strydent.com
Formac	formac.com
Archos	archos.com
Openlink Software	openlinksw.com

Services Showcase

Copy Craft	copycraft.com
Presentation Services	imagers.com
Modern Postcard	modernpostcard.com
Postcard Press	postcardpress.com
Total Recall	totalrecall.com
Drive Savers	drivesavers.com
Microcom	mcrecovery.com
Lazarus	lazarus.com
Mac Academy	macacademy.com
Show and Tell	show-tell.net
Creative Juices	bigposters.com
Silicon Valley CD	svcd.net
NetNation	netnation.com
Action Front Data Recovery	datarec.com
Interland	interland.net

Direct Showcase

The Camera Zone	thecamerazone.com
Abe's of Maine	abesofmaine.com
Music Industries Corp.	musicindustries.com
Biomorph	biomorphdesk.com
POS Direct	posdirect.com
Big Orange	bigorangetech.com
Academic Superstore	academicsuperstore.com
Software Showcase	softwareshowcase.com
Journey Educational Mktg.	journeyed.com
Creation Engine	madaboutmac.com
MacResQ	macresq.com
PowerOn Computers	poweron.com
Compu America	compu-america.com
MacMart	macmart.com
Innovative Computers	icni.com
PowerMax	applemugstore.com
MCE Systems	powerbook1.com
Shreve Systems	shrevesystems.com
Mac of all Trades	macofalltrades.com
Data Tech Remarketing	datatech-rmkt.com
Digital Prepress	prepresssytems.com
Mac Power	macpowerinc.com
MacPro	mac-pro.com
L.A. Computer Center	lacc.com
PowerMax	powerdv.com
MegaMacs	megamacs.com
Data Memory Systems	datamem.com
Mac Solutions	macsolutions.com
Tahoe Peripherals	tahoeperipherals.com
Memory Masters	18004memory.com

For more information contact Niki Stranz or Carol Johnstone at (800) 597-1594.

The Best FireWire Drives for DV Professionals!

Slim FireWire External Hard Drive

Manhattan Series

40G FireWire External Hard Drive for ONLY $239

9"x5.25"x1.75"

Perfect for:
- DV Editing.
- DTP.
- Data Archiving.
- MP3 Music Jukebox.

Key Features:
- 5 Capacities to choose 20G, 30G, 45G, 60G, 75G.
- Daisy Chain up to 63 devices.
- Hot swappable.
- No device IDs or termination.

FireWire/USB 2.5" Combo Drive

SoHo pro series

It's Portable! 5.67"x3.23"x1.14"

12G $349

Why not have the best of both worlds? Now you can have both FireWire and USB ports in this one mini drive! How convenient!
- 6G,12G, 20G, 25G, 30G available.
- FireWire/USB in the same drive.
- Ultra-portable. Ultra-slim.
- Hot-pluggable between different computers.

FireWire 2.5" Mini Drive

SoHo series

It's Portable! 5.67"x3.23"x1.14"

12G $259

CGI now provides you with the ultra-slim, portable IEEE-1394/ FireWireDrive. It's fast and easy to use. No IDs setting required.
- 6G,12G, 20G, 25G, 30G available.
- IEEE-1394/FireWire
- Ultra-portable. Ultra-slim.
- Hot-pluggable between different computers.

Storage Upgrade Solutions

Internal Hard Drives

IBM Ultra 160 SCSI

Size	RPM	Cache	Model no.	Price
9.1G	10,000	4MB	DDYST09170U	$231
18.3G	10,000	4MB	DDYST18350U	$390
36.9G	10,000	4MB	DDYST36950U	$588

IBM IDE Ultra ATA/100

Size	RPM	Cache	Model no.	Price
20G	5400	512K	DTLA-305020	$107
20G	7200	2MB	DTLA-307020	$135
30G	7200	2MB	DTLA-307030	$159
45G	7200	2MB	DTLA-307045	$220
60G	7200	2MB	DTLA-307060	$377
75G	7200	2MB	DTLA-307075	$490

Maxtor IDE Ultra ATA/100

Size	RPM	Cache	Model no.	Price
20.4G	2MB	7200	DM520494H4	$130
20.4G	2MB	5400	VL320494H2	$105
30.7G	2MB	5400	DM530734H2	$117
30.7G	512K	7200	VL330734H4	$209
61.9G	2MB	5400	MS619648	$289

2.5" IDE Hard Disk Drive

Size	RPM	Cache	Model no.	Price
6.0G	4200MB	256K	6015MAP	$125
10G	4400MB	1MB	1016GAP	$153
12.4G	4200MB	1024K	1214GAP	$188
20G	4400K	1MB	2016GAP	$255

Size	RPM	Cache	Model no.	Price
6.0G	4200MB	512K	DARA-206000	$130
10G	4200MB	512K	JSA-210	$185
12G	4200MB	512K	DARA-212000	$168
20G	4200K	2MB	DJSA-220	$279

FireWire to SCSI Converter

The FireSCSI adapter enables existing and new high-speed SCSI peripherals to be attached to the FireWire port of a Macintosh or Windows PC. Ideal for Apple G3/G4, iMac DV, or any FireWire equipped PC.

$89

- Plug-and-play high speed connectivity for SCSI peripherals
- Simple hardware installation
- Add SCSI peripheral support to iMac DV
- Saves your legacy SCSI peripherals

FireWire + USB PCI Card [CG-1394USB]

$89

- Add two FireWire ports and two USB ports to your Mac or PC.
- OHCI compliant.
- Support serial bus data rate up to 400 Mbits/sec.
- Supports USB 1.1

PCI ATA Card [CG-ATA 66]

$95

- Supports up to four internal ATA 66 Drives
- Easy Installation
- Compatible with most PCI-based Power Macintosh

FireWire Card Bus PC Card [CG-1394PC]

$89

- Add two FireWire ports to your Power Book or Note Book
- Perfect solution for any PCMCIA Laptop
- Mac and PC compatible

FireWire HDD CD-RW Case [CG-3525E] $139

- Accomodate 3.5" or 5.25" IDE/ATAPI drives such as HDD, Zip and CD-RW.
- Plug and play, hot swappable capability.
- No jumper pins or ID setting.
- Built-in 50W power supply; universal auto-switching 90~240V.
- Built-in 40x40 mm fan.

(Note: drives are sold separately)

PCI FireWire Card [CG-1394HC] $39

- Add two FireWire ports to your Mac or PC.
- OHCI compliant.
- Support serial bus data rate up to 400 Mbits/sec.
- Peer to peer communication structure.

iBook Sling-Bag $39

- Specifically engineered for iBook users.
- Designed to easily carry and protect your investment whether the iBook is in use or in transport.
- Zip to easily close and protect belongings.
- Carry iBook by hand or by shoulder strap.
- Truly a 24 hour standby carrying case.
- Design allows room for necessities such as: power adapter & power cord.

FireWire

Century Global Inc.

www.centuryglobal.com

(Mon-Fri 8am-6pm PST)

TOLL FREE #: 1-877-608-1394

Resellers inquiry are welcome.

MasterCard VISA

*All the prices include 3% cash discount.
*Prices and specifications subject to change without notice.
*Non-defective returns are subject to a 15% restocking fee.
*Shipping charges are non-refundable.
*For complete terms & policies see our web-site.

Not responsible for typographical or pictoral errors. The FireWire® logo is a trademark of Apple Computer, Inc., used under license therefrom. All other product names mentioned herein are trademarks or registered trademarks of their respective owners. ©2000 Century Global, Inc. All rights reserved.

Custom ULTRA 160 SCSI LVD - Ultra 100 IDE - Firewire 1394

If you want Ultra SCSI Performance use our Quality Cables & Active Terminators. High Performance Solutions for Ultra100 IDE and Firewire Improves Performance

SCSI Ultra 160 RAID | FireWire RAID | IDE Ultra 100 RAID

Speed Breakthru...40 MB/s!!!

SCSI Vue™ SCSI RAID Enclosures

Ultra 160 SCSI Towers 7 & 9 Bay

Temperature ALARM!

From: $999

SCSI Vue™ Ultra 160 SCSI Cases

From: $99

OPTIONS:
- Ultra 160 LVD Cable Kit
- Dual Hot-Swap Redundant PS
- Hot-Swap SCSI Bays w / Bracket
- 2-3 Fan Bay Coolers w / Brk
- Temp Alarm System

- Ultra SCSI Custom Teflon Cable Available
- Custom Enclosures in 1 Day for Raid & Arrays

SCSI Vue™ RackMount RAID

Our 8 Bay Rack Mount Enclosure includes a 250 watt power supply. These cases are commercial quality. Optional rails are also available.

$399

Bay Cooler Kit keeps those HOT Ultra SCSI Drives COLD as ICE!

Dual Fan & Bracket $29

HOT SWAP Pull Out Bays Compatible with all 50 pin & 68 pin SCSI Buses up to Fast SCSI 2. From: $79

Active Digital SCSI Repeater

From: $99

PS Included

- Models for all SCSI types
- Fixes SCSI Cable Problems
- Doubles Cable Length (up to 18')

SCSI Vue™ Gold Diagnostic Cables

NOW! Ultra-3 LVD 160MB/s!

Benefits:
- No Loss Of Important Data
- Faster Performance
- Test Cable Integrity

Features:
- Diagnostic Indicators
- Large Ferrite Filters
- Triple Shielding (Unique Design)
- Double Gold 20u" Plated Connectors
- Extra Heavy 26 Gauge Wire
- 100 Styles in Stock

From: $39

Gold VHD Ultra160 SCSI Cable

From: $109

Features:
- New .8mm Ultra 160 LVD SCSI Connector
- Triple Shielding (Unique Design)
- Double Gold 20u" Plated Connectors
- Diagnostic Indicators
- Large Ferrite Filters

LVD-TPO Teflon * Internal Cables

*Teflon® is a registered trademark of DuPont

Benefits:
- Less Errors, Ultimate Performance
- Silver Wire Improves Signal Quality

From: $39

Features:
- Perfect 90 or 132 Ohm Impedance
- Custom in 1 Day
- Triple Pronged Connector - Gold contacts Silver Wire

Replacement Cable for External Drive Cases

68 Pin Replacement Cable for External Drive Cases

TEFLON TPO

8 Bay Tower

FireVue™ FireWire RAID systems

offer up to 480 gigabytes of storage. Using the second generation of FireWire. We are now able to get a true 40MB/s data transfer rate; 3 Times faster than the competition!

480 Gigabyte 8 Hot-Swap Bays

8 - Bay Tower holds 480 Gigabytes of Hot-Swappable Drives. Bays incorporate exclusive Blue Neon Light.

$3995 Kit

4 Bay Tower

240 Gigabyte 4 Hot-Swap Bays

4 - Bay Tower holds 240 Gigabytes of Hot-Swappable Drives. Bays incorporate exclusive Blue Neon Light.

$1995 Kit

2 Bay Tower

120 Gigabyte 2 Hot-Swap Bays

2 - Bay Tower holds 120 Gigabytes of Hot-Swappable Drives. Bays incorporate exclusive Blue Neon Light.

$995 Kit

Our Hot-Swappable RAID Systems offer quick and easy bay interchangability and complete fault tolerance. Each Hot-Swap Bay includes 2 fans and our exclusive Blue Neon Light.

Systems can be custom configured to your specific needs. Our RAID Systems use standard IDE ATA100 Drives offering low cost and high reliability. Each system uses Maxtor DiamondMax 60 Gigabyte 7200rpm drives with three year warranties.

FireVue™ FireWire 1394 Adapters

These Firewire 1394 Gender Changer and Cable Extenders allow you to use your current cables to extend or change your connector ends. Combined with the added versatility that these devices offer is the ability to also monitor 1394 power. Our exclusive LED circuit lets you know that power is being supplied to the 1394 bus.

4-4 Pin - Connects 2 Cables
6-6 Pin - Connects 2 Cables
4-6 Pin - Converts 6p Cable
6-4 Pin - Converts 4p Cable

$19.95

FireVue™ FireWire 1394 6 Port HUB

These Firewire 1394 HUB / Repeater allow you to connect up to 6 devices. They can also be wired together to offer unlimited capabilities. Power Supply guarantees proper operation of many devices at the same time and rejuvenates the lines.

Power Source Included

$129

FireVue™ FireWire 1394 to Cardbus

$129

The perfect solution for any PCMCIA Laptop or Portable computer. This card is both Mac and PC compatible. Gives you two 1394 6-pin Firewire connectors. Supports up to 400Mb speed.

Optional Power Supply

FireVue™ FireWire 1394 to PCI Host

$129

Gives you four 1394 6-pin Firewire connectors. IEEE Standard compliant with auxiliary power connector on card. Supports up to 400Mb speed. Works with Mac OS 8.6 or newer, just plug it in. Also supports Windows 98SE, 2000, and 2000 Server.

FireVue™ Gold FireWire 1394 Cables

From: $29

Diagnostic LED monitors power on the Firewire cable. Gold Connectors, Ferrite Beads, and perfect cable characteristics. Lengths up to 32', both 4 and 6 pins.

Our 32' 6 pin to 6 pin Cable is a Granite exclusive. These cables go longer because they are made better! 2 x Specification.

RAID Cables

FireVue™ FireWire 6" Patch Cables

LED shows that power is being supplied

$19.95

6" Patch Cable connects External Cases or Internal Drives in Raid Cases. Large Ferrite Bead protect cable from static and noise interference.

FireVue™ FireWire Case Kits

Simply add your IDE drive to our case and you have an instant FireWire Drive. Two models, 3.5" and 5.25". Supports Hard Drives, CD-Roms, tape, and a variety of other devices.

$129

FireVue™ FireWire Hot-Swap Bay

The Hot-Swap FireWire Bays fit all standard 5 1/4" openings. Can be used in any standard enclosure or computer opening. Comes with Neon glow bar indicator, Ultra fast 40 MB/s second generation speed, and two cooling fans.

$159

SCSI Vue™ Active Terminator

Ultra-160 LVD
68MD
SCSI
Optional Remote Display
From: $39

Seven models available with optional Remote LED Pak. These are the finest terminators available, they fix SCSI problems and improve reliability.

Benefits:
- Improves SCSI Bus Performance
- Less Errors; More Reliable Data Transfer
- Diagnoses Problems
- Analyzes Signal Quality

Features:
- Active Regulation
- Fast 50 & Fast Wide 68
- Status Indicators
- Gold Contacts

Hot Swap Powered Terminator

$49

Now you can safely remove any SCSI device from a SCSI chain by simply clicking a switch. Optional Power Supply provides termination power to portable setups or when termination power is not being supplied properly.

SCSI Cable Tester - LED Readout

Special Package of all 3: $99

This Digital SCSI Cable Tester can test all the popular cable styles for opens, shorts, and unreliable operation. Battery powered for easy use an

Three models to choose: • 50 IDC • 50 Cen • 68 MD

Gold Diagnostic Adapters

- Both 50 pin and 68 pin (all combinations)

From: $39

Gender Changer

- 68 Pin Drive to 50 Pin IDC (runs wide drive as narrow)

Drive Bus Changer (run 68 pin on 50 pin bus)

- 80 Pin SCA Drive to 68 Pin (converts SCA to 68 SE or LVD)

Ultra-160

For Adaptec Ultra Wide Cards
- Adapters with partial termination built in for 68 to 50 converters (converts Host Adapter)

68 Pin to 50 Pin Centronics or 50 Pin MicroD Adapters

IDEVue™ IDE RAID Systems

120 Gigabyte 2 Hot-Swap Bays

$955 Kit

Kit Includes:
- Hot-Swap Case, 2 Bays, with 65 watt power supply.
- Two Hot-Swap Bays with fans
- Two 36" Teflon Cables
- Two Maxtor 60 Gigabyte 7200 rpm ATA 100 IDE Drives
- One 2 Port Escalade™ PCI RAID Controller.

240 Gigabyte 4 Hot-Swap Bays

$1895 Kit

Kit Includes:
- Hot-Swap Case, 4 Bays, with 200 watt power supply.
- Four Hot-Swap Bays with fans
- Four 36" Teflon Cables
- Four Maxtor 60 Gigabyte 7200 rpm ATA 100 IDE Drives
- One 4 Port Escalade™ PCI RAID Controller.

480 Gigabyte 8 Hot-Swap Bays

$3695 Kit

Kit Includes:
- Hot-Swap Case, 8 Bays, with 250 watt power supply.
- Eight Hot-Swap Bays with fans
- Eight 36" Teflon Cables
- Eight Maxtor 60 Gigabyte 7200 rpm ATA 100 IDE Drives
- One 8 Port Escalade™ PCI RAID Controller.

All RAID Cards include support for RAID 0, 1, 10, Hot-Swap and Hot-Spare. Ultra Fast 100MB/s with low CPU overhead. These cards are unbelievably fast.

IDEVue™ Ultra 100 RAID PCI Host

Speeds up to 100MB/s! 1/2 of a Terabyte with today's new larger capacity drives. Cost effective and fast. Linux, Win 98, NT, 2000, Mac.

Raid 0, 1, 10, Hot-Swap Hot-Spare Support

Offered in three packages, 2 Drive, 4 Drive, and 8 Drive models, it is now easy to configure a RAID System that fits your needs. Using the exclusive TwinStor™ and DiskSwitch™ technologies, Escalade supports RAID 0, RAID 1, and RAID 10. It also allows for both HOT-SWAP and HOT SPARE support. These exclusive technologies create an environment that provides both data security and blistering fast speeds.

$145 2 Port Model

$245 4 Port Model

$445 8 Port Model

IDEVue™ Ultra 66/100 TPO Cables

Ultra 66/100 TPO Cables use 80 conductor cable and special 40 pin connectors. The best you can buy for internal or external use.

From: $29.95

IDEVue™ Ultra 100 Teflon Cables

Ultra 66/100 Teflon Cables use 80 conductor cable and special 40 pin connectors. These are designed for RAID applications or where additional shielding and protection is required.

From: $29.95

Up to 36" Long! (double the specification length)

IDEVue™ Ultra 66/100 Hot Swap Bay

$39.95

The IDE Ultra66/100 Hot Swap Bay works with hard drives and removable drives. Includes cooling fan, key lock, and 96 pin high reliability interconnection. LED indicators for Power and HDD Activity.

Fan

Key Lock

For true Hot-Swap you must use a Host Adapter

FREE Technical Support!!!

Available to everyone, customer or not.

Granite Products Are The Best Because They're Engineered Right.

Online Catalog at... www.scsipro.com

Granite "The Solution Company"

Granite D•I•G•I•T•A•L

3101 Whipple Rd. Union City, CA. 94587 Ph: 510-471-6442 Fax 510-471-6267

Circle 186 on card or go to www.macworld.com/getinfo

FireWire

Complete FireWire Solutions

Fast • Reliable • Affordable

FirewireDirect

Storage • Card Readers • Cables • PCI Host Adapters • CardBus • CDRW • DVD-RAM

FireWire Storage
Starting at $269

- 20GB to 150GB RAID

FirewireDirect offers the most extensive line of FireWire/iLINK components, peripherals and solutions available today. Our products support all major platforms including Macintosh, Windows and Linux. For a complete listing of our products, please visit us on the web.

PCI Host Adapters Starting at $39

- 3 Port FireWire
- 6 Port FireWire/USB
- FireWire/ATA 100 RAID
- 100% OHCI compliant
- Utilizes TI chipset
- Transfer rates up to 400Mbps

Compact Flash

- 4.5 times faster than USB readers

FireReader Starting at $99

SmartMedia

CDRW & DVD-RAM Starting at $260

- CDRW 8x8x32
- CDRW 16x10x40
- 9.4GB DVD-RAM

CardBus $89

- Dual port CardBus
- 100% OHCI compliant
- Utilizes TI chipset
- Transfer rates up to 400Mbps

Reseller and Distributor Inquiries Welcomed.

Tel 512-302-0012 • Fax 512-302-0064 • www.firewiredirect.com

Finally, a Better WebCam

PYRO 1394 WebCam

- Clear, vivid pictures
- Smooth streaming video
- Cross-platform video conferencing

FireWire technology offers the best image quality over the Internet. Unlike USB cameras that compress the video stream, PYRO Web Cam has ZERO compression & utilizes a high-quality Sony® CCD so you can make the best possible impression. Also includes: ArcSoft VideoImpression; PhotoFantasy 2000 & VideoLink Pro LE, which enables Mac & PC users to video conference with each other.

FireWire® Mac

ADS TECHNOLOGIES

Available at: Fry's, MAC Connection, Microcenter, Tiger Direct, Comp USA, Circuit City, Outpost.com and everywhere else!

800.888.5244 • 562.926.1928
www.adstech.com

PYRO BasicDV - PYRO 1394DV For Notebooks - PYRO Web Cam

Circle 151 on card or go to www.macworld.com/getinfo

ADD FIREWIRE To Your Computer

Let Orange Micro's OrangeLink™ add the blazing speed of FireWire to your Mac. FireWire will allow up to 400Mbps transfer rate for data. This allows you to edit your home videos and transfer data faster than you can call 911. Think of all the possibilities. Your friends and relatives will be amazed at how fast you edit and send out home videos! Go with Orange Micro, the FireWire Specialist, for all your FireWire needs.

iBOT Desktop Web Cam

$119

iBOT harnesses the speed and power of FireWire unmatched by the slower USB based web cams. With a data transfer rate that's 16 times faster than traditional USB web cams, you'll experience high quality clear video. The iBot is great for video teleconferencing, video e-mail, and movie editing with the included software. The pro version has additional software and a microphone for a low $149.

OrangeLink+ FireWire/USB

$139

Update your Mac with this PCI combination board. With this addition to your system, you can take advantage of the latest high performance IEEE-1394 peripherals, including digital video cameras, as well as all the current USB devices. For making your home videos, free video editing software is included.

Orange Converter

$99

Continue to enjoy the great advantages of SCSI with your new Mac. iMac and Cube users can now have access to SCSI peripherals. Orange Micro's innovative FireWire to SCSI converter is easy to hook up and use. It connects to your FireWire port and converts all SCSI data from your SCSI peripherals - input and output.

OrangeLink FireWire CardBus

$99

Perfect add-on interface for your Powerbook with a CardBus slot. Compatible with Adobe® Premiere® and Apple's Final Cut Pro™ for video editing and all IEEE-1394 hardware peripherals such as DV cameras and VST® portable hard disks. Get started on your own movies with the included video editing software.

- FireWire + SCSI Board $229 *80MB/sec SCSI; includes video editing software and cable*
- FireWire PCI Board $69 *includes video editing software and cable*
- FireWire Hub $99 *5 additional ports and cable*
- FireWire Repeater $49 *15 ft. 1394 extension cable*
- Grappler+, SCSI/Serial $99 *10MB/sec SCSI plus serial and cable*
- Grappler SCSI Boards $49-$69 *10MB/sec and 20MB/sec SCSI*

ClubMac (800)217-9153 Fry's Electronics

Info: www.orangemicro.com
Orders: www.1394firestation.com

Orange Micro inc.

Circle 61 on card or go to www.macworld.com/getinfo

RATOC Systems,International

FireWire Storage

FireWire Mac

radialogic included.

Cute and Cool!

FireWire Plug & Play connectivity for Ultra-SCSI devices!
Hook up existing SCSI devices to FireWire port !

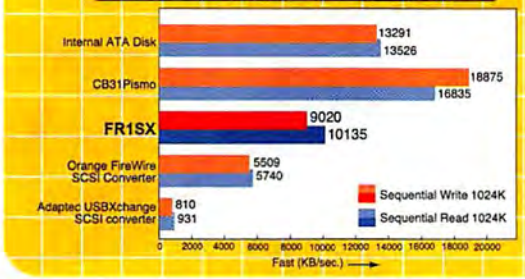
FireWire to Ultra SCSI Converter

FR1SX

- **Changes Ultra SCSI device into FireWire storage.**
- **Quick and Easy installation.**
- **Compact, Just fit to SCSI-II connector.**
- **Allows true Plug & Play.**
- **Allows easy peripheral sharing with WindowsPC and Mac.**

The product name is changed to FR1SX from FireREX1.

PowerBook2000 HDD Bench Mark Testing Report



2FireWire 400Mbps ports

High-perfomance FireWire CD-RW drive

FireWire Portable CD-RW Drive

FR-CW84

- **High-performance portable FireWire CD-RW drive.**
  - **The fastest portable CD-RW drive.**
    - **8x record, 4x rewrite and 24x playback.**
  - **Compact, ultra thin(20mm) and ultra light-weight(480g). Ideal for portable.**

FireWire Desktop External CD-RW Drive

FR-CW1610

- **High-performance desktop FireWire CD-RW drive.**
  - **The fastest desktop CD-RW drive.**
    - **16x record, 10x rewrite and 32x playback.**
  - **Supports 'Burn Proof' technology. It frees from 'Data underrun error'.**

FR-CW84/FR-CW1610

[Common features]

- **Supports FireWire Plug & Play and hot-swapping.**
- **Supports two FireWire(6P) 400Mbps port for FireWire daisy chain.**
- **Includes Adaptec Toarst 4.1.1 for MacOS.**
- **Includes Adaptec Easy CD Creater 4.1.1 and DirectCD 4.1.1 for Windows.**
- **System requirement.**
  - PowerMac/PowerBook/iMac/iBook with FireWire port running MacOS9.0.4/FireWire 2.4 or later.
  - WindowsPC with IEEE1394 port running Windows98SE,Windows2000 or WindowsME.

- **Supported Writing modes:**
  CD-ROM, CD-DA(Audio CD), CD-ROM/XA, Audiocombined CD-ROM,CD-I, CD-I ready, CD Bridge, Video CD, CD-Extra, CD-R/W and CD-Text, ISO9660, PhotoCD
- **Supported Playback modes:**
  CD-ROM, CD-DA(Audio CD), CD-ROM/XA, Audiocombined CD-ROM,CD-I,CD-I ready, CD Bridge, Video CD, CD-Extra, CD-R/W and CD-Text, CD-R(Orange Book, Partll), CD-R/W(Orange Book,Partll), ISO9660, PhotoCD
- **Supported Writing methods:**
  Disc-at-Once, Session-at-Once, Track-at-Once, Multi-session, Packet-Writing.

J&R *www.jandr.com 800-221-8180*
MCE PowerBook *www.powerbook1.com 800-5000-MAC*
ClubMac *www.clubmac.com 800-260-8549*
APS Tech *www.apstech.com 800-395-5871*
Smalldog Electoronics *www.smalldog.com 802-496-7171*

Advanced Micro Systems *www.amsus.com 310-357-4400*
Outpost.com *www.outpost.com 877-688-7678*
FireWireShop *www.firewireshop.com 408-955-9229*
EMJ(Canada) *www.emj.ca 800-265-7212*

Distributed by INGRAM MICRO

RATOC Systems,International

See **www.ratocsystems.com** to learn more information
phone **408-955-9400**

Circle 188 on card or go to www.macworld.com/getinfo

ADESSO
Input Specialists

KEYBOARDS

----- and a whole lot more!!

• USB Ergo Keyboard
• USB Mini Keypad
• USB Scrolling Mouse
• USB Optical Mouse

TRUFORM™ is CONTOURED

USB

Visit us at www.adessoinc.com

Circle 166 on card or go to www.macworld.com/getinfo

Rise Above the

MSRP $24.95

All New
G-Riser™

Heavy-duty legs designed to raise G3's & G4's four inches off of the floor, which reduces dust intake and improves airflow. Perfectly complements the style and look of the computer enclosure, the G-Riser not only adds value to system operation, but adds an air (no pun intended) of distinction to the platform's architecture.

Check out our other G3 & G4 products

www.contourdesign.com

G3 and G4 are registered trademarks of Apple Computer, Inc. The G-Riser is a trademark of Contour Design, Inc.
© Copyright 2000 Contour Design, Inc. ALL RIGHTS RESERVED.

Circle 169 on card or go to www.macworld.com/getinfo

The Easy-Switch

Share your **monitor, mouse, keyboard & USB peripherals!**

- Support for both Mac & PCs.
- Looks and works great with new G4s!
- Available for 2, 4 or 8 computers.
- Includes all necessary USB and video cables!
- PCI Compatibility Kit available for beige Macs.
- ADB version also available.

MoniSwitch

USB

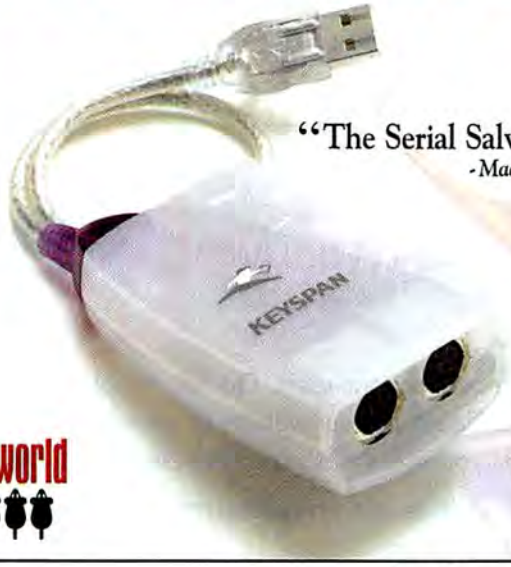
Dr. Bott

Ask about our reseller program!

www.drbott.com
Toll-Free (877) 611-2688

Circle 173 on card or go to www.macworld.com/getinfo

Still the World's Best Selling USB Serial Adapter.



"The Serial Salvation..."
-MacWorld 11/99

Macworld

Compatible with more printers!
Prints up to 4 times faster!

USB Twin Serial Adapter
Add 2 Mac serial ports to your USB Mac ($79)
- For use with tablets, modems, cameras and many printers
- Get two ports for the price of the single port solutions!

Keyspan FireWire Cards
- PCI: Add 3 FireWire ports to your Mac or PC ($89)
- CardBus: Add FireWire to Your Laptop ($99)
- Includes QuickTime Pro & FireWire Cable

5 Year Warranty!

USB PDA Adapter
Connect Palm organizers to your USB Mac or Win98 PC ($39)

Digital Media Remote
USB remote control for PowerPoint, DVD, CD, & MP3 software players ($49)

USB-Parallel Printer Adapters Mac or PC ($39)

USB 4-Port Hub ($39) **2-Port PCI USB Card** ($39)

KEYSPAN (510) 222-0131 www.keyspan.com

Circle 170 on card or go to www.macworld.com/getinfo

iMate
UNIVERSAL ADB TO USB ADAPTER

Easily Connects Any ADB Device To USB- Equipped iMac or PC Computer

The innovative iMate USB to ADB adapter allows users to easily connect their existing ADB peripherals to iMacs, Macs with USB cards, and PCs with USB. The iMate is compatible with any ADB device including mice, keyboards, trackballs, trackpads, hardware dongles, and AppleVision displays. The iMate is a simple and inexpensive solution for making the transition to USB as well as preserving your investment in ADB devices.

- One iMate can support multiple devices
- Activity LED
- Supports keyboard soft power on and off
- Successfully tested by Apple and major hardware manufacturers

G4Port
THE SERIAL SOLUTION

- Easy to install
- Economical
- Cost Effective

Also available for G3's and Cube Macs

The g4Port universal serial adapter is the perfect companion for your new G4 (AGP graphics) computer. Designed from the ground up with the G4 in mind it supports every serial device that works on your older Macs.

The g4Port replaces the internal modem for 100% serial compatibility and provides a great transition for people with existing serial equipment. *(Internal modem must be removed)*

SUPPORTS:
- Localtalk Printing & File Sharing
- Midi Interfaces • Modems
- PDAs/Palm Pilots • Serial Printers

GRIFFIN TECHNOLOGY

iMic
USB AUDIO INTERFACE

Full USB Plug and Play Operation For Audio Playback and Recording

The iMic is the ideal audio interface for Macs without audio input capabilities, like the iBooks and G4 Cubes. You can use it to attach virtually any audio device to your USB equipped Mac—microphones, headsets, stereos, turntables, music equipment and more. Designed for both professionals and hobbyists, the iMic provides superior audio input/output quality.

- USB audio input and output
- Supports up to 24 bit audio recording
- High signal to noise ratio (typical 95 dB)
- Supports mic level and line level signals
- Works with any Mac with USB ports
- Inexpensive

615.255.0990

info@griffintechnology.com 1619 Elm Hill Pike, Nashville, Tennessee 37210 www.griffintechnology.com

macally
iwebkey®

USB Wireless Multimedia Keyboard

macally AirStick

macally ioptinet

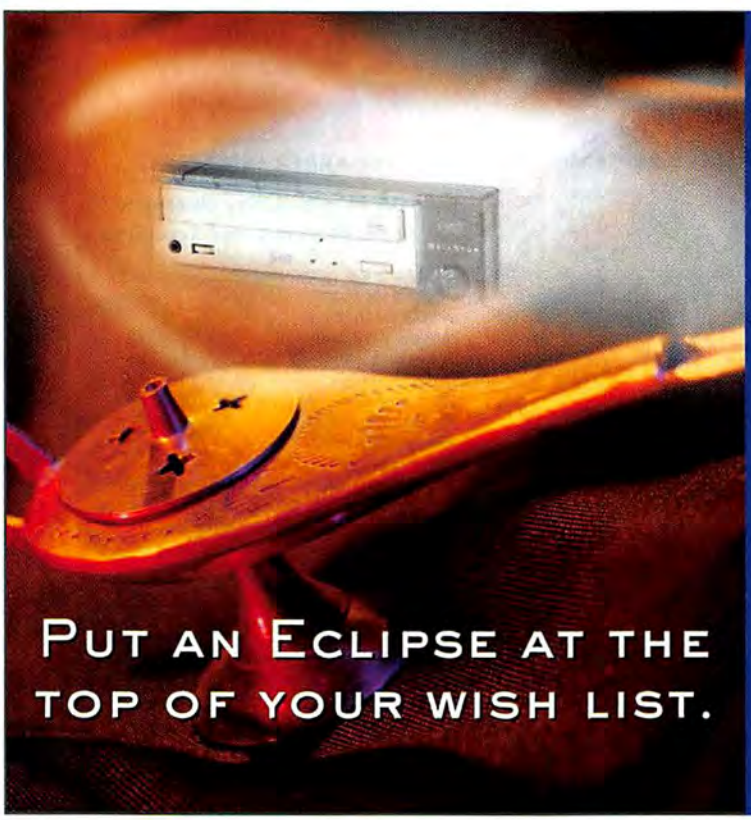
PCIFireWire/USB

macally™

Macally is proud to bring you the latest USB and FireWire peripherals for Mac users. Our full line of products are specifically designed for your Mac to improve your productivity. Please visit our website to see what Macally has to offer for all your peripheral needs. We work hard to provide you with the best peripherals for your Mac.

Call us for dealers near you 1-800-644-1132 or visit us at: www.macally.com

All trademark or registered trademarks are the property of their respective owners



ECLIPSE FROM BELLSTOR, the first simple high-performance storage solution. Featuring the high speed FireWire interface, the BellStor Eclipse is available in Hard Disk, Tape and CD-RW models.

- Data transfer rates up to 400 Mbps
- Simple Plug & Play installation
- Hot-Pluggable
- Auto-configuring
- No device ID's or termination

"...if you're craving a FireWire CD-RW drive, put this one at the top of your list."

BUZ ZOLLER
Mac Addict, July 2000

BELLSTOR
SIMPLIFYING STORAGE SOLUTIONS

www.bellstor.com · (800) 800-1513

For more info. please contact us at 1-888-999-2836

Huh?

FireWire / USB / KVM for your Macintosh. by IOGEAR

KVM For Macintosh

With the MiniView™ USB KVM, you can share USB peripherals - including a keyboard, mouse or any combination of USB devices -- and a monitor between multiple USB computers.

MiniView™ USB KVM 2 port (Above)

FireWire Speed

Sleek design and ultra fast connectivity lead us to develop our compact 3 and 6 port MiniHub FireWire. They provide a convenient, Plug-N-Play way to expand your current FireWire set-up.

MiniHub FireWire (Above)

USB Connectivity

Because most computers come equipped with only one or two USB ports, it's necessary to use a USB hub when connecting additional USB devices. USB hubs expand the number of USB devices a computer can handle.

USB MiniHub (Above)

More! Portable

Go to our website ***www.iogear.com*** to get the latest information on our entire product line. Visit us at **MacWorld SF Booth #4700**

FireWire PCMCIA(Top) / USB-PDA Adapter(Right)

EZQUEST®

FireWire • USB • SCSI
CDR/W's & Hard Drives
www.ezq.com

finalist macworld eddys 12x10x32

Call Us Toll Free 800-345-4220

Broadest Selection of Bar Code Products in the Industry

- Technically superior products direct from the manufacturer
- Toll free technical and pre-sale support
- 24-hour turnaround on repairs
- Free UPS Blue shipping in U.S.
- 30-day money back guarantee
- Portable & non-portable Batch Readers
- Cordless interactive R/F Terminals
- Wand, Laser, CCD, Magstripe or Slot Badge
- PostScript bar code fonts

or visit our website at
www.BarCodeHQ.com
for a complete catalog and bar code primer

Call For Free Catalog & Bar Code Primer

Worthington Data Solutions is now... WORTH data

Phone: 831-458-9938 • Fax: 831-458-9964

Selling Direct?
Sell More!
Here in the Showcase.
800-597-1594

Want to Print Bar Code Labels?

maclabel.com

LABEL PRINTERS

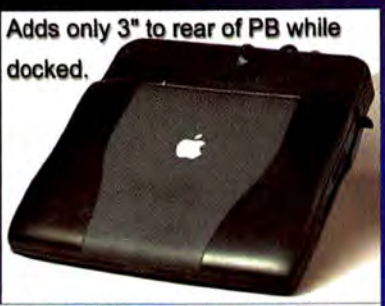
USB
Ethernet
Appletalk
HP PCL5, LJIII

IntelliTech INTERNATIONAL
PH: 800-694-3034
iii@intellibar.com

PowerBook Users!

Convert your PowerBook to a desktop system (or back) in seconds.

Adds only 3" to rear of PB while docked.



BookEndz
Docking Stations

Only $229.95 !

Eliminates cable confusion and damage to connectors

www.photo-control.com

BookEndz
Division of PHOTO CONTROL CORPORATION
800-787-8078 or 763-537-3601
www.photo-control.com email: beinfo@photo-control.com

More accurate than a $300,000 proofing system!

PowerRIP 2000 makes

Proof and Print PostScript

- See your color traps with the ability to combine separations
- Recognizes named spot colors in print jobs, such as PANTONE, and selects the best CMYK match for your printer
- Includes new and improved ICC profiles for Epson, HP, and iProof's PressProof papers
- Includes SWOP, FOGRA profiles
- Accepts color matching ICCs
- Network printing included
- Drives Epson and HP ink jet printers

Add the PowerRIP PDF option to generate Web or print-ready PDFs from the same PostScript or EPS files used for PowerRIP 2000

Available at MacWarehouse or directly through iProof Systems
Tel: 321-254-4401 • Fax 321-254-6899 • www.iproofsystems.com

LIND

Lind Electronics, Inc. 6414 Cambridge Street Minneapolis, MN 55426

Auto Air Power Adapters for Apple G3 PowerBooks™ and iBooks™

TÜV

**Order Online at:
www.LindElectronics.com
or Call to Order at
#800-897-8994**

RACKMOUNT YOUR G4

(or your G3)

**mwd@marathoncomputer.com
www.marathoncomputer.com
800 · 832 · 6326**

Circle 184 on card or go to www.macworld.com/getinfo

Real-time Music & Visual Arts Software for MacOS
Download your free Onadime Player
or Onadime Composer demo today!
www.onadime.com

See the Music.

ONADIME
COMPOSER

The Live Digital Medium

- CD's
- movies
- mp3's
- pictures
- live music
- live video
- quicktime
- color shapes
- live MIDI
- real-time fx
- mouse
- QT MIDI
- tablet
- fractals

www.onadime.com

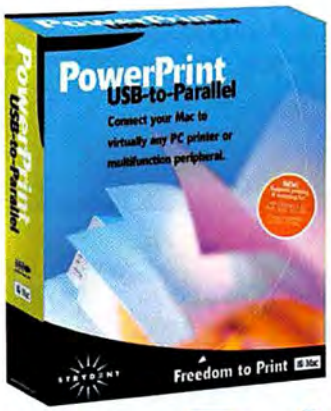
Circle 182 on card or go to www.macworld.com/getinfo

Can't Print

MacUser Macworld Macworld mactoday MacWEEK

The Solution...

Print from your Mac to over 1600 popular printers



STRYDENT

PowerPrint®

For more information or to purchase PowerPrint:
Call 888-826-7863 or visit www.strydent.com/powerprint

Circle 33 on card or go to www.macworld.com/getinfo

WHOLESALE WATERLESS COLOR PRINTING
FROM YOUR COMPUTER FILES

1000 FULL COLOR BUSINESS CARDS FOR $100 Sug. retail price $179
1000 FULL COLOR POSTCARDS FOR $149 Sug. retail price $249

Printed waterless at 300 line screen from your computer files on Super Premium 10pt. Kromekote with our FREE scratch-resistant aqueous coating.

Try Our Fast 4/C Print Quotes!

- BUSINESS CARDS
- POSTCARDS
- CD INSERTS
- CD TRAY LINERS
- BROCHURES
- BOOKLETS
- NEWSLETTERS
- POSTERS & MORE

FEATURING 300 LINE SCREEN WATERLESS OFFSET PRINTING

Rates for Brochures, Booklets and Flat Sheets are also available.

4-COLOR WATERLESS SPECIAL

1,000 24" x 36" POSTERS
24" x 36" 4-Color Posters printed 4/0 from your computer files at 300 line screen on 100 lb. Gloss Text. Price includes full bleed and FREE aqueous coating.
Get 2,000 for only $1,999

$1,699 SUGGESTED RETAIL $2,294

Authorized Adobe — GRAPHIC ARTS AVAILABLE

Copy Craft PRINTERS, INC.
4413 82nd Street • Lubbock, TX 79424 • FAX: 806.798.8190

QUARK Authorized Service Bureau

Se Habla Español

Email your requests for printing quotes to request@copycraft.com

1.800.794.5594
CALL TODAY FOR A **FREE** COPY OF OUR **NEW** 32-PAGE FULL COLOR CATALOG
Visit www.copycraft.com for more Specials...in English or Spanish!

Circle 223 on card or go to www.macworld.com/getinfo

Digital Solutions!

- INSTANT Online Quotes
- OVERNIGHT Services
- Submit Jobs Online
- Online Tech Help
- A Price You'll Like!

Send PC/Mac files by FTP or Priority Air Express to Imagers and for most output services, your finished work is in your hands the very next morning.

- Digital Short-Run Printing
- High-Res Film Scanning
- Digital Posters/Banners
- Fuji Digital Photo Prints
- Digital Color Lasers
- Slides & Overheads
- New Media Services

QuickMaster DI HEIDELBERG Direct to Offset From Your Files!
New! indigo Ultrastream Print ONLY what you need!
New! XEROX DocuColor 2060 New Capabilities & Paper Stocks!
Kodak PHOTO CD Hi-Res Scanning
DisplayMaker
Fuji

Hours...
Monday to Friday
8:00am to 8:00pm
East Coast Time

IMAGERS® Digital Production Center

We guarantee our work!
1575 Northside Dr.Ste.490 Atlanta 30318
www.imagers.com
800.398.5816/404.351.5800

Circle 207 on card or go to www.macworld.com/getinfo

full color Postcards

$95 for 500 copies

modernpostcard.com

use our own exclusive **PRO DESIGNER™** & FTP your files. We'll print your postcards & even mail them for you!

Modern Postcard™

1-800-959-8365

© 2001 Modern Postcard. All rights reserved.

207 on card or www.macworld.com/getinfo

1000 Full Color BizCards - $60!

Preferred by over 8,000 professionals!

- Superthick Stock
- Glossy UV
- No film charge
- Friendly Service
- Free Samples

1000 Color Postcards $145
black imprint on back
FREE!

Postcard Press
1-800-957-5787
www.postcardpress.com

PROFESSIONAL DATA RECOVERY SERVICE

ALL ROTATING MEDIA
MOST OPERATING SYSTEMS

No Recovery. No Fee.™

With one of the best success rates in the business, we take every step necessary to get your lost data back. In the remote chance we can't recover the data, there is no cost to you.* As one of the original data recovery companies, Total Recall has the engineering and expertise required to recover your lost data, and we've served over 80,000 customers worldwide since 1989. Total Recall...We Live Up To Our Name!

*See web site for complete details. ©2000 TRPS, LLC

Visit our new website:
- Instant on-line quotes
- Real-time job tracking
- On-line customer service
- Recovery Software

96% RECOVERY SUCCESS RATE!

TOTAL RECALL®
THE DATA RECOVERY COMPANY™
2462 Waynoka Road • Colorado Springs, CO 80915
(719) 380-1616 • Fax (719) 380-7022
800.743.0594
www.totalrecall.com

Circle 199 on card or go to www.macworld.com/getinfo

DATA RECOVERY: 800-440-1904

7 good reasons to choose DriveSavers:

1. Fastest, most successful data recovery service available.
2. Recommended and certified by **all** drive companies to open the drive and maintain the warranty.
3. Advanced, proprietary recovery techniques.
4. 24-hour, onsite, and weekend service available.
5. Retrieve recovered data instantly with DATAEXPRESS™ over secured Internet lines.
6. Featured in MacWorld, Mac Addict, MacWeek, Popular Mechanics; also by CNN, BBC, Forbes, and many others.
7. Federal and State Contracts.

DRIVESAVERS DATA RECOVERY
Since 1985
www.drivesavers.com

"We Can Save It!"

www.drivesavers.com

©2000 DRIVESAVERS, INC. 400 BEL MARIN KEYS BLVD., NOVATO, CA 94949 INTL: 415-382-2000 FAX: 415-883-0780

Circle 211 on card or go to www.macworld.com/getinfo

data recovery
www.mcrecovery.com

When you absolutely, positively have to get your data back...
- 24hr. Emergency Data Recovery
- Worldwide Services

MICROCOM
20802 Plummer St. Chatsworth, CA 91311 • 818 718-1200
800 469-2549

Data Recovery in hours.

- Over 10 years of experience with clients worldwide including Apple, NASA, HP, and FedEx.
- We've recovered more than half-a-million megabytes of Mac Data alone.
- You only pay when there's a recovery.
- Express One-Day Service is available.
- Call 24 hours a day.

415-495-5556 • FAX 415-495-5553 • RESTRICTIONS MAY APPLY
381 Clementina Street • San Francisco, California 94103

LAZARUS
DATA RECOVERY
Working at the speed of business.
800-341-DATA

Circle 217 on card or go to www.macworld.com/getinfo

Don't Wait-
Showcase Your Services Here!
800-597-1594

For computer & software training

MacAcademy

Visit us at
www.macademy.com
1.800.527.1914

Digital Imaging

Slides & Negatives	$3.75
4x5 Transparencies/Negs	$30
Large Posters & Displays	$45
Scanning: Hi & Lo Res	
Kodak Photo-CD Scans	
Short Run Color Printing	

Show & Tell 39 W 38th St., NY, NY 10018
www.show-tell.net
212 840-2912 212-840-7953 (fax)
jobs@aviltd.com • posters@aviltd.com

219 on card or www.macworld.com/getinfo

BIG POSTERS at HUGE DISCOUNTS
FROM YOUR COMPUTER FILES

24" x 36"	36" x 48"	48" x 72"
Full color print on 7 mil high or low gloss paper	Full color print on 7 mil high or low gloss paper	Full color print on 7 mil high or low gloss paper
$25	$50	$125
NO MINIMUMS VOLUME DISCOUNTS	NO MINIMUMS VOLUME DISCOUNTS	NO MINIMUMS VOLUME DISCOUNTS

FOR MORE INFO & PRICING VISIT OUR WEBSITE
www.BIGPOSTERS.com
CREATIVE JUICES PRINTING & GRAPHICS INC.
(in New York) Tel: 516-520-4533 Fax: 516-520-4534 • 14 Walnut Rd., Levittown, NY 11756
1-888-880-HUGE

177 on card or www.macworld.com/getinfo

CALL SILICON VALLEY CD

FOR CUSTOM SILKSCREENED BLANK CD-R DISCS, AND...

CD/DVD MANUFACTURING AND PACKAGING

CD-R DUPLICATION WITH CUSTOM PACKAGING

BusinessCardCD™ OPTICAL BUSINESS CARDS

Why use Silicon Valley CD? Listen to a satisfied customer:

I wanted to take a moment out of my day to thank you for the excellent service...you have put us a day ahead of schedule and it will make a world of difference.

Dennis Purdy, Purchasing Manager
Ricoh Silicon Valley, Inc.
August 30, 2000

CALL TODAY!
800-255-4020
WWW.SVCD.NET

FAST **Turnarounds**
EASY Ordering

ORDER BLANK CD-R DISCS AND SUPPLIES IN OUR ONLINE STORE!

SILICON VALLEY CD *since 1992*

990 Richard Avenue #103, Santa Clara, CA 95050 Tel: 408-486-0800 Fax: 408-486-0809

DATA RECOVERY

ALSO IN CALIFORNIA

For MAC - (Hard Drives, Opticals, Removables)

By Nick Majors' DATA RECOVERY LABS

"The Best Data Recovery Service available - Anywhere - at any Price!"

Dedicated in-house MAC specialists are available to work on your emergency data recovery. Complete facility with clean rooms and full MAC capabilities.

Free evaluations. All recoveries are 100% satisfaction guaranteed. Complicated / top priority projects are our specialty.

Datarec.com™ DATA RECOVERY LABS

USA • Canada • Japan

1-800-563-1167
www.datarec.com

«Listen Different»

www.macshowlive.com

Every week, we're streaming live, interactive, and talking...

100% Mac!

• News • Basics • Gaming • Mac Pro • Tech Tips • • Feature Interviews •

listen anytime @ macshowlive.com

MAC LIVE SHOW

When Things Get Rough, a Good Host Thinks of Everything.

Trust NetNation to keep your web presence afloat.

No matter what stage your business is at, we can help. From the first step of registering your own dot.com to hosting your web site on the net, we provide you with the essential technical services to help you succeed in today's online marketplace. At NetNation, we not only provide you with industry knowledge and technical expertise, our customer service representatives are on hand 24 hours a day, 365 days a year. We offer an extensive product line and we are with you every step of the way. That's why customers in over 130 countries trust us to power their web sites. Get your business online! Call us toll-free at 1.888.277.0000 or visit us at www.netnation.com/mw

NetNation™ Communications Inc.

San Diego | London | Vancouver

www.netnation.com/mw

Web Hosting | ASP/AIP | E-commerce | Domain Name Registration

Nasdaq: NNCI

©1997-2000 NetNation Communications, Inc. All rights reserved. Offers subject to change without notice. NetNation and the NetNation logo is a trademark of NetNation Communications, Inc. All other trademarks are property of their respective owners.

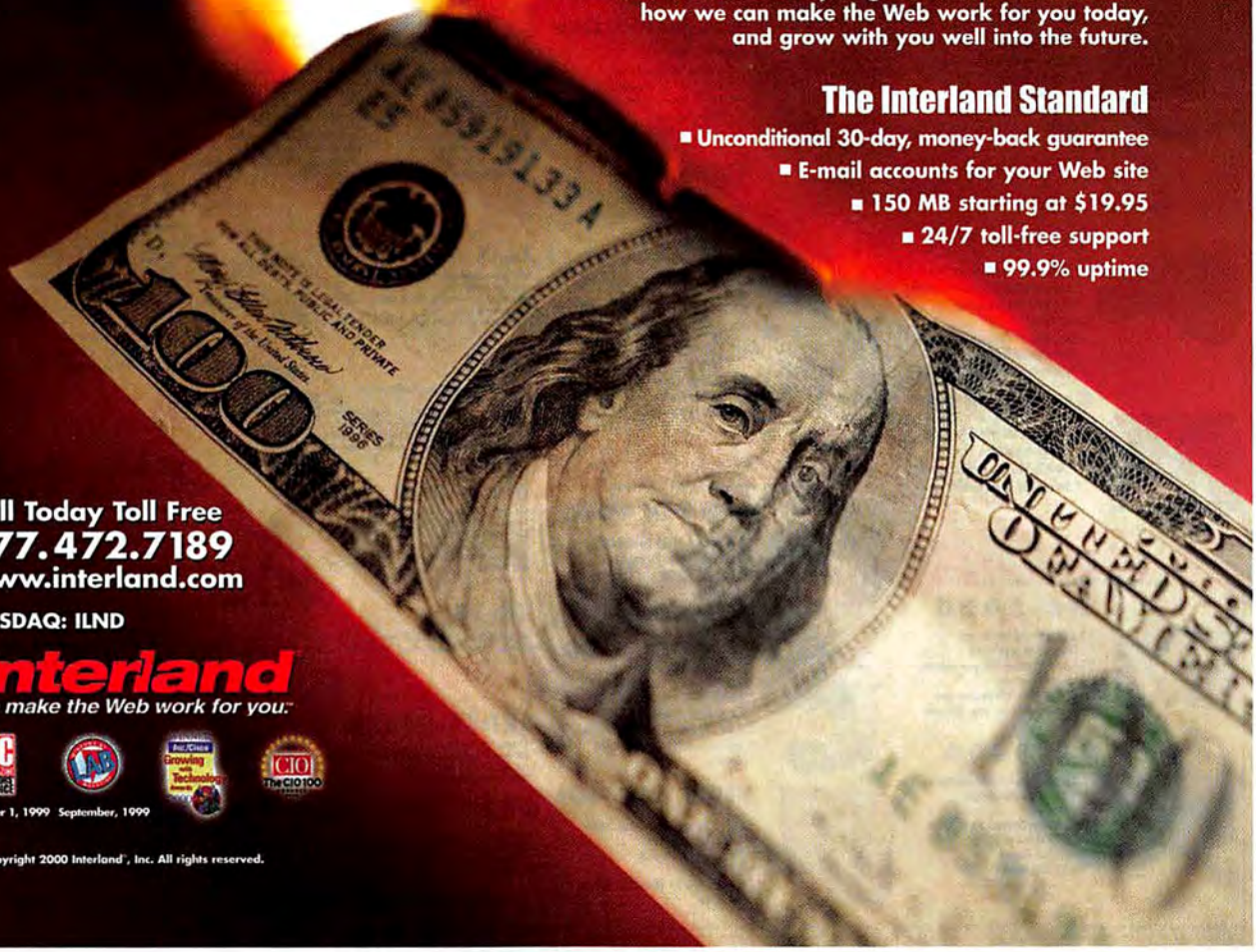
Go Ahead. Host Your Web Site With Another Company. It's Your Money.

Making Money On The Web Begins By Not Wasting Money On The Web.

Unless you've got money to burn, Interland is the way to go. Our complete solutions include everything from shared hosting to dedicated and high-availability hosting to Web site design, all at an unbeatable value. That's why we're rated #1 by *PC Magazine* and *Windows NT Magazine*. So whether you're already on the Web or ready to get started, call us to learn how we can make the Web work for you today, and grow with you well into the future.

The Interland Standard

- Unconditional 30-day, money-back guarantee
- E-mail accounts for your Web site
- 150 MB starting at $19.95
- 24/7 toll-free support
- 99.9% uptime



Call Today Toll Free
877.472.7189
www.interland.com

NASDAQ: ILND

@interland
We make the Web work for you.™

December 1, 1999 September, 1999

© Copyright 2000 Interland™, Inc. All rights reserved.

Circle 11 on card or go to www.macworld.com/getinfo

For Current Low Prices Call Us!! or Visit Our Web Site At: www.thecamerazone.com

THE CAMERA ZONE
visit us online at www.thecamerazone.com

24 HOUR FAX: 718-491-4418
USA TOLL FREE: 888-596-4715
140 58th Street Suite 4E
Brooklyn NY 11220

Company Hours
Sunday 10am - 5:30pm
Monday-Thursday 9am-10pm
Friday 9am-4:00pm
Saturday Eve. 11/25 6:30-9:30pm
Shop Early While Supplies Last!

WE ACCEPT ALL SCHOOL, and GOVERNMENT BIDS & POs!! WE SHIP WORLDWIDE!! **CALL TOLL FREE 1-888-596-4716**

LOWEST PRICES AT www.thecamerazone.com

DIGITAL CAMERAS

OLYMPUS
Comes with USB Cable Interface

C-3030L
- 3X optical zoom
- 3.34 Million Pixel CCD
- 32 MB SSFDC
- 2048 x 1536 resolution
- Aperture-preferred & Shutter-preferred
- 15 Recording Modes
- 1.8" wide view LCD Display

C-3000 .....Call D-460 .....Call
D490 .....Call D360 .....Call

C-2100UZ
- 10X Stabilized
- 1.8" LCD Monitor
- 1600x1200 Resolution
- 3 fps burst

C-2500L
- 3X optical zoom
- 2.5 Megapixel Technology
- 32 MB SSFDC
- 1800 x 1200 resolution spot metering

E-10
- 1.8" Color LCD
- Holds SmartMedia and Compact Flash
- 35-140mm Lens
- Fully Multi-coated glass optics

New C-211 .....Call

Nikon
Comes with USB Cable Interface

Coolpix 990
- Nikons New 3.34Megapixel Entry Featuring a Superb quality
- 2048 X 1536 resolution
- 4X Zoom
- Exclusive 256 Elements Matrix Metering with Outstanding Exposure

Coolpix 880
- 3.34 Megapixel CCD w/true image resolution of 2048x1536 for easy cropping
- Incredible print quality

New D1 Pro Digital SLR...In Stock
Coolpix 950 .....Call

Kodak
Comes with USB Cable Interface

DC-5000
- 2.1 Megapixel resolution
- 1760 x 1168 resolution
- 2X optical zoom lets you capture important details
- 1.8" TFT color LCD to give you excellent detail for your pictures

DC-3400
- 2.3 Mega Pixel CCD Resolution
- 1760x1168 High Image Resolution
- Real Image Optical Viewfinder
- 3X Digital Zoom
- 2X Optical Zoom
- TTL AE Autofocus

DC-215 .....Call DC-290 .....Call
DC-240 .....Call DC-4800 .....Call
DC-280 .....Call

SONY
Comes with USB Cable Interface

MVC-CD1000
- 1600 x 1200 resolution
- 2.5" TFT LCD
- 10X Optical Zoom Lens
- New Optical Super Steady Shot System

DSC-P1
- 3.3 Megapixel
- 3x Optical/6X Digital Zoom Lens
- 1.5" LCD Screen
- Underwater Housing
- Exclusive new GIF animation feature

DSC-S70
- 3.34 Pixel Super CCD Sensor
- 2048 x 1536 Resolution
- 4MB Memory Stick Included
- 2" Advanced Color Lcd
- 3x Optical Zoom
- 6x Digital Zoom
- 4" Macro

Mavica FD-73 .....Call Mavica FD-95 .....Call
Mavica FD 90.....Call

Canon
Comes with USB Cable Interface

Powershot S-100 Zoom
Digital Elph
- 1600x1200 resolution
- 1.8" TFT LCD display
- 2X/4X digital zoom
- Built-in flash
- Built-in high- speed USB interface

Powershot G-1
- 1600x1200 resolution
- 1.8" TFT LCD display
- 2X/4X digital zoom
- Built-in flash
- Built-in high- speed USB interface

Powershot S-20 Zoom
- 1600 x 1200 resolution
- 1.8" TFT LCD Display
- 2x Optical
- 4x Digital Zoom
- Built in Flash
- Built in High Speed USB Interface

FUJIFILM
Comes with USB Cable Interface

FINE PIX 4900
- 2.4 Mega Pixel Super CD
- 6x Aspherical Zoom Lens
- 1/4 to 1/2000 sec Shutter Speed
- TTL 64 Zone Metering

FINE PIX 4700
- 2.3 Million Mega Pixel
- 1800x1200 resolution
- 3x optical zoom (35-105mm)
- 2.5x digital telephoto mode
- Includes 8MB Smartmedia card

FINE PIX 40i
- Ultra compact metal body
- 4.3 million pixel
- Plays MP3 Audio
- USB Port
- Available in Metallic Silver or Blue

DIGITAL VIDEO

SONY

DCR VX-2000
- Sonys Newest & most Compact DV Camcorder
- 1 1/3" Touch Screen Precision Color LCD Monitor
- Precision Color View Finder (200,000 pixels)
- 12 or 16 Bit PCM Stereo w/Audio Dub Capability
- Carl Zeiss Vario Sonnar lens
- 10x optical/ 120x digital zoom
- Steadyshot Image Stabilizer

DCR PC-100/110
- Digital Video Recording
- Mega-Pixel CCD
- Carl Zeiss™ Vario-Sonnar Lens
- 10x Optical/120x Precision Digital zoom
- 2.5" Precision SwivelScreen LCD Display (200K Pixels)
- Viewfinder (180kk pixels)
- Precision Color View Finder (180,000 Pixels)

DCR PC-5
- Palm-sized Handycam Camcorder
- 2.5" SwivelScreen™ LCD Display
- Super SteadyShot Picture Stabilization
- AccuPower™ Battery System
- Stero Sound with Audio Dub Capability
- 10x optical/ 120x digital zoom
- Carl Zeiss® Optics

DCR TRV-20/11
- 10x Optical/120x Digital zoom
- Analog Recording Capability
- Color View finder 180,000 Pixels
- Optical Super Steadyshot Stabilization System
- Progressive Scan CCD mode
- LaserLink wireless Connection
- Memory mode for still Image Capture

DCR TRV-820/720/520

- 25x optical And 450x digital zoom lense. Hyper precision CCd with 460,000 pixels captures more detail and sharpness even at full zoom.
- Photo mode captures a still image with seven seconds of audio for narration dor still images

*Dcr Trv 520; Has a large 3.5 swivrel Lcd color display
*Dcr Trv 720; Has a 4 inchLcd display. 113,000 pixel resolution Color viewfinder. Up to 14 hours recording with optional Np-f960 battery.
*Dcr Trv 820; Same as 720 with built in printer

Canon

XL-1
- 3-CCD DV Camcorder with Interchangeable Lens Mount System
- 16X Optical Zoom w/ SuperRange Image Stabilizer
- Normal Movie mode
- Hi-resolution stop action movie & Digital Still Modes

GL-1 *New!*
- Professional Quality L-Series Fluorite Lens For Remarkable Images
- 20x Zoom Lens with 190x Digital Zoom Provides Supreme Clarity • 3 CCD Image Sensors with Pixel Shift Achieve Outstanding Detail • Optical Image Stabilization Corrects Camera Shake Instantly • 3 Shooting Modes Accommodate any Recording Need

Elura 2MC
- 10x Optical/40x Digital Zoom Lens
- Optical Image Stabilization
- 2.5" Color LCD View Screen
- Color View finder™ PCM Stereo
- Utilizes Multimedia Cards for Digital Still Pictures

Optura Pi .....Call

ZR-10
- 10x Optical Zoom • 200x Digital Zoom • 2.5" Flexible LCD Viewscreen & Color Viewfinder • Long Time Recording • Digital Effects • Digital Effects

JVC

GRDVL-9800U
- 4" Color LCD monitor
- 500 lines of horizontal &480 lines of vertical resolution
- 10X Optical Hyper Zoom
- 200x Super Frame Digital Zoom

GRDV-M90/80
- Multimedia Interface • 10x Optical Hyper Zoom
- 2.5" High Resolution LCD monitor • 25x Digital Zoom
- High resolution color view finder
- Digital recording for superior picture & sound

GR-DVL-M300/500/505/805

PRINTERS

EPSON

Stylus Photo 870

$100 Rebate Available Call for Information

- The EPSON Stylus Photo 870 Introduces you to photo printing's smallest ever 6 picoliter ink droplet. Resulting in crisper detail and enhanced Photo AcuPhoto Halftoning and 6 color quick dry inks.

Stylus Photo 1270

- EPSON Stylus Photo 1270 ink jet printer delivers posters and panoramic of 13"x44" in high resolution 1440 x 720 dpi. Included software is EPSON Adobe Photoshop 5.0 LE and valuable plug-inks.

Stylus Photo 2000P .....Call Stylus Photo 875DC .....Call
Stylus Photo 750.....Call

OLYMPUS

P-330N

P-400

Canon BJC80.....Call Canon CD300 .....Call

SCANNERS

Nikon

LS-2000

- Fast, with average scan times of 20 seconds at 2700 dpi optical resolution
- Dynamic range of 3.6 is highest available in a desktop film scanner • Multi-Sample Scanning feature gives you the quality of a drum scanner on your desktop
- Allows users to work in RGB, CMYK, Lch and RGB color spaces
- Hot swappable adapters allows switching between film types without resetting scanners or software

LS-30 .....Call LS-4500 .....Call

MINOLTA

Dimage Scan Elite

- Scans both 35mm sleeves and mounted, positive and negative films in color and black & white
- Optional Aps adapter is available
- 2,820 dpi optical resolution
- 3.6 wide dynamic range
- 12-bit Ad Conversion producing 36-bit color
- Digital ICE correction Enhanceme• Adobe Photoshop LE included • Available for Mac and Windows

Scan Dual II .....Call Scan Multi II.....Call

Canon

Canoscan 2710

- Uses state of the art Xenon lamps for even more light and increases image clarity • High reso lution 2720 dpi optical resolution • Scans as fast as 13 seconds per frame• Includes Adobe Photoshop LE

All merchandise is brand new & carries a Full USA or International Warranty. Our 14-Day Satisfaction Guarantee allows for exchanges on products or returns for credit. All returns for credit are subject to a minimum 10% restocking fee. 20% restocking fee for special orders. Shipping & Handling charges are non-refundable. All returns must be returned in original mint condition. Not responsible for typographical errors. * Indicates price after rebate.

ABE'S OF MAINE

SINCE 1979! CAMERAS AND ELECTRONICS

OPEN HOURS
Mon.-Thurs. 9:30AM-10:30PM
Friday 9:30AM-4:00PM
Saturday Closed
Sunday 10:00AM-7:00PM

ALL MAJOR CREDIT CARDS ACCEPTED
Orders and Inquiries can now be E-Mailed to us at: info@abesofmaine.com

1-800-231-2237

www.abesofmaine.com

SONY MAVICA MVC-FD73
- 680x480 Resolution
- 10X Optical Zoom
- Accepts Floppy Disks

Call or Visit www.abesofmaine.com

MVC-FD85.....CALL

SONY MAVICA MVC-FD90
- 1.6 Mega Pixel Camera
- 1472x1104 Resolution
- 8X Optical Zoom

Call or Visit www.abesofmaine.com

MVC-FD95.....CALL

SONY DSC-S50
- 1600x1200 Resolution
- Mega Movie Mode
- 5 Manual Focus Presets

Call or Visit www.abesofmaine.com

SONY DSC-S70
- 2048x1536 Resolution
- 3X Optical Zoom
- 6X Digital Zoom
- 5 Manual Focus Prese

Call or Visit www.abesofmaine.com

SONY DSC-F505V
- 1600x1200 Resolution
- 3.3 MegaPixel Camera
- 2" LCD Screen

Call or Visit www.abesofmaine.com

MVC-CD1000.....CALL

KODAK DC-4800
- 3.1 Megapixel Zoom
- 3X Optical Zoom
- 2X Digital Zoom
- 2160X1440 Resolution

$639.99

DC-3400.....419.99 DC-3800.....389.99

NIKON COOLPIX 990
- 3.34 Mega Pixel
- 2048x1536 Resolution
- 3X Optical Zoom
- 1.8" LCD Monitor

Call or Visit www.abesofmaine.com

COOLPIX 950.....CALL

NIKON COOLPIX 880
- 3.34 Megapixel
- 2.5X Optical Zoom
- 1.8" LCD Screen
- 2048x1536 Resolution

Call or Visit www.abesofmaine.com

COOLPIX 800.....CALL

OLYMPUS D490Z
- 2.11 Mega Pixel Resolution
- QuickTime™ Movie Mode
- 3X Optical Zoom
- 2X Digital Zoom

Call or Visit www.abesofmaine.com

Olympus Digital Cameras

D-360L	CALL
D-460Z	CALL
C-211DP	CALL
C-3000	CALL
C-3030	CALL
C-2100	CALL
E-10 SLR	CALL

CANON POWERSHOT G1
- Memory options to 340MB
- 3.3 Megapixel Camera
- 3X Optical Zoom
- 12 Shooting Modes

$749.99

CANON POWERSHOT S-20
- 3.3 Megapixel Camera
- 2X Optical Zoom
- 1.8" LCD Screen

$529.99

CANON POWERSHOT S-100 DIGITAL ELPH
- 2.1 Megapixel Camera
- 2X Optical Zoom
- Smallest 2 Megapixel

$419.99

CANON POWERSHOT S-10
- 2.1 Megapixel Camera
- 2X Optical Zoom
- 1.8" LCD Screen

CALL!

We Carry A Full Line of Laptops, Accessories, and PDA Organizers. Please Call for Information or Log on to www.abesofmaine.com

FOR SALE
WILL BUILD TO SUIT*

Choose
Plastic Table Top
or upgrade to glass

iStand™
Computer
Workstation
is designed and made in Italy by a team of superior craftsmen. The frame has an electrostatic powder-coated, textured grey finish and computer arc-welded joints for strength and durability. It is available in all five iMac** Fruit Flavors, G3** Blueberry, plus Original Bondi Blue, Graphite, and Neutral.

*Modular workstation design and available optional add-on components let you customize your iStand to suit your needs.

**iMac and G3 are registered trademarks of Apple Computer.

1•800•431•6699
Contact your *i* Representive Today

www.iStand.net
iStand@musicindustries.net

Circle 154 on card or go to www.macworld.com/getinfo

comfort by design

adjustable computer furniture

biomorphdesk.com

call now for catalog
888 302-DESK

biomorph interactive desk

©2001 SSI Ltd

Circle 161 on card or go to www.macworld.com/getinfo

POINT OF SALE • INVENTORY CONTROL
Software & Hardware for:

- Retail/Wholesale
- Mail Order
- Internet Commerce
- Rentals/Service/Repair
- Kiosk Development
- FileMaker/4D Tools
- Credit Card Auth. SW
- Full USB Support

Fully Integrated Accounting
Multi-Site • Cross Platform • Receipt Printers • Barcode Readers/Printers • Cash Drawers • Mag Stripe • Ribbons • Paper • Labels • Developer Integration Support
New Visor Laser Scanners
Touch Screens

P.O.S. DIRECT

www.posdirect.com
(800) 622-7670 • sales@posdirect.com
(618) 985-8237 vox • (618) 985-3014 fax

New Free CD Rom v.4.0 Now Shipping

Circle 165 on card or go to www.macworld.com/getinfo

Big Orange Technologies

Call Free 1.866.995.5995

MasterCard VISA

www.bigorangetech.com

Prices may change by time of publication.

IMac IMac IMac IMac

Indigo	Ruby	Sage	Graphite	Snow
350 MHz	400 MHz	450 MHz	500 MHz	500 MHz
400 MHz	450 MHz			
450 MHz				

IMac 350 MHz 64Mo/7Go/24x/Modem 56 Ko Indigo $799
IMac 400 MHz 64Mo/10Go/24x/Modem 56 Ko/FireWire Indigo/Ruby $999
IMac 450 MHz 64Mo/20Go/DVD/Modem 56 Ko/FireWire Indigo/Ruby/Sage $1299
IMac 500 MHz 128Mo/30Go/DVD/Modem 56 Ko/FireWire Graphite/Snow $1499

450MHz PowerPC G4 processor Velocity Engine
- 1MB of backside level 2 cache
- 64MB of high-performance memory
- 20GB Ultra ATA/66 hard disk drive
- DVD-ROM drive with DVD-Video playback
- ATI RAGE 128 Pro graphics card with 16MB of graphics memory, Apple Display Connector, and VGA connector
- All-digital speaker system .

Cube

$1794

G4

400MHz , 64MB SDRAM, 20GB Ultra ATA Drive,DVD-ROM w/ DVD-Video, 56k Modem, Rage 128 Pro, NIC, Two USB Ports, Two Firewire Ports, Mac OS 9

$1594

IBook

iBook 366MHz ,64MB/10GB/CD24x $1494
iBook 466MHz Special Edition64MB/10GB/DVD $1794

Dual 450MHz Power PC G4, 128MB SDRAM, 30GB Ultra ATA Drive,DVD-ROM w/ DVD-Video, 56k Modem, Rage 128 Pro, NIC, Two USB Ports, Two Firewire Ports, Mac OS 9

$2494

PowerBook

PowerBook 400MHz ,64MB/10GB/DVD $2494
PowerBook 500MHz ,128MB/12GB/DVD $2999

Dual 500MHz Power PC G4, 256MB SDRAM, 40GB Ultra ATA Drive,DVD-ROM w/ DVD-Video, 56k Modem, Rage 128 Pro, NIC, Two USB Ports, Two Firewire Ports, Mac OS 9

$3494

$179

AGFA
SNAPSCAN E40

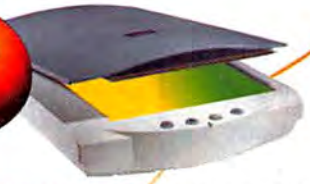
$99

EPSON STYLUS
COLOR 777

$199

HEWLETT PACKARD
DESKJET 935 C

$139



UMAX ASTRA 3450 U

$349

SONY
HMDA 200

$499

17" Apple Studio

$129

RATOC Systems,International FireWire
CBFW2
FireWire CardBus PC Card
for PowerBook G3

$399

SONNET
SIMPLY FAST
Crescendo G4/350 MHz
1Mo cache 73/75/76/85/86...

$99

NEW !

RATOC Systems,International FireWire
FireWire Plug & Play connectivity for Ultra-SCSI devices!
Hook up existing SCSI devices to FireWire port !

Memory at Wholesale prices !!

	SIMM 72 Pins	DIMM 5 volts	SDRAM PowerMac G3 PowerMac G4	PowerBook 1400	PowerBook 3400	Ibook•IMac PowerBook WALLSTREET
16 Mo	$59			$59		
24 Mo				$79		
32 Mo	$99	$89	☎	$99	$99	☎
64 Mo		$149	☎		$179	☎
128 Mo		$249	☎		☎	☎
256 Mo			☎		☎	☎
512 Mo			☎			

Prices may change by time of publication.

Big Orange Technologies

Big Orange Technologies - 6506 Arizona Ave - Los Angeles - CA 90045
Call free : 1.866.995.5995 - Fax : 310.649.4101 - www.bigorangetech.com

ACADEMIC DISCOUNTS

Great Savings for... Students, Teachers and Schools!

WACOM Graphire Tablets
4 x 5 Tablet with Mouse, Pen, and Power Suite Software. $79

MACWORLD Special

Adobe Bundles
Save over 70% on the Web, Publishing, and Design Collections plus the new Dynamic Media Collection!

Macromedia Web Design Studio
Dreamweaver 4, Fireworks 4, Flash 5, and Freehand 9. $239

Office 2001 for Mac
The best version ever is now available at an incredible price. CALL

All Adobe Titles	Call!	Filemaker Pro 5	$148	Photoshop 6 NEW	Call!
Boris FX	$309	Fireworks 4	$98	Painter 6	$199
Coda Finale 2001	$199	Flash 5 NEW	$98	Sibelius	$229
CodeWarrior Pro 6	$109	Flash + Freehand	$139	TechTool Pro 3	$79
Director 8	$329	FormZ 3.6	$825	Vectorworks 8.5	$329
Dreamweaver 4 NEW	$98	Freehand 9	$98	Iomega Products	Call!
Dreamweaver 4 + Fireworks 4	$139	Lightwave 6	$789	Wacom 6x8	$284
Electric Image	$495	Mathematica 4	$129	*(PC titles available!)*	
		Norton Utilities	$59		

Visit us online for more savings, specials, bundles and 24hr. ordering!

CALL FOR YOUR FREE CATALOG
1-800-333-8571 FAX ID'S & PO'S TO 512-450-0263

ACADEMIC SUPERSTORE
www.AcademicSuperstore.com

Circle 180 on card or go to www.macworld.com/getinfo

Savings for Students & Teachers

Call for... FREE CATALOG!

Up to... **80% Off**

We will beat any advertised price!!

Save on over 5,000 Titles!!

Web Design Studio
Includes: Dreamweaver 4.0, Flash 5.0, Fireworks 4.0, Freehand 9.0
$249

Final Draft 5.0
Premiere Professional Screenwriting Software
$149

FileMaker Pro 5
Leading Relational Database Software
$159

Flash 5.0
Professional Web Animation Software
$99

Boris FX 5	$339
Chromatica	$75
Coda Finale 2001	$249
Director 8.0	$349
Dreamweaver 4.0	$99
ElectricImage 3D 2.9	$739
EndNote 4.0	$105
Eye Candy 4000	$79
FLIGHTCHECK 3.79	$199
FileMaker Pro 5.0	$159
Flash 5.0	$99
HyperStudio 4.0	$149
Inspiration 6.0	$69
Kai's Power Tools 6.0	$89
LightWave 3D 6.0	$889
MacLinkPlus 11 Deluxe	$75
Mask Pro 2.0	$99
Mathematica 4.0	$139
Nisus Writer 5.1.3	$79
PhotoGr. Edges 10,000	$139
Screenwriter 2000	$139
TechTool Pro 4.0	$85
Vectorworks 8.5	$339
Wacom Intuos 6x8	$285
WebSpice 2,000,000	$59
WordPerfect 3.5.1	CALL

(800)699-1836

Software Showcase Academic Discount Guide

Software Showcase Inc.
1775 Rt 34 South D#12
Farmingdale, NJ 07727
Phone # (732) 556-0400
Fax# (732) 556-0408
Info@softwareshowcase.com

Visit our WebSite for $10 Off online orders.

Mon-Fri 8-7 Est • Sat 10-3

www.softwareshowcase.com

Circle 168 on card or go to www.macworld.com/getinfo

STUDENTS!

Save up to 75% OFF popular software!

Adobe
Microsoft
Discreet
Microsoft
MetaCreations
Macromedia
AliasWavefront
Softimage
Autodesk
Extensis
Alien Skin
Digimation
Symantec
Corel
ADAM
Wacom
Many
More!!

THOUSANDS OF TITLES AVAILABLE!

FREE CATALOG!

Serving students & schools since 1990

1-800-874-9001

JourneyEd.com
Journey Education Marketing

www.JourneyEd.com

look here for all your macintosh service needs!

ACADEMIC DISCOUNTS *on* CREATIVE DIGITAL TOOLS

www.creationengine.com
800.431.8713

explore our web site!

product info
academic prices
online ordering
reviews
tutorials
art gallery
quote builder
site licensing prices

Students, faculty, and schools can save up to 70% on the hottest creative software from over ninety companies including Adobe, Macromedia, Discreet, Newtek, and Hash.

www.madaboutmac.com
Macintosh resources for teachers and students!

CREATION ENGINE, LLC

174 on card or www.macworld.com/getinfo

888-447-3728

Mac·Res·Q®
sales@macresq.com
(925) 689-9488 • (925) 689-9487 fax

G3 iMac Systems
G3/233 Mhz $499
G3/333 w/ VideoFX $629

G3 All-In-One Systems
G3/233 Mhz $599
G3/333 Mhz $699

We've merged with MacWorks to offer you more!

PowerMac G3/233 DT $599!

PowerMac 8600/300 $499!

PowerBook 3400c/200 $699!

NEW 15" MultiScan $89!

Norton Utilities 5.0 $29!

Norton AntiVirus 6.0 $19!

Global Village VideoFX $49!
Easily connect camcorders, VCR/DVD to your USB Mac!

All items are refurbished unless noted as new. Pricing & availability subject to change.
15% restocking fee on functional returns. No returns after 30 days.

More than 4000 Macintosh products & secure online ordering @

www.MacResQ.com

Circle 191 on card or go to www.macworld.com/getinfo

COMPU AMERICA "The Computer Specialist"

1-800-533-9005

Fax Bids: (310) 475-7744 or
email at SALES@COMPU-AMERICA.COM
10435 Santa Monica Blvd., Los Angeles, CA 90025

Check out our Web!

WWW.COMPU-AMERICA.COM

Government, University and Fortune 1000 P.O.'s are welcome! Business Leasing is Available!
International Orders Please call tel: (310) 446-1771 We are open Mon-Sat, 9am-6pm

POWERMACS Starting at $799

G4/500DP...256/40G/DVD RAM/56K	2399
G4/500DP...256/40G/DVD RAM/56K	2299
G4/500MT..256/27G/DVD-RAM/ZIP	1975
G4/450DP...128/30G/DVD/56K	1899
G4/400MT..64/20G/DVD/56K	1279
G3/450MT..64/20GIG/DVD/56K(CUBE)	1399
G3/350MT..128/9GIG/24XCD/ZIP	899*
G3/400MT..64/6G/DVD	899*
G3/350MT..64/6G/24X	799*

WORKGROUP SERVERS

G4/500...256/18G/DVD/SHARE	2899
G4/400...256/18G/24X/SHARE	1899
G3/450...256/2-9G/24X/SHARE	1399

CALL FOR OTHER WORKGROUP SERVERS.

I-MACS Starting at $599

I-MAC G3/500 . 128/30G/DVD/56K (graphite)	1399
I-MAC G3/500 128/30G/DVD/56K (snow)	1349
I-MAC G3/450 64/20G/DVD/56K (sage)	1149
I-MAC G3/400 64/10G/DVD/56K	899*
I-MAC G3/333 32/6G/24xCD/56K	649*
I-MAC G3/266 32/6G/24xCD/56K	599*

All Flavors Are In Stock!
(Blueberry, Strawberry, Grape, Lime, Tangerine.)

I-BOOKS Starting at $1099

12.1 Active TFT Color Screen, 20xCD, 56K Modem

I-BOOK G3/366 64/10G/CD Indigo	1349
I-BOOK G3/366 64/6G/CD Grape	1399
I-BOOK G3/300 32/3.2G Blueberry	999*
I-BOOK G3/300 32/3.2G Tangerine	999*

HEWLETT PACKARD

1100XI/1100AXi	349/379
2100XI/3150XI	349/549
2100M/2100TN	649/799
4000N/4000TN	999/1299
4050N/4050TN	1299/1399
4500N/4500DN	2099/2999
4050USB	CALL
5000	1250
5000N/5000GN	1879/2199
8000N/8000DN	2149/2179
8100N/8100DN	2699/2999
8500/8500N	CALL
8500DN	CALL
8550/8550N	CALL
8550DG/8550DN	CALL

EPSON Starting at $69

STYLUS COLOR Printers

440 (PC only)	70*
740	99
900	249
900N	299
1160	399
3000	799*
5000	2329

G3 POWERBOOKS Starting at $499

G3/500 128/20G/DVD/14.1 TFT/56K	2099
G3/500 128/12G/DVD/14.1 TFT/56K	1999
G3/400 64/10G/24xCD/14.1 TFT/56K	1899
G3/300 64/8G/DVD/14.1 TFT/56K	1599
G3/266 64/4G/CD/14.1 TFT/56K	1399
G3/233 32/2G/CD/12.1 TFT/56K	1099

Call for all other PowerBooks. 5300cs, 5300ce, 1400cs, 1400c, 3400c

YOUR #1 COMPUTER SUPERSTORE!

All prices are cash discounted. * denotes a refurbished product. Not responsible for any typos. Apple, the Apple logo, Mac, PowerMac, PowerBook, iMac, iBook, Workgroup, G3, G4, & I-Sight are trademarks of Apple Computer, Inc., registered in the U.S. and other countries. All other names & logos are trademarked by their respective owners. We are Not Apple Authorized.

800·673·MACS

916-652-1880 fax 916-652-1881 800-673-6227

WE SHIP ANYWHERE IN THE WORLD. CHECK OUT OUR WEEKLY WEB SPECIALS http://www.poweron.com

MONTHLY SPECIAL DEALS

USB Keyboard iKEY refurbished $19.95
Translucent Design. Rev. A OS 8.x compatible. Includes 5' USB cable.

Apple Floppy Drive refurbished $79.95
New Manual Floppy 661-0121 or 661-1190 (for 040er to G4)

56K External Modem refurbished $69.95
OEM Packed/NEW Includes Cables Mac Ready

Mac OS 8.1 CD refurbished $49.95
Complete Installation OEM Packed/NEW CDROM

Umax 2000U Scanner refurbished $49.95
USB Interface 600x1200 dpi 36-bit Color

'Special' Apple 17" Multiscan refurbished Trinitron Tube $129.95

'Deals' Apple 20" Multiscan refurbished Trinitron Tube $299.95

Apple Compatible HARD DRIVES

FREE 50 pin Adapter
3.5" x1" WIDE
2GB $69.99

External SCSI TH Hard Drive Case (N)	49.99
External SCSI FULL HEIGHT Case (N)	79.99
Apple 500 MB SCSI-3.5" x1" 50 pin	24.99
Apple 700 MB SCSI-3.5" x1" 50 pin	34.99
1 GB SCSI-3.5" x1.6" 50 pin Internal	39.99
Zip Drive 100 MB USB -External (N)	124.99
20 GB EIDE Hard Drive-Internal	129.99

PCI VIDEO CARDS

Supports TWO Additional Monitors
250Mhz RAMDAC
1920x1200 max
128 bit 2D/3D
Twin Turbo
Dual Ported EDO VRAM $99.95

ixMicro Game Rocket 16MB VRAM	
Voodoo Banshee, 250Mhz -PCI (N)	99.99
Radius Thunder TX 1152 (16 MB)	
12MB RAM + 4VRAM -PCI (N)	59.99
Radius Thunder 3D (32 MB)	
24MB RAM + 8VRAM -PCI (N)	89.99
NuBus Video Cards	IN STOCK

Apple Original CDROM Specials

$59.95 8X SCSI CDROM

CDROM drives are MacOS Bootable and use Apple Original Driver Software

CDROM Installation Kits
•• IN STOCK ••

External SCSI CDROM Cases (N)	39.99
2x Apple SCSI CDROM-Internal	19.99
4x Apple SCSI CDROM-Internal	39.99
8x Apple SCSI CDROM-Internal	59.99
12x Apple SCSI CDROM-Internal	99.99
24x Apple SCSI CDROM-Internal	129.99
24x iMAC CDROM-Tray loading	69.99
24x iMAC CDROM-Slot loading	99.99
4x iMAC DVD ROM-Slot loading	99.99
8x Apple ATAPI CDROM-Internal	39.99
12x Apple ATAPI CDROM-Internal	59.99
24x Apple ATAPI CDROM-Internal	79.99
32x Apple ATAPI CDROM-Internal	99.99
6x Apple DVD ROM ATAPI-Internal	149.99
8x Apple DVD ROM ATAPI-Internal	169.99
1x Apple DVD RAM ATAPI-Internal	199.99

iMac DV G3/400 Mhz graphite SPECIAL EDITION

$899.99
refurbished
128 MB RAM • 13 GB HD • USB
FireWire • Ethernet • 56k V.90
Apple DVD CDROM Included!

iBOOK G3/300 Mhz

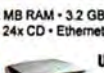
includes notebook bag

$999.99
refurbished
32 MB RAM • 3.2 GB HD • USB
24x CD • Ethernet • 56k V.90

MORE iMAC DEALS

iMac 333 -32/6 GB/CD/E/56k	549.99
iMac 350 -64/6 GB/CD/E/56k	699.99
iMac 400 DV -64/10 GB/DVD/E/56k	799.99

FREE FREE FREE FREE



UMAX 2000u FREE with iBook purchase

INJET CARTRIDGES

Epson 600/740/800 CMY	$24.99
Canon BC-02 BLK	$18.99

100's more on our website

TONER CARTRIDGES

Toner HPII/LW IINT/IINTX	$39.99
Toner HPIIP/Personal LW ...	$54.99

100's more on our website

All brand or product names are registered trademarks of their respective holders and are respectfully acknowledged

www.poweron.com

sales@poweron.com
Check Out Our Complete Inventory Online

MasterCard DISCOVER VISA

PowerON Computer Services
8101 Washington Blvd. Suite 101 Roseville, CA. 95678

Gov't & School PO's Accepted
CALL for EDUCATIONALQuotes

Mon-Fri 7-6, PST Sat 10-5 PST

All Prices include 3% cash discount. All items are Used or Refurbished unless otherwise indicated. ALL SALES FINAL

Circle 198 on card or go to www.macworld.com/getinfo

MacMart

SYSTEMS AND PERIPHERALS

Visit Our Web Site For Specials

POWERBOOKS

Contact Us To Save On Refurbished Powerbooks

G3/266 14.1" 64-6GB-CD-56K (R)	$1499
G3/400 14.1" 64-10GB-DVD-56K	$2149
G3/500 14.1" 128-20G-DVD-56K	$2899

PRINTERS / SCANNERS

Canon BJC-85 USB Portable Color	$285
Epson Stylus 880I 2880x720 DPI	$148
Epson Stylus 980 2880x720 DPI 13ppm	$245
Epson Stylus 1520 Up To 17x44" Serial	$495
Epson Stylus 2000P Photo Repo. Quality	$799
HP DJ 840C 8 Pager Per Min.	$165
HP Laser 2100M Up To 2400x1200DPI	$745
HP Laser 4050N 17 ppm w/Ethernet	$1395
Tektronix Phaser 750N USB/Ethernet	$2275
Epson Perfection 640U Scanner	$145
Epson 2000 Scans, Prints & Copies	$145
Epson Perfection 1240U Scanner	$185
Microtek X6EL w/ Trans. Adap	$138
Nikon Coolpix 800 - 880 - 950	$549 - 649 - 799
Umax Astra 4000U Includes Photoshop	$210
Umax Powerlook III Proffesional Series	$545

DRIVES

1000s Of Hard Drives & Storage Products To Choose From

Iomega Internal Zip Drives	$65
Seagate 30 Gig Barracuda 7200 Rpm	$175
USB External 32x4x4 w/Toast	$199
SCSI 24x8x4 External w/Toast	$249
Firewire 12x10x32 External W/Toast	$399

Contact Us For Mounting Kits & Bezels For Any Mac

NEW POWERMACS

See Our Web Site For System Bundles

We Can Custom Configure Any System To Your Needs

G4/400 64 MEG -20GB-DVD-56K	$1399
Cube/450 64MB -20GB-DVD-56K	$1399
Cube/500 128MB -30GB-DVD-56K	$1949
G4/450 DP 128-20GB-DVD-56K	$1899
G4/500 DP 256 MEG-27GB-DVD	$2299
G4/500 DP 256 MEG-27GB-DVD RAM	$2599

Visit Our Web For New Discontinued Powermacs

Pre-Owned MACS

Huge Inventory Of New & Used Older Models

7300/200 16 MB - 2 GB - CD	$349
3400C/200 16 - 2 - CD -mdm -Floppy	$699
9600/200 32 MB- 4 GIG - CD - VID	$749
G3/300 64 MB - 6 GB - CD	$799
G3/400 64 MB - 6 GB - CD - ZIP	$899
G3/400 128 - 20 - DVD - ZIP - 56K	$1099

MAC PARTS

Call For Unlisted Models & All Mac Parts

LogicBoard 7100/80 ... 7200/90	$135 ... $149
LogicBoard 8500 ... 9500	$479 ... $499
PowerSupply 7300 ... 72/75/7600s	$159 ... $110
PowerSupply 85/9500s ... G3s	$199 ... $225
Apple CD 2x ... 4x ... 8x	$25 ... $45 ... $55
Apple SCSi HDs 2GB - - 4GB	$59 ... $89

OTHER CARDS

We Carry All Mac Adapters & Cards

Bootable SCSI Card For Your G3 or G4 System	$45
PCI Firewire Card 3 Ports	$69
SCSI / Serial Combo with 2 Serial Ports	$97
G3 & G4 CPU UPGRADE CARDS	$AVE

Guaranteed Low Prices

If We Don't Have It - Chances Are Nobody Does

VIDEO / DISPLAYS

New 17 Inch Display Starting at $165

Apple Studio Display 17" (Graphite)	$299
Apple Studio Display 17"	$449
Apple 15" Flat Panel Display	$945
Proview 19" 25dp 1600x1200	$255
NEC 21" 25dp 1600x1200 76HZ	$688
Pre-Owned Apple Displays	$ave

- VIDEO CARDS -

ATI Xclaim 3D 8 Meg PCI Perfect 2nd Card	$85
3DFX 4500 Voodoo-4 32 Meg	$159
ATI Nexus 128 Rage 32 Meg	$229
3DFX 5500 Voodoo-5 - 32 Bit	$239

MEMORY

Lifetime Warranty - Meets or Exceeds Apple Specs

We Carry Memory For All Older Powerbooks

SDRAM PC100 - For G3, G4 Computers, Cube & Imac DV	
64M ... 128M ... 256M	$35 ... $59 ... $109
SO-DIMMs - For G3 Powerbook, Pmac & Oneseats	
64M ... 128M 256MB	$39... $65... $119
72 PIN SIMMs - 32 MB ... 64 MB	$79 ... $89
168 PIN DIMMs - 32M ... 64M ... 128MB	$69 ... $149 ... $279

macmart.com

Proud Member of the Better Business Bureau

Order Toll Free in the USA

1-800-600-2708

International & Dealers 818-904-1400

Sales@macmart.com or Fax Us 818-904-1410

• Brand Names are Trademarked with their respective holders • Prices listed are c.o.d • Price & Availability subject to change • Returns Subject To Restocking Fee *

Circle 197 on card or go to www.macworld.com/getinfo

---

iCN

INNOVATIVE COMPUTER & NETWORKING INC.

PowerMac 8600	PowerBook 3400	PowerMac G3	PowerBook G3	CD & DVD
200MHz/32/2GB/CD	200Mhz/16/2GB/CD Floppy/Modem	266MHz/32MB 4GB/CD	250/32/4GB/CD/Mod	8xCD-ROM SCSI .....$35 24xCD-ROM Atapi iMac $69
$369	$559	$489 Add 32MB Memory for only $39	$1049	DVD-ROM For iMac ...$109 DVD-RAM For G4 .....$309

IMac 400MHz

64MB/10GB

DVD/Modem

$699

www.allapplemac.com

Huge Parts Inventory Over 28,000 Items In-Stock

POWER BOOKS icni.com

G3 500 MHz /128MB/12GB/DVD	$2495
G3 400 MHz /64MB/6GB/DVD	$1985
G3 333 MHz /64MB/4GB/CD*	$1579
G3 266 MHz /64MB/6GB/CD*	$1349
G3 250 MHz /32MB/4GB/Mod*	$1049
G3 233 MHz /32MB/2GB/CD*	$849
3400 / 200 MHz /16MB/2GB/CD/Mod*	$559
3400 / 240 MHz /16MB/3GB/CD	$649
5300ce / 117 MHz /16MB/1GB*	$379
iBook 300 MHz/32MB/3GB/CD/56K/ETH	$949
iBook 366MHz/64MB/6GB/CD/56K/ETH	$1329

POWER MACS icni.com

G4 500 DUAL /256MB/40GB/DVDKB/56K	$2525
G4 500 MHz /256MB/27GB/DVD	$2050
G4 450 DUAL /128MB/30GB/DVD/KB/56K	$1850
G4 450 MHz /128MB/20GB/DVD	$1600
G4 450 Cube /64MB/20GB/DVD/KB/56K	$1295
G4 400 MHz /64MB/20GB/DVD/KB/56K	$1295
G4 400 MHz /64MB/10GB/DVD	$1279
G3 400 MHz /64MB/6GB/DVD	$979
G3 350 MHz /64MB/6GB/DVD	$899
G3 266 MHZ /32MB/4GB/CD	$489
9600 300 MHz /64MB/4GB/CD/Zip	$949
9600 200 MHz /32MB/4GB/CD	$595
9500 180 MHz /32MB/2GB/CD	$499
8600 200 MHz /32MB/2GB/CD	$369
8500 180 MHz /16MB/2GB/CD	$349
7600 132 MHz /16MB/1GB/CD	$249
7300 200 MHz /16MB/2GB/CD	$329
7200 120 MHz /16MB/1GB/CD	$219

MONITORS icni.com

APPLE 21" Studio*	$999
APPLE 20" 850 Vision*	$459
APPLE 1710 Vision*	$129
APPLE 17" Studio* (Graphite)	$349
APPLE 15" Multi	$89
APPLE 15" Flat LCD	$629

HARD DRIVES icni.com

HD 1GB SCSI	$39
HD 2GB SCSI	$55
HD 4GB SCSI	$85
HD 9GB SCSI	$139

CD & DVD icni.com

32xCD-ROM IDE For G3, G4	$49
24xCD-ROM For iMac	$69
DVD For G3, G4	$109
DVD For IMac	$119
8xCD-ROM SCSI	$35

IMACS icni.com

IMac 233MHz /32/4GB/CD/Modem*	$549
IMac 333MHz /32/6GB/CD/Modem*	$599
IMac 350MHz /64/6GB/CD/Modem*	$649
IMac 400MHz /DV/64/10GB/DVD/Modem	$699
IMac 450MHz /128/20GB/DVD/Modem	$1249
IMac 500MHz /128/30GB/DVD/Modem	$1449

Vivitar ViviCam 2655

640x480 Resolution

USB/RS232/TVOutput

Focus Free

$129

ICN has the largest inventory of

Apple & Toshiba parts

USB & FireWire Peripherals.

Prices Subject to Change Without Notice • All Prices reflect 3% Cash Discount • * Refurbished

ICN Is Not An Authorized Apple Dealer • All Trademarks Are Property Of Their Respective Companies.

1.800.472.4921 Tel: 310-445-6600

Fax: (310) 445-6611 FAX TOLL FREE/JAPAN: 00-31-114211

11755 Exposition Blvd. Los Angeles CA 90064

www.allapplemac.com • 1.800.472.4921

CALL THE MAC EXPERTS!

Your one-stop source for Apple® Macintosh® – over 40,000 items on sale at better than mail order prices!
It's pretty simple: we know a lot about Mac® stuff, and we care about our customers.

Blowouts & Specials

Contour Design anti-carpal tray $9.00
Black Ink for StyleWriter Pro $9.00
500 sheet feeder for LW 8500.....$19.00
Envelope cassette for LW 8500 ...$19.00
Apple plaintalk microphone $12.00
Fuser oil for Color LaserWriter ...$23.00
Gravis Firebird ADB Flight Cont ..$29.00
OG 400W 3 piece speaker set.....$29.00
Curtis Model 9500N Surge Prot...$29.00
Norton Antivirus 6.0 OEM $29.00
Int. 56k modem for Blue&White ..$39.00
Open Box Apple Battery for PB....$49.00
Ref Umax 1220U USB scanner ...$59.00
Mac OS® 8.1 full retail $59.00
Internal 1 Gb SCSI drive $88.00
Ref Epson 740 inkjet printer $89.00

Want a Cube? Price too high? How about: **$1299!***

Indigo iMac™ 400 Only while supplies last: **$799!***

Other incredible Macintosh® values

iMac™ 333 32/6 Gb/CD* $649.00
iMac™ 350 64/6 Gb/CD* $688.00
Graphite iMac™ G3/400* ...$999.00
PwrBook G3/500 128/12...$2495.00
Graphite iBook™ G3/366* ..$1299.00
G4/450 128/20/DVD/Zip* ..$1599.00
*Factory refurbished by Apple

Protect your Mac investment through a 3 year warranty with AppleCare!

Ask about our other rockin' Lacie deals!

FireWire DVD-RAM.....$839.00
FireWire CD-RW 12x10x32x.....$369.00
USB CD-RW 4x4x24x.....$259.00
Electron22blue II Display $1349.00

What's New?

New Macs are on the assembly line as this goes to press; you can be sure PowerMax has the latest, up-to-the-minute info on the newest Apple products! Call for expert advice and opinions today!

Check These Out– New Lower Prices!

Save Your Peripherals!

Fully configured pre-owned Macs™
6100 series, starting at $119
6200 series, starting at $179
6400 series, starting at $249
7100 series, starting at $127
7200 series, starting at $125
7300 series, starting at $299
7500 series, starting at $249
7600 series, starting at $299
8100 series, starting at $189
8500 series, starting at $349
8600 series, starting at $499
9500 series, starting at $448
9600 series, starting at $749
5200 allIn1 series, starting at $199
Beige G3 Desktops, starting at $649
Beige G3 Towers, starting at $719
Blue & White G3's, starting at $999
G4 Graphites, starting at $1099
iBooks™, starting at $969
iMac™ G3/266 starting at $639

Great price/performance!

iMac™ G3/400 DVD's starting at....$829
PowerBook® 1400's, starting at.....$225
PowerBook® 3400's, starting at.....$699
PowerBook® 5300's, starting at.....$429
PowerBook® G3's, starting at.....$1199
PowerBase Towers, starting at $189
Umax Towers, starting at.....$389
PowerCenters, starting at.....$129
PowerCtr Pro Towers, starting at.....$249

Factory Refurbished Macs™
iMac™ G3/266 32/6/24x CD.....$619
iMac™ G3/400 64/10 /DVD.....$829
Graphite iMac™ 128/13/DVD.....$999
Graphite iBook™ 366 64/6/CD....$1369
PowerBook® G3/250 32/4/CD..$1149
PwrBk G3/400 64/6/DVD.....$1949
PwrBk G3/500 128/12/DVD.....$2249
G4/500 Dual 256/40/D-RAM....$2649

Always more coming- call or check our site for details!

"We ain't quite as purty as that one mail order gal, but we sho' know our stuff!"

The PowerMax "No Bull!" Bundles

• No complicated reseller rebates • No special terms or conditions • No "get this if you buy this"
• No hidden charges • No hooks, installation fees or, well, any other bull!

G4/450 "Max"travaganza!

A rare opportunity on a limited supply of G4/450's with the beautiful Apple 15" LCD display, this "Max" travaganza features a factory refurbished G4/450 tower, with a whopping 192 mb of RAM, 20 Gb drive, DVD-ROM drive, internal Zip, internal 56k modem, and the LCD display. Extend your warranty to three years for only $249.

$2188!

The "Beige is Beautiful" Bundle

Sure, the new towers with their Blue&White & Graphite have their moments, but pound for pound, a good-old fashioned beige G3 delivers an incredible bang for the buck! Get this rock-solid G3/266 Tower complete with 64 mb RAM, 6 Gb hard drive, internal Zip drive and beautiful Apple 1710 Trinitron display for one great low price!

$999!

TradeUp with PowerMax!

We'll take your Mac® OS computer in trade toward the purchase of new product. Call one of our expert Mac® consultants for full details!

Call us – or visit

WWW.POWERMAX.COM

• Over 200 Mac models to choose from
• Knowledgeable, non-pushy salespeople • Great tech support
• No voice mail (during office hours) • We consult on all Mac hardware & software • no games, no hidden charges... no bull!

POWER MAX™
Knowledge is Power

800-613-2072

Local: (503) 624-1827 • Fax (503) 624-1635
email: sales@powermax.com

Prices subject to change without notice. Prices reflect cash discount. 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 or product names are registered trademarks of their respective holders.

• Personal Financing • Fast P.O. Approvals •
Business Leasing • Weekly specials on our web site
• Order on line or call one of our experts!

Authorized Reseller

DISCOVER NOVUS VISA MasterCard American Express

G4s & Cubes | DV iMacs™ | iBooks™ | PowerBooks® | Blue & White G3's | Beige G3's | Software

Join a User Group. Save Big Bucks.

MUG STORE

Macintosh User Group members enjoy access to a very special Apple-sponsored web site featuring super deals on the latest Apple products as well as factory refurbished and discontinued Macs, and much more! Not a member? Find out how you can get these great deals by calling PowerMax at 800-689-8191.

Apple Specialist

www.applemugstore.com

Authorized Reseller

The MUG Store. A cooperative venture between Apple and PowerMax to bring MUG members exclusive deals on the latest Mac® products and special offers on discontinued and *factory refurbished computers.

PowerMax is a division of Computer Stores NW, Corvallis, OR.

Circle 208 on card or go to www.macworld.com/getinfo

www.powerbook1.com

secure online ordering

MCE POWERBOOK PRODUCTS

USB FlexLight

Don't get caught in the DARK with your PowerBook!

Conveniently lights up your keyboard and surrounding paperwork! Powered by the PowerBook's USB port.

$19.99

DataShuttle Xtreme

PC Card, FireWire, or USB

The world's most *VERSATILE* Storage Device!

You have the Power to Choose:

FireWire for high-speed data transfer
USB for compatibility with iMac and iBook
PC Card for compatibility with PowerBooks

* See web site for details.

	30GB	20GB	Kit
FireWire	$629	$429	$139
USB	$599	$399	$119
PC Card	$579	$379	$99

Turn your old internal PowerBook drive into an external drive!*

COMPLETE POWERBOOK STORAGE SOLUTIONS by MCE Mac

MobileStor

THE BEST Internal Hard Drive Upgrade Kits for your PowerBook!

For use in PB 2000, iBook, PB G3 Series, G3, 3400, 2400 & 1400*

MobileStor 6G	6GB	3 yr wty	$179
MobileStor 10G	10GB	3 yr wty	$199
MobileStor 20G	20GB	3 yr wty	$299
MobileStor 30G	30GB	3 yr wty	$499

Included FREE in every MCE MobileStor hard drive upgrade solution is the *complete* MCE PowerBook Hard Drive Installation Kit which includes an illustrated installation manual, and all of the appropriate tools and brackets needed for the proper installation of your new MCE MobileStor hard drive kit.

* see website for details and compatibility with other PowerBook models

Ultra-DMA Drives!

Xcarét Pro Expansion Bay Hard Drives

- Ultra Fast! • Hot Swappable • Bootable
- Compact • Protective MCE Carrying Case
- Kit is perfect for your old internal PB drive!*

Perfect for audio & video recording & editing.

multimedia tuned 32GB	30GB	20GB	10GB	Kit
160 min.†	150 min.†	100 min.†	50 min.†	
$699	$649	$449	$349	$149

Turn your old internal PowerBook drive into an expansion bay drive!*

†approximate FireWire DV Video Capture time in minutes • See web site for details.

Xcarét Pro Expansion Bay CDRW Drives

For PowerBook G3 Series 98 or PowerBook G3 99/2000

4x Record
4x Re-Write
20x Read

- Bootable! • Hot Swappable
- Fast Backup or Data Transfer
- Adaptec Toast™ Software
- Protective MCE Carrying Case

NEW LOW PRICE!

$349

CUSTOM POWERBOOK CONFIGURATIONS

ASK ABOUT OTHER CUSTOM CONFIGURATIONS & BUNDLES!

Authorized Reseller

Apple PowerBook 2000

- 400MHz/1MB L2 cache
- 20GB MCE Hard Drive
- 14.1" Display
- 128MB SDRAM
- 2 FireWire Ports
- 2 USB Ports
- DVD-ROM Drive
- AirPort Ready

$2799

compare to $2999*

w/30GB HD†...$3099

†in place of 20GB HD; compare to $3299*

Apple PowerBook 2000

- 500MHz/1MB L2 cache
- 30GB MCE Hard Drive
- 14.1" Display
- 128MB SDRAM
- 2 FireWire Ports
- 2 USB Ports
- DVD-ROM Drive
- AirPort Ready

$3599

compare to $3799*

w/extra Micro-AC Adapter & Battery...$3799

compare to $3997*

* Apple Store 9/22/00

Apple PowerBook 2000

Media Developer Bundle

- 500MHz/1MB L2 cache
- 30GB MCE Hard Drive
- MCE Expansion Bay CDRW Drive
- 512MB SDRAM • DVD-ROM Drive
- 14.1" Display • 2 USB Ports
- 2 FireWire Ports • AirPort Ready

$4999

w/MCE 30GB Expansion Bay Hard Drive...$5599

Audio & Video Developer PowerBook Bundles

CardBus Upgrade Service for PB 2400 & 3400/G3

opens up the possibilities for USB, FireWire, 10/100 Ethernet, expanded Video

See website for details!

KRATOC Systems

High-speed PC Card adapters for audio/video data transfer on your PowerBook!

SCSI Cards for new PowerBooks

CBFW2 FireWire CardBus PC Card	$129
CB31PB Ultra SCSI CardBus PC Card	$129
CB32PB UltraWide SCSI CardBus PC Card	$259

WORLD'S SMALLEST POWERBOOK AC ADAPTER!

FOR PB 2000, iBook, PB G3, 3400, 2400, 1400 & 2300

SMALLER THAN APPLE'S SMALLEST ADAPTER!!

Micro-AC Adapter only $85

Save space and weight in your carrying case!!

Auto/Air Adapter $80

Charge your PowerBook in the car or airplane

BUNDLE DEAL!

Micro-AC Adapter & Auto/Air Adapter $150

MADSONLINE

PowerBook G3 Series Carrying Cases

Slimline Case...$99

Productivity Case...$139

IREZ

TURN YOUR POWERBOOK OR IBOOK INTO A VIDEO POWERHOUSE!

CapSure PC Card	$99	Kritter USB Camera w/claw	$99
CapSure USB S-Video or Composite Built-in Microphone	$119	Kritter USB Camera w/wand	$129
CapSure/Kritter SV BUNDLE DEAL!	$229	Kritter SV Camera Requires CapSure Card	$139

* Type 2 PC Card • Import movies or stills through S-Video or Composite • Full-Motion (up to 30fps) preview at up to 1024x768

Blue, Orange, Black, or Ice

VST TECHNOLOGIES incorporated

Expansion Bay Zip Drives

100MB starting at $199

250MB $279

Charger, Battery & AC Adapter Bundle $299

Expansion Bay DVD-ROM Drive for PowerBook G3 Series 99 $299

PRO AUDIO EQUIPMENT FOR POWERBOOKS

Digigram VXpocket

Professional ANALOG AND DIGITAL audio interface for your PowerBook!

$699

Steinberg USB-2-Midi Interface $99

PowerBook & iBook Memory Upgrades!!

See our web site for latest pricing!!

Apple Computer

High-Capacity Li-Ion Batteries!

PowerBook 2400 Battery $249

PowerBook G3 99/2000 Battery $139

iHub Jr.

3 Port USB Hub

$39

iMouse Jr.

USB for iBook

$29

CardBus to USB Adapter

$79

USB Floppy Drive

$69

iOpti Jr.

Compact Optical Mouse

$35

Expansion Bay Device Carrying Case

Convenient protection for expansion bay devices!

$19

Klear Screen

PowerBook Screen Cleaner

three 6-packs $25

G3 Processor Upgrades for your PowerBook 1400, 2400 & G3 Wall Street

JOINT Simply Fast

PowerLogix

INTERWARE

Kensington

Notebook MicroSaver Security System

$43

Canon

BJC-85 Portable USB Bubble Jet Printer

$299

30 Hughes Suite 203 • Irvine, CA • 92618

Visa / MC / AmEx / Discover / P.O.

1-800-5000-MAC • 949-458-0800 • fax 949-458-1803

Circle 184 on card or go to www.macworld.com/getinfo

WE BUY MACS AND MAC STUFF
(318) 424-9791

SHREVE SYSTEMS

For all of this and more check out our website!
http://www.shrevesystems.com

WE STOCK MAC PARTS!

1-800-227-3971

FAX (318) 424-9771 Technical Support (318) 424-7867
Customer Service (318) 424-9791 Purchasing (318) 424-9791
1200 Marshall st Shreveport, Louisiana 71101

The Vintage Mac Superstore!

PowerMac 6100 Bundle

*Includes 13" Monitor
*8 MB Ram
*250 MB Hard Drive
*2X CD
*keyboard & mouse

World's Lowest Price!
While They Last!

Call us to see just how ridiculous this price is!

MacintoshLC580 Internet Ready!

- 33-MHz MC68LC040
- 8MB of RAM
- 800MB Hard Drive
- 28.8 Motorola Modem

Last Chance Blowout!

ONLY $149

$199 with internal 4XCD

FLOPPY DRIVE BLOWOUT!

1.44 Super Drives STARTING AT $19!

PART # 661-0474 NEW

NO EXCHANGE REQUIRED!

Blue & White G3's

1•800•227•3971

NEW! ON SALE!

ONLY $1,199

- 450-MHz PowerPC
- 128 MB RAM
- 9 GB SCSI HD
- CD
- * Keyboard & Mouse
- 16 MB ATI Rage Pro Video Card

BRAND NEW!

We stock parts for new and vintage Macs!

MacAlly Extended Keyboard

NEW! $19

NEW! Genuine Apple ADB Mouse II

$49

ClarisWorks 3.0 CROSS-PLATFORM- FOR MAC OR PC

ONLY $19!

FREE Edutainment Software Bundle included with the purchase of ClarisWorks 3.0! Over 20 titles!

PowerBook 5300cs includes FREE 56K Modem!

- Supports ext. video
- 24MB RAM
- 750 Hard Drive
- 100-MHz 603e
- Dual-scan color
- Refurbished
- FREE 56k modem

ONLY $499

HP Deskjet 890 ONLY $249

Monitor Blowout!

ONLY $329

NEW!

Apple 17" Studio Display

PowerComputing 17" Monitor ONLY $169!

Factory Refurbished

Don't Miss Out!

AS LOW AS $89! NEW!

Voxon 14" and 15" Monitors

See our line items below for other monitor blowout specials!

We also specialize in digital audio recording! Call for the best prices on Alesis, Akai, Tascam, Digidesign and Mark of the Unicorn!

Now Includes a FREE 2GB Hard Drive!

AS LOW AS $699

AKAI DPS 12 v2

Check out our website at www.shreveaudio.com

ClarisWorks 4 Internet Edition ONLY $39! NEW!

System Bundles SALE!

7100/60	5200/75	4400	5300/100	7300/180	PowerCurve 120	7200/75
24/350/CD/13" Monitor	8/500/CD/15" Monitor	32/2GB/CD	16/1GB/CD	32/2GB/CD	0/0/0/	0/0/0
$299 refurbished	$299 refurbished	$399 refurbished	$449 refurbished	$399 refurbished	$99 refurbished	$149 refurbished

PowerMac CPU SALE!

PRINTERS

HP Deskjet 890 CM, NEW	$249
Apple StyleWriter 1200, refurbished	$149.
Apple Stylewriter 1500, factory refurbished	$149.
Apple StyleWriter 2400, no cartridge, refurbished	$99.
LaserWriter IInt, refurbished w/ Toner	$199.
LaserWriter IIf w/5MB RAM, refurbished	$549.
LaserWriter IIg w/5MB RAM, refurbished	$649.
Texas Instruments Micro Laser Pro E NEW	$449.

Laser toner cartridges sold separately

IMAGING PRODUCTS

Apple QuickTake 150 refurbished	$149.
Apple QuickTake 100 refurbished	$99.

MACINTOSH LOGIC BOARDS

G3 logic board, No Processor, No ROM	$399.
7200/90 logic board, refurbished	$179.
LC logic board, refurbished	$49.
LC II logic board, refurbished	$99.
Mac LCIII logic board, refurbished, exchange	$129.
Performa 630 ,No Processor, refurbished	$49.
Quadra 950 logic board, refurbished	$179
7100/66 logic board, refurbished	$99
6200/75 logic board, refurbished	$149

APPLE PC COMPATIBILITY CARDS

Pentium 100-MHz, refurbished	$149.
Pentium 166-MHz, 12" PCI card, refurbished	$299.
586 100-MHz, 7" PCI card, refurbished	$99.
486 66-Mhz for 6100 series, NEW	$29.

MONITORS

Apple 17" Studio Display NEW	$329
Apple 14" A/V refurbished	$129.
Apple 14" Multiscan, refurbished	$119.
Apple 15" Multiscan, refurbished	$119
Apple 15" AV, factory refurbished	$199.
Apple MultiScan 17", refurbished	$179.
Apple 20" Multiscan, refurbished	$599.
Radius IntelliColor/20e, factory refurbished	$999.
Voxon 14" Multiscan NEW	$99.
Voxon 15" Multiscan NEW	$129.
Power Computing 15" refurbished	$119.
Power Computing 17" refurbished	$169.

NUBUS ADAPTERS

Quadra 660AV NuBus Adapter	$79.
Quadra 610 Nubus Adapter	$79.
IIsi Nubus adapter with math co-processor	$49.

VIDEO CARDS

E-Machines DoubleColor SX Nubus Card NEW	$29.
RasterOps 24MX NEW, 24-bit Nubus	$149.
*PowerMac HPV Card (1MB)	$79.
*PowerMac A/V Card (2MB)	$199.

1•800•227•3971

*Products are refurbished unless indicated as "new". Prices reflect a 2% cash discount and are subject to change without notice. Returns are subject to a 15% restocking fee. Not responsible for typographical errors. All trade-ins MUST BE in working condition. Refurbished systems may include like-new components and may also include cosmetic blemishes which do not functionally impair performance of the hardware.

Prices reflect a 2% cash discount and are subject to change without notice. Returns are subject to a 15% restocking fee. Not responsible for typographical errors.

www.shrevesystems.com

MAC OF ALL TRADES®

Visit Our Web Site...
www.macofalltrades.com
800.304.4639

These are typical used and refurbished items we buy and sell daily...

Direct: 404.355.5144
500 Bishop Street, Suite E-3 Atlanta, GA 30318
email: macofalltrades@macofalltrades.com
Fax: 404.355.5461

Save on Reconditioned Macs & Peripherals

PowerMacs
4400/200 32/2G/CD $199
7200/90 24/500/CD..... $139
7200/120 24/1G/CD..... $179
7300/200 24/1G/CD $349
7500/100 24/1G/CD..... $229
7600/132 24/1G/CD..... $229
8500/120 32/2G/CD $249
8500/180 32/2G/CD $329
8600/300 64/4G/CD $549
9500/132 32/2G/CD $299
9600/200 32/4G/CD $549

G3 PowerMacs
DT/233 32/4G/CD $549
DT/300 32/4G/CD $649
MT/266 32/6G/CD/AV $699
MT/300 64/4G/CD/Zip $799
MT/333
128/9GUW/CD/Zip $949
All CPUs include mouse

Monitors
14" Apple Color Plus $79
14" Apple Trinitron $99
15" Apple MultiScan $99
15" Apple MultiScan AV .. $129
17" Apple MultiScan $149

PowerBooks
5300cs 16/750 ..... $279
5300c 16/750 ..... $299
1400c/133 16/1G/CD $549
3400c/180 32/1G/CD $699
G3/233 32/2G/CD $999
6-Month Warranty
VISA & MasterCard accepted

To Order Call
1-800-281-3661
Or www.datatech-rmkt.com
DataTech
REMARKETING, INC.
Tel: 615-860-4422
Fax: 615-860-0390
471 Myatt Dr., Madison, TN 37115

Corporate names and trademarks are the property of their respective owners.

macs for rent
from DataTech Remarketing
Rent what you need now—
for as long as you need it.
log on & inquire
www.macsforrent.com
or call 1.800.281.3661

DIGITAL PREPRESS SYSTEMS
Rebuilt Imagesetters
(714) 892-5290
See Our Website! Fax: (714) 892-4361
www.prepresssystems.com
email: prepress77@hotmail.com
SAPHIR SCANNERS
HOWTEK DRUM CANNER
HARLEQUIN RIP

SILKSCREENING
PROCESS COLOR SYSTEM
PLATEMAKING SYSTEM

Mac POWER
Sales & Service, Inc.
BUY • SELL • TRADE
UPGRADE • REPAIR
New • Used • Refurbished
• Powrbooks
• PowrMacs
• Performas
• Quadras
• MacII-LC
• Monitors
• Printers
• Peripherals
• Ram
• Parts
www.macpowerinc.com
888-275-POWER
Fax: 408-448-6132
San Jose, California, 95123

www.MAC-PRO.com
Systems & Software
Buy • Sell • Upgrade • Repair • New • Used
We have It All
In Stock!
•Imac, G3, G4
•PowerBooks

Everything Mac!
Any Ad is a Mac Pro Ad
800-525-3888
sales@mac-pro.com Fax 408-369-1205

192 on card or www.macworld.com/getinfo

LACC.COM
(800) 689-3933
Local (310) 671-4444
Fax (310) 671-9565
LA Computer Center
450 N. Oak st.
Inglewood CA 90302
University and Governmnet and fortune1000 P.O's are welcome
International orders wlecome

CONVENENCE
FAST DELIVERY
SECURE SITE

LACC.COM

POWERMACS
FROM $849

G3 350 64/6G/CD/16M	$849
G3-350 128/12G/CD/ZIP	$999
G3 400 64/6G/DVD	$945
G3 450 128/9G/CD/ WIDE DRIVE	$1199
G4 350 64/10G/DVD 56K	$1079
G4 400 64/10G/ DVD 56K	$1279
G4 400 64/20G/DVD 56K	$1399
G4 450 256/27G DVD-RAM ZIP	$1699
G4 500 256/27G DVD-RAM ZIP	$1999
G4 DUAL 450 128/30G/DVD/56K	$2099
G4 DUAL 500 256/40G/DVD-RAM/56K	$2999
QUBE 450MHZ	$1399

WORKGROUP SERVERS

G4 500 DUAL PROCESSOR	$CALL
G4 500 256 /18G/DVD/SHAR	$2799
G4 400 256 /18G/CD/ SHAR	$1899

CALL FOR ALL WORKGROUP SERVERS

I-MACS
FROM $649

DV SE -500MHZ Graphite/SNOW	$1249
DV+ 450MHZ Sage /Ruby	$1099
DV 400Mhz ALL FLAVORS	$849
Blueberry 350MHZ 64/6G/DVD/M	$779
IMAC 333 LINE	$649

I-BOOKS SAVE

G3-300 Blueberry/Tangerine	$*999
G3-366 Graphite/Indigo	$1349
G3-366 Indigo/Key Lime	$1399
G3-466 Graphite/Key Lime	$1699

POWER BOOK

G3 233 32/4G/CD 56K 14.1 TFT	$*1299
G3 400 64/6G/DVD 56K 14.1 TFT	$1999
G3 400 6410G/DVD 56K 14.1 TFT	$2099
G3 500 128/12G/DVD 56K 14.1TFT	$2299
G3 500 128/20/DVD/56K 14.1TFT	$2499

PRINTERS
FROM $99

895Cx 830C/970Cx	$169/179/249
T45xi/ T65xi	$249/349
2100XI/ 2100M/ 2100TN	$599/699/999
1100XI/ 1100AXI	$369/399
3100XI/ 3150XI	$379/479
4000/ 4000T	$999/1099
4000N/ 4000TN	$1249/1349
4050/ 4050T	$999/1099
4050N/ 4050TN	$1349/1449
4500/ 4500N/ 4500DN	$1899/2199/2999
4550/ 4550N	$2099/2399
5000/5000N/5000GN	$1199/1799/2099
8000/ 8000N/ 8000DN	$1549/2099/2299
8100/ 8100N/ 8100DN	$2299/2549/2999
8500/ 8500N/ 8500DN	$CALL
8550/8550N	$CALL
8550DN/8550GN	$CALL

APPLE 15" TFT SCREEN BLUE	$999
APPLE 15" TFT GRAPHITE	$635
APPLE 15" TFT M7928ZMA	$939
APPLE 21" CINEMA DISPLAY	$3799
APPLE 17"	$399
APPLE 21" MONITOR	$1329

NEC LCD 1810	$2499
NEC LCD 2010	$3799
VIEWSONIC Vp181	$2799
IBM T85A 18.1 (White)	$1549
SONY CPD-L181	$2399
IOMEGA JAZ 2GB SCSI EXT	$239

3 COM Palm VIIx	$395
3 COM Palm VII	$395
3 COM Palm VX	$398
3 COM Palm Vx Champagne	$445
3 COM Palm IIIC	$319
DESIGN KEYBOARD 105 ADB	$49

All prices subject to change without notice • All Prices reflect cash discount • * reflects Factory refurb. LOS ANGELES COMPUTER CENTER IS NOT AN APPLE AUTHORIZED DEALER Apple, Apple logo, Mac, Book, Power Macintosh, PowerBook, are trademarks of Apple Computer,Inc., registered in the U.S.

keeping it simple
custom solutions
home packages, pro packages, mobile packages, and more!
Elura2 MC $1229!
Canon
Apple Specialist
powerDV digital video
From iMacs to Dual G4s, PowerDV has your video solution.
Complete video editing packages start at just $1799!
www.powerdv.com
1-877-928-5200

Circle 208 on card or go to www.macworld.com/getinfo

Don't Wait-
Showcase Your Services Here!
800-597-1594

MEGAMACS.COM

•PowerBook Batteries	from $29
•Adobe GoLive3 / Premier5.1	$14/179
•Office 2001 / Freehand 8	$299/59
•Norton AntiVirus 6 / Utilities 4	*$14/9*
•OmniPage7.0/8.0/OS 8.1	$45/129/29
•RayDreamStudio5.5orTimbuktu	$59
•Ricoh Ext. SCSI CDRW w/toast	$149
•Iomega PCI SCSI 2 Card	$25
•17 inch .26 Digital Color Monitor	$119
•Epson 740 / 860 (w/rebate)	$79/55
•Formac ProTV / LW Pro 630	$89/299
•Logitech WebCam / wheel mouse	$29/12
•G3-333 ZIF / PL 366 Card	*$112/189*

Get FREE software with orders placed on our website
918-664-MACS(6227) WE BUY MACS!
fax: 918-663-6340 Price rounded down,credit cards ok

Compare the best Mac Products at the best prices

The Macworld PriceFinder is your comprehensive resource for choosing the best Macintosh products, getting the lowest prices and buying with confidence from the vendor of your choice.

Shop and compare, get product reviews, out-the-door pricing and availablity from a wide array of Macintosh vendors – it's all there.

The Macworld PriceFinder
www.macworldpricefinder.com

©2000 Mac Publishing, L.L.C. Macworld.com are trademarks of Mac Publishing. Macintosh is a registered trademark of Apple Computer, Inc.

Classifieds

CD-ROM Replication by Oasis. **ISO-9002 certified manufacturing.** Minimum quantity 200 CD's. Unique packaging options including Oasis Jewel-FreeTM Box. *www.oasiscd.com* 888-296-2747

DUST COVERS - KEYBOARD SKINS - CARRYING CASES. Complete selection for the iMac and G-4. **800-872-1946** *www.abcomcorp.com*

ROLL CALL CHURCH MANAGEMENT SOFTWARE, ONLINE BIBLE BY THE BOOK *www.bythebook.com* **or dial (800) 554-9116**

TRUE QuickTime STREAMING HOSTING. **FREE** 15 day trial. Stream all 3 video formats + MP3 from $4.99/m **PlayStream.com 800-874-8855**

FREE MAC NEWS - Apple discounts, industry trends, new products: *www.macdirectory.com/pages/newsdaily.html*

MacTreasures - Macintosh software not found on retail shelves. URL: *www.mactreasures.com* **(408) 227-1645.**

Macintosh web hosting & QuickTime streaming - Host your site on secure Mac servers - Publish your FileMaker database on the web - Access like an iDisk! - Stream QT Movies - Plans start @ $100/year w/50MB of space. *www.macserve.net*

POWERBOOK GUY - The premier source for powerbooks, parts, & accessories! *www.powerbookguy.com* **(510) 533-5500**

Niki Stranz (415) 243-3664 or (800) 597-1594 x1
niki_stranz@macworld.com
Carol Johnstone (415) 243-3691 or (800) 597-1594 x2
carol_johnstone@macworld.com

MEMORY

DATA MEMORY SYSTEMS - CALL 800-662-7466

Lifetime Memory Guarantee - 30 Day Money Back

AC Adapters
Batteries
Cables
Camera Memory
DIMMs
MacCPU Upgrades
Iomega Stuff
Modems
Monitors
Networking
PowerBook Memory
Printer Memory
SDRAM
SIMMs
Storage Drives
Surge Suppressors

Memory
√ PC66 SDRAM
√ PC100 CL2/CL3
√ PC133 SDRAM
√ ECC & EDO

Networking
- Client/Server Systems
- Ethernet Cards & Conns.
- Hubs
- CAT5 Cabling

DMS has all you need to network your business

Since 1986, DMS has provided customers with the best memory prices, guarantee and service anywhere!

Nothing has changed...

Secure Online Shopping
www.datamem.com

DMS DATA MEMORY SYSTEMS
DATA MEMORY SYSTEMS
24 Keewaydin Dr.
Salem, NH 03079
Fax: 603-898-6585

Circle 213 on card or go to www.macworld.com/getinfo

MEMORY

OnLine Discounted Memory Pricing available only at www.macsolutions.com

BEST PRICES!

MEMORY mb	16	32	64	128	256	512
G3/G4	–	$22	$31	$53	$115	$333
iMac™ 350	–	$22	$31	$53	$115	$333
iMac™ 233-333	–	$22	$33	$60	$129	–
iBook™	–	$22	$33	$60	$129	–
PowerBook G3	–	$22	$33	$60	$129	$324
168 pin DIMMs	$21	$39	$73	$139	–	–
72 pin SIMMs	$15	$37	–	–	–	–
30 pin SIMMs	$19	–	–	–	–	–

All prices are subject to change without notice. Not responsible for typographic errors. Limited to stock on hand.

*New Macs available for Walk-In sales only.

SPECIALS!!	
Mac®OS 8.1 CD only	49
Quantum 2gb SCSI IntHD-Used	60
Seagate 30gb IDE 7200rpm	149
IBM 45gb IDE 7200rpm	189
IBM 75gb IDE 7200rpm	369

NEW MACS!*	
G4/400 64/20gb/DVD/56k	web
G4 Cube 450 64/20gb/DVD/56k	web
iMac™ 350MHz 64/7gb/CD/56k	web
PowerBook® G3-500 128/12gb	web

Special pricing on our website. GO There!!

Authorized Dealer Apple Specialist Authorized Service Provider

MacSolutions, Inc. Fax: (310) 966-4433
11933 Wilshire Blvd, West Los Angeles, CA 90025
University & School P.O.'s Welcome. Ad code 1218

MAC Solutions

Call 800-873-3RAM or Order Online at
www.macsolutions.com

ONEMEMORY

LIFETIME WARRANTY
BEST QUALITY
FAST·EASY
SECURE

PC100		PowerBook	
128mb	$51	128mb	$58
256mb	$113	256mb	$127

sales@onememory.com
www.onememory.com

Don't Wait-

Showcase Your Services Here!

800-597-1594

206 on card or www.macworld.com/getinfo

MEMORY SPECIALISTS

- Printers
- Monitors
- Supplies
- Scanners
- Media
- Hard Drives
- Modems
- Software
- Accessories
- Cables/Adapters
- Mice/Input Devices
- Keyboards
- Network Products
- Hubs/NICS

Serving Mac User's Since 1991. We sell only NEW, Grade A Full MFG Spec Ram

Low Prices & Personalized Service

Tahoe Peripherals

5301 Longley Lane, Suite A-2,
Reno, NV 89511 • Fax 775-823-2200
www.tahoeperipherals.com

800-307-3434

212 on card or www.macworld.com/getinfo

WHY IS THE COMPETITION SHAKING?

BECAUSE
1•800•4•MEMORY
IS HERE

WE CAN **BEAT**
ANY QUOTED PRICE ON ANY MEMORY FOR ANY COMPUTER (NOTEBOOK, DESKTOP, PRINTERS) ANYWHERE . . . PERIOD!

- LIFETIME WARRANTY
- FREE TECH SUPPORT
- NO CREDIT CARD SURCHARGE
- MOST ORDERS SHIPPED SAME DAY

CALL AROUND
THEN CALL US

CHECK OUR WEB SITE FOR *SPECIALS*
WWW.18004MEMORY.COM

Macworld REPRINTS

Professional reprints are highly effective marketing tools that will enhance your promotional efforts

Use reprints as:

- **Trade show handouts**
- **Sales tools**
- **Presentation materials**
- **Direct mail pieces**

Call today to order digital or hardcopy reprints from Reprint Services:

717-399-1900

continued from page 170

Slippery Prices

Last September, *Computerworld* magazine unearthed another slippery tactic: Amazon charges different prices—varying by as much as $10—to different people, depending on "which browser was being used, whether a consumer was a repeat or first-time customer, and which Internet service provider a customer was using." The *Men in Black* DVD, for example, cost the reporter $2 more when she used Netscape Navigator than when she tried Microsoft Internet Explorer.

Economists call this game "yield management"—the science of playing with prices to eke out the most profit, even though two consumers might pay wildly different prices. Airlines and hotels practice yield management all the time. All that's new is that a company that sells *things*, instead of services, has joined the party. This practice would never work in a local store, but Amazon can get away with it—after all, from your Web browser, you can't see what price anyone else is paying.

Amazon's pricing games have grown only more complex since then. In August, on all books under $30, the company cut its usual discount of 20 percent in half. Add in the $4.50 single-book shipping charge, and you can see how Amazon wound up quietly dismantling one of the pillars of its image: that it offers lower prices than the local bookstore.

In November, shortly after the pricing switch became public, Amazon restored the 20-percent discounts. But that may change again, and the damage has been done; Amazon is no longer Old Faithful. You may have a different shopping experience each time you visit.

Do the Right Thing

It's certainly Amazon's right to fiddle with its business model; the company has done nothing illegal (although some of its experiments have their seamy side). But we, the book-buying public who loved the original bookstore, helped make it the company's only profitable division. By constantly tweaking the formula, Amazon appears to be trying to make us subsidize the struggling departments—the ones that sell cars, patio furniture, and shaving cream. Let's just hope the company's tinkering doesn't squeeze the appeal right out of what used to be not only the "world's largest bookstore" but also one of the best. **m**

DAVID POGUE (www.davidpogue.com) is the author of *iMovie 2: The Missing Manual* (O'Reilly/Pogue Press, 2001).

DAVID POGUE

Darkness in the Amazon Jungle

AMAZON.COM KEEPS FIDDLING WITH THE FORMULA

For a long time, Amazon.com had us in the palm of its hand. From the privacy of our Web browsers, we could buy any book on earth for less money than we would spend at a local, tax-charging bookstore. The whole place seemed up-front and trustworthy. Amazon was the Big Warm Consumer Fuzzy.

The first time I noticed weird things going on at Amazon was a couple of years ago, when I ran into a fellow book author. "Have you been watching my new book?" she asked breathlessly. "Don't you mean *reading* your new book?" I asked. "No, no—watching it. On Amazon. I hit 359 last week!"

She went on to explain how each book's Amazon page shows its sales rank. Hour by hour, you can see how a book is selling, relative to the other 5 million books in Amazon's catalog. (I remember thinking: "She sits there all day, clicking on the Reload button over and over again, gloating over every little uptick in her book's rank? That is pathetic!" Two hours later, I was doing the same thing.)

The thing is, nobody understands how Amazon's sales-rank computations work, and the company isn't telling. It's easy to fool their system; if six friends order your book simultaneously at 5:26 on Thursday afternoon, then, by golly, you'll see it shoot into the top 50 (for a few enchanted minutes, anyway).

One of my books hums along in the 1,500 range during evenings and weekdays, but it tanks to 80,000 or so on weekends. What's *that* about? I mean, if the answer is "People don't buy books on the weekend," then *all* books should tank on the weekend, and their relative rankings should stay the same. Furthermore, it's a little odd that the sales-rank numbers don't correspond to Amazon's own "most popular" sort order, which appears when you're viewing the results of a search.

Glowing Praise

OK, so maybe those numbers are for entertainment purposes only. But what about those reviews that ordinary readers are allowed to post? This Amazon feature, too, holds a grisly fascination for those of us in the book-creation business. It takes a lot of chutzpah for an online store to post negative reviews of the very products it sells. But the funny thing is, Amazon's editors don't post every negative review, as those of us on an authors' mailing list have discovered by comparing notes; the overwhelming majority of books appear with mostly positive reviews. To paraphrase Garrison Keillor, Amazon is a place where every book is above average.

But I really began to wonder about Amazon in 1999, when the *New York Times* reported that secret promotional fees from publishers, not the independent judgment of editors, determined Amazon's "Editor's Picks."

Amazon responded quickly; it now tells which books are backed by paid placements.

continues on page 169

Medicine For Your Mac

Nothing can ruin your day faster than a sick and ailing computer. And while Macintosh is one of the most reliable computers in the world, sometimes things can go wrong. That's why we invented TechTool Pro. TechTool Pro is the super-utility that can find and isolate almost any problem on your computer. No other utility in the world comes even close to covering as many aspects of your Macintosh as does TechTool Pro.

But diagnosing computer maladies is only half the battle. Besides repairing drives, recovering data and checking the health of your Macintosh components, TechTool Pro can now help protect you against virus problems and software conflicts. TechTool Pro can also keep your Mac running at its peak between problems. The program optimizes your disk drive to make your computer run faster and more efficiently. Our RAM panel even allows you to see the inner configuration of your memory without needing to open the case.

Do all these features make TechTool Pro complicated to use? Not at all. The MultiTester feature allows you to give your computer a full checkup with one click of your mouse. TechTool Pro even creates graphic, easy-to-read and understand reports. Now you can know the state of your computer without having a degree in computer science.

Every day, more and more Macintosh professionals are choosing TechTool over other system utilities. In fact, even Apple Computer includes TechTool Deluxe with every copy of their AppleCare™ Protection Plan. Simply put, TechTool Pro 3 is the most complete and powerful troubleshooting and repair utility available for your computer. Why would you settle for anything less?

MacWorld Aug. 1999

MacHome 1999 Product Award

mac today EDITORS' CHOICE 98

Micromat Inc.
800-829-6227
707-566-3831
FAX: 707-566-3871
info@micromat.com
www.micromat.com

©2000 Micromat, Inc. All rights reserved. TechTool is a registered trademark of Micromat, Inc. Macintosh and AppleCare are trademarks of Apple Computer, Inc.

Dang. Forgot the racing stripes.

But that's about it, in terms of souped-up, sports-car qualities. Introducing TurboRing™, the world's first trackball with patented Scroll Ring™ technology and three programmable buttons. Now, you can blast through long documents. And whiz through Web pages. All in sheer, ergonomic bliss. The idea of comfort and handling at high speeds is coming to a whole new Autobahn. Your desktop. For more information, visit www.turboring.com. And please, buckle up.

KENSINGTON.

Smart design at work.

Kensington is a registered trademark and TurboRing and Scroll Ring are trademarks of ACCO World Corporation. ©2000 Kensington Technology Group a division of ACCO brands, Inc.