JULY 1996 / $3.95

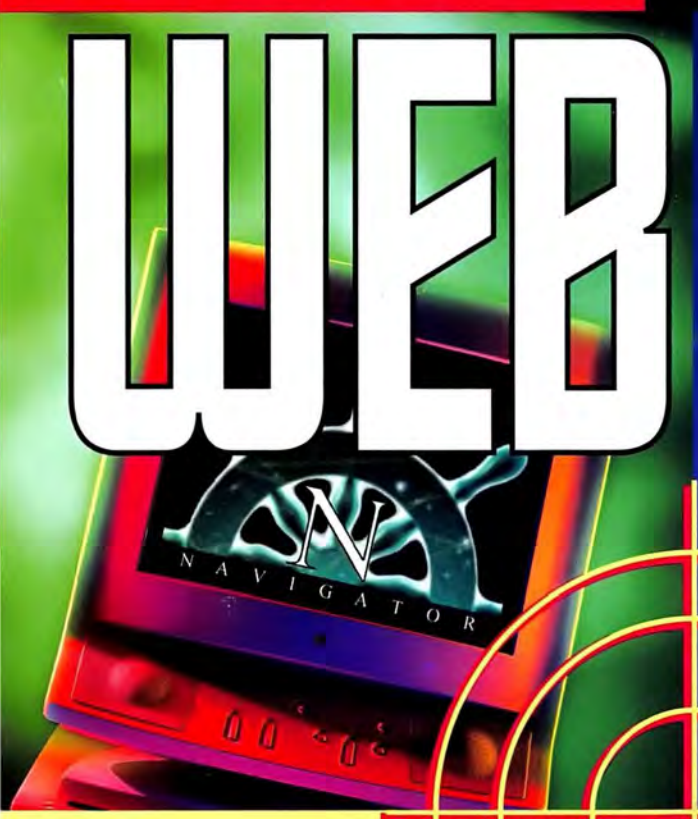
MacUser

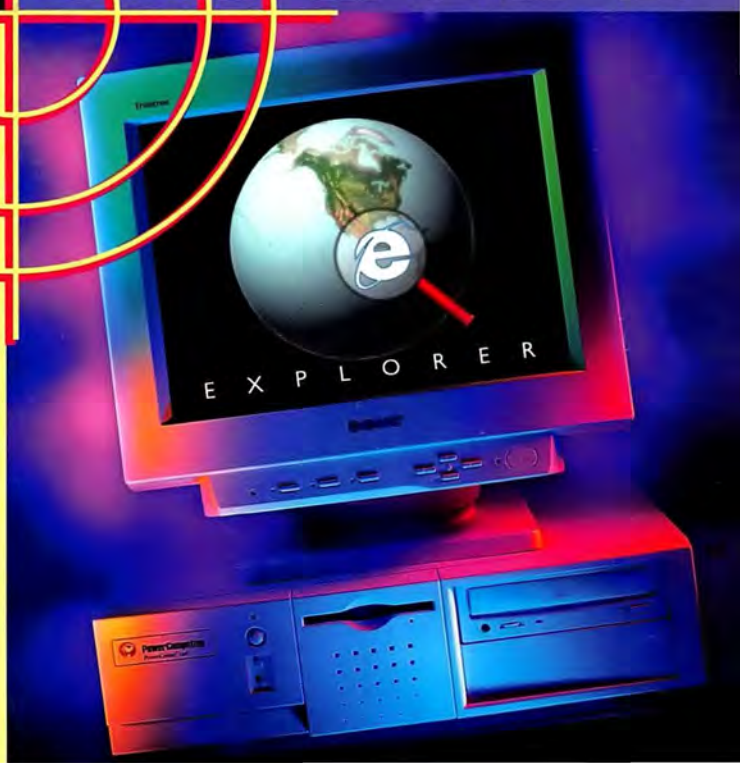
http://www.zdnet.com/macuser/

ZD ZIFF-DAVIS PUBLISHING COMPANY

WEB WAR

Microsoft Battles Netscape for Control





PLUS

Mac Time Trials:
We test 12 fast new systems

Cyberdog!
Apple teaches the Internet new tricks

07>
0 71486 02579 5

TAKE CONTROL

In here

You

Your Power Mac™

And Microsoft® Office

Become one.

YOU ARE AN IDEA FACTORY

You assemble your thoughts

Effortlessly.

You drag

Words tables

Charts graphics

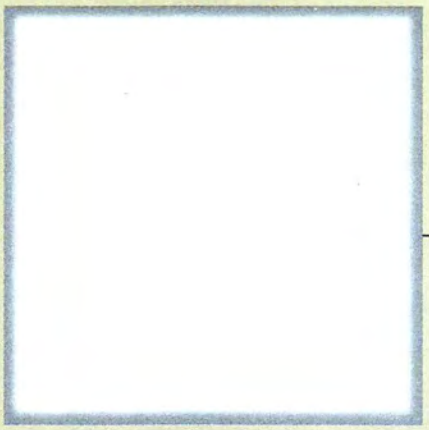
From one program

And drop them

Into another

Instantly.

(server and software acquired separately). For information only: in the 50 United States and Canada, call (800) 531-6748.
9641 in Canada. Microsoft and PowerPoint are registered trademarks and *Where Do You Want To Go Today?* is a trademark of Microsoft Corporation. Power Mac is a trademark of Apple Computer, Inc.

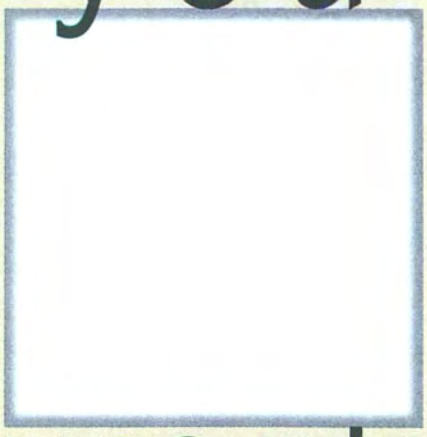


©1995 Microsoft Corporation. All rights reserved. Microsoft Office, shown here, includes: Word, Microsoft Excel, the PowerPoint presentation graphics program and a workstation license for Microsoft Mai
Outside the U.S. and Canada, call your local Microsoft subsidiary or (206) 936-8661. Customers can reach Microsoft text telephone (TT/TDD) services by calling (800) 892-5234 in the U.S. or (905) 56

in

here

you



work

miracles

IDEAS BEGIN TO FORM

You run

Microsoft Excel calculations

In your Word document.

You turn your Word document

Into a PowerPoint® presentation.

You see everything

Come together.

Seamlessly.

GO AHEAD

Make something.

Make anything.

This is you. Working.

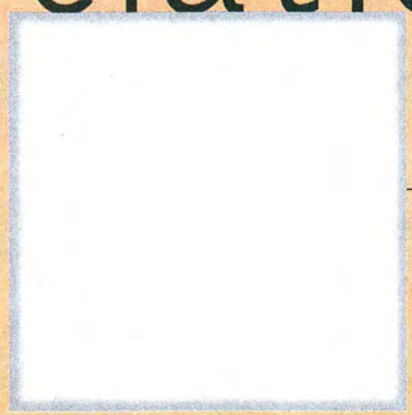
Microsoft

WHERE DO YOU WANT TO GO TODAY?™

in

here

revelations



happen

© 1995 Microsoft Corporation. All rights reserved. For info. only: in the 50 United States and Canada (800) 531-6748. Outside the U.S. and Canada, call your local Microsoft subsidiary or (206) 936-8661. For Microsoft text telephone (TT/TDD) services call (800) 892-5234 in the U.S. or (905) 568-9641 in Canada. Microsoft and PivotTable are registered trademarks and *Where do you want to go today?* is a trademark of Microsoft Corp. Power Mac is a trademark of Apple Computer, Inc.

YOU ARE LOOKING FOR ANSWERS

You are on

Your Power Mac.™

You open

Microsoft® Excel 5.0a.

You begin

With a hunch.

You begin

At zero.

1

You open a worksheet.
You type "Jan."
You use AutoFill
And the rest of the months
Are filled in for you.
Automatically.

2

You enter numbers.
You click AutoFilter
And the data you want to see
Rises to the top
So you can focus on
What you need to focus on.

3

You want to slice
And dice your numbers.
You build a PivotTable®
To see them
From any perspective
You want.

4

You see
Patterns form.
You come
To understand.
You get it.

Microsoft®

WHERE DO YOU WANT TO GO TODAY?™

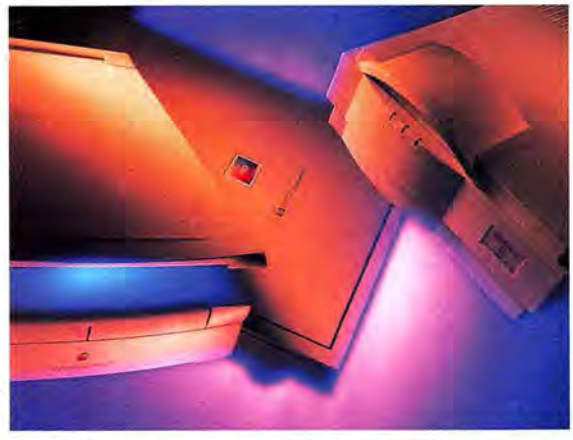
MacUser
JULY 1996 / VOLUME 12 NUMBER 7

CONTENTS

NEWS

Pentium Power Macs Add-in cards boost Windows 95 performance. / **Multimedia Authoring Tools** Interactive Web pages made easy. / **Clone Watch** Multiprocessor Mac OS systems. / **MacUser Utility of the Month** SiteSeer. / **Plus** Macintosh price index. / **25**

MacWEEK Report From the heart of Silicon Valley to the shores of Lake Washington, our intrepid sister pub brings you the latest intelligence on all things Macintosh. / **35**



REVIEWS

HP ScanJet 4p, Apple Color OneScanner 600/27, and **UMAX Super Vista S-12** Three bargain-priced SOHO-targeted color flatbed scanners vary in their ability to capture color. / **39**

Iomega Jaz You've read about the Zip drive; now meet its big brother. The Jaz offers fast, reliable, removable large-file storage at a reasonable price. / **42**

Now Utilities 6.0 Now Software spruces up some old favorites and adds a few new ones to its utility collection. / **44**

mTropolis Drag-and-drop object-oriented programming makes this a powerful alternative to Macromedia Director. / **46**

Live Picture 2.5 and **xRes 2** Two image editors challenge Photoshop's dominance by finessing big files. / **47**

Suitcase 3.0, theFONDler 4.0, and **Font Box Professional Edition 1.7.1** Three useful utilities help you untangle your type. / **48**

Adobe PhotoDeluxe User-friendly, entry-level image editor offers a subset of features used by professionals. / **52**

KPT Cool Effects Bargain-priced Photoshop plug-in takes your digital-imaging skills to the next level. / **53**

IRIS IRISPen Trade your Hi-Liter for a scanner with this OCR-like pen. / **54**

Panasonic KXL-D742 CD-ROM drive This battery-operated, quad-speed external is designed specifically for PowerBooks. / **57**

3D World First QuickDraw 3D design program is quick and draws praise. / **59**

Dramatica Pro 2.0 Story writers should check out this aid to character development. / **60**

COLUMNS

Letters Tough love, inflationary claims, Pippin plugs, and Quicken quibbles. / **13**

Pamela Pfiffner Apple at the crossroads. / **21**

Andy Ihnatko Andy's high-tech dating advice. / **186**

How to Reach Us / 8

Product Index / 148

Advertiser Index / 152

Marketplace / 159

On the cover / The battle of the browsers
Cover photo / Jim Karageorge
Screen illustrations / Clarence Emmons

COVER STORY

WEB WAR

CAN MICROSOFT BEAT THE BROWSER THAT MADE *WORLD WIDE WEB* A HOUSEHOLD PHRASE?

Is Netscape Navigator up for the challenge? The stakes are high as each browser jockeys to become the all-in-one Internet platform. The bottom line? Navigator faces some formidable competition from Internet Explorer — but this is good news for users.
By Jason Snell / 62

FEATURES

Walking the Cyberdog

Apple's new Internet application uses OpenDoc to deliver a radically different approach to Web browsing, e-mail, and other Internet functions. You have to see Cyberdog to believe it, but it's definitely a tail-wagger. And best of all, it's free. **By Henry Bortman / 69**

Power Takes the Lead

The premier Mac-clone maker streaks past Apple again with its new PowerTower 180, which is at least 14 percent faster than Apple's latest top-of-the-line machines. We test a dozen of the newest systems. **By Henry Bortman / 75**

The Big Picture

Whether you're scanning one big original in a design studio or batch-processing multiple images in a production environment, large-format flatbed scanners can do both. We evaluate five for image quality, speed, and price. **By Roman Loyola / 80**

Quick Labs

Problem: We just can't keep up with all the great products introduced each month. Solution: Quick Labs, a monthly bulletin of lab results on the latest printers, monitors, and storage systems. **/ 86**

DEPARTMENTS

DESKTOP MEDIA

AppleScript for Artists Isn't it time you automated the repetitive tasks in your work? Here's how with AppleScript. **/ 89**

Graphics How-To Turn flat EPS illustrations into virtual paper sculptures with Painter 4's surface and lighting controls. **/ 92**

Expert Tips Fonts '96: AppleScript-able Suitcase, embeddable fonts on the Web, and more. **/ 95**

NETWORKING

Gateway to Web Success How to use CGI applications to bring your site to life. **/ 97**

Net Traveler With just the right plug-ins, you're ready for the full Internet experience. **/ 101**

HANDS ON

Open Transport 101 Apple's new networking system: the basics. **/ 103**

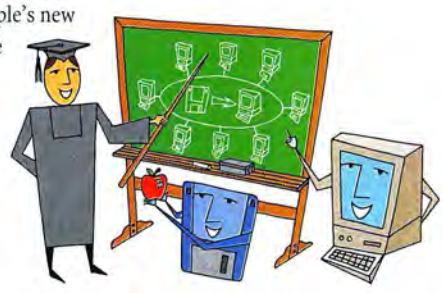
Help Folder Bob and Chris answer all your questions. **/ 105**

PERSONAL MAC

The Couch-Potato Mac Kick back, relax, and check out the electronic guides to movies and TV. **/ 113**

The Two Dads Bailey gets a JumpStart. **/ 116**

The Game Room Heavy on action, light on gore. **/ 117**



MacUser (ISSN 0884-0997) is published monthly by Ziff-Davis Publishing Company, L.P., One Park Avenue, New York, NY 10016. Editorial Offices: 950 Tower Lane, 18th Floor, Foster City, CA 94404. Telephone: 415-378-5600. U.S. subscription rates are $27 for 12 issues, $45 for 24 issues, and $62 for 36 issues. Additional postage for Canada: Add $16 per year to the U.S. rates for surface mail. Single-copy price is $3.95 (Canada, $4.95). Canadian GST registration #R-140496720. Canada Post International Publications Mail Product (Canadian Distribution) Sales Agreement No. 278521. POSTMASTER: Send address changes to *MacUser*, P.O. Box 56986, Boulder, CO 80322-6986. Second-class postage paid at New York, NY 10016, and at other mailing offices. Printed in the USA.

PowerCADD™

Power Macintosh version of PowerDraw

300% faster than ever

Accelerated for Power Macintosh

File Size	PowerCADD 2.0	PowerDraw 6.0	PowerDraw 5.0
	(SCREEN REDRAW TIMES - SECONDS)*		
1.5 MB	2.27	8.5	28.85
6.4 MB	5.49	18.12	38.25
1.0 MB	1.68	3.87	7.87

*Test conducted on a Power Macintosh 8100/100AV for PowerCADD 2.0 and a Macintosh Quadra 630 for PowerDraw versions.

MACWORLD MW ★★★★

Macworld October 1995

"...PowerCADD's greatest benefit is speed..."

"PowerCADD does the best job of harnessing the Power Mac's capabilities I've seen."

MacUser October 1995

"...PowerCADD's programmability and extensibility may make PowerCADD a better choice than high-end CAD programs."

score card MacWEEK ◆◆◆◆

MacWEEK July 10, 1995

"...a 1.4 MB (PowerCADD) file on the Power Mac updated more than two times faster on the Power Macintosh (redraw speed of five seconds)."

InfoWorld July 24, 1995

"PowerCADD 2.0 boasts faster redraw times, faster editing and processing speeds, improved layer controls, enhanced editing commands, and a redesigned interface."

ENGINEERED SOFTWARE™

Call 910-299-4843
Fax 910-852-2067
In Canada 204-453-8111

CIRCLE 73 ON READER SERVICE CARD

MacUser

Group Publisher
John Blake

Editor in Chief
Pamela Pfiffner

Editorial
Editor **Andrew Gore**
Managing Editor **Nancy Groth**
Technical Director **Henry Bortman**
Executive Editors **Susan Janus, Rik Myslewski**
Senior Editors **Karen J. Ohlson, Jim Shatz-Akin**
Senior Associate Managing Editor **Claire H. Breen**
Chief Copy Editor **Eva Langfeldt**
Associate Technical Editor **Rhoda Simmons**
Associate Editors **Carolyn Bickford, Shelly Brisbin, Roman Loyola, Nancy Peterson, Sean J. Safreed**
Copy Editor **Jon Zobenica**
Assistant Editor **Rebecca Olson**
Contributing Editors **Sharon Zardetto Aker, David Biedny, Christopher Breen, Don Crabb, Shelley Cryan, Bruce Fraser, Andy Ihnatko, Ted Landau, Bob LeVitus, John Rizzo, Bob Schaffel, Michael Swaine, Gregory Wasson, Chuck Weger, Kelli Wiseth**
Executive Assistant to the Editor in Chief
Teresa Campbell

MacUser Labs
Group Labs Director **Jeffrey S. Pittelkau**
Associate Labs Director **Nathan Garcia**
Senior Project Leaders **Kristina De Nike, Jeffrey K. Milstead**
Project Leader **Rick Oldano**
Technical Specialists **James Galbraith, Martin Wong**
Lab Administrator **Chris Moreno**

ZD Labs
Director **Robert W. Kane**

MacUser Online
Editor, Online **James S. Bradbury**
Managing Editor, Online **Scott Love**
Associate Editors, Online **Jodi Naas, Jason Snell**

Design
Art & Design Director **Lisa Orsini**
Senior Art Director **Diane Dempsey**
Art Production Manager **Jan McKenzie Rogers**
Assistant Art Director **Stephani Finks**
Art Production Assistant **David G. Simoni**

Advertising/Sales
Advertising Coordinators **Jennifer Sawyer, Elizabeth Turney**
Sales Assistant **Colleen Dasher**

Production
Production Director **Carlos Lugo**
Production Manager **Jill Waldman**
Assistant Production Manager **Monique Risso**

Marketing
Group Marketing Director **Laurel Clark Skillman**
Group Research Manager **Timothy O. Gaughan**
Marketing Manager **Renee Bula**
Marketing Coordinator **Stephanie Arnold**

Operations
Group Business Director **Bret A. Violette**
Group Business Manager **Mary E. Colbert**
Assistant to the Group National Ad Director **Gina Michelucci**

ZIFF-DAVIS PUBLISHING
Chairman and CEO **Eric Hippeau**
President, U.S. Publications **Ronni Sonnenberg**
President, Interactive Media and Development Group **Jeffrey Ballowe**
President, International Media Group **J. B. Holston III**
President, Computer Intelligence/InfoCorp **Bob Brown**
President, Training and Support Publishing Group **William Rosenthal**
Vice President, Chief Financial Officer **Timothy C. O'Brien**
Vice President, General Counsel, and Secretary **J. Malcolm Morris**
Vice President, Human Resources **Rayna Brown**
Vice President, Planning **Darryl Otte**
Vice President, Production **Roger Herrmann**
Vice President, Controller **Mark Moyer**
Treasurer **Thomas L. Wright**

U.S. Publications Group
President, U.S. Publications **Ronni Sonnenberg**
President, Business Media Group **Claude P. Sheer**
President, Consumer Media Group **J. Scott Briggs**
Senior Vice President, Circulation **Baird Davis**
Vice President, Business Manager **Tom McGrade**
Vice President, Marketing Services **Jim Manning**
Vice President, Central Advertising Sales **Bob Bader**
Vice President, Product Testing **Mark Van Name**
Vice President, Circulation Services **James F. Ramaley**
Vice Presidents **Don Byrnes, Al DiGuido, Daniel Farber, Michael Miller, Daniel Rosensweig, Paul Somerson**
Executive Director, Licensing **Gertrud Borchardt**
Director, ZD Labs **Robert W. Kane**
Director, Benchmark Operation **Bill Catchings**
Vice President, Managing Director, Ziff-Davis Magazine Network **Joe Gillespie**
Executive Director, Ziff-Davis Magazine Network **Alicia Saribalis**
Marketing Director, Ziff-Davis Magazine Network **Michael Perkowski**
Directors, Ziff-Davis Magazine Network **Ken Beach, Michael Bird, Jeff Bruce, Kelly Lowman, Melinda Maginn, Debbie Moss, Julie Tuttle**

Interactive Media and Development Group
President, Interactive Media and Development Group **Jeffrey Ballowe**
Executive Vice President **David Shnaider**
Vice President, Business Development **T. L. Thompson**
Vice President, General Manager, ZD Net **James Savage**
Vice President, ZDTV **Richard Fisher**
Vice President, Creative Services **Herbert Stern**
Vice President, Research **Elda Vale**
Editorial Director, New Products **Bill Machrone**
Group Business Manager **Jocelyn Grayson**
Director, Public Relations **Gregory Jarboe**

Ziff-Davis Publishing Company
A Softbank Company

In memory of **John J. Anderson** 1956 – 1989
and **Derek Van Alstyne** 1967 – 1989

The Audit Bureau ABC BPA

Entire contents © 1996 Ziff-Davis Publishing Company, L.P. All rights reserved; reproduction in whole or in part without permission is prohibited. *MacUser* is a registered trademark of Ziff-Davis Publishing Company, L.P. *MacUser* is an independent journal, not affiliated in any way with Apple Computer, Inc.

Perfect output at a surprisingly perfect price. For the first time in laser printer history, the new Accel-a-Writer® 8300 with **X•ACT**™ allows you to calibrate the accuracy of your printer to within the width of a single dot. No other printer on the market delivers these exacting standards. And true **Adobe™ PostScript™** offers another standard of perfection with high performance and incredible output accuracy.

The new Canon® JX engine is at the heart of this leading-edge printer. And with **1200 x 1200 dpi** your Accel-a-Writer 8300 becomes a desktop plain-paper imagesetter with the capability to **print up to 12 x 25 inches**.

Finally, XANTÉ®'s **Enhanced Screening Technology** allows you to further fine-tune your output quality by providing 40% more levels of gray when enabled for exceptional halftones.

So ask yourself... if your output could be *close to perfect* or *perfect*, which would you choose? We think you know the answer. XANTÉ's new Accel-a-Writer 8300. There's no other printer like it.

MacUser

AT&T Capital Corporation

Optional on-site service provided by XANTÉ in partnership with Olivetti North America
olivetti

XANTÉ
Innovations In Output

1-800-926-8839, ext. 2223
Dealers call ext. 2224 FAX: 334/342-3345
MasterCard/VISA/American Express/Discover Card accepted.

Adobe PostScript

©1996 XANTÉ Corporation. XANTÉ and Accel-a-Writer are registered trademarks of XANTÉ Corporation. X-ACT is a trademark of XANTÉ Corporation. Adobe, PostScript, and the PostScript logo are trademarks of Adobe Systems Incorporated or its subsidiaries and may be registered in certain jurisdictions. Other brands and product names are trademarks or registered trademarks of their respective holders.

CIRCLE **126** ON READER SERVICE CARD

Bookmark these hot sites

http://www.zdnet.com
ZD Net Home Page

MacUser
http://www.macuser.com
MacUser Site

Come see the hottest destinations for computer buying information on the World Wide Web.

ZDNet™
World Wide Web Edition

MacUser

How to Reach Us

THE EDITORS of *MacUser* want to hear from you. Send your questions, tips, kudos, comments, or complaints to *MacUser,* 950 Tower Lane, 18th Floor, Foster City, CA 94404; 415-378-5600. Send e-mail to letters@macuser.com (Internet). We are, unfortunately, unable to look up stories from past issues, recommend products, or diagnose your Macintosh problems by telephone. Contact Apple toll-free at 800-538-9696, ext. 500, for information on user groups in your area.

IF YOU SUBMIT A TIP to *MacUser* (and we hope you do), please be advised that you agree that Ziff-Davis Publishing Company, L.P., and its affiliates and licensees can reproduce, publish, display, and distribute your tip worldwide in all print and electronic media and in all other forms, manner, and media now known or hereinafter devised.

Subscription Inquiries/Change of Address

FOR SUBSCRIPTION SERVICE questions, address changes, or ordering information, please write to *MacUser,* P.O. Box 56986, Boulder, CO 80322-6986. New subscriptions and address changes take up to six to eight weeks. For back issues (subject to availability), send $7 per issue, $8 outside the U.S., to Back Issues Dept., Ziff-Davis Publishing Company, L.P., P.O. Box 53131, Boulder, CO 80322-3131. We periodically make lists of our customers available to carefully screened mailers of quality goods and services. If you do not wish to receive such mailings, please let us know by writing to us at *MacUser,* P.O. Box 56986, Boulder, CO 80322-6986. *MacUser* (ISSN 0884-0997) is published monthly by Ziff-Davis Publishing Company, L.P., One Park Avenue, New York, NY 10016. Editorial Offices: 950 Tower Lane, 18th Floor, Foster City, CA 94404. Telephone: 415-378-5600. U.S. subscription rates are $27 for 12 issues, $45 for 24 issues, and $62 for 36 issues. Additional postage for Canada: Add $16 per year to the U.S. rates for surface mail. Single-copy price is $3.95 (Canada, $4.95). Canadian GST registration #R-140496720. Canada Post International Publications Mail Product (Canadian Distribution) Sales Agreement No. 278521.

POSTMASTER: Send address changes to *MacUser,* P.O. Box 56986, Boulder, CO 80322-6986. Second-class postage paid at New York, NY 10016, and at other mailing offices.

ZD Net/Mac: MacUser Online

ZD NET/MAC is a commercial online service that provides selected articles, reviews, and electronic supplements to *MacUser.* In addition, you will find thousands of reviewed shareware files and have a chance to interact with editors. To order a free starter kit to access ZD Net/Mac, hosted on CompuServe, call 800-848-8199. On **CompuServe,** simply type GO ZMC :MACUSER. Or check out *MacUser*'s home on the **World Wide Web,** at http://www.zdnet.com/macuser/.

MacUser on CD-ROM

FIND *MACUSER* ON Computer Select, a CD-ROM from Computer Library. To subscribe, call 800-827-7889, ext. 708. If you're calling from Canada, 212-503-4400; from Europe, 44-344-710091; or from anywhere else, 212-503-4425.

Complaints About Advertisers

MACUSER EDITORS are not responsible for the contents of the advertisements in the magazine. However, if you bought a product advertised in *MacUser,* are dissatisfied, and can't resolve the problem, write to Ad Department, *MacUser,* 950 Tower Lane, 18th Floor, Foster City, CA 94404.

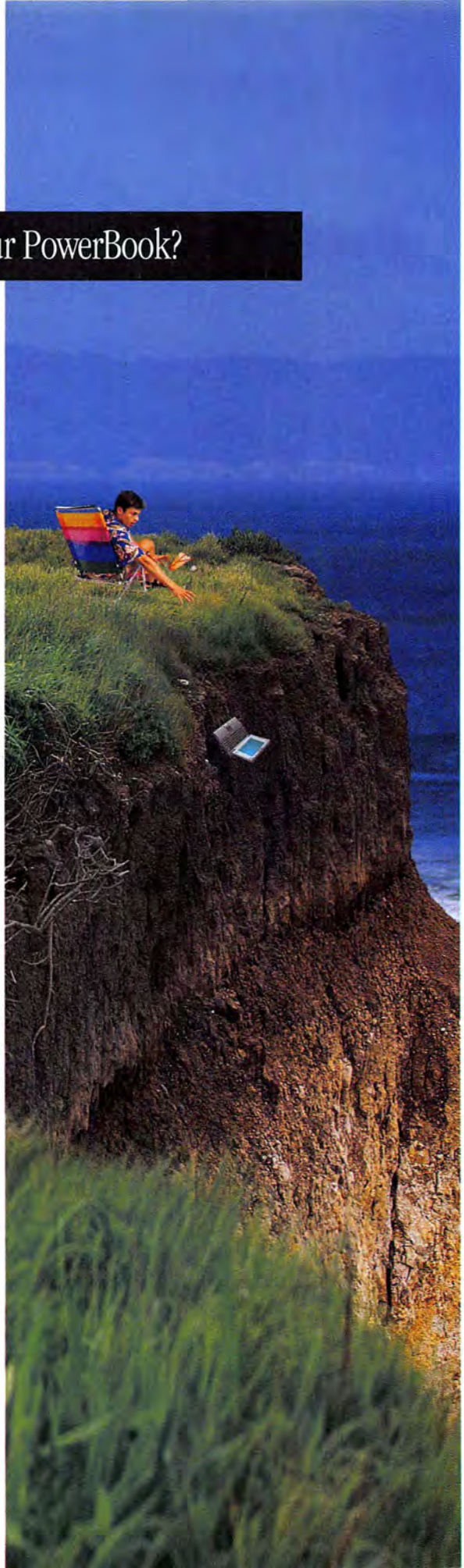
Permissions and Reprints

MATERIAL IN THIS PUBLICATION may not be reproduced in any form without permission. Written requests for permission should be addressed to Chantal Tucker, Ziff-Davis Publishing Company, One Park Avenue, New York, NY 10016, or faxed to 212-503-5420. **For price quotes on reprints, please call Ziff-Davis Reprints toll-free at 800-825-4237.**

Product Announcements and Updates

SEND PRODUCT INFORMATION to News Editor and send new products to Reviews Editor at *MacUser,* 950 Tower Lane, 18th Floor, Foster City, CA 94404.

What *was* on your PowerBook?



Amazing where you'll find PowerBooks these days. On the road. In the air. At the beach. Everywhere.

Only thing is, they're traveling around with important files that don't exist anywhere else. And every disaster that can happen to a Mac in the office is multiplied when you take a PowerBook into the world. Like cocktails in the keyboard. Or when it gets hijacked at the airport. Voltage spikes. Gorilla bellhops. The unfortunate farewell when you leave it behind in a cab.

With Retrospect Remote® 3.0, PowerBooks get the protection they need. It backs up PowerBooks automatically when they connect to the network. So even when your PowerBook's not connected, you still have peace of mind.

Retrospect Remote also backs up each Mac on your network in priority order. And now, with the new Remote Pack for Windows 95 & NT, it takes care of PC notebooks and laptops. Even PCs that stay put.

score card
MacWEEK
MacUser RATED

It's unanimous. MacWeek says Retrospect is "the best of the breed." MacWorld writes "Retrospect leaves the competition in the dust." And MacUser reports "no other backup utility can match its breadth or depth."

We wrote the book on PowerBook backup. Call us at 800-982-9983 and we'll send it to you. Because sometimes using a PowerBook isn't a day at the beach. But with Retrospect, you'll always bounce back.

If you're not on a network, we still have you covered with our single user version, Retrospect® 3.0.

dantz® *To go forward, you must back up.®*

©1996 Retrospect Remote and Retrospect are registered trademarks of Dantz Development Corporation. All other trademarks are property of their respective holders. Dantz Development Corporation. 4 Orinda Way, Building C, Orinda, CA 94563. Phone: 510.253.3000. Fax: 510.253.9099. Internet: info@dantz.com, upgrades@dantz.com, www.dantz.com.

CIRCLE **28** ON READER SERVICE CARD

ViewSonic

Intense SonicTron™ colors explained black and white.

Attention desktop publishers, graphics users and Macintosh® owners, here's great news, times four: SonicTron™, ViewSonic's new color screen technology, is now available in four models.

Choose from our Professional Series and get all the features needed by the most sophisticated users. Or, choose from our more economical Graphics Series and still get the same great image quality.

	SonicTron™ Professional Series		SonicTron™ Graphic Series	
Model	**PT810**	**PT770**	**GT800**	**GT770**
CRT Size	21" (19.5" viewable)	17" (16.0" viewable)	20" (19.1" viewable)	17" (15.9" viewable)
Aperture Grille Pitch	0.30mm	0.25mm	0.30mm	0.25mm
Mac® Resolution (Max.)	1600 x 1200	1600 x 1200	1600 x 1200	1280 x 1024
Recommended Resolution	1600 x 1200 @ 73 Hz	1152 x 870 @ 75 Hz	1280 x 1024 @ 79 Hz	1024 x 768 @ 75 Hz

Designed with a vertically flat screen, SonicTron blends an aperture grille mask and an ARAG® anti-glare, anti-reflection coating to keep the images bright, sharp and precise from center screen to corner.

The hallmark of each monitor is a high contrast image so intense mere adjectives cannot do it justice.

The competition pales by comparison.

Whether you choose from our Graphics or our Professional Series, these SonicTron monitors deliver a level of clarity and saturated color heretofore unattainable at anything close to their price range. (In fact, the pricing is so advantageous our competition is a bit envious.)

Every SonicTron comes with a limited 3 year warranty on CRT, parts and labor–the best in the business. We even offer an optional 48 hour Express Exchange Service℠ program.

Tested and passed with flying colors.

Recently, Cadalyst magazine put a SonicTron PT810 through its paces and then reported the following to its readers: "Great image quality. Your eyes will really appreciate this monitor after hours of use." They concluded by giving it 5-stars, their highest rating.

Byte magazine was similarly impressed with the PT810. Their reviewer, Jerry Pournelle said, "You'll have to fight me to get this monitor away from me. I am literally sitting here wondering how I got along without it all these years. I can read it comfortably from any position ... Highly recommended."

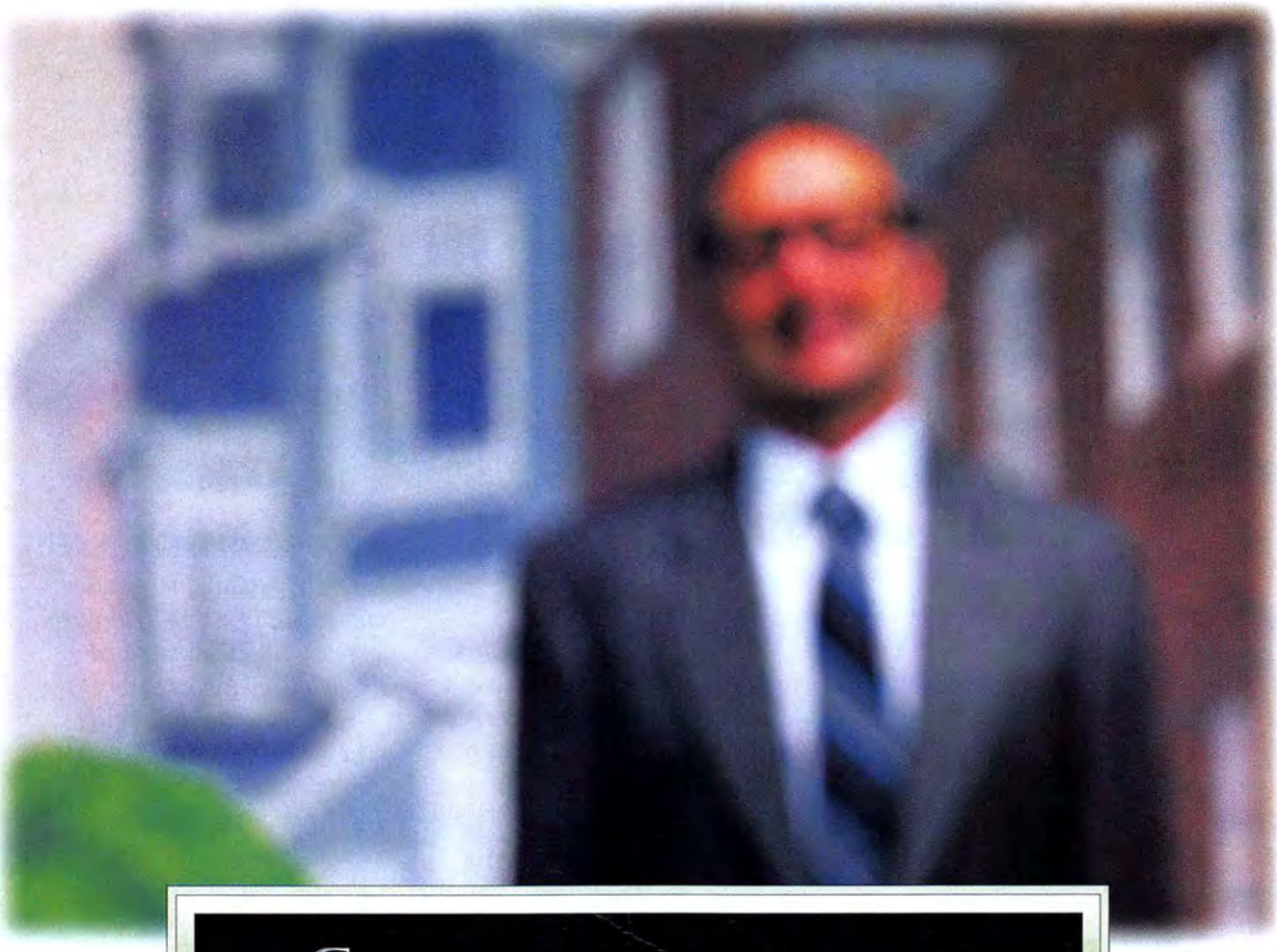
If you'd like to see the difference for yourself, call (800) 888-8583 and ask Agent 5416 for your nearest dealer.

ViewSonic®

(909) 869-7976 Fax: (909) 869-7958 • Call FaxSonic™ at (909) 869-7318 (24-hour fax-on-demand)
Request Docs. PT810–163, PT770–152, GT800–155, GT770–148 • Internet: http://www.viewsonic.com • © 1996 ViewSonic Corporation. Corporate names and trademarks are the property of their respective companies.

CIRCLE **99** ON READER SERVICE CARD

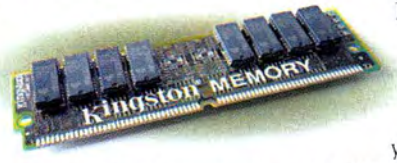
C O M P U T I N G W I T H O U T L I M I T S™



Choosing The Right Memory Is Like Choosing The Right Glasses.

Not Just Any Kind Will Do.

People who say all memory is the same aren't seeing things as clearly as they should be. The reality is that memory isn't just memory. It can differ widely from manufacturer to manufacturer. And even a subtle difference can make all the difference to your Macintosh.® At Kingston® we make memory for almost every Macintosh that's ever been made. Our engineers customize each design for every specific model, meeting or exceeding Apple specifications. And to ensure reliability, we test every cell on every chip on every module. (On a 16 megabyte module, that's 128 million cells.) That's why we're one of a select group of Authorized Apple RAM Developers. Along with its extraordinary quality, Kingston can also save you up to 50%. Want to see how much you can save? Call (800) 259-8965. That should put things into focus for you.



Kingston TECHNOLOGY CORPORATION

For more information call us at (800) 259-8965 ISO 9001 SGS *Visit our Web site: http://www.kingston.com/mu.htm*

Kingston Technology Corporation, 17600 Newhope Street, Fountain Valley, CA 92708 USA, (714) 435-2600, Fax (714) 435-2699. © 1996 Kingston Technology Corporation. All rights reserved. Kingston is a registered trademark and Computing Without Limits is a trademark of Kingston Technology Corporation. Macintosh is a registered trademark of Apple Computer, Inc.

LETTERS

Cruel to Be Kind

I WOULD URGE *MacUser* not to continue to place Apple on a pedestal for the things Apple has done in the past. Apple has made some serious strategic business mistakes and will continue to make them if it listens only to praise from die-hard fans. It's time for some "tough love" and for *MacUser* to push the campaign to wake up Apple. It is time for Apple fans and management to listen most to the things they don't want to hear.

Apple's lead in education is no longer secure. On most campuses, you find more PCs than Macs. In secondary education, Apple is up against stiff competition from PCs, because of the higher costs of Macs and because parents want their children better prepared for a PC-dominated workplace.

If you consider PCs (not individual brands) Apple's competition, Apple does not dominate the home market, because it's not price-competitive.

Apple wants to start spreading its operating system around so it can build a critical mass of Mac OS fans. Sounds like the business plan Gates wrote. The difference is that Microsoft had no plans to be in the hardware business but did intend to be a broad-based software supplier. Apple is still trying to use an operating system to sell hardware and is not positioned to become a force in applications software. Is it possible *now* to build a business around an aging operating system? Although Microsoft had an old operating system, it didn't have a Microsoft to compete with.

Finally, consider that Apple can't broaden use of its OS unless prices come down, and that means lower revenues. Apple can't currently make money by growing hardware sales (the more it sells, the more it loses), so giving away software is the road to ruin.

There are opportunities for Apple. IBM appears to have ceded the Mac/Windows-compatible hardware market to Apple. Once Apple gets beyond its immediate problems and completes its hardware "fire" sale, it needs to begin aggressively promoting Mac/Windows hardware. When it does that, it won't need lectures from Apple purists who believe that Apple has sold out to Satan. It will need support from *MacUser* and others who can recognize that their needs are best served by an economically healthy Apple.

Charles R. Cordeau
Barrington, IL

Inflationary Claims

THE TRILLION-DOLLAR sizing of the future PDA industry ("Toy Story," April '96, page 68) is an absolutely absurd claim, and nothing even close to it was ever made by me. The only trillion-dollar projections I've made in the past are that the collective size of *all* industries that would be affected by the digital revolution (that is, all computers, all communications, all content, and all related services) would exceed several trillion dollars early in the next millennium.

John Sculley
New York, NY

/ Apparently we are among dozens of news organizations that have misquoted you. Please add MacUser *to the list. / AG*

PDA Insight

THANKS FOR PAYING ATTENTION to the Newton and other so-called PDAs ("Toy Story," April '96, page 68). I don't really like the PDA moniker, since I view my new Newton as more of a small computer with a pen input system than as some sort of "assistant." Two things about the article surprised me: The "What's Missing" section fails to mention the single

WRITE TO LETTERS

c/o *MacUser*
950 Tower Lane, 18th Floor
Foster City, CA 94404
letters@macuser.com

All letters become the property of *MacUser*, and we reserve the right to edit any letters we print. Include a return address and a daytime phone number. If you write to us via e-mail, please specify whether you want your electronic address printed.

ILLUSTRATION / MARGARET MCMULLIN

Open Folder

Erstwhile *MacUser* subscriber Kevin Atherton, of Vernon Hills, Illinois, took exception to our April article on Suck, the culture-watch e-zine devoted to lampooning electronic as well as print media. "At least 17 times, you use the slang expression for *fellate*," said Kevin, who promptly canceled his subscription and accused all and sundry (*MacUser* and Suck as well as *Time* and *Newsweek* — sorry to drag you guys into this) of propagating a lifestyle he feels is sending this country to [*expletive*] in a handbasket.

We know what you mean, Kevin. In addition to this reckless display of First Amendment frivolity, certain members of our staff have been overheard using such double entendres as *RAM, hard drive, motherboard,* and *PPP.* We'll deal with the perpetrators among us. You take the good fight to America Online, which we hear is now allowing the use of that *B*-word slang term for *mammae.*

Fourteen-year-old Kevin Sweeny, of Wappingers Falls, New York, is no suckling. Undaunted by our lascivious content (or perhaps drawn to it — let's face it, who among us didn't have a stash of *MacUsers* we hid from mom when we were at that awkward age?), Kevin has sent us a business proposition: "I wrote computer reviews for a local magazine that recently went under. I would like to transfer over to writing reviews for you. Here are my terms: $15 per review and a free subscription." Although there are currently no openings in our Reviews department, we are looking into that subscription. You've got moxie, Kid.

Self-professed Psychic Supreme Petrene Soames, who hails from — among other dimensions — Houston, Texas, wrote to ask that she be included in *MacUser* as "one of the latest Internet personalities." It's too late to include her in the list of 101 Web sites we featured in our March issue. But readers who want to get in touch with their inner Hunk-ra should check out http://www.neosoft.com/~fabrice/toppsychic/. Petrene, the next time you're in the 21st century, could you check up on Apple and tell us how the company's future looks? More specifically, does it suck?

most antagonizing thing about the Newton: lack of backlighting. The Newton display is very hard to see, so the device is often difficult to use. Since I'm not familiar with the other Pads, I don't know if they share this problem. If you can't see the display, what good is the Newton?

Second, the article mentions "two ways to get application software into the Newton," along with the idea that there isn't very much software out there. Neither of those approaches is the most common in my experience, and I've found quite a bit of software. The real way most applications get onto people's Newtons is not directly by card or indirectly by disk but instead by a download to a desktop machine and then a transfer onto the Newton.

Terry Schmitt
via the Internet

NICE TO SEE a review of the Mac's little brothers. I'm happy to see there's hope yet for the Newton. But you missed what I've found to be the best PDA on the market, the Psion series of palmtops. This little thing is a Mac user's delight, with multitasking, excellent user interface, and easy programming. I see them being used on planes and trains all the time.

Aston J. Bridgman
astinj@haven.ios.com

Pippin Opinion

I DON'T THINK I can stand the suspense! I'm one of the (I hope) millions of Americans eagerly awaiting the arrival of the Pippin ("Prime-Time Player," April '96, page 64) in the U.S. Granted, the Pippin does need a few improvements, but I think it's about time a truly versatile game system came on the market. The Pippin would be even more versatile with the Digital Video Disk installed and would be well worth even more than its estimated price.

Ken King
via the Internet

THE PIPPIN SOUNDS great, if a little pricey for what you actually get. But hey, why not market a SCSI VCR adapter so that info gleaned from the Internet can be stored on a cheap yet massive storage device? You could also run video games and apps straight off the tape! Until DVD recordables are as cheap as other media, why not explore other current consumer devices? How about a Pippin with an audiocassette drive? Reel-to-reel, anyone? These could also be used with the Mac as a cheap, useful link to span the technology and price gap of new gadgets in the pipeline.

Michael Alvarado
Santa Clara, CA

THE PIPPIN IS NOTHING more than a stupid little gadget Apple dreamed up when it should have been working on Copland. It's similar to the Newton, in that it's ahead of its time; it's not cheap; and it's not a necessity — no matter how hard Apple plugs it. And finally, it's really cool and neat.

But when it comes down to whether we really need these gadgets, the answer is an overwhelming "I'd like one, but I can live without it."

Kurt Ramsauer
rams@nworks.com

Spinning Webs

CONGRATULATIONS ON raising some good points many Web designers are ignoring ("The Ant and the Grasshopper," April '96, page 91). Quite a few people don't have the equipment, RAM, or desire to browse the Web with Netscape Navigator.

I would like to point out a solution that you didn't mention: creating multiple sets of Web pages that accommodate either ants or grasshoppers.

First, create a home page for your site that's attractive in any browser. From there it's easy to let visitors choose their compatibility level: full graphics, minimal graphics, text-only, or any combination. Although this results in a little more work for the Web designer, it doesn't have to be difficult if you just go about it the right way.

Once you've established the site's overall design and written the content, start by creating text-only, HTML 2.0-compliant pages with no graphics and no proprietary Netscape tags. Then, when you want to create your full- or minimal-graphics versions, insert the coding for placing the graphics, tables, and the like. This way, you'll be able to accommodate all visitors without coming across as a Netscape-tag snob.

Jeff Carlson
kepi@halcyon.com

/ Your point is a good one, although creating (and updating) multiple versions of pages may be more work than many Web authors will accept. Less intrusive would be using a CGI (Common Gateway Interface) application on your Web server to automatically choose the HTML files that work best with a user's browser. / JS

YOU PROVIDED SOME interesting general ideas on providing readable pages using HTML table tags on viewers that don't support table tags, but the advice on adding leading spaces to <td> tags to separate column data and turning </tr> to
</tr> tag pairs works *only* if you're not using </td> tags.

Following the article's advice directly when also observing the HTML 2.0 tag specification leads to large amounts of white space preceding a table in Netscape browsers. Rather, you should add a space at the end of a table column and a <br> tag inside the last table column of a row. If you were following the HTML 2.0 format strictly, these changes would be required:

</td><td> → space</td></tr>
and
</td></tr> →
</td></tr>.

Dennis Haase
via the Internet

When Is a Mac Not a Mac?

WHEN YOU WROTE about "Performa Anxiety," you effectively straightened out the writer who was confused about the differences among machines (Help Folder, April '96, page 117), but you neglected to point out one key difference (and benefit) of Performas: They come with a one-year *in-home* warranty! For first-time computer buyers, this is an incredible service that shouldn't be underplayed. Not that most Macs need it . . . .

Jim Sachs
Menlo Park, CA

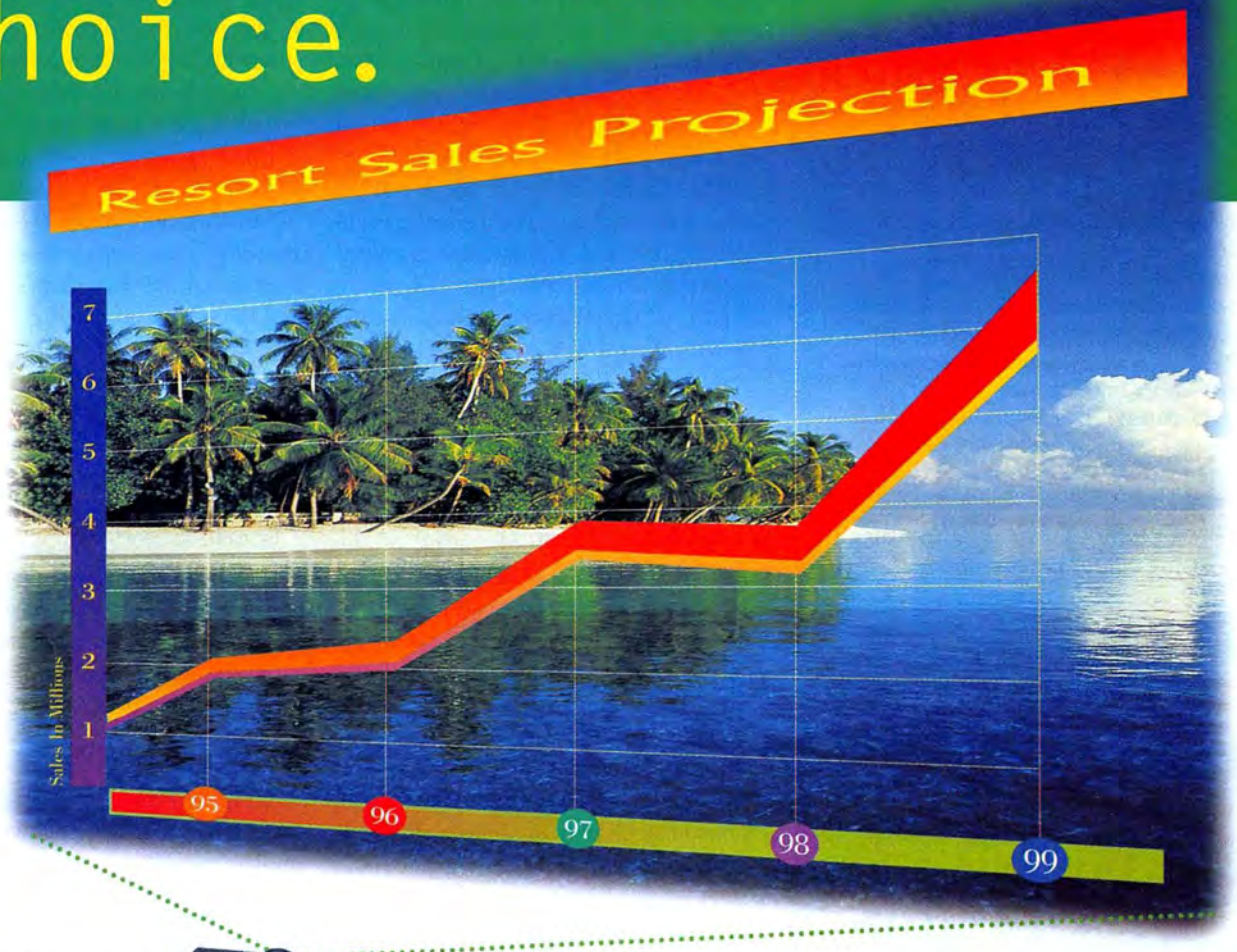
/ Good point. If you buy a Performa, Apple coddles you a bit more than if you buy a Mac. An Apple representative will come to your home to fix a problem, such as an inoperable monitor, if it can't be solved over the phone. / NP

BOB AND CHRIS state there's *no* difference between a Mac and its Performa counterpart. Why then does Insignia Solutions sell a SoftWindows for Performa and another version for the Mac? Does the Performa version run on a regular Mac? The Performa version is about $100 less.

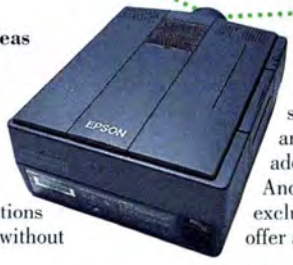
Gary Willard
GaryW70451@aol.com

/ OK, OK. So we overlooked one eensy-beensy little detail. Most Performas don't come with built-in Ethernet. OK, so it's not such a little detail. SoftWindows for Performas is cheaper because it doesn't have networking. Apple designed it that way because most Performas don't have Ethernet built-in. / BL & CB

The smallest, lightest, brightest multimedia projector is now an even brighter choice.



Turn your bright ideas into brilliance. Introducing the Epson ELP-3300, the world's smallest, lightest and brightest multimedia projector. Now you can make brilliant presentations anytime and anywhere without turning off the lights.

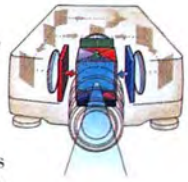


The world leader in high performance, portable projectors. The revolutionary ELP-3300 shines 75% brighter than ordinary single-LCD projectors, is about the size of a briefcase and weighs less than 17 pounds. Epson's breakthrough prism technology and three separate Poly-Silicon LCD's generate incredible detail, visibly better brightness (350 lumens) and superior color reproduction.

Easy-to-Use & Versatile. In just seconds, you can connect to any PC, Mac, VCR or camcorder. The ELP-3300 supports full-motion video, colorful text, animated graphics and stereo sound to address a broad range of presentation needs. And for added confidence on the road, Epson's exclusive Extra Care Road Service Program can offer a replacement unit, usually overnight.

Call for a free video. Call 1-800-GO-EPSON, ask for operator 3088 and we'll send you a free video on the benefits of the revolutionary ELP-3300. Or visit our Web site at http://www.epson.com and see for yourself why Epson is the brighter choice.

MACWORLD EDITORS' CHOICE AWARD 1995 FINALIST



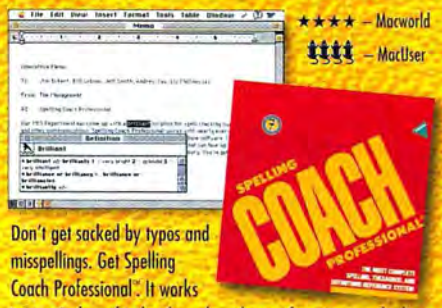
Epson's Prism Technology, and 3 advanced LCD's (not just 1) produce the brightest, high-quality images.

Weighs under 17 pounds.

YOU'VE GOT TO SEE IT IN EPSON COLOR.™

Epson is a registered trademark of Seiko Epson Corp. ELP-3300 is a trademark of Epson America, Inc. All other trademarks or registered trademarks are the properties of their respective companies. Extra Care Road Service Program is free while under Epson's one-year limited warranty. Editors choice nomination given to ELP-3000, the first in the line of Epson projectors with 3 LCD, Prism Technology. © 1996 Epson America, Inc.

Coach Pro Calls Great Spelling Plays



★★★★ – Macworld
★★★★ – MacUser

Don't get sacked by typos and misspellings. Get Spelling Coach Professional™. It works interactively and in batch mode with your favorite e-mail editors, word processors and all leading software programs to signal fumbles in spelling, punctuation and capitalization. Coach calls in corrections from Merriam-Webster's dictionary of over 95,000 words and 93,000 legal, medical and technical terms. Instantly look up definitions for over 85,000 words or consult its BigThesaurus™ of 1.4 million combinations of synonyms, antonyms, compared, contrasted and related terms.

Put Spelling Coach Professional on your team for just $49.95!

DENEBA SOFTWARE
(305) 596-5644
http://www.deneba.com/

PC&MacConnection
800-998-0014
SKU #1768

Masterful Artworks Hailed by Critics!

★★★★½ – MacUser

"artWORKS is the best value you can find in an entry-level graphics program" – Mac User

Acclaimed by reviewers and users alike, Deneba artWORKS™ puts crisp object-drawing and vivid 24-bit painting and image editing tools in one handy place. In short, everything you need to touch up family photos, create dazzling newsletter mastheads, school reports, business graphics and more. It's the perfect companion for any color ink jet printer. Use the artWORKS 8,000 Clip Art Image Collection and 500 Fonts to get started on your next work of art – included FREE on CD-ROM.

And for just $49.95, this masterpiece won't break your bank.

DENEBA SOFTWARE
(305) 596-5644
http://www.deneba.com/

PC&MacConnection
800-998-0014
SKU# 11055

LETTERS

Who's the YoYo?

INSTEAD OF SPENDING $149 on Big Island's YoYo Telephone Manager (News, April '96, page 29), you can get a much more affordable alternative, with practically the same options. Triplo Software's control panel PhoneWatcher (shareware, $15), combined with a modem capable of recognizing Caller ID, can log phone calls and callers, drawing names from a user database. Like YoYo, PhoneWatcher can call your pager and let you know who called. Considering the price difference ($134) and the fact that a control panel is somewhat easier to cart around than a hardware device, you tell me which is the better product.

Info and the program are available from Triplo Software's Web site: http://www.triplo.com/.

The Cyber Hitchhiker
cyberhikr@aol.com

Quicken the Dead?

MACUSER'S 4.5-MOUSE rating of the Quicken 6.0 Deluxe CD-ROM (April '96, page 40) was outrageously generous. It was probably the nicest thing anyone has done for Intuit since the Justice Department annulled its ill-fated marriage to Microsoft.

Quicken 6.0 Deluxe — it should really be called Quicken 5.5 — has two significant flaws. As an upgrader from 5.0 (as well as 4.0), I found that this upgrade added *nothing* important. Compare this with the upgrade from 4.0 to 5.0, which provided a cleaner interface and a graphical icon bar.

Most egregious, however, are the many substantial differences between the Mac and Windows versions of the Deluxe CD-ROM. The Windows version includes the following: Tradeline Stock Trading Guide, Morningstar Mutual Fund Finder, Tax Estimator, The Wall Street Journal Personal Finance Guide, The Wall Street Journal Video Guide, and a library of U.S. government publications. For $59, Mac users get only the mutual-fund finder. It's infuriating, since none of these Windows modules would be all that difficult to port to the Mac — they are essentially only databases.

I urge anyone thinking about upgrading to wait for a version that substantially improves on Quicken 5.0 and to hold out for parity between the Mac and Windows versions.

Barry L. Ritholtz
ritholtz@aol.com

AS GOOD AS QUICKEN might be, I think it was unfair of you not to mention Intuit's false advertising for Quicken 6. "Online banking" is promoted on the package, but you have to call Intuit to request the 6.5 upgrade (6.2 is on the floppies and CD-ROM in the shrink-wrapped package). Also, numerous banks support online banking for Quicken users, but exclusively for PC users. Add to this the loss of stability in going from Quicken 5 to 6 and the huge amount of bugs that cropped up between 6.2 and 6.5, and you've got a product that no longer deserves the mouse rating it received.

I've been a Quicken user for over three years and will continue using it, because there is no close second. But I have given up counting on Intuit for reliable information about its product and take extreme measures to ensure that my Quicken data has not become corrupted. Just because a product is better than all its competitors doesn't mean it's worthy of a high mouse rating.

Todd C. Merrill
tcmerrill@tasc.com

/ Quicken 6.0 enables Mac users to obtain electronic banking from those institutions that offer this service. Unfortunately, it's true that many banks that advertise Quicken electronic-banking services don't offer them to Mac clients. / JSA

Breach of Security

YOU CLAIM THAT Symantec's Norton DiskLock for Macintosh 4.0 ("For Your Eyes Only," April '96, page 82) is missing several features it actually does have. Your features chart says DiskLock has no "system control," when in fact DiskLock has a check box labeled "can modify system folder" — uncheck it, and the system folder is locked. Also, DiskLock is listed as having no "floppy control," yet DiskLock has a check box labeled "can use floppy disks" — unchecking it disables the floppy drive. You claim that DiskLock has no "desktop control," but you can make the top level of a hard disk read-only, which prevents users from moving files and folders. The chart says DiskLock doesn't support "drop boxes," although DiskLock actually has four options for locking folders, including drop boxes. And you say DiskLock does not support "secure erase," yet the encryption preferences offer three levels of secure erasure.

I know reviewers are people too and everyone makes mistakes, but the DiskLock review had so many errors that I have to wonder which product you actually reviewed.

David Shayer, Symantec
dshayer@netcom.com

Now, in Living Color

Enhanced CU-SeeMe™

DESKTOP VIDEOCONFERENCING SOFTWARE

- **Internet & TCP/IP Networks**
- **Full Color Video & Improved Audio**
- **Uses 28.8 Modem (14.4 for Audio Only)**
- **Whiteboard for Document Collaboration**
- **All Windows & Macintosh Platforms**
- **Secure Private and Group Conferences, Large Audience Broadcasting**
- **Over Half a Million Users**
- **Full Documentation and Tech Support**
- **Under $100**

Now You Can See What I'm Saying!

Try It For FREE at:
http://www.wpine.com/mu.htm

NewMedia 1996 Hyper Award
MacWorld Best of Show
BCS The Boston Computer Society

White Pine Software, Inc.
email: info@wpine.com
40 Simon St., Nashua NH 03060
Phone: 800-241-PINE, 603-886-9050

White Pine
Keeping You Connected

CIRCLE **37** ON READER SERVICE CARD

MacUser
You're already reading it.
WOW! Win this PowerBook and more prizes . . . see page 66
MacUser
NEW! PowerPC PowerBooks
3 Times as Fast
Bigger, Better Screen
Long-Life Battery
Wireless Networking
PLUS
Windows 95 Will Your Connectivity Software Still Work?
Ultrafast Internet Why You Need an ISDN Connection Now
Now start saving on it.
Special Subscription Price – call today!
Get POWERFUL SAVINGS and a FREE GIFT too,
from the world's #1 resource for Macintosh users.
To reserve BIG SAVINGS
call 1-800-627-2247 right away.
FREE GIFT WHEN YOU SUBSCRIBE
FREE GIFT WHEN YOU SUBSCRIBE
FREE GIFT WHEN YOU SUBSCRIBE
FREE GIFT WHEN YOU SUBSCRIBE

/ You're right; we were in error regarding DiskLock. But the mistake we made was in the version number — we reviewed version 3.0 but listed 4.0 in the chart and the article. Version 4.0 shipped just as we were going to press, so we weren't able to test it for this story. It does incorporate all the important features you listed: system, floppy, and desktop control as well as drop boxes and secure erase. / SJ

BEING AN AVID READER of *MacUser* for several years now, I was disappointed with your omission of On Guard, from Power On Software, in your security-software roundup. As a manager of over 20 Macs, I am always looking for software that will not only make my job easier but also prevent users from tampering with system software. On Guard does that and much more. Access levels can be set on specific documents, folders, or an entire hard disk. User settings can be configured individually or simply copied and pasted between users. Network setup couldn't be easier. Simply choose a zone or computer, and save the settings from the administrator's computer. Its ability to individually designate Launch, Open, Save, Copy, View, and Eject functions at any system level is a manager's dream come true.

The software is extremely solid and (unlike most other security packages) in no way interferes with the Mac's normal operations. Tech support is among the best I've ever encountered, and frequent updates continually improve the package.

Ralph Bellandi
rbellandi@aol.com

I ENJOYED YOUR STORY on software security, but I noticed that it failed to mention the password protection provided by Aladdin's StuffIt. It allows the user to stuff an archive with a password and keep it from prying eyes.

This feature is even available in the shareware version. I'm sure this would be of interest to many Macintosh users, many of whom may own this software but be unaware of this feature.

Daniel Mangialetto
dmangia@GroupZ.net

IN YOUR SECURITY-SOFTWARE article, Edmark's KidDesk was notably omitted. This surprised me, since KidDesk is a delightful security option for home and school. The new family edition has added interfamily e-mail, voice-mail, an address book, and a notepad to the desk's original accessories: a calendar, a clock, a calculator, and the ability to put each child's photo in a frame on the desk. Children choose their own desk styles, and their files can be saved separately, preventing access by other kids.

The school edition allows classes to be organized separately by teacher, and there are options for an administrative password, a password for each teacher, and one for each individual student.

In both editions, a three-key combination controls access to the Finder, and the school edition also requires knowledge of the teacher's password.

Elsa Paton
Athol, MA

Making the Connection

HAVING JUST ADDED a couple of Macs and a LaserWriter to our Ethernet network, I noticed that you left out a simple solution for connecting LocalTalk printers to networks ("Easier Ethernet," April '96, page 103). Apple provides, in the latest version of the Network Software Installer (1.5.1), a control panel called LaserWriter Bridge 2.0.1. It allows a LocalTalk LaserWriter connected to the printer port of an Ethernet-connected Mac to be visible to the Ethernet network.

This software is free for downloading from most sites that have Apple software. We've been using it for several weeks and have experienced no problems.

Larry B. Macy
Macy1@jeflin.tju.edu

A Flood of Gates

ANDY, ANDY, ANDY. You paid $30 for a copy of Bill Gates' latest bloated offering ("Road Trip," March '96, page 210)? For shame. Why, around here there are *piles* of copies at the local Barnes & Noble for 40 . . . 50 . . . yes, even 60 percent off! Had I but known, I would have gladly picked up a stack of them and asked our friendly UPS pickup guy to deposit them directly on your sundeck. They're like roaches underfoot, multiplying against all reason and threatening to overflow into the cutout shelves even before they're officially punted by the publisher.

Greg Dunn
gregdunn@indy.net

Correction

The author of "Motorola Joins, Power Speeds," May '96, page 27, should have been listed as Henry Bortman.

GREAT MACINTOSH® PRODUCTS FROM COREL®

Coming This Summer.. COREL DRAW! 6 for the Macintosh

COREL

SUPER TEN

ROYALTY-FREE HIGH-RESOLUTION PHOTO PACKS

Each Corel® Professional Photos on CD-ROM Super Ten Pack contains 1,000 colorful and captivating images for you to enjoy.

Titles:

1. Animals
2. People
3. Select Photos
4. Great Works of Art
5. Food
6. Cars
7. Aircraft
8. Gardens
9. Underwater
10. Textures
11. Textures II

$37.98* Each

$19.98*

Wild Board Games™
The fun way to learn popular board games
For Macintosh® and Windows® 3.1

$19.98*

Red Rhino™
Read, color and search for the balloon with Red Rhino
For Macintosh® and Windows® 3.1

$19.98*

NN 'n N Toy Makers™
An interactive toy making adventure
For Macintosh® and Windows® 3.1

$19.98*

Green Bear™
Read, color and decorate with Green Bear
For Macintosh® and Windows® 3.1

$19.98*

Yellow Hippo™
Read, color and hunt for yellow items with Yellow Hippo
For Macintosh® and Windows® 3.1

$19.98*

Nikolai's Trains™
An interactive journey across the landscape of a child's imagination
For Macintosh® and Windows® 3.1

$19.98*

Blue Tortoise™
Read, color and race to the picnic with Blue Tortoise
For Macintosh® and Windows® 3.1

$19.98*

Wild Cards™
The fun way to learn popular card games
For Macintosh® and Windows® 3.1

$19.98*

The Interactive Alphabet™
The imaginative way to learn your ABC's
For Macintosh® and Windows® 3.1

$19.98*

Turn Around Turtle: Show and Tell™
Go on an adventure with Turn Around Turtle
For Macintosh® and Windows® 3.1

$19.98*

Pandora's Box™
Learn the wonders of Greek mythology through Pandora's Box
For Macintosh® and Windows® 3.1

$19.98*

All-Movie Guide™
The ultimate guide to the movies
For Macintosh®, Windows® 3.1 and Windows® 95

$19.98*

Bernard of Hollywood's™ Marilyn
A multimedia journey through the life of Marilyn Monroe
For Macintosh® and Windows® 3.1

$19.98*

Bernard of Hollywood's™ Pin-ups
A multimedia retrospective of Hollywood's most famous pin-ups
For Macintosh® and Windows® 3.1

$37.98* Each

Corel® CD HOME Super Ten Pack Series
Ten great titles in each pack for one amazing price
For Macintosh® and Windows® 3.1

$64.98*

Gallery™2 for Mac
The world's best CD-ROM clipart...and more

$899.98* Each

Corel® Stock Photo Library 1, 2 & 3
20,000 royalty-free, high-resolution photos on 200 CD-ROMs in each library

$18.98* Each

Corel® Professional Photos on CD-ROM
The world's leading photo CD-ROM collection

Enter the Corel $3,000,000 World Design Contest!
(September '95 to July '96)
To receive a faxed copy of the contest rules and an entry form, please call:
1-613-728-0826, ext. 3080, Document # 1125.
To leave a message: 1-613-728-0826, ext. 81609.
To send a fax: 1-613-728-2891.

The Mac Zone™ Your Catalog SuperStore

1-800-248-0800

Please refer to source code CT25.

KUR-0235-US

*US$ plus applicable taxes.

COREL

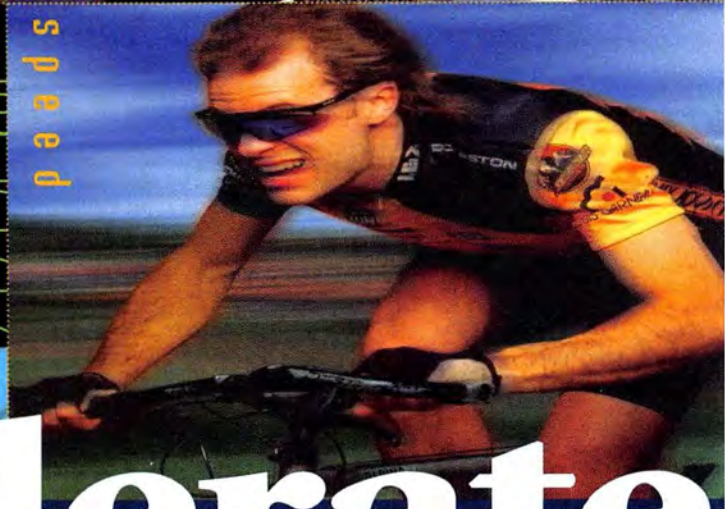
http://www.corel.com
Call now for faxed literature!
1-613-728-0826 ext. 3080
10,000,000 CD-ROMs shipped!

Corel is a registered trademark of Corel Corporation. All-Movie Guide is a trademark of Matrix Software Inc. Bernard of Hollywood's is a trademark of Renaissance Roads Productions, Inc. and is used under license. Blue Tortoise, Green Bear, Red Rhino and Yellow Hippo are trademarks of Alan Rogers. Nikolai's Trains and NN 'n N Toy Makers are trademarks of I. Hoffman + Associates Inc. Windows is a registered trademark of Microsoft Corporation in the United States and/or other countries. Macintosh is a registered trademark of Apple Computer, Inc. All product and company names are trademarks or registered trademarks of their respective companies.

true color

multimedia

real-time 3D



paads

Accelerate

it all

You want to do it all. Fly through mega photoshop files. Create dazzling 3D designs. Produce high-impact multimedia titles. With the MGA Millennium graphics accelerator for PCI Power Mac, you'll get the power you need to breeze through all this and more. And only $399 ESP for the 4MB version!

MGA Millennium's advanced state of the art features include a fully optimized PCI design, and the award winning MGA 64-bit processor. In addition, its faster, new Window RAM (WRAM) memory ensures consistently high performance no matter what resolution or color depth you're working in.

Benefit from ultra high resolution displays of up to 1440 x 1080 in true 24-bit color or 1600 x 1200 in 16 bit color.

And as the only graphics accelerator to offer affordable hardware accelerated Quick Draw™3D, you'll be on the cutting edge of 3D design. Render Gouraud shaded 3D designs, logos, animations and VRML scenes all in real-time.

With the newest release of Quick Time 2.2, enjoy high quality, full-screen, full motion playback of both Quick Time movies and MPEG files right on your Mac.

Twenty years of experience producing high performance solutions and over 100 international awards makes Matrox and MGA Millennium the professional's choice in graphics.

With MGA Millennium you can have it all. Blinding speed. Brilliant true color. Real-time 3D design. And the latest in multimedia. Don't settle for anything less.

- Publishing, 3D design and multimedia
- Hardware accelerated Quick Draw™3D
- Faster Window RAM (WRAM) memory
- 4MB PCI base board upgradeable to 8MB
- 8MB PCI base board (not upgradeable)

get

MGA Millennium

for PCI Power Mac

Matrox Graphics Inc. 1025 St. Regis Blvd.
Dorval, QC H9P 2T4 Canada
Tel: (514) 969-6320 Fax: (514) 969-6363
In Quebec, call: (514) 969-6330

1-800- 660-1873

VISIT OUR WWW PAGE AT:
http://www.matrox.com/mga

MATROX MGA POWER GRAPHICS

MacWAREHOUSE 1-800-255-6227

INGRAM MICRO 1-800-456-8000

express direct 1-800-374-5511

PC Connection 1-800-800-9478

matrox

MacBench 3.0 publishing graphics mix test performed on Power Mac 9500/132 with 40MB of RAM @ 1152 x 870 in 16.7 million colors with Matrox Millennium for PCI Power Mac, Number Nine Imagine 128, IMS Twin Turbo 128 and Radius Thunder 30/1600.

CIRCLE **94** ON READER SERVICE CARD

PAMELA PFIFFNER

Identity Crisis

APPLE TURNED 20 in April, but don't feel bad if you didn't get an invite to the party. Posting a $740 million loss has a way of deflating any birthday balloons. The company has instead decided to defer its celebration to another time — perhaps early 1997 — when it can face the future with a bit more optimism. By then, it'll be close to Apple's 21st birthday — an age associated with entering adulthood and leaving childish games behind.

ILLUSTRATION / JAMES YANG

Once again, Apple finds itself at a crossroads. Clearly, the company has to reinvent itself. Everything we've seen thus far from Apple's new chief, Dr. Gilbert Amelio, indicates that the Apple we'll see at that birthday bash won't be the same company we're wringing our hands over now. But what will it be? More important, how will it change the Mac? I've gotten some indications from people within Apple, and Amelio's plans are coming into focus, but the way I see it, the company can take the Mac in one of four directions:

The Computer for the Rest of Us. OK, so there's nothing new about this one, but many loyal Apple customers still cling tenaciously to an ideal that began as a marketing gimmick. It's the strategy that got Apple where it is today, reeling from massive losses and gasping for market share. Let's face it: The Mac is no longer the Computer for the Rest of Us — that computer, wherever it might be, is running Windows and Microsoft Office.

When this slogan was first trotted out, the Mac had a distinctive look and feel, a certain power and elegance that distinguished the Macintosh from its PC rivals. But the playing field has leveled. Is there anything worth saving in this scenario? Yep. If Apple can get back to basics and simplify its product line (even Apple insiders are hard-pressed to tell you which Mac models have which features), then the company may still be a player in the low end, especially the home and small-business markets.

The Computer for the Few of Us. This statement may appear to be a sad commentary on Apple's market share, but think of it as a lifestyle mantra. Sure, it smacks of elitism, but so what? The Mac has never really been a computer for the masses. Apple could embrace the Mac's snob appeal by creating sleek, slick machines that, much like luxury cars, make a statement about their owners. It's the Ultimate Computing Machine.

Instead of continuing to go through traditional computer-reseller channels, Apple could sell these Macs through executive-toy catalogs such as the one from The Sharper Image or at posh retail outlets such as New York's Museum of Modern Art Design Store (an Apple Classic is already in its permanent collection).

Apple's already working on machines like these, but will they ever see the light of day? I hope so, if only to reconfirm the coolness factor of the Mac. On the other hand, unless there's lots of power under the hood, machines such as these only reinforce the notion that the Mac is a toy rather than a business tool.

The Computer for Some of Us. In this scenario, Apple builds on its current successes: graphics, publishing, multimedia, and so on. Think Niche Knack. The Wintel juggernaut hasn't been very successful in these markets. As a result, Apple has a pretty clear shot, but this is no time to be sanguine — the gap is narrowing. In the multimedia arena, Apple needs to edge out Silicon Graphics in the competition for Hollywood big bucks. QuickTime has been a big hit, and with innovations such as the new QuickTime plug-in for Netscape Navigator (http://quicktime.apple.com), Apple continues to build on that success. If Apple licenses Windows NT to run on its servers, the Macintosh will further solidify its dominant position as a front end for print publishers. And in the field of education, Apple should take seriously the old *SNL* parody of another of its slogans — the Power to Crush the Other Kids.

Apple would be foolish to neglect these markets, but right now I think some people at Apple already take them for granted. In the comments he's made thus far, Amelio often neglects to mention publishing and education. I hope that's corrected — and soon.

The Computer for All of Us. This is the scenario with the most currency. Amelio has publicly remarked that Apple's future lies in an "Internet-based computing architecture" that's well suited to propelling us into the Information Age. The Internet is the solution that conceivably embraces the other three scenarios — low-end or high-end.

The interesting thing about the Internet scenario is that the computer platform isn't much of a factor, according to Amelio. In this age of online information, it doesn't matter which machine you use to get onto the Internet: It's the experience you have once you're there. This strategy resonates with Apple's past. Twelve years ago, Apple employed a similar approach by offering an alternative to working with text-based command-line computers.

Apple's got the basic elements it needs in order to succeed, but the strategy needs to be clearly formulated and communicated. With the Internet, I think Apple's found the right medium for a turnaround. Look for that party invitation to arrive on the Net.

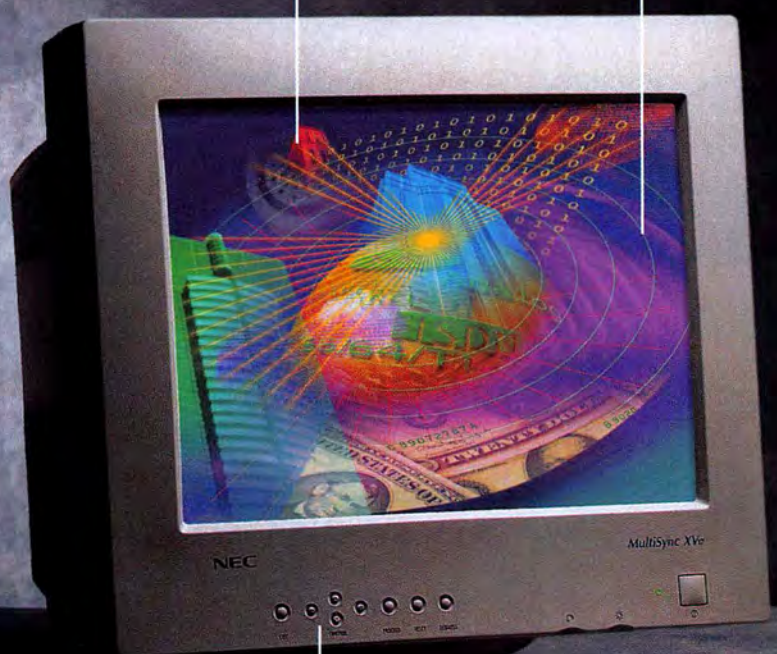
CRITICS CALLED IT "VIRTUALLY FLAWLESS."

"...great picture quality, advanced features, and top-notch support... a superb monitor."

FamilyPC**

"...bright screen, superior on-screen controls and low price."

Windows*



MacUser†

"A tremendous bargain, with great, easy-to-use controls."

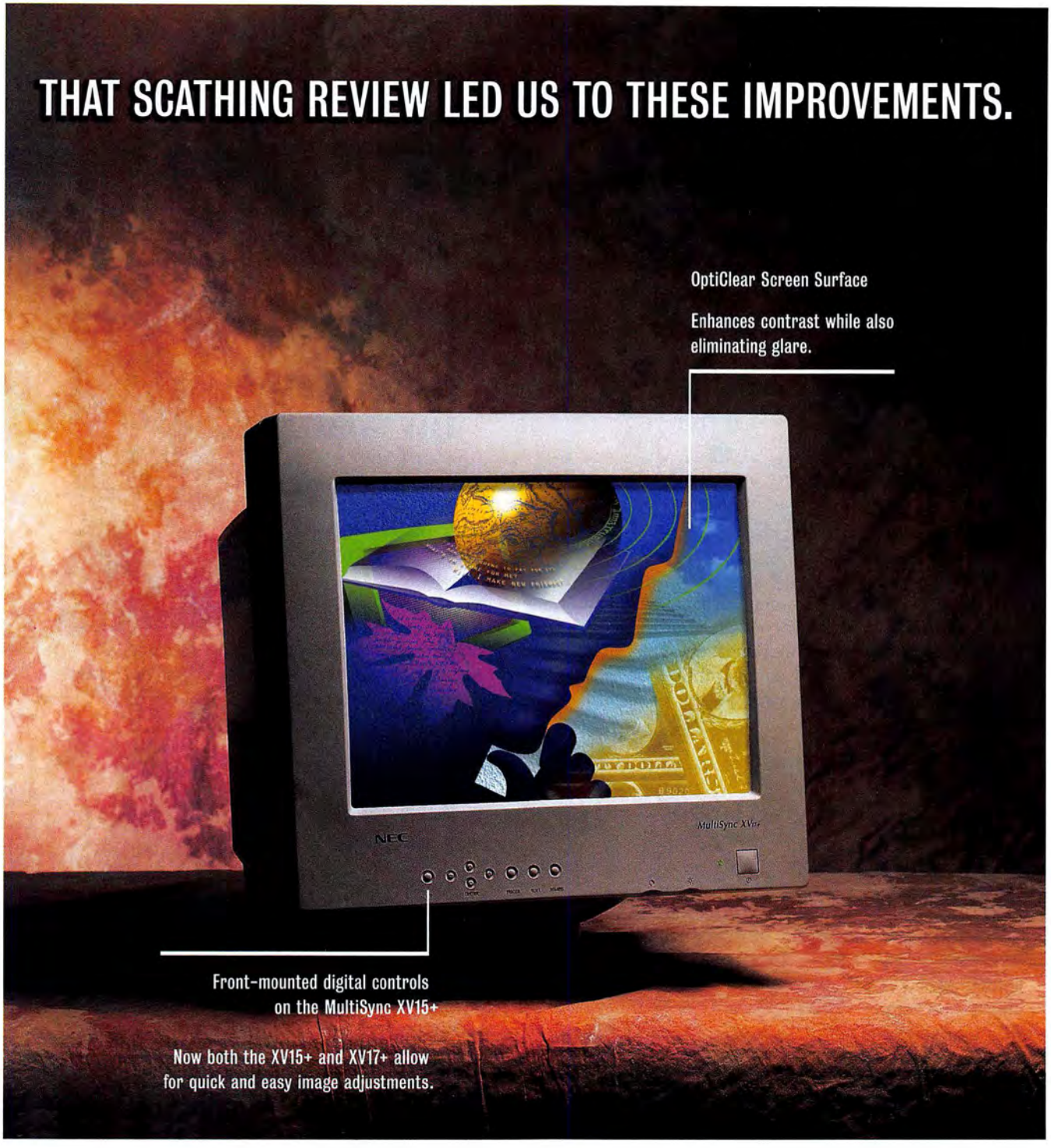
Introducing the MultiSync® XV+™ Series Monitors. Upgraded, refined, and with new features that give you more control over your screen and practically all monitor functions.

Both the MultiSync XV15+™ and the MultiSync XV17+™ deliver the sharp detail, bright colors and crystal clear images you've come to expect. Only now, you'll notice enhanced contrast and even less glare, thanks to our unique OptiClear™ screen surface.

Because front-mounted digital controls were so popular on the MultiSync XV17,™ we've added them to the MultiSync XV15+. So now both XV+ monitors allow for quick and easy image adjustments.

*Copyright ©1995 by CMP Publications, Inc. Reprinted from Windows Magazine with permission. **Quote reprinted with permission, FamilyPC Magazine, (June '95) Copyrigh
and XV15+, XV17+, XV17, OptiClear and See, Hear and Feel the Difference are trademarks of NEC Technologies, Inc. All other trademarks or registered trademark

THAT SCATHING REVIEW LED US TO THESE IMPROVEMENTS.



Then, of course, there's the issue of our famed reliability. Which really isn't an issue at all considering that both monitors are backed by a 3-year limited warranty, which is one of the best in the industry. Perhaps of even more importance is the fact that each is backed by NEC's hard-earned reputation for building, without question, the most precise monitors the world has ever seen.

The new MultiSync XV+ Series from NEC. Once "virtually" flawless, now just plain flawless. To learn more about the XV+ Series, call 1-800-NEC-INFO. For information via fax, call 1-800-366-0476 and request catalog #1.

SEE, HEAR AND FEEL THE DIFFERENCE.™

NEC

Visit our new web site at http://www.nec.com

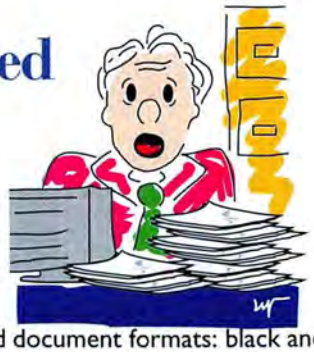
95. †Reprinted "MacUser," July 1995. Copyright ©1995 Ziff-Davis Publishing Company. MultiSync is a registered trademark e the property of their respective holders. GSA# GS00K94AGS5241PS01. ©1996 NEC Technologies, Inc. Key #28698.

Use MarcoPolo Today
And Avoid ResumeMaker™ Tomorrow

Video Tutorial Included
New Version
includes FREE copy of MarkUp with purchase

MarcoPolo™, the intelligent document imaging and management solution with built-in optical character recognition (OCR). Archive valuable information—using your existing computers and scanners—and store it in a central location where it can be searched and retrieved by title, text content, or assigned keywords. Then, when you need something, just search and you've got it on-screen instantly, looking just like your original. So, when your boss brings up the following…

"You need what?"



A 1992 shipping record? Uh oh! You should have scanned and archived it. With MarcoPolo you can archive mixed document formats: black and white, grayscale, or color documents; QuickTime Movies, sound files, E-mail messages, etc. Then later, easily find, read, print, or even extract text for use in another application. So if you'll need it later, get MarcoPolo today.

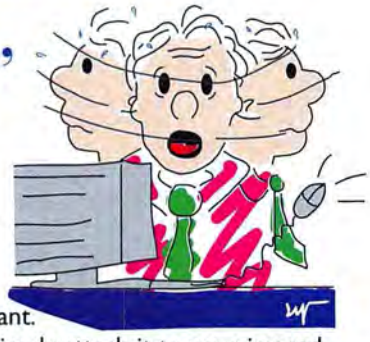
"Sure, I use my scanner."

Wouldn't you like to finally use that scanner on your desk? Now you can with MarcoPolo. It works with virtually any scanner, letting you get paper documents off your desk and into your Macintosh®. Use your scanner for more than just the kid's pictures. Get MarcoPolo today.

"Is anyone out there?"

Workgroups work best when everyone is informed, and there is no better way to archive and share information than MarcoPolo. Now, no matter where a document comes from, even from the Internet, everyone can read it. Of course, there's access control for sensitive material. Make MarcoPolo your instant Intranet solution; get MarcoPolo today.

"It's somewhere on the server."



Have that Excel® spreadsheet or Word® letter at your fingertips with MarcoPolo. We understand that the original file is important. That's why you can simply attach it to your imaged documents and have MarcoPolo launch the file and the application at your request. Have instant access to information; get MarcoPolo today.

MW ★★★★

Accelerated for Power Macintosh

ORDER YOUR COPY OF MARCOPOLO TODAY

800-484-9817 (code 6299)

CIRCLE **140** ON READER SERVICE CARD

$395

Limited Time Offer

Other quality Mainstay products:

MacFlow Flowchart Design and Development

Plan & Track Project Planning and Management

Captivate Essential Graphics Utilities

VIP C & VIP BASIC Visual Interactive Programming for C & BASIC

Phyla Object-Oriented Database

MarkUp Document Editing and Review

Mainstay 591-A Constitution Avenue, Camarillo, California 93012-9812 • ph: 805-484-9400 • fax: 805-484-9428 • Mainstay1@aol.com

ResumeMaker is a registered trademark of Individual Software, Inc. Excel and Word are registered trademarks of Microsoft.

NEWS

Mac No Longer Easiest to Use

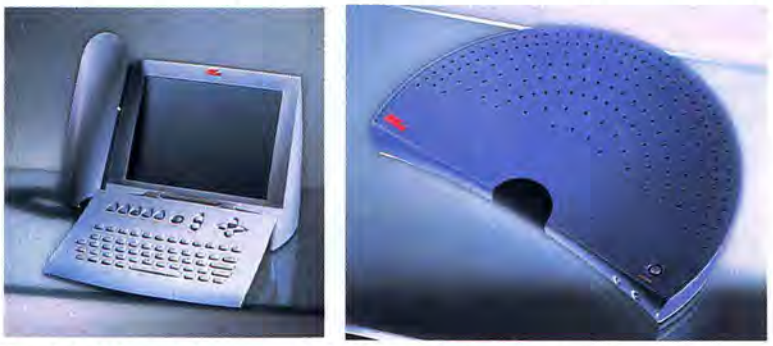
Consumer-electronics giants show interest in new technology from innovative startup.

WHEN YOU WANT TOAST, you use a toaster — you don't struggle with a multifunction Sustenance Management System that'll prepare anything from a strawberry smoothie to a rib roast. A toaster does only one thing, but it does it well.

Dealing with information should be as simple as dealing with an English muffin. However, as you watch those dozen or so extensions march across your screen during startup, you're reminded of how far the Mac has strayed from its original goal: to be the world's first *information applicance.*

An ambitious startup in Belmont, California, is refocusing on that goal. Tiny Diba is negotiating with an impressive array of big guns from the consumer-electronics world — including Cable & Wireless, GoldStar, Hitachi, NEC, and Zenith, according to sources — about licensing the suite of hardware, software, and networking technologies that underlies Diba's new, simpler way of dealing with the Information Age: IDEAs (interactive digital electronic appliances).

A Diba IDEA is a single-purpose, easy-to-use, inexpensive information-management or -retrieval device. Because an IDEA is designed for only one task, its interface and form factor can be specifically optimized for that task and that task alone — much as a toaster's bread slot need not accommodate a Thanksgiving turkey.



Futuristic design and simple setup distinguish these inexpensive, easy-to-use, single-purpose information appliances: the Diba Mail (left) and the Diba Internet.

DIBA INTERNET. The first piece of electronic equipment every red-blooded American kid learns to operate is the TV remote. With the Diba Internet, that basic skill can be used to surf the World Wide Web. The compact, futuristic Diba Internet box contains a 28.8-kbps modem, proprietary browser software, and a composite-video port for connecting to a color TV. The handheld infrared remote includes scrolling and pointing controls as well as a flip-open alphanumeric keypad for entering URLs. Browser software has been optimized for TV display and includes the ability to save a list of favorite Web pages. Manufacturing cost will be around $300; expect consumer cost to vary, depending on competition and supply.

DIBA MAIL. Nonbusiness e-mail is limited to the one-third of Americans who have a Mac or PC at home. The Diba Mail aims to up that percentage. The Diba Mail appliance has phone and fax capability, along with a fold-down keyboard and a monochrome LCD display. Its proprietary e-mail software has standard editing controls as well as an address book that includes batch fax and e-mail processing. Since the Diba Mail is designed to be used in conjunction with an e-mail service provider, Diba claims that the Diba Mail should be available at nominal cost from the service provider when you subscribe.

DIBA KITCHEN. If IDEAs are intended to be the toasters of the Information Age, why not an IDEA that complements your real toaster — and your blender, your microwave, and your Cuisinart? Enter the Diba Kitchen, a tiny menu planner, nutrition database, CD-audio player, and color TV that either sits on your kitchen counter or hangs from your cabinets. The Diba Kitchen includes a CD-ROM with thousands of recipes — accessible via buttons labeled Chinese, Italian, American, Mexican, Quick&Easy, and Other — and with nutritional information divided into 26 categories, including calories and cholesterol. An optional compact thermal printer connects to the Diba Kitchen's serial port. Estimated prices were not available at press time. 415-596-1177; http://www.diba.com/. / *RIK MYSLEWSKI*

FUTURE TECH

IBM Licenses the Mac OS — Finally . . .

THE PROVERBIAL SHOE has finally dropped: IBM will license current and future versions of the Mac OS. The giant that was once Apple's most hated foe has become one of its most valuable allies.

The deal is similar to the recently announced Apple/Motorola agreement: IBM will supply the Mac OS to sublicensees of its choosing and may build Mac OS clones. IBM and Motorola's goals, however, will be different. Whereas Motorola will focus on "enterprise systems" that may never be available at stores in the U.S., IBM will work with third-party parts suppliers and system integrators to produce not only enterprise-class workstations but also servers, low-priced desktop models, and notebook computers for the U.S. market. Like Motorola, IBM will target the Chinese market, but it's eyeing Taiwan, India, Japan, and Europe too.

The key to these ambitious plans is the soon-to-appear PowerPC Platform (see "The Mac of the Future," May '96, page 78) — and the key to this customizable, multi-OS system will be its adoption by third-party chip, firmware, and motherboard suppliers.

Help is on the way. VLSI has announced its Gold Eagle PowerPC Platform ASICs (application-specific integrated circuits), and FirmWorks is now shipping Power FirmWare — ROM-based software that will let PowerPC Platform systems boot multiple operating systems and support plug-and-play PCI cards. No details were available at press time, but major motherboard makers are rumored to be ready to board the rapidly accelerating PowerPC Platform bandwagon. / *RIK MYSLEWSKI*

[*More information on the IBM licensing agreement can be found on MacUserWeb, http://www.zdnet.com/macuser/. — Ed.*]

Multimedia Heavyweights Leapfrog Sun's Java Language

New authoring tools make it easy to create and maintain interactive Web pages.

FULL-STRENGTH multimedia-authoring programs are becoming Internet-savvy, making it easier to enhance your Web site with audio, video, and animations without learning Java or facing CGI (Common Gateway Interface) creation.

SUPERCARD. Allegiant Technologies' SuperCard plug-in for Netscape Navigator 2.0 lets Net surfers view interactive applications from your Web site. SuperCard-enhanced pages can include buttons and scrolling text fields within Navigator frames and can download audio that plays while graphics download. Like any truly Internet-savvy application, SuperCard can now import GIF-, JPEG-, and ART-compressed files. 619-587-0500; http://www.allegiant.com/.

AUTHORWARE 3.5. Shockwave for Authorware, delivered in version 3.5 of Macromedia's industrial-strength authoring program, is able to play back sound and animations over the Internet via the Shockwave plug-in. Intranet-page designers can create interactive applications for their users to download or upload information to an FTP server for, say, a survey. The $4,995 Authorware Interactive Studio includes Director 5.0, Extreme 3D, xRes 2, SoundEdit 16 2.0, and Deck II. 800-326-2128 or 415-252-2000; http://www.macromedia.com/.

ClickWorks offers easy programming of interface elements such as buttons via navigation options on pop-up menus.

CLICKWORKS. Aimed at publishers who want to easily repurpose print material for use on CD-ROM or the Web, Scitex's ClickWorks doesn't require coding for many of its interactivity functions, such as creating navigation buttons — you choose actions from a series of pop-up menus. ClickWorks can embed URLs in graphics, and scripters can link a CD-ROM-based application to data on the Internet with support for linking to SQL databases. ClickWorks runs on Power Macs; has runtime versions for 680x0 Macs, Power Macs, and Windows platforms; and will be available this summer for around $1,000. 800-675-5666. / *SEAN J. SAFREED*

OpenDoc Coming to Your Office

IT'S STILL TOO EARLY to say whether OpenDoc will be a boon or a boondoggle, but practical OpenDoc parts are finally beginning to appear — and Digital Harbor, a startup company founded by former WordPerfect employees, plans to be among the first to provide them. Not surprisingly, the firm's first effort will be a word processor, code-named Opal, that will create OpenDoc *container* documents — parts that form the shell of a document in which other parts can be embedded.

Opal will offer standard formatting functions, such as justification; a ruler for setting margins and tabs; and headers and footers. It will be able to open and save RTF files but will not let users create or save named styles. It will also support text wrap around irregularly shaped objects.

Other plans are still sketchy: Columns, search-and-replace, spell checking, and HTML output are some possibilities — but they also might be left as "opportunities" for other vendors to supply as bundled parts. Meanwhile, another group of WordPerfect refugees has demonstrated WorldSoft's WorldWrite running as an OpenDoc container. WorldSoft declined to comment.

Following Opal, Digital Harbor plans to release a full-featured word processor, code-named Jade, which will support named styles, bookmarks and hyperlinks, merging of multiple documents, table-of-contents and index generation, outlining, tables, footnotes and endnotes, and a thesaurus. Expect Jade when Copland ships in 1997.

Opal will sell for under $100 and will be available this summer, primarily over the Internet. 801-796-8213. / *HENRY BORTMAN*

MACUSER UTILITY OF THE MONTH

Free Web-Management Tool

TIRED OF REMEMBERING to create bookmarks for your favorite Web sites? No sweat — *MacUser*'s SiteSeer plugs into Netscape Navigator, Spyglass Mosaic, and Microsoft's Internet Explorer; keeps track of every site you visit; and creates simple drag-and-drop-aware windows for your bookmarks. Drop URLs in from the Finder, your Clipboard, or your favorite browser, and they'll be saved forever. And if you drag URLs or FTP addresses into the Download Later window, SiteSeer will grab all the files you've flagged, saving you repetitive chores.

Created by William Tudor, *MacUser*'s SiteSeer is available exclusively from the ZD Net/Mac service on CompuServe (GO ZMC:MACUSER) and on the Web at (http://www.zdnet.com/macuser/). Available as of May 31. / *SCOTT LOVE*

Intel Inside

POWER-HUNGRY Windows 95 can finally run at high speed on a PCI-based Power Mac, thanks to new cards from Apple, Reply, and Orange Micro.

Apple's two offerings are the most conservative. Either card can run Windows 3.1 or Windows 95 but not Windows NT, and neither is a speed burner. For $1,049, you get a 100-MHz Intel Pentium processor; $799 gets you a 100-MHz Cyrix 5x86 processor that Apple claims can provide speed equivalent to that of a 100-MHz Pentium. Each card includes 8 MB of RAM, an FPU, and a Level 2 cache and ships with DOS 6.22. You can also buy your card with a shiny new Power Mac wrapped around it — just ask for a Power Mac 7200/120 PC Compatible. 800-538-9696 or 408-996-1010; http://www.apple.com/.

The Reply and Orange Micro cards will be able to run Windows NT, and they promise more speed. Reply is offering Pentium processors with clock rates of 100 to 200 MHz, from $695. Orange Micro plans to offer cards with AMD and Cyrix 5x86 processors as well as with a variety of Pentium processors, with clock rates of up to 166 MHz. Prices for Orange Micro's Pentium cards will start around $750; cards based on the AMD and Cyrix processors should cost much less. Reply: 800-955-5295 or 408-942-4804; http://www.reply.com/. Orange Micro: 714-779-2772. / *CAROLYN BICKFORD*

CLONE WATCH

Low-Cost MultiProcessing

DayStar's Genesis MP 300 offers dual-multiprocessor performance at an affordable price.

TWO MICROPROCESSORS are better than one — and cheaper than four. DayStar Digital, whose premium-priced four-processor systems were the first (and, to date, only) multiprocessor Mac OS systems, has released a more affordable dual-PowerPC 604/150 model, the Genesis MP 300, with prices beginning at $6,499 for a stripped-down unit that has no RAM or hard drive. Figure another $2,500 to $3,000 for 32 MB of RAM, a 2-GB drive, and a graphics-accelerator card, and you're ready to join the multiprocessor revolution.

We performed a set of five Photoshop tests on a prerelease Genesis MP 300 and compared the results with those of a quad-PowerPC 604/150 Genesis MP 600, Power Computing's new top-of-the-line 180-MHz PowerTower 180, and an Apple Power Mac 9500/132. On our Gaussian Blur (with a 2.3-pixel radius) and RGB-to-CMYK Mode Conversion tests, the Genesis MP 300 was nearly twice as fast as the Power Mac 9500/132 and outran the PowerTower 180 by a sizable margin. On our Rotate Image test, however, the Genesis MP 300 was only a bit faster than the Power Mac 9500/132. In fact, on this test, the PowerTower 180 beat the Genesis MP 300 — and the Genesis MP 600. (For more on the Genesis MP 600's Photoshop performance, see "Formula 1 Photoshop," June '96, page 70.)

In a related move, DayStar once again lowered its prices on Genesis MP 600 and 528 systems. A 16-MB/1-GB configuration of the Genesis MP 528 now squeaks in at just under $10,000; a 32-MB/2-GB Genesis MP 600 can now be had for $13,000 and change. 800-962-2077 or 770-967-2077; http://www.daystar.com/. / *HENRY BORTMAN*

MORE PROCESSORS = MORE SPEED / well, duh . . .

On our five processor-intensive Photoshop tests, the dual-150-MHz-processor Genesis MP 300 was significantly faster than the single-processor Power Mac 9500/132. On all but the Rotate Image test, it also outperformed the PowerTower 180, which has a single 180-MHz PowerPC processor. All tests were performed with a 50-MB file and a 200-MB Photoshop RAM partition.

PHOTOSHOP TASKS

	Rotate Image .3 Degree	Gaussian Blur (1-pixel radius)	Gaussian Blur (2.3-pixel radius)	RGB-to-CMYK Mode Conversion	Resize Image to 50%
DayStar Genesis MP 300	65.2	14.1	35.2	15.7	19.5
DayStar Genesis MP 600	60.2	12.1	24.4	11.1	9.2
Power Computing PowerTower 180	57.7	16.5	50.1	21.8	25.5
Apple Power Mac 9500/132	75.6	20.5	64.1	31.0	32.9
	SECONDS SLOWER	SECONDS SLOWER	SECONDS SLOWER	SECONDS SLOWER	SECONDS SLOWER

Which High-Speed Connection Scheme Will Replace SCSI?

SCSI'S DAYS ARE NUMBERED — and the numbers we're hearing are pretty damn fast: For example, check out the 40-MB-per-second basic throughput rate of SSA (serial storage architecture), appearing in systems from Microtech (see "Storage Milestone," June '96, page 28) and La Cie. Impressed? Then check out FC-AL (fibre channel-arbitrated loop), which promises 100-MB-per-second data transfers, announced in systems offered by MegaDrive and Transoft.

Either technology lets you connect over 125 devices to one or several PCI-card equipped Macs, but with some key differences. For instance, every Mac has equal, direct *simultaneous* access to each device on a two-way SSA loop, but data transfers must travel one by one along a unidirectional FC-AL loop. FC-AL proponents point out that its raw speed should prevent gridlock; SSA proponents are skeptical about FC-AL's transfer speeds when numerous nodes are busy transferring files.

SSA is also less expensive: Compare the estimated $2,000 price for a La Cie SSA 4-GB RAID array bundled with a PCI card, due in July, with the estimated $5,000+ per node for Transoft's FibreNet system, which includes software, a PCI card, and an array with up to a terabyte of storage capacity. MegaDrive's FC-AL Aria systems, due to ship this fall, should also start at about $5,000. Prices may drop when Digital and Seagate ramp up FC-AL drive-mechanism production later this year. La Cie: 800-999-1465 or 503-520-9000; http://www.lacie.com/. MegaDrive: 800-644-6342 or 310-247-0006. Transoft: 805-897-3350; http://www.transoft.net/. / *CAROLYN BICKFORD*

Now You Can Use Adobe Premiere to Control the Weather

DAZZLING SPECIAL EFFECTS just got a whole lot easier to add to QuickTime video being edited in Adobe Premiere. Artel Software's Boris Effects 2.0 sports new interface controls, and MetaTools' Final Effects AP adds the sci-fi thrills of particle effects and the power to conjure up a thunderstorm on command.

▼ **BORIS EFFECTS 2.0.** The new attractive and easy-to-use interface in this Premiere plug-in shows a preview of effects, has interactive 3-D rotation with an on-screen dial, and can save the settings for special effects you create. Also new are motion effects, including motion blur and motion trails, and the ability to create a precise motion path with Bézier controls. Boris Effects ships with a bonus CD-ROM full of transitions. $350. 617-566-0870; http://www.tiac.net/users/artel/.

FINAL EFFECTS AP. MetaTools offers most of the power of its After Effects professional-quality video-effects package to Premiere users with this set of 12 plug-ins and four transitions. Notable are the particle-effects generators that can be employed to create explosions or smoke effects. You can also use the FE Rain or FE Snow plug-ins to add a shower or blizzard to your video compositions. All the plug-ins show small previews of the effects. $199. 805-566-6200; http://www.metatools.com/. / *SEAN J. SAFREED*

The Geek Beat

ISDN. SAGEM, maker of the Planet line of ISDN cards, has developed an ISDN GeoPort Adapter ($495). The device can also be used with non-GeoPort Macs, with the addition of an included adapter. Eicon Systems' Diva T/A ($495) is an ISDN terminal adapter on a Type II PC Card. Motorola now ships a Mac cable and software (Software Ventures' Internet Valet) with its BitSURFR Pro ISDN modem and offers a free ISDN provisioning and tech-support service called LifeGUARD to its customers. Eicon: 214-239-3270. http://www.eicon.com/. Motorola: 800-894-4836. SAGEM: 408-446-8690; http://www.satusa.com/.

▼ **NETWORK HARDWARE.** Combine a router, an ISDN modem, and a 10BASE-T hub, and you get the WebRamp ($695), from Trancell. Targeted at small offices, the 8-port WebRamp includes Mac or Windows configuration software; an ISDN BRI and NT1; and support for AppleTalk, IP, and IPX routing. 408-988-5353.

NETWORK MANAGEMENT. For the first time, AppleShare administrators can manage their servers remotely, with Nok Nok A/S 2.0 ($195), from The AG Group. 800-466-2447 or 510-937-7900; http://www.aggroup.com/.

DEVELOPMENT TOOLS. Symantec's C++ Compiler ($399) now includes Java support and Caffeine, a graphical Java development environment. Version 8, Release 5, of the PowerPC-native development environment also includes support for Pascal and for creating 680x0 applications. 800-441-7234 or 541-334-6054; http://www.symantec.com/.

WORLD WIDE WEB. RushHour ($295) is graphics server software for the World Wide Web, from Maxum Development. It works with Macs, UNIX machines, or any other Web servers to speed the delivery of graphics files to a browser. 708-830-1113; http://www.maxum.com/. / *SHELLY BRISBIN*

Dantzing Windows

PC USERS NEED HELP when it comes to sharing a Mac backup server with Macs — and that's just what's provided by new Windows 95 and NT client software from Dantz Development, for use with its popular Retrospect backup package.

Windows users can request backup from a server and can protect individual folders from automatic backups — just like their Mac counterparts. Although PCs and Macs appear together in Retrospect's Remotes window, Macs are backed up over AppleTalk whereas PCs use the IP support Dantz has added to the Retrospect application. Dantz will sell 5-, 10-, and 50-user Remote Packs for Windows 95 and NT for $169, $249, and $1,095, respectively. 510-253-3000; http://www.dantz.com/. / *SHELLY BRISBIN*

Top Web Server Lengthens Its Lead

Rivals can't match WebSTAR's convenient plug-in architecture.

TIME'S RUNNING OUT for the competition to catch up with WebSTAR, the runaway favorite Mac Web server software. Taking a page from Netscape's technology plan, Quarterdeck's StarNine division has added plug-in support to version 1.3 of WebSTAR and has announced attractive enhancements for its upcoming version, 2.0. The improvements in one of WebSTAR's few competitors, InterServer Publisher, on the other hand, are decidedly underwhelming.

WebSTAR's server-extension plug-ins are compiled applications that drop into the Plug-ins folder. Sharing memory with WebSTAR, they're likely to be much faster than the CGI (Common Gateway Interface) applications currently available for WebSTAR and other Web server-software packages. Major developers such as Maxum Development (NetCloak and NetForms) have announced plug-in versions of their CGI software. StarNine has also announced a developers kit as well as a security API that will allow developers to extend WebSTAR's security features.

Plug-ins will add new features — such as built-in image-map support — to WebSTAR 2.0 (scheduled for release in June). Version 2.0 will also sport an overhauled administration scheme and will support applications created with the security API. Version 1.3 is free to current users; version 2.0 pricing has not been announced. 800-525-2580 or 510-704-1272; http://www.starnine.com/.

ILLUSTRATION / MARGARET MCMULLIN

The latest news from InterCon is less interesting: Version 1.2 of InterServer Publisher adds support for Open Transport, enhancements designed to speed CGI processing, and new security features that provide better control of FTP access. 800-468-7266 or 703-709-5500; http://www.intercon.com/. / *SHELLY BRISBIN*

NET.CETERA

Adobe Responds to PageMill's Critics

ADOBE MADE becoming a Web publisher easy when it released PageMill 1.0 last year. However, most veteran HTML authors groused that PageMill lacked support for many common layout features. Adobe must have heard all that grumbling: We just had a sneak peek at PageMill 2.0, and we're willing to bet that its powerful and easy-to-use features will please both novice and professional users.

Like version 1.0, PageMill 2.0 displays your Web pages on-screen just as if they were in a Web browser. However, PageMill 2.0 can handle much more complicated designs: For example, you can create tables by a simple drag-and-drop operation and merging table cells takes just one click on PageMill's expanded tool bar.

Other HTML features added to PageMill 2.0 include the wrapping of text around graphics, various font sizes and colors for body text, flush-right alignment, and hidden fields in interactive forms. The raw HTML code PageMill generates also promises to be improved — and those picky HTML wizards will be able to view and edit that code with PageMill's new View Source feature.

PageMill 2.0's new features don't end with HTML. Additionally on tap is limited support for some Netscape Navigator-compatible plug-ins, including ones that allow placement of PDF, QuickTime, and audio files. Editing is easier with a find-and-replace feature, a spelling checker, and the ability to import documents from word-processing programs. Also, PageMill 2.0 will finally be available for PCs running Windows 95 and Windows NT (but not Windows 3.1). $99. 800-623-2320 or 415-961-4400; http://www.adobe.com/. / *JASON SNELL*

PageMill 2.0 makes it easy for Web authors to create HTML tables.

PHOTOGRAPHY / ADRIAN ORDENANA

Net-Phone Threat

Industry group wants FCC to regulate Internet telephony.

BEWARE: An association of long-distance-service resellers wants to keep you from using the Internet to make cheap phone calls.

Today you can make inexpensive long-distance voice calls over the Internet by using software such as Electronic Magic's NetPhone, DSP Group's DSP TrueSpeech, and the University of Illinois' Maven — but not for long, if ACTA (America's Carriers Telecommunication Association) has anything to say about it. This group of long-distance carriers and resellers has petitioned the FCC (Federal Communications Commission) to designate — and regulate — Internet-phone-software developers as telecommunications carriers.

Standard phone service is regulated by the FCC and by individual state PUCs (public-utilities commissions) or similar agencies. In a petition filed on March 8, 1996, with the Policy Division of the Common Carrier Bureau of the FCC, ACTA argues that telephony on the Internet should be regulated in a similar way.

Not surprisingly, money is the central issue. According to ACTA, its 160+ members are "required to pay, directly or indirectly, various fees and charges in order to render their telecommunications service to the public." ACTA's members pass these expenses along to their customers, the upshot being that an average domestic long-distance call costs 22 cents a minute. ACTA claims that the same call made over the Internet via telecom software costs about 3.3 cents a minute.

"ACTA is, in effect, attempting to eliminate outside competition by banning emerging technologies," says Jeff Pulver, chairman of the VON (Voice on the Net) coalition, formed specifically to fight the ACTA petition. So far, at least 75 companies and 400 individuals have joined.

Apart from its overt threat to Internet telephony, the ACTA petition has other, darker implications. Along with the named companies, the petition mentions "other, unnamed providers" of unregulated phone services. "While the ACTA filing directly targets two-way voice communications," says Xing Technologies' president, Howard Gordon, "we expect it's only a matter of time before similar efforts are directed against Internet radio and television broadcasting." In other words, Internet teleconferencing products such as Xing Technologies' StreamWorks, Cornell University's CU-SeeMe, Apple QuickTime Conferencing, and VDOnet's VDOLive may be the next targets.

Tune your favorite Web browser to http://www.von.org/ to get a progress report on the ACTA petition. / *STEPHEN SATCHELL AND H. B. J. CLIFFORD*

Morph-o-Mania!

TWISTING, TWIRLING, and tweaking pictures may become the rage for children and professionals alike, with a new application from MetaTools euphoniously dubbed Kai's Power Goo — Kai being Kai Krause, the man responsible for Kai's Power Tools, Bryce, and the hallucinatory album covers of the '70s prog-rock proponents Yes.

What sets Kai's Power Goo apart from distortion competitors such as Gryphon's Morph and The Valis Group's Flo is its easy-to-use interface. Brightly colored buttons display distortion options for growing, shrinking, smearing, smudging, moving, and nudging portions of a picture. You simply click and drag to "paint" a distortion. Further, Goo has a set of brushes for color manipulation such as lightening or darkening parts of a picture. You can also animate the distortions you create and save them as QuickTime movies. Price? Less than $50. 805-566-6200. / *SEAN J. SAFREED*

CD-ROMS

Stress, Love, Elvis, and Peanut Butter

WHEN STRESSED out, how do you cope? Do you breathe deeply, turn to a friend, or settle down with a nice spoonful of peanut butter? Four new CD-ROMs may not cure your mental distress, but they'll at least get your mind off your troubles.

NATURAL STRESS RELIEF. Stop grinding your teeth, and take this disc's stress-reduction courses on How to Cope or Set Goals or start keeping a journal of (self-determined) stress levels. There's even Immediate Relief: a cloud-dappled screen replete with peaceful ocean sounds and a low male voice saying — you got it — "breathe." $80. InnerFlow Software: 800-928-9868.

▲ **THE LOVE & RELATIONSHIP TEST AND PERSONALITY TEST.** With whom would you rather schmooze: Aristotle or Elvis? Answer such searching questions in these two CD-ROMs, and discover your intimacy quotient, your self-image, your destiny, and more. For a laugh, take the tests with a friend; for honest results, go at it alone. Either way, you might find out you have a fascination for large exotic cats — or worse. $20 each. Virtual Entertainment: 800-301-9545 or 617-449-7567; http://www.virtent.com/.

PEANUT BUTTER: HOW IT'S MADE. If all that anxiety is making you downright nutty, you should take a break at Lernerville, an animated peanut-producing pantheon, and find out everything you've ever wanted to know about the wacky world of peanut butter. But remember, 60 bucks buys an awful lot of the real thing. $60. The Lerner Group: 800-328-4929 or 612-332-3344. / *REBECCA OLSON*

PHOTOGRAPHY / PAVLINA ECCLES

THE OFF BEAT

Here's Looking at You, Kid

GET A NEW ANGLE on videoconferencing, movie-making, or taking still pictures by mounting your digital camera on a mini tripod. When topped by a Connectix QuickCam, this 6.5-inch-tall tripod with flexible legs looks like a creature from the Residents' Freak Show CD-ROM. Its swiveling camera mount lets you take shots at any angle, including fully vertical or horizontal.

Usually for sale as an accessory with a QuickCam, the tripod is also available separately for approximately $15 from Connectix (800-950-5880 or 415-571-5195). It's worth shopping for the lowest price, since you ought to be able to find this or similar tripods at any camera store. / *NANCY PETERSON*

NEW & NOTABLE

HARDWARE

▼ **Nakamichi SP-3d.** A pair of compact, lightweight satellite speakers and an independent subwoofer promise to give you crystal-clear stereo from your Macintosh and add a sci-fi look to your desktop. $199. 310-538-8150.

CODi AirPro. The ultimate in safe passage for your precious PowerBook, CODi AirPro carrying cases cushion shocks from drops of over 6 feet with a six-sided, variably inflatable system of internal air pockets and passages. $79 to $179. 800-263-4462 or 717-540-1337; http://www.codi-inc.com/.

Digital Vision TelevEyes/SC. Use your television set as a second monitor or videotape multimedia presentations from your Mac by using this new VGA-to-TV scan converter with built-in on-screen controls. $499. 800-346-0090 or 617-329-5400.

Microtek ScanMaker E6. This 30-bit-color flatbed scanner has a resolution of 600 x 1,200 dpi, an 8.5-x-13-inch scanning area, SCSI-2 compatibility, image-editing software, and a nice price. $599. 800-654-4160 or 310-297-5000; http://www.mteklab.com/.

Hayes Optima 288 Business Modem. Targeted at the small-business market, this modem features fax and data transmission, voice-mail, flash ROM, and security measures such as access control and call-back. $450. 404-840-9200.

PixelCraft Pro Imager 7100. This productivity-oriented flatbed scanner features triple-DSP onboard acceleration, 30-bit-color capture, enhanced resolution of up to 2,400 dpi, and also the handy ability to gang-scan images on its large 11.7-x-17-inch platen. $8,495. 800-933-0330 or 510-562-2480.

Lightware Viewpoint. Weighing less than ten pounds, this portable LCD data and video projector has NTSC/PAL/SECAM video capabilities and a resolution of 640 x 480 pixels. Also included is a 3-watt-per-channel stereo amplifier with integrated speakers. $6,500. 541-484-7052.

UMAX PowerLook II. You can scan 600-x-1,200-dpi, letter-sized, 36-bit full-color images in less than a minute with this single-pass flatbed scanner. $3,495. 800-562-0311 or 510-651-4000; http://www.umax.com/.

Lexmark Optra N. Designed for large workgroups, this 600-x-600-dpi monochrome laser printer comes standard with two 500-sheet paper trays, prints on paper as large as 11 x 17 inches, and has a built-in 50-MHz processor and a 24-ppm print engine. $3,339 and up. 800-891-0331 or 606-232-2000; http://www.lexmark.com/.

SOFTWARE

SiteCheck. Verify all the hypertext links on your Web site remotely, thoroughly, and simultaneously. $79.95. Pacific Coast Software: 619-675-1106; http://www.pacific-coast.com/.

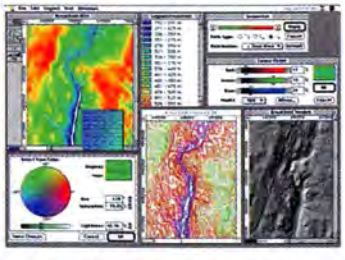
SiteEdit. Use this server-based utility to update information on your Web site without FTP. $29.95. Pacific Coast Software: 619-675-1106; http://www.pacific-coast.com/.

Tommy — The Interactive Adventure. The Who's 1969 album has spawned a concert, a movie, and a Broadway play. Now there's an interactive CD-ROM version that combines concert and movie footage with an archive of original documents and interviews. $40. MacPlay: 800-462-2752 or 714-553-3530; http://www.macplay.com/.

Magic Separator 4.1. Improve color fidelity when you convert RGB images to CMYK with this Photoshop plug-in. The software provides gamut control and recommends the best transformation for four-color separations. $198. Magic Software: 800-615-4787 or 716-855-0295.

MultiClip PRO 3.5. This smart Clipboard replacement now supports Macintosh Drag and Drop, has built-in support for importing JPEG and other graphics files, and can be automated with AppleScript. $149. Olduvai: 305-670-1112.

PosterWorks 4.0. Whether for a billboard or a backdrop, layouts up to 10,000 square feet in size are a cinch for this program, which now has indicators that tell you about device limits, panel size, and more. $495. S. H. Pierce: 617-338-2222; http://www.posterworks.com/.



◀ **Map•Factory.** This Geographic Information System lets you create, annotate, and analyze maps by using a variety of sophisticated tools, including spatial-analysis features that help you see changes, rank areas by one or several criteria, and estimate density. $1,295. ThinkSpace: 519-858-5047; http://www.thinkspace.com/.

QuicKeys 3.5. You don't need to write a script to automate tasks with the latest version of this popular macro utility, which lets you map actions to its new tool bar and floating palette as well as to key combinations. $119. CE Software: 800-523-7638 or 515-221-1801; http://www.cesoft.com/.

Tailor 1.0. This PostScript editor opens an EPS file from any source and lets you correct typos; manipulate color; modify the shape of objects; extract data; and render a new, clean PostScript file. $495. EnFocus Software: 303-861-2395; http://www.enfocus.com/.

Territory Manager 2.5. Salespeople can create sales forecasts and analyses, keep a prospect list, schedule sales calls, and — using a link to a separate program — map their data. $295. Software Solutions: 812-477-3181. / *CAROLYN BICKFORD*

MACINTOSH PRICE INDEX

THE UNITED COMPUTER EXCHANGE index reflects average sales prices of new and used Macs as of April 5, 1996. Prices (other than those for compact models, Performas, and LCs) do not include a monitor or a keyboard. The United Computer Exchange is a national clearinghouse of used microcomputer equipment.

Mac Model	New	Used
Classic II (4/40)	•	$325
LC III (4/80)	•	$325
Performa 5215CD (8/1GB)	$1,899	$1,400
Performa 6220CD (16/1GB)	$1,899	$1,550
IIsi (5/80)	•	$275
IIci (4/80)	•	$400
IIfx (4/80)	•	$500
Quadra 605 (4/80)	•	$425
Quadra 610 (8/160)	•	$550
Quadra 630 (4/250)	•	$600
Quadra 650 (8/230)	•	$1,050
Quadra 660AV (8/230/CD)	•	$800
Quadra 700 (8/230)	•	$775
Quadra 800 (8/230)	•	$1,050
Quadra 840AV (8/230/CD)	•	$1,375
Quadra 900 (8/230)	•	$900
Quadra 950 (8/230)	•	$1,275
Power Mac 6100/66 (8/350/CD)	•	$1,000
Power Mac 7100/80 (8/700/CD)	$1,299	$1,125
Power Mac 7200/90 (8/500/CD)	$1,449	$1,200
Power Mac 7500/100 (16/1GB/CD)	$2,589	$2,000
Power Mac 8100/100 (16/1GB/CD)	•	$2,000
Power Mac 8100/110 (16/2GB/CD)	•	$2,300
Power Mac 8500/120 (16/2GB/CD)	$4,499	$3,700
Power Mac 9500/132 (16/2GB/CD)	$4,399	$3,800
PowerBook 145B (4/80)	•	$700
PowerBook 150 (4/120)	•	$700
PowerBook 165 (4/80)	•	$850
PowerBook 165c (4/80)	•	$1,050
PowerBook 170 (4/80)	•	$850
PowerBook 180 (4/120)	•	$1,200
PowerBook 190cs (8/500)	$1,999	$1,600
PowerBook 520 (4/160)	•	$1,000
PowerBook 520c (4/160)	•	$1,200
PowerBook 540 (4/240)	•	$1,400
PowerBook 540c (4/320)	•	$1,900
PowerBook 5300cs (8/500)	$2,499	$1,800
Duo 250 (4/200)	•	$1,100
Duo 280 (12/240)	•	$1,600
Duo 280c (4/320)	•	$1,700
Duo 2300c (8/750)	$3,499	$3,000

• = discontinued model

For more pricing information on these and other models, call 800-755-3033 or 770-955-0569 or visit http://www.uce.com/. And find it on ZD Net/Mac, in Library 1 (Special Reports) of the MacUser Forum (GO ZMC:MACUSER).

Have A New PowerPC PowerBook? Fill In The Blanks.

"Apple cut...on-board Ethernet found on the 500 series."
Stephen Howard - MacWEEK

"They (Apple) don't have built-in Ethernet."
Don Crabb - MacWEEK

"The PowerBook 190 ships with no video-out support..."
Henry Norr - MacWEEK

Your new PowerBook 5300 or PowerBook 190 has everything. Well, almost. What would make it even better would be fast 16-bit color for large monitor support when you're in the office or for presentations, and a permanent, built-in Ethernet connection that doesn't use precious PCMCIA slots.

FOCUS Enhancements is ready, right now, with quality video and Ethernet card values you won't find anywhere.

The new MV (Micro Video) series from FOCUS Enhancements

8-Bit Video and Ethernet
For 8-bit color, 512KB video RAM, an Ethernet 10BaseT port plus external display connection, the LapisColor MV8-EN is only $249.

16-Bit Video-Out
The LapisColor MV16 card drives virtually any monitor including Super VGA, has 1MB of video RAM, delivers brilliant 16-bit and 8-bit color, all for only $299. They're in stock now!

16-Bit Video and Ethernet
Plug into your Ethernet network, add 16-bit video-out color and save your PCMCIA slots with the LapisColor MV16-EN. Our card comes with a 1 MB of video RAM, 10BaseT Ethernet port and a connector for external displays. Only $399.

Call for more information or the reseller nearest you.
Call for a free product guide

800-538-4888

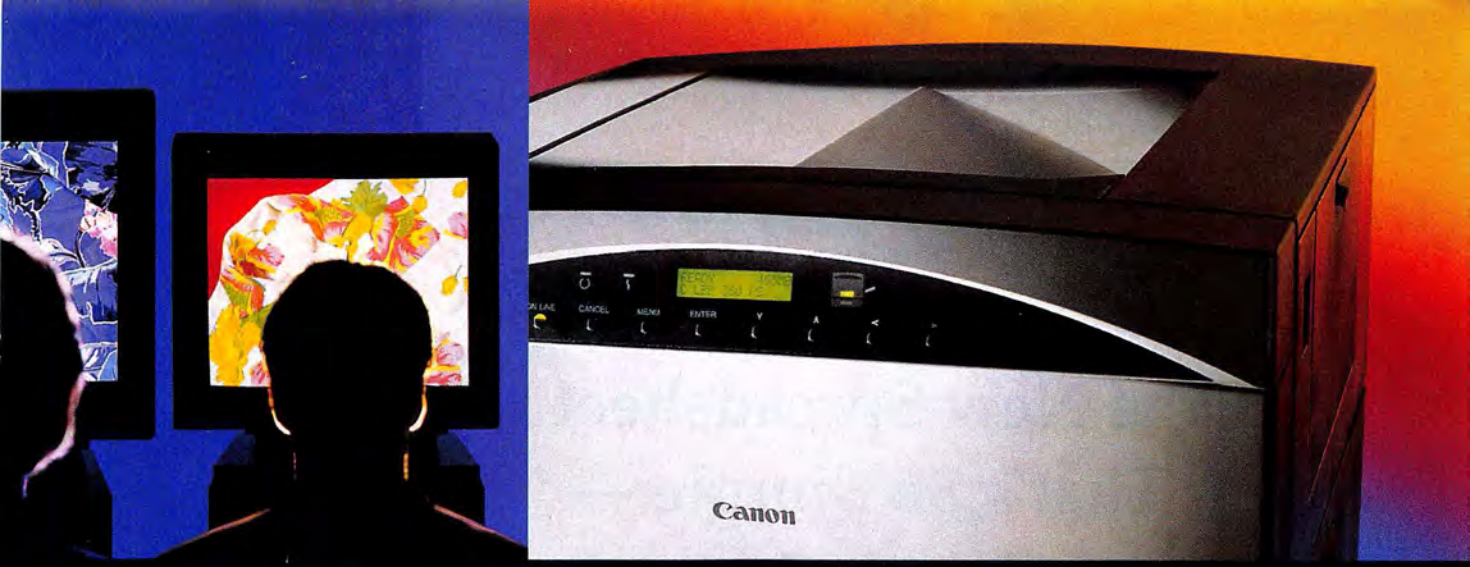
CIRCLE **26** ON READER SERVICE CARD

FOCUS enhancements
networking • graphics • software

INGRAM MICRO · COMPUTER ATTIC · The Mac Zone · JRR COMPUTER WORLD · Computer Town · MacWAREHOUSE

16.7 million

Macintosh is a registered trademark of Apple Computer, Inc.
Fiery, Fiery XJ Downloader, Fiery XJ Spooler and XJE are trademarks of Electronics For Imaging, Inc.
PostScript is a trademark of Adobe Systems Incorporated, registered in the U.S. and other countries.
Novell is a registered trademark of Novell, Inc.
Windows is a trademark of Microsoft Corporation.
© 1996 Canon U.S.A., Inc.



colors, yet it goes with everything.

Introducing the network compatible, Color Laser Beam Printer 360PS.

You want a color laser printer that stands out. But it's got to go with your network, right? Then the new Color Laser Beam Printer 360PS from Canon is the perfect match for your business.

The Canon C LBP 360PS puts all 16.7 million colors of the rainbow within your reach. It's plug 'n' play, and connects easily with Macintosh,® Windows™ and UNIX operating systems, plus Ethertalk, TCP/IP, and Novell® IPX networking environments. Innovative Fiery XJ Downloader™ and Spooler™ software give you unmatched flexibility when downloading PostScript™ files and managing network printing. Which means while you print, your computer is free to go on to the next job.

Adobe PostScript

And because Canon's the leader in laser technology, you'll see vivid, continuous tone color at blinding speeds. With the built-in Fiery™ XJE™ controller, the C LBP 360PS prints out 3 full-color pages per minute, with a resolution of 600 dpi. Plus, it feeds letter-or legal-size paper with a capacity of up to 600 sheets. In fact, the C LBP 360PS makes color printing so efficient, it can't help but make you look good.

fiery driven

So if you're looking for a high-quality, color laser printer to go with your network, we have the system that is the solution. The C LBP 360PS from Canon. For more information, just call **1-800-OK-CANON.** Or visit us on the Web at **http://www.usa.canon.com**

CIRCLE **9** ON READER SERVICE CARD

Canon

publishers of
Conflict Catcher 3™
proudly announce:

The New Spreadsheet That's So Simple — It's Revolutionary!

It's Easy!

- Drag & drop your calculations!
- Let's you see your work — no more confusing formulas!
- Cuts down on User errors
- Add charts, graphs, text & graphics with a few clicks

It's Powerful!

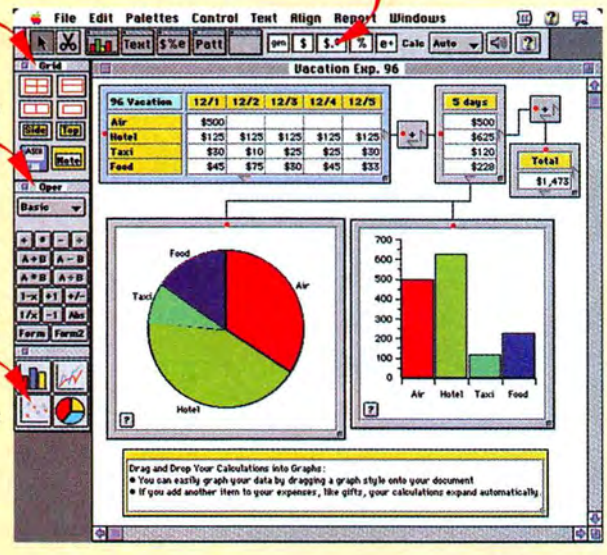
- Supports Basic & Advanced Math Functions, Logic, Scientific Functions, Statistics, Trigonometry, and more
- Plug your numbers into ready-made solutions
- Build custom formulas for re-use

For professional-looking presentations — Formatting your documents is as easy as clicking on the Toolbar .

It's Easy! Just drag and drop your operations

It's Powerful! Performs functions for Trigonometry, Scientific, Statistics, Logic, and Basic Math

Add charts, graphs, and text fields with a couple of clicks



Kiss overblown spreadsheets goodbye!

For information or to order **Let's Keep It Simple Spreadsheet**™

Sales: 1-800-359-4920 • FAX: 1-800-359-4264 • Tech: 408-484-9228

http://www.casadyg.com

22734 Portola Drive, Salinas, CA 93908-1119

INGRAM MICRO

The Douglas Stewart Co.

MERISEL

CIRCLE **14** ON READER SERVICE CARD

MacWEEK REPORT

MacUser's Inside Track to Macintosh News

Developers hold back on new technologies

By MacWEEK staff

There's angst in the Mac developer community today, and it's not all in response to Apple's second-quarter loss.

Many developers question Apple's continuing support for numerous technologies on its plate, and some are holding back their adoption of innovations, including OpenDoc, QuickDraw 3D, QuickTime VR and QuickTime Conferencing. With the Apple Worldwide Developers Conference around the corner, developers are seeking assurance that the company will back up its words with action.

"Apple doesn't jump into a new standard with both feet," said Chuck Shotton, vice president of Quarterdeck Corp. of Marina Del Rey, Calif.

Developers that have supported PowerTalk, publish and subscribe, QuickDraw GX, and other faltering Apple technologies said they feel justified in their hesitation.

"We really want to support OpenDoc, but we're a little uncomfortable," said Joe Kissel, Nisus product manager at Nisus Software Inc. of Solano Beach, Calif.

Kissel said several of Apple's efforts have arrived unfinished. "It's like they're trying to test the waters and will decide later if they are going to support them," Kissel said. "I just got the API for PowerTalk."

Other developers pointed to Apple's difficulty in bringing tools and products to market. "If there are long, significant delays in technologies, developers lose faith in them," said Brian Lawley, director of C++ and Java tools at Symantec Corp. of Cupertino, Calif.

In addition to speedy delivery, Apple must move new technologies more quickly into the OS, said Gary Gonzalez, president of Binary Software Inc. of Santa Monica, Calif. "QuickDraw GX will be 2 years old before it goes into the system software. It's useless," he said.

Developers said they have this same fear about QuickDraw 3D and OpenDoc. "If I were Apple, I'd be totally focused on integrating OpenDoc into the Mac OS," said David Smith, CEO of Cary, N.C.-based Virtus Corp.

Apple and Claris Corp. have also had a lackluster record in implementing new technologies.

"You never see a Microsoft product ship without OLE support," Symantec's Lawley said. Resolving this issue is most critical, he said, "because if Apple won't bet on its own technologies, then no third party is going to."

Some longtime Macintosh programmers said some Apple efforts seem to be little more than technological exercises without a clear market.

"It comes down to 'What problem does this [technology] solve?' " Smith said. He gave PlainTalk's speech recognition as an example: "When it's barely accurate enough to recognize single words, you have to ask yourself, 'Why spend a huge effort to integrate it into my application?' "

While many developers said Apple's current technologies solved real problems, they were more concerned that Apple hadn't learned from its past mistakes of keeping technologies proprietary.

Developers agreed Apple's technologies need to be cross-platform.

Shotton said that for QuickDraw 3D and QuickTime Conferencing to succeed, Apple should publish them as open standards.

Virtus' Smith agreed about QuickDraw 3D: "They make it an open standard or it ceases to exist. There's just no choice." □

Apple's technology pitches

HOME RUNS	OUTS	ON BASE
Apple Guide	Balloon help	FireWire
AppleScript	Bedrock	OpenDoc
Macintosh Drag and Drop	Data Access Language (DAL)	QuickDraw 3D
Open Transport	Dylan	QuickTime Conferencing
PlainTalk speech synthesis	GeoPort/Express Modem	
PowerPC	PlainTalk speech recognition	
QuickTime	Publish and subscribe	
TrueType	PowerTalk/PowerShare	
WorldScript	QuickDraw GX	
3DMF	QuickTime VR	

Reliability key issue for Apple

By Joanna Pearlstein and Kelly Ryer

Extended beta testing and a new Quality Council comprising decision makers from the company's engineering, manufacturing, testing, product marketing and customer service groups are two key parts of senior vice president Frederick Forsyth's plans to improve the reliability of Apple Computer's hardware and software.

CEO Gilbert Amelio deputized Forsyth, Apple senior vice president for worldwide operations, to oversee quality-assurance efforts.

Forsyth said: "[Amelio] doesn't care what the cause is — supply problems, design problems, manufacturing, service, distribution. He is looking across the organization to ensure we have the processes in place for resolution."

Help, Apple style

Apple's technical support can be reached at (800) 767-2775. Users can search Apple's technical information library at http://til.info.apple.com/til/til.html.

According to Forsyth, one way to improve quality control is to augment the testing process with more input from outside sources. In the wake of public beta tests of Open Transport and OpenDoc, Apple said it will continue the trend with a public beta of Copland, its next major OS release. Nancy Morrison, an Apple spokeswoman, said, "It won't be really widespread, but there will be a seeding program for customers."

But Forsyth said: "We're looking to find beta sites. We want to get a broader base of users to test things. [That's] clearly required for major changes. We want to get some educational institutions and developers."

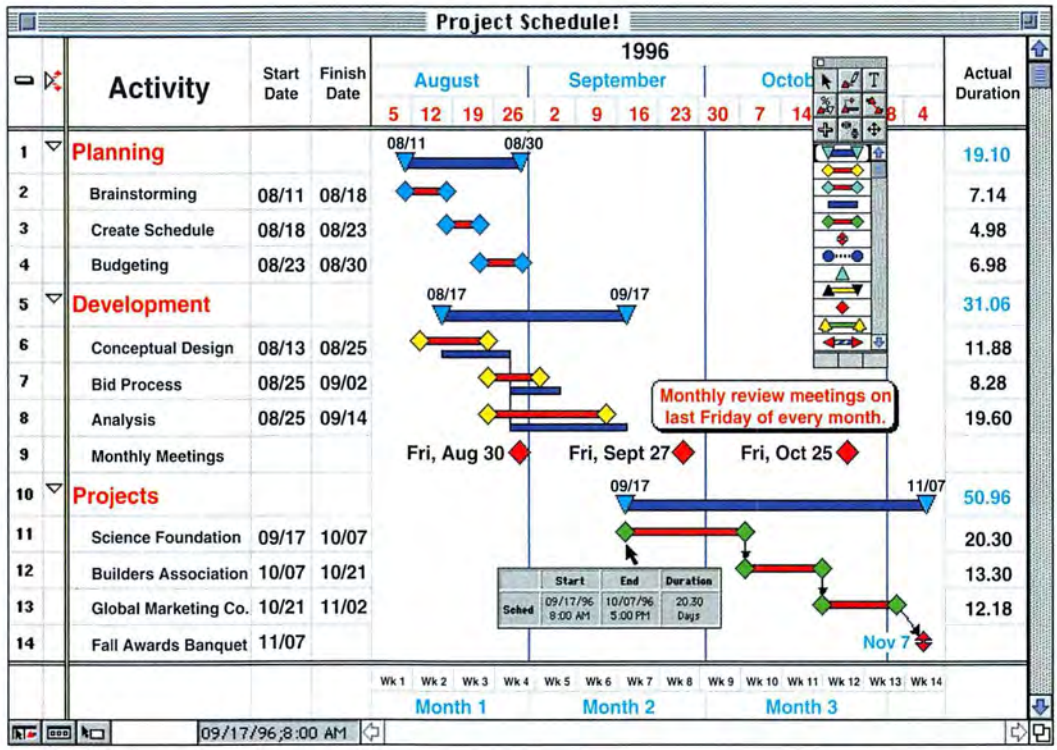
An increased focus on quality is reflected in recent Apple actions. The company reportedly delayed the release of faster Power Mac models in order to ensure the machines will work properly when released. □

New Version 4.0

You can't stay on schedule if you don't have one.

Mac™ OS

Accelerated for Power Macintosh



"If you're looking for a quick and easy way to create Gantt charts, this program might be just the one for you."

MacUser

"...An excellent choice for anyone whose primary need is to create precise, presentation-quality Gantt charts."

MacWEEK

FastTrack Schedule™ 4.0

Simple Scheduling. Impressive Power.

FastTrack Schedule 4.0 lets you create and update presentation-quality schedules quickly and easily. Whether you need a quick scheduler or a full tracking system, FastTrack Schedule 4.0 offers the combination of flexibility, ease of use and power all in one program! Take a quick look at some of the features found in FastTrack Schedule 4.0. Simple scheduling and impressive power are as easy as...1,2,3.

1 Flexibility

- Timescales from Hours to Fiscal Years
- Link Options • Find & Replace
- Paste in Graphics & Add Textblocks
- Custom Bar and Milestone Styles
- Page Breaks • Shift Items in Work Units
- Capture Schedule Defaults • Hide Graph
- Layout Options for Multi-columnar Reports
- Durations in Work Hours & Work Days

2 Ease of Use

- On Line Help Systems • Tool Tips
- Balloon Help • Action Columns
- Control Palette • Auto Scrolling
- Bar Tracking Window • Select All
- Interactive Page Preview Layer
- Cursor Tracking Window • Quick Corner
- Templates • Floating Toolbox
- Autofit Schedule • Auto Resize Row Height

3 Power

- Scheduled, Revised & Actual Dates
- Custom Work Calendar
- Filters & Sorts • Task Dependencies
- Outline tasks to show sublevels
- Import & Export Data as ASCII text
- Network Versions - File Locking, Passwording
- Available for Macintosh, Power Macintosh, Windows 3.1, Windows NT and Windows 95.

To order, for more information or for a free demo call today!

800.450.1983

http://www.aecsoft.com

CIRCLE **15** ON READER SERVICE CARD

AEC SOFTWARE

AEC Software, Inc., 22611-113 Markey Ct., Sterling, VA 20166 USA • Phone 703.450.1980 • FAX 703.450.9786 • http://www.aecsoft.com

©1996 AEC Software, Inc. All rights reserved.
Windows, Windows 95 and Windows NT are registered trademarks of Microsoft Corporation. Macintosh is a registered trademark, and Power Macintosh is a trademarks of Apple Computer, Inc.

Apple puts Finder on the Web

By Joanna Pearlstein

Putting the face of the Mac OS onto the Internet, Apple last month unveiled WebFinder, a Finder-like tool for serving documents on the Web, as well as new versions of both MacPPP and AppleSearch Server.

WebFinder, an ACGI (Asynchronous Common Gateway Interface), displays Web pages in file directories that resemble those of the Finder. The program displays the file's icon, and users can sort items by Name, Size, Kind and Date Last Modified.

Whenever a user clicks on a text file in the directory, WebFinder converts it into HTML on the fly, while maintaining all styles, Apple said. Clicking on an Adobe Acrobat file launches the Acrobat plug-in, if a plug-in is available.

WebFinder's access privileges are set through Apple file sharing.

John Dasher, engineering manager for Apple's CyberTech Internet programming group, said his team designed WebFinder "as a complement to FTP. FTP turned out to be a little too complex for some users, and we said, 'Gosh, there's got to be an easier way.' "

WebFinder is currently running on Apple's CyberTech Web site at http://cybertech.apple.com. The tool is expected to be available free in the near future.

In other Internet news, Apple Computer last month shipped MacPPP 2.5, an update to the tool used for a Point-to-Point Protocol (PPP) connection. The new version is compatible with Open Transport and offers improved virtual-memory support, better serial-port management on PowerBooks and several bug fixes.

The new tool is included in Version 1.1 of the Apple Internet Connection Kit and is available on Apple's Web servers.

MacPPP is free, but Apple supports it only for owners of the $49 Apple Internet Connection Kit.

Finally, Apple has released a patch for the AppleSearch Server, which enables Wide Area Information Server functionality with Open Transport; the Version 1.5.1 update is required only for those who are using Open Transport.

Both MacPPP 2.5 and the AppleSearch Server 1.5.1 Patch are available on the CyberTech site. □

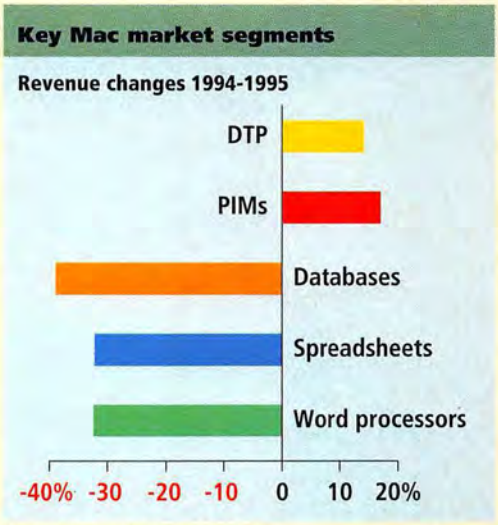
SPA survey: Mac app sales dropped in '95

By Mark Hall

Despite record shipments of 4.7 million Macs in 1995, Apple's software developers lost ground.

According to a survey of U.S. and Canadian personal computer software sales conducted by the Software Publishers Association of Washington, D.C., the Mac portion tumbled to $1.05 billion from $1.23 billion the previous year, a 14.3 percent decline. Total software sales grew 12.3 percent, to $7.53 billion in 1995, up from $6.7 billion in 1994.

Mac application sales took 14.5 percent of the market, down from 18 percent in 1994, while Windows software dominated with 75 percent of overall sales. DOS software accounted for only 9.5 percent of annual revenue.



Source: Software Publishers Association.

"The concern for Mac developers is: How big is the market?" said SPA Research Director Jim Sanders. According to Heidi Roizen, Apple vice president of developer relations: "Mac software sales were $1 billion last year. That's not a dead market."

The SPA said Mac databases, spreadsheets and word processing applications declined the most from 1994 to 1995.

"Our entire Mac business is down in line with the industry," said Dave Meltzer, Mac product manager for Microsoft Corp. of Redmond, Wash. "But the fundamental business strength measured in volume continues to be strong."

"We've seen some contraction, but we're not sure whether it's the overall industry, Mac-specific, or anticipation of upcoming releases," said CEO Ford Goodman of CE Software Inc. of West Des Moines, Iowa.

But Larry Zulch, president of Dantz Development Corp. of Orinda, Calif., said: "Our sales have been strong. Other than a short drop, we've been quite pleased with how sales have been going."

Critics have said the SPA's study reflects excessive channel sell-in of Windows 95 applications, not actual sales to customers. □

Spyglass to acquire Surfwatch

By James Staten

Spyglass Inc. is adding a significant new tool to its Web kit. In April, the company announced a deal to acquire Surfwatch Software Inc., maker of Internet content-filtering tools.

Naperville, Ill.-based Spyglass plans to purchase Surfwatch in a stock swap valued at $12.6 million. Officials at Los Altos, Calif.-based Surfwatch said that upon completion of the deal, the company will become a West Coast research and development division of Spyglass. No layoffs are expected at either company.

Spyglass CEO Douglas Colbeth will run the combined company; the future role of Surfwatch President Bill Duvall is as yet undetermined.

Jay Friedland, vice president of marketing at Surfwatch, said his division's first order of business will be to integrate its Internet filtering technologies into the client and server portions of Spyglass' Web Technology kits, slated for release this summer.

"[Spyglass] recognized that Internet filtering is more than a parental-control thing and that it has applications in the intranet and corporate worlds," Friedland said. □

It's Here!!!

THE $99 RELATIONAL UPGRADE FOR FILEMAKER PRO.

JUST SOME OF THE NEW FEATURES

- RELATIONAL POWER
- ENHANCED SCRIPTMAKER®
- AUTO PHONE DIAL
- INTEGRATED MAIL MERGE
- LARGER FILE SIZE
- OPEN MORE FILES
- NEW TEMPLATE SOLUTIONS
- NATIVE POWER MAC™
- PARAGRAPH FORMATTING

Great news in the battle to be more productive: the revolutionary upgrade for the leading Macintosh® database is now shipping, complete with an arsenal of innovative features. "FileMaker® Pro 3.0 is the ultimate in relational databases and it makes great improvements over its worthy predecessors," says Mac Home Journal (1/96). It "...puts all other Mac databases to shame," raves Small Business Computing Magazine (1/96). FileMaker Pro 3.0 only costs $99 to upgrade or $199 for the full product. So march on over to your nearest dealer, or just call 1-800-293-0617 ext. 995 to order direct.*

CLARIS®

Simply Powerful Software™

*In Canada, please call 1-800-361-6075, ext. 141.

© 1996 Claris Corporation. All rights reserved. Claris, FileMaker and ScriptMaker are registered trademarks and Simply Powerful Software is a trademark of Claris Corporation in the U.S. and other countries. Macintosh is a registered trademark and Power Mac is a trademark of Apple Computer, Inc. in the U.S. and other countries. All other trademarks are property of their respective owners. Pricing reflects Claris' estimated retail price and actual price may vary.

REVIEWS

Color scanners for home/small office

HP ScanJet 4p ★★½

Apple Color OneScanner 600/27 ★★★★

UMAX Super Vista S-12 ★★★★

Capturing color images gets easier and cheaper.

PHOTOGRAPHY / JIM KARAGEORGE

"A SCANNER FOR EVERY MAC" hasn't yet emerged as a presidential-campaign slogan, but three new sub-$800 color scanners — the Hewlett-Packard ScanJet 4p, the Apple Color OneScanner 600/27, and the UMAX Super Vista S-12 — make that promise enticingly real for many home and small-business computer users.

Any of the three will do if your main concern is scanning black-and-white and gray-scale images, but chances are you're interested in quality color images — after all, these *are* color scanners. In that case, these scanners are decidedly *not* equal.

All three are flatbed models that connect to your computer's SCSI chain, and all ship with necessary cables and SCSI termination. (The UMAX uses an external terminator, and the Apple and HP models offer switchable internal termination.) All three accommodate standard 8.5-x-11-inch pages, and the UMAX and HP models are large enough to scan 8.5-x-14-inch sheets.

Each includes software for performing *prescans* — quick, low-resolution scans that help you decide on scanner settings for optimal image quality — in addition to software for image acquisition and image editing. Although each scanner uses the same basic procedures, the tools for acquiring, editing, and further handling scanned documents vary considerably. Before you buy, be sure to consider the tasks you intend to accomplish with your scanner and make sure to get the tools you need.

HP ScanJet 4p

The ScanJet 4p's features list has everything you'd want in a small-office scanner: Multifunction, easy-to-use software; friendly, thorough manuals that walk you through setup, the scanning process, and troubleshooting; a simple color-calibration system; and support for an optional ($599 list) automatic sheet feeder for scanning multipage documents. Despite these credentials, however, the ScanJet 4p came up woefully short in image quality. In our tests, scanned photographic images generally appeared fuzzy and consistently exhibited poor color quality. Blues and greens appeared glaringly bright, and reds sometimes appeared washed out.

The main software for the ScanJet 4p is Visioneer's PaperPort, which acts as a control center for a variety of scanner operations. PaperPort's main screen consists of a customizable tool bar — with icons that represent applications you can employ to manipulate scanned images — and a large window, known as the Desktop, where documents appear as small thumbnails after they've been scanned. To activate an application in the tool bar, you drag an image's thumbnail from the PaperPort Desktop and drop the thumbnail onto the desired application icon.

Chief among the tool-bar applications are PictureScan, which you use to adjust the ScanJet 4p's settings, and Photoshop LE, a limited edition of Adobe Systems' versatile image editor that provides tools for sizing, cropping, color-correcting, and retouching your images. (PictureScan can be opened from within Photoshop LE and PaperPort.) Other tool-bar icons include one for PaperPort's built-in OCR tool, which converts scans of printed text into editable text, and one for ScanJet Copy, an application that lets you use the scanner and your printer like an office copier. Your currently selected printer and your fax application, if you have one, also appear as icons on PaperPort's tool bar.

HP designed PictureScan to spare first-time users any confusion, so its scanning adjustments are intentionally limited: You select a printer from a pull-down menu (which includes HP printers plus generic options such as "300-dpi inkjet") and specify one of four document types ("color image with text," for example).

REVIEWS RATING KEY	
★★★★★	OUTSTANDING
★★★★	VERY GOOD
★★★	ACCEPTABLE
★★	POOR
★	SERIOUSLY FLAWED
💣	DANGEROUS

Although this approach appears sound, in reality it's merely inflexible. If the colors in your prescan don't look right — and most of ours didn't — there's little you can do other than scan the image and try to fix it afterward in Photoshop LE.

The ScanJet's color-calibration software offered little help, although it was easy to use: You scan a supplied sample page, print it on your printer, and scan the printout, and the software tweaks the scanner automatically. We observed some improvement in color quality after we calibrated the ScanJet, but color images still looked unacceptable on-screen and in printouts.

Part of the image-quality problem may be with PictureScan's inexplicable restriction of the ScanJet 4p to a maximum resolution of 200 dpi (the same resolution as most fax machines') — even though the hardware is capable of capturing images at 300 dpi. HP claims that resolutions greater than 200 dpi are overkill for the types of printers home and small-office computer users have. PictureScan therefore sets the scan resolution for most documents at 150 dpi — even though one of the program's printer options is a 1,200-dpi imagesetter.

We did find that a boost in scan resolution can make a big difference in image quality: When we printed images scanned at 150 dpi (PictureScan's chosen setting for our color dye-sublimation printer), the printouts were noticeably fuzzy. When we forced the scan resolution to 200 dpi (by "lying" to the scanner and saying we planned to print on an imagesetter), the resulting images were decidedly sharper. HP is shortchanging users by denying access to all that the scanner is capable of.

Apple Color OneScanner 600/27

The Apple scanner delivers most of the advantages promised by the HP ScanJet 4p but avoids the ScanJet's biggest drawback, by making it easy to obtain acceptable-quality (if not picture-perfect) scans most of the time.

The Color OneScanner's central software application, a program called Dispatcher, presents you with four large buttons, each bearing an icon that corresponds to Dispatcher's main functions: The Scan button is for adjusting and controlling the Color OneScanner during image captures. The Image Edit button provides access to basic image-editing tools similar to those in Photoshop LE, although Dispatcher lacks that program's support for plug-in enhancement modules. The Scan Router button lets you use the Color OneScanner as a copier or conventional fax machine (provided you have your own fax software); you can fax a scanned page, or print multiple copies of it, without saving the scanned image to your hard disk. (These functions are made even more useful with the addition of an optional automatic sheet feeder [estimated street price, $350] that Apple supplies for the Color OneScanner.) The Archive button lets you view scans as thumbnails.

Dispatcher, like HP's PaperPort, lets you establish links to other applications in which you'd like to work on your scanned pages. Dragging an application's icon onto the Dispatcher tool bar adds that icon to the tool bar; dragging an image file's thumbnail onto an icon on the tool bar opens the file in the corresponding application. Apple supplies Xerox's Textbridge OCR application with the Color OneScanner and recommends that you use this drag-and-drop approach to activate it.

Dispatcher's simple Scan dialog box offers users the flexibility to adjust the scanner for most image types. You start the adjustment process by selecting an output device from a pull-down menu. Once you've done a prescan, you have the option of using slider controls to adjust the image's contrast and color balance. You can also override the scan-resolution setting Dispatcher has specified for your chosen output device. The Color OneScanner controls made it easy for us — after we found the output to our dye-sub printer a bit indistinct, for example — to improve image quality considerably by setting a higher scan resolution.

UMAX Super Vista S-12

Whereas the Apple and HP scanners aim to be multipurpose devices used for capturing text pages as well as images, the UMAX Super Vista S-12 is intended purely as an image scanner. It dispenses with OCR and copier functions in favor of tools devoted to obtaining high-quality image scans — and succeeds admirably at that goal.

The Super Vista S-12 ships with Photoshop LE and uses a Photoshop plug-in module, called VistaScan, for image acquisition and scanner-setting adjustments. Because VistaScan is a subset of the control module UMAX supplies with the company's high-end graphics scanners, its interface may intimidate scanning novices. Fortunately, UMAX also supplies an outstanding tool called AutoScan, which automatically adjusts the scanner settings for a given document. It's so good that, in many cases, you won't have to use VistaScan at all.

AutoScan performs a prescan and, without showing you the image, automatically adjusts scanner settings for best results with the printer you've selected. Click on the Scan button, and the image appears in a preview window as it's captured. If you don't like the results, you can launch VistaScan (and Photoshop LE) from within AutoScan to override the automatic scan settings. VistaScan lets you choose from dozens of preset scanning resolutions, or you can type in your own. The plug-in also provides image-scaling and -correction features, such as sliders for Highlights, Shadows, and Brightness & Contrast.

The UMAX VistaScan offers greater graphics versatility than the Apple and HP printers. In addition to an optional sheet feeder ($495 list), it has an optional transparency adapter ($495 list) that lets you scan 35mm slides or transparencies as well as paper originals.

The Bottom Line

None of these scanners can compete with professional-caliber graphics scanners — but none of them attempt to. Each scanner's output exhibited some artifacts and signs of "noise" associated with imperfect captures. Nevertheless, the scans produced by two of these scanners are good enough for most any business-communications needs or for inclusion in family art or publishing projects.

Despite a well-rounded software bundle and excellent documentation, the HP ScanJet 4p falls flat where it really counts: image quality. For that reason, we can't recommend it. Apple's Color OneScanner 600/27 delivers usable-quality images and offers a strong software bundle that will be useful in offices where OCR is desired or where a scanner pinch-hits as a fax machine and a copier (in conjunction with your printer). If your needs are confined to image capture only, the UMAX Super Vista S-12, with its impressive AutoScan tool, offers exceptional results and value. / Rick Oldano

Apple Color OneScanner 600/27, $599 (estimated street). **Company:** Apple Computer, Cupertino, CA; 800-538-9696 or 408-996-1010; http://www.apple.com/. **Reader Service:** Circle #401.

Hewlett-Packard ScanJet 4p, $615 (list). **Company:** Hewlett-Packard, Santa Clara, CA; 800-722-6538 or 408-246-4300; http://www.hp.com/. **Reader Service:** Circle #402.

UMAX Super Vista S-12, $895 (list). **Company:** UMAX, Fremont, CA; 800-562-4000 or 510-651-4000; http://www.umax.com/. **Reader Service:** Circle #403.

Take it with you. Everywhere.

Kodak digital technology that fits in your pocket. Pretty liberating, huh? It's the newest in our award-winning line of digital cameras – the *Kodak Digital Science*™ DC20 camera. Download, enhance, manipulate and e-mail images on your PC or Macintosh. (Exclusive software is included on CD.) No film processing. No scanning. Translation: No waiting. So anyone can have fun sharing Kodak moments *in* moments. Once they reach the ground.

E-mail it to your friends.

Make your friends jealous.

ANY $350 CAMERA CAN CAPTURE THIS PICTURE. ONLY ONE CAN SET IT FREE.

Make your words come to life.

Show them what you did today.

THE DC20 DIGITAL CAMERA

Stretch yourself.

To find out more about the DC20 digital camera and other *Kodak Digital Science* products, visit us at

Kodak ds digital science™

TAKE PICTURES. FURTHER.

http://www.kodak.com/ or call 1-800-508-1531 in the U.S., 1-800-465-6325 in Canada for the dealer nearest you.

CIRCLE **4** ON READER SERVICE CARD

Kodak, Digital Science and the ds monogram symbol are trademarks of Eastman Kodak Company. © Eastman Kodak Company 1996.

Iomega Jaz

★★★★½

Fast, high-capacity removable storage hits a high note.

COMBINING THE CONVENIENCE and affordability of its predecessor — the Zip drive — with remarkable speed, upped capacity, and superior design, the Jaz removable-cartridge drive looks like another well-deserved hit for its manufacturer, Iomega. The drive, with its sub-$100 1-GB cartridges, is sure to appeal to anyone who works with large files, particularly folks in multimedia development and prepress.

Built for Speed

You won't have to compromise speed for price with the Jaz drive: It's the fastest removable-media drive you can buy. In our MacBench 3.0 Disk Mix test, the Jaz drive was 37 percent faster than the previous speed leader among removable-media drives, the 270-MB SyQuest drive, and more than three times as fast as the Zip drive. Results were even more dramatic in our MacBench 3.0 Publishing Disk Mix test, in which the Jaz was 58 percent faster than the SyQuest 270. (We tested the Jaz using the default driver settings, which, like those for the tested reference drives, had the write-verification option turned off. When we turned write verification on, as Iomega recommends for greatest data security, the Jaz's speed dropped by about 18 percent but was still greater than that of the SyQuest 270 with write verification off.)

Despite these impressive scores, Iomega's claim that the Jaz is faster than most hard drives isn't applicable to most current drives. A 1-GB Quantum hard drive in a Power Mac 7500/100 easily beat the Jaz in the Disk Mix and Publishing Disk Mix tests. The Jaz drive did, however, come close to hard-drive speed when writing large (1 MB) data chunks sequentially to disk, which means it would be well suited for digital-video-editing work.

If you work with large files, such as digital-video clips, you may want to consider Iomega's Jaz Jet, a $100 Fast SCSI PCI card. The Jet card improved speed on reads and writes larger than 1 MB in size; on the other hand, it slowed down the small reads and writes that are typical with word-processor and spreadsheet documents. If you live and breathe for fast throughput, you might consider one of the Jaz bundles from ProMax, MicroNet, or FWB — each of which offers two Jaz drives with RAID 0 software.

Iomega's Jaz drive and cartridges are conveniently portable.

Built to Last

You don't have to compromise on design or durability with the Jaz drive. Unlike the Zip drive, which offers only two SCSI IDs and 25-pin SCSI connectors, the Jaz drive has eight SCSI IDs and two SCSI-II HD-50 connectors. The HD-50 connectors provide excellent data security, but they're not commonly used in the Mac market, so you need to use an adapter — which Iomega includes — to plug the Jaz drive into a Mac. If you want to hook it into a SCSI chain that has more devices, cabling can get complicated. You don't have to worry about getting an HD-50 terminator, however, because the Jaz drive has built-in termination.

The 8-x-1.5-x-5.5-inch drive is small and light enough to carry around. You can't orient the case vertically, but even if you could, you wouldn't be able to use it, because the drive heads wouldn't work in that position.

To test Jaz-cartridge durability, we heated the cartridges up to 185 degrees Fahrenheit with 95-percent humidity and also dropped them onto a metal surface from a height of 2.5 feet. The cartridges came through essentially unscathed — a bit scuffed but with data intact.

The Jaz drive comes with the same easy-to-use formatting software as the Zip drive, and in fact, you can use the same software for both. One minor disappointment: You can't use the software to format a Jaz cartridge for use with PC-compatible computers. If Iomega truly wants its removable-media systems to become the floppy drives of the future, it needs to give its Mac clientele the ability to transfer data to PCs.

The Bottom Line

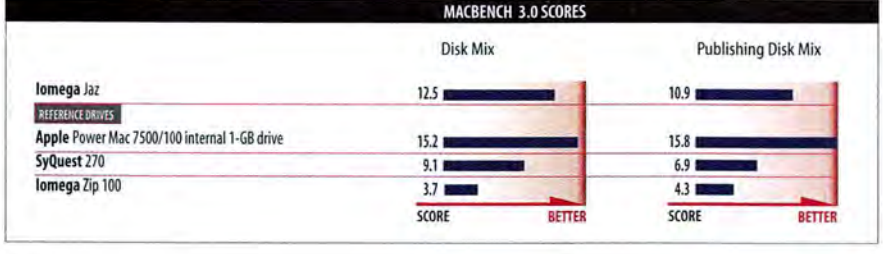
Iomega's inexpensive Zip drive was a runaway mass-market hit last year, but its relatively low-capacity, 100-MB cartridges made it impractical for large files such as digital-video and -audio clips. Jaz cartridges deliver much more storage capacity than do the highest-capacity SyQuest discs, and the drive is fast, reliable, and reasonably priced. Later this year, SyQuest plans to release its retort to the Jaz drive: the SyJET drive, which will use 1.3-GB cartridges. Producing a drive that combines speed and ease of use as well as the Jaz drive does should be a challenge for SyQuest — and a boon for consumers. / Kristina DeNike

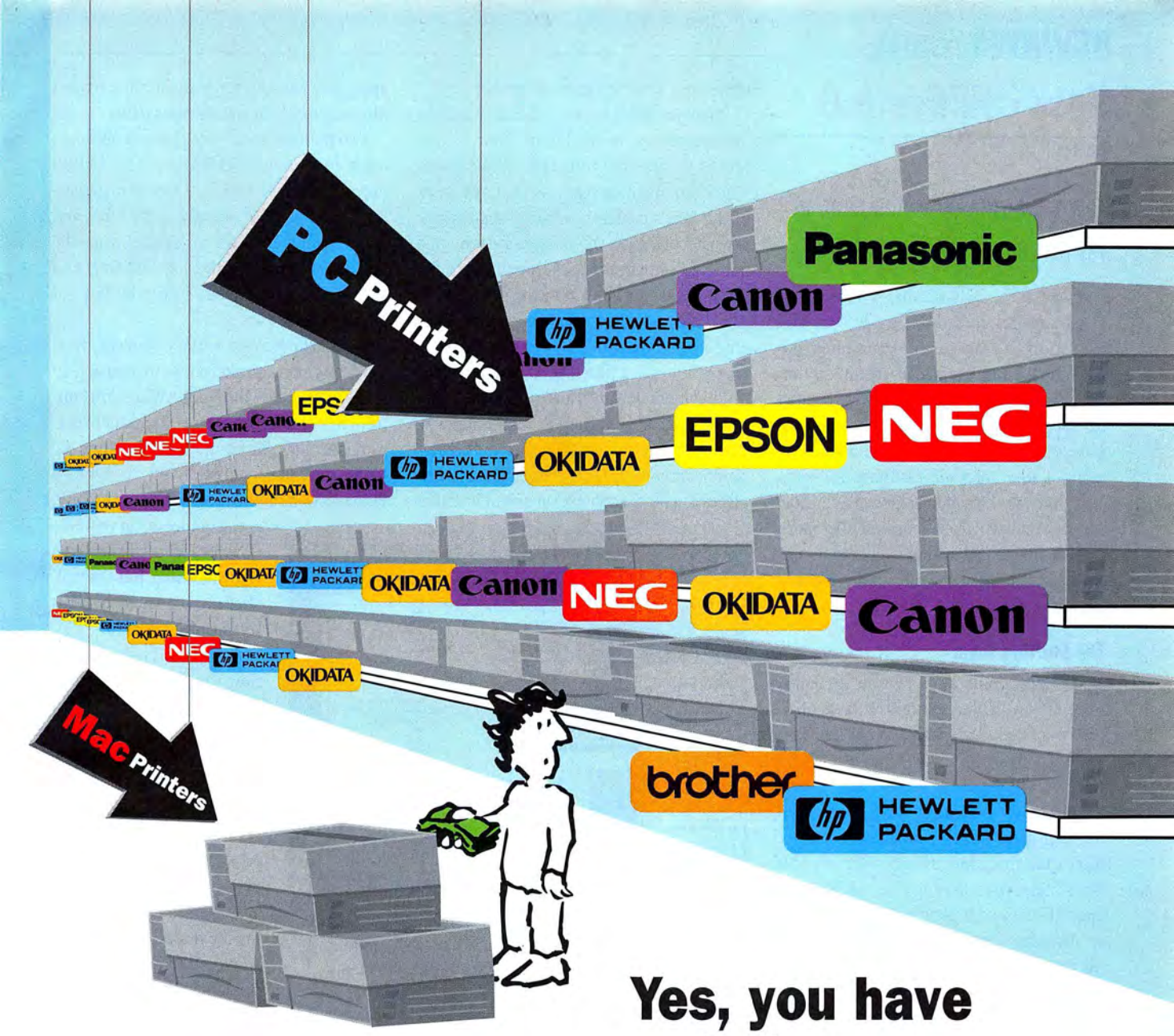
Iomega Jaz, $580 (estimated street). **Company:** Iomega, Roy, UT; 800-697-8833 or 801-778-1000; http://www.iomega.com/. **Reader Service:** Circle #404.

PHOTOGRAPHY / PAVLINA ECCLESS

RAPID REMOVABLES / how Jaz plays

The Iomega Jaz compares favorably to the previous speed leader among removable-media drives, the SyQuest 270. (SyQuest 270 mechanisms are sold only in third-party drives; we tested a Power User drive, from MacWarehouse). All systems were tested on a Power Mac 7500/100's built-in SCSI chain, with write verification in the default "off" setting. MacBench 3.0 scores are relative to those of the Power Mac 6100/60 with an internal 250-MB Quantum drive, which is assigned a score of 10.0 in each test.





Yes, you have a choice.

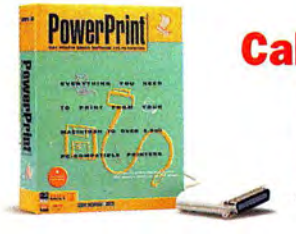
Before you drop the wad on a new printer, consider one of the thousands of PC printers that work with your Mac — using PowerPrint

Don't restrict yourself to just a few choices. Look at getting a PC printer and hooking it up to your Mac with PowerPrint. PC printers from companies like Canon, Epson, Hewlett Packard, Okidata and Panasonic offer you a great selection of features and prices. PowerPrint is everything you need to print from your Mac to the printer of your dreams, new or old. For less than $150, PowerPrint has the software and cable that'll have your Mac printing directly to your PC printer. **So get PowerPrint — and use the printer you *really* want.**

Visit our website: www.gdt.com

CIRCLE **16** ON READER SERVICE CARD FOR END USERS

CIRCLE **17** ON READER SERVICE CARD FOR DEALERS



Call: 800.665.8707

PowerPrint®

THE MACINTOSH PRINTING SOLUTION

MacUser 100 ◆◆◆◆◆ MacWEEK Aug. '84

© 1996 GDT Softworks Inc. All product and corporate names are trademarks of their respective companies.

PHONE: 604.473.3600 FAX: 604.473.3699

Now Utilities 6.0

★★★★

New stars step up to the plate in this revamped utilities package.

LIKE ANY BALL CLUB that has stars as well as benchwarmers, Now Utilities, that venerable collection of Mac-customizing tools, has some great features mixed in with others that, to put it kindly, still need work. Now Utilities 6.0 spruces up old favorites, but some awkwardness introduced in version 5.0 still remains. Rather than address those problems, Now Software has added three new utilities — Now Auto Type, Now Tabs, and Now Shortcuts — in hopes they'll prove heavy hitters. Here's a rundown on the latest roster, with our appraisal of each utility's prospects.

The Starting Team

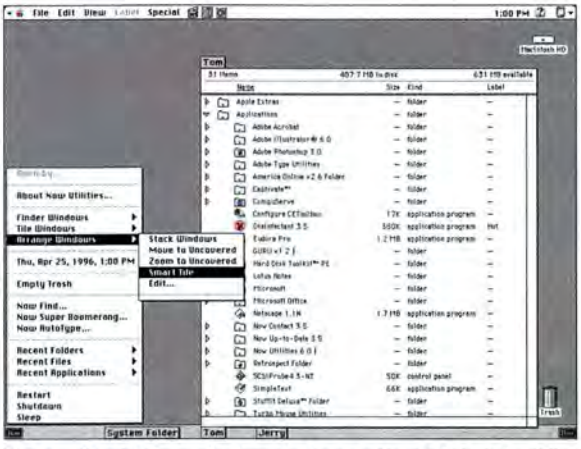
Now SuperBoomerang is worth the entire price of Now Utilities. It adds menus of recently opened files and folders to the Open and Save dialog boxes. In Now Utilities 6.0, Now SuperBoomerang's folder and volume menus are hierarchical, up to ten folders deep. Another great utility, Now Menus, lets you place icons in the menu bar, to which you can attach SuperBoomerang's lists of recently opened items or frequently used applications or any other files or folders. You can drag a file onto a Now Menu icon in the menu bar and through the hierarchical menu to drop it into a folder as many as ten levels down. This saves lots of folder clicking and closing.

Now Startup Manager lets you create sets of extensions and specify which set loads when. It can even test your system for extension conflicts, although not quite as elegantly as Casady & Greene's Conflict Catcher 3.0 does. Now WYSIWYG Menus hierarchically groups typefaces in the Fonts menu by family and displays their names in their own fonts. Now Save automatically saves your work in any application at intervals you designate and additionally captures your keystrokes as you work, so even in the case of a catastrophic crash, you can resuscitate your most recent notes.

Now Benchwarmers

The following tools are members of the Now Utilities team that, at best, need a little coaching; a few of them might actually be better off retiring from the game altogether.

When you hold the cursor down on a folder or volume icon in the Finder, Now Folder-Menus rewards you with a painfully slow hierarchical menu, as many as ten levels deep, of the item's contents. Among other things, Now QuickFiler lets you compress files on your hard disk both in the background, much like Symantec's AutoDoubler, and on demand, like Aladdin's StuffIt. It also replaces System 7.5.x's Find File utility with a slower utility that allows you to see a file's size, creator, and type in a single window, but Now QuickFiler doesn't let you drag an item from its inspection window or change an item's file type and creator. Now Scrapbook, a stand-alone application, replaces Apple's Scrapbook DA and offers some nice features, such as an editor for text on the Clipboard, but it still doesn't support Macintosh Drag and Drop.



You can "dock" open Finder windows to Now Tabs' tab bar. Click on a tab, and the window opens. Or click on either "Now" button to invoke a command menu. Plug-ins such as the Arrange Window module selected here let you customize this menu.

The All-New Rookie Squad

The star recruit is the nifty Now Auto Type, which lets you set up and use key combinations and abbreviations as alternatives to typing out frequently used or awkwardly long words and phrases. Even better, Now Auto Type monitors your typing, and if it notices that you're repeatedly typing a particular phrase, such as your return address, it will suggest that you create a key combination for it. You can also access a pop-up menu of your key combinations and abbreviations.

Now Tabs puts a tab bar along the bottom of your screen. You can drag any window in the Finder onto this bar, where it will turn into a small, labeled button. When you click on the button or drag something onto it, the button opens as a window, from which you can open files or into which you can save them.

Two buttons on the bar give you access to other functions: Clicking on either button pops up a menu that contains Now SuperBoomerang's list of recently opened files and folders (already easily accessible from the menu bar) as well as the date and time and several Finder commands, such as Restart and Shut Down.

For performing a variety of tasks, Now Shortcuts offers an alternative to mousing up to the menu bar in the Finder: When you Control-click on the icon of a file you want to manipulate, Now Shortcuts invokes a pop-up menu that lists — directly on the icon — Finder actions plus QuickFiler's Find, Archive, and Compress commands. Now Shortcuts can save you some mousing, but Control-clicking on an icon takes some getting used to.

Another new feature of Now Utilities 6.0 is support for plug-ins — macro commands that can be added to the menus invoked by Now Tabs' tab-bar buttons or Now Shortcuts. You get a developers kit with Now Utilities, so you can create your own plug-ins, and Now encourages users to post their plug-ins for trade on Now's Web site. As this article went to press, only two such plug-ins were available — one that makes it easy to arrange all the open windows on your desktop or to pull any one of them to the front and one that lets you specify an application to use in opening any file you select. Both are handy but hardly essential.

The Bottom Line

If you still don't own Now Utilities, buy it: It's still one of the best productivity enhancements you can get for your Mac. If you're currently using Now Utilities 5.0, the new functions and improvements in Now SuperBoomerang, Now Menus, and Now Startup Manager and the new utilities are worth the $29.95 upgrade price only if you know you'll find them useful. / Eric Taub

Now Utilities 6.0, $89.95 (estimated street). **Company:** Now Software, Portland, OR; 800-274-0670 or 503-274-2800; http://www.nowsoft.com/. **Reader Service:** Circle #405.

Slip it into your pocket or into your Apple PowerBook® 190 or 5300 and slip out of town.

MO TO GO.

See MO go. It's 230 traveling megabytes in a 3.5-inch magneto - optical disk.

MO. It's Fujitsu's DynaMO® 230 Portable Magneto-Optical Drive.

IMAGING MAGAZINE PRODUCT OF THE YEAR 95

Where's multimedia going next? Anywhere you want it to go. Simply slide Fujitsu's 230 megabyte *MO* drive into the expansion bay in your PowerBook or notebook PC and go.

MO is perfect for storing, transporting or backing up everything from multimedia presentations and graphics files to spreadsheets, engineering drawings and applications. All on a single reliable, rewriteable MO disk.

MO is faster and smaller than CD-ROM. It has the capacity of 160 floppies. And at less than $20 for a 230MB disk and under $500 for a drive, it's extremely affordable. *MO*. It's the floppy of the future.

And it's from Fujitsu, the world leader in magneto-optical storage.

For *MO* info, call Fujitsu Computer Products of America at 800-898-1455.

CIRCLE **35** ON READER SERVICE CARD

For MO info
visit http://www.fcpa.com

FUJITSU

COMPUTERS, COMMUNICATIONS, MICROELECTRONICS

© 1996 Fujitsu Ltd. All rights reserved. DynaMO is a registered trademark of Fujitsu Ltd. PowerBook is a registered trademark of Apple Computer, Inc.

mTropolis

★★★½

mFactory's David takes on Macromedia's Goliath.

MULTIMEDIA AUTHORING software is an old tradition on the Mac, dating back to the creation of HyperCard in 1987. With the introduction of mTropolis, a new tool (with a fresh approach) has been added to the authoring-program ranks. Although still in its infancy, mTropolis has the potential to give the dominant tool, Macromedia Director, some serious competition.

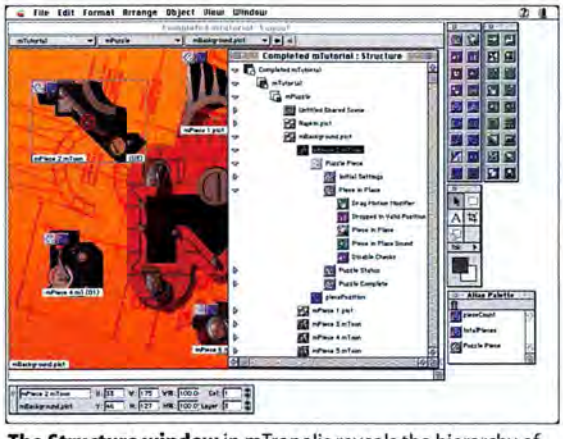
The considerable power of mTropolis derives from several sources: Its clever drag-and-drop approach to object-oriented programming allows speedy project development and troubleshooting. And, because mTropolis successfully separates programming instructions from the media they control (QuickTime movies, animations, sounds, and so on), the program makes it extremely easy to reuse portions of a project. For example, once you've programmed a goldfish to swim in one project, it's simple to drop the same fish into another project — or to apply its behavior to a guppy character. This sort of flexibility is unheard of in Director. Furthermore, although mTropolis runs only on Macs and compatibles (68040 or better, at least 16 MB of RAM), you can use it to generate programs that run on Macs, Power Macs and compatibles, and Windows 3.1 and Windows 95 systems.

Most of your work in mTropolis is performed in the Project window. Here, you can organize your program into sections and scenes, create objects that are linked to external media, and control the objects through the use of *modifiers* — programming instructions represented as icons on floating palettes. To apply a modifier, you drag it off its palette and drop it onto the object you wish to control. Once a modifier is in place, you can double-click on it to open a configuration dialog box, where you specify the conditions under which the modifier's instructions are to be executed.

mTropolis comes with 36 modifiers, organized into five categories: Effects, Variables, Behaviors, Mini Scripts, and Messengers. Effects modify object characteristics such as color and transparency in text or graphics or the rate of a sound fade-out. Variables store numerical information, such as game scores and object-position coordinates. Behaviors serve as containers for groups of modifiers, including other Behaviors; they are organized hierarchically much like Finder files and folders, so for example, a Tail Wag behavior could sit inside a more complex Happy Dog behavior. Mini Scripts provide a simple but powerful programming language. And finally, Messengers govern object interaction by sending instructions to objects and modifiers.

The Message Is the Medium

Messages in mTropolis can be generated by the user (through mouse clicks and keystrokes), by mTropolis itself (as in events triggered by scene changes or completion of animations), or by any object in a project: In a simple example, a moving object that bumps into another might send a collision message telling the struck object how far and how fast it should ricochet.



The Structure window in mTropolis reveals the hierarchy of objects and modifiers in your project.

Each Messenger modifier's configuration dialog box contains numerous standard messages, including Show and Hide (for any visible object), Play and Pause (for movies or animations), and Scroll (for text). These standard instructions go a long way, but for instances specific to your project, mTropolis makes it easy to create custom author messages. You might use a New High Score author message to trigger a scene change in your game, for example.

Some Programming Required

When you need to perform mathematical operations, inspect or change the attributes of an object, or do conditional tests in your project, you use a Mini Scripts modifier, which has its own simple but powerful programming language. If you're familiar with AppleScript, HyperTalk, or Lingo, you'll have little trouble learning the Mini Scripts language.

The Price of Power

Developers familiar with Director's score-and-cast metaphor or with the cards-and-stacks orientation of HyperCard and SuperCard will need some time to adjust to mTropolis' drag-and-drop environment, and lightweight documentation makes the learning curve steeper than it should be. Experienced multimedia authors can learn a great deal by dissecting and studying the many example projects included on the mTropolis CD-ROM, however, and can easily be doing productive work within a month of working through the mTropolis tutorial.

Before shelling out $5,000 for the program, however, be aware that it is a version 1.0 release and therefore has a few bugs — some of them quite serious: Using the Save command, for example, may corrupt your project (mFactory recommends using the Save As command as a workaround). And moving more than one message at a time into an Author Message group sometimes causes the messages to be deleted, but you're safe moving only one message at a time. mFactory acknowledges these flaws and has slated them for correction in release 1.1, which may be available by the time you read this. The update also promises several new features, including real-time 3-D, support for QuickTime VR, and the ability to generate programs that support multiple users over the Internet.

The Bottom Line

For professional multimedia developers, mTropolis is a promising — if extremely expensive — alternative to Macromedia Director (estimated street price, $850). Although it has a few rough edges and missing features (not surprising for a version 1.0 release), its greater power and flexibility make it worth a serious look. If mFactory follows through on its promises to squash the bugs and continue adding enhancements, mTropolis may prove irresistible. / Patrick Milligan

mTropolis 1.0, $4,995 (list). **Company:** mFactory, Burlingame, CA; 415-548-0600; http://www.mfactory.com/. **Reader Service:** Circle #406.

Finessing Big Files

Live Picture 2.5 ★★★★

xRes 2 ★★★½

These programs handle large images that Photoshop can't.

ALTHOUGH ADOBE PHOTOSHOP continues to dominate the Mac graphics market, the venerable image processor does have weaknesses, particularly when it comes to working with very large (over 20 MB) images. In answer to this problem, both Macromedia's xRes and Live Picture's Live Picture provide tools optimized for working with large files.

Live Picture and xRes take similar approaches in their handling of large images. Each program converts your source images to a proprietary format, and while you're editing an image, each program applies edits only to the portion of the image you're viewing onscreen. Sparing your computer the effort of applying changes to unseen portions of huge images saves considerable time.

During editing sessions, neither xRes nor Live Picture changes your original images. Live Picture FITS documents and xRes MMI documents are simply descriptions of the edits you've performed. When you're finished editing, you can use the programs to render a final image in any of several formats.

For creating composites (multilayer images) involving many large images, these programs offer a level of performance undreamed of in Photoshop. However, this doesn't mean you should throw out Photoshop; you'll still want it around for preparing images and for final output.

Live Picture now allows you to include one EPS image in the topmost layer. Unfortunately, absolutely no editing can be done on EPS graphics.

Live Picture 2.5

Although not a major upgrade, version 2.5 of Live Picture adds some useful new features as well as some needed bug fixes. Live Picture's new price ($995) is steep, but Photoshop and Live Picture 2.5 make a powerful combination.

As in Photoshop, separate images in your document can sit in separate layers. In Live Picture, however, individual edits can also sit in separate layers. You can apply color corrections, sharpening, or distortions in different layers, which you can easily alter, hide, or remove at any time. This frees you to experiment by trying different editing techniques, in various combinations. What's more, you can use a brush tool to apply edits or effects from a particular layer onto selected portions of the image, without hassling with masks.

Among Live Picture's new features is its support for Photoshop-compatible plug-ins and ColorSync 2.0 and the addition of gamut-preview features similar to Photoshop's. Version 2.5 also lets you import any EPS file into (only) the topmost layer of your image — but Live Picture cannot edit EPS graphics.

Despite the improvements, many of Live Picture's weaknesses remain. The program's brushes, for example, still annoyingly apply ink only when the brush is moved, not when the button is pressed. For experienced Photoshop users, Live Picture's greatest weakness is its interface and the requisite learning curve. Otherwise excellent features, such as the silhouetting tool, are hindered by cumbersome controls.

Because Live Picture lacks a powerful set of painting and editing tools, you'll find yourself frequently moving between the program and Photoshop. Complicating this process is Live Picture's inability to preserve layers when it exports Photoshop 3.x files.

xRes 2

Although xRes' approach to managing data is very similar to Live Picture's, xRes' designers have gone to great lengths to make the program feel and act like Photoshop. In fact, version 2's most significant feature is its completely redesigned interface.

xRes makes a great complement to Photoshop for handling large images, but the program is also able to function as more of a stand-alone application than Live Picture. In addition to its Photoshop-like interface, the program provides a full set of natural-media brushes and familiar editing tools and, in version 2, the ability to print directly from the program. The natural-media brushes don't compare to those in Fractal Design's Painter, but for small touch-ups, they're quite handy.

Similar to Photoshop's Layers palette, xRes' Objects palette lets you move and relayer an image as well as create complex, multichannel masks. Unfortunately, where Photoshop automatically understands that empty areas of a layer are transparent, xRes requires you to create masks that conceal everything in a layer except for the objects you want visible. Making these masks is fairly easy, but it's an extra step Photoshop users won't expect.

xRes can't compete with Live Picture's speed or flexibility, however. Although xRes offers as many as 20 levels of undo, these require enormous amounts of scratch-disk space. What's more, file manipulation in xRes is far slower than in Live Picture. And xRes' Photoshop-like interface, although it has powerful tools, is not as flexible as Live Picture's layered-editing approach.

Along with some new features, xRes 2 features an all-new interface modeled after Photoshop plus Macromedia's new standard application tool bar.

The Bottom Line

Live Picture and xRes handle large composites and edits much more speedily than Photoshop, but neither program is perfect. Although xRes features a more familiar interface and a broader tool set, its speed doesn't compare to that of Live Picture. Live Picture, meanwhile, is hampered by a cumbersome interface and dependence on Photoshop for many editing tasks. If we had to choose just one of these two programs, we'd opt for Live Picture, because of its superior speed and flexible editing environment. / Ben Long

Live Picture 2.5, $995 (list). **Company:** Live Picture, Soquel, CA; 800-724-7900 or 408-464-4200; http://www.livepicture.com/. **Reader Service:** Circle #407.

xRes 2, $699 (list). **Company:** Macromedia, San Francisco, CA; 800-326-2128 or 415-252-2000; http://www.macromedia.com/. **Reader Service:** Circle #408.

Type Organizers

Suitcase 3.0 ★★★

theFONDler 4.0 ★★½

Font Box Professional Edition 1.7.1 ★★★

Trio of tools tries to tame troublesome type.

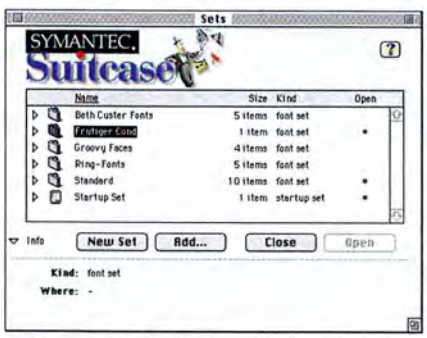
IF YOU'RE A MAC USER WHO depends on fonts for your work, you probably fall into one of two categories (we hesitate to say *types*): You don't even pretend to understand the Mac's font architecture and you have a difficult time managing your typefaces, or you're an experienced user with a thorough understanding of the Mac's font architecture and you have a difficult time managing your typefaces. Fortunately, three new utilities can help you sort through the confusion associated with multiple font-file types, corrupted fonts, or font-naming and -ID conflicts.

All three of the programs we tested — Suitcase, from Symantec; theFONDler, from Rascal Software; and Font Box, from Insider Software — perform their feats on TrueType, PostScript Type 1 and 3, and Adobe multiple-master fonts. Currently, Suitcase is the only program that supports QuickDraw GX.

Suitcase 3.0

Although Suitcase has been around since the early days of the Mac, version 3.0 is the first update this product has seen in years. Longtime users will be thrilled that version 3.0, a complete rewrite, is fully PowerPC-native and stable on current-generation computers.

The original aim of Suitcase was to relieve demands on system memory that result when large font libraries load into RAM. The small Suitcase application lets you "turn on" sets of typefaces without having to move any files into or out of your System Folder. With Suitcase, only active fonts load into memory and fonts can reside on any volume.



Suitcase 3.0, with its completely overhauled interface, allows you to create application-specific font sets.

Suitcase 3.0's all-new interface enables you to create font sets by dragging and dropping folders from the Finder into Suitcase's single window or onto the Suitcase application's icon. Once the sets are defined, you activate them by double-clicking on their names in the Suitcase window. Any font or font set can be dragged into the predefined Startup set and will be available at boot time.

Although the new interface is uncluttered and easy to use, previous versions of Suitcase made thorough use of keyboard command equivalents and could thus be driven entirely from the keyboard. The new interface is not as mouse-free, which may be irksome to experienced Suitcase users. However, the new version is entirely AppleScript-able — it can't record macros, though.

As of this version, you can create application-specific font sets by dragging any application's icon into the Suitcase window. Fonts added to an application set are opened any time that application is launched. We'd like to see the addition of document sets, which could activate font sets upon the opening of a document.

Unfortunately, there's no link between Suitcase's sets and their original Finder folders, so changing the contents of the original folder on your disk does not change the font set inside Suitcase. Instead, you have to make changes manually to your Suitcase sets.

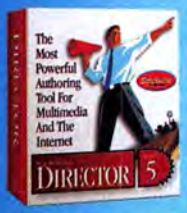
theFONDler 4.0

Providing management as well as maintenance features, theFONDler is a diagnostic laboratory for identifying everything from simple problems such as corrupted or missing printer fonts to more-esoteric troubles such as "Bad Style map offsets."

At the management end, you can use theFONDler's Collect feature to search a volume or folder for fonts and move or copy them into a single folder. With the Disburse function, you can then organize the folder into separate subfolders, each containing all the files relating to a single font family (the regular, narrow, and italic versions of Helvetica, for example). Longtime Mac users will appreciate theFONDler's ability to delete now-obsolete

Upgrade To The Director Multimedia Studio 2 For Only $499.

Feel the awesome multimedia power of Director,® Extreme 3D,™ SoundEdit™ 16 *plus* DECK II™ (or Sonic Foundry's Sound Forge™ for Windows), and Macromedia xRes™ for only $499.** For first time buyers, it's all just $999.***



Upgrade To Director 5 For $399!
Get the most powerful multimedia authoring tool in the world for just $399.**

Get The Most Powerful Tools In Graphics And Design, All For Just $599.***

Design in 2D and 3D, create and modify fonts, and edit hi-res images with the new, integrated FreeHand Graphics Studio.™ Includes FreeHand,™ Extreme 3D, Fontographer,® and Macromedia xRes. Windows introductory price $449.***

The PC Zone 1-800-258-2088

The Mac Zone 1-800-248-0800

MicroWAREHOUSE 1-800-367-7080

MacWAREHOUSE 1-800-255-6227

PC Mall 1-800-555-6255

MacMall 1-800-222-2808

PCs Mac Connection 1-800-998-0072

COMPUTER CITY 1-800-THE-CITY

*Offer valid in the U.S. and Canada only. Outside the U.S., Canada, and Europe, call 1-415-252-2000 or FAX us at 1-415-626-0554. In Europe, call +44-1344-761111. For education resellers, call 1-800-326-2128. **Proof of ownership required. ***Estimated street price. Reseller prices may vary. Macromedia reserves the right to substitute products in the Studios at any time. Windows version includes coupon for Macromedia xRes 2.0 for Windows, shipping Spring '96. Studio price good through September 30, 1996. Macromedia, Director, Fontographer, and the Macromedia logo are registered trademarks and Shockwave, Xtras, SoundEdit, DECK II, Extreme 3D, Director Multimedia Studio, Macromedia xRes, FreeHand, Freehand Graphics Studio, Tools To Power Your Ideas, and Showcase are trademarks of Macromedia, Inc. © 1996 Macromedia, Inc. All rights reserved.

The Best Multimedia Tools On Earth At A Shocking Price, $999.

New Director Multimedia Studio™ 2.

It's true. You get everything you need to develop corporate presentations, CD titles, interactive kiosks and more. Four applications that work together to power your ideas faster than you ever imagined. And the ability to author once and play anywhere–from Mac to Windows 95 and NT, all the way to the Internet.

All in one package for only $999.

What can you do with all this power? You can take 3D modeling and animation to the edge of the universe with Extreme 3D.™ Create mindblowing graphics with Macromedia xRes,™ the fastest hi-res image editor in the world. Record and edit multi-track, 16-bit digital audio with SoundEdit™ 16 *plus* DECK II.™ And wrap it up in new Director® 5. With anti-aliased text, multiple casts, snap-to alignment and Xtra™ plug-ins, it's the fastest Director ever.

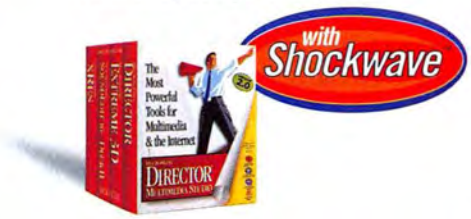
Then sit back and watch heads turn around the globe as Shockwave™ plays your productions on the Internet.

You can't find this much creative power anywhere else. But you can see it all for free. Just stop by our Web site or call for a Showcase™ CD.

Now that one multimedia studio lets you create anything you can imagine, what in the world are you waiting for?

Free Showcase CD-ROM* GO 1-800-326-2128

http://www.macromedia.com/



MACROMEDIA®

Tools To Power Your Ideas™

CIRCLE **92** ON READER SERVICE CARD

NEW! Version 4.5

IT'S *about* TIME

StatView is about time.
Saving time – your time.

Since 1985, StatView's been the best selling data analysis software on the Macintosh. Why? Because StatView's easy. Easy to learn. Easy to use.

In less time than it takes to learn most data analysis programs, you get your results with StatView.

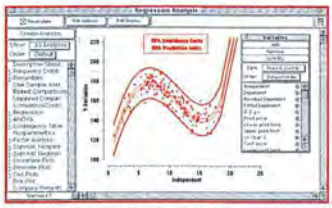
StatView is designed to work with you. The software's flexible and intuitive interface allows you to analyze data the way you want to.

StatView features fully integrated statistics, data mangement, graphing and presentation tools – all the tools you need to get your work done.

And with StatView, your time is never wasted. StatView's innovative templates allow you to save all your work simply by saving the document. You can open that template at any time to resume your analysis. Or apply it to any other data set.

Whether you need to analyze data on a daily basis or only every couple of months, StatView's unprecedented ease of use will save you time and effort.

Isn't it about time you used StatView?



Creating an analysis is as easy as clicking your mouse.

MACUSER EDITORS' CHOICE AWARD 1995 FINALIST

FOR MORE INFORMATION CALL
1-800-666-STAT

ABACUS CONCEPTS
THE SIGNIFICANT DIFFERENCE™

Accelerated for Power Macintosh

1918 Bonita Avenue, Berkeley, CA 94704-1014 Phone: 510-540-1949, Fax: 510-540-0260 Internet: info@abacus.com
We have localized, international and student versions of StatView and license, academic and quantity discounts. Call for more information.

CIRCLE **168** ON READER SERVICE CARD

AFM (Adobe Font Metrics) files and correct potential errors such as font-ID conflicts.

Collect and Disburse are great helps for quickly organizing all those files in your font folder. Such organization is particularly crucial for users who need to be sure they're delivering all the necessary font files to a service bureau or print house.

For more-serious diagnostic work, theFONDler can analyze any file, folder, or volume; examine all the included fonts (whether they're installed in your system or not); and create a text file containing a detailed report about potential problems and anomalies. In addition to reporting any number of fatal errors, theFONDler also provides information about potential design problems in a font. For example, the "Kerning applied to symbolic characters" warning is an indication that a font may have spacing problems.

Most of the information in theFONDler's reports are these sorts of warnings and reports, which can be quite daunting to inexperienced users. Fortunately, the program places a small icon next to each entry to let you easily differentiate warnings from fatal errors.

Unfortunately, other than renumbering font

The report window of theFONDler flags an exhaustive number of font problems and denotes serious ones with orange icons.

IDs to eliminate conflicts, theFONDler cannot correct any of the mistakes it finds, nor can it automatically remove or delete fonts. It's up to you to peruse theFONDler's report and make any appropriate changes to your library.

Font Box Professional Edition

Font Box takes a more active approach to font management. After searching any number of volumes, Font Box gathers all found fonts into one complete, optimized font folder.

As Font Box collects your fonts, it automatically deletes corrupted fonts, duplicate fonts, bitmaps whose PostScript files are missing

MacUser
COMING SOON:
96
SEPTEMBER

HIGH-RESOLUTION MONITORS

If you do serious image-editing or desktop publishing, attention to detail is crucial. The September issue of MacUser tests and mouse rates 11 monitors that can support super resolution. Imaging and DTP expert, Bruce Fraser focuses on the big picture and zooms in on the details of the new "hi-res" monitors plus graphics cards that can do super resolution and 24-bit color.

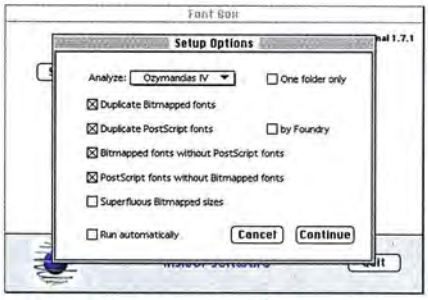
STOCK PHOTOS ON THE WEB

Whether you're looking for a photo of a Black Hole or Jackson Hole, chances are you can find it on the Web. The September issue of MacUser tells you where to buy stock photography online. What are the sources? What can you see before you buy? And how much should you pay? Find out everything you need to know about these online photo opportunities.

THE RIGHT MAC TO PACK FOR COLLEGE

Don't leave home without it - that is, the Freshman Guide to Mac Computing in September's Personal Mac section. It's all here: the best Macs for students, budget-friendly equipment recommendations, software to give you an academic edge, and other Mac-related fun stuff. Recommended reading for the class of 2000..

SEPTEMBER AD CLOSE:
MONDAY
JUNE 17, 1996



Font Box takes an automatic approach to font troubleshooting and offers only a few configuration options.

(and vice versa), and unneeded screen fonts. It also resolves font-ID conflicts and moves loose screen fonts into suitcases.

Because Font Box can search multiple volumes (including network volumes), it's ideal for groups of designers who want to ensure that they all have the same fonts installed.

Since some users might be a little concerned about having an application muck around with their installed fonts, Font Box can copy them to a new folder and create an optimized library there. You then have the option of installing the library or not.

The Bottom Line

Suitcase is probably the most useful of all these utilities. A great improvement over the Mac's built-in font-management facilities, Suitcase is a program you'll use repeatedly every day as you switch from project to project. Although there's room for improvement, version 3.0 is a good upgrade.

Both theFONDler and Font Box provide good diagnostic features that will benefit the owner of any large type library. But unless you're eager to sift through theFONDler's obscure reports and then track down and manually deal with the errors they identify, Font Box, with its automatic approach, is probably the better choice, despite its inability to find every possible font problem.

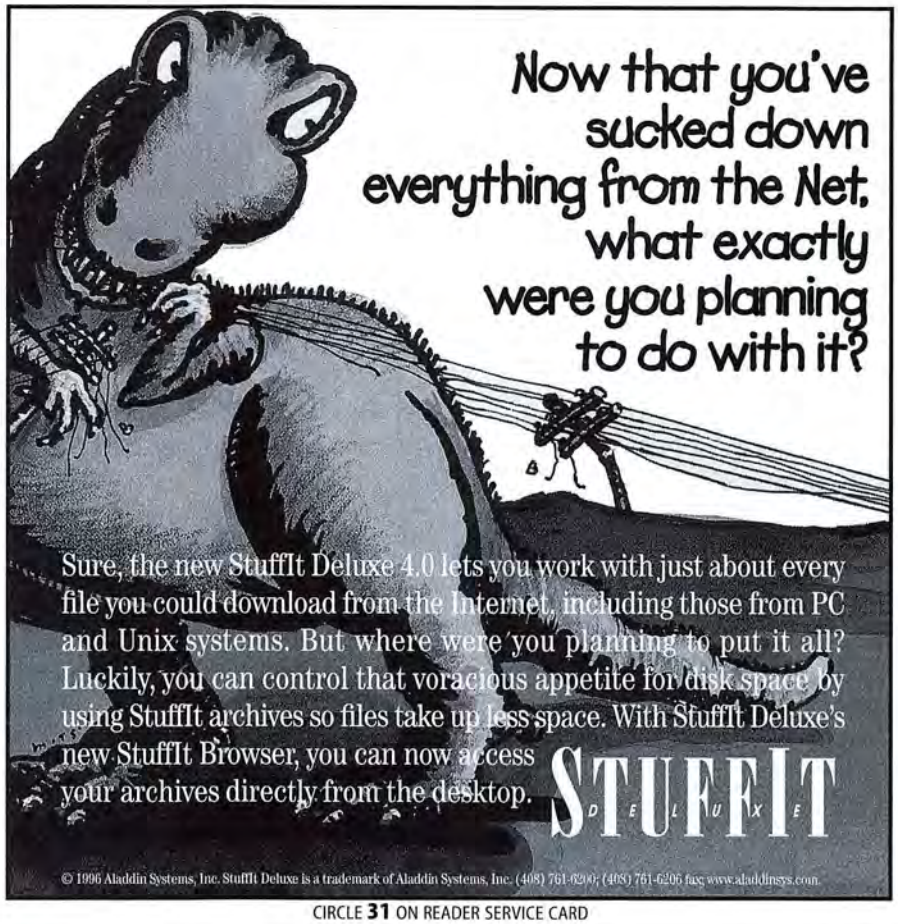
Whatever your choice, you might move from being a user who has difficulty understanding the Mac's font architecture to a user who has a program that understands for you.

/ Ben Long

Font Box Professional Edition 1.7.1, $159; local-system-only version, $79 (list). **Company:** Insider Software, San Diego, CA; 619-622-9900; http://www.theinside.com/. **Reader Service:** Circle #409.

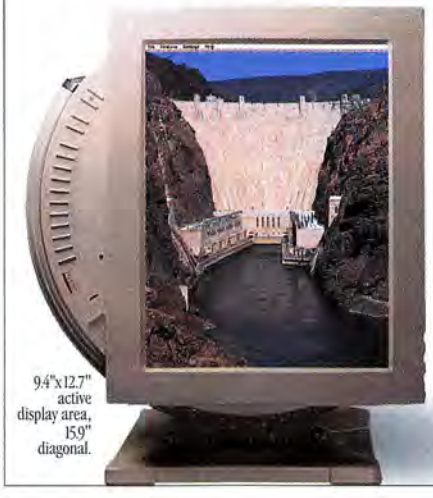
Suitcase 3.0, $69.95 (list). **Company:** Symantec, Cupertino, CA; 800-441-7234 or 408-253-9600; http://www.symantec.com/. **Reader Service:** Circle #410.

theFONDler 4.0.1, $69.95 (list). **Company:** Rascal Software, Newhall, CA; 805-255-6823; http://www.rascalsoft.com/. **Reader Service:** Circle #411.



CIRCLE **31** ON READER SERVICE CARD

The Monitor that Shows You the Whole Dam Thing.



9.4"x12.7" active display area, 15.9" diagonal.

Portrait Display Labs

The Pivot 1700™ has other 17" color monitors beat from top to bottom. It pivots from horizontal to vertical mode to give you the tallest, sharpest display you can get. Taller, even, than a 21" monitor! And much more affordable. So now you can read a full 8.5"x 11" page *without scrolling*.

Call us today or, if you prefer, e-mail us at pdlcalif@aol.com for the whole story.

800-858-7744 Ext. 25

http://www.portrait.com

Adobe PhotoDeluxe

★★★½

Image processor 'for the rest of us' hides many of its strengths.

WITH PHOTODELUXE 1.0, Adobe Systems puts much of the functionality of Photoshop — its popular image-editing warhorse — into a program designed for home users. PhotoDeluxe may go *too* far in shielding new or casual photo editors from Photoshop's power.

Like Photoshop, PhotoDeluxe lets you do basic image-editing tasks, such as cropping, rotating, or resizing images; adjust colors; apply basic filters (such as Sharpen); and apply special effects. Also like its predecessor, PhotoDeluxe accepts plug-ins; can handle many file formats; and accepts images from scanners, digital cameras, and Photo CD discs.

PhotoDeluxe keeps available controls to a bare minimum. After you launch PhotoDeluxe for the first time, only the Apple, File, and Edit menus are visible. (You can get more menus by selecting Long Menus from the File menu.) The only additional controls are large, colorful buttons whose purposes are hard to miss.

PhotoDeluxe nests its tools inside two areas: Guided Activities and On Your Own. Each one, accessible by a click on a button, organizes the various tools for a project differently. Each of the Guided Activities is a minitutorial on a basic task, intended to give a sense of PhotoDeluxe's practical and creative possibilities. Each Guided Activity makes available only the tools needed for the task at hand.

Graduates of the Guided Activities and seasoned image editors might prefer the On Your Own area. It has the same type of button interface as Guided Activities but allows more-flexible access to a wider range of features.

Even with PhotoDeluxe, image processing is a demanding task. A poor photograph or badly scanned image will require great time and effort to bring to even mediocre quality.

Despite Adobe's efforts to make Guided Activities and On Your Own goof-proof, users will find much to confuse them in both areas. In some instances, clicking on a big, friendly button invokes a dialog box that asks for relatively cryptic information. The slim manual and online documentation offer little help.

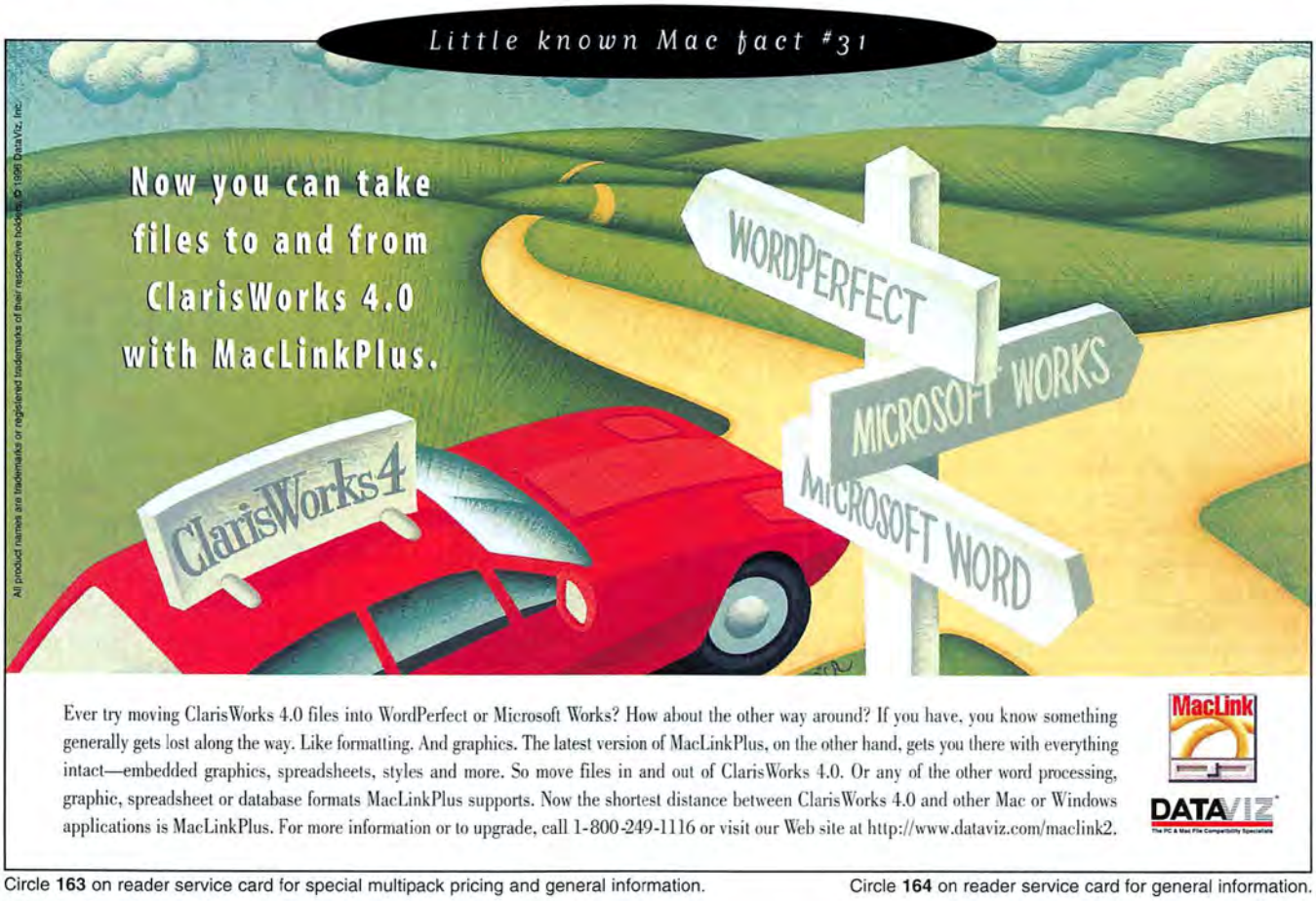
We suspect that once you've experimented a bit with PhotoDeluxe, you'll find its interface *overly* friendly. Like us, you may wish you could thwart sometimes-baffling safeguards. We grew tired, for example, of having to go to Step 2 of the "Remove Red Eye" Guided Activity to use the magnifying-glass zoom tool. Other frustrating limitations include a limit of one open document at a time and restriction of paint colors to the 256-color Mac system palette — even though the program can open and edit images in millions of colors.

PhotoDeluxe has tough hardware needs: 8 to 12 MB of free RAM (not a stretch for graphics pros but too much for home users). It also requires a 68040 or PowerPC processor.

The Bottom Line

A laudable, if imperfect, attempt to make image editing accessible to nonprofessionals, PhotoDeluxe offers a safe, friendly introduction to digital-photo manipulation. But once you've got your feet wet, you may long for a tool with fewer restrictions. / Michael de la Peña

Adobe PhotoDeluxe 1.0, $89 (estimated street).
Company: Adobe Systems, Mountain View, CA; 800-628-2320 or 415-961-4400; http://www.adobe.com/.
Reader Service: Circle #413.



Circle 163 on reader service card for special multipack pricing and general information.
Circle 164 on reader service card for general information.

KPT Cool Effects

★★★½

Low-cost PhotoDeluxe plug-ins have some interface problems.

STUNNING SPECIAL EFFECTS on the cheap — that's the promise of KPT Cool Effects. This set of powerful image-manipulation tools works with any application that accepts Photoshop-style plug-ins but is designed for users of Adobe's entry-level image-processing tool, PhotoDeluxe. KPT Cool Effects can provide professional results, but its awkward interface makes it less than a pleasure to use.

KPT Cool Effects dresses up borders, text, and backgrounds by creating lighting effects, textures, abstract patterns, and overlays. Image filters and pattern generators create faux wood picture frames, simulate neon type, and make photos appear more like paintings or professional "glamour" shots. Although 5 of its 26 effects are included with PhotoDeluxe, KPT Cool Effects is a steal that's hard to pass up.

KPT Cool Effects filters let you add "noise" or distortion effects to any selected part of your image, including type. Although they're a snap to apply, fewer than a fifth provide a preview window. And although most effects can be intensified or weakened on a scale of 1 to 10, if you choose your setting before pulling down the PhotoDeluxe Effects menu, you may lose the ability to undo. Save early and often. Also, watch out for the weather effects: The distortions of the breeze and wind effects are the reverse of what their names suggest.

The Gaussian Electrify and Gaussian Glow filters, which create subtle blurs that lighten or darken an image, are particularly striking, especially when applied to portraits and location shots. The first gives your photo an angelic look; the second makes it appear to have been shot in the glow of a neon sign.

In addition to the filters, KPT Cool Effects has four pattern generators — Gradient Designer, Gradients on Paths, Fractal Explorer, and Texture Explorer — which transform any selection into a modifiable pattern. As powerful as these generators are, their interfaces are cumbersome. Navigating them requires repeated scrolling through menus and submenus. What's worse, many preset patterns have unhelpful, self-consciously hip names such as Djungloid 2 and Killer Sweepoid that tell you nothing about what effect they produce. Luckily, all four pattern generators have helpful, although small, preview windows.

The help text for the filters and the pattern generators, which describes the less-than-obvious effect features, can be accessed only through the four pattern generators: Even if you want assistance with a filter, you must open a pattern-generator window to access help. The limited manual doesn't help much either. Fiddling around is the best way to discover what the filters and the pattern generators can do. However, when you finally *do* conjure up the perfect effect, it's hard to say that it wasn't worth the effort. The combinations of shapes and colors can be truly stunning.

The Bottom Line

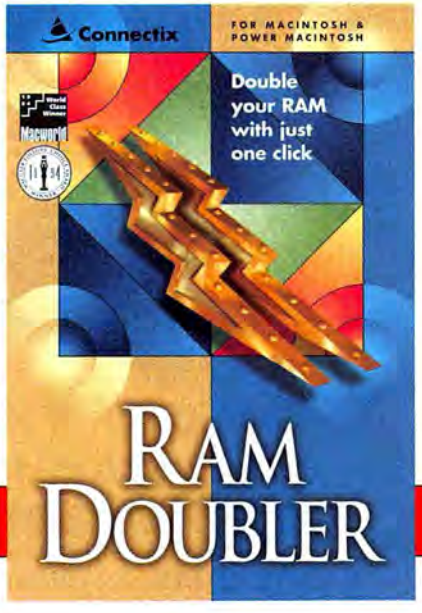
If you have Adobe PhotoDeluxe, using KPT Cool Effects is a fun way to take your digital-imaging skills to the next level. There are enough accessible, interesting effects to keep you exploring for days. However, the quirky Undo function and the paucity of preview windows can be frustrating. / Marcie Shatz

KPT Cool Effects 1.0, $29 (list). **Company:** MetaTools, Carpinteria, CA; 800-472-9025 or 805-566-6200; http://www.metatools.com/. **Reader Service:** Circle #414.

What Do You Say When You're Out Of Memory?

I need RAM Doubler.

The more memory your Mac has, the more productive you'll be. But forget about adding SIMMs. RAM Doubler™ is software that doubles your Mac's memory. *RAM Doubler does what it says it will do.~Macworld.* And you don't have to open your Mac. Just run RAM Doubler's 15 second installation and you can run twice as many applications – instantly. *May well be the best investment you make this year.~MacUser.* You'll agree. Buy RAM Doubler today and double your RAM with one click. Your satisfaction is guaranteed. RAM Doubler is available wherever great software is sold.



Connectix

System Requirements: Macintosh equipped with a 68030, 68040 or PowerPC microprocessor. System 6.05 or later, including all versions of system 7 • 4 MBs required (hard disk required for machines with 4 to 6 MBs) • Not compatible with Mac SE, original Mac Classic, original Mac LC or PowerBook 100 or Mac II without a 68851 PMMU or any accelerator that does not work with virtual memory.

★★★★½

© 1995 Connectix Corporation. 2655 Campus Drive, San Mateo, CA 94403 USA. 800-839-3629 • 415-571-5100 • FAX: 415-571-5195
EMAIL: info@connectix.com • RAM Doubler is a trademark of Connectix Corporation. All other trademarks are the property of their respective holders.

CIRCLE **62** ON READER SERVICE CARD

IRIS IRISPen

Scanning 'pen' soaks up print and pours it into your Mac.

NO MATTER HOW FAST computer hardware becomes, keying in data will always be slow, tedious, and error-prone. Accordingly, developers keep coming up with new scanners and OCR (optical character recognition) programs designed to move information from paper to computer, avoiding the keyboard altogether. The latest such device, Image Recognition Integrated Systems' IRISPen, combines a scanner you hold like a pen with software that converts the type, as you scan it, into digital text and pours it directly into any application. (Primax Electronics, which manufactures the hardware, sells the same product under the name DataPen Personal Text Scanner.)

Handy Hardware

The scanner, which looks more like a utility knife than a pen, is connected by a thin cable to a stand, which, in turn, is connected to one of your Mac's serial ports. Ordinarily the stand is also connected to an AC adapter, although you can choose instead to power it with five AA batteries.

The IRISPen scans only one line at a time. You place the scanner at the beginning of the text you want to capture, press down to start scanning, and roll the pen across the line. Learning to keep it straight and finding an optimal speed take practice, but we soon got the hang of it.

We never came close, though, to the throughput of "up to 100 characters per second" that IRIS claims. Typically, it took about 6 seconds to scan and recognize a line of about 100 characters. (Our average was 15 seconds per 100 characters until we turned off our interactive spell-checking extension.)

One-Way Gate

The IRISPen's stand has a pass-through serial port — this is a nice touch, because it allows you to keep a modem and a printer or a LocalTalk network connected simultaneously. Making use of this option can be cumbersome, however: You have to reactivate the IRIS software, a process that involves two dialog boxes and five mouse clicks, after you've used other hardware via the pass-through port.

There are other limitations too. For one, the scanner can't share a serial port with an Apple GeoPort Telecom Adapter. And if it shares the printer port with a LocalTalk network, you have to turn off AppleTalk and thereby lose any active network connections before you can use the pen. Then, after you're through with scanning, you'll have to remount any servers you were using.

Soft and Easy

Happily, the IRISPen 2.0.4 software won't bloat your Extensions folder: It's just an application you launch when you want to use the pen. The software requires at least 2 MB of RAM (2.5 MB on Power Macs and compatibles not running virtual memory). The standard installation copies more than 90 files, which take up more than 8 MB of disk space, but that includes support for 11 languages and you can get rid of most of the bulk by eliminating languages you don't expect to use.

Because the IRISPen software emulates the keyboard, it works within any application. The software has numerous useful configuration options — for instance, you can select characters for entry at the start or end of each

THEN GET THIS !

Port Juggler 4x

4 more ports, set it and forget it.

PCI Power Mac compatible

momentum info: 808 947 0055

CIRCLE 22 ON READER SERVICE CARD

NoteBook Enhancements

LIND

Docking Stations PB 100, 500, 5300/190 Series

Vehicle Adapters for PowerBooks & StyleWriter Printers

Call our "800" Numbers to order or get a Free Catalog!

Battery Chargers & Conditioners

Monitor Stands

Mobile Office Power Center

The MOPC converts raw AC or DC power to the controlled levels required to operate complex mobile and portable computer systems.
- Rugged lightweight power system
- Replaces many AC/DC & DC/DC converters
- Reduced cable complexity
- Easily adapts to changing system requirements
- Rapid field repair

Keyboards & Mice

PocketNet & Int'l Telephone Adapters

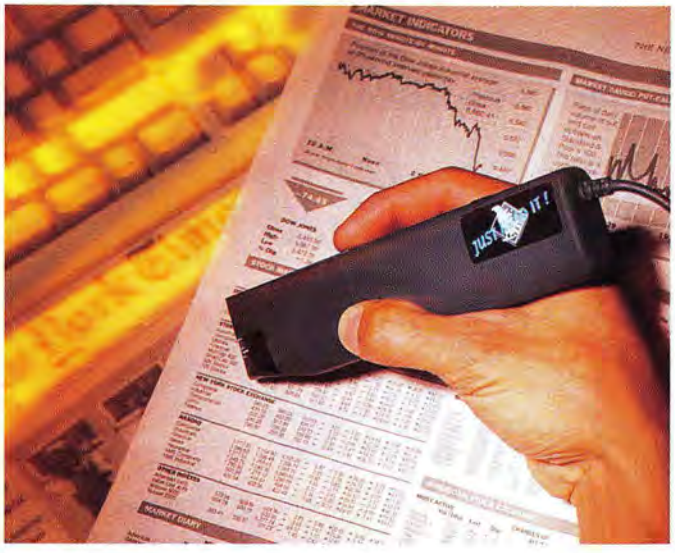
800-682-4987

PilotTech: Phone—(612) 828-6002
Fax—(612) 828-6806
pilottech@aol.com
http://www.pilot-tech.com/

800-897-8993

LIND: Fax-On-Demand: (612) 927-4671
Tel: (612) 927-6303 Fax: (612) 927-7740
http://www.lindelectronics.com/
AOL Keyword: LIND — lrlind@aol.com

CIRCLE 74 ON READER SERVICE CARD



You can scan text, one line at a time, into any application with the IRISPen scanner and its unique, integrated software.

scanned line (such as a space, a tab or dollar sign, or even a string such as *Tel:*). You can also train the system to improve its accuracy with problematic fonts and teach it how to handle special symbols. And there's even a special setting for left-handed users.

The IRISPen system can handle any font in sizes from 8 to 22 points, but it isn't able to recognize the fine print used for many business cards, phone books, footnotes, certain catalogs, and other listings. In tests with a variety of magazines, books, press releases, and receipts, it typically recognized 95 to 100 percent of the characters correctly. Remember, though, that 98-percent accuracy means that you'll have two mistakes to correct in each 100-character line. We had particular problems with the first character or two in each line. More often than not, the system failed to recognize them, no matter how carefully we positioned the scanner. In addition, we encountered frequent errors when we tried to scan close to the gutter in books and magazines that wouldn't open flat.

The Bottom Line

Even though its performance and accuracy are far from perfect, the IRISPen generally works as advertised. Its hardware and software both have an elegant look and feel, and it comes with a clear and even amusing manual as well as Apple Guide online help.

Our main question, though, is, Who needs it? If you're entering significant amounts of text, line-by-line scanning is tiresome and inefficient; for small amounts, most people will find typing faster and easier. But if you really don't like to type or you regularly need to enter large amounts of text a few words or lines at a time — say, personal data from paper forms, product information from catalogs, or perhaps short excerpts from books and magazines — the IRISPen can provide some welcome relief. / Henry Norr

IRIS IRISPen, $299 (list). **Company:** Image Recognition Integrated Systems, Boca Raton, FL; 800-447-4744 or 407-395-7831; http://www.irisusa.com/. **Reader Service:** Circle #415.

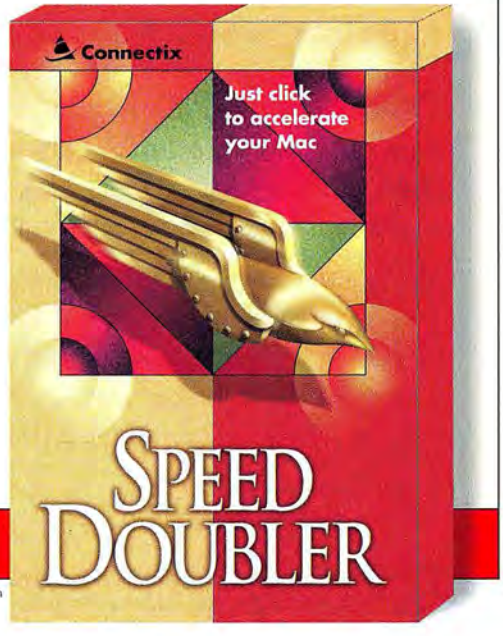
Break the speed limit.

Break the speed limit on your Mac with Speed Doubler™. It's software that installs in seconds, requires no hardware upgrades and takes your Mac to the next level of performance. You get faster access to the data you use most. Faster disk access. Faster Finder performance. And check this: Speed Doubler automatically doubles the emulation speed on Power Macs.

With Speed Doubler, Power Macs instantly run non-native applications twice as fast! For instance, recalculate a 5000 cell Excel 4.0 spreadsheet with Speed Doubler in 6 seconds, without it...13 seconds. Run a summary calculation of 1500 FileMaker Pro records in 90 seconds instead of 3 minutes. It's not magic. It's Connectix Speed Doubler. And if you own a Power Mac, you gotta have it. Get Speed Doubler today wherever fine computer products are sold. Your satisfaction is guaranteed.

Connectix

MACUSER EDITORS' CHOICE AWARD 1995 FINALIST



Requirements: Macintosh equipped with a PowerPC, 68040, or 68030 microprocessor • System 7.0 or greater • 8 MB physical RAM or greater • Compatible with Connectix RAM Doubler • Not compatible with Mac Plus, Mac SE, original Mac Classic, original Mac LC or PowerBook 100

© 1995 Connectix Corporation. 2655 Campus Drive, San Mateo, CA 94403 USA • 800-839-3629 • 415-571-5100 • FAX: 415-571-5195 • EMAIL: info@connectix.com
Speed Doubler and RAM Doubler are trademarks of Connectix Corporation. All other trademarks are the property of their respective holders.

CIRCLE **63** ON READER SERVICE CARD

REAL BIG COLOR®

Starting at $12,995*

The solution for all your digital printing needs—from color laser copier originals to 54-inch Big Color

Real Big Color® comes only from LaserMaster. And, now it's available at a price that's really scaled down! At this price, every business can afford the consistent, accurate color and photo-realistic quality that have made DisplayMaker Pro the standard for large-format digital color printing.

The ColorMark Software/RIP provides productivity features that make Big Color printing easy and efficient. And, combined with LaserMaster's RIPStation™ and optional DMP Connectivity Kit, the ColorMark Software/RIP can support up to 2 DisplayMaker Pros.

Get hooked on real Big Color. Call today for details.

ColorMark™ Color Management System Prints Right—First Time, Every Time℠

(800) 339-3590 DEPT. N22

LM® LASERMASTER®
The Big Color® Company

Made with PRESSMATE FILM

Corel Optimized

* Requires a dedicated Windows NT-compliant print server—ask about LaserMaster's RIPStation™.

©1996 LaserMaster Corporation. (612) 944-9330; In Europe call: (31) 2356-22000. These products incorporate the PowerPage interpreter from Pipeline Associates, Inc.–Corel Optimized. Prices in U.S. dollars and valid in the U.S. only. Prices and specifications subject to change without notice. Contact us on the Internet at http://www.lasermaster.com

Panasonic KXL-D742 CD-ROM drive

4½

Portable quad-speed CD-ROM drive complements PowerBooks.

SOME GOOD IDEAS ARE SO OBVIOUS, you have to wonder why no one thought of them sooner. The Panasonic KXL-D742 portable CD-ROM drive is just such an idea: a battery-operated, quad-speed external CD-ROM drive *designed specifically for PowerBooks.* Just the kind of goodie PowerBook road warriors have been craving ever since Apple added multimedia capabilities to its portable line.

The Panasonic drive delivers quadruple-speed CD-ROM data access plus support for multisession Photo CD, CD-ROM XA, and audio CD. It can run off a tiny AC power supply (included), six AA batteries, or an optional rechargeable power pack. With a status LCD and push-button controls for play, pause, and track control, the drive can also operate as a stand-alone audio-CD player.

It's obvious Panasonic had Apple's portables in mind when it designed, if not when it named, the KXL-D742. The drive comes in a slim, wedge-shaped chassis about as thick as a pack of cigarettes and weighing about a pound with batteries. Graceful curves and a charcoal-gray case make it look like a natural extension to a 5300- or 190-series PowerBook. And unlike the only other portable CD-ROM drive we've tested, MediaVision's REno Portable, it doesn't require any additional cables or adapters: The supplied 50-pin-to-HDI-30 cable is PowerBook-ready. The KXL-D742 also includes a mini stereo cable for PowerBook audio playthrough, but no headphones.

In our tests, the Panasonic drive ran for two and a half hours off six alkaline batteries. Even when there wasn't enough juice left to run the drive as a 4x data peripheral, our alkalines still held enough of a charge to play the 45-minute soundtrack from *Pulp Fiction* twice from start to finish. Although this was admirable performance, giving users a way to switch from 4x to 2x could extend battery life even more.

The drive goes to sleep when it's not in use, waking up when the SCSI bus queries it for data. FWB's CD-ROM ToolKit 1.5.9, which ships with the drive, provides caching options that can extend the amount of time the CD-ROM drive stays in sleep mode. Unfortunately, setting caches with FWB's software is difficult and can affect data-streaming performance. In our tests, for example, a medium-sized cache caused significant audio and frame dropout when we ran a QuickTime movie off a disc.

The Bottom Line

Even our most nitpicky examination uncovered little to criticize in Panasonic's portable CD-ROM drive. Using the drive would be a great way to feed that field sales presentation with images and sound the next time you're on the road, plus feed your eyes with great CD-ROM-based entertainment or your ears with a few good tunes on the flight home.

And for $399, only $60 more than the cost of Panasonic's 4x CD-ROM drive for desktop Macs, you may have enough money left over for an upgrade to first class. / Andrew Gore

Panasonic KXL-D742 CD-ROM drive, $399 (estimated street). **Company:** Panasonic Communications & Systems, Secaucus, NJ; 800-742-8086 or 201-348-7000. **Reader Service:** Circle #416.

New Color QuickCam - 16 Million Colors At Your Fingertips!

Be Colorful!

Color QuickCam™ includes everything you need for brilliant color pictures and video with your Mac. Plug it in, install the software and you're ready to rock. Great for fun at home, projects at work -- even send pictures over the net. Let your imagination go wild. Works with all QuickTime™ compatible software and on all QuickTime compatible Macs, including PowerBooks®. It's easy, fun, and your satisfaction is guaranteed. Color QuickCam is under $200*. B&W QuickCam is under $100. Find both where fine computer products are sold.

Call 1-800-839-3629 or visit our site at www.connectix.com.

*After $30 rebate

Connectix

Make Movies

Video Conference

Take Fun Pictures

Inventory Valuables

Be Creative

Color QuickCam Now Shipping!

© 1996 Connectix Corporation. 2655 Campus Drive, San Mateo, CA 94403 USA • 415-571-5100 • FAX: 415-571-5195 • EMAIL: info@connectix.com
QuickCam is a trademark of Connectix Corporation. QuickTime and PowerBook are registered trademarks of Apple Computer, Inc. All other trademarks are the property of their respective holders.

CIRCLE 64 ON READER SERVICE CARD

MacWEEK ◆◆◆◆

MACWORLD EDITORS' CHOICE AWARD 1998 FINALIST

MacUser ◆◆◆◆

21 REASONS WHY NISUS WRITER IS A STEAL AT JUST $99

1. Compatibility Never again will you be stuck using WordPerfect or Word 6.0. Nisus Writer lets you read and write to all popular formats. **2. Noncontiguous & Rectangular Selection** Select any number of text blocks at once, no matter where they are in a document. What other word processor can do that? **3. Virtually Unlimited Undos** Nisus Writer lets you undo over 32,000 mistakes, just the thing when you're having a bad day. **4. Foreign Languages** With the appropriate Apple Language Kits, Nisus Writer lets you write in over 19 languages in a single document, including Cyrillic, Japanese, Chinese, Arabic and Hebrew (foreign language classes not included). **5. Multimedia** **"Hey, you!"** Attach your voice or any sound to words or sentences, and jazz up your documents with a QuickTime movie or two. **6. Web Page Creation** Nisus Writer's built-in HTML macros do most of the work for you, so you're practically done with your own Web page already. **7. Auto-Numbering** Watch as Nisus Writer automatically numbers and renumbers tables, figures, equations, chapters, sections and more.

8. Use Less Memory And Disk Space Cut the fat. Nisus Writer takes only 7 MB of disk space fully loaded and needs only 3 MB of RAM to run. No foolin'. **9. Desktop Publishing & Layout Tools** Put text in columns, wrap it around graphics and more, just like with those expensive programs. Or just write, and export to QuarkXpress or PageMaker without losing any formatting. **10. Macros** You can make Nisus Writer do just about anything you want it to (except your laundry) with a simple keystroke or mouse click. Nisus Writer's simple macro recorder and built-in programming language make it easy. **11. Keyboard Shortcuts** Create custom shortcuts to activate any Nisus Writer feature. You may never pull down menus again. **12. Styles** Create customized styles for characters and paragraphs. **13. Graphics Tools** This ain't no toy. Nisus Writer gives you a full suite of color drawing tools, and lets you import graphics too. **14. Dynamic Cross-Referencing** Nisus Writer automatically updates all references to page and line numbers, text content and figures as your document changes. **15. Text-To-Speech** Nisus Writer's suave voice will read your text back to you in up to five different languages. Other word processors come up speechless. **16. Glossary** Make a glossary of often-used text or graphics and place them in documents with just a few keystrokes. **17. Powerfind** Find anything, anywhere, even in unopened documents. If there's a needle in that haystack, Nisus Writer will find it. **18. Multiple Clipboards** Copy and paste to your heart's content with Nisus Writer's **TEN** editable Clipboards. **19. Bookmarks** Forgot where you left off? Never again. Just mark any location in your document and jump to it with one mouse click. **20. Indexing Tools** Easily index your documents using word lists, Find/ Replace, or defined styles. **21. Auto-Save & Backup** What, you didn't backup? Big deal. Nisus Writer already did it for you.

BMUG

All this and much more, for just 99 bucks (SRP). So order the Nisus® Writer 4.1 CD-ROM* (with online documentation) at MacWAREHOUSE or MacZone today. Hurry, quantities are limited!

*Nisus Writer on diskettes with printed documentation is $149 SRP.

INGRAM MICRO

MacWAREHOUSE 1-800-255-6227

The Mac Zone 800-436-0606 Source code #2693

For more reasons to buy Nisus Writer 4.1, call 800-493-0998 or visit our Web page at www.nisus-soft.com

Awarded for Power Macintosh

107 S. Cedros Ave. • Solana Beach, CA 92075 • (619) 481-1477 • FAX (619) 481-6154

Nisus and Nisus Writer are registered trademarks of Nisus Software Inc. All other product names are the trademarks or registered trademarks of their respective holders.

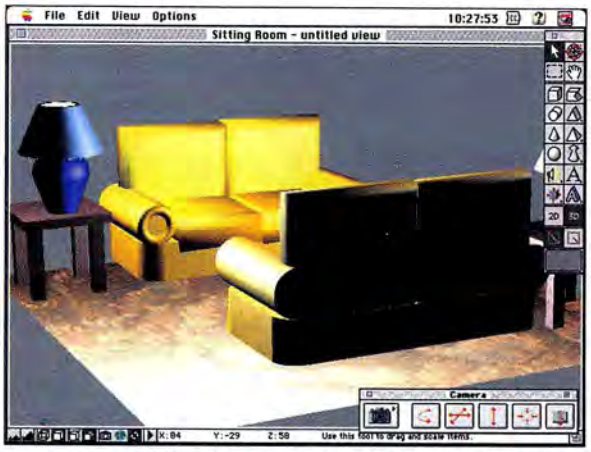
3D World

Entry-level 3-D program is easy to use but limited.

NOW SHIPPING WITH EVERY Power Mac, Apple's QuickDraw 3D System Extension puts powerful 3-D rendering onto everyone's desktop. The first program to harness that power in a creative tool, 3D World, from Microspot, is a generally easy-to-use introduction to 3-D creativity. But spotty documentation, a far-from-intuitive lathe tool, and a stingy set of supplied textures limit its value in comparison to similarly priced, more powerful (if harder-to-learn) 3-D applications.

3D World's interface is simple and straightforward. Four palettes provide access to tools for creating objects and manipulating, lighting, and viewing them in a scene. Anyone familiar with basic Mac 2-D drawing tools will quickly understand the tools for creating solid objects such as spheres, cubes, and cones, which can be grouped and combined to create more-complex shapes. Far less intuitive is the lathe tool, which allows you to create complex tooled objects (such as decorative table legs) as well as helixes (such as corkscrews or bolts).

Once you've created the objects you want to work with, you can change views, using the Camera palette; place and adjust lights, using the Light palette; and specify object size and position, using the Info palette. (You can move and resize objects by dragging them instead, but using the Info palette gives you greater precision by letting you enter size dimensions and position coordinates for your objects.)



Easy-to-use tools in Microspot's 3D World allow you to create 3-D scenes like this one quickly.

After you've finished a scene, you can use 3D World's handy orbit tool to take a flying tour around the place. You can easily stop at any time during the trip and set up a new camera view or make adjustments to the positions of objects.

3D World's architecture allows for the addition of plug-in enhancements. Microspot supplies 6 plug-ins with the program and another 14 when you return your registration card. A few of these plug-ins simply fill in important gaps in the program: The align tool, for example, is essential for snuggling objects against one another for assembly into larger structures — a process that's truly difficult using the Info palette alone. More-innovative plug-ins include Light Director, which lets you direct lighting to specific locations on an object by pointing and clicking, and 3D Text, which creates 3-D text from any of your fonts.

A Great Review is Worth Repeating

Almost nothing influences buyers in the computer market as much as a great product review, particularly one in MacUser. That's because computer product buyers rely on these reviews to help them make informed purchase decisions. They know that our labs, writers and editors can be trusted to be thorough, fair and impartial in their testing and reporting. For a computer product marketer a great review is almost priceless.

Its Value Increases With Use
Reprints of your review are an invaluable selling tool for your product and an important image builder for your company. An objective, third party product evaluation will be read, and trusted, by far more people than any regular product literature, direct mail, press release or sales letter. Think of all the ways you can take advantage of reprints:

- Use them in sales proposals
- Hand them out at trade shows
- Send them to your mailing list
- Provide them to distributors
- Add them to a press release or a mailing to your stockholders.

And, if you customize your reprint— with a special cover, highlighting, an ad, sales office listings, etc.— the value increases even more.

Get the most value from your MacUser review. Call Ziff-Davis Reprints today at
800-825-4237.

REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS

MacUser

Unfortunately, the only documentation provided for the plug-ins is skimpy and comes in the form of Read Me files.

Render Me Speechless

3D World's greatest strength lies in its real-time rendering capabilities. When you create an object, it appears fully rendered on the screen. Double-click on it, and you're presented with the Info dialog box, which lets you specify several aspects of the object: its size and position on the x-, y-, and z-axes; its color; and its shininess and reflectiveness. If you have a QuickDraw 3D accelerator card installed, you can even render it transparent. If you drag a PICT or 2-D map onto an object, it wraps around it. Macintosh Drag and Drop capabilities also allow you to embed sounds or URLs in 3D World objects — clicking on the object plays the sound or links to the corresponding Web address. A separate library program that ships with 3D World lets you store colors, textures, bitmapped images, and views for reuse in 3D World. Unfortunately, the only sample textures Microspot supplies are a handful of swatches from the Apple Scrapbook and Desktop Patterns DAs. Compared to the scores of realistic metal, wood, and stone sample textures and shaders supplied with other entry-level 3-D packages, such as Ray Dream Studio (now sold by Fractal Design) and MetaTools' KPT Bryce, this is a big flaw.

3D World can be enhanced by installation of a QuickDraw 3D accelerator card, but this is by no means necessary. Even with the minimum required RAM (16 MB, mostly required by the QuickDraw 3D extension) and a small amount of virtual memory, the program ran without a hitch.

The Bottom Line

3D World is easy to use, very stable, and genuinely fun. Although it's not going to take the place of programs such as Specular Infini-D or Strata's StudioPro, it most definitely provides adequate 3-D drawing capabilities to the average user. However, for the price, you might do well to consider some of the slightly more complicated but fuller-featured competing programs. They may be harder to learn than 3D World, but they provide higher-quality object rendering plus more sample images and textures to help you generate top-notch 3-D objects. / Jeff Battersby and Jim Shatz-Akin

3D World, $139 (list). **Company:** Microspot, Saratoga, CA; 800-622-7568 or 408-253-2000; http://www.microspot.com/. **Reader Service:** Circle #417.

Dramatica Pro 2.0

★★★★

Professional writers' story-analysis and troubleshooting tool.

SOMERSET MAUGHAM ONCE SAID there are three rules for writing a novel — but unfortunately, no one knows what they are. Well, Dramatica Pro 2.0, from Screenplay Systems, doesn't know the rules either, but if you're a serious screenwriter, playwright, novelist, or short-story writer, the program can offer meaningful help for honing your craft.

Dramatica Pro differs radically from other writing programs, such as Collaborator, Storyline Pro, and Plots Unlimited, in that it's focused far less on the process of writing than on the planning and development of characters *before* you write. By helping you sort through character motivations and relationships, story theme, action, and plot, Dramatica Pro helps you define the essence of the story and avoid unnecessary rewrites. If you've got an existing story that's proving difficult, the program can also help you troubleshoot it and uncover weaknesses in its plot or character development.

Dramatica Pro's Build Characters screen helps you model your story's characters and diagram their relationships.

A Compelling Argument

Key to Dramatica Pro is a theory that all the characters, scenes, and action that make a good story are elements in an *argument* — the central message or experience you, the author, want to communicate. Dramatica's purpose is to help you clarify that message and then ensure that the elements of your story advance it. (This theory, as well as the specialized terminology that appears throughout the program's story-development process, are detailed in a highly readable, if weighty, 416-page textbook that ships with the program.)

For starters, Dramatica asks you a series of highly structured multiple-choice questions about the characters, themes, problems, scenes, and outcomes of your story. (Where appropriate, the program prompts you to type character names and other information in addition to answering questions.) Queries touch on technical matters, such as whether your narrator will be the main character or a detached observer, and thematic ones, such as whether you want your protagonist to change over the course of the story or to resist change.

Based on your answers, the program selects one of 32,000 possible "Storyforms" — diagrammatic story representations — for your story. The Storyform includes events Dramatica concludes should occur to build and resolve the story's essential conflicts, and the roles characters in the story must play (examples include the Goad, who pricks the protagonist to action, and the Foil, whose behavior contrasts and underscores the protagonist's). If, in the course of answering Dramatica's queries, you've described characters that play any of these roles, Dramatica places them in the Storyform for you.

Dramatica's next step is to help you fill in the gaps in the Storyform. By using the *StoryGuide Pro* textbook and a series of detailed worksheets, you add, delete, or change episodes and characters; enter notes on action; or begin drafting dialogue and narrative. When you've finished — or at any time during the process — you can view or print your notes or any of 35 reports that chart plot progress, character development, and so on. You can use the reports as a kind of super-outline when you get down to actual writing.

Dramatica Pro's developers have gone a long way to make things easier in version 2.0, notably with a completely rewritten manual and the *StoryGuide Pro* textbook, the new workbook, and greatly expanded online help. Still, the program demands significant effort and time. It's not for dabblers or hobbyists.

The Bottom Line

Dramatica Pro won't write your screenplay or novel for you (or improve your style), but it's invaluable for helping you think through all the elements of your story. / Michael Miley

Dramatica Pro 2.0, $399 (list). **Company:** Screenplay Systems, Burbank, CA; 800-847-8679 or 818-843-6557. **Reader Service:** Circle #418.

INTRODUCING

FlexCam VC

Color Video Camera

Internet Videoconferencing

The Original

Surf the Internet. Send your friends Email. Cut and paste. Now what?

FlexCam VC* Nobody has sold more color video-conferencing cameras than VideoLabs.

The FlexCam VC is bundled with two licenses for BeingThere 3.0**, which provides high-powered videoconferencing over the Internet or corporate and educational networks. ISDN support is also available.

Enjoy face-to-face, full-color communication with colleagues, "conference call" with a group, or "broadcast" to a larger audience. Share your work by dropping files onto a co-worker's picture, and instantly see why FlexCam VC is a better solution than costly phone calls, black-and-white faxes or overnight shipments. Call VideoLabs today! The Internet has never LOOKED so good.

New Introductory Price $399
MSRP $429.00

Cameras for other uses

VideoLabs makes a wide variety of desktop and scientific cameras:

» Teaching Cam for close ups in the classroom!
» Document Cam for clear presentations!
» Microscope Cam for the Lab!
» FlexCam - a versatile desktop camera for desktop publishing!

* FlexCam VC requires a Macintosh 840AV or higher. A PowerMac 7500AV or higher recommended.
** BeingThere 3.0 is QuickTime conferencing compatible.

★★★★
MacWorld - DEC 94

"...the FlexCam is simply the better camera."
Deke McClelland - MacWorld Magazine 4 96

Call us for your nearest dealer

1.800.467.7157

Mac OS

QuickTime Conferencing

Available through:

MacWAREHOUSE MacSystems

LOVIÉL EDUCATION SPECIALISTS

Fry's ELECTRONICS

Computer Alliance

VideoLabs, Inc.
10925 Bren Road East
Minneapolis, MN 55343
http://www.flexcam.com
612.988.0055 Main Office
612.988.0066 Fax

FlexCam is a registered trademark and VideoLabs is a trademark of VideoLabs, Inc.
All company names and logos are registered trademarks of their respective companies.

WEB

MICROSOFT AND NETSCAPE SQUARE OFF IN THE INTERNET'S

Choosing a Web browser is a no-brainer, right? If you've got a direct connection to the Net, you use Netscape Navigator. If you're a dues-paying member of an online service such as America Online, you go with the browser your service provides.

NOT ANYMORE.

Now, anyone who surfs the World Wide Web has a choice. For the first time, Navigator has some real competition: Microsoft's Internet Explorer 2.0 for the Macintosh, a speedy and compatible Web browser with a feature set that matches — and often exceeds — Navigator's.

Everyone has a choice — even subscribers to AOL and CompuServe: Later this year, America Online will integrate Internet Explorer into its software and will also provide compatibility with Navigator. CompuServe will allow its customers to use either browser.

Navigator and Internet Explorer are freely downloadable from the Internet, so you can try them both out yourself — but in the end, you'll have to pick one of them to be your main surfboard.

Which should you choose? The groundbreaking standard setter or the upstart challenger from the mega-company all Macintosh users love to hate? And does it really matter? After all, isn't a browser just a window onto the Web that simply displays the creations of Web-page designers?

You bet it matters. The Web is still in its frontier phase, with millions of designers developing new tricks and techniques daily. You need a browser that can handle anything the Web throws at it today and that'll be ready for whatever appears tomorrow. Luckily for you, Netscape and Microsoft are each firmly committed to winning the Battle of the Browsers — and both have deep enough pockets to fund their armies of developers.

What does a browser need to do to win the war? Let's take a look at the combatants.

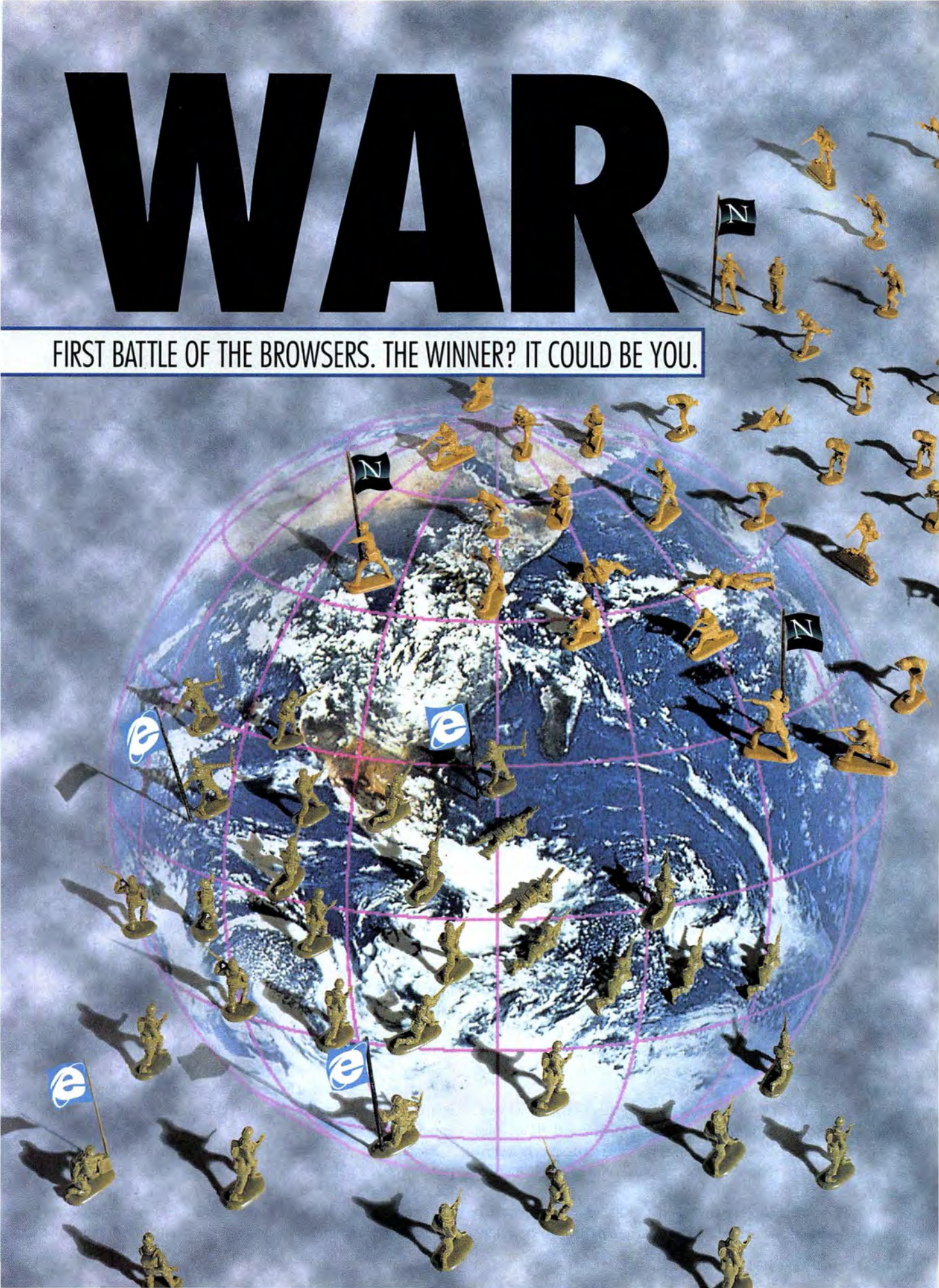
HTML Go Beyond the Basics

In order to compare Web browsers, you need to understand how they work. When a Web page is sent over the Internet, it's all plain text — there are no bold or italic characters, no fonts or point sizes, not even any graphics. Instead, the plain text uses a system called *HTML*, HyperText Markup Language, which describes styled, graphics-rich pages by using special codes called *tags*. When a browser receives an HTML file, it interprets the tags and draws the page on-screen, calling on image files as needed.

Because HTML was originally designed to describe pages only in general terms ("This is a big headline," rather than "This is a 48-point headline in Times Bold"), the same page might be displayed in wildly varying ways

BY JASON SNELL

PHOTOGRAPHY / TOM UPTON


WAR
FIRST BATTLE OF THE BROWSERS. THE WINNER? IT COULD BE YOU.

BATTLE OF THE BROWSERS / Microsoft's Internet Explorer beats Netscape Navigator

Microsoft
Internet Explorer 2.0
★★★★

The challenger edges out the market leader through compatibility, versatility, and speed — but improvements still need to be made.

Netscape Communications
Navigator 2.01
★★★½

If Netscape hopes to maintain its Web-browser dominance, it must match the advantages of Internet Explorer.

FEATURE			ADVANTAGE	
HTML	Support	Solidly supports standard HTML tags as well as Netscape's enhanced tags.	◀ ▶	Web browsers owe Netscape a debt of gratitude for its contributions to HTML.
	Enhancements	New text-display and sound-management tags give Web designers further options.	◀ ▶	Frames are promising but difficult to implement and navigate.
MULTIMEDIA	Plug-ins	Microsoft has done a good job of providing support for Navigator-compatible plug-ins.	◀ ▶	Its plug-in architecture may still be shaky, but it opens up a world of possibilities.
	Other	Supports multiple sound and video formats and a primitive but workable VRML browser.	◀ ▶	Support of JavaScript is good, but most in-line multimedia support still needs work.
PERFORMANCE	Speed	Smart page-drawing techniques make Internet Explorer simply feel faster.	◀	Netscape needs to remove the roadblocks to faster page drawing.
	Reliability	Somewhat more robust than Navigator, but still unacceptably unstable.	◀ ▶	Users should demand more stability from such an important, everyday application.
USABILITY	Interface	A better scheme for managing favorite Web addresses provides a slight advantage.	◀	File-download-progress bar is nice, but bookmark management needs improvement.
	Mac savvy	Internet Config makes a Net administrator's life easier; QuickDraw 3D is a welcome addition.	◀	AppleScript support is solid, but Internet Config support is a must for version 3.0.
	Other	Send-only e-mail and rudimentary newsgroup access are disappointing afterthoughts.	▶	Full send-and-receive e-mail and a better news reader give Navigator the edge.

— depending on the Web browser (see "The Ant and the Grasshopper," April '96, page 91, and "From the Web Press to the Web," October '95, page 117).

One of the reasons Netscape Navigator became the leading Web browser was because it provided support for *new* HTML tags, for centering text, adding background colors and patterns, and aligning text and graphics within tables. Because other Web browsers could not use these tags, Web pages that had been designed to use Navigator's tags — lots of Web pages — looked good only in Navigator.

While rival browser makers have been playing catch-up (see the "Also-Rans" sidebar), Netscape has kept several steps ahead of them by adding even more — and more-powerful — features to Navigator. But in just a few months, Microsoft has managed to leapfrog other rivals and now provides the only real alternative to Navigator.

Internet Explorer supports almost every feature offered by Navigator — since it has to: Why would you want to switch from Navigator and lose access to all the graphically pleasing HTML tags Netscape has introduced? Navigator and Internet Explorer each support the most popular of the "extended" HTML features, most of which were introduced or popularized by Netscape: background patterns and colors, colored text, type-size controls, tables, and horizontal and vertical positioning of graphics.

Microsoft hasn't merely replicated Navigator's tags — it's one-upped Netscape by introducing a host of additional HTML tags Navigator doesn't yet support, such as ones that let designers set text in various typefaces and have a background sound play while a page is being loaded.

Most browsers simply ignore HTML tags they don't understand. If a Web-page designer uses tags supported by only one browser, other browsers will ignore them. Although this may sound distressing, Microsoft turns it into a virtue: Designers can add Internet Explorer-specific tags to their pages without fear of turning away the legion of Navigator users on the Web — the Navigator users may not even know they're missing anything.

For example, rather than creating an entirely new tag for inserting QuickTime movies into Web pages, Microsoft enhanced the existing HTML tag for placing still images. As a result, you can design a page that will show a QuickTime or AVI movie when viewed in Internet Explorer and that will substitute a GIF or JPEG still image when viewed by browsers that don't support Microsoft's new tag (currently, no other browsers do).

In contrast, many Web pages that rely on Netscape-specific tags can be unreadable or extremely unattractive when viewed by other Web browsers. For example, although Navigator was one of the first browsers to support the display of images using the high-quality JPEG format — rather than the old, fat, grainy GIF format — Navigator doesn't provide Web designers a way to send JPEG files only to those browsers that can view such images (and GIF files to those that can't). Therefore, page designers have to use either JPEG images exclusively — thus limiting their pages to Navigator users only — or GIF images exclusively. These days, most browsers support JPEG images, but there's always another "only in Netscape" feature just around the corner.

Because Web pages can be rendered in wildly varying ways, depending on the Web browser being used, it's important to note that Internet Explorer is remarkably good at displaying pages exactly as Navigator — the de facto standard — would display them. When we used Internet Explorer to view a complex test page designed for

Navigator and laden with graphics, tables, and interactive forms, it looked nearly identical to the same page as viewed by Navigator — absolutely identical in most details.

We even encountered an instance of Internet Explorer rendering pages *better* than Navigator. On an interactive Web page containing an HTML table embedded within a cell of another HTML table, Internet Explorer correctly rendered both tables. But Navigator couldn't — it showed what was supposed to be the embedded table as if the table tags weren't even there.

The one notable HTML feature Navigator 2.0 provides that Internet Explorer doesn't is frames. When a frames-based page is displayed in Navigator, Navigator can split the page into several scrollable panes and view multiple HTML documents at once. By using frames, a Web designer can, for example, create a hyperlinked table of contents that can remain open while pages referenced in that table of contents are viewed in a separate pane of the same browser window. Unfortunately, it's notoriously difficult to create pages that use frames — most current efforts look ungainly, and such pages can be extremely hard to navigate.

Multimedia Be Ready for Anything

Although HTML support has traditionally been the major issue in evaluating Web browsers, version 2.0 of Navigator introduced a new set of issues: how best to play multimedia content *in-line* — directly in the browser window. Although multimedia content could previously be displayed with external "helper" applications, the plug-in architecture built into Navigator 2.0 allows the playing of just about any multimedia file format in the browser window, as long as an appropriate third-party plug-in has been installed.

Since the world of Navigator-compatible plug-ins is so new, the future of the technology is hard to predict. Major plug-ins such as Adobe's PDF (for high-quality page rendering) and Macromedia's Shockwave (for animation and increased interactivity) will probably become popular, and no doubt some of the many new plug-ins on the market will also become de facto standards. If a Web browser is to compete with Navigator, it must support in-line display of PDF documents, Shockwave presentations, QuickTime movies, and more — to do so, it must support the appropriate plug-ins.

Internet Explorer is the first browser other than Navigator to support Netscape's plug-in architecture. Although the plug-in technology is still shaky — even Navigator doesn't run all plug-ins successfully all the time — Internet Explorer works with most common plug-ins, including those from Adobe and Macromedia. As a result, just about every multimedia format in use on the Web can be played in Internet Explorer as well as Navigator.

Internet Explorer also supports some multimedia formats without needing plug-ins: It can play sounds in the common WAV, AIFF, MIDI, and Sun μ-law formats as well as movies in either the AVI or the QuickTime format — users of Internet Explorer don't necessarily have to download and configure helper applications just to hear the latest sound clip from *Friends* or to view a teaser of next week's episode of *Babylon 5*.

Internet Explorer also offers rudimentary support for VRML, Virtual Reality Modeling Language, via Apple's QuickDraw 3D technology. Internet Explorer's VRML browser doesn't support mapped textures and other advanced VRML features, and it's not easy to navigate a 3-D world by using the QuickDraw 3D interface, but Internet Explorer provides the Mac's first usable, stable VRML browser. Netscape currently offers VRML support only through plug-ins, and at press time, there was still no Mac VRML plug-in that could match the quality of Internet Explorer's VRML browser.

Neither Internet Explorer nor Navigator yet supports Sun Microsystems' Java, the much hyped cross-platform language that allows small programs called applets to be embedded in Web pages and executed within the browser window. However, Navigator — unlike Internet Explorer — currently supports a simplified subset of Java, known as JavaScript, which allows simple scripts to be embedded in Web pages.

Trying to be the only Internet-access application you'll ever need, Internet Explorer and Navigator each also support e-mail and newsgroup access. However, you can only send — not receive — mail with Internet Explorer. Using Navigator, you can send as well as receive mail, using the POP and SMTP protocols. Navigator's news reader is more advanced than Internet Explorer's, which is rudimentary at best — but to be honest, neither program's e-mail and news features come even within hailing distance of adequacy. If you send and receive e-mail or read newsgroups on a regular basis, you'll be better off using free stand-alone tools such as Qualcomm's Eudora Light or John Norstad's NewsWatcher.

THE ALSO-RANS / too little too late

IT'S A TOUGH SELL when you're up against the free-to-download, $49 Navigator and the completely free Internet Explorer. Four second-tier browsers are hanging on, however — although just barely.

MacWeb 1.1.1, from Tradewave, was the first good Mac Web browser — small and simple, not requiring much RAM or hard-disk space. Unfortunately, MacWeb is showing its age — it doesn't support background colors, tables, or just about any Netscape innovation. Hopefully, MacWeb 2.0 will offer some improvement, but for now, MacWeb is useful only if you're stuck with an underpowered Mac.

NCSA Mosaic 2.0.1 is the latest version of the browser that started the World Wide Web revolution. Mosaic 2.0.1 supports a variety of HTML features, although it can't display background colors or patterns. It can be sluggish, and it's pretty bare-bones: There's no drag-and-drop support, and you don't get a pop-up menu when you click on a hyperlink. Mosaic *is* free . . . but, then, so is Internet Explorer.

Spyglass Mosaic 2.1 — an updated version of NCSA Mosaic — is the third-best Mac Web browser but has no compelling advantages over the top two. It's speedy and supports most Netscape extensions to HTML, and it offers some Spyglass innovations, such as client-side image maps, that are now supported by Navigator and Internet Explorer. A demonstration version is available directly from Spyglass; the product is bundled with various books and software packages, including StarNine's WebSTAR.

TCP Connect II 2.3.1, from InterCon Systems, is the ClarisWorks of Internet access, offering e-mail, FTP, Gopher, and news in addition to Web access — at $395, a pricey but convenient collection. The browser will be familiar to plenty of AOL users and eWorld expatriates: It's the one those services used — although AOL is now replacing it with Internet Explorer and eWorld has eXpired. The browser is serviceable but painfully slow. It supports most HTML extensions but not Navigator plug-ins or any form of Java. We recommend it only if you must use just one application for all your Net access.

Performance Speed Down the I-Way

Given the deserved grief Microsoft got from Mac users when Microsoft Word 6.0 was released — complaints were that it was as slow as erosion, looked like a Windows application, and didn't support Mac technologies — it's fair to question how Internet Explorer matches up with Navigator in terms of speed and usability.

It matches up quite well, actually. When it comes to displaying pages, Internet Explorer is faster. For example, when you click on Navigator's Back button, you usually experience a brief delay, followed by a wait while Navigator redraws all the items on the previous page. In contrast, moving back one page in Internet Explorer is nearly instantaneous, with the page appearing completely rendered. Likewise, selecting text takes noticeably less time in Internet Explorer than in Navigator.

The method Internet Explorer uses to render pages also beats Navigator's — page loading feels faster. It's just a matter of page-loading priorities: When Navigator loads a page, it won't display anything below any images that have yet to be loaded unless the Web-page designer has embedded the height and width dimensions of an image in the HTML code. Also, Navigator won't draw any part of a table until all the images in that table have been loaded.

Internet Explorer, on the other hand, is designed to display everything as quickly as possible. If an in-line image is present but the HTML code doesn't say what its height and width dimensions are, Internet Explorer will draw a generic placeholder, render the rest of the page, and then move items on the page around once the image begins to appear. Tables appear as soon as they're loaded and then constantly redraw as their images are loaded.

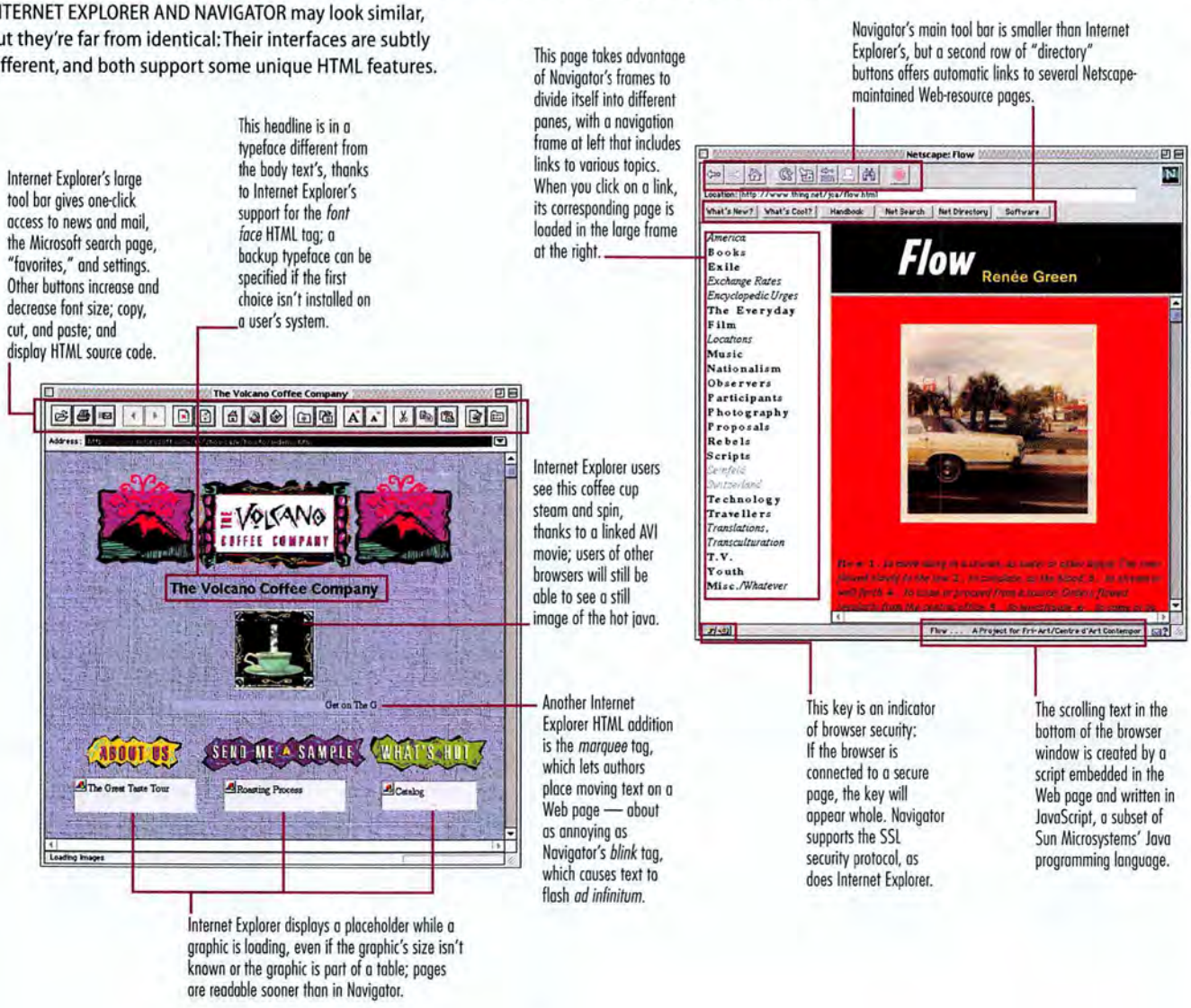
Even though each browser takes the same total time to download a full page of text and graphics, Internet Explorer's method of always displaying as much of a page as it can (and first displaying the most-useful information — the text) makes it feel much more responsive.

Usability Be Easy to Handle

The two browsers have quite similar interfaces. Both include a tool bar, although Internet Explorer's provides more options than Navigator's. Both display pop-up menus when you click and hold your mouse button on a hyperlink, offering the ability to open a link

SUBTLE DISTINCTIONS / small additions add up to big improvements

INTERNET EXPLORER AND NAVIGATOR may look similar, but they're far from identical: Their interfaces are subtly different, and both support some unique HTML features.



in a new window, download a file to disk, or copy an image to the Clipboard. Both use the same file format to store bookmarks (in Netscape terminology) or favorites (à la Microsoft) — names and addresses of your favorite Web sites. And both use a similar interface to organize that information: a Finder-like window.

Here the similarities end and Internet Explorer's advantages begin to show. Although Navigator 2.0's bookmark manager is a big improvement over version 1.0's, it's slow and frustrating: The bookmark window may look like a Finder window, but you can't rename bookmarks without selecting Edit Bookmark from the Item menu. Microsoft's Favorites window, on the other hand, works like a good Finder window should — right down to the keyboard shortcuts. It's also much speedier.

Navigator does offer one interface element Internet Explorer can't match: Netscape knows that when you're downloading a file, you don't want to stare at an empty Web-browser window. Taking a page from the book of FTP client software everywhere, Navigator creates a small, separate progress window while it's downloading files. In contrast, Internet Explorer downloads files from within the browser window, wasting screen space and making it far too easy to mistakenly abort your download by clicking on a link in that window or by accidentally closing the window. Neither browser, however, can display information from FTP and Gopher sites in as Mac-like a fashion as can Apple's Cyberdog (see "Walking the Cyberdog," in this issue), which works like the Finder in ways a Web-browser window can't.

Both applications offer acceptable AppleScript support, but Internet Explorer also offers support for Internet Config, the Mac-only system of sharing preferences among various Internet applications — and a great time-saver for network administrators. If you use applications that support Internet Config (such as Claris Emailer, Eudora, NewsWatcher, Anarchie, or Fetch), then many common Internet settings — including information about file formats, server names, and e-mail addresses — don't need to be reentered every time you install new Internet-savvy software.

Sadly, Navigator and Internet Explorer are still annoyingly unstable — unforgivable behavior for such important, everyday tools. Both crash much more frequently than other mainstream applications — and they usually bring the whole Mac down with them. (In our testing, Navigator crashed more often than Internet Explorer. We extensively tested both applications exclusively on PowerPC-based machines.) And any use of plug-ins only heightens the chances of a crash — in fact, our experience suggests that every popular plug-in is still susceptible to sudden crashes.

The Battle for Internet Dominance

This competition between two free products isn't making either Microsoft or Netscape much money (Navigator is actually free only to members of educational and nonprofit institutions; other users are obliged to pay $49). However, this battle is just the first shot of a growing war over the Internet.

With its agility as a startup company founded by Internet veterans, Netscape has quickly become a major developer of Web-browser and money-making server applications (none of its servers run on the Mac OS, however). Microsoft is using its money and muscle to catch up fast. Considering that Navigator currently holds between 80 and 90 percent of the browser market, it'll be a tough chase — but Microsoft has time.

FEATURES / it's close, but Internet Explorer has the edge

	MICROSOFT INTERNET EXPLORER 2.0	NETSCAPE COMMUNICATIONS NAVIGATOR 2.01
HTML		
Background sounds	●	
Colored cells in tables	●	
Frames		●
Tables	●	●
Text alignment	●	●
Text color	●	●
Text-size control	●	●
Typeface control	●	
Multimedia		
Built-in QuickTime and AVI	●	
Built-in VRML browser	●	
JavaScript support		●
Plug-in support	●	●
Server-push animation	●	●
Other		
Download-status window		●
Drag-and-drop bookmarks	●	
Drag-and-drop links	●	●
E-mail receiving		●
E-mail sending	●	●
Internet Config support	●	
News reader	●	●
Available from		
	http://www.microsoft.com/ie/platform/macmsie.htm	http://www.netscape.com/comprod/mirror/client_download.html

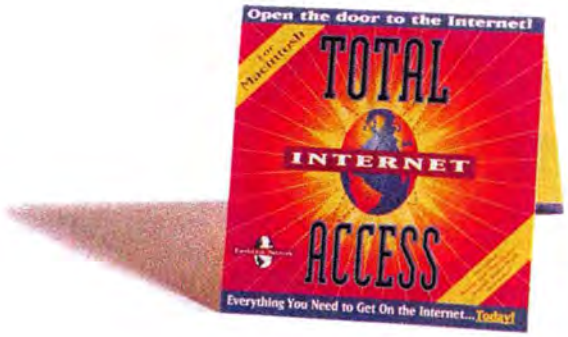
Well before the end of this year, both companies will release version 3.0 of their browsers. Navigator 3.0, already in prerelease testing, offers full support for Java, some support for Internet Config, and built-in support for several multimedia formats. We expect Internet Explorer 3.0 to also add Java support and to match Navigator's support for frames and JavaScript. And, of course, Microsoft will try to extend the Web playing field: Internet Explorer 3.0 will also support ActiveX — a Microsoft-created alternative to the Navigator plug-in architecture — which allows various kinds of data to be viewed by Web browsers.

Since you can download both browsers from the Internet, you can easily try them out for yourself. Internet Explorer is a fast, well-behaved, well-made product, one any Web surfer can use to travel the Net. And Navigator's immense popularity isn't a fluke — it's also a solid application that, with every successive version, seems to steer the Internet in exciting new directions.

But in the end, we recommend Internet Explorer; it's the best Web browser available today. What's more, its price — free — can't be beat. In the first skirmish of the Web War, Microsoft has pulled off a stunning victory.

MacUser associate editor/online Jason Snell has been on the Net for eight years and on the Web for about half that time. He is the editor of the online magazine InterText (http://www.etext.org/Zines/InterText/) and the coauthor of *Providing Internet Services via the Mac OS* (Addison-Wesley, 1996).

Internet for Macintosh.
Install disks. Double click.



It's that simple.

EarthLink Network®

The coolest, easiest Internet access on Earth.

$19.95 per month. Flat rate. Unlimited usage.
Call now for your free EarthLink Network TotalAccess™
with Netscape Navigator™ 2.

1-800-395-8425

1995 BYTE POURNELLE'S USER'S CHOICE AWARD

Every account includes a FREE 2 meg Web site. Internet access in over 275 cities in the U.S. and Canada. Software for MACINTOSH, WINDOWS, WINDOWS 95, featuring Netscape Navigator 2. Earthlink Network is one of the largest Web space providers in the U.S. and also provides ISDN, Frame Relay, T1 and other internet services. **There is a one-time set-up fee of $25.00. Prices for Canada are different.*

NETSCAPE NAVIGATOR™ INCLUDED

EarthLink Network, Inc. 3100 New York Drive, Suite 201, Pasadena, California 91107 Fax: (818) 296-2470.
Info via email: info@earthlink.net. Live human via email: sales@earthlink.net. Visit our Web site at http://www.earthlink.net

Copyright ©1996 EarthLink Network, Inc. All Rights Reserved. Trademarks are property of their respective owners. Netscape Communications, Netscape Navigator and the Netscape Communications logo are trademarks of Netscape Communications Corporation.

CIRCLE **90** ON READER SERVICE CARD

WALKING THE CYBERDOG

APPLE CROSSES OPENDOC WITH INTERNET IN NEW BREED OF SOFTWARE.

THESE DAYS, NETSCAPE NAVIGATOR is the big dog on the Web, although Microsoft's Internet Explorer seems poised to take a bite out of it (see "Web War," *MacUser*'s contribution to the debate, in this issue). However, using a Web browser isn't the only way to surf the Internet, as Apple is showing with Cyberdog, an OpenDoc-based Internet application that barks up quite a different tree.

Both Navigator and Internet Explorer approach the Web from a similar vantage point. When it's time to surf, you launch a browser application and get to work. The problem with this approach is that other Internet functions, such as e-mail, newsgroup access, and FTP file transfers, get tucked in around the edges of the browser's central function. In fact, many people opt to use a separate application for each of these functions: Eudora or Claris Emailer for e-mail, Fetch or Anarchie for FTP transfers, and so on.

By implementing Cyberdog as a collection of specialized software components, not unlike the way ClarisWorks combines spreadsheet, word-processing, and graphics capabilities, Apple has created an all-in-one Internet application users can customize or even use pieces of in other OpenDoc-compliant software.

BY HENRY BORTMAN

CYBERDOG: GREATER THAN THE PARTS

Rather than being yet another monolithic browser application, Cyberdog is a collection of OpenDoc *parts*, small chunks of application code, each of which serves a particular Internet-related function. The easiest way to understand how these parts work together is to take a look at Apple's Cyberdog Starting Point document.

Starting Point contains several CyberButtons, which are OpenDoc parts. CyberButtons are embedded in what is known in OpenDoc parlance as a *container* document. In this case, the container is a Cyberdog DocBuilder document, but it could just as easily be created by any OpenDoc container application. Claris, for example, has announced that the next release of ClarisWorks will be able to generate OpenDoc container documents (see figure 2). This is the beauty of Cyberdog: You no longer have to use specialized applications to access the Web, download a file, or send e-mail; instead, you can embed a cyberlink in any OpenDoc-savvy document.

Each CyberButton has associated with it a CyberItem that defines its behavior and a graphic. For some buttons, such as Starting Point's Explore and Search buttons, the CyberItem is a URL — clicking on one of these buttons opens a browser window that connects to a corresponding Internet site. Clicking on other buttons, such as Starting Point's Log and Notebook buttons, invokes special functions.

CYBERCRUMBS: DOGGING YOUR TRAIL

When you click on the Log button, for example, Cyberdog's Log window opens. The Log lists CyberItems for the last 100 Web pages, FTP sites, and newsgroups you've visited. It updates automatically each time you visit an Internet site and is smart enough not to display the same site multiple times. You can display the Log's listing hierarchically, chronologically, or alphabetically.

figure 1 / ANATOMY OF A CYBERDOG

A. Cyberdog Starting Point

Apple provides a document entitled Cyberdog Starting Point, a collection of CyberButtons that enable you to access the full range of Cyberdog's features. You can customize this document to provide instant access to Web pages, FTP sites, your personal Internet mailbox, and other Internet functions that reflect your individual work routines.

B. Notebook

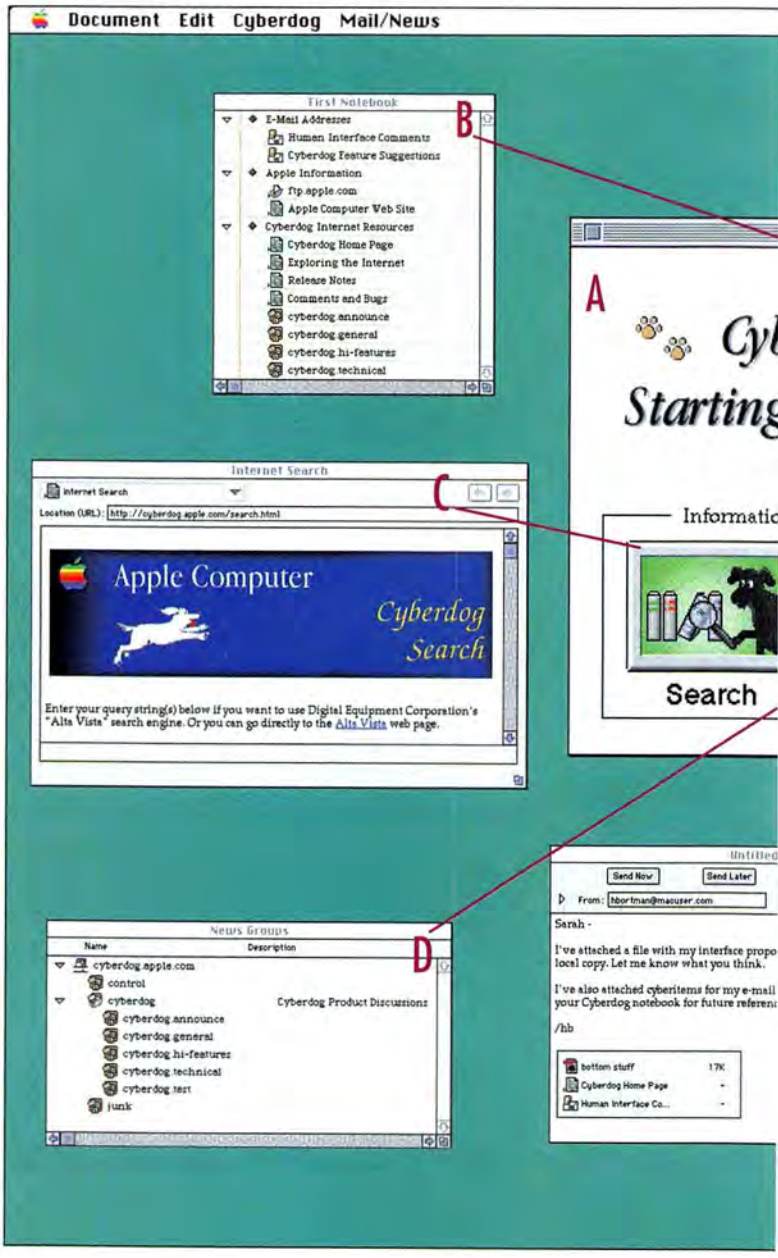
When you first click on the Notebook button in the Starting Point document, you see Cyberdog's default notebook. You can create as many additional notebooks as you like. You can drag and drop CyberItems that represent e-mail addresses or URLs for Web pages, newsgroups, FTP sites, and other Internet locations into a notebook. Any e-mail address stored in your default notebook becomes accessible automatically when you're addressing Cyberdog e-mail messages.

C. Web search

Starting Point's Search button takes you to Apple's Cyberdog Search Web page, which is wired to Digital's Alta Vista search engine. This page provides access to other search engines as well.

D. Newsgroups

The left-hand button in Starting Point's discussion area takes you to a listing of CyberItems for newsgroups you have connected to. You can access newsgroup messages by double-clicking on these CyberItems.



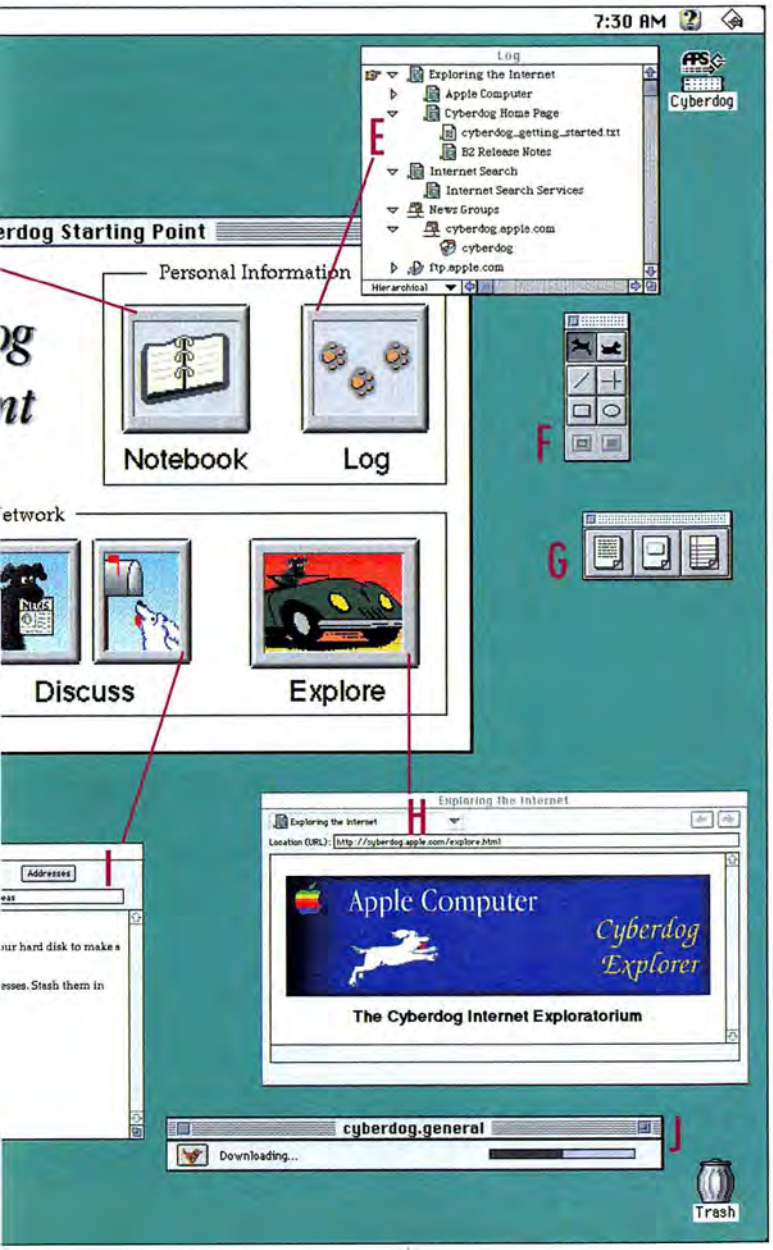
Cyberdog's notebooks are similar to the Log. They too can contain CyberItems for Internet locations. A notebook can also contain mail addresses, pointers to text and binary files, and other CyberItems. But whereas the Log updates automatically, following you like a digital bloodhound, notebooks contain only CyberItems you've dragged into them.

A notebook also lets you rename items. If, for example, you drag a CyberItem for a favorite home page into a notebook, you can rename it with a more recognizable title, just as you would rename a file in the Finder. In this way, notebooks act almost like little Finders for Internet-related data.

You can put as many CyberItems as you like into a notebook, and you can group them into folders for easier cataloging, although folders can go only one level deep. You can also create multiple notebooks. One of the notebooks you create (the default notebook) has a special property: Addresses you store in it are directly accessible from within e-mail and newsgroup message windows, relieving you of having to type lengthy and enigmatic Internet addresses.

CYBERDOG FETCHES THE PAPER

Cyberdog Starting Point includes CyberItems for accessing Internet mail and for news reading. You access these services from the two CyberButtons labeled Discuss in the Starting Point document. Clicking on the mail button (the right-hand button) opens the CyberMail window, which displays a list of your mail trays. CyberMail comes with In and Out trays and a Trash tray, for deleting e-mail messages. You can create additional trays to help categorize messages you want to store. Clicking on the triangle next to a tray expands its contents, much like expanding a folder in the Finder. Double-clicking on a mail tray opens a window that displays a list of stored messages.



E. Log

Cyberdog's Log automatically maintains a running list of the last 100 Internet sites you've visited. You can sort the Log hierarchically, chronologically, or alphabetically. Double-clicking on an icon in the Log opens the appropriate applet window.

F. Tool palette

Cyberdog provides a simple tool palette to aid in designing documents with Cyberdog DocBuilder.

G. Cyberdog Parts palette

The Parts palette gives you an easy way to embed (from left to right) text elements, CyberButtons, and notebook elements in an OpenDoc document.

H. Web access

Clicking on Starting Point's Explore button opens a browser window that displays the Cyberdog Explorer home page. The CyberItem icon in the upper left corner of the browser can be dragged to a notebook for permanent storage, onto a CyberButton to create a link to a Web page, or into a Cyberdog document window to embed a Web page directly in the document.

I. CyberMail

Cyberdog lets you access Internet e-mail by clicking on the right-hand one of the two buttons labeled Discuss. You can attach any type of CyberItem, as well as files and graphics, to a Cyberdog e-mail message.

J. Progress bar

This progress bar is displayed when a new browser window is being opened.

CyberMail is fully compliant with MIME (Multipurpose Internet Mail Enclosures): You can enclose files within a mail message by dragging them directly into the message body. Drag-and-drop enclosure also works for any CyberItem. If the recipients of your mail messages are also Cyberdog users, they can drag the enclosures back out of the messages onto their desktop or into a Cyberdog notebook.

Clicking on the left-hand Discuss button opens a window entitled News Groups, Cyberdog's news reader. Within the News Groups window is a list of available news servers and newsgroups. As in Cyberdog's Mail Tray window, you can expand the contents of a news server by clicking on the triangle to the left of the news server's icon. This is a feature that NewsWatcher, the most popular freeware news reader for the Macintosh, fails to offer. Cyberdog goes even further to make life easy for newshounds: Its news reader enables you to view the contents of more than one newsgroup simultaneously. One shortcoming of Cyberdog's news reader, however, is its poor handling of binary files that are embedded in newsgroup messages; they appear in a news message as garbage text.

figure 2 / CLARISWORKS DOES CYBERDOG
This document was created with an early prototype of ClarisWorks 5.0, which will be able to create OpenDoc container documents. The document has CyberButtons for three Apple Web pages and a live, embedded FTP site — Adam Engst's site for Mac Internet software. You can download a file from an FTP site embedded in a Cyberdog document by dragging its icon onto the desktop.

WEBBING THE DOG

Starting Point also contains two buttons that access specific Web pages. The Explore button opens a browser window that displays the Cyberdog Explorer home page. The Search button takes you to a Cyberdog-customized front end to Digital's Alta Vista search page.

When it comes to surfing the Web, Apple's Cyberdog is a mixed bag. The browser windows are HTML 2.0-compliant and support tables and backgrounds. They do not, however, support right-aligned text or client-side image maps; nor do they support Navigator plugs-ins or Java. These are serious shortcomings in a world in which the sizzle half-life of new Web features is measured in months.

Apple is aware of the need to catch up and is working with third-party developers to provide appropriate solutions. In fact, one developer, ResNova, of Berkeley, California, has already demonstrated a prototype OpenDoc part that can view Java applets.

The Cyberdog approach to browsing does have some advantages: Other browsers require you to cut and paste — or type — URLs to change locations on the Web. Cyberdog simplifies this process. In the top left corner of every Cyberdog browser window, just above the URL listing, sits a CyberItem that contains the link to the page in the window below. You can switch instantly to another Web page or to an FTP site or newsgroup by dragging the CyberItem for that location over the CyberItem already there. Want to save a reference to a page you've just surfed to? Drag its CyberItem to your notebook or the desktop. Want to pass it on to a friend? Drag it to a floppy disk, or e-mail it. Big deal, you say? Navigator bookmarks can jump through most of the same hoops. Perhaps. But there's one hoop they can't jump through.

BURIED BONES

Although notebooks and the Log are time-savers and CyberButtons have a great deal of flexibility, there is an even more compelling aspect of Cyberdog that no other browser can match: the ability to embed Internet sites directly within a document.

Here's how it works. If you drag a CyberItem for a Web page into an OpenDoc document, you don't get a button or icon that can take you to that site — you get a browser view of the site itself, live and in person. Same for an FTP site or newsgroup location. Close the document, and reopen it later. The sites update automatically. You can put as many of these live links into a document as you like.

Sounds like Navigator frames? Somewhat. But Navigator frames are stuck in the Navigator browser. Embedded Cyberdog browsers can go anywhere, at least within the currently limited panoply of

STUPID CYBERDOG TRICKS

THE OPENDOC ENVIRONMENT in which Cyberdog runs contains no applications in the traditional sense. This can make the dimension in which OpenDoc documents and traditional applications coexist pretty bizarro.

Try this: Open the Cyberdog Starting Point document; you'll notice that the File menu becomes the Document menu. Pull down that menu; although there's no Quit option, there is an item labeled Close Cyberdog Starting Point. OK, it's a document, not an application, so that makes sense.

Or does it? Examine the Application menu on the far right of the menu bar. You'll see Cyberdog Starting Point, not Cyberdog, listed. Click on the Notebook button in the Starting Point document; a notebook window entitled First Notebook opens. Now check out the Document menu again, and you'll see Close First Notebook. Close Cyberdog Starting Point is gone. Hmmm. Just for kicks, go back to the Application menu — Cyberdog Starting Point is still the lone document (application?) listed.

It gets better. Click on the Cyberdog Starting Point window to make it active. Go back to the Document menu, and select Close Cyberdog Starting Point. Now make sure the First Notebook window is still open, and then click on the Application menu. What do you see? Cyberdog Starting Point. That's kinky.

Here's one last stupid Cyberdog trick. Open the Cyberdog Starting Point document again. Click on several buttons to get a bunch of windows open. Now go to the Application menu, and select Hide Cyberdog Starting Point. All the windows you just opened vanish, just as if Cyberdog Starting Point were an application, not a document. But try to close all these windows at once, as you would by quitting a normal application — try to quit Cyberdog Starting Point — there's no way to do it.

Ah, well, that's what updates are for, right?

CYBERDOG ICONS AND WHAT THEY REPRESENT

OpenDoc container apps.

Figure 2 shows a simple example of the kinds of documents you can create with this capability; the container application for the document is an early prototype of the upcoming OpenDoc-based version of ClarisWorks. The document has three CyberButtons pointing to various Apple Web pages and a live FTP browser view linked to Adam Engst's FTP site of Mac Internet goodies. Cyberdog's FTP browser has an interface that is much better than those of Fetch or Anarchie. Like the Finder, Cyberdog's FTP browser lets you expand an FTP site's directory hierarchy by clicking on triangles that represent different levels of the hierarchy. Furthermore, the Cyberdog FTP browser is fully integrated with the Finder: To download a file from an FTP site, drag it to the desktop or to a hard-disk icon.

But the possibilities for Internet embedding go far beyond this basic demonstration. Imagine, for example, an astronomy lesson. In an OpenDoc container document, the teacher has placed some text describing a research assignment, a live browser window linked to a Web site maintained by NASA, and a custom OpenDoc part that can use data gathered from the site to create a map of the space shuttle's orbit. Sure, you could provide the same functionality with a monolithic application that had these capabilities. But who wants to program a text editor, a Web browser, and a mapping utility for a single assignment? The advantage of the OpenDoc/Cyberdog approach is that you can construct an infinite variety of customized documents with components from many sources.

PAPER TRAINING FOR OPENDOC

For the moment, the Cyberdog vision far outstrips the reality. OpenDoc is still in its infancy, and Cyberdog has both the distinction and the burden of being its first real raison d'être. Although OpenDoc is supposed to elevate the Mac's ease of use to new heights, it's equally likely to cause a good deal of confusion in the interim.

Plus, Cyberdog/OpenDoc is a total memory hog. Just launching OpenDoc and opening the Cyberdog Starting Point document causes the system to swallow over 5 MB of RAM. The system wants nearly another megabyte to open a browser window and half a megabyte more to open the Notebook. That's 6.5 megs. Did someone say something about component software being small and lightweight?

Neither OpenDoc nor Cyberdog is widely available. OpenDoc isn't slated for inclusion in Apple's System 7.5.3 retail product until about the time this article appears. Although Cyberdog 1.0 is expected to be finalized around the same time, it will not be included in the initial System 7.5.3 retail product. In fact, as we went to press, Cyberdog was still in beta and worked only on PowerPC-based Macs. Apple probably won't make it commercially available until later in the year, when enough other OpenDoc parts and containers are available to create a viable working environment.

When Cyberdog is ready for prime time, expect Apple to go all out to get it into as many users' hands as possible. It will be available free online and from user groups. It will be bundled with Macs. And don't be surprised if Apple uses it as the justification for releasing a new System 7.5 update, followed by a new System 7.5.x retail product.

Still, Cyberdog is intended to be "exampleware." Apple's not trying to compete with Netscape or Microsoft for dominance in the browser market. Quite the contrary: Apple is encouraging third parties to develop more-powerful alternatives to its Cyberdog parts. Eric Jackson, of Amplified Intelligence, is already at work on a browser part that will support VRML and QuickDraw 3D, which Cyberdog's browser part does not now support. Virtus is reportedly working on similar technology.

MY DOG'S BETTER THAN YOURS

Apple has been hyping the OpenDoc/Cyberdog combo for so long now that it's starting to feel like YAFAT (yet another forgotten Apple technology). But don't be lulled into disinterest by the deafening lack of promotion. True, OpenDoc has been available to developers for nearly six months now. And, no, there still isn't a single piece of OpenDoc software worth loading on your Mac, let alone paying for.

But that's gonna change. Apple did itself a serious disservice by the way it initially presented OpenDoc to the world. By making it look as if OpenDoc did little more than provide a way to edit graphics in place, Apple created the impression that DTP-oriented users were the only ones for whom OpenDoc was of interest. When none of the leading vendors of graphics or page-layout software stepped forward to embrace OpenDoc — Adobe's initial endorsement was weak at best — its main purpose in life appeared to have evaporated.

Apple has chosen wisely in making Cyberdog the centerpiece of its reinvigorated OpenDoc strategy. With Cyberdog, the company has found a way to take some leadership in what is arguably the hottest market in the computer industry today — not by jumping in two years too late with another Apple me-too product but by developing as core OS technology a whole new approach to cybersurfing.

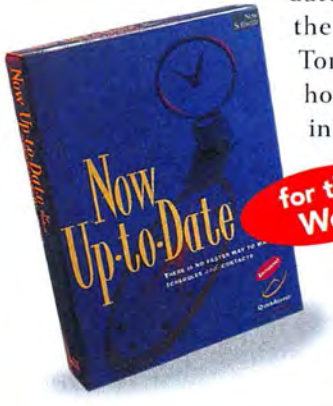
OpenDoc could be the biggest system-software sleeper Apple has had in years.

Henry Bortman is *MacUser*'s technical director.

What kind of person can get Hootie & The Blowfish, Tori Amos, *and* Collective Soul on his calendar?

You. And no recording industry experience required. Announcing Now Up-to-Date,™ the only schedule and contact manager that brings you the world of the Web.

Take off to sites like Atlantic Records. With a single drag and drop, you can add your favorite artist's concert dates, even a whole group of them, to your calendar. Find Tori Amos' tour date for your home town and simply drag it into your calendar, along with a hot link back to the Atlantic site.



No typing.

No extra steps.

Need someone's e-mail address? Surf over to the Four11 site, where you can add it into your Now Up-to-Date address book in a single drag and drop operation.

Got an intranet at work? Now Up-to-Date Web Publisher lets you post calendars and address listings with absolutely no HTML programming. Everyone has easy access to employee directories, client lists and project schedules through their Web browser—Windows 95, 3.1 and Mac OS alike.

To download a free trial of Now Up-to-Date, visit the Now Software Time Management Network at http://www.nowsoft.com/trial1. You'll find everything you need to get started, including links to the growing list of Web sites already publishing calendars and address books.

To find out how Now Up-to-Date can get you connected, call 1-800-544-2599.

Sunglasses optional.

Mac OS

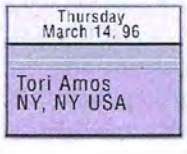
Designed for Microsoft Windows 95

ATLANTIC

1 *Visit www.atlantic-records.com*

2 *Now drag-and-drop*

3 *any event into your personal calendar.*



Now Up-to-Date, the Now Software logo, and "It's about time." are trademarks of Now Software, Inc.; Windows is a trademark of Microsoft Corp.; Macintosh and Mac OS are trademarks of Apple Computer, Inc.; the Atlantic Records logo is a trademark of Atlantic Recording Corporation; Four11 is a trademark of Four11 Corp.

CIRCLE **82** ON READER SERVICE CARD

POWER Takes the Lead

PREMIER CLONE MAKER BEATS APPLE AGAIN WITH 166- AND 180-MHZ 604-BASED CLONES.

BY HENRY BORTMAN

IN THE RACE TO DELIVER THE FASTEST MACS money can buy, Apple has been struggling to keep pace with Power Computing. Once again, the premier Mac-clone maker has blown past Apple, with the PowerTower 180, which is at least 14 percent faster than Apple's latest offerings.

Power Computing first distinguished itself last November as the company best able to produce the fastest PowerPC machines when it shipped the 150-MHz 604-based PowerWave 150. At the time, Apple's fastest model was the Power Macintosh 9500, which topped out at 132 MHz. It wasn't until the end of April that Apple made its move to catch up, "speed bumping" the Power Mac 9500 to 150 MHz. But Power Computing once again zoomed past, this time with two new Power Macintosh clones, clocked at 166 and 180 MHz.

The high end is not the only place where changes took place in the spring. Along with a 150-MHz 9500, Apple released 150- and 132-MHz versions of the 8500. The 7500 was replaced by the 7600, reflecting a jump from a 100-MHz 601 CPU to a 120-MHz 604. And at the low end, Apple beefed up the processor in the 7200 to a 120-MHz 601. The 7200 was previously available with either a 75-MHz or a 90-MHz PowerPC 601.

At the same time, Power's product line underwent dramatic change. The company's top-end PowerWave systems, which came with 120-, 132-, or 150-MHz processors, have been replaced by the PowerTower, a three-slot minitower. This system comes with a 166- or 180-MHz 604 onboard. Also gone from the Power price list is the entry-level PowerCurve series, which featured a 120-MHz 601. It has been replaced by the PowerCenter, which is available with a 120-, 132-, or 150-MHz CPU. Unlike Apple, Power no longer uses PowerPC 601 chips.

POWER GRABS THE POLE POSITION

The most exciting of this latest round of Mac contenders is, without a doubt, the PowerTower 180. At the heart of Power's top-of-the-line machine lies the fastest PowerPC chip available, a 180-MHz 604. On our MacBench tests of near-final systems, the PowerTower 180 clocked in at 14 percent faster than Apple's new 150-MHz top-of-the-line system. Before you sneer at a mere 14 percent, note that Apple's

PHOTOGRAPHY / STEVEN UNDERWOOD

own speed-bump of the 9500, from 132 MHz to 150 MHz, yields a 17-percent boost in processing speed, according to MacBench. The PowerTower 166, as expected, finished between the new 9500 and the PowerTower 180, about 5 percent faster than the former.

One reason the PowerTower doesn't do even better is that its motherboard design doesn't support interleaved memory, as the Apple 9500 and the PowerWave boards do. Why would Power abandon a superior memory architecture in designing a high-end machine? That's an interesting story. The PowerTower's motherboard is based not on Apple's high-end Tsunami architecture, used in the 9500, but on the cheaper Catalyst architecture, used in the 7200.

This may seem like an odd choice, but there's a good reason. The Tsunami motherboard has a maximum processor-bus speed of 50 MHz. Because the current 604 chip can run no faster than three times the speed of the processor bus, Tsunami-based systems can't go above 150 MHz. This won't change until the PowerPC 604e chip becomes available, later this year. With a 604e processor, Apple will be able to push the 9500 to 200 MHz.

Curiously, the processor bus in the lower-end Catalyst architecture can be pushed to 60 MHz. That's why Power chose this design for its superfast PowerTower systems — the same design, incidentally, on which it bases its PowerCenter (formerly PowerCurve) systems.

Although Apple's specs for the 9500, other than the processor speed boost, haven't changed much, Power has made some nice improvements over its previous high-end systems. The PowerWave shipped with the same ATI Xclaim GA card as the 9500/120. This time out, Power has chosen a faster card, the IMS TwinTurbo-128M. On our MacBench Graphics Mix and Publishing Graphics Mix tests, the PowerTower/TwinTurbo combination outpaced the 9500/ATI twosome by 31 percent to 49 percent. And the TwinTurbo has 4 MB of VRAM, twice what Apple ships with the 9500's ATI card. That means users can work in 24-bit color at much higher resolutions.

MOVING UP to the 604

= reference model

Power Mac 7500 with Apple 604/132 upgrade card

Power Mac 7500 with Apple 604/120 upgrade card

Power Mac 7500/100

The high-speed Micropolis AV drive in the PowerTower also beat the 9500/150's Seagate drive. Curiously, although the AV drive is designed for the high throughput typical of digital-video and publishing applications, the PowerTower's drive ran neck and neck with the 9500/150's in MacBench's Publishing Disk Mix test. It was on the standard Disk Mix, which mimics the small-block access typical of business applications, that the Micropolis drive stood out — it was more than 1.5 times as fast as the 9500/150's Seagate.

Power bundles Connectix's Speed Doubler with the PowerTowers, which features a RAM cache that helps small-block transfers far more than throughput-intensive large-block transfers.

The PowerTower's speed on the MacBench CD-ROM Mix test was nothing short of astonishing. This, too, is attributable to Speed Doubler, as well as to the FWB CD-ROM ToolKit driver Power includes. When we installed these enhancements on Apple's 9500/150, we saw CD-ROM speed that equaled that of the PowerTower.

The PowerTower's impressive speed credentials shed light on an

HOW THE NEW MAC OS SYSTEMS STACK UP / tested configurations

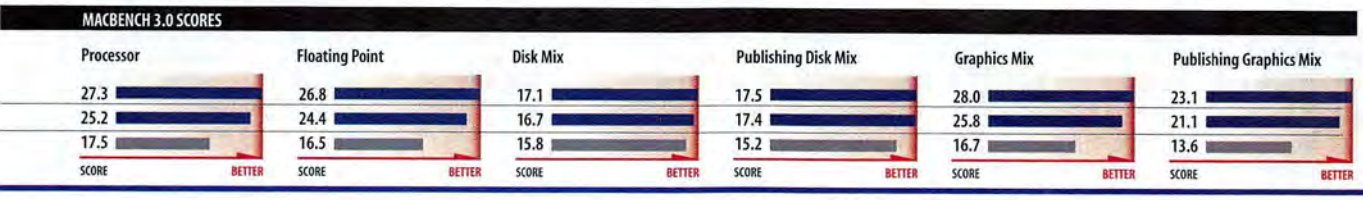
USING MACBENCH 3.0, we measured the speed of the new lineups from Apple and Power Computing. MacBench measures a Mac's subsystems — that is, it isolates the various components that contribute to a Mac's performance. The Processor test measures raw computing power on the full range of Mac tasks; its focus is the CPU and memory subsystem. The Floating Point test measures specialized mathematical calculations. The Disk Mix and Publishing Disk Mix tests measure the speed of the disk subsystem. The Disk Mix test emulates how business applications such as Microsoft Word and Excel utilize a hard-disk drive. The Publishing Disk Mix test emulates Photoshop and QuarkXPress drive usage. The Graphics Mix and Publishing Graphics Mix tests measure the speed of the graphics subsystem. Like the Disk Mix tests, the Graphics Mix test is based on business tasks and the Publishing Graphics Mix test is based on DTP tasks. All tests were conducted with System 7.5.3 installed. All MacBench 3.0 scores are relative to those of a Power Mac 6100/60 with an internal 250-MB Quantum drive.

= reference model = fastest in vendor's lineup

Model	Price*	Processor	Installed RAM	Installed L2 Cache	Hard-Disk Capacity	Hard-Disk Mechanism	Graphics Adapter
APPLE COMPUTER SYSTEMS							
Power Mac 9500/150	$4,371	604/150	16 MB	512K	2 GB	Seagate ST32430N	ATI Xclaim GA
Power Mac 9500/132	$4,599	604/132	16 MB	512K	2 GB	Seagate ST32430N	ATI Xclaim GA
Power Mac 8500/150	$4,371	604/150	16 MB	256K	2 GB	Seagate ST32430N	Built-in VRAM
Power Mac 8500/132	$3,627	604/132	16 MB	256K	1 GB	Quantum Fireball 1280S	Built-in VRAM
Power Mac 8500/120	$3,999	604/120	16 MB	256K	1 GB	Conner CFP1080S	Built-in VRAM
Power Mac 7600/120	$2,562	604/120	16 MB	256K	1 GB	Quantum Fireball 1280S	Built-in VRAM
Power Mac 7500/100	$2,699	601/100	16 MB	none	1 GB	Conner CFP1080S	Built-in VRAM
Power Mac 7200/120	$2,025	601/120	16 MB	256K	1 GB	Quantum Fireball 1280S	Built-in VRAM
Power Mac 7200/90	$1,549	601/90	16 MB	none	500 MB	Quantum Maverick 540S	Built-in VRAM
POWER COMPUTING SYSTEMS							
PowerTower 180	$4,995	604/180	32 MB	512K	2 GB	Micropolis 4221-09 1128RAAV	IMS TwinTurbo-128M
PowerTower 166	$4,595	604/166	32 MB	512K	2 GB	Micropolis 4221-09 1128RAAV	IMS TwinTurbo-128M
PowerWave 604/150	$4,349	604/150	16 MB	512K	2 GB	Conner CFP2105S	ATI Xclaim GA
PowerCenter 150	$2,926	604/150	16 MB	256K	850 MB	Quantum TRB850S	Built-in VRAM
PowerCenter 132	$2,426	604/132	16 MB	256K	850 MB	Quantum TRB850S	Built-in VRAM
PowerCenter 120	$2,144	604/120	16 MB	256K	850 MB	Quantum TRB850S	Built-in VRAM
PowerCurve 601/120	$2,117	601/120	16 MB	none	1 GB	Conner CFP1080S	Built-in VRAM

*Estimated street prices; Power Computing direct prices.

APPLE INITIALLY SHIPPED the Power Mac 7500 with a 100-MHz processor. It now sells 120- and 132-MHz 604 processor upgrade cards for speeding up your system. Using MacBench 3.0, we compared the speed of the 7500/100 with that of a unit upgraded with each of the faster processors. The 7500/100 had no L2 cache installed; the upgraded systems had 256K of L2 cache. All tests were run with System 7.5.3. All MacBench 3.0 scores are relative to those of an Apple Power Mac 6100/60 with an internal 250-MB Quantum drive.



intriguing point: Clones are supposed to be cheap. The PowerTower 180 isn't. In fact, in its $4,995 QuickStart configuration, the model we tested, it is the most expensive single-processor Mac OS system available today, costing some $600 more than the estimated street price of Apple's 9500/150.

But take a closer look. The PowerTower 180 comes with 32 MB of RAM, versus the 9500/150's 16 MB. Its accelerated-graphics card includes 4 MB of VRAM, compared to the 9500/150's 2 MB. By the time you outfit a 9500/150 with RAM and VRAM equivalent to those of the PowerTower 180 — not to mention a keyboard, which Apple's machines lack but which comes standard with all Power Computing systems — the PowerTower 180 starts to look like a bargain. And you can chop an additional $400 off the 180's price if you're willing to settle for the slightly slower PowerTower 166.

The 9500/150 does have one advantage over the PowerTower 180. Until Power ships its first six-slot machine, later this summer, the 9500/150 is the only machine with six PCI slots. For maximum expansion capability, the 9500 is the only game in town, for now.

THE 8500 PASSES ON THE TURN

If the edge goes to Power at the high end, Apple's 8500, now available in 132- and 150-MHz models, is a strong contender for the midrange. What distinguishes the 8500 is its integrated digital-video input and output; no other desktop computer on the market, Mac or PC, can match it. If you need top-notch broadcast-quality video, the 8500's built-in circuitry will come up short, but for more-casual use — in-house corporate use, educational use — it's a winner. Power Computing, although it promised months ago to offer low-cost PCI-based digital video, has yet to deliver on its commitment.

The 8500 also holds up well in terms of raw speed. Compared to PowerCenter systems with similar processors, the 8500s were about 10 percent faster on MacBench's Processor test. This is probably due to their use of interleaved memory, a feature they have in common with the 9500 but that PowerCenter systems lack. The 8500s also do significantly better in terms of disk speed — some 50 percent better — than PowerCenter systems with equivalent processors.

On the MacBench graphics-subsystem tests, the PowerCenters

HOW TO Make Your CD-ROM Sing

THE POWERTOWER scores on MacBench's CD-ROM Mix test were the best we've seen. The difference is not in the CD-ROM drive, however. Power ships the FWB CD-ROM ToolKit driver, along with Connectix's Speed Doubler, preinstalled on the hard disk, which improves CD-ROM performance by caching large amounts of data in memory. When we installed the same software on a 9500/150, its CD-ROM Mix scores shot up as well.

	4X CD-ROM MECHANISM	CD-ROM DRIVER	SPEED ACCESS INSTALLED	MACBENCH 3.0 SCORES CD-ROM MIX
PowerTower 180	Toshiba XM-5401TA	FWB CD-ROM ToolKit	yes	90.7
PowerTower 180	Toshiba XM-5401TA	FWB CD-ROM ToolKit	no	29.3
Power Mac 9500/150	Matshita CR800S-A	FWB CD-ROM ToolKit	yes	83.2
Power Mac 9500/150	Matshita CR800S-A	FWB CD-ROM ToolKit	no	24.4
Power Mac 9500/150	Matshita CR800S-A	Apple CD-ROM	no	15.0

SCORE BETTER

and 8500s got a split decision: The 8500s led by 13 to 16 percent on the Graphics Mix test, but they fell behind by 12 to 13 percent on the Publishing Graphics Mix test. This was due largely to the poor performance of the 8500's built-in video circuitry in accelerating the drawing of vertical lines.

Since we've praised the 8500 for its video skills, it seems only fair to raise the small matter of price. The 8500/150 we tested was nearly $1,450 more than the PowerCenter 150. The 8500/132's sticker price was $1,200 above that of the PowerCenter 132. Granted, the 8500/150 had a 2-GB drive and the 8500/132 a 1-GB drive, whereas the PowerCenters had only 850-MB drives. Still, that's a huge price difference.

CRASH-TEST DUMMIES?

In any new set of CPU announcements, the excitement is always at the high end. The bulk of sales, however, are found at the other end of the spectrum, where the cost-conscious part with their cash.

Power's lowest-end system, the PowerCenter 120, available at $1,899, distinguishes itself as the lowest-cost 604-based system (if you're bold enough to confront today's bloated software offerings with only 8 MB of RAM, that is). Apple's comparable offering, the 7600/120, costs around $450 more for a similar configuration. It also offers digital-video input, which the PowerCenter 120 doesn't. Both systems sport 120-MHz 604 processors.

Although it might appear at first glance that the PowerCenter 120 is the better deal, a closer examination of the 7600/120's test results shows that the 7600/120 bested the PowerCenter 120 on most MacBench tests, particularly on the Processor and Graphics Mix tests. The Disk Mix and Publishing Disk Mix tests, on which the 7600/120 also did better, are heavily dependent on the drive mechanism; presumably the PowerCenters would do better with higher-capacity, faster drives than the 850-MB unit we tested.

Is an extra $450 a fair increment for a performance edge, digital-video input, and the Apple logo? Unless you know you won't want the video capability somewhere down the road, we'd say yes.

Bringing up the low end of Apple's lineup is the Power Mac 7200/120, a speedier version of the original 7200/75 and 7200/90. It costs only $120 less than a PowerCenter 120 for similar configurations (if you consider the $100 keyboard, it's a wash), and its processing speed falls below that of Power's low-end offering. Furthermore, the 7200 has no processor-upgrade slot. For this reason, we question Apple's wisdom in even bothering to keep this car on the track.

UPGRADE PIT STOP

Apple appears to have conceded the severe limitations of the 7200 by offering a logic-board upgrade for 7200/75 and 7200/90 owners. This $1,300 upgrade will turn your limping 7200 into a sparkling new 7600/120, complete with a processor-card upgrade slot and digital-video input. There is a catch, however: You have to spend another $600 on a 120-MHz processor-upgrade card. In other words, to upgrade to a working system, you have to spend nearly $2,000.

And that's a bare-bones system. The original 7200 shipped with only 8 MB of RAM; if you want a more reasonable complement of 16 MB, figure in another $250. And throw in an extra $125 for 256K of Level 2 (L2) cache, which the 7200 lacked and which is highly recommended. We won't mention the fact that the 7200 came with a 500-MB hard-disk drive. The grand total: nearly $2,300, just $250 shy of the expected street price of a brand-new 7600/120. Hmm.

Apple's 8500 logic-board upgrade, for $1,799, may prove a more attractive offer. It can upgrade a Quadra 800 or 840AV or a Power Mac 8100. Again, you have to purchase a processor-upgrade card in addition: $599 for the 120-MHz 604, $899 for the 132-MHz 604. Even if you go for the faster processor, your total will be nearly $1,000 less than the cost of a new 8500/132. However, proceed with caution if you're upgrading from a Quadra model — you can't move your Quadra RAM into a Power Mac.

Apple will also sell its 120- and 132-MHz 604 processor-upgrade cards to 7500 and 8500 owners; Power Computing will market only a 120-MHz 604 card. The good news: At $295, Power's card will sell for exactly half the price of Apple's 120-MHz offering. The bad news: Power has not yet decided to make it available to Apple Mac owners. To order one, you have to provide Power with the serial number of your PowerCurve 601/120.

Later this year, Power will offer 132- and 150-MHz 604 upgrade cards, for $495 and $695, respectively. With prices like those, Power can expect Apple Power Mac customers to be beating down the door to get at its upgrades. But Power is still unsure about whether it can support the demand such cheap upgrade cards would generate.

THE CHECKERED FLAG

A mere two years ago, it looked like Apple would keep the Mac OS a single-entrant race and that the Mac faithful would forever cast their collective gaze toward Cupertino for the latest round of new Mac models. Clones seemed a distant possibility, and real competition for Apple seemed even more distant. The notion that twice in one year, it would be a clone vendor — not Apple — that would push the Mac performance envelope was positively heretical.

Apple is no longer the only contender in this competition, and a Mac doesn't get the pole position just because it has a multicolored logo on the case. In the latest lap, Power Computing has fielded some killer machines. Apple will be hard-pressed to catch up.

Henry Bortman is *MacUser*'s technical director.

PowerBook® Tools from Newer®

INTRODUCING NUPOWR™ AND ULTRADOCK™ THE LATEST IN A FULL LINE OF POWERBOOK POWER TOOLS.

Get your 500 series PowerBook tooling along at 5300 speed with NUpowr.

Don't settle for less than PowerPC speed with your PowerBook 500 series computer. NUpowr replaces the 4MB 040 processor in your PowerBook 500 with a 117MHz 603e PowerPC with either 0MB, 4MB or 8MB of RAM for up to 360% faster performance. So you can get 5300 performance for only a fraction of the cost. And, for a limited time, NUpowr is bundled free with Connectix® Speed Doubler™.

UltraDock: A workbench full of tools for your PowerBook Duo®.

The UltraDock 16sce is so loaded with ports for desktop features, it's like a portable workbench for Duo users. With UltraDock, you can connect to a color monitor, an Ethernet network, SCSI devices, external speakers – even a floppy drive. Or if you want to add just one desktop feature, snap on a pocket-size Newer MicroDock™. Choose from Color, SCSI, Ethernet or Floppy Drive. Each one includes an ADB port for a desktop keyboard.

Or build a stacked deck of PC Cards for PowerBooks.

We've got the largest selection of PC cards for the Mac™ including 28.8 data/fax modems with cellular capability, 10BaseT Ethernet, video-in/capture cards and Flash RAM in 5MB, 10MB, 20MB, 30MB and 40MB sizes for Macs or digital cameras.

And Newer has always been on the cutting edge of memory. So tool up, PowerBook users. With power tools like these, who needs desktops?

Newer® TECHNOLOGY

1-800-678-3726
316-943-0222
Fax: 316-943-0555
E-Mail: sales@newertech.com
Website: http://www.newertech.com

800-678-3726

Newer is a registered trademark of Newer Technology, Inc. NUpowr, UltraDock, MicroDock and EtherTech are trademarks of Newer Technology. PowerBook, PowerBook Duo and Mac are trademarks or registered trademarks of Apple Computer Company, Inc. All other product names are trademarks or registered trademarks of their respective holders. ©1996, Newer Technology.

INNOVATORS IN POWER & PERFORMANCE

Lifetime Warranty On Memory | Toll Free Technical Support | 30-Day Money Back Guarantee | 100% Guaranteed Compatible

UMAX
Microtek
ScanMaker 2532
AGFA
HORIZON ULTRA

PHOTOGRAPHY / GIAMPIERO BENVENUTI

THE Big PICTURE

Large-format flatbeds handle bigger originals than standard scanners, as well as *more* originals for batch scans — a big plus for production environments. They can't beat the drums — drum scanners, that is — but two come darn close.

BATCH SCANNING IS WHERE IT'S AT for high-volume, deadline-pressured prepress houses, service bureaus, and art departments. For users working in those environments, the standard 8-x-14-inch scanning area of most flatbed scanners is just too small. For starters, it can't handle large-sized original images. More important, if you want to save time by scanning multiple originals simultaneously, you're limited in the number of items you can fit on the scanning area.

Traditionally, prepress users who require the ultimate in image quality and scanning productivity have relied on expensive drum scanners for batch jobs. But not everyone needs the image perfection offered by a drum scanner and not everyone can afford the $40,000-to-$80,000 price tag. Enter large-format flatbed scanners, cost-effective alternatives to mid-range drum scanners that offer a scanning area of approximately 11 x 17 inches. In the past year, the number of vendors offering large-format scanners has grown, and several of the new products boast aggressive prices. To see how the current crop of large-format flatbed scanners measures up, MacUser Labs tested and evaluated the five scanners in the $7,000-to-$30,000 price range. We scrutinized each scanner's image quality, scanning speed, software tools, and overall ease of use. By and large, we found that each can be a viable production tool, but in the end, you get just what you pay for.

BY ROMAN LOYOLA

QUALITY CONTROL

Although you may not require the top-notch image quality of a drum scanner, you still need good-looking images. If you're putting together a clothing catalog, for example, you want the blue blazers to look blue, not purple, and the gray slacks to look gray, not brown. A good scanner must accurately capture a wide range of colors as well as handle various levels of brightness and contrast correctly, provide good color saturation, and maintain a high level of image detail. And the better the image quality of a raw scan, the less time you'll need to spend tweaking the image to make it right.

To test the image quality of each of the five scanners, we used a Power Mac 9500/132 equipped with a Radius ThunderColor 30/1600 graphics card and a Radius PressView 17 SR monitor. We calibrated the complete system with the Radius ProSense calibrator. For output, we used a NewGen ChromaxPro dye-sublimation printer in order to check basic color accuracy and then sent our final scans to a service bureau to obtain 3M Matchprint proofs.

The original we scanned was a 5-x-7-inch color transparency from the Graphic Arts Technical Foundation (Pittsburgh, Pennsylvania; 412-621-6941). We chose the GATF transparency because it challenged the scanning prowess of each device in several ways — it had a wide color range as well as skin and other natural tones, a gray gradient background, highlights, shadows, and fine detail.

For each scanner, we first performed a raw (unadjusted) scan and then used the software tools bundled with each device to improve the image quality as best we could. We made two Matchprint proofs for each device — one of the raw scan and one of the corrected scan — and compared them with proofs of the same original scanned by the Howtek Scanmaster 7500, a $56,000 large-format drum scanner. What we found was that although all the scanned images required adjustment, some needed much more work than others — an important consideration for users working in time-sensitive production environments.

The scanner that produced the best-looking raw scan was the new $29,950 Scitex SmART 320. It was the most expensive scanner we tested but was also the newest and least expensive addition to the Scitex SmART line. Printouts were consistent with what we saw on-screen, and colors were well saturated. Although highlights showed a slight cyan cast and skin tone had a bit too much magenta, these problems were barely noticeable and were easy to correct with the software tools. The number of artifacts was almost nil, and the Scitex scanner was the only one that was able to reproduce the original's gray gradient background without a hitch.

Second in line for image quality was the $15,900 Howtek Scanmaster 2500. Although the colors weren't as vibrant as those of the Scitex scanner, the Howtek scanner boasted good color consistency between screen and output, good reproduction of details in shadow areas, and very few artifacts. As with the Scitex scanner, only minor image adjustments were necessary.

Placing third on the image-quality scale, the $17,995 Agfa Horizon Ultra produced images that had a pronounced yellow cast, and some image areas were blurred. We were able to eliminate the cast and sharpen images by using the scanner's software tools, but these adjustments required more work than the adjustments of the images from the Scitex and Howtek scanners.

Not surprisingly, images scanned by the two lowest-cost scanners, the $12,995 PixelCraft Pro Imager 8200 and the $6,995 UMAX Mirage D-16L, required the most adjustment. Although the PixelCraft scanner did a good job of reproducing the gray gradient background, colors were overly dense and there were many artifacts. The UMAX scanner's images suffered from a pronounced yellow cast that blew out the highlights, made the gray background look brown, and gave skin tones an unnatural look. However, using each scanner's software tools, we were able to dramatically improve the images, although achieving the results we wanted took two to three times as long as with the Scitex and Howtek scanners.

One image-quality factor you'll want to consider is bit depth. The higher the bit depth a scanner supports, the more color information it captures and the more data you have to work with when tweaking an image. The UMAX scanner captures 10 bits of data per color (red, green, and blue), whereas the Agfa, Howtek, PixelCraft, and Scitex scanners each capture 12 bits of data per color.

WIN, PLACE, SHOW

Although you can fit more originals onto the bed of a large-format scanner than you can onto that of a standard-sized one, you'll find that each scan takes longer to perform than with a standard flatbed scanner, because of the larger scanning area. However, within the set of large-format scanners we tested, we discovered a wide variation in scanning speed. To compare the scanners, we first timed a raw scan of a single original — the 5-x-7-inch GATF color transparency — at 300 dpi and then timed a raw scan of multiple originals at 300 dpi. Our scanning times did not include times for prescans or the time required to make image adjustments.

The Howtek and Scitex scanners let you scan directly in the CMYK color space and make adjustments there — a big plus for prepress

THE BOTTOM LINE

A LARGE-FORMAT FLATBED SCANNER should provide you with more than just an extra-large scanning area that can accommodate multiple items, for batch scans, and large originals. In rating the five scanners, we gave image quality and software tools for image adjustment the most weight but we also considered speed and price. With these factors in mind, one scanner stood out from the rest.

+ / OUTSTANDING ● / ACCEPTABLE − / POOR

RATING	PRODUCT	PRICE	IMAGE QUALITY	SPEED	SOFTWARE
4½	Howtek Scanmaster 2500	●	+	−	+
4	Scitex SmART 320	−	+	−	+
3½	UMAX Mirage D-16L	+	●	+	−
3	Agfa Horizon Ultra	●	●	●	−
3	PixelCraft Pro Imager 8200	●	●	+	−

BEST BUY

The Howtek scanner offers an excellent combination of good image quality, powerful software tools, and competitive price ($15,900). It wasn't among the fastest scanners we tested, but the image quality it provides is so good you won't have to spend a lot of time tweaking images. Its Trident software requires several days of training, but in the end, you'll appreciate the fine level of control it provides over image adjustment.

LISTING IS ALPHABETICAL WITHIN GROUPS OF EQUAL MOUSE RATINGS.

Features of LARGE-FORMAT FLATBED SCANNERS

	AGFA HORIZON ULTRA	✓ HOWTEK SCANMASTER 2500	PIXELCRAFT PRO IMAGER 8200	SCITEX SMART 320	UMAX MIRAGE D-16L
List price	$17,995	$15,900	$12,995	$29,950	$6,995
Bit depth	36 bits	36 bits	36 bits	36 bits	30 bits
Optical resolutions	1,200 x 2,000 dpi	600 x 1,200 dpi	1,400 dpi at 11.7 x 17 in. 1,900 dpi at 8.5 x 11 in.	400 dpi at 11 x 17 in.	400 x 800 dpi at 12 x 17 in. 800 x 1,600 at 6 x 17 in.
Max. interpolated color resolution	2,000 dpi	4,800 dpi	4,000 dpi	800 dpi*	9,600 dpi
Max. scanning area (reflective)	11.7 x 16.5 in.	13 x 18 in.	11.7 x 17 in.	11.8 x 17 in.	12 x 17 in.
Max. scanning area (transmissive)	9.5 x 13.4 in.	13 x 18 in.	8.5 x 12 in.	10.3 x 17 in.	12 x 17 in.
Vendor-rated dynamic range	3.4	3.4	3.6	3.6	3.2
One- or three-pass scanning	three	one	three	one	one
Bundled software driver/tools	FotoFlavor, FotoLook, FotoTune	Trident	ColorAccess, QuickScan	SmART Color	MagicMatch, MagicScan
Separate Photoshop plug-in	●	●	●		●
Built-in transparency adapter	●	●	●	●	●
Standard on-site training	●†	●	●	●§	
Money-back guarantee			●		
Toll-free tech support	●		●	●	●
Warranty	90 days	90 days	180 days	3 months	1 year
Extended-warranty cost	$2,365 for 1 year	$895 for 1 year	$995 per year	$270 per month	NA◊
Company	Agfa Division, Bayer Wilmington, MA 800-685-4271 508-658-5600 508-658-6285 (fax) http://www.agfahome.com/	Howtek Hudson, NH 800-444-6983 603-882-5200 603-880-3843 (fax) http://www.howtek.com/	PixelCraft Oakland, CA 800-933-0330 510-562-2480 510-562-6451 (fax)	Scitex America Bedford, MA 800-685-9462 617-275-5150 617-275-3430 (fax) http://www.scitex.com/	UMAX Technologies Fremont, CA 800-562-0311 510-651-4000 510-651-8834 (fax) http://www.umax.com/

✓ MacUser BEST BUY *Supports up to 2,630 dpi (5,260 dpi interpolated) with 35mm slides. †One-day training available for $1,250.

§Computer-/video-based self-training package included. ◊Extended-warranty program planned for later this year.

pros. The UMAX scanner can scan in CMYK, but because you can use the color-correction tools that come with the scanner only in the RGB color space, you'll have to work in Photoshop if you want to make adjustments in CMYK. The Agfa and PixelCraft scanners work only in RGB, so prepress professionals have to convert their final scans to CMYK and adjust them in Photoshop.

Although its images required a lot of adjustment, the UMAX Mirage D-16L boasted the fastest raw scans for the single and the batch scan. In our single-image test, it finished in just under 50 seconds. The PixelCraft Pro Imager 8200 ranked second in the single-image test, finishing in a little more than 1 minute. The Agfa Horizon Ultra finished in 1 minute, 40 seconds. The Agfa and the PixelCraft scanners were surprisingly fast, given that each is a three-pass scanner (the only two of that type we tested).

The Howtek Scanmaster 2500 and the Scitex SmART 320 finished last in the single-image test, with the Howtek scanner finishing in 3 minutes and the Scitex unit in close to 4. But keep in mind that although these scanners took the longest to perform the scans, each scans directly in CMYK.

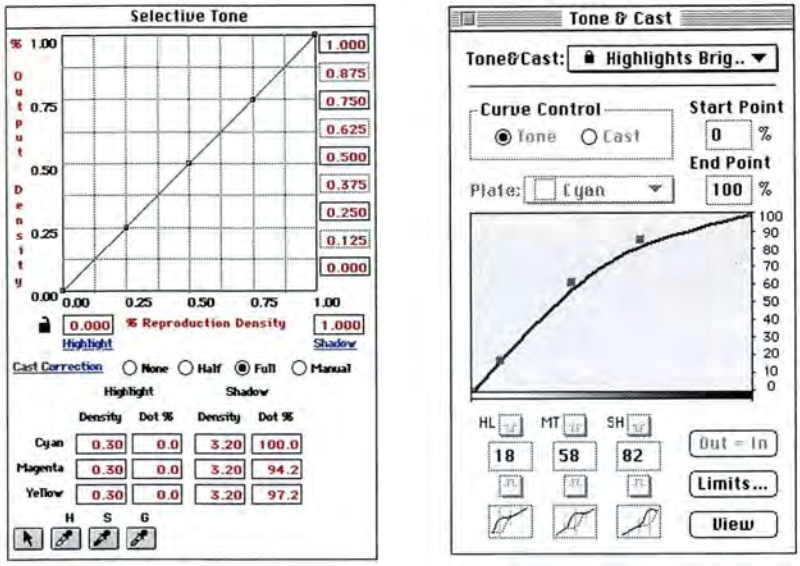
We got slightly different results for our batch-scan test, which consisted of scanning four 4-x-5-inch transparencies and one 6-x-6-centimeter transparency. The PixelCraft scanner finished 10 seconds behind the speedy UMAX Mirage D-16, which took a little more than 4 minutes to perform the batch scan. However, there's one caveat with the PixelCraft scanner: When you scan in transparency mode, the maximum scanning area is reduced to 8.5 x 12 inches. Because we couldn't fit all five of our originals onto the PixelCraft scanner's transparency scanning area, its batch-scanning time is based on scanning only three of the five originals. The Agfa and Scitex scanners also have scanning-area limitations for transparencies, but each was able to accommodate all five originals.

The Howtek scanner finished its batch scan of the five originals in slightly less than 5 minutes. The two slowest scanners — the Agfa and the Scitex SmART 320 — each took more than 8 minutes. We expected better results from the Scitex scanner, but it was slow because it calibrates itself after it has scanned each original in the batch. The good news is that you can always be sure of calibrated scans; the bad news is that scanning times are relatively long for production environments. The Scitex scanner also requires the use of a special plastic mask that blocks out extraneous light, which can degrade image quality. However, before you scan, you must cut a hole for each original and tape the original to the mask.

One note about batch scanning: The Howtek and Scitex scanners can accommodate reflective media and transparencies in a single batch scan. The UMAX scanner can too, according to the company, but UMAX doesn't recommend combining media. The Agfa and PixelCraft scanners can scan in *either* reflective *or* transparency mode; you can't scan the two types of media at one time.

Polish Your Image

NO MATTER HOW GOOD a raw scan is, you'll almost always want to tweak the image to make it look the way *you* think it should. Of the five large-format flatbed scanners we reviewed, two — the Howtek Scanmaster 2500 and the Scitex SmART 320 — feature software tools that stand worlds apart from those of the other scanners when it comes to control over an image. Another key feature for prepress pros is the ability to scan and adjust images in CMYK during the prescan stage, an ability both the Howtek and the Scitex scanners provide.



SOPHISTICATED CONTROLS, such as the palette shown here (left) for tone correction, are a hallmark of the Howtek Scanmaster 2500's software. Compare these tools with their counterparts in the PixelCraft Pro Imager 8200's software (right) — the PixelCraft tools get the job done, but they don't offer the same level of control as the Howtek tools.

SOFTWARE TOOL KITS

Another way to distinguish one scanner from another is to look at the software tools that come in the box. The scanners we tested came with two main types of tools — those that work in CMYK and those that work in RGB. We favor software that lets us scan and make adjustments to our images in CMYK, the colors used for printing. We also like software that lets us make as many adjustments as possible to our prescan images. That way, we're working with all the bits of color captured by the scanner (30- or 36-bit color, depending on the scanner). When you have to make adjustments to an image in Photoshop or a color-separation package, you're stuck working with only the bits that were saved in the image after the final scan (24-bit color).

The Howtek Scanmaster 2500 and the Scitex SmART 320, which let you scan and adjust in CMYK, provide the most-robust software tools. But the flip side of the software tools' power is a steep learning curve — be prepared to spend several days learning the ins and outs. Once you're familiar with the software, however, you'll appreciate the flexibility and power each set of tools offers.

Howtek's Trident software, the same as what comes with the more expensive Scanmaster 7500 drum scanner, offers three main palettes for image adjustment — one for tweaking highlights and shadows, one for adjusting color cast, and one for unsharp masking. We liked the level of control these palettes provide: You can enter numeric values and selectively adjust areas of an image. The one drawback is that the tools lack keyboard shortcuts.

Scitex's SmART Color software uses a similar series of palettes, but what makes Scitex's software noteworthy is the handy and well-designed Color Correction tool, which lets you fine-tune a selected color. One important feature we missed, however, is the ability to rotate and invert images — for such a powerful set of tools, this is a surprising omission.

The Agfa Horizon Ultra comes with FotoLook, a Photoshop plug-in that handles images in RGB. You *can* scan in CMYK by using FotoLook, but you first have to do some time-consuming prep work that involves scanning an IT8 color-calibration target and using it to create a reference file in Photoshop. The reference file, which FotoLook uses to work in CMYK, is based on CMYK curves you create in Photoshop. But because so many variables are involved in creating the curves — including proper calibration of the monitor, calibration of the output devices, and the veracity of the scanned calibration target — the process leaves lots of room for error.

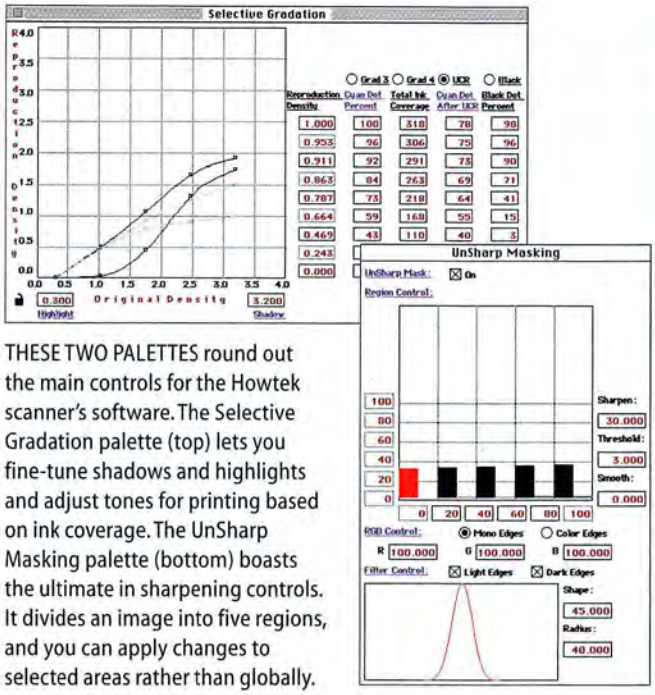
The PixelCraft Pro Imager 8200's software divides the scanning process into two parts. The first phase involves QuickScan, a Photoshop plug-in that captures images in RGB. We found that this phase went without a hitch, but if you want to create color separations, you have to go on to the second phase — bringing the images into ColorAccess, PixelCraft's color-separation software. Not only is the software confusing but we were also never able to get it to work properly — once we'd created and saved a CMYK image in ColorAccess, we weren't able to open it.

The UMAX Mirage D-16L comes with MagicScan, a Photoshop plug-in, and MagicMatch, a stand-alone application. We couldn't discern any differences between the plug-in and the application. Moreover, the software offered the most simplistic level of control over images of any of the scanner software we looked at.

GET THE PICTURE

Belying the claims of several vendors of large-format scanners, none of the scanners we tested produced results that were as good as those of the Howtek drum scanner. The Howtek and Scitex flatbed scanners came quite close, however, and their accompanying software tools are more than up to the job of making the necessary image corrections.

Considering these two high-quality contenders, we feel that the Howtek scanner offers the best overall combination of image quality, speed, powerful software tools, and price. It's not the fastest scanner we tested, but it will save you considerable time making image



THESE TWO PALETTES round out the main controls for the Howtek scanner's software. The Selective Gradation palette (top) lets you fine-tune shadows and highlights and adjust tones for printing based on ink coverage. The UnSharp Masking palette (bottom) boasts the ultimate in sharpening controls. It divides an image into five regions, and you can apply changes to selected areas rather than globally.

THE SMART COLOR software that comes with the Scitex SmART 320 scanner *is* truly smart — we especially liked the Color Correction palette (top), which lets you select a color from your image and tweak the CMYK values. The Color Control palette (bottom) is for making changes to an entire image. The Before and After displays in each palette are particularly helpful for getting just the right shades.

adjustments, because it can scan directly in CMYK and the quality of its raw scans is so good. When you do need to make adjustments, Howtek's Trident software provides all the tools you'll need. Learning to use the software takes time, but once you're familiar with it, you'll appreciate its power. If you're looking for top-drawer image quality but you're not prepared to pay top dollar for a drum scanner, you'll want to consider the Scitex SmART 320.

The UMAX Mirage D-16L offers a good alternative for users on a budget. But be aware that what you save in dollars, you pay in image-correction time.

In the old days, associate editor Roman Loyola's ThunderScanner made him assemble an image from small pieces he'd scanned. MacUser Labs project leader Rick Oldano managed the testing for this report.

SCANNING AHEAD / more options for buyers

THE LARGE-FORMAT-SCANNER ARENA continues to heat up. Veteran scanner vendors ScanView and Linotype-Hell have each announced a new offering in this category, but ScanView's entry won't be available until about the time this article appears and Linotype-Hell's product shipped just after we completed the review.

ScanView (415-378-6360), best known for its quality desktop drum scanners, will make its first foray into the flatbed-scanner arena with the ScanMate F8. A pricey offering (it will cost $30,000 to $40,000), the scanner is intended for use by newspapers, commercial printers, and service bureaus. What's different about the ScanMate F8 is its design — it's a freestanding floor model. It has a maximum scanning resolution of 4,000 dpi and the ability to scale scanned images destined for a 150-line screen at 1,333 percent.

The ScanMate F8 can handle positive and negative film as well as color, grayscale, continuous-tone, and halftone images and line art. The scanning area is 11 x 17 inches for reflective media and 8 x 10 inches for transmissive media.

With a dynamic range of 3.6, the scanner can acquire images at 48 bits per pixel when used with ScanView's ColorQuartet image-acquisition software. ColorQuartet is designed not only for acquisition but also for color correction and color separation.

SCANVIEW'S SCANMATE F8 takes scanning to new heights, literally, with its unusual design. The pedestal that supports the scanning bed houses the device's optics and electronics.

At the opposite end of the price spectrum is the Opal, from Linotype-Hell (800-799-4922 or 516-434-2700), a company that is also known for its successful line of drum scanners. Priced at just under $10,000, the Opal has a maximum scanning area of 12 x 17 inches for reflective and transmissive media.

The Opal captures data at 10 bits per channel (RGB), using a one-pass, trilinear CCD (charge-coupled device). For the 12-x-17-inch scanning area, the Opal supports 400-x-800-dpi resolution, scalable from 10 to 300 percent; for the 6-x-17-inch area, it supports 800-x-1,600-dpi resolution, scalable from 10 to 600 percent. The larger scanning area can interpolate to 6,400 x 6,400 dpi and the smaller to 9,600 x 9,600 dpi.

The Opal ships with Linotype's powerful LinoColor prepress scanning and color-separation application, which is based on the company's Color Technology. LinoColor, which requires a Power Mac or compatible to run, makes full use of Apple's ColorSync 2.0 color-management system. For those who prefer to acquire images in Photoshop or who own a 680x0 Mac, the Opal comes with the ScanLite Photoshop plug-in. In the scanner package, you also get a full edition of Photoshop, the Canto Cumulus Desktop Image Database, and Linotype's Fonts Just in Time CD-ROM. / Rick Oldano

QUICK LABS

Okidata Trio • Hard Drives with Style • Apple Monitor Seen but Not Heard

BREAD-AND-BUTTER PRODUCT SETS for Quick Labs are monochrome laser printers, high-capacity hard drives, and monitors. We review a slew of these products in each issue, so you can stay informed and up-to-date on the flood of new hardware that hits the street every month. Most of the products we review in Quick Labs are solid performers, but a few truly stand out.

This month, a new monitor from Apple wins a special round of applause. It boasts a good-looking display, a time-saving calibrator, and well-designed software controls. If this monitor looks familiar to you, you're right. It's a version of Apple's AppleVision 1710AV multimedia monitor aimed at users who can live without the AV model's built-in speakers in order to save some money.

Okidata's trio of monochrome laser printers covers both ends of the business spectrum — from small businesses and home offices to workgroup environments. All three are solid workhorses that can be counted on to get the job done.

For storage, La Cie's pair of stylish-looking Tsunami drives proves that image isn't everything. What counts most is rugged reliability and convenience — both areas in which the new Dynatek drive has a slight edge over La Cie's offerings.

THREE NEW PRINTERS

In the printer spotlight this month is Okidata, with its latest lineup of monochrome PostScript laser printers. Two of the new printers, the OL610e/PS (pictured) and the OL810e/PS, are tailor-made for small businesses. The third, the OL1200/PS, is designed for workgroups that have relatively high-volume printing needs.

Priced at $949, the OL610e/PS has a 6-ppm engine and comes with 2.5 MB of RAM, expandable to 18.5 MB. The printer's standard print resolution is 300 dpi, but for better-looking output, it can print at 600 dpi by using interpolation. Because of its relatively slow engine and limited paper capacity (100 letter-sized sheets of paper), this printer is best used in small businesses and home offices.

Moving up the price scale, the $1,439 OL810e/PS is faster and can hold more paper (250 sheets) than the OL610e/PS. The OL810e/PS has an 8-ppm engine and comes with 3 MB of RAM, expandable to 19 MB.

Intended for medium-to-large workgroups, the $1,839 OL1200/PS has a 12-ppm engine and 6 MB of RAM, expandable to 34 MB. It can hold 500 sheets of paper and prints at 600 dpi. An Ethernet card costs an extra $479.

The print quality of all three Okidata printers was just OK. Overall, the most distinguishing characteristic was heavy, dark images and text. When we printed grayscale images, for example, the results from all three printers lacked detail in shadows. And on our text document, printed characters weren't as finely reproduced as those from some other printers we've tested.

Of the three, the OL1200/PS produced the best-looking documents. Graphics and text weren't quite as heavy as those printed by the other two devices.

REVIEWER / ROMAN LOYOLA TESTER / JIM GALBRAITH

+ / OUTSTANDING ● / ACCEPTABLE − / POOR	ESTIMATED STREET PRICE	COLOR OR MONOCHROME	TECHNOLOGY	RESOLUTION	WARRANTY	TEXT QUALITY	GRAPHICS QUALITY	PAPER HANDLING	SUPPORT	COMMENTS
Okidata OL610e/PS	$949	monochrome	laser	600 dpi*	1 year	●	●	●	●	Suitable for small businesses and home offices. Dark output.
Okidata OL810e/PS	$1,439	monochrome	laser	600 x 1,200 dpi	1 year	●	●	●	●	Fuzzy-looking grayscale output. Adequate text-output quality.
Okidata OL1200/PS	$1,839	monochrome	laser	600 dpi	1 year	●	●	●	●	Decent output quality. Good speed.

PAGES PER MINUTE

*Interpolated; standard resolution is 300 dpi.

LISTING IS ALPHABETICAL WITHIN GROUPS OF EQUAL MOUSE RATINGS.

PHOTOGRAPHY / LON CLARK

THREE NEW HARD DRIVES

Hard-drive design has come a long way since the early days of computing. In contrast to the nondescript boxes that housed the first drives available for the Mac, two of the drives tested this month boast sleek, stylish cases.

However, although the La Cie Tsunami 1280 (pictured) and the Tsunami 2160 *look* good, they use dated technology. The Tsunami case material isn't as rugged as it should be, and the drives have DIP switches for setting SCSI IDs — lose the manual or forget how to set a new ID, and you can end up in a SCSI version of Russian roulette. If you're looking for a more rugged case design from La Cie, check out its Joule-drive line. La Cie bundles its Silverlining driver software with all of its drives. If you're using System 7.5.3, make sure you have Silverlining 5.6.3, which installs the necessary SCSI Manager 4.3-compliant drivers. The Silverlining upgrade can be downloaded from La Cie's Web site (http://www.lacie.com).

Dynatek's newest offering, the Orion HDA 2.21SD-M1, has a more modern case design. The case is large (2.3 inches high, 6.4 inches wide, and 9.8 inches deep), but it's sturdy, has a clean design, and uses the more conventional push wheel for setting the SCSI ID. Its cost per megabyte is also lower than that of its closest rival in this product set, the La Cie Tsunami 2160. The Dynatek drive's software, Compass Pro 3.0, does a good job, but it lacks an initializing feature, standard in most formatting software.

All MacBench 3.0 Disk Mix scores are relative to that of a 1-GB Quantum internal drive in a Power Mac 7500/100, which has a score of 10.

REVIEWER AND TESTER / RICK OLDANO

+ / OUTSTANDING ● / ACCEPTABLE − / POOR	ESTIMATED STREET PRICE	WIDE SCSI	FORMATTED CAPACITY	PRICE PER MEGABYTE	WARRANTY	CASE	SOFTWARE/ MANUALS	SUPPORT	COMMENTS
✱✱✱½ **Dynatek** Orion HDA 2.21SD-M1	$599	no	2,000.3 MB	$.30	5 years	●	●	+	Well-designed case. Good price.
✱✱✱ **La Cie** Tsunami 1280	$369†	no	1,251.9 MB	$.29	5 years	−	●	+	Case lacks ruggedness. Dated hardware features.
✱✱✱ **La Cie** Tsunami 2160	$669†	no	2,113.3 MB	$.32	5 years	−	●	+	Case lacks ruggedness. Dated hardware features.

†Direct price.

LISTING IS ALPHABETICAL WITHIN GROUPS OF EQUAL MOUSE RATINGS.

ONE NEW MONITOR

This month Apple's 17-inch AppleVision 1710 gets our undivided attention. It's the same model as the AppleVision 1710AV but with two key differences — it doesn't have speakers, and it's about $200 cheaper. The 1710 teams excellent image quality with flexible, well-designed software controls and automatic color calibration.

The monitor's software controls are installed as a control panel that replaces your system software's Monitors control panel. The software controls communicate with the monitor through the ADB port (don't worry about losing your ADB port — the monitor's base has ADB ports into which you can plug your keyboard or mouse) and let you control the monitor's geometry, convergence, and color. White point, gamma, and even ambient-light settings can be saved, so if you have favorite settings you use for various kinds of documents or lighting conditions, you can easily call them up. You can also import and export ColorSync profiles.

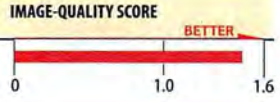
The 1710 uses DigitalColor, a technology developed by Apple that automatically calibrates your monitor. How does it work? Each 1710 is calibrated at the factory, and the data created during calibration is stored in memory inside the monitor. When you do your calibration of the 1710, it measures its own red, green, and blue values. If they don't match the data in the monitor's memory, the monitor recalibrates itself — a real time-saver compared to the typical calibration process with external equipment.

We liked the AppleVision 1710, but it is somewhat pricey. You can buy the ViewSonic 17GA, for example, for about the same price, and it comes with speakers.

Image-quality scores reflect the results of our tests for image sharpness, focus, brightness, uniformity, pincushioning, color range, color accuracy, and vibrancy. A score of 1.0 is considered acceptable.

REVIEWERS / BRIAN FIKES AND ROMAN LOYOLA
TESTER / BRIAN FIKES

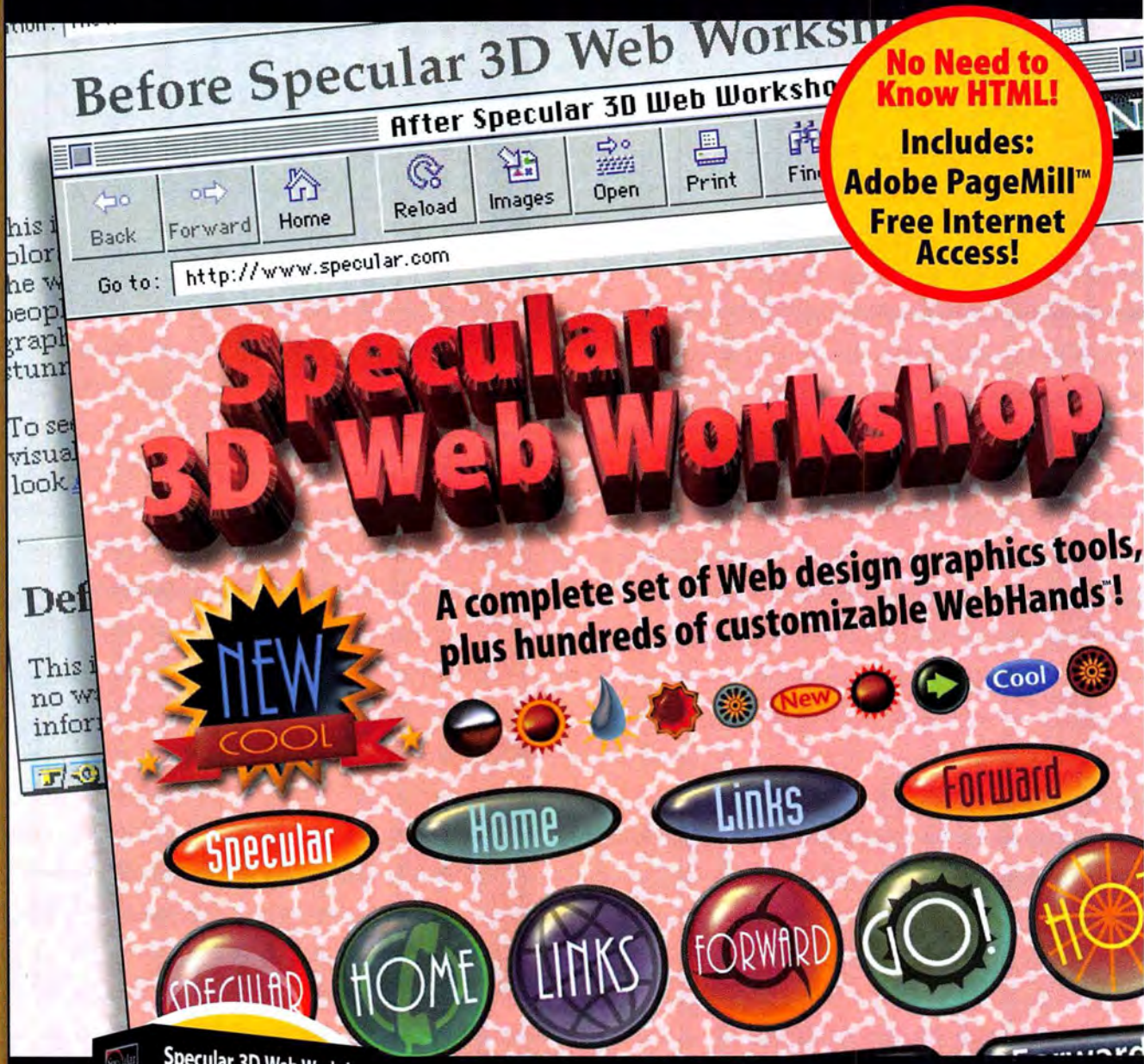
+ / OUTSTANDING ● / ACCEPTABLE − / POOR	ESTIMATED STREET PRICE	SCREEN SIZE	MAXIMUM RESOLUTION	WARRANTY	MANUALS	SUPPORT	CONTROLS	COMMENTS
✱✱✱✱ **Apple** AppleVision 1710	$999	17 in.	1,280 x 1,024 pixels	1 year	+	●	+	Excellent software controls. Built-in calibration. Pricey.



GET INFO / Apple Computer 408-996-1010 **Dynatek Automation Systems** 416-636-3000 **La Cie** 503-520-9000 **Okidata** 609-778-4184

SPECULAR 3D WEB WORKSHOP™

Blast Your Web Page Into The Next Dimension!



No Need to Know HTML!
Includes: Adobe PageMill™ Free Internet Access!

Web Workshop
New!

Infini-D
'92 & '95 Eddy Award Macworld World Class

LogoMotion
MacUser 4-Mice
MacWEEK 4-Diamonds

TextureScape
1994 Eddy Award NewMedia Awesome

Collage
MacWEEK 4-Diamonds
MacUser UK 4-Mice

BackBurner

Replicas

Specular 3D Web Workshop is the complete solution for creating high-impact Web pages. Specular 3D Web Workshop makes it easy to integrate sophisticated graphics, such as 3D animations, into your Web pages with drag-and-drop simplicity. Whether you are a beginning Web enthusiast or a seasoned Web Master, 3D Web Workshop has everything you need to quickly create a stunning page that will draw in Web surfers and keep them coming back!

Specular
The 3D Graphics Company

Innovative Specular WebHands™ make creating custom Web pages fast and easy. Drag-and-drop professionally designed Web graphics into Adobe PageMill™ (included FREE!) for instant page creation, or edit text, lighting, color, perspective and more. Animated WebHands work out of the box with any browser, or you can tune them for QuickTime or Shockwave™ plug-ins. So blast your Web page into the next dimension with Specular 3D Web Workshop!

ONLY $249 Ask for item # 80613
Call MacMall at 1-800-222-2808

30 Day Money-Back Guarantee!

For more information, call Specular at 1-800-433-SPEC
Check out our Web site for a demo: www.specular.com

Specular 3D Web Workshop, Specular WebHands and the Specular logo are trademarks of Specular International, Ltd. The Netscape Navigator interface and the Netscape logo are trademarks of Netscape Communications Corp. All other trademarks are copyright by their respective owners.

CIRCLE **67** ON READER SERVICE CARD

Let us show you how a little script writing can reduce a lot of busywork for graphic artists.

By Chuck Weger

AppleScript for Artists

LEAVE THE REPETITIVE TASKS to your Mac by using AppleScript, so you can get back to the more creative aspects of graphic-arts work. With this plain-English programming language, you can automate the time-consuming steps involved in such tasks as processing incoming scans, compiling catalogs, and moving printed documents to the World Wide Web. And because AppleScript works with many popular applications, you can very likely create your scripts by using applications you already have.

Here's a brief overview of AppleScript and some ideas on how to use it to streamline common graphic-arts processes.

What Is AppleScript?

AppleScript is a programming language that's both simple enough for nonprogrammers to learn (see the sample code in the "Photoshop Image Manipulation" figure) and flexible enough to perform pretty much any task users can with a keyboard. And it's ideal for taking over repetitive tasks while you're doing something else.

Some people think of AppleScript as a high-powered macro language, similar to QuicKeys or Tempo. But an AppleScript script can do more than select a menu item or click on a dialog-box button; it can manipulate many of a document's parts (called *objects*), such as fields in a database, paragraphs in a document, or values in a spreadsheet. Not only can AppleScript outdo a macro program but it can also outperform a user at a keyboard. That's because it can access properties of a document the user can't see (the name of a text box in QuarkXPress, for instance). A script can also be more methodical than even the most careful user at checking details.

Supporting Cast

AppleScript doesn't work alone. Part of what makes it so powerful is that it can manipulate one or many applications (on one or more Macs). So you can automate an entire job, whether it requires using a database application, a page-layout program, or a utility.

Unfortunately, not all applications are scriptable. For those programs that aren't, there's help: PreFab Player, from PreFab Software, lets you script the unscriptable (see the "Must-Haves" sidebar and the "Photoshop Image Manipulation" figure). Still, you can do the best scripting with programs that give you full scripting capability. Here's the lowdown on what you can expect from some representative publishing-program favorites:

QuarkXPress. QuarkXPress was one of the earliest and best supporters of AppleScript (it even shipped with a run-time version of another scripting language, UserLand's Frontier). Hundreds of complex routines have been developed with QuarkXPress as a base, partly because of its scriptability. Even some Quark XTensions (for example, XCatalog, from Em Software) are scriptable.

Adobe Photoshop. Adobe has been notably late to the scripting party, with only Fetch (inherited from Aldus) and some of the Prepress Division tools (ditto) being scriptable. Photoshop, an application that would benefit dramatically from scripting, continues to lack it. You can use PreFab Player as a workaround for creating scripts in Photoshop, but it's not as powerful as a scriptable version of Photoshop would be.

FileMaker and Cumulus. Two database programs heavily used in graphic arts — Claris FileMaker Pro, for text, and Canto Cumulus, for images and other media assets — are both scriptable. You can use them in concert with AppleScript to perform publishing tasks that require accessing or storing data.

ILLUSTRATION / OCTAVIO DIAZ

Apple Media Tool. Even Apple, long dormant in the area of scripting, is back in the act. The newest release of Apple Media Tool is not only scriptable but it's also *recordable*, meaning that you can record a series of actions into a script rather than write the script from scratch.

Suitcase. For those of us who live in a font swamp — creating, loading, and unloading font suitcases — there's good news: Suitcase 3.0, from Symantec, is also AppleScript-savvy.

Working Scripts

Here are some specific situations in which an AppleScript script or two can offload a good chunk of your repetitive work:

Preflight. The process of checking files for correctness before they're output to film or plate is a prime example of time-consuming, repetitive work. You can use an AppleScript script with Luminous' Color Central to take over the checking of resolutions and color palettes and also to make sure a file includes the right graphics.

Desktop Color Separation (DCS). Wherever the same set of operations must be performed on many files, such as in DCS, you should think scripting. For example, you could automate the creation of DCS files with Photoshop and PreFab Player and the e-mailing of the low-res master file to clients with Eudora or Claris Emailer.

Image input. Another good use for AppleScript is in the acquisition of images from a scanner or digital camera (using Cumulus) and then the transformation of those images. To transform them, you could write a script that would instruct Photoshop to apply color separation, change resolution, and rotate them.

Photoshop Image Manipulation

DOES THIS PROCESS LOOK FAMILIAR? If you feel as though you could do it in your sleep, you'll be glad to know that AppleScript can do it for you while you sleep — even though Photoshop isn't scriptable out of the box. By using an application called PreFab Player (see the "Must-Haves" sidebar),

1. ORIGINAL IMAGE

Cataloging images. Scripts are particularly useful when coupled with databases for performing such tasks as storing tagged images. Each step in this common procedure, which involves the manipulation of Photoshop files, can be performed through scripting: Move Photoshop files onto a server, using the Finder; resample them with Color Central to generate a low-res file for OPI (Open Prepress Interface) use; catalog them with Cumulus; and tag the cataloged images with information (such as a photo source or a product code) from a corporate FileMaker database.

Database publishing. Scripts and databases are also useful in repetitive types of publishing, such as creating product catalogs. You can, for instance, automate the use of information from a FileMaker product database in order to create a page layout in QuarkXPress and then the copying of product shots from a Cumulus database into the layout (see the "Saving Time with AppleScript" figure).

Finding fonts. AppleScript can also do something as simple yet time-consuming as checking for fonts. Using Suitcase and AppleScript, a service bureau can automate the process of analyzing an incoming file for required fonts and then locating and loading them.

How to Learn Scripting

There isn't room in this article to teach you everything you need to know to take advantage of AppleScript. But we can point you toward the best books on the topic plus some crucial online resources (see the "AppleScript Library" sidebar).

You won't really *get* AppleScript until you start scripting yourself, though. The best way to learn is by copying — er, shall we say, *emulating* — someone else's work. Grab a script that works, and start playing with it. You can find a wide variety of scripts online (see the "Must-Haves" sidebar) or simply use the sample script that's posted on *MacUser*'s FTP site (ftp://ftp.zdnet.com/macuser/graphic-artist-script.hqx), which automates the conversion of spot color to process color in QuarkXPress. (Be sure to download the accompanying read-me file and the file Jon's Commands as well.) And remember: You can't break anything, as long as you steer clear of dangerous commands such as the Finder's Delete command.

Must-Haves / software for serious scripters

WHY BE SATISFIED with creating average scripts? Here's a list of software that will give you more scripting power, ranging from making scripts easier to use to helping you learn how to script:

FaceSpan. This is an interface builder that lets you build windows, dialog boxes, and menus for your scripts. Use it to make projects look and feel like other Mac applications. Software Designs Unlimited, 919-968-4567.

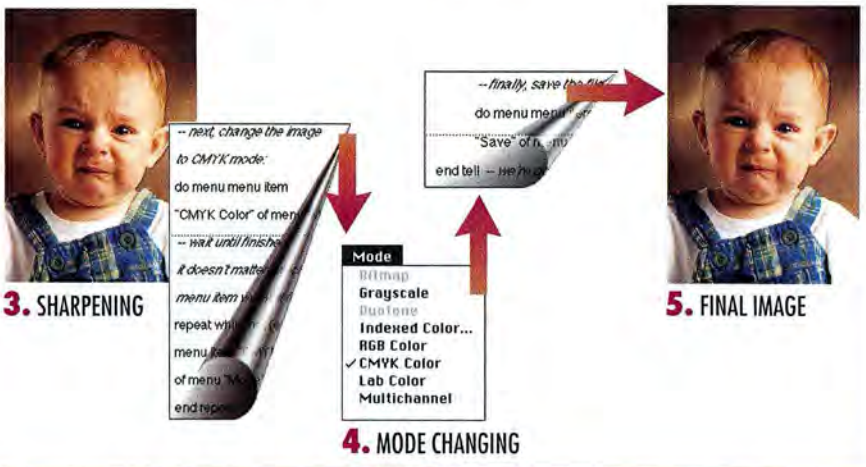
PreFab Player. Many applications (Photoshop, for example) aren't yet scriptable. PreFab Player lets you write scripts for those applications. It simulates such actions as making menu selections, clicking on dialog-box buttons, and just about anything users can do under script control. PreFab Software, 617-628-9025.

Scripting additions. Commonly called OSAX (after the file type — the plural is OSAXen), these are plug-ins that extend AppleScript by adding new commands and new data types. There are hundreds of them, they're all shareware, and most can be obtained from ScriptWeb (http://www.scriptweb.com/scriptweb/). Some popular additions include ACME Script Widgets, Jon's Commands, GTQ Scripting Library, and Script Tools.

Sal's AppleScript Snippets. This is a collection of QuarkXPress unlocked sample scripts (scripts with viewable code) written by Sal Soghoian, one of the world's leading QuarkXPress scripters. Call the vendor, XChange (800-788-7557 or 970-225-2484), for this inexpensive ($39) and useful learning tool, or download it from Sal's Web page (http://users.aol.com/nyhthawk/welcome.html).

Script editors. For those who outgrow the script editor that comes with AppleScript, there are three commercial products that do more in terms of editing, debugging, and general utility tasks. **Scripter** (Main Event Software, 202-298-9595) is perhaps the most comprehensive. It's great for beginners exploring scripting terminology. Another good script editor is **Script Debugger** (Late Night Software, 604-929-5578), which is fast and functional. Last, there's **ScriptWizard** (Full Moon Software, 800-232-1560 or 510-843-6485).

you can write easy, English-like AppleScript code that simulates menu selections such as these in Photoshop and in other nonscriptable applications. (You can download the actual script for this process from *MacUser*'s FTP site at ftp://ftp.zdnet.com/macuser/graphic-artist-script2.hqx.)



3. SHARPENING

4. MODE CHANGING

5. FINAL IMAGE

The Future of AppleScript

If you put in the time to learn AppleScript, can you rest assured that you haven't wasted your efforts on a technology without a future? Fortunately, AppleScript's future looks bright. Besides the benefits graphic artists can reap, those who frequent the World Wide Web have plenty to celebrate. There's a host of new scriptable applications — from mail client software such as Eudora and Claris Emailer to browsers such as Netscape Navigator and server software such as WebSTAR. Using AppleScript is one of the best ways to automate Internet-related work, including retrieving and filing mail. It's also the simplest way to develop CGI (Common Gateway Interface) programs, those little gnomes that live on Web servers and help generate forms, databases, and interactive Web pages.

The reception by the user community has been welcoming, and Apple is showing renewed interest. AppleScript is slated for inclusion in Copland and is scheduled to be PowerPC-native by the time you read this. With the support of the larger community of users taking advantage of it in order to streamline their work, AppleScript will help ensure that the Mac continues to be the best platform for getting real work done.

Chuck Weger is a MacUser *contributing editor.*

The AppleScript Library

THERE'S NO SHORTAGE of places to read about AppleScript. Here are some popular ones:

Books

Goodman, Danny. *Danny Goodman's AppleScript Handbook*. Second edition. New York: Random House, 1994. If you get just one AppleScript resource, make it this book. It's comprehensive; tough reading in parts, but everything's there.

Schneider, Derrick. *The Tao of AppleScript*. Second edition. Indianapolis: Hayden Books/BMUG, 1994. A kinder, gentler alternative to the Goodman book. This may be an easier read for those who have no programming experience.

Michel, Steve. *Scripting the Scriptable Finder*. Pleasant Hill, CA: Heizer Publishing, 1995. A thin but information-packed book. Most of the material in here is in Goodman's book somewhere, but you may be able to find it more easily in this guide. Call 510-943-7667 to get it.

Trinko, Tom. *Applied Mac Scripting*. New York: M&T Books, 1995. A mammoth work that covers both AppleScript and Frontier scripting.

Online Resources

All the major online services have forums devoted to scripting, and many vendors, such as Quark and Claris, have forums with scripting sections. But the best resources are on the Web. Point your browser at http://www.scriptweb.com/scriptweb/.

Saving Time with AppleScript

ANY REPETITIVE PROCESS that has many steps, including one that involves using multiple applications, is an excellent candidate for a time-saving script. AppleScript's ability to manipulate objects across the boundary of separate applications makes using it a great way to automate processes such as searching for images and related text in separate databases and putting them together in a layout.

Steps for a task without AppleScript:

1. Open QuarkXPress layout, FileMaker Pro database, and Cumulus database.
2. Search for image in Cumulus database.
3. If you find multiple images, determine the correct one by checking information such as most recent date or image source.
4. Drag and drop image into QuarkXPress.
5. Switch to FileMaker Pro.
6. Search for text related to image.
7. Cut and paste text into QuarkXPress.
8. Edit text as needed in QuarkXPress.
9. Return to step 2 and repeat remaining steps for next image.

Steps for the same task *with* AppleScript:

1. First time only: Create an AppleScript script that performs the steps for this task.
2. Double-click on the script icon.
3. Come back to Mac when the script has finished running, and edit results in QuarkXPress as needed.

Painless Paper-Cut Effects

Use Painter 4 to turn flat EPS illustrations into virtual paper sculptures.

ORNATE PAPER SCULPTURES take a fine hand — and plenty of time — to create. However, digital illustrations with the *look* of cut and molded paper are simpler to create than you might guess. With Fractal Design's Painter 4, you can take a flat, black-and-white EPS illustration and give it the distinct edging and three-dimensional look of a paper sculpture.

The key to creating these effects is to use the right settings for Painter's surface and lighting controls. New options in Painter's surface controls let you easily add beveled edges to any Floater — Painter's term for a floating layer — by simply changing the softness setting of the mask; the result is a paperlike edging effect. Creating the same effect in previous versions of Painter meant changing the Feather controls in a separate palette. Don't worry about converting shapes to Floaters. Painter 4 automatically changes shapes — Bézier-based Floaters — into bitmapped Floaters when you apply effects not possible with vector-based shapes. As for creating the 3-D look of molded paper, we chose *not* to paint in the highlighting by hand, which would have been a time-consuming process. Instead, we exploited the lighting controls' color-enhancing capabilities, using lights to create the illusion of contours and gradations on the objects.

Sean J. Safreed is associate editor for graphics at MacUser *and an ardent Painter aficionado.*

STEP BY STEP

1. CLEAN UP THE ORIGINAL. To clean up the image (we chose an EPS illustration with a Fourth of July theme from T/Maker's Incredible Image Pak 25,000), open it in Adobe Illustrator 6.0 and simplify the shapes into separate closed objects. Color the objects at this point if you want them colored, and then copy the illustration to the Clipboard.

2. PAINT WITH LIGHT. Open Painter 4, and paste (Edit: Paste: Normal) the EPS objects into a new Painter document. Painter 4 handles PostScript objects pasted from Adobe Illustrator as individual floating objects. You can edit the objects' Bézier curves if you need to tweak shapes.

To provide contours and highlights, you need to apply colored lights, using the Apply Lighting filter. Click on a Floater, using the Floater Adjuster tool, and open the Apply Lighting dialog box (Effects: Surface Control: Apply Lighting). This dialog box lets you bring out parts of your image as if it were sitting under a set of spotlights. The icons in the preview window represent the lights shining on the image.

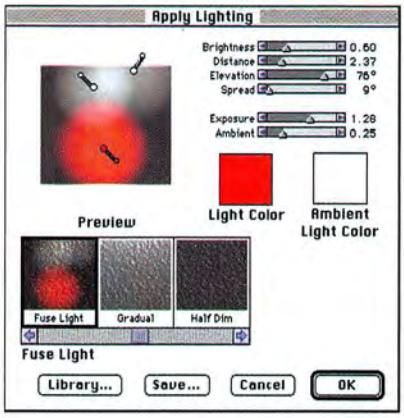
We also used the Apply Lighting filter on every Floater in our firecracker image to give it a graduated surface. We created the shaded highlights for the fuse in the image by setting three spotlights, two white and one red, to color the fuse's Floater. We avoided creating overly bright highlights on the object by lowering the brightness setting for each light to about half its default value.

Save each lighting setup, using the Save button, so you can return to the settings later.

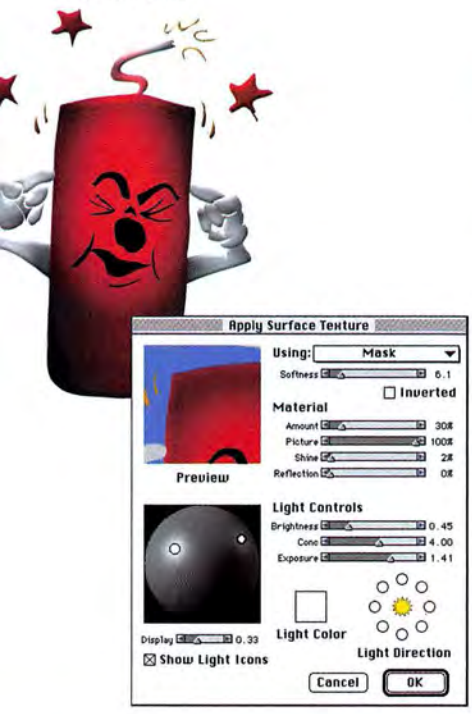
3. ADD A BEVEL. To create a beveled edge around the shapes, use the Apply Surface Texture filter to create a blurred version of the mask surrounding each Floater.

1. CLEAN UP THE ORIGINAL

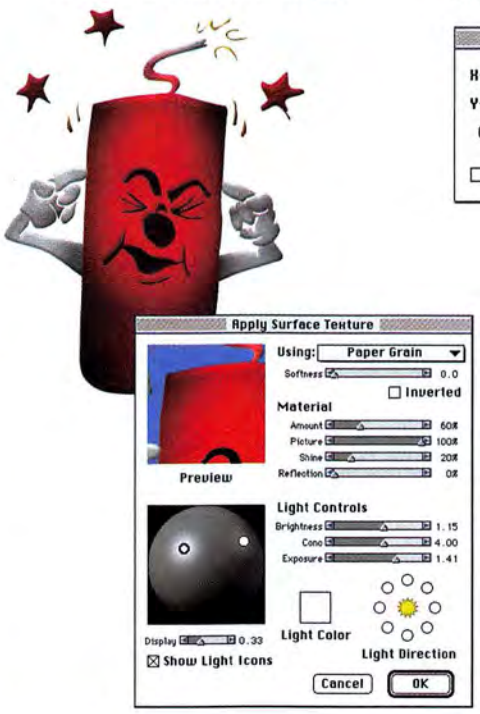
2. PAINT WITH LIGHT



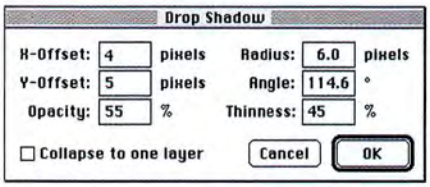
3. ADD A BEVEL



4. GIVE THE SURFACE A TEXTURE



5. APPLY A DROP SHADOW



Click on a Floater, and open the Apply Surface Texture (Effects: Surface Control: Apply Surface Texture) dialog box. The dialog box holds a formidable array of sliders for adjusting a surface's look. Select the Mask option from the Using pop-up menu, and move the Softness slider to 6.1 (or a lower value, if the object is so small that it doesn't have 6.1 pixels to blur at each border to create an edge). Softening the edge is just a matter of moving the Amount slider down; we chose a value of 30 percent. Finally, to create the dull highlight of a Paper surface, you must move the Shine slider down to 1 or 2 percent for each Floater.

4. GIVE THE SURFACE A TEXTURE. Once you've applied a bevel to the edge of each Floater, you still need to add paper grain to each object. First select appropriate paper settings. In the Art Materials: Paper palette, set the current paper grain to Fine Grain (from the More Paper Textures library included with Painter). Set the Scale slider in the Art Materials: Paper palette to 50 percent.

To apply these settings, click on a Floater and open the Apply Surface Texture dialog box again. Select the Paper Grain option from the Using pop-up menu. Slide the Amount slider to 60 percent and the Shine slider to 20 percent, and apply the settings to the Floater.

5. APPLY A DROP SHADOW. Paper sculptures exist in three dimensions. To add that illusion to each Floater, apply a drop shadow. Click on a Floater, and open the Drop Shadow dialog box (Effects: Objects: Create Drop Shadow). Set the x-offset to 4 pixels and the y-offset to 5 pixels. Change the opacity setting to 55 percent and the radius to 6.0 pixels. Not a masterpiece but an appreciably more eye-catching image than the original.

1996 Macworld WORLD CLASS AWARD WINNER

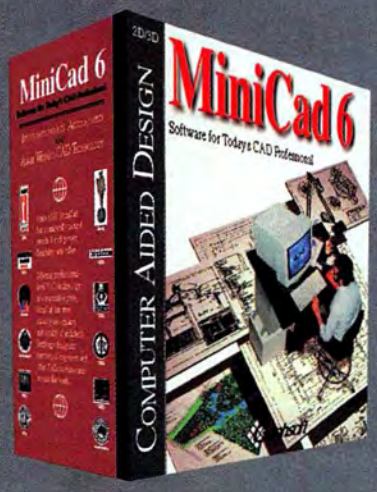
SHOULD MiniCad 6 BE YOUR CAD SOLUTION?

- A proven market leader that handles any job; 2D, 3D, materials lists, and presentations
- No extra modules to buy. Specialized support for many design professions: A/E/C, civil, mechanical and electrical engineering, landscape, theater/lighting, food service and more
- A program that's easy to use, easy to buy: lower entry & training costs, less downtime AND much higher productivity
- THE cross-platform solution: identical code means flawless file transfer between Mac & Windows.
- A program that can be used for every stage of the design process — from concepts, to working drawings, models and visual proposals
- A program you can try... RISK-FREE

MiniCad 6®

MACINTOSH® WINDOWS®

THE FULL-FEATURED CAD PROGRAM with INTEGRATED PROFESSIONAL SOLUTIONS



MINICAD 6: THE COMPLETE CAD PACKAGE!

MiniCad 6 has just what you're looking for: a complete 2D/3D drafting environment, a powerful database allowing you to generate estimates, schedules, reports..., a built-in macro language to automate routine drafting tasks, full file transfer capabilities to other major programs, even digital terrain modeling! All highly organized and easy-to-use. You can even add sizzle to your presentations with QuickTime™ 3D animation and QuickDraw™ 3D file support,

MONEY BACK GUARANTEE 30 DAY AT PARTICIPATING DEALERS

FREE DESIGN AND DRAFTING TOOLKIT™

Our FREE Toolkit is packed with thousands of symbols, tools, commands, templates, parametrics, formatted reports, worksheets and sample files targeted at specific industries. No extra symbol libraries to buy! Fewer hassles and more time to design — so much of the work has been done for you. These specialized feature sets are powerful, complete and solidly integrated into MiniCad 6, giving you the design flexibility and targeted industry solutions you need.

AN AGGRESSIVE COMPANY WITH 11 YEARS OF CAD EXPERIENCE

Now in its 11th year, Graphsoft's MiniCad is the best-selling CAD program on the Macintosh, utilized by design professionals in over 80 countries and 12 languages.

TRY IT RISK-FREE FOR 30 DAYS!

When you buy MiniCad 6 from a participating dealer, you'll get Graphsoft's no-hassle 30 day money back guarantee. You'll also get 18 months of free technical support, a quarterly newsletter, multi-media CD that provides both QuickTime movies on the operation of each Tool and Command, and samples of working MiniCad files from around the world.

Diehl Graphsoft, Inc.
Graphsoft™
A NASDAQ TRADED COMPANY
www.graphsoft.com

For more information please contact Graphsoft at **1-800-694-7318 (Dept. U)** or 410-290-5114 Fax: 410-290-8050
In Canada call Paxar at **1-800-260-0905** For Academic pricing call **1-800-531-3227**

CIRCLE **11** ON READER SERVICE CARD

QuickTime, QuickDraw and Macintosh are trademarks of Apple Computer. Windows is a trademark of Microsoft. MiniCad and Design and Drafting Toolkit are trademarks of Diehl Graphsoft Inc.

EXPERT TIPS / By Bob Schaffel and Chuck Weger

Fonts: A Reprise

If you toil in type, check out these utilities.

OUR COLUMN ON FONT ISSUES ("Font Fatigue," January '96, page 111) brought in more mail than most other topics we've covered. For example, our colleague Kathleen Tinkel wrote to chastise us for not pointing out that Symantec's Suitcase can, in fact, show which printer font is required by a given screen font. So, fine, we made a mistake. "Let sleeping fonts lie" is our motto.

But time (and software) marches on, so we've decided to report on several major developments in the Mac font universe. For those of us who use more than a dozen fonts, 1996 could be the year all our dreams come true (we have very modest dreams).

First of all, Symantec (800-441-7234 or 541-334-6054) released an upgrade of Suitcase, its font-management utility, earlier this year. After years of lounging moribund in our Extensions folders, Suitcase is back with a vengeance. It works reliably with System 7.5.x; sports a redesigned user interface; and offers new features, including application-specific font sets that come alive only when needed.

What's more interesting, Suitcase is now AppleScript-aware. You can write scripts to add fonts to suitcases (collections of screen fonts) as well as to open and close suitcases. So, for example, you can write a preflight script that opens a QuarkXPress file, asks QuarkXPress for a font listing, and then uses that listing to create a set of suitcases or to gather all the fonts into a single folder for transmission to a service bureau.

One drawback is that Suitcase no longer comprehensively reports on font-ID conflicts when you try to open a suitcase containing a font that's already in use. Also, its windows have gotten overly large and there are some strange interface quirks, particularly with Macintosh Drag and Drop. Two steps forward, one step back. It's still a worthwhile upgrade.

Not to be outdone, Alsoft (800-257-6381 or 713-353-4090) has upgraded MasterJuggler. Although the upgrade is not as dramatic as Suitcase's reawakening (Alsoft's utility has *always* worked on System 7.5), if you're a fan of MasterJuggler, you should make sure you are running the latest, PowerPC-native version. And sorry, sports fans, but we're not going to get into the Suitcase-versus-MasterJuggler debate here.

We also should mention a handy control panel called TypeTamer, from Impossible Software (714-470-4800). TypeTamer is like Adobe's Type Reunion; it merges styles and thereby shortens your font menus, so you don't see things such as BI Helvetica Bold Italic in a different spot on the menu from other Helvetica typefaces. TypeTamer also shortens an application's font menu by showing only those fonts that are used in a document — a separate pop-up menu labeled All shows all the fonts installed in the system. Plus, TypeTamer lets you define your own "sets" (different from Suitcase sets), which show up on their own pop-up submenu on the Fonts menu.

Fonts and FONDs

Perhaps most important to those of us in the heavy-duty design and prepress worlds, a small company called DiamondSoft (415-381-3303) is working on a product called The Font Reserve. This is the world's first (to our knowledge) production-quality Mac font organizer. Offering more capabilities than Suitcase or MasterJuggler, The Font Reserve can collect all your fonts into a database, analyze them, remove duplicates and corrupted files, and automatically load and unload fonts as an application calls for them. It also does much of the grunt work involved in preflighting documents for proper font output on an imagesetter. It has half a dozen ways of organizing fonts, including by font foundry, by customer, and by family. What's more — here's the really cool feature — it allows a network server to handle all the fonts for a workgroup.

If it works as promised, The Font Reserve will be a true time-saver for those of us with large font collections. DiamondSoft says the product should be out sometime this summer.

And for the complete font geeks among us, there is the recently revised utility called theFONDler (winner of our own personal Worst-Named Product Contest), from Rascal Software (805-255-6823). Despite its name, theFONDler is perhaps the best utility we've seen for peeking inside a font and looking at the important resources that make type happen on the Mac. It shows you when a font is likely to cause problems in your system and gives suggestions regarding what to do about it. The same company makes theTypeBook, a handy utility that inventories your fonts and prints type spec sheets.

The sleeper of the year, however, could be the agreement among Apple, Adobe, and Netscape to allow embedded fonts (read: real typography) on Web pages. It's not clear as of this writing what will result from this partnership, but we think it will probably mean more font headaches before the dust finally settles. Ultimately, fonts on the Internet will be A Good Thing; as Netscape's press release says, "People creating information for the Web will be able to choose from numerous fonts and ensure that users see their pages as they were originally intended to be seen." Imagine that! But getting there, as they say, will be half the fun.

There are other font issues we're bypassing for now, but that's the Font Report for the summer of '96. Good night, and good luck.

Bob Schaffel is emerging-technologies consultant for R. R. Donnelley & Sons. Chuck Weger is a graphic-arts consultant and a partner in Genex Media, a company specializing in new media and Web design.

ILLUSTRATION / BOB STAAKE

INSIGNIA SOLUTIONS

Okay, so you're going to run Windows on your Power Mac.

Here's why you're still a good person.

You're Intelligent.

You really need to run Windows. SoftWindows from Insignia Solutions is the only software that lets you do it on your Power Mac. Your keen mind instantly puts two and two together.

You Know The Value Of A Dollar.

SoftWindows 3.0 costs roughly $299. Apple's DOS Compatibility Card, about $749. Plus another ten bucks or so for the screwdriver you'll need to install it.

You're Loyal.

Sure, you'll be running all those applications from the other side of the tracks. But you'll be doing it on your own terms (i.e., on your Power Mac).

Relax. Now you can get intimate with Windows without cheating on your Power Mac. New SoftWindows 3.0 runs 35% faster than before. And SoftWindows 95 comes with TurboStart, for faster booting. *InfoWorld* called SoftWindows "the perfect fit for the business professional who needs the versatility of both a Macintosh and a PC on the desktop." Call 1-800-848-7677 for dealers or to hear about our upgrade offer for current customers.

SoftWindows for Power Macintosh

Insignia and Insignia Solutions are registered trademarks and TurboStart is a trademark of Insignia Solutions Inc. SoftWindows is a trademark used under license. Windows is a registered trademark of Microsoft Corporation. Mac is a trademark, and Macintosh, Power Mac and Apple are registered trademarks of Apple Computer, Inc. *InfoWorld* ©1995 International Data Group. SoftWindows 95 costs roughly $349. Prices as published in MacWarehouse, Volume 50R3. ©1996 Insignia Solutions Inc.

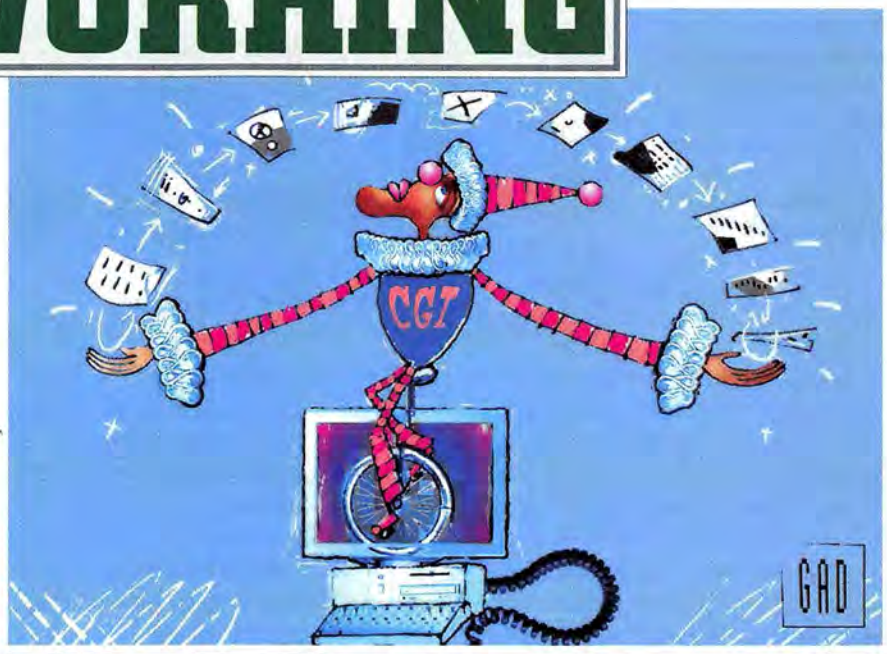


ILLUSTRATION / VICTOR GAD

To make your Web site a productive gateway between you and your customers, you need a CGI application — the right CGI application.

By Jon Wiederspan

Gateway to Web Success

CREATING A MAC-BASED Web site is amazingly easy. With server software, a direct connection to the Internet, and the HTML pages and graphics that make up your site, you're in business. Basic Web pages aren't very interactive, though: They can provide links only to predefined pages, and they don't allow users to conduct searches or send information to the site's owner. If you want to perform business transactions on the Web or let users search your database, it's time to take the next step: You need a CGI application.

If you've filled out an online form, clicked on a Web-based map, or bought anything from an electronic mall, you've probably encountered a CGI application. CGI stands for Common Gateway Interface. The CGI standard defines an interface through which information server software (such as Web server software) can communicate with other applications on the server or on the network. Software that exchanges data via this interface — a CGI application — gives Web servers new features, such as forms processing, image mapping, and linking to databases. You'll find CGI applications running on almost all Web servers, including UNIX and Windows NT platforms and the Macintosh. To help you choose the right applications for your Web site, here's a guide to using CGI applications, the issues you'll face when working with them, and the key points to consider when making your choices.

What's a CGI Application Good For?

CGI applications can bring life to your Web site, by adding features to the server software itself and linking the site to other applications.

Image-map processing is the most common example of a CGI application that adds to server software. It's also one of the simplest. An image map is a Web-page graphic element that contains "hot spots." When you click on a hot spot, a CGI application retrieves an HTML page that matches your request. You might, for example, click on a city on a map of the U.S. to view a page containing information about businesses in that city. Unlike standard HTML pages, image maps allow you to include a lot of hot spots within a single graphic element.

In addition to enhancing server software, CGI applications can link Web servers with database managers, statistical packages, and other applications in order to bring a wide variety of information to the Web. If, for example, you provide a searchable product catalog, a user can enter a keyword into an HTML form. The CGI application sends the request to a database program and tells it to return the results of the search as an HTML page. This CGI function is called *HTML on the fly*, because the application generates a new page each time the database is searched. Webmasters can also use CGI applications to count Web-page "hits" and send the data to a spreadsheet program for analysis and reporting.

Preparing for Problems

Although CGI applications add greatly to a Web site, they're not without problems. You need to prepare for the impact on speed, security, and system stability when you add CGI applications to your Web server.

Slower response. When you use CGI applications with a Web server, you reduce the potential server speed. A single CGI application — particularly if it's a simple one, such as an image-map processor — may not place much strain on the server, but speed can decrease as you add more CGI applications. Servers slow down because CGI applications compete with the Web server software for resources, including CPU time, disk access, and network bandwidth. The degree of resource competition varies widely among CGI applications.

How CGI Apps Work

Database access is one of the most important purposes of CGI applications on the Web. You can, for example, give customers access to a product catalog and track their information requests. If you're very ambitious, you can make sales right from your Web site.

Using a CGI application to publish an image map requires little server horsepower, but providing access to databases consumes disk-access and CPU time. You can minimize database-related slowdowns by storing database applications and files on a separate server, leaving the Web server to handle Web connections and CGI applications.

Security risks. While you're counting CGI applications, consider this: Every CGI application you add to the server is a potential security risk. That's because CGI applications can do things your server wouldn't normally allow users to do. Most server software has built-in security measures to protect files and folders. A well-designed server will provide a way for CGI applications to comply with these security measures before it returns a file to a user, but it is very easy for a CGI application to simply ignore these security measures and access whatever file it wants.

A less stable system. Like Web server software, CGI applications must be stable enough to deal with the demands of processing Web-access requests. Even commercial CGI applications can be unstable at times, and when they crash, they can take your whole server with them. When you install a new CGI application, test the system exhaustively before making the site available to the public.

What to Look For

Several commercial and shareware Mac CGI applications are available — mostly distributed through the Web. If you're a programmer, you can write your own, although it's a good idea to check out the professionally developed options first (see the "Finding CGI Applications" sidebar). Selecting the proper CGI application to use on your server can be hard. In general, you should look for the following characteristics in CGI applications you buy:

Fast, compiled language. CGI applications written in C or another compiled programming language are usually preferable to those written in a scripting language, such as AppleScript or UserLand's Frontier. Compiled CGI applications are faster and generally have more features and a better interface. Because they consist of a single file, they also tend to consume less memory, are easy to install, and are not subject to damage inflicted by a Webmaster's tinkering with the code. Many amateur and professional developers use AppleScript to create CGI applications, but these, unlike CGI applications written in a compiled language, are generally slower and more difficult to maintain; because they consist of multiple files that must be installed and configured in certain ways, one file out of place can cause the whole CGI-application framework to come undone. Frontier-based CGI applications offer some advantages over those written in AppleScript — they are often faster, for example.

Responsive tech support. Support should be a major consideration when you're choosing CGI applications for commercial Web sites. Look for developers that provide mailing lists where users can discuss problems and suggest new features. The company may also make these lists searchable online or supply a FAQ (Frequently Asked Questions) list for new users. Because broken CGI applications can bring your Web site to a screeching halt, you should additionally look for developers that provide prompt response to problems, via phone and e-mail. A company that doesn't provide online support for its CGI application is a company to be avoided.

A track record. Given the Web's relative youth, it may seem strange to fault a CGI-application developer whose product is new to the market. There's a big difference, though, between a product that's been around for a year or more and one that was only recently introduced. Very few companies get it right the first time around — especially on the Internet, where technologies can change drastically in the time it takes to release a shipping product. If you find yourself choosing between an older product with an established user base and a newer product with more-exciting advertising, take the old-timer. Here's a tip: A company's mailing-list archives can also give you an idea of a product's reputation among its users. If you notice chronic user complaints or an unresponsive developer, look elsewhere.

CGI applications give you the tools to operate a useful and interactive Web site, but software is not a shortcut for an organized, well-designed set of pages. To get the most from CGI applications, plan the rest of your site as carefully as you seek out good software.

Jon Wiederspan is director of technical services for ComVista, an Internet consulting group in Redmond, Washington, and is coauthor of Planning and Managing Web Sites on the Macintosh *(Addison-Wesley).*

Finding CGI Applications

SEVERAL ORGANIZATIONS offer CGI tutorials and maintain lists of Mac CGI applications. Here are some of the best resource collections:

ComVista (http://www.comvista.com/net): Tutorials on writing CGI applications, plus links to a wide variety of Mac Internet tools.

Mac OS WWW Page (http://www.ape.com/webstar): An unabashed evangelism site for Mac Web servers and tools, including CGI applications.

Macintosh WWW FAQ (http://arpp1.carleton.ca/mac/): Comprehensive list of Web client, server, and CGI tools.

WebEdge Resources (http://www.webedge.com/resources): Resource collection from sponsors of a semiannual Mac Web development conference.

Web66 (http://web66.coled.umn.edu): Web development resources and tutorials geared toward educators. / Shelly Brisbin

A PostScript image printed on an Apple Color StyleWriter **without** StyleScript

A PostScript image printed on an Apple Color StyleWriter **with** StyleScript

Adobe PostScript

These images were created in Freehand and Illustrator and exported as EPS files into Quark XPress and printed from an Apple Color StyleWriter 2500.

Smooth the jagged beast

If you're sending PostScript graphics to an Apple StyleWriter printer, you need StyleScript to smooth the jaggies. With StyleScript, you can turn an Apple StyleWriter into an affordable, sharp, high-quality PostScript printing machine. StyleScript is an amazing product that utilizes genuine Adobe PostScript Level 2 software, and works easily with your Apple StyleWriter. Combine the two and you get the ability to print crisp, clear images. StyleScript maximizes the output quality of your PostScript graphics to your printer's best resolution. So you get the same result as if you used a PostScript printer – all for less than $150.

So get StyleScript and tame the jaggies!

CIRCLE **58** ON READER SERVICE CARD FOR END USERS

CIRCLE **59** ON READER SERVICE CARD FOR DEALERS

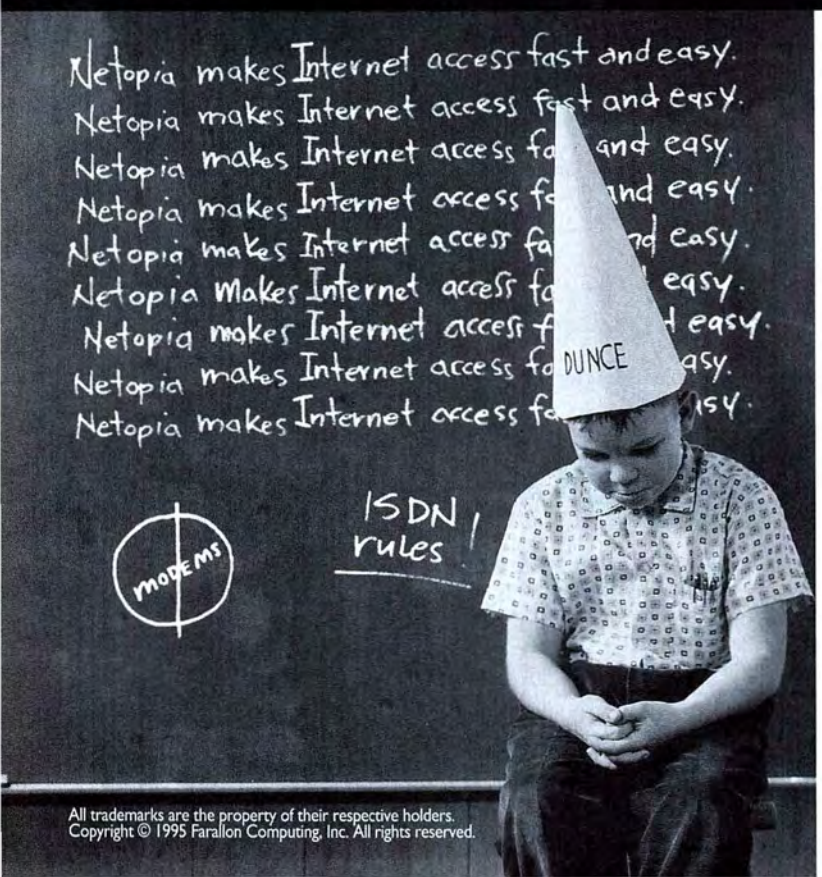
© 1996 GDT Softworks Inc. PHONE: 604.473.3600 FAX: 604.473.3699
All product and corporate names are trademarks of their respective companies.

Call: 800.807.9905
website: www.gdt.com

StyleScript®

ADOBE LEVEL 2 POSTSCRIPT SOFTWARE

High-speed Internet access for your whole office is finally a no-brainer.



All trademarks are the property of their respective holders.
Copyright © 1995 Farallon Computing, Inc. All rights reserved.

It no longer takes a lot of time or money to connect every computer on your network to the Internet. It simply takes the Netopia Internet Solution. Now, your whole office can simultaneously access the Net at ten times the speed of modems, using ISDN. You'll get Netscape Navigator. You'll get e-mail, Gopher, file transfer and more. And, with our "Up and Running, Guaranteed!" service, you'll practically get the whole thing done for you, over the phone. For details, call 1.800.463.1988 or visit http://www.farallon.com. **Farallon**

NET TRAVELER / By Michael Swaine

Smarten Up Your Browser

Your browser can show movies, play music, and read to you with the right helpers and plug-ins.

YOU'RE CLICKING FROM site to site like a loco flamenco dancer, trying to locate that one cartoon or video diversion that can get you through another shift in the hold of the good ship Commerce, when suddenly you're stopped in your clicks by the Spanish Inquisition:

"This page contains information of type basura/x-vil that can be viewed only with the appropriate plug-in. What do you want to do?" Searching in vain for the "How should I know?" button, you mutter under your breath, "Do I need this?"

You don't need the aggravation, but maybe you do need that basura/x-vil information. You can't help worrying that this obscure message might be trying to alert you to something you actually care about. New technologies are turning up on the World Wide Web almost daily — live video, talking pages, CD-quality music that plays while you work — all flowing from that same spigot you opened when you began your quest. Granted, you could probably live without the singing commercials and strangers' home videos, but how about tiny movies that show how to form words in sign language? Or Spanish-language lessons using text-to-speech?

Fortunately, you can get the Spanish without the Inquisition. By downloading and installing a few well-chosen tools now, you can head off most of the basura/x-vil-like dialog boxes and smarten up your browser so you don't miss out on the cool stuff. Here's how to pack your utility belt before you leave the cave.

Hafta-Have Helpers. Your browser can handle any data type your Mac can, including PICT and TIFF images, MIDI music, text read as speech, virtual-reality worlds, 3-D models, CAD designs, movies, and PostScript documents. Actually, your browser doesn't know the first thing about these data types, but it does know how to hand them off to a *helper* application that does — once you've told the browser which helpers read which data types. Shareware and freeware applications are available to read most data types used on the Web. You'll find loads of helpers at the usual Mac archive sites and at ftp://ftp.ncsa.uiuc.edu/Mosaic/Mac/Helpers.

The procedure for activating helpers varies from browser to browser, but it typically goes something like this: Find General Preferences on the Options menu, and pick Helpers. You'll see a list of data types in the form video/quicktime, image/pict, or maybe basura/x-vil. For the recognizable data types, just pick an application on your hard disk that can read that data type (SimpleText for PICT images, for example). If you want to watch video and listen to sound over the Web, you need at least Sparkle and SoundMachine, available at NCSA and elsewhere. Your browser may already have many data types paired with popular helper apps.

Plug-in Play. With version 2.0 of Navigator, Netscape introduced an alternative to helper apps: *plug-ins*, which integrate browsers more closely with external software. Whereas helpers put multimedia files into a separate window, plug-ins display them right on the Web page. Plug-ins are installed in a folder adjacent to your Web browser. They are not clickable applications but are activated when you click on a file the plug-in supports. At press time, only Navigator and Microsoft's Internet Explorer supported plug-ins, but any browser released this year is likely to be plug-in-friendly.

Common plug-ins bring formatted documents, video, and sound to the Web. PDF (portable document format) readers such as Tumbleweed Software's Envoy (http://www.twcorp.com/plugin.htm) and Adobe's Acrobat Amber (http://www.adobe.com/Amber/) bring WYSIWYG documents to Web sites. Several plug-ins put video and animation onto the page (check out Macromedia's Shockwave, at http://www.macromedia.com/Tools/Shockwave/sdc/Plugin/). Count on Web sites becoming noisier as well, with Progressive Networks' nice RealAudio plug-in (http://www.realaudio.com/products/ra2.0/); text-to-speech plug-ins such as Talker, from MVP Solutions (http://www.mvpsolutions.com/PlugInSite/Talker.html); and MIDI music plug-ins just around the corner.

You'll find the best list of plug-ins at Dave Garaffa's BrowserWatch Web site (http://www.browserwatch.com/plug-in.html). *MacWEEK* also maintains a Mac-specific list, at http://www.zdnet.com/macweek/plugins.html.

By the way, *basura/x-vil* is Spanish for *Microsoft Windows.*

Don't Know GIF from Gab?

MacUser maintains a list of frequently asked questions (FAQs) about the Internet, *MacUser* itself, and this column specifically. Send mail to faq@macuser.com. *MacUser*'s address on the World Wide Web is http://www.zdnet.com/macuser/. You can reach me at traveler@macuser.com.

ILLUSTRATION / LESLIE NEWMAN

To make sure they're highly-skilled, we make our employees pass an intense screening process.

(So intense it usually tells us more about those who fail.)

MacTemps is the only staffing agency that won't send you just anybody off the street. Because not everybody has the skills to pass our tests. We know Macintosh technology better than any other staffing agency. So we can thoroughly test our employees to make sure they have the skills you're looking for. Design and production on Quark XPress® and Photoshop™. Presentation graphics using PowerPoint® and Persuasion®. Multimedia using Director® and Premiere™. Not to mention help desk and technical support. Our employees know it all. If they didn't, we wouldn't offer a 110% money-back guarantee. For a highly-skilled temporary or permanent employee, call 1-800-MACTEMPS. And we'll send you the ones who pass.

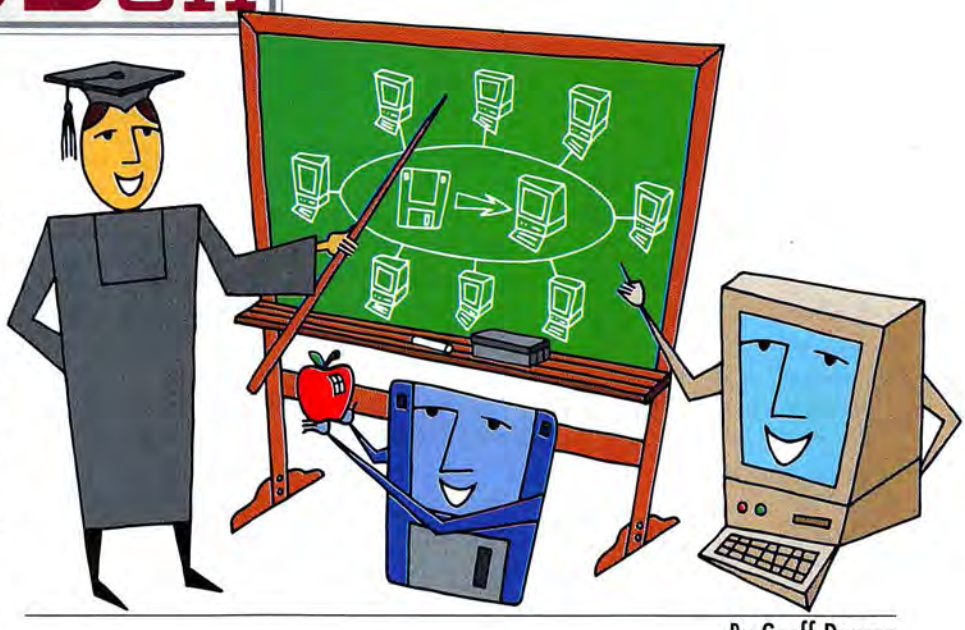
Offices in 24 U.S. cities, London, Paris, and Melbourne.

MacTemps
1-800-MACTEMPS®

CIRCLE **39** ON READER SERVICE CARD

For some up-to-date job listings, visit our web site at http://www.mactemps.com.

HANDSon



Now that Open Transport networking software is ready for almost any Mac, are you ready for it? Let this quick course help you prepare.

By Geoff Duncan

Open Transport 101

IF YOU'VE BEEN EXCLUDED from using Open Transport, Apple's latest networking system software, you're not alone. Until recently, only those who owned certain Power Mac models could use this software, which makes network setup simpler. Recently, however, Apple updated Open Transport to version 1.1, opening up its use to PowerPC and non-PowerPC systems alike.

Now that Open Transport is available to just about every Mac user, it may be time to consider whether this new part of the system software can benefit you. Here are insights on who should buy in and some troubleshooting tips to get you out of minor jams:

Why Buy In?

If you own a PCI-based Mac, you *have* to use Open Transport in order to get networking technical support from Apple. On the other hand, Open Transport isn't compatible with 68000 and 68020 Macs. For users of all other Macs, using Open Transport is an option, and it's an attractive option, for several reasons:

Simple interface. Part of what Open Transport does is replace Apple's complicated Network and MacTCP control panels with a simpler control panel called TCP/IP (see figure 1). You don't have to enter as much arcane information in the new control panel, and you don't have to understand as much about low-level networking protocols to configure TCP/IP.

Also, user-configurable options appear automatically. So, when you install a network service such as PPP (Point-to-Point Protocol) or SLIP (Serial Line Internet Protocol), that service automatically appears in Open Transport's TCP/IP control panel. All you have to do is select an option from a pop-up menu in the control panel to use the service.

Speed. Using Open Transport 1.1 on PowerPC systems should be faster than using previous Apple networking system software, since version 1.1 is PowerPC-native.

Easy configuration switching. One of the most compelling reasons to use Open Transport is that it can make it easier to change major aspects of your networking configuration, such as whether you're using PPP or Ethernet to connect to the Internet. For the first time, you can make such changes without having to restart your Mac — a real time-saver for PowerBook users, since they're likely to periodically need to switch configurations.

Quick switching is also useful if you need to switch among Internet providers or if you need to change connection methods on a desktop machine. For instance, a desktop Mac that usually connects to an AppleTalk network over Ethernet may occasionally need to hook up to, say, a PowerBook 170 that can communicate only over LocalTalk.

To switch among settings, all you are required to do (once you have created your

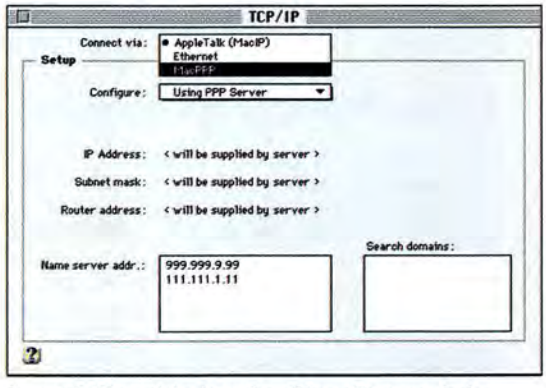


figure 1 / One of the beauties of Open Transport is the simplicity of the new networking control panel, TCP/IP. For instance, all you have to do to choose your connection method is select an item from a pop-up menu (as shown at the top of this sample control panel).

ILLUSTRATION / ROBERT DIERCKSMEIER

settings) is select one from the Configurations dialog box (see figure 2), accessible from the TCP/IP control panel.

Troubleshooting Tips

Open Transport should make networking easier. Even so, the process of getting set up and using new software can always have snags. Here are some typical problems with Open Transport and likely solutions:

PROBLEM: I can't make a connection.

SOLUTION: Start with the basics — check to see if your TCP/IP control panel is set up correctly. The exact settings vary with the software you're using for connection and with your Internet service provider's setup, but there are some basic guidelines:

The type of connection you use doesn't necessarily show up as the default setting in the TCP/IP control panel. You have to find the setting on the pop-up menu at the top of the control-panel window and select it (see figure 1). It's simple — if you're connecting to the Internet via your Mac's Ethernet or AppleTalk connection, choose either Ethernet or AppleTalk (MacIP). If you're using a dial-up account, select the name of the software you use with that account (such as MacPPP) from the list.

What can be confusing is not finding your dial-up account on the list at all. If your connection software is completely missing from the menu, the software may not be installed correctly. Try reinstalling it.

The second part of the control panel you should check if you're not able to make a connection is the Configure pop-up menu. The default settings, even on machines upgraded from MacTCP to Open Transport, may be incorrect. The correct option to select from that menu depends on your connection method. If your Internet service provider gave you a fixed IP number, select Manually from the menu. In the field that appears, enter your IP number if it's not already filled in for you. If you're using a dial-up SLIP or PPP account, the choice is easy: Choose either Using SLIP or Using PPP Server.

In most cases, you won't be able to make connections if you don't enter at least one IP address in the area labeled Name Server Addr. A name server is a server that finds Internet addresses for you. It's a good idea to enter more than one name-server address, just in case the first one's unavailable. If there are no addresses in this field, ask your Internet provider for them.

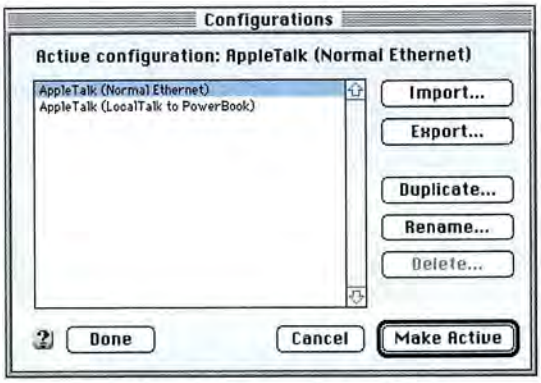


figure 2 / Don't touch that restart button. With Open Transport, you don't have to restart your Mac to switch network settings. You're set as soon as you choose a setting in this dialog box within the TCP/IP control panel.

PROBLEM: My Macintosh crashes when I use Internet-connection software.

SOLUTION: If you are using MacPPP or FreePPP (both freeware) and you crash, make sure you're using version 2.5 or later of either program.

If you use commercial software and you're experiencing crashes, it could be because the third-party software is incompatible with Open Transport. Current versions of most commercial PPP and SLIP implementations — including Intercon's InterSLIP, InterPPP, and InterPPP II; Hyde Park Software's MacSLIP; Synergy Software's VersaTerm SLIP; and Sonic System's SonicPPP — are compatible with Open Transport. If the product you use is not among those listed, contact the vendor to find out if there's an Open Transport-compatible update.

PROBLEM: I must use incompatible software.

SOLUTION: Just because you must use incompatible software, such as the Microsoft Mail 3.1 client or Apple's LaserWriter Bridge or LocalTalk Bridge (version 2.0.1 or earlier of either one), it doesn't mean you can't ever use Open Transport. It just means switching back and forth between Open Transport and "classic" networking. To simplify the process, you'll need a copy of Apple's Network Software Selector. It comes with System 7.5.3 and System 7.5 Update 2.0 (see the "Finders Keepers" sidebar for information on obtaining this system software and the update).

PROBLEM: I don't have enough memory to run Open Transport.

SOLUTION: If there's a disadvantage to Open Transport, it's the amount of RAM each protocol can require. On a PowerPC system, Open Transport can require as much as 1.5 MB of RAM; on a non-PowerPC system, as much as 500K. Using virtual memory or RAM Doubler will allow you to recover some memory, but there's a catch, since some connectivity software — including pre-2.5 versions of MacPPP and FreePPP — isn't fully compatible with virtual-memory schemes.

Rather than use virtual memory, you can conserve RAM by disabling protocols you aren't using. For instance, if you don't need AppleTalk, you can disable it by opening its control panel; choosing User Mode from the Edit menu; selecting Advanced User Mode from the resulting window; clicking on the Options button; and, finally, clicking on the Inactive radio button.

An Open-and-Shut Case

Is Open Transport 1.1 worth it? If you're happy with your current networking setup, especially if you're already running low on memory, the answer may be no. But if you need to switch configurations periodically, want a faster networking system for PowerPC systems, or just want a simpler networking interface, the answer is almost certainly yes. And as more and more software becomes Open Transport-savvy, running Apple's new networking system software may be the only way to make sure developers will support your Mac.

Geoff Duncan is a Macintosh and Internet consultant as well as the managing editor of TidBITS (http://www.tidbits.com/), an online Macintosh weekly newsletter.

Finders Keepers / how to get Open Transport

IF YOU'VE MADE THE DECISION to install Open Transport, first you have to find it. It comes with System 7.5.3, which is included with all new Macs. It's also available for free from Apple via the Internet and online services, as part of System 7.5 Update 2.0 (which updates any version of System 7.5 to 7.5.3). You can download it from Apple's Internet site at ftp://ftp.support.apple.com/pub/apple_sw_updates/US/mac/system_sw/System_7.5_Update_2.0/. If you're not interested in downloading the entire System 7.5 Update, you can buy Open Transport separately from retail stores for about $30. As always, it's a good idea to back up your data before installing new system software.

The only PowerPC machines excluded from the Open Transport 1.1 users club are the Power Mac 5200, 5300 (desktop), 6200, and 6300, but at press time, Apple planned to ship an update, Open Transport version 1.1.1, specifically for those machines. It should be available now from the Apple support areas online.

By Bob LeVitus and Christopher Breen

Help Folder

Mac common sense, word-processing nostalgia, and mysterious dialog boxes.

Mac No-Nos

Q. I desperately need your help! I installed Snitch (a free utility that lets you modify several attributes from within a file's or folder's Get Info window) and selected Get Info on my Games folder. I checked the Invisible box. Now I can't find the folder! How do I get it back?

Name withheld for obvious reasons
via the Internet

CHRIS: Hmm, how can I put this delicately?

BOB: Watch it. We've got a subscription renewal at stake.

CHRIS: Fear not. The master of positive spin is on the case. Ya know, Mr. or Ms. Withheld, some of the most valuable experience one can gain comes from making mistakes. Fortunately, we can all learn from them. First we're gonna undo the one you've made, and then we'll go over a few more Mac no-nos, for the benefit of all.

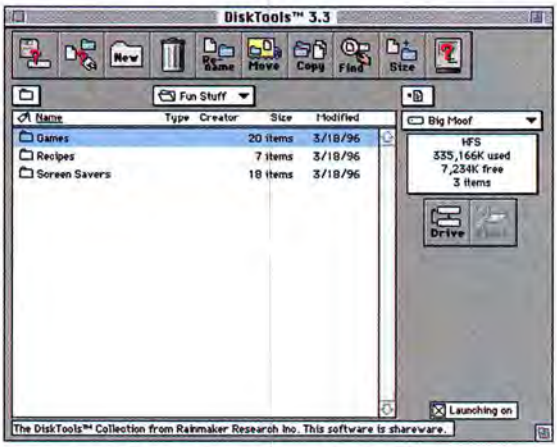


figure 1 / DiskTools changes file and folder attributes and restores invisible files and folders with a click on a button.

BOB: Before Chris lets loose with the sermon, I'll provide the way out. You need a utility that can make the folder reappear, such as Evan Gross' $20 shareware utility collection, DiskTools (see figure 1). Open DiskTools, locate your Games folder in the scrolling list, click on the second button from the left (it's not labeled), and uncheck the Invisible box. Your folder is now back in business.

By the way, DiskTools is worth downloading for the main program alone, but you also get a killer calculator replacement, a wonderful note pad, and a couple of other nifty DAs.

You were saying, Pastor Breen?

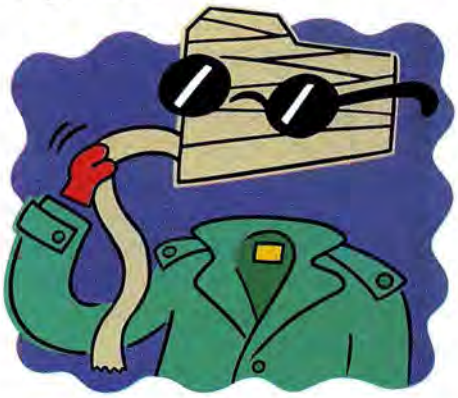
CHRIS: Bob and I — in our never ending search for truth — have committed just about every fatheaded sin a person can perpetrate on a Mac. Perhaps we can save our readers a little grief by pointing out areas where we've ventured and where more-cautious beings should fear to tread.

BOB: I'll take software and start with the lesson learned from the experience of our anonymous questioner. Don't flirt with danger! Clicking on boxes marked Invisible or selecting menu options reading Erase, Delete, or Clear without knowing how to restore files or folders to their original state is a bad idea. Memorizing the keyboard shortcut for Undo (Command-Z) is a must. Don't count on its working every time, though.

Leaving yourself an escape hatch is particularly important when using ResEdit. We've said it before, and we'll say it again — when modifying a file with ResEdit, always work on a backup copy.

CHRIS: The following hardware tips may seem obvious to some, but ignoring them could land you smack-dab in the chowder.

Don't move a hard drive while it's turned on. Chances are you'll gouge a deep trench into a disk platter and your drive will be trashed.



Likewise, plugging and unplugging cables while your Mac is switched on is a formula for disaster, particularly when messing with ADB cables. One pin bent in the wrong place, and kazap! — your ADB controller is a crispy critter.

And finally — I know this sounds bizarre, but I swear I've seen it done — covering your Mac, hard drive, or printer with a blanket to muffle the sound can also apply deep, penetrating heat to the hardware's components. The vents are there for a reason. Keep 'em clear of blankets, external peripherals, and your scrapbook full of old Help Folder columns.

Promised PPC PowerBook

Q. Why can't I find an Apple PowerPC upgrade board for my 500-series PowerBook? Is this another unrealized Apple promise?

Mike Mierau
via AOL

CHRIS: Unrealized promise? Well, no and yes.

BOB: No because Apple has supposedly been providing PowerPC upgrades for the 500-series PowerBooks since last December.

CHRIS: And yes because Apple has kept a very low profile with regard to these upgrades and users have reported great difficulty in tracking them down.

That fading red sticker on your PowerBook that says "Ready for PowerPC Upgrade" isn't false advertising — the PowerBook 500s are indeed upgradable. If you want your PowerBook to jam, however, the upgrade you get will probably bear the Newer Technology label.

WRITE TO HELP FOLDER/TIPS

c/o *MacUser*
950 Tower Lane, 18th Floor
Foster City, CA 94404

Don't want to wait for an answer? Post your question on ZD Net/Mac, *MacUser*'s online service, or send e-mail to helpfolder@macuser.com or tips@macuser.com. We pay $25 to $100 for any undocumented tips we publish.

ILLUSTRATION / DAVID BAMUNDO

PowerPC upgrades from Apple and Newer consist of a daughterboard with a PowerPC 603e processor. The Newer upgrades start at $600 (estimated street price after you've traded in your old daughterboard). You can get the upgrade with 0, 4, or 8 MB of RAM. Newer's boards contain a 117-MHz processor, and Apple's come with the 100-MHz variety.

BOB: Users of the Duo 200 series haven't been left out — although they'll have to fork over lots more cash to speed up their portables, since the upgrade consists of a completely new motherboard. The $1,299 Apple board contains a PowerPC 603e processor with 8 MB of RAM soldered on. I know it's expensive, but it does have one significant advantage over the 500-series upgrades: It will run the Copland OS, which Apple plans to release next year.

CHRIS: I can hear the screams from here. You'd better explain that.

BOB: I hate to be the one to break it to you, but the old motherboard of the 500s is based on 680x0 technology. Even with the PowerPC upgrade, Copland isn't expected to run on those machines. You'll have to stick with Apple's System 7.5 instead.

Really Retro Writing

Q. I would like to locate a font that mimics the type of a 1940s-vintage manual typewriter. I'd also like my Mac to make the sounds of clicks, clatters, rasps, and rings with my keystrokes and carriage returns.

Sheldon Levy
Midland, MI

BOB: No problem, Sheldon, on either count.

CHRIS: A quick search of America Online's software library for the keywords *typewriter and font* scored more than 40 files.

BOB: We'll save you the trouble of downloading them all; head straight for the VintageTypewriter font family, created by Susan Townsend (see figure 2). The $20 shareware package includes six fonts. Some of the other typewriter fonts are interesting, but Susan's — available in your choice of TrueType or Type 1 — are consistently beautiful.

CHRIS: Hey, Bob, what's the name of that noisy program you say is so wonderful in your *New & Improved Stupid Mac Tricks* book/disk collection (San Diego, California: AP Professional, 1995)?

BOB: You must mean TappyType, a control panel that adds the clickety-clack sound of a manual typewriter — complete with the kerchunk-ding bell sound of a carriage return — to your Mac.

CHRIS: TappyType is "Gumbyware" by Colin Klipsch. Try it for 30 days. If you like it, show your support by wearing a handkerchief on your head, clenching your fists, and strutting around your neighborhood shouting "WOOOH!" at interesting bits of cement. In other words, TappyType is free.

BOB: I'm using Susan's Smith Upright font and Colin's TappyType. There's something perversely wonderful about making thousands of dollars worth of Mac and printer look and sound like $10 worth of '40s pawnshop junk.

Jammin' RAM

Q. Is it true that my Power Mac's RAM will run 10 percent faster if I install DIMMs in pairs?

Simon Y. Chang
Providence, RI

BOB: I had a hunch that what you've heard is true, and upon consulting my expert sources, I learned why. It has to do with *interleaving* — a process in which bits of data "ping-pong" between two banks of DRAM to speed things up.

CHRIS: I might add that interleaving works only if same-sized DIMMs are plugged in at the right locations. So check your manual (it's different for each model).

BOB: Last but not least, not every PCI-based Power Mac and compatible supports memory interleaving. (The Power Mac 7200, for example, does not support RAM interleaving.) Make sure yours does. And even if it doesn't, look on the bright side — you now have the option of adding RAM one module at a time, something you couldn't do with earlier Mac models, which forced you to add memory modules two at a time.

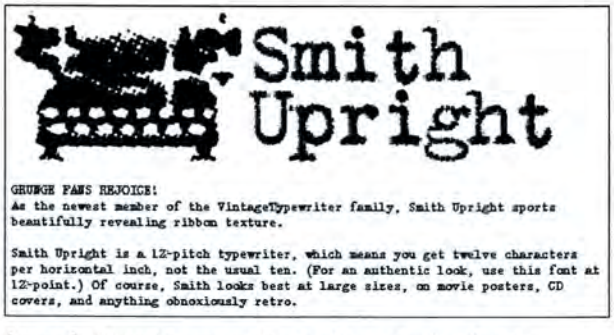


figure 2 / Susan Townsend's VintageTypewriter font family includes this killer re-creation of a 12-pitch Smith Upright.

Tips / Recordable CDs

Choosing Discs

Not all discs are created equal when it comes to protecting your data. To help guarantee a disc's reliability, seek out a brand that offers an optional protective resin layer. This extra layer guards against such hazards as the chemicals from ink and the pressure you apply when you write with a pen on a disc. (Eastman Kodak and Mitsui/MTC are among the companies that make discs with an extra layer.) You should be able to tell if there's an extra protective layer by reading the fine print on a disc's packaging.

Christopher Breen
***MacUser* contributing editor**

Righteous Rebuild

Q. Is it true that I could damage my System Folder by not turning off extensions before I rebuild the desktop?

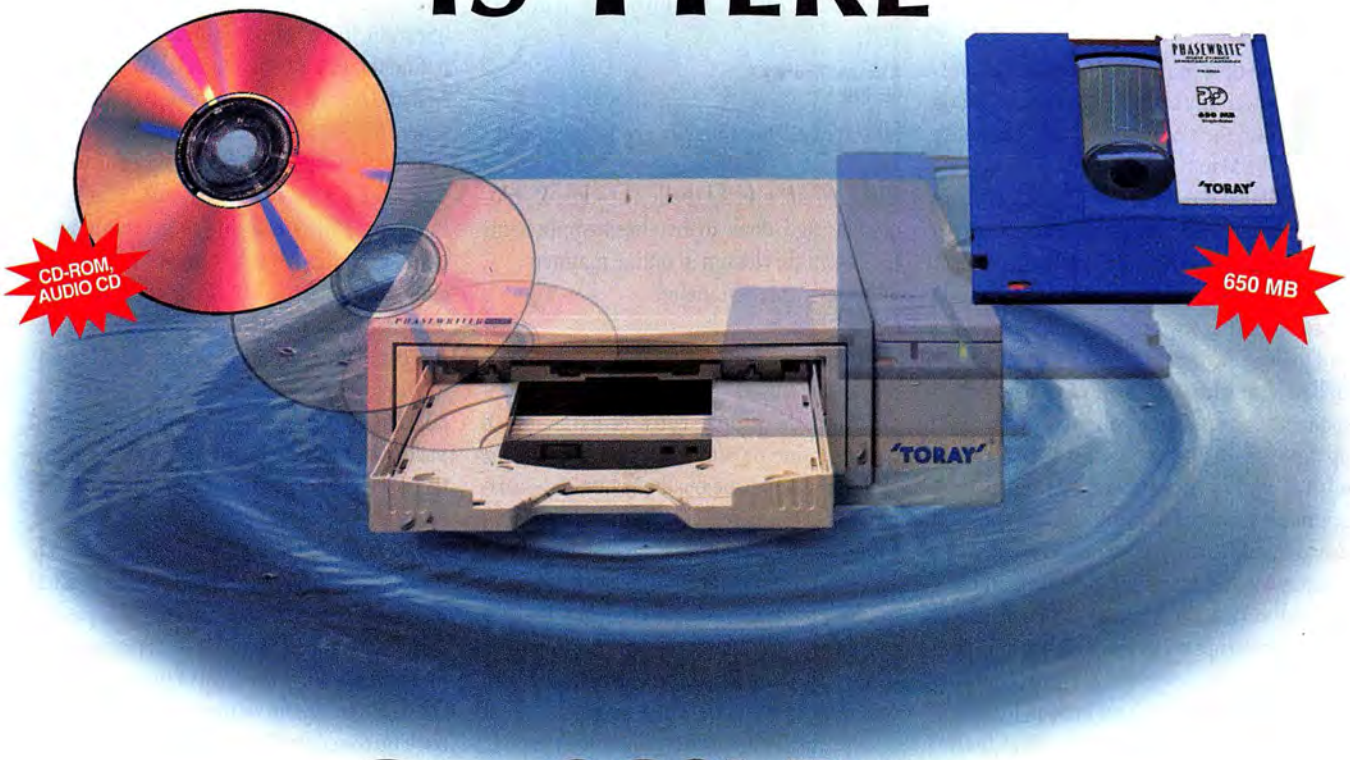
Pam Page
via the Internet

BOB: Yep. Here's how to rebuild it correctly, according to Apple:

1. Before you rebuild your desktop, use the Extensions Manager control panel to save your extensions configuration.
2. To turn off all extensions, click on the Sets pop-up menu in the Extensions Manager and choose All Off.
3. Turn on Macintosh Easy Open, by finding it in the list of control panels and clicking on it to put a check mark beside it.
4. Restart your computer while holding down the Command and Option keys.
5. Release the keys, and click on OK when a dialog box appears asking, "Are you sure you want to rebuild the desktop . . . ."
6. Open the Extensions Manager, and turn your extensions back on, by clicking on the Sets pop-up menu and choosing the set of extensions you saved in step 1.
7. Restart your computer in order to activate the extensions.

CHRIS: I might mention that the Apple-approved method — although it works most of the time — isn't always the best way to rebuild your desktop. If you want a crystal-clean rebuild, try MicroMat's freeware TechTool. This marvelous utility vaporizes the old invisible Desktop file and creates a brand-spanking-new one. The advantage? Desktop files sometimes become corrupted, leading to such ugly manifestations as generic icons and documents that can't find their creator when you double-click on them. An Apple rebuild can't repair that corruption. TechTool starts fresh.

THE NEW PD STANDARD IS HERE



ONE SCSI DRIVE
BOTH 4X CD-ROM AND REWRITABLE OPTICAL

It's the Phasewriter Dual™ with PD technology from Toray and it transcends existing standards with more flexibility than any other optical drive. Phasewriter Dual reads CD-ROMs at quad speed and reads or writes to optical disks at a blistering .87 MBytes/second transfer rate. Just drop a CD-ROM into our new Phasewriter Dual or switch to a 650 MByte single-sided rewritable disk for portable data exchange. The Phasewriter Dual is setting new standards with higher capacity and CD-ROM compatibility at a much lower cost.

And it's Fast, Fast, Fast!
Plug this drive into any platform hardware or network and you're ready to go.

The single front loading tray holds CD-ROMs or Toray's CD-size rewritable optical (PD)disks. Because it is a SCSI drive, the software identifies and mounts either media automatically.

For information on drives, media or the retailer nearest you, call **1-800-TORAY-PD**.

PHASEWRITER DUAL™

by

'TORAY'

email: info@toray.com Internet: http://www.toray.com

©1995 Toray Marketing & Sales (America), Inc.

BOB: Either way, it's a good idea to rebuild your Desktop file every month or so, whether you think you've had problems or not.

Know the Code

Q. When my Mac locked up recently, I tried to use the Command–Control–power-key shortcut to restart it. By mistake I used the wrong key sequence, and a blank dialog box with an angle bracket (>) in the top left corner appeared on the screen. What is this dialog box used for?

Cramer51
via the Internet

BOB: Sounds like you missed a keystroke. Command–power-key brings up that white dialog box. Adding the Control key to the sequence restarts the Mac.

That dialog box is the Mini-Debugger. Like the Wizard of Oz pulling levers (pay no attention to the man behind the curtain), it's a part of the Mac you're not supposed to see. It's used for the most part by programmers for testing and debugging parts of their programs.

CHRIS: In the old days, there was no keyboard sequence for restarting your Mac or bringing up the Mini-Debugger: Almost all Macs came with a plastic doohickey (called a programmer's switch) that you could install and use to rescue a frozen system. It consisted of a plastic switch containing two buttons: the Reset button (usually marked with a triangle) and the Interrupt button (usually marked with a circle or dot).

BOB: Many newer Macs have built-in Reset and Interrupt buttons. Pushing the Reset button restarts your Mac instantly; the perfect cure for a freeze.

CHRIS: Pushing the Interrupt button, on the other hand, causes the Mini-Debugger dialog box to appear.

BOB: Here's where it gets interesting: Not all Macs have Reset and Interrupt buttons. Instead, keyboard commands are necessary. These commands also work on machines that have Reset and Interrupt buttons.

CHRIS: To make the Mini-Debugger disappear, press the G key and then Return. Depending on how badly your Mac is hung, crashed, or frozen, this sequence may allow you to exit the Mini-Debugger gracefully.

BOB: If that doesn't work, you'll have to restart. Press the Reset button, or use the Command–Control–power-key shortcut.

CHRIS: Here's one last thought before we leave this topic: The Reset button is not a substitute for the Restart command on the Special menu. Using Restart is kinder and gentler to your Mac than using keyboard shortcuts or the Reset button. An abrupt reset can damage system files.

Missed Manners

Q. HEY! I CAN'T FIND THE THING YOU GUYS MENTIONED IN LAST MONTH'S COLUMN ANYWHERE!!! YOU KNOW THE ONE I MEAN. WHAT KIND OF IDIOTS ARE YOU!?? I'M PAYING FOR MY TIME ONLINE, AND I CAN'T SPEND ALL DAY LOOKING FOR THIS STINKING FILE!!! WHERE THE HECK IS IT???

A Vocal Minority
via AOL

BOB: Whoa! Did we really get a message like that?

CHRIS: No, not exactly. I boiled a couple of readers' messages down to their basic components to present this lesson in online manners.

BOB: You mean netiquette?

CHRIS: Right-o.

Friends, the Internet has swollen with a torrent of new users, many of whom don't understand the proper rules of behavior. Of course, none of our subscribers would be guilty of such atrocious behavior, but I suspect that there are a few ill-mannered nonsubscribers reading this for free in an oral surgeon's office prior to undergoing an agonizingly painful root canal and that these people may be unaware of the proper way to comport themselves online. Yeah, we mean you, Mr. I-Don't-Have-Time-To-Floss.

Let's start with an easy one: Don't type in all capital letters. That's read as shouting and will anger the message's recipient.

BOB: Here's another basic one: Include your name at the end of the message if you're writing to someone for the first time. The user name "hsrgsuzw666@zlo.com" in the message header is the next-best thing to being anonymous. Nobody likes getting anonymous mail.

CHRIS: Don't send files via e-mail unless the recipient has requested them. That 753K screen dump may look totally gnarly to you, but the person on the other end is paying to download it. Ask first.

BOB: Don't expect others to be your personal librarian. If you want information or a file, try to find it on your own. When you've done your best and have still come up empty, politely ask others for help.

CHRIS: Try to refrain from using educational FTP sites during business hours. People using these sites are trying to get some work done. Even though many university sites include directories full of fun stuff, downloading a 4-MB game demo in the middle of the day could deny access to people who are doing their jobs.

BOB: Last and probably least, a pet peeve: Avoid participating in chain-mail threads. Honestly, the sky will not cave in because you trash this junk.

Here's a tip: If simply breaking the chain is too passive a way to express your disgust at this waste of bandwidth, try Dr. Bob's patent-pending Chain-Breaking System (infomercial in the works). Test the faith of those who send chain letters by forwarding the letters right back up the chain. Sure it's rude, but you'll ferret out the true believers in a hurry.

Tips / Hidden Keystrokes

Control Strip

When I started using the Control Strip utility, I was unhappy with its position at the bottom left corner of the screen. Applications always seem to open their documents aligned to the left side of the screen, so the documents were being partially obscured by the strip. I recently discovered that pressing the Option key as you select the tab of the Control Strip lets you move the strip not only vertically but also to the other side of the screen.

Chris Connors
via the Internet

Launcher

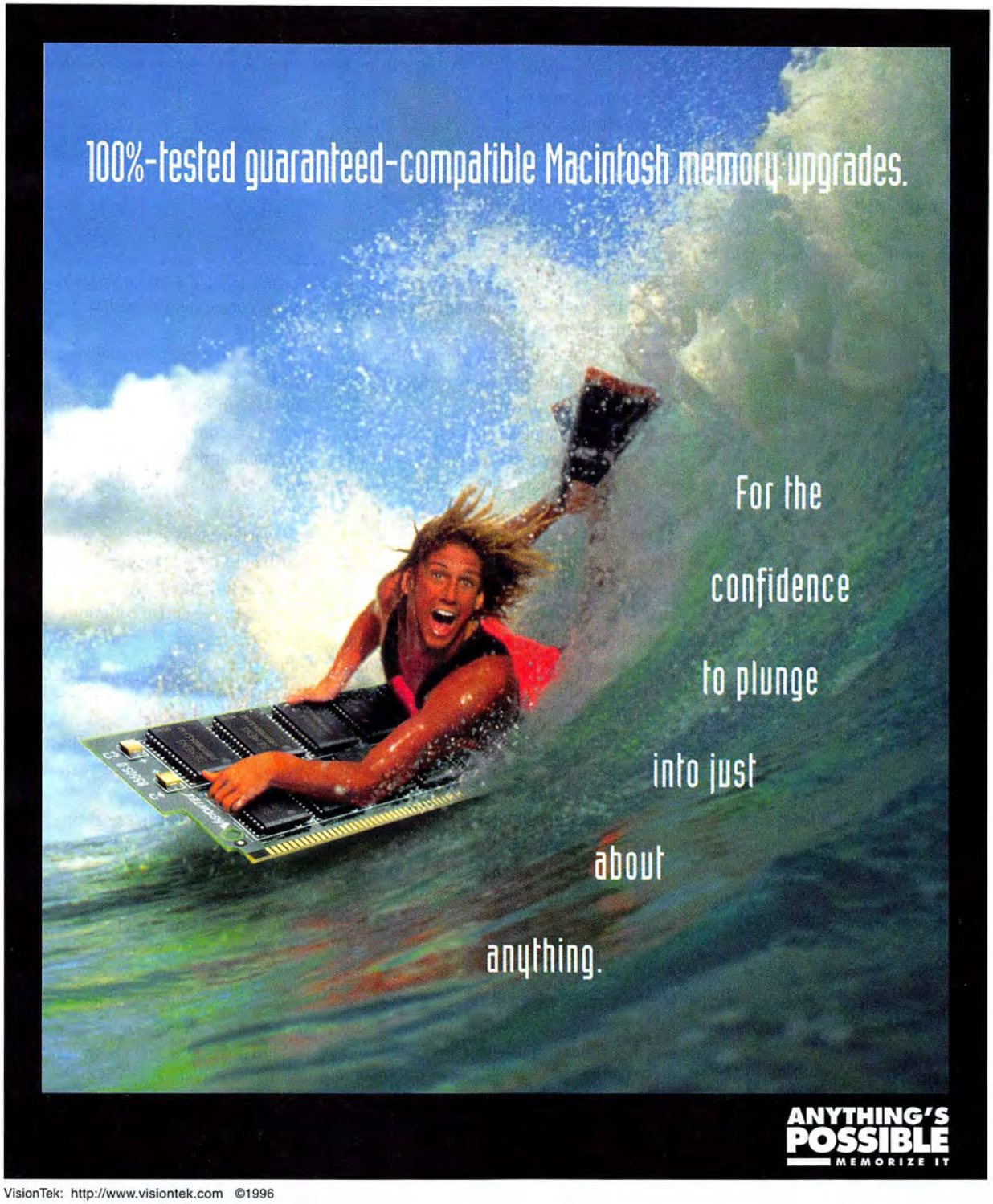
You can shrink or enlarge the Launcher's buttons by holding down the Command key and clicking anywhere between the buttons. Choose among small, medium, and large buttons for each category. To view the Launcher's secret About box, hold down the Option and Command keys and click anywhere between the Category buttons. To open a Category folder on the desktop, hold down the Option key and click on the Launcher's corresponding Category button.

Marvin Panganiban
via the Internet

Netscape Navigator

For the ichthyologically attuned, Netscape Navigator offers a hidden treat. Pressing Control-Option-F calls up a page on Navigator's server featuring a picture of a fish tank — updated anywhere from every 30 seconds to every five minutes in JPEG and GIF formats. Look for the image of FishCam creator Lou Montulli in the tank's reflection.

Derek Jacobs
via the Internet



VisionTek: http://www.visiontek.com ©1996

Ride the new wave of productivity. With VisionTek's full line of high quality memory modules for your PowerBook, Power Macintosh, or MacOS compatible. Guaranteed compatible and supported with our toll-free Tek-Support, Tek-Fax, Tek-BBS, and Tek-Web technical and customer assistance. And our exclusive Corporate Assistance Program makes VisionTek the only choice for your MacOS systems. For Macintosh memory and the VisionTek reseller nearest you, call **1-800-360-7185.**

VISIONTEK™

CIRCLE **25** ON READER SERVICE CARD

Drag and Drop or Not

Q. I used to be able to drag files from the Items Found window in Find File. Not anymore. What did I mess up?

E. Drucker
via the Internet

BOB: I boldly predict that our friend E. (may I call you E.?) has lost or disabled the all-important Clipping Extension (included with System 7.5) or the Macintosh Drag and Drop extension (included with earlier versions of System 7).

CHRIS: Very good. Now tell the nice person how to fix it.

BOB: Sure. Just reinstall your system software from the original disks, and Drag and Drop will return to Find File and other programs.

CHRIS: If you've merely disabled the Clipping or Drag and Drop extensions, return them to the active Extensions folder and restart the Mac.

I Mean Really Erase

Q. I must return a borrowed PowerBook 540c. How can I quickly return the hard disk to pristine condition and delete files I don't want the next user to have?

Cate Gable
via the Internet

BOB: You're right to worry. Items dragged into the Trash — even after the Trash has been emptied — can be recovered by a clever user, with nothing more sophisticated than a copy of Symantec's Norton Utilities or MacTools Pro. The easy way to avoid such skulduggery is to erase the entire disk, initialize and reformat it, and then reinstall only Apple system software before turning it in.

CHRIS: I suppose you want me to tell her the hard way?

BOB: Yep. Since you're the junior member of this writing team, I think that's only appropriate.

CHRIS: OK. The hard way is to grab a program that mangles a trashed file so badly that it is, for all intents and purposes, unrecoverable. This allows you to selectively delete specific files or folders instead of having to erase the entire disk.

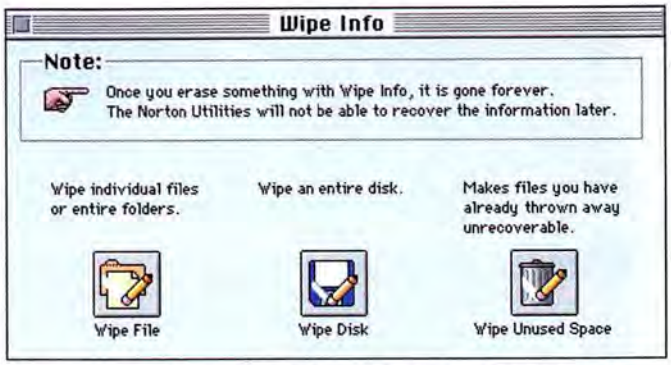


figure 3 / Norton Utilities' Wipe Info module will even defeat its sibling, Unerase, permanently and positively eradicating trashed files.

You've got a couple of choices: the free way, as represented by Greg Koenig's elegant File Fire, or the pay way, à la Symantec's Norton Utilities.

Now don't discount File Fire just because it was written by a 13-year-old. It overwrites trashed files multiple times and can also change a file's name, size, type and creator codes, and creation date. With a simple drag-and-drop onto File Fire, your file, folder, or volume is toast.

If your utility needs are broader — or you already own the darned thing — Norton Utilities' Wipe Info (see figure 3) is the way to go.

BOB: Not only does Wipe Info permanently delete your data but it's also bundled with the wonderful Norton Utilities package, which includes such gems as the Disk Doctor diagnosis-and-repair utility and Floppier, a fast floppy copier.

Faster! Faster!

Q. Like many other users, I am always in search of ways to increase the speed of my machine. I have a fairly fast Power Mac with 16 MB of RAM, but it's not enough.

What can I do to soup up my Mac?

R. Christian Alperin-Lea
New Orleans, LA

CHRIS: Buy an old Mac Plus, and work with it exclusively for a couple of weeks. I guarantee you'll be as giddy as a schoolgirl (which you may actually be) when you return to your Power Mac.

Barring that fatuous solution, there are a few tricks for giving the goose to your computer's performance.

BOB: You can speed up your Mac without spending a nickel, just by managing it correctly. For example, you'll get a speed benefit from disabling extensions and control panels that slow down your Mac. Also, try running your Mac in black-and-white and choosing Small Icon from the View menu. And if you have enough memory, try a RAM disk (you can use System 7.5's Memory control panel to set one up).

If you don't have it already, you should consider using Connectix's Speed Doubler. It won't do much for your PowerPC-native applications, but non-native programs will shine when doubled.

CHRIS: Of course, if you're willing to throw money at the problem, you have plenty of good options:

- Accelerators: Clock chippers, faster processors, and graphics-accelerator cards will zip things up mightily.
- Cache cards: You can see as much as a 40-percent speed increase with one of these plug-in babies.
- Fast SCSI-2 cards with Fast SCSI hard drives: Technically they won't make your Mac faster, but they sure will suck the data off your disk in a hurry.
- Additional RAM: With a ton o' RAM, programs such as Photoshop — which resort to virtual-memory schemes in low-memory situations — will perk right up.

BOB: Don't forget those utilities that let you work faster: macro programs, navigation enhancers such as Now's SuperBoomerang, and CD-caching software such as FWB's CD-ROM ToolKit.

Bob LeVitus is director of evangelism for Power Computing. Christopher Breen recently coauthored The Macintosh Bible Guide to Games, *published by Peachpit Press.*

Tips / Saving Money

Graphic Online Expense

AOL has a wonderfully rich graphic environment, but waiting around while the service downloads graphic after graphic may not be the most efficient way to spend your time or money.

Bill Karsh has developed ArtValve, a terrific control panel that allows you to turn off the automatic downloading of AOL graphics. When AOL queries the software to see if you have a particular picture, ArtValve intervenes; responds, "Got it, thanks all the same"; and substitutes a not terribly attractive default graphic in its place. If you can't live without those beautiful graphics after all, you can turn ArtValve off.

Frequent visitors to AOL will find that this $5 shareware program pays for itself in a matter of weeks.

Christopher Breen
***MacUser* contributing editor**

You can find the shareware and freeware programs referenced in this article on *MacUser*'s Web page (http://www.zdnet.com/macuser/). You can also find them in the MacUser and ZD Net/Mac areas on CompuServe. See How to Reach Us for instructions on accessing ZD Net/Mac.

The ultimate computing resource online

ZDNet™

http://www.zdnet.com

From the sources you trust:

- PC Magazine
- PC Week
- PC Computing
- Computer Shopper
- Windows Sources
- MacUser
- MacWEEK
- Inter@ctive Week
- Computer Life
- FamilyPC
- Computer Gaming World
- Yahoo! Internet Life

Be sure to sign up for Personal View
ZD Net's FREE news service that you can easily configure to track only the companies and products that interest you most.

Click into ZD Net's world-renowned Shareware Library and start downloading!
Over 10,000 programs — all tested, rated and reviewed by ZD Net editors.

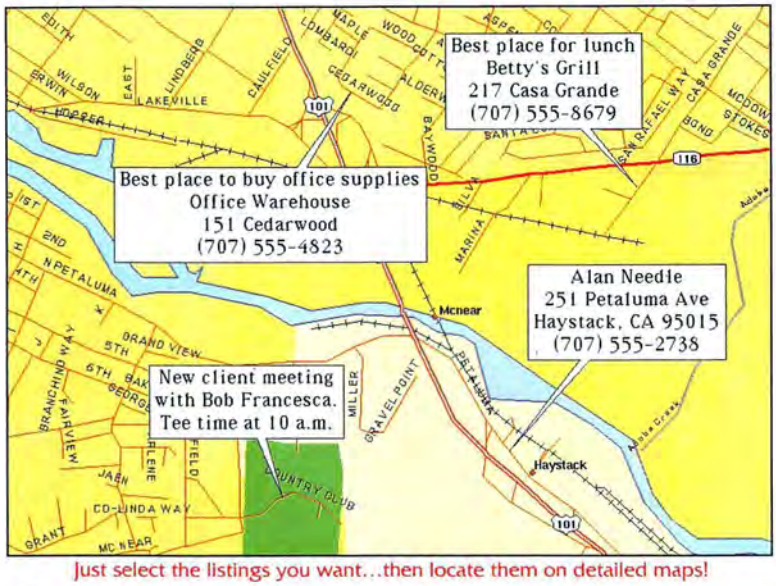
Join in! There's a lot going on —
from wide-ranging discussions with industry leaders, to topical weekly chats with editors and ZD Net personalities — there's always something new, exciting and insightful happening at www.zdnet.com.

See You Online!

CIRCLE 3 ON READER SERVICE CARD

Find A. Needle in Haystack, CA...

Find the customers, suppliers, old friends or golf courses you're looking for. Street Atlas USA® 3.0 is America's best-selling mapping software. Use it with Phone Search USA™ 2.0, our digital phone directory, to look up almost anyone and anyplace in the USA — and locate them on detailed maps.



Just select the listings you want...then locate them on detailed maps!

- Find potential clients nearby—or nationwide
- Locate suppliers by type and place—from architects in Atlanta to software stores in San Francisco
- Locate hotels, restaurants and meeting sites for business trips
- Make maps to client locations

...or almost anyone and anyplace in the USA!

Available from your local software retailer, your favorite software catalogs or direct from DeLorme at 1-800-452-5931, ext. 320.

New Version!

Street Atlas USA 3.0

- Seamless street maps of the entire USA on one CD-ROM
- Incredible map detail
- Search by place name, ZIP Code—even street address
- Customize maps with notes and symbols
- Print detailed, useful maps

Phone Search USA 2.0

- Over 80 million business and residential listings on three CD-ROMs
- Search by name, phone number or business type
- Search the whole country or just a state, city or ZIP Code
- Export unlimited listings

New for Macintosh!

DELORME

Check out our Web site! www.delorme.com

CIRCLE **150** ON READER SERVICE CARD

What's better than a remote control at enhancing your TV- and movie-viewing pleasure? Your Mac.

By Jon Zilber

The Couch-Potato Mac

WATCHING TV IS so early '90s. Renting videos is so pre-Web. Let's face it — if you're going to veg out in the post-GUI era, why not use your Mac to transform your passive couch-potato lifestyle into a more interactive mouse-potato paradigm? Your Mac is just itching to help you turn those hours wasted vegging out in front of the tube into *quality time* vegging out in front of the tube.

Video Visionaries

Plunking down a couple of bucks to rent a new video release or punching up a cable pay-per-view selection is like playing the slots in Las Vegas — except that Vegas gives better odds. Here's a safer bet: Invest in a good movie guide, and it will quickly pay for itself by steering you to just the right selection. You can check what your favorite reviewer thought of a particular flick, search for movies that fit your mood, or even get recommendations based on your own personal history of picks and pans.

Overall, **Cinemania 96** ▶ (★★★★½; $35 estimated street), from Microsoft (800-426-9400 or 206-882-8080), is your best bet. This updated version of last year's Eddy-nominated product has over 20,000 reviews from Roger Ebert, Pauline Kael, and Leonard Maltin; free monthly online updates; exhaustive cast and credit lists; movie stills; and audio and video clips. Hypertext links abound, letting you explore connections among actors, directors, genres, and themes. Sure, you can get lost in all its links, but the journey is bound to unearth a few discoveries for your next video-store run.

In contrast, get lost in **Corel All-Movie Guide** (★★½; $24.95 list), from Corel (800-772-6735 or 613-728-8200), and you'll be just plain lost. Sure, it boasts the biggest database of any movie guide — and *Waterworld* had the biggest budget of any movie in 1995. Using All-Movie Guide is like having a C++ programmer as your movie maven. The information in its unintuitive database not only varies dramatically in quantity and quality from movie to movie but it's often inconsistent within a selection as well. The 1971 film *The Canterbury Tales,* for example, is flagged as both an "okay family film" *and* "not for children." Still, All-Movie Guide does have data on over 90,000 films and offers a few neat features, such as a time line showing the chronology of the movies that match your search criteria and a plot finder that lets you search for movies matching a wide variety of thematic descriptions (such as "Aliens, bad," "Aliens, good," or "Aliens, sexy"). It also lets you order videos online. But if all you want is a big database of movie reviews, you're better off checking out the Internet Movie Database (http://www.msstate.edu/Movies/).

Blockbuster Video Guide to Movies & Videos (★★★★; $20 estimated street), from Creative Multimedia (800-262-7668 or 503-241-4351), has a simple, streamlined approach that can help you find what you want quickly without drowning you in movie trivia. Its search capabilities aren't quite as forgiving as Cinemania's, though; you have to enter an exact and complete word to find a match, whereas the Cinemania search engine narrows down your search with every letter you type. And although it can search for themes and plot elements in its 21,000 reviews, you have to know how to look. The 1967 film *Bedazzled* (a satirical retelling of Faust) turns up if you search for *devil* but not if you look for *Satan, Faust,* or *satire.* Online updates are available for $3 per month or $30 per year.

Criterion Goes to the Movies (★★★★; $24.95 list), from Voyager (800-446-2001 or 212-431-5199), covers a comparatively scant 140 movies, but it includes a

ILLUSTRATION / ROBERT ZAMMARCHI

the Home Computer CATALOG

Bring home the

Order any product shown here and get a

FREE*

Order #90724

Music Net CD

Vol. 2 Version 1

**Plus $1.95 shipping and handling*

Use this hot CD to preview over 200 R&B, country, rock and jazz albums.

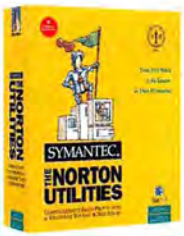
Valid through 8/31/96.

Norton Utilities 3.2 Upgrade

Find or fix lost or damaged files with the most widely used data recovery software!

Order #93976

Only $38.98



Flight Control System

The Flight Control System uses Thrustmaster's multiple function joystick technology, providing a versatile accessory to your game playing.

Order #95201

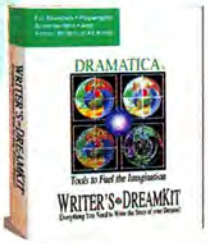
Only $99.98

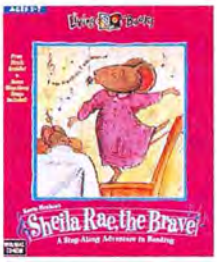
Writer's DreamKit

Guides you in writing a story with flawless structure from concept to completion. A must for ALL writers!

Order #89743

Only $99.98





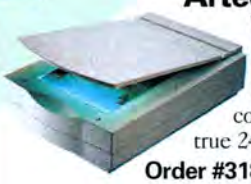
Sheila Rae, the Brave

This new interactive, animated storybook uses music to help kids learn to love reading.

Order #86676

Only $37.98

Artec's ViewStation Plus



Fast, single-pass color scanning with true 24-bit color!

Order #31805

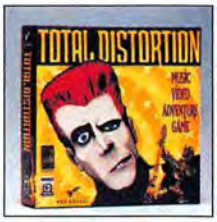
Only $369.98

Total Distortion

Total Distortion™ is an adventure game packed with serious danger inside a giant, animated 3D rock 'n roll world.

Order #97703

Only $37.98



Muppet Treasure Island

Journey through the Muppets' version of Robert Louis Stevenson's classic search for buried treasure.

Order #86720

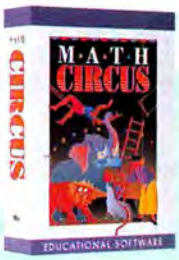
Only $37.98

Boca Modem 28.8 V.34

This affordable modem offers super-fast 28,800 bps data transfer capability, saving you phone charges.

Order #89300

Only $198.98

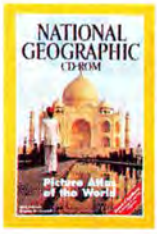


M*A*T*H Circus

M*A*T*H Circus is an exciting collection of problem-solving activities for kids with an appealing circus theme.

Order #88008

Only $39.98



Picture Atlas Of The World

Full-color maps and fascinating information on every country in the world!

Order #89997

Only $65.98

24" AnthroCart

The 24" AnthroCart features an open look that works in virtually any environment. If you want flexibility and mobility, then this is the cart for you.

Order #85561

Only $199.98

Design Your Own Home Suite

Design every aspect o your house or office yourself, including architecture, interiors and landscape.

Order #87185

Only $119.98

Marathon & Marathon 2 Bundle

The ultimate CD bundle for Marathon action fans!

Order #88455

Only $59.98

CD Stax

This hand-crafted, solid wood CD tower holds up to 20 single CDs. Completely stackable and ready to expand.

Order #30505

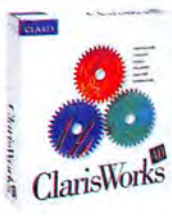
Only $16.98

Angel Devoid

A myriad of lethal characters await you in this dark, cybergothic, 3D world. Stay alive and you'll find your true identity!

Order #86736

Only $44.98



ClarisWorks 4.0

Word processing, outlining, spreadsheet, charting, presentation, graphics and paint tools in a single package!

Order #93424

Only $119.98

To Order Call 1•800•454•3686

© 1996 Multiple Zones International, Inc. All rights reserved. The Home Computer Catalog is a trademark of MZI.

best in computing

Call **1•800•454•3686**

Products for Computing at Home: Learning, Playing, Working

From the home office to the family room, the computer has become the center of our lives for learning, playing and working. While technology makes life easier, buying computing products has become more difficult – crowded stores, not enough information, and parking hassles. But now there's a better way! Introducing *the Home Computer Catalog*, your shop-at-home source for hardware, software and accessories you use at home. We select products we believe in. Our sales advisors know their stuff. Most orders are delivered overnight. So order any item you like – or ask for your FREE subscription!

Convenient Shipping via UPS Ground. Overnight delivery via Airborne Express available. Ask you sales advisor for details.

CIRCLE **109** ON READER SERVICE CARD

the Home Computer CATALOG

Authorized Catalog Reseller

☐ **YES!** SIGN ME UP for a FREE one-year subscription to the Home Computer Catalog.

YOUR SOURCE CODE **HU607**

To receive your FREE subscription, mail this coupon to: The Home Computer Catalog, 15815 SE 37th Street, Bellevue, WA 98006-1800

Name _____

Address _____

City _____

State _____ **Zip** _____

or call us at **1•800•454•3686**

thoughtful essay and a video clip from each — far more video clips than any of the others include, and they're all classics. Although it's just a catalog for the acclaimed Criterion Collection of laserdiscs, it's still an invaluable addition to any film buff's CD-ROM collection.

I Like to Watch

Someday, when digital videodisc replaces videotape, you may be able to watch any movie on your own Mac screen. For now, you can choose from a handful of full-length QuickTime movies on CD-ROM, generally supplemented with behind-the-scenes goodies. The best of these — including *This Is Spinal Tap*, *Comic Book Confidential*, and *A Hard Day's Night* — are from Voyager. Voyager's **Ephemeral Films** ▲ (★★★★½; $29.95 list) is perhaps the best suited to CD-ROM; it's a campy collection of social-propaganda and industrial promotional films that were the forerunners of today's infomercials. No thigh busters, psychic hotlines, or Apple Performas hawked here, but you will find *A Wonderful New World of Fords; Dating: Do's and Don'ts;* and a young Mike Wallace narrating as an even younger Dick York struggles with the difficulties of fitting in, in the 1947 classic *Shy Guy.*

As Seen on TV

Television, it's been said, is a vast wasteland. A visit to tvland (http://www.tvland.com/) may not make it any less of a wasteland, but it certainly makes the wasteland vaster. While you're online, be sure to stop and stock up at Bubba's BBQ Chip Collection (http://users.aol.com/gbeason/bbqchips.html).

But don't just watch another *Star Trek* rerun when you can boldly go where no Mac has gone before, thanks to **Star Trek: The Next Generation Interactive Technical Manual** (★★★★; $60 estimated street), from Simon and Schuster Interactive (800-910-0099). Thanks to the 3-D magic of QuickTime VR, you can explore practically every nook and cranny of the *USS Enterprise* from every possible perspective. And **Star Trek Omnipedia** (★★★½; $60 estimated street), also from Simon and Schuster Interactive, can help you find just about every bit of *Star Trek* trivia from the original series, *The Next Generation,* and *Deep Space Nine.*

Only one TV-related CD-ROM, however, deserves to be called **Monty Python's Complete Waste of Time** (★★★★★; $50 estimated street), and perhaps no other CD-ROM has ever so delightfully lived up to its promise as does this celebration of all things Pythonesque, from 7th Level (800-884-8863 or 214-498-8100). Among the skits included are the naughty bits from "Nudge, Nudge," the haughty bits from "The Argument Clinic," and some cheesy video from "The Cheese Shop." You can sing along to Spam!, customize your Mac with the Desktop Pythonizer, or play pointless games involving flatulent fowl. If "penguin on the telly" holds a special meaning for you, don't miss this disc.

Ultimate Potato Accessories

No mouse potato is truly complete without two final items. First, what the remote control is to the couch potato, the **EZ-CD CD opener** ($3 list) is to the mouse potato. This low-tech lifesaver from MacTec Products (818-702-6979) effortlessly slices open all CD-ROM packaging materials. Thanks to the magic of analog technology, it even works on audio CDs too!

And if you're out of breath from the exertion of slitting open all those CD-ROMs, maybe you've embraced the potato lifestyle a bit too vigorously. Check out **Active Trainer** (★★★★; $44.95 list), from Laser Media (800-639-0628 or 416-977-4320). This surprisingly slick fitness package is so inspiring you'll practically burn calories just by watching its instructional videos. Featuring expert advice and QuickTime videos on weight, aerobics, diet, and lifestyle training, the Active Trainer CD-ROM even comes with a tape measure and a handy fat caliper for measuring your progress from spudly to studly.

The Two Dads

BY RIK MYSLEWSKI AND JIM SHATZ-AKIN

RIK & JIM: . . .happy birthday, dear Baileeeeey . . .happy birthday to you!
JIM: Blow out the candle, Bailey.
RIK: Jim, it's her first birthday — she can't follow instructions yet.
JIM: Sure she can. Watch. Bailey, smash your hands into the cake and rub them all over your face.
[*Bailey chuckles as she does so.*]
RIK: Now hose her down so she can tear open this birthday present: Knowledge Adventure's **JumpStart Toddlers.**
JIM: Great gift, Rik. Knowledge Adventure has done a terrific job on its JumpStart line of early-learning software.
RIK: When Bailey's 3, she'll graduate to **JumpStart Preschool,** then on to **JumpStart Kindergarten** ▲, **JumpStart 1st Grade,** and **JumpStart 2nd Grade** ▼. Beginning this fall, 3rd Grade and 4th Grade will also be available — and they'll link up with Knowledge Adventure's Web site.
JIM: There's a lot to be said for leading a kid through a well-thought-out, grade-based sequence of activities.
RIK: And the JumpStart series is quite rich — 1st Grade and 2nd Grade each include enough activities to fill a full school year.
JIM: I like the wide variety of activities: everything from the three *R*s to the three *A*s: art, arcade-style games, and astronomy.

RIK: Not to mention brain-teasers, geography, and music — all age-appropriate, all fun.
JIM: Practical too: Each title tracks how well your kid's doing and then adjusts its difficulty and suggested activities accordingly.
RIK: From Preschool on up, you get a progress report that details your kids' proficiency in several areas. You can track as many as 99 kids at a time — perfect for teachers with multiple classes.
JIM: Good manuals, good online documentation, songs you can play on your audio-CD player — what's not to like?
RIK: Well, navigation can be confusing, and some of the music is cloying.
JIM: But you can't fault the life lesson taught in Toddlers' "Duck Song": "I quack in the morning. I quack at night. I quack until I get it right."

JumpStart Toddlers ★★★★

Ages: 18 months – 3 years.
A new software category: *lapware.* With your help, your little one will learn basic computer skills along with number, shape, and letter recognition. Fewest activities in the series.

JumpStart Preschool ★★★★

Ages: 3 – 5.
A wealth of activities — along with Kisha the koala and Pierre the polar bear — teaches prereading and premath skills. Most activities are great, but navigation could be easier.

JumpStart Kindergarten ★★★½

Ages: 4 – 6.
A solid group of games and activities — BeBop the hamster's hide-and-seek game alone is worth the price of admission. Don't bother with the lame painting module, however.

JumpStart 1st Grade ★★★★½

Ages: 5 – 7.
Over a dozen activities will engage even the most jaded first-grader. Songs and animations entertain, and a milk-cap-acquisition scoring scheme motivates.

JumpStart 2nd Grade ★★★★★

Ages: 6 – 8.
The best of the bunch, this well-animated collection of activities is organized around a challenging pen-pal game. Highlights include surprisingly sophisticated tunes and pleasantly silly Mad Libs-style storybooks.
Price: CD-ROM, $35 each (estimated street).
Company: Knowledge Adventure, Glendale, CA; 800-542-4240 or 818-246-4400; http://www.adventure.com/.
Reader Service: Circle #419.

The Game Room

BY BOB LEVITUS

AS IN REAL LIFE, this month's selection of games gives you more than one way to move through your adventures — you either walk, drive, or fly your way into entertainment-landia.

In System Shock, you go by foot (mostly) on an adventure that requires mindless destruction as well as thoughtful puzzle-solving. Comanche Mac also satisfies an appetite for destruction but requires a different type of skill — flying a military helicopter. Al Unser Jr., Arcade Racing offers cars rather than carnage, in a racing game that's much like those you'd find in an arcade.

System Shock

This game succeeds by balancing mindless shoot-'em-up action with thought-provoking challenges.

Your goal in System Shock — surprise, surprise — is to save the world. The twist here is your role: You play the world's most notorious cyberspace thief. After being busted for hacking, you get a rare "cyberjack" brain implant that helps you save the space station you're on, which is swarming with cyborgs, robots, and human mutants. Your brain implant feeds you clues to help you figure out how to destroy SHODAN, a ruthless artificial-intelligence center that controls the enemy army.

Although the theme of saving the world isn't new, System Shock's well-designed user interface makes the game uniquely fun to play. Whatever you need — regardless of when you need it — is a mouse click or key press away. For instance, a dermal stamina patch is stored on the side of your viewing window so you can access it anytime.

For a shoot-'em-up, System Shock is also unique in that there's little mayhem and almost no gore. To take up the slack, you have mental exercises — such as puzzle solving and code breaking — that get more interesting as you progress.

Another nice touch is that you can adjust the difficulty levels for any of the game's parts — combat, the mission's plot, the puzzles, and the cyberspace experience (the portion of the game in which you enter a make-believe Internet) — making System Shock suitable for a wide variety of players.

The only drawbacks I found were its hefty requirements (a Power Mac 7100/80 or greater with 16 MB of RAM and a Level 2 cache) and chunky, ported-from-DOS graphics.

GAME POINT

System Shock is a sci-fi game with just the right balance of destruction and puzzle solving. The helicopter simulation Comanche Mac is a happy medium between a complex flight sim and a simple arcade game. Al Unser Jr., Arcade Racing is just like arcade racing games, but don't expect the thrilling crash scenes.

System Shock ♦♦♦♦

Price: $40 (estimated street).
Company: Origin Systems, Austin, TX; 512-434-4263.
Reader Service: Circle #420.

Comanche Mac ♦♦♦♦

Price: $50 (estimated street).
Company: NovaLogic, Calabasas, CA; 800-858-1322 or 818-880-1997.
Reader Service: Circle #421.

Al Unser Jr., Arcade Racing ♦♦♦

Price: $40 (estimated street).
Company: Mindscape, Novato, CA; 800-866-5967 or 415-897-9900.
Reader Service: Circle #422.

Comanche Mac

I'm a sucker for flying games, so it should come as no surprise that I think the helicopter flying game Comanche Mac is the coolest thing since propellers on beanies. Comanche is ideal for those who find flight simulators such as A-10 Attack! and F/A-18 Hornet too finicky to be enjoyable.

As the pilot of an RAH-66 Comanche attack chopper, you're in command of a deadly piece of military hardware that can achieve high speeds at altitudes as low as 50 feet. You're armed with an ample supply of missiles, rockets, cannons, and other weaponry, providing a plethora of pyrotechnics in every mission.

Comanche's first ten missions act as a tutorial to let you learn skills you'll need in the real missions. Once you've completed the tutorials — which should take 10 to 20 hours — you get 90 other missions that take place in a variety of regions, from Antarctica to South America. To add more variety, the missions present you with several conditions, including reduced-visibility situations such as night flying.

Comanche Mac has some interesting effects, such as translucent smoke, snow, haze, and reflective water. One particularly intriguing effect can be seen during night flight when you use your handy FLIR (forward-looking infrared) — this device lets you amplify moonlight and casts a weird green glow.

The controls are simple. All you have to worry about is steering, controlling your altitude and speed, aiming, and shooting. There is one problem with the game's controls, though: You can't reassign them to whatever keys you want. You're stuck with the default settings.

Comanche gets kudos for running decently on 68030 Macs, although on those machines, you have to turn down the graphics resolution, put up with some jerky motion, and miss out on lots of cool effects.

Al Unser Jr., Arcade Racing

Take an Indy-style racing game out of the arcade and put it on your Mac, and you've got Al Unser Jr., Arcade Racing (pictured below). Sure, you lose the cool steering wheel, but you have the game at your fingertips and you save lots of quarters.

Just like the arcade racing games, this one's all twitch and no thought. You just steer — using your keyboard and mouse — and try not to crash. You can choose which keys control which actions, but there are some strange restrictions: You can't assign controls to certain keys, and other keys can be used for steering but not for stopping or accelerating.

Driving is smooth and responsive in every one of the ten cars you can choose from (all of which, unfortunately, seem to handle the same). You drive around one of 15 tracks, challenging yourself (Practice mode), the clock (Timed mode), or computerized opponents (Championship mode).

Now for the bad news: In this game, you never crash, burn, or die, even when you drive directly into an object bigger, heavier, or more flame-resistant than your car. If you drive poorly, you should have to pay the price — a spectacular, flaming demise. You might consider this built-in immortality an enhancement, since it moves the game along quickly, but I call it a disappointment.

The game runs on any Mac model Quadra 630 or later and is accelerated for the Power Mac.

Bob LeVitus is a MacUser *contributing editor and Power Computing's director of evangelism.*

The Tip-Off

System Shock

If you're about to face a hairy battle (in harder settings only), apply several medi-patches to yourself before the fracas begins.

DIRECT LINE

For many of you, mail order is your primary means of purchasing Macintosh products and services. That's why MacUser has put together the following special section.

It's what you've been demanding—a convenient place to quickly find the products you need from the vendors you want to buy from. MacUser's Direct Line to products is just one more reason to turn to MacUser for the relevant information aimed at the serious user.

MacUser

$0 Down 100% Business Financing NO Payments for 90days

FREE!
5x200mb Syquest Cartridges with lease
$345 Value

Ultimate Designers Special

- PowerMac 8500/120 — PowerMac 8500/120 Starting at $2699
- Internal CD ROM
- 64MB RAM
- 2GB internal hard drive
- Extended keyboard
- Sony 20SF II Trinitron monitor
- ATI Xclaim PCI Graphics Card
- Microtek Scanmaker 3E
- SyQuest 200 Drive
- TI Microlaser Pro 8 600dpi Printer
- 12x12 Graphics Tablet

Per Month **$249**

FREE VALUE ADDED SERVICES

Most Popular Configuration

Why Lease?

Digital GraphiX NOW LEASING

- $0 Down 100% Business Financing No Payments for 90 days. You can lease hardware, software and extended warranties.
- Converts a large cash purchase into low monthly payments.
- Leasing allows your business to pay for equipment as it generates income, not before.
- Computer equipment depreciates rapidly, so don't spend your hard earned capital, it's the most important asset your company has.

Why Lease or Buy from Digital GraphiX?

WE PROVIDE THE BEST VALUE ADDED SERVICE IN THE INDUSTRY.

FREE VALUE ADDED SERVICES

- We are system experts. **WE ARE NOT ORDER TAKERS. We offer the best service, price and selection.**
- We cater to marketing and advertising professionals, printing shops, service bureaus, multimedia, digital imaging, and CAD/CAM professionals. Our Business is knowing your mac system needs.

PowerMac System Specials

CPU/XKey/Mouse	Monitor/Card	Cash	Lease	
9500/132 /40mb/2.0GB/CD	Sony 20SF II/ATI Xclaim	$5879	$159	SALE
8500/120 /80mb/2.0GB/CD	Sony 20SF II /ATI Xclaim	$6469	$175	
8500/120 /16mb/1GB/CD	Viewsonic 17" /VRAM upgrade	$4029	$109	SALE
7500/100 /32mb/2.0GB/CD	Sony 17SF II /ATI Xclaim	$3739	$99	
7500/100 /24mb/1.0GB/CD	Sony 17SF II /VRAM upgrade	$3459	$95	SALE

Graphix & CAD Systems

Perfect for: Graphic Designers, Printers, Service Bureaus, Advertising Agencies, and Marketing Departments

New $0 Down NEW BUSINESS Financing Available

FedEx

FREE!

Quark With Every Graphix System Lease
$650 Value

8500/120 Mid Range DTP System

Per Month **$299**

Systems Starting at **$2599**

- PowerMac 8500/120
- Internal CD ROM
- 64MB RAM
- 2GB internal hard drive
- Extended keyboard
- Sony 20SFII monitor
- ATI XClaim PCI Video Card
- Microtek Scanmaker II E6
- Sony 8GB DAT tape drive
- SyQuest 200 Drive
- GCC 608 600dpi, 11x17 Printer
- 12x12 Graphics Tablet

9500/132 Hi End Super Station

Per Month **$459**

Systems Starting at **$2899**

FREE VALUE ADDED SERVICES

- PowerPC 9500/132MHZ
- Internal CD ROM
- 144MB RAM
- 4GB internal hard drive
- Radius PressView 21SR Monitor
- ATI XClaim PCI Video Card
- JAZ 1.0GB Internal Optical Drive
- SyQuest 200 Drive
- Microtek ScanMaker III with Transparency
- GCC XL 1208 1200dpi, 11x17 Printer
- 12x18 Graphics Tablet

Scanners

Agfa Studio Scan IIsi	$879
Agfa Arcus II/Transparency	$1999
Microtek Scanmaker II E6	$599
Microtek Scanmaker III	$1979
Microtek Scanmaker E3	**$389** SALE
Epson ES-1200c Pro	$1169
Epson ES-1000c	$729
HP ScanJet 4s	$295
HP ScanJet 4c	**$945** SALE
Umax Powerlook/Trans	$1939
Umax Vista-S12 Pro	$899
Umax Vista-S12 LE	$789

Digital & Multimedia Systems

Perfect for: Video Editing, Video Production, Digital Imaging, Multimedia and Hi-End Graphic Professionals

Intel Inside PC Systems also available

Real Time Video Capture

FREE!

Adobe Premiere With Every Digital System Lease
$485 Value

9500/132 Digital Video Power System

Per Month **$399**

Systems Starting at **$2899**

- PowerPC 9500/120MHZ
- Internal CD ROM
- 64MB RAM
- 2GB hard drive
- Extended keyboard
- Sony 20SF II Monitor
- ATI XClaim PCI Video Card
- TrueVision Targa 2000 PCI Digital Card
- 8GB SCSI-3 Fast&Wide disk array
- FWB Jackhammer SCSI-3 controller
- Exabyte 8505 16GB Tape drive

16 MB Only $299 SALE

Lifetime Warranty

Memory

Size	DIMMS/SIMMS
4MB	$69/$69
8MB	$159/$129
16MB	**$299/$299**
32MB	$619/$589
64MB	$1199/NA

Optical Drives

IOMega Jaz 1.0GB	$599	
Olympus 1.3GB	**$1299**	SALE
MaxOptix Tahiti 4 2.6GB	$2399	
Sony 2.6GB	$1889	

SyQuest Drives

Includes 25/50 cable, active terminator, FWB Hard Disk Toolkit

EZ 135 External	$199
270MB External	$399
200MB External	**$349** SALE

SyQuest Cartridges

270MB	$56
200MB	**$59**
88MB	$45
44MB	$39

Monitors

Samsung 14NE	$299 SALE
Apple 15	$349
Viewsonic 17EA AV	$699
Radius 17 PrecisionView	$899
Sony 17SF II	**$899** SALE
Sony 20SF II	$1799 New
Radius 21 PrecisionView	$2289
PressView 21SR	$3149

Laser Printers

TI MicroLaser Pro 8	**$1199**
HP 4MV	$2839
HP 5Mp	$1045
Epson Stylus Color Pro	$539
GCC XL 608, 600dpi	$2339
GCC XL 808, 800dpi	$2989
GCC XL 1208, 1200dpi	$4169

Optical Cartridges

OEM 128MB	**$10.99**	SALE
OEM 230MB	$16.99	
OEM 600/650MB	$39	
OEM 1.2/1.3GB	$56	

74 MINUTE CD ROM RECORDABLE MEDIA
$68.99 BOX OF 10

Hard Drives

Quantum / Conner	Internal	External	
Quantum 540MB	$99	$159	
Quantum 1GB	$249	$309	
HP 2GB	**$499**	**$559**	SALE
Quantum 4GB	$899	$959	
Seagate			
Seagate 2GB	$730	$805	
Seagate 4GB	$990	$1065	
Seagate 9GB	$2190	$2290	

Digital GraphiX

Intel Inside

Your Value Added Mac & PC Source

20695 S. Western Ave Suite 132
Torrance, CA 90501

800-680-9062

800-680-9062 SALES, USA & CANADA
310-783-1525 FAX
310-783-1515 INTERNATIONAL

Order from 5:30am - 6:00pm M-F , 9:00am - 4:00pm Sat

Prices subject to change without notice. Not responsible for typographical errors. Call for an RMA number before returning equipment.

GREAT PRODUCTS... PRICELESS SUPPORT

APS Technologies

STORE MORE FOR LESS
1GB STORAGE FOR ONLY $229.95

Internal configuration

APS Q 1080

While Quantities Last

Quantum

MacWEEK ★★★★ MacUser 21 LABS ★★★★

- ✔ Well suited for home and office use
- ✔ Great for AV and non-AV applications
- ✔ PRML technology delivers more storage to powerful CPUs & applications

For an incredible value in 1GB drives, look no further than the APS Q 1080. It is the value champ of mid-capacity drives. This drive gives you over a gigabyte of capacity and read/write performance that makes it a natural for any application. It is backed by a 3-year warranty and supports a 500,000 hour MTBF. If you're ready to take a step forward in drive capacity and performance, the APS Q 1080 makes that step an easy one.

7200 rpm PERFORMANCE, 5400 rpm PRICE

APS MS 2000

$469.95 Internal configuration

MICROPOLIS

- ✔ 7.31MB/sec. sust. write, 4.54MB/sec. sust. read
- ✔ 5400 rpm mechanism
- ✔ Performs like a 7200 rpm drive
- ✔ 5-year warranty

That's right, this incredible drive has the performance you'd expect from a 7200 rpm mechanism but with a 5400 rpm drive's price – and reliability! The APS MS 2000 formats to 2047MB, delivers sustained reads at up to 4.54 MB/sec. and sustained writes at up to 7.31 MB/sec, has an average access time of 20ms and average seek of 9.6ms.

GREAT BUDGET BUY

APS Q 840

$189.95 Internal configuration

Quantum

- ✔ Our most affordable drive
- ✔ Low power requirements and low noise, great for internal use
- ✔ 3-year warranty

MacUser 21 LABS ★★★★

When your Mac's original hard drive is no longer adequate for your needs, it's time to upgrade to the APS Q 840. It formats to 810MB and is capable of sustained reads of 2.6MB per second and sustained writes of 2.7MB per second with seek and access times of 12.2 ms and 22 ms, respectively.

APS DESKTOP DRIVES

Model	Capacity/Awards	Internal	SR2000
APS Q 840 Quantum 840 Trailblazer	811MB MacUser 21 LABS ★★★★	$189.95	$259.95
APS Q 1080* Quantum 1080 Fireball	1042MB MacUser 21 LABS ★★★★	229.95	289.95
APS Q 1280 Quantum Fireball II 1280	1222MB MacUser 21 LABS ★★★★	269.95	369.95
APS I 2160 IBM Ultrastar ES	2063MB	479.95	579.95
APS MS 2000 Micropolis 4421	2000MB	469.95	569.95
APS ST 4200 Seagate ST 15230N	4094MB MacUser 21 LABS ★★★★	889.95	989.95

*While Supplies Last

These products are performance-matched for optimal performance in the PowerPC environment.

APS HIGH-PERFORMANCE DRIVES

Model	Capacity/Awards	Internal	SR2000
APS MS 2.0 Micropolis 4221	1955MB MacUser 21 LABS ★★★½	$549.95	$649.95
Fast/Wide or AV available for an additional $100.00			
APS Q 2.0 Quantum Atlas XP32150	2050MB MacUser 21 LABS ★★★★	699.95	799.95
Fast/Wide available for an additional $100.00			
APS MS 4.0 Micropolis 3243	4064MB MacUser 21 LABS ★★★★	899.95	999.95
Fast/Wide or AV available for an additional $100.00			
APS Q 4.0 Quantum Atlas XP3430	4101MB MacUser 21 LABS ★★★★½ MacWEEK ★★★★	899.95	999.95
Fast/Wide available for an additional $100.00			
APS MS 9.0 Micropolis 1991	8669MB	1899.95	2099.95
AV available for an additional $100.00			

IDE POWERBOOK DRIVES

Model	Capacity/Features	Drive Type	Internal
APS PB 230 MO Fujitsu	217MB	IDE	$399.95
APS Q 1.08 Quantum Europa	1037MB 3800 rpm	Fast ATA2	429.95

To receive an automated fax listing of all APS documents, call 800-374-5802 from any touch-tone telephone.

Then call 816-920-4150 from a fax machine with a handset or fax modem and follow the instructions.

Call for information about our ultra-high capacity drives, professional backup and server products.

CALL FOR YOUR FREE Early Summer 1996 CATALOG

Featuring our complete line of APS Drives, Supplies & Accessories

MacWEEK ★★★★ MW ★★★★ MW EDITORS' CHOICE MW SERVICE HERO MacUser RECOMMENDED

APS TECHNOLOGIES

MORE MEGS THAN EZ!
ZIPPIER THAN ZIP!

Call Us 24 HOURS A DAY, 7 DAYS A WEEK

While supplies last, order now!

	Capacity	Access	Seek	Read Trans.	Write Trans.	Warranty	Price per MB
APS SQ 3270	255MB	27ms	13ms	1.8m/sec.	1.6m/sec.	2-year	$1.17
Zip	96MB	45ms	33ms	1.0m/sec.	1.0m/sec.	1-year	$2.07
EZ135	128MB	27ms	13ms	1.1m/sec.	0.8m/sec.	1-year	$1.80

APS SQ 3270

SyQuest®

- ✔ Delivers fixed platter performance
- ✔ 2-year warranty
- ✔ Use 105MB or 270MB cartridges
- ✔ Perfect for desktop or powerbook computers

$299.95* External configuration

*Only with the purchase of one SQ 270 cartridge

The APS SQ 3270 gives you exceptional performance with 1.8MB per second sustained reads from its 3600 rpm mechanism. A 270MB SyQuest cartridge formats to 255MB and gives you the convenience of unlimited storage possibilities – just add more media as your storage needs grow.

MacWorld Magazine World Class Award

650MB MAGNETO-OPTICAL & 4X CD-ROM!
SAVE A SCSI ID & SAVE A BUNDLE!

JUST **$499.95** External configuration

The new APS PD4 is the most versatile drive available for your Mac. Combining a fast 4X CD-ROM player with re-writable 650MB optical cartridge drive, the APS PD4 saves a SCSI address while performing these two important desktop functions.

APS PD-4

MacUser Editor's Choice Award

APS QIC & DAT BACKUP SYSTEMS

Model	Capacity/Awards	Internal	SR2000
APS HyperQIC™ Travan 4 Conner QIC 3095 Mech.	8GB MacWEEK LABS	N/A	$499.95
APS DAT DDS-1 Non-Compression Mech.	2GB	$649.95	699.95
APS HyperDAT® DDS-1 Compression Mech.	8GB	849.95	899.95
APS HyperDAT® Pro DDS-2 High Speed Mech.	8GB	1049.95	1099.95

APS SYQUEST DRIVES

Model	Capacity/Awards	Internal	SR2000
APS SQ 3270	255MB LABS	N/A	$299.95*
APS SQ 5200	194MB MacUSER LABS	$339	389.95

*Only with the purchase of one SQ 270 cartridge — SQ 270 cartridge $54.95

APS MO DRIVES

Model	Capacity/Features	Awards	SR2000
APS 230MB MO	Up to 217MB	LABS	$449.95
APS 2.6GB MO	4MB cache		1799.95

APS MEDIA SALE

90M DAT 3-pack with free cleaning cartridge	$29.95	SQ-400 (44MB)	$39.95
128 MO 3-pack after $20 rebate	74.95	SQ-800 (88MB)	44.95
230 MO 3-pack after $20 rebate	89.95	SQ-310 (105MB)	54.95
		SQ-327 (270MB)	54.95
		SQ-2000 (200MB)	81.95

105299 74Min. CD-R Media $7.95

APS CD-ROM DRIVES

Model	Internal	SR2000
APS T 3701 6.7X-speed CD-ROM	$249.95	$299.95
APS PD4 4X CD-ROM/Optical	N/A	499.95
APS CD-R Recordable CD-ROM	N/A	899.95
APS CD-R Pro 4X4 performance CD-R	N/A	1799.95

- 30-day money-back guarantee on all APS brand products. Your risk is the cost of shipping.
- Drive-for-Drive Repair or Replacement Warranty. APS will, at its discretion, replace or repair products found to be defective according to the terms of the product's warranty.
- Refused orders subject to 20% restocking fee.
- Listed capacities are formatted
- Actual data compression and tape capacity vary greatly depending on the type of data recorded, other system parameters and environment.
- Prices and specifications are subject to change without notice.
- All hard drives from APS Technologies come preformatted with Apple's System 7.0.1 software, and APS Technologies' APS PowerTools SCSI formatter/hard disk partitioner. You may need to install system software appropriate to your machine before use.
- Not responsible for typographical errors.
- Copyright © 1996 APS Technologies

Canadian Choice Award

VISA MasterCard DISCOVER AMERICAN EXPRESS Card TeleCheck

Visa, MasterCard, Discover, American Express: No Surcharge
Same day shipping for personal checks (Restrictions apply)

CIRCLE **148** ON READER SERVICE CARD

CALL TODAY!

Visit our Web Page at http://www.apstech.com/ International Sales: (816) 920-4109

800-289-5385

APS Technologies

REF. CODE: 260007

Call Us 24 HOURS A DAY, 7 DAYS A WEEK

APS - We're Not Just Hard Drives

GREAT PRODUCTS... PRICELESS SUPPORT

REF. CODE: 260007

Voice Organizer™

- Fits in the palm of your hand
- Stores up to 99 memos, 99 reminders, and 400 phone numbers
- Operates using simple voice commands

105372 **$149.95**

ComShare750

- Operate up to four devices on one phone line
- Save money by having equipment share lines
- Connect a telephone, fax machine, modem, and answering device

101418 **$119.95**

Trapez 900

ITAD

- 900MHz digital cordless telephone
- Exceptional clarity
- Four programmable digital voice mailboxes

Reduced Price

106031 **$279.95**

Reduced Price

SCSI Sentry® II

- Solves tough termination issues
- Uses APS' patented DaTerm®, Digital Active Termination
- Includes a high-capacity, auto-switching international power supply
- Centronics 50 M/Centronics 50 F connectors

1009-018 **$59.95**

USRobotics Sportster 28.8 Faxmodem

- Fully v.34 compatible at up to 33,600 bps
- Includes MacCom Center™ software

28.8 FAXMODEM
105292 **$219.95**

14.4 FAXMODEM
101590 **119.95**

Back-UPS Pro

- Provides smooth, continuous power
- Allows safe shutdown during power outages
- Microprocessor controlled voltage regulation

ITEM DESCRIPTION	OUTPUT VA	CAP. WATTS	POWER TIME HALF LOAD	OUTLETS	PRICE
BACK-UPS PRO 280	280	175	20 MIN.	4	$159.95
BACK-UPS PRO 420	420	260	25 MIN.	4	229.95
BACK-UPS PRO 650	650	410	18 MIN.	4	299.95
BACK-UPS PRO 1000	1000	670	19 MIN.	6	399.95
BACK-UPS PRO 1400	1400	950	19 MIN.	6	499.95

PageOffice

- Holds 10 pages in its document feeder
- Fax, E-mail, edit, file, or print scanned pages
- Uses a convenient SCSI interface
- Includes OCR software

105304 **$289.95**

HP DeskJet 340

- Compact and portable for easy printing anywhere
- Excellent high-quality printer value

105249 HP DESKJET 340
$319.95

105250 HP MAC ADAPTER
29.95

Relisys Taurus Scanner

- Single-pass cold scan flatbed scanner
- Up to 9600 x 9600 dpi interpolated resolution
- 30-bit color with 1024 levels of gray

105269
$699.95

Cordless MouseMan®

- Operates up to six feet away from its receiver
- Works even without a clear path to the receiver

106052 **$79.95**

The APS catalog is full of new products, supplies & accessories for all your computing needs.

CALL NOW FOR YOUR FREE
EARLY SUMMER 1996 CATALOG

Compact Disc Storage System

- Safely stores up to 40 CDs
- Uses a third the space of jewel box storage
- Easy to select the title needed

WHITE 101187 **$29.95** BLACK 101186 **29.95**

BEST SELLING CD-ROMS		
Item Number	Item Description	Price
105320	Starplay Games of Fame	$29.95
105333	You Don't Know Jack	32.95
100056	A.D.A.M the inside story	39.95
100154	Star Trek Tech. Manual	39.95
105332	Links Pro CD	39.95
105328	Body Works 5.0	41.95
105330	Compton's Interactive Encyclopedia	46.95

BEST SELLING CD-ROMS		
Item Number	Item Description	Price
105324	Absolute Zero	$45.95
105321	F/A-18 Hornet 2.01	46.95
105322	Star Wars Rebel Assault II	49.95
105334	Buried in Time	49.95
101627	Doom II	49.95
105331	Microsoft Encarta '96	49.95
100125	Myst	49.95

INPUT DEVICES		
Item Number	Item Description	Price
105094	Kensington Mouse	$59.95
101577	Alps GlidePoint	74.95
105301	Adesso Tru-Form Keyboard	84.95
105267	Adesso Mac Track Keyboard	99.95
105180	Kensington Thinking Mouse	99.95
105303	Kensington Turbo Mouse 5.0	104.95
106053	Logitech TrackMan® Live!™	139.95

BATTERIES/AUTO ADAPTERS		
Item Number	Item Description	Price
106113	PB 140-180 Hi-Capacity Battery	$49.95
106117	Auto Adapter for PB 140/180	49.95
106116	Auto Adapter for PB 500	69.95
100493	PB Duo 210/230 Battery	79.95
105227	PB Duo 210/230/250/270/280 Battery	89.95
106114	PB 5000 Series Battery – 190/5300	119.95
106112	PB 520-540C Battery	119.95

Visit our Web Page at http://www.apstech.com/ International Sales: (816) 920-4109

VISA MasterCard Discover American Express Bank Check

APS TECHNOLOGIES 800-289-5385

CIRCLE 148 ON READER SERVICE CARD

Accelerating towards the perfect machine.

At PowerTools, we are as dedicated to you as you are to your work. This is why we strive to perform at the highest level and offer quality products at very affordable prices. Whether you are in need of accelerated products to increase your productivity, peripherals to expand the usefulness of a computer or a complete turn-key system, PowerTools is here to provide you with the best service and advice. We're here to help you achieve more...PowerTools, the performance company.

$49
PowerPlus 601 accelerator
- up to **129Mhz** with 3 speed settings
- upgradable to **PowerPositive 601** model
- most economical accelerator available

$79
PowerPositive 601 accelerator
- up to **135Mhz** with 31 speed settings
- same high-tech circuitry as new PPCP
- **PowerTools assumes Apple Warranty**

$149
PowerPositive 604 accelerator
- up to **178Mhz** with 31 speed settings
- same high-tech circuitry as new PPCP
- **PowerTools assumes Apple Warranty**

PowerTools also carries the complete line of quality products from the following manufacturers:

Quantum • Seagate • adaptec • FWB • NEC SyQuest • Iomega • Toray • Pinnacle Micro Verbatim • Radius • Sony • Portrait Display Labs • Hewlett Packard • Epson • AGFA Microtek • UMAX • ATi • TrueVision • WACOM DayStar • Global Village • Megahertz • Asanté Dayna • Apple • Supra • Nikon • TI • Magic • and over 10,000 software titles

POWERtools

Tel: 800-347-8759 • 512-892-4925 Fax: 512-476-6399

Get Connected! http://www.blol.com/

NOW ORDERING IS EASIER THAN EVER WITH BOTTOMLINE.

- WHY PAY MORE, PRICES UPDATED HOURLY
- SECURE ONLINE ORDERING
- WEEKLY ONLINE SPECIALS
- DETAILED TECHNICAL SPECS
- LINKS TO MANFACTURER'S SITES
- FREE SHIPPING FOR ONLINE ORDERS

HAVE QUESTIONS OR NEED ADVICE EMAIL US AT SALES@BLOL.COM

BOTTOM LINE
DISTRIBUTION

4544 S. Lamar, Suite 100, Austin, TX 78745
800 347-0052 ■ FAX 512 892-4455

CIRCLE **19** ON READER SERVICE CARD

The Mac Zone®

Established 1986

your Macintosh® catalog SuperStore™

Serving Mac users since 1986

EXCLUSIVE BUNDLE!

Only $227.98 #87219

ZipPac HardCase w/Iomega Zip Drive Bundle

NEW LOW PRICE!

Only $199.98 #92953

U.S. Robotics Sportster V.34 28.8 FaxModem

BEST SELLER!

Only $239.98 #88902

Hewlett-Packard DeskWriter 600

NEW!

Only $79.98 #89308

Insignia Solutions SoftWindows 3.0 for Power Mac Upgrade

NEW!

Only $169.98 #87496

Logicode 28.8 External FaxModem

EXCLUSIVE BLOWOUT! ADESSO

PowerBook Battery & Charger Combo Pack

Only $59.98 #95637

NEW!

Only $249.98 #87485

Philips 8x Internal CD-ROM Drive

SAVE $48

Only $148.98 #86447

Adobe PageMill & Ray Dream Designer 4 Bundle

Only $44.98* #92638

*After $20 mfr rebate

ClarisWorks 4.0
Computer Version Upgrade

HOT! BUNDLE

Only $89.98 #86011

RAM Doubler/ Speed Doubler/Conflict Catcher 3 Bundle

1996 Grolier Encyclopedia included

Only $159.98 #85899

Performantz Quad Speed CD-ROM Drive

BEST SELLER!

Only $1959 #91077

RasterOps SuperScan 21
21" (20" viewable)

Only $49.98 #86727

LucasArts The Dig with Dig Novel

MEMORY UPGRADES!

Call for details.

As Low As $89.98

Only $349.98 #89519

Markzware Flight Check for Mac

Lowest Price 15" Monitor!

Only $399.98 #85806

Performantz 15" Monitor
15" (13.6" viewable)

Before you buy, call The Mac Zone

1-800-436-8000

For the best Macintosh products at better than Warehouse and Superstore prices.

Fax (206) 603-2500 • International (206) 603-2550 • CompuServe code: GO MZ

CORPORATE SALES 1-800-258-0882 | GOVERNMENT SALES 1-800-372-9663 | EDUCATION SALES 1-800-381-9663 | INTERNATIONAL SALES 1-206-603-2570

© Copyright 1996 Multiple Zones International Inc. All rights reserved. The Mac Zone is a federally registered trademark.

Full Line of Apple® Macintosh® Computers

Overnight Delivery AIRBORNE

- Over 5000 Products
- Overnight Delivery only $3 (up to 10 lbs)
- The Hottest Bundles!
- Low Prices Everyday

ORDER ANYTIME 24 HOURS A DAY 7 DAYS A WEEK

Authorized Catalog Reseller

OL410e Postscript Laser Printer

EXCLUSIVE BLOWOUT!

Only $499.98 #93689

OKIDATA®

LOWEST PRICE EVER!

ProMax 1GB External Hard Drive

Only $299.98 #32263

CONNER The Storage Answer

NEW PowerPC 604 Series!

PowerCenter™ Computers

- 120, 132 or 150MHz PowerPC™ 604 processor
- 256K Level-2 Cache
- 1MB VRAM
- 8 or 16MB RAM, upgradable to 256MB
- 850MB or 1GB hard drive
- 4X speed CD-ROM drive
- Keyboard and mouse

PACKED WITH HUNDREDS OF DOLLARS WORTH OF PRELOADED SOFTWARE!

Monitor sold separately.

As Low As $1895

INCLUDES: CD-quality, 16-bit stereo sound • Three PCI expansion slots • Two front accessible 5.25" bays, one 3.5" half height internal drive, and one 3.5" full height or two 3.5" half height internal bays • Built-in Ethernet (AAUI and 10Base-T)

More Configurations Available!

PowerComputing

EXCLUSIVE BLOWOUT!

Supra Corporation

Supra 14.4 Fax Modem

Only $49.98 #85619

Sleepless in Seattle...

You bet! We're here 24 hours a day, 7 days a week to serve you when you need us.

1-800-436-8000

Call Today for Your FREE CATALOG!

Shop The Mac Zone ONLINE!

- Online Shopping Internet Address:

Visit our store on marketplaceMCI: http://www.internetMCI.com/marketplace/mzone

CompuServe type: GO MZ

- The Mac Zone – Trusted Internationally

Australia	Indonesia	Poland
Austria	Israel	Portugal
Benelux	Italy	Scandinavia
Brazil	Japan	Singapore
Central America	Kenya	Spain
Chile	Korea	Switzerland
Colombia	Malaysia	UAE/Middle East
France	Mexico	United Kingdom
Germany	New Zealand	Venezuela
Hong Kong		

Your Source Code MU607

Circle 135 on the reader service card

YES! START MY FREE 1-YEAR CATALOG SUBSCRIPTION ASAP!

☐ MAC ZONE ☐ PC ZONE ☐ the Home Computer CATALOG

Name _____

Address _____ Apt _____

City _____ State _____ Zip _____

Mail to: The Mac Zone, 15815 SE 37th St., Bellevue, WA 98006-1800

I buy primarily for:
_Home Use
_Business Use
_Work-from-Home Use

Your Source Code MU607

POWER COMPUTING

NEW! Power Computing PowerCenter

Monitor Sold Separately

ONLY $1895

28807

The economical power solution

- 120MHz PowerPC 604 card, upgradeable RISC processor
- Low profile desktop enclosure
- 8MB RAM, exp. to 256MB
- 256K level 2 cache; 850MB hard drive
- 4x CD-ROM drive; 1.44MB floppy drive
- Built-in Ethernet (10T, AAUI) networking
- 16-bit CD-quality audio (in/out)
- FREE pre-loaded software–A $1200 value

CALL 800-800-6227 to order!

FREE! MEMORY INSTALLATION!

DIMMS

8MB	16MB	36MB	64MB
as low as $179.95	as low as $319.95	as low as $649.95	as low as $1249.95

SIMMS as low as $29.95

Purchase a computer & memory upgrade together and we'll install your new memory upgrade *at no extra charge!*

Ma

BEST PRICING & SELECTIO

28.8 V.34 POWER!

$199.95

20544

The ONLY Macintosh faxmodem with Speed Enhancers for communication beyond 57.6 Kbps! Includes award-winning GlobalFax software

GLOBAL VILLAGE COMMUNICATION

23483 PowerPort Platinum PC Card $349.95
23486 PowerPort Platinum PRO PC Card 519.95

28080

Exclusive Bundle!
Draw, Paint and Retouch with ArtPad II. Explore the advanced capabilites of New Painter 4.0! Buy both products at an unbeatable savings!

SAVE $160!

ONLY $349

Authorized Catalog Reseller

Full Line of Apple® Systems

800-800-MACs

ORDER TODAY!

NEW Version 2.0!

Integrated suite of Internet applications with advanced features in a fast and efficient format!

ONLY! $44.95

24238

ONLY! **$199.95**

100MB Zip Drive

Affordable & portable drive offers high capacity storage on inexpensive 100MB disks.

FREE 100MB Cartridge & ZipTools 95!

MACUSER EDITORS' CHOICE AWARD WINNER
Hardware Product of the Year

19171

COMMUNICATIONS

24237	3COM Impact ISDN	$389.
18363	Accura V3.4+ Fax 144	199.95
28251	BOCA MV.34MA Faxmodem 28.8	169.95
16949	MDS FaxModem 28.8	149.95
4879	Practical Periph MC144MTII	89.95
18792	Radish Comm InsideLine	109.95
22236	Software Ventures Internet Valet	39.95
23286	SupraExpress Plus 28.8	164.95
24560	SurfWatch	19.95
17048	U.S. Robotics Sportster V.34 Fax	199.95
26793	VOCALTEC Internet Phone	59.95
17470	Zoom FaxModem V.34	169.95

MULTIMEDIA/VIDEO

19485	Altec ACS500 Speakers	$299.95
25826	IMS Twin Turbo 128M-4M PCI	599.
26885	Kodak DC50 Zoom Camera	979.
21182	MDS 4X CD-ROM External Drive	179.95
17314	Magnavox 14" Color Display	299.95
25623	Matrox MGA Millennium 4MB PCI	529.
25700	MagInnovision DX1795 17" Monitor	729.
27690	Power Secretary PE for Word	595.
21797	Viewsonic 15GA 15"Multim. Mon	499.

NETWORKING

2583	Asanté FriendlyNet 10T	$29.95
24593	Dayna Communicard 10T PC Card	159.
21362	DaynaPORT Enet LCCommSlot	79.
23492	Farallon AirDock IR Adapter	69.
11499	Farallon EtherWave AAUI Trans	109.
1723	Farallon PN303 DIN-8 3 pack	49.95
24587	Miramar Personal Mac-Lan	159.95
15490	Sonic 10BaseT Transceiver	33.95
16854	Sonic Micro Print/12	319.
22503	Sonic Quickstream/3	799.
14545	Timbuktu Pro-Mac	135.

STORAGE

22886	Apple External 850MB Drive	$349.95
27344	Conner 2.1GB Drive	649.
27644	La Cie 1.2GB Internal Drive	329.
27056	MDS 88MB SyQuest Cartridge	34.95
9054	MDS Internal 1GB Hard Drive	299.95
15951	MDS SyQuest 200MB Drive w/Cart	379.95
26948	Pinnacle RCD 5040 Recordable CD	995.
28736	Sony 3.5" HD Disks - 50 Pack	32.95
22801	SyQuest EZ135 Ext. SCSI Drive	199.95
7070	SyQuest 200MB Cartridge	57.95

INPUT/OUTPUT

16451	Adesso PowerMouse	$19.95
21197	Adesso TruForm Keyboard	89.95
25844	Advanced Gravis FreBird Joystick	69.
22658	Agfa Studio Scan IIsi	749.
26278	Brother MFC-4000ML	999.
2373	CoStar LabelWriter XL	149.95
23075	Epson Color Stylus II	299.
2499	GDT PowerPrint	99.95
27415	HP LaserJet 5LFS/PowerPrint/PrintExtras	579.
28520	HP Mac DeskWriter 680c	319.95
17589	Kensington Thinkirg Mouse	89.95
27299	Logitech TrackMan Marble for Mac	99.95
26748	MDS 1-Button Mouse	17.95
22799	MDS 105 Key Keyboard	39.95
16212	Mouse Systems MacPoint	24.95
23538	Okidata OL610E/PS Printer	799.
26399	USTT Infinity 3 Torer Cartridge	138.95
24684	Visioneer PaperPort Vx	259.95

INTERNATIONAL CUSTOMERS

Please call 603-446-4444 or fax 603-446-7791. Additional charges & restrictions may apply.

NEW 1.2GB DRIVE! LACIE LIMITED

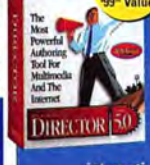
- Average access time—5.56ms
- Data transfer rate of 10MB/sec.
- Includes La Cie Storage Utilities (a $99 value)

$399.95

22331

FREE ClipPix! $99.95 Value

NEW 5.0! UPGRADE CD



$398.95

28185

The most powerful tool for interactivity and Internet publishing

OUR POLICY • VISA, MASTERCARD, AMERICAN EXPRESS, and DISCOVER cards. No surcharge. • Most products are covered by manufacturer's warranty against defects for at least 30 days from the invoice date. • All returns require prior authorization; please call for an RMA • We are not responsible for typographical errors. • Pricing and promotions are subject to change without notice.
Continental U.S.: Shipping Charges: $5 per order up to 10 pounds. On orders weighing 10 pounds or more, shipping is $1 per pound. Please call for weight/shipping charge information. Barring events beyond our control, all credit card orders phoned in weekdays by 3 a.m. ET will ship Airborne Express for delivery the next business day. (Some orders ship UPS Ground for next day delivery). Saturday delivery available to many areas upon request at no additional charge. Order all day Saturday thru noon Sunday for Monday delivery. Some areas require an extra day delivery. **APO/FPO, International orders and Hawaii, Alaska, Canada, Puerto Rico & U.S. Virgin Islands:** Shipping may require additional time and charges. All other areas: Call 603-446-4444 or FAX 603-446-7791 M-F 9 a.m.-5:30 p.m. ET.

©1996 PC Connection, Inc., Marlow, NH. MacConnection & the raccoon characters are registered trademarks of PC Connection, Inc. All other trademarks remain the property of their respective companies.

cConnection®

FREE TECH SUPPORT • NEXT DAY DELIVERY • AWESOME SERVICE • CUSTOM SYSTEMS OVERNIGHT!

Hot NEW Bundle!

The Ultimate 3D Web Design Solution! **$149.95** 27545

All-in-one page development tool for the World Wide Web in easy-to-use word processor format

Adobe

SAVE $49.95!

#1 best-selling 3D Illustration application with simple drag & drop interface

All NEW Color QuickCam!

Connectix

The fun way to capture still & full motion images, now in COLOR!

- Connectix QuickPICT, QuickMovie and QuickCards Limited software included
- Multiposition camera stand
- After Dark compatible full screen color screen saver

$199.95* 27405

Internet Valet FREE with purchase!

*price after $30 mfr.s rebate. Offer valid WSL

Claris OfficeM@il All-In-One Email Solution!

ONLY **$299** 29072

Create mail enclosures instantly by simply dragging and dropping a file onto your message.

Everything you need to exchange Email across the room or around the world on the Internet!

- Easy setup and maintenance
- Runs over existing AppleTalk or TCP/IP networks
- Automated mail features enable you to sort, file, delete, and reply to messages automatically
- Includes Claris Em@iler 5-user software, server software and Internet email access via ClarisLink*

*ClarisLink Internet mailbox requires a monthly fee of only $39.95 for an unlimited number of users, for up to 10 hours of connect time. Only $5.95 per hour once the monthly 10-hour limit is exceeded.

COLOR PRINTING FOR THE FAMILY!

HP DeskWriter 680c

- Prints on variety of paper types
- 5ppm in black; 1.5ppm color
- HP ColorSmart technology for brilliant color printing

ONLY **$319.95** 28520

NEW 4X VERSION!

ONLY! **$89.95** 27099

Momentum's Port Juggler 4X

Connects up to 4 serial or LocalTalk devices to one port on your Mac. New software switches between devices automatically!

#1 Internet Email!

ONLY **$59.95** 22159

- Message filtering & powerful mail management tools
- Spell checking option

Multipacks Available!

QUALCOMM

BCS THE BOSTON COMPUTER SOCIETY

Boston Computer Society names MacConnection "Best All Around Company" 2 years in a row!

Berkeley Mac Users Group awards MacConnection "Best Mac Mail-Order Company!"

BMUG Choice Product FALL 1995

BUSINESS

13510	AEC FastTrack Schedule	$169.95
23995	Automatic Software Big Business	379.95
24055	Best!Ware Mind Your Own Business	79.95
25478	Claris FileMaker Pro 3.0 Upgrade	99.95
23160	ClarisWorks Upgrade	49.*
16551	Microsoft Office for Mac 4.2 Upgd	279.95
16552	Microsoft Word 6.0 Upgrade	119.95
8010	Niles EndNote Plus	169.95
16548	Symantec ACT 2.5 Upgrade	49.95

UTILITIES

6740	Aladdin StuffIt Deluxe 4.0	$73.
20403	C & G Conflict Catcher 3 Upgrade	39.95
17537	Central Point MacTools Pro 4.0	99.95
23287	Connectix Speed Doubler	49.95
12093	DataViz MacLink+ Translators Pro	95.
18815	DataWatch Virex 5.6 Upgrade	29.95
10839	Kent Marsh Folderbolt Pro Upgrade	49.95
28452	Now Utilities 6 Upgrade	29.95
16860	Symantec Disk Doubler Pro 1.1 Upg	39.95
16323	Symantec Norton Utilities Upgrade	39.95
10312	Symantec SAM Upgrade	29.95
3955	Symantec Suitcase 3.0	34.95*

*price after mfr's rebate

GRAPHICS

24672	Adobe Illustrator 6.0	$389.95
22197	Adobe PageMaker 6.0	549.95
19257	Adobe Photoshop 3.04	569.95
21308	Auto F/X Photo Edges Vol.1	179.95
22788	Corel Gallery 2 CD-Mac	79.95
3227	Deneba Canvas 3.5	299.95
1768	Deneba Spelling Coach Pro	49.95
28103	Director 5.0 CD	869.95
28079	Director Multimedia 2.0 Studio	969.95
27803	Enstep Image Fonts Pack CD	139.95
24535	Fractal Design Painter 4.0	359.95
20749	Fractal Design Poser	124.95
24014	FreeHand 5.5	399.95
29023	FreeHand Graphics Studio 2	579.95
24509	MetaTools Kai's Power Tools 3.0	129.95
27498	MetaTools KPT Bryce II	169.95
21640	MetaTools KPT Vector Effects	129.95
17342	Pantone Color Drive	139.95
16769	QuarkXPress 3.3.2	649.95
24579	Ray Dream Designer 4.0	99.95
24580	Ray Dream Studio	299.95
7784	Strata StudioPro 1.75 CD	899.95
23296	T/Maker Incred. ImagePak *25,000*	49.95

EDUTAINMENT

13509	Broderbund MYST CD	$44.95
24612	Bungie Marathon 2 CD	42.95
23441	Edmark Thinkin' Things 3 CD	42.95
18168	Math Blaster: In Search of Spot CD	34.95
25911	Maxis Sim City 2000 CD	59.95

Fast 24-Bit Color!

ScanMaker E3

- Fast, 24-bit, single-pass scanning
- 16.7 million colors, 256 shades of gray
- Free ScanWizard, ColorIt! and Caere OCR software

FREE Software Included!

ONLY **$389** 26232

MICROTEK

CALL TODAY FREE! Catalog

800-800-4444

OR FAX YOUR ORDER
603-446-7791
796MU

CIRCLE 147 ON READER SERVICE CARD

Check our Web Site for daily specials!

Get Free Shipping When You Order On-Line. Surf to: http://www.blol.com/bld/

PowerBook 5300gs 8/500 $1299

Quantum Capella 2.2 GB 3.5"

Internal $599

External $649

30 Day MBG on all Magic Drive

Media Blowout SyQuest 200 Cart $54

16 MB DIMM $249

Lifetime Warranty

Memory

1MB 30 pin	25
4MB 72pin	71
8MB 72pin	139
16MB 72pin	299
32MB 72pin	569
8MB DIMMs	149
Powerbooks Memory	Call

Magic Memory

Lifetime Warranty

Global Village

Teleport Platinum 28.8 V.34	194
Powerport Gold PC	182
Powerport Mercury PB500	329
Powerport Platinum PC	335
Powerport Platinum Pro Card	496

GLOBAL VILLAGE COMMUNICATION

Wacom

ArtPad II 4x5	138
ArtZ II 6x8 w/Ultra Pen	309
ArtZ II 12x12	429
ArtZ II 12x18	675

WACOM

Syquest Media

Jaz 1.0GB Disk	125
200/270mb Syquest cart	54/57
128mb Optical Cartridge	14
230mb Optical Cart 10 Pack .15each	
256mb Optical Cartridge	59
1.3gb Optical Cartridge	79
44/88mb Syquest Cartridge	42/47

Ordering

BOTTOM LINE ON-LINE

http://www.blol.com/bld/

1. Toll-free call at 800-990-5696.
2. Fax us at 512-892-4455.
3. International? Call us in the US at 512-892-4070.
4. Email us your order or request for assistance at sales@blol.com
5. Or try Bottom Line On-Line: http://www.blol.com/ We offer the latest pricing.
6. If you need us after the sale, call customer service at 512-892-4090.

Free Catalog

Get Connected !

BottomLine makes it easy for you. Must have items for users looking to get connected to the web.

Adobe Pagemill	95
Adobe Sitemill	399
Supra Simple Internet	call

DGR Keyboard

DGR Keyboard	49
Wrist rest	99¢

with purchase of keyboard

Accelerator

POWER BLOCKS PowerMac ACCELERATOR

Installs in seconds, fail safe indicator light.

PowerMac6100/84mhz	59
PowerMac7100/84mhz	69

Iomega

Now In Stock. Call Today

Iomega Zip Drive	199
Iomega Jaz Drive	589

Magic Storage Solutions

DRIVES	Int.	Ext.
Seagate 9GB	2199.	2299
Barracuda 4.2GB	1299.	1399
Barracuda 2.1GB	847	947
Capella 2.2GB	**599**	**649**
Conner 2.1GB	625	725
Fireball 1.2GB	269	349
Deskstar 1GB	299	399
Conner 1GB	235	319
Grand Prix 4.2GB	1069.	1169

NuBus/PCI SCSI II Cards

Atto Silicon Express IV	887
Atto PCI SCSI	309
Atto PCI Dual	779
Jackhammer NuBus	459
Jackhammer PCI	359

All drives are formatted and include 20 MB of shareware. External drives also include: CharisMac Anubis™ utility, double shielded 25/50 cable and power cord, external terminator, 30-day money back guarantee, autoswitching 40 watt power supply.

How to Buy a Magic RAID

1. Choose the size of RAID drive you want.
2. Choose the SCSI II card you want. This will depend on your Mac type (PCI or NuBus), and preferences.
3. Select the RAID controller software which matches your SCSI II card, or your current preferred driver.
4. Finally, buy the RAID case. We'll do the rest.

RAID Software & Cases

Anubis RAID	190
FWB RAID Toolkit	299
RAID Case (2 drives)	160
Wide RAID Case (2 drives)	170

We now carry a complete line of mounting kits for all kinds of internal drives. Just look at your options!

MECHANISMS	Int.	w/Kit.
Internal Jaz	469	499
SyQuest 270	339	369
Toshiba 3701 6.7x	269	319
Apple CD-600i	260	289
Exabyte 2GB DAT	489	519

Quality Awards

- MacUser RATED — Magic 5.3GB 11/95
- MacUser RECOMMENDS — Magic SyQuest 270 2/95
- MacUser RATED — Magic SyQuest 270 2/95
- MacUser RATED — Magic SyQuest 200 2/95
- MacUser RATED — Magic 2GB 6/95
- MacUser RATED — Magic 4GB RAID 12/95

Check our Web Site for daily specials!

Great Deals on new Apple Products

PowerMac 7200/120
8MB/1.2GB/CD $1899

PowerMac 7600/120
16MB/1.2GB/CD $2999

PowerMac 8500/132
16MB/1.2GB/CD $3799

PowerMac 8500/150
16MB/2GB/CD $4599

PowerMac 9500/150
16MB/2GB/CD $4699

Flexible leasing options for qualifying businesses.

Your Favorite Products at Our Great Prices!

Top 10 List

1) Jaz Drive.....$589
2) 7200/75mhz (limited qty) .$999
3) Teleport Platinum.....$194
4) 16mb 72-Pin Dimm.....$269
5) Arcus II Scanner.....$1925
6) PaperPort VX.....$269
7) Magic 4gb Raid.....$1999
8) Jaz Media 1.0gb.....$125
9) HP 5MP.....$999
10) Quick Cam.....$98

Syquest Drives

Syquest EZ135 External Drive....199
Syquest EZ135 Cartridge from 19

Magic SyQuest 270MB Drive.....399
2 Yr Warranty, 30 Day Money Guarantee

Magic SyQuest 200MB Drive.....399
2 Yr Warranty, 30 Day Money Guarantee

Umax

Vista S6.....519
Vista S8.....629
Vista S12 Pro.....869
PowerLook II.....2750
PageOffice.....299
Gemini D-16 Pro.....1657

Apple

7200/75 8/500/CD.....999
7200/90 8/500/CD.....1299
7500/100 16/500/CD.....2399
7500/100 16/1GB/CD.....2499
8500/120 16/1GB/CD.....3399
8500/120 16/2GB/CD.....4169

Office Essentials

Now Utilities.....85
Emailer.....59
Conflict Catcher.....63
Norton Utilities.....99
In Control.....80
Now Up To Date.....64
Soft Windows.....299
PageMaker.....499
Photoshop.....499

Spring '96 Catalog

Agfa Truevision Hewlett Packard Supra Microtek US Robotics Magic Nikon

MONITORS
Apple 1705 17".....739
Apple 1710 17".....1049
Apple Multiscan 20".....1899
ArtMedia 17" Sony.....936
DiamondPro 21TX.....2099
DiamondScan Pro 17 1182
NEC 17" Multisync.....795
Philips Monitors.....call
Portrait 17" Pivot.....969
Magnavox 17".....999

DIGITAL VIDEO
Spigot II Tape.....549
Targa 2000 Nubus.....2699
Targa 2000 Pro PCI.....3499
IMS Turbo 2mb.....369
Number Nine.....call

VRAM
256K/512K.....19/38
PCI VRAM 1MB.....69
ATI VRAM 2MB.....179
PCI Cache256/512k..129/199
256K/512K Cache.119/299

MODEMS
Supra Express 288.....159
Supra v.34 28.8.....211
U.S. Robotics 28.8.....198
Cyberphone 28.8.....197
Supra 28.8 PowerBook...185
Supra 14.4 PowerBook...161
Cruise Card 28.8.....297
Netlink PC Cellular.....269

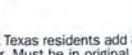
CD
CD Recordable Media.....9
NEC 6XE CD.....579
FWB CDR.....1468
Pinnacle CDR.....1289
Panasonic Portable CD.....call

SCANNERS
Agfa Arcus II.....1925
Agfa StudioScan IIsi.....759
Epson 1200c..... 999
Microtek E3 Flatbed.....389
Microtek E-6.....598
Nikon SuperCoolScan...1999
Visioneer PaperPort VX...269

PRINTERS
Apple Laserwriter 320.....769
Apple 4/600 Laser.....869
Apple 16/600 Laser.....2199
Epson Stylus Pro XL.....1799
Epson II.....467
Fargo Dye Sub.....1385
LaserJet 5si MV.....call

KODAK
Kodak DC40 camera.....699
Kodak DC50 camera.....995

KEYBOARDS
DGR Extended Keyboard...49
Apple Design Keyboard.....87
Extended Keyboard II.....153



SYSTEMS
When your thinking of buying a system call us first!

Hot Deals on Powerbooks. Now is the time to buy!

POWERBOOKS
PB 5300/100 8/500 ...1299
PB 5300CS 8/500.....1999
PB 5300CS 16/750.....2499
PB 5300C 8/500.....2599
PB 5300C 16/750.....2999
PB 5300CE 32/1.1gb...3999
Powerbook 190cs.....1699

POWERBOOK MEMORY 190/5300
8/16mb.....299/499
32mb PB Memory.....999

POWERBOOK MEMORY
160/165C/180/180C
6/8/10mb 225/299/399

All our memory is 100% Tested and back with a Lifetime Warranty.
Call Today.

DIMMs
8MB DIMM.....149
16MB DIMM.....269
32MB DIMM.....599
64MB DIMM.....1199

30 PIN SIMMS
1/2MB SIMM.....25/63
4/16MB SIMM.....89/479

72 PIN SIMMS
4/8MB SIMM.....71/139
16/32MB SIMM.....299/569

Shipping: **$5, 5 lbs., 2 Days** Payment: No surcharge on credit cards. Corporate POs welcome. Tax: Texas residents add 8.25% sales tax. Prices: Items, prices and availability subject to change. Returns: Call for RMA number. Must be in original condition, opened software is non-refundable. Subject to a restocking fee. Original shipping is non-refundable. Apple brand products are not returnable for refund. Bottom Line Distribution cannot be responsible for errors in typography or photography. Customer Service:512-892-4090.

International Sales: Bottom Line Distribution is committed to the needs of the international Macintosh user. We offer discounted rates with DHL. Delivery to most countries is 2 to 3 days. Dealer inquiries are welcome. Language interpreters available. Address: 4544 S. Lamar Blvd., #100, Austin, TX 78745

DISCOVER MasterCard VISA

BOTTOM LINE DISTRIBUTION

512-892-4070 ■ Fax: 512-892-4455 Hours: M-F 9-9 | Sat 9-4

1-800-990-5697 US & Canada

CIRCLE **24** ON READER SERVICE CARD

Get Free Shipping When You Order On-Line. Surf to: http://www.blol.com/bld/

radius™ Quantities are Limited...

AWARD WINNING PRODUCTS

DISPLAYS

TWENTY ONE INCH DISPLAYS

21 Inch DiamondTron Monitor
from **$1999***
- Rated Superior to Trinitron
- Two year Mfr's Warranty
- Largest Aperture Grille monitor available
- Up to 1600x1200 on Macs and PCs
- Full Digital Control from Keyboard

Radius SuperMatch 21 TXL	from $1699*
Radius PrecisionView 21	$CALL
Radius PressView 21sr	from $2899*
SuperMac PressView 21 "Editors Choice"	$1999*

Radius PrecisionColor Display 21
$1499* Compare at $2399
- 1600x1200 to 1024x768
- Razor sharp dot pitch
- Best for color accuracy
- Selectable color temperatures

RasterOps SuperScan MC 21	$CALL
Radius Multiview 21	$CALL
Radius 21 inch Grayscale Display	$799

*With qualifying videocard, accelerator, or computer purchase

TWENTY INCH DISPLAYS

TRINITRON BLOWOUT-LOWEST PRICE EVER!
While Supplies Last!
$999* **20" Trinitron Display**
- Manufactured by Sony
- Industrial Grade Trinitron CRT

Mac or PC Ready

SuperMac SuperMatch 20 Plus	$999*
Radius PrecisionColor 20v	$1099*
Digital 20 inch Display Up to 1280x1024	$1399
RasterOps 20 Multimode	$1299
Radius PrecisionColor 19	$899*

from **$1499*** Retail $2399 **Radius IntelliColor Display 20**
- MacUser, MacWorld, MacWeek Editor's Choice
- 1600x1200 to 640x400

Apple Multiple Scan 20 Display	$CALL
Ikegami 20 inch Grayscale Display	$699
Radius 20 inch Grayscale Display	$699

*With qualifying videocard, accelerator, or computer purchase

SEVENTEEN INCH DISPLAYS

$599* Compare at $1299 **SuperMac/E-Machines T16IIMR**
- High Grade Studio Trinitron Series
- .25mm multi-resolution
- Editors Choice
- 1024x768 to 640x480 resolutions

SuperMatch 17T	$799*
PrecisionColor Display 17	from $899
PrecisionView 17	$CALL
Radius PressView 17sr	$CALL
SuperMac SuperMatch 17	from $499*

*With qualifying videocard, accelerator, or computer purchase

PORTRAIT DISPLAYS

$399* **Radius Color Pivot LE**
We have cards for **SE/30, LC, IIsi** Nubus, and Quadras
* With purchase of video card.

PrecisionColor Pivot	$599
Grayscale Pivot	$399
Radius Full Page Display	$CALL
Apple Portrait Display	$399
Portrait Display Labs 1700	$CALL
E-machines ColorPage 15 with NUBUS card	$499

COLOR CALIBRATORS

SuperMac Display Calibrator	only $199
SuperMac Display Calibrator PRO	$499
Radius Mac ProSense Calibrator	$799

VIDEO CARDS

1600x1200 PCI & NUBUS

Radius Thunder IV GX 1152	$BELOW COST
Radius Thunder II GX 1360 & 1600	from $999
Radius Thunder IV GX 1360 & 1600	from $1599
Radius Thunder 24/GT (accepts PhotoEngine)	$CALL
Radius ThunderColor 30/1152 & 1600	$CALL
IMS Twin Turbo 128M (4MB with MPEG)	$599
Radius PrecisionColor 8/1600	$499
EA Research EAsycolor 1600/16	$CALL

21" RESOLUTIONS

Radius PrecisionColor Pro 24X	$699
Thunder 8 "Fastest 8 bit card ever"	$CALL
Thunder 24 (DSP available)	$CALL
Radius LeMans GT	$799
SuperMac Ultura LX*	from $899
RasterOps Horizon 24*	from $999
RasterOps 24XLTV	$1999
RasterOps Prism GT	$CALL
Radius PrecisionColor 8XJ	$499

*DSP Available

20/19" RESOLUTIONS

SuperMac Spectrum 24 Series V	$599
Radius PrecisionColor Pro 24XK	$CALL
SuperMac Futura MX	$499
RasterOps PaintBoard Lightning	$CALL
SuperMac Spectrum 8	$199
PowerView/SuperView for Powerbooks	$199/$299

17/16" RESOLUTIONS

Radius 24 bit video cards	from $199
Radius PrecisionColor Pro 24XP	$CALL
SuperMac Futura SX	$299
RasterOps 24 MX	$399

PHOTOSHOP ACCELERATION

Radius PhotoEngine from **$399***
- Four AT&T 3210 66MHz DSPs
- Accelerates Photoshop Filters
- Up to 15x acceleration on all Macs
- MacUser Editor's Choice
- Available in Daughtercard or NUBUS versions

Adobe charged

Radius Photo Booster for Quadra/PDS or Rockets	from $199
SuperMac DSP daughter cards for Thunder/Ulturas	$299

DIGITAL VIDEO

Video Vision Studio 2.5.1 **$1999***
- 24bit Full-Screen, Full-Motion Video
- Includes Adobe Premiere and VideoFusion
- Breakout bar supports dual input

** with purchase of Studio Array*

Video Vision Studio Array **$1999**
- 4GB RAID Customized for Video Vision
- Includes FWB Jackhammer SCSI accelerator
- Chain up to three Arrays together (4GB,8GB,12GB)

Video Vision Telecast from **$2999**
- Full-motion, broadcast-quality video
- Available as upgrade for Video Vision Users

miroMOTION DC20 *M-JPEG PCI video capture & playback*	$CALL
Truevision Targa 2000 PCI/NUBUS	$CALL
RasterOps 24XLTV	$1999
RasterOps 24STV	$999
RasterOps MoviePak II *JPEG Daughtercard Upgrade*	$CALL
Spigot II Tape *Now Bundled with Adobe Premiere*	$499
VideoSpigot Cards Nubus/LC/IIsi	from $99*
Radius Spigot Power AV	$799

*With purchase of Adobe Premiere

CRA SYSTEMS **800/375-9000** http://www.cra-sys.com CRA SYSTEMS

Supplies Won't Last... SUPERMAC. RASTEROPS

AT OR BELOW DEALER COST!

CPU SPECIALS

POWER MACS

PowerMac Performa 6200 8/1000/CD — from $999*
- Power PC 603/75MHz RISC processor
- Ready for Apple TV/Video/Presentation Systems
- Internal quad-speed CD-ROM bay
- 14.4kbps modem included

PowerMac Performa 5200CD — from $1199*
- Integrated 15" Display & AV ports
- Power PC 603/75MHz RISC processor
- Internal quad-speed CD-ROM drive with software

Power Macintosh 7100/80 8/700/CD — from $1299*
- 80MHz PPC 601 RISC processor
- AV upgrade supports full motion video
- Expandable, with three Nubus slots

PCI PowerMacs Available -- CALL for Lowest Prices Ever!!

PowerMac 9500/120 — from $2999
PowerMac 9500/132 & 150 — $CALL

**CPU only, with Qualifying Card or Monitor Purchase*

QUADRA/MAC II SERIES

Quadra / Centris 610 8/80/CD — only $699
Quadra 700 8/80 — $799
Quadra 840AV 8/250/CD *w/ Spigot Power AV* — $1999
Macintosh II 4/40 *w/ video card installed* — $299*

Mac IIsi Color Pivot System — CPU only $299; Complete system $799
- Macintosh IIsi with 5MB RAM/80MB HD
- Radius Color Pivot Display
- Extended 105-key Keyboard
- FREE ClarisWorks!

Add Radius Card for Display to TV — only $199
Add Apple Cache Card to Macintosh IIci — $39

Mac IIcx 15" Color System — CPU only $275; Complete system $849
- Macintosh IIcx with 4MB RAM/80MB HD
- E-machines ColorPage 15" Display
- NUBUS accelerated video
- Extended 105-key Keyboard
- FREE ClarisWorks!

Add MacRecorder to Mac IIcx — only $99
Add Ethernet card to Mac IIcx — from $99

**with purchase of any qualifying monitor*

Mac Plus System w/Keyboard & Mouse — only $149
Macintosh SE upgraded with 16/25MHz 68020 processor — from $299

POWERBOOKS

PowerBook 5300 series — $CALL
PPC Upgraded Color PowerBooks — from $2299
PowerBook 520c — from $1499
PowerBook 190 series — $CALL
PowerBook Duo 210/230 — from $699
PowerBook Duo 270c/280c — $CALL

Ethernet Dock for Powerbook Duo's — $399*
Apple Duo Docks — from $499*
Add GCC WriteMove II portable printer — $199*

**with purchase of a PowerBook*

CPU UPGRADES

Daystar PowerPC and 040 Accelerators — $CALL
Radius Rockets 33MHz to 40MHz — from $399
Stage Two Rocket 40MHz w/FPU — $699
-includes SCSI II Booster and RocketShare
Rocketshare multiprocessing software — $299
Speed upgrades for all 680X0 and PPCs — $CALL

PRINTERS

Ask about Printers available in 220v!

COLOR PRINTERS

QMS ColorScript 1000 — from $1999
- Internal SCSI drive
- Powerful RISC processor
- PostScript Level 1, 2 and HP/PCL-5

QMS Magicolor 600 dpi — only $2999
Radius Proof Positive — $CALL
- Award Winning dye-sublimation printer
- Full-bleed two page and one-page models
- True Adobe Postscript Level 2
- All consumables available

QMS ColorScript 210/230 — from $1199
- Up to 11x17" full-bleed output

Tektronix Phaser 300i — $CALL
Tektronix 540 Plus color Laser — $CALL

TABLOID LASERS

QMS 860 Hammerhead 600-1200dpi — from $1999
- 11 x 17 full bleed
- PostScript Levels 1&2
- 8ppm heavy-duty Canon engine
- Powerful RISC processor

Mac and PC Ready

Hewlett-Packard 4mv — $CALL
GCC SelectPress 1200x1200dpi — $4999
QMS PS2210/2220 — $1499/$1699
- 20,000 page monthly duty cycle
- 22ppm • Dual-tray input

HOME/OFFICE

QMS PS1500 / PS1700 for Macs and PCs — from $1299
- True Adobe Postscript
- 15ppm to 17ppm output
- Dual Paper input
- 50,000 print monthly duty cycle

Hewlett-Packard 5mp 600dpi — $CALL
GCC Elite 600et 10ppm, 600dpi, ethernet — $CALL
Apple Select 360 10ppm, 600dpi — $1199

New and Reconditioned Models of Most Items Available

CRA Systems, Inc. FedEx
300 South 13th St., Waco, TX 76701
Monday thru Friday 9AM to 7PM CST Saturday 10AM-4PM *Sales Dept.Only*
Domestic Sales 800.375.9000 Fax 817.750.9050
Consultants/Dealers 817.754.2120 International Sales 817.754.2120
Prices reflect 2% cash discount. Prices subject to change. Not liable for typographical errors. All shipping charges for COD orders to be secured by credit card. Dealers and consultants call for quantity pricing. We ship anywhere.

CIRCLE **50** ON READER SERVICE CARD

CRA SYSTEMS **800/375-9000** CRA SYSTEMS
http://www.cra-sys.com

MAC BARGAIN$

DI$COUNT PRICE$ ON QUALITY HARDWARE, $OFTWARE & ACCE$$ORIE$

Buy with Confidence Online from MAC BARGAIN$.

- NEW! To place an order, e-mail to mac.bargains@mzi.com
- NEW! For detailed product information, e-mail to mac.bargains.info@mzi.com
- Over 2500 products in stock

Great Deals!

Adobe Systems

89675	Acrobat Exchange 2.1	$128.98
06263	Dimensions V2.0	$121.98
95314	Fetch V1.2 Single-User	$93.98
06994	FrameMaker V5 Upgrade	$198.98
03582	FrameMaker V5	$559.98
88205	Illustrator V5.0 to V6.0 Upgrade CD	$98.98
88206	Illustrator V6.0 CD & 3.5"	$364.00
91255	PageMaker 6.0 Upgrade	$139.98
91256	PageMaker V6.0 Mac/PowerMac CD & 3.5"	$545.00
88414	PageMill 1.0	$95.66
04042	Photoshop 3.0.5	$544.98
95341	Photoshop 3.0.5 Upgrade	$157.00
04670	Premiere V4.2	$484.98
03971	Streamline 3.1	$122.98
92218	SuperPaint Deluxe 3.5	$68.98
03497	Type Manager 3.9 PowerMac	$38.98
03950	Type On Call 4.1	$42.98

Aladdin

05827	Stuffit Deluxe 3.5	$69.98

Alsoft

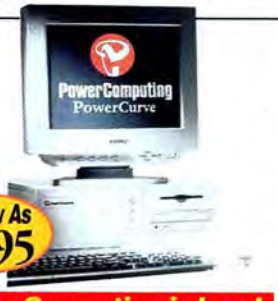
00618	DiskExpress II 2.2	$42.98
04543	Master Juggler 1.9	$42.98

Avid Technology

98489	Elastic Reality for Power Mac	$228.98
03552	Avery MacLabel Pro	$45.30

Best!Ware

04712	MYOB Accounting V6.0	$78.98
99042	MYOB Accounting V6.0 w/Payroll	$132.98



As Low As $1895

Power Computing!

#86611	PowerWave 604/150 8/2GB CD Tower	$3845.00
#86600	PowerWave 604/150 8/1GB CD Tower	$3545.00
#86601	PowerWave 604/132 8/1GB CD Tower	$3245.00
#86602	PowerWave 604/150 8/1GB CD Desktop	$3195.00
#86603	PowerWave 604/120 8/1GB CD Desktop	$2545.00
#86613	PowerCurve 601/120 8/500MB CD Desktop	$2195.00
#86615	PowerCurve 601/120 8/1GB CD Desktop	$2345.00
#86626	PowerCurve 601/120 8/850MB CD Low Pro	$1995.00
#86627	PowerCurve 601/120 8/1GB CD Low Pro	$2074.00
#86628	PowerCurve 601/120 8/850MB Desktop	$1895.00
#86629	PowerCurve 601/120 8/850MB Low Pro	$1795.00
#86604	Power Computing Stargate Risercard	$249.98

Power Computing is here!
Mac-compatible, PowerPC™ performance for less!

SupraExpress 144 Ext. FAXModem

Only $49.98

- 14,400 bps fax and data capability
- V.42bis hardware-based compression for up to 57,600 bps throughput
- Bundled with top-rated fax, communications and online software
- Five-year limited warranty
- For more information, e-mail keyword SUPEXPRS288

Supra #85619

Performantz Quad-Speed CD-ROM Drive

Only $149

- 600K/second data transfer rate
- Fast 150ms average access time
- 256K cache
- Multisession PhotoCD and MPC 2 compliant
- Includes CD-ROM acceleration software
- For more information, e-mail keyword C2KQUAD

Performantz #88573

Caere

05161	OmniPage Direct V2.0	$58.11
91304	OmniPage Pro V6.0 Upgrade	$148.98

Casady & Greene

91300	Conflict Catcher 3	$59.00

Claris

18052	ClarisDraw	$184.98
93424	ClarisWorks V4.0	$117.98
92638	ClarisWorks V4.0 Ver/Comp Upgrade	$64.98
88830	FileMaker Pro V3.0	$179.98
88829	FileMaker Pro V3.0 (Ver/Comp Upgrade)	$94.98
06525	MacWrite Pro V1.5	$54.98
18051	Organizer for Mac	$45.98

Connectix

05646	PowerBook Utilities	$53.98
96785	RAM Doubler v1.52	$53.98
90375	Speed Doubler	$53.00
90149	RAM/Speed Doubler Bundle	$75.00

Corel

95331	Corel GALLERY 1	$31.98
91628	Corel GALLERY 2	$63.98

Only $629

QuarkXPress V3.32 for Mac/Power Mac #95320

92234	Corel Stock Photo Library 1	$879.98
91276	Corel Stock Photo Library 2	$879.98
00203	Cricket Graph III	$84.98

Dantz

04722	Diskfit Pro V1.1	$68.98
02586	Retrospect V3.0	$134.94
04194	Retrospect w/ Remote 10-Pack	$259.98

Datawatch

02077	Virex V5.6	$59.45

Dataviz

96907	MacLink Plus/PC Connect 8.0	$113.98
96908	MacLink Plus/Translators Pro 8.0	$93.98

Delrina

97921	Delrina Fax Pro for Mac	$52.45

Only $287

SoftWindows for Power Mac 3.0 CD-ROM #98475

DeltaPoint

04805	DeltaGraph Pro 3.5	$124.98

Entertainment

99236	7th Guest, The-Virgin	$41.98
88389	A-10 Attack CD-Rom	$47.98
06848	Civilization-Microprose	$42.98
91005	Dark Forces-LucasArts	$49.98
92035	DOOM II-GT Interactive	$44.98
96284	Marathon-Bungie Software	$37.98
88450	Marathon 2 Durandal	$44.98
97733	MYST-Broderbund	$49.98
93543	Night Trap-Acclaim	$47.98
00473	PGA Tour Golf II-Electronic Arts	$37.98
94563	Rebel Assault CD-ROM	$27.98
92047	Sim City 2000 Collection CD	$56.98

Farallon

96800	Timbuktu Pro Single Pack	$125.98
96802	Timbuktu Pro 10-Pack	$659.98
96801	Timbuktu Pro Twin-Pack	$199.98

Fractal Design

98082	Fractal Design Dabbler 2	$43.98
00665	Fractal Design Painter 4	$332.28
93967	Fractal Design Painter 4 Upgrade	$119.49
91289	Fractal Design Poser	$89.76

GDT Software

00642	PowerPrint 3.0	$94.98
94262	StyleScript	$94.98
90060	IdeaFisher V6.0	$49.98

Globalink

95417	French Assistant	$47.98
95416	German Assistant	$47.98
95415	Italian Assistant	$47.98
95418	Spanish Assistant	$47.98

Insignia

03664	Access PC V3.0	$79.98
06786	RapidCD	$44.98
98475	SoftWindows 3.0 for Power Mac CD-ROM	$287.00
89308	SoftWindows 3.0 for Power Mac upgrade CD	$79.98
94287	SoftWindows for Mac	$275.00

Intuit

06164	MacInTax 1040 Final '95	$39.98
93222	QuickBooks 4 for Mac	$122.98
89653	QuickBooks Pro for Mac	$184.98
89685	Quicken Deluxe CD 6	$59.98
04230	Quicken 6 for Mac	$41.98

JIAN

04257	BizPlanBuilder 5.0	$78.98
01045	EmployeeManualMaker 3.0	$91.98
06827	Publicity Builder 2.0	$84.98

Kent Marsh

94266	Folderbolt Pro	$88.98
89686	Folderbolt Pro/NightWatch II Bundle	$119.98
04981	NightWatch II	$78.98

Leader Technologies

05690	PowerMerge 2.5	$78.98

Macromedia

88684	Deck II v2.5	$304.00
92266	Director Multimedia Studio 2.0	$998.98
86007	Director Multimedia Studio 2.0 Upgrade	$498.98
88726	Extreme 3D	$474.98
04537	Fontographer V4.1	$307.98
88749	FreeHand 5.5 CD	$375.00
87152	FreeHand 5.5 Competitive Upgrade CD	$148.98
87150	FreeHand 5.0 to 5.5 Upgrade CD	$78.98
92290	FreeHand Graphic Studio 2.0	$598.98
88730	Macromedia Director 5.0 CD	$789.98
95291	Macromedia Director 5.0 Upgrade CD	$398.98
97770	SoundEdit 16 CD	$278.98

Mainstay

01159	MacFlow 4.0	$221.98
93218	Plan and Track	$191.98

MetaTools Software

06668	Kai's Power Tools V3.0	$11
95335	KPT Bryce 2.0	$17
92243	KPT Convolver 1.0	$11
91258	KPT Vector Effects	$11

Metrowerks

94281	CodeWarrior 9.0 Gold Java	$35

Microsoft

99702	Cinemania 96 CD	$2
95750	Encarta 96 CD	$4
00227	Excel V5.0 Full Version	$28
04545	Excel V5.0 Version Upgrade	$11
04293	Flight Simulator V4.0	$3
99696	FoxPro V2.6 Full Version	$8
18059	Office V4.2.1 Upgrade	$26
96024	Office V4.2.1 Upgrade CD	$26
06300	PowerPoint V4.0 Upgrade Version	$11
04161	Project V4.0 Full Version	$41
06184	Project V4.0 Upgrade	$12
04898	Word V6.01 Full Version	$28
00596	Word V6.01 Upgrade	$11
05750	Works 4.0	$4

Nisus Software

03479	Nisus Writer 4.1 for Mac	$11
93238	Nisus Writer w/Language Key 4.1	$24

Now Software

06713	TouchBase & DateBook Pro 4.2 Deluxe CD	$6
99120	Now Up-to-Date V3.6/Now Contact V3.6	$8
04191	Now Utilities V6.0	$7
92896	Optimem RAM Charger	$5

Peachtree Software

02594	Peachtree Accounting	$9

Personal Computing

92014	ADAM The Inside Story	$3
02785	After Dark v3.0-Berkeley Systems	$2
93161	Kid Pix Studio CD for Mac	$3
90082	Millie's Math House CD-Edmark	$3
05518	Music Time v2.0-Passport Designs	$9
05984	Reunion 4.0 The Family Tree Software	$9
05934	Star Trek Screen Saver-Berkeley Systems	$3
96777	Street Atlas USA 2.0	$6
87526	The Lost Mind Of Dr. Brain	$3
90042	The Playroom CD-Broderbund	$3
89738	The Tortoise and the Hare CD-Broderbund	$3

Quark

95320	QuarkXPress V3.32 for Mac/Power Mac	$62

PhotoDisc

97349	PhotoDisc Starter Kit	$3

Ray Dream

00441	Designer V4.0	$9
04150	JAG II	$8
88707	Ray Dream Studio Upgrade	$14

SoftKey

95594	American Heritage Talking Dictionary CD Mac/Win	$2
03631	Calendar Creator 2.0	$3
00641	WriteNow V4.0 w/Correct Grammar	$4

Stalker Software

90146	SCSIShare	$6
92867	LineShare	$5
92868	PortShare Pro	$10

Strata

99509	StudioPro 1.75	$84
89777	Strata Virtual Studio	$1,19

Only $95.66

Adobe PageMill 1.0 #88414

Symantec

06231	ACT! V3.0	$14
06997	Disk Doubler Pro V1.1	$7
03481	MacTools 4.0 Pro	$8
04890	Norton Utilities V3.2	$9
93976	Norton Utilities V3.2 Upgrade	$3
00116	SAM 4.0	$6
04776	Suitcase V3.0 Full/Upgrade	$5
06243	Software Ventures MicroPhone Pro	$13

T/Maker

91303	ClickArt Incredible Image Pak 25000	$4

WordPerfect

03972	WordPerfect V3.5 Full Version	$11
25917	WordPerfect V3.5 Full Version CD	$11
05013	WordPerfect V3.5 Upgrade	$7

Call MAC BARGAIN$ before you buy!

1-800-407-7404

Add applicable sales tax (only in OH, WA). All shipments refer to "in stock" items, barring system failure, etc. Not responsible for typographical errors. Credit cards are not charged until the order is shipped. Most products ship the same day for overnight delivery. Overnight delivery is only $7 for the first 7 pounds and $1 for each additional pound. Call for international shipping rates. Packaging and handling $4 per order for delivery in the USA. Returns subject to a restocking fee. Prices and product availability subject to change without notice. Specials and promotions may be limited to stock on hand.

For the Best Deals Around!

1-800-407-7404

MONITORS

Sony

5675	Multiscan 15sx	$419.00
6676	Multiscan 15sf II	$479.00
6677	Multiscan 17sf II	$858.98
6909	Multiscan 17se II	$1,039.00
6678	Multiscan 20sf II	$1,749.00
7952	Multiscan 20 TC	$3,399.00

Radius

6548	Intellicolor 20e Display	$1,799.00
2647	PrecisionView 17"	$969.98

S. Robotics

As Low As $110.98

Modems

701	Mac & Fax Sportster 14.4	$110.98
953	Mac & Fax Sportster 28.8 V.34	$196.98
406	Mac & Fax Sportster Voice 28.8 V.34	$239.98
348	Mac & Fax Sportster PC Card 28.8 V.34	$289.98
6648	PrecisionView 21"	$2,189.00

NEC

7645	NEC XV15+ 15" Color Mtr	$498.00
7646	NEC XV17+ 17" Color Mtr	$829.00
9721	NEC XP 17 17" Color Mtr	$1,024.00
9722	NEC XP 21 21" Color Mtr	$2,148.00
9719	NEC XE 21 21" Color Mtr	$1,769.26

VIDEO/GRAPHICS BOARDS

ATI

9135	Exclaim GA 2MB PCI	$348.98
9136	Exclaim GA 4MB PCI	$457.98
9137	Exclaim GA 2MB Upgrade	$236.98

Connectrix

7884	QuickCam	$89.98

Focus

9820	LapisColor 16 for LC	$314.00

Radius

7892	PrecisionColor Pro 24XK	$799.98
7684	Spigot Power AV	$349.98
7642	Thunder24 GT	$499.98
7637	Thunder IV GX 1152	$1,699.00
7909	Precision Color 8/1600 PCI	$455.98
7907	Thunder 30/1600 PCI	$1,147.00
7905	ThunderColor 30/1600 PCI	$1,399.00
7906	ThunderColor 30/1152 PCI	$1,534.00
7683	VideoVision Studio 2.0	$2,499.00

TrueVision

7938	Targa 2000 Nubus	$2,999.00
7846	Targa 2000 Nubus Trade-In Upgrade	$2,750.00
7956	Targa 2000 PCI	$4,799.00

ACCELERATORS

Daystar

7168	PowerCard 66Mhz	$599.98
7164	Turbo 601 100Mhz for IIci	$1,198.00
7166	Turbo 601 100Mhz for IIvi, vx P600	$1,198.00
7169	Turbo 601/66Mhz	$549.00

DVC

7361	Equalizer for PowerMac 6100/7100/8100	$69.98

MEMORY

NEWER TECHNOLOGY

7685	Newer Power Clip for 6100/7100	$79.98
7296	Newer Power Mac 256K Cache 7200/7500/8500	$164.98
7428	Newer 1MB VRAM DIMM 7200/7500/8500	$99.98

NETWORKING

Asante

7809	10T FriendlyNet Adapter	$39.98
7404	10T HUB/8 w/ 10T/TN Ports	$158.98
7646	MC+30IET64 IISI & SE/30 (TK/10T)	$145.98
7118	Micro EN/SC for PowerBooks 10T	$207.00
7499	Thin FriendlyNet Media Adapter	$54.98

Farallon

7753	AirDock Infrared Connector	$63.98
7409	EtherWave AAUI Transceiver	$94.98
7412	EtherWave LC Card	$168.98
7339	EtherWave Multi Printer Adapter	$335.98
7411	EtherWave NuBus Card	$169.98

Performantz

7955	TeleNet Connector DIN 8	$13.98
7939	10BaseT Transceiver	$27.98

COMMUNICATIONS/MODEMS

Global Village

7314	PowerPort Gold PC Card 14.4	$174.98
7388	PowerPort/Mercury for PowerBook 5XX	$318.98
7167	PowerPort/Platinum for PowerBook 1XX	$324.98
7313	PowerPort Platinum V.34 PC Card	$315.98
7312	PowerPort Platinum Pro V.34/10-T PC Card	$474.98
7748	TelePort Gold II	$103.98
7155	Teleport Platinum V.34 for Desktop Macs	$194.00

Megahertz

7311	CruiseCard Mac 14.4 with XJack	$134.98
7310	CruiseCard Mac 28.8 V.34 with XJack	$279.98

Motorola

7622	Power V.34 Data/Fax Modems	$253.98
7621	LifeStyle V.34 Data/Fax Modem	$199.98

Performantz

7624	28.8 V.34 Fast Mac FaxModem	$135.98

CIRCLE **108** ON READER SERVICE CARD

Practical Peripherals

90600	MacClass MC288T2-EZ PCMCIA	$349.98
92951	MacClass MC288MT II v.34	$179.35

Supra

93719	FAXNetwork Software Server	$69.98
93721	FAXNetwork Software 10 User	$189.98
93736	Supra Express 144 Plus	$93.98
06865	Supra FaxModem 144PB Int - PowerBook	$155.98
90212	Supra FaxModem 288 V.34 Int for PB	$196.98
89309	Supra Express 288 V.34 FaxModem	$154.74
00413	Supra FaxModem V.32BIS (MC) w/Sft Cable	$173.98

TDK

91807	TDK 28.8 PCMCIA Fax/Modem for Apple 5xx	$279.98

US Robotics

93701	Mac & Fax Sportster 14.4	$110.98
92953	Mac & Fax Sportster 28.8 V.34	$196.98

STORAGE DEVICES

FWB

06271	CD-ROM Toolkit	$47.98
00555	Hard Disk Toolkit	$115.98
05476	Hard Disk Toolkit - Personal Ed	$46.98
94121	SCSI JackHammer	$449.00

LaCie

03949	Q Drive External 1080MB	$349.98
89875	Q Drive External 2150MB	$719.98

Microtech International

89609	Polaris 500MB Ext	$294.98
89611	Polaris 1.0GB Ext	$427.98
89612	Polaris 2.0GB Ext	$939.98

Olympus

89942	Deltis Power 3.5" MO 230MB	$489.00

SyQuest

24935	EZ135 SCSI Drive & Cartridge	$194.98
01142	Performantz 200MB w/o Cartridge	$344.98
97989	Performantz 270MB w/o Cartridge	$344.98
87044	Performantz 44/88MB w/o Cartridge	$294.98

MEDIA

Sony

14368	CD-R 650MB (74min)	$7.98
14359	DG120M 4mm Data Cart (4GB)	$24.98
01140	3.5" 230MB M.O. 512b/s	$22.00

Iomega Zip Drives and Cartridges

As Low As $189.98

SyQuest

#91159	Iomega Zip 100MB Cart Singles	$18.98
#91160	Iomega Zip 100MB Cart 3-Pack	$48.98
#91161	Iomega Zip 100MB Cart 10-Pack	$144.98
#91825	Zip Drive	$198.98
#93320	Iomega Mac Transportable 230	$452.98
#97291	Bernoulli Multidisk 150MB Cart	$89.98

Syquest

24998	EZ135 Cart (Single)	$20.98
24909	EZ135 Cart 5-Pack	$94.98
24910	EZ135 Cart 10-Pack	$179.98
99922	SyQuest 105MB Cart	$57.98
00278	SyQuest 200MB Cart	$74.98
97992	SyQuest 270MB Cart	$81.98
02183	SyQuest 44MB Cart	$40.00
00183	SyQuest 88MB Cart	$45.98

Verbatim

21922	CD-R 4x 74min	$8.98
01169	230MB 3.5" R/W 1024b/s MO Cart	$20.98
90985	8mm DL 112m Data Tape	$7.98
97982	5.25" 1.3GB Rewritable Optical Cart	$64.98

CD-ROM/MULTIMEDIA

NEC

90485	Multispin 6XE CD-ROM	$489.00
28660	Multispin 4XC QuadSpeed 7 Disk Changer	$369.98

Performantz

88573	Performantz C2X Quad-Speed CD-ROM	$149.98

Sony

91947	4X Speed CD-Rom CSD-7611	$289.98
01172	Computer Speaker System CSS-B100	$39.00
91982	Spressa CD-Recorder CD CSP-9211S	$1,189.00
13166	SRS-D2K Speakers w/ Subwoofer	$134.98
91944	SRS-D4K Speakers w/Subwoofer	$194.98

SCANNERS

Agfa

02135	Arcus II	$1,979.00
89851	StudioScan IIsi	$749.00

Epson

91939	ES-1000C	$737.00
02133	ES-1200C	$949.98
02110	ES-1200C Pro	$1,122.00

Hewlett Packard

87989	ScanJet 4C	$949.98

Nikon

86274	Coolscan II	$1,249.00
89921	Super Coolscan LS-1000	$1,953.00
01174	Scantouch Flatbed Scanner	$1,117.00

Polaroid

01192	SprintScan 35mm Filmscanner	$1,499.00

Umax

86269	Vista S-6E	$398.98
01193	Vista S6 Pro 2	$649.00
91968	Vista S8 Pro 2	$773.98
01189	Powerlook Pro 2 w/TMA	$1,890.00
88594	Powerlook II	$2,949.00

Visioneer

88164	PaperPort Vx for Macintosh	$349.98

INPUT DEVICES

Adesso

91099	Tru-form Extended Keyboard w/Pointer	$99.98
91854	Soft Touch Extended Keyboard	$48.98

Alps

92698	Alps Glidepoint for Mac	$56.98

Calcomp

91862	Drawing Slate II 12x12 w/Pressure Pen	$224.00
91864	Drawing Slate II 6x9 w/Pressure Pen	$194.00

Kensington

93628	Thinking Mouse ADB	$84.98
05176	TurboMouse 4.0 Trackball w/4.1 Software	$99.98

Performantz

90677	Soft Touch Extended Keyboard	$44.98

Wacom

90643	ArtPad II (ADB) w/Erasing UltraPen	$144.98
90644	ArtPad II (ADB) w/ Dabbler Bundle	$149.98
90646	Artz II 12x12 (Serial) w/Erasing UltraPen	$399.98
90645	Artz II 6x8 (ADB) w/Erasing UltraPen	$297.98

PRINTERS

Accessories

05765	Macintosh DIN 8 Printer Cable	$6.48
86166	Port Juggler 4X	$94.98

Epson

20670	Stylus Color II Ink Jet	$294.98
89901	Stylus Color Pro Ink Jet	$494.98
87980	Stylus Pro XL Ink Jet	$1,789.00
19291	Stylus Color Color Cartridge	$29.00
19292	Stylus Color Black Cartridge	$15.00
89178	Stylus Color 720dpi Coated Paper (100 sheets)	$13.00

Hewlett-Packard

88902	HP DeskWriter 600	$238.98
94057	HP DeskWriter 660C InkJet	$348.00
23786	HP LaserJet 5MP	$1,044.00

Tektronix

92531	Tektronix Phaser 140	$1,195.00
90628	Tektronix Supply Startup Kit	$179.98

POWER BACKUP

APC

94396	APC Personal Surge Arrest	$32.98
94395	APC Personal Surge Arrest w/Phone	$24.98
07150	BackUps 280	$99.98
99364	BackUps 400	$148.98
11651	BackUps 600	$249.98

MOBILE COMPUTING

Targus

06023	Notepac (4 color choices)	$29.98
06610	Leather Notebook Case	$89.00
07454	Universal Notebook Case	$59.98

Terrapin

90782	TGL300 Deluxe Leather - Black	$99.99
90783	TGL400 Leather - Black	$84.99
90784	HS300 Hardshell Workstation - Black	$42.99
90786	SS300 Softshell Workstation - Black	$24.99

Memory!

SIMMs As Low As $46.98 MB

30pin SIMMS

05653	2MB 80ns Upgrade Kit (2-1MB SIMMS)	$46.98
05655	4MB 80ns Upgrade Kit (2-2MB SIMMS)	$89.98
05656	8MB 80ns Upgrade Kit (2-4MB SIMMS)	$174.98
05654	16MB 80ns Upgrade Kit (4-4MB SIMMS)	$349.98

72pin SIMMS

06734	4MB 60ns SIMM (1x32)	$72.98
06729	4MB 70ns SIMM (1x32)	$69.98
06756	8MB 60ns SIMM (2x32)	$142.98
06755	8MB 70ns SIMM (2x32)	$134.98
06807	16MB 60ns SIMM (4x32)	$279.98
95693	16MB 70ns SIMM (for LCIII)	$259.98
96721	32MB 60ns SIMM (8x32)	$589.98

168pin DIMMS

90377	8MB 70ns DIMM (1x64)	$149.98
90378	16MB 70ns DIMM (2x64)	$229.98
90379	32MB 70ns DIMM (4x64)	$539.98
90380	64MB 70ns DIMM (8x64)	$999.00

PowerBook 500 Series

95681	4MB Mem Module for 520/520c/540/540c	$135.98
95682	8MB Mem Module for 520/520c/540/540c	$264.98

PowerBook 5300

89462	4MB Mem Module for 5300	$129.98
89463	8MB Mem Module for 5300	$229.98
89464	16MB Mem Module for 5300	$429.98
89465	32MB Mem Module for 5300	$899.98

VRAM

89439	1MB VRAM DIMM for 7200/7500/8500	$62.98

Power Macs Under $1000!

HP LaserJet 5MP

Only $1044

- 600x600 dpi resolution
- Individual or shared use
- Flexible paper handling
- Prints up to 6 pages per minute
- Includes 35 Adobe Type I fonts and 75 TrueType fonts on disk
- 350 sheets input, 100 sheets output
- For more information, e-mail keyword HP5MP

Hewlett-Packard #23786

ViewSonic 17GA 17" Monitor/Adapter Bundle

Only $774

- 17" multimedia monitor (16" viewable)
- 0.27mm dot pitch
- Maximum resolution of 1152x870 at 75Hz refresh
- Built-in high fidelity speakers
- Built-in headphone jack and external microphone port
- Mac and PC compatible (Plug & Play for Windows 95)
- Three-year limited warranty on CRT, parts and labor
- For more information, e-mail keyword VS17GA

ViewSonic #88429

WHY PAY MORE

when you can get a better price from MAC BARGAIN$?

Call Now!

DISCOUNT PRICE$ ON QUALITY HARDWARE, $OFTWARE & ACCE$$ORIE$

IF YOU DON'T SEE IT... CALL!

MAC BARGAIN$

FAX: 1-206-603-2520 INT'L PHONE: 1-206-603-2558
E-Mail Address: mac.bargains@mzi.com
15815 S.E. 37th Street, Bellevue, WA 98006-1800

Knowledgeable Sales Advisors help make buying easy!

YOUR SOURCE CODE BU607

©1996 MZI, Inc. Bellevue, WA ™Trademarks of all companies listed in this ad. All rights reserved.

SYEX EXPRESS

1030 Wirt Rd., #400
Houston, Texas 77055

Leaf Lumina Digital Camera

A revolutionary digital imaging camera that consists of a single pass, rapid-scanning, tri-linear array containing 2700 elements per R, G and B.

$4795

Leaf
a scitex company

Your Source for Digital Desktop Publishing Solutions!

$3075

Radius PressView 21SR

Get true color with the Radius PressView 21SR Color Reference Display System which is designed for the most demanding color professionals.

The PrecisionView 17 Color Display is designed for professional-quality color in any environment.

** Limited time, while supplies last.

$799**

Radius PrecisionView 17

radius

Agfa Arcus II Color Scanner

The Arcus II features 36-bit pixel depth, a true density range of 3.0 D, resolutions up to 2400 ppi for continuous tone pictures and an astounding 3600 ppi for line art. Every Arcus II comes with a transparency unit and a wide array of software including Adobe Photoshop LE, and FotoTune Light!

$1925

AGFA

Iomega Jaz Drive

Jaz is a portable, high-performance disk drive featuring 1GB of storage capacity on compact, removable cartridges.

$599

iomega

Radius VideoVision® Studio PCI

VideoVision Studio PCI includes all of the same features as the original, plus some key enhancements. The new version provides 16-bit, 48kHz audio synchronized to video clock rates and a new encoder that improves video quality.

$3195

Radius Telecast Upgrade

This JPEG compression video system combines component video and CD-quality audio capabilities in an open QuickTime architecture that frees video professionals to make creative choices in their hardware and software tools.

$3399

FWB incorporated

FWB HammerCD-R 4X

The HammerCD-R 4X is the top choice for high volume recording and other applications where the fastest recording speed is important.

$2099

We carry the complete line of Apple® computers.

MONITORS

NEC MultiSync XV15+™	$489
NEC MultiSync XV17+™	$829
NEC MultiSync M500™/M700™	$599/$899
NEC MultiSync XE21™/XP21™	$1799/$2199
Sony CPD-15srII 15" Trinitron	$499
Sony CPD-17sfII 17" Trinitron	$889
Portrait Display Labs Pivot 1700™	$965

SCANNERS

Agfa StudioScan IIsi Scanner	$935
UMAX Vista S-8 Pro	$779
UMAX Vista S-12	$869

Hewlett-Packard ScanJet 4p

Features affordable single-pass scanning at 1200 dpi enhanced and 300 dpi optical resolution.

$499

PRINTERS

Hewlett-Packard LaserJet 5MP Printer	$1039
Hewlett-Packard DeskJet 855Cxi Printer	$499
Hewlett-Packard DeskJet 1600CM Printer	$1969
Epson Stylus Color Pro Printer	$589
Epson Stylus Color Pro XL	$1789

Hewlett-Packard DeskWriter 680C

$329

MODEMS

U.S. Robotics Sportster Voice 28.8	$259
U.S. Robotics Sportster 28.8	$209
Global Village PowerPort Mercury™ 500 series/Duo	$329
Global Village TelePort Platinum™	$199
Global Village PowerPort Platinum™ PC Card	$325

For Macintosh PowerBook 5300 series.

VIDEO BOARDS

Radius Thunder 30/1600	$1219
Radius ThunderColor™30/1152	$1599
Radius ThunderColor 30/1600	$1999
IMS Twin Turbo PCI 128M	$569
Number Nine Imagine 128 PCI 4MB	$849

Radius Thunder™ 30/1152

$769

STORAGE

SyQuest EZ135	$215
SyQuest 200MB Removable Drive	$299
NEC 4Xc 7 Disc Changer	$349
Quantum 1GB External Hard Drive	$359

Includes FWB Toolkit, cable & terminator.

Iomega Zip Drive

$199

GE WARRANTY

GE Service Protection Plus adds whatever period of time is necessary after the expiration of the manufacturer's warranty to offer total service protection of four years from the equipment purchase date.

Product Price Range	Contract Price
$100 - $350	$69.95
$351 - $700	$99.95
$701 - $1200	$179.95
$1201 - $2000	$199.95
$2001 - $3000	$239.95
$3001 - $4000	$269.95
$4001 - $5000	$299.95

Call your Syex representative for full details on the GE Service Protection Plus warranty.

Connect Today!

Call us if you don't see the product you're looking for. We carry these products and **much, much more!** Check our web site, www.syex.com, for the most up-to-date product listings. E-mail us at **info@syex.com**.

VISA MasterCard DISCOVER

• Prices & product availability subject to change without notice • We are not responsible for typographical errors • RMA number is required for any product returned • Returns subject to a restocking fee • All trademarks or registered trademarks are property of their respective owners • Syex Express does not guarantee product compatibility • Sorry, no CODs

Call Today for a FREE Catalog

Outside the Continental U.S.: (713) 957-1999 or FAX (713) 956-5741

1-800-876-3467

connect: www.syex.com

CIRCLE 38 ON READER SERVICE CARD

AWARD-WINNING COLOR SILVERSCANNERS

LACIE LIMITED

Compare these features:

- Color previews in seconds.
- Scans in under a minute.
- The industry's leading scanning software.

"ScanPrep is an essential application if you own a scanner... the sort of program that has to be seen to be believed." **Ben Long – MacWeek**

Highest Possible Rating

"No matter what acquired plug-in you get if you use Photoshop, you'll also want to buy a copy of ScanPrep." **– MacUser**

Highest Possible Rating

Silverscanner PRO
24 bit color, 300 x 600 dpi interpolated to 1200 dpi.
- ▲ Silverscan
- ▲ ScanPrep
- ▲ Omnipage Lite OCR

$599

NEW Product

Silverscanner PRO with Photoshop LE
24 bit color, 300 x 600 dpi interpolated up to 1200 dpi.
- ▲ Photoshop LE
- ▲ ScanPrep ▲ Silverscan
- ▲ Omnipage Lite OCR

$669

Silverscanner DTP
30 bit color, 400 x 800 dpi interpolated to 3200 dpi.
- ▲ Silverscan
- ▲ ScanPrep
- ▲ Omnipage Lite OCR

$799

4½

1 Year Scanner Warranty

Silverscanner DTP with Photoshop LE
30 bit color, 400 x 800 dpi interpolated up to 3200 dpi.
- ▲ Photoshop LE
- ▲ ScanPrep ▲ Silverscan
- ▲ Omnipage Lite OCR

$889

Silverscanner III
30 bit color, 600 x 1200 dpi interpolated up to 4800 dpi.
- ▲ Silverscan
- ▲ ScanPrep
- ▲ Omnipage Lite OCR

$1499

4

30 Day Money Back Guarantee

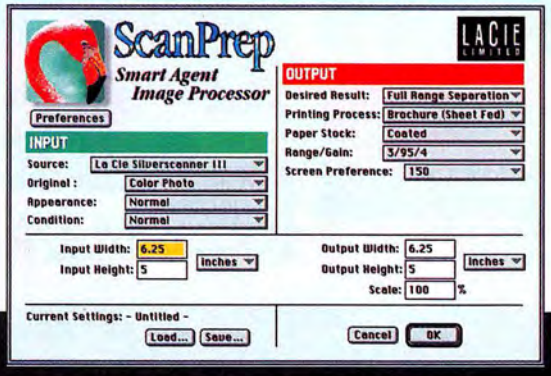
Silverscanner III with Photoshop Full
30 bit color, 600 x 1200 dpi interpolated up to 4800 dpi.
- ▲ Photoshop (Full Edition)
- ▲ ScanPrep ▲ Silverscan
- ▲ Omnipage Lite OCR

$1659

Sheet Feeder Adapter (DTP and III) **$499**
Transparency Adapter (DTP and III) **$799**

ScanPrep automates Photoshop's image processing tools, individually preparing each image for printing right before your eyes. Simply describe the project to ScanPrep and scan the base image. ScanPrep yields professional prepress results, quickly and easily.

ScanPrep provides automatic adjustment of picture contrast and color saturation. Even when the original is lacking in contrast or saturation, it corrects the problem without human intervention.



5 5 5 5 5

Call 1-800-999-1528

* La Cie Storage Utilities FREE with the purchase of a La Cie Drive. Call for details, conditions, limited money back guarantee, and free offers. Prices do not include shipping and only apply to products shipped within the continental United States. Add sales tax where applicable. SilverScan, Silverlining, La Cie and the La Cie logo are trademarks of La Cie, Ltd. Photoshop is a trademark of Adobe, Inc. ScanPrep is a trademark of ImageXpress. OmniPage is a trademark of Caere. All other trademarks are the property of their respective companies. All prices, specifications, terms, warranties, descriptions, products and services herein are subject to change without notice or without recourse. © Copyright 1996 La Cie, Ltd. All rights reserved.

LACIE LIMITED offers a world of storage solutions

La Cie Storage Utilities FREE!* With All La Cie Drives

All products bearing this Storage Utilities mark include acclaimed Silverlining Disk management software plus four other vital performance enhancements, a $99 value... ***FREE!***

TSUNAMI DRIVES

- Ready to plug and play with switchable active termination, cables, and La Cie Storage Utilities.
- Up to 4.3GB capacity in a 6.5"x8.5"x2.2" compact case.

$327

Quantum 1280 MB

850MB Quantum Trailblazer	3 yr. warr.	$249
1280MB Quantum Fireball	3 yr. warr.	$327
2160MB Ultrastar ES	5 yr. warr.	$544
4.3GB Quantum Atlas	5 yr. warr.	$969

INTERNAL DRIVES

Special LOW Price

- High-performance drive and controller technology.

$869

Quantum Atlas 4.3 GB

3.5" Drives

850MB Quantum Trailblazer	3 yr. warr.	$179
1280MB Quantum Fireball	3 yr. warr.	$257
2160MB Ultrastar ES	5 yr. warr.	$444
4.3GB Quantum Atlas	5 yr. warr.	$869

Brackets available for $10 with internal hard drive purchase.

PORTABLE JOULE DRIVES

MACUSER EDITORS' AWARD 1995 FINALIST

- Docking provides new security and backup solutions.
- Share hard disk-sized files with diskette convenience.
- Unplug and go for convenient data transport.

Joule 3.5" Drives with Dock

850MB Quantum Trailblazer	3 yr. warr.	$329
1080MB Quantum Fireball	3 yr. warr.	$369
2160MB Ultrastar ES	5 yr. warr.	$669
8.0GB DAT DDS-2 Includes Retrospect		$959
8.0GB TURBO DAT DDS-2 Inc. Retrospect		$1159
230MB Optical	1 yr. warr.	$499

POWER WIDE DRIVES

- Utilize Wide-SCSI technology for high-speed, high capacity file transfer

FAST: 1 drives + 1 card
WRITE 7.0 MB/Sec
READ 7.7 MB/Sec

FASTER: 2 drives, 2 cards + RAID
WRITE* 13.0 MB/Sec
READ* 14.3 MB/Sec

FASTEST: 3 drives, 3 cards + RAID
WRITE* 32.8 MB/Sec
READ* 27.0 MB/Sec

Power Wide External Drives

2.0GB Quantum Atlas Wide + Wide PCI Adaptec 2940 Board	NEW!	$1199
4.0GB Quantum Atlas Wide + Wide PCI Adaptec 2940 Board	NEW!	$1399
2.0GB Quantum Atlas Wide + RAID + Wide PCI Adaptec 2940 Board	NEW!	$1299
4.0GB Quantum Atlas Wide + RAID + Wide PCI Adaptec 2940 Board	NEW!	$1499

★ RAID Level 0 (Striped) For PCI Macs only

TOWER JOULE DRIVES

3.5" Drives with Mount For use in Tower with a Joule Base

850MB Quantum Trailblazer	3 yr. warr.	$329
1080MB Quantum Fireball	3 yr. warr.	$369
2160MB Ultrastar ES	5 yr. warr.	$669
4.3GB Quantum Atlas	5 yr. warr.	$1099
8.0GB DAT DDS-2 Includes Retrospect		$959
8.0GB TURBO DAT DDS-2 Inc Retrospect		$1159

Joule Bases - Supports Stacks Up To 6 Drives High

850MB Quantum HD	3 yr. warr.	$389
1080MB Quantum HD	3 yr. warr.	$429
2160MB Ultrastar ES HD	3 yr. warr.	$699
230MB Optical	1 yr. warr.	$529

RAID JOULE DRIVES

- Ideal for high performance applications like multi-media and animation.
- User can easily configure RAID level 0, 1 4 or 5.

Joule RAID

Quantum drives bundled with Trillium Research Software configurable to levels 0, 1, 4 & 5.	RAID Drives only	RAID with SCSI card
4.2GB	$1999	$2299
8.4GB	$3499	$3799
16.8GB	$6999	$7299
25.8GB	$9999	$10299

CD-ROM 8X DRIVE

- Fastest access speed available.
- Transfer rates up to 1200 kb/sec.
- Smooth audio and video playback.

$299

8X CD-Rom

8X CD-Rom External $299

DLT DRIVES

Maximum Storage Capacity
Ideal for network servers and high-end work stations

- Transfer rates from 150 to 180 MB per minute.
- Flexible cache buffer automatically adjusts to slower host data transfer rates.

$2999

30.0GB DLT External

DLT Drives Includes Retrospect

30.0GB Quantum DLT External	$2999
40.0GB Quantum DLT External	$4999

DAT DRIVES

- The ideal medium for data backup.
- The cheapest backup solution per megabyte.

$899

8.0GB DAT DDS-2

DAT Drives Includes Retrospect

2.0GB DAT External	$699
8.0GB DAT DDS-2 External	$899
8.0GB TURBO DAT DDS-2 External	$1089

1995 MAC HOME JOURNAL READERS' CHOICE

MAC HOME JOURNAL

Industrial Design Excellence Award OCTOBER 1994

I.D. Magazine 40TH ANNUAL DESIGN REVIEW WINNER 1994

MACUSER EDITORS' AWARD 1995 FINALIST

MACWORLD MW EDITORS' CHOICE

Mon.– Fri. 5AM-7PM & Sat. 8AM-NOON PST
International 503-520-9000
Fax 503-520-9100 (24 hrs.)
http://www.lacie.com/~lacie

AMERICAN EXPRESS VISA DISCOVER MasterCard

* La Cie Storage Utilities FREE with the purchase of a La Cie Drive. Call for details, conditions, limited money back guarantee, and free offers. Prices do not include shipping and only apply to products shipped within the continenta United States. Add sales tax where applicable. Tsunami, Joule, Joule Portable, La Cie Term, Silverlining, La Cie and the La Cie logo are trademarks of La Cie, Ltd. All other trademarks are the property of their respective companies. All prices, specifications, terms, warranties, descriptions, products and services herein are subject to change without notice or without recourse. © Copyright 1996 La Cie, Ltd. All rights reserved.

CD-R DRIVES

- Low cost media for backup.
- CD-Rs ship with Gear Multimedia software.
- Create your own CD with fast write capability.

$879
2X Recordable

CD-Recordables	
2X Recordable with Gear MultiMedia	$879
4X Recordable with Gear MultiMedia	$1389
650 CD-R Disk 74 Minutes	10 Disk Pack $89

OPTICAL DRIVES

- Optical is the new standard in removable reliability.
- Available in two popular capacities.
- Compact storage convenience.

$599
650MB Optical

	Powerbook	Internal	External
230MB 1 yr. warr.	$399	$389	$399
230MB Optical Cartridge			$19.95
650MB External 1 yr. warr.			$599
650MB Optical Cartridge			$49

OPTICAL DRIVES

- Optical is the new standard in removable reliability.
- Compact storage convenience.

$1999
2.6GB Optical

2.6GB External 1 yr. warr.	$1999
2.6GB Optical Cartridge	$99

APPLE EXTERNAL HARD DRIVES

The only hard drive backed with Apple engineering. For a local reseller or catalog resource call 1-800-999-0499.

Sold exclusively by these and other fine Authorized Apple Resellers:

MicroCenter · CompUSA · MacConnection

TSUNAMI DRIVES

- Ready to plug and play with switchable active termination, cables, and La Cie Storage Utilities.
- 2.1GB capacity in a 6.5"x8.5"x2.2" compact case.

$544
Quantum 2160 MB

INTERNAL DRIVES

- High-performance drive and controller technology.

$179
Quantum 850 MB

CARTRIDGES DRIVES

	Qty. 1	Qty. 10
Syquest SQ400 44MB	$38 ea.	$37 ea.
Syquest SQ800 88MB	$42 ea.	$41 ea.
Syquest SQ2000 200MB	$66 ea.	$65 ea.
Syquest EZ135 135MB	$18 ea.	$17 ea.
Syquest SQ3270 270MB	$54 ea.	$53 ea.
Iomega Jaz 1GB	$119 ea.	$99 ea.
Optical 128MB	$23 ea.	$22 ea.
Optical 230MB	$25 ea.	$24 ea.
Optical 1.3GB	$59 ea.	$58 ea.
Optical 2.6GB	$99 ea.	$97 ea.
CD-R 74 650MB		$8.50 ea.
DAT 90m	$9 ea.	$8 ea.
DAT 120m	$20 ea.	$19 ea.
DAT Cleaning Kit	$9 ea.	$8 ea.
DLT 30 30GB	$40 ea.	$39 ea.
DLT 40 40GB	$98 ea.	$97 ea.

SYQUEST DRIVES

LA CIE & SYQUEST OFFER
Includes coupon for 2nd cartridge by mail for a total of 2 FREE cartridges! ($39.90 value)

$187
EZ135

EZ135MB 2 yr. warr. Includes ONE FREE cartridge and coupon for 2nd FREE cartridge by mail!	$187
270MB External	$279

JAZ™ WITH 3 CARTRIDGES

- 1 GB of data on sturdy and compact 3.5-inch disks.
- Exclusive La Cie metal case.
- Power supply included in the casing.
- Includes **3** cartridges!

MacWeek

$699
JAZ 1GB w/3 Cartridges

Iomega Jaz 1GB Includes 3 cartridges!	$699
Jaz 1GB Cartridge	$119 EA
Jaz 1GB Cartridge 10 Pack	$99 EA

LACIE LIMITED

offers versatile **storage solutions**

- 30 Day Money Back Guarantee
- Toll Free Technical Support
- Factory Direct Quality & Value
- Ready to Plug And Play

Friendly! Fast! **More customer support**

Toll-free tech line:
1-800-288-9919
http://www.lacie.com/~lacie

Call Today 1-800-999-1528

1-800-258-2622 1-800-CLUBMAC 1-800-258-2622

CLUBMAC REMOVABLE STORAGE

ClubMac 5.25" 200MB Removable

MacUser ★★★★ February 1995

Mac OS COMPATIBLE

C104 1801 5.25" ClubMac 200MB Cartridge not included $299*

FEATURING SyQuest® REMOVABLE TECHNOLOGY

EZ135 Drive 135MB

S198 2001 EZ 135MB Drive $197

270MB

C104 1801 3.5" ClubMac 270MB Cartridge not included $299*

C104 1803 3.5" ClubMac 105MB Cartridge not included $149

GENUINE SYQUEST CARTRIDGES

Part Number	Media	Qty 1	Qty 10	Qty 20	Part Number	Media	Qty 1	Qty 10	Qty 20
S198 1013	105MB	$35ea	$34ea	$33ea	S198 1010	44MB	$40ea	$39ea	$38ea
S198 1014	270MB	$57ea	$56ea	$55ea	S198 1011	88MB	$44ea	$43ea	$42ea
S198 2001	135MB	$19ea	$18.50ea	$18ea	S198 1012	200MB	$69ea	$68ea	$67ea

* With SyQuest Cartridge Purchase.

All SyQuest drives include Charismac Anubis formatting software, necessary cables for "plug-and-play" and documentation. All SyQuest drives include a 30-Day Money Back Guarantee and TWO Year Warranty. All SyQuest cartridges include a FIVE Year Warranty (warranty after the first year is handled by SyQuest).

CLUBMAC HARD DRIVE STORAGE

Quantum

Incredibly Low Price

7200 RPM • 1024K CACHE

	Part No.	Internal	Part No.	External
850MB Trailblazer 11ms	C104 0002	$199	C104 0052	$259
1080MB Fireball 12ms	C104 0000	$239	C104 0050	$299
1280MB Fireball 12ms	C104 0001	$269	C104 0051	$329
2100MB Atlas 8.6ms	C104 0004	$699	C104 0054	$759
4300MB Atlas 8.6ms BEST BUY	C104 0005	$939	C104 0055	$999

CLUBMAC CD-ROM DRIVES

CLUBMAC 4.4X-SPEED CD-ROM

CD AutoCache

PhotoCD

Mac OS COMPATIBLE

C104 1400	ClubMac DUAL-Speed CD-ROM Drive	$79
C104 1700	ClubMac Pioneer 4.4X CD-ROM Drive	$169
C104 1600	ClubMac SIX-Speed CD-ROM Drive	$299
N024 1070	NEC MultiSpin 4Xc 7 Disc Changer	$339

DAT STORAGE DEVICES

CLUBMAC TAPE BACKUP DRIVES

FREE DAT TAPE

TWO Year Warranty

BUNDLED WITH Retrospect v3.0 Backup Software

C104 0900	2-4 GB MiniQIC w/o cartridge	$479
C104 1301	2 GB ThunderDAT	$749
C104 1300	4-8 GB CompressionDAT	$899
C104 1200	4-8 GB SuperDAT	$1059

REMOVABLE STORAGE

Iomega Jaz Drive 1.0GB

Includes One Cartridge!

iomega Jaz Cartridges

I040 1015	Jaz Cartridges (1GB Single)	$119.99
I040 1017	Jaz Cartridges (1GB 5 pack)	$479.99

Iomega Zip Drive 100MB

Includes One 100MB Cartridge!

iomega Zip Cartridges

I040 1006	Zip Cartridges (100MB)	$19.99
I040 1011	Zip Cartridges (3 pack)	$49.99
I040 1010	Zip Cartridges (10 pack)	$149.99

- ClubMac hard drives include all cables, cords, leds, and brackets necessary for use with the Macintosh you specify. ClubMac formats all hard drives and installs Apple System 7.1 software, Charismac Anubis, and PowerMerge LE.
- External drives include a Double Shielded, twisted pair 25-50 SCSI cable.
- ClubMac honors all original equipment manufacturers warranties. ClubMac will repair or replace drives at it's discretion. Drives returned within first 30 days of purchase are replaced with a new unit.
- All ClubMac hard drives include a 30 day money back guarantee. Your risk is the cost of shipping.

7 Hammond, Irvine CA 92718

DISCOVER NOVUS VISA MasterCard AMERICAN EXPRESS Cards

NO SURCHARGE!

Authorized Catalog Reseller

HOURS A DAY 24 OPEN DAYS A WEEK 7

MONITORS & GRAPHIC CARDS

Radius Thunder 30/1152 PCI

Best New Display Card. 1995 Eddy Award.

$799

R013 1070

This new generation of PCI cards is the result of years of experience on the Macintosh® platform. No other PCI card maker can equal the quality and performance.

- 30-bit color with built-in Photoshop Acceleration
- Real-time CMYK-to-RGB display
- On-the-fly resolution and bit-depth switching

Radius Thunder 30/1600 PCI Card (R013 1071) $1199
Radius ThunderColor 30/1152 PCI Card (R013 1072) $1599
Radius ThunderColor 30/1600 PCI Card (R013 1073) $1999

Radius PrecisionView 21 Display

21"

$2299

R016 1032

FEATURES

- Resolution up to 1600 x1200
- 21" .25m high performance DiamondTron display
- Color management support for AGFA FotoTune 1.0 & 2.0, Apple ColorSync 1 & 2, EFIColor, and Kodak Precision.
- .30mm Dot Pitch
- Energy Star Compliant

Radius PrecisionView 2 Display System (R016 1032) $2299
Radius PressView 17SR Display System (R016 1031) $1999

Radius IntelliColor Display/20e Display System

BEST BUY

radius

20"

$1799 OR

While Supplies Last!

FEATURES

- Preset resolutions: 640 x 480 at 67Hz up to 1380 x 1040 at 74hz
- 20-inch Trinitron, vertically flat tube
- 15.2 in x 11.5 in maximum viewing area
- 0.31mm Phosphor Trio Pitch
- 10 pre-sets, 15 programmable settings

Radius IntelliColor Display/20e (R016 1009) $1799

MultiScan 17SFII

SONY.

17"

$915

S106 1018

FEATURES

16.0" Viewable image size
.25 mm Aperature Grille Pitch
Max Macintosh Resolution:
1024 x 768 ™ 75hz
On screen display of digital screen controls
Macintosh Adapter included
3 Year Warranty parts and 2 Year CRT

ony Multiscan 17SFII (S106 1018) $915
ony Multiscan 17SEII (S106 1019) $1095

21" MultiSync XE21

21"

$1779

N026 1010

- 21" diagonal flat square technology
- 13.8" Viewable image size
- Max Res:
  640 x 480 NI
  1024 x 768 NI
- Fine 0.28mm dot pitch
- Monitor Manager
- AccuColor, Digital controls
- Energy star compliant for true energy savings

NEC 21" XE21 (N026 1010) $1779
NEC 21" XP21 (N026 1011) $2159

17" MultiSync XV17+

NEC

Large Screen performance at an affordable price

17"

$799

N026 1032

- Perfect entry level business, small office/home office, home education/entertainment
- 17" diagonal flat square display
- 15.6" Viewable image size
- Max Res: 1024 x 768 NI
- PC Res: 1280 x 1024 NI
- Fine 0.28mm dot pitch
- FullScan capability
- On-Screen Manager

NEC 17" XV17+ (N026 1032) $799
NEC 15" XV15+ (N026 1031) $469

PRINTERS

EPSON Stylus COLOR Pro

E047 1019

$499

Incredible 720 dpi color printing, optimized with special coated paper
True black laser quality text
Pantone Matching
Postscript upgradeable
Text print speed up to 3ppm, color 1ppm
Cross-platform compatibility
TWO Year Limited Warranty

Stylus COLOR Pro XL

E047 1022

$1799

12"x18" COLOR

Prints up to 12.5" x 18" full bleed in Photo Quality color
720 x 720 dpi photo quality with Microdot technology
True black laser quality text
Pantone Matching
Postscript upgradeable
Network option available
Text print speed up to 3ppm, color 1ppm
Cross-platform compatibility

HP LaserJet 5MP

HEWLETT PACKARD

1045

- 600 x 600 dpi laser printing with HP Resolution Enhancement technology plus 120 levels of gray
- 6 ppm print speed, 20-MHz ColdFire processor
- 3MB RAM standard, expandable up to 35MB
- Adobe PostScript Level 2 with 35 scale typefaces
- Ports for sharing and wireless printing
- Two industry-standard parallel ports with auto-switching between ports
- Power Saver with sleep mode

047 1030 HP LaserJet 5MP Printer $1045

HP DeskJet 855CXI InkJet Printer

499

FEATURES

- COLOR PRINTER
- Dual I/O for either PC or Mac connect
- Black print speed up to 7ppm
- Color print speed up to 3ppm
- Handles plain and special papers, transparency film, and envelopes

NEW PRODUCT

047 1065 HP DeskJet 855CXI InkJet Printer $499

SCANNERS

AGFA Arcus II

Agfa

A055 1001

$1995

- Single pass, High speed scanner
- 600 x 1200 dpi resolution
- 36-bit color scanning
- Transparency Module
- Includes: Adobe Photoshop, AGFA FotoLook scanning software Fotatune LE for color management

A055 1001 Agfa Arcus II Desktop Professional Scanner $1995
A055 1011 Agfa StudioScan IIsi $699

EPSON ES1200C Pro

E045 1003

$1179

- 600 dpi optical resolution, and up to 4800 dpi(via interpolation)
- 30-bit color scanning
- Pro Package includes: Adobe Photoshop, Scantastic, KAI's PowerTools, SCSI cable

E045 1003 ES1200C Pro-MAC Color Scanner Full Package $1179
E045 1007 ES1200C LE-MAC Color Scanner w/Scantastic $949
E045 1013 ES1000C LE-MAC Color Scanner $735

Powerlook II

U010 1052

UMAX

The Magic of Color

$2495

- 600 dpi
- 36-bit color capture
- Transparency adapter
- Includes Adobe Photoshop 3.0, WordLinx OCR, Lai's PowerTools SE, PowerPhotos CD

U010 1052 Powerlook II 36-bit color capture, Transparency adapter $2495
U010 1055 Vista S12Macle 33-bit color capture, 600 x 122 dpi $799

VISIONEER PaperPort Vx

The Easiest way to get

$279

BEST BUY

V029 1008

PERIPHERALS

WACOM ARTZ II 6"x8" GRAPHICS TABLET

W010 1028

$298

Edit images, paint, draw and develop your technique to create stunning art with a new Wacom Graphics tablet!

LIFETIME LIMITED WARRANTY

GLOBAL VILLAGE COMMUNICATION TelePort Platinum 28.8kbps Fax/Modem

G050 1016

$199

Great Internet Modem!

The TelePort Platinum is the only Mac fax/modem with special enhanced software so you can communicate beyond 56 kbps! Send and receive data at up to 28,800 bps – based on the V.34 standard – and sends faxes at up to 14,400 bps.

G050 1016 TelePort Platinum 28.8 data, 14.4 S/R Fax $199

US Robotics 28.8 Sportster

The Intelligent Choice in Data Communications

$195

U020 1021

FEATURES

- 28.8 V.34 and 33.6 kbps
- V.32 bis at 14.4 kbps
- V.42/mnp 2-4 error control

New ClubMac Catalog is now Available! Call 800-258-2622.

HOURS A DAY 24 OPEN 7 DAYS A WEEK

Authorized Catalog Reseller

Source Code 680796

ClubMac®

1-800-258-2622

7 Hammond, Irvine CA 92718

General Sales ..... 24 Hours a Day, 7 Days a Week (800) 258-2622
Inquiries and Int'l Sales ..... M - F 5am - 9pm PST (714) 768-8130
Corporate/Educ Sales ..... M - F 5am - 5pm PST (800) 258-2621

Customer Service ..... M - F 7am - 5pm PST (800) 551-6398
Technical Support ..... M - F 7am - 5pm PST (800) 854-6227
24-Hour Fax ..... (714) 768-9354

1-800-258-2622 1-800-CLUBMAC 1-800-258-2622

MacWAREHOUSE

Authorized Catalog Reseller

We carry over 6,000 products for your Mac!

Sony Trinitron Graphic Displays as low as $469!

Sony 15sx1 15" Display (13.9" viewable area) ..... BND 0909 ..... $469
Sony 17sfII 17" Display (16.0" viewable area) ..... MON 0134 ..... $959
Sony 20sfII 20" Display (19.1" viewable area) ..... MON 0133 ..... $1949

Global Village TelePort Platinum 28.8 Modem

Features voice/Fax, Call Recognition and Fax/ARA.

only $209.95

Ask for item # DMD 1452

CD-ROM Drive BLOWOUT!

Get a blazing-fast QUAD SPEED CD-ROM drive at the *LOWEST PRICE EVER!*

Now Only $179.95!

Ask for item # BND 0678

The Nova ART EXPLOSION! 40,000 images and 1,200 fonts on 5 CD-ROMs! Ask for item # BBD 0223

4 Ways to Order:

1. Call 1-800-255-6227
2. FAX: 1-908-905-9279
3. CompuServe: GO MW

NEW! MacWAREHOUSE is now on the Internet

Now you can order your favorite Macintosh products on the 'net!

✓Hundreds of shareware and demo titles for you to download!
✓Latest information on the newest products!

http://www.warehouse.com

1. Our customer service staff is ready to take your order 24 hours a day, 7 days a week.
2. We accept the following major credit cards: Visa, MasterCard, Discover, AmEx. Your credit card will not be charged until each item is shipped (no surcharge).
3. CT, NJ, and OH residents add applicable sales tax.
4. Shipping charge for orders under 10 lbs. is $3.00. Orders over 10 lbs. are $1.00 per pound or fraction thereof.
5. Place your order for "in-stock" items up to 12:00 midnight(E) (weekdays), and we will ship same day for overnight delivery (barring system failure, etc.).
6. We use Airborne Express, unless UPS Ground offers overnight delivery to your area. (Some areas of the U.S. require more than one day delivery.)

30 DAY GUARANTEE

7. Many of our products come with a 30-Day Money Back Guarantee. If, for any reason, you are not completely satisfied with your purchase of any of these items, call our Customer Service Department at 1-800-925-6227 for a Return Authorization Number and a full refund of the original purchase price of the item, excluding shipping and handling charges. Ask our operator at the time of ordering if the product is covered by the Money Back Guarantee You must return the undamaged product at your expense, including all its packaging and documentation and the blank warranty card if applicable. All items we sell come with the MacWAREHOUSE 30-Day Guarantee Against Defects. If your product is defective in any way, all you have to do is call our Customer Service Department for a Return Authorization Number. Defective software will be replaced upon receipt of the defective product. Defective hardware will be replaced or repaired at our discretion.

30-DAY Guarantee Against Defects

© Copyright 1996 Micro Warehouse, Inc. MacWAREHOUSE® is a division of Micro Warehouse, Inc. MacWAREHOUSE® and MicroWAREHOUSE® are registered trademarks and Data Comm WAREHOUSE and MacSystems WAREHOUSE are trademarks of Micro Warehouse, Inc. Apple, the Apple logo, Mac and Macintosh are registered trademarks of Apple Computer, Inc.
Item availability and price subject to change without notice. We regret that we cannot be responsible for typographical errors.

MEMORY UPGRADES as low as $39.95

1MB, 30 pin, 80ns

Ask for item # CHP 0022

We'll install your SIMMs for only $29.95 extra when you purchase your CPU and SIMMs at the same time. Orders must be placed by 8pm (EST) for overnight delivery. Ask for item # INSTL01

New! Color Quickcam

only $199.95*

Ask for item # INP 0676

A complete, 24-bit digital video system that's as easy to install as plugging in a mouse!

*Price reflects a manufacturer's $30 rebate. Price before rebate: $229.95. Exp. 8/31/96.

The Visioneer PaperPort Vx™

Best Seller!

The easiest way to get paper into your Mac!

VISIONEER

$299

Ask for item # INP 0560

SyQuest EZ135 Drive

Store 135MB on one 3.5" cartridge

Ask for item # DRI 1129

Only $189.95

135MB cartridge	1-2	3-9	10+
	$29.95	$27.95	$24.95

*To receive cartridge shipped directly from SyQuest— you must send in the coupon on box, plus: original sales receipt, registration card, UPC label from back of box, and a $5 check or money order for shipping and handling. Please allow 4-6 weeks for delivery. Drive must be purchased no later than 7/31/96.

Zip Drive Deluxe Kit

You get:
- Zip Drive!
- Five 100MB Disks!
- Zippered carrying case!

Utility Software included on first 100MB disk

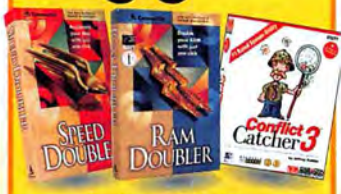
NEW! all for only $299!

Ask for item # BND 0862

Speed Doubler, RAM Doubler & Conflict Catcher

all three only $99.95

Ask for item # MSB 0044



Shipped in promotional packaging.

QuarkXPress 3.32

UPDATE

only $659.95

Comes on CD-ROM only with both 68K and Power Mac Versions

Ask for item # DTP 0170

Adobe Illustrator 6.0

Upgrade for as low as $99.95

PLUS, GET DELUXE CD-ROM PACKED WITH EXTRAS!

Adobe Illustrator 6.0 Upgrade from 5.0 or later UPG 0222 (CD-ROM Only) $99.95*

Adobe Illustrator 6.0 GRA 1334 ..... $389

*CD-ROM Only. Serial numbers required at time of order.

REHOUSE®

Plus a full line of Macintosh™ computers!

SPECIAL ZIP DISK BUNDLE

6 Zip 100MB Removable Disks only **$99.95**

and get an organizer caddy FREE– a $14.95 value!

Ask for item #BND 1116

POWER USER PRO 1.2 GB HARD DRIVES

only **$379!**

- Features Active Termination
- Super-fast access speeds

Ask for item # BND 1187

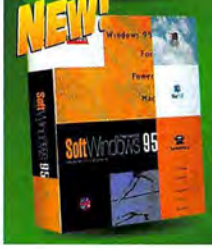
SoftWindows 3.0 for Power Mac

NEW!

Upgrade for **$79.95***

Ask for item # UPG 0255 (CD-ROM)

NEW!



SoftWindows 95 for Power Mac

Upgrade for **$149.95***

Ask for item # UPG 0253(CD-ROM)

*Serial number from prior purchase required at time of order.

Power User 88c MB Removable Drive

SyQuest REMOVABLE TECHNOLOGY

- Reads & writes both 44MB & 88MB Cartridges!

only **$199.95***

*Drive only

Ask for item # DRI 0910

5.25" SyQuest Removable Cartridges

Item #	Size	Qty. 1-4	Qty. 5-9	Qty. 10+
MED 0035	44MB	$59.95	$54.95	$49.95
MED 0071	88MB	$64.95	$59.95	$54.95
MED 0146	200MB	$89.95	$84.95	$79.95

Compatible w/System 7.5.2!

Suitcase 3.0

New Version

Take the work out of Managing fonts!

Upgrade for only **$49.95***

Ask for item # UTI 0737

*After $30 manufacturer's mail-in rebate. Price before rebate is $79.95.

NEW! Kensington Turbo Mouse 5.0

only **$109.95**

Ask for item # UTI 0737

New 4-button design!

KENSINGTON

Adobe PageMill

Adobe PageMill lets you create and maintain great-looking pages on the World Wide Web.

$99.95

Ask for item # BND 0998

Get PhotoDisc Visual Symbols Sampler and ArtBeats WebTools FREE!

VST Charger for PowerBook 5300/190 Series

$179.95

FREE Apple AC Adapter

Ask for item # ACC 1982

FREE CATALOG!

MacWAREHOUSE HOT LIST

Product & Item#	Price
QuarkXPress 3.32 Ask for item # DTP 0170	$659.95
Adobe Photoshop 3.0.5 Ask for item # UPG 0263	$179
Illustrator 6.0 Upgrade from 5.0 Ask for item # UPG 0222 (CD-ROM)	$99.95
Ray Dream Designer 4.0 Ask for item # GRA 1203	$99.95
Adobe PageMill Ask for item # BND 0998	$99.95
Microsoft Office 4.2.1 with FREE Comanche Ask for item # BND 1168	$289
HP DeskJet 855 cse Ask for item # INP 0673	$529
Iomega Zip Drive Ask for item # DRI 1050	$219.95
Symantec AntiVirus for Macintosh 4.0 Ask for item # UTI 0567	$69.95
Power User 200 MB Syquest Drive Ask for item # DRI 0940 (Drive Only)	$369
FileMaker Pro 3.0 Upgrade Ask for item # BND 1143	$79.95*

* Price reflects $20 manufacturer's mail-in upgrade rebate. Price before rebate is $99.95.

Get a Power User's Tool Kit® FREE!

The Power User's Tool Kit is packed with powerful programs compiled exclusively for MacWAREHOUSE customers. Some of the programs are shareware, so you can try them free of charge—some authors ask that you pay a small fee ($8-$25). The Power User's Tool Kit is FREE when you order from MacWAREHOUSE. You pay only $2.00 shipping and handling. If you would like the disk, please ask for Item # AAA 0161. All programs work with System 7.

To order call toll-free 24 hours a day, 7 days a week

1-800-255-6227

FREE CATALOG SUBSCRIPTION! Check the appropriate box(es) to receive your FREE 1-year catalog subscription(s) and mail this coupon to: 1720 Oak Street, P.O. Box 3031, Lakewood, NJ 08701

Name

Address Apt.

City State Zip

(Expect to receive your first issue(s) within 4-6 weeks).

❑ *Yes, send me my FREE Power User's Tool Kit. Enclosed is my check for $2.00 to cover shipping & handling.* MU0796

❑ MacWAREHOUSE ❑ MicroWAREHOUSE ❑ Data Comm WAREHOUSE ❑ MacSystems WAREHOUSE

CIRCLE 156 ON READER SERVICE CARD

Power Macintosh 9500/150
Real Solution Design Station

The 9500/150 Real Solution Design Station is the most cost effective solution for designers. It's the fastest Mac yet, and comes with all the hardware and software tools you need to blast through production work. Save with this exclusive Image Solutions package.

$0 DOWN!
$399
PER MONTH

ALL LEASED EQUIPMENT MARKED " " IS COVERED BY A 24 HOUR WARRANTY REPLACEMENT GUARANTEE—JUST ONE PART OF OUR EXTENDED SERVICES PROGRAM!

$2699 **PowerPC 9500/150MHZ**
- Apple internal 4x CD-ROM
- 80MB RAM
- Apple 2.0GB internal hard drive
- Extended keyboard

$2199 **Radius PrecisionView 21", 1600 x 1280 monitor**
- Radius ThunderColor 30/1152 video card

$949 **Relisys 4830T 400 x 1600 dpi, 30 bit color scanner, interpolation to 4800 x 4800, single pass, Cold Scan technology, w/A4 transparency**
- Pioneer Quadraspin six disc CD changer w/six CD Photo Library

$1899 **Multifunctional external drive combo incudes SyQuest 200MB drive and Sony 1.3GB optical drive**
- SyQuest 200MB cartridge, 1.3GB optical cartridge

$1049 **Apple LaserWriter Select 360 (600 x 600 dpi, 10 ppm, PostScript Level II) w/one cartridge and two AppleTalk connectors**
- Active SCSI terminator
- One 25/50 SCSI cable, five 50/50 cables

$149 **UPS Battery Back-Up (insures equipment up to $25,000!)**
- Image Solutions Extended Services

Get the *real* system solution!

Your Macintosh system is not complete until you have new software to run on it—the latest software designed specifically for PowerMacs.

Whether you buy or lease, we can help you fit the software you need into your equipment budget. Image Solutions' prices on these selected titles are lower than you will find anywhere else. Save money and boost your productivity with a real solution!

Adobe Illustrator

Adobe Photoshop

Kai's Power Tools

Live Picture

Microsoft Office

Software Specials

Adobe Photoshop 3.0.1 w/CD	**$199**
Adobe Illustrator 5.5 w/CD	$299
Caere OmniPage Direct 2.0	$39
Dantz Retrospect II 3.0	**$99**
HSC Live Picture 2.0	**$299**
MetaTools Kai's Power Tools 2.1	$35
Microsoft Office 3.0	**$299**

Basic Systems

	Buy!	*Lease!*
9500/150 /32/2.0GB/CD w/ 20" monitor, XKeyboard, Mouse	**$6499**	**$159**
9500/132 /16/1.0GB/CD w/ Apple 17", XKeyboard, Mouse	**$4199**	**$103**
8500/132 16/1.0GB/CD w/ 20" monitor, XKeyboard, Mouse	$5999	$147
7600/120 16/500/CD w/ Apple 17", XKeyboard, Mouse	**$3699**	**$91**
7200/120 16/1.0GB/CD w/ Apple 15", XKeyboard, Mouse	$2849	$70

Factory Configurations

	Buy!	*Lease!*
9500/132 /16/2GB/CD	$3999	$98
9500/132 /16/1GB/CD	**$3579**	**$88**
9500/120 /16/1GB/CD	**$2999**	**$73**
8500/120 /16/2GB/CD	$3599	$88
8500/120 /16/1GB/CD	$3199	$78
7500/100 /16/1GB/CD	$2299	$56
7500/100 /16/500/CD	**$2199**	**$53**
7200/90 16/500/CD	$1299	$32
7200/90 8/500/CD	**$1199**	**$29**
7200/75 8/500/CD	**$999**	**$24**

No money down business leasing!

Your business is probably a lot like everybody else's. You need a new Macintosh system today, but aren't quite sure how to fit it into your equipment budget. Image Solutions is an AT&T Capital Corporation Preferred Vendor. We understand equipment financing. Let us show you why leasing is the most popular way to acquire business equipment. With no money down, no payments for 90 days and up to five years to pay, you control how fast and how much you pay. Call your Image Solutions sales representative right now for details.

AT&T Capital Corporation

Power Macintosh 8500/132 Color Publishing *Real Solution*

$2799 **PowerPC 8500/132MHZ**
- 48MB RAM
- Apple internal 4x CD-ROM
- Apple 1.0GB internal hard drive
- Extended keyboard

$0 DOWN!
$239
PER MONTH
$7.20 A DAY!

$649 **Apple 17" multisync monitor**

$574 **Twin Turbo 128 video accelerator**

$949 **Relisys 9624T 600 x 2400 dpi, 24 bit color scanner, w/A4 transparency**

$1599 **Multifunctional external drive combo incudes SyQuest 200MB drive, Quantum 540MB hard drive and Sony 650MB optical drive**
- SyQuest 200MB cartridge, 650MB optical cartridge

$374 **Apple Color StyleWriter 2400 or portable StyleWriter 2200 w/one cartridge and two AppleTalk connectors**
- Image Solutions Extended Services

Power Macintosh 7600/120 *Real Solution* DTP Station

$1799 **PowerPC 7600/120MHZ**
- 24MB RAM
- 4MB VRAM
- Apple internal 4x CD-ROM
- Apple 1.0GB internal hard drive
- Extended keyboard

$0 DOWN!
$179
PER MONTH
$5.22 A DAY!

$399 **Apple 15" multisync monitor**

$379 **Relisys 2412, 300 x 1200 dpi, 24 bit color scanner**
- Multifunctional external drive combo incudes SyQuest 200MB drive, Quantum 540MB hard drive and Sony 650MB optical drive
- SyQuest 200MB cartridge, 650MB optical cartridge

$459 **Apple LaserWriter 4/600 (4 ppm, 600 dpi, PostScript Level II, 64 built-in fonts) w/ toner cartridge and two AppleTalk connectors**
- Image Solutions Extended Services

Power Macintosh 9500/150 *Real Solution* Video Station

Grab video frames in real time and store them on a blazing fast disk array for later digital processing.

$3499 **PowerPC 9500/132MHZ**
- 272MB RAM
- Apple internal 4x CD-ROM
- 2GB internal hard drive
- Extended keyboard
- Sony 20" Trinitron monitor
- Twin Turbo 128, 4MB 1600x1200 video card

$0 DOWN!
$539
PER MONTH
$17.06 A DAY!

$3899 **TrueVision Targa 2000 PCI digital video**
- FWB JackHammer SCSI-3 Fast&Wide PCI controller w/FWB RAID Toolkit

$2769 **8GB Seagate Barracuda IV SCSI-3 Fast&Wide striped disk array**
- Internal SDT-5000 DAT drive w/ one FREE tape
- Image Solutions Extended Services

CIRCLE **34** ON READER SERVICE CARD

800-352-3420

Fax: 310-782-5974
Email: imagesol@aol.com
International: 310-782-5969
385 Van Ness Ave. #110 • Torrance, CA 90501

VISA MasterCard

Order from 6 to 9 weekdays, weekends from 9 to 5. Visit our showroom 9 to 6 weekdays, weekends by appointment.

Prices subject to change without notice. Not responsible for typographical errors. 24 hour replacement limited to products in stock.

Image Solutions

The solution provider for print shops, service bureaus and imaging professionals

CREATIVE COMPUTERS

MacMall

YOUR MAC SUPERSOURCE!

"The Only Catalog Every Mac™ Owner Should Have"

Your Great Deal HQ!

Get On The Net With MacMall! http://www.macmall.com

HEWLETT® PACKARD

Get Organized INSTANTLY with the HEWLETT PACKARD ScanJet 4s!

➤ 200 dpi optical/400 dpi enhanced resolution ➤ 4-bit grayscale ➤ Scans your text pages in less than 10 seconds ➤ Includes Visioneer PaperPort 3.0 software with integrated OCR and links to your e-mail, e-fax and word processor

Hewlett® Packard ScanJet 4s Scanner *w/Mac® interface* **$319.99** #75776

HEWLETT PACKARD

Deskwriter 320

- *Crisp 600 x 300 dpi*
- *Compact and lightweight for easy portability*
- *35 scalable fonts and compatibility with TrueType® and ATM™*

INCLUDES FREE COLOR KIT!

Hewlett® Packard Deskwriter 320 *Refurbished* **$169.99** #78333

FREE Color Kit and Sheet Feeder • While supplies last

SYMANTEC

Protect Your Mac™ With The #1 Selling Virus Protection!

SAM 4.0

Accelerated for Power Macintosh

SAM 4.0 Mac™/PowerPC™ **$44.99*** #77226

**Price reflects a $20 rebate direct from SYMANTEC. Valid from March 1 thru May 31, 1996*

Order The Industry Standard System Utilities

NORTON UTILITIES 3.2

Accelerated for Power Macintosh

Norton Utilities 3.2 Mac™/PowerPC™ w/FREE Norton Disk Doubler Pro 1.1 **$94.99** #79771

ACT!

Accelerated for Power Macintosh

ACT! 2.5 Mac™/PowerPC™ **$118.99*** #79218

**Price reflects a $50 rebate direct from Symantec, valid 3/1/96 to 5/31/96.*

ACT 1.0 for Newton® **$98.99** #78735

MEGAHERTZ

Express Yourself with a CruiseCard™ Modem!

The exciting new way to communicate from your Apple® PowerBook®! It's a PC Card. It's 28.8kbps. And it's from Megahertz®–the experts in PC Cards.

14.4kbps PCMCIA Modem w/XJACK Connector **$69.99** #74301

28.8kbps CruiseCard™ w/Patented XJACK Connector **$298.99** #80213

KENSINGTON

Deluxe Case

➤ *Elegant 3 compartment design* ➤ *Computer, printer and file storage* ➤ *Numerous inside pockets*

PowerBook® Executive Deluxe Case **$78.99** #55455

Compact Case

➤ *Briefcase design* ➤ *Single compartment with several pouches*

PowerBook® Compact Case **$47.99** #61321

ABSOLUTE BATTERIES

Instant, Reliable Power for Your PowerBook®!

Charge your batteries on the road with this auto adapter!

Auto Adapter for PowerBook® 140-180 **$48.99** #73030

Battery for PowerBook 5300/190 Series (14.4v 2800 mAh Capacity) **$179.99** #78841

MIRAMAR SYSTEMS

Full Peer-to-Peer File and Print Sharing for Macintosh® and Windows™

score card MacWEEK ◆◆◆◆ MacUser ★★★★½

Personal MACLAN Connect 5.5 **$148.99** #77141

NOW SOFTWARE

The Most Speedy, Automatic & Intelligent Time Manager Ever!

Award-winning calendar program.

Now Up-to-Date™ 3.5 **$68.99** #73006

NEWER TECHNOLGY

Here's How to Make Your PowerBook® 500 17% Faster than a PowerBook® 5300!

NuPowr 117MHz-4MB **$849.99** #78524

NuPowr 117MHz-8MB **$1024.99** #78525

PowerPC™ 603e upgrade card for PowerBook® 500 series

CREATIVE COMPUTERS
MacMall
YOUR MAC SUPERSOURCE!

The Catalog with the Great Deals

What Great Deals

PowerComputing

The *Fastest* Mac™ OS Compatibles Are Here!

introducing **PowerWave**

See our full line catalog for the PCI PowerWave!

- 120MHz PowerPC™ 604 RISC Processor w/32k Cache
- 16MB RAM expandable to 512MB
- 1GB Hard Drive
- Quad Speed CD-ROM Drive
- 100% Mac™ OS Compatibility
- $900 worth of FREE Software

16MB RAM/ 1GB Hard Drive 4X CD-ROM $3195 #77666

PowerComputing MacUser/ZD LABS ★★★½ MW ★★★★

PowerWave™ 604/132 16MB RAM/1GB Hard Drive/4xCD Tower Unit	$3499.00	#77667
PowerWave™ 604/150 16MB RAM/1GB Hard Drive/4xCD Tower Unit	$3799.00	#77668
PowerWave™ 604/150 16MB RAM/2GB Hard Drive/4xCD Tower Unit	$4099.00	#77669

275 MHz OF POWER!

AFTERBURNER MVP

The first Parallel Processor card to break the 100MHz barrier for all 60MHz, 66MHz & 80MHz Power Macs™!

- High-Performance PowerPC™ 601plus™ processor
- 120MHz standard speed, 140MHz Pro version available
- Out performs the Power Macintosh® 9500
- Allows Parallel processing for up to 275MHz of power!
- 100% compatibility with 6100, 7100 & 8100 PPC

AfterBurner MVP (120MHZ)	$1,299.99	#78002
AfterBurner MVP PRO (140MHZ)	$1,379.99	#78003

WARP FACTOR 175

175MHz accelerator for 8500 & 9500 Fastest Available!

$199.99 #78001

6100..... to 90MHz • 7100..... to 90MHz
8100/80.. to 90MHz • 8100/100.. to 128MHz
8100/110..up to 135MHz

Arctic $79.99 #78005
Active Cooling System (-70) degrees F.

HYPERSPEED $179.99 #78004
7200 & 7500-128MHz

WARP FACTOR 135 $79.99 #78089

XLR8 INCORPORATED

PowerComputing

PowerCURVE™

- *120MHz PowerPC™ 601 processor*
- *Includes Macintosh system 7.5.2 and a 100% guarantee of Mac OS compatibility*
- ***$900** worth of **FREE** Software Bundled*

PowerCURVE 601/120 8MB RAM $1599* (optional hard drive & CD) #78994

PowerCurve™ 601/120 8/850/4xCD-low profile	$1998	#78553
PowerCurve™ 601/120 8/1GB/4xCD-desktop unit	$2149	#78554
PowerCurve™ 601/120 16/1GB/4xCD-low profile	$2299	#78555
PowerCurve™ 601/120 16/1GB/4xCD-desktop unit	$2499	#78556

FUJI 3.5" OPTICAL DISKS

3.5" 230MB Mac-Formatted 3-Pack After $20 Mail-in Rebate	$69.99*	#72382
3.5" 230MB Unformatted 3-Pack After $20 Mail-in Rebate	$59.99*	#72199
3.5" 128MB Mac-Formatted 3-Pack After $20 Mail-in Rebate	$49.99*	#68884
3.5" 128MB Unformatted 3-Pack After $20 Mail-in Rebate $1 off	$44.99*	#71112

*Prices reflect a Mail-in rebate direct from Fuji

Fuji CD-R Recordable CD

CD-R Recordable CD 74 min/650MB, 3-Pack After $10 Mail-in Rebate	$16.99*	#68885
CD-R Recordable CD 550MB/63min	$7.99	#68534
CD-R Recordable CD 650MB/74min	$8.99	#68535

IOMEGA® ZIP DRIVE

Stores 100MB on one 3.5" cartridge

Iomega ZIP Drive (SCSI) $199.99

ZIP cartridge (single) $19.99 #69405

IOMEGA® JAZ DRIVE

1GB removable storage drive!

Imagine: you can fit your whole hard drive on one Jaz cartridge!

Iomega 1GB JAZ Drive $599.99 #74475

SUPRA

Supra Express™ 28.8 Fax/Modem

- *V.42bis data compression for up to 115,200 bps throughput*
- *28,000 bps data (V.34 and V.FC)*
- *Five-year limited warranty*
- *14,400 bps fax*

28.8 V.34 Fax/Data Modem $159.99 #74097

CAERE

OmniPage Pro 6.0

Upgrade Your Scanner Software to OmniPage Pro 6.0 for Macintosh® and Save Over $300!*

Upgrade Mac™ 3.5" Diskette $147.99 #78336

OmniPage Pro 6.0 *Mac™ 3.5" Diskette* $499.99 #78307

Call 1-800-222-2808 for your FREE Catalog

Have You Missed?

SYQUEST® DRIVES

The Safest Way to Back Up Your Critical Data!

Arriva™ Removable Drives = Performance!

Case may vary.

200MB/RW88/44 SyQuest® External Drive $349.99 #72029
(cartridge not included)

270MB/RW105 SyQuest® External Drive $349.99 #64243
(cartridge not included)

All Arriva™ Drives come with CharisMac Anubis formatting software

SYQUEST® EZ-135

135MB Removable Drive
- *135MB capacity*
- *SCSI Interfaces*
- *Avg. Seek Time: 13.5/ms*
- *Cartridge*

SyQuest $199.99 #73549

MACROMEDIA

Director 5.0!

Now ShockWave Enabled and Ready to Help You Create Your Web Site!

Director 5.0 Shockwave Enabled CD PowerPC™/Mac™ $399.99 #79240

Director 5.0 Shockwave Enabled for Windows™ CD $879.99 #79239

Director 5.0 Shockwave Enabled CD PowerPC™/Mac™ $849.99 #79243

INSIGNIA 35% FASTER!

SoftWindows™ 3.0 *for Power Macintosh® upgrade CD*

$74.99 CD #79637

SoftWindows™ 3.0 for Power Macintosh® Disk Upgrade $74.99 #79638

SoftWindows™ 3.0 Full Version CD $299.99 #79229

UMAX

36-Bit PowerLook II with FREE Transparency Adapter! A $500 Value!

The NEW PowerLook II single-pass scanner features 36-bit color data capture for over 68.7 billion colors. It's armed with a density range of 0.1 to 3.3 D, for the richest and sharpest images. You can use its Ultra View Technology (with resolutions up to 9600dpi) for brilliant enlargements.

36-Bit PowerLook II Mac MetaTools
- Live Picture • Kai's Power Tools Mac™/PowerPC™
- KPT Convolver 1.0 • Kai's PowerPhotos

$2495.99 #78933

OR

36-Bit PowerLook II Mac Pro2.
- Full Photoshop™ 3.0 • Kai's Power Tools SE
- Kai's PowerPhotos Sample CD • WordLinx OCR

$2495.99 #78154

VIEWSONIC

NEW PRODUCT!

This high-resolution, super-crisp monitor is specially designed for graphics-intense applications including pre-press and desktop publishing.
- .25mm Aperture Grille
- Flat SonicTron™ Screen
- 1280x1024 resolution
- On-View™ Controls
- PC/Mac™ Compatible

Viewsonic® GT770 17"Color Monitor $829.99 #81043

Enter the Dream Machine Sweepstakes

You could win this Porsche Boxster

Call 1•800•222•2808 For Our Full Line Catalog & Get All The Details

No purchase necessary. For complete details including official rules see the MacMall catalog 57 or higher. Sweepstakes open to US residents 21 years of age or older. Void where prohibited. Car depicted is a prototype. Actual car to be awarded may vary.

Get your FREE catalog(s) today!

Please Check catalog(s) you wish to receive.

- ❑ MacMall
- ❑ PC Mall
- ❑ DataCom Mall

Name _____

Address _____

City _____

State _____

Zip _____

OFFER CODE
MacUser
ZMUS671

Mail to:
MacMall, Dept. ADV.,
2645 Maricopa St.,
Torrance, CA 90503

VISA

We're open to take your order anytime, 24 hours a day, seven days a week.

24 HRS/DAY 7 DAYS/WEEK

Order toll free: 1•800•222•2808

CIRCLE **18** ON READER SERVICE CARD

The LLB Company, Inc.

1-800-848-8967

FREE CATALOG! 1.800.848.8967

Electronic orders: Compuserve @ 73423.1272 @Compuserve.com

- P.O.'s accepted upon approval
- All major credit cards accepted - No surcharge - when shipped
- Prices subject to change, not responsible for errors
- We export to most countries in the world
- Orders received before 8:00 pm EST weekdays shipped same day
- Open 6am to 7pm M-F. 9am to 4pm Saturdays
- Returns subject to a 15% restocking fee

E-Mail us!

The LLB Company, Inc. 13228 NE 20th St., Suite B, Bellevue, WA 98005

UR0796

AIRBORNE EXPRESS OVERNIGHT $7.00 up to 10lbs

POWERBOOK ACCESSORIES

Newer TECHNOLOGY — *NUPOWR is the PowerPC Upgrade for the PB500 Series*

PB500 NUPOWR 117MHz 0MB	$615
PB500 NUPOWR 117MHz 4MB	799
PB500 NUPOWR 117MHz 8MB	989

VST

PB190/5300 BATTERY NIMH	$163
PB190/5300 BATTERY/CHARGER	299
PB5300 POWER ADAPTER AC/DC	229
PB500 INTERNAL BATTERY	129
PB2300 INTERNAL BATTERY	99
APPLE AC ADAPTER PB 5300	59

ACCESSORIES

ZIP (iomega)

CARRYING CASE & CTG HOLDER	$29
MINI CASE (HOLDS DRIVE & 1 CTG)	15
CADDY - 6 DISKS W/W/O CASE	12

ADESSO

KEYBOARD W/TRACKBALL	$89
PRO POINT EXT KEYBOARD	79
SOFT TOUCH+EXT. KEYBOARD	49
TRU-FORM EXT. KEYBOARD	89
TRUFORM EXT. KEYBOARD W/PNTR	100
POWERMOUSE DELUXE PREMIUM PK	45

WACOM

4X5 ARTPAD II ADB W/ERASER	139
ARTZ II 6X8 GRAPHICS TABLET	315
ARTZ II 12X12 GRAPHICS TABLET	439
ARTZ II 12X18 GRAPHICS TABLET	705
ARTZ II 12X18 ELECST. TABLET	885
ARTZ II 18X25 GRAPHICS TABLET	1985

SCANNERS

EPSON 1200C PRO	$1202
VISIONEER PaperPortVX for Mac	295

Nikon ELECTRONIC IMAGING

CoolScan II External	1349
Super CoolScan	1999

AGFA

StudioScan IISI	795
ARCUS II	1941
POLAROID SPRINTSCAN	1555

UMAX

POWERLOOK I I	$1988
VISTA S-12 PRO+	908
VISTA S-12 LE+	808
VISTA S-6 E PRO/LE	608/508

MODEMS

GLOBAL VILLAGE

Teleport Platinum 28.8 V.34	$205
PowerPort 1XX Platinum 28.8 V.34	339
PowerPort Platinum PC Card 28.8	349
PowerPort Platinum PRO PC Card	519

SUPRA

SUPRA Simple Internet 28.8 Ext.	$159
SUPRA 28.8 V.34	229
SUPRA 28.8 PB FAX Modem	189
SUPRA EXPRESS 144 PLUS	99
SUPRA EXPRESS 288 External V.34	159

US ROBOTICS (Robotics)

28.8 Sportster V.34 Internet Bundle	$199
Sportster14,400 Mac & Fax	119
28.8 V.34 PCMCIA Sportster	291

TDK

28.8 V.34 PCMCIA PB190/5300	$259
Global Class 288 V.34 PCMCIA	355

Motorola

Lifestyle 28.8 V.34	$212
Power 28.8 V.34	270
ISDN Bitsurfer PRO	369

MEGAHERTZ

Cruise Card 14.4 PCI	$135
Cruise Card 28.8	295
Cruise Card 14.4	159

ACCELERATORS

DAYSTAR — 66MHZ POWERCARD 601 $649

Turbo 040 40MHZ w/cache	$679
Turbo 040i 33MHZ w/cache no FPU	609
PowerPro 601 100MHZ w/cache	1240
Turbo 601 100 MHZ w/adapter	1175
PowerCard 601 100MHZ	959

SONNET

Quad Doubler 40MHZ Centris610	235
Quad Doubler 40MHZ w/FPU Centris 610	345
Quad Doubler 50MHZ w/FPU Quadra 610	390
Quad Doubler 50MHZ w/FPU Centris 650	390
Quad Doubler 50 MHZ Centris 660AV/7/900	390

CD-ROM

Accessories

Mark I Flight Cont.Sys	95	Monopoly (Virgin)	42
Mark I Wpns Cont.Sys	69	Myst	49
Rudder Cont. Sys.	105	Power Pete	27
Entertainment		Phantasmagoria	59
Battle Beast	29	Rebel Assault II	50
Dark Forces	49	Triple A Pak	40
Descent	50	Warcraft 1.0	48
Dust	39	*Miscellaneous*	
F/A-18 Hornet 2.0	49	Soft Windows 2.0	299
Full Throttle	49	Quicken 6.0 Deluxe	65
Havoc	39	COREL PHOTO CD'S	
Marathon II	45	BUY 4 - GET 1 FREE!	

DRIVES

APPLE

1.2GB	449	850MB	339
		2GIG	799

QUANTUM (EXTERNAL)

1.2GB Ext. Fireball	$359
850MB Ext. Trailblazer	279
ATLAS 4.3 GB 8.6 MS	1079

Rumi

200MB SyQuest w/Cart	$479
270MB SyQuest w/Cart	479

NEC

6XE Multi-Spin CD-ROM Drive	$519
4XC 7CD Changer	369

2X CD Recorder/Writer	$1375	FWB Incorporated
4X CD Recorder/Writer	1999	

SyQuest EZ135 W/Cartridge $187

Iomega Zip Drive	$199
Jaz 1.0GB Drive	609

PINNACLE MICRO

RCD1000 w/10 Recordable CD's	$1295
RCD5020 Ext. CD Recorder	1265
APEX 4.6GB Optical Drive	1589

PRINTERS

APPLE

Color Stylewriter 2500	$375
Laserwriter 4/600	895
Personal Laserwriter 320	809

HEWLETT PACKARD (HEWLETT PACKARD)

HP LaserJet 4MV	$2840
HP LaserJet 5P	888
HP LaserJet 5si	2860
HP DeskWriter 660C	359

We also carry HP and Apple Printer supplies

EPSON

STYLUS COLOR 1500 PRINTER	$995
STYLUS COLOR PRO XL PRINTER	1795

MONITORS

AV1710AV	APPLE VISION 1710 AV 26MM	1,069
MS1705	MULTISCAN 17" 28MM	759
MS20	MULTISCAN 20"	1,989

SONY

15SF	SONY 15" SFZ MULTISCAN	515
17SE1	SONY 17" 17SE1	1,150
17SF	SONY 17" MULTISCAN	939

NEC

XV15+	MULTISYNC XV15+ 15"	$525
XV17+	MULTISYNC XV17+ 17"	895

HITACHI-RASTEROPS

MC17	SUPERSCAN 17"	$965
MC20	SUPERSCAN 20"	1,485
MC21HR	SUPERSCAN 21"	2,159

radius

PressView 21SR	$3,439
PressView 17SR	2,105
PrecisionView 21	2,495
PrecisionView 17	1,035

MEDIA

SONY — CDR 10 F $73

Magneto Optical Disks

5.25" M01.3GB 1024k b/s/1.2GB 512k b/s	$5
5.25" M0650MB 1024k b/s/594MB 512k b/s	5
3.5" M0230MB/Mac Formatted/3-PACK	20/22/5
3.5" M0128MB/Mac Formatted/3-PACK	18/20/4

SONY CD-Recordable

74 Min 4x 650MB-10 Pack	$7
74 Min 4x 650MB	

Verbatim

DataLife 4mm/8mm Data Cartridges

8mm, DL 112 Meters 2.5/5.0GB	$
4mm, DL 60 Meters DDS-MRS 1.3GB	7.5
4mm, DL 90 Meters DDS-MRS 2.0GB	9.5

iomega

Iomega ZIP Cart. 100MB	$1
- 3pack	49.5
-10 Pack	13
Iomega Jaz 1GB Cart.	12
- 5 Pack	49
Iomega Jaz 540MB Cart	6
- 5 Pack	29

SyQuest

EZ135	$19.5
- 5 Pack	96.2
- 10 Pack	190.0

The Original SyQuest Cartridge

	1-4	5-9	10+
44MB 5.25"	$40	$39	$38
88MB 5.25"	$43	$42	$41
200MB 5.25"	$63		$62
270MB 3.5"	$49	$48	$47
105MB 3.5"	$55		$54

media

VIDEO

FOCUS ENH. LTV MICRO FOR MAC ... $139

IMS

TWIN TURBO 128M PCI 2MB RAM	$370
TWIN TURBO 128M PCI 4MB RAM	569

MATROX

MGA MILLENIUM PCI 8MB	$867

NUMBER NINE

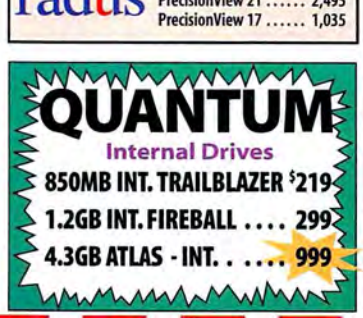
IMAGINE 128 PCI 4MB 16.9 75HZ	$695
IMAGINE 128 PCI 8MB 16.8 80HZ	1,159

TRUE VISION

TARGA 2000N NUBUS FOR MAC	$2,579
TARGA 2000 PCI FOR MAC	4,169

radius

THUNDER IV GX-1600	$2,095
VIDEO VISION STUDIO 2.0	2,529
PRECISION COLOR 8/1600 PCI	505
THUNDERCOLOR 30/1600 PCI	2,105



The LLB Company, Inc.

1-800-848-8967

International: 206.746.0229 WEB SITE: HTTP://llb.com Fax: 206.746.5168

MEMORY

Standard 30-pin SIMMs

1MB 100/80/70NS	$26/25/33
2MB 80/70NS	44/46
4MB 80/70NS	72/77
8MB 70NS	179
16MB 70NS	455

30-pin, 9 bit PC SIMMS

1MB 70NS	$30
4MB 70NS	130

72-pin SIMMs

4MB 70/60NS/EDO	$55/58/75
8MB 70/60NS/EDO	110/113/150
16MB 70/60NS/EDO	244/246/349
32MB 60NS/EDO	495/636

72-pin, 9 bit PC SIMMS

4MB 70NS	$89
8MB 70NS	189
16MB 70NS	300
32MB 70NS	875

8MB 72PIN $110

PB 5300 Series

8MB/12MB RAM	$213/270
16MB/32MB RAM	400/800

PB 190 Series

4MB/8MB 70NS	$129/209
12MB/16MB 70NS	299/495
32MB70NS	1219

PB500 Series

4MB/8MB RAM	$133/230
16MB/32MB RAM	425/840

4MB PAL SIMMs for II,IIx

4MB 70NS	$129

64-pin SIMMs for IIfx

1MB 80/70NS	$26/43
4MB 80/70NS	155/155
8MB 70NS	305
16MB 70NS	520

168-pin DIMMs

4MB 60NS	$125
8MB 60NS	124
16MB 60NS	234
32MB 60NS	488
64MB 60NS	1039

PBDUO 210/230 Series

PB DUO-4MB/8MB	$159/260
PB DUO-12MB/14MB	445/455
PB DUO-20MB/28MB	698/899

PB2300 Series

PB 2300-4MB/8MB/16MB	$159/289/495
PB 2300-20MB/32MB/36MB	555/875/879

What type of Memory do I need?

Standard 30-Pin Simms:
Plus, SE, SE 30, Classic, Classic II, Color Classic, LC, LCII, Performa 200, Performa 400-430, Performa 600, Quadra 900/950, Mac II, IIx, IIcx, IIsi, IIci, IIfx, IIvx, IIvi.

Standard 72-Pin Simms:
Quadra 605/630, 610, 650, 700, 800/840AV, LCIII, LC475, LC630, Performa 450-560, 575 and 6115CD, PowerMac 6100, 7100, 8100, WS 80, WS60, WS 95, WS 6150 and WS 8150, 9150.

168 Pin Dimms:
PowerMac 9500, 8500, 7500, 7200

NEWER MEMORY

Newer™ TECHNOLOGY

DIMMS

4MB 64 BIT 60NS DIMM	$145
8MB 64BIT 60NS DIMM	159
16MB 64 BIT 60NS DIMM	355
32MB 64BIT 60NS SIMM	629
64MB 64BIT 60NS DIMM	1719

72-PIN SIMMS

4MB 70NS/60NS SIMM	$82/85
8MB 70NS SIMM	139
16MB 70NS/60NS SIMM	309/315
32MB 60NS SIMM	915

VRAM AND CACHE

POWERMAC 1MB CACHE (POWERMAC 6100, 7100, 8100)	$569
POWERMAC 512K CACHE(POWERMAC 6100, 7100, 8100)	275
POWERMAC 256K CACHE(POWERMAC 6100, 7100, 8100)	142
CACHE 256K DIMM	132
CACHE 1MB DIMM	269
1MB VRAM 7200/7500/8500	92
2MB VRAM 9500	225

FPUs/CoProcessors Video RAM/Cache

FPU's/Math CoProcessors

Centris FPU 25MHz	$189
FPU 33MHZ DUO/P600	52
FPU Color Classic 16MHZ	44
FPU LCIII 25 MHZ	49
FPU LC/LCII 16 MHZ	49
LC575 33MHZ Math CoProc.	240

VRAM/CACHE

5% off with qualifying purchase!

256K 80NS Video RAM	$17
512K Video RAM	22
1MB Video RAM PM72/75/8500	55
2MB Video RAM PM 9500	225
256K/512K Cache Card	72/282
1MB Cache Card	792
256K Cache Dimm PMPCI256	109
512K Cache Dimm PMPCI512	165

5% Off Specials

Buy any size DIMM and get 5% off DIMM VRAM

Buy any 30 or 72 pin SIMM and get 5% off 256K or 512K VRAM

Buy any 72 pin SIMM and get 5% off 256K cache

Buy any PowerBook memory and get 5% off any battery or charger

Get 5% off any CD title!

We also offer quality products by Kingston, Viking, and Simple. Call for Details!

Product Index

ADVERTISER ..... PAGE

Database Management

Claris Corporation 800-293-0617 ext. 995 38

Display Systems & Video

Corel Systems Corporation 800-248-0800 19
Eastman Kodak 800-322-2177 ext. 602 41
Epson America 800-BUY-EPSON 15
NEC Technologies Inc. 800-NEC-INFO 22-23
Portrait Display Labs 800-858-7744 51
Video Labs, Inc. 800-467-7157 61
Viewsonic 800-888-8583 10-11

General Hardware & Accessories

Kingston Technology 800-259-8965 12
Lind Electronic Design 800-897-8993 54
Matrox Graphics Systems 800-660-1873 20
Momentum 808-947-0055 54
Power Computing 800-999-7279 ..... Cover 5-8
VisionTek 800-360-7185 109

Graphics & Design

Corel Systems Corporation 800-248-0800 19
Deneba Software Inc. 305-596-5644 16
Engineered Software 910-299-4843 6
Graphsoft 410-290-5114 94
Macromedia 800-326-2128 / 415-252-2000 48
Macromedia 800-326-2128 / 415-252-2000 49
MacTemps 800-MACTEMPS 102
Specular International 800-433-SPEC 88
Video Labs, Inc. 800-467-7157 61

Input Devices

Connectix 800-950-5880 ext. 101 57
Eastman Kodak 800-322-2177 ext. 602 41
Video Labs, Inc. 800-467-7157 61

Entertainment

Connectix 800-950-5880 ext. 101 57
Eastman Kodak 800-322-2177 ext. 602 41

Mail Order

Bottom Line Distribution 800-347-8759 123
ClubMac 800-258-2622 138-139
Computer Discount Warehouse 800-291-4CDW 149-151
CRA Systems 800-375-9000 130-131
DGR Technologies 800-990-5696 128-129
Digital Graphix 800-680-9062 119
Home Computer Catalog 800-454-3686 114-115
Image Solutions 800-352-3420 142
LLB Company, Inc. 800-848-8967 146-147
Mac Bargains 800-407-7404 132-133
MAC Xtra 800-553-4230 157
MacConnection 800-800-6227 126-127
MacMall 800-222-2808 143-145
MacProducts, USA 800-990-5696 128-129
MacWarehouse 800-255-6227 140-141
MacZone 800-436-8000 124-125
MegaHaus 800-786-1191 155
POWERtools (The Performance Company) 800-347-8759 123
ProDirect 800-555-1256 156
Syex Express, Computize 800-876-3467 134

ADVERTISER ..... PAGE

Networking & Connectivity

DataViz, Inc. 800-249-1116 52
EarthLink Network 800-395-8425 68
Farallon Computing 800-995-7761 ext. 1 100
GDT Softworks 800-665-8707 43
Insignia Solutions 800-848-7677 96
White Pine Software 800-241-PINE 17

Organizational Tools

AEC Software 800-450-1983 36
Lind Electronic Design 800-897-8993 54
Mainstay 805-484-9400 24
Now Software 800-544-2599 74

Output Devices

Canon USA 800-OK-CANON 32-33
Lasermaster Technologies, Inc. 800-339-3590 Dept. N22 56
XANTÉ Corporation 800-926-8839 7

Performance Enhancers

Connectix 800-950-5880 ext. 101 53
Connectix 800-950-5880 ext. 101 55
Focus Enhancements Inc. 800-538-4888 31
Newer Technology 800-678-3726 79

Programming & Systems

Power Computing 800-999-7279 ..... Cover 5-8

Resources

AEC Software 800-450-1983 36

Spreadsheets & Numerical Analysis

Abacus Concepts 800-666-STAT 50
Microsoft Corporation 800-531-6748 2-3

Storage Systems

APS Technologies 800-289-5385 120-122
Direct Tech 800-279-5520 158
Fujitsu Computer Products of America 800-898-1455 45
La Cie Limited 800-999-1528 135-137
MegaHaus 800-786-1191 155
Toray 800-TORAY-PD 107

Utilities

Aladdin Systems 408-761-6200 51
Casady-Greene Inc. 800-359-4920 34
Dantz Development 800-95-BACKUP 9
GDT Softworks 800-807-9905 99

Word Processing

Nisus Software 800-493-0998 58

General

DeLorme Mapping 800-452-5931 ext. 320 112
Eastman Kodak 800-322-2177 ext. 602 41
Epson America 800-BUY-EPSON 15
Lind Electronic Design 800-897-8993 54
MacTemps 800-MACTEMPS 102
Microsoft Corporation 800-531-6748 ..... Cover 2-4, 1

WHY PAY RETAIL?
CDW® SELLS FOR LESS!™

CDW® is an Apple® Authorized Catalog Reseller

Our catalog features a full line of Apple® Power Macintosh®, Performa® and PowerBook® computers plus Macintosh-compatible peripherals and software.

CALL for your FREE subscription today!

Authorized Catalog Reseller

Hot New Products!

Connectix **NEW! Color Quick Cam**

$196.29* CDW 67750

**After $30 mail-in manufacturer rebate*

$30 Rebate!*

Monitors

NEC MultiSync M500

15" color monitor

Superior display with integrated speakers and microphone

$569.01 CDW 66451

Data Storage

MicroNet

Advantage External *featuring Iomega Jaz*

High-performance 1GB portable data storage device

$566.68 CDW 67762

1GB "Jaz" disk **$116.38** CDW 68260

Printers

EPSON Stylus Color II

Photo-quality color printing for today's office

$269.00* CDW 57348

** After $30 mail-in manufacturer rebate (ends 8/31/96)*

FREE! Look Your Best Color Pak
- Adobe HomePublisher CD
- Adobe PhotoDeluxe CD
- Color Tips booklet
- Epson extra value coupons!

$100 PRICE DROP!

Notebook Accessories

Panasonic KXL-D742

4X portable CD-ROM player for Apple® Macintosh® PowerBook® computers

$399.00 CDW 66161

Multimedia Kits

NEW! 8X CD-ROM Kit

- Includes 8X SCSI external CD-ROM drive, FWB's CDR ToolKit software, SCSI cable and terminator plus Bungie Marathon 2, Groliers Encyclopedia and A10 Attack software

$344.13 CDW 68739

MOTOROLA

BitSURFR Pro

ISDN terminal adapter for Macintosh

$353.80 CDW 67525

COMPUTER DISCOUNT WAREHOUSE™

CDW® sells for less and services you better!™

800-291-4CDW (4239)

www.cdw.com

Turn to the third page of our ad for more communications values!

©1996 CDW Computer Centers, Inc. MU1675 MacUser 7/96

TOP SELLING MACINTOSH SOFTWARE

COMPUTER DISCOUNT WAREHOUSE™

SoftWindows™ V3.0 and SoftWindows™ 95 for Power Macintosh™

INSIGNIA SOLUTIONS

Put thousands of Windows applications at your fingertips

Now you can run Windows V3.11, Windows 95 or DOS applications on an Apple® Power Macintosh® computer, right alongside your regular PowerMac™ applications!

SoftWindows V3.0 upgrade, 3.5"	$67.02	CDW 68767
SoftWindows V3.0 upgrade, CD	$67.02	CDW 68769
SoftWindows 95 upgrade, CD	$139.27	CDW 68770
SoftWindows V3.0 with CPU purchase	$183.20	CDW 67424
SoftWindows V3.0 full version, CD	$287.05	CDW 67194
SoftWindows 95 full version, CD	$321.60	CDW 67195

System requirements apply. Call a CDW account executive for more information.

Apple® Internet Connection Kit V1.1

New Version!

All-in-one solution for Internet connection

Authorized Catalog Reseller

Enhancements: ◆ New service providers ◆ Updated AppleGuides and documentation ◆ More modem strings ◆ PC Card support ◆ One button install for key applications ◆ Configures Internet applications for your system automatically

Applications included: ◆ Netscape Navigator V2.0 ◆ Claris Em@iler Lite ◆ Fetch V3.0 ◆ NewsWatcher V2.2.1 ◆ Apple Internet dialer V1.1 ◆ MacPPP V2.5

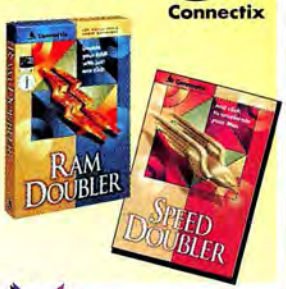
ONLY $44.46 CDW 58671

PowerMac™ PowerPack

RAM Doubler V1.6.1/Speed Doubler V1.1

Connectix

Get two incredible utilities at one nifty price with Connectix's PowerMac PowerPack. RAM Doubler is a system extension that gives you extra memory to run all of your favorite software. Speed Doubler accelerates your Mac without the expense or hassle of upgrading your hardware*.



$73.48 CDW 64073

**System requirements apply, call CDW today for more information.*

SYMANTEC. Suitcase V3.0

NEW! Power Mac native version!

The world's best-selling font manager

Suitcase makes fonts and sounds easy to manage through an intuitive drag-and-drop interface. You can use Suitcase to group fonts into sets for quick access, display them within applications or to sample fonts in any size and style. Suitcase will even link fonts to specific applications, so the fonts you want will automatically open when you need them. Plus, Suitcase automatically resolves font conflicts whenever you load new fonts and compresses screen fonts to help save valuable disk space.

$65.43 CDW 65638

** Owners of any previous version of Suitcase qualify for a $30 mail-in manufacturer rebate.*

$30 upgrade rebate*!

Adobe

After Effects V3.0	606.15
Dimensions V2.0	121.93
Illustrator V6.0 (3.5" + CD)	363.18
Illustrator V6.0 upg 3.X to 6.0 (3.5" + CD)	114.98
Illustrator V6.0 upg 3.X to 6.0 (CD only)	89.96
Illustrator V6.0 upg 5.X to 6.0 (3.5" + CD)	114.98
Illustrator V6.0 upg 5.X to 6.0 (CD only)	89.96
PageMaker V6.0 (3.5" + CD)	545.78
PageMaker V6.0 5 user pack	2163.90
PageMaker V6.0 upgrade	132.81
PageMill V1.0	93.07
Persuasion V3.0.2	572.93
PhotoDeluxe	79.22
Photoshop V3.0.5	545.78
Photoshop V3.0.5 vers upg	159.55
Premiere V4.2 CD	484.79
SiteMill V1.0	363.18
SiteMill V1.0 upg from PageMill V1.0	265.73
Streamline V3.0	121.93
Type Basics	123.67
Type Manager V3.8	39.18

Adobe PageMill V1.0

$93.07 CDW 61992

Apple® Fun and Learning CD pack	12.70
Apple® Home Office Collection	26.77
Apple® Internet Connection Kit	44.46
Apple® Small Business Collection	35.63
Apple® System 7.5 upgrade	95.41
Apple® System 7.5 upgrade CD	95.18

Broderbund

Ilin the 1st Degree CD	48.04
Learn the Art of Magic CD	35.50
MYST CD-ROM	48.32
The Printshop Deluxe CD Ensemble	71.79
Typestyler V2.0	124.42
Welcome To The Future CD	42.87

Caere

Caere OmniPage Direct V2.0	57.93
Caere OmniPage Pro V6.0	459.02
Caere OmniPage Pro V6.0 upgrade	134.70

Casady & Greene

Conflict Catcher 3	58.77
Conflict Catcher 3 comp upgrade	34.91
Conflict Catcher 3 vers upgrade	35.03

Claris

Claris Emailer	55.14
Claris FileMaker Pro V3.0	179.14
Claris FileMaker Pro V3.0 upgrade	91.95
ClarisDraw V1.0	245.40
ClarisImpact V2.0	81.72
ClarisOrganizer V1.0v2 w/CLICKBOOKS	44.82
ClarisWorks V4.0	116.54
ClarisWorks V4.0 CPU bundle	63.95
ClarisWorks V4.0 vers/comp upgrade	64.28

Connectix

PowerMac PowerPack/RAM & Speed Doubler	73.48
RAM Doubler V1.6.1	54.63
Speed Doubler V1.1	55.45
VideoPhone (software only)	54.98

QuarkXPress V3.32

$639.11 CDW 63937

Corel

Corel CD Creator	154.42
Corel Gallery 1	36.24
Corel Gallery 2	62.47
Corel Stock Photo Library 1	879.10
Corel Stock Photo Library 2	868.05
CA Cricket Graph III V1.53	89.83
Dataviz MacLink+/PC Connection	115.25
Datawatch Virex V5.5	59.86
Deneba Canvas V3.5 + CD	251.83
Diskfit Direct V1.0	32.68

Entertainment

A.D.A.M. Nine Month Miracle CD	36.24
A.D.A.M. The Inside Story CD	36.10
Berkeley After Dark V3.2	32.95
Bungie Marathon	37.16
Bungie Marathon 2: Durandal	42.39
Bungie Marathon CD	37.62
Davidson WarCraft Orcs & Humans CD	45.60
Maxis SimCity 2000	34.05
Maxis SimCity Classic	26.08
ScruTiny in the Great Round	36.50
Virgin 7th Guest CD	32.14

Fractal Design

Dabbler V2.0	42.15
Painter V4.0	331.95
Painter V4.0 upgrade	114.98
Poser V1.0	89.85
Sketcher V1.0	48.39

FWB

CD-ROM ToolKit™ V2.0	49.88
Hard Disk ToolKit™ Personal V1.7.6	49.00
Hard Disk ToolKit™ V1.8	117.28
RAID ToolKit™	293.51
Farallon Timbuktu Pro V1.0	126.84

Insignia

SoftWindows 95 CD	321.60
SoftWindows 95 upg CD	139.27
SoftWindows for Performa	116.04
SoftWindows V3.0 CD	287.05
SoftWindows V3.0 CD w/CPU purchase	183.20
SoftWindows V3.0 upg	67.02
SoftWindows V3.0 upg CD	67.02

Intuit

MacInTax 1995 Federal Final Edition	41.79
MacInTax Deluxe 1995 Federal Final Edition	45.28
QuickBooks Pro V4.0	179.80
QuickBooks V4.0	111.19
Quicken Deluxe V6.0 CD	59.99
Quicken V6.0	44.53

Macromedia

Director Multimedia Studio V2.0 CD	899.07
Director Multimedia Studio V2.0 upg CD	467.76
Director V5.0 CD	839.65
Director V5.0 upg CD	374.37
Extreme 3D CD	444.60
Extreme 3D comp upg CD	187.08
Fontographer V4.1	299.95
FreeHand Graphics Studio V2.0 CD	548.53
FreeHand Graphics Studio V2.0 upg CD	276.06
FreeHand V5.5 CD	342.93
FreeHand V5.5 vers upg V4.0 or earlier CD	138.33
FreeHand V5.5 vers upg V5.0 to V5.5 CD	74.84
SoundEdit 16 V2.0 CD	264.62
SoundEdit 16 V2.0 plus DECK II CD	351.15
xRes V2.0 CD	446.04
xRes V2.0 comp upg CD	186.34

MetaTools

Kai's Power Tools 3	111.41
KPT Bryce V2.0 CD	158.82
KPT Convolver V1.0	111.41
KPT Power Photos I CD	111.41
KPT Power Photos II CD	111.41
KPT Power Photos III CD	113.97
KPT Vector Effects V1.0	111.41
Live Picture V2.5	629.24

CLARIS FileMaker Pro V3.0

Version & competitive upgrade

$91.95 CDW 63951

Metrowerks

CodeWarrior Bronze 8	114.04
CodeWarrior Gold 8	298.83
Discover Programming for Macintosh	61.63

Microsoft

Arcade V1.0	28.95
Cinemania 1996 CD	29.20
Encarta 1996 CD	44.94
Excel V5.0	298.44
Excel V5.0 upgrade	296.94
Flight Simulator V4.0	41.68
FoxPro V2.6	89.96
Office V4.2.1	449.03
Office V4.2.1 CD	449.31
Office V4.2.1 vers upg, CD	267.06
Office V4.2.1 vers upgrade	265.86
PowerPoint V4.0	296.94
PowerPoint V4.0 upgrade	114.98
Project V4.0	421.73
Project V4.0 upgrade	132.70
Wine Guide CD	29.20
Word V6.0.1	296.94
Word V6.0.1 vers upgrade	114.98
Works V4.0	45.13

NOW Software

Now Contact V3.5	59.97
Now Contact/Up to Date V3.6 bundle	84.35
Now Up to Date V3.5	59.97
Now Up-to-Date Web Publisher V1.0	251.70
Now Utilities V5.0	65.88

PRO CD

Home Phone 1996 WIN/MAC CD	28.99
Select Phone 1996 Deluxe WIN/MAC CD	133.81
Select Phone 1996 WIN/MAC CD	84.28

Quark

Quark XPress V3.32 CD	639.11

Strata

Instant Replay V1.0	84.62
Media Paint V1.1	403.97
Studio Pro BLITZ V1.75	851.43
Vision 3D V4.0	405.95

Symantec

ACT! V1.0 for Newton	92.07
ACT! V2.5	148.18
Norton Utilities V3.2	94.27
SAM AntiVirus V4.0	64.17
Suitcase V3.0	65.43
Symantec C++ V7.0	74.17

WordPerfect

WordPerfect V3.5	116.99
WordPerfect V3.5, CD	119.44
WordPerfect V3.5, vers upgrade	79.45
WordPerfect V3.5, vers upgrade, CD	81.79

Most orders ship the same day

NASDAQ

BUY WITH CONFIDENCE
CDW® IS A NASDAQ TRADED COMPANY
TICKER SYMBOL CDWC
D & B rated 5A1
Duns 10-762-7952

VISA MasterCard Discover/NOVUS

Credit card charges are not submitted until time of shipment. For your protection, we ship only to your credit card's verified billing address. Freight is calculated on the carrier's actual freight charge plus insurance and packaging material. The cost of insurance is 0.35% (0.0035) of the order total. Packaging materials will not exceed $4.00 for single package shipments or $6.00 for multi-package shipments. Before returning any product, you must obtain an RMA number. Non-defective returns are subject to a restocking fee. Software, chips and other electronic components are not returnable. Allow 10 business days for shipping when paying by personal check. 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 trademarks and registered trademarks are the sole property of their respective owners.

CDW® TELEPHONE HOURS

Sales
Monday-Friday 7am -9pm CDT
Saturday 9am-5pm CDT

Tech Support for Customers
Monday-Friday 8am-9pm CDT
Saturday 9am-5pm CDT

If you find a better price, call CDW® before you buy

Fax: 847-465-6800
Sales: 800-291-4CDW (4239)

CDW Computer Centers, Inc. • 1020 E. Lake Cook Road • Buffalo Grove, IL 60089

MU1675
MacUser 7/96

GET CONNECTED WITH A MODEM FROM CDW®

COMPUTER DISCOUNT WAREHOUSE™

Monitors

NEC

M500 15" flat square w/speakers	569.01
XV15+ 15" flat square	473.13
XV17+ 17" flat square	799.84
XE21 21" flat square	1659.65
XP17 17" flat square	1058.89
XP21 21" flat square	1919.54

MAGNAVOX

CM2080 14" .29mm	249.56
CM1215 15" .28mm	369.77
CM4018 17" .28mm	636.08
20CM64 20" .31mm	1013.19

SONY

15sx 15" Trinitron	428.41
15sfII 15" Trinitron	484.45
17sfII 17" Trinitron	811.60
17seII 17" Trinitron	1075.61
20sfII 20" Trinitron	1666.22
Multiscan TC 20" Trinitron	3234.48

Viewsonic

15GA 15" PerfectSound monitor	488.97
17GA 17" PerfectSound monitor	734.40
GT770 17" Graphics Series .25mm	822.78
PT770 17" Graphics Series .25mm	895.03
GT800 20" Professional Series .30mm	1694.17
PT810 21" Professional Series .30mm	1872.83

Radius

PressView 17SR 17"	1987.82
PressView 21SR 21"	3202.97
PrecisionView 17 17"	942.19
PrecisionView 21 21"	2318.00

Graphics/Video Boards

ATI Technologies

Xclaim GA 2MB PCI	354.48
Xclaim GA 4MB PCI	476.02

Diamond Technologies

Javelin 3240XL 2MB PCI	344.12
Javelin 3400XL 4MB PCI	493.26
Javelin 2MB VRAM upgrade	172.16

Matrox

MGA Millennium 4MB PCI graphics accelerator	549.52
MGA Millenium 8MB PCI graphics accelerator	831.23
MGA Millenium 4MB WRAM upgrade	327.19

Radius

Thunder 30/1600	1203.37
Thunder 30/1152	800.00
ThunderColor 30/1600	1995.19
ThunderColor 30/1152	1584.87
PrecisionColor 8/1600	492.50

Networking

Allied Telesyn

Microcom Transceiver AAUI TO 10BT	34.85
Microcom Transceiver AAUI TO 10B2	34.67

Dayna

Bluestreak NuBus adapter	319.07
Bluestreak PCI adapter	205.99
Bluestreak 100BTX Hub	1561.86

Farallon

Air Dock infrared connector	64.68
Ether10-T Starlet/4 hub	123.78
Ether10-T Starlet/8 hub	148.63

Communications/Modems

FastMac™

FastMac™ 28.8 V.34	137.98

Global Village

PowerPort fax/modems

Mercury 19.2K/PowerBook 5XX	323.60
Platinum V.34	327.27

PowerPort PC Cards

PowerPort Gold PC Card	169.38
PowerPort Platinum PC Card	325.29
PowerPort Platinum Pro PC Card	487.16
PowerPort Platinum Pro PC Card	487.16

Teleport fax/modems

TelePort Gold II 14.4K	104.71
TelePort Platinum V.34	194.73

Megahertz

114.4K CruiseCard with XJACK	75.25
28.8K CruiseCard with XJACK	278.34
28.8K cellular-capableCruiseCard with XJACK	289.66

MOTOROLA

Montana 28.8K cellular/pager PC Card	254.86
Mariner 28.8K/LAN cellular/pager PC Card	419.50
Lifestyle 28.8 external	177.93
Power 28.8 external	237.04
BitSURFR Pro ISDN terminal adapter	353.80

Practical Peripherals

14.4 external mini-tower w/fax	82.65
28.8 V.34 external mini-tower w/fax	171.00
MacClass PCMCIA 14.4	149.69
MacClass PCMCIA 28.8	264.78

Supra

SupraExpress 14.4 Plus	94.89
SupraExpress 288	153.19
Simple Internet 288	167.00
SupraFAXModem 288 V.34	209.80

U.S. Robotics

Mac&Fax Sportster 14.4	78.18
Sportster 28.8 V.34	188.19
Sportster Voice	216.42
Courier V.Everything	363.19
Courier I-modem	632.84

Storage Systems

CD-ROM DRIVES

Hi-Val 4X SounTastic CD-ROM Kit	198.37
Hi-Val 8X SounTastic CD-ROM Kit	344.13
MicroNet 4X CD-ROM Kit with 5 titles	283.10
MicroNet 4X CD-ROM Kit with 10 titles	356.57
MicroNet 4X CD-ROM Kit with 12 titles	355.66
NEC MultiSpin 6XE	335.65

FWB

HammerCD 2X CD-ROM recorder	1373.12
PocketHammer 2000FMF	1058.19
PocketHammer 2050FMF	1303.14
PocketHammer 4100FMF	1758.22
PocketHammer H2000PE	1032.42

Iomega

Zip drive 100MB SCSI external	199.00
100MB Zip disk	19.00
Jaz Drive 1GB SCSI-II external	599.00
1GB Jaz disk	124.00

Micronet

Advantage 1GB drive featuring "Jaz" external	566.68
Advantage 1GB "Jaz" disk	116.38

SyQuest

EZ135 external SCSI	199.99
135MB EZ135 cartridge	23.11

Magnetic media

88MB SyQuest cartridge, 5yr	42.65
200MB SyQuest cartridge, 5yr	59.56
270MB SyQuest cartridge, 5yr	48.75

Need more disk space? CDW carries Conner, IBM, Maxtor, Micropolis and Seagate SCSI hard drives. Call for details.

Input Devices

AGFA

Arcus II with full version Adobe Photoshop	1995.00
StudioScan IIsi	699.65

ALPS

Portable GlidePoint	39.82
Desktop GlidePoint	69.84
GlidePoint Keypad	109.42
GlidePoint Keyboard	115.48

ADESSO

PowerMouse	19.82
Soft Touch Plus extended keyboard	47.92
Tru-Form extended keyboard	84.76
Tru-Form extended keyboard w/pointer	94.18

Connectix

VideoPhone w/Quick Cam	138.49
QuickCam (grayscale) digital video camera	97.03
Color QuickCam digital video camera	226.29

EPSON

Action Scanning System II	429.67
ES-1000C color flatbed scanner	737.82
ES-1200C color flatbed scanner	947.43
ES-1200C ProMAC color flatbed scanner	1122.02

Logitech

Cordless Mouse Man	69.56
TrackMan Marble	86.40
TrackMan Live!	122.27

Microtek

ScanMaker 35T 35mm film scanner	691.87
ScanMaker E3	373.64
ScanMaker E6	556.49
ScanMaker E6 Pro	737.82
ScanMaker III w/trans adapter	1989.22

Nikon

Super CoolScan film scanner	1943.58
LS-20 Super CoolScan II	1152.54
Coolscan film scanner	1307.71
AX-1200 Scantouch flatbed scanner	1131.80
LS-4500AF multi-format film scanner	7849.86

Polaroid

SprintScan film scanner	1553.32

RELISYS

Scorpio Infinity	403.54
Taurus Infinity	669.62

UMAX

Vista-S6 SOHO	393.25
Vista-S6 MACLE2	498.86
Vista-S6 MACPRO2	617.32
Vista-S12 MACLE2	756.82
Vista-S12 MACPRO2	838.53

Visioneer

Paper Port VX	278.34

Printers

EPSON

Stylus Color II	299.00
Stylus Color Pro	499.00
Stylus Pro XL	1799.00

Hewlett Packard

HP DeskWriter 340 portable	296.69
HP DeskWriter 600	234.39
HP DeskWriter 660C	348.87
HP DeskWriter 1600CM	1966.82
HP LaserJet 5MP	1045.86

Texas Instruments

microLaser 600	695.69
microLaser Pro/8	1111.05
microLaser PowerPro/12	1362.91

Memory

Simple Technology memory upgrades

Power Mac 9500 8500 7500 8MB	199.99
Power Mac 9500 8500 7500 16MB	449.86
Power Mac 8100 7100 6100 8MB	209.67
Power Mac 8100 7100 6100 16MB	385.35
Power Mac 8100 7100 6100 32MB	875.04
Quadra/Centris 610 Performa 630/631 4MB	107.39
Quadra/Centris 610 Performa 630/631 8MB	197.68
Quadra/Centris 610 Performa 630/631 16MB	456.00
Powerbook 520 520c 540 540c 4MB	167.69
Powerbook 520 520c 540 540c 8MB	221.41
Powerbook 520 520c 540 540c 16MB	413.61
LaserJet 4M Plus 4MB	107.39
LaserJet 4M Plus 8MB	197.68
LaserJet 4M Plus 16MB	456.00

If you don't see it, call! CDW carries the complete Simple line-up

MOTOROLA BitSURFR Pro

ISDN terminal adapter for Macintosh

Professional high-speed digital communications for your office or home

NEW!

BitSURFR Pro is a terminal adapter for the high-speed, digital ISDN telephone service. This device features two analog POTS ports plus Multilink PPP, AIMux and bonding support for 128K bps connections. Ideal for the office or work-at-home users, BitSURFR Pro is an all-in-one combination of hardware and software ready to connect your MAC, telephone, analog modem and/or fax machine to ISDN.

$353.80 CDW 67525

Global Village Teleport Platinum

28.8K bps V.34 faxmodem

The best choice for maximum performance

Loaded with features and backed up by a 5-year warranty, Global Village's Teleport Platinum is the premier choice for Internet and business connectivity.

◆ Data: V.34 (28.8K bps) ◆ Fax: 14.4K bps send and receive ◆ Features Flash ROM for easy feature upgrades! ◆ Included software: Power Macintosh native GlobalFax™ V2.5, GlobalFax OCR, ZTerm and America Online

$194.73 CDW 52875

U.S. Robotics™ Sportster 28.8 for Macintosh

Sportster reliability and economy, now with 33.6K bps support

◆ True V.34 (28.8K bps) and 33.6K bps! ◆ 14.4K bps send/receive fax ◆ V.42/MNP 2-4 error correction ◆ V.42bis/MNP 5 data compression ◆ Up to 115K bps data throughput ◆ 7 LED status lights ◆ Built-in speaker with volume control ◆ Includes MacComCenter™ fax software ◆ 5 year warranty, made in USA

$188.19 CDW 61506

FastMac™ 28.8 V.34 Fax/Data Modem

Economy and value

◆ Data: V.34 (28.8K bps) ◆ 115,200 bps throughput with data compression ◆ Fax: 14.4K bps send and receive ◆ V.42/MNP 2-4 error correction ◆ V.42bis/MNP 5 data compression ◆ Group 3, Class 1 and 2 fax support ◆ Includes MacComCenter™ integrated data and fax communications software ◆ 5 year warranty, made in USA

$137.98 CDW 57414

CDW® sells for less and services you better!™

800-291-4CDW (4239)

Visit our newly redesigned web site! www.cdw.com

Call for a FREE CDW® catalog!

©1996 CDW Computer Centers, Inc.

CIRCLE 136 ON READER SERVICE CARD

MU1675
MacUser 7/96

MacUser

950 Tower Lane, 18th Floor
Foster City, CA 94404
Phone (415) 378-5600
Fax (415) 378-6903

National

John Blake, Group Associate Publisher (617) 393-3075
Cheri L. McKeithan, Group National Sales Manager (415) 378-5652
Elizabeth Turney, Ad Coordinator (415) 378-5606

Mid-Atlantic/Southeast (AL, DC, DE, FL, GA, MD, NC, Metro NY, NJ, PA, SC, VA, WV)

Laura Mosier, District Sales Representative
Mystic Center, 10 President's Landing
Medford, MA 02155; (617) 393-3692
James Loza, Account Executive (415) 378-5677
Andrea Villani, Sales Assistant (617) 393-3068

Northeast (CT, MA, ME, NH, upstate NY, RI, VT, Canada , except Alberta and British Columbia)

Sharon Kiernan, District Sales Representative
Mystic Center, 10 President's Landing
Medford, MA 02155; (617) 393-3060
Heather McKee, Account Executive (415) 378-5640
Andrea Villani, Sales Assistant (617) 393-3068

Midwest (AR, IA, IL, IN, KS, KY, LA, MI, MN, MO, MS, ND, NE, NM, OH, OK, SD, TN, TX, WI)

Tom Hernandez, District Sales Manager
150 North Wacker Drive, Suite 2500
Chicago, IL 60606; (312) 214-7343
Dan Hudson, Account Executive (415) 378-5622

Northwest CA (San Mateo and north, AK, HI, ID, MT, OR, WA, WY, Canada; Alberta, British Columbia)

Ellen Skugstad, District Sales Manager
950 Tower Lane, 18th Floor
Foster City, CA 94404; (415) 378-5657
Brigid Dombrowski, Account Executive (415) 378-5658
Jen Weiss, Sales Assistant (415) 378-5626

Bay Area CA (South Bay, NV)

Chris Marrow, District Sales Representative
950 Tower Lane, 18th Floor
Foster City, CA 94404; (415) 378-5651
Casie Davis, Account Executive (415) 378-5630
Jen Weiss, Sales Assistant (415) 378-5626

Southwest CA (So Cal, AZ, CO, UT)

Dale Hansman, District Sales Manager
11766 Wilshire Blvd., Suite 1550
Los Angeles, CA 90025; (310) 268-1376
Laura Goodwin, Account Executive (415) 378-5605
Lisa Armendariz, Sales Assistant (310) 268-1375

Advertiser Index

RS#	ADVERTISER	PHONE NUMBER	PAGE
168	Abacus Concepts	800-666-STAT	50
15	AEC Software	800-450-1983	36
31	Aladdin Systems	408-761-6200	51
148	APS Technologies	800-289-5385	120-122
19	Bottom Line Distribution	800-347-8759	123
9	Canon USA	800-OK-CANON	32-33
14	Casady-Greene Inc.	800-359-4920	34
*	Claris Corporation	800-293-0617 ext. 995	38
120	ClubMac	800-258-2622	138-139
136	Computer Discount Warehouse	800-291-4CDW	149-151
62	Connectix	800-950-5880 ext. 101	53
63	Connectix	800-950-5880 ext. 101	55
64	Connectix	800-950-5880 ext. 101	57
77	Corel Systems Corporation	800-248-0800	19
50	CRA Systems	800-375-9000	130-131
28	Dantz Development	800-95-BACKUP	9
163, 164	DataViz, Inc.	800-249-1116	52
150	DeLorme Mapping	800-452-5931 ext. 320	112
*	Deneba Software Inc.	305-596-5644	16
24	DGR Technologies	800-990-5696	128-129
33	Digital Graphix	800-680-9062	119
55	Direct Tech	800-279-5520	158
90	EarthLink Network	800-395-8425	68
4	Eastman Kodak	800-322-2177 ext. 602	41
73	Engineered Software	910-299-4843	6
*	Epson America	800-BUY-EPSON	15
*	Farallon Computing	800-995-7761 ext. 1	100
26	Focus Enhancements Inc.	800-538-4888	31
35	Fujitsu Computer Products of America	800-898-1455	45
16,17	GDT Softworks	800-665-8707	43
58,59	GDT Softworks	800-807-9905	99
11	Graphsoft	410-290-5114	94
109	Home Computer Catalog	800-454-3686	114-115
34	Image Solutions	800-352-3420	142
154	Insignia Solutions	800-848-7677	96
80	Kingston Technology	800-259-8965	12
42	La Cie Limited	800-999-1528	135-137
112	Lasermaster Technologies, Inc.	800-339-3590 Dept. N22	56
74	Lind Electronic Design	800-897-8993	54
23	LLB Company, Inc.	800-848-8967	146-147
108	Mac Bargains	800-407-7404	132-133
146	MAC Xtra	800-553-4230	157
147	MacConnection	800-800-6227	126-127
18	MacMall	800-222-2808	143-145
24	MacProducts, USA	800-990-5696	128-129
92	Macromedia	800-326-2128 / 415-252-2000	48-49
39	MacTemps	800-MACTEMPS	102
156	MacWarehouse	800-255-6227	140-141
135	MacZone	800-436-8000	124-125
140	Mainstay	805-484-9400	24
94	Matrox Graphics Systems	800-660-1873	20
160	MegaHaus	800-786-1191	155
*	Microsoft Corporation	800-531-6748	Cover 2-4, 1
*	Microsoft Corporation	800-531-6748	2-3
22	Momentum	808-947-0055	54
*	NEC Technologies Inc.	800-NEC-INFO	22-23
20	Newer Technology	800-678-3726	79
*	Nisus Software	800-493-0998	58
82	Now Software	800-544-2599	74
*	Portrait Display Labs	800-858-7744	51
21	Power Computing	800-999-7279	Cover 5-8
19	POWERtools (The Performance Company)	800-347-8759	123
76	ProDirect	800-555-1256	156
67	Specular International	800-433-SPEC	88
38	Syex Express, Computize	800-876-3467	134
*	Toray	800-TORAY-PD	107
128	Video Labs, Inc.	800-467-7157	61
99	Viewsonic	800-888-8583	10-11
25	VisionTek	800-360-7185	109
37	White Pine Software	800-241-PINE	17
126	XANTÉ Corporation	800-926-8839	7
*	ZDNet	http://www.macuser.com	8
3	ZDNet	http://www.zdnet.com	111
*	Ziff-Davis Reprints	800-825-4237	59

*Denotes no reader service number.

Since
The Drive Authority
1987

MEGAHAUS

1-800-786-1191

8:00AM - 8:00PM Mon-Fri 9:00AM - 3:00PM Sat CST

CD RECORDERS

Complete Macintosh external with everything you'll need to make your own CDs - including Mastering software & 1 disk.

2X CD Write
4X CD Read
$839 w/ Corel
$875 w/ Toast

Smart Storage Solutions

4X CD Write
4X CD Read
$1199 w/ Corel
$1245 w/ Toast

CD Mastering configuration:
add a 2Gig A/V drive for only $669
4Gig $1039

Smart & Friendly 2Xw2Xr Complete Mac kit $899
Comes with full featured Incat Software & 1 disk
This drive features packet recording, compatible with Retrospect CD-R driver kit.

Pinnacle Micro 2Xw4Xr Complete Mac kit $1199
Comes with Corel CD Creator Software & 5 disks

CD ROM DRIVES

All CD Drives include external drive, cable, & driver software.

Sanyo	4X	190ms	$169
NEC	4X	200ms	$175
Teac	6X	140ms	$289
NEC	6X	150ms	$325
Plextor	6X	145ms	$369
Toshiba	6.7X	120ms	$295
Plextor	8X	145ms	$475
Toshiba	8X	145ms	$429

Bundle Special
Buy any CD ROM with any hard drive and take $10 off the price of BOTH!

CD ROM CHANGERS

Pioneer	4.4X	DRM-624X	6 Disk	190ms	$319
Pioneer	4X	DRM-1804X	18Disk	300ms	$1899

CD ROM TOWERS		**4 Drive**	**7 Drive**
NEC	4X	$899	$1489
Sony	4X	$959	$1599
Pioneer	4.4X	$1199	$2029
Plextor	4.5X	$1659	$2829
Teac	6X	$1439	$2439
NEC	6X	$1659	$2839
Plextor	6X	$1899	$3269
Toshiba	6.7X	$1499	$2549
Toshiba	8X	$1999	$3449
Plextor	8X	$2519	$4329

Smoked Glass door, Key locking case, Ext SCSI ID select switches, 65w pr sp.

Smoked Glass door with key lock Ext SCSI ID select switches 300w pr sp.

OPTICAL DRIVES

All Optical Drives include external drive, cable, driver software, and **1 FREE cartridge**.

230MB	Fujitsu	$479
650MB	PD ROM combination optical & 4XCD	$509
2.6Gig	Maxoptix	$1999
2.6Gig	Hewlett Packard	$2219
4.6Gig	Smart Storage Solutions	$1499

MEDIA

		2-4	5-9	10-29
Tapes				
QW3080	[QW3080]	$32	$27	$25
4mm 90M	[DAT90M]	$15	$10	$8
4mm 120M	[DAT120M]	$27	$22	$20
8mm 112M	[DAT112M8MM]	$15	$10	$8
8mm 160M	[DAT160M8MM]	$23	$18	$16
Optical Disks		**2-4**	**5-9**	**10+**
128MB	[VBR3H1]	$26	$21	$19
230MB	[FW230MEDIA]	$23	$19	$17
650MB 512K	[VBR5B2]	$51	$47	$45
650MB 1024K	[VBR5B4]	$51	$47	$45
1.3GB 512K	[VBR5E2]	$59	$55	$53
1.3GB 1024K	[VBR5E4]	$59	$55	$53
2.6GB 512K	[OC2.6GIG512]	$87	$83	$81
2.6GB 1024K	[OC2.6GI1024]	$87	$83	$81
SyQuest				
44MB	[SQ400]	$44	$40	$38
88MB	[SQ800]	$48	$44	$42
105MB	[SQ310]	$56	$52	$50
135MB	[EZDISK]	$26	$22	$20
200MB	[SQ2000]	$72	$68	$66
270MB	[SQ327]	$58	$54	$52
Iomega				
100MB ZIP	[ZIP100C]	$23	$18	$16
1Gig JAZ	[JAZC-1GIG]	$99	$95	$93
Cleaning Cartridges				
4mm	[DAT4MMCLEAN]	$20	$15	$13
8mm	[DAT8MMCLEAN]	$29	$24	$22
Miscellaneous				
650MB PD disks	[LMR650A]	$58	$54	$52

HARD DRIVE SPECIALS

		Internal	External
2 Gig	**5400rpm**	**$475**	**$535**
2 Gig	**7200rpm**	**$569**	**$629**
4 Gig	**7200rpm**	**$889**	**$949**
9 Gig	**5400rpm**	**$1799**	**$1899**

SCSI HARD DRIVES

SCSI	Speed	RPM	Brand	Model	Wty	Int	Ext
1050MB	9ms	5400	Seagate	ST31051N	3	$360	$420
1080MB	11ms	5400	Seagate	ST51080N	3	$248	$308
1280MB	12ms	5400	Quantum	FB1280S	3	$265	$325
2050MB	8.5ms	7200	Micropolis	MC4221	5	$585	$645
2050MB	8.5ms	7200	Micropolis	MC4221AV	5	$665	$725
2147MB	9ms	5400	Micropolis	MC4421	5	$539	$599
2147MB	9ms	5400	Seagate	ST32151N	5	$619	$679
2147MB	9ms	5400	Seagate	ST32430N	5	$599	$659
2147MB	8ms	7200	Seagate	ST32550N	5	$675	$735
2150MB	8ms	7200	Quantum	XP32150	5	$635	$695
4290MB	8ms	7200	Seagate	ST15150N	5	$999	$1059
4290MB	9ms	5400	Seagate	ST15230N	5	$889	$949
4294MB	8.9ms	7200	Micropolis	MC3243	5	$979	$1039
4294MB	8.9ms	7200	Micropolis	MC3243AV	5	$1039	$1099
4300MB	8.6ms	7200	Quantum	XP34300	5	$889	$949
9091MB	12ms	5400	Micropolis	MC1991	5	$1879	$1979
9091MB	12ms	5400	Micropolis	MC1991AV	5	$1979	$2079
9080MB	11ms	5400	Seagate	ST410800N	5	$1909	$2009
WIDE SCSI							
2050MB	8.9ms	7200	Micropolis	MC4221W	5	$625	$735
2050MB	8.9ms	7200	Micropolis	MC4221WAV	5	$769	$879
2147MB	8ms	7200	Seagate	ST32550W	5	$745	$855
2150MB	8ms	7200	Quantum	XP32150W	5	$689	$799
4294MB	8.9ms	7200	Micropolis	MC3243W	5	$1039	$1149
4294MB	8.5ms	7200	Micropolis	MC3243WAV	5	$1129	$1239
4294MB	8ms	7200	Seagate	ST15150W	5	$1089	$1199
4300MB	8.6ms	7200	Quantum	XP34300W	5	$979	$1089
9080MB	11ms	5400	Seagate	ST410800W	5	$2079	$2229
9100MB	12ms	5400	Micropolis	MC1991W	5	$2019	$2169
9100MB	12ms	5400	Micropolis	MC1991WAV	5	$2119	$2269

SCSI CONTROLLERS

Save $10 when you purchase any SCSI controller with any SCSI drive.

ADAPTEC
A2940MUW PCI, supports Ultra Wide SCSI, 15 Wide SCSI $299

ATTO
NuBus, Bus Mastering, 15 Wide SCSI devices $799
PCI, Bus Mastering, 15 Wide SCSI devices $319
PCI, Bus Mastering, Twin Channel, 30 Wide SCSI devices $829

RAID SOLUTIONS

Remus software by Trillium Research - an Adaptec Company.
High speed RAID software for the Macintosh.
Remus RAID 0 or 1 software $229
Remus Lite RAID 0,1,4, or 5 software $349
We custom build RAID systems - including hot swappable solutions.

SCSI ENCLOSURES

HH = 5 1/4" half height, 3 1/2" drives can be mounted in a HH bay with an adapter bracket.
FH = 5 1/4" full height. Open = Open face for tape etc.

part #	drive capacity	power, fans	"high, wide, deep	
3.5CASE	1 3.5"	20W,1	5.5x3.5x8	$99
HHCASE	1 HH	40W,1	2.3x9.7x10.4	$79
HHCASEOPEN	1 HH	40W,1	2.3x9.7x10.4	$79
CDCASE	1 HH CD	40W,1	2.3x9.7x10.4	$89
FHCASE	1 FH or 2HH	65W,1	4x10x10.5	$139
DUALCASE	2 FH or 4HH	2x65W,2	11.9x7.5x12	$250
TOWERCASE	3 FH or 7HH	300W,2	19x9x13	$439
QUADCASE	4 FH or 8HH	4x65W,3	17.4x8.4x11.7	$539

GS-2002 holds 5 FH or 8HH or 12 HH CD, has hot swappable redundant 300W power supplies,2 cooling fans with stop alert, measures 21x8.5x18.5 $749
Call for WIDE SCSI and rack mount enclosures.

SCSI SWITCH

Too many SCSI devices?

Switch SCSI peripherals between two computers or switch two chains of peripherals on one computer. Regenerates SCSI signal to increase maximum overall cable length.

2 way SCSI Switch box [SCSISWITCH] $499
4 way SCSI Switch box [SCSI2SWITC4] $849

REMOVABLE DRIVE BRACKET

Converts any 3 1/2" hard drive into a removable drive. Great for transportability, data interchange, or security needs. Extremely high quality construction. Metal cartridge and frame, cooling fan. Unit has SCSI ID select on the cartridge. Qty discounts available.

	System	Extra Cartridge	Extra Frame
SCSI	**$85**	**$40**	**$54**
WIDE SCSI	**$129**	**$64**	**$75**

Volume discounts available.

***NEW!* Portable weather resistant case to hold and transport bracket $55**

IDE HARD DRIVES

IDE	Speed	RPM	Brand	Model	Wty	Price
1080MB	9.5ms	5400	Fujitsu	M1606T	3	$209
1280MB	12ms	5400	Quantum	FB1280A	3	$229
1700MB	11ms	4500	Quantum	SR31700A	3	$255
2167MB	10ms	5400	Seagate	ST32140A	3	$309
2500MB	11ms	4500	Quantum	SR32550A	3	$369
2 1/2"						
540MB	13ms	4200	Toshiba	MK1924FC	1	$309
810MB	13ms	4200	Toshiba	MK1926FC	1	$379
1350MB	13ms	4200	Toshiba	MK2720FC	1	$569

SCSI TAPE DRIVES

All Tape Drives include external drive, cable, NovaMac software, & **1 FREE tape**.

2Gig	Seagate	QIC	$425
2Gig	HP	DAT	$769
2Gig	Seagate	DAT	$769
2-4Gig	HP	DAT	$799
2-4Gig	Seagate	DAT	$869
4-8Gig	Seagate	DAT	$999
4-8Gig	HP	DAT	$1079
7-14Gig	ExaByte	8mm	$1199

Buy your backup tapes now for best discount pricing!

BACKUP SOFTWARE

Desktape $289
Allows you to mount most tape drives as a normal drive on the desktop.
Dantz Retrospect for Mac $Call
NovaMac $79
NovaMac provides Tape Backup, Restore, File Management, and diagnostics, in one complete package.

ZIP & JAZ

iomega

All Iomega drives include external drive, cable, driver software, and **1 FREE cartridge**.

100MB Zip $199
1 Gig Jaz $599

SYQUEST

All SyQuest Drives include external drive, cable, driver software, and **1 FREE cartridge**.

135MB $199
200MB $389
270MB $389

SyQuest TECHNOLOGY

Look for us on the Internet at:
http://www.megahaus.com

DISCOVER MasterCard VISA

MegaHaus
2201 Pine Drive, Dickinson, Texas 77539
(713)534-3919 FAX (713)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. ©1996 MegaHaus Inc.

ProDirect 800-555-1256

Service•Performance•Price... ALWAYS

Fax 24 hours a day 612-941-1109
International orders call 612-941-1805

•NEVER A SURCHARGE!
• *NO SALES TAX!
• SAME DAY SHIPPING !
• EXCLUSIVE! 90 DAY PERFORMANCE GUARANTEE!

MW EDITORS' CHOICE

MW ★★★★

"Like an eye catching sports car, this 2.4 GB looks and goes fast"
MacWorld June 1996

PDC2400
•8 ms Seek•7200 RPM
•512K Buffer•5 YearWarranty
$725 Internal $785 External
Conner 2107S Mechanism

Seagate

1080 GB Medalist			$270	$330
11 ms Seek	5400 RPM	128 KBuffer	5 Year Warranty	
2. 4 GB Hawk			595	655
9 ms Seek	5400 RPM	512K Buffer	5 Year Warranty	
2.5 GB Barracuda 2			725	785
8 ms Seek	7200 RPM	1024K Buffer	5Year Warranty	
4.3 GB Barracuda 4			1095	1155
8 ms Seek	7200 RPM	1024K Buffer	5 Year Warranty	
2.5 GB Fast & Wide Barracuda			785	845
8 ms Seek	7200 RPM	1024 KBuffer	5 Year Warranty	
4.3 GB Fast & Wide Barracuda			1195	1255
8 ms Seek	7200 RPM	1024K Buffer	5 Year Warranty	
9.0 GB Elite			1925	2025
11 ms Seek	5400 RPM	1024 Buffer	5 Year Warranty	
9.0 GB Elite Fast & Wide			2050	2150
11 ms Seek	5400 RPM	1024 Buffer	5 Year Warranty	

90 Day Performance Guarantee on all Hard Drives... Call

MICROPOLIS

2.1 GB	**M4221AV**	**645**	**715**	
8.5 ms Seek	7200 RPM	512K Buffer	5 Year Warranty	
4.3 GB	**M3243AV**	**1005**	**1075**	
8.5 ms Seek	7200 RPM	512K Buffer	5 Year Warranty	
9.0 GB	**M1991AV**	**1985**	**2085**	
11 ms Seek	5400 RPM	512K Buffer	5 Year Warranty	

IN STOCK.. MICROPOLIS WIDE AV DRIVES

90 Day Performance Guarantee on all Hard Drives... Call

Digital Tape Backup

HEWLETT PACKARD

2.0 GB HPC35470			
SCSI *15MB/min., 4mm media,*		$835	$895
3-5 GB HPC35480			
SCSI *45MB/min., 4mm media,*		940	995
4-8 GB HPC1533			
SCSI *60MB/min., 4mm media,*		1129	1189
24-48GB SCSI Auto Tape Loader		3195	3295
HP1553, 60MB/min., 4mm media			

Exabyte

Capacity	*Model*	*Media*	*Int.*	*Ext.*
2-5 GB	8205XL	8mm	$1395	$1485
7-14 GB	8505XL	8mm	$2055	2115

Quantum

Fastest Drives Made Today!

DLT2000XT $3295
30GB Capacity•*TRANSFER RATE 150 MB PER MINUTE*
DLT4000 $5435
40GB Capacity•*TRANSFER RATE 180 MB PERMINUTE*
DLT4500 • 200 GB Capacity $9895
TRANSFER RATE 180 MB PERMINUTE
DLT4700 • 280 GB Capacity $11395
TRANSFER RATE 180 MB PERMINUTE

SyQuest TECHNOLOGY

DRIVES

Capacity	*Model*	*External*
88 MB	SQ5110C	$295
135MB	SQEZ135	215
200 MB	SQ5200	395
270 MB	SQ3270	295

CARTRIDGES

Capacity	*Price*
44 MB	$40
88 MB	45
135 MB	19
200 MB	70

PCI/NUBUS FAST & WIDE ACCELERATORS

FWB incorporated

JackHammer $465
Fast/Wide 16BIT SCSI 2 accelerator card for Apple's Nubus based computers. Supports fast/wide SCSI 2 (16 Bit) transfer rates up to 20MB/sec. and fast SCSI 2 (8 Bit) transfer rates up to 10 MB/sec. Full 16 Bit wide support for the latest drives and disk arrays.

PCI JackHammer $385
Single channel RISC based PCI to Fast/Wide SCSI 3 accelerator card for Apple's PCI based computers. Ideal solution for your audio, video, prepress, and real time applications. Transfer rates up to 20MB/sec.Formatting software included.5 year warranty. Call for Disk Array Solutions!

FWB RAID ToolKit.....CALL

ATTO Express PCI $345
Single channel RISC based PCI to Fast/Wide SCSI 3 accelerator card for Apple's PCI based computers. Call for Disk Array Solutions! Also available in Dual Channel.

ATTO Silicon Express 2 $425
SCSI 1 & 2 support, transfer rates up to 10.0 MB/sec.,supports multiple block sizes,takes advantage of parallel processing capability.Ideal for graphic design, multimedia applications and More!

ATTO Silicon Express 4 $829
Fast/Wide 16 BIT SCSI 2 accelerator card for Apple's Nubus based computers. Supports fast/wide SCSI 2 (16 Bit) transfer rates up to 20MB/sec. Full 16 Bit wide support for the latest drives and disk arrays. Fully compatible with all existing SCSI 1 drives.

REMUS Disk Array RaidLevel 0 & 1 $255

SCSI HARD DRIVE CABINETS

- PowerStor™ with active termination
- Optional Fixed Daisy Chain Connector... Puts an end to your cable nightmares
- *Exclusive* On/Off switch Conveniently located on the FRONT of our cabinet.
- Power and drive activity light.

PowerStor™ 5.25" or 3.5" half ht open/closed bezel HD enclosure	$75
Minicab™ 3.5" open/closed bezel HD enclosure	$69
Full Height Cab 5.25" full height cab	$139
Multi Bay Cabinets 5.25" and 3.5" cabinets available	$CALL
Two, four, six, and eight bay cabinets available. All cabinets come with a 25-50 pin Mac system cable and a power cable. 1 year warranty on all cabinets.	
Multi Bay Rack Mount 5.25" and 3.5" cabinets available	$CALL
Two, four, six, and eight bay cabinets available.. All cabinets come with a Mac system cable and a power cable. 1 year warranty on all cabinets.	

HOT! SPECIALS

Quantum 420 MB	*$149*	*$209*
4500RPM, 11 ms seek, 128K cache, 3 year warranty		
Quantum530 MB	*$165*	*$225*
8 ms Seek 5400 RPM,512K Buffer 5 Year Warranty		
Conner 1060 MB CFP1060	*$255*	*$315*
5400RPM, 9 ms seek,512K Buffer, 5 year warranty		
PDI 2.2GB Ultra XP	*$525*	*$585*
32170, 5400RPM, 512K Buffer, 8ms seek, 5 year warranty		
Quantum Atlas 4 GB	*$925*	*$985*
Q34300, 7200, 7.9 ms seek, 2048K cache, 5 year warranty		
Seagate 9.0GB	*$1925*	*$2025*
ST410800, 5400RPM, 11ms seek, 1024K cache, 5 year warranty.		

CD ROM & CD WRITERS

Pioneer 4 x 6 Disk CD ROM Changer	$375
Toshiba 4x CD ROM *140 MS Seek*	$199
Toshiba 6x CD ROM 102 MS seek256 K Cache	$295
Panasonic PD4 x/650MB ***NEW!*** *4 x CD ROM & 650MB Optical Drive in one!*	$625
Yamaha 4x CD Writer CDE100 4x CD writer•Multisession•Selectable Speed	$1645
Pioneer 4x CD Writer DW-S114X 4x CD writer/Reader•1024K Buffer•Multisession	$1655
Pinnacle **RCD 5040 2 x CD Writer** Combination 2x CD Writer/4x CD ROM 1MB Cache	$1199
Pinnacle Vertex 2.6**GB Optical** 17 MS Seek, 1024K Cache, ISO /ANSI Standard	$1279

All CD Writers come complete with 1 piece of media and Toast Pro software.

AV SPEED•PRODIRECT PRICES•
90 DAY PERFORMANCE GUARANTEE!

•INDUSTRY LEADING IBM PATENTED MR HEAD TECHNOLOGY PRODUCES THE BEST TRANSFER RATES AVAILABLE TODAY!
•IDEAL FOR YOUR MOST INTENSE AV OR DTP NEEDS...AN IDEAL SCRATCH DISK
•1,000,000 HOURS MEAN TIME BETWEEN FAILURE , 5 YEAR WARRANTY, 1 YEAR ADVANCE EXCHANGE WARRANTY... NEVER HAVE ANY DOWN TIME
• TRUE 7200 RPM SPEED, NOT SIMULATED SPEED LIKE OTHERS' IMITATIONS.

540 MB IBM *DESKSTAR*
•9 ms Seek •5400 RPM
•128K Buffer •5 Year Warranty
$155 INT. ***$215*** EXT.

1080 MB IBM *STARFIRE*
•8 ms Seek •7200 RPM
•512K Buffer •5 Year Warranty
$279 INT. ***$339*** EXT.

2.2 GB *ULTRA XP*
•8 ms Seek•7200 RPM
•512KBuffer •5Yr.War.
•MR Head Technology
All drives come preformatted with FWB for Maximum performance in AV and DTP environments.
$525 Int $585 Ext

4.2 GB *ULTRA XP*
•8 ms Seek•7200 RPM
•512KBuffer •5Yr.War.
•MR Head Technology
All drives come preformatted with FWB for Maximum performance in AV and DTP environments.
$895 Int $955 Ext

NEW!

CALL FOR OUR NEW DATA SUPPLIES CATALOG

INK Jet/Laser Supplies
American Inkjet
Apple
Canon
Epson
Hewlett Packard
IBM
ImagePlus
Renewable Resources
Texas Instruments

Magnetic Media
Diskettes
3M
Bulk/General
Fuji
Maxell
Sony
Verbatim

GUARANTEED LOWEST PRICES ON ALL DATA SUPPLIES!

Optical /CD-R
3M
Fuji
Hewlett Packard
Panasonic
Philips
Pioneer
Plasmon
Ricoh
Sony
Verbatim

Streamer Cassettes/ Audio/Video
Maxell
Sony

QIC Wide /DAT Tapes
Removable Cartridges
DAT Tapes (4mm & 8mm)

Quantum

420 MB			$149	$209
14 ms Seek	4500 RPM	128K Buffer	3 Year Warranty	
535 MB *Performance !*			175	235
9 ms Seek	5400 RPM	512K Buffer	5 Year Warranty	
850 MB *Value!*			195	255
14 ms Seek	4500 RPM	128K Buffer	3 Year Warranty	
1080 MB *Fireball*			255	315
10ms Seek	5400 RPM	128K Buffer	3 Year Warranty	
1280 MB *Fireball II*			285	345
10ms Seek	5400 RPM	128K Buffer	5 Year Warranty	
2.2 GB Saturn			545	605
8.5ms Seek	5400 RPM	512K Buffer	5 Year Warranty	
2.0 GB Atlas			655	715
8ms Seek	7200 RPM	1024K Buffer	5 Year Warranty	
4200 MB Grand Prix			895	955
8.6 ms Seek	7200 RPM	512K Buffer	5 Year Warranty	
4.3 GB Atlas			955	1015
7.9ms Seek	7200 RPM	2048K Buffer	5 Year Warranty	

Fast & Wide SCSI AV Drives

2.0 GB Atlas			735	795
8ms Seek	7200 RPM	1024K Buffer	5 Year Warranty	
4.3 GB Atlas			1035	1095
7.9ms Seek	7200 RPM	2048K Buffer	5 Year Warranty	

90 Day Performance Guarantee on all Hard Drives... Call

CONNER

1060 MB			$255	$315
9 ms Seek	5400 RPM	512 KBuffer	5 Year Warranty	
2.1 GB	**C2105**		645	705
9 ms Seek	5400 RPM	512K Buffer	5 Year Warranty	
2.1 GB	**C2107S**		725	785
8 ms Seek	7200 RPM	512K Buffer	5Year Warranty	
4.3 GB	**C4207**		950	1010
8 ms Seek	7200 RPM	512K Buffer	5Year Warranty	

ProDirect, Inc. 6824 Washington Avenue South, Eden Prairie, MN 55344

8:00am-7:00pm (CST) Mon.-Fri.
10:00 am- 3:00 pm Saturday

All prices are subject to change without notice. Returned orders are subject to restocking fee. International customers pay all shipping charges. All shipping are non-refundable. To return merchandise call for an RMA number. All RMAs returned within 10 business days of issuance. Customers are responsible for sh charges to return product.

VISA MasterCard DISCOVER NOVUS AMERICAN EXPRESS Cards

CALL MACXTRA NOW!

1-800-553-4230

FAX your order: 206-746-5324 International calls: 206-746-3803

MAC Xtra DISCOUNTS

PUZZLED BY HOW TO ENERGIZE YOUR MAC?

MEMORY!

LIFETIME WARRANTY

STANDARD 30-PIN SIMMS

FOR PLUS, SE, SE 30, CLASSIC/II/COLOR, LC,/LCII, PERF. 200/400-430/600, Q 900/950, MAC II, IIX, IICX, IISI, IICI, IIFX, IIVX, IIVI.

4MB 80NS $71!

1MB 100NS $24
1MB 80/70NS 24/33
2MB 80/70NS 44/45
4MB 80NS/70NS ..... 71/75 ✓
8MB 70NS 270
16MB 70NS 455

4mb PAL SIMMs for II/IIx
4MB 80NS $134

64-pin SIMMs for IIfx
1MB 80NS $38
4MB 70NS 154
8MB 70NS ..... 303 ✓
16MB 70NS 520

PC SIMMS
1MB 70NS $29
4MB 70NS 130

72-PIN SIMMS

FOR Q 605/630, 610, 650, 700, 800/840AV, LCIII/475/630, PERF. 450-560/575 & 6115CD, PMAC 61/71/8100, WS 80/60/95/6150/81/ 9150.

4MB 70NS/60NS $54/57
8MB 70NS/60NS ..119/124 ✓
16MB 70NS/60NS .. 264/269
32MB 60NS 510

8MB 72-pin 70ns $119!

PC SIMMS (72-PIN)
4MB 70NS $87
8MB 70NS 187
16MB 70NS 375
32MB 70NS 875

168-PIN DIMMS

FOR PM 9500, 8500, 7500, 7200

16MB 60NS DIMM $243!

4MB $124
8MB 130
16MB ..... 243 ✓
32MB 489
64MB 1198
ALL 60NS!

POWERBOOK SERIES

PB5300
8MB ... $218 12MB ... 320
16MB .. 408 ✓ 32MB ... 827

PB2300
4MB .. $157 8MB 283
16MB .. 490 20MB ... 550
32MB . 870 36MB ... 795

PB190 SERIES
4MB ... $129 8MB ... 290
12MB .... 299 16MB .. 599
32MB ... 929 **ALL 70NS!**

PB500 SERIES
4MB .... $131 **8MB ... 267** ✓
16MB .... 425 32MB ... 847

PB DUO 210/230
4MB $157 8MB 259
12MB 443 14MB 453
20MB .... 777 28MB.. 897

FPU'S/MATH COPROCESSOR/ VRAM/CACHE

CENTRIS FPU 25MHZ ... $186
FPU 33MHZ DUO/P600 51
FPU COL. CLASSIC 16MHz .. 49
LC575 33MHz FPU 238
LCIII FPU 25 MHz 238

POWERMAC 6100, 7100, 8100 VRAM/CACHE

256K 80NS VRAM $17
512K VRAM 22
256K CACHE 70
512K CACHE 279
1MB CACHE 789

POWERMAC 72/75/85/9500 VRAM/CACHE

1MB VRAM 72/75/8500 ... $55
2MB VRAM 9500 227
256K CACHE DIMM ... 109
512K CACHE DIMM ... 185

POWERBOOK ACCESSORIES

BATTERIES
VST PB5300 BATTERY, CHARGER, AC ADAPTER ... $319
VST PB2300 INT. TYPE III 97
VST PB500 INT. BATTERY .. 125

HARD DRIVES
VST EXP. BAY HARD DRIVE 540/810MB/1.2GB ... $482/615/769

MODEMS
GLOBAL VILLAGE POWERPORT PLATINUM 28.8 V.34 ..... $337
SUPRA 14.4/28.8 PB 165/189
MEGAHERTZ CRUISE CD 14.4 ... 135

SCANNERS & PRINTERS

Visioneer
PAPERPORT VX .. $295

Umax
POWERLOOK II . $1989
VISTA S-12
PRO+/LE+ .. 908/808
VISTA S-6 E 549

UMAX PowerLook II $1988!

Nikon
COOLSCAN EXTERNAL .. $1349
SUPER COOLSCAN 1999

Agfa
STUDIOSCAN IISI $795
ARCUS II 1941

Polaroid SPRINTSCAN .. $1555

Apple
COLOR STYLEWRITER PRO ... $415
LW 4/600 . 895 PERS. LW 320 . 809

Hewlett Packard
LASERJET 5L/5P PLUS/5SI .. $515/888/2860
DESKWRITER 660C 359

Epson
STYLUS COLOR PRO XL PRINTER .. $1795
PRO XL BLACK/COLOR CART. ... 19/35

Printer Supplies
HP DESKJET/WRITER COLOR CART. .. $29
HP DESKJET/WRITER BLACK CART . 26.50
HP LASERWRITER 4V/4MV TONER .. 152
HP LASWERWRITER 4/4M TONER .. 116
APPLE LW 12/600 BLACK TONER ... 95
APPLE LW 12/600 COLOR TONER *(CYAN, MAGENTA OR YELLOW)* .. 110 *(EACH)*
APPLE COLOR STYLEWRITER HIGH PERFORMANCE BLACK CART. 29
APPLE COLOR STYLEWRITER 2400 BLACK & COLOR CART. 44

CIRCLE **146** ON READER SERVICE CARD

MODEMS

Global Village
TELEPORT PLAT. 28.8 V.34 ..... $203
POWERPORT1XX PLAT.28.8 V.34 337
POWERPORT PLAT. PC CARD 28.8 .. 349
POWERPORT PLAT. PC CARD PRO .. 519

Supra
EXPRESS 28.8 EXT V.34 .... $159
14.4 EXPRESS 98
28.8 PB FAX/MODEM ... 187
28.8 V.34 S/R FAX MOD. .. 220

Motorola
ISDN BITSURFER $275

US Robotics
28.8 V.34 INTERNET BNDL .. $199
14.4 SPORTSTER EXT 117

Zoom
2400 BPS .. $65 V.FAST 28.8 .. 189
VFX 14.4 V.32BIS S/R FAX 169
VFXV 14.4 V.32BIS W/VOICE ... 148
14.4 EXTERNAL S/R V.42 79

DRIVES

Apple Ext. Drives
850MB $339
1.0GB 409
2.0GB 409/799

Syquest EZ135 $187!

Quantum
INT. AND EXT. DRIVES
1.2GBEXT. FIREBALL .. 359
850MB EXT. TRAILBLAZER .. 279
CAPELLA 2.2GB EXT. .. 759
ATLAS
4.3GB 8.6MN 1289

Rumi Syquest
200MB SYQUEST W/CART . $479
270MB SYQUEST W/CART . 479

NEC
6XE MULTI-SPIN
CD-ROM DRIVE $515
4XC 7-CHR
CD-ROM DRIVE ... 359
4X 4V INT.
CD-ROM DRIVE 176

Syquest
EZ135 W/CART. . $187
EZ135MB CART. ... 19

Iomega
ZIP DRIVE. $199
ZIP CART. 19.50
JAZ 1.0GB DRIVE 599
JAZ 1.0GB CART. .. 123

FWB
CD RECORDER/WRITER
2X $1349
4X 1969

MEDIA

Syquest

EZ135MB SYQUEST CART.	$19
EZ135MB SYQUEST CART. -10 PK..	180

THE ORIGINAL SYQUEST CARTRIDGE!

	1-4	5-9	10+
44MB 5.25"	$40	$39	$38
88MB 5.25"	$43	$42	$41
200MB 5.25"	$63		$62
270MB 3.5"	$49	$48	$47
105MB 3.5"	$55		$54

Sony
RECORDABLE CDROM 640MB 8
RECORDABLE CDROM 640MB 10 PK 73
3.5" 230MB OPTICAL/MAC ... $27/29
650MB OPTICAL 54
2.3GB/2.6GB OPTICAL 88/88

Verbatim
3.5" 128MB OPTICAL $21
3.5" 1230MB OPTICAL 28
RECORDABLE CDROM 640MB 8
RECORDABLE CDROM 640MB 10 PK 73
2SDD 3 1/2 10PK DISK 7.50
4MM/60M DATA CART 7
DATA 4MM DC 295 FT 9
DATA 8MM DC 367 FT 7
DC 2120 120MB QIC80 12

Iomega
ZIP 100 MB CART. $19.50
ZIP 100 MB CART. - 10 - PK ... 139
ZIP 100 MB CART. - 3 - PK 45
JAZ 1GB CART/5 PK 123/490
JAZ 540MB CART/5 PK 69/294

MONITORS & VIDEO

Monitors
APPLEVISION 1710AV $1069
NEC MULTISYNC XV15+/17+ .. 523/889
NEC MULTISYNC XE15 620
NEC MULTISYNC XE17 1099
NEC MULTISYNC XE21 1845
NEC MULTISYNC XP17/XP21 ... 1135/2140
WE ALSO CARRY SONY, NSA HITACHI, RADIUS MONITORS

Video
PREC. COL. PRO 24X/XK NUBUS .. $1159/825
RADIUS THUNDER IV
GX-1152/1360/1600 ..... 1635/1875/2040
RADIUS THUNDER 24 GT 490
ATI XCLAIM 4MB/2MB CARD 489/365
NUMBER NINE IMAGINE
128 PCI 4MB/8MB CARD 869/1149
IMSI TWIN TURBO 128 4MB/2MB CD .. 555/362

ACCELERATORS

66mhz PowerCard 601 $659!

Daystar
POWERPRO 601 80MHZ W/RAM CACHE .. $1441
POWERPRO 601 100MHZ W/CACHE 1231
TURBO 040 40MHZ W/CACHE ... 679
TURBO 040I 33MHZ W/CACHE NO FPU ... 605
TURBO 601 66MHZ FOR IICI, IISI W/ADAPTER .. 851
TURBO 601 66MHZ FOR IIVX, IIVI, P600 851
TURBO 601 100MHZ FOR IICI, IISI W/ADPTR .. 1165
TURBO 601 100MHZ FOR IIVX, IIVI, P600 1165
POWERCARD 601 100MHZ .. 946

POLICIES

PRICES SUBJECT TO CHANGE WITHOUT NOTICE
MAC XTRA - 1075 BELLEVUE WAY NE, STE. 114 BELLEVUE WA 98004

OVERNIGHT DEL. $7.50 AND UP, UPS GROUND $6 AND UP
RETURNS SUBJECT TO APPROVAL & RESTOCKING FEE

WE ACCEPT P.O.'S FROM FORTUNE 500 AND EDUCATIONAL INSTITUTIONS
OFFICE HOURS: M-F, 7AM TO 6PM; SAT., 9AM TO 4PM, PST
PHONE (206) 746-3803 FAX (206) 746-5324

UR 0796

Visist our Web Page at http:/www.directtech.com

DIRECTTech SYSTEMS INC.

CALL: 1-800-279-5520

MORE BYTES FOR YOUR BUCK! FROM YOUR #1 STORAGE VENDOR

Seagate

WEEKLY SPECIAL!

- *SEAGATE HAWK 4
- *4.3 GB USABLE STORAGE
- *9 MS SEEK TIME
- *5-YEAR WARRANTY
- *INTERNAL CONFIGURATION

$899.00

MICROPOLIS MICRODISK LT & LS

THE STACKABLE, REMOVABLE DRIVE SUBSYSTEM

Model #	Capacity
MDLT2100/AV	2.1 GB
MDLT4300/AV	4.3GB
MDLS9100/AV	9.1GB

NOW AVAILABLE IN FAST/WIDE CONFIGURATION. ASK ABOUT THE MICROPOLIS RAID 5 SOLUTION.

CALL

FOR LATEST PRICING AND CONFIGURATION. CIRCLE 55 ON READER SERVICE CARD

HARD DRIVES

ALL DRIVES ARE PREFORMATTED, TESTED AND PACKAGED WITH SCSI MANAGER 4.3 COMPATIBLE DRIVERS. EXTERNAL DRIVES INCLUDE CHOICE OF 25-50 OR 50-50 PIN CABLE.

Capacity	Model No.	Mechanism	Seek	Warranty	Internal	PHASER-I
420 MB	DT-420TB	Quantum	11ms	2 yrs	$150	$225
850 MB	DT-850TB	Quantum	11 ms	2 yrs	$199	$275
1.0 GB	DT-1080FB	Quantum	11ms	3 yrs	$269	$344
1.05 GB	DT-51080	Seagate NEW PRODUCT!	10 ms	3 yrs	$269	$344
1.05 GB	DT-31230	Seagate NEW LOW PRICE!	9.0 ms	5 yrs	$355	$430
2.0 GB	DT-4221	Micropolis NEW LOW PRICE!	8.0 ms	5 yrs	$595	$670
2.0 GB	DT-2490	Hewlett Packard	9.0 ms	5 yrs	$899	$999
2.1 GB	DT-32550	Seagate Barracuda IILP	8.0 ms	5 yrs	$705	$780
4.3 GB	DT-3243	Micropolis NEW LOW PRICE!	8.5 ms	5 yrs	$975	$1,050
4.3 GB	DT-15150	Seagate Barracuda NEW LOW PRICE!	8.0 ms	5 yrs	$1,199	$1,275
4.3 GB	DT-15230	Seagate Hawk 4 NEW PRODUCT!	9.0 ms	5 yrs	$899	$975
9.0 GB	DT-1991	Micropolis NEW LOW PRICE!	12 ms	5 yrs	$1,950	$2,050
9.0 GB	DT-410800	Seagate Elite 9 NEW LOW PRICE!	11 ms	5 yrs	$1,999	$2,099

AUDIO/VIDEO TUNED DRIVES

DIRECTTECH SYSTEMS IS AN AUTHORIZED A/V PARTNER WITH SEAGATE AND MICROPOLIS.

Capacity	Model No.	Mechanism	Seek	Warranty	Internal	PHASER-I
1.05 GB	DT-31230AV	Seagate	9 ms	5 yrs	$355	$430
2.0 GB	DT-4221AV	Micropolis NEW LOW PRICE!	8.5 ms	5 yrs	$650	$725
2.1 GB	DT-32550AV	Seagate Barracuda	8.0 ms	5 yrs	$705	$780
4.3 GB	DT-3243AV	Micropolis NEW LOW PRICE!	8.5 ms	5 yrs	$1,025	$1100
4.3 GB	DT-15150AV	Seagate Barracuda	8.0 ms	5 yrs	$1,199	$1,275
9.0 GB	DT-1991AV	Micropolis NEW LOW PRICE!	12 ms	5 yrs	$1999	$2,099
9.0 GB	DT-410800AV	Seagate Elite 9 NEW LOW PRICE!	11 ms	5 yrs	$1999	$2,099

FAST/WIDE SCSI DRIVES

MOST EFFECTIVE WHEN COMBINED WITH A FAST/WIDE ATTO BOARD. CALL FOR SPECIAL CONFIGURATIONS!

Capacity	Model No.	Mechanism	Warranty	Internal	PHASER-I
2.1 GB	DT-32550W	Seagate Barracuda 2LP Wide	5 yrs	$799	$899
2.1 GB	DT-4221W	Micropolis 4221Wide	5 yrs	$650	$750
4.3 GB	DT-15150W	Seagate Barracuda 4 Wide	5 yrs	$1,250	$1,350
4.3 GB	DT-3243W	Micropolis 3243Wide	5 yrs	$1,050	$1,150
9.0 GB	DT-1991W	Micropolis 1991Wide	5 yrs	$2,050	$CALL
9.0 GB	DT-1991AVW	Micropolis 1991AVWide	5 yrs	$2,100	$CALL
9.0 GB	DT-410800W	Seagate Elite 9 Wide	5 yrs	$2050	$CALL

DISK ARRAYS/RAID

MEDIA 100 * RADIUS * DIGITAL VIDEO * TARGA 2000 ARRAYS INCLUDE - ATTO CARD, REMUS & 2 FAST/WIDE DRIVES

Capacity	Model No.	Mechanism	Seek	Warranty	EXTERNAL
4.0 GB	DT-32550W-2	Seagate - Fast/Wide Barracuda 2LP (2)	4.0 ms	5 yrs	$CALL
8.0 GB	DT-3243WAV	Micropolis - Fast/Wide 3243AV (2)	4.0 ms	5 yrs	$CALL
18.0 GB	DT-1991WAV	Micropolis - Fast/Wide 1991AV (2)	4.5 ms	5 yrs	$CALL
CALL FOR MORE INFORMATION ON DIRECTTECH DISK ARRAYS!					
ATTO Silicon Express IV	Nubus Fast/Wide Accelerator				$CALL
ATTO Express PCI	Dual Channel - PCI -Fast/Wide				$CALL
ATTO Express PCI	Single Channel - PCI-Fast/Wide				$CALL

SYQUEST

INCLUDES ANUBIS FORMATTING SOFTWARE AND ONE CARTRIDGE

Capacity	Model No.	Internal	PHASER-I
88 MB	SQ5110C	$299	$350
200 MB	SQ5200	$410	$460
270 MB	SQ3270	$410	$460

CD ROM RECORDABLE

JVC Personal Archiver (2X)	$1,165
YAMAHA CD Recorder (4X)	$1,799

JVC External CD Recorders include cables, terminator, 2 Blank CD's and Software.

NEW JVC PRICING

TAPE

INCLUDES A FREE COPY OF RETROSPECT AND ONE TAPE

Capacity	Model No.	Format	PHASER-I
2 GB	HP-35470	4mm	$950
4-8 GB	Sony-5000	DDS-2	$999
4-8 GB	HP-1533A	DDS-2	$1,299
5-10 GB	Exabyte-8505	8mm	$2,199
15-30 GB	DLT-2000XT	DLT	$4,399

OPTICAL

INCLUDES ANUBIS FORMATTING SOFTWARE AND ONE CARTRIDGE

Capacity	Model No.	Seek	PHASER-I
230 mb	Fujitsu	30 ms	$675
1.3 GB	HP-C1716	23 ms	$2,099
2.6 GB	Maxoptix	18 ms	$2,199

MEDIA

Type	Price
Syquest 44	$40
Syquest 88	$46
Syquest 105	$54
Syquest 200	$76
Syquest 270	$60
Optical 128 MB	$22
Optical 230 MB	$30
Optical 1.0 GB	$100
Optical 1.3 GB	$90

CALL FOR QUANTITY PRICING!

MICROPOLIS
Seagate
HEWLETT PACKARD
Quantum
SyQuest
JVC

Directtech now offers Data Recovery Services! Call for Price Quotes

Ask about our WARP Policy (Warranty Advanced Replacement Policy.)

VISA MasterCard AMERICAN EXPRESS

No charge for Visa, Mastercard or Amex

Government, Corporate, and University P.O.s Welcome!

- 30-day money-back guarantee on all drives.
- Refused orders subject to restocking fee.
- RMA No. required for all returns.

Prices, terms, and availability are subject to change without notice.

All tradenames and trademarks are the property of their respective companies.

INTERNATIONAL ORDERS CALL: PHONE: (612) 941-2616
FAX ORDERS: (612) 942-0430

NEW OFFICE HOURS!
M-F 8A.M. -7 P.M.
SAT. 10 A.M. -2 P.M.

CALL: 1-800-279-5520

DirectTech Systems, Inc. 7625 Golden Triangle Drive, Suite R Eden Prairie, MN 55344

MARKETPLACE

MacUser

Use MacUser XPRESSINFO to get More Information From Advertisers FAST!

A phone call is the fastest way to get information from a MacUser Marketplace advertiser. But if you want information fast and you don't want to call, MacUser Xpress Info is the fast way to get more product information. Go to **http://www.zdnet.com/marketplace/mcu** on the Web. Specify which issue of MacUser you have and click on the boxes next to the names of all the companies you want information from. Then fill in the contact information and click the submit button. An E-mail message is immediately sent to every advertiser you checked, telling them you want more information.

If you need information fast, you should get it fast!

	Premier	Classified
HARDWARE		
Accelerator Boards		
Bar Coding		168
Boards/Components/Chips	160	168
Computer Systems	160	169
Disk Drives	162	
General		
Input/Output Devices		
Multi-Media		
Peripherals	163	178
Powerbook Products	162	
SOFTWARE		
Bar Coding	163	178
Business		182
CD-Rom	163	
Computer Insurance		
Communications/Networking	164	
Data Conversion/Recovery		
Education	164	
Entertainment/Games		
Foreign Languages/Translation		
General	166	180
Graphics/Fonts		
Medical/Dental		
Multi-Media		
Music/Midi	166	180
Programming Tools/Languages		
Religion Scientific/Engineering		
Adult		183
SERVICES		
Online Services	167	
Computer Insurance		181
Data Conversion/Data Recovery		
Digital Output		
Disk Duplication		180
Repair Services		183
MISCELLANEOUS		
Accessories		181
Astrology		183
Supplies		179

ACCOUNT REPRESENTATIVES

Brian Gleason
212-503-5153
East Coast

Annuradha Kumar
212-503-3802
Northwest

Alexandra D'Anna
212-503-5941
Midwest

Gina D'Andrea
212-503-5863
Southwest

CENTRAL ADVERTISING STAFF

Robert A. Bader
Vice President, Central Advertising

Paul A. Fusco
Director, Sales & Marketing

Bill Herbst
Sales Manager

AD SALES INFORMATION

One Park Avenue, Third Floor
New York, NY 10016
(212) 503-5115 or (800) 825-4ADS

Eileen Convery
Sr. Production Coordinator

Stephanie Buckhout
Sr. Advertising Coordinator

MEMORY UPGRADES

PERIPHERAL OUTLET, Inc.

We are one of the largest memory distributors in the U.S. (since 1986). We were the first to develop 8, 16, 32, and 64 MB DIMMs for the new PCI PowerMacs. We have 72 pin SIMMs for PowerMacs and Quadras, 30 pin SIMMs, and memory upgrades for Macintosh PowerBooks, Duos and Newtons. We also sell processor and coprocessor upgrades, accelerators, video RAM upgrades and cache cards. We offer toll free tech support. Lifetime warranty on memory products. Buy *your* memory from the best!

Prices quoted may change without notice. Visa, MasterCard, American Express, and Discover accepted. We accept POs from Educational, Government, and Fortune 500 organizations. Open 7AM-7PM CST Monday-Thursday, 7AM-6PM CST Friday. Order by 6:30PM CST for same day delivery *(some restrictions apply)*. We ship overnight for as low as $8 in the U.S.

PERIPHERAL OUTLET, Inc.
327 East 14th, PO Box 2329
Ada, Oklahoma 74820
405/332-6581
FAX 405/436-2245
AppleLink-PERIPHERAL

800/640-0733

XPRESSINFO or CIRCLE 171 ON READER SERVICE CARD

NEW! REVOLUTIONARY MEMORY UPGRADE SOFTWARE

With OptiMem RAM Charger™ you open more applications and documents, on any Mac running System 7—even if memory is also expanded by VM or RAM Doubler.™

70% OFF!
One-time limited offer: We're changing our packaging, so for this month only (while limited supplies last), we are offering RAM Charger for only **$29.95** To order in the US call **800-JUMP-MAC** Call 412-681-2692 outside US or for tech info.

Check out all of the rave reviews:

MACWORLD MW ★★★★★ *"The Mac OS ought to work this way already. Until it does, there's OptiMem RAM Charger."* **MacWorld**

MacWEEK ◆◆◆◆ *"...offering much better ease of use, greater control over individual applications' memory parameters and an overall improvement in reliability."* **MacWEEK**

MAC HOME JOURNAL 🍎🍎🍎🍎 *"...memory errors occurred far less frequently ...had a stabilizing effect on the operating system."* **Home Office Computing**

MacSense *"...should be part of the system software."* **MacWEEK**

Home Office Computing ★★★★ of 4 *"OptiMem RAM Charger is the steal of the year."* **MacSense**

Jump Development Group
1228 Malvern Ave, Pittsburgh, PA 15217
E-mail: JumpDevGrp@aol.com
http://www.wp.com/jump

Fax: 412-681-2163
Phone: 412-681-2692
Recorded & Fax-back Info: 412-681-0544
US Sales: *800-JUMP-MAC* (586-7622)

OptiMem. **RAM CHARGER**

NOT JUST MORE RAM, MORE POWER WHERE YOU NEED IT.

JUMP DEVELOPMENT GROUP

XPRESSINFO or CIRCLE 172 ON READER SERVICE CARD

Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu

PREMIER
Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu

POWERMAC ACCELERATION

DVC EQUALIZER

6100 up to 90MHz
7100 up to 90MHz
8100/100 up to 126MHz
Performa 611x up to 90MHz
$79.95
16 Dial-Selectable Speed Settings

Do not be misled. With thousands sold, accept only the DVC Equalizer™!

8500/9500 up to 175MHz
$149
32 Dial-Selectable Speed Settings

LED Installation Light • 30 day MBG • No Permanent Modifications

L2 CACHE CARDS

7200/7500/8500
256K.....$99
512K.....$149
acceleration certified
6100/7100/8100/P611x
256K.....$99
512K.....$259
1024K.....$299

7200/7500/8500 VRAM 1Mb.....$65
DIMM Saver/R (SIMM to DIMM converter)...$49
DIMM's and SIMM's.....$CALL

FedEx 800-889-5137 DVC HARDWARE
BUS. 417-889-5113 • FAX 417-889-7980 • DVCBOOSTER@AOL.COM

XPRESSINFO or CIRCLE 173 ON READER SERVICE CARD

Snow
compact
economical

IceQub
most enhanced
extra cool

Pearl
air filter
elegant

Telephone (800) 966-0188 . Fax (714) 630-6816
World Wide Web http://www.microhut.com
Information product@microhut.com

Micro Hut

CIRCLE 174 ON READER SERVICE CARD

Memory
Buy, Sell or Trade

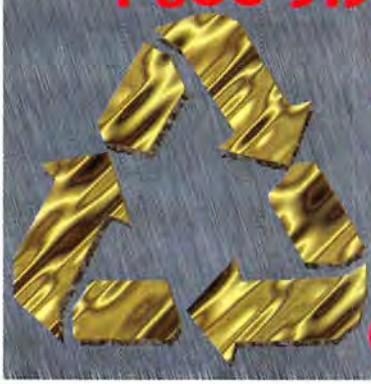
LOWEST SIMM PRICES EVER!

8MB DIMM $179
4x32 60ns $339
2x8 80ns $37
16x8 70ns $299
PB 140 6MB $149
Clip Accelerators $49

We Buy all SIMMs and DIMMS, from 256Kb to 128Mb!

Trade-In, and receive up to a 5% bonus.

MEMORY TRADERS
1-800-315-7807



1201 North 19th St.
Suite 1201
Arlington, VA 22209
703-243-4006
FAX 703-522-6626

Lifetime Guarantee

Prices subject to change on the whim of the market.

MasterCard VISA

CIRCLE 175 ON READER SERVICE CARD

BEST BUYS TO RUN YOUR MAC FASTER

Accelerate Your Mac IIci, IIsi & LC/LC II to 68040 Speed

Sonnet Presto 040 80/40 MHz accelerators increase Mac IIci, IIsi performance up to 600%. Run an LC/LC II 4.5x as fast with the Presto 040 LC 50/25 MHz card. System 7.5 compatible. Use PDS slot.

		w/FPU
Presto 040 LC, LC II	$199	$299
Presto 040 for Mac IIci, IIsi*	$299	$399
Presto IIci, IIsi w/128K cache	$399	$499

*Adapter req'd $49

Fastest Quadra Ever! Plug in a 100/50 MHz 68040 Board

Double speed with full compatibility. Works in Q/C 610, 650, 660AV, 700, 900. 80/40MHz unit for Centris 610.

80/40 MHz...$199 w/FPU.....$299
100/50 MHz w/FPU.....$399

Power Mac Cache/FPU

Performa 5400 256K DIMM.....$CALL
Performa 5260 256K DIMM.....$CALL
PM 6100-8500 256K..$89 512K..$135
Power FPU software will run 68K FPU applications on Power PC FPU.....$75

Give New Life to Older Macs!!!

Give your older Mac more muscle. All Sonnet Allegros come equipped with a fast 68030. Some models also have FPUs, cache and/or additional SIMM slots.

33MHz SE	4x30-pin SIMM slots	$189
33MHz Mac II	Supports RAM Doubler	$189
33MHz Mac IIx	Plugs into CPU socket	$189
33MHz LC II	Ind. FPU & 16K cache	$149
33MHz Color Classic	Ind. FPU & 16K cache	$149
NuBus Adapter 660AV/IIsi		$99/$149

Add Math Coprocessor to 68040 Macs

If you use CAD, Excel, or rendering programs, you will speed through applications like never before.

25MHz C610,C650,Q610,LC475,P47X $149*
33MHz LC575,LC630,P57X,P63X.....$199*
33MHz PB190,PB52X,PB54X,Duo 280.....$299
* with LC040 exchange 68882 upgrades from $49.

SONNET TECHNOLOGIES, INC., 18004 Sky Park Circle
Irvine, California 92714, 714-261-2800 Fax 261-2461
Gov't./Corp./Education P.O.
E-Mail: sales@sonnettech.com
800-786-6260

CLOSE

"MacUser readers know what they want and need less hand holding. They're buying and they're easier to close. We definitely get our money's worth from our Marketplace advertising."

—Richard Harold
President, Shreve Systems

PUT YOUR AD HERE AND WRITE YOUR OWN MACUSER SUCCESS STORY. START ADVERTISING NOW! CALL 800-825-4237 TODAY!

Get More Information FASTER!

Don't Wait for the Mail.

Get Product Information Fast Via the World Wide Web

When you need immediate product information from a MacUser Marketplace advertiser, nothing beats a phone call. Almost every advertiser has an 800 number and every one has a trained staff ready and waiting to answer your call.

But what if you want information fast and you don't want to call? Do you send a postcard by regular mail? Of course not! Today, the fast, easy way to get more information is to use the World Wide Web and e-mail.

When you use MacUser Xpress Info on MacUser's World Wide Web site your request for product information is instantly sent to MacUser Marketplace advertisers.

Go To Xpress Info

Look for "Xpress Info" below MacUser Marketplace ads. That means you can request more information from the advertiser through MacUser Xpress Info. Simply activate your Web browser and go to http://www.zdnet.com/marketplace/mcu. This will take you straight to MacUser Xpress Info at the MacUser Web site where you'll specify which issue you have and if you want to see company names listed alphabetically or by reader service number.

Click on the boxes next to the

names of all the companies you want product information from. At the bottom of the page is a form for contact information. Be sure to include your e-mail address and fax number so advertisers can respond quickly. And, if you answer the questions about your purchase plans, they can better tailor their response to you.

Now your request is ready to go. Click on the Submit button and an e-mail message is sent to every advertiser you checked, telling them that you've read their MacUser Marketplace ad and want more information about their products.

Get it FAST!

So don't wait for the mail. Add http://www.zdnet.com/marketplace/mcu to your Web browser's bookmark. Then when you want more product information from a MacUser Marketplace

advertiser go right to MacUser Xpress Info and get the information fast.

If you need product information fast, you should get it fast!

If you haven't been on the Web yet, check out the ads for online services and Internet access in this issue. Look under Telecommunications in the Product Index and Online Services in the Marketplace Index.

MacUser XPRESSINFO

PREMIER Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu

PREMIER
Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu

BEST PRICES ON THE NEW POWER MACS,

MAC NET

Prices Simply Unbeatable!

MORE POWERFUL THAN EVER!

CALL US NOW!
1-800-404-9976

NEW POWER MACS

Power Mac 9500[150]16/2GB/CD	CALL
Power Mac 8500[150]16/2GB/CD	CALL
Power Mac 7600[120] 16/1.2GB/CD	CALL
Power Mac 7200[120] 16/1.2GB/CD	CALL
Power Mac 8500[120] 16/1GB/CD	3,099
Power Mac 7200[90] 8/500/CD	1,099
Power Mac 7200[75] 8/500/CD	999

PERFORMAS & POWERBOOKS

Performa 6300[75] 8/1.2GB/CD/FAX	1,899
Performa 6200[75] 8/1GB/CD/FAX*	1,090
Performa 5300[75] 8/1.2GB/CD/FAX	1,999
Performa 630[75] 5/500/Keyboard/Monitor	949
Power Book 5300[100] 8/500	1,199
Power Book 5300[100] CS 8/500	1,899
Power Book 5300[100] C 16/750	3,399

PERIPHERALS

Laserwriter Color	5,399
Stylewriter 2500 -NEW	349
Stylewriter 1500	289
Stylewriter 2200 Color	259
Laserwriter 4/600	749
Apple Monitor 14"- NEW	269
Apple Monitor 15"	359
Apple Monitor 17"- NEW	649
Apple Monitor 20"	1,799
Apple Keyboard	75
Geoport	109
Quick Take 150	649

HP PRINTERS

Deskwriter 600	249
Deskwriter 660C	299
Desk Jet 850C	399
Laser Jet 5MP	1,049
Laser Jet 4M Plus	1,849

SyQuest external

CARTRIDGE	DRIVE
88MB	199
200MB	329
270MB	329
EZ 135MB	179
ZIP - IOMEGA	179

SCANNERS

MICROTEK

E6	399
E6 PRO	669
PAGE WIZ	179
TRANSP. ADAPTER	259

UMAX

VISTA S6E	369
VISTA S6E PRO	569
VISTA S8	649
VISTA S12	749

All products are fully warranted. Dealers inquires welcome.

*CPU Only

CIRCLE 176 ON READER SERVICE CARD

New! Expansion Bay 230MB Magneto-Optical Drive

VST Technologies' Expansion Bay Magneto-Optical Drive is the perfect portable backup solution for PowerBook 190 & 5300 users.

Each removable Magneto-Optical disk holds up to 230MB of data, providing virtually limitless storage and archiving space! Plug-N-Play simplicity.

- Hot swappable — no need to sleep, shutdown or restart
- Uses ISO standard 128MB and 230MB MO disks — compatible with desktop MO SCSI drives
- Disks offer unlimited read and rewrite — provides reliable, inexpensive archiving of your most valuable files
- *Part # MOD5000 — $449.95 MSRP*

Also for PowerBook 190s & 5300s

Hot Swappable Expansion Bay Hard Drives

Expand your PowerBook 190/5300 with up to1.2GB of extra storage space.

540MB Hard Drive (EBHD540)	MSRP $549.95
810MB Hard Drive (EBHD810)	MSRP $699.95
1.2 GB Hard Drive (EBHD1200)	MSRP $879.95

VST Technologies
1620 Sudbury Road, Ste. 3 • Concord, MA 01742
(508) 287-4600 • (508) 287-4068 Fax

VST TECHNOLOGIES

XPRESSINFO or CIRCLE 177 ON READER SERVICE CARD

if you were thinking of expanding your storage or adding a CD-ROM, you might want to give us a call.

We specialize in expansion housing, from one 3-1/2" portable, or one 5-1/4" "Mac" ZFP all the way up to eighteen 5-1/4"HH.

WX525F-7B
WX525F-2B
WX525F-4B
WX525F
Special $55

CALL US FOR A PORTFOLIO TO ORDER 800-75-WETEX
OUTSIDE CALIFORNIA 93839

WETEX INTERNATIONAL (USA) CORP.
624 S. Hambledon Ave., City of Industry, CA 91744
Tel: 818-854-6600, Fax: 818-854-6611

CIRCLE 178 ON READER SERVICE CARD

GROW

"This is a great place to grow a business. I don't see how anyone could be selling Mac products direct and not advertise in MacUser."

—Mark Nimochs
MacAttack

PUT YOUR AD HERE AND WRITE YOUR OWN MACUSER SUCCESS STORY. START ADVERTISING NOW! CALL 800-825-4237 TODAY!

Add a second keyboard, monitor and mouse up to 250 feet away from your Macintosh!

- Supports most Macintosh computers with detachable monitors
- Compatible with Macintosh Hi-Res video
- Macintosh mouse support standard at both local and remote workstations
- Switch selectable privacy mode
- No software required for operation

MAC COMMANDER™

Cybex Computer Products Corporation
4912 Research Drive Huntsville Al 35805 USA
1-800-932-9239 (205) 430-4030 fax
http://www.cybex.com

CYBEX COMPUTER PRODUCTS CORPORATION

Mac and Macintosh are trademarks of Apple Computer, Inc. Cybex and Companion are trademarks of Cybex Computer Products Corporation.

Dealer Program Available **Made in USA**

XPRESSINFO or CIRCLE 179 ON READER SERVICE CARD

High Performance DLT Backup

Uses Quantum DLT-2000XT Drive Rated at 2.5 MB/sec and Retrospect

30 GB DLT External Backup $3395

Disk Arrays For Digital Video

Systems to 16 GB UltraSCSI Wide-40 Capable

2 GB	External	$1099
4 GB	External	2445
8 GB	External	3395
16 GB	External	6295

Wide Disk Arrays Shipped With ATTO SiliconExpress IV NuBus or Adaptec 2940UW PCI Host Adapter and Remus Software

Call ProMax For Fully Configured Macintosh Digital Video Editing Systems - Solutions by Radius, Truevision, and Data Translations

"Always a pleasure to buy a product that works perfectly the first time, and every time". - M.N., Portland, Oregon

JAZ Arrays + CD-R Systems

Iomega JAZ: 1 GB-12 ms-5400 RPM-Winchester • Philips CD-R: 2ˣ Recorder - 4ˣ Reader + Toast Pro

1 GB JAZ Internal (Includes a Cartridge and Bezel For 840-8100-8500-9500)	$545	2 GB JAZ Array (With Fast SCSI-2 Card and Remus Light)	$1295 (1745)
1 GB JAZ External (Includes Cartridge, ProMax Cabinet With Built-in Power Supply)	595	4 GB JAZ Array (With Fast SCSI-2 Card and Remus Light)	2395 ($2845)
2ˣ x 4ˣ CD-R External (Philips CDD-2000 Third Generation CD-R System)	995	2ˣ x 4ˣ CD-R+JAZ (Philips CDD-2000 Plus JAZ Drive Combination)	1495
2ˣ x 4ˣ CD-R Internal	895	CD-R Media (10 Pack Sony or Mitsui)	7.99 ea

JAZ Systems Complete With Cartridge and Lido 7 Software • JAZ Arrays Include Lido 7 Software • CD-R Systems Include Toast Pro

Call Now For Additional Information • Sales: 1-800-977-6629 or Tel: 714-727-3977

FAX: 714-727-3546 • promaxtec@aol.com • Web Page: http://www.scsidisk.com

proMAX **ProMax Technology**

16 Technology Drive · #106 • Irvine, CA 92718

Prices subject to change without notice. Trade names are the property of their respective owners.

XPRESSINFO or CIRCLE 181 ON READER SERVICE CARD

Käblit™ Security

NOW!

STOP COMPUTER THEFT!

IN THE OFFICE — ON THE ROAD

- Secure computer or Powerbook™ to desk, table, etc.
- Protect data
- Lifetime warranty

MacKäblit™ II - List $49.95

Fixed Location

Käblit™ T-Lock - List $39.95

Any Location

Quick And Easy To Install
Travels With Your Powerbook™

Padlock Security Provided by Master® Lock

Secure-It

Order now — Call 800-451-7592...

18 Maple Court, East Longmeadow, MA 01028, USA phone 413-525-7039

The particular Master® Lock Trademarks used are trademarks of the Master® Lock Company and are used by Secure-It, Inc. under license.

CIRCLE 180 ON READER SERVICE CARD

Bar Code Solutions

Videx data collection equipment is designed for work on the go. Cast-metal cases protect the products and allow them to work reliably in harsh environments.

Videx Products...Built Tough...Built to Last!

Videx 1105 N.E. Circle Blvd., Corvallis, OR 97330
541-758-0521 • Fax 541-752-5285 • http://www.videx.com

Videx, OmniWand, FlexWand, DuraWand, and TouchProbe are trademarks of Videx, Inc. CCO581

Diamonds 3D

A New Dimension in AWARD-WINNING, PULSE-POUNDING Arcade Game EXCITEMENT!

Few Mac games were ever more popular than the original Diamonds (MacWorld's 1993 Arcade Game of the Year). Now you can play its incredible sequel! It's like a three-dimensional breakout. A totally new experience! The ball doesn't bounce up and down, it comes right at you! Plus, just like Diamonds, there are paint bricks, lock bricks, magic bricks and more. Definitely one of the most exciting and challenging games ever! $24.22

Lots more. —Call for a free catalog.

Available now from your favorite reseller, or by calling 800-229-2714

Please add $2.95 per order for shipping and handling if ordering by phone.

MACSoft WizardWorks Group, Inc.
3850 Annapolis Lane, Suite 100
Plymouth, MN 55447 • 612/559-5140

MacUser Gold ★★★★ JUNE 1996

XPRESSINFO or CIRCLE 173 ON READER SERVICE CARD

PREMIER Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu

Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu PREMIER

CONNECT WINDOWS & WINDOWS 95 TO APPLETALK

INSTANT PC TO Mac NETWORKING

Everything you need to connect your PC to a Mac network

- PCTalk is the easiest, most affordable way to network PCs and Macs
- Print from Windows to LaserWriters, DeskWriters, and other AppleTalk printers
- Share hard drives, CD-ROMs, and data between PCs and Macs in both directions
- Kit includes Miramar Personal MACLAN Connect software

PCTalk Personal MACLAN Kit $299

COMPUSA

Apexx TECHNOLOGY, INC.

Call 1-800-767-4858

http://www.apexxtech.com

XPRESSINFO or CIRCLE 183 ON READER SERVICE CARD

Hang Ten with MachTen

Make Your Macintosh An Internet Server

MachTen... gives every Macintosh from Classics to PowerMacs:

1. Unlimited Web 'Home' Pages
2. Unlimited TCP Connections
3. Unlimited Mail Accounts
4. Unlimited Internet Addresses
5. Unlimited Domain Names
6. Domain Name Service (DNS)
7. POP Mail Service
8. Mac/UNIX File Sharing
9. Mac/UNIX Printer Sharing
10. Unlimited Possibilities

Mac OS and UNIX on a single machine: *The Best Of Both Worlds.*

For more information, or to order call 1-800-6-MACH-10

Internet: info@tenon.com http://www.tenon.com

TENON INTERSYSTEMS

1123 Chapala Street, Santa Barbara, CA 93101
Tel: 805-963-6983 • Fax: 805-962-8202

©1995 Tenon Intersystems. All trademarks are the property of their respective owners.

XPRESSINFO or CIRCLE 185 ON READER SERVICE CARD

MACINTOSH TO WINDOWS PEER TO PEER FILE AND PRINT SHARING $199.

NEW! Personal MACLAN Version 5.5 is the only cross platform networking software that provides peer-to-peer file and printer sharing between Macintosh and Windows or Windows 95. Macs can share files from any Windows PC through Chooser. PCs can mount local Macintosh drives as a logical drive letter.

"Simply the best AppleTalk for Windows product you can buy". MACUser - November 1995

- Peer to peer sharing of any hard-drive, C-D ROM, or floppy drive
- Print from Windows to any AppleTalk printer
- Print from the macintosh to any Windows post script printer
- No special software required for the Mac user
- Backup you PC from your Mac
- New 32 bit Apple talk VxD provides better performance
- Compatible with Windows for Work groups, NetWare and other LANs

Order now

Miramar Systems

800-862-2526

Call for competitive upgrades

email: sales@miramarsys.com.
www.miramarsys.com

MacUser RATE November 1995

XPRESSINFO or CIRCLE 184 ON READER SERVICE CARD

Words of Women: QUOTATIONS for Success

- Locate a quote instantly for your speech, article or newsletter
- Copy quote into your word processor
- Add your own quotes or anecdotes
- Print in an enlarged format for your inspirational quote of the day

Words of Women is the first commercially available software database of quotations by women. Containing 3,000 quotations by 1,000 historic and contemporary women. Quotes are accessed by selecting one of the eight pictured general categories or by entering an authors name, profession or key word. 640 by 480 pixel display with 256 colors recommended.

$29.95+$5 s/h

PowerDynamics Publishing

1-800-WOMEN-02 e-mail: PowerDP@aol.com

XPRESSINFO or CIRCLE 186 ON READER SERVICE CARD

SELL

"Advertising in MacUser Marketplace is a must for anyone involved in the Mac market."

—Richard Harold
President, Shreve Systems

PUT YOUR AD HERE AND WRITE YOUR OWN MACUSER SUCCESS STORY. START ADVERTISING NOW! CALL 800-825-4237 TODAY!

FREE You Don't Know Jack Lite* with any order

United CD ROM

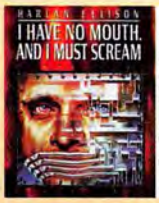
Free Software with every purchase!*

1•800•UNITED4

Call for a free catalog! **1•800•864•8334** Over 5,000 PC & Mac Titles in Stock Daily!

http://www.unitedcdrom.com

Over the Reich
by Avalon Hill
A strategy role-playing game of air combat over Germany during the latter part of WWII.
49516 **$38**



I Have No Mouth & I Must Scream
by MGM
Based on Harlan Ellison's novel. Become one of 5 damned souls trapped in a computer.
50945 **$44**

Warcraft II
by Davidson & Associates
A real time, fantasy strategy game. Return to battles between the Orcs & Humans with new allies & enemies.
50940 **$44**

Congo
by Viacom
Brings to life a gauntlet of dense jungles & subterranean caves. Find the lost city of Zinj.
45846 **$34**

Total War
by SSG
Contains Gold of the Americas, Carriers at War I, II, Warlords 1, Halls of Montezuma, Panzer Battles & more!
50966 **$38**

Muppet Treasure Island
by Activision
An interactive adventure for kids, featuring those lovable Jim Henson Muppets.
49083 **$37**

Bad Mojo
by Spectrum-Holobyte
You are a cockroach in this mysterious adventure where you explore the inner recesses of a dangerous world.
49109 **$48**

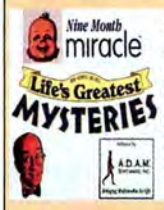
Great Word Adventure
by 7th Level
Teaches language skills such as alphabetizing, letter recognition, compound words, rhymes & more.
48404 **$35**

Flight Unlimited
by Virgin Games
From soaring over beautiful, majestic scenery to the thrill of flying inverted loops, this program has it all.
45123 **$48**

Mortal Kombat 3
by GT Interactive
8 new characters and 12 new backgrounds. Use the exclusive encryption kodes to unlock secret powers.
49180 **$46**

Nick Jr. Play Math
by Viacom
Kids learn important early quantative skills, like counting, comparison, sorting, classifying & more.
45870 **$18**

Way Things Work
by Dorling Kindersley
Based on the book by David Macaulay, you can actually see & hear how things work.
39433 **$32**



Family Pack Bundle
by ADAM
Includes 2 great software programs for the price of one: 9 Month Miracle & Life's Greatest Mysteries.
50939 **$32**

Virtual Pool
by Interplay
So real it's guaranteed to improve your actual pool playing. Four different games, computer opponents & more.
48090 **$41**

Quest for Fame
by IBM
Are you ready for the ultimate rock n' roll adventure? Play along with the music using the virtual pick.
51057 **$38**

Garden Encyclopedia
by Books That Work
With more than 1,000 different plants to choose from, you can create the garden you've always wanted.
44482 **$24**

Express Net Suite
by Graphix Zone
Includes Netscape Navigator 2.0 with E-mail, Internet Phone, Microphone, Surfwatch & more!
49976 **$30**

Havoc
by Reality Bytes
Command a Battlecycle, Hypertank or Hovercraft. Blast, jump or throttle past network opponents or challenge yourself.
45856 **$35**

Residents Bad Day on the Midway
by WEA
Dodge death & taxes as you solve a mystery of murder & intrigue at the carnival.
44606 **$37**

Shanghai Great Moments
by Activision
Includes The Great Wall, Classic Shanghai, Action Shanghai & Beijing.
47785 **$26**

FAX ORDERS: 1•217•352•9749
International Orders Call
1•217•352•8737
ORDER AS LATE AS 9:30 PM!
SAME DAY SHIPPING**
Hours: M-F 8 AM – 10 PM
Sat. 8 AM – 5 PM • Sun. 12 NOON – 5 PM
(All times listed are CST)

CONTACT US ONLINE!
BBS 1-217-352-9654
CompuServe: 76043,1605
America On-Line: UNITEDCD
UNITED CD ROM INFO via Fax back at 1•217•352•8123
http://www.unitedcdrom.com

Drug Wars
by American Laser Games
Targeting the entire drug distribution chain is truly an international war. It's also your job.
41073 **$22**

Terminator Future Shock
by Bethesda Softworks
Based on "The Terminator." Future Shock pits you against a horde of 3D animated robots.
45537 **$43**

* While supplies last. All prices in U.S. dollars. Shipping charges apply to free offers.
** Orders received as late as 9:30 PM (CST) for 2nd day air. Call for other deadline times. Special offers, item availability and prices may vary according to format and are subject to change without notice. Not responsible for inadvertant errors.

ALL MAJOR CREDIT CARDS ACCEPTED

CODE 038

Clientes internacionales por favor enviar sus ordenes por fax a los Estados Unidos al 217-352-9749 o por e-mail a la direcion Unitedcd@aol.com. Visite nuestro World Wide Web en http://www.unitedcdrom.com

Cyber Photographer
by MacDaddy
You be the photographer, then print out your own calendars, cards, etc. Must be 21 to order this product.
42564 **$29**

Savage
by Discovery Comm.
Enter the minds of some of the most magnificent killers on earth. Explore the deadly business of survival.
44047 **$30**

XPRESSINFO or CIRCLE 187 ON READER SERVICE CARD

PREMIER Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu

PREMIER

Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu

LaserMerge® Electronic Paper® 2.0

Replaces over $800 worth of Software

LaserMerge replaces WaterMarker, Toner Tuner, Peirce Print Tools, ClickBook, DynoPage, three-by-five, PrintShop, CardShop, LabelPress, Bar Code Pro, and much more…

LaserMerge is a printer extension that sits between any application and the printer driver. You choose (and design) Electronic Paper templates that totally control printing…

- Sign Faxes
- Print Logs
- Watermarks
- Toner Level
- Bar Codes
- Labels
- Serialization
- Letterheads
- 38 Text Commands

- New Paper Sizes
- Design Multi-Ups
- Pamphlets
- Print 10X Faster
- PS Level 2 Forms
- Personalize Copies

Electronic Paper Templates can control, duplicate, clip, rotate, scale, and colorize any application's output. They can also add graphics, text, and PICT and EPS images to the printed page. System 7 required! Works with ANY printers. QuickDraw GX is NOT required! LaserMerge's miracles require only 32K of memory. LaserMerge ships ready to install in English, French, German, & Spanish.

For 101 ways to use LaserMerge, call (800) 648-6840

30-day money-back guarantee

VISA

Competitive Upgrade: If you own ANY Print Utility, you can upgrade to Electronic Paper for $40. Call for details!

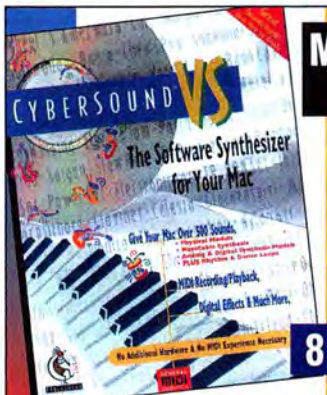
List Price: $95 **Networked Sites:** Starting at $25/unit

Worldwide: (615) 937-6800 **Fax Facts:** (615) 937-INFO
Internet: http://www.mindgate.com **Fax:** (615) 937-6801

MindGate® Technologies, Inc.
164 Oliver Smith Road
Flintville, TN 37335-5335

MindGate, LaserMerge, Electronic Paper and their logos are registered trademarks of MindGate Technologies, Inc. All other trademarks belong to their respective owners.

XPRESSINFO or CIRCLE 188 ON READER SERVICE CARD



MAKE MUSIC WITH YOUR MAC!

CyberSound VS is perfect for:

- Musicians
- Composers
- Developers
- Audio Engineers
- Students
- Educators

Great for all ages!

Call today for your *FREE DEMO* Disk* – or download a demo from our WWW Site.

800.468.5530
415.812.7380

* $4.95 shipping & handling. world wide web: http://www.cybersound.com
Compatible with all PowerPC processors. Reduced performance on Mac 68040 processors.

$249

XPRESSINFO or CIRCLE 190 ON READER SERVICE CARD

Full Color Business Cards & MORE

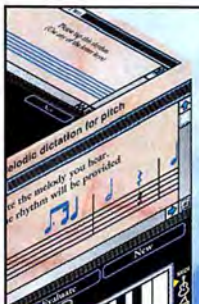
Direct From Your Computer Files, from NōNEG PRESS

Real Offset Printing • Super Premium Card Stock • Professional Look and Feel
FREE File Trapping • 2540 dpi. & 200 line-screen • SATISFACTION GUARANTEED

No. of Different Sets	750 CARD SETS SHIPPED WITHIN 5 Days	10 Days
1-2	$99	$69
3-4	$89	$59
5-6	$79	$49
7+	$69	$39

Call Now, **FREE** Samples & Info 916/ 391-6797
http://www.business-card.com/wholesale

XPRESSINFO or CIRCLE 191 ON READER SERVICE CARD



Practica Musica™ VERSION 3

MacUser Editors' Choice Awards 1994 Finalist

Your personal music tutor now includes rhythm tapping, chord progressions, and many other exciting new features. More than ever the most complete music training package available. $140

A LITTLE Kidmusic™

NEW! Fun music learning and entertainment for kids. Tap keys to play with automatic accompaniment, play rounds, learn pitch and rhythm notation, write or record tunes. Expandable library of traditional songs. $75.00

ARS NOVA • (206) 828-2711 • (800) 445-4866
FAX (206) 828-2132, http://www.ars-nova.com

MacUser Editors' Choice Awards 1992 Finalist

Songworks™

Not only prints your song, but helps you write it! Suggests tune and harmony ideas, plays, prints melody, chord symbols, lyics– with or without MIDI. Song files compatible with *A Little Kidmusic* and *Practica Musica*. $125

XPRESSINFO or CIRCLE 189 ON READER SERVICE CARD

SUCCESS

"Thanks in large measure to MacUser Marketplace, we went from a one man show to a ten-person, multi-million-dollar operation. MacUser readers are sophisticated buyers who ask the right questions. And they're calling to buy."

—Andres Montejo
President, Computer Pros

PUT YOUR AD HERE AND WRITE YOUR OWN MACUSER SUCCESS STORY. START ADVERTISING NOW! CALL 800-825-4237 TODAY!

INTERNET FOR MAC
UNLIMITED & UNCENSORED

(Finally, a national Internet provider that doesn't discriminate against Macintosh users)

For just $19.95/month (no sign-up-fees, no hidden extras) IDT will give you unlimited, uncensored Internet access including free Netscape 2.0.

Or get it all for just $15.95 if you also sign up for IDT's long-distance phone service – always 20-50% cheaper than AT&T. (And AT&T doesn't even provide Internet access for Mac users).

No other national carrier can make this offer. So what ar you waiting for? Call IDT anytime, 24 hours a day.

IDT

1-800-245-8000

How smart people communicate™

Rated #1 for network reliability by the Wall Street Journal's Smart Money Magazine

IDT is a registered trade mark of IDT Corporation. All other trademarks are the property of their respective owners

PREMIER Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu

CLASSIFIED

Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu

APPLE

9500/132	16/2/CD	$3785
9500/132	16/1/CD/V	$3385
8500/120	16/1.0/CD	$3169
8500/120	16/2.0/CD	$3599
7500/100	16/500/CD	$2185
7500/100	16/1.0/CD	$2345
7200/75	8/500/CD	$899
7200/90	16/500/CD	$1299
5300/100c	16/750	$2829
5300/100cs	8/500	$1999
5300/100cs	16/750	$2399
5300/100ce	32/1.1	$3999
2300/100c	8/750	$2859
2300/100	20/1.1	$3849
190/66	8/500	$1285
190/66cs	8/500	$1485

Competitive Rate Program
LEASING

POWER COMPUTING

We carry the entire Apple computer and peripheral product line as well as most popular third party brand products at ultra-competitive prices with free technical support on everything we sell. MOST items are IN STOCK with same day shipping available on orders placed before 3 pm E.S.T. Custom configurations are No problem!

(800) 900-4599

Voice 305/725-9777 • Fax 305/725-9977

http://www.sourcecomp.com

VISA MasterCard FedEx Federal Express American Express Cards DISCOVER NOVUS

MEMORY

SIMMs		DIMMs	
4 MB	72/70.....$55	4 MB	168/70...$109
8 MB	72/70.....$105	8 MB	168/70...$129
16 MB	72/70.....$225	16 MB	168/70...$229
32 MB	72/70.....$475	32 MB	168/70...$479
		64 MB	168/70.$1049

LIFETIME WARRANTY

L2 CACHE

256k - 61XX/71XX/81XX.....$95
256k - 72XX/75XX/85XX.....$125
512k - 72XX/75XX/85X.....$175

VRAM

1MB DIMM - 72XX/75XX/85XX...$59
512k SIMM - 61XX/71XX/81XX....$29

PB RAM 5300/190/2300

4 MB.....$129
8 MB.....$229
16 MB.....$399
32 MB.....$599
48 MB.....$1099

XPRESSINFO or CIRCLE 221 ON READER SERVICE CARD

Bar Coding

For PC's and Macintosh
- Bar Code Readers
- Portable Readers
- Radio Frequency Readers
- PostScript Bar Code Fonts

■ DIRECT FROM MANUFACTURER
■ 30 DAY $ BACK GUARANTEE
■ FREE "800" TECH SUPPORT
■ IMMEDIATE SHIPPING

800-345-4220

WORTHINGTON DATA SOLUTIONS

CIRCLE 222 ON READER SERVICE CARD

Best Quality Lowest Price Memory

MAC MEMORY

LIFETIME GUARANTEE

30 PIN SIMMs
1MB/2MB/4MB/8MB/16MB

72 PIN SIMMs
4MB/8MB/16MB/32MB

168 PIN DIMMs
4MB/8MB/16MB/32MB/64MB

ALL POWER BOOKs
2MB-36MB

1MB DIMM VIDEO RAM
9500/8500/7500 Series

2MB VIDEO UPGRADE
9500/8500/7500 Series

VIDEO RAM
256K/512K

POWER MAC CACHE
256K/512K/1024K

DIMM CACHE
256K/512K/1024K

MEMORY FOR ALL PRINTERS

FPU & PROCESSORs
68040 Processor w/FPU 25MHz
68040 Processor w/FPU 33MHz
68882 FPU 25MHz /33MHz

If you don't see it Call DMS

Data Memory Systems Inc.
24 Keewaydin Drive unit 5
Salem, NH 03079
Tel. 603-898-7750
Fax 603 898 6585
www:http://www.datamem.com/datamem

University, Government and Corporate P.O.'s with Approved Credit

DISCOVER NOVUS MasterCard VISA

1-800-662-7466

Memory Upgrade Specialists Since 1987

XPRESSINFO or CIRCLE 223 ON READER SERVICE CARD

OWC (800)-275-4576

IN ILLINOIS & INTERNATIONAL:
(815) 338-8658 / FAX (815) 338-4332

Serving the Apple Universe since 1988

On the Web at http://www.macsales.com

Memory

72 pin SIMMS

4mb	70ns	$59	
8mb	60ns/70ns	$119	
16mb	60ns/70ns	$229	
32mb	60ns/70ns	$479	

60ns DIMMS

8mb	$129
16mb	$239
32mb	$489
64MB	$1049

Cache

61/71/8100		72/75/8500	
256k	$95	256k	$129
512k	Out	512k	$179

VRAM (72/75/8500)

1 Mb VRAM $69

Call for 30 pin SIMMS

SPECIAL! 14.4 Magnum Fax/Modem $59 or $49 w/ any purchase!

No Surcharge! DISCOVER NOVUS VISA MasterCard American Express Card

The Speed Bumps are Here!

7200/120	8/1.2GB/CD	NEW!..	$1779
7600/120	NEW!.		$CALL
7500/100	16/1000/CD.		$2439
8500/120	16/1000/CD.		$3269
8500/132	NEW!.		$CALL
8500/150	NEW!.		$CALL
9500/132	16/1000/CD		**$3779
9500/150	NEW!.		**$CALL

**Includes 2MB ATI Video Card

Call for Custom Configurations & PC Compatables

OWC Rocket Accelerator for both PMac 6100s & 7100/66 84mhz $59.95

Hard Drives

Quantum 850mb	$195	$249*
Conner 1060mb	$249	$299*
3 1/2 Mice MacUser		
Quantum 420mb	$149	$199
Quantum 2gb 8ms	$699	$749
Quantum 4.3gb	$979	$1029
Conner 2.1gb 9ms	$479	$529
Conner 2.1gb 8ms	$549	$599

Call for IDE internals for PowerBook & Performa Computers

30-Day Money Back Guarantee on All Hdd! Sys7.1 installed & 30mb of free software. External version features platinum case with dual SCSI ports, Push-button SCSI ID & 40watt power.

Other World Computing
224 West Judd Street
Woodstock, IL 60098
International: (815) 338-8685
Fax: (815) 338-4332

Prices and specifications subject to change with notice. FPS examination fee on returned merchandise unless otherwise noted.

CIRCLE 224 ON READER SERVICE CARD

BUY • SELL • TRADE MEMORY

WE CAN BEAT ANY PRINTED PRICE IN THIS MAGAZINE
WE CAN PAY HIGHER THAN ANY ONE FOR YOUR OLD or BROKEN MEMORY

Life Time Warranty on All Parts

1•800•4•MEMORY

HTTP://WWW.MEMORYMASTERS.CO
MEMORYBUY@AOL.COM

XPRESSINFO or CIRCLE 225 ON READER SERVICE CARD

JP MICRO

DIMMS
8MB 16MB 32MB 64MB 128MB

SIMMS
4MB 8MB 16MB 32MB 64MB

CACHE
256K 512K 1MB SIMM & DIMM

VRAM
256K 512K 1MB MAC & PC

CALL FOR POWERBOOK MEMORY!
WE CARRY ALL LASER & LAPTOP MEMORY.

CALL FOR THE BEST PRODUCTS AND PRICES.GUARANTEED!

800-610-6227

LIFETIME WARRANTY

CIRCLE 226 ON READER SERVICE CARD

WANTED: Used Memory

TOP $$$ PAID

Guaranteed!
We'll honestly try to beat ANY price!

256K-64Mb
Any Quantity

Trade-Ins Welcome
We Buy Macs

New & Used SIMMs–CALL

AVAILABLE:

NOTE: All prices are subject to change. Limited to stock on hand.

DIMMs	8mb	$ 119
	16mb	$ 238
	32mb	$ 476
SIMMs 72 PIN	8mb	$ 115
	16mb	$ 209
	32mb	$ 440
SIMMs 30 PIN	2mb	$ 30
	4mb	$ 65
	16mb	$ 265
PBOOK	Model	500 5300
	16mb	$ 350 $365
	32mb	$640 $655

MAC Solutions

310-394-0001

(800)80-WE-BUY

1416 WILSHIRE BLVD. SANTA MONICA, CA 90403
FAX: (310) 394-7744

XPRESSINFO or CIRCLE 227 ON READER SERVICE CARD

MEMORY

Guaranteed Lowest Prices
Life Time Warranty

- 30 Pin SIMMS
- 1MB—16MB
- 72 Pin SIMMS
- 1MB—64MB
- 168 Pin DIMM
- 4MB—64MB
- All Power Books
- All Printers
- VRAM, DIMM, CACHE

WE BUY MEMORY

We accept P.O.'s from government, schools & qualified firms.

Eritech International
1-800-808-6242
818-244-6242 818-502-5059

CIRCLE 228 ON READER SERVICE CARD

SimmSaver Memory Solutions

PATENTED SIMMSAVER MEMORY ADAPTERS LET YOU UPGRADE OR INCREASE YOUR COMPUTER'S MEMORY USING YOUR OLD 30-PIN OR 72-PIN SIMMS!

NEW!

DimmSaver/R is the reversible adapter that converts two 72-pin SIMMs into one 2M, 4M, 8M, 16M, 32M, 64M, 128M DIMM. Save your older 72-pin memory for use in the new PowerMacs!

SimmSaver/8 series of adapters convert four 30-pin SIMMs into one 72-pin SIMM. To convert eight 30-pin SIMMs into one 72-pin SIMM, ask for the SimmSaver 8SQ.

SimmSaver/32 series of adapters convert two 72-pin SIMMs into one 72-pin SIMM.

Many more adapter solutions are available! Call today to find out how we can solve your memory problems!

NEW! STI is now your source for Princeton memory modules! Highest quality memory with a Lifetime Guarantee! For Macs, PowerPCs, and Notebooks.

SimmSaver Technology, Inc. 1-800-636-7281

Tel. (316) 264-2244 • Fax: (316) 264-4445 • http://WWW.solgate.com/sti • E-mail: simmsave@solgate.com

XPRESSINFO or CIRCLE 229 ON READER SERVICE CARD

GRIFFIN TECHNOLOGY

MONITOR SOLUTIONS

http://www.nashville.net/~griffin

- MAC SYNC ADAPTER sync on green circuitry allows almost all SuperMac, Radius, RasterOps, E-Machines and most other monitors to be used with PowerMac, PCI cards, and AV models.
- MAC RES ADAPTER universal resolution adapter selects the proper resolution for your monitor and allows on-the-fly resolution switching.
- MAC II SERIES allows all multisync monitors, including Apple Multiple Scan 14 and 15 models to be used with the IIci, IIsi & Mac II built in video.
- MAC TO VGA universal Mac to PC adapter connects any PC monitor to your Mac.

VISA MasterCard Discover

Dealer and quantity pricing available.

Tel 615/255-0990 • Fax 615/255-8040 • Grifcom@aol.com

XPRESSINFO

Power Macintosh

7200/75	8/500CD	$ 929
7200/90	8/500CD	CALL
7500/100	16/500CD	2098
7500/100	16/1GBCD	2269
8500/120	16/1GBCD	3079
8500/120	16/2GBCD	3339
9500/132	16/1GB/CD	3659
9500/132	16/2GBCD	3689

All New!

7200/120	8/1.2/CD	1759
7200/120	16/1.2/CD	2149
7600/120	16/1.2/CD	2777
8500/132	16/2GB/CD	3679
9500/150	16/2GB/CD	4389
9500/150	16/2GB/CD	4455

PowerBook

190CS/66	8/500	1419
5300CS	8/500	1839
5300CS	16/750	2289
5300C	8/500	2287
5300C	16/750	2739
5300CE	32/1.1	3889
2300C/100	8/750	2749
2300C/100	16/1.1MDM	3599

Apple Monitors

MltplScan 14"/15" Lowest/299
MltplScan 1705/1710 649/888
MltplScan 1710AV/20 989/Call

FOURB TECHNOLOGIES

ORDER NOW AND SAVE

1-800-946-6221

International: 310.571.0506

Fax: 310.571.0510

iomega ZIP 100 $187

Performa 6300CD $2139

GLOBAL VILLAGE TELEPORT PLATINUM $194

APPLE 15" Mntr $299

iomega JAZ $549

Agfa Arcus II Scanner $1879

Apple Printers

StylWrtr 1200/2400	209/319	15SX	15" 399
StylWrtr 1500/2500	269/359	15SF2/17SF2	459/839
LsrWrtr 4/600PS	699	17SF1	17" 959
LsrWrtr 360 W/Tonr	1079	17SE2	NEW! 999
LsrWrtr 16/600 W/Tnr	2079	20SF2	1600X1280 1666
LsrWrtr 12/600Ps	5888	GDM-2000CT	NEW! 3099

SONY

Performa

6116CD 8/700CD	1239
5215CD 8/1GB/CD	1479
6200CD 8/1GB/CD	1569
6205CD 8/1GB/28.8	1659
6290CD 16/1.2GB14"	1849
6300CD 16/1.2GBCD	2139
6320CD 16/1.6/MPEG	2455

WorkGroup Srvrs

6150/66 16/1.2/Intrnt	$2099
7250/120 16/1.2/CD	2669
7250/120 16/1.2/CD/AS	3389
8550/132 24/2GB/Intrnt	5559
8550/132 24/2GB/CD/AS	5949
500/132 32/CD/BASE	7599
700/150 32/1GB/CD	10335

ALL WG SERVERS AVAILABLE

HEWLETT PACKARD

DskWrtr 600/660c	238/349
DskJet 855CXI	484
4MV/5SIMX	2689/3729
ScanJet 4C MAC	888

NEC

XV15/XV15+	459/469
XV17/XV17+	739/779
XE17/XP17	989/1039
XE21/XP21	1689/1939

WACOM

ArtPad II 4X5	129
ArtZ II 6X8/12X12	289/415

Prices are COD Cash/Cashier Check

CIRCLE 230 ON READER SERVICE CARD

Digital Video

Truevision TARGA 2000PCI

Plug-n-Play Solution for Video Authoring, 3D, Animation & Multimedia

- True 60 fps
- 16-Bit CD/DAT Quality Sound Capture
- Undisputed Performance Leader
- Works w/Any Macintosh w/PCI Slots
- 640x480 & 648x486
- NTSC & PAL • Upgradeable $3695

TARGA 1000 PCI.....$CALL
TARGA Pro UG.....$1099
Hard Drive Arrays.....$CALL

For more Info/Custom Configuration —ask for Jeff

Atlantic Computer Systems
171 Route 37E & Hooper Ave.
Toms River, NJ 08753

Sales 908-240-3101

Fax 908-286-6869 email: atlantic1@aol.com

XPRESSINFO or CIRCLE 231 ON READER SERVICE CARD

CLASSIFIED Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu

Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu CLASSIFIED

MacMarket 1-800-223-4622

Fax us at: 818-708-6399

Call Today For Your Catalog

Inventory Reduction

PowerMac 6100/DOS 16/500/CD #A1373 $999
PowerMac 8100/100 8/700 ..... #A1350 $1749

Get the latest Apple CPU's at MacMarket

ACELLERATORS

ATTO
Express PCI-MC ..... $729 #A4519
ExpressPCI–SC PCI .... $293 #A4518
SiliconExpressIVNuBus ..... $799 #A4515

FWB $359
PCI Technology #A4417
JackHammer Accelerator

DAYSTAR
100MHz PowerPro 601 $1159 #A4500
Quadra 610, 650, 700, 800, 950, Centris 610, 650 (610 needs an adapter)
100MHz Turbo 601 ..... $1139 #A4509
IICi, IISi, IIVx, IIVi and Performa 600
100MHz PowerCard 601 . $919 #A4498
Performa, Quadra, LC475, LC575, 605, 630

SCANNERS

AGFA
Studio Scan IISi ... $689 #S8477
Arcus II ..... $1799 #S8482
DuoScan ..... Call #S8477

MICROTEK
Better Images Through Innovation
ScanMaker Series
III w/PhotoShop ..... $1929 #S8444
ScanMaker E3 ..... $375 #S8460
ScanMaker E6 ..... $559 #S8461

UMAX
Mirage (11x17) ..... CALL #S8560
PowerlookIIPro2 CALL #S8520
PowerlookPro +. $1829 #S8519
Vista S6 E ..... $399 #S8439
Vista S12 LE ..... $749 #S8564
Vista S12 Pro2 ..... $853 #S8565

Polaroid
SprintScan/ES ..... $1469 #S8547

Nikon ELECTRONIC IMAGING
CoolScan II ..... $1159 #S8500
SuperCoolScan ..... $1899 #S8503

FAX/MODEMS

GLOBAL VILLAGE COMMUNICATION
PowerPort PC Cards
PowerPort Gold PC 14.4 . $175 #F8152
PlatinumPro28.810Base-T $479 #F8147
PowerPort Platinum 28.8 $319 #F8150
TelePort Platinum ..... $195 #M8120
TelePort Gold II ..... $109 #M8123

SupraFAXModem
SupraExpress14.4+ ..... $97 #F8106
Fax/Modem28.8v.34 ..... $219 #F8109
SupraExpress28.8+s .... $154 #F8107

PowerMac 9500/132MHz

48/1GB/CD/ATI #A1241 $4117
80/2GB/CD/ATI #A1228 $4949

PowerMac 8500/120MHz

16/1GB/CD ..... #A1314 $3199
48/2GB/CD ..... #A1322 $4287
80/2GB/CD ..... #A1332 $4599

PowerMac 7500/100MHz

16/1GB/CD ..... #A1181 $2299
48/1GB/CD ..... #A1333 $2799

PowerMac 7200

16/500MB/CD/75MHz #A1387 . $1099
16/500/CD/90MHz #A1187 $1199

Apple Monitors

MultipleScan15" ..... #M6558 . $339
MultipleScan1705 .... #M6638 . $659
Vision1710 ..... #M6500 $859
Vision 1710AV ..... #M6567 $1049
MultipleScan20" ..... #M6564 $1859

SALE
SyQuest
EZ-135Drive W/Cart #R6115 $194
200MB Removable #R6166 $349

PRINTERS

HEWLETT PACKARD
660c 600X300 ..... $359 #P3223
5MP 600dpi ..... $999 #P3232
4MV 600dpi ..... $2649 #P3235
DeskJet 1600CM ..... $1939 #P3410

EPSON Printers
StylusColor 2 InkJet ..... $299 #P3294
StylusColor ProXL ..... $1689 #P3291

MONITORS

Portrait Display Labs
Pivot 1700 ..... $929 #M6597

SONY
Sony 15 SF2 ..... $499 #M6438
Sony 17 SF2 ..... $869 #M6580
Sony 20 SF2 ..... $1679 #M6574

radius
Precision View 17 ..... $949 #M6606
Press View 21SR ..... $3049 #M6609
PrecisionView 21 ..... $2095 #M6614
PressView 17SR ..... $1899 #M6600

RASTEROPS
SuperScan 20" ..... $1349 #M6525
SuperScan 21HR . $1979 #M6706

ViewSonic
17GA Perfect Sound ..... $769 #M6760
GT 770 17" ..... $849 #M6766
GT800 20" ..... $1759 #M6768

PowerBooks

5300cs/8/500 .... #A1130 . $1980
5300cs/16/750 .. #A1133 . $2399
5300c/8/500 ..... #A1121 .. CALL
5300c/16/750 .... #A1118 .. CALL
5300ce/32/1GB #A1115 . $4095
2300c/8/750MB #A1106 . $3399
190/4/500MB ... #A1112 .. CALL
190cs/8/500MB #A1109 . $1549
150 /4/250 ..... #A1136 .... $789

Apple Printers

StyleWriter 1200 ..... #P3265 . $199
StyleWriter 1500(color) ..... #P3369 $269
StyleWriter 2500(color) ..... #P3367 $389
LaserWriter 360 ..... #P3247 $1089
LaserWriter 4/600PS ..... #P3256 . $795
LaserWriter 16/600 ..... #P3250 $2139

Performa Systems

6300CD ..... #A1193 ..... CALL
6200CD ..... #A1190 ..... CALL
5215CD ..... #A1191 ..... CALL
6116CD ..... #A1198 ..... CALL

WACOM
ARTPAD II 4 x 5 ..... $135 #T9513
ARTZ II 6 x 8 ..... $299 #T9500
ARTZ II 12 x 12 ..... $399 #T9503

GRAPHIC ACCELER.

NUMBER NINE Graphics Acceleration
Imagine128, 8MB ... $1,299 V9248

INTERGRATED MICRO SOLUTIONS TwinTurbo128M
(4MB) ..... $529 #V9240
(8MB) ..... $939 #V9238

XclaimGA
w/2MB VRAM ..... $349 #V9165
w/4MB VRAM ..... $459 #V9162

TRUEVISION
Targa 2000 ..... $3788 #V9200
Targa 1000 ..... $2559 #V9204

Adaptive Solutions.
PowerShop PCI ..... $1797 #V9244

Radius PCI Cards

ThunderColor 30/1600 ... $1899 #V9102
ThunderColor 30/1152 ... $1499 #V9105
Thunder 30/1600 ..... $1159 #V9108

MEMORY

DIMMS
8MB•64BIT•168PIN .... $149 #M1628
16MB•64BIT•168PIN .... $269 #M1625
32MB•64BIT•168PIN .... $479 #M1622
64MB•64BIT•168PIN .. $1166 #M1619

SIMMS
8MB•32BIT•72PIN 60NS . $159 #M1598
16MB•32BIT•72PIN 60NS $279 #M1595
32MB•32BIT•72PIN 60NS $495 #M1604

PowerBook Memory
5300 & 190
4MB #M1386 $139 | 16MB #M1390 $449
8MB #M1387 $249 | 32MB #M1393 $899
12MB#M1388 $374 | (32MB FOR 5300 ONLY)

Newer TECHNOLOGY 64BIT DIMMs
8MB ..... $153 #M1448
16MB ..... $285 #M1451
32MB ..... $597 #M1454
64MB ..... $1169 #M1457

NUPOWR
PB500 Upgrades•117MHz•PowerPC
CPU Only ..... $579 #A4540
w/4MB RAM ..... $759 #A4542
w/8MB RAM ..... $899 #A4544

MAGNETIC/OPTICAL

PINNACLE MICRO
Tahoe 230 ..... $499 #E7228
Vertex 2.6GB ..... $1299 #E7253
RCD 5040 ..... $949 #E7248

MacMarket is Located at:
6924 CANBY AVE UNIT #104
RESEDA CA. 91335
M-F 8AM-6PM (Pacific)

International Call: 818•708•6388
Customer Service & Technical Support Call: 818•708•6388
Fax: 818•708•6399

All Prices reflect a Cash Discount. Any other method is 2% to 4% higher. Prices are subject to change without notice. All Returns are subject to restocking fee, must be in original package, condition & needs an RMA#. No Refunds on Labor or Freight Charges. We accept Visa, Mastercard, Discover & American Express. P.O.s accepted from U.S. Gov't, Schools & Corporations. Not responsible for typographical errors.

XPRESSINFO or CIRCLE 232 ON READER SERVICE CARD

MacUSA

Since 1983

1(800)-809-0880

Voice: 818-704-8923
Fax: 818-704-9858

Power Macs

6100/7100/8100/CD...CALL
6100/7100/8100AV.....CALL
7200 75/90..... CALL
7500 100.....CALL
8500 120.....CALL
9500 120/132.....CALL
Workgroup Servers.....CALL

Performa Bundles

631/638/640..... CALL
5215/6116/6200..... CALL
6205/6220/6300..... CALL

Powerbooks

190 mono/color.....CALL
5300mono/C/CE/CS...CALL
2300 Color.....CALL
150/520.....CALL

Monitors

Apple, Radius, NEC, Sony

Printers

Apple, H.P., Epson, NEC

Scanners

Apple, H.P., Epson, Umax, Microtek, Agfa

Software Blowout!

Microsoft Office V4.2 ~~$595~~ *$295*
Word/Excel/Powerpoint $99Ea
Adobe Photoshop ~~$595~~ *$275*
Adobe Illustrator $595 *$275*
Premier/Pagemaker $275
Apple Parts Avaliable

Contact us via the Internet!

macs@ix.netcom.com
macusa@eworld.com
http://www.macusa.com

Dealer and International Orders Welcome.

Prices Reflect Cash Discount and are Subject to Change

We'll Beat Any Price!

Visa /MC/AmEx Welcome.
24422 Vanowen Street, Canoga Park, California, 91307, U.S.A.

CIRCLE 233 ON READER SERVICE CARD

COMPAQ HEWLETT PACKARD radius Microsoft FUJITSU IBM SUPERMAC AGFA XANTE Tektronix

Selling Reliability, Quality and Affordability with every system for over 10 years !

We Carry A Full LIne Of Storage Solutions By: FWB

Call For Latest Prices !

All Major Brand Color & B/W Printers
Dye Sublimation, Solid Ink, Liquid inkjet, Thermal Transfer, Continuous Tone Laser...
and much more...CALL

ALL APPLE PARTS & ACCESSORIES IN STOCK
Rentals / Service available in NYC area !

COMPUTER REVELATIONS

Over 20,000 products Available !
PowerMacs
Printers, Monitors,
Scanners,
all peripherals,
Hardware & Software !

Check out our web-site !
http://satcom.pb.net/cri/

See us for your Digital Video needs

1 800 275-9924 in NY 516 737-0800
331E DANTE COURT HOLBROOK NY 11741 FAX 516 737-0923
NEW & USED BOUGHT & SOLD *Ask about our EXTENDED WARRANTY*

XPRESSINFO or CIRCLE 234 ON READER SERVICE CARD

SHOPPERS MARKET

"The Intelligent Choice"

1-800-607-2325

VISA, MASTERCARD, AMEX, DISCOVER ACCEPTED.

SALES (310) 842-3700

FAX (310) 842-8130

10173 Washington Blvd., Culver City, CA 90232

VISIT OUR WEB SITE AT http://shoppersmarket.com

POWERMAC 8500/150 32/2 gig CD $5199

POWERMAC 9500/150 16/1.2 gig CD $4589

POWERMAC 8500/132 16/1.2 gig CD $3699

PERFORMA

5215	8/1 GIG CD	1299
5260	8/1.2 GIG CD	1995
6200	8/1 GIG CD	1299
6205	8/1 GIG CD	1549
6220	16/1.2 GIG TV	1299
6290	8/1.2 GIG CD	1839
6300	16/1.2 GIG CD	2109
6320	16/1.2 GIG CD	2429

POWERBOOKS

5300CE	117 Mhz 32/1GIG	3899
5300CE	117 Mhz 16/1GIG	3599
5300C	100 Mhz16/750	2699
5300C	100 Mhz 8/500	2199
5300CS	100 Mhz16/750	2249
5300CS	100 Mhz16/5000	2099
5300CS	100 Mhz 8/500	1799
5300	100 Mhz 8/500	1195
DUO 280C	4/320	1699
DUO 2300C	20/1GIG/MODEM	3599
190CS	8/500	1389
150	8/240	699
520	4/240	749
520C	4/240	1399
520C	12/320 modem	2099
540C	4/320	2189

HARD DRIVES

160 /240 MB PB 500'S	89/119
520/810 MB PB 500'S	299/439
500 MB 3.5"/1 GIG	119/249
4 GIG/4 GIG BARRACUDA	849/1089

STORAGE

IOMEGA 100MB ZIP DRIVE	189
IOMEGA JAZZ 1 GIG ZIP	599
SYQUEST EZ135	199
SYQUEST 200 MB	399

PRINTERS

STYLEWRITER 1200	189
STYLEWRITER 1500	259
STYLEWRITER COLOR 2200	299
STYLWRITER COLOR 2500	369
LASER 4/600	679
APPLE LASER SELECT 360	1099
APPLE 16-600/PS	2099

POWERMAC

7200/75	8/500 CD	969
7200/90	16/500 CD	1299
7200/120	8/1.2GIG CD	1789
7200/120	16/1.2 GIG CD	2099
7500/100	16/1 GIG CD	2149
7600/120	32/2 GIG CD	3499
8500/120	16/1 GIG CD	2998
8500/132	32/2 GIG CD	4299
8500/132	80/4 GIG CD	5099
8500/150	80/4 GIG CD	5799
9500/132	16/1 GIG CD	3299
9500/150	80/4 GIG CD	5699
7100/80	8/700 CD	999
7100/80 AV	16/700 CD	1399
8100/100	16/700 CD	2099
8100/100AV	16/1G/CD	2399
8100/110	16/2 GIG CD	2699

MEMORY

FOR 7200/7500/8500 & 9500

8 MB DIMMS	149
16 MB DIMMS	289
32 MB DIMMS	509
64 MB DIMMS	1099

FOR POWERBOOK 5300 SERIES

4 MB/8 MB	149/249
16 MB/32 MB	429/999

FOR POWERBOOK 500 SERIES

4MB/8 MB	129/249
16 MB/32 MB	429/1099

CUSTOM CONFIGURATION AVAILABLE

POWERBOOK 520 4/240 $749

POWERMAC 7600/120 16/1.2 gig CD $2849

POWERBOOK 5300CS 8/500 $1799

POWERBOOK 5300C 16/750 $2729

VIDEO CARDS

THUNDER 30/1152/1600	749/1099
THUNDERCOLOR 30/1152	1399
THUNDERCOLOR 30/1600	1749
THUNDER IV 1600	1199
VIDEOVISION STUDIO 2.5i	2099
TARGA 2000 PCI	3199
TARGA 2000 PRO PCI	4499
NUMBER 9 IMAGINE 128 8 MB	1149
TWIN TURBO 128 8 MB	949
ATI 4 MB PCI CARD	399
MEDIA 100 CALL	

MONITORS

APPLE 15"/1705	319/629
APPLE 1710/1710AV	899/988
APPLE 20" MULITSCAN	1699
SONY 155X/SFII	439/499
SONY 17 SFII/SE2	869/1049
SONY 20 SFII/SE2	1799/1899
PRESSVIEW 21 SR	3099
PRECISIONVIEW 21	2049
INTELLICOLOR 20 E	1699
PIVET 17" .28 879	
PIVET 17" .26 979	
NEC XV15/XV17+	499/779
NEC XE17/XE21	999/1649
RASTEROPS SUPERSCAN ACE19R	1899

SCANNERS

EPSON ES 1200C PRO	1099
EPSON ES 1000	769
PAPERPORT VX	279
UMAX POWERLOOK PRO	1899
UMAX S12 PRO	899
UMAX VISTA S8 PRO	749
AGFA ARCUS II	1899
AGFA STUDIOSCAN IISI	879
NIKON COOLSCAN PLUS	1949

MODEMS

GV TELEPORT PLATINUM	194
GV POWERPORT PC CARD	329
GV POWERPORT PCI PRO	479
MHZ CRUISECARD 28.8	279
MHZ CRUISECARD 14.4	139
SUPRA INTERNET 28.8	189
SUPRA 28.8 V.34	229
SUPRA EXPRESS 28.8 V.34	169

WE MATCH ! WE BEAT ! WE DEAL !

ALL PRICES ARE CASH DISCOUNTED AND ARE SUBJECT TO CHANGE WITHOUT NOTICE.

XPRESSINFO or CIRCLE 235 ON READER SERVICE CARD

RECORD CDs

NOW YOU CAN AFFORD ONE TOO!

YAMAHA 4X MULTIMEDIA BUNDLE $1299

iomega JAZ 1GB Removable HD
- 3.5" Removable Hard Disk Technology
- 6.7 MB per sec. Ideal for Video

Includes 1 Cartridge $599

OPTICAL 2.6 & 1.3 GB Maxoptix CALL Fast&Reliable

2X Write Read 4X $799 COMES WITH ASTARTE TOAST

Now with: TOAST PRO 3.0 Writes On-the-Fly Optimizes On-the-Fly Incremental Backups

PHILIPS OR SONY

CD PENS $4.99

CD PRINTER $2995

CD LABEL KITS Includes 100 labels Includes Mac Software Includes Alignment Device NOW ONLY $79.99

OPTICAL BLOWOUT

128MB...$129.99

230MB...$179.99

650MB Optical ...$399.99

1.3GB Optical ...$499.99

SYQUEST CARTRIDGES

44MB...$33 • 88MB...$37 • 200MB...$70

105MB...$35 • 270MB...$56

JAZ/ZIP CARTRIDGES

JAZ 1GB $115 • ZIP 100MB $16.99

CD-ROM CHANGERS

JVC 7 Disc Changer 4X Speed $329

6 CD - 500 CD CHANGERS AVAILABLE

$6.99 AS LOW AS Verbatim, Kodak or Mitsui 74 Minute - 4X & 6X Cert.

MEDIASTORE

See us at http://www.mediastore.com

800•555•5551

NEVER UNDERSOLD!

ph. 714-997-5551 • fx. 714-997-5553

VISA MasterCard AMERICAN EXPRESS

XPRESSINFO or CIRCLE 236 ON READER SERVICE CARD

LOWEST PRICES GUARANTEED

Power Mac

6100/66 8/500/CD	$899
6100/66 16/500/CD DOS	$1089
7200/75 8/500/CD BEST BUY	$889
7200/90 16/500/CD	$1299
7200/120 8/1.2/CD NEW!	$1879
7500/100 16/500/CD	$2249
7600/120 16/1.2/CD NEW!	$2898
8500/120 16/1GB/CD	$3089
8500/120 16/2GB/CD	$3499
8500/132 16/1.2/CD NEW!	$3698
8500/150 16/2GB/CD NEW!	$3498
9500/132 16/1GB/CD/VI	$3499
9500/132Mhz 16/2GB/CD	$3689
9500/150 16/2GB/CD NEW!	$3598

Performa

P 6320/120Mhz 16/1GB/CD/TV	$2329
Performa 5215 8/1GB/CD	$1498
Performa 6205 8/1GB/CD	$1549

Call Us For Current Pricing

Performa 6290 8/1GB/CD	$1898
Performa 6300/100 MHZ	$2098

PowerBook

PB 5300ce 32/1.1GB	See Specials
PB 5300c 8/500 BEST BUY	$2299
PB 5300cs 16/750	$2399
PB 190cs/66 8/500	$1498
PB Duo 2300c 8/750	$2779
PB Duo 2300c 20/1GB/M	$3699

Custom Configuration Available

7200/120 80/2GB/CD/L2	$3499
7500/100 40/1GB/CD	$2759
7600/120 80/2GB/CD/L2	$3498
8500/120 128/2GB/CD	$3799
8500/132 144/4GB/CD	$3989
8500/150 128/4GB/CD/L2	$3796
9500/132 64/2GB/CD/VI	$3899
9500/150 256/4GB/CD/L2	$9799

Workgroup Servers

6150/66 INTERNET	$2079
7250/120 INTERNET	$2979
7250/120 16/1.2GB/CD/A.S	$3398
8550/132 INTERNET	$5598
8550/132 24/2GB/CD/A.S	$5999
StyleWriter 1500 NEW	$298
Color StyleWriter 2500 NEW	$398

Limited Supply

PB 540C 4MB/320 REF. $1998

PB 540C 12/500/M REF. $2598

OVERNIGHT SHIPPING ORDER TODAY GET IT TOMORROW FedEx Via Federal Express for orders placed by 8:00PM EST

MONTHLY SPECIALS

6100/66 8/500/CD BEST BUY	$899
7200/75 8/500/CD	$889
6100/66 16/500/CD/DOS	$1089
7200/90 8/500/CD	$1189
9500/120 16/1GB/CD/vi	$2949
9500/132 16/1GB/CD/vi	$3499
PB 5300/100 8/500	$1149
PB 5300cs 8/500	$1829
PB 5300c/100 16/750	$2299
PB 5300ce/117 32/1.1GB	$3799
LaserWriter 4/600 PS	$699
Color StyleWriter 2400	$289
StyleWriter 1200 BEST BUY	$189
EZ quest 1GB Jazz Dr	$579

Now On World Wide Web http://www.MacBase.com

MEMORY

72-PIN Memory

4MB 60ns	$89
8MB 60ns	$149
16MB 60ns 2K	$279
32MB 60ns 2K	$549

7200/7500/8500/9500 DIMM

8MB DIMM	$149
16MB DIMM	$229
32MB DIMM	$579
64MB DIMM	$1069
1MB V-RAM	$65
256K L2 Cache	$99
512K L2 Cache	$159

BEST BUY

PowerBook 5000 Series

4MB UPGRADE	$179
8MB UPGRADE	$239
16MB UPGRADE	$449
32MB UPGRADE	$848

PowerBook 500 Memory

4MB UPGRADE	$179
8MB UPGRADE	$269
16MB UPGRADE	$425
32MB UPGRADE	$1059

GOVERNMENT, EDUCATIONAL & CORPORATE ACCOUNTS WELCOME! COMPANY P.O.'S ARE ACCEPTED

MACBASE™ U.S.A

1941 Freeman #B Signal Hill, CA 90804 *Since 1988*

(800) 951-1230

International (310)498-1230

Fax (310)498-0032

Prices are C.O.D. and subject to change without notice. P.O.S are subject to credit approvals

HOURS: M-F 8-6, SAT 10-2 PST

CIRCLE 237 ON READER SERVICE CARD

CLASSIFIED Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu

CLASSIFIED

Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu

FUJITSU LaserMaster HEWLETT PACKARD Adobe NEC

Computer Pros is Your Macintosh Source.

7200 75MHz 8/500/4xcd . . $1209
7200 90MHz 16/500/4xcd . . 1735
7500 100MHz 16/1GB/4xcd. 2739
8100 100MHz 16/700/cd . . . 2835
8500 120MHz 16/1GB/cd . . 3545
8500 120MHz 16/2GB/cd . . 3860
9500 132MHz 16/1GB/cd/Video2MB 3465

PERFORMAS

638 8/350/cd w15"color& Kb $1369
6200 8/1GB/cd w15"color & Kb 1779
640CD 12/500/cd/DOS/15"color keyboard and mouse 1955
6300CD 100MHz 16/1.2GB/15" color monitor28.8 modem/4x cd 2690

PRINTERS

Stylewriter 2400 color printer. $339
Stylewriter 1200 199
Apple Select 360 1189
Laserwriter 4/600. 819
Star SJ144 color (mac) 159
Epson Stylus Pro XL 1899
GCC Elite XL 1208. 3800

GCC Elite XL 808 2799
GCC Elite XL 608. . . . . $2199
H.P. Deskwriter 660C. 435
H.P. Laserjet 5 MP mac/IBM . 1089
H.P. Deskjet 850C mac/IBM. . . 425

MONITORS

Apple 20" Multiscan $1949
Apple Vision 1705 Monitor . . . 719
Apple Vision 1710 Monitor . . . 889
Apple Vision 1710 AV Monitor. 939
NEC XV17. 880
Supermatch 17xl 869
Viewsonic 17" GA 980

KEYBOARDS

Apple Extended Keyboard . . . $153
Apple Design Keyboard 79
MACally Extended Keyboard . . . 75

SIMMS

4MB 72 Pin 1x32 . . . . . $125
8MB 72 Pin 2 x 32 250
16MB 72 Pin 4 x 32 450
32MB 72 pin 8 x 32. 925

DIMMS & V-RAM

4MB $225
8MB 260
16MB 465
32MB 950
V-RAM For PowerMac (1MB) . 120
V-RAM For 9500 (2MB) 375
512 Level II Cache. 399

POWERBOOK

8MB for Powerbook 5300 . . . $350
16MB for Powerbook 5300 . . . 550
32MB for Powerbook 5300 . . 1500
Fax Modem for PB 520 & 540. 375
Pwrbook 190 CS 2145
Pwrbook 5300 8/500 mono. . 2140
Pwrbook 5300CS8/500 psve. . 2578
Pwrbook 5300CS 16/750 psve. . 3247
Pwrbook 5300CS16/750 actv. 4059

SCANNERS

UMAX Transp. Adapter S6/S8 $275
UMAX Vista S8 w/Adobe LE . . . 89
UMAX UC 630 LE 99

ACCESSORIES

Smart UPS 400 VA $330
Apple Quicktake150 dgtl.camera 695
Apple CD 300E-r. 149
Adobe Photoshop Bundle full . . . 467

STORAGE

840MB HD . $230 2210MB . . . 720
1080MB . . . 290 4300MB . . . 1075
2150MB . . . 825 Ext. Kit 99
Sanyo 4x CD int $225
Syquest EZ-Drive 135 MB 242
Syquest 88MB external 322
Syquest 200MB external 472
Syquest 270MB external 451

1-800-329-4MAC (4622)
International Orders (305) 825-9574

Computer Pros

Prices reflect cash discount. Prices subject to change.

XPRESSINFO or CIRCLE 238 ON READER SERVICE CARD

Apple II & Macintosh

COMPUTERS • PARTS
EXCHANGE REPAIRS

Specialists in used & reconditioned systems, monitors, printers & parts. Call for a free catalog.

WE BUY MACS!

INT'L: 617-275-4600 FAX: 617-275-4848

1-800-274-5343

Pre-Owned Electronics™

205 BURLINGTON RD, BEDFORD, MA 01730

CIRCLE 239 ON READER SERVICE CARD

Micro Outlet Phone: 800-801-4622 / 310-533-0496 Fax: 310-533-0501

Business Hours:
Monday-Friday 8:00 am to 7:00 pm pst
Saturday 10:00 am to 2:00 pm pst
2785 Pacific Coast Highway #178 Torrance, CA • 90505

GE 4 YEAR ON SITE WARRANTY

$100 to $350	$351 to $700	$701 to $1200	$1201 to $2000	$2001 to $3000	$4001 to $5000
$49.95	$79.95	$139.95	$169.95	$199.95	$259.95

PowerMacs

9500/150	**16/2GB/CD**	**$ CALL**
8500/150	**16/2GB/CD**	**CALL**
8500/132	**16/2GB/CD**	**CALL**
8500/120	16/1GB/CD	3074
8500/120	48/1GB/CD	3524
8500/120	16/2GB/CD	3450
8500/120	48/2GB/CD	3900
7600/120	**16/1.2GB/CD**	**CALL**
7500/100	16/500/CD	2065
7500/100	16/1GB/CD	2255
7200/120	**16/1.2/CD**	**CALL**
7200/120	**8/1.2/CD**	**CALL**
7200/120	**8/1.2/CD/DOS**	**CALL**
7200/75	8/500/CD	930
7200/90	8/500/CD	1095
7200/90	16/500/CD	1195

Powerbooks

190	8/500	$ CALL
190CS	8/500	1150
5300	8/500	1170
5300CS	**8/500**	**1750**
5300CS	16/750	2275
5300C	8/500	2575
5300C	16/750	2775
5300CE	32/1GB	3895
DUO2300C	8/750	3200
DUO2300C	20/1GB/MOD	4095
150	4/250	850
520	4/240	795
520C	4/240	1595

Performas

Performa 5215	8/1GB/CD	$1365
Performa 6200	8/1GB/CD	1395
Performa 6205	8/1GB/CD	1695
Performa 6290	**8/1.2GB/CD**	**CALL**
Performa 6300	**16/1.2GB/CD**	**2195**
Performa 6320		**CALL**

Hard Drives

INTERNAL:		
Quantum	850MB Trailblrz 3.5"	$ 179
Quantum	1GB Fireball 3.5"	259
Quantum	1.2GB Fireball 3.5"	279
Seagate	2GB Barracuda 3.5"	660
Quantum	2.1GB Atlas LP 3.5"	682
Quantum	4.3GB GrandPrix 3.5"	825
Seagate	4GB Barracuda 3.5"	1085
EXTERNAL:		
Quantum	850MB Trailblrz 3.5"	$ 249
Quantum	1GB Fireball 3.5"	329
Quantum	1.2GB Fireball 3.5"	349
Seagate	2GB Barracuda 3.5"	730
Quantum	2.1GB Atlas LP 3.5"	752
Quantum	4.3GB GrandPrix 3.5"	895
Seagate	4GB Barracuda 3.5"	1155
Syquest	EZ-135 Drive	199
Iomega	Zip Drive	189

PowerMac Memory

4MB	Simms 72 Pin	$ 55
8MB	Simms 72 Pin	140
16MB	Simms 72 Pin	235
32MB	Simms 72 Pin	499
8MB	Dimms	125
16MB	Dimms	225
32MB	Dimms	449
64MB	Dimms	895
8MB	Powerbook 190 / 5300	225
16MB	Powerbook 190 / 5300	399
32MB	Powerbook 190 / 5300	925
1MB	VRAM	55
256K	L2 CACHE	99
512K	L2 CACHE	119

Scanners

AGFA	StudioScan IIsi	$ 799
HP	**Scanjet 4C**	**915**
Umax	VistaS6 LE Scanner	499
Umax	VistaS8 LE Scanner	635
Umax	VistaS12 LE Scanner	720
Umax	**Powerlook2 Mac Pro**	**2275**
Epson	**1200C Mac Pro Version**	**1090**
Nikon	**Super Cool Scanner**	**1895**
Nikon	**ScanTouch AX1200**	**1170**
Visioneer	**Paperport VX**	**299**
Visioneer	**Paperport**	**269**
UMAX	**Page Office**	**299**

Printers/Monitors

Apple	Stylewriter 1200	$ 179
Apple	Stylewriter 1500	$ 289
Apple	**Stylewriter 2400**	**289**
Apple	**Stylewriter 2500**	**389**
HP	Laserjet 5MP	999
Apple	Multiscan 15" Monitor	319
Apple	Multiscan 1710AV	920
Sony	15SFIIMonitor	469
Nec	17XV+ Monitor	799

MISC/SOFTWARE

Pinnacle	**RCD1000**	**$999**
Apple	600E CDROM	299
Conectix	Quick Cam	95
TrueVision	**Targa 2000**	**3560**
Radius	StudioVison	CALL
Internet Phone	SPECIAL	199
UMAX	BizCard Reader	199
Atto	Fast&Wide SCSI/PCI	CALL
FWB	Fast&Wide SCSI/PCI	CALL
Adobe	Photoshop 3.0.5	399
Adobe	Pagemaker 6.0	469/399
Form Z 2.7	SPECIAL	CALL
Electric Image	SPECIAL	CALL

Modems

Apple	Geoport Adap	$118
Supra	28.8 Express	155
Supra	28.8 Modem	199
Glob.Vill.	28.8 TelePort	189
Glob.Vill.	19.2 PowerPort	299
Glob.Vill	**28.8 PPort PC**	**329**
Megahertz	CruzCard28.8	289
Megahertz	CruzCard14.4	75

LEASING SPECIALISTS FAST APPROVALS!

LOWEST RATES
NO ADVANCED PAYMMENTS
100% TAX DEDUCTIBLE

LEASE SPECIALS

Entry Level DTP Workstation
Power Macintosh 7600/120
32MB, 1GB HD, CD
Sony CPD-17SF2 Monitor
Apple Design Keyboard
Hewlett Packard LaserJet 5MP
Epson 1200C Color Scanner
Call for your low lease payment!

Multimedia Workstation
Power Macintosh 8500/150
48MB, 2GB HD, CD
Apple 1710 AV Monitor
Apple Design Keyboard
Truevision Targa 2000
Macromedia Director 4.0
Call for your low lease payment!

The Pre-Press Workstation
Power Macintosh 9500/150
144MB, 1GB HD, CD
ATI XClaim 4MB Video Card
Apple 20" Multiscan Monitor
Apple Design Keyboard
Hewlett Packard LaserJet 4MV
Epson 1200C Color Scanner
Call for your low lease payment!

MICRO OUTLET 800-801-4MAC

CALL FOR CUSTOM CONFIGURATIONS

Due to publication time advertising prices may vary. All prices includes cash discounts. Not responsible for typographical errors. Shipping and service fees are non-refundable. No sales tax outside of CA. All returns subject to 15% restocking charge. All returns must have an authorization number (R.M.A.)

Email: Microutlt.@aol.com
Visit us on the World Wide Web at: HTTP://WWW.microoutlet.com
C.O.D. / MASTERCARD / VISA / DISCOVER / AMERICAN EXPRESS

XPRESSINFO or CIRCLE 240 ON READER SERVICE CARD

PC SYSTEMS DESIGN

1-800-833-0128
24 Hr Fax Line 714-572-8051

Buy From The Systems & Peripherals Specialists!

Providing Quality Computer Solutions Since 1983

HARD DRIVES

1080MB	Fireball-Quantum-11ms	$ 245
1280MB	Fireball-Quantum-11ms	$ 265
2.0 GB	Atlas-Quantum-8ms	$ 689
4.0 GB	Atlas-Quantum-8ms	$ 949
4.0 GB	XP34300W-Quantum-8ms	$1095
2.0 GB	M4221-Micropolis-8ms	$ 589
4.0 GB	M3243W-Micropolis-8ms	$1095

SCSI CONTROLLERS

FWB	Jack Hammer PCI Card	$ 375
FWB	Jack Hammer Nubus Card	$ 455

REMOVABLES DRIVES

Syquest	EZ135 w/ cart.	$ 199
Iomega	Zip 100 w/ cart.	$ 197
Iomega	Jaz 1G w/ cart.	$ 597

Great Deals

CD-ROMS/SCANNERS

SONY	External 4x CD-ROM Drive	$ 195
TOSHIBA	Internal 6x CD-ROM Drive	$ 225
TOSHIBA	External 6x CD-ROM Drive	$ 275
NEC	4Xc External 7-Disc Changr	$ 335
MICROTEK	E3 - 24 bit 600dpi	$ 389
MICROTEK	Scanmaker III 24 bit 600dpi	$1985
AGFA	Arcus II - 36bit	$1995

MODEMS / PRINTERS

SUPRA	Express Plus 28.8k	$ 169
Megahertz	28.8k PC Card w/ xJACK	$ 279
GL VILL	Teleport Platinum 28.8k	$ 195
GL VILL	Powerport Platinum 28.8k PC-Card	$ 325
GL VILL	Powerport Pro 28.8k w/ Ethernet	$ 495
HP	Deskjet 855 XCi Inkjet	$ 479
HP	Laserjet 5MP Laser Printer	$ 989

MONITOR SPECIALS

SONY	15 SX .25 dpi	$ 419
SONY	17 SF II .25 dpi	$ 845
SONY	20 SF II .25 dpi	$1695
MAG Innov.	DX17T Technitron .26 dpi	$ 795
PortraitDisp.	Pivot 1700 .28/.26dpi	$929/$999

BEST BUY!!

Corporate & Educational PO's are WELCOME

All Hard Drives Listed above are Internal. Add $60 for most External Cases.

Call For Our FREE NEW Catalog!!

We offer 30 day money back guarantee on all hard drives plus manufacturer warranty. Product information & prices are subject to change without notice. PC Systems is NOT responsible for typographical errors.

CIRCLE 241 ON READER SERVICE CARD

Parts Trades Upgrades

*Call 318-424-9791

$99 Bundle
- System 7.5 CD
- ClarisWorks 3.0 CD
- internal 1/2 height 160MB HD
- Global Village Bronze modem

IIsi 5/160
$549
MONITOR, MOUSE AND KEYBOARD
includes ClarisWorks bundle

PowerBook 520c
- 4/240, 25MHz LC040
- DUAL SCAN COLOR
- FACTORY REFURBISHED

$1399

We take trades on PowerBooks!
call (318) 424-9791

BARGAIN BASEMENT

MACINTOSH SYSTEM 7.5 CD	25.
1MB 30-pin 120ns SIMMS	10.
New Duo Type 1 Batteries	15.
PowerBook 140-180c keyboard	49.
PowerBook 140-180 a/c adapter	49.
Curtis Trackball Mouse new	39.
StyleWriter ink cartridges: 3 for	29
ImageWriter LQ ribbon	6.
IIsi Power Supply	CALL
PowerBook Canvas Tote Case	19.
Quadra 660AV NuBus Adapter	49.
Personal NT Logic Bd.	49.
Apple PowerCD Carrying Case	10.
40MB 1/3-height Hard Drive	29.

NEW LOWER PRICING!
Macintosh Logic Board Upgrades

Personal NT to NTR printer ugprade	exchange $69
LaserWriter IINT/NTX to IIf	exchange $399 NT/299 NTX
Mac II or IIx to IIfx (with RAM swap)	exchange $299
Centris 610 to Quadra 660AV	exchange $299
Quadra 660AV TO PowerMac 6100/60	exchange $499
Quadra 800/840AV to PowerMac 8100/80	exchange $999
Quadra 800 to Quadra 840AV	exchange $299
Quadra 650 to PowerMac 7100/66	exchange $699
LC550 to LC575	exchange $499
IIvx or IIci to Centris 650	exchange $299
Performa 630 to PowerMac 6200	exchange $699

Macintosh CPUs

LC550 4/160/CD	$699.
Performa 578 8/320/CD NEW	$1199.
Performa 631 8/500/CD	$689.
Performa 637 8/350/CD	$669.
LC630/DOS 12/500/CD	$799.
Performa 6100 8/500/CD	$799.
Centris 650 4/0	$649.
Quadra 605 4/160 NEW	$679
Quadra 660AV 4/0	$649.
Quadra 840AV 0/0	$1099.
Quadra 800 8/0	$1099.
Quadra 950 8/500 NEW	$1499.
PowerMac 5200/75LC 8/500/CD	$1399.
WGS 9150 16/1G/DAT	$2599.

TOO MANY CPU'S TO LIST - CALL US!

FACTORY REFURBISHED

Accessories/Peripherals

630 Series Card Specials

DOS Compatibility Card (w/4MB)	$399.
Video Expansion Card	$149.
TV Tuner Card	$179.

Apple OneScanner	$379.
Apple Color OneScanner	$479.
HDI External 1.44 for PowerBooks	$149.
IIsi NuBus Adapter	$99.
Bernoulli 90PRO external	$89.
SyQuest 44 external	$69.

Personal LaserWriter LS
REFURBISHED $249
NEW $349
*toner sold separately

Performa 578
- 8/320/CD
- complete with ext. keyboard
- BIG software bundle

$1199 NEW

Video Cards

Apple 8-bit Card	$99.
RasterOps 24MX	$199.
RasterOps PaintBoard Turbo new	$299.
E-Machines DoubleColor SX new	$149.
SuperMac PDQ 8•24	$349.
7100/8100 series AV Card	$499.
6100 series AV Card with adapter	$599.
PowerMac HPV VRAM Card	$299.

Monitors

Apple 13" Trinitron	$249.
Apple 14" Trinitron	$269.
Apple 15" MultiScan	$329.
Apple 21" Color	$1199.
RasterOps Sweet 16	$599.
*Hewlett-Packard 17" with card	$649.
*Hewlett-Packard 20" with card	$899.
Radius TPD 19" mono	$399.
Radius TPD 21" mono	$549
Radius PrecisionColor/20	$1199.
Radius Color Display/21	$1299.
Radius PrecisionColor Pivot	$549.
RasterOps GDM-1950 20"	$849.

Printers

Apple StyleWriter 1200	$179.
Apple Personal LaserWriter LS	$249.
Apple Personal LaserWriter 300	$299.
Apple Personal LaserWriter NT	$599.
Apple Personal LaserWriter NTR	$699.
Apple LaserWriter IINT	$699.
Apple LaserWriter IINTX	$899.
Apple LaserWriter Pro 630	$1199.
Apple LaserWriter 4/600PS	$649.
Apple Color Printer NEW	$699.
HP DeskWriter 310 NEW	$229.
Hewlett-Packard DeskWriter	$199.
Hewlett-Packard DeskWriter C	$219.
Hewlett-Packard DeskWriter 550c	$249.

FREE CDROM W/1555 FONTS WITH PURCHASE OF ANY INKJET PRINTER!
Laser toner cartridges sold separately

PowerBooks

PowerBook 520 SALE top of page!

PowerBook 170 4/80	$799.
PowerBook 180 4/80	$999.
PowerBook 160 4/80	$699.
PowerBook 150 4/120	$799.
PowerBook 145•4/80	$599.
PowerBook 140 4/40	$499.
DuoDock	$399.
Duo 230 4/80	$549.
Duo 250 4/240	$949.
Duo 280 4/240	$1149.

HTTP://www.shrevesystems.com

To Place Your Order Call:

1•800•227•3971

1200 Marshall St. • Shreveport LA 71101

FAX (318) 424.9771
Customer Service (318) 424.9791
Purchasing & Information (318) 424.9791
Email: ssystems@softdisk.com

Products are refurbished unless indicated as "new". Prices reflect a 2% cash discount and are subject to change without notice.

CIRCLE 242 ON READER SERVICE CARD

CLASSIFIED Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu

Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu CLASSIFIED

CALL THE MAC EXPERTS!

MacUser Labs Says:

"Nice Price, Nice Image Quality, Nice Controls, — Nice Monitor!"

"Top Image-Quality Honors!"

PowerMax Trinitron™ Monitors

Model PM14T	25 mm dot pitch- up to 1280x1024	$329
Model PM15T	25 mm dot pitch- up to 1280x1024	$449
Model PM17T	25 mm dot pitch- up to 1280x1024	$799
Model PM17TE+	25 mm dot pitch- up to 1600x1280	$999
Model PM20T	31 mm dot pitch- up to 1600x1280	$1749

PowerMax External Hard Drives

Call for up-to-date pricing on our complete line of quality hard drives!

Why Buy From PowerMax?

- Over 90% of our orders ship within 24 hours. We stock every major brand of Mac product from Adobe to Zoom!
- We speak plain English- no technotalk or high pressure.
- We consult with you, we want to make sure what you buy is what you need.
- Unlike most catalog outlets who try to keep prices low by limiting service options- we are a dealer who actually offers more expertise and service than most local full-priced dealers! We keep prices low through aggressive purchases, high volume and years of experience!
- All we ask is that you call a couple of the other guys first- then call us. You'll really appreciate our difference!

Customizable Mac Systems

Ref Performa 637 8/350/CD-while supplies last!	$688
Ref Performa 6214 8/Gig/CD-while supplies last!	$848
PowerMac 7200/75 8 Ram/CD	$788
PowerMac 7200/90 8 Ram/CD	$1088
PowerMac 7200/120 8 Ram/CD	$1588
PowerMac 7200/120 16 Ram/CD w/cache	$1949
PowerMac 7600/120 16 Ram/CD	$2588
PowerMac 8500/132 16 Ram/CD	$3188
PowerMac 8500/150 16 Ram/CD	$3988
PowerMac 9500/150 16 Ram/CD	$4088
Performa 5215 8/Gig/CD/Fax/15"	$1623
Performa 6220 16/Gig/CD/Video/TV	$1623
Performa 6290 8/1.2 Gig/CD/14"	$1949
Performa 6300 16/Gig/CD/15"	$2196
Powerbook 5300 8/500 Grey Scale	$1149
Powerbook 190CS 4/500	$1099
Powerbook 5300CS 8/500	$1849
Powerbook 5300CS 16/750	$2379
Powerbook 5300C 8/500	$2469
Powerbook 5300C 16/750	$2759
Powerbook 5300CE 32 Ram/Gig	$3949

• No One Stocks Macs The Way We Do! •

PhotoShop Workstation Special:

PowerMac 7200/90 with 16 Mb Ram, CD, 1 gig drive, 15" display, extended keyboard and Adobe PhotoShop on CD! Only **$2089**, or just **$89 per month!**

We stock the following lines, and can beat virtually any legitimate price!

•Adobe •Agfa •Atto •Bob's •Canon •DayStar •Epson •Fargo •GCC •Global Village •HP •Iomega • Kingston •Kodak •LaCie •Magnavox •Microtek •Mitsubishi •NEC •Nikon •Optima •QMS •Quantum •Radius •Samsung •Seagate •Seiko •Sony •SyQuest •Tektronix •TrueVision •Umax •Xante

Visa • MasterCard • Discover • Amex • COD • Leasing • P.O.s

Call today for your free PowerMax Catalog!

POWER MAX

Knowledge is Power

800-844-3599

Local line: (503) 624-1827 • Fax (503) 624-1635

HTTP://WWW.Illuminatus.Com/PowerMax • E-Mail: PowerMax@Illuminatus.com

Prices subject to change without notice. Prices reflect cash discount.

XPRESSINFO or CIRCLE 243 ON READER SERVICE CARD

HAWKE

BUSINESS SYSTEMS
A Division of the CPS Service Group
Flemington, NJ 08822
Fax - (908) 782-7027

(800) 875-2610

EMail - MacHawke@AOL.Com

Buy - Sell - Trade - Repair

Macintosh Computers and Peripherals

PB180 12/120 w/GV Gold Modem	$1349.00
PB180c 14/160 w/Express Modem	$1899.00
PB 140, 165, 165c Duo 210, 230 - Call	

6 Month Parts and Labor Warranty

Classic 4/40 w/K&M	- $399.00
Classic II 4/80 w/K&M	- $499.00
Mac Se/30 4/80 w/K&M	- $575.00
Mac II Si 5/80 w/ K&M	- $425.00
Mac IICi 5/160 w/ K&M	- $499.00
Apple Hi Res Color Mon.	- $225.00

Exchange Upgrades

Mac II to Mac IICx w/ fdhd	- $249.00
Mac II to Mac IIFx w/fdhd	- $499.00
Mac IICx to Quadra 900	- $649.00
Mac IICi to Quadra 900	- $599.00

CPU Case Included in Exchange

Refrb Apple 800k floppy(w/t)	$39.00
Refrb Apple 1.44 floppy(w/t)	$89.00
New Apple 1.44 floppy (w/t)	$129.00

XPRESSINFO or CIRCLE 244 ON READER SERVICE CARD

MediaGuide

BUY / SELL / TRADE

USED - We guarantee the BEST prices!

SE 1/20 (800K)	$99	LC 2/40	$199
Mac II 4/40 (800K)	$159	IIsi 5/80	$249
IIcx 8/80	$289	IIci 8/230	$399
IIfx 0/0	$249	IIvx 5/80	$449
Quadra 630 8/230/CD	$799		
Quadra 610 8/160	$599		
Powerbook 165 4/80	$699		
Apple 13" RGB	$229	16" RGB	$599
Imagewriter II	$149		
Apple Laserwriter	$149		
800K floppy	$29	NEW 1.44	$119

We carry parts for aging Macs — CALL

NEW

Photoshop 3	$225	Pagemaker 6	$225
Office 4.2.1	$149	ClarisWorks 3.0	$39
2x Ricoh CD-ROM Recorder	$799		
30-pin SIMMs: 1MB	$15	4MB	$69

(303) 715-1991

e-mail: MGSales@MediaGuide.com • Fax (303) 715-1419

CIRCLE 245 ON READER SERVICE CARD

MACMAIL

WITH THE LOWEST PRICE EVER CALL

MACS, ETC.

POWERMACS!!

PMAC7200/75•8/500/CD	$955
PMAC7200/90•8/500/CD	$1155
PMAC7200/90•16/500/CD	$1240
PMAC7500/100•16/500/CD	$2350
PMAC7500/100•16/1G/CD	$2395
PMAC8500/120•16/1G/CD	$3355
PMAC8500/120•16/2G/CD	$3850
PMAC9500/120•16/1G/CD	$2998
PMAC9500/132•16/1G/CD/V	$3675

STORAGE DEVICES!!

SEAGATE 1GIG EXT. HD	$339
SEAGATE 2 GIG EXT. HD	$695
SYQUEST 135MB E-Z DRIVE	$209
IOMEGA 100MB ZIP DRIVE	$198
SYQUEST 200MB EXT	$429
SYQUEST 270MB EXT	$429

PERFORMAS

!Prices include Apple Display, Keyboard, Mdm, & Software!

630 CD/8/500	$1055
5215 CD 8/1 GIG	$1430
6200/CD/8/1GIG	$1790
6300/CD/16/1.2GIG	$2485
APPLE VI/TV CARD	$205
APPLE CD 600E	$270

POWERBOOKS

POWERPC 5300 CS/100 8/500	$1925
POWERPC 5300 CS/100 16/750	$2595
POWERPC 5300 C/100 8/500	$2998
POWERPC 5300 C/100 16/750	$3375
POWERPC 5300 CE/117 32/1G	$5395
POWERBOOK 190/66 4/500	$1185
POWERBOOK 190/66 CS 8/500	$1325

MONITORS

Apple 14" MultiScan	$285
Apple 15" MultiScan	$339
Apple 1705 MultiScan	$ 679
Apple VISION 1710	$895
Apple 1710 AV DISPLAY	$999
APPLE 20" MULTISCAN	$1850
RADIUS PRESSVIEW 21" SR	$2940
Rasterops Superscan 17	$880
Rasterops Superscan 20	$1380
THUNDER COLOR 30/1152	$1495

PRINTERS, ETC.

Stylewriter 1200	$189
Color SW 2200	$259
NEW!! APPLE SW 1500	$265
NEW!! APPLE SW 2500	$365
LW 4/600 PS W/TNR	$759
LW 16/600 W/TNR	$2099
LW 12/600 W/KIT	$6210
APPLE DESIGN KB	$80
APPLE EXTENDED KB	$143
EXT. KB GENERIC	$50

•SE HABLA ESPAÑOL
•Int'l Orders Welcome
•Leasing Plans
•FEDEX•UPS•Etc...
•Prices may change
•Prices represent cash discounts

MACMAIL
Miami, Florida
1-800-622-6844
International call
(305) 639-9646

800-MAC-6844

VISA MASTERCARD AMERICAN EXPRESS COD

CIRCLE 246 ON READER SERVICE CARD

SAVE on RECONDITIONED MACS AND PERIPHERALS

- We're Mac specialists.
- High-quality and reliable reconditioned equipment with a 90-day warranty.
- Compare and save.
- Buy with confidence.

1-800-281-3661

Call 615-860-0109 to request a fax of current products.

VISA & MasterCard Accepted

DataTech Remarketing, Inc.
471 Myatt Dr., Madison, TN 37115
615-860-4422 • Fax 615-860-0390

XPRESSINFO or CIRCLE 261 ON READER SERVICE CARD

LATEST Mac S·A·L·E INTERNATIONAL SPECIALS

* HUGE SAVINGS ON NEW *

•New Apple CD-300i Plus•

2X Speed Tray Loading Int. CD-Rom Drive

ONLY $79.00

New

PowerMac 7200
(CPU only)
75MHz 8/500/CD- $949.00
90MHz 16/500/CD- $1,299.00
Save $100 with Monitor, Printer & Keyboard Purchase

• Personal LaserWriter •
NTR Logic Board
With Trade-In ONLY $79.00

New

StyleWriter 1200
with Ink Cartridge & Cable
► $199.00 ◄

* NEW *

Color StyleWriter 2400	$299.00	Apple 15" MultiScan	$375.00
Color StyleWriter 2200	$299.00	Performa 575 5/160/CD	$999.00

MacAlly Ext. Keyboard	$55.00
Apple PB Int. Data/Fax Modem	$25.00

* USED *

Mac Plus	No Kbd or Mouse	$99.00
Mac SE (800K)	1/0	$199.00
Mac II	4/40	$169.00
Mac II X	4/80	$279.00
Mac II CX	4/80	$279.00
Mac LC	2/40	$249.00
Mac LC II	4/80	$375.00
Mac IISI	5/160	$379.00
Mac IICI	4/80	$395.00
Mac IIVX	4/80	$475.00
Apple Powerbooks		Sale Pricing
Duo 210	4/80	$499.00
Duo 230	4/80	$599.00
DuoDocks	From	$349.00
Pwr Mac 6100/60	8/250	$699.00
Centris 650	4/230	$599.00
Quadra 650	8/230	$699.00
Quadra 700	4/230	$699.00
Quadra 800	8/500/CD	$949.00
Performa 475	4/160	$599.00
Performa 575	5/160/CD	$899.00
Performa 600	5/80/CD	$599.00
Apple 13" RGB Display		$250.00
Apple 14" AV Display		$350.00
Apple 14" MultiScan		$275.00
Apple 14" Color Display		$350.00
Apple 16" RGB Display		$649.00
Apple 1710AV Display		$799.00
Performa Display		$179.00
Performa Plus Display		$250.00
Apple PowerCD		$149.00
Apple CD 300 Ext.		$129.00
Color Stylewriter 2200		$199.00
Color Stylewriter 2400		$199.00
Portable Stylewriter		$149.00
ImageWriter II		$169.00
Laserwriter 4/600 PS		$599.00
Apple OneScanner		$249.00
Apple External SuperDrive (1.44)		$149.00
Apple Extended II Keyboard		$95.00
PowerBook Accessories		CALL

(Performa's Are CPU Only)

Macintosh PowerBook 5300/100
• Brand New In Box - 8/500 •

FEATURES:

- 100-MHz PowerPC 603e RISC processor
- 8MB RAM, expandable to 64MB
- 500MB internal hard drive
- Bright 9.5" passive matrix grayscale screen (640 x 480 16 levels of gray)
- Two PCMCIA Card slots & expansion bay for third-party devices
- 2.5 to 4 hour nickel metal-hydride battery
- Built-in infrared technology
- Light Weight: 5.9 lbs
- PowerBook Mobility Bundle & eWorld software
- 16-bit CD-quality stereo sound (in/out)
- 8-bit (upgradable) color video output (supports external displays)
- Built-in speaker & integrated microphone
- Built-in, removable Apple 1.4MB floppy disk drive
- LocalTalk/serial, SCSI, ADB, audio in/out & video out ports

*Accessories available

***Save Additional $50* With Purchase Of Any StyleWriter & PowerBook**

USED SYSTEM SPECIALS

Mac IIsi 5/80
Complete Color System
W/Apple Color Monitor & Kbd
► $599.00 ◄

Mac IIci 4/80
Complete Color System
W/Apple Color Monitor & Kbd
► $679.00 ◄

Mac LC 4/80
Complete Color System
W/Apple Color Monitor & Kbd
► $469.00 ◄

We Now Feature A Huge Inventory Of Parts For All Apple Product And Also Offer Extended Warranties

Visit Our Web Site At: www.getnet.com/macsale Or E-Mail Us At: macsale@getnet.com

Limited Quantities/Prices subject to change
Prices represent a Discount - off Full Price
Returns at discretion of Mgmt/15% Restocking fee

1-800-729-7031

1150 W. Alameda Dr, Suite 1 & 2
Tempe, AZ 85282
(602) 858-0900 / Fax: (602) 858-0811

WE WANT TO BUY YOUR NEW/USED MAC EQUIPMENT

CLASSIFIED Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu

Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu CLASSIFIED

iCN

INNOVATIVE COMPUTER & NETWORKING

LARGEST WEST COAST INDEPENDENT Apple RESELL, PARTS & SYSTEMS

ASK ABOUT OUR BUSINESS LEASING

6200/75 8/800/CD/15"Mon/KB $1379

5200/75 8/800/CD/15"Mon/KB $1399

POWERMACS

9500/150 16/2G/CD	$4285
9500/132 16/1G/CD/ATI	$3689
9500/120 16/1G/CD/ATI	$2990
8500/132 16/1G/CD	$3559
8500/120 16/1G/CD	$2990
7600/120 16/1G/CD	$2759
7500/100 16/1G/CD	$2289
7200/120 16/1G/CD	$2090
7200/90 16/500/CD	$1259
7200/75 8/500/CD	$1059

COMPLETE UPGRADES

WITH ORINGIAL APPLE LOGIC BOARD & PARTS

Workgroup Server 8150/80/110 to 8550/132 Workgroup Server $2345

Q900, Q950 to 9150/120 Workgroup Server $1690

Q800*, Q840av, 8100 to (*Add $100 for Q800) 8500/120/132 $1690-2090

Centris & Quadra 6XX to 6100 & 7100 CALL

POWERBOOK UPGRADES

WITH ORINGIAL APPLE LOGIC BOARD & PARTS

PowerBook 190/190cs to PowerPC $1249

Duo 2XX Series Duo 2300 $1149

PowerBook 5XX Series to 5300 PowerPC $899

Perf630/52XX/62XX, Q630, LC630, to 100Mhz 603e Processor $1240

6100/66 16/500/CD DOS $1059

PowerBook 5300ce 32/1.1 GB $3795

PowerBook 190cs 8/500MB $1179

PowerBook 5300 8/500MB $1190

ATTO Technology

NuBus/PCI SCSI-2 Fast/Wide ACCELERATORS

Express PCI SE	$319
Express PCI ME	$719
SiliconExpress IV	$799
ExpressStripe Raid 0	$329

DEMOS

Q950 4/0	$975
Q840av 8/230/CD	$1090
Q800 8/230/CD	$890
Q650 8/230	$890
NUBUS COMPUTERS	CALL

ORIGINAL APPLE PARTS

9500 Logic Board	$1239
8500 Logic Board	$795
132Mhz 604 Processor Card	$1295
120Mhz 604 Processor Card	$795
8500 Power Supply	$195
Q840av Logic Board	$695
Q800 Logic Board	$645
Q950 Logic Board	$595
1.44 Floppy Drive	$125
AV Card	$439
CD-ROM 600e, 4x-Speed External	$279

For technical info, or the most recent pricing, visit our web site at:

Internet: http://www.icni.com

Email: icn@icni.com

POWERBOOKS

5300c 16/750	$2790
5300c 8/500	$2349
5300cs 16/750	$2349
5300cs 8/500	$1890
150 8/250	$820
540c 4/320-R	$1890
520c 4/240-R	$1195
520 4/240-R	$795
DUO2300 20/1G/Mod	$3595
DUO280c-R	$1495

PERIPHERALS

GLOBAL VILLAGE Platinum ProPC Ethernet/28.8	$489
Spigot PowerAV Full Motion Video Capture Nubus Card	$599
SyQuest EZ135 Removable Storage	$229
BEST DATA 28.8 FAX/Modem w/Voice Mail	$195
UMAX Vista S6 w/Full Photoshop	$629
UMAX Vista S8 w/Full Photoshop	$729
AGFA StudioScan IISi	$837
AGFA Arcus II w/Transparency Adpt., Full Photo	$1759
PaperPort Vx By Visioneer	$295

• Prices Subject to Change Without Prior Notice •
• All Prices Reflect 3% Cash Discount •

PERFORMAS

5215 8/1G/CD/Mod/15"Mon/KB	$1459
6290 8/1G/CD/14" Mon/KB	$1859
6320/120 16/1G/CD/Mod/14" Mon/KB	$2399

MONITORS

APPLE 15" Multiscan	$309
SONY 15 SF2	$499
NEC XV15+	$499
APPLE 1705	$699
APPLE 1710	$889
SONY 17 SF2	$869
NEC XV17+	$839
VIEWSONIC 17GA	$799
SONY 20 SF2	$1789
NEC XE21	$1699

APPLE PRINTERS

LW 4/600	$759
LW 12/600 Color	$5850
LW 16/600	$2090
LW SELECT 360	$1099
StyleWriter 2500	$389
StyleWriter 2400	$299
StyleWriter 2200	$299
StyleWriter 1500	$299
StyleWriter 1200	$199
GCC Printers	CALL

310-445-6600

FAX TOLL FREE FROM JAPAN: 00-31-114211

FAX: (310)445-6611 • 2045-B South Barrington Ave., LA, CA 90025

XPRESSINFO or CIRCLE 248 ON READER SERVICE CARD

1-800-334-KIWI

Factory Refurbished Macs

Performa 631 8/500 CD, CPU only	$625
Perf. 631 8/500 CD, keyboard, 14" Monitor	$875
Perf. 631 8/500 CD, keyboard, 15" Multiscan	$925
Perf. 640 DOS 12/500 CD, kbd, 15" Multiscan	$1199
Performa 6116 8/700 CD, CPU only	$725
Perf. 6116 8/700 CD, keyboard, 14" Multiscan	$975
Perf. 6116 8/700 CD, keyboard, 15" Multiscan	$1025
Performa 5215 8/1 Gig CD	$1199
P6200 8/1 Gig CD, modem, kbd, 15" Multiscan	$1149
P6200 16/1 Gig CD, modem, kbd, 15" Multiscan	$1275
P6220 16/1 Gig CD TV, modem, kbd, 15" Multi	$1399
Powerbook Duo 230 4/120	$549
Powerbook 150 4/120	$599
Powerbook 520 4/240	$799
Powerbook 520c 4/240	$1099

Refurbished products have a 90 day warranty.

Visa/Mastercard/AmEx No Surcharge.

Better Business Bureau Member. Over 7 years in MacUser.

Kiwi Computers, PO Box 67381, L.A., CA 90067

Toll Free (800) 334-5494 Fax (310) 286-9667

International (310) 553-4507

E-mail: Kiwi Comp@AOL.COM

Hours: Mon-Fri 8am-5pm, Sat 9am-2pm PST

Returns are subject to a 15% restocking fee.

Prices subject to change w/o notice. Quantities may be limited.

CIRCLE 249 ON READER SERVICE CARD

MacGlobal

SYSTEMS AND PERIPHERALS SALES AND SERVICE

Performas		Powerbooks	
410/466/476	Call	160/165/170/180	Call
550 5/160	$799	150 4/240	$785
580 5/500	$950	520 4/240	$925
631 8/500	$950	520C 4/240	$1,325
6200 8/gig	$1,100	540 4/320	$1,950

Power Macs		Quadras	
7200 8/500	Call	630 4/250	Call
7500 16/500	Call	650/800/840/950	Call
8500 16/500	Call		

Printer

StyLW 1200	$185
Laser 300	$285
Laser 320	$450
Laser 4-600	Call

We Buy! TOP DOLLAR paid for used memory, hard drives and CPUs!

Call us!

Phone: 1-800-722-8864

Fax: [408] 997-1400

MacGlobal

XPRESSINFO or CIRCLE 250 ON READER SERVICE CARD

Infinity Micro

Apple HEWLETT PACKARD LIMAX radius GCC Technologies Seagate DAYSTAR

2288 Westwood Blvd. LA, CA 90064

800•589•1234 Tel 310•470•9426 Fax 310•470•4956

One stop shopping for all your software & hardware needs!

POWERMACS

7200/75 8/500CD	895.
7200/90 16/500 CD	1195.
7200/120 8/1G/CD	1835.
7200/120 16/1.2/CD	2245.
7500/100 16/1G/CD	2225.
7600/120 16/1G/CD	2745.
8500/120 16/1G/CD	2945.
8500/132 16/2G/CD	3795.
8500/150 16/2G/CD	4495.
9500/120 16/1G/CD	2895.
9500/132 16/1G/CD	3495.
9500/150 16/2G/CD	4699.
7100/80 8/700 CD	1145.
8100/100 8/700	1995.
8100/110 16/2G/CD	2795.

Scanners

ES-1200c Pro	1085.
ES-1000	709.
Paperport VX	279.
PowerLook Pro	1875.
Vista S12-Pro	895.
Vista S8-Pro	749.
Vista S6-Pro	655.
Agfa Acruss II	1885.
StudioScan IISi	875.

POWERBOOKS

5300CE 32/1GIG	3775.
5300C 16/750	2795.
5300C 8/500	CALL
5300CS 16/750	2395.
5300CS 8/500	1895.
5300 8/500	1085.
190CS 8/500	1795.
190 8/500	1285.
520 4/240	745.
520C 4/240/R	1195.
540C 4/320	1995.

PERFORMA

6300CD 16/1.2/CD	2145.
6290CD 8/1G/CD	1895.
6230CD 16/1G/CD	2285.
6220CD 16/1G/CD	1699.
6205CD 8/1G/CD	1695.
6200CD 8/1G/CD	1495.
6116CD 8/1G/CD	1245
6115CD 8/1G/CD	985.
5215CD 8/1G/CD	1385.
640 Dos 12/500/CD	1285.
638CDV 8/250/CD	1299.
637CD 8/350 CD	645.

Apple 15" Mutiscan	299.
Apple 1705/1710	635./885.
Apple 20" Multiscan	1495.
PrecisionColor 17	725.
PrecisionColor 21	1345.
PrecisionView 17	845.
PressView 17 SR	1975.
Intellicolor 20e	1245.
SuperMatch21TXL	1695.
PressView 21T	1895.
PressView 21SR	2995.
Sony 15sf/17sf2	485/879
Sony 17se2/20sf2	875/1745
Portrait 1700 .26	1035
Portrait 1700 .28	985
Thunder30-1152	795
Thunder30-1600	1145
Thunder Clr./30-1152	1399.
Thunder Clr./30-1600	1695.
VideoVsn Studio 2.51	2085.
Targa 2000Pci	3295.
Targa 2000Pro	3295.
# 9 Imagine 128	685.
IMS Twin Turbo 128	525.
ATI 4MB PCI card	425.

•Lease or Buy•

Stylewriter	
1200	199.
1500	295.
2500	375.
2200	279.
2400	297.
Lw 4/600	695.
Lw 360	1085.
LW 16/600	1995.
12/600PS	5875.

GCC	
XL 808	2795.
616	2425.

FARGO	
Prim. Pro	1325.
Pict. 310	3395.
Pict. 310E	4295.

Panasonic Post Script L.2 Laser $299.

POWERBOOK 520 4/240 $ 745.

CIRCLE 251 ON READER SERVICE CARD

DATA MICRO COMPUTER INC.

800•345•1234

TEL (310) 398•3300 • FAX (310) 391•2488

DEALERS & INTERNATIONAL SALES WELCOME!

Govt, Univers.'s & Corp. P.O.'s welcome

QMS LaserMaster TOSHIBA RasterOps GCC Technologies SuperMac Hewlett Packard LIMAX radius IBM

POWERMAC

6100/66 8/500	895.
7100/80 8/700/CD	1150.
7200/75 8/500/CD	845.
7200/90 16/500/CD	1269.
7200/120 8/16/CD	CALL
7500/100 16/1Gig/CD	2245.
7600/120 16/1 Gig/CD	CALL
8100/100 16/700/CD	2585.
8500/132 16/2Gig/CD	CALL
8500/120 16/1Gig/CD	3145.
8500/150 16/2Gig/CD	CALL
9500/120 16/1Gig/CD	2750.
9500/120 32/4Gig/CD	4450.
9500/132 16/1Gig/CD	3375.
9500/150 16/2Gig/CD	CALL

POWERBOOKS

5300CE 32/1Gig	3885.
5300C 16/750	2785.
5300C 8/500	2695.
5300CS 16/750	2595.
5300CS 8/500	1840.
5300 Mono 8/500	1155.
190CS 8/500	1295.
190 8/500	1280.
540C 4/320	2295.
520C 4/160	1345.
520C 4/240	1445.
520 4/240	895.
150 4/240	850.
Call for memory	
Platinum pro	495.

PERFORMAS

476 4/320	595.
550 5/160CD	795.
575 5/250CD	995.
578 8/320CD	1175.
5215 16/1Gig CD	1395.
630 4/250	655.
631 8/500CD	745.
635 4/250CD	695.
637 8/350CD/15"	1297.
638 TV/8/350CD15"	1252.
6200 16/1Gig/CD	1595.
6290 8/1.2Gig CD	1995.
6220TV 16/1GigCD	1899.
Centris 650 8/500	945.
640 DOS 12/500CD	1495.

RADIUS

15" Gray Scale	295.
15" Pivot/Gray Scale	449.
20" TPD/20GS	695.
21" TPD/21GS	777.
Precision Color/17	745.
Intellicolor Disp/20	1299.
Intellicolor Disp/ 20E	1499.
Pressview 21T	CALL
SuperMatch 17XL	695.
SuperMatch 20 Plus	745.
SuperMatch 21 Color	1299.
SuperMatch 21TXL Video	1499.
vision Studio	695.
SuperMac 20" Trinit.	1295.
Spectrum 24PDQ Plus	1395.
E-Machine Futura IISX	1945.
E-machine Futura IILX	2675.

APPLE PRINTERS

S/300	$495.	16/600	$2095.
S/360	$1045.	Per320	$599.
4/600	$695.	Per300	$399.

AGFA

Arcus $1995

CIRCLE 252 ON READER SERVICE CARD

UNITED COMPUTER EXCHANGE

"A Global Network for buyers and sellers of used Macintosh equipment"

ATTENTION BUYERS & SELLERS

TRY OUR "Used Mac Price Index"

WEB PAGE Available on 24hr-FaxInfoline (770) 995-0569

http://www.uce.com WEB Home PAGE International (770) 612-1205

800-755-3033

CIRCLE 253 ON READER SERVICE CARD

USED COMPUTERS

The Computer Exchange

"We match buyers and sellers of used equipment nationwide."

From CLASSIC to POWER PC

Call for More Info

800-304-4639

Ph: 404-898-0700

http://www.compexch.com

205 Armour Drive Atlanta, GA 30324

XPRESSINFO or CIRCLE 254 ON READER SERVICE CARD

LA's LEADING COMPUTER STORE!

LA COMPUTER CENTER

(800) 689-3933

ORDERS ONLY!

(310) 473-2535 FAX (310) 312-9041

E-mail us at: lacc@directnet.com

Visit Us At Our NEW Web Site

www.LAComputerCenter.com

24Hrs A Day -- On-Line Ordering

POWERMACS

7200 120MHZ! 8/1.2GIG/CD $1799

7200 120MHZ! 16/1.2GIG/CD $2149

7600 120MHZ! 16/1.2GIG/CD $2799

7200 75MHZ! 8/500/CD $899

8500 132MHZ! 16/1GIG/CD $3499

8500 150MHZ! 16/1GIG/CD $4199

9500 150MHZ! 16/2GIG/CD $4299

MONITOR AND KEYBOARD SOLD SEPERATELY.

9500 132MHZ! 16/1GIG/CD w/Video Card $3399

8500 120MHZ! 16/1GIG/CD $2995

7500 100MHZ! 16/1GIG/CD $2199

7500/100 16/500/CD $2099

6100/66	8/500/CD	$899
6100/66/DOS	16/500/CD	$1099
7100/80	8/700/CD	$1299
7100/80AV	16/700/CD	$1499
8100/100	8/700	$2199
8100/100AV	16/1GIG/CD	$2699
8100/110	16/2GIG/CD	$2799
7200/90	16/500/CD	$1249
8500/120	16/2GIG/CD	$3199
9500/120	16/1GIG/CD	$2799
9500/132	16/2GIG/CD	$3699

QUADRAS

610	8/230/CD	$899*
630	4/250	$749*
950	8/0	$1399

WGS & WORKSTATIONS

8150/80 16/1GIG/CD/DAT	$2599
8150/110 16/1GIG/CD/AS	$2899
9150/80 8/2GIG/CD	$3299
9150/120 16/2-1G/CD/D/A	$5899

POWERBOOKS

PowerBook 150 8/250 $699 4/250 $CALL

PowerBook 5300 8/500 $1149

PowerBook 5300C 16/750 $2699

PowerBook 5300CE 32/1GIG $3799

5300CS	8/500	$1849
5300CS	16/500	$2049
5300CS	16/750	$2299
5300C	8/500	$2299
190	4/500	$999
190CS	8/500	$1429
180C	4/160/mod	$1899*
540C	4/320	$1999*
540C	12/320/mod	$2599*
520	4/240	$749
520C	4/240	$1199*
520C	4/240/mod	$1299*
520C	12/320/mod	$1799*
Duo2300C	8/750	$2699
Duo2300C	20/1.1G	$3599
Duo250	4/200	$699*
Duo250	12/200/Mod	$1199*
Duo280	12/240/Mod	$1299*

MONITORS

SONY

1425 14"	$349
15SXI/15SFII 15"	$429/519
17SFII 17"	$859
GDM 17SEII	$1049
20SFII 20"	$1759

RADIUS

SuperMatch 17"	$599*
SuperMatch 20"	$799*
Intellicolor 20	$1199*

APPLE

20" MultiScan $1069*

14"AV MultiScan	$279
14"/15" MS	$199*/249*
1705	$649
1710/1710av	$879/949
20" MultiScan	$1649

PERFORMAS

6200CD 8/1GIG/CD $1299

CPU, KEYBOARD, MOUSE, 14.4KBPS & 15" MULTISCAN MONITOR COMPLETE WITH SOFTWARE

6200CD 8/1GIG/CD $869*

CPU, KEYBOARD, MOUSE, 14.4KBPS ONLY NO MONITOR

631CD 8/500/CD CPU & KEYBOARD & 14" MONITOR $799*

6116CD 8/700/CD CPU & KEYBOARD & 14" MONITOR $899*

640CD	12/500/CD/NO MON	$999*	5215CD	8/1GIG/CD	$1349
6116CD	8/700/CD/14"	$1299	6220CD	16/1GIG/CD	$1049*
6205CD	8/1GIG/CD/15"	$1599	6300CD	16/1GIG/CD/15"	$2099

WE ALSO CARRY TOSHIBA IBM COMPAQ

INTERNATIONAL ORDERS WELCOME! Call for Quantity Pricing!

WE WANT TO BUY YOUR NEW & USED APPLE PRODUCTS UNIVERSITY, SCHOOLS, GOV'T & FORTUNE 1000 P.O.'S ACCEPTED! BUSINESS LEASING AVAILABLE CALL FOR DETAILS

GET 4 YEAR ON SITE WARRANTY!

ASK YOUR SALES REP REGARDING OUR EXTENDED ON SITE WARRANTY

$100 to $350	$351to $550	$701 to $1200	$1201 to $2000	$2001 to $3000	$4001 to $5000
$49.95	$79.95	$139.95	$169.95	$199.95	$259.95

* Reflects Refurbished Units. Prices Subject To Change Without Notice. CALL FOR LATEST PRICE. ALL PRICES REFLECT A 3% CASH DISCOUNT Credit Cards Will Be Verified For Fraudulent Use.

FedEx NEXT DAY AND SAME DAY SHIPPING AVAILABLE. WE SHIP WORLDWIDE!! OPEN SATURDAY, VISIT OUR SHOWROOM!

PRINTERS

LaserWriter 4/600	$699
LaserWriter Personal	$329*
laserWriter Select 360	$1099
LaserWriter 16/600/PS	$1999
Color LaserWriter 12/600	$5999
Portable Stylewriter	$239*
StyleWriter 2200	$299
StyleWriter 1200/2400	$199/299
STAR COLOR PRINTER	$99

STYLEWRITER 1500 $279 2500 $369

HP DeskWriter 660C	$379
HP DeskJet 850C	$489
HP LaserJet 5MP	$949
HP LaserJet 4MPlus	$1849
HP LaserJet 4MV	$2799

XPRESSINFO or CIRCLE 255 ON READER SERVICE CARD

VL PROMAC, INC.

800-829-4857

PowerMac

PowerMac 7200/75	8/500/CD	$979
PowerMac 7200/90	16/500/CD	$1,299
PowerMac 7500/100	16/1GB/CD	$2,259
PowerMac 8500/120	16/1GB/CD	$3,179
PowerMac 9500/132	16/1GB/CD	$3,565
Performa 5215 Bund.	8/1GB/CD	$1,399

Monitor

14"/15"	$319/335
17"/1705	$690
17"/1705/1710AV	$878/995
20"	$1,845

Printer

Laser 4/600	$685
StyleWriter 1500	$269
StyleWriter 2500	$359
HP 660c	$349

Special

CALL ABOUT NEW MODEL IN SPECIAL

International 305·593·9221

Fax 305·593·8921

VISA MasterCard

SE habla Espanol

CIRCLE 256 ON READER SERVICE CARD

MAC CITY COMPUTERS

SAVE ON HUGE SELECTION OF APPLE PRODUCTS WITH LOW MAC CITY PRICES!

PERFORMA

6300	16-1G cd	2299
6220	16-1G cd R	1199
6200	08-1G cd R	1399
5215	08-1G cd	1399
6116	08-700cd R	999
638	08-350cd R	899

HARD DR SPECIALS

4GIG/2GIG	$889/$559
1GIG/730MB	$239/$189
160mb 2.5" I/pb	$129

Prices are subject to change w/o notice

INTERNATIONAL ORDERS C.O.D WELCOME

DISCOVER

POWER MAC

SAVE ON ANY CONFIGURATION

NEW LOW PRICE EVERY DAY

P.M 8100/7100 CALL

9500/132 16-1G CD$3199 48-2G CD$4049 80-2G CD$4529

8500/120 16-1G CD$3049 32-1G CD$3299 144-2G CD$Call

1MB V-RAM $69

9500/120 16-1g cd 2899 48-2g CALL

7500/100 16-1G CD 2229 48-1G CD 2729

$199 Teleport 28.8

7200/75 8-500 cd 899 16-500 cd 1049

7200/90 24-1g cd1579 16-500cd1269

EZ 135 $229

Iomega ZIP DR $199

POWERBOOK FREE SHIPPING

5300	8-500	1199
5300CS	16-750 /8-500	Call / 1799
5300C	16-750 /8-500	2699/2099
5300CE	32-1G	3799
190CS	8-500	1399

540C 520/520C 150 CALL

Visit Our Web WWW.maccity.com/bestprice

MEMORY

MAC 72 PIN	
4MB / 8MB	95 / 159
16MB / 32MB	259 / 499
P.M 9500/8500/7500/7200 DIM	
8MB/ 16MB	159/ 259
32MB/ 64MB	499 / 1039
POWERBOOK 5300 $SAVE	

Peripherals

Apple Laser Pro 16/600	Call
Apple Laser Pro 4/600	699
Apple Select 360	1099
Stylwriter 2500	379
HP 5MP	959
Apple 15"/17" Multiscan	349 / 849
RADIUS 17"/Prec 21"	919/Call
SONY 17SFII/17SEII	849/CALL
Mcroteck iihr w/ph 3.0	Call
AGFA Studio / Arcus II	Call

Sales (800)505-8991

WE GUARANTEE QUALITY AND BEST PRICES, SINCE 1987

NO TAX OUTSIDE CALIFORNIA

ALL PRICES REFLECT C.O.D CASH DISCOUNT

Tel:(818)505-8991Fax:(818)505-8992

11026 Ventura Blvd , Studio City , CA 91604

CIRCLE 257 ON READER SERVICE CARD

CLASSIFIED Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu

Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu CLASSIFIED

For current up to date pricing and Custom Configuration
See our WEB-SITE at **http://www.wcn.com**

(800)761-1999

BIGMAC

a division of WCN

BIG MAC

168 Pin DIMM Modules
For Power Mac 9500 to 7200

8/16MB	Call for
32/64MB	Best Pricing
256/512K Cache	109/159
1MB V-RAM	69

72 Pin SIMMS Modules
6100–8100, Quadra, Centris & Performas

8/16/32/64MB	Call For

Power Book 500/5300/190

8/16MB/32/64MB	Best Pricing

Kingston TECHNOLOGY CORPORATION

POWER MACS

7200/75	8/500/CD	975
7200/90	16/500/CD	1299
7500/100	16/1GB/CD	2250
7600/100	16/2GB/CD	2799
7600/120	48/2GB/CD	3399
8500/120	16/1GB/CD	3195
8500/120	16/2GB/CD	3450
8500/132	16/2GB/CD	3695
8500/150	16/2GB/CD	4395
8500/150	48/2GB/CD	4995
9500/132	16/1GB/CD	3695
9500/150	16/2GB/CD	4495
7200/120	16/1GB/CD	2250
7200/120	8/1GB/CD	1899
6100/66	16/500/DOS	1199
7100/80	8/700/CD	1399
7100/80AV	16/700/CD	1699
8100/100	8/700	2050
8100/100AV	16/700/CD	2650

SPECIAL

5300	*8/500*	*1099*
5300C	*8/500*	*2395*
5300CS	*8/500*	*1799*
5300CE	*32/1GB*	*3699*
8500/132	*16/2GB/CD*	*3695*
9500/150	*Demo*	*3595*
6100/66	*16/500/CD/DOS*	*1199*

PERFORMA

6300	16/1GB/CD	2295
6200	8/1GB/CD	1495
6220	16/1GB/CD	1595

WORKGROUP

7250/120	16/1.2GB/CD	2895
8550/132	24/2GB/CD/DAT-2	1775
500/132	32/2GB/CD	7846
700/150	48/4GB/CD/DAT-2	13444
700/150	32/1GB/CD	10356

Call for APPLE 3rd party products
All prices reflect a cash discount, any other method of payment is 3% higher. International Orders, Visa, MC & AmEx Welcome • Next Day Shipping for U.S.A. & International. Prices are subject to change w/o notice & Limited Quantity

TFI : (800) 761-1999 • FAX: (310) 235-1790
TEL.: (310) 235-1780 • http://www.wcn.com
1831 PONTIUS AVE., LOS ANGELES, CA 90025

XPRESSINFO or CIRCLE 258 ON READER SERVICE CARD

800-580-0177

MONTHLY SPECIALS

Powermacs/ Performas

72/75 8/500CD	955.
72/90 8/500CD	1150.
72/90 16/500CD	1250.
75/100 16/1G/CD	2299.
85/120 16/1G/CD	3199.
95/132 16/1G/CD	3450
Performa 5215	1375.

Call for current pricing

Perfoma 630 Bundle $1099.
Perf. 630CD 8/500 w software
Apple 14" Multiscan Display
Apple design keyboard
Fax Modem

5300CE 3799.00

Call for custom configurations and volume discounts on the complete Apple product line.

Free shipping in the U.S

Lowest prices on memory

Prices reflect a cash discount and are subject to change without notice

World Micro
800-580-0177 , 305-716-0177
305-716-0277 Fax

XPRESSINFO or CIRCLE 259 ON READER SERVICE CARD

MacBYTE

JULY SPECIAL: 4MB 72 PIN SIMMS - ONLY $39.00!!!

BUY • SELL • TRADE

CASH FOR MACS

NEW & USED MACS WITH WARRANTIES

WORLD - WIDE SHIPPING

Visa/MasterCard/Amex/COD

TECH SUPPORT: 310-448-4488
FAX: 310-448-4494

800-432-2983

4215 Glencoe Ave., #150
Marina del Rey, CA 90292

E-MAIL: MacByteCo@aol.com

XPRESSINFO or CIRCLE 260 ON READER SERVICE CARD

POINT OF SALE INVENTORY CONTROL

Software & Hardware for:

- Retail
- Mail Order
- Rentals
- Service/Repair
- Manufacturing
- Kiosk's

Bar Code Readers • Receipt Printers
Cash Drawers • Mag Stripe/Check Readers
Portable Data Collection • FileMaker Tools
Credit Card Authorization & Dep. Software
Time Clock Software • Price & Mailing Labels
Web Site: http://www.posdirect.com
Call, fax, or e-mail for a
FREE INTERACTIVE CATALOG
(800) 622-7670 sales@posdirect.com
(618) 985-8237 tel (618) 985-3014 fax

P.O.S. DIRECT

P.I.M.S. Professional Inventory Management System

DEALER INQUIRIES WELCOME
30 DAY MBG

Welcome to the Productivity Revolution

XPRESSINFO or CIRCLE 264 ON READER SERVICE CARD

HOT SWAP SCSI

Safe · Easy · Fast

Add SCSI devices to the Mac while the power is on!

With the SCSI PowerPlug®, any Mac user can swap external SCSI devices in under 20 seconds—without shutting down! No proprietary tower or docking station required! 4-diamond MacWeek & 3.5 mice MacUser reviewed. Includes patent-pending PowerPlug II connector, software and complete instructions.

Ph: **(203) 761-0651**
Fax: **(203) 761-1444**

Hot Wire Technology Inc.
462 Danbury Rd., Wilton, Ct 06897

mention this ad for $99 special price!

www.hotswap.com

CIRCLE 262 ON READER SERVICE CARD

Creating precision bar codes is as easy as using a font!

PRINTBAR™ BAR CODE FONTS

- Compatible with virtually any Macintosh application.
- Choose from: UPC/EAN/ISBN • Code 39 • Code 128 NEW! • Interleaved 2 of 5 • POSTNET/FIM.
- Many bar code sizes in each font package.
- Money back guarantee on all products.

"This is the best product of its kind, and it's reasonably priced too."
—MacUser review ★★★★½

EXTRA BONUS FREE POSTNET & FIM with any PrintBar Font Purchase

Visit our Web Site at: www.bearrock.com

4140 Mother Lode Dr., Ste. 100,
Shingle Springs, CA 95682
PH: 916 672-0244 • FAX 916 672-1103
E-Mail us at: info@bearrock.com

Scanning bar codes is even easier!

BAR CODE READERS AS LOW AS $199!

- Instant or remote data entry from bar codes! Scan information into any software application with a wand, CCD, laser gun, badge slot or magstripe reader.
- Don't waste your money on the wrong kind of bar code reader for your situation.
- Our experienced customer service reps can help you choose the correct reader at the best price!

"...the people at Bear Rock are flat-out experts on the topic of bar codes and produce products of exceptionally high quality."
—Personal Publishing Magazine

Bear Rock TECHNOLOGIES
Bar Code Products That Mean Business

800 232-7625

XPRESSINFO

Bar Code Generation

MacBARCODA

The highest precision barcoding package available for the Mac.

For Sheet-fed Labels

Easy to use, prints any label with barcodes, text, graphics, numbers and dates.

LabelDesigner

For Roll-fed Labels

Prints short-run labels on reels with barcodes, text, graphics, numbers and dates. Compatible with the full range of Zebra Printers.

macthermal

A complete line of barcode scanners starting at $255

Computalabel

Call toll free **800 289 0993**

28 Green Street, Newbury MA 01951
Fax 508-462-9198

XPRESSINFO or CIRCLE 263 ON READER SERVICE CARD

CABLE T. V. CONVERTERS & DESCRAMBLERS

Own your own cable TV equipment from...

TKA ELECTRONICS
14937 Industrial Rd.
Omaha, NE 68144

☆ 13 MONTH WARRANTY

☆ 30 DAY NO RISK TRIAL

AMERICAN EXPRESS COD

For a FREE catalog call:

800-729-1776

CIRCLE 273 ON READER SERVICE CARD

ONLINE CATALOG! HTTP://WWW.COMPU-AMERICA.COM

9500 150MHZ!
16/2GIG/4XCD $4299
- 150MHz CPU
- 604 RISC
- PCI BUS
- Tower Case

5300CE 117MHZ!
32/1.2GIG ACTIVE $3795
- 117MHz
- 603e CPU
- 2 PCMCIA
- 800X600

COMPU AMERICA
"The Computer Specialist"

DUO 280C 66MHZ!
4/320/ACTIVE $1095
12/320/19.2 $1695
- 68040/66
- DOCKABLE!
- 4.5 LBS

1-800-533-9005
EMAIL: CompuAmer@aol.com
(310) 446-1771 FAX Bds.
(310) 475-7744
10435 Santa Monica Blvd LA, CA 90025
We are open on Saturday!
Come and see our HUGE showroom! We ship WORLDWIDE!
We accept Government, Fortune 1000, and University P.O.'s.

PERFORMA 6200
8/1GIG/4XCD $1299
- 75MHz
- 14.4 FAX
- Keyboard
- 14" Disp.

POWERMAC

7200/75	8/500/CD	989
7200/90	8/500/CD	1249
7200/90	16/500/CD	1379
7200/120	8/1.2G/CD	CALL
7200/120	16/1.2G/CD	CALL
7500/100	16/500/CD	2049
7500/100	16/1GIG/CD	2149
7600/120	16/1.2G/CD	CALL
8500/120	16/1GIG/CD	2999
8500/120	16/2GIG/CD	3299
8500/132	16/1.2GIG/CD	CALL
8500/150	16/2GIG/CD	CALL
9500/120	16/1GIG/CD	2799
9500/132	16/1GIG/CD/VID	3349
9500/132	16/2GIG/CD/VID	3799
9500/150	16/2GIG/CD/VID	CALL
6100/66	8/500/CD	1089
6100/66	16/500/CD/DOS	1599
7100/80	8/500	1099
7100/80	8/700/CD	1289
7100/80AV	16/700/CD	1849/1699*
8100/100	8/700	1899/1699*
8100/100	16/1GIG/CD	2499/2299*
8100/100AV	16/1GIG/CD	2699/2499*
8100/110	16/2GIG/CD	2799
QUADRA 950	8/500	1699
WGS 6150/66	16/700/CD	1995
WGS 8150/110	16/1GIG/CD/DAT	4195
WGS 8150/110	16/1GIG/CD/INT	3995
WGS 9150/120	16/2GIG/CD	5399

PERFORMAS

6300	16/1.2GIG/CD	2199
6290	8/1.2GB/CD	1999
6230	16/1GIG/CD/MPG	2299
6220	8/1GIG/CD/ No Disp.	1599/1099*
6205	8/1GIG/CD/28.8	1799
6200	8/800/CD	1299/1199*
6116	8/700/CD	1349/1099*
6115	8/350/CD	1049*
5215	8/1GIG/CD	1399
640CD DOS	12/500/CD/NO Disp	1049*
638CDV	8/250/CD/TV	1099*
635	5/250/CD	799*
631	8/500	1299/899*
630	8/250/CD	849*

POWERBOOKS

5300CE/117	32/1GIG	3899
5300C/100	16/750	2999
5300C/100	8/500	2695
5300CS/100	16/750	2595
5300CS/100	8/500	1949
5300/100	8/500	1099
190CS/66	8/500	1749
190/66	MONO 8/500	1099
520	4/240	799/749*
520C Ref.	4/160 & 240	1099/1199
520C Ref.	12/320/FAX	1899
540C	4/320	1999*
540C	12/320/FAX	2599*
DUO 2300C	20/1.2GB/14.4	3895
DUO 2300C	8/750	3095
DUO 280	4/240	1499/1299*
DUO 280	12/240/FAX	1899/1499*
DUO 280C	4/320	2499/1699*
DUO 280C	12/320/FAX	2995/2299*
150	8/250	849
150	4/250	749

Apple Printers

SW 1200/2200/2400	199/349/299
SW 1500/2500	279/379
Apple Personal Laser 300	349*
Apple Personal Laser 320	599
Apple LaserWriter Select 360	1099
Apple LaserWriter 4/600PS	699
Apple LaserWriter 12/600PSC	5899
Apple LaserWriter 16/600PS	1999

PRINTERS

5MP	PS 600dpi Laser	969
4MV	11x17 Laser	2799
4M Plus	PS 600dpi Laser	1849
DeskJet 1600CM		Call.
DeskWriter 855c		529
DeskWriter 850C		489
DeskWriter 660C		389
DeskWriter 600		239
HP 5MP PostScript		999
STYLUS PRO XL		1649
STYLUS COLOR PRO		599
STYLUS COLOR II		349

APPLE MONITORS

Apple MS 15" / 1705 17"	329/699
Apple 1710AV / 1710	999/899
Apple Multiscan 20"	1649

SONY MONITORS

Sony 15SF2 / 17SF2	489/879
Sony 17SE2 / 20SFII	879/1749

NEC MONITORS

NEC 15XV+/17XV+	489/799
NEC 17XE / 17XP	999/1049
NEC 21XE / 21XP	1699/1999

PORTRAIT LABS

PORTRAIT DISPLAY 1700 .26	1049
PORTRAIT DISPLAY 1700 .28	999

RADIUS

PRESSVIEW 21SR 21"	2999
PRESSVIEW 21 21"	1895*
PRECISION COLOR 21"	1399*
INTELLICOLOR 20E 20"	1299*
SUPERMAC 20"895*	
PRECISION VIEW 17"	949
PRECISION VIEW 21"	1995
MULTIVIEW 21"	1699
RADIUS 15" COLOR PIVOT	399*
THUNDER COLOR 30/1600	1799
THUNDER COLOR 30/1152	1499
THUNDER 30/1600	1399
THUNDER 30/1152	1099
THUNDER 8/1600	429

UMAX

VISTA S6 MAC PRO II	659
VISTA S8 MAC PRO II	759
VISTA S12 MAC PRO II	849

ACCESSORIES

APPLE 600E 4XCD	279
WACOM TABLETS OF ALL KINDS	CALL
TELEPORT PLATINUM 28.8	199
TELEPORT GOLD 14.4	99
POWERPORT PLAT PCMCIA 28.8	319
POWERPORT PLAT PRO 28.8/ETHER	479
ZIP DRIVE 100MB/1000MB	199/649

All prices are subject to change without notice. All prices are cash discounted. An Asterisk "*" reflect refurbished.

CIRCLE 265 ON READER SERVICE CARD

SYNEX

BAR CODE PRO®

Creates perfect PostScript® bar code graphics for desktop publishing, packaging, coupons, CDs, labeling, libraries, or inventory control. Includes 40+ symbologies and variations in one easy-to-use application.

Bar Code Pro® Readers (wand) and **Bar Code Pro® Scanners** (gun) for data entry, connect to your ADB port and are compatible with any software application.

In a hurry? Ask about our same day Email service!

(800) 619-0299

692 10th St Brooklyn NY 11215
Ph: (718) 499-6293 • Fax: (718) 768-3997
AOL: SYNEX2 keyword: SYNEX
Visit our Web Site at: www.snx.com

0 12345 67890 5

"Installs in 60 sec. and takes less than five minutes to master" — MacWorld !

XPRESSINFO or CIRCLE 268 ON READER SERVICE CARD

STOP THROWING AWAY

TONER CARTRIDGES

Empty Cartridges Recycled
Guaranteed To Work Like New

From **$36**

FREE U.P.S. PICK-UP & DELIVERY

National Toner
Recycling & Supply

(800) 676-0749

XPRESSINFO or CIRCLE 267 ON READER SERVICE CARD

Mouse Pads

Custom Printed
- Your Logo Design
- Fast Turnaround
- Guaranteed Quality

Plastic

Cloth

MicroStore™

800-962-8885

FAX: 507-665-2604
LE SUEUR, MN 56058

Wrist Supports

CIRCLE 266 ON READER SERVICE CARD

Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu CLASSIFIED

APPLE @ AMAZING PRICES

SPECIAL OFFER!

7200/75 8/500/CD
FOR ONLY
$899
7200/90 16/500/CD
FOR ONLY
$1,199

HP PRINTERS, MEMORY, SOFTWARE, SCANNERS & SYQUEST

HP PRINTERS

Deskwriter 600	269
Deskwriter 660 C	389
Desk Jet 850 C	429
Laser Jet 5MP	1,059
Laser Jet 4M Plus	1,949

SCANNERS

Microtek E3	399
Microtek E6	599
UMAX VISTA S 6	599
UMAX VISTA S 8	699

PRINTERS & ACCESSORIES

Laserwriter Color-Laserwriter 4/600
Stylewriter 2400 Color-Apple 20" Monitor
Apple 15" Monitor-Design Keyboard
Apple CD 600 External

SyQuest (Free Cartridge)

	CART.	DRIVE
88MB	42	208
200MB	60	339
270MB	52	359
EZ 135MB	19	199
ZIP-IOMEGA	14	199

HARDRIVES

540 MB	139
840 MB	179
1080 MB	239
2.2 GB	599
4.3 GB	949

FAX

SUPRA EXPRESS 28.8	159
SUPRA FAX 28.8	209

MEMORY

	DIMM	SIMM
8MB	139	129
16MB	269	259
32MB	549	499
64MB	1,199	

THE NEW POWER MACS ARE HERE WAITING FOR YOU!

WE GIVE YOU THE BEST DEAL!

60 MONTHS LEASE AVAILABLE!

FREE DELIVERY

Cards | MasterCard | VISA | DISCOVER

NO CREDIT CARD SURCHARGES!

Lease quotes are based on a 60 months lease program, 10 % buyout option at the end of the term. Other programs available.

MAC SPOT 1-800-680-1112

TOTALLY FREE DELIVERY BY FedEx

FAX 305-591-4391

*When you buy a drive.

CIRCLE 269 ON READER SERVICE CARD

DISKETTE DUPLICATION FROM $.49

HIGHEST QUALITY MEDIA

- 3.5" and 5.25" Formats
- Custom Labels/Shutter Printing
- Diskette Mailers/Accessories
- Assembly Services
- Bulk and Formatted Diskettes
- Generous Volume Discounts

CD ROM Duplication

- Pre-Mastering Services
- One-off/Small Volume Runs
- Large Volume Replication
- Packaging Accessories
- Blank CDR Media 63 & 74 Min.

800-255-3142

Diversified Systems Group, Inc
P.O. Box 1114
Issaquah WA 98027

XPRESSINFO

SPOTLIGHT

SOUND SOLUTIONS

The Definitive Source for Multimedia, Music and Sound, Hardware and Software

MIDI Software
(Sequencing, Notation & Educational)

State of the Art Keyboards and Sound Modules

Hard Disc Recorders

Sound Cards & DSP Boards

Best Price, Best Service, Huge Inventory

Call for pricing and information

1 800 355 0220

http://www.rust.net/spotlight

CIRCLE 270 ON READER SERVICE CARD

The Best Software Buys

ADOBE: *Full Version*	
PageMaker 6.0	$470
PageMaker 5.0	$410
Persuasion 3.02	$299
PhotoShop 3.04	$469
Illustrator 6.0	$479
Premiere 4.0	$395
MACROMEDIA: *Full Version*	
Freehand 5.5	$299
Director 4.0	$699
Fontographer 4.1	$299
Graphic Design Studio	$615
Extreme 3D	$495
Authorware Pro 3.0	$2200
MISC: *Full Version*	
MiniCad 6	$510
Infini-D 3.1	$450
WordPerfect 3.5	$185
MICROSOFT: *Full Version*	
Office 4.21	CALL
Word 6.01	CALL
Excel 5.0	CALL
Project 4.0	CALL
SYMANTEC: *Full Version*	
Act 2.5	$148
Norton Utilities 3.2	$89
Mac Tools 4.0	$99
Sam AntiVirus 4.0	$99
Suitcase 2.1	$65
QUARK	
QuarkXPress 3.32	$589
CLARIS: *Full Version*	
File Maker Pro 2.1	$299
Claris Draw 1.0	$240
Impact 2.0	$99
Mac Project Pro	$299

Call for additional Software pricing

800.641.6973

A-1-Computer Inc. FAX 718-437-5896

CIRCLE 271 ON READER SERVICE CARD

Variety & Value

The best and most current shareware collections available anywhere!

A wide variety of pre-tested, fully-operational programs of excellent quality!

SOFTWARE OF THE MONTH CLUB

1-800-470-CLUB
fax 619-930-7310

CIRCLE 272 ON READER SERVICE CARD

MAC REPAIR & UPGRADE

800-622-7977

24 HOUR SERVICE TURNAROUND
LONGER WARRANTY
FREE DIAGNOSTICS
COMPETITIVE PRICE

- Specialize in component repairs
  -Power Mac
  -Power Book
  -Logic boards
- Advance Exchanges

Phone: 408-720-9899
Fax.: 408-720-9459
720 East Evelyn Ave.
Sunnyvale, CA 94086
http://www.dttservice.com

DT&T MACINTOSH SERVICES, INC.

XPRESSINFO or CIRCLE 281 ON READER SERVICE CARD

Student-Teacher-School Software Discounts!

Latest Versions & Full Packages Call for Adobe & Microsoft!

QuarkXpress 3.32 $289	Strata Studio Pro $469 1.75	Director 4.04 $569
Freehand 5.5 $169	Fractal Painter 4 $215	MiniCAD +6 $319

Act! 2.0	$129	CodeWarrior Gold 8	$139	Kai's Power Tools 3.0	$78
ArchiCAD 4.55	$495	Conflict Catcher III 1.0	$59	KPT Bryce 1.0	$78
Astound 2.0	$125	Delta Graph Pro 3.5	$90	KPT Vector Effects 1.0	$78
AutoCAD R12	$189	Elastic Reality 1.2	$139	Mathematica 2.22	$159
Authorware Pro 3.0	$950	Fontographer 4.1	$169	Norton Utilities 3.2	$84
BluePrint 5	$150	Form-Z 2.7	Call	OmniPage Pro 6	$249
Canvas 3.5	$175	Fractal Poser 1.0	$89	RayDream Studio	$259
Coda Finale 3.5	$249	FrameMaker 5.0	$385	SoftWindows 2.0	$228

SOFTWARE PLUS Order Line (800) 261-8524 "We will beat any advertised Price!"

Software Plus Academic Inc., 377 Route 17 South S-116, Hasbrouck Heights, NJ 07604 Info/Cat (201)288-7441 Fax (201)288-7442

XPRESSINFO or CIRCLE 274 ON READER SERVICE CARD

DATA RECOVERY IN HOURS.

- Over 10 years of experience with clients worldwide (e.g., Apple, NASA, & FedEx).
- We've recovered more than half-a-million megabytes of Mac data alone.
- You only pay if there's a recovery.
- One-Day turnaround is available.
- Call 24-hours a day.

LAZARUS
DATA RECOVERY
Working at the speed of business.

800-341-DATA

415-495-5556 • FAX 415-495-5553 • RESTRICTIONS MAY APPLY
381 Clementina Street • San Francisco, California 94103

CIRCLE 275 ON READER SERVICE CARD

Sure It's Insured?

Most computers are not insured. And ordinary policies may exclude or limit coverage you need. Do you have the ready cash to replace stolen or damaged equipment? You will if you have SAFEWARE's[R] comprehensive **Computerowners**[sm] coverage. It provides full replacement of hardware, media and purchased software for just pennies a day! Your protection includes **theft, fire, accidental damage, natural disasters**, even **power surges** are covered. Select your system value and premiums from the table. Use the coupon or call for immediate coverage or information 1-800-SAFEWARE.

Amount of Insurance	Ann. Prem.
☐ Up to $2,000	$ 49
☐ $2,001 - $5,000	69
☐ $5,001 - $8,000	89
☐ $8,001-$11,000	109
☐ $11,001-$14,000	129

Call for rates on higher amounts. Underwriting requirements may vary by state. Void where prohibited.

Residents of TX, NY, PA *Call for information!*

1-800-800-1492
Available in the US and Ontario.

SAFEWARE

Ask about our International Policy!

Internet Home Page: http://www.safeware-ins.com

Copy then mail.

10 DAY TRIAL. Review your policy for 10 days after you receive it. Satisfaction guaranteed or your money back! MUSE-4/96

Name_____
Address_____
City/State/Zip: _____
Phone: (Daytime) _____
☐ Check Enclosed ☐ Visa ☐ Mastercard Exp Date: _____
Card #_____
Total value of hardware, media and purchased software $ _____
Your signature: _____

Mail to: **SAFEWARE**, The Insurance Agency Inc.
5760 N. High St., PO Box 676, Columbus, OH 43081

XPRESSINFO or CIRCLE 276 ON READER SERVICE CARD

SO, YOUR HARD DRIVE SPLIT AND TOOK ALL THE DATA WITH IT?

PROFESSIONAL DATA RECOVERY SERVICES.

HARD DRIVES, FLOPPY DRIVES, SYQUEST, EZ-135, ZIP, JAZ, OPTICAL AND BERNOULLI.

ONE-DAY SERVICE AVAILABLE.

COMPETITIVE RATES.

TOTAL RECALL
THE DATA RECOVERY COMPANY

800-743-0594

2462 WAYNOKA ROAD COLO SPRINGS, CO 80915 • 719-380-1616 • 719-380-7022 • http://www.recallusa.com

XPRESSINFO or CIRCLE 278 ON READER SERVICE CARD

DATA RECOVERY: 800 440-1904

Seven good reasons to choose DriveSavers:

1. World's largest, most trusted, and experienced data recovery specialists
2. 24-hr, onsite and weekend service available
3. Proprietary techniques so advanced we retrieve data others might simply abandon
4. Certified to maintain most drive warranties
5. Over 11 years of data recovery experience
6. Featured by CNN, NextStep, C-Net, and *Forbes*
7. All storage devices; Dos, Win95, WinNT OS/2, Mac OS, Unix, Sun, SGI, Novell

DRIVESAVERS DATA RECOVERY

WE CAN SAVE IT!

Call when you need us, or visit DriveSavers at: www.drivesavers.com

400 BEL MARIN KEYS BL., NOVATO, CA 94949, VOICE: 415-382-2000, FAX: 415-883-0780

CIRCLE 277 ON READER SERVICE CARD

CLASSIFIED

Get product info fast from Marketplace advertisers. Go to MacUser XPRESSINFO http://www.zdnet.com/marketplace/mcu

Student - Teacher & School Discounts!

LATEST VERSIONS & FULL PACKAGES

QuarkXPress 3.32
$299

Director Multimedia Studio 2.0

INCLUDES:
-Director 5.0 for Mac/Pmac
-Extreme 3-D 1.0
-Painter 4.0 for Mac/Pmac
-Sound Edit 16 2.0

$1095

#1 In Education!

MINICAD 6
$319

Freehand 5.5
$189

Director 5.0
$589

Authorware Pro
3.0 $975

Infini-D 3.1
$249

Fractal Painter
4.0 $219

Strata Studio Pro
1.7.5 $469

Electric Image
2.5 $749

Wacom ArtZ II
6x8 $285

4TH Dimension 3.5	$449	Final Draft 3.0	$125	Overture 1.1	$249
Action 1.04	$99	Fontographer 4.1	$149	Omnipage Direct 2.0	$65
After Dark 3.2	$39	Form Z 2.7.5	CALL	Omnipage Pro 6.0	$209
Alchemy 3.0	$199	Freehand Graphic Studio	$449	Pagetools 2.0	$79
Alias Sketch! 2.02	$229	Fileguard	$119	Paint Alchemy 2.0	$89
Archicad 4.5.5 Student	$495	German Power Translator	$99	Photoone Alphabets	$129
Astound 2.0	$119	Glider Pro	$29	Pixar Typestry 2.1.1	$135
At Ease 3.0	$29	Hard Disk Toolkit 1.8	$109	Poser 1.0	$99
Autocad 12	$199	Helix Express 3.5	$249	Power FPU	$75
Blueprint 6	$149	Hypercard 2.3.1	$89	Printshop Deluxe 1.1	$55
Canvas 3.5.2	$149	IdeaFisher Pro 6.0	$75	Quickeys 3.01	$85
CD-ROM Toolkit 2.0A	$49	Infinite FX	$65	QX-Tools 1.0	$79
Chem Draw Pro 3.5	$149	Inspiration 4.1	$89	QuarkXPress Passport 3.3.2	$349
Chem Office Pro 3.1	$299	Instant Replay 1.0	$75	Raid Toolkit 1.8	$249
Claire Personal Music Coach	$75	Intellihance 2.0	$79	Ram Doubler 1.6	$55
Claris Draw 1.0	$129	Internet Connection Kit	$45	Ram Doubler/Speed Doubler	$95
Claris Emailer 1.0	$59	Jag II	$65	Ray Dream Studio 1.0	$219
Claris Impact 2.0	$89	Japanese Language Kit	$149	Sigmaplot 5.0	$199
Claris Works 4.0	$89	JMP 3.1	$329	Sound Edit 16 2.0	$189
Coda Finale 3.5	$249	Kai's Power Tools 3.0	$85	Speed Doubler 1.1	$55
Code Warrior 8	$129	KidPix Studio	$39	Studio VisionPro 3.0	CALL
Collage 2.0.1	$69	KPT Bryce 2.0	$119	Supercard 2.5	$229
Color It! 3.0	$49	KPT Convolver 1.0	$85	Supercard MegaStudio	$319
Complete After Dark	$49	KPT Final Effects 3.0	$119	System 7.5	$85
Conflict Catcher III 1.0	$59	KPT Power Photos Vol 1,2,3	$85	Soft PC 3.0	$89
Cricket Draw III 2.01	$79	KPT Vector Effects 1.0	$85	SoftWindows 2.0	$229
Cricket Graph III 1.5.3	$79	Lotus 1-2-3 1.1	$99	Teleport Gold II 14.4	$109
Dabbler 2.0	$45	M.Y.O.B. 6.0	$49	Teleport Platinum 28.8	$199
Datadesk 5.0	$369	M.Y.O.B. 6.0 With Payroll	$90	Terrazzo 1.5	$89
Debabelizer Toolbox 1.6.5	$219	MacAcad Tutorial Videos	$35	The Black Box 2.0	$75
Deck II 2.5	$199	Mac Draft 4.2.1	$199	Transjammer Vol 1or 2	$59
Deltagraph Pro 4.0	$95	Mac Project Pro 1.5	$179	TurboMouse 5.0	$105
Design Workshop 1.2	$249	MacLink Plus Translator	$99	Typestyler 2.0	$139
DrawTools 1.0	$79	Maple V 4.0	$599	Vellum 3-D 3.0	$595
Digitrax 1.2	$99	Marionet	$99	Video Director 2.0	$89
DiskGuard	$75	Master Trax Pro 6.0	$79	VideoShop 3.0	$199
DrawingSlate II 12x12	$219	Mathcad 3.1	$69	Virex 5.6	$60
DrawingSlate II 6x9	$199	Mathematica 2.2.2 Student	$149	Vision 3-D 4.0	$179
Elastic Reality 1.2	$149	Media Paint 1.2	$199	Vision 3.01	CALL
Encore 4.0.4	$249	Media Tool	$399	Wacom Art Pad II 4x5	$135
Envelopes Starter Pack	$65	Minitab Release 10XTRA	$199	Wacom Art Pad II w/Dabbler	$155
Extreme 3-D	$199	Nisus Writer 4.1 W/LangKey	$199	Wacom Art Z II 12x12	$399
Fast Track Schedule 4.0	$139	Now Bundle 3.5	$69	Walkthrough Pro 2.5	$199
Filemaker Pro 3.0	$129	Now Utilities 5.0.1	$59	Word Perfect 3.5	CALL
				XRES 2.0	$199

NOW CARRYING HARDWARE BY THE FOLLOWING....

*Calcomp - Drawing Tablets
*Wacom - Drawing Tablets
*Global Village - Modems
*Logitech - Scanners & Mice
*Hayes - Modems
*US Robotics - Modems
*Supra - Modems
*Radius - Monitors & Computers
*Okidata - Printers
*Sony - Monitors

**SAME DAY SHIPPING ON MOST ITEMS.
**ADOBE, SYMANTEC & MICROSOFT PRODUCTS AVAILABLE TO QUALIFIED STUDENTS, TEACHERS & SCHOOLS.
**SCHOOL PURCHASE ORDERS WELCOME.
**NO SURCHARGE ON CREDIT CARDS.
**IBM & MAC PRODUCTS AVAILABLE.

Visit our NEW Web Site!!
http://iaswww.com/source.html

CALL FOR FREE CATALOG!!
(800) 289-3275
INCLUDES COMPLETE PRICE LIST & FREE PRODUCT INF.

WE WILL BEAT ANY ADVERTISED PRICE!!

The SOFTWARE Source

1-800-289-3275

Visa - M/C - Amex - Discover

2517 Hwy. 35, Bldg. L
Manasquan, NJ 08736
(908) 528-0030
FAX (908) 528-9378
E-MAIL: SFTSWS@AOL.COM

XPRESSINFO or CIRCLE 279 ON READER SERVICE CARD

MODEM SEX
FREE
Top 100 BBS
•The Ultimate Connection•
• UNLIMITED ACCESS
• 100,000 Shareware & GIF's, Windows, Mac and DOS files
• Sexy Network Chat with Singles and Couples
• Unlimited Downloads
• Free Internet Accounts
• Up to 28.8k on all 188 Lines
• New GIF's posted daily by our photographers
Call from home or office!
1-217-792-3663
USE YOUR MODEM TO DIAL
Must be 18+. C/S Voice Line 415-281-4429

CIRCLE 280 ON READER SERVICE CARD

The World's Best & Largest Online Service for
GAY MEN!
Hundreds of Local Access Numbers!
For Your Local Number & Logon Instructions Call:
Voice: (800) 949-2668
Modem: (415) 703-8200
(telnet: bbs.eyecon.com)
(www:http//www.eyecon.com)
EXE CONTACT
Gay Owned & Operated!
Adults Only

More Info FASTER!
Get product info fast from Marketplace advertisers.
Go to MacUser Xpress Info:
http://www.zdnet.com/marketplace/mcu
MacUser XPRESS INFO

World Famous Psychic
To Stars & Celebrities
30 Years Experience
Can Help You Obtain
Love, Health, Wealth & Luck!
Call David Guardino
Anytime at
214-340-9844 or
214-340-0840

ODYSSEY
Where Adults Come To Play!
Hundreds of Local Access Numbers
modem
415-703-8899
voice
800-947-0936
www
http://odyssey.ody.com
8-N-1 ODYSSEY ONLINE Adults Only

CIRCLE 282 ON READER SERVICE CARD

We're Looking for a few Good Men... to respond to Beautiful Ladies all over the world!
Dear Cherry Blossoms Hawaii, Will you please help me find a good American gentleman interested in love & marriage with me?
Yours Truly, Monica
We receive over 1,000 requests like Monica's each and every month, and have been introducing these ladies to American men since 1974, accounting for over a marriage a day. If you are single and looking for love, then browse our award-winning site at:
http://www.webpersonals.com/cherry
Or, call us for our free color catalog at 1-619-262-6025 x57
or write: Cherry Blossoms
190-MU Rainbow Ridge
Kapaau, Hawaii 96755

XPRESS/NFO or CIRCLE 283 ON READER SERVICE CARD

FREE Sexy Images
THE LACE NETWORK
(818) 709-4275
An On-Line Service For Adults
Exceptional Quality
All Original Material
Centerfold Models • Adult Film Stars
Adult Entertainer Fan Clubs • E-mail The Stars
Amateurs • Swimwear • Lingerie
Computer Movies • Multimedia
Set Your Modem to 8-N-1 and Your Terminal Emulation to ANSI • Adults Only • Local Access Available in over 1000 cities throughout the U.S. and Canada • Visit Our WebSite - www.lace.com or Telnet to lace.com • Voice (818) 718-9977

XPRESS/NFO or CIRCLE 284 ON READER SERVICE CARD

SEXY EXPLICIT ADULT EROTIC IMAGES!
WARNING! WARNING!
HIGHLY EXPLICIT SEXUAL ENTERTAINMENT!
OVER 100,000 ADULT GIF, SHAREWARE, WINDOWS/DOS FILES-UPDATED DAILY!
FREE UNLIMITED DOWNLOADS!
NO SUBSCRIPTION REQUIRED!
AND NOW...LIVE VIDEO GIRLS!
USE YOUR MODEM TO DIAL
011-373-837-1233
MCI CUST: 10288-011-373-837-1233
INTERNATIONAL LONG DISTANCE RATES APPLY. 18+.

CIRCLE 285 ON READER SERVICE CARD

UNCENSORED ASIAN BEAUTIES HOT & FREE!
Over 10 GB of high quality adult GIFs.
Loads of original content.
UNCENSORED world-wide live chat.
!! All Free !!
Call now:
011-852-172-94-920
Erotica East
THE UNCENSORED BBS
Over 18's only.
No credit cards required.
Standard long distance charges apply.

XPRESS/NFO or CIRCLE 286 ON READER SERVICE CARD

BBS EROTICA
The most adult BBS available
The Finest Images
1000s of GIFs, JPEGs, Multi-media, Shareware and more!
Adult classifieds from around the Globe
FREE Downloads
Updated Daily
No subscription/No Credit Card
011 852 1729 4981
Long Distance Rates Apply. Must be over 21.

CIRCLE 287 ON READER SERVICE CARD

The World's Hottest On-Line Service
PEEPSHOW
LIVE GIRLS
VIDEO/CD CLIPS
SWINGERS' ADS
LIVE CHAT
MAGAZINES
FETISH MALL
All this for one low monthly price $9.95
Immediate Secure Connections with VISA/MC
Must be over 18
http://www.peepshow.com

CIRCLE 288 ON READER SERVICE CARD

Gourmet Gallery BBS
ADULTS ONLY
100% original gifs
Thumbs+Closeups
50 New Pics/Week
14 Online CD-ROMS
14 Gig of Files
16 lines (1200-28.8)
Best Prices in Cyberspace
408-956-5656
MasterCard VISA

CIRCLE 289 ON READER SERVICE CARD

MacUser MARKETPLACE

BUSINESSCARD

MacUser's BusinessCard section is a forum for innovative, hard-to-find and low-cost MAC products and services. Ads are listed by product category and include Reader Service numbers to allow fast, easy response.

RATES:
1 issue–$535, 6 issues–$505, 12 issues–$485.
Multiple-ad per issue rates also available.
Prepayment must accompany each insertion.
AMEX/VISA/MC welcomed.

AD FORMAT:
MacUser will typeset each BusinessCard ad. Advertisers should furnish typewritten copy. Ads include: 1) Headline (1 line, initial caps=30 characters max, all caps=25 characters max), 2) Descriptive copy (5 lines, 225 characters max), 3) Company name (same specifications as headline), and 4) Address and telephone number
(2 lines, 40 characters per line). No logos, artwork or camera-ready ads. Publisher reserves the right to edit supplied copy to meet section specifications.

DEADLINES:
MacUser is published 12 times a year.
The BusinessCard closing is approximately two months prior to issue date.
Please send copy and payment to:
MacUser BusinessCard, One Park Avenue, 3rd Floor, New York, NY 10016,
ATTN: Bill Herbst
For more information, call Bill Herbst at **800-825-4237** *or* **212-503-5965, FAX: 212-503-5860.**

HARDWARE/BATTERIES

COMPUTER BATTERIES & MORE
Batteries for laptop/NB/PB, CMOS, camcorders, cameras, RC vehicles, toys, cordless phones/ drills/shavers, cellular, remotes, pet fences. UPS/LANS, Ni-Cads, chargers, etc. WE REBUILD! CALL & ASK! WHOLESALE! V/MC/AmX/Dscvr/POs.

BATTERY EXPRESS
713 Gladstone St., Parkersburg, WV 26101-5661
800-666-2296/304-428-2296 fax: 304-428-2297

CIRCLE 345 ON READER SERVICE CARD

BOARDS/COMPONENTS/CHIPS

TOP-QUALITY MEMORY
Small, reputable mfg/dist. offers SIMM/DIMM memory for sale. Factory co-developed/ISO9000 compliant. We specialize in selling to SO/HO, G/A, DTP, VARS, Network Providers & all schools. Lifetime warranty 30-day mbg. VISA/MC accepted.

MOHAWK MEMORY COMPANY INC.
16 Waltham Street, Maynard, MA 01754
800-98MOHAWK (986-6429) Fax 508-897-0009

CIRCLE 346 ON READER SERVICE CARD

CD-ROM

CD-ROM PRODUCTION SERVICES!
- All formats: Mac, ISO, Hybrid, Mixed Mode
- Premastering, beta testing, or archiving
- Mass Replication available, any quantity
- Personal, Knowledgable Service for 10 Years!
- Certified Apple Developer•low prices/fast delivery

Northeastern Digital Recording
2 Hidden Meadow Ln Southboro MA 01772
508-481-9322 fx:508-624-6437 CDNDR@aol.com

CIRCLE 347 ON READER SERVICE CARD

PERIPHERALS

HEWLETT- PACKARD DEMO PRINTERS
All MacIntosh/Apple Compatible
Laser Printers, DeskWriter Inkjet Printers, PaintWriter Color Printers
Pen Plotters, DesignJet Inkjet Plotters
Specials: PaintJet XL 300, LaserJet 4M,4siMX

TED DASHER & ASSOCIATES
E-mail sales@dasher.com
(800) 638-4833 Fax (205) 591-1108

CIRCLE 348 ON READER SERVICE CARD

SOFTWARE/BUSINESS

Credit Authorization Software
Save hundreds, if not thousands of dollars. Automatically authorizes and deposits all credit card sales — individually or in batches. Integrate with your sales system with AppleEvents, AppleScript & import/export.

Tellan Software, Inc.
3286 Knightswood Way, San Jose, CA 95148
(800) 483-5526 or (408) 274-1110

CIRCLE 349 ON READER SERVICE CARD

4TH Dimension Accounting®
A4™ includes AP, AR, GL, PR Links, Invoicing, Quotes, Inventory, PO's, Job Costing, Contacts, and Call History. Financial reporting, graphing and searching. Source code available. Client/Server starting at $3,995.

Softek Design, Inc.
Telluride, Colorado
(970) 728-5252 http://www2.csn.net/a4softek

CIRCLE 351 ON READER SERVICE CARD

Manufacturing Tools
•Inventory Control •Bill of Materials•Purchasing Inquire/Mac is a full featured material management system for the small manufacturing company. Designed to work with your accounting software! Call for a free demo. 1-800-782-5682

OnBase Technology, Inc.
14 Hughes, #B105, Irvine, CA 92718
714-830-5682 Fax: 714-830-5691

CIRCLE 352 ON READER SERVICE CARD

EDUCATION

Quality Educational Software
- Bring the world of education into your home
- Apple II and Mac Software
- All software evaluated by computer educators
- Call for Special MacUser Offer

Home Educational Software
Tuesday - Friday 9:30 - 6:30 P.M. PDT
800 622 0879 Calif. 805 388 2722

GRAPHICS/FONTS

3D OBJECT LIBRARIES
3-CDROMs - Photo-realistic 3D models for INFINI-D and STRATA - Super Bundle $495 or $195/ea.
•Interior Design Coll.-500+ models &4 complete homes! •Wright Coll.-140+ Frank Lloyd Wright home furnish.! •Camelot Coll.-12th century castle!

REPLICA Technology
4650 Langford Rd., N. Collins, NY 14111
716-3370621 fx:716-3370642 sls:1800-7148184

CIRCLE 354 ON READER SERVICE CARD

HEALTH/FITNESS

Develop muscle! Be free of pain!
Create the body you've always dreamed of! Electrical muscle stim uses adjustable impulses to rapidly develop muscle &/or provide relief from chronic pain. Medically proven, effortless & safe. Results guaranteed! Call for free info or visit our website.

David Steele Enterprises, Inc.
1280 Bison Ste B9507Newport Bch, CA 92660
http://www.davidsteele.com OR 800.401.4677

CIRCLE 355 ON READER SERVICE CARD

RELIGION

BIBLE ON DISK or CD-ROM
Full Featured. Fast & Friendly Bible study software. As the leader in Bible study software since 1981 we have continued to listen to our customers & provide them with the tools they need. Call for a FREE catalog.

BIBLE RESEARCH SYSTEMS
2013 Wells Branch Pkwy #304, Austin, TX 78728
(800) 423-1228 (512) 251-7541

CIRCLE 357 ON READER SERVICE CARD

SERVICES/COMPUTER INSURANCE

Insures Your Macs
The COMPUTEROWNERS™ insurance policy repairs or replaces hardware, media and purchased software. Rates as low as $49 a year covers theft, accidents, fire, power surge and more! Call for immediate coverage or info: 1-800-800-1492.

Safeware, The Insurance Agency Inc.
2929 N. High St., PO Box 02211, Columbus, Ohio 43202 1-800-SAFEWARE

CIRCLE 358 ON READER SERVICE CARD

DESKTOP PUBLISHING

25 Full-Color Brochures!
Do you need affordable, persuasive,fast-turnaround printing in small quantities? Now you can have it all with CRYSTAL PRINTS™. Our new digital press lets you print ten to 1000 pieces and save money. Yes ten!

Pacific Rim Graphics
CALL US TODAY for your FREE IDEA BOOKLET!
800-563-9919

CIRCLE 359 ON READER SERVICE CARD

Desktop Photo Service Bureau
*Archive to CD-Rom
*Slides as low as $2, AGFA Alto - 16K 4X5, 2 1/4Neg/Pos/B&W *Dye-Sub Prints as low as $10 *Laser Master Big, Color, 1200 dpi Laser, Plates for Offset

MouseWorks Printing & Photography
105 N. Jackson, Athens, TN 37303
Phone: Voice (615)744-7898 Fax (615)745-0233

CIRCLE 360 ON READER SERVICE CARD

DIGITAL OUTPUT

WHOLESALE COLOR PRINTING
Printing brokers & resellers need to know us! 5000 8.5x11 process color sheets printed one side from your disk on 80# Gloss $495 (color proof & film incl.) HIGH QUALITY DIGITAL DRUM SCANS $24ea. Free Catalogs! http://www.lewiscolor.com

LEWIS COLOR LITHOGRAPHERS
30 Joe Kennedy Blvd. Statesboro GA 30458
912-681-6824, Fax 681-8817, 800-346-0371

CIRCLE 361 ON READER SERVICE CARD

BUSINESSCARD

DISK DUPLICATION

DISKETTE & CD ROM DUPLICATION
Data duplication services for Industry. Duplicate diskettes or CD Roms, all formats with turnkey solutions. Call to qualify for your FREE DDI Online diskette.

DATA DELIVERY INC. (DDI)
(800) 430-3487

CIRCLE 362 ON READER SERVICE CARD

REPAIR SERVICES

Apple II & Macintosh Repairs/Svc.
•Specializing in Apple II & Macintosh Pre-Owned Hardware•We buy, sell, support & **Repair the entire Apple and Macintosh family•**

The ARC (An **A**pple **R**esource **C**enter)
1014 Central, Tracy, CA 95376
Mon.-Fri. 10 A.M.-6 P.M. Sat 11 A.M.-4 P.M.
Info: 209/832-4300 Order: 800/753-0114
Fax: 209/832-3270

CIRCLE 368 ON READER SERVICE CARD

VIDEO TRAINING FOR MACS
Clearly explained, easy to follow lessons. Covers Mac OS, word processors, spreadsheets, much more! 400 minutes training on 4 tapes. Special introductory price $69.95 'til 6/30. 30-Day money back guarantee. Visa/Mastercard.

Scribblers Media, Inc.
1775 N. State St., Girard, OH 44420
800.860.2324 (24 hrs)•www.scribblers.com

CIRCLE 374 ON READER SERVICE CARD

ONLINE SERVICES

Your Business on the Internet
Don't know how to get started or how to put your Web page together? We can do it all for you. Put your business on the Internet's "World Wide Web" for as little as $25 a month + set up fee, and open up to a global market.

Electronic Media Communications
Web Site Developers & Consultants
1-800-363-3429 or 213-651-9398

CIRCLE 363 ON READER SERVICE CARD

TRAINING

Rent MacAcademy Videos by Mail
Video's the easy way to learn! All major Mac programs available: over 85 different titles, each 2 hours long. A two week rental including S&H, costs less than a dollar a day. Return postage is prepaid. Get a free catalog. Ask about our CD-ROM rentals.

CareerTAPES® Enterprises
PO Box 309 Center Harbor, NH 03226
(603) 253-7470

CIRCLE 369 ON READER SERVICE CARD

MISCELLANEOUS/ACCESSORIES

PERSONALIZED MOUSEPADS
We put your photo, logo, artwork or whatever on a mousepad, in full color, for $15.95 plus $4 S&H (add 6% tax NC resident). Send item with check or money order or VS/MC/DISC/AMX card # and exp. date to:

PHOTOS ANYWHERE
PO Box 417•China Grove, NC 28023
1-800-788-3738 • Fax (704)855-3772

CIRCLE 375 ON READER SERVICE CARD

A Great Review is Worth Repeating

REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS REPRINTS

Almost nothing influences buyers in the computer market as much as a great product review, particularly one in MacUser. That's because computer product buyers rely on these reviews to help them make informed purchase decisions. They know that our labs, writers and editors can be trusted to be thorough, fair and impartial in their testing and reporting. For a computer product marketer a great review is almost priceless.

Its Value Increases With Use
Reprints of your review are an invaluable selling tool for your product and an important image builder for your company. An objective, third party product evaluation will be read, and trusted, by far more people than any regular product literature, direct mail, press release or sales letter. Think of all the ways you can take advantage of reprints:

- Use them in sales proposals
- Hand them out at trade shows
- Send them to your mailing list
- Provide them to distributors
- Add them to a press release or a mailing to your stockholders.

And, if you customize your reprint— with a special cover, highlighting, an ad, sales office listings, etc.— the value increases even more.

Get the most value from your MacUser review. Call Ziff-Davis Reprints today at

800-825-4237.

MacUser

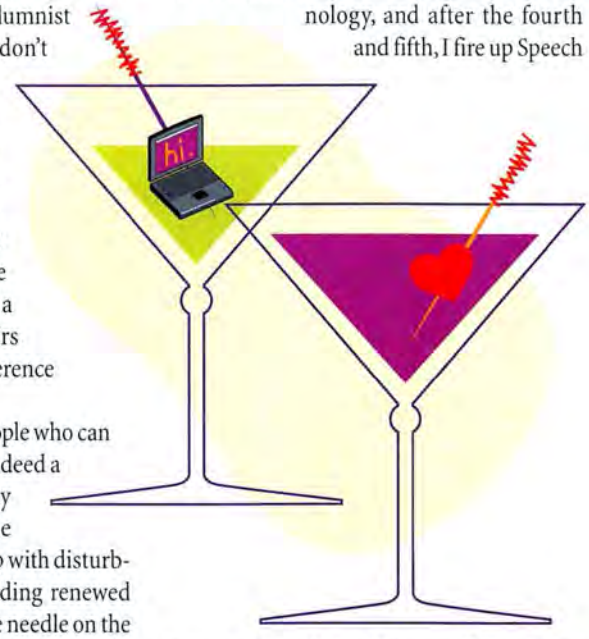
ANDY IHNATKO

Lonely Hearts Club Bandwidth

IT WAS THE MOST BEAUTIFUL wedding I've ever attended and, having four sisters, I've been to a few. Erin and Allan, all decked out in the traditional finery, exchanging tender vows of peace and love in front of the world. It was enough to move this columnist to the occasional tear, and I don't normally cry at weddings. Of course, I don't normally attend a wedding dressed in a MacRenderMan T-shirt and shorts either, but unlike the stick-in-the-mud family that Sister #2 inexplicably married into, the Crains had no objections to a pants-optional ceremony: Theirs was held in a live online conference room.

It comes as no surprise to people who can see the photo above that I am indeed a major geek, and therefore in my interludes with women, the phrase "like a brother" comes up with disturbing frequency. But Allan's wedding renewed my hopes. Clearly he pegged the needle on the ol' Geek-Meter too, and yet through the miracle of modern digital technology, he'd managed to get Erin to sign on the dotted line. Is that the secret? Could megahypersupercool technology help random geeks attract members of the preferred target gender (in my case, chicks)? Can a PowerBook 5300ce do for single guys in the '90s what a customized van and a quart of Hai Karate did for them in the '70s? Clearly it was a question that could be answered only through strict empirical methods, by consuming many gin and tonics in many downtown bars over a period of months.

Field Trial 1. *The Place:* The Miracle of Science bar and grill, Central Square, Cambridge, MA. *The Attractant:* PowerBook 5300ce. Located mere blocks from MIT, the MOS has established itself as one of the bars of choice for the geek element to meet and interface. Confident that I have brought the right hardware to the right place, I open the PowerBook and begin some idle work. I am ignored. I order another drink. I maintain my invisibility. With the third drink, I realize the idiocy of bringing a hot notebook to a place where people go to take a break from Class 12 exposure to technology, and after the fourth and fifth, I fire up Speech Recognition and spend the rest of the evening having "Victoria" tell me knock-knock jokes. *The Verdict:* Success — I was, technically, talking to a woman — although limited.



Field Trial 2. *The Place:* The Ginger Man bar, just a few short steps from Wrigley Field, Chicago, IL. *The Attractant:* Newton MessagePad 100. In a word, Jackpot. I get myself a drink and retire to the rear section of the bar. I take a seat along one of the three pool tables, torch my Sty-Lite Illuminated Stylus, and begin taking notes. Almost instantly, I am approached by a comely young lady, who asks about the illuminated pen. I describe the device and its purpose while she grins heavily. I make considerable progress, and she is very interested in learning where I've come from, where I'm staying, and how long I'll be in town. Ultimately, she makes overtures indicating her being amenable to interludes of a more personal nature. I'm about to award the Newton the coveted Barry White Trophy when she lets slip that she loves my music. I get a slightly nauseated feeling and through a series of questions determine that she believes me to be John Popper, lead singer of Blues Traveler. I break the news to her, and she returns to the gaggle of girlfriends whence she came. *The Verdict:* Just the ticket for overweight men with sideburns and not the barest hint of scruples. John Popper, you owe me one.

Field Trial 3. *The Place:* Au Bon Pain, Harvard Square, Cambridge, MA. *The Attractant:* IBM ThinkPad 701C. Under the impression that the way-cool "Butterfly" keyboard of the 701 series might prove to be, like its namesake, a more colorful and therefore effective communication of the desire to mate, I open the lid and prepare to fire up a game. But Windows can't find the sound hardware. After an hour of troubleshooting, I realize that I have garnered the attention of three other patrons (1F 2M). I motion to them, and they each make suggestions regarding my .WIN, .INI, and .SYS files. After another half an hour's work, the game's opening strains come ringing out. Conversation ensues, and e-mail addresses are exchanged. *The Verdict:* Success, but it's a relationship forged in combat against a mutual enemy and consequently a bogus foundation for romance.

Field Trial 4. *The Place:* Johnny D's music club, Davis Square, Somerville, MA. My empirical data being mixed at best, I decide I need a nontechnological attractant as a control. Therefore, I approach the bar, order a beverage, take a 5-pound bag of potting soil out of my satchel, and perch it jauntily atop my coat on the seat next to me. The sight of a man with a bag of dirt sparks one's curiosity, and by the end of the evening, I have two solid prospects, one of which leads to four very nice dates. *The Verdict:* Unqualified success. I suspect that it won't work for you unless you can answer the inevitable first question by saying you're writing a magazine column, but hey, I mean, who cares about *you?*

ILLUSTRATION / SAM KUO

"POWER COMPUTING HAS FIELDED SOME KILLER MACHINES. APPLE WILL BE HARD PRESSED TO CATCH-UP."

— MacUser Magazine July, 1996 MacUser ZD LABS

"IF YOU REQUIRE MAXIMUM PERFORMANCE, NO CURRENT APPLE SYSTEM CAN TOUCH THE POWERTOWERS."

— MacWEEK Magazine 4.29.96 ♦♦♦♦

"THE APPLE POWERMAC 8500 WE TESTED WAS NEARLY $1,450 MORE THAN THE POWERCENTER 604/150... THAT'S A HUGE PRICE DIFFERENCE." - MacUser Magazine July, 1996

"THEY MIGHT AS WELL HAVE COME FROM APPLE - THE PERFORMANCE AND COMPATIBILITY ARE THAT GOOD."

— Macworld Magazine MW ★★★★

WE COULDN'T HAVE SAID IT BETTER OURSELVES.

POWERTOWER 604/180
STARTING AT JUST $4195

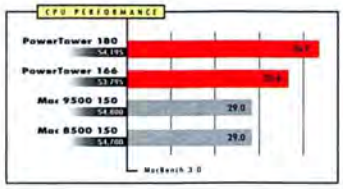
POWERCENTER 604/120
STARTING AT JUST $1895

PowerComputing

INTRODUCING THE FASTEST MacOS SYSTEM EVER MADE.

POWERTOWER 604/180MHz

STARTING AT JUST $4195



Power Computing has designed the world's fastest MacOS system - again. Based on the PowerPC 604 running at a blazing 180 or 166MHz, PowerTower is more than 20% faster and more than 20% less expensive than even the fastest Apple - the PowerMac 9500/150. Power Computing's new PowerTower is the highest-performing, most reliable Mac OS system available today for serious power users.

PowerTower 180 Hot Pick
180MHz PowerPC 604 Processor
- 32 MB RAM (256 MB Max)
- 2 GB 7200 RPM AV Hard Drive
- Quad-speed (4x) CD-ROM Drive
- 512K Level 2 Cache
- Twin Turbo 128M graphics accelerator with 4MB VRAM (128-bit)
- 2 MB VRAM on-board (4 MB Max)
- 3 PCI Expansion Slots
- Connectix Speed Doubler
- Mini-tower enclosure
- Extended Keyboard and Mouse
- $1,200 in bundled software

$4,995

PowerTower 166 Hot Pick
166MHz PowerPC 604 Processor
- 32 MB RAM (256 MB Max)
- 2 GB 7200 RPM AV Hard Drive
- Quad-speed (4x) CD-ROM Drive
- 512K Level 2 Cache
- Twin Turbo 128M graphics accelerator with 4MB VRAM (128-bit)
- 2 MB VRAM on-board (4 MB Max)
- 3 PCI Expansion Slots
- Connectix Speed Doubler
- Mini-tower enclosure
- Extended Keyboard and Mouse
- $1,200 in bundled software

$4,595

PowerTower 180 Starter
180MHz PowerPC 604 Processor
- 16 MB RAM (256 MB Max)
- 2 GB 7200 RPM AV Hard Drive
- Quad-speed (4x) CD-ROM Drive
- 512K Level 2 Cache
- 2 MB VRAM on-board (4 MB Max)
- 3 PCI Expansion Slots
- Connectix Speed Doubler
- Mini-tower enclosure
- Extended Keyboard and Mouse
- $1,200 in bundled software
- Add Macromedia Bundle $795
- Add Sony 20" Trinitron 20sfII $2099

$4,195

PowerTower 166 Starter
166MHz PowerPC 604 Processor
- 16 MB RAM (256 MB Max)
- 2 GB 7200 RPM AV Hard Drive
- Quad-speed (4x) CD-ROM Drive
- 512K Level 2 Cache
- 2 MB VRAM on-board (4 MB Max)
- 3 PCI Expansion Slots
- Connectix Speed Doubler
- Mini-tower enclosure
- Extended Keyboard and Mouse
- $1,200 in bundled software
- Add internal Iomega Zip Drive $159
- Add Sony 17" Trinitron 17sfII $979

$3,795

OVER $1200 OF FREE SOFTWARE BUNDLED WITH EVERY POWERTOWER AND POWERCENTER SYSTEM INCLUDING: MacOS 7.5.3 • FWB Hard Disk Toolkit PE • FWB CD-ROM Toolkit • Claris Works • Grolier's Encyclopedia • Now Utilities • Now Contact • Now Up-to-Date • Nisus Writer • Intuit's Quicken SE • America Online • Compuserve • Launch CD • 250 Bitstream Fonts • US CD Atlas • World CD Atlas • The Animals CD-ROM • Connectix Speed Doubler (PowerTower only)

HOT PRODUCT 1995 · MW ★★★★ · MACUSER AWARD 1995 FINALIST · MW · MacWeek · MacUser ZD LABS

AND THE MOST INEXPENSIVE 604 SYSTEM EVER SOLD.

POWERCENTER 604/120MHz
STARTING AT JUST $1895

"POWERCENTER OUT PERFORMS THE POWERMAC 7600 AND AT A FRACTION OF THE COST!"

Don't even think about PowerPC 601 systems. Now for the first time, PowerPC 604 Mac OS systems are available to everyone - all at a price starting well below $2,000. PowerCenter features the 604 PowerPC running at 150, 132 and 120MHz delivering the performance and value demanded by the small-office, home-office, enterprise and graphics user.

PowerCenter 120 Starter
120MHz PowerPC 604 Processor
- 8 MB RAM (256 MB Max)
- 850 MB Hard Drive
- Quad-speed (4x) CD-ROM Drive
- 256K Level 2 Cache
- 1 MB VRAM on-board (4 MB Max)
- 3 PCI Expansion Slots
- Low-profile enclosure
- Extended Keyboard and Mouse
- $1,200 in bundled software

$1,895

Configure it any way you want it.

PowerCenter 150 Starter
150MHz PowerPC 604 Processor
- 16 MB RAM (256 MB Max)
- 1 GB Hard Drive
- Quad-speed (4x) CD-ROM Drive
- 256K Level 2 Cache
- 1 MB VRAM on-board (4 MB Max)
- 3 PCI Expansion Slots
- Desktop enclosure
- Extended Keyboard and Mouse
- $1,200 in bundled software
- Add Macromedia Bundle $795
- Add internal Iomega Zip Drive $159
- Add Sony 15" Trinitron 15sx $499

$2,995

PowerCenter 120 MS Office Bundle
120MHz PowerPC 604 Processor
- 24 MB RAM (256 MB Max)
- 1 GB Hard Drive
- Quad-speed (4x) CD-ROM Drive
- Microsoft Office 4.2.1
- 256K Level 2 Cache
- 1 MB VRAM on-board (4 MB Max)
- 3 PCI Expansion Slots
- Low-profile enclosure
- Extended Keyboard and Mouse
- $1,200 in bundled software
- Add Labtec Speakers Starting at $29
- Add 14" Mag .28DPI Monitor $299

$2,595

PowerCenter 132 Starter
132MHz PowerPC 604 Processor
- 16 MB RAM (256 MB Max)
- 1 GB Hard Drive
- Quad-speed (4x) CD-ROM Drive
- 256K Level 2 Cache
- 1 MB VRAM on-board (4 MB Max)
- 3 PCI Expansion Slots
- Desktop enclosure
- Extended Keyboard and Mouse
- $1,200 in bundled software
- Add 28.8 modem & Internet Kit $195
- Add internal Iomega Zip Drive $159
- Add Sony 15" Trinitron 15sx $499

$2,495

SERVICE & SUPPORT
- 30 day money back Guarantee
- Toll-free lifetime technical support
- 1, 2, or 3-year on-site service available, starting at $49.

ORDER DIRECT
800-405-7693
http://www.powercc.com

PowerComputing™

Apple, Macintosh and Mac are registered trademarks, and the MacOS logo is a trademark of Apple Computer, Inc. PowerTower and PowerCenter are registered trademarks of Power Computing Corporation. All other brand and/or product names are the property of their respective holders. Prices and specifications are valid in the U.S. only and are subject to change without notice.

1983
UPSTART COMPAQ SHIPS THE WORLD'S FASTEST PC-BEATS IBM - BECOMES INDUSTRY LEADER.

1985
DELL GOES DIRECT - CUSTOMIZING LOW-COST, HIGHEST-PERFORMANCE PCs. CONSUMERS REJOICE.

1996
POWER COMPUTING CORPORATION HAS LEARNED A FEW LESSONS.

MacOS Users Now Have The Best Choice.

As Apple's first licensee, Power Computing pushes the Mac envelope with PowerTower and PowerCenter - the fastest and most affordable high performance Mac OS systems.

PowerTower, the world's fastest MacOS system ever

POWERTOWER 604/180
STARTING AT JUST $4195

is designed with a PowerPC 604 running at 180 or 166MHz. PowerTower is designed to meet the needs of graphic designers, multimedia professionals and engineers who require the absolute highest-performance, most reliable Mac OS systems.

PowerPC™

PowerCenter, the most affordable 604 ever.

POWERCENTER 604/120
STARTING AT JUST $1895

PowerPC 604 MacOS systems are now available to all users at a price starting well below $2,000. Featuring PPC 604 speeds at 150, 132, and 120MHz on upgradeable CPU daughtercards - each PowerCenter is stocked with RAM, hard disk, 4X CD-ROM, extended keyboard and $1,200 of software.

Better, Faster, Smarter MacOS Systems -

any way you want them since each system is custom configured to your individual specs and needs. And every system is backed by Power Computing's 30-day money back guarantee.

PowerComputing™

http://www.powercc.com
2555 North IH 35, Round Rock, TX 78664-2015
Tel. 512/388-6868 Fax. 512/388-6799
Internet: info@powercc.com

CONFIGURE IT ANY WAY YOU WANT IT.

ORDER DIRECT 1-800-405-7693