THE REALLY PRACTICAL APPLE MACINTOSH MAGAZINE

MACFORMAT

ISSUE 11 ■ APRIL 1994 ■ £3.95 WITH HD DISK

MACFORMAT ISSUE 11 ■ APRIL 1994 ■ MEET THE SYSTEM • THE POWERMAC RANGE • COMPLETE GUIDE TO PRINTING • HYPERCARD 2.2 • CHESS GAMES

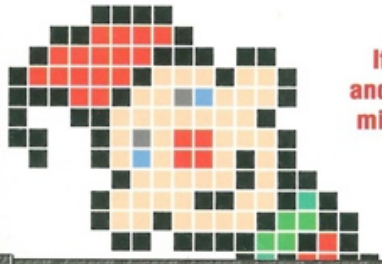
The PowerMacs Arrive At Last!

We've got the full details of the new PowerPC-chip-based Mac range inside – read it in MACFORMAT first!

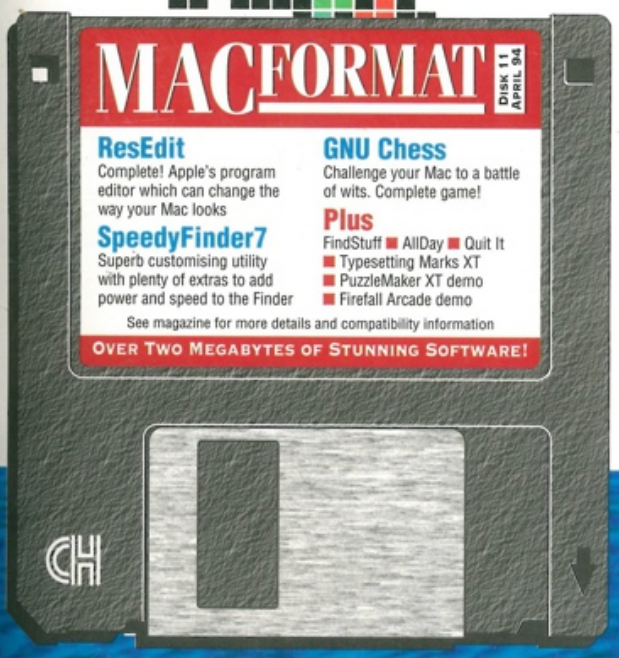
Sort Out Your System

Learn what the insides of your System folder actually do – and how you can get them working faster and more efficiently

CUSTOMISE YOUR MAC WITH OUR RESEDIT PRIMER



If your free book and cover disk are missing, ask your newsagent



Printing Solutions

Complete guide to printing – and leading budget printers tested
PLUS: Win a Canon colour inkjet

Check This Out!

Which Mac chess game makes the best moves?

HyperCard 2.2

How Apple's new do-anything program can make your life easier – in colour!

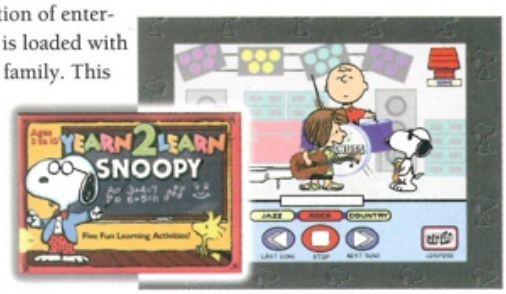
future PUBLISHING
YOUR GUARANTEE OF VALUE

Superior Software, Service and Support **Softline**

Latest Releases...

SimCity 2000. Taking all the elements that made SimCity a classic this version takes it to a new level of realism. Work with realistic 3D landscapes, services such as hospitals, universities, amusement parks and prisons and an underground network of water lines and subways. The local paper updates you on the progress of the city and your popularity among the citizens. Maps and graphs show how your city compares to neighbouring communities. SRP £34.03

Yearn 2 Learn Snoopy They're back! Snoopy and the whole gang continue to make learning fun for children. From the creators of the best selling Yearn 2 Learn Peanuts, this new collection of entertaining and educational games is loaded with fun and learning for the whole family. This pack includes Math, Word Skills, Reading and Music Fun with an added bonus —Face Maker which lets children create their own faces!
SRP £44.99



Populous is your opportunity to play God and decide the fate of your people. You can create and destroy worlds in your aim to conquer the evil God, who's intent on your demise. Use your Godly powers to control the people and help them build up the land then, as you grow in power, you can unleash volcanoes, earthquakes and floods on the enemy. Populous provides you with over 500 worlds to challenge. It's the ultimate God game! SRP £34.03

SimCity & Lemmings Bundle get two of the all time best selling programs in one box—the original SimCity and Lemmings! With SimCity you control your own city. Design, build and live through population explosions, crime waves, success, failure and even the occasional godzilla attack. Lemmings is one of the all time classic strategy games. Save hoards of mindless cute, green lemmings from certain suicidal doom.
SRP £29.99

All prices shown are exclusive of VAT.

Softline Distribution, Mill House, Mill Lane, Carshalton, Surrey SM5 2WZ
Tel 081 401 1234 Fax 081 401 1235 AppleLink UK0037 CompuServe 100012,21

All trademarks are registered and are respectfully acknowledged as the property of their respective holders. Softline, the Softline Device and Logo are registered trademarks of Softline Distribution Ltd. All text and graphics ©1994 Softline Distribution Ltd. Unauthorised use is strictly prohibited.

Softline Authorised Dealers

Bedford Computers
Bedford 0234 271113
MacPoint
Birmingham 021 333 3448
Logic Computer Solutions
Bournemouth 0202 319845
Visual World
Bristol 0272 258 823
PC World
Bristol 0800 486111
AppleCentre Cambridge
Cambridge 0223 247111
PC World
Cardiff 0800 486111
MacLine
Carshalton 081 401 1111
Guernsey Computers Ltd
Channel Islands 0481 728 738
Clwyd Computers
Clwyd 0745 814156
PC World
Croydon 0800 486111
AppleCentre Croydon
Croydon 081 681 0772
Gordon Harwood Computers
Derby 0773 836781
AppleCentre Edinburgh
Edinburgh 031 557 5995
ApplePoint Farnborough
Farnborough 0252 378378
Tower Records
Glasgow 041 204 2500
Imago Europe Plc
Haslemere 0428 645 225
Tomorrows World
Hull 0482 29583
LCS (North West) Ltd
Kendal 0539 741 777
Five To Twelve
Kingston 081 974 8900
PC World
Brentford 0800 486111
Stirling Micro Systems Ltd
London NW1 071 935 5262
Chromasonic Computer
London NW4 081 203 8989
Tower Records
London Piccadilly 071 439 2500
AppleCentre Swanfast
London SW6 071 731 0846
Micro Anvika Ltd
London W1 071 580 6382
AppleCentre West One
London W1 071 631 5305
The Macintosh Centre
London W14 071 602 9444
AppleCentre Chiswick
London W4 081 994 7424
AppleCentre Kidderminster
Kidderminster 0562 822 222
Callhaven Plc
Kingston 081 549 5612
Superplate Computer
Leeds 0532 340800
Ind Ltd
Maldon 0621 840666
Quodport Limited
Manchester 061 274 3797
AppleCentre Norwich
Norwich 0603 630252
AppleCentre Oxford
Oxford 0865 20 11 00
Absolute Computers
Oxford 0865 53072
Mac Collection
Oxford 0865 59653
AppleCentre Preston
Preston 0772 615 512
CIC Software
Redhill 0737 644829
AppleCentre Romford
Romford 0708 384 242
MacGold
Scarborough 0723 582100
ApplePoint Slough
Slough 0753 518866
Central Studios Ltd
Southport 0704 534534
Up To Press Ltd
Wakefield 0924 465347
PC World Lakeside
West Thurrock 0800 486111

HMV

Aberdeen,Union St
Birmingham, New St
Brighton, Western Rd
Croydon, North End
Edinburgh, Princes St
Glasgow, Union St
Leicester, High St
Manchester, Market St
Oxford St, London
Reading, Oxford Rd
London, Level One:, Oxford Circus

GAME

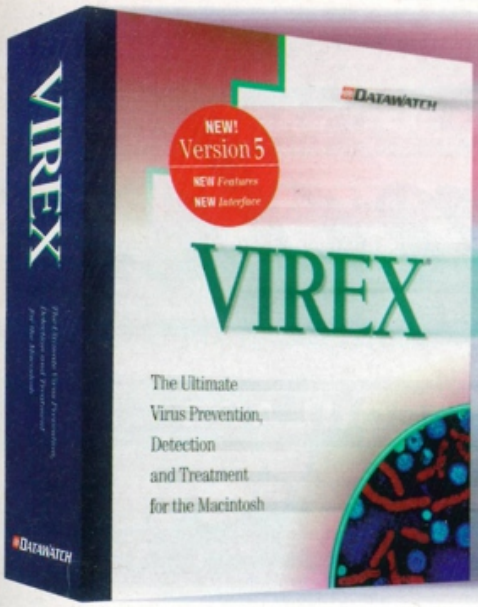
Aberdeen 0224 211102
Belfast 0232 314733
Bournemouth 0202 311668
Coventry 0203 256148
Dublin 010 353 1677 3755
Kingston 081 549 8018
Leeds 0532 465320
Liverpool 051 709 7205
Norwich 0603 219221
Nottingham 0602 502662
Northampton 0604 604123
Romford 0708 734803
Plymouth 0752 256922
Poole 0202 666255
Sheffield 0742 569299
Stratford 0789 267736
Woking 0483 768376

TEMPO

Barking 081 591 0091
Chingford 081 524 7511
Crawley 0293 541000
Croydon 081 649 7221
Harlow 0279 454375
New Malden 081 949 3255
London WC1 071 304 4113
Staples Corner 081 450 6100
Stevenage 0438 748583
West Thurrock 0708 866699

Product range differs from store to store.
Please check for availablility.

SUPERIOR SOFTWARE — SOFT line — SERVICE AND SUPPORT



Be Safe Be Quick

Move over SAM,® Virex® is now 25*+ times faster!

The problem with anti-virus software is that it slows down your Macintosh. Every time you start your computer, run a program or insert a disk, you spend way too much time waiting. After all, you spent a lot of money on a fast Mac, right?

Virex 5.0 solves this problem with new SpeedScan™ technology which enables Virex to scan, detect and eliminate viruses with blinding speed. With SpeedScan Virex does in 10 seconds what SAM (Symantec Antivirus for Macintosh) needs over 6 minutes to do. Yes seconds, not minutes.

Virex can be set to scan all disks as they are inserted, scan attached hard discs either at startup or shutdown or check applications as they are launched—for the ultimate in protection. Now with SpeedScan you won't be tempted to shut it off temp-orarily or cancel a disk scan because it's taking too long.

Of course along with that you get the best anti-virus software, the easiest to install, the simplest to use and the most effective against viruses.

*Virex was measured against SAM 3.5 scanning 79MB (1571 files) on a Mac IIci with a 230MB hard drive.

For complete peace of mind you can subscribe to our Update Service. This means you'll automatically receive protection against new viruses as and when they are discovered.

Virex 5.0 SRP £69.99.

special trade-in offer

New for old—take any old anti-virus program, even freeware or shareware qualifies, to your dealer and collect a **Virex trade up kit** for only £29.99.

Alternatively send your trade-in disk directly to the address below with the completed form and payment. Please add £3 Postage and Packing.

Name.....
Address.....
.....
Postcode.....
Daytime Tel.....
☐ Cheque Enclosed
☐ Credit Card No.....
Expiry Date:.....
.....

Mail to Upgrade Services Unlimited,
Mill House, Mill Lane, Carshalton, Surrey SM5 2WZ.
Offer only applies in the UK.
For European suppliers please call for details.

Softline Superior Software, Service and Support

SUPERIOR SOFTWARE
SOFTline
SERVICE AND SUPPORT

The Finder

Welcome

Whether you're a regular reader or you've picked up this magazine for the first time, welcome to the new-look MACFORMAT! Whatever you use your Mac for, whether you're a novice or an expert, MACFORMAT is committed to helping you get more out of your Mac. The Mac revolutionised computing ten years ago, and Apple's new machines prove there's plenty of excitment to come. Let MACFORMAT be your guide to the whole Mac universe!

Editorial enquiries: MACFORMAT, Future Publishing Ltd, 30 Monmouth Street, Bath BA1 2BW
Tel: 0225 442244, Fax: 0225 446019
AppleLink: MacFormat
E-mail: macformat@cix.compulink.co.uk
Advertising enquiries: Mike Hawkins, Tel: 0225 442244
Subscription enquiries: Future Publishing, Freepost, Somerton, Somerset TA11 7BR
Tel 0225 442244, Fax 0458 274378

Entire contents Copyright © 1994 Future Publishing Ltd. All rights reserved.

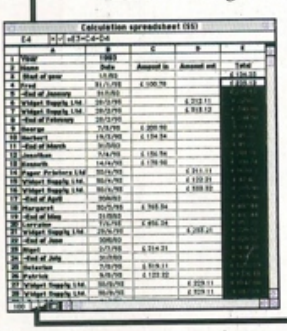
HOW TO DO IT

Editing for beginners 48
Whatever publication you're producing with your Mac, here's the scoop on researching, interviewing and reporting

Designing with clip art 58

How to make best use of the vast range of ready-made art in your own letterheads and documents, plus how to modify the images yourself

HyperCard messages 60
HyperCard can do almost anything for you, if you know what its messages are and how to handle them...



Cashflow 72
If you run any kind of business, you need some way to keep track of your cashflow. Here's how!

Databases 98
How to avoid data loss disasters, no matter which database you're using, or repair the damage if it's happened

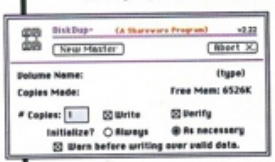
REGULARS

News 13
Exclusive full details of the new range of PowerMacs, with a special report on what it means for you and for the future of the Mac. Plus the latest products, including a camera you can plug into your Mac and an 'unfolding' program

Apple Talk 22
Your letters on everything to do with Macs, from the ignorance of sales staff to the size of our T-shirts

Special offers 63
MACFORMAT has scoured the planet (well, almost) for top Mac products and brings them to you at amazing prices

Subscribe! 66
Get MACFORMAT for a year plus a special free software offer

Mac answers 68

Your real-life Mac problems solved by our experts – from RAM to the black border around the screen...

Gamebusters 86
More problems solved – how to beat your favourite games, with tips and tactics from MACFORMAT readers

Back issues 94
Catch up on the issues of MACFORMAT you've missed

Free reader ads 100
Find a hardware or software bargain, contact a local user group – or flog your own used kit for free

Buying advice 101
Whether you're buying by mail or in a shop, here's some helpful advice about your rights and how to protect them

Next month 105
I'll bet you're wondering what's coming up in the *next* issue of MACFORMAT. Find out here (but read *this* issue first)

Win a colour inkjet 106

Your chance to win a complete Canon BJC-600 colour ink jet printer setup, worth £850! Just enter our simple competition

FEATURES

PowerMacs are here! 19
A comprehensive special report on the new range of Macs. Amaze your friends with your in-depth knoweldge!

Sort out your System 27
Learn what the contents of your System folder actually do – and how you can make your Mac faster and more reliable

Printing solutions 40
All you ever wanted to know about printing but didn't dare to ask, plus three sub-£350 printers reviewed

Check this out! 84
We let four Mac chess games battle it out. (One of them is yours, complete, on the cover disk.) Which one won?

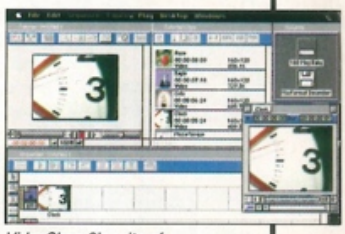
COVER DISK

Your Cover disk 7
Apple's customising program, *complete;* a better Finder for System 7; and much more. Details and installation instructions on page 7

REVIEWS

What's new? 24
Take a first look at some of the latest Mac software, including:

FreeTrieve
HyperStudio 3
Open Sesame!
Premiere 3
RAM Doubler
VideoShop 2



VideoShop 2's suite of *QuickTime* editing functions inlcudes picture-in-picture...

HyperCard 2.2 34
The new version of Apple's multimedia meta-program (to coin a phrase) is here. Does it live up to its promise?

PuzzleMaker 36
A *QuarkXPress* XTension just for creating crosswords? (Check it out yourself with our cover disk demo!)

Phototone Textures 38
Quality ready-made textures you can use as backgrounds, or even tile like wallpaper so you can't see the joins!

SuperPaint 3.5 50
A draw and paint program all in one, for just £150, with lots of nifty 'plug-in' tools – can it be all it seems?

CD-ROM round-up 53
What's new on CD, including interactive demo discs...

Dinosaurs
Info Mac III
Instant Access to Entertainment
Mac Essentials
Musical Instruments
Quadra Photo Library Vol. 1
Supersonic

Shareware 75
Plot the earth, plan a wedding, navigate your frets (it says here) and much more, all for free or next to nothing!

Anarchie on the Internet 80
How can you find anything on the Internet, the world-wide computer comms network? Try this little $10 wonder!

Star Trek 25th anniversary 88
To boldly etc etc. Stardate blah blah. You've heard it all. But have you seen anything like this new adventure game?

Breakline 92
It's fast. It's furious. It's got a great intro. But this arcade game also has something familiar about it...

Music 95
A score-writer for less than a fiver. A truly complete *Cubase* handbook. Mac music making was never easier!

LC 475 & LC III

CPU	Monitor included	Keyboard	RAM/HD	Processor	Speed MHz	Video support to	Slots	RAM Upto	Ethernet	Price
LCIII	14" PP	St	4/80	030	25	16" Col	LCPDS	36MB	-	£699
LC475	14" PP	St	4/80	040	25	21" Col	LCPDS	36MB	-	£799
LC475	14" PP	St	8/160	040	25	21" Col	LCPDS	36MB	-	£999
LC475CD	14" PP	St	8/160	040	25	21" Col	LCPDS	36MB	-	£1149

PP = Performa Plus Monitor RGB = High Res Colour Monitor CD = CD-ROM 300 St = Standard Keyb LCPDS = LC Processor Direct Slot

Quadras

610	14" RGB	St	4/160	040	25	21" Col	040 PDS	68MB	•	£1299
610CD	14" RGB	St	4/160	040	25	21" Col	040 PDS	68MB	•	£1499
610CD	14" RGB	St	8/230	040	25	21" Col	040 PDS	68MB	•	£1799
660AV CD	-	-	8/230	040	25+	21" Col	040 PDS	68MB	•	£1749
660AV CD	-	-	8/500	040	25+	21" Col	040 PDS	68MB	•	£2049

CD = inc. CD-ROM drive RGB = High Resolution Colour Monitor St = Standard Keyboard 25+ = plus 55Mhz DSP chip

650	14" RGB	St	4/160	040	33	21" Col	3 NuBus	136MB	•	£1649
650CD	14" RGB	St	4/160	040	33	21" Col	3 NuBus	136MB	•	£1749
650CD	14" RGB	St	8/230	040	33	21" Col	3 NuBus	136MB	•	£2049

CD = inc. CD-ROM drive RGB = High Resolution Colour Monitor St = Standard Keyboard

840AVCD	-	-	8/500	040+	40+	21" Col	lots !	128MB	•	£2999
840AVCD	-	-	16/1000	040+	40+	21" Col	lots !	128MB	•	£3599
950	-	-	8/230	040p	33	21" Col	5 NuBus	256MB	•	£1999

CD = inc. CD-ROM drive 040+/p = plus 68882 maths co-pro/PMMU 40+ = plus 66MHz DSP chip lots = 3 NuBus slots & 3 empty bays

Monitors	14" PP	14" RGB	14" AV	15"Portrait	16" RGB	21" RGB
	£229	£269	£469	£465	£729	£2069
Keyboards	Standard	Extended	Adjustable			
	£90	£155	£180			

PP = Performa Plus Colour Monitor RGB = High Res Colour Monitor AV = High Res Audio Visual Col Portrait monitor is not colour.

Specialist Areas: Education • MultiMedia • CAD • DTP • Graphics • Accounts • Networks • Business

PowerBooks

CPU	Display	Floppy	RAM/HD	Processor	Speed MHz	Video Support to	Slots/ Options	RAM Upto	FPU	Price
165	10" 16 g/s s-t	•	4/80	030	33	16" Col	Modem	14MB	-	£1099
165	10" 16 g/s s-t	•	4/160	030	33	16" Col	Modem	14MB	-	£1199
180	10" 16 g/s a-m	•	4/120	030	33	16" Col	Modem	14MB	•	£1799
180M	10" 16 g/s a-m	•	4/120	030	33	16" Col	-	14MB	•	£2049
180c	8" 256c a-m	•	4/160	030	33	16" Col	Modem	14MB	•	£1949
180cM	8" 256c a-m	•	4/160	030	33	16" Col	-	14MB	•	£2199

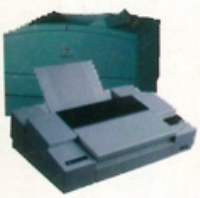
180M - inc. Express Modem g/s = Levels of grey s-t = Super-twist a-m = Active-matrix Modems are optional unless specified.

Duos

230	9" 16 g/s s-t	-	4/80	030	33	w Dock	Modem	24MB	-	£799
230	9" 16 g/s s-t	-	4/120	030	33	w Dock	Modem	24MB	-	£939
250	9" 16 g/s a-m	-	4/200	030	33	w Dock	Modem	24MB	-	£1599
270c	9" 32Kc a-m	-	4/240	030	33	w Dock	Modem	32MB	•	£1949

g/s = Levels of grey c = colours s-t = Super-twist a-m = Active-matrix w Dock = Dock required Modem is optional.

Printers



Printer	Type	DPI	Speed	Paper Tray	Fonts	Interface	Network	Price
StyleWriter II	B/J	360 dpi	1-2 ppm	100 shts	39 TT	RS232	-	£239
A3/A4 Colour	B/J	360 dpi	½ ppm	100 shts	64 TT	SCSI	-	£599
L/Writer 300	L/W	300 dpi	4 ppm	100 shts	39 TT	RS422	-	£499
Select 320	PSL/W	300 dpi	4 ppm	100 shts	35 PS	LT	•	£699
Pro 810	PSL/W	800 dpi	20 ppm	750 shts	64 PS	LT&Eth	•	£3999

B/J = Bubblejet PSL/W = PostScript LaserWriter ppm = pages per min shts = paper tray capacity TT = TrueType PS = PostScript

All prices are exclusive of VAT, are subject to change without prior notice and are valid while stocks last. E&OE.

direct-2-U

ON-SITE WARRANTY
per new unit (eg. system, printer, scanner etc.)
£39

MAILORDER HOTLINE

081 995 1872

081 994 7424

120 Chiswick High Road, London W4
Fax: 081-742 1455
9.00 am - 5.30 pm

071 602 9444

290 Kensington High Street, London W14
Fax: 071-371 6203
09.30 am - 5.30 pm M-F
10.00 am - 5.00 pm Sat

10 yrs Macintosh experience

FREE ! Technical Support

ServiceCentre at Chiswick Branch

Next Day Delivery - £10
(if stock is available and the order is placed before 4.00pm)

Software Training

All goods have a 1yr manufacturer's warranty

Authorised Reseller

A complete chess game, *ResEdit* to play with the innards of your Mac, *SpeedyFinder* to improve the Finder beyond recognition, and *Firefall* to blow aliens up. And that's not the half of it...

This month's goodies

Yours on this issue's MACFORMAT cover disk (more details overleaf):

- *ResEdit* – the ultimate Mac customiser. Rewrite those alert messages, change colours and fonts – but use with care! Full details in the *ResEdit* Primer free with this issue!
- *GNU Chess* – probably the ultimate shareware chess game. Mac chess games roundup, page 84.
- *Firefall Arcade* demo – a hot new arcade shoot-'em-up, straight from the States. Watch for a full review next issue.
- *SpeedyFinder7* – improve System 7's Finder.
- *lastDitch* – a *HyperCard* stack that enables you to read any text file, clean it up, run the fastest word count in the world, and more. Use it or pull it apart and see how it's done. How's it done? See *HyperCard*, page 60.
- *AllDay* – give yourself a pop-up calendar.
- *Typesetting Marks XT* – haven't upgraded to *QuarkXPress 3.2* yet? Neither have we. So use our exclusive XTension and you can create curly quotes, em and en dashes and ligatures in *XPress 3.1*.
- *FindStuff* – a vastly improved 'Find' utility for System 7.
- *Puzzler XT* demo – try out this crossword-puzzle-creating Quark XTension for yourself! See review, page 36.
- *QuitIt* – quits applications for you automatically.

START HERE

MACFORMAT's cover disk is a high-density floppy, so it can bring you more for your money. Almost all Macs made in the last four years (anything since the SE/30, including Classics and Performas) have a 'SuperDrive' which can read high-density disks, but older models don't and can't (that's Pluses, old SEs and original Mac IIs).

Packed with 3Mb of data

If your Mac is chronologically challenged, don't worry: you can get the same programs on two ordinary (double-density) disks. Just send your original cover disk with a self-addressed return envelope to: MACFORMAT Disk Swap, DisCopy Labs, PO Box 21, Daventry NN11 5BU. Make sure the envelope is big enough to hold two disks and sturdy enough to make it through the post.

If you don't want the hassle of doing this every month, you can subscribe and choose to get your copy with two ordinary disks delivered for no extra cost. See page 66 for details; when you subscribe you also get the choice of the following software: *Lemmings*, *SimEarth* or *Adobe Type Manager*!

BACK IT UP

Before you do anything else, you should make a backup of the MACFORMAT cover disk and work only with the backup, just in case anything goes wrong. Make sure the original cover disk is write-protected (move the tab so that you can see through the hole) – now nothing can be written to the disk. Then follow these simple steps:

1. Insert the MACFORMAT cover disk in your disk drive.
2. Highlight the disk icon (but don't double-click on it) and drag it over your hard disk's icon. The contents of the cover disk will be copied into a new folder on your hard disk called 'MACFORMAT April disk' (but not decompressed, so you still can't run anything directly).
3. When the copying finishes, drag the cover disk icon into the Wastebasket to eject it.
4. Insert a blank high-density disk. Check it's not write-protected, and, if need be, format it, naming it 'MACFORMAT April backup'.
5. Drag the 'MACFORMAT April disk' folder from your hard disk on to the new floppy disk's icon. When it has finished copying, your backup is complete.
6. You can now delete the 'MACFORMAT April disk' folder from your hard disk by dragging it to the Wastebasket.

GET GOING

Before you install any new software on your Mac you should ensure that you have a full backup of your hard disk, in case anything goes wrong, and that applies equally to our cover disk. Once you have backed up your hard disk, make sure you have no applications running, only the Finder, and insert the cover disk in your floppy drive.

Double-click on the disk's icon to open it; there will be two files. Read Me contains information about the programs on the disk – double-click on it to read it. The other icon is the compressed file containing the cover disk programs.

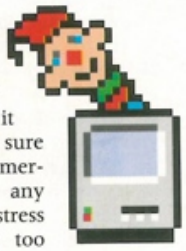
We compress the programs into a single file so we can fit more on the disk, but before you can use them you must decompress the files. Double-click on the icon, and a dialogue box will appear which looks similar to the normal **Save** dialogue. Select the place on your hard disk where you want the expanded programs to reside, and click **Save**. After a few moments, the software will be installed on to your hard disk. You do not need to copy the files on the disk on to your hard disk before doing this.

Some programs may need further installation – typically dragging them into the **System** Folder; check the Read Me files which come with the programs for details.

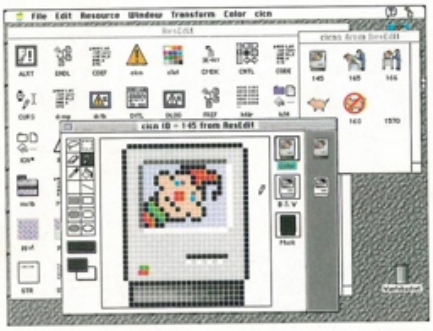
ResEdit

Shareware fee: none
Compatibility
Mac: any
System: any
Display: any

Before we describe *ResEdit*, a word of warning. It's an extremely powerful program which directly alters both programs and **System** files. Because of this it can easily damage files beyond repair. Never, ever, use *ResEdit* on anything other than a copy of a program, and if you use it on **System** files, make sure you have the proper emergency disks to repair any damage done. We can't stress the importance of this too much. Right, dire warnings over with, what does *ResEdit* do? It edits resources. And what are resources? The fundamental building blocks of all Macintosh applications. When you choose **Save**, the dialogue box which appears is a resource. So is the **File** menu you used to pick it, and the mouse pointer you indicated with. All these resources are stored in the program file and called up when needed.



With *ResEdit* you can tweak these resources – create your own mouse pointer, change the text in dialogue boxes, alter the colour of the menu bar or add a keyboard shortcut. The free book with this month's issue explains some of the things you can do.



Get inside your applications with *ResEdit* – the resource editor that enables you to tweak your Mac's appearance.

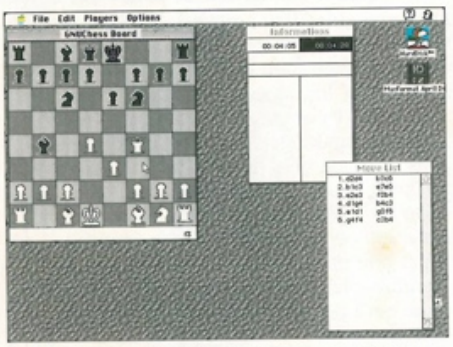
WARNING

ResEdit is a powerful program which can fatally damage files very easily. You use it at your own risk. Always make a backup of anything you intend to modify using *ResEdit*. MACFORMAT cannot be held responsible for any damage caused by your use of *ResEdit*, nor can we answer any queries on it, either by phone or by post. Take care and good luck!

GNU Chess

Shareware fee: none
Compatibility
Mac: any
System: any
Display: any

Challenge your wits against your Mac in this complete and fully operational chess program. It plays a pretty good game, and you can see how it compares to commercial games in our feature on page 84.



Can you beat your Mac at chess? *GNU Chess* is a black-and-white game, but then what more do you need with chess?

Firefall Arcade demo

Shareware fee: none
Compatibility
Mac: any
System: System 7 required; needs 2.8Mb RAM free
Display: 256 colours

Firefall Arcade is based on *Millipede*, the arcade classic from around 1980. On a playing field filled with obstacles, a millipede winds its way towards the bottom of the screen, from where you shoot at it. If you hit a segment it turns into an obstacle, and three shots on an obstacle clears the area. If any segment of the millipede hits you, you die. Other nasties fly at you from time to time, as do power-ups.

The sound and graphics on this version are delicious, and it's one of the best-looking straightforward shoot-'em-ups available on the Mac. Watch for a review of the full program next issue; meanwhile try it for yourself!

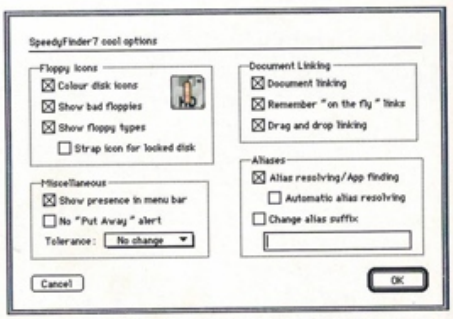
Firefall: fleets of maniac fireworms worm their way down the screen to zap you and your heavily-armed ship.

SpeedyFinder7

Shareware fee: US$25 (A$25 to Australians)
Compatibility
Mac: any
System: System 7
Display: any

SpeedyFinder7 has been described as the 'Swiss army knife' for System 7 Macs. It offers many useful improvements to the System 7 Finder in one package: speed up copying, no more delay when renaming files, fast emptying of the Wastebasket, auto Alias resolving, opening documents from one application with a different application, and much more. Its package of enhancements makes anyone's life that little bit easier. *SpeedyFinder7* has a big advantage over similar programs in that it doesn't directly alter the Finder at all – it's a configurable Control Panel, so you install it by placing it in the Control Panels folder and de-install it simply by dragging it into the Wastebasket. Other utilities require that you re-install the whole System!

The speeded-up copying is worth it alone!



Enhance the Finder with *SpeedyFinder7*: a Swiss army knife for your Mac!

lastDitch

Shareware fee: none
Compatibility
Mac: requires *HyperCard*
System: any
Display: any

This is a *HyperCard* stack that's not just a demonstration of *HyperCard* but a useful text-reading utility in its own right. You need to have *HyperCard* on your Mac to use it. You can elect to load only text files or all files. The stack loads them into memory (very quickly) and displays the contents in a scrolling field. *HyperCard* fields can display a maximum of 30,000 characters, and if the file is longer than this it is broken up into blocks which can be displayed

consecutively. This stack can also export files in ASCII format. You can load a file and then export it immediately. This exported version can be read by anything that can read ASCII.

The stack will do very fast word counts, and you can also check for words or phrases. Click on the **Info** button to display a scrolling text field and click on the button again to hide it.

AllDay

Shareware fee: none
Compatibility
Mac: any
System: System 7
Display: any

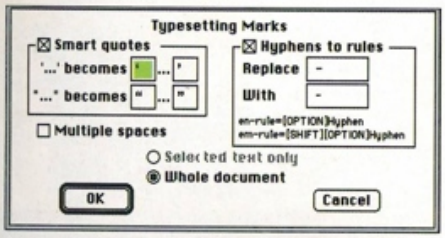
A simple desk accessory which provides a pop-up calendar. Simple and extremely useful. To use it, you just copy it into your Apple Menu Items folder, and it's then available in your Apple menu any day you need it.

AllDay gives you instant access to a pop-up calendar.

Typesetting Marks XT

Shareware fee: none
Compatibility
Mac: requires *QuarkXPress*
System: any
Display: any

A custom XTension which was written here at Future Publishing, makers of MACFORMAT. We wanted an easy way of using proper 'curly' quotes, correct em-dashes and en-dashes, and ligatures (fi fl), not to mention an easy way to remove excess spaces. Some of these features are implemented automatically in *XPress 3.2*, but for everyone who's still using *3.11*, here it is! Just copy it into your *QuarkXPress* folder, and next time you launch *XPress* there it is in your **Utilities** menu.

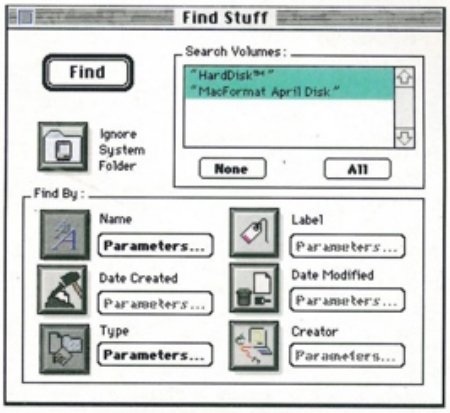


Give your *XPress* documents the professional touch.

FindStuff

Shareware fee: a postcard
Compatibility
Mac: any
System: any
Display: any

One of the worst things about System 7 is the dreadfully inflexible and slow **Find File** command (many people feel that System 6 did it better all along). *FindStuff* is an enhanced file finder which can search for files based on many more parameters than the ordinary **Find**, and it's quicker too!

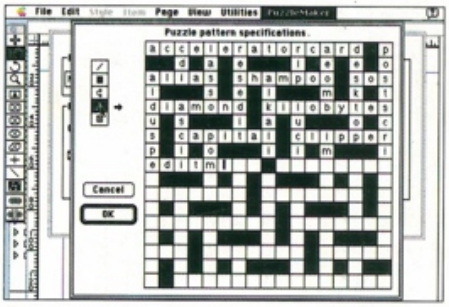


More powerful file finding, and at speed too, with *FindStuff*.

The Puzzler XT Demo

Shareware fee: none
Compatibility
Mac: requires *QuarkXPress*
System: any
Display: any

Try this crossword-producing *XPress* XTension.



Never a cross word? See the full *Puzzler* review, page 36.

ABOUT SHAREWARE

Some of the software on the MACFORMAT disk is shareware: commercial software which can be freely distributed. If after a fair trial period (normally one month) you decide to carry on using it, you are obliged to pay the shareware fee specified in the program's documentation files.

QuitIt

Shareware fee: $15
Compatibility
Mac: any
System: System 7
Display: any

Using this nifty Control Panel you can prevent your Mac's memory being cluttered up with applications with no open windows. You know the problem: you close all of an application's windows but you forget to select **Quit** from the **File** menu, so the application is still in the background, guzzling memory. But no longer! Now, when you click the close box of the last open window, *QuitIt* will quit the application automatically! (Beware though: you won't want to install *QuitIt* if you like being able to switch back to an application using the **Application** menu at the right of the menu bar instead of waiting for it to start from scratch again.) Just copy *QuitIt* into the **Control Panels** folder in your **System** folder.

Quit out of a program simply by clicking the close box.

FAULTY DISK?

When you duplicate as many thousands of disks as MACFORMAT does each month, unfortunately a few duds are bound to slip through the net.

If you think you have one such lemon, read through the installation procedure on page 7 just to double-check that you're not missing something.

If the disk still won't work, then return it by 20 April with a sturdy self-addressed envelope (a Jiffy bag is ideal) to: MACFORMAT April Disk, DisCopy Labs Ltd, PO Box 21, Daventry NN11 5BU. Telephone: 0327 300077.

Please do not send your disk to any other address – we have no stocks of disks at our Bath or Somerton offices. We regret we cannot answer phone queries on disk installation problems.

Authorised Education Reseller
Authorised Apple Workgroup Server Reseller
Certified Digital Audio Editing Systems Specialists

This is... computer warehouse

"BIG Big bargains and a whole lot more.."

"Why pay more in '94? - Dial 071 724 4104"

FAX 071 724 3775 FOR A QUICK QUOTE

Authorised Reseller

The Great Value Macintosh Superstores!

CW SPRING SPECIALS

Macintosh PowerBook 100

This MUST BE the offer of '94! A genuine Macintosh PowerBook for less than £300! But hurry CW only has 50 of these excellent value machines.

- Extremely portable weighs less than current models!
- The cheapest PowerBook ever!!

POWERBOOK 100 2/40
CW PRICE £299

POWERBOOK 100 4/40 + 3.5" FLOPPY DRIVE
£399.00

LIMITED STOCKS ONLY CALL CW NOW!

Macintosh LC 475

CW PRODUCT CHECKLIST

- ☐ 25Mhz 68040
- ☐ 4Mb RAm Exp to 36Mb
- ☐ 80Mb Hard Drive
- ☐ PDS expansion slot
- ☐ The speed of a Quadra

CW RECOMMENDED

CHOOSE YOUR CONFIGURATION

LC475 + 4Mb RAM, 80Mb Hard Drive, 14" Performa Plus Colour Display £799

LC475 + 4Mb RAM, 160Mb Hard Drive, 14" Performa Plus Colour Display £849

LC475 + 8Mb RAM, 80Mb Hard Drive, 14" Performa Plus Colour Display £899

MACINTOSH LC 475

QUADRA POWER IN A SLIMLINE LC CASE!

This superb general use machine features a Motorola 68040 clocked at 25Mhz which means it's ready to rip through your business, entertainment and education applications with gusto. It includes support for all Apple displays, including the 21" Colour Display and comes complete with 4Mb of RAM and an 80Mb Hard Drive.

- 25Mhz 68040 - as fast as a Quadra 700!
- 4Mb RAM (expandable to 36Mb)
- 80Mb Internal hard drive
- Processor Direct Slot for expansion
- Built-in monitor support to 21"
- System software • Desktop Mouse
- Almost as fast as a Quadra 700!

LC475 4Mb RAM, 80Mb DRIVE
LC475 NO KEYBOARD 4Mb RAM 80Mb HARD DRIVE
£699 EX VAT

Macintosh Classic II

The excellent value Classic II features a 16Mhz Motorola 68030 processor and is extremely space efficient. Ideal for word processing and simple computing tasks.

- 16Mhz 68030 • 4Mb RAM memory
- 40Mb Hard Drive • Built-in 9" mono screen

FREE CLARISWORKS 1 INTEGRATED PACKAGE

CLASSIC II 4/40 + C.WORKS
LIMITED STOCKS £399

Macintosh LC III

Another superb deal from CW. The LCIII is THE budget colour choice!

- Motorola 68030 processor at 25Mhz
- LC expansion slot
- 4Mb RAM expandable to 36Mb
- 80Mb hard drive
- Add a printer & monitor & Save £££'s

LCIII + PRINTER 4/80 + StyleWriter II
£949.00

LC III 4Mb RAM 80Mb Drive
CW PRICE £549

APPLE CD-300 CD-ROM £145

APPLE LASER SELECT 310 £489

APPLE POWERCD CD-ROM £139

APPLE STYLEWRITER II £229

d2 44Mb Syquest Drive

44MB SYQUEST FOR LESS THAN £250!

- 44Mb Genuine Syquest
- Complete with one cartridge

£42.99 Media From

d2 SYQUEST 44Mb DRIVE
CW PRICE £249

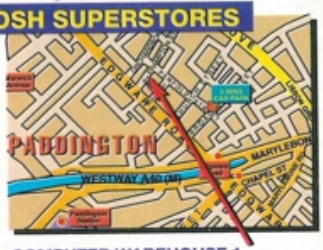
Top Value PSI Modems

THese modems represent stunning CW value. Choose from internal models for your PowerBook or external models for any Macintosh!

From Only £99!!

- **POWERMODEM 1** Internal Fax/Modem for your PowerBook. 2400bps Modem 9600bps FAX £99.00
- **POWERMODEM 4** 14.4 v.42bis internal PowerBook Fax/modem 14,400 send and receive £249.00
- **COMSTATION 1** Fax/Modem for your Macintosh 2400bps Modem 9600bps FAX £99.00

TWO GREAT MACINTOSH SUPERSTORES



COMPUTER WAREHOUSE 2
708A The Tudor Estate. Abbey Road
London NW10 7UW
Tel: 081 838 5553.

COMPUTER WAREHOUSE 1
9 Hatton Street.
London. NW8 8PR
Tel: 071 724 4104. FAX: 071 724 3775

JUST LOOK WHAT'S INSIDE!

- SOFTWARE
- PRINTERS, NETWORKING
- HARD DRIVES, CD-ROMS
- GAMES, EDUCATION
- SCANNERS, MODEMS
- ACCELERATORS
- MEMORY, UPGRADES
- CONSUMABLES
- ACCESSORIES

And all at the UK's **LOWEST** prices. Complete the coupon NOW or phone **071 724 4104!!**

MAIL THIS FORM TO RECEIVE FREE CATALOGUE

Name
Address
Post Code
Tel No

Please send me the UK's Biggest and Best Macintosh Mail Order Catalogue packed with everything Macintosh ☐

Please put me on the mailing list ☐

MACFORMAT 3/94

SEND TO COMPUTER WAREHOUSE No 9 HATTON STREET. LONDON NW8 8PR

Visit either Warehouse for amazing bargains and massive stocks. CW1 is your central London option. CW2 is home of the Marketplace and parking is FREE. Visit soon!!

071 724 4104 CW1
No 9 HATTON STREET. LONDON NW8 8PR FAX: 071 724 3775

081 838 5553 CW2
708A TUDOR ESTATE. ABBEY RD. LONDON NW10 FAX: 081 963 0624

VISIT A WAREHOUSE!
Yep! The two best Macintosh stores are ready to greet you with bargains galore!

POWER PC's AT CW's FAVOURITE WAREHOUSE SUPERSTORES

Macintosh Colour Classic

Here's another great deal! CW has secured 15 of these excellent machines and can offer them at an unbelievable price. All come with 3 months service warranty.

- 16Mhz 68030 processor
- Processor Direct Slot for expansion
- 4Mb RAM, 40Mb H. Drive
- 156 colour 10" display

ONLY STRICTLY LIMITED STOCKS OF THESE EX-DEMO MACHINES!

15 UNITS ONLY CALL CW NOW!

COLOUR CLASSIC 4/40
CW PRICE £449

Macintosh Quadra 660AV

- Motorola 68040 processor at 25Mhz
- 55Mhz DSP chip
- Built-in GeoPort for connection to ISDN, PABX & direct fax capability

QUADRA 660AV 8/230 CD
NEW PRICE LOW

Macintosh Quadra 610

- Motorola 68040 processor at 25Mhz
- Built-in Ethernet & expansion slots
- 4Mb RAM + 160 Mb Hard Drive
- 21" monitor support

QUADRA 610 4/60
CW PRICE £895

Macintosh Quadra 650

- Motorola 68040 processor at 33Mhz
- 4Mb RAM (max 136Mb)
- 3 x 12" Nubus slots
- PDS expansion slot

QUADRA 650 4/160
CW PRICE £1199

Macintosh Quadra 840AV

- 40Mhz 68040 - The fastest Mac!!
- 3 Nubus slots
- 8Mb RAM – 500Mb drive
- On-board 66Mhz DSP

QUADRA 840AV 8/500CD
CW PRICE £2695

POWERBOOKS!!

POWERBOOK 145B — 4Mb RAM 40Mb Drive — £799.00

DUO 230 / WORKS — 4Mb RAM 80Mb Drive — £799.00

DUO 230 / WORKS / FLOPPY — The Works for your Office! — £899.00

PowerBook 180c

Amazing CW performance and a great active matrix display make this the best notebook you can buy.

- Fast Motorola 33Mhz 68030
- Math co-processor
- 4Mb RAM (exp to 14Mb)
- 160Mb H. Drive
- Active matrix 256 col. display

FREE Microsoft Office + MacLink Plus + Carry Case!

POWERBOOK 180C 4/160
CW PRICE £1899

All products and offers subject to availability. Prices exclude VAT unless otherwise stated. E&OE. Apple, Mac, Quadra, and Macintosh are trademarks of Apple Computer. All other trademarks respected.

This is... Authorised Reseller computer warehouse

FAX 071 724 3775 FOR A QUICK QUOTE

COMPUTER WAREHOUSE 2
708A The Tudor Estate, Abbey Rd
London. Tel: 081 838 5553

COMPUTER WAREHOUSE 1
9 Hatton Street, London
NW8 8PR Tel: 071 724 4104

MEGA SCANNER DEAL

CW PRODUCT CHECKLIST
- 24-bit Colour Scanner
- Up to 1200dpi scanning
- SCSI lead included
- FREE Photoshop LE
- FREE On-site Warranty

CW RECOMMENDED

MICROTEK SCANMAKER II

WOW! A 300 dpi 24bit colour scanner with Adobe Photoshop LE AND FREE 1 year On Site Warranty for less than £500!!

With ScanMaker you can capture 24-bit colour images, 8-bit greyscale images and black and white line art at resolutions up to 1200dpi. Plus Adobe Photoshop LE allows you to manipulate your images to your hearts desire!

- 24-bit colour scanning
- 8-bit greyscale scanning
- 300 x 600dpi optical resolution
- Up to 1200dpi line art
- **Free Adobe Photoshop LE**
- **Free 1 year on-site warranty**

FREE PHOTOSHOP LE + ON-SITE WARRANTY

SCANMAKER II + PHOTOSHOP LE
PLUS.. 1 YEAR ON-SITE WARRANTY FREE
£499

POWERBOOK 165 SAVE

THIS OFFER WON'T LAST!! CALL CW ON 071 724 4104 NOW!!

POWERBOOK 165

A 33MHZ MACINTOSH NOTEBOOK FOR UNDER £1000!

Supertwist display providing 16 levels of grey lets you display crisp text and CW stunning graphics.

It's also CW fast with a Motorola 68030 running at a speedy 33MHz - that's quicker than a IIvx!.

- 33MHz Motorola 68030 processor
- 4Mb RAM (expandable to 14Mb)
- 80Mb drive (160Mb option)
- Colour display output - drive a 16" colour monitor!

165 + WORKS — MICROSOFT WORKS — £1049

165 + PSI MODEM — 24/96 FAX MODEM — £1089

CW PRODUCT CHECKLIST
- 33Mhz Motorola 68030
- 16 grey level screen
- 4Mb RAM fitted
- 80Mb internal H.drive
- Direct colour output

POWERBOOK 165 4/80
4Mb RAM
80Mb H.Drive
£995

A3 COLOR Printer

GENUINE APPLE 360dpi COLOUR A3 PRINTER!!

- 360dpi Cannon ink-jet engine for superb quality
- Prints to plain paper or transparencies up to A3
- 64 scalable TrueType fonts included
- Apple brand

CW PRODUCT CHECKLIST
- Output up to A3 in size
- Full colour 360dpi print
- Apple™ quality brand
- Top CW value

APPLE A3 COLOUR
CW PRICE £499

MAD MARCH PRINTER SALE!!

Apple Personal LaserWriter 300
• Laser • 300dpi
£499 FREE FUN FONTS

Apple Personal LaserWriter 320
• Postscript • Networkable
£699 FREE FUN FONTS

Monotype FunFonts
- 25 high quality scalable fonts
- Over 500 handy art characters & dingbats
- Easy to install & impress!

£49

The Great Value Macintosh Superstores!

LOWEST PRICES
CW's HUGE buying power means he can offer the absolute LOWEST UK prices.

CW2 081 838 5553
708A TUDOR ESTATE. ABBEY RD. LONDON NW10 FAX: 081 963 0624

CW1 071 724 4104
No 9 HATTON STREET. LONDON NW8 8PR FAX: 071 724 3775

The Only Colour Printer Your Mac™ Will Ever Need!

The new Canon BJC-600™ is a 360 dpi plain paper A4 colour printer which takes colour ink jet technology into a new dimension. The BJC-600 is the first printer of its type to offer true plain paper support. The ink drying time is considerably faster than that of other colour ink jet technologies thereby virtually eliminating the head banding normally associated with such low cost devices. The BJC-600 offers Laser quality colour output onto paper, OHP film or even onto company stationary. The standard version of the BJC-600 for the Apple Mac includes a Chooser™ level QuickDraw™ driver which offers ColorSync™ support as well as a fast black & white printing option. The BJC-600 is also available with an accelerated RISC based PostScript processor upgrade.

Canon BJC-600™

- 4 Colour Bubble Jet Print Engine
- Colour and Black & White Modes
- Plain Paper Support
- ColorSync Compatible QuickDraw™
- Optional PostScript
- £ 725.00 SRP (QuickDraw version)

To find out more about the Canon BJC-600 call Pisa Systems on Tel: **0494 564455.** Or contact your nearest Apple dealer.

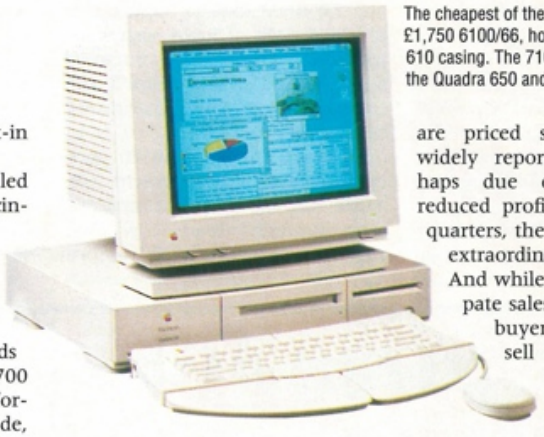
PISA SYSTEMS

Canon

All trademarks acknowledged

PowerMacs storm in

Exclusive! Full details of the three new Macs from the future...



The cheapest of the new PowerMacs is the £1,750 6100/66, housed in a modified Quadra 610 casing. The 7100 and 8100 models use the Quadra 650 and 800 designs respectively.

Completing one of the boldest moves in its ten-year history, Apple has finally unveiled its next generation range of computers, Power Macintosh. At the same time, Apple itself and some other manufacturers have announced upgrades to enable owners of current Macs to convert their machines into PowerMacs.

Based on the PowerPC 601 RISC processor, jointly developed by Motorola, IBM and Apple over the last two and a half years, the first PowerMac models are available now. Starting at £1,750 for the entry-level 60MHz 6100/60, the PowerMac range comprises three machines offered in different configurations. At the high end, the 80MHz 8100/80 represents the sharp edge of Apple's new technology, offering double the power of the 6100 for a competitive £4,700 in its 16/500CD format. Pitched between the two, at £2,600 for a 8/250 configuration, is the 7100/66 rated at 66MHz. Each model also comes in an AV form with S-video and composite video in/out completing each base system's built-in 16-bit stereo audio capabilities.

The PowerMacs come bundled with the new System 7.1.2 Macintosh operating system and the leading PC equivalent combination – MS-DOS 6 and Windows 3.1. Each can run the host platform's software under emulation, typically at speeds broadly equivalent to Quadra 700 Mac and 33MHz 386 PC performance. On the Macintosh side, users will also benefit from new versions of *PC Exchange*, AppleScript and *QuickTime*, as well as *Plain Talk*, Apple's text-to-speech and speech-recogntion software. All this is configured to run automatically on startup.

But the biggest benefit to users will be the 'native' versions of most of the popular Mac applications converted to draw directly on the underlying RISC architecture. These so-called 'accelerated applications' or 'fat apps' will deliver performance levels some two to four times the speed of a 33Mhz Quadra on a basic 6100, rising to the unprecedented peak performance of the 8100, delivering eight times the power of a Quadra 950.

In addition to the three desktop models, Apple has simultaneously announced logic upgrade boards for six current Mac models. The 6100/60 board, for use in the Quadra 610 and 660AV, is £800, and replacement PowerMac boards are also available for the IIVi, IIvx, Performa 600 and Quadra 650 in their 7100/66 format. Quadra 800 and 840AV owners can enjoy the benefits of upgrading to the 8100/80 specification for £2,000. Again, each board will be offered in AV configurations.

Although the new RISC Macs are priced slightly higher than widely reported previously, perhaps due entirely to Apple's reduced profits over the last few quarters, the range still represents extraordinary value for money. And while it's difficult to anticipate sales figures for first-time buyers, Apple expects to sell one million units in the next year to both consumer and professional markets. But for existing Mac owners, the promise of an upgrade path will be matched only by the pressure to take that path and upgrade.

Since Apple has announced upgrade paths for all current Macs, including the LC 475 and perhaps, thereby, the LCII and LCIII, the best bet might be to buy a Power-PC-capable machine before the value of your current model begins to plunge and upgrade later. The advantage is that, in the meantime, all the bugs should be sorted out in six months' time. But the temptation to buy now is a strong one because existing Mac owners have an affordable opportunity to transform their machines beyond recognition. Mac IIvi users, for instance, hitherto constrained by average 16MHz 030 performance, need now spend only £800 to harness the power of a 66MHz RISC processor driving System 7 five times faster than they're used to, and offering built-in video grabbing and CD quality audio sampling too. Just how successful Apple is in selling this dream is the key to not only the fortunes of Power Macintosh but Apple's very future as a company.

Andy Storer

THE PRICE OF POWER

Product	Computer	System*	System w/ *SoftPC**
Power Macintosh 6100/60 8/160	£1,526	£1,761	£2,254
Power Macintosh 6100/60 8/250/CD	£1,878	£2,113	£2,607
includes video display adapter as standard			
Power Macintosh 7100/66 8/250	£2,466	£2,701	£3,194
Power Macintosh 7100/66 8/250/CD	£2,701	£2,936	£3,429
Power Macintosh 7100/66 8/250/CD/AV	£3,406	£3641	£4,134
Power Macintosh 8100/80 16/500/CD	£4,816	£5,051	£5,220
Power Macintosh 8100/80 16/1Gb/CD	£5,403	£5,638	£5,808
Power Macintosh 8100/80 16/500/CD/AV	£4,933	£5,168	£5,338
***'System' inc 14-inch colour monitor and extended keyboard; *SoftPC* is an IBM-PC emulator**			
Upgrades			
Power PC Upgrade Card	£703		
Power Macintosh 6100/60 upgrade	£1,056		
Power Macintosh 7100/66 upgrade	£1,408		
Power Macintosh 8100/80 upgrade	£1,878		
Power Macintosh 6100/60 AV	£1,408		
Power Macintosh 7100/66 AV	£1,526		
Power Macintosh 8100/80 AV	£2,113		

■ Turn to pages 20 and 21 for a closer look at the new Power Macintosh range and what they could mean for you...

NO RISC!

RISC – Reduced Instruction Set Computer – chips are faster by design than the chips currently used in Macs. They use fewer instructions, all of a uniform size, and handle them more efficiently, all of which means extra processing speed at every stage, whatever the task.

More compact Quadra power

If anyone needs assuring that Apple is committed to conventional Macintosh models in the face of the PowerMac initiative, its announcement of two new LCs should allay fears.

The LC 550 and LC 575 machines, based on 33MHz 030 and 040 processors respectively, have just been launched into the US education market following the same route as the LC520. Like the earlier model, both are shipping with a built-in 14-inch colour monitor with unidirectional microphone and stereo speaker. In addition, both come with a tray-loading CD-ROM drive, 160Mb hard disk and 4Mb of RAM upgradable to 36Mb. The 550 is priced at $1,199 (£800) while the 575, presenting Quadra 800 performance, sells for $1,699(£1,150).

Along with the LC520, these two new machines represent what Apple has labelled its Entry Systems PowerPC line – in other words, models which will be provided with upgrade paths to the new RISC platform. It's not clear yet though whether upgrades for these, and the LC475, will be based on the PowerPC 601 chip. Sources close to the company indicate they could well be based on the 603 chip, a cheaper derivative due later this year and delivering similar performance levels.

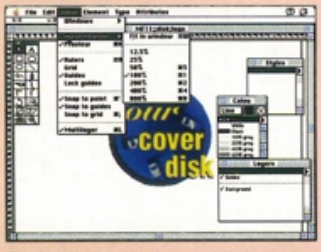
Apple UK is not yet in a position to confirm whether either LC will find its way into Europe.

■ Apple is on 0800 127753.

Free goes four

Aldus has expanded the creative and productivity features of its high-end illustration and graphics package *FreeHand*, with version 4.0 now available as an upgrade for £150. The full version of the new package will come bundled with a trial version of *Fetch 1.2*, Aldus's multimedia cataloguing software.

New features include a user-customisable interface with floating palettes, a live pasteboard for multiple page design, and greater control over columns, rows, gutters and margins. Perhaps best of all though is that text insertion is now direct: users can now type text straight on to objects for styling. Enhanced colour handling and custom palettes complete the list of major innovations. For more information call Aldus on 081 568 8868.



Freehand in its older incarnation, in use in a typical context... This user could upgrade to the new version 4.0 for just £150.

All of life is there

'All Human Life' is an exhibition of great photographs from the famed Hulton Deutsch Collection at the Barbican in London until April 24. As well as viewing almost 500 photos from the earliest days of photography up to today, visitors can pop downstairs to see 12 Macs displaying Hulton's 'Decades' series of CD-ROMs – 1920s, '30s, '50s and '60s. Each disc is £116 and contains 2,500 low-resolution images from one decade; you can export and use them as-is or order a high-res image or print from Hulton (071 266 2660).

With the custom *Photofinder* software you can search for images by keywords or types...

Quick click and shoot

In a bid to corner the market for affordable digital photography for personal computer users, Apple has announced a £700 camera which plugs directly into any Mac. QuickTake 1000, based on Kodak's £6,000 DCS200 digital camera, shoots full screen, 640x480 pixel, images in 24-bit colour. Using built-in flash memory to store up to eight images, the camera offers simple point-and-click auto-focus and auto-flash operation. Once shot, images can be ported to the Mac via a serial cable connecting it to *QuickTake* and loaded into any *QuickTime*-aware application for editing. A lower resolution mode of 320x240 is also available, enabling users to store up to 32 images to be saved in the camera. Results are said to be perfectly acceptable for personal DTP purposes where the final output is for lasers, colour printers and photocopiers.

■ For more information call Apple on 0800 127753

Dreaming on

Top 3D rendering and modelling package *Ray Dream Designer* has been upgraded to include *Photoshop* plug-in extensions and more than 50 other new features. Version 3.0 now integrates modelling and rendering modules and includes a 3D Paint feature allowing artists to add colour and texture directly on to an object's surface. It's priced at £428 to new users; upgrades for any previous version cost £75, but *Ray Dream* users who bought a copy of the previous version after July 15 last year can upgrade for free.

■ Contact Amtech on 0202 476977 for further details.

Gilding the lily, or just colouring the raytrace? *Ray Dream Designer* now enables you to colour objects directly.

APPLE BYTES

Apple in catalogue

With the news that Ryman Computer Shops, one of the high street retailers selling Macs, is to ditch computers in favour of telephones following the company's takeover by a telecommunications outfit, Apple has struck a deal to sell its Performa range through the catalogue store chain Argos. 34 outlets will stock the range, adding to the 516 Dixons, John Lewis and PC World stores retailing the range nationwide. We are unable to confirm the rumours that you will soon be able to buy a Mac in your local corner store or order one from your milkman for Christmas.

PowerCD slashed

Apple's three-in-one portable CD-ROM drive, PowerCD, has had its price cut from £411 to just £199. Capable of playing CD-ROM titles, Photo CD and audio disks, the drive can be used directly with televisions, hi-fis and as a portable stereos as well as a regular CD drive connected to your Mac. More details from Apple on 0800 127753

Wanted: cloners

After months of speculation, Apple's boss, Michael Spidler, has finally confirmed that the company is seeking PC manufacturers to build Mac clones in a bid to boost market share. Dell and Compaq are believed to have been among those approached, but IBM looks the most likely candidate to sign an agreement. Till now, production of Macs and the Mac operating system has been firmly in Apple's hands.

Colour without cost

The price of PostScript-compatible colour printing has been significantly reduced with the launch of the Fargo dye sublimation printer from Colorgraph on 0734 819435. The 2.3-page-a-minute Fargo costs £995 and comes with a thermal transfer option which its manufacturers claim produces results virtually indistinguishable from glossy colour prints. Watch for a review in MACFORMAT next issue.

Stylish Colour

Next month, Apple is set to unveil a Colour Stylewriter costing less than £600. The 600dpi inkjet printer, based on a Canon engine, outputs on to plain paper using fast-drying inks to overcome the absorption problems associated with inkjets. Its drivers are QuickDraw-based, designed to compete head-on with Hewlett Packard's acclaimed 550C inkjet in terms of price and performance. More information on the Colour Stylewriter is available from Apple, 0800 127753.

APPLE BYTES

MacTel goes global

Leading Mac bulletin board MacTel, home to more than 30,000 shareware files, is now providing subscribers access to the worldwide Internet network. For £2 a month, users can e-mail any address anywhere in the world using an icon-based interface. MacTel can be contacted by voice on 0602 455077 or on-line on 081 543 8017.

Macs on telly

E-Machines' Simply TV card could be ideal for anyone wanting to display their Mac screens on standard colour TVs. The £295 card – designed to fit into the Processor Direct Slot of Colour Classics, LCs and Performas – outputs the Mac display signal to any TV or VTR with composite video or S-video socket to provide flicker-free pictures. Simply TV is being handled by DirekTek on 081 845 5969.

Pushing the Plus

MACFORMAT readers deliberating over whether to buy a CD-ROM drive might do well to wait a few months for Apple's new Apple CD300 Plus device based on a NEC engine. Expected to sell for £50 less than the external version of the current CD300, the Plus offers the same data transfer rates of 300K a second and average access times of 295 milliseconds. But don't wait too long. The Plus could well be the last of the dual-speed drives in the Mac market – Apple is said to be working on a four-speed drive using the same NEC mechanism.

Write on

MacWrite Pro 1.5, updating the popular Mac word processor, has just been released by Claris, offering full support for the features of Apple's System 7 Pro, including AppleScript events scripting, *QuickTime* and the PowerTalk electronic mail system. It can also generate an automatic, configurable Table of Contents and even 'text wrap around *QuickTime* movies', which sounds like quite a trick. *MacWrite Pro 1.5* costs £175, or £23.50 to upgrade from *MacWrite Pro 1* and £70.50 from earlier versions of *MacWrite*. More from Frontline Distribution, 0256 463344

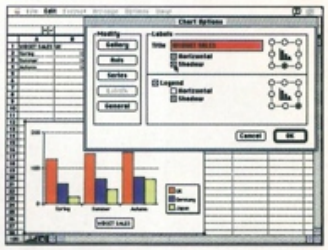
And for DOSsers...

DOS Mounter Plus, the popular PC file access utility, has been upgraded to enable Mac users to access DOS and Windows files resident on Novell Netware network servers. For £9.95, users can mount any DOS-formatted floppy disk, removable cartridge or optical disk. the latest version, 4.1, is available from Computers Unlimited on 081 200 8282.

Works first on PowerPC

A new version of *ClarisWorks* 2.1, the best-selling integrated application on the Mac, is set to be one of the first applications to ship in a 'native' PowerMac form (that is, optimised for best performance on the new machines). The new release will also début on the Mac as a standard application, packaged in the same box at the same price of £195.

Added to what could quickly become the standard method by which most new software is shipped and bundled, the software automatically detects whether the Mac is PowerPC-based or not and then installs the appropriate version. This means that PowerMac users will be treated to a version of *ClarisWorks* which takes advantage of Apple's PlainTalk technology, enabling users to convert text to speech and vice versa, as well as significant performance enhancements. As far as conventional Mac functionality is concerned, 2.1 now features hyphenation and additional file translators. Updates for 2.1 cost £23.50 through Frontline Distribution, 0256 20534.



ClarisWorks on a PowerMac could set new standards for integrated packages...

Graphics for under £100

For converting graphics between formats, *DeBabelizer* may be for you – and now you can also choose its 'lite' little brother!

Readers wowed by last issue's review of Equilibrium's elegantly-titled *DeBabelizer* may be interested to know that a cut-down version of the £293 comprehensive graphics file format converter is now available. *DeBabelizer Lite*, priced at only £99, can handle 55 cross-platform bitmapped graphics formats and can utilise *Photoshop* Acquire, Filter and Export plug-ins. What's more, you can translate individual images or entire folders in one go.

Lite is able to ranslate images made in any paint, scanning or photo retouching application and maintains maximum colour integrity and quality to and from each platform. Common file types include most Macintosh, Windows, Atari ST, Amiga, Silicon Graphics, Sun and general file formats like JPEG, GIF and Photo CD.

Would-be cross-platform converters should call Letraset on 071 928 3411 for more details.

Fancy a dabble?

If you've always wanted to draw and paint but never attempted to get started, *Dabbler* from Fractal Design may provide some inspiration. It provides an educational approach to computer art, featuring an easy interface, visual tutorials and a good choice of natural media painting tools. Among *Dabbler's* innovations are extensive use of sound to accompany selection from a picture-based menu system, animated examples of colour basics and artistic techniques linked to a step-by-step manual – and, perhaps best of all, the facility to draw directly over photographic images. Scans or Photo CD images can be treated to *Dabbler's* built-in natural media brushes, which include mimics of Van Gogh and Seurat, before being removed to reveal your overlaid creations. For details on availability and price call Letraset, 071 928 3411.

All my own work, if you don't count tracing.

The future unfolds

A bit of a weird one, *Touch 3D*; it's a CAD package which enables you to take a solid 3D model created in any major CAD program and break it down into its constituent parts to be unfolded on screen or in print. Any CAD output device can be used to print *Touch 3D's* de-constructions – PostScript lasers, inkjets, plotters, cutting machines, the works. Pitched at prototyping industrial design, sheet metal work, packages, sketches, fabric patterning and architectural, exhibition and theatrical models, *Touch* costs £299 from Gomark, 071 731 7930.

Take a CAD file from *AutoCAD*, *Blueprint*, *DesignCAD* or a host of others, and... well, unfold it with *Touch 3D*.

Falling Newtons

Apple has dropped the price of its Newton MessagePad to £499 in a move believed to be due to lacklustre sales of the hand-held organiser. But the company is expecting sales to improve now that several innovative applications are available. Titles like *The Economist World in Figures*, *Time Out Guide to London* and *The Good Food Guide* look set to change the MessagePad's fortunes.

■ More information from Apple on 0800 127753.

You wouldn't buy this hardware without test driving it first

The Macintosh Essentials CD from Software Dispatch. 70 leading applications for you to try before you buy.

Thanks to Software Dispatch™ from Apple, you can now unlock the formidable power of Macintosh™ software in an exciting new way.

Just imagine if you could try and compare 70 of the latest software products without leaving your desk. Imagine being able to find the software you're looking for without having to search for it. And then imagine that buying and installing new software only took a simple phone call.

Almost unthinkable – but not any more. With the arrival of the Macintosh Essentials CD from Software Dispatch, now you can.

The Macintosh Essentials CD not only contains titles such as System 7 Pro, Letraset® Fonts, Norton Utilities™ and SAM,™ but also many other leading software products the most popular categories – Business, Utilities, Fonts, Graphics/Design, Games, Education and Travel.

Software Dispatch will revolutionise the way you buy Macintosh software forever. The CD already holds complete programs and demonstrations to help you try them so that you can find the software you want before you buy.

All you need to enjoy this new way of buying software is a Macintosh personal computer and CD-ROM drive – then you're ready to go shopping on your Macintosh.*

When you've chosen the software you want, just call the Software Dispatch hotline and you will be told how to unlock the applications and install them onto your Macintosh. Immediately.**

* You need 4MB of memory and System 7 software.
** Payment is by VISA, MasterCard or American Express.

© January 1994, Apple Computer, Inc. All rights reserved. The Apple logo is a registered trademark and Apple, Macintosh, Software Dispatch and the Software Dispatch logo are trademarks of Apple Computer, Inc. and are registered in the USA and other countries. Letraset is a trademark of Esselte Letraset Ltd. Norton Utilities and SAM are trademarks of Symantec Corporation. Product information is subject to change without notice.

Now the same is also true for Macintosh software

Introductory Software Offer.
Buy one title and you can get 50% off one of following titles.†

- **Battle Chess** – An exciting game that lets you match your wits with your computer.
- **Safe & Sound** – An easy-to-use utility that finds and fixes 100 of the most common disk problems.
- **Crystal Quest** – A fascinating game that will test your skill and your imagination.

Stay in touch with the future.

Once you have made a purchase using the Macintosh Essentials CD, you will automatically be sent *free update CD's* with more new software for you to try and buy. So you'll always stay in touch with the latest and best.

Call for your free copy today.

☎ 0345 678 001

†Offer applies to first purchase only and closes 30th June 1994.

Macintosh Essentials CD from Software Dispatch. MF 1
For your free copy, call ☎ 0345 678 001 today.

Alternatively, you may prefer to complete this coupon and return it to the address below (no stamp required).

Mr/Mrs/Ms First Name _____

Surname _____

Job Title _____

Company/Organisation _____

Address _____

_____ Town/City _____

County _____ Postcode _____

Daytime Telephone _____

I use a Macintosh model (e.g. Macintosh LC 475) _____

Do you currently use a CD-ROM drive? ☐ Yes ☐ No

If yes, please specify model _____

Software Dispatch
AMS/AMS/015306/M02
P.O. Box 66
Hounslow
TW5 9RT

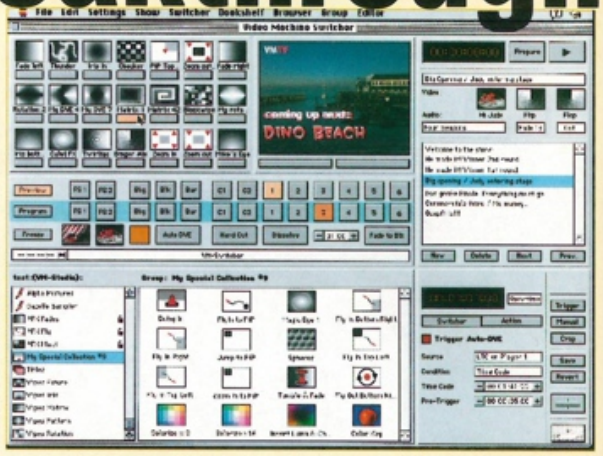
SOFTWARE DISPATCH ™

Apple

FAST video breakthrough

It may look an awful handful but FAST Electronics' Video Machine contains all the tools you need to use your Mac as a video post-production studio on your desktop. Which is why it'll cost you just a little under £4,000 to get it up and running. But its features really go to show what your Mac is capable of when applied to custom requirements.

VM-Studio 2, the software which holds this modular hardware system together, can directly control DAT (Digital Audio Tape) drives and handle eight-channel, broadcast-quality vision mixing with audio. With its *TitleMagician* component, users can combine PostScript fonts with on-screen material to produce titles while its DVE Editor offers more than 300 Digital Video Effect presets which can be user-modified. A few years ago, this sort of power might have cost tens of thousands and filled a largish studio. So if you're a budding Mac videographer and would like to find out more, give Magnifeye a call on 071 221 8024.



If you thought 'desktop video' meant playing *QuickTime* movies on your Mac, you may find the new Video Machine from FAST Electronics a bit of an eye-opener.

How to stay sharp

Smarter than Newton? Maybe not, but you could say it was a pretty Sharp alternative...

Mobile organisers with pen input and facilities to transfer files to and from the the Mac aren't just confined to the Newton MessagePad. Sharp's new IQ-8920 also fits the bill, weighing only 300g and featuring a QWERTY keyboard. And at £299, its infra-red file transfer capability and optional fax/modem unit may seem to be an attractive alternative. With onboard calendar, word processor and database applications, all of which can process handwritten input from the accompanying pen, the IQ-8920 is available from most high street stores.

■ More details from Sharp on 061 205 4255.

Powerhouse mouse

It had to happen. The first PowerMac mouse is ready to ship. Logitech has even got a PowerMac trackball too. But don't be fooled into thinking there's any special technology involved – both just plug straight into the same old ADB port to be found on your Mac. But if you're after smooth, precise and comfortable input devices with a utility to assign commands like Cut and Paste to either of the two extra buttons, MouseMan (£69) and TrackMan (£75) are worth checking out. Call Logitech, 0344 891313.

Computer Shopper Show

Readers wanting buying advice from the MACFORMAT team can get it straight from the horse's mouth at the National Computer Shopper Show this month.

At the show, to be held in Birmingham's NEC complex, MACFORMAT will be hosting the Macintosh buying advice centre, so if you're thinking of buying a new Mac, want advice on software, or just fancy a chat, come along and see us. We even hope to have one of the new PowerMacs going through its paces, showing the PC owners at the show a thing or two about speed!

You'll also have the chance to pick up a MACFORMAT subscription at a special show price!

The National Computer Shopper Show runs from Thursday March 24 to Sunday 27, and features more than 100 exhibitors, including the country's biggest AppleCentre group, KRCS.

On the door admission is £7, but you can order advance tickets for £5 on 021 767 4343. There are special train deals available for travellers from London; ring the above number for details.

Future PUBLISHING

TECHNICAL WRITER / DISK EDITOR

MACFORMAT is looking for another member of the team dedicated to producing the best Macintosh magazine in Britain. The person we are looking for can remember the model numbers of all the current Macs, understands *why* rebuilding your Desktop can solve problems, and has a good working knowledge of a wide range of Macintosh programs.

The successful applicant will also be responsible for sourcing shareware programs and compiling the monthly cover disk, so a good knowledge of the Internet and comms would be an advantage. Extensive Macintosh experience, perhaps in technical support, is essential, as is a good clear writing style, and the ability to make complex subjects comprehensible to the rest of us. Salary commensurate with experience.

Apply to: Anne Dillow, Future Publishing, 30 Monmouth Street, Bath BA1 2BW.

Include a full CV and a 300 word article explaining what hard disk fragmentation is.

FUTURE PUBLISHING • BEAUFORD COURT • 30 MONMOUTH STREET BATH • BA1 2BW

ADOBE ILLUSTRATOR 5.0 UPGRADE
£129!
UPG 0043

LIGHTNING-FAST ZOOM 14.4 MODEM BABT APPROVED!
£199.95
MOD 0165

SYQUEST 44MB REMOVABLE CARTRIDGES
Featuring SyQuest
£49 MED 0035

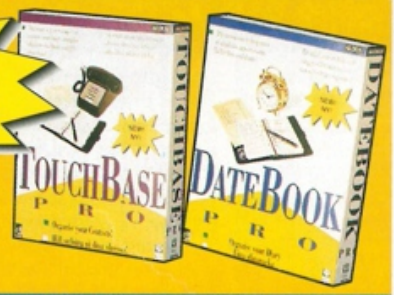
MacWAREHOUSE®

ORDER IT TODAY, USE IT TOMORROW – OVERNIGHT DELIVERY ONLY £5

MICROSOFT OFFICE
WORD, EXCEL, POWERPOINT & MAIL
LOWEST PRICE EVER! **£219.95**
EUR BND 1028

FREE!
HELLCATS
Get Microsoft Office, Write Now and FREE Hellcats all for £219.95! Call for details.

LOWEST PRICE EVER!
only **£49.95**



DATEBOOK PRO AND TOUCHBASE PRO BOTH - ONLY £49.95!
EUR ZZZ 1005

Apple CD 300 only £165

ONLY **£165**

Here's a CD-ROM drive that will give you fast, convenient and cost-effective access to the fast-growing store of information on CD-ROM discs – AND play your audio CDs too!

Ask for item No. APC INP 0014

Macintosh LC 475 4/80
with Performa 14" monitor, mouse and keyboard – APC BND 0015
Only £799!

Grolier CD-ROM ONLY **£79.95!** EDU 0393

SIMMs! as low as **£35!**

FREE! CATALOGUE SUBSCRIPTION
Mail in this coupon to receive your FREE 1-year subscription to the MacWAREHOUSE catalogue!
Mail to: MacWAREHOUSE, Queens Road, Barnet, Herts EN5 4DL or simply copy and fax to: 081 447 1696

Name _____

Address _____

Town _____ County _____ Postcode _____

ALL PRICES EXCLUDE V.A.T. **MCFAPR 7**

Overnight Delivery-Only £5.00!
0800 181 332
FAX: 081 447 1696
EXPRESS CUSTOMER SERVICE: 081 449 7113

PowerMacs: *the future arrives*

Want the latest low-down on PowerMacs? MACFORMAT has the exclusive full details.

Almost exactly ten years after its first machine brought a smiling face to the dull world of personal computing, Apple is poised to storm the nineties with a range of desktop RISC computers of unprecedented power.

The company's first three PowerMac models are being billed as nothing short of the foundation of Apple's future. Apple's confidence rests on three premises. One, PowerMacs combine significant breakthroughs in price and performance; two, they offer existing Mac and PC users smooth migration paths; and three, they deliver top-notch 'native' applications drawing directly on the custom hardware.

In terms of price and performance, the PowerMac range certainly looks a winner. For £1,500, you can now buy a 60MHz 6100 which delivers two to four times Quadra power in native mode and Quadra 700 performance under emulation. Couple this with a range of hardware upgrades for most Macs starting at £700 or so and demand could certainly begin to exceed supply.

But since any Mac owner's major investment is in software, it'll take more than raw power to convince existing users to upgrade – the key is in how effectively PowerMacs run all current Macintosh applications. As you might expect, Apple had paid a great deal of attention to this matter. Its emulator for PowerMac, System 7.1.2, is a port of System 7.1 running on the 68LC040 chip to be found in the LC475. And since few if any of the 200 leading developers readying native applications for the range have publicly declared any incompatibility problems, one can only assume the emulation is both stable and thorough. The machines MACFORMAT tested certainly performed flawlessly, even running shareware titles with no inexplicable complaints. Moreover, we found them to be faster in many respects. All file transfers are now carried by SCSI-2 architecture, and hardware calls for essential system level functions like DrawText, QuickDraw, font management, *QuickTime*, and resource and memory management now directly address RISC architecture.

These performance benefits under emulation aside though, System 7 on PowerMac is still an unknown quantity to most of the Macintosh world's 6,000 developers despite Apple's claim that applications can be converted at the rate of half a million lines of code in less than five days. While over 200 have committed to date, Apple wants to make 1995 the year in which it will concentrate on co-marketing a sustained conversion of applications to PowerMac.

Besides pitching the platform as the ideal solution for the publishing, productivity, technical and multimedia markets, the company is also targeting the education, consumer, mobile and entertainment sectors. A significant percentage of both kinds of customers are expected to be from the world of PC users, attracted by Pentium-beating horsepower, *Windows* emulation running at 486 speeds and prices that

CAN YOU UPGRADE YOUR CURRENT MAC?

Mac model	Vendor	Type	Speed	AV option
IIvi	Apple	logic board	7100/66	yes
IIvx	Apple	logic board	7100/66	yes
Performa 600	Apple	logic board	7100/66	yes
Quadra 610	Apple	logic board/PDS	6100/60	yes
Quadra 650	Apple	logic board/PDS	7100/66	yes
Quadra 660AV	Apple	logic board	6100/60	yes
Quadra 700	DayStar	PDS	7100/66	no
Quadra 800	Apple	logic board/PDS	8100/80	yes
Quadra 840AV	Apple	logic board	8100/80	yes
Quadra 900	DayStar	PDS	8100/80	no
Quadra 950	DayStar	PDS	8100/80	no

Upgrading to PowerMac should not be a problem – Apple promises a range of hardware upgrades starting at £700. Macs listed in the table (left) have already been designated as upgradable. Apple is expected to offer upgrades for the LC 475 later this year, while DayStar has indicated its intention to provide upgrades for the full Mac II family. There are no details yet concerning other Mac models.

How it works: with the addition of a processor upgrade card fitted in PDS slots, 040-based systems will run at twice the speed – eg a 25MHz system will run at 50MHz. Users will be able to switch between PowerPC and double-power Mac modes. Logic board upgrades can include optional AV technologies, but this is not possible with PDS upgrades.

■ For enquiries contact Apple on 0800 127753. For DayStar contact Merisel, 081 568 8866.

WHAT DOES IT MEAN FOR MACS?

While many readers will greet the PowerMac range with open arms, some of you may be wondering what this means for the future of the Macintosh we all know and love. Will developers continue to offer new Mac software? And will they continue to offer software upgrades to existing titles? Will parts supplies continue to be available? Will third party hardware manufacturers continue to bring new peripherals to market? In short, will the Mac be around for much longer? The answer to all these questions is yes. With ten million Macs sold, only a fool would abandon the platform. But Apple is adamant the future of the Macintosh is RISC and to that end no more Macs based on Motorola 68xxx chips will be built.

SHOULD YOU UPGRADE?

If your machine appears in the upgrade table above, you might be considering making the move to PowerMac. Bear in mind, though, that if your current machine is already faster than a Quadra 700, you'll derive no determinable performance benefits unless and until you buy native PowerMac applications. However, you may consider it worth selling your current Mac CPU and buying a cheap IIvi or IIvx CPU, which are now discontinued, so you can buy a 7100/66 logic board upgrade. This will work out cheaper than buying an off-the-shelf 7100/66. The latter may be a wise move if you're a Classic or LC owner since no upgrade paths have yet been announced for these machines. The decision, as they say, is yours.

crush the best mail order bargains. Indeed, the success of Apple's PowerMac plan is assured by the relatively low technology cost involved. In fact, there's simply no point in buying a new Mac, or upgrading an old one, unless it's a PowerMac. With prices close to £1,500 and £700 respectively, the future-proofing benefits are obvious. Existing technologies are improved by near real-time responsiveness, while new technologies like speech recognition can draw on the hardware's native power. *Andy Storer*

HANDS ON THE FIRST POWERMACS

The first thing you notice on powering up a PowerMac is that the startup sound has changed to a higher pitch. And from then on in, everything else seems to follow suit. Simple things like copying files, emptying trash, loading and saving applications really shift. Apple invited me to its HQ and left me with all three models to play the day away. I took along leading Mac applications like *Word*, *Excel*, *ClarisWorks*, *Morph* and *Premiere*, which all ran under emulation with no problems at all, enjoying Quadra-level performance enhancements. Even the odd shareware titles ran with no complaints.

But the best results were from the 'native' or accelerated applications on offer. *Painter* for PowerPC, for instance, applied filters and refreshed screens with alarming ease, while a new application, *Atlantis Render*, enabled near real-time ray-traced rendering of solid 3D geometrics. *SoftWindows*, Insignia's *Windows 3.1* emulator, flew along at speeds I'd associate with a fast 386 or 486 sx PC, while *ClarisWorks* for PowerPC ran at a blistering pace. The only disappointment was the absence of a native version of Adobe *Photoshop*, or rather one which would load. So although we're assured *Photoshop* native is all ready to roll, its absence blew any chance I had of comparing native speeds with straight Mac versions of the same software, applying time-intensive tasks to 24-bit colour images. You'll have to wait until next issue for the full-low down on that...

Just how fast do PowerMacs run System 7?

Mac	Overall Performance Rating
Classic	1
IIsi	6.21
LCIII	7.81
IIci	8.34
Quadra 610	12.74
PowerMac 6100	20.08
PowerMac 7100	21.58
Quadra 700	23.17
PowerMac 8100	24.59
Quadra 800	29.43

We ran the system performance analyser *Speedometer 3.23* on the 6100, 7100 and 8100 under System 7 emulation. As you can see from its findings, all three broadly compare to Quadra 700 performance.

POWERMACINTOSH SPECS IN FULL

PowerPC

	6100/60	7100/66	8100/80
(Casing based on	Quadra 610	Quadra 650	Quadra 800)
Processor	PowerPC 601	PowerPC 601	PowerPC 601
Speed	60MHz	66MHz	80MHz
Performance			
Native	2to 4x 040@33MHz	25% faster than 6100	2x faster than 6100
emulated	fast 030 to 040	fast 030 to 040	fast 030 to 040
RAM	8Mb standard	8Mb standard	8Mb standard
max possible	72Mb	136Mb	264Mb
SIMM slots	2	4	8
Expansion slots	1 x 7-inch NuBus	3 full-size NuBus	3 full-size NuBus
Storage			
hard disk	160Mb to 250Mb	250Mb to 500Mb	250Mb to 1Gb
floppy	1.4Mb	1.4Mb	1.4Mb
CD-ROM	optional	optional	optional
Video			
VRAM video	1Mb standard	2Mb standard	
VRAM expansion	2Mb	4Mb	
Audio	16-bit audio stereo in/out with DMA		
Networking	Ethernet onboard with DMA channel		
SCSI	high speed asynch	high speed asynch	high speed asynch + dual SCSI channels
AV option	yes	yes	yes
video in	NTSC/PAL/SECAM	NTSC/PAL/SECAM	NTSC/PAL/SECAM
video out	NTSC/PAL	NTSC/PAL	NTSC/PAL
interface	S-video/composite	S-video/composite	S-video/composite

Onboard software for all machines

System 7.1.2, AppleScript, *PC Exchange*, QuickTime, PlainTalk text to speech and speech recognition software

Optional software MS-DOS/Windows 3.1 with Insignia Solutions' *SoftWindows*

WHO'S DEVELOPING POWERMAC SOFTWARE?

So far 61 developers have publicly committed to port versions of their software to PowerMac. Here's the best of the software bunch:
Adobe, Aldus, Claris, Fractal Design, Insignia, Macromedia, Microsoft, Quark, Virtus and WordPerfect. Most are promising software within six months of the March launch, with 15 to 20 having native applications ready at launch. Most vendors look likely to release just one version of their software – dubbed 'fat binary applications' – which will run on either processor. Hardware companies signed to ship PowerMac-compatible kit include Dayna, Radius, RasterOps, Scitex and SuperMac.

Apple Talk

Reckon you could tell us a thing or two? Go ahead – you might win a T-shirt for your trouble!

Feeling unlucky? Never win any of MACFORMAT's fabulous competitions? Cheer up! Just use an unusual postcard when you enter, and even if it isn't drawn as the winner it could win you a consolation prize! Every month we'll pick out the most eye-catching postcards and award them a MACFORMAT T-shirt. This month's winners include R A Hein of Edenbridge (for a very clever image from the Canon Portfolio by artist Ian Murray, left), and M Pyke of London WC1 (below). (Yes, London streets can often seem like that, right?)

A horrendous jungle

I have to tell you that there is a horrendous jungle out there for Mac buyers. I am looking to upgrade and I find that most sales staff out in the high street and some of the main dealers just don't know what they are talking about. In fact 99% of the people I have spoken to know less than me (and I'm not fully conversant with all aspects of the Mac range). I'm sure they have lost sales simply because of lack of knowledge and expertise – and those with the information most useful to the beginner just don't want to know about the small purchaser.

It has taken me ages to sift through the data to decide what I want – now I have to find a dealer who can offer it to me at a good price. This is where some of the Apple people come into their own – they prefer to wheel and deal rather than get involved with advice and sales and back-up.

I would like to see a report showing the machines most suited to a given use, based on what an individual is actually looking for a machine to do. Unless someone wants to play with a computer, what is the point in buying an '030-chip-based machine? They are already out of date. Why should a buyer accept a machine that has *ClarisWorks 1* pre-loaded when that too is out of date?

Paul Ruck
Bushey Heath, Herts.

It's true of computers, and washing machines, and hi-fis, and dishwashers: most of the people selling 'em know very little more than the best price they can do for you. Paul wins a MACFORMAT T-shirt for making the point. We've considered doing 'buyer's guides' to Mac setups, but there are so many options and permutations, and so many potential uses that people might have in mind, we couldn't possibly cover enough of them and give you enough digestible information to base an informed choice on. It's usually a good rule of thumb to buy the fastest, most powerful system you can afford, but then if you find something that isn't the very latest or very best but does what you want at a good price... well, there's always a market for Fiestas and Metros as well as Rolls-Royces.

One small thing

We all know that Macs come in all shapes, sizes and configurations. Here is some news for you: So do humans! I am, of course, referring to your knee-length dresses – I believe you call them T-shirts. Yes, just like my Classic I am one of those 'best things that come in small packages'. So if you want one of my hard-earned tenners you will have to come up with something a bit smaller than L or XL!

On a more serious note, there is one small thing you could do to help combat the theft of our precious Macs. Why not print a list each month of serial numbers of stolen Macs? Then people looking for second-hand Macs could check the serial numbers against your list first. Obviously the list would not be comprehensive, but it could go some way to deterring thieves.

Audrey Hudson
Larkhall, Lanarkshire

*Even assuming we could get a reliable source of serial numbers, keep the list up to date and eliminate the merest possibility of typographical errors, would such a list justify the space it would take up? Our feature on security (MACFORMAT 9) suggested some ways to prevent theft, and here's another novel security measure we've just heard about: normally when you start up you get a screen that says "Welcome to Macintosh", but one company has created a startup screen that reads "This Mac has been stolen from CCM Concepts, Middlesbrough. Call the police." Now **that** would deter you, wouldn't it!*

*It's easy to do in System 7: simply create a screen in startup screen format (you can do it in **PixelPaint 2.1, SuperPaint 3.0, UltraPaint 1.1** or **Canvas 3.0**, or use **ResEdit**) – any bitmapped colour image will do, so long as it is saved out in the correct format – and save it with the name **StartupScreen** in the root directory of the System folder (ie loose). If you fear that Mac thieves are savvy enough to find it, you could always use **ResEdit** to make it invisible – it will still work. (The nearest you can get in System 6 is to use **SetStartup** to open a document with a similar message on startup, but this is much less elegant.) Thanks to CCM and Mark Smiddy for that idea.*

Oh, and I am reliably informed that knee-length MACFORMAT T-shirts are the ultimate fashion statement, so I'm sorry to hear you'll be missing out.

Can't be sure

Please help me, I think I'm cracking under the pressure! I have just been playing *A-Train* and doing rather well, even if I say so myself. I was up to the early hours of July 8th in my second year of operation (in the game, that is – I'm not *that* sad), using the new town scenario and was looking at the 'Railroad' fly-out, when my eye was caught by something moving erratically on the screen behind. *I saw a UFO in A-Train*! I can tell you that it was white and shaped like a floppy sun hat with black square dots for windows around the edge. I don't think I was abducted but I can't be sure. It certainly didn't affect anything in the game; it just flew in top left and exited middle right. Please don't tell me that the medication has stopped working... I really *did* see a UFO in *A-Train*....

Graeme Babbs
Edinburgh

*A UFO in **A-Train**? Ridiculous. Next you'll be saying there's an alien in **Sim City 2000**.*

'Drop' charts?!

Could MACFORMAT publish an article on genealogy programs for the Mac? Family history is one of the fastest growing hobbies and keeping records on a computer is ideal.

I've looked at a couple of PD programs but they hold limited records and are not that easy to use. I need something that will go back at least eight generations, cope with marriages between cousins, up to three marriages, print out pedigree and drop charts and, as a bonus, print out the whole thing as a book. I have not seen any commercial programs advertised but I'm sure there must be some out there.

Agnes J McGhee
Glasgow

*Not **the** McGhee of Glasgow? Family history must be a growing hobby: we've had a couple of requests for*

More T-shirt winners: Mark Gritten for an uncannily accurate portrait of the editor (or, if you prefer, an interactive exhibit from the 'Science for Life' exhibition at the Wellcome Centre for Medical Science, Euston Road, London), and Richard Thomson of Edinburgh for the truth behind the haggis. Remember, whenever you enter a MACFORMAT competition or send us a tip or query, you have an extra chance of winning a T-shirt, so think *weird*!

information on genealogy programs, from people who weren't even related to each other. We'd be happy to hear from anyone who's found such programs and can recommend one.

Poor soul

As one of those poor souls who haven't managed to purchase a removable 1Gb hard drive, I have very little space hanging around on my internal hard drive. My problem is this. *UnStuffit* and *Compact Pro* will not decompact individual programs from MACFORMAT cover disks. It is therefore necessary for me to copy about 1.5 to 2Mb of stuff off my hard drive just so I can look at the programs contained on the disk, many of which are of no interest anyway (although in all fairness I have to say that a great many are extremely useful). Please, please, please change back to a format that I can get at individual items in – I am sure that I'm not the only one short on space.

I do however have a couple of suggestions for items for your cover disk. As a manic card player I would recommend *Gin Rummy* to anyone, and as a slightly less manic player of arcade games (no, I don't know why it is that way round either) I would recommend *Space Junkie* and *Cyclone*. All three are shareware and well worth a look at. And on a purely personal note would it be possible to put some *Harpoon* scenarios on the disk at some point?

Guy Sansom
via CIX

Anyone else unhappy about getting 2Mb or more on the MACFORMAT cover disk? I don't know, some people are never satisfied.... But thanks for the suggestions, and thanks also to ***John Walker*** *of Leeds, who asked for genealogical programs (what, again?), "something to make these Mandelbrot and fractal type images to help while away the winter evenings, and something that would let you put notes onto a musical stave and then hear what it sounds like without needing to buy keyboards and MIDI interfaces, whatever they are."* ***Jonathan Alldis*** *of Newcastle upon Tyne asks for some more fonts, virus protection and disk tools utilities. ("Are there any shareware fonts for Roman numerals?" he asks. I thought Roman numerals were letters like MCMLXVIII, or am I missing something?) Jonathan goes on: "Utilities that defragment hard disks, utilities to improve graphic handling. On the leisure front, can we have* ***Seahaven Towers*** *please?" (You did have that on MACFORMAT cover disk 3, but that's now sold out, so if we get enough requests to repeat it that's a definite maybe.) "Also [You still there, Jonathan?] shareware about astrology, Tarot, biorhythms and astronomy, sailing, cycling, and other specialist subjects. File compression programs. How about the shareware you review each issue?" Etc etc. All duly noted. Any further cover disk suggestions gratefully received.*

Got something to say? Write to Apple Talk, MACFORMAT, 30 Monmouth St, Bath BA1 2BW.

THPELLING ERRORZ

Mr Price [MACFORMAT 9, complaining that 'The quick brown fox jumped over the lazy dog' does not include all the letters of the alphabet] will find that changing the expression to the correct one, namely 'The quick brown fox jumps over the lazy dog', will include his missing 's'.

We Scandinavians are still left with the problem of showing our peculiar æ, ø and å. Perhaps we should take a clue from Inspector Clouseau: "Yes, yes, a døg, that's what I said...".

Paal Ovrum,

Personally, I've always liked 'Pack my box with five dozen liquor jugs', or at a pinch 'Jackdaws love my big sphinx of quartz'. Any more? How about some Mac-related ones?

Cruising the keys

This month's selection of tips, keystroke shortcuts and discoveries.

Jeremy Bloomfield of Ludlow wins a MACFORMAT T-shirt for finding an interesting use for *Font/DA Mover* (remember it?) with System 7. [Option]-opening causes *everything* to appear in the dialogue box (ie not only suitcases), so you can extract odd fonts from games etc. But it goes further than that. The *Wordfinder* thesaurus DA that came with *MacWrite II* only works with System 6, until you use the above method to install it into *MacWrite*, and it then appears in the **Apple** menu only when *MacWrite* is running. The implications of this are huge – you can have a different **Apple** menu selection for every application. Jeremy says he hasn't explored it fully, but he's installed the *§uperhelp* DA into *SuperPaint*, and knows you can have a different, non-global, font menu for each application too.... Anyone know more?

■ **Richard Laing** of Colchester reminds us that when you get a system error and can't get out of it with [command] [option] [esc], you don't have to switch the power off to reset. As long as your Mac is one that can be started up from the keyboard, you can reset with [command] [control] [start button], even on Macs that lack an interrupt switch, like the Colour Classic or IIsi. Of course, you still lose unsaved data, but at least you spare the hardware the shock of switching off and on again. You don't have to move your fingers so far, either.

■ This month's token Australian presence: **Paul Bonetti** from Brisbane notes that if a dialogue box comes up asking you to insert a disk that you don't have handy, pressing [command] [full stop]) will get rid of the dialogue box and the computer will forget it even asked. It's always worth trying this key combination (it's the universal 'cancel' command) when you get one of those annoying dialogues where the only option is 'OK' and it's *not* OK – it sometimes (but not always) saves you from a fate worse than crashing.

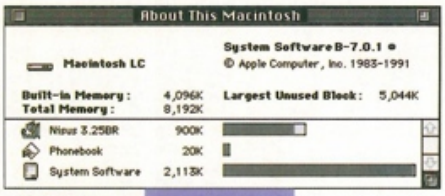
Finally, this from regular tipster **Tom Paterson** of Loughborough. (Thanks, Tom – keep 'em coming!) If you have *SuperClock* running, while in the Finder hold down the [option] key and click on the time. It disappears until you click there again. (Of course you already know you can display the date and a stopwatch by clicking on the time display.) Tom also says that if you forget your password when running At Ease on your Classic, just press the furthermost button on the right hand side of the Mac to return you to the Finder. Then go to the At Ease control panel and change the password. This is a lot simpler than having to boot up from a floppy disk. (But, kids, don't try this at home. Daddy has a *reason* for not wanting you to find the Finder....)

■ Have you found any hidden secrets? There's a MACFORMAT T-shirt for the best, and a fiver for the rest, every month!

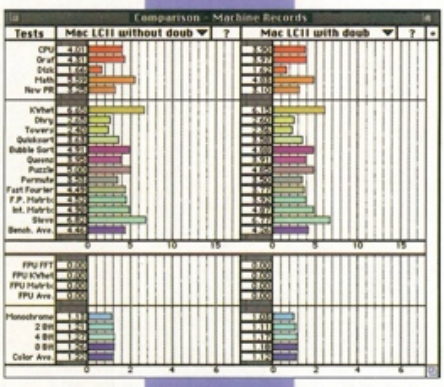
What's new?

Feast your eyes on the latest software to arrive at the MACFORMAT offices... including a RAM doubling extension and a 'software assistant'...

This has been a really great month for new Mac software, with at least three notable new programs turning up. First up is a software-only innovation which doubles your RAM. No, really! Connectix's *RAM Doubler* is here alright, and it works – what more can I say? A couple of things actually. On the one hand installation's a breeze – the *RAM Doubler* extension simply copies itself to your **System** folder, you restart and hey presto, your Mac has double its original memory. But on the other, your Mac must have a Memory Management Unit (MMU) fitted, which effectively rules out older machines based on the 68000 and 68020 chips, like the Mac Plus, SE, Mac II and original Classic, and secondly there's a marginal trade-off in performance. As you can see from the *Speedometer* test I conducted, *RAM Doubler* has had the overall effect of slowing down our office LCII by about 5%. Interestingly, graphics handling suffered the worst – down by 8.5%.



Well here it is – *RAM Doubler* in action, boosting a 4Mb LCII to the wide open spaces of 8 luuurverly Megs. So what's the catch? There just has to be one, doesn't there...



... and here it is. As you can see, the LCII with *RAM Doubler* runs slower than originally. OK, so it might only be 5% or so – in any case it's a small trade-off for double your memory.

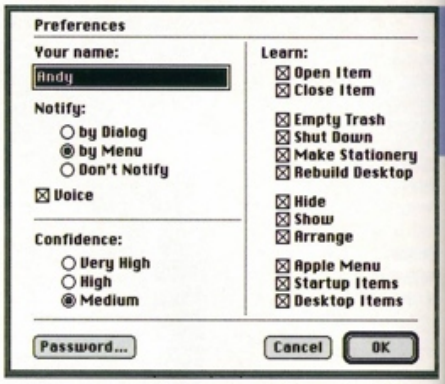
Why *RAM Doubler* registers a lower performance rating in *Speedometer* is the key to how it works – the program cons the Mac into thinking it's got double RAM via virtual memory.

Whether this is a small price to pay in return for double your precious RAM largely depends on what you use your Mac for. If you're into *QuickTIme* video or audio, for instance, you'll be disappointed. I have to confess I don't know how *RAM Doubler* works – and until Connectix's US patent clears, no-one outside the company will – but I guess it may work by emulating virtual memory in some way. I think this because when I was running the new Microsoft CDs reviewed on page 53, I got error messages telling me to turn off virtual memory before the applications would run their *QuickTime* components. I never use virtual memory – I don't fancy plodding through sludge – so I checked the Control Panel and found that it was indeed turned off. So something's definitely odd somewhere. Luckily, you can disable *RAM Doubler* before starting up by holding down the '~' key, so you can circumvent these virtual memory clashes. Meanwhile, for all other intents and purposes, it works fine; I can now use both *Photoshop* and *QuarkXPress* at the same time on an 8Mb Mac. So now I'm hoping Connectix will go one stage further and bring out *Clock Doubler* to ramp up my CPU performance to the point where they'll both run rather than crawl.

Someone's watching me

Another item on my wish list has arrived, and that's *Open Sesame!* – the Mac's first 'learning agent'. It's a software assistant which over a period of time picks up your working patterns and begins to automate them for you. At its heart is a neural learning module, lurking in the background, which observes your mouse clicks and keystrokes and attempts to form patterns of meaning, which it passes to its inference engine. This then compares incoming user event patterns with patterns for instructions that have already been automated. When one matches, *Open Sesame!* produces a set of AppleEvents to perform the automated instruction.

But no, this isn't the answer to your prayers for a Mac which anticipates your every move – it does have certain limitations. In a nutshell,



Open Sesame! is the first 'learning agent' to make it to the Mac. Here you're able to configure the range of events it'll offer to automate for you once it's learnt your habits...

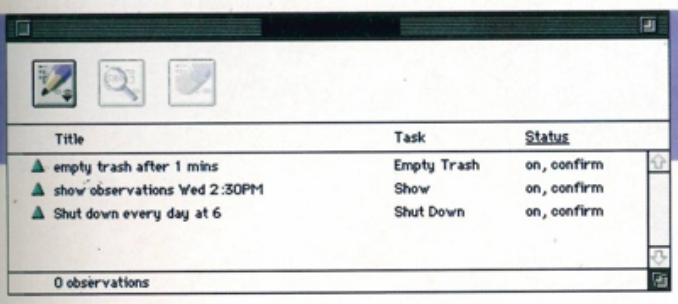
the patterns learnt are those based on time or sequences of Finder level events. So if you switch off your Mac at 5.30 every day, *Open Sesame!* will automate that, or if you regularly load up your diary on startup to catch up on your appointments, then check your e-mail, then run your word processor, *Sesame!* will present you with that too. Such repetitive, sequential events are no problem.

This is fine in as far as it goes, and I expect as *Open Sesame!* begins to learn my patterns, I'll no longer have to do tedious chores like emptying the Wastebasket myself. But what I'm after is something a little smarter, something which auto-saves my work for me, which loads up my accounts package only on days when bills are just about to go into the red, which reminds me, when I'm not busy, every day for a week that I have to buy my wife a Mac for her birthday. That kind of thing. Then our two software agents can argue out whose turn it is to do the washing up. I'll keep you posted on just how smart *Sesame!* really is – bet it's not as functional as *QuicKeys 3*, which I'll look at next month. Nice to know there's a neural network lurking somewhere in my Mac though...

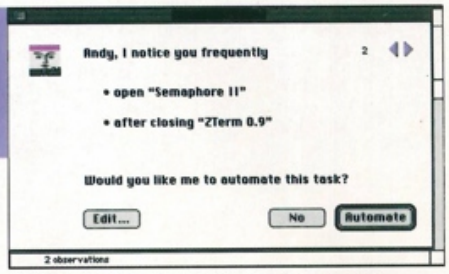
> *For any decent QuickTime quality you need to capture at 30 frames a second, and saving that to disk takes an eternity.*

The third new product which I just couldn't

While *HyperCard's* only just got round to offering full-colour support, one of its derivatives, *HyperStudio*, has provided it for a while now. What's more, it'll read the same stacks...



After only a day or two, *Open Sesame!* begins to detect patterns. Sometimes it's not always that useful – in which case you can edit out its misses. But its hits are genuinely useful – like automatically putting regularly-used programs in your Apple Menu, for instance.



This is where *Open Sesame!* gets smart – it offers to automatically load my downloads into an off-line reader.

wait to rip from its shrink-wrap was *HyperCard 2.2*. I first started using the program in 1987, back in the days when no one really had a clue how to describe it. What I liked about it then was the ease with which you could script *HyperCard* to execute commands with the merest click of a button. It made authoring interactive applications a cinch, and I always expected it to become the de facto multimedia authoring package on the Mac. Apple's lack of support may have had something to do with why this hasn't happened, or maybe it was more its lack of colour capability. I won't pre-empt Rod's review on page 34, but just say that full colour support still isn't included and I simply can't believe this remains the case after seven years. So, as coincidence would have it, I was more than pleased when a demo of *HyperStudio 3.0* turned up in the office mail bag.

Less hype, more studio

HyperStudio offers built-in support for colour, *QuickTime*, Audio CD, live video digitising and path-based animation for starters. What's more, it'll read *HyperCard* stacks, so you can convert all your old mono efforts into full colour extravaganzas. Even more interesting for budding authors is that you don't need to use any scripting language to build up stacks. When you gain confidence, though, you can dip into HyperLogo, the HyperTalk-style language for more precise control. Only pity really is the price – after years of enjoying Hyperactivity free thanks to Apple's evangelism, it turns out to be £111. Mind you, set against comparable products such as *HyperCard 2.1* at £170 and *Director 3.1* at a hefty £1,175, this doesn't seem all that unreasonable a price to pay for surprisingly good multimedia support.

On now to Mac video. When you hear that even an old heavyweight like *QuarkXPress* is to feature *QuickTime* capability in its next upgrade – due Real Soon Now, folks – you know all this video malarkey is heading somewhere permanent. I'm not sure how well sales of the recent AV Macs are going, but I, like a lot of other people I guess, will be buying an AV version of the PowerMac upgrade card when it's available in the spring. Mac AV video capabilities really aren't that bad at all. I spent what seemed like 48 straight hours on a friend's 840AV the other week and was suitably impressed by the quality of its video digitising. This is probably where the 48 hours comes in – for any decent *QuickTime* quality you need to capture at 30 frames a second, and saving that to disk takes an eternity, especially if you compress it on the fly.

Once the clips are in situ, though, the fun begins. I was using Adobe *Premiere 3.0*, which really is the bee's knees when it comes to video editing – animated titles, mattes, transitions, dissolves, audio mixing, *Photoshop* filters, the works. Since a couple or three London video post-production houses are now using *Premiere* in their 'non-linear suites', I thought I'd better check to see just how professional it was. All I can say is that it'd be worth every single penny at three times its £580 price. If I could afford it.

What's needed is a sub-£100 *QuickTime* editor – *'Premiere Lite'* perhaps – which gives us budget-conscious users just a couple of video and audio tracks, a transition track and smooth anti-aliased titling. I thought Avid's *VideoShop 2.0*, which arrived the other day, might fit the bill, but, again, it's altogether more high-end, with much the same capabilities as *Premiere*, plus the added bonus of a couple of other neat tricks like picture-in-picture and movie re-sizing. And it's £465. So I've put in an order for the £150 *QuickFlix 1.0* to look at for next issue – by all accounts it could fit the bill.

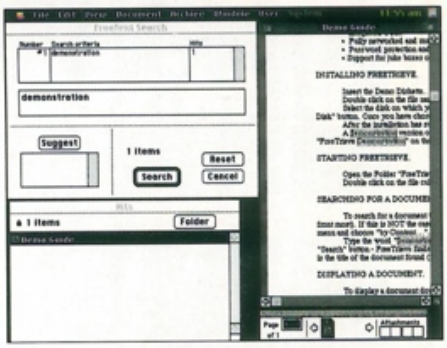
FreeTrieve will scan every storage device attached to your Mac and catalogue it for you, with thumbnails.

But as I said, digitising *QuickTime* movies takes up a horrendous amount of disk space. Typically, you're looking at overheads of at least 10Mb per second, which in turn becomes another headache as far as keeping track of the data is concerned. What's needed is an archiving application like *FreeTrieve* which'll scan every storage device attached to your Mac and catalogue it for you, with thumbnails. *FreeTrieve* goes a stage further in that it'll also read in text documents, still images and sounds, and you can annotate these with your own keyword descriptors. What's also handy is its ability to search any volume for all instances of a specific word. So if you know the words "buy her a plastic mac instead" are somewhere on your hard disk, it'll scan all the documents at 2,000 words a minute and display the exact instance of every use of those words. As you might imagine, this is incredibly useful for anyone with a lot of files and a poor memory. The package also comes with an OCR component you can use if you have a scanner. At £580 it might only appeal to users with one helluva lot of data, but then again it'll probably pay for itself in weeks.

So what do we have coming up for you next month? Well, besides *QuicKeys 3* and *VideoFlix*, I'll also be taking a look at a new clip art and sound collection, plus, if I can get hold of it, the amazing photo manipulator *Live Picture*. See you then.

Andy Storer

VideoShop 2 in action – all you need for cutting *QuickTime* movies in one easy-to-use package. Its highlights include movie resizing and picture-in-picture.



FreeTrieve scans every device attached to your Mac for any text or picture which may be residing on it in any document. Extremely useful for anyone with loads of data.

WHERE TO GET IT

FreeTrieve
£580, Adaptivity, 0494 875172. Requires Mac II and up.

HyperStudio 3
£117, TAG, 0800 591262. Any Mac.

Open Sesame!
$99, Charles River Analytics, 0101 617 491 3474.

Premiere 3
£580, Adobe, 081 547 1900. Requires 8Mb RAM.

RAM Doubler
£82, Computers Unlimited, 081 200 8282. 68030 Macs.

VideoShop 2
£465, Letraset, 071 928 3411. Requires Mac II and up.

AppleCentre Warrington

Part of the MCC Group of Companies

Telephone: 0925 444499

AppleCentre

Still going strong!!

With over twelve years experience, AppleCentre Warrington is the North West's longest standing Apple only Authorised Dealer, supplying computer systems to Education, Business and Corporate organisations.

◆ Sales ◆ Service ◆ Support
◆ Training ◆ Maintenance

244 Europa Boulevard, Gemini Business Park, Westbrook, Warrington WA5 5TN Tel: (0925) 444499 Fax: (0925) 417100

CLEARING THE DECKS

READY FOR POWER MACINTOSH

Access, Visa & American Express

HOLDENS DIRECT
0772 615512

FAX 0772 615919

AppleCentre Preston

HOLDENS COMPUTER SERVICES LIMITED
Chapel Lane, Longton
PRESTON PR4 5EB

In order to pave the way, and provide warehousing space, for the forthcoming Power Macintosh launch, we are disposing of a large quantity of obsolete, demonstration and used items. All of them represent an unequalled opportunity to obtain coveted Apple products at an extremely low price.

NEW BUNDLES COMPLETE WITH STYLEWRITER II & MICROSOFT WORKS 3.0	
Macintosh Classic 2/40	£525.00
Macintosh LC 4/40 with Performa Plus Display	£725.00
Macintosh LC II 4/40 with Performa Plus Display	£825.00
Macintosh LC II 4/80 with Performa Plus Display	£875.00
USED POWERBOOK BARGAINS	
PowerBook 100 2/20 with Floppy Disk Drive	£350.00
PowerBook 140 4/40	£450.00
PowerBook 160 4/40	£599.00
PowerBook 170 4/40	£799.00
NEW CD ROM DRIVES	
Apple PowerCD Bundle with cable	£175.00
AppleCD 300 with cable & terminator	£139.00
ORIGINAL MACINTOSH PORTABLE - ALMOST A COLLECTOR'S ITEM	
Used Macintosh Portable 2/40 with carrying case, several available	£299.00
GENUINE APPLE PORTRAIT MONITORS	
Used Apple Portrait Monitors, only	£199.00

Twelve months manufacturers' warranty on all new items, three months on used equipment but excluding batteries. All prices subject to VAT

Macintosh, PowerBook and the Apple Logo are trademarks of Apple Computer Inc. AppleCentre is a service mark of Apple Computer U.K.

Sort out your System

The System folder is the heart of your Mac. If you know what its insides actually do, you can save valuable RAM and disk space, and make your Mac run more quickly, reliably and efficiently...

What makes your Mac a Mac? The hardware, after all, is just a collection of components – chips, disk drives and so on. Although the Mac uses a different family of chips from PCs, all desktop computers from whatever manufacturer do a pretty similar job. No, it's the software that makes the Mac so different from any other personal computer. And, in particular, it's the contents of your System folder that make everything happen. The System file itself – along with other bits like the Finder, Extensions, Control Panels and so on – turns a box full of printed circuit boards into the most easy to use, powerful computer available. So isn't it a good idea to know what everything does?

In the first place, if you know you don't have to be frightened of your System folder, you'll sleep better at night; but knowing what's what is also useful because it will enable you to take more control of your own Mac. Say, for example, that you tried out *Seahaven Towers*, the shareware 'Patience'-style card game from MACFORMAT cover disk 3. You played a few games but eventually decided it wasn't for you and binned it. End of story? Not quite. You might never have realised that *Seahaven Towers* left a 'Preferences' file behind in your System folder. This file contains nothing more important than your high-score table, but it is misleadingly named 'Indexor' and there's nothing to indicate what it is, so how are you to know that you ought to trash 'Indexor' but leave, say, 'Chooser' alone? True, Indexor is probably under 10K in size, but what about all the other Preferences files floating around in there, and all those fonts, and those odd things in the Extensions folder...

In fact, if an application doesn't seem to be working as it should, or your preferred settings seem to have vanished, or you can't use some fonts you're sure you've installed, the odds are that something is not in the right place in your System folder – a Preferences file, an Extension, or perhaps the application or Accessory itself. System 7 (and upwards) tries to make life easy for you: if you drag something over the System folder that needs to go somewhere in particular, the System will very helpfully put it there for you; but just about everything can be moved by hand again.

The problem is that things can get pretty complex within the System folder. It's important not to move or delete things unless you're pretty sure that you know what you're doing. Otherwise you might find that the next time you try to start your Mac up, all you get is a blinking question mark over the top of a floppy disk icon – a sure sign that you've got problems. For this reason, over the next six pages we're going to give you an explanation of exactly what's in a 'standard' System folder – that is, one which hasn't been customised at all. That way, you'll know what you can throw away, and you'll be able to identify any items which have been added by other applications.

A tidy, well-organised System folder is vital if you want to keep your Mac running smoothly. Turn the page to begin the spring-clean...

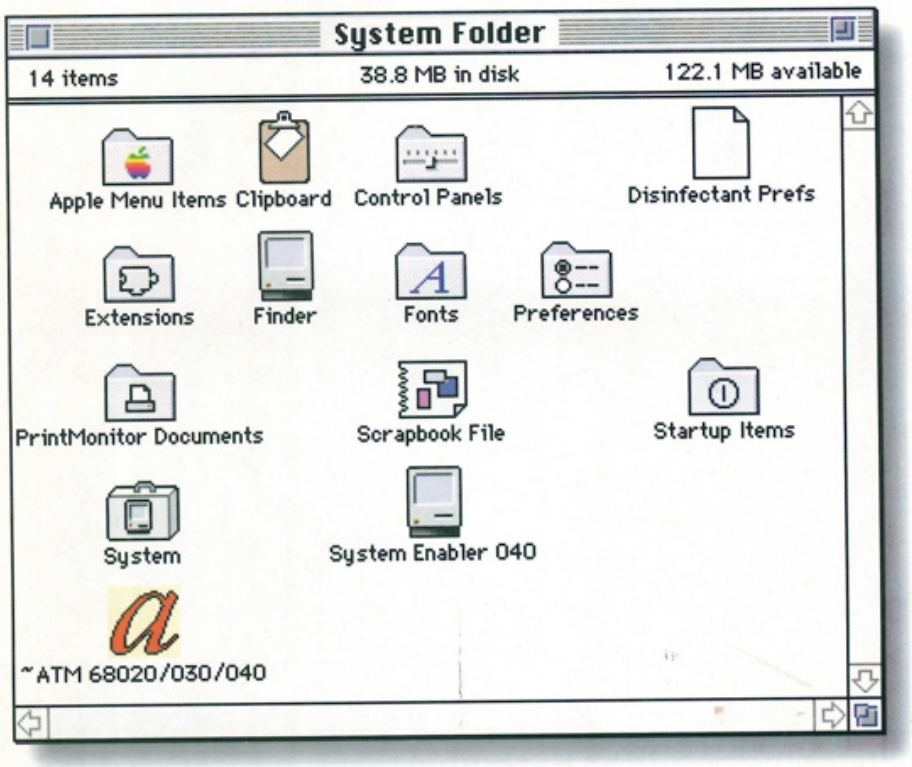
The System Folder

The System folder contains all the software needed by your Mac to start up, implement the familiar user interface and handle things like input from the keyboard and output to the screen.

The file that does most of this work is the System file. This contains the Mac's 'Operating System', and is essential to your computer's operation. Without a System file, no Mac will start up. However, there are plenty of ancillary files too, which are more or less important to the operation of the Macintosh. For instance, if you're using a Mac introduced in the last 18 months or so, you're almost certain to require a 'System Enabler' file in the System folder before the Mac will work. The System Enabler tells the System file about specific features of your computer's hardware; when System 7.1 was created, information about all the current Macs was included in the System file, but since then plenty of new models have appeared, and rather than produce a new release of System software every time (something which happened with System 6 and even with System 7.0), Apple decided that the best thing to do was simply to produce a new System Enabler for each new model. Not that things have been made easy for us; each Enabler is known by a three-figure code, so you have to know that you need System Enabler 666 for your Mac IIIqz, rather than an Enabler called, say, System Enabler IIIqz. But then, that's Apple for you...

The next most important file is the Finder. After the System file has loaded, and has initialised all the Extensions and Control Panels (about which more later), it loads the Finder. Interestingly, the Finder is just like any other Application that the Mac can run – except that it doesn't have a **Quit** menu item, which means it's running in the background all the time. The Finder handles things like drawing the Desktop on the screen, displaying folders and files, allowing you to launch applications, copy items and so on. Third-party developers could create their own versions of the Finder (and people did just that in the early days of the Mac), but the amount of work required to create anything as sophisticated as System 7's Finder – and the fact that Apple's version is so easy to use in the first place – means that no-one has done this. (Except, in fact, Apple itself – see the boxout about At Ease opposite.)

Within the System folder you'll also find



Apple Menu Items

Any object placed in this folder will appear under the **Apple** menu (at the far left of the standard menu bar, whenever it is showing). This can be a file, an application, a folder, a volume... in fact, anything at all, up to a maximum of 51 items in all. (Or possibly 53. Whatever, it's certainly better than System 6's maximum of 15.) It can also be an Alias to any object – read on for why you might want to do this. When you select the object's name from the **Apple** menu, it behaves just as if it has been double-clicked. So, for example, an application will launch, a file will attempt to open into the application that created it, and a folder will open a window of its contents on the screen.

This is where Aliases come in handy. Normally, you don't want to move applications out of their normal folders – and you certainly wouldn't want to put an entire folder into the Apple Menu Items folder. So instead you can put an Alias of the object into the folder; when you select it from the **Apple** menu, it's just like double-clicking the Alias, and that in turn is like double-clicking the object that the Alias points to.

Apple uses this Alias mechanism itself; there's an Alias of the Control Panels folder in the Apple Menu Items folder, so selecting this opens the original Control Panels folder – which lives inside the main System folder. *See also p 32.*

Clipboard

Whenever you **Cut** or **Copy**, the Mac saves the object that you've just performed the operation on in memory as the Clipboard. However, when you swap applications or quit one to launch another, the Mac needs to save the Clipboard contents to disk so that they're not lost. This file contains those contents.

Control Panels

This folder contains all the Control Panels that have been installed. Control Panels are double-clickable objects that allow you to alter settings of some description. For instance, you can alter things like the date, time and Desktop pattern from the General Control Panel, change the number of colours displayed on your screen from the Monitors Control Panel and so on – experiment to see what effect your changes have; you can't damage anything, and you can always change back to the original settings. Many third-party utilities, such as *SuperClock!*, come in the form of Control Panels, too. In general, you shouldn't remove any of the Control Panels that came with your Mac (except perhaps for Map, and Easy Access, which is designed for users with disabilities) – they don't take up much disk space, and you need them to control your Mac's settings. If you add any yourself (*ATM* has a Control Panel as well), you should know whether they're worth it to you! *See also p 31.*

Disinfectant Prefs

See 'Preferences'

Extensions

Extensions can be thought of as 'bolt-ons' to the System – they enable the System to do extra things that it wouldn't ordinarily be able to do, often in connection with external devices. For example, you may have a specific Extension to handle the kind of network that your Mac is connected to, or one which tells the Mac how to use a certain kind of printer (the basic System can't talk to printers; it needs Extensions to tell it how to do so). *See also p 30.*

Finder

The Finder is an application, just like any other, which handles things like drawing the Desktop on the screen, displaying folders and files, allowing you to launch applications and so on. It normally runs all the time, since there's no **Quit** item in the **File** menu; although it's possible

AT EASE, THE REPLACEABLE REPLACEMENT

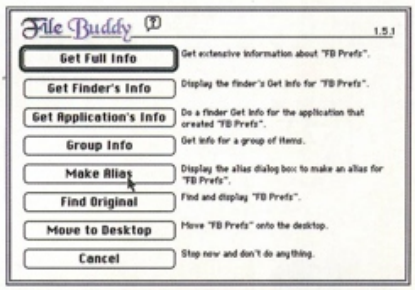
At Ease is Apple's 'easy to use' replacement for the Finder, standard with many Mac Performas. It only allows very basic access to applications and folders, and prohibits the novice user from moving or deleting anything which might be important – such as any of the System folder's contents. However, if you're currently using At Ease in your day-to-day Mac use, you should seriously consider changing to the Finder. At Ease is fine if, for example, you have young children using the Mac, but if you want to access the real power of your computer, sooner or later you'll need full control of it – and for that, At Ease just won't do.

If At Ease is set up to load as the default, use your password to go to the Finder and then select **At Ease Setup** from the **Control Panels** in the **Apple** menu. Click in the **Off** button and your Mac will from then on start up with Finder instead. (Then, if you like, you can trash At Ease itself, the At Ease Items folder, the At Ease Setup control panel in the Control Panels folder, and (not forgetting) the At Ease Preferences file in the Preferences folder – all of which will save you a good few hundred K of disk space for a start.)

File Buddy

One utility which is extremely helpful for keeping your Mac tidy is a piece of shareware called *File Buddy*. This application enables you to scan for unused Aliases (that is, Aliases where the original item has since been deleted) and Preferences files, as well as a wide range of other housekeeping functions. Indeed, since it enables you to inspect and alter file types and creators (as well as whether a file is invisible, inited and has a bundle!), many people will find that they use *File Buddy* in preference to *ResEdit*.

File Buddy is shareware; we gave a copy away on MACFORMAT cover disk 7 in December – for details of how to order back issues, turn to page 94.



File Buddy is an easy-to-use housekeeping aid – a bit like an electronic feather-duster. Only more informative.

plenty of other files and folders; and over the next few pages we'll explain just what they all do. The files that we tell you about are those that are created when you do a standard installation of System 7.1, but you should realise that there are plenty of third-party products that can also be added. These range from Control Panels like the indispensable *SuperClock!*, which puts a digital display of the time and date on the right-hand side of your menu bar, to things like specialist network support Extensions (see page 30), and less useful items such as an Extension which turns the names of all buttons, check-boxes and the like to 'Bubba' – just to make using an application that bit harder. However, all of these third-party products are things that you have to install yourself, and don't come with the Mac as standard. And if you've installed them, you should have a good idea of what they do already... don't you?

An important note: if you're using *ResEdit* (or even *FileBuddy*) you may discover that there are some files in your System folder that are normally invisible. Be warned! These are hidden for a reason – usually they are so vital that they are hidden in order to prevent you deleting them or altering them. Don't tamper with invisible files unless you are absolutely sure of what you're doing, and always, *always* make sure you have a backup before you begin!

to force the Finder to quit, there really is no reason why you should want to do so.

Fonts

In System 7.1 this folder contains all the screen and printer fonts that the Mac can use. Do note, though, that if you've upgraded from an earlier version of the System to version 7.1, some printer fonts may have been left in the Extensions folder, and some screen fonts may still be in the System file itself (double-click on the System file to see them, and drag them to the Fonts folder). Note also that earlier versions of *Adobe Type Manager (ATM)* require printer fonts to be placed in the Extensions folder in order to work properly. As long as the screen fonts are in the Fonts folder, printer fonts can be in either the Fonts or Extensions folders. For Systems before 7.1, see page 33. It's possible that you may encounter some problems if you have more than 128 different items in the Fonts folder. *See also p 32.*

Preferences

Many applications need to keep a record of user-created settings; for instance, your word processor may need to keep track of which font you want it to use as the default, and so on. When System 7 came along, Apple created the Preferences folder for applications to store such files, rather than having them lying about loose in the System folder, as was previously the case. However, do note that some older applications do create their Preferences files loose in the System folder (like Disinfectant Prefs here, from an older version of the invaluable anti-virus utility) – and if this is the case, you shouldn't move the file to the Preferences folder, since if you do the application won't be able to find it. In general, however, if you delete a Preferences file all that will happen is that you'll lose your customised settings – in most cases an application will just revert to its default settings and create a new Preferences file for itself. *See also p 32.*

PrintMonitor Documents

If you have **Background Printing** switched on from the **Chooser**, then the PrintMonitor program, which controls this process, needs somewhere to store its files temporarily as it processes them. It uses this folder for the purpose. If PrintMonitor has spooled a document for printing, the document's icon in this folder will have cross-hairs over it to indicate that it can't be manipulated and will be deleted automatically. If only the Finder is running, the folder should be empty, but don't delete it!

Scrapbook File

The Scrapbook is a Desk Accessory accessible from the **Apple** menu, where you can store frequently-used text, illustrations, sounds and so on. This file contains the Scrapbook's contents, although the only way that you can access them is from the Scrapbook DA.

Startup Items

After the Finder has loaded, it looks in this folder and launches anything which it contains. That is, in effect it double-clicks each item, so if, for example, you have a window which you always want to be front-most when you start up your Mac, put an Alias of that folder in the Startup Items folder. Or you could put a sound in the Startup Items folder and, since double-clicking a sound plays it, it will be broadcast each time the Mac starts up. More conventionally, you could put an Alias of something like a to-do list manager in this folder so that it's launched every time you switch on.

System

This file is at the heart of the Mac's operation – move it and you won't be able to start up. Under System 7.0 and above, the System file acts like a folder – if you double-click it, you'll be able to see its contents. Normally, the only items you'll be able to see are sounds and keyboard layouts (which tell the System what country you're in and therefore which keys on the keyboard correspond to which characters). However, you may also find fonts there – if so, under System 7.1 it's perfectly OK to move them to the Fonts folder.

System Enabler

System Enablers are a technology introduced in System 7.1 to avoid Apple having to produce a new full release of System software each time a new model of Mac is introduced. New Macs each require their own System Enablers, and won't start up unless they're present, loose, in the System folder.

ATM

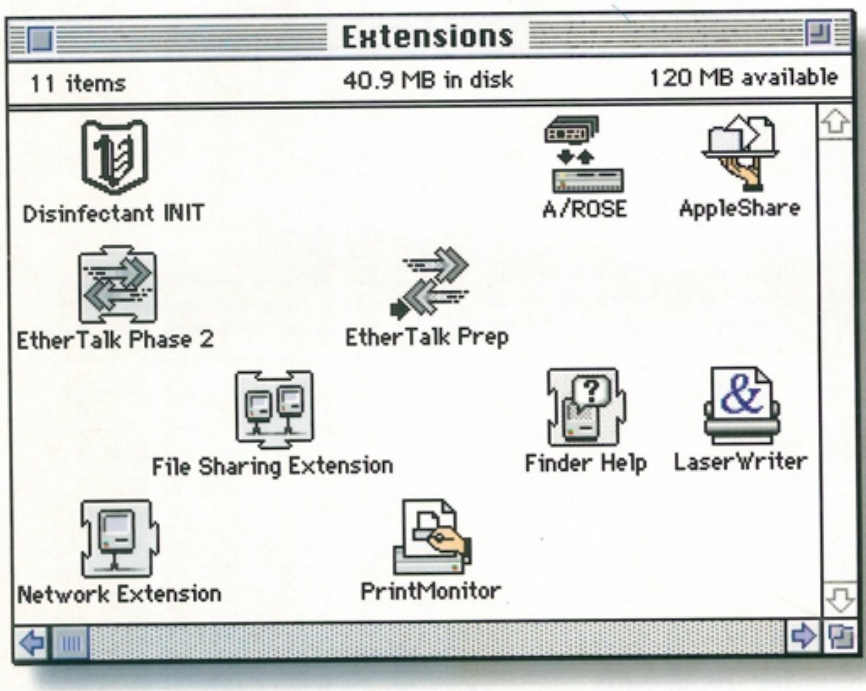
ATM stands for *Adobe Type Manager*, which is a program which 'renders' PostScript Type 1 fonts so that they appear smooth on the screen. It's not part of the standard System software, but if you have it, you'll find that it comes in two parts. One is a Control Panel, the other is this file, which must sit loose in the System Folder in order to work.

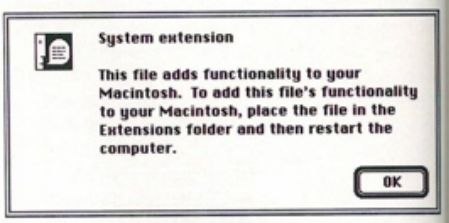
The Extensions Folder

Extensions are System 'bolt-ons' that load into RAM at startup along with the System. That is, whether they are in use at any given moment or not, they are sitting in the part of memory used for actually *doing* things, along with the System and the Finder (which have to be there because they're keeping the Mac 'alive'). This means that there's correspondingly less memory available for you to run applications in, open documents, and so forth. (To find out just how much the System Software as a whole, including Extensions, is taking up – and how much this leaves you to run anything else – select **About This Macintosh** in the **Apple** menu at the Desktop.) Devoting memory to Extensions is fine if you're going to be calling on their services – they'll be ready and waiting, say to print out a document or share it with others on a network – but if not, they are all expendable.

Extensions load into memory in alphabetical order. You can change the order of loading simply by renaming them, but it isn't always a wise idea to do so, because some Extensions need to load before others – if you have *Disinfectant* for example, it ought to load first in order to scan everything else for viruses. (But, you say, it starts with a 'D', so how can it load before 'AppleShare'? Because its name actually begins with an invisible special character which is sorted before 'A'. If you really want to cause some mischief, there are no fewer than 94 of these special characters – and numbers come next, then capital letters, then the lower case letters. If you really want to know more, write in to MACFORMAT and ask!)

It is always a good idea to use as few Extensions as possible – only the ones you really need – for two reasons: first, they can very quickly consume huge amounts of RAM if you're not careful (each fills from 2K to as much as 200K), leaving that much less for your actual applications to run in; and second, the more Extensions you load the greater the risk of conflicts with applications or between Extensions themselves. You can use various shareware or commercial utilities (such as *Extensions Manager*, *InitPicker* or *Conflict Catcher*) to identify or avoid such clashes, but the simpler approach is surely just to minimise the risk.





Double-click on a sound and it plays. Double-click on a font and it is displayed in a window on-screen. Double-click on an Extension and you get this box. At least it's informative...

Disinfectant INIT

This is a third-party Extension which checks for viruses every time you run an application. It's well worth using, it's free, and the new version 3.3 was on MACFORMAT cover disk 10 last month. (If you missed that issue, turn to page 94.)

A/ROSE

This stands for Apple Real-time Operating System Extension, and it won't be needed by most people. It enables your Mac to communicate with any Mac Coprocessor Platform-based NuBus cards. In English, this means cards such as Apple's latest Ethernet NuBus cards, TokenRing cards and some other networking NuBus devices. If you're not using such a card (most people aren't), you can throw away the file with no problems.

AppleShare

This is a Chooser Extension – it appears in the **Chooser**, which is accessible from the **Apple** menu. It enables you to log on to AppleShare file servers and Macs running System 7 Personal File Sharing. If your Mac isn't connected to a network, you won't need this file.

EtherTalk

(EtherTalk Phase 2 and EtherTalk Prep) These two Extensions are required if your Mac is connected to an Ethernet network. Otherwise, they can be junked with no problems.

File Sharing Extension

This Extension enables System 7's Personal File Sharing – it allows you to share files and folders with other people on your network. The actual control of this process is via a couple of Control Panels, but the Extension is needed to do the actual work behind the scenes.

Finder Help

This file is used by the Balloon Help system to display Balloon Help messages in the Finder. Although it's not, strictly speaking, an Extension, it must be located in the Extensions folder. If you know your way around and never need Balloon Help, it can go.

LaserWriter

This is a Chooser Extension, and it enables you to select a network laser printer on which to output your work. It tells the System how to send information to the laser printer; different printers have their own Extensions, which must be located in the Extensions folder if you're going to use them for output. You only need the Extensions for the printer or printers you use; any others are just taking up space.

Network Extension

This Extension tells the System how to use any network that you're connected to. If you're going to print to a network printer such as a LaserWriter, share files using Personal File Sharing or AppleShare, or do anything else on a network, this Extension must be present.

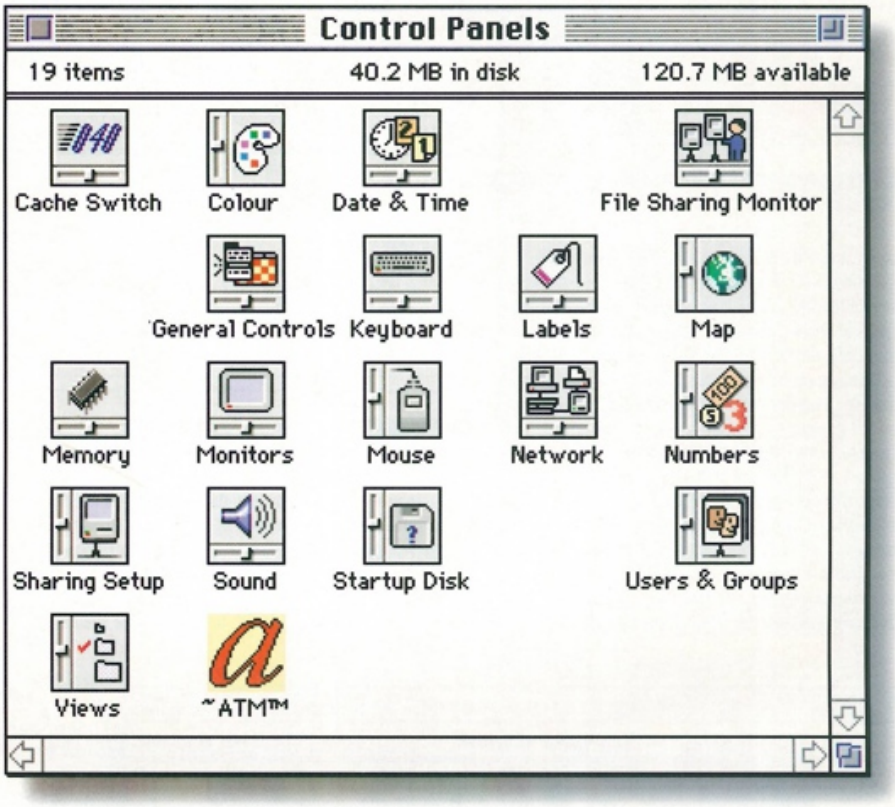
PrintMonitor

PrintMonitor is an application which controls background printing. Although it's actually an application not an Extension, it must be in the Extensions folder to work.

In System 7.0, printer fonts will also live in the Extensions folder. In System 6, there was no separate Extensions folder – see page 33.

The Control Panels Folder

One of the great things that made the Mac such a favourite for the last ten years is the ease with which you can customise it to suit yourself, and with System 7 Apple made the whole process as easy as point-and-click. You just select **Control Panels** from the **Apple** menu (at any time, even when an application is running), double-click on the appropriate Control Panel, and you can change a whole range of settings including the pattern on your Desktop, the number of colours displayed (sometimes handy for forcing the screen to redraw if some software glitch has 'frozen' the image), and all the others detailed below. Control Panels are not for throwing away – you *want* all that power!



Cache Switch

If you're using a 68040-chip-based Mac such as the Quadra family, this Control Panel enables you to turn on and off the processor's 'caches'. These are internal parts of the central processing unit which could cause compatibility problems with older applications; if an application won't run on your Quadra, try turning the caches off and seeing if that solves the problem.

Colour

This Control Panel enables you to select the colour which is used whenever you highlight an object such as text or an image in any application.

Date & Time

Enables you to set the default format for dates and times – different countries use different formats. For example, the 14th of February 1994 is written 14/2/94 in the UK, but 2/14/94 in the United States.

File Sharing Monitor

If you have File Sharing switched on, this Control Panel displays who's connected, and how much work your Mac is having to do in order to cope with their requests.

General Controls

This Control Panel enables you to set things such as the time and date, Desktop background colour, how fast the cursor blinks and so on.

Keyboard

Using this, you can switch between different keyboard layouts. For instance, [shift]-3 on a United States keyboard gives the '#' sign, while in the UK it's a '£'. And in France, the keyboard's top row of letters are 'AZERTY', not 'QWERTY'.

Labels

From here you can customise the colour and text of the labels which you can give to any icon, by highlighting it and using the Finder's **Label** menu.

Map

OK, we said not to throw Control Panels away, but this one isn't particularly useful; it will tell you the distance between two cities in the world and the time difference between them. Here's a tip, though: open the **Scrapbook** from the **Apple** menu, find the colour map, **Copy** it, open the Map Control Panel and select **Paste.** Hey presto: your map's in colour!

Memory

Here you can set the RAM cache – how much of your System's memory is used to try to speed up hard drive access – as well as things like whether or not you have Virtual Memory and 32-bit addressing selected. On PowerBooks, it's here that you can create a RAM disk.

Monitors

Choose how many colours your monitor displays (and one or two other options) from this Control Panel. The fewer colours, the faster the screen update.

Mouse

Here you can decide how fast your mouse moves the cursor across the screen, and how fast you have to press the mouse button for a double-click.

Network

From here, you select which network you'll be using. For most people, this will simply default to AppleTalk, but if you're connected to Ethernet then you'll have to use this Control Panel to choose EtherTalk.

Numbers

This controls the default formatting of numbers – whether those before and after the decimal point should be separated by a full-point or a comma, for instance.

Sharing Setup

To use System 7's Personal File Sharing, you need to give your Mac a name and tell it your own name. Here's where you do it. This Control Panel also determines whether or not Personal File Sharing is switched on in the first place.

Sound

Here's where you choose what sound to use as the 'beep' your Mac uses to signify that something's wrong. If you have a Mac with a microphone, you can record your own sounds from this Control Panel – but beware: recorded sounds can consume a lot of disk space.

Startup Disk

If you have more than one hard drive connected to your Mac which you can use to boot up from, Startup Disk tells your Mac which one you'd prefer to use.

Users & Groups

To use Personal File Sharing, you need to tell the Mac about which people in your network might want to connect to your Macintosh. This is where you do it.

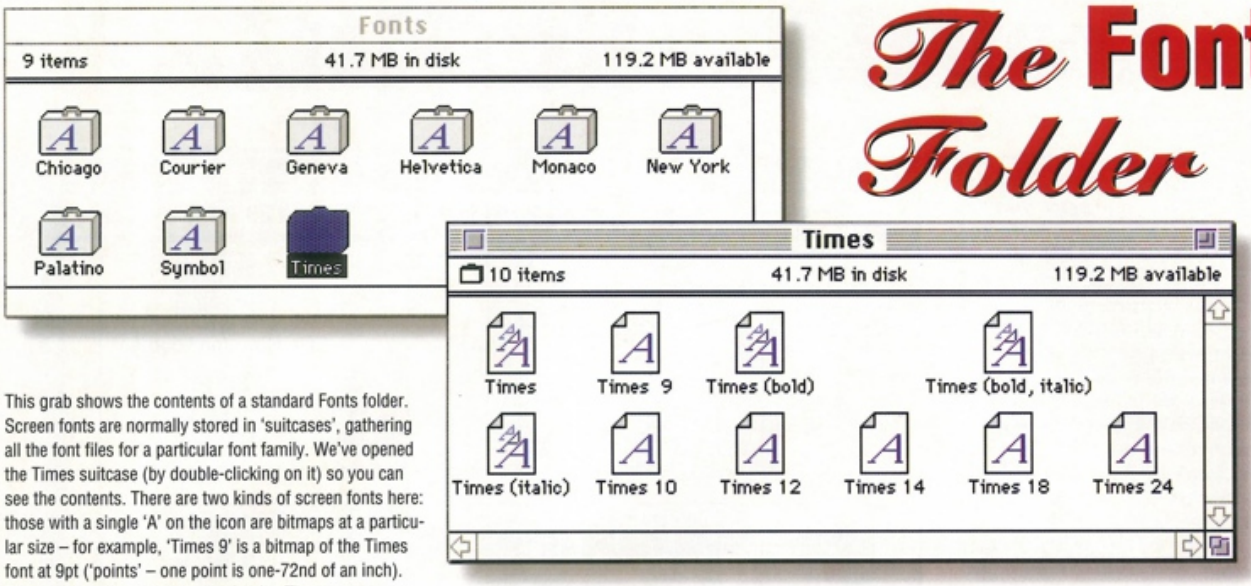
Views

This Control Panel enables you to customise the way the Finder displays things when you open windows. Changing the font can be fun, but it gives your Mac more work to do and will slow down the Finder's display.

ATM

This is the Control Panel section of *Adobe Type Manager*, which displays PostScript fonts smoothly on the screen. It's a third-party product, not shipped with the Mac as standard. Other programs may add their own Control Panels too.

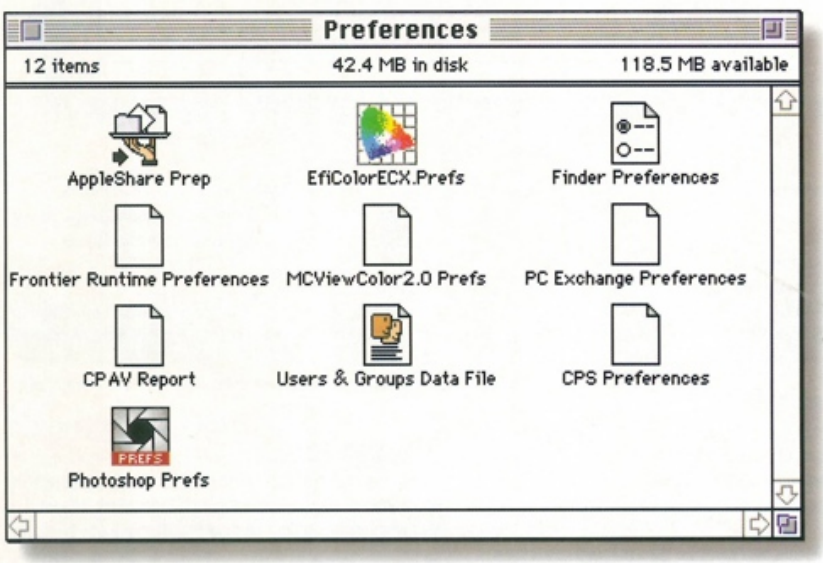
The Fonts Folder



This grab shows the contents of a standard Fonts folder. Screen fonts are normally stored in 'suitcases', gathering all the font files for a particular font family. We've opened the Times suitcase (by double-clicking on it) so you can see the contents. There are two kinds of screen fonts here: those with a single 'A' on the icon are bitmaps at a particular size – for example, 'Times 9' is a bitmap of the Times font at 9pt ('points' – one point is one-72nd of an inch). This enables the System to display 9pt Times on-screen very quickly, but it will look rather jagged if it's enlarged. The fonts with several 'A's on the icon are TrueType fonts, which look smooth at any size. Double-clicking on a font file will bring up a window with a sample of the font.

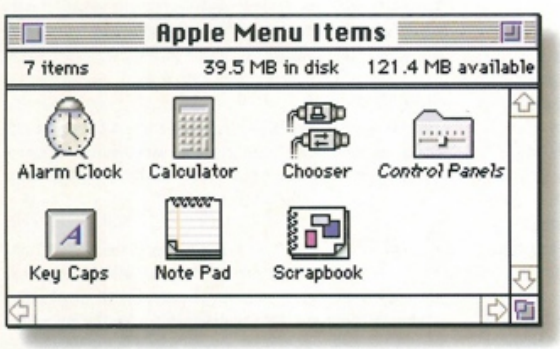
If we had any PostScript fonts installed, the printer font would also be in the Fonts folder. (If you select **by Name** or **by Kind** from the **View** menu, you'll see these have 'System Extension' as their Kind. They don't need to live in suitcases.) If you're using an old version of *Adobe Type Manager* (*ATM*), you may find that you need to place the printer font in the Extensions folder for *ATM* to work. This is OK – printer fonts can be in either folder, although screen fonts must be either in the Fonts folder or installed directly into the System.

The Preferences Folder



This is an example of a Preferences folder from a Mac which has various different applications running on it. Each application has created a Preferences file, which stores user settings, and has stored that file in the Preferences folder. If you delete an application from your Mac, check in the Preferences folder to see if it has saved a file there, and you can get rid of this file too. Most applications give their Preferences files sensible names, but some don't – like *Seahaven Towers*, for instance – so you may need to use *FileBuddy* (see page 29) to find which application created a Prefs file.

The Apple Menu Items Folder



Anything in this folder will appear under the **Apple** menu. Notice the Alias of the Control Panels folder (you can tell it's an Alias because the name is in italics) – when this is selected, the real Control Panels folder will open. The Chooser, which appears here, enables you to connect to other Macs on the network or to choose which printer you'll be using. The others are handy utilities called Desk Accessories.

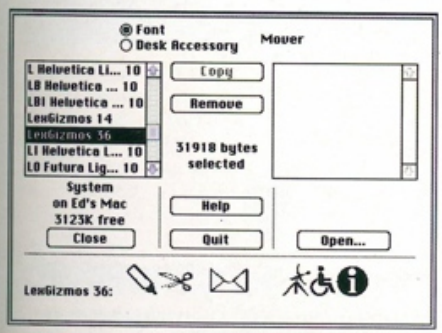
A minimum System

It's a good idea to have a 'minimum System floppy', so that even if something goes wrong with the System on your hard drive you can start your Mac up (and it's vital to have a backup if you're going to start seriously fiddling with the contents of your System folder). The absolute minimum requirements are the System file and the Finder, plus (under System 7.1) any System Enablers required by your particular model of Mac. If you find that not all of this fits on a disk, you might want to try removing any sounds from a copy of the System file by double-clicking on it and dragging the sounds to the Wastebasket. The same goes for fonts if you have a System before 7.1, where fonts are stored in the System suitcase. This may give you enough room to squash everything on to the floppy. (The fonts needed by the Finder to display windows – normally Chicago 12 and Geneva 9, 12 and 9 italic – are usually invisible anyway, so you can't delete them.) If you have a set of System disks, you should find that the Disk Tools disk is a minimum startup disk – to check, try inserting the floppy and restarting your Mac. (The Mac will look on the floppy for a valid System before it looks on the hard disk; if it doesn't find one on the floppy, it will just eject the disk.) Performas, however, don't come with a set of System disks as standard, so you'll have to create your own by copying the Finder and System from your hard drive on to a floppy.

System 6 *and* 7.0 *Vs* 7.1

The information on the preceding pages has focussed specifically on System 7.1, since that's the System version that is shipped with all new Macs, and that's the version that Apple recommends people should be running if their Macs can cope with the memory requirements. However, System 7.0 is very similar, and even System 6 isn't too different.

Taking 7.0 first, the only real difference as far as the System folder is concerned is that there are a couple of extra Control Panels in 7.1, dealing with things like the default format of the date and time, and the fact that System 7.0 didn't have a Fonts folder. Instead, printer fonts go in the Extensions folder, and screen fonts (and TrueType fonts) should be placed into the System file itself – as mentioned elsewhere, the System file acts like a folder, so fonts can be dragged on to the file and they will automatically be placed inside it. There are also no System Enablers for System 7.0 – new Macs just can't run this version of the System, and have to use 7.1. In practice, though, if you're running System 7.0 or 7.0.1 (the only difference is that the 7.0.1 version supports a couple of Macs that 7.0 doesn't), there's not a great deal of point in upgrading to 7.1.



Font/DA Mover wasn't all bad – you got a nice display of the font you were moving. But you couldn't move one without it!

System 6 is somewhat different. The first thing that you'll notice if you use a System 6 Mac is that there are no neat sub-folders to separate things like Extensions (which were known as INITs in System 6) and Control Panels (or cdevs in System 6). Instead, everything is loose in the System folder. Control Panels aren't accessible by double-clicking on them; rather, you have to select **Control Panels** from the **Apple** menu, whereupon a special Control Panels dialogue box appears.

And that brings us on to the **Apple** menu itself. Under System 6, the only objects that can be installed in the **Apple** menu are Desk Accessories, commonly known as DAs. These are special mini-applications, and a maximum of 15 can be installed at any one time. They are installed straight into the System file using a horrendous piece of software known as *Font/DA Mover*. This monstrosity (illustrated at left) was the bane of the Mac user's life until Apple did away with it in System 7; if you're using a System 6 machine, be sure to read your manual very carefully before trying to use the program, since it's very easy to mess things up.

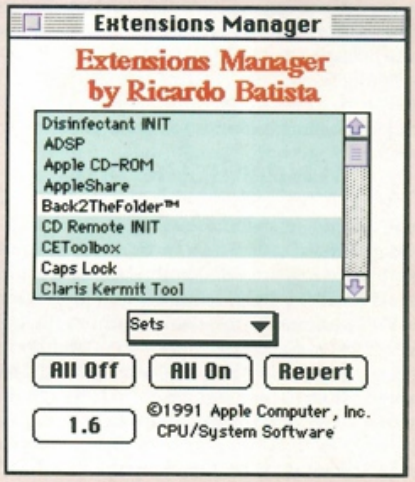
As you may have surmised by its name, *Font/DA Mover* is also used to install fonts into System 6. Printer fonts are just dropped loose into the System folder, but all screen fonts must be installed using *Font/DA Mover*, directly into the System file. And if you want to use TrueType fonts, you must make sure that you have the Apple TrueType INIT which makes this possible. System 7 needs more memory to run, and 7.1 still more, but it certainly makes life easier!

Paul Beery, Tim Smith & Alex Summersby

Tips to a tidy Mac

■ Make sure that you have a backup of the System disks that came with your Macintosh. That way, if your System folder gets corrupted you can always re-install it. (If your Performa came without System disks, ask your dealer for some, or else make your own as detailed in the box headed 'A minimum System' just to the left on this page.)

■ Don't overdose on bells and whistles. There is tons of shareware and freeware for the Mac, but you'll find that you install much of it and never use it again. If that's the case, trash it! Every Extension that loads at startup time uses up precious RAM, and can slow down your machine.



If you've overdone the Extensions and find that they're causing odd behaviour (as they might!), you can use programs like this to manage them. Or dump some...

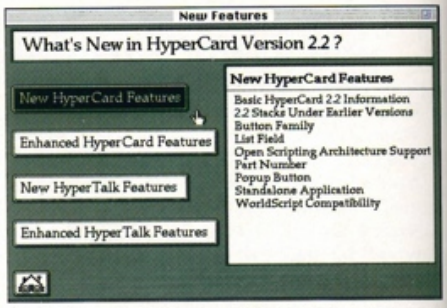
■ If you're running short on disk space, check your System folder and throw out anything that you're sure you don't need. For instance, if you're using your Mac at home, you won't need things like AppleShare and all the file sharing extensions – and if you do need them in the future, you've always got backups on your System disks.

■ If you're not sure what an Extension does, try turning on Balloon Help and pointing to it – a few Extensions and Control Panels will print up a short description of their purpose in the balloon. Also try **Get Info** ([command] I).

■ Have a periodic trawl of your System folder and get rid of any unused Preferences or whatever. They all take up precious disk space – and even if you delete a Preferences file from an application that you still have, the worst that can happen is that the application will default to its standard settings, rather than your customised ones.

HyperCard 2.2

A brand new version of the most versatile program in the world... but does it deliver all it promised?



Want to know what's bigger and better in the new *HyperCard*? It can tell you that itself, using its own stacks.

It's hard to imagine what *HyperCard* started out as, and even harder to describe what it is now – a multimedia information-handling application? A 'software engineering' package? At heart, it's a powerful object-based programming language, and the new version promised much. At last *HyperCard* was going to get colour, plus support for animation, for QuickTime movies, and for Apple's much-vaunted AppleScript inter-application scripting language... and at long, *long* last the ability to turn stacks into stand-alone applications. It almost sounds too good to be true...

What's in the box?

You get no less than *eleven* disks, and two of them contain *ADDMotion*, a third-party add-on stack. The rest are filled with *HyperCard 2.2* and all its ancillary, help, reference and tools stacks.

The automated installation procedure helpfully sneaks a look at your System and decides what you need, so for installation on a IIsi running System 7, for example, you'll need to clear about 10Mb of hard disk space before you start (yes, the stuff is compacted too); a Classic running System 6 needs little more than 5Mb.

This is all fine and dandy for owners of old and feeble machines. What your Mac can't use, the installer won't install. Unfortunately, this includes the AppleScript reference stack.

As it turns out, many of the stacks provided with *HyperCard 2.2* are not even mentioned in the manual – they contain their own documentation, true, but it's not quite the same. You get the feeling that much of this bundle has been lashed up around the 'core' product.

However, *Hypercard 2.2* does come with three manuals. One covers *ADDMotion*, while the other two cover *HyperCard 2.2* itself – a guide introducing *HyperCard* for new users and a HyperTalk reference, the indispensable companion for anyone who wants to program *HyperCard*. There are also a couple of booklets – one listing lots of current *HyperCard* add-ons, one introducing AppleScript and quoting a current list of AppleScript-compliant applications.

A word of warning here. The *HyperCard*/HyperTalk documentation is a model of clarity. The printed AppleScript documentation is brief, vague and very general. You certainly won't be able to sit down and start scripting your Finder, even though there is on-disk documentation for this. Given that AppleScript is the Next Big Thing, it's disappointing to have to play the detective to find any useful references to it and then embark on a long, investigative trail to find out what it can do.

What's new?

Colour support

Since *v2.0*, *HyperCard* has been able to display coloured PICTs in a separate layer, but not as part of the card. *HyperCard 2.2* comes with a stack containing colouring tools to soup the whole thing up a bit. But if you're expecting a 24-bit paint package, think again...

What you get is a pretty crude, clunky and slow system for 'colourising' existing and new objects. *HyperCard* is less like colour photography, more like hand-tinted mono. You can import coloured PICTs on to cards, but you can't edit them with the *HyperCard* paint tools. Third-party *HyperCard* colouring kits have been around for a while, and this one looks nothing new. But it is free...

Once the colour tools stack has been installed, a 'switch' on the Home card toggles the tools on and off. Buttons and fields can be coloured, and you can draw simple coloured rectangles. Anything more complex than that,

ADDMotion II

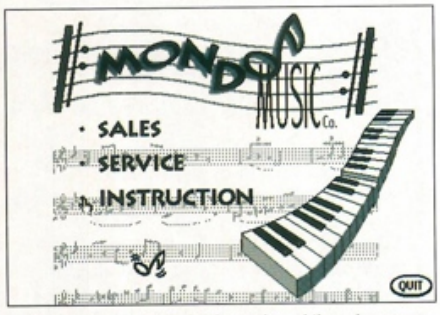
There's no mention of *ADDMotion* in the main *HyperCard* documentation, but it comes on two disks provided with the main package, and there's also a shrink-wrapped manual.

You soon find out that *ADDMotion* is a third-party stack that comes with animation tools, some demos and a tutorial. It enables you to add animations to your own stacks via an impressive array of controls, and even save them out as QuickTime movies.

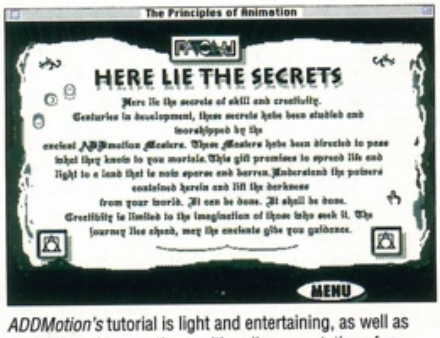
ADDMotion is a little gem. You can control every aspect of your animation using props, multi-cell actors, time-lines and more – sound effects and music can be added easily too.

You do need a hefty chunk of RAM for it to work in, though (2Mb in mono, 4Mb+ in colour), and animations themselves take a bit of patience. But there can't be many easier or more flexible routes into animation than this. Best of all, the animation tools are grafted on to each new stack you create, meaning they're quite independent of the *ADDMotion* stack itself.

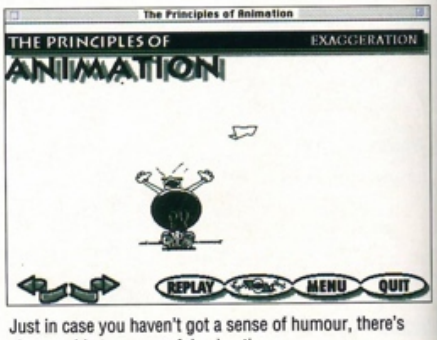
As if that wasn't enough, *ADDMotion* comes with a full set of colour paint tools. And with a bit of fiddling, it can be used to 'colourise' your cards. It looks at least as useful as the 'proper' colourising tools included elsewhere. *ADDMotion* is brilliant. Simple as that.



ADDMotion shows you what it can do and then shows you – very painlessly indeed – how it did it.



ADDMotion's tutorial is light and entertaining, as well as useful. It makes creating multimedia presentations fun.



Just in case you haven't got a sense of humour, there's also a guide to successful animation.

though, has to be knocked up in a proper paint package, imported as a PICT and then 'placed'.

When you design a stack, try to make colouring buttons and fields the last thing you do, because if you move a coloured button, the 'colour' doesn't move with it until you manually redraw the screen. Yawn.

QuickTime support

HyperCard 2.2 comes with a special stack dedicated to running QuickTime movies. You can stop, start, forward wind, pause and so on. By 'sharing' this stack you can run QuickTime movies in your own stacks.

AppleScript support

Apple wants all software developers to build support for AppleScript, its new inter-application scripting language, into all new software. Depending on the type of support built in, AppleScript will enable you to control one application from within another, set up recordable sequences of actions (good old-fashioned macros) within an application, and attach scripts to objects so that when you close a database field, for instance, a user-defined sequence

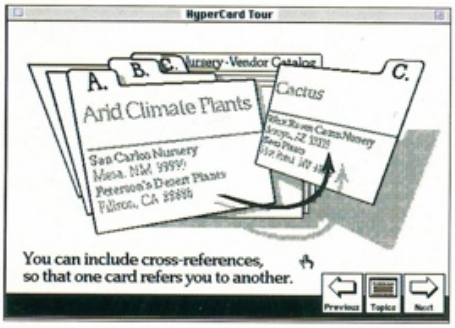
> *Stand-alone application-building... potentially the single most useful upgrade to HyperCard.*

of actions takes place automatically.

HyperCard 2.2 supports its own scripting language, HyperTalk, and AppleScript too. In principle you could control any AppleScript compatible applications from within *HyperCard*. In practice you'll need more than a bit of programming skill and the willingness to (a) track down the necessary documentation and (b) work through it, which will require major effort on your part.

Miscellaneous enhancements

HyperCard buttons can do most things, but if you wanted anything as slick as a pop-up menu you had to lash one up yourself with some pretty clunky HyperTalk routines. With *HyperCard 2.2* you don't. There's a new button style



If you still haven't got a grip on exactly what *HyperCard* does, there's a stack that gives you a guided tour... in fact the bulk of the package's documentation is in stack form.

that produces pop-up menus. Less immediately useful, but cosmetically satisfying, is a pair of new button styles which mirror the standard Mac dialogue 'OK' and 'Cancel' styles. And you can now create 'families' of buttons. You might want to use a set of buttons where selecting one automatically 'deselects' the rest. Previously, you had to bodge this with some canny HyperTalk code. There's also a new field style that lets you select options from a list.

Meanwhile, behind the scenes, new commands, messages and properties have been added to HyperTalk since version 2.1, but these are evolutionary changes rather than revolutionary ones. Experienced HyperTalk programmers will assimilate them rapidly, and existing routines and techniques will work with 2.2 with no problems.

As with each successive *HyperCard* release, the programmers have taken the opportunity to tinker with the script execution speed, so expect some improvements in this department.

Then there's stand-alone application building – long awaited, and potentially the single most useful upgrade to *HyperCard*. Read all about it in the panel below.

The verdict?

You get a lot for your money. The box weighs a ton and there's no shortage of reading matter. You get the application itself, heaps of example and tutorial stacks and tools for adding sound, colour, animation and QuickTime playback

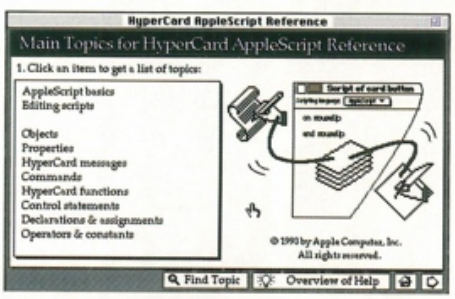
Now you can 'colourise' your stacks. This means you can add colour once you've created them. It doesn't mean that *HyperCard* now supports colour. A subtle difference...

ability – plus AppleScript support and the ability to produce stand-alone applications.

But there's no single document that gives you an overview of how it all fits together – more necessary with each new *HyperCard* 'evolution'. This is seriously bad news for new users, and Apple shouldn't assume that buyers are willing to play amateur detective for half a day to sort it all out. The *HyperCard 2.2* bundle is a good deal, but it's a set of enhancements rather than a major upgrade. And the whole lot feels as if it's been put together quickly – a bargain bundle rather than an integrated package.

If you've got *HyperCard 2.0* or *2.1*, should you upgrade? It depends how much you want colour, AppleScript support, QuickTime and stand-alone program capability. In terms of raw power, *HyperCard 2.2* is no great advance on *2.0* or *2.1*, but the host of new extras included certainly make it attractive (if labyrinthine).

When all is said and done, *HyperCard* is a unique piece of software. It's a blank page, a construction kit for software solutions. Version 2.2 is just the icing on the cake. *Rod Lawton*



AppleScript is a 'key Apple technology'. Which is why some printed documentation and a decent overview would be nice, rather than just stack-based information.

STAND-ALONE APPLICATION BUILDING

Until now, *HyperCard* users and programmers have only been able to pass round their stacks to other users, because you need *HyperCard* to run any of them.

But now the **Save as** menu item offers another option – **Application.** This saves your stack as a stand-alone application that can be used by anyone – you won't need *HyperCard* to run it. What's more, you can distribute such an application commercially – there are no royalties to pay, no licences to buy. Brilliant.

Except that your stand-alone application is not a specially compiled, pared-down sliver of pure machine code. Instead, what's saved out is the stack itself plus a special *HyperCard 2.2 Player* grafted seamlessly on.

Many *HyperCard* features are omitted in this player, but essentially it's the same fat wodge of code that needs the same fat wodge of memory to run in. For example, the *'lastDitch'* stack on this month's MACFORMAT cover disk takes up only 15K as a *HyperCard* stack. Saved as an application it balloons to almost 800K!

The stand-alone application-maker is, nevertheless, an excellent addition.

Significantly, any 'application' stack can open ordinary stacks. If you have an application stack, you have a *HyperCard 2.2 Player* too. Before, you had to pay for a *HyperCard Player* – or for a licence to distribute one.

HYPERCARD 2.2

HyperCard 2.2 costs £195 from authorised Apple dealers. For more call Apple free on 0800 127753.

Documentation What there is is good...	64%
Features Thanks to the bundled stacks, excellent.	87%
Value for money More versatile than ever – that's versatile!	92%
MACFORMAT RATING	91%

Crossword solutions

If you haven't got a clue how to create puzzles, you may find the answer in *PuzzleMaker* – try out a demo of this *XPress* XTension on this month's MACFORMAT cover disk...

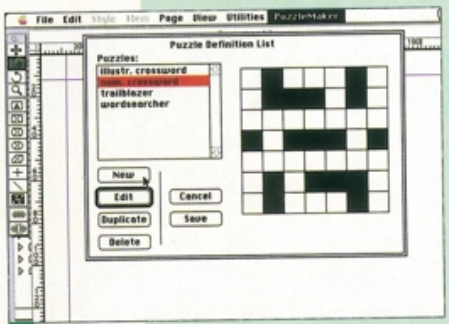
Try this for a specialised product: *PuzzleMaker* from Document Partners Nederland is a crossword designing XTension – a bolt-on which extends the capabilities of *QuarkXPress* – and it costs almost as much as that notoriously-pricey program itself.

In 1990, in Future Publishing's late lamented *MacPublishing* magazine, I reviewed an *XPress 2* XTension of just this type, *The Puzzler* from Publishing Technologies Nederland. The names may have changed, but this is an upgrade of that product, expanded and much improved.

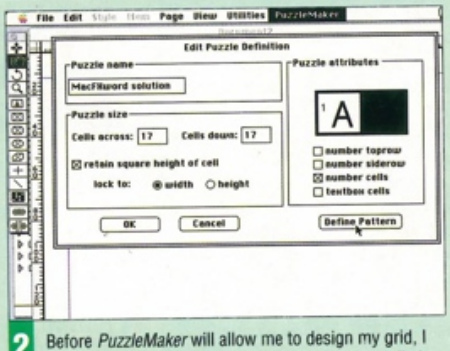
Drop it in your *XPress* folder and *PuzzleMaker* adds a new item to the *XPress* toolbox and a new heading to the menu bar. Go to **Define Puzzles** on the new menu, and you get a scrolling list of puzzles – though to begin with there are only small examples of the five types of puzzle that the XTension can create: standard crosswords, picture clue crosswords, trailblazers, wordsearches and 'footprint' puzzles (unfortunately, there's no documentation to suggest how to create one of these).

Select **New**, and you're into the springboard screen of the program, the **Edit Puzzle Definitions** dialogue. From here, you can bounce into further dialogues used for designing the

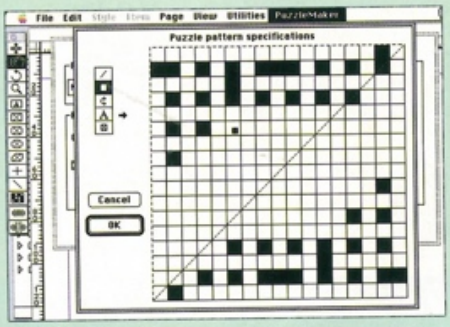
HOW TO CREATE A CROSSWORD USING PUZZLEMAKER



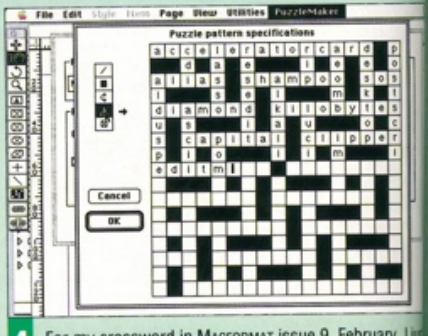
1 Choose **Define Puzzles...** from the *PuzzleMaker* menu and this dialogue pops up. The list of puzzles builds as you add your designs to it, but to begin with it features just these four examples. To create an orthodox crossword, I select the numeric option and click on **New**.



2 Before *PuzzleMaker* will allow me to design my grid, I have to name the puzzle and decide how many cells I want to have in it. Puzzles don't have to have equal number of cells on their horizontal and vertical axes, but this is a traditional crossword, and I've specified a 17 by 17 grid.



3 I can create an asymmetrical pattern, or make use of a selection of reflection options. I'm using 180° rotation, so I have chosen the diagonal reflector, which gives that effect rather than the straight mirroring of the horizontal reflectors. The small black square is the cursor – click to turn cells black.



4 For my crossword in MACFORMAT issue 9, February, I just wanted numbers in the grid, but for this issue's solution, I need to fill in all of the characters. The text tool will automatically advance through all of the white cells in the grid, or I can click on any cell – say, to make a correction.

JARGON BUSTERS

Descender: the part of a lower case character such as 'p' which hangs below the baseline on which capitals sit. When text which contains no descenders (such as capitals only) is vertically centred, it appears to sit high in the box.

EPS(F): Encapsulated PostScript (file) – a graphics format. When an *XPress* document is saved as an EPSF, it becomes a PostScript 'snapshot' of the page, along with a PICT preview image. This graphic can be placed and scaled in other documents, but otherwise it can't be edited – for example, to correct a spelling error.

Light: literally, a white square rather than a black one. However, the word can also be used to mean a line of white squares into which an answer is to be entered, as in 'numbered clues correspond to horizontal lights, while themed clues correspond to vertical lights'.

68030: one of the family of central processor chips used in Macs. The first Macs used the slower 68000; the Mac II and original LC an 020; all current models use an 030 or better.

Trailblazer: a crossword puzzle which does not have black squares. Instead, some cells have short clues in them, and arrows indicate the direction in which the answer should run.

Wordsearch: a grid of apparently random characters which has words hidden in it which may run left-to-right, right-to-left, up, down or along diagonals.

XTension: a utility which adds functions to the capabilities of *QuarkXPress*. Hundreds are available. Some of those produced by Quark may be rehearsals for features under consideration for a future version of *XPress* itself. *PuzzleMaker*, on the other hand, is a third-party commercial product.

grid, specifying typography, choosing colours and so on. The number of buttons here has been kept to a minimum; instead, you point-and-click. If you want to specify how you want clue numbers to look, for example, click on the clue number in the sample cell and you are immediately transported to the correct dialogue for this task – the same applies to solution text, 'black' square colours, frame sizes and colours, and clue typography for trailblazers.

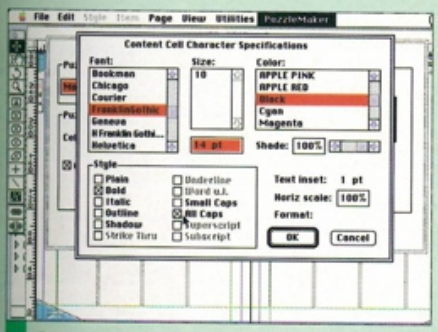
In the **Define Pattern** dialogue you can pick up a small black square from its toolbox, and black out cells in your grid as required. If you are using a symmetrical grid of some sort (which is traditional), you can cycle through the reflection options by repeatedly clicking on one of the tools. As well as single-plane and two-plane mirroring, you can produce 180° rotational symmetry using the diagonal option.

If you've previously checked off the **Text Cells** option for a trailblazer puzzle, the **Define Patterns** dialogue is where you mark the squares where you want the clues to go; this is also where you mark out cells which are to be picture boxes in any type of illustrated puzzle.

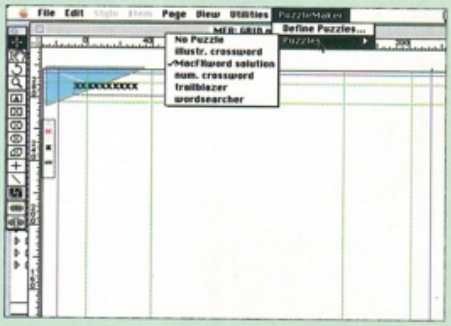
For solution grids, you can now enter characters into the lights while still in **Define Patterns**. Click on the text tool and a cursor appears in the first empty cell on the top row. As each character is entered, the cursor moves through the empty cells until reaching the one furthest right on the bottom row. In *The Puzzler*, characters could be entered into the puzzle only after it had been drawn up on-page, and this meant click-selecting each cell (in fact, an independent text box) in turn and then typing the character. This was a tedious job, and the new method is a big improvement.

Another failing with *The Puzzler* was the way in which the position of a character within the height of its box was determined by specifying a text inset (it was automatically centred across the width). This meant that it was often difficult to centre characters vertically – most non-condensed faces have a W which is wider than it is high, so, unless you specified horizontal scaling, it wouldn't fit in an inset which pushed it to the right depth in the box.

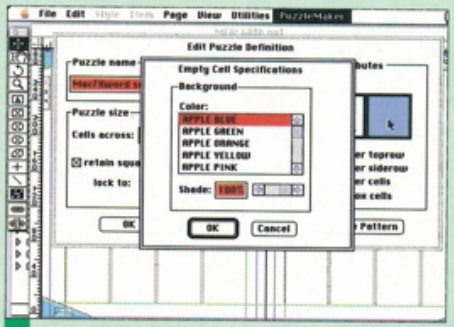
PuzzleMaker employs *XPress 3's* vertical alignment capabilities to centre characters for height. This is still technically imperfect because the function allows for descenders, so capitals (which are the norm in crossword solutions) sit a fraction higher than the optical centre. Perfectionists will still need to select each character



5 From the **Edit Definition** dialogue I can assign attributes by clicking on the relevant item in the pair of cell representations. Clicking on the 'A' in the white cell brings me to this dialogue for entering text character specifications. For numbers, click on the '1' in the same cell.



7 Once I have saved my puzzle with all of the specifications I want, I can go back out into my *XPress* document to create the solution. *PuzzleMaker* has defaulted to selecting the most recent puzzle I've worked on, so all I need to do now is click on the puzzle icon in the *XPress* toolbox and draw a frame.



6 The 'black' squares and frames don't have to be black! For other colour options, click on the black cell (or frame) in the **Edit Definition** dialogue. As well as C, M, Y, K, R, G, B and Registration, any colours you have defined in the open *XPress* document are also on offer.

8 Because I'd specified square cells and locking to width in the **Edit Puzzle Definition** dialogue, I don't need to worry about drawing a square frame, just one that's the correct width. *PuzzleMaker* does the rest, drawing and filling the cells off-screen, then placing them as a grouped object.

and use baseline shift for spot-on alignment; however, solutions grids are normally used quite small, and the automated effect should prove entirely passable in most circumstances.

The Puzzler laboriously drew each item in your puzzle on-screen. *PuzzleMaker* draws off-screen and only places the finished puzzle, which is rather less tedious. The example on pages 36–7 is a fairly complex job, but took just over a minute for *PuzzleMaker* to draw up on my 68030-based Mac; a test 13 by 13 B&W grid containing just the light numbers (the program automatically works out what numbers you need and where it should put them) took less than 15 seconds. Still, the resulting puzzle is a cumbersome thing – the 13 by 13 puzzle runs to almost 200 text boxes including light numbers – so as soon as you're happy with it, it's sensible to save the page as an EPSF which you can place as a single graphic.

PuzzleMaker is an impressive upgrade to an already useful product, but its price has risen to an even more impressive degree – £545, nearly as much as the program it supplements. Niche products don't come cheap, but admittedly an individual producing only a few specialist crosswords a year would find the cost hard to justify. However, for a publication which runs puzzles regularly, even if you only costed the staff time soaked up in manually preparing grids and solutions at £10 per puzzle, the cost of *PuzzleMaker* could be recouped in around 40 issues (taking the tax offset into account). In the extreme example of a local daily running six puzzles a week, you're looking at a payback schedule of less than seven weeks. It may add up to a solution for you.

Martyn Lester

PUZZLEMAKER

PuzzleMaker costs £545 and is a *QuarkXPress* XTension (so you have to buy *XPress* separately). It is available from Document Partners Nederland, who can be contacted on 010 31 4120 27272 (telephone) or 48096 (fax). Postal enquiries should be addressed to PO Box 370, 5340 AJ Oss, The Netherlands; Applelink address is Doc.Partners.

MACFORMAT RATING **83%**

Phototone Textures

You don't have to be a professional illustrator to make your backgrounds look good – Letraset Digital's *Phototone Textures* will do it for you.

Whether Letraset Digital's *Phototone Textures* falls into the category of DTP or graphics, I'm not sure, but wherever you use backgrounds you're likely to find a use for the product.

The range of textures work with any application that accepts *Photoshop* plug-in filters, and they are described as 'tileable images'. What this means is that they are square RGB TIFFs designed following tessellation principles similar to those used in wallpaper patterns – which means that any item cut through the right-hand edge matches up with corresponding pattern at the left-hand side.

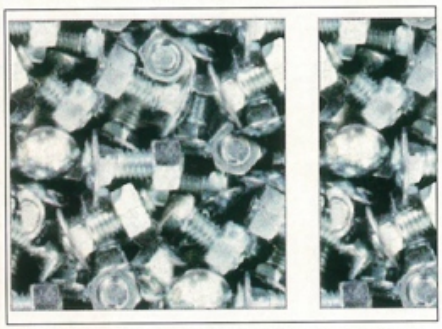
To illustrate how it works, I placed the whole of a sample TIFF in a *QuarkXPress* document, with the edge of a duplicate copy to the right. As you can see from the screen grab below, if the two copies were pushed together, their edges would match up to give a seamless rectangular image – and the same applies to the top and bottom, too.

In *Photoshop*, the *Phototone* filter (supplied with each image) automates the tiling across any size or shape of selection. I found an old *Photoshop 2.0.1* in the possession of an art editor who never learned to use it (what a waste!) and found that it tiled my test texture perfectly, as you can see from the second screen grab below. *Phototone* documentation refers only to versions *2.0.5* and *2.5*, though, so don't take this as any guarantee that earlier versions are as compatible as my test suggests.

One hundred textures are contained in the catalogue at present, including manufactured items such as tangles of metal chains (both polished and rusty), barbed wire and Shantung silk, as well as natural textures such as wood grain, tree bark, stone surfaces and sponge. Each texture costs £35.

To complain that this is a lot to pay for a single TIFF would, I think, be missing the point. Compare the total cost of a photoshoot, D&P and repro, all for just a single image, and thirty-five quid for a limitlessly tileable and re-usable texture sounds like a bargain to me. Ask your local Letraset Digital dealer for a leaflet of samples.

Martyn Lester



This is the Nuts and Bolts *Phototone Texture* opened as a straightforward TIFF and then duplicated to show the tessellated design – the edges of the pair will match up when they're pushed together.

Using the Herbs and Spices *Phototone* filter in *Photoshop*, I have made my texture tile to fill an inverted selection – ie everything but the text. No sign of joins, as you can see – or rather, as you can't see!

With a current range of 100 textures, from Bark Chips...

... to Pebbles (all fully tileable, so you can't see a join)...

... to Ivy, there's probably a *Phototone Texture* to suit you.

JARGON BUSTERS

Plug-in: a utility which extends the capabilities of *Photoshop*. In the case of *Phototones*, it's a Letraset Digital filter which tiles the texture image on import.

TIFF: Tagged Image File Format – a standard graphics format.

PHOTOTONE TEXTURES

Phototone Textures are RGB TIFF images which come supplied with a *Phototone* plug-in. The price is £35 per texture and they are available from Letraset on 071 928 3411 (sales) or 071 928 7551 (enquiries).

MACFORMAT RATING **90%**

Open 10.00am to 5.00pm Monday to Saturday

DABS direct PRESS

The BEST value just got better with Dabs Press Freephone

FREEPHONE 0800 558866

Order now on our Sales Freephone Hotline

SERVING YOU SINCE 1987

Dabs Press Direct is an Apple Macintosh Authorised Reseller

Authorised Reseller

Authorised Reseller

Access · American Express · VISA · Switch · TRANSAX

REGIONAL SALES: LONDON 071-582 4777 MANCHESTER 061-773 8632 PRESTON 0772 623000

LASERS

APPLE

LaserWriter Select 300 512k + DC/D	467
LaserWriter Select 320 2Mb	619
LaserWriter Select 360 7Mb	1199
LaserWriter Pro 600 4Mb	1279
LaserWriter Pro 630 8Mb	1475
Upgrades	Call

DIGITAL

DECLaser 1152 A4 600dpi PS	559

CALCOMP

CCL600 A3/A4 600dpi PS	2599

GCC

BLP Eclipse 8	Call
Selectpress 600 with Ethernet	Call
Selectpress 1200 - 1200dpi	Call
WideWriter 360 A2 360dpi	Call

HEWLETT PACKARD

LaserJet 4ML A4 360dpi PS	742
LaserJet 4MP A4 600dpi 4ppm PS	1015
LaserJet 4M A4 600dpi PS	1339
LaserJet 4Si Mx 600dpi PS duplex	3269

QMS

PS860 A3/A4 600dpi PS	2899
ColourScript 1000	7815

STAR

Laser 5TT	725

TEXAS INSTRUMENTS

MicroWriter A4 300dpi PS	549
MicroLaser Pro 600 A4 600dpi PS	979

FREE PRINTER CABLE WITH ALL PRINTERS AND LASERS.

PRINTERS

APPLE

StyleWriter II Mono	214
StyleWriter II Portable	299
Colour Inkjet A3 SCSI	549

CALCOMP

CCL6613XF colour thermal PS	5495

CANON

BJC 820 A3 colour inkjet	1245

FARGO

Primera Wax Transfer (inc. Mac kit)	759
Primera Dye-Sublimation Upgrade	259

GCC

Writemove II portable	339

HEWLETT PACKARD

DeskWriter 310 portable	169
DeskWriter 310 & ASF	207
DeskWriter 310 Colour Kit	29
DeskWriter 510	187
DeskWriter 550C	375
DeskJet 1200C colour PS	1599
DesignJet 650C A1 plotter	6868
DesignJet 650C A0 plotter	7529

CONSUMABLES

INKJET CARTRIDGES

HP DeskWriter 550C - Black D/Cap	21
HP DeskWriter 550C - Colour	22
Canon BJC 820 - Black	16
BJC 820 - Cyan, Magenta or Yellow	20

TONER

HP 4M	74
HP 4ML	45
HP 4Si Mx	109

Call for items not listed

DABS PRESS FREEPOST

FREEPOST(PR1327)
LEYLAND,
PRESTON.

MONITORS

APPLE

Performa Plus 14"	209
Colour display 14"	235
Audio Visual 14"	417
Portrait 15"	405
Colour display 16"	635
Colour display 21"	1840

NEC

4FGe Multisync 15"	498
5FGp Multisync 17"	925
6FGp Multisync 21"	1549
GBM 70 Multisync	1995

PHILIPS

4CM4270 14"	289
1520 15"	339
4770 17"	475
Trinitron 17"	799
Brilliance 2010 20"	988
Brilliance 2120 21"	1499
2082 Das 20"	1459

RADIUS

Two page 20GS 20" Greysc. Ergo	668
Two page 21GS 21" Greysc. Ergo	780
Pivot Display Mono/Greyscale Ergo	545
PrecisionColour Pivot Ergo	869
PrecisionColour 20"	1595
Colour Display 21"	1874
Intellicolour 20"	1899

SONY

CPD 1420S 14"	269
CPD 1430S 14"	395
CPD 1730S 17"	729
GDM 2036S 20"	1529
GDM 2038 20"	1640

SUPERMAC

Supermatch 17" Trinitron	840
Supermatch 20"	1399
Supermatch 21"	1749

VIDEO BOARDS

RADIUS

8xj - 8 bit 2page display	399
24xp - 24 bit 16" display & below	399
24xk - 24 bit 2 page display	625
24x - fast 24 bit 2 page display	1129

SUPERMAC

Thunder 8 - 8 bit, fast, 14" -21"	999
Spectrum 24 Series IV Nubus - 24 bit	745
Thunder 24 - 24 bit, very fast	1930
Thunder II - 24 bit, the fastest!!	3120

MODEMS

GLOBAL VILLAGE

Teleport Fax Modem Bronze II	89
Teleport Fax Modem Silver	259
Teleport Fax Modem Gold	279

GLOBAL VILLAGE Powerbook

Powerport Bronze	89
Powerport Silver	259
Powerport Gold	289

HAYES

Optima 24	220	Optima 96	389
Optima 144	479		

PACE

Microlinfx 32 Plus pocket fax	285

US ROBOTICS

Sportster 14.4/Mac & fax	199

IMPORTANT NUMBERS

PRESTON	Sales	0772 623000
	Fax	0772 622917
MANCHESTER	Sales	061-773 8632
LONDON	Sales	071-582 4777
All Customer Services		0772 623281

APPLE MACINTOSH HARDWARE

	HD	RAM	Type	VRAM	CPU	CoPro	£
LC 475 4/80	80	4	72 pin	512k	25MHz LC040	no	715
LC 475 4/80 Bundle	80	4	with Performa 14" monitor & keyboard				795
LC 475 8/160	160	8	72 pin	512k	25MHz LC040	no	845
LC 475 8/160 Bundle	160	8	with Performa 14" monitor & keyboard				875
Quadra 610 4/160	160	4	72 pin	512k	25MHz 040	no	880
Quadra 610 4/160 CD	160	4	72 pin	512k	25MHz 040	yes	1069
Quadra 610 8/230	230	8	72 pin	512k	25MHz 040	yes	1325
Quadra 650 4/160	160	4	72 pin	512k	33MHz 040	yes	1170
Quadra 650 4/160 CD	160	4	72 pin	512k	33MHz 040	yes	1360
Quadra 650 8/230 CD	230	8	72 pin	512k	33MHz 040	yes	1645
Quadra 800 8/230	230	8	72 pin	512k	33MHz 040	yes	1799
Quadra 800 8/500 CD	500	8	72 pin	512k	33MHz 040	yes	2319
Quadra 840AV 8/500 CD	500	8	72 pin	1Mb	40MHz 040	yes	2695
Quadra 840AV 16/1Gb CD	1000	16	72 pin	1Mb	40MHz 040	yes	3258
Quadra 950 16/FD	0	16	30 pin	1Mb	33MHz 040	yes	2440
Quadra 950 16/1Gb	1000	16	30 pin	1Mb	33MHz 040	yes	3150
Powerbook 145B 4/80	80	4	Cards		25Mhz 030		865
Powerbook 165 4/80	80	4	Cards		33Mhz 030		995
Powerbook 165 4/160	160	4	Cards		33Mhz 030		1155
Powerbook 165c 4/80	80	4	Cards		33Mhz 030		1209
Powerbook 165c 4/120	120	4	Cards		33Mhz 030		1289
Powerbook 180 4/120 mod	120	4	Cards		33Mhz 030		1689
Powerbook 180c 4/160	160	4	Cards		33Mhz 030		1919
Powerbook duo 230 4/80	80	4	Cards		33Mhz 030		835
Powerbook duo 230 4/120	120	4	Cards		33Mhz 030		944
Powerbook duo 250 4/200	200	4	Cards		33Mhz 030		1499
Powerbook duo 270c 4/240	240	4	Cards		33Mhz 030		1785
Powerbook duo 270c 12/240	240	12	Cards		33Mhz 030		2209
Newton Message Pad							445

We are Apple Authorised Resellers.
All machines UK sourced (NOT GREY)

REMOVABLE DRIVES

Syquest drive 44Mb SCSI Ext 5.25"	250
Syquest drive 88Mb SCSI Ext 5.25"	335
Syquest drive 102Mb SCSI Ext 3.5"	375
Syquest 44Mb cartridge 5.25"	42
Syquest 88Mb cartridge 5.25"	62
Syquest 102Mb cartridge 3.5"	45

All drives above come with free cable, software and 1 cartridge.

CD-ROM DRIVES

Apple CD300 Ext with SCSI cable			165
NEC 2Xi	150	NEC 3Xi	285
NEC 3Xp	299	NEC 3Xe	369
NEC 4X Pro	619		
NEC Mac interface & software			29
Toshiba 3401 Ext Bare Drive			365

CD-ROM TITLES

Creepy Crawlies	32
Dinosaurs	39
Grooves	59
ITN World News	42
Lifesaver	42
London	29
Putt Putt	29
Putt Putt Fun Pack	29
Sherlock Holmes 3	42
World Atlas 3	49

Call for titles not listed

CARRIAGE

HARDWARE/SOFTWARE (Per Order)

Standard GB 1-3 working day Delivery	£8.00
Next working day Delivery	£15.00
N Ireland/Highlands/CI/IOM 1-3 Days	Call
Saturday Delivery (Mainland GB)	£30.00

CONSUMABLES/SMALL ITEMS

Standard UK1-3 working day Delivery	£3.50
Next working day Delivery	£6.50

Call for quotes on other areas/times

PRICES ARE PER ORDER NOT PER BOX
ALL DELIVERY TIMES ARE SUBJECT TO BEING INSTOCK AND UNSOLD

SOFTWARE

Aldus PageMaker 5	399
QuarkXPress 3.2	585
Hayes Smartcom 3.3	69
MacLink Plus PC 7.5	129
MacLink Plus Translators 7.0	93
PC Exchange Mac	49
Timbuktu 5.0	149
Timbuktu Remote 3.0	155
Adobe Acrobat	130
Adobe Acrobat Exchange	130
Adobe Acrobat Distiller	555
Adobe Acrobat Proofing kit	249
Adobe Acrobat Starter kit	899
Adobe Illustrator 5.0	355
Adobe Photoshop 2.5.1	525
Aldus Freehand 4	299
Aldus Persuasion 2.1	235
MS Powerpoint	210
Norton Utilites 2.0	99
After Dark 2.0	32
MYOB	199
Ritz Meridian	169
Ritz Accounting	295
Ritz Payroll	125

FINDING US

DABS PRESS - 250 LEYLAND LANE, LEYLAND, PRESTON PR5 3HL
From M61 J8 or M6 J28. Leave **M61 J8**, head West to Leyland, 3rd exit from round-about onto the A6. After 2 miles take left onto B5248 follow to T-junction with A49, turn right, at lights turn left under the M6. From **M6 J28** head West, towards Leyland centre, to mini-roundabout, straight over to 2nd mini-roundabout, turn right to main roundabout, take 2nd exit onto dual carriageway, at lights turn left. After 1.5 miles, at the 3rd set of lights turn left onto Leyland Lane, we are 1 mile further on the right.

DABS PRESS - 22 WARWICK STREET, PRESTWICH, MANCHESTER M25 3HN
Leave the M62 at Junction 17. M62 follow sign for Prestwich/Salford. Go south on the A56 through the pelican at the hospital, the main lights in the village and on to the next pelican crossing. Turn right immediately after this into Warwick Street. We are 100 yds further on the right.

DABS PRESS - LONDON
TELEPHONE SALES ONLY - NO COLLECTIONS

APPLE KEYBOARDS

Standard Keyboard	74
Extended Keyboard	128
Adjustable Keyboard	149

MEMORY

1Mb 30 pin SIMM	55
2Mb 30 pin SIMM	80
4Mb 30 pin SIMM	115
8Mb 30 pin SIMM	290
16Mb 30 pin SIMM	495
4Mb 72 pin SIMM (Centris, LCIII)	135
4Mb 72 pin SIMM (Quadra 800/840)	150
8Mb 72 pin SIMM (Centris, LCIII)	260
8Mb 72 pin SIMM (Quadra 800/840)	280
16Mb 72 pin SIMM (Quadra 800)	459
16Mb 72 pin SIMM (Quadra 840)	559
Classic 3Mb RAM Card	110
Powerbook RAM - all types	from 155

VIDEO RAM

256k for Quadra 700, 800, 900, 950, LCIII, Centris, ColClassic	35
512k for LC,LCII,IIvi,IIvx, Performa 600,Duodock	39

HARD DISKS

CONNER SCSI

CP30200 (210)	199	CPA340A (340)	229
CP30544 (540)	511	CP31370 (1.3Gb)	813

DEC SCSI

DSP3085 (852)	720	DSP3105 (1Gb)	840
DSP3160 (1.6Gb)	1090	DSP5200 (2Gb)	1290

MAXTOR SCSI

7245S (245)	225

QUANTUM SCSI

ELS170s	185	LPS270s	219
LPS340s	275	LPS700s	619
LPS1000s	725	LPS1800s	989

SEAGATE SCSI

ST3390 (340)	299	ST3655 (540)	479
ST11200 (1050)	699	ST12400 (2.1Gb)	1299

For External hard drives add £100 +VAT.
Please call for sizes not listed.

SCANNERS

EPSON

GTx 6500 inc. Xtra Bundle with OCR	609
GTx 6500 inc. Image Bundle	729
GTi 8000 inc. Xtra Bundle with OCR	769
GTi 8000 inc. Image Bundle	849

HEWLETT PACKARD

Scanjet IICX	688

LOGITECH

Scanman 32 Mac	169

MICROTEK

Scanmaker IIXE inc. Photoshop LE	920
Transparency unit for IIXE	599

TERMS

EEC residents add 17.5% VAT to all prices.
We also supply many products not listed here. All goods UK sourced with full warranties etc. Export orders welcome, carriage charged at cost. Official orders accepted only from public sector/education /listed PLCs. Prices listed are C.W.O (cheques supported by current cheque guarantee cards, cash, credit/debit card, postal order, bank transfer, bankers draft). Surcharge applicable on Business cheques using Transax.

Leasing Finance available to government depts, local councils, education, NHS and businesses (Subject to status). Minimum order value £1000, please call for details. Written details on request.

14 day credit terms available to public sector & quoted Plc's only. Add 2% to prices listed for credit.

Personal cheques, with current guarantee card, to the value of £1500 NO LONGER REQUIRE 14 DAYS CLEARANCE.

Minimum order £10. Prices and manufacturers specifications subject to change without notification. Goods offered subject to being unsold. Goods not offered on a trial basis. All returns must have prior authorisation. All orders are subject to our Terms & Conditions, available upon request. Proprietor D. Atherton. E&OE [14.02.94]

Restocking fee charged on non-defective returns.

DUE TO CURRENCY FLUCTUATIONS ALL PRICES MAY CHANGE

FREEPHONE 0800 558866 FREEPHONE 0800 558866

ORDER NOW ON 0800 558866 • ORDER NOW ON 0800 558866

Printing solutions

You've got loads of questions about printing – we know you have, we've got evidence – so you'll be pleased to know that you can find most of the answers right here...

Printers are probably the first major peripherals that you'll want to buy for your Mac, but doing so is fraught with problems for the unwary. What kind of machine do you need – inkjet, laser printer, PostScript, QuickDraw, networkable, dedicated to one machine...? On the following few pages we've identified some of the most common questions that we get here at the MACFORMAT offices and we've tried to answer them in as general a way as possible. We also tell you just what PostScript is, and look briefly at a couple of products which will help you to get the best out of any existing printer that you own – even if it doesn't immediately look like it can be connected to your Mac. Then we cast our eyes over three low-cost printers, to see whether one of them might be just right for your needs.

What sort of printer should I buy?

This is the most fundamental question that you can ask. As far as black-and-white output goes, you have three basic answers: a dot-matrix printer, an inkjet device or a laser printer. So let's take these one at a time, starting with dot-matrix. A dot-matrix printer works by pressing an inked ribbon on to the paper using tiny pins. It's much like a typewriter, except that instead of fixed characters on a striking arm, the pins are arranged in a small rectangular block, and since any of them can be set to hit the ribbon or not at any time, the range of characters and shapes which can be displayed is much wider than with a typewriter.

Dot-matrix printers were the first affordable printers, and indeed the first Apple-produced output device was the ImageWriter, which worked on this technology. However, these

days it's possible to get much better image quality using an inkjet or laser printer, so really you should only consider getting a dot-matrix printer if you need to print multi-part stationery, which requires an impact printer. If you do need such a device, check out Epson's Apple-compatible range of dot-matrix devices.

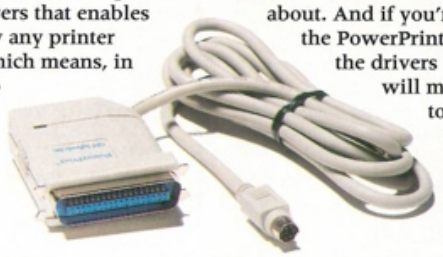
Next we come to inkjet printers (sometimes known as 'bubblejets', but Bubble Jet – two words – is actually Canon's proprietary name for its own inkjet printers, as 'DeskJet' is Hewlett Packard's). These have gained in popularity rapidly over the last two years or so, and are now very cheap and very impressive. They typically give a resolution of 300dpi – some output at the slightly higher 360dpi – and produce very nice-looking results indeed. In fact, for text work and line-art, it's often difficult to distinguish between inkjet and laser printer output, especially if you're printing to ordinary cartridge or 'typing' paper, which won't give the crispest results at the best of times. However, since these devices work by printing one line at a time, printing scans or large areas of black does tend to give rise to 'banding' – that is, each line is a slightly different density, resulting in an uneven image.

The other problems with inkjet printers are that they don't tend to be networkable, and that they are slow. If you're the only person who will be using the printer, the networking consideration won't be a problem, but if you want to share the printer with two or three other people, it could be a very different story – people will have to use your Mac every time they want to print something out. And the speed problem could well be a major consideration – especially if you're outputting complex pages. It's been known for an inkjet printer such as the StyleWriter to take over an hour to print out a complex page created in a program like *QuarkXPress* – although to be fair it will be quite happy dealing with a standard letter or spreadsheet from something like *ClarisWorks*.

Finally, there are laser printers – or, more accurately, page printers, since many of the devices that you can buy nowadays use light emitting diodes, or LEDs, rather than lasers to create the image. But the name has stuck, and people tend to refer to all page printers as laser printers. Laser printers produce the best quality output, but are also the most expensive to run. Not only is the initial purchase cost higher than that of either of the other two types of printer, but the toner cartridge, which must be replaced after every few thousand pages, is much more expensive than a new ribbon for a dot-matrix printer or a new inkjet cartridge. Still, for many people the extra cost is worth it for the increase in speed and output quality that is apparent over the other two types of printer.

POWERPRINT – PLUG IN AND PRINT?

What do you do if you already have a printer, but it doesn't have a Mac-compatible interface? Well, you could do far worse than to take a look at PowerPrint, from GDT Softworks. It's a combination of a special cable and software drivers that enables you to connect virtually any printer with a parallel port (which means, in practice, any printer) to your Mac. Simply connect the Mac and printer together using the PowerPrint cable, use whichever printer driver the manual suggests is appropriate, and you're away. Even if your actual printer isn't directly supported, virtually all will emulate one of the machines that the software can cope with.



Don't abandon that old PC-compatible printer you picked up in a car boot sale: hook it up using PowerPrint's smart cable.

The output quality is surprisingly good, although occasionally some graphics don't come out perfectly. Of course, this is QuickDraw emulation, not PostScript, but even so most users won't find anything to grumble about. And if you're on the road, taking the PowerPrint cable and installing the drivers on your PowerBook will mean that all you need to do in order to output a document is borrow a couple of minutes on just about any printer that you can find in an office.

PowerPrint is distributed in the UK by Academy Software, 081 656 9560. It costs £158.63, which covers multiple users outputting to a single printer. Cheaper than buying a new one!

Why can't I just use my old dot-matrix printer on the Mac?

In the PC world, the standard way to connect a printer is via something called a Centronics printer port or parallel port. The Mac, though,

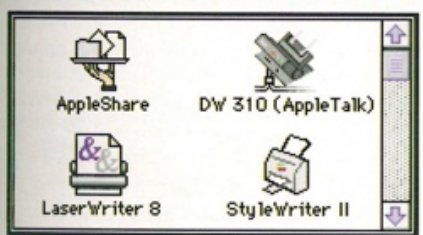
To plug a printer into your Mac, find the port with this little printer symbol. Use the right cable – if it plugs in OK, the connector has the right pin pattern.

The modem port (it has this symbol) has the same pin pattern, but you can't connect a printer to it *unless* the printer driver permits that (like the WriteMove).

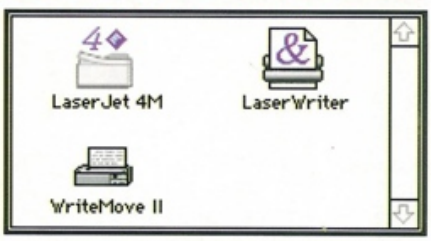
doesn't have such a port – Apple decided that a serial port, like the port used by all computers for connecting a modem line, was the way to go. (This means that the Mac actually has two serial ports. The pinouts are the same, but it doesn't follow that you can just plug a printer into either port – the printer driver has to know where to send its messages. You're fine if it gives you the option of using the modem port though.) Even if the Mac had the right connections for your old dot-matrix printer, you'd need an appropriate driver (see Jargon busters at left) to work. When you're buying a printer, you must ensure that it's Macintosh-compatible – if not, you can't connect it directly.

Because of this problem, there are some third-party products which enable you to connect non-Mac printers up. Probably the best

JARGON BUSTERS



To use a given printer, you must have its driver installed...



... and select it in the Chooser before you try to print.

Driver: driver software is what the Mac uses to actually send data to the printer. Without a printer driver, the Mac doesn't know what it's talking to, and therefore can't output your work. Different printers use different drivers, although if you have a PostScript laser printer, the chances are very good that you can just use Apple's standard LaserWriter driver. If not, you should have received specific software with your printer.

Modem: MOdulator/DEModulator, a device which enables computers to communicate with others over the telephone line.

Resolution: this is a measure of how many tiny individual dots are used in a given area on the page – the higher the resolution, generally speaking, the better-looking the output will be. Resolution is normally measured in dots per inch, or dpi; 300dpi, for example, means that there are 300 x 300 = 90,000 dots per square inch. (Of course, if you print with an inkjet on absorbent paper the dots will tend to run together a bit...)

SCSI: Small Computer Systems Interface. This is the kind of interface normally used to connect a hard drive to your Mac.

around is PowerPrint (see the box on page 41), which enables you to attach several hundred different types of printer to your Macintosh via a special cable and driver software. However, if you're buying a new printer, you should make sure that it will connect directly.

Do I have to buy an Apple printer?

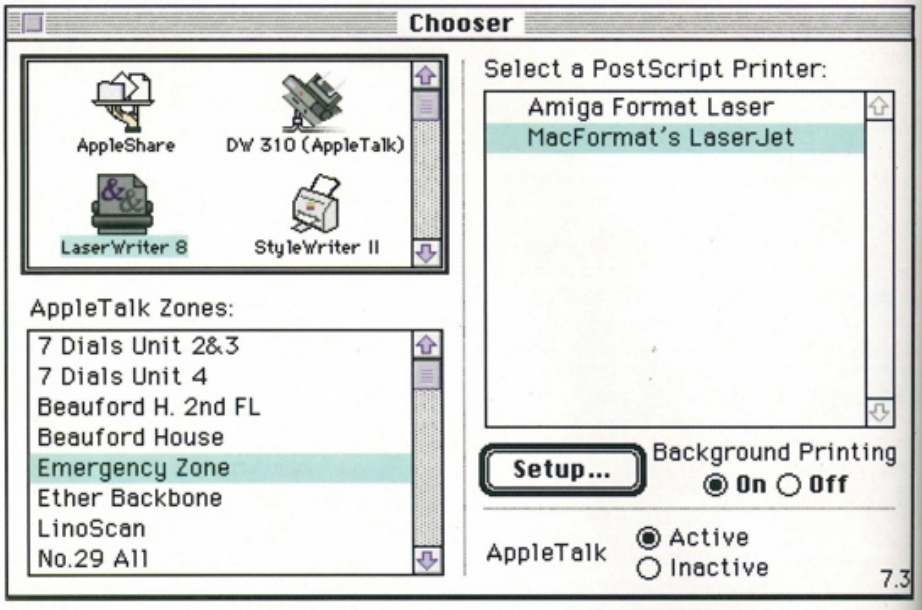
Absolutely not! Although many people do buy Apple-branded printers such as the LaserWriter and StyleWriter families, you can often find printers carrying other brands that are just as good and cost considerably less. For example, there are loads of great bargains on laser printers at the moment, so you certainly shouldn't feel restricted to buying just what Apple itself offers. The only rule is that you must buy a printer which is Macintosh-compatible – don't just buy one from the Sunday supplement that's advertised at £199, until you're sure that it has a LocalTalk port!

What's this LocalTalk, then?

LocalTalk is Apple's basic networking system, and it's what you connect most laser printers to. If a printer has a LocalTalk port, it will plug into your network and should then appear with no problems to all the Macs on the network (which will be connected via their printer – AKA 'network' – ports), although you may need to install driver software, which should have been included with the printer.

But I don't have a network – I only have one Mac.

In that case, you can save yourself a bit of money. Although many people will tell you that to connect your printer you will need to buy LocalTalk connectors, in fact all you need is a simple cable, often sold as an ImageWriter cable. It should cost you no more than about £10, rather than the £30 or £40 that a LocalTalk connector kit will cost.



If your Mac is on a network, the Chooser enables you to select which printer to send output to, in which zone, and to print in the background (that is, while you're doing something else on your Mac). Just don't ask why MACFORMAT is in 'Emergency Zone'...

What about inkjet printers?

These normally aren't networkable, so they will come with their own cable to connect directly to your Mac's printer or modem port.

OK, now what's this PostScript lark that I hear about?

Basically, there are two kinds of printer. One kind contains a hardware PostScript interpreter – a built-in computer, dedicated to taking PostScript instructions (see the box below) and telling the printer how to print them. The other kind of printer is non-PostScript – these are often called 'QuickDraw' printers, but it's actually the Mac which has QuickDraw in it, not the printer. The Mac uses the QuickDraw system to create graphics and text on the screen. A QuickDraw printer (such as almost all inkjet printers and some laser printers) just takes this information and uses it to print. This is often fine, but if you're using a graphics program such as *Illustrator* or *FreeHand*, or a page make-up package like *QuarkXPress* or *PageMaker*, you should look at buying a PostScript printer for the better quality that you'll get. The resolution is the same – it's just that PostScript is a more powerful language than QuickDraw, and is more suited to printed output. Also, if you have any PostScript fonts on your Mac, you'll need a PostScript printer or *Adobe Type Manager* (*ATM*) before they will print out correctly. Finally, if you have any graphics in EPS (encapsulated PostScript) format, a QuickDraw printer will only output them at 72dpi – regardless of the resolution of your printer. For 'proper' results you need a PostScript device.

WHAT EXACTLY IS POSTSCRIPT?

At its most basic, PostScript is a type of programming language known as a Page Description Language (PDL). What this means is that a PostScript 'program' for a page is a series of commands – "draw a line from this point to that point, put this text there," and so on. The beauty of PostScript is that it is 'device independent'. That is, when you create the PostScript description of a page you don't need to know what printer you're going to output it on. When you print to a PostScript printer from your Mac, the printer driver (the software that enables your Mac to talk to a particular model of printer) takes the pages that you want to output and converts them into a series of PostScript commands, which are then downloaded to the printer. The printer contains its own computer which interprets these commands and works out exactly where to print the tiny black dots on the paper that combine to create the final image.

The device-independence factor is important because you might want to print the same page to, say, a 300dpi (dots per inch) laser printer and a professional, high-end imagesetter running at a staggering 2,400 dpi. You simply give the same PostScript 'program' to each – it's up to the individual device to turn the commands into the actual dots, so whatever the resolution of the printer the page will be printed as smoothly as possible. Of course, having a built-in computer makes PostScript printers pricier...

And TrueType...?

TrueType is a font format created by Apple and Microsoft, which gives clear, good-looking text on the screen and on QuickDraw printers at any type size. PostScript printers can also output TrueType fonts, but professional publishers tend to stick to PostScript for several reasons (one major one being that they've already invested in large libraries of PostScript typefaces).

Why do laser printers have RAM in them? Inkjets don't.

This is because laser printers output a whole page at a time – so they have to store a page's worth of information before they can output it.

FREEDOM OF PRESS

Freedom of Press has been around for some time, in various incarnations. It's a software PostScript interpreter – ie, it uses the Mac's processing power to translate a PostScript description of a page into the individual dots that the printer outputs. Why would you want to do that? Well, it means that any QuickDraw printer can be used just as if it were a PostScript device – great if you've got, say, a StyleWriter II, QuickDraw laser printer or a low-cost colour inkjet printer.

Of course, it's not all sweetness and light. PostScript printers contain dedicated computers to interpret the PostScript language – the LaserWriter NT, when it was introduced, was a more powerful computer than any of the Mac range at the time! Because *Freedom Of Press* uses the Mac's processing power rather than a dedicated chip, output takes much longer than if you were printing to a dedicated PostScript device. The more powerful your Mac – and the more RAM you have – the faster the program runs, but if you have a high-spec Mac you probably already have a PostScript output device.

Still, if you haven't and you need extra quality or are printing documents which contain EPS (Encapsulated PostScript) files, *Freedom Of Press* should do the job for you. It comes in two versions: 'Classic' is £151.57, and the 'Pro' version (for high-end colour output on non-PostScript devices) is £1,733 (reasonable for an alternative RIP). Both are available from DirekTek, 081 845 5969.

Inkjet printers, on the other hand, since they're printing at the same time as the Mac is sending them information, needn't store anything.

RAM becomes particularly important in PostScript printers. Because PostScript is a kind of programming language in its own right, the printer in fact contains a computer to take the PostScript commands and turn them into the final image. By and large, if your Mac sometimes says "A PostScript error has been generated. The document is OK but cannot be printed" when you try to output something, the chances are that your printer doesn't have enough memory – so you'll have to talk to your supplier about getting a RAM upgrade. To make sure that this is the case, watch the small 'status' box that appears when you're printing (this doesn't appear if you're printing in the background, so turn background printing off from the Chooser). It normally says things like "status: processing job". But if an error occurs, you'll see a brief message of the form "error:" followed by a description. If it's a 'limitcheck' error, then that means that the printer is out of memory. As the message says, the document is fine – it's just that your printer can't handle it.

Some laser printers have a SCSI socket on the back. Why?

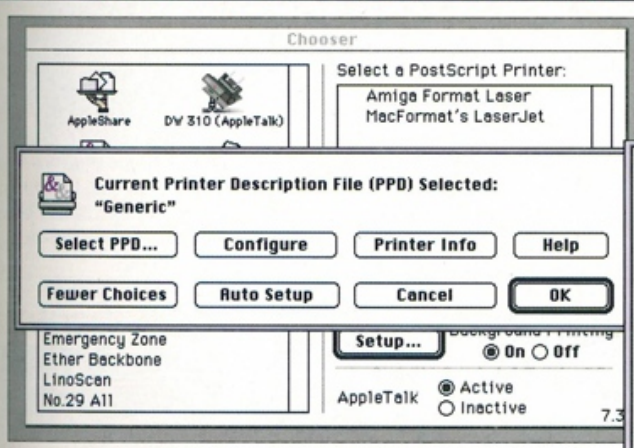
If you have a PostScript printer, you may be able to connect a hard drive to it, on which you can store fonts. When a document is printed, your Mac sends ('downloads') all the fonts that the document contains to the printer – and that can take some time. If the fonts are available on the printer's own hard drive, they can be accessed much more quickly, and that in turn speeds up printing. However, it's normally only high-end printers that have this feature – check before you buy a hard drive!

What if I need colour?

Then you need a colour printer – or, more precisely, a printer capable of colour output. Why the distinction? Well, although there is only one method of printing in colour there are two ways of doing it. Printing colour means building up an image using the four basic colour inks: cyan (a kind of blue), magenta, yellow and black. Every colour on the printed page is made up of dots of these four colours, in various proportions – red, for example, is 100% magenta plus 100% yellow. (Black is necessary because printing inks aren't quite opaque enough to produce a true black even if you mix 100% of all the other three.)

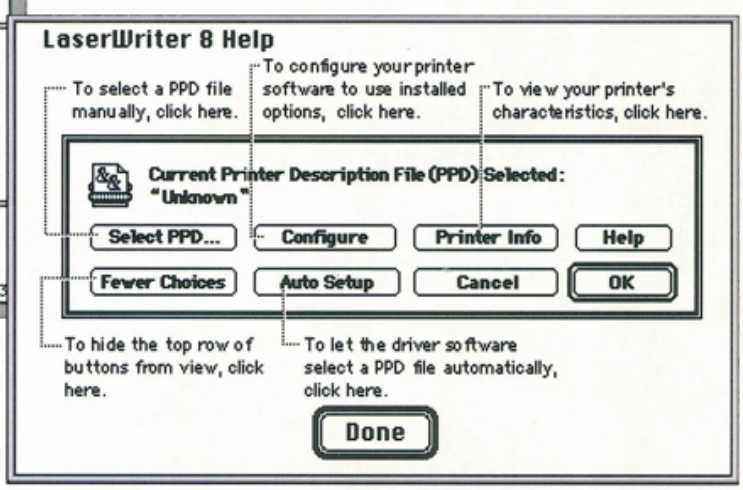
Now, you can get colour output by using either a printer with several inkjets (say) laying down the different colours at one time, or a printer on which you can swap the ink reservoir and print different colours in several passes. The latter method requires a fairly powerful page-makeup program that can output 'separations' one at a time, and it can result in muddy or misaligned colours, so it's probably worth investing in a 'real' colour printer. Apple's colour-capable StyleWriter is £600 (see News pages); colour printers begin at under £400 and range up to thousands. *Ian Wrigley*

GETTING THE MOST FROM YOUR LASER PRINTER



If you're using Apple's LaserWriter 8 driver, the **Setup** button in the Chooser gives you various choices to optimise your printer's performance.

Most PostScript laser printers will produce perfectly acceptable output if you use Apple's standard LaserWriter printer driver. However, not all laser printers are the same – some offer higher resolution output than others; some support newer versions of the PostScript language – so Apple's new LaserWriter 8 driver aims to help you take advantage of whatever your particular printer has to offer. It takes a modular approach and invites you to select from a range of separate 'Printer Description Files' – fine if there is one for your printer! – or auto-select a 'best guess'.



A foolproof **Help** screen explains what options you have. The catch is that you need the PPD files (some come with LaserWriter 8, but there isn't one for every printer), and if you're not careful you can mismatch PPD and printer. Safer to stick to **Auto Setup** or use the 'Generic' driver, perhaps...

The write choice?

Now you know how it works, what about the hardware? Here are some budget choices from the huge range available...

On these pages we've taken a look at three low-cost, non-laser printers, each of which does a slightly different job. The StyleWriter II is probably the best known Mac-compatible inkjet available, and has been bought by tens of thousands of people. But have they made a good choice? The Hewlett-Packard DeskWriter 310 is a newcomer to the market, but Hewlett-Packard is well known for the quality of its printers – and it has the advantage that it can be persuaded to output colour. Finally, GCC's WriteMove II is designed for people on the move – it's battery powered and styled to match the PowerBook. Read on to find out what we think of them all...

An important note about ratings: these printers are designed for different tasks and are not really directly comparable with one another. The MACFORMAT ratings here assess them relative to other printers of the same kinds, *not against each other*.

Win! Win! Win!

Do you need a complete colour solution? We reviewed the Canon BJC-600 bubble jet colour printer last issue and awarded it a MACFORMAT rating of 91%. This issue you could *win* one, complete with cable and software – a package worth £850! Turn to page 106.

Apple StyleWriter II

If you're looking to buy an inkjet printer, the StyleWriter II is probably the first one that comes to your attention. It's made by Apple, after all, which must be a point in its favour (actually, the guts are made by Canon, which is no bad thing either), it outputs at 360dpi (dots per inch) and it's relatively cheap (£276). But is it the best option?

Setting the StyleWriter II up is simplicity itself. It takes up a fair bit of room on the desktop, especially when the paper tray is extended to catch your printed pages, and it doesn't look incredibly elegant, but it is styled to match the colour of your Mac if you're an aesthetically inclined person. A sheet feeder comes as standard, although it can be removed – handy if you're short of space or if you want to print on particularly thick paper or envelopes.

Although the printer connects to your Mac via a serial cable, if you're also on a network you can easily share your printer with other people – simply select the requisite option from the Chooser. Do note, though, that this might have an effect on your Mac's speed while other people are printing.

Output quality is excellent, although things can be rather slow – especially if you're printing a complex page. Because it's a QuickDraw device (as are the other two printers on test), you'll need *Adobe Type Manager* if you want to print smooth PostScript fonts, and it does have some slight glitches when outputting from *QuarkXPress* – Quark is aware of the problem, but since the program is really designed for output to PostScript devices, it's unlikely to be fixed.

You can output in three modes: Best, Normal, and Draft. There's very little difference between Best and Normal; indeed, often Normal produces the higher-quality results. Draft involves the printer head only making one pass for each printed line, rather than two, so is faster and lighter on ink usage, but lower quality. On the other hand, it's perfectly acceptable for printing text-only documents. And the speed increase is certainly worth it: a seven-page document containing Helvetica text only took around four and a half minutes in Best and Normal modes, while Draft mode took just two minutes and 40 seconds. (For comparison, our office Hewlett-Packard LaserJet PostScript printer had the seven pages ready in one minute and 20 seconds.)

The StyleWriter II is an excellent device, and for a long time had the lion's share of the Mac inkjet printer market. It can still be highly recommended, but coming up hot on its heels is the next printer on test, the Hewlett-Packard DeskWriter 310.

■ *Thanks to Ryman Computer Store, Bath, for generously supplying a StyleWriter II for review.*

STYLEWRITER II

Price: £276. For further information call Apple free on 0800 127753.

Good points

Affordable; high quality output; sheet feeder supplied; shareable.

Bad points

Takes up a lot of desk space.

MACFORMAT RATING 87%

Hewlett-Packard DeskWriter 310

Hewlett-Packard has long been known in the printer market; the company's LaserJet machines account for well over 50 percent of laser printer sales in the UK every year. The company has been making Mac-compatible inkjet printers for a few years, probably the best known being the DeskWriter 550. However, the new(ish) DeskWriter 310 is set to take over the mantle, and will undoubtedly prove extremely popular with Mac owners on a number of counts – not least the fact that it's capable of very reasonable colour output.

Setting up the 310 is a little like something out of *The Krypton Factor*. To add the printer itself to the sheet feeder involves rather a lot of scratching of the head and looking in puzzlement at the manual the first time you do it, although to be fair it's perfectly easy after that and the unusual configuration with the printing unit itself at an angle seems to work fine. The printer connects to the Mac via a serial lead or AppleTalk, so it's totally networked from day one – there's no need to set up any kind of sharing on the Mac.

Unfortunately, unlike the StyleWriter, the DeskWriter has no real tray to collect the printed output; there are a couple of spring-loaded pieces of plastic to stop it dropping immediately on to the next sheet, so avoiding the problem of smudging, but I found that the paper didn't tend to drop down very cleanly, and I had to keep an eye on the output to stop it all sliding on to the floor.

Given that, though, the printer performed admirably. Colour output is by way of a special 'colour kit', which essentially consists of a special ink cartridge containing the different colours, and output quality was good. Our test seven-page document was output in almost exactly the same time as the StyleWriter II when in Normal mode, although Draft mode was somewhat slower – just over four minutes.

The fact that this is a very cheap colour printer, which is fully networkable, will make it a popular choice for a lot of people – and it's certainly well worth considering before you charge off and buy a StyleWriter – especially since it's almost exactly the same price.

HP DeskWriter 310

Price: £329 (with sheet feeder), £270 (without). For further information call Hewlett-Packard on 0344 369222.

Good points

Networked; colour output; sheet feeder supplied; can run off batteries.

Bad points

No proper mechanism for receiving pages after they've been output. Would have rated much better otherwise!

MACFORMAT RATING **90%**

GCC WriteMove II

The WriteMove II is designed for a particular task: to be used while you're 'on the road'. In no way is it intended to be a high volume output device; rather, you'd use it to print out a quick quote for a job or a brief letter.

The printer is supplied with both a battery and a mains power adaptor; the adaptor takes the form of a separate 'brick' rather than being built in to the plug. This is a pain, since the lead from the transformer to the printer isn't long enough to leave the transformer on the floor, and instead you must find space for it on your desk (or very close to the printer). Similarly, the serial cable which links the printer to the Mac is a little too short for my liking – especially given that it's designed to be used in places like cars, where you'd want to put the printer on the seat next to you while your PowerBook was balanced on your knees.

The manual which comes with the printer says that *Adobe Type Manager* is included, but a small errata sheet states that since Apple computers can now use TrueType fonts, *ATM* has no longer been bundled. GCC will, however, send you a free copy if you request one.

Unlike the other two printers on these pages, the WriteMove II isn't an inkjet printer, but instead uses a ribbon and a process called 'thermal fusion'. Two different ribbons are available: a single-strike version produces the best quality and will last for around 20 pages, and a multi-strike ribbon doesn't give such good results but will give about 80 pages of life. Yes, 20 pages and 80 pages – so you won't be using the WriteMove to output your 20,000-word thesis. This is especially true given the print speed – our seven-page test document took almost 20 minutes to output, and there's no sheet feeder, so each page must be manually inserted.

The print quality itself is reasonable, but nothing to write home about. Black areas have speckles of white in them, and even text can appear to be less than perfect. You would certainly not want to output much in the way of graphics, although obviously that's not what the machine is intended for.

I found myself wishing that I could like the WriteMove II more than I did. It's a neat idea, a compact design, and clearly something for which there's a need. However, I'm afraid that in the end it's just too expensive and not good enough quality. If I were out on the road I'd prefer to take something like the DeskWriter 310 (without its sheet feeder), or even the StyleWriter and borrow someone's mains socket if I wanted to print something out. A real pity.

Ian Wrigley

Alternatively

If you need a portable printer, you might also consider Apple's Portable StyleWriter (unfortunately not received in time for this review). It's light, uses the old standard StyleWriter I ink cartridge, and comes complete with battery (claimed life: up to 50 pages), recharger, cable and 39 TrueType fonts. It too costs £351. For more details, phone Apple free on 0800 127753.

GCC WriteMove II

Price: £351. For further information call GCC Technologies on 081 565 4030.

Good points

Small; battery-powered.

Bad points

Extremely slow; print quality isn't great; short ribbon life; short battery life (12 to 16 pages); expensive.

MACFORMAT RATING **63%**

Harwoods have been established since 1955 and providing Computer Systems since 1982. We have always emphasised our quality of service which has included facilities that you may be charged for elsewhere...

Why not pay us a visit ...we are only 5 minutes from M1 Junction 29. Opening Times: Monday to Saturday 9.00am till 5.30pm. Wednesday 9.00am till 1.00pm REMEMBER WE ARE OPEN EVERY SATURDAY!

the harwood Directory

Apple™ Authorised Reseller

...in Derbyshire/Nottinghamshire & by Mail Order... Nationwide

WHY NOT FAX YOUR [illegible] 0773 831[illegible] (We will confirm back imm[illegible] OR... FAX FOR A QUICK-QUO[illegible]

FREE DIRECT DELIVERY SERVICE

FREE WARRANTY COLLECTION

FREE EQUIPMENT CONFIGURATION SERVICE BY HARWOOD ENGINEERS

FREE HELPLINE SUPPORT

CREDIT & CHARGECARD FACILITIES

MOST PACKS INCLUDE A FREE STARTER KIT AND APPLICATION SOFTWARE

FINANCE FACILITIES AVAILABLE

FREE APPLE ON-SITE WARRANTIES

MOST PACKS INCLUDE KEYBOARD, MOUSE, SYSTEM S/W etc

TAX HOME PRICES IN BRACKETS... EXC. VAT

TAX BUSINESS BOLD PRICES ARE EXC. VAT

SHOWROOM OPEN ON SATURDAYS TOO!

SHOWROOM DEMONSTRATIONS & HELP AVAILABLE.
PAY US A VISIT: Before making a special journey... Please phone us to arrange for a specific demonstration if required, to check availability and to confirm that prices are still current (see notes re "PRICES" below).

We are open 9.00 to 5.30 on 5 days, Wednesday 9.00am to 1.00pm

How to order...

BY PHONE: Phone our Order Hotline with your Access, Visa, Mastercard, Connect, Delta, Switch or Limbard Creditcharge Card Quoting card number & expiry date (most Dixons, Currys, and other 'store' cards are Limbard Creditcharge and are happily accepted by us) & issue number where necessary (eg. Switch etc)

BY POST: Make cheques, bankers/building society drafts or postal orders payable to GORDON HARWOOD COMPUTERS. (Personal/business cheques take 7days to clear from day of receipt whereupon your order will be despatched). Please send Name, Address, and most importantly if possible, a Daytime Telephone Number along with your order requirements. Please check you are ordering from our latest advertisement before posting (phone if you require confirmation).

PRICES: Please remember that for example "September issues" may be on sale as early as July, meaning that prices and offers advertised therein which may appear up to date, could have been changed (we often have to provide artwork to magazines up to a month before the magazine is on sale). We therefore reserve the right to alter a specific item or pack price (either up or down) in the unlikely event of the cost price we pay changing. Please phone FIRST!

EXPORT: Most items are available at TAX FREE PRICES to non UK residents and service personnel. Please contact us for confirmation of export prices before ordering.

FREE DELIVERY: by Parcel Force, UK Mainland only, OR: SPEEDY NEXT WORKING DAY COURIER SERVICE. Add just £6.00 per major item for guaranteed delivery (or £13.00 for Saturday delivery). UK Mainland most regions. (Despatch normally on day of order or payment clearance). Overseas rates on request.

All listed prices are what YOU PAY, and there are NO HIDDEN EXTRAS. Prices are correct at time of going to press (Pack details may vary from time to time). Offers and Services are subject to availability and to being the latest advertised products, packs and prices. Please note goods are not supplied on a trial basis. E&OE.

APPLE MACINTOSH DESKTOP SYSTEMS

Macs from only... £759 including Monitor, Keyboard & Software LIMITED STOCKS!!!

FREE... CLARIS HOME PAGE Software WORTH over £100 with ALL our Macintosh Systems!!!

FREE On-Site with MACS, CDs & Monitors when purchased together as a complete system!!!

Starter Pack worth £30 with all Trinitron Systems

MONITOR OPTION / MAC MODEL	14" Performa Plus Hi-Res Colour Monitor .28mm Dot Pitch		Apple 14" Trinitron Hi-Res Colour Monitor .26mm Dot Pitch	
LCIII, 4/80 25MHz, 68030, Up to 16" Display Support, Up to 36Mb. RAM	£759 (£892) Only Whilst Stocks Last PHONE NOW!!!		£879 (£1033) Only Whilst Stocks Last PHONE NOW!!!	
LC475, 4/80 25MHz, 68LC040, 32Bit Bus, Up to 36Mb. RAM	4/80	£889 (£1045)	4/80	£999 (£1174)
	8/160	£999 (£1174)	8/160	£1119 (£1315)
QUADRA 610 + Ethernet 25MHz, 68040, FPU, Up to 68Mb. RAM	4/160	£1229 (£1445)	4/160	£1354 (£1591)
	4/160 CD	£1449 (£1703)	4/160 CD	£1559 (£1832)
	8/230 CD	£1729 (£2032)	8/230 CD	£1829 (£2150)
QUADRA 650+Ethernet 33MHz, 68040, FPU, Up to 136Mb. RAM, 3 NUBUS Slots	4/160 CD	£1679 (£1973)	4/160 CD	£1789 (£2103)
	8/230 CD	£1959 (£2302)	8/230 CD	£2079 (£2443)
QUADRA 660AV (Audio Visual) + Ethernet 25MHz, 68040, FPU, Up to 68Mb. RAM, 55MHz DSP	8/230 CD	£2059 (£2420)	8/230 CD	£2169 (£2549)
	8/500 CD	£2329 (£2737)	8/500 CD	£2449 (£2878)

FREE only at Harwoods...
- FREE Starter Pack worth £30 with any Mac Colour Trinitron Monitor System... 10-DS/HD Disks, Mouse Mechanic Maintenance Tool, Disk Head Cleaner & Mouse Mat.
- ALL Macs (above) include Keyboard, Mouse, System 7.1 and are fully tested/pre-configured/software installed.
- FREE Apple 12 months on-site maintenance - ALL Macs
- FREE Claris Works worth over £100 with ALL Macs

FREE A FREE CLARIS WORKS WP, Database, Draw, S/Sheet & COMMS WORTH OVER £100!

Remember to check that prices quoted by other suppliers INCLUDE all of this IN THE PRICE!!!

QUADRA 840AV POWER

ASK ABOUT UPGRADE TRADE-IN BARGAINS TOO!

8/500CD £2949 (£3466)

The ULTIMATE MACS with a speed of 60Mhz via DSP using a 40Mhz CPU

16/1000CD £3499 (£4112)

FREE On-Site with all Apple Quadras!!!

APPLE LC475 SUPER SAVER BUNDLE
Simply Plug in and Play...

- Apple LC475 4/80 or 8/160
- Apple Keyboard 2
- Apple StyleWriter II Printer
- Apple Performa 14" Colour Monitor
- Claris Works Software
- All Cables
- Pre Configured
- Fully Tested
- Software Installed
- FREE On-site Warranty

FREE On-Site with LC475 Bundle

LC475 4/80 £1099 (£1292) | LC475 8/160 £1225 (£1440)

LAST FEW LCIII BUNDLE BARGAINS...

ONLY 4 MORE Stocks Limited

Only £994 (£1168)

- Apple LCIII 4/80
- Apple Keyboard 2
- Apple StyleWriter II Printer
- Apple Performa 14" Colour Monitor
- Claris Works Software
- All Cables
- Ten DS/HD Disks
- Disk Head Cleaning Kit
- Mouse Mechanic Tool
- Mouse Mat

GREAT REASONS TO BUY FROM HARWOODS...

When you buy from Harwoods, you not only get a quality of service second to none, you also benefit from EXTRAS INCLUDED IN OUR PACKS You won't need to buy anything else for ages!!!

FREE WITH EVERY DESKTOP MAC

FULLY INTEGRATED PACKAGE WORTH OVER £100...
- WORD PROCESSING
- SPREADSHEET
- DATABASE
- DRAW/GRAPHICS
- GRAPHS & CHARTS
- COMMS

THE HIGHLY ACCLAIMED... all in one compact fast application with an upgrade path to other products in the Claris range

FREE WITH EVERY TRINITRON COLOUR DESKTOP MAC SYSTEM

EXCLUSIVE STARTER PACK WORTH OVER £30...
With any Desktop Colour Trinitron Mac System
- 10 HIGH DENSITY FLOPPY DISKS
- MOUSE MAT
- DISK HEAD CLEANING KIT
- MOUSE MECHANIC - MOUSE TOOL

FREE WITH ALL PORTABLE MACS

EXCLUSIVE STARTER PACK WORTH £30...
With any Powerbook or Duo you get a free...
- GENUINE APPLE CARRY CASE

With Colour Powerbooks or Duo's you also get...
- FREE MONITOR CABLE ADAPTOR

FREE WITH ALL MAJOR APPLE HARDWARE PRODUCTS

APPLE ON-SITE MAINTENANCE FOR A FULL YEAR...
No more waiting for products to be returned...
- SIMPLY PHONE & AN ENGINEER WILL CALL AT YOUR ADDRESS THE NEXT WORKING DAY
- COVER IS FOR A FULL YEAR
- REPAIRS WILL BE FREE (both parts AND labour)
- OPTION TO EXTEND COVER FOR UP TO 3 YEARS

Offer applies to all Major Apple hardware (unless on-site is detailed as optional eg. Add-On CD Players etc.) Please contact us should you require full details of applicable goods/service details

WARRANTY UPGRADE! If you have Apple hardware under normal warranty... YOU CAN NOW PURCHASE EXTENDED/ON-SITE PEACE OF MIND COVER AT VERY SPECIAL LOW PRICES...

FREE On-Site for goods displaying this logo!

FREE WITH EVERY MACINTOSH
- FULL CONFIGURATION SERVICE
- COMPLETE SYSTEM SOFTWARE INSTALLATION
- SYSTEM DISKS AND MANUALS

STOP PRESS...NEW PRODUCTS...STOP PRESS

QuickTake 100 Camera

NEW APPLE CAMERA A FAST WAY TO GET PHOTOS INTO A MAC
- 24 Bit Colour Images
- 320 x 240 or 640 x 480 pixels
- Between 8 and 32 images can be stored in memory
- Auto EXPOSURE from 1/30 to 1/175 sec.
- Apertures: f2.8 - f16
- Focus 4ft to infinity
- Auto Flash
- Images download to Mac up to 1 yr later
- Std Tripod Socket

PHONE US FOR MORE INFORMATION NOW!

AMAZING RAM DOUBLER

SUPERB SOFTWARE THAT REALLY DOES DOUBLE THE RAM OF YOUR MAC (see the magazine reviews to find out just how good this one is!) £53 (£61)

SUPRA 144LC V.32bis Fax Modem
- 14400BPS
- 1 Year Warranty
- Includes MAC SOFTWARE for BOTH fax & modem (not BABT approved)

Amazing Value: £136 (£159)

LINOTYPE HELL FONT CD DISK

'Just in Time' Font CD - 2400 Viewable Linotype PostScript Fonts plus Font Utilities & Clip Art to buy & unlock by telephone and includes SOME FREE PRINTABLE FONTS & CLIP ART! ONLY £14.95 (£18)

MACINTOSH RAM UPGRADES

ALL CONFIGURATIONS AVAILABLE. Shown are just a few examples:
- For Classic, LC and LCII 1Mb. £42.51 (£50) 4Mb. £127.51 (£150)
- For LCIII, LC475, QuadraC610/650 4Mb. £127.51 (£150) 8Mb. £255.27 (£300)
- For PowerBook 145/165/180 4Mb. £169.95 (£200)

Free fitting for personal callers

PowerPC

14/3/94 LAUNCH DATE JUST ANNOUNCED... Phone us and ask for your FREE information pack for despatch as soon as possible

ROBOTICS Fax Modem

SPORTSTER EXTERNAL...
- 14400BPS
- BABT APPROVED
- Inc. SOFTWARE

£236 (£278)

Apple Replacement Keyboards

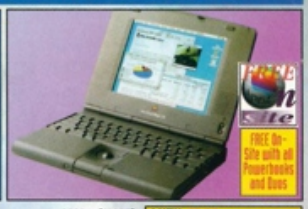
Standard	£80 (£94)
Extended	£140 (£165)
Ergonomic	£165 (£194)

(Fully Adjustable)

Offers & Services are subject to availability and to being the latest advertised products, packs and prices. Please note goods are not supplied on a trial basis. E&OE.

APPLE MACINTOSH PORTABLE SYSTEMS

FREE STARTER PACK worth £30 only from Harwoods!
Genuine Apple™ Carry Case WITH ALL POWERBOOKS, with Colour Powerbooks you also get a FREE Monitor Cable Adaptor. ALL our Powerbooks include batteries & charger unit!!!
Phone NOW!!!



145B, 4/80 Mono	£899	(£1057)
145B, 4/120 Mono	£1049	(£1233)
165, 4/80 Mono	£1129	(£1327)
165, 4/160 Mono	£1299	(£1527)
165C, 4/80 Colour	£1279	(£1503)
165C, 4/120 Colour	£1449	(£1703)
165C, 4/120EM Colour [inc. Express Modem]	£1749	(£2055)
180, 4/120 Mono	£1849	(£2173)
180, 4/120EM Mono [inc. Express Modem]	£2049	(£2408)
180C, 4/160 Colour	£1999	(£2349)
180C, 4/160EM Colour [inc. Express Modem]	£2199	(£2584)
Duo 230, 4/80 Mono	£799	(£939)
Duo 230, 4/80 Mono & 1.4Mb. Floppy Drive	£849	(£998)
Duo 230, 4/80 Mono inc. Duo Dock	£1399	(£1644)
Duo 230, 4/120 Mono	£949	(£1116)
Duo 230, 4/120 Mono inc. Duo Dock Plus	£1649	(£1938)
Duo 250, 4/200 Mono	£1599	(£1879)
Duo 250, 12/200EM Mono [inc. Exp. Modem]	£1949	(£2290)
Duo 270, 4/240 Colour	£1899	(£2232)
Duo 270, 12/240EM Colour [inc. Exp. Modem]	£2299	(£2702)
POWERBOOK FILE ASSISTANT - File sync. Mac-P/Book	£PHONE NOW!	

WITH FREE 1 YEAR ON-SITE WARRANTY AND AN OPTION TO EXTEND COVER UP TO 3 YEARS

ASK US ABOUT THE OPTION TO ADD CLARIS WORKS TO YOUR

ORDER FOR A POWER-BOOK OR DUO AT A FRACTION OF THE NORMAL PRICE!!!

APPLE DUO ACCESSORIES...

Apple Duo Upgrade Option: Upgrade your 210/230 to Duo 250 or 270 Specifications	£Phone for Details	
Duo Dock - all Duos except 270	£559	(£657)
Duo Dock Plus - a must for a Duo 270 or an option for all Duos	£885	(£1040)
Duo Docks can be upgraded to a Duo Dock Plus when moving up to a 270!!!	Ask for Details	
NEW Longer Life Hi-Capacity Power-book Duo Batteries - 2.5 to 6Hrs life!	£43	(£51)

INKJET PRINTERS TO SUIT YOUR POCKET!!!

FULL RANGE OF ACCESSORIES FOR INKJET PRINTERS ON STOCK INCLUDING NEW INKJET CARTRIDGES AT GREAT PRICES... Please call for details and prices!!!

Apple StyleWriter II-Mono, FAST 2ppm, 360dpi, 138 Greyscales *On-site Warranty optional	£235	(£277)
Portable StyleWriter-Mono, 1ppm, Inc. Batteries/Charger *On-site Warranty optional	£299	(£352)
HP DeskWriter 310-Mono, Lightweight portable budget inkjet	£195	(£230)
HP DeskWriter 310-Optional colour kit for above	£31.95	(£37.54)
HP DeskWriter M 510-Mono	£219	(£258)
HP DeskWriter C 500-Colour	£269	(£317)
HP DeskWriter C 550-Colour	£429	(£504)

ALL THESE INKJET PRINTERS ARE SUPPLIED WITH A SERIAL CABLE FREE OF CHARGE!!!

A3/A4, FULL COLOUR, 360dpi, ideal for colour proofing etc. Inkjet Technology at its BEST!!! CMYK Colour Print capability, Apples badged version of Canons similar BJC 820 selling for almost £2000

Last Few at a Special Price... £Phone

Also available - Optional PostScript emulation software to enable printing of PostScript files - please ask for details.

STOP PRESS...NEW APPLE PRINTER...STOP PRESS

NEW Apple Colour StyleWriter Pro
A superior quality Ink-Jet Printer for BOTH Colour (CMYK) and Mono output. Ideal for Home, Business or Educational use. 360dpi resolution and up to 2 ppm of A4 printing. Apple ColourShare colour matching Technology built in. Supplied with 64 TrueType Fonts. Prints on Plain Paper, Transparency, Coated Paper and BRCH PRINT PAPER for exceptional near Dye-Sub quality results! RSK FOR YOUR INFO PACK AND LOOK OUT FOR MAGAZINE REVIEWS!

PHONE US NOW!!!

AFFORDABLE LASER PRINTERS

PRINTER MODEL TYPE	SIZE	dpi	ppm	PostScript	Special Feature	PRICE
PERSONAL LASERWRITER 300	A4	300	4	✗	LOW COST	£499 (£587)
PERSONAL LASERWRITER 320	A4	300	5	✓Level 2	RISC Based	£675 (£794)
LASERWRITER SELECT 360	A4	600	10	✓Level 2	Auto Emulation	£1239 (£1527)
HEWLETT PACKARD HP 4ML	A4	300	4	✓Level 2	Manual Emulation	£799 (£939)
HEWLETT PACKARD HP 4MP	A4	600	4	✓Level 2	Auto Emulation	£1089 (£1280)
HEWLETT PACKARD HP 4M	A4	600	8	✓Level 2	Auto Emulation	£1399 (£1644)
GCC BLP ECLIPSE 4	A4	300	4	✓Level 2	Edge to Edge Print	£775 (£911)
GCC BLP ECLIPSE 8	A4	300	8	✓Level 2	Edge to Edge Print	£999 (£1174)

FREE On-Site with ALL Apple Lasers!!!

ALL OUR LASER PRINTERS ARE SUPPLIED WITH A SERIAL CABLE FREE OF CHARGE!

APPLE MACINTOSH MONITORS

PRICE BREAKTHROUGH BUT LIMITED STOCKS!!!

A MASSIVE 30% EXTRA VIEWABLE AREA ON SCREEN*!!!

ATTENTION 12" MONITOR OWNERS, FOR A LOW COST REPLACEMENT...

If you have an LC, LCII or other Mac with a 12" Colour Monitor*, take this chance to increase your view to the FULL WIDTH of an A4 letter on screen!!! NO MORE scrolling from side to side. .28 Dot Pitch 14" Colour Display featuring... Anti Glare Screen & Tilt and Swivel Stand built-in. An ideal LOW COST option with crisp, clear flicker free high resolution of 640 x 480.
GREAT APPLE PERFORMA PLUS IS A BRILLIANT MONITOR FOR THE PRICE!

£159 (£187) Optional On-site warranty available

MONITOR MODEL TYPE	COLOUR	SIZE	DOT PITCH	RESOLUTION	REFRESH RATE	PRICE
APPLE 14" PERFORMA	✓	14"	0.28	640 X 480	60.0hertz	£159 (£187)
APPLE 14" TRINITRON	✓	14"	0.26	640 X 480	66.7hertz	£259 (£305)
APPLE 16" TRINITRON	✓	16"	0.28	832 X 624	75.0hertz	£639 (£822)
PHILIPS 17" STEREO	✓	17"	0.31	1024 X 768	72.0hertz	£539 (£704)
PHILIPS 20" TRINITRON	✓	20"	0.31	1152 X 872	82/160hz	£1399 (£1644)

APPLE MACINTOSH SCANNERS

NEW EPSON GTX AND GTI RANGE AT EVEN KEENER PRICES and WITH SOFTWARE!

NEW GTX 6500 upto 1200dpi with Photoshop LE & Omnipage Direct	£699 (£822)
NEW GTI 6500 upto 1200dpi with the FULL VERSION of Photoshop	£849 (£998)
NEW GTX 8000 upto 1600dpi with Photoshop LE & Omnipage Direct	£875 (£1029)
NEW GTI 8000 upto 1600dpi with the FULL VERSION of Photoshop	£999 (£1174)

Logitech Scanman 32 Hand held 100/400 dpi scanner, 32 greyscales, SCSI interface, with software, OCR compatible £195 (£230)

MACINTOSH CD ROM & MULTIMEDIA PACKS

Buy a CD Player and get the Linotype Font CD for only £9.95

APPLE POWER CD PORTABLE - Link to Mac via SCSI Port, Link to TV via SCART/CVBS to play Photo CD. Plays stereo audio CD through Hi-Fi System. Inc. SCSI cable & Terminator

APPLE CD 300 ROM DRIVE - Dual Speed, Photo CD, stereo audio and CD ROM on your MACINTOSH. (Please state if you require a SCSI cable and/or terminator when ordering).

£169 (£199) Optional On-site warranty available

£Phone Optional On-site warranty available

PHONE US NOW FOR DETAILS OF CD SOFTWARE TITLES INCLUDING GAMES AT SPECIAL PRICES!

APPLE MULTIMEDIA ADD ON - For existing Mac owners this great kit to adds Multi-media in one complete package! Contains AppleDesign Powered Speakers, High Speed AppleCD 300 ROM Drive, QuickTime, SCSI Cables & Terminator plus Software.

FOR MAC: **£295** (£347) Optional On-site warranty available

FOR PC: **£335** (£394) Optional On-site warranty available

APPLE NEWTON NEW LOW PRICE SUPER DEALS!!!

£389 (£457)

'On the move organisin'. Note-Pad, To-Do List, Date Book/Name File. Supplied with 4 AAA Batteries & AC Adaptor. ALL OUR NEWTONS HAVE A FULL 1 YEAR APPLE DIRECT REPLACEMENT WARRANTY!!!

NEWTON WITH COMMS £499 (£587)

NEWTON ACCESSORIES...

1Mb. Storage Card	£123.31	(£145)
2Mb. Storage Card	£PHONE	
Re-Charger & Battery	£36.13	(£43)
Carry Case	£29.48	(£35)
External FAX Modem	£134.13	(£153)
Leather Carry Case	£39.79	(£47)
Rechargeable Batt. Pack	£11.82	(£13)
Synthetic Carry Case	£15.23	(£18)

NEWTON SOFTWARE...

Fortune 500 Guide to America	£52.54	(£62)
Fodor's '94 Travel	£52.54	(£62)
Business Forms	£20.41	(£24)
Expense Plus!	£50.38	(£59)
Day-Timer Meeting & Expense Pack	£50.38	(£59)
GoFigure	£35.82	(£42)

GENUINE UK SOFTWARE AT GREAT PRICES!!!

Probably the LOWEST PRICES on UK Software...Definitely NO Grey Imports!

WORD PROCESSING		
Microsoft Word 5.1	£179	(£211)
MacWrite Pro	£135	(£159)
ACCOUNTS/SPREADSHEETS		
SAGE Bookkeeper	£145	(£171)
SAGE Accountant	£299	(£352)
Microsoft Excel	£229	(£270)
DARKROOM		
Photoshop 2.5	£545	(£641)
Morph	£99	(£117)
INTEGRATED		
Claris Works I	£99	(£117)
Claris Works II	£149	(£176)
Microsoft Works	£99	(£117)
UTILITIES		
After Dark	£37.50	(£45)
More After Dark	£27.50	(£33)
Capt. Marvel Saver	£20.99	(£25)
Norton Utilities	£99	(£117)

MISCELLANEOUS		
AutoRoute	£99	(£117)
DTP/DRAWING		
NEW Quark Express 3.2	£599	(£704)
NEW Aldus FreeHand 4.0	£324	(£381)
PageMaker 5.0	£495	(£582)
Adobe Illustrator 5.0	£365	(£429)

NEW SYSTEM 7 PRO Latest System software from Apple - feature packed for the future... £89 (£105)

GAMES GALORE - Phone us!!!

UTILITIES		
NOW Utilities	£99	(£117)
Apple PC Exchange	£45	(£53)
Apple QuickTime	£95	(£112)
Apple System 7.1	£45	(£53)
Apple At Ease	£35	(£42)

gordon harwood computers
Dept. MF/A2 NEW STREET ALFRETON DERBYSHIRE DE55 7BP
0773 521606 or 836781

Getting your story

Continuing our series on getting your small publication up and running, here's the scoop on what you should know about researching, interviewing and reporting your story.

Whether you're producing a newsletter, fanzine, house journal or comic using your Mac, you need to know at least the basics of publishing. In this series so far we have talked about planning and targeting your publication (MACFORMAT 7), what equipment and skills you need to get started (MF 8), the basics of page design (MF 9), and finding what kind of material you want to include (last issue). (If you missed any of these issues, turn to page 94.) Now that you know what content you want, it's time to talk about going out to get it.

What should published writing aim to be? Stylish, perhaps. Provocative, perhaps. Informative, definitely. More importantly, your publication must be accurate, and it ought to be fair. Accuracy is about finding good sources of information and checking what they say. Fairness is about making sure people are treated properly. The level of both needs to be much higher than in normal chit-chat.

Journalism traditionally makes a commitment to objectivity. That means that you leave yourself, and your own feelings about issues, out of the story. You should aim to speak to everyone who is mentioned in a story and include their point of view. You can't actually be objective, but you should try to be.

Feature writing allows more leeway. You are at liberty to include your own feelings and views if you can convince the reader of their merits. You can be as impassioned as you like. But you should still play fair: tricking people, conning them, distorting what they say is wrong and can be legally disastrous.

In your own publication you are free to be as one-sided and propagandist as you like, although you will have to obey the law of the land: things like fanzines are absolutely one-sided. But if your aim is to achieve any kind of authority, respect or long-term survival with a less partisan readership, you will find that aiming at objectivity has its advantages.

In features which are based on personalities, the tape recorder is very useful.

Where to find facts

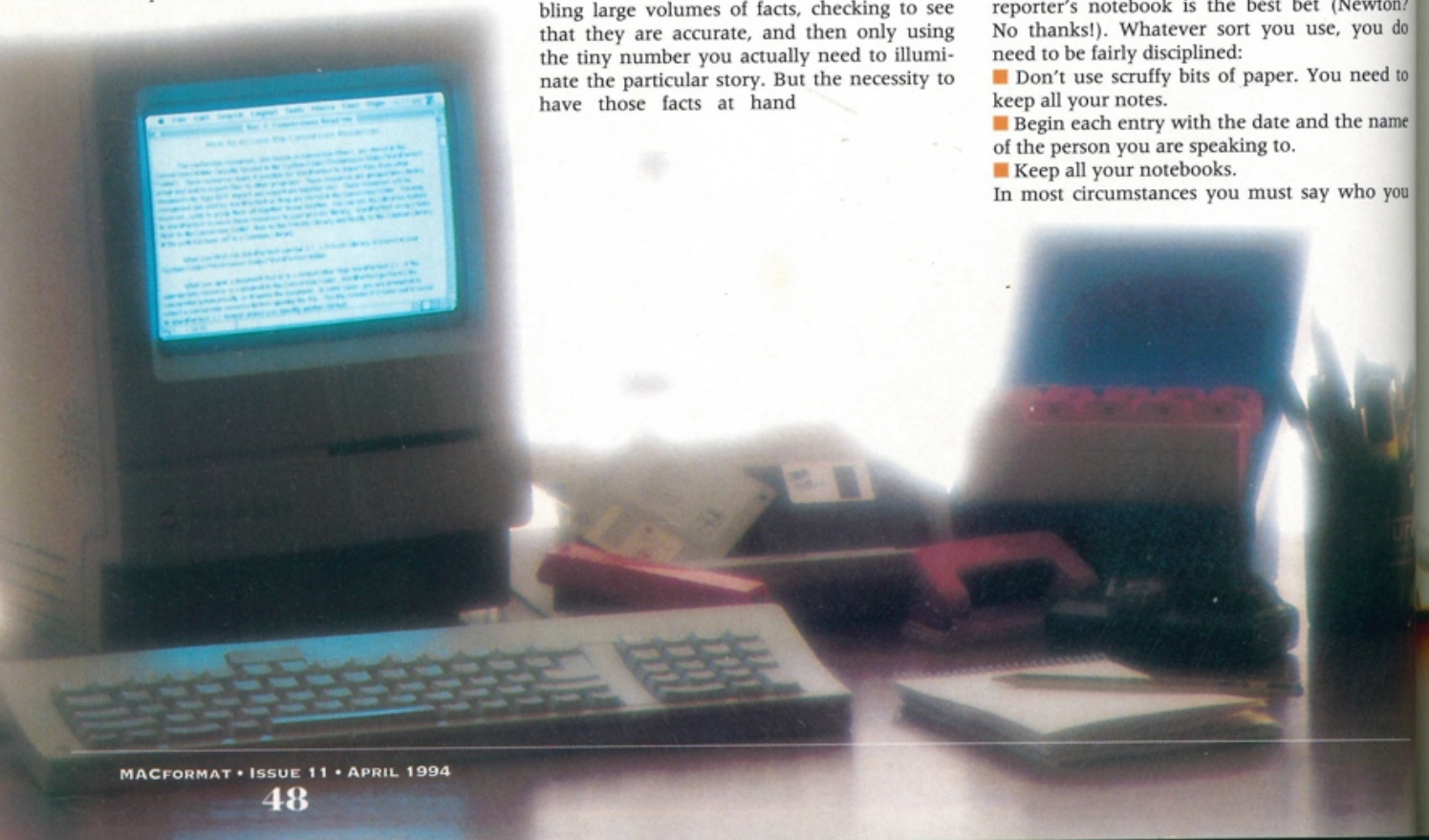
Writing for publication is often about assembling large volumes of facts, checking to see that they are accurate, and then only using the tiny number you actually need to illuminate the particular story. But the necessity to have those facts at hand means assembling relevant reference material. You will need to find a good reference library and master both traditional and electronic research techniques. You will need a variety of reference books. There are, however, very few articles which can be written entirely from printed sources; more often you will have to do some interviewing. Interviewing is about how you get on with people.

Preparation is the key. Going armed with the facts saves time (you don't need to ask them how they spell their names, or when they were born) and enables you to tell when people are being 'economical with the truth'.

There is no point in interviewing anyone if you don't have some means of recording their answers. Whether you use a tape recorder or not depends on what kind of interview you are doing, for one thing. For news purposes, you are more interested in what a person says than the way that they say it. But the principal purpose of quotes in a news story is to establish its authenticity. For these purposes, the simple reporter's notebook is the best bet (Newton? No thanks!). Whatever sort you use, you do need to be fairly disciplined:

- Don't use scruffy bits of paper. You need to keep all your notes.
- Begin each entry with the date and the name of the person you are speaking to.
- Keep all your notebooks.

In most circumstances you must say who you



are, what publication you are writing for, and what you want to know, before producing your notebook. If all you want is a couple of phrases, you can write down what they say as soon as possible after the interview, relying on memory for a few minutes.

Even writing straightforward stories, you may need to use a tape recorder if your note-taking is unreliable (it doesn't have to be shorthand, but it does have to be quick) and if there is likely to be anything very contentious or legally tricky said during the interview. As a young journalist I was told that the courts prefer a good shorthand note to tape recordings; these days the opposite seems to be true.

Interviewing for feature purposes is rather different. Obviously some features are little different from news stories, just longer. Others are perhaps more wide-ranging and complex but equally based on hard fact. In those cases, the notebook is the most use. But in features which are based on personalities, the tape recorder is very useful. Providing it is working properly (and the proportion of failures is much higher than you'd think), the tape recorder frees you to listen carefully to what the person is saying, to couch your questions more intelligently, and also to observe what is going on.

Terms and conditions

It is important to know the terms on which your interview is taking place. Anyone being interviewed should not need reminding that your intention is to seek material for publication. But there is often a confusion about whether the discussion is 'on the record' or 'off the record'. In my experience, when people say they will talk to you 'off the record' they mean one or more of the following things:

A: "I have heard some gossip but I don't know if it's true or not."

B: "I want to tell you something but I don't want you to use it."

C: "I don't mind you using the information but I want you to get it confirmed by somebody else and get somebody else's quotes to back it up."

D: "I don't mind you using my words, as long as you don't mention anything that identifies me as the source."

As you can see, there is plenty of room for confusion here. The only way round this is either not to engage in 'off the record' type conversations at all with people you don't know or to have a serious discussion first to establish exactly what you both mean.

Version **A** is simply a misuse of the term. They should simply say, "I have heard this but I have no idea whether it is true." Many good stories will come to you like that, but you have a lot of work to do.

Version **B** is used to suppress stories and should be avoided. If you promise you won't print anything someone tells you, and then they tell you something you already know, what can you publish and how can you prove you didn't break your word? Disastrous.

Don't break any silences that occur. Silences should be filled by the interviewee.

Version **C** is useful and with people you trust means you can sensibly talk 'off the record' to find out what is going on. One of my best contacts used to explain whole stories to me on this basis; then he'd ring me back with a prepared quote, often denying in his official capacity what he had just told me as a friend. That way the 'source' remained hidden.

Version **D** is what they call a 'non-attributable' conversation. It involves the person giving you the information, and a quote, and then you thinking up some form of words that will conceal their identity.

Interviewing technique

- Face to face is best. People are less rude that way. If they invite you in, and they offer you a cup of tea, take it: they will have to talk to you then, because otherwise there will be a long period of embarrassing silence.
- Make a list of questions. You don't forget any of your areas of discussion; you can structure the discussion so that the really tricky stuff comes after a lot of relaxing chit-chat.
- Do not break any silences that occur. If a silence is to be filled, it should be filled by the interviewee. It might be just what it takes to get them to say more than they had intended.

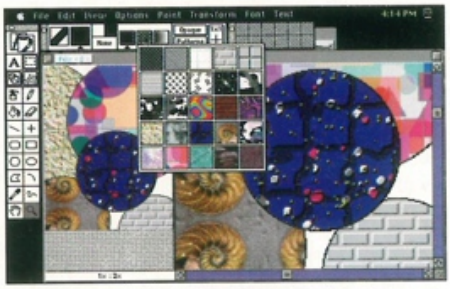
The truth is that often you hope the subject will say something unexpected, perhaps even something they will regret saying later. That's why the tape recorder is useful: they cannot 'unsay' things later. You should also reject any attempt by them to see your article before you publish it, although you may agree to read back the quotes to make sure you got them right.

The tape recorder also leaves you free to look the person in the eye and coax them into talking freely. You should keep your own expression sympathetic, interested but otherwise blank. If the interviewee catches you raising an eyebrow or frowning then an interesting line of discussion could well be cut short.

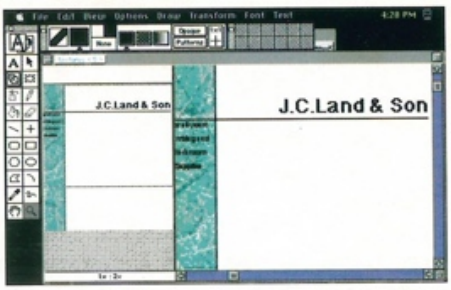
At the same time you do need to keep an eye out for their body language. A feature article requires you to record not only exactly what was said, but how: the person's accent, tone of voice and delivery.

With you sitting there ready to ambush them, it is a wonder that anyone ever consents to give an interview. But they do, usually for reasons of their own. For instance, they may want to put their side of the story across; or they may be flattered that anyone should be interested in asking their views; or they may have some overriding emotion they want to find an outlet for. People do not, however, respond to the kind of things you see in films and silly TV plays: "You have to speak, Mr Jones. The public have a right to know."

Next time, how to write up your material. *John Morrish*



In this new version of *SuperPaint* there's a good selection of fills which are fun for whacky start-up screens and also ideal for slide or screen presentation backgrounds.



Using the texture fills, *SuperPaint* is excellent for visualising. You can create a panel of texture on the page, then overlay your type, as in the letterhead visual above.

SuperPaint also has a good collection of patterns for use as backgrounds to your illustrations or as artwork in themselves. Some of them hurt the eyes more than others!

More for your Monet

You can now get the best of both worlds with *SuperPaint 3.5* – a draw and paint program combined – without having to pay the earth for it.

SuperPaint 3.5 is a hybrid graphics program combining the best of the object-oriented drawing programs, like *FreeHand* and *Illustrator*, with the ability to work in a 24-bit paint environment.

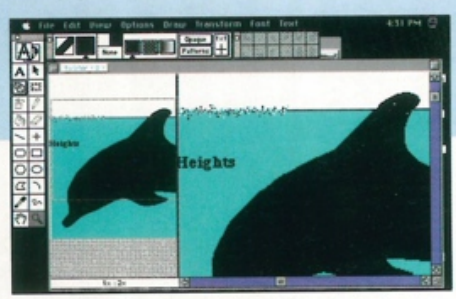
SuperPaint uses a system of layer controls to move between the paint and draw modes, so you can mix and match between the PostScript objects, painted images, imported pictures and text. However, you can't edit through these layers. If you create an image in the drawing level, then switch to the paint level and try deleting or erasing, you find that the edit tools will not function – you have to flick back to your draw mode to edit.

SuperPaint was first released back in 1986. This new version adds many more features in the way of currently popular paint and draw effects. What's more, it is now fully System 7-compatible with support for Publish and Subscribe, TrueType, Virtual Memory and Balloon Help. Plus it now supports TWAIN, the standardised scanner 'language' which enables you to interface directly with colour and black and white scanners and pull your 24-bit images into a document ready for manipulation or colouring. This is a real improvement over the last version of *SuperPaint*, which required compatible software drivers to hook up a scanner.

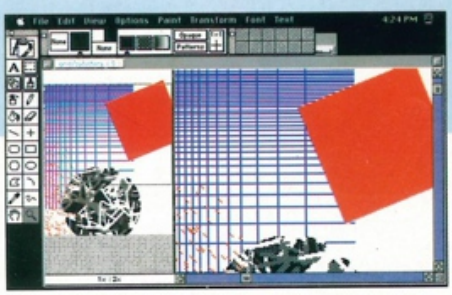
As another part of the upgrade, Aldus has added support for QuickTime movies, so you can now capture stills and place them into your artwork. This is possible using the QuickTime plug-in. The standard QuickTime controller appears and you can scroll back and forth through the frames of your movie using the slider. When you have found the right still, *SuperPaint* will import it into your document and place it into the Draw layer as a SuperBits image. You can use the same mode to view Photo CD images. After using the same movie controller to preview the thumbnail CD pictures, you can set resolution via the pop up menu below the movie controls.

SuperPaint has all the basic drawing and painting tools and controls you would expect from mid-priced drawing and painting software. These including: Scale, Free rotate, Flip, textures, gradients, autotracing, masking and plug-in support for other filters, including Aldus *Gallery Effects*. There are a few surprises too. First is a copy brush tool, which enables you to select from your image and paint with the copied area. This is like the Rubber Stamp tool found in other paint programs, but with better control. Then there are loads of neat and useful graphic effects in the draw and paint

GIVE US THE TOOLS



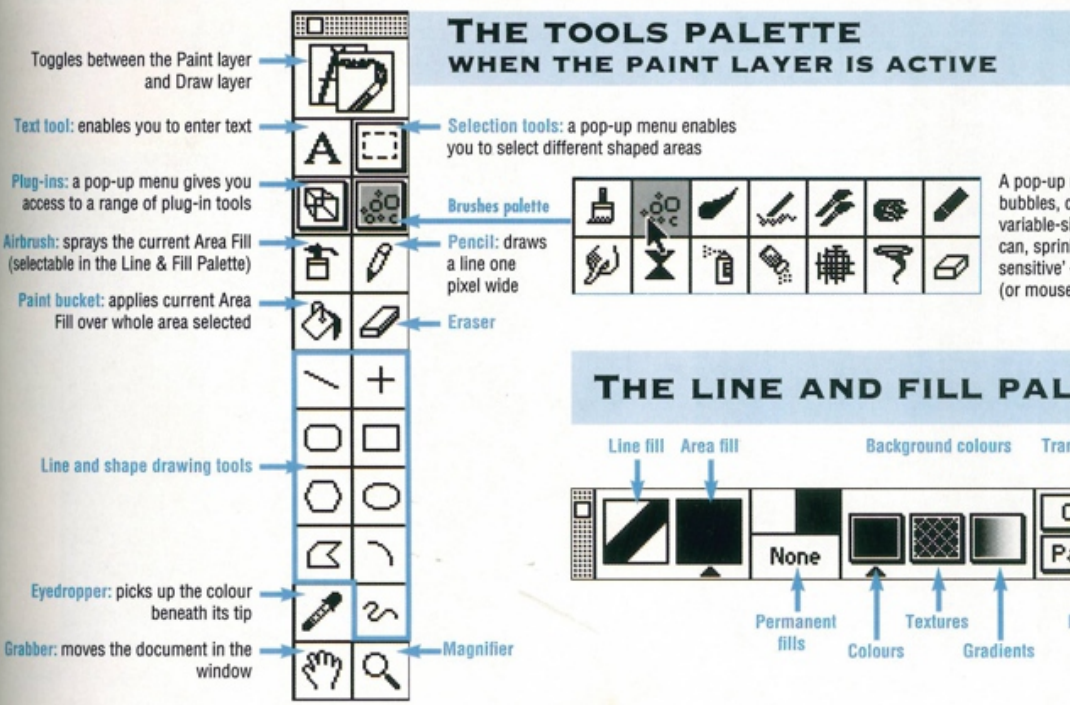
The painting tool called – would you believe it – the Twister randomly scatters the pixels at the tip of the tool, as you can see from the top of the green fill in the above screen.



This illustration was created using the new Grid tool. This draws out a grid with either linear (evenly spaced horizontal and vertical) lines or logarithmic (unevenly spaced) lines.

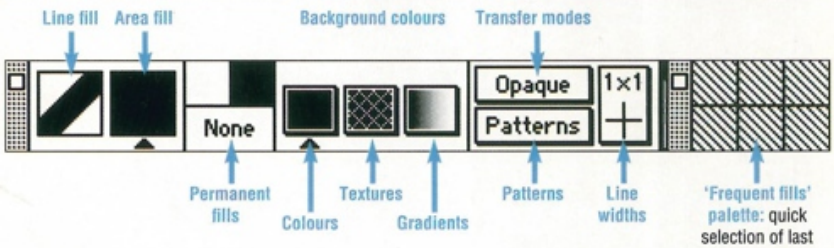
This grab shows an illustration created using a combination of the Grid tool and the Calligraphy brush which, with some fine tuning, can produce some great effects.

THE TOOLS PALETTE
WHEN THE PAINT LAYER IS ACTIVE



A pop-up menu with tools including paint brush, bubbles, calligraphy brush, charcoal, magic marker, variable-size eraser, smudge tool, spin tool, spray can, sprinkler, twister. Most of these are 'pressure-sensitive' – use a pressure-sensitive drawing tablet (or mouse speed) to vary coverage area, density, etc.

THE LINE AND FILL PALETTE



plugs-ins: Flowers, Grids, and Crop marks, which can be controlled from both the draw and paint levels. Using the Flower tool, you can control the size and shape of the petals. With the Grid tool, you can draw either linear or logarithmic lines. There is a good selection of textures, so producing backgrounds for your page layout and presentations is easy. These can be saved out as PICT, TIFF, EPS, or *MacPaint*. There's also an excellent folder of templates included. If you are looking for speedy solutions to your design problems, they include a two-fold brochure and a fax form, plus templates for party invitations and a memo sheet.

These effects modes are *SuperPaint's* strong points, and all the effects' controls are simple and straightforward to use. What's more, most of the painting tools – like the calligraphic pens, brushes and charcoal – can now be operated in conjunction with a pressure-sensitive graphics tablet (or else can be set to respond to mouse speed), varying density, spread, etc. The pressure-sensitive controls are better than I expected, but they don't match the quality of the higher-end paint programs like *Painter 2*.

Other tools like the Twister tool are fun and give a lot of scope for producing special effects for borders and illustrations. I can see *SuperPaint* being popular in schools and colleges as you only need a short time with it to produce some effective designs. There is only the one program to learn and you don't have the hassle of converting object-oriented drawings to EPS and then importing them to paint programs.

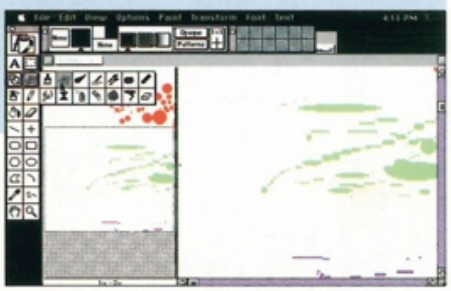
Sadly, the typographic control in *SuperPaint* is frustrating. It should have been a priority of this overhauled version, but something has gone amiss. It lacks any form of support for kerning or paragraph spacing, and the control you do have is generally poor. While I am on the weaker points, there is a problem with the program's lack of anti-aliasing. Anti-aliasing helps your painting look smooth on screen and in print; without it your images look jaggy and have a 'doorstep edge' to them. It's hard to believe that *SuperPaint* doesn't feature this – almost all other 24-bit paint programs have some sort of anti-aliasing built in.

In theory, *SuperPaint* is great idea: having both a paint program and a draw program combined sounds like the best of both worlds. But in reality all the flicking between modes is time-consuming and, with limited zoom controls, the program can be a little frustrating for a first-time user. You can add to this the unfortunate fact that it runs quite slowly anyway, even on reasonably well specified kit.

SuperPaint is excellent at producing lots of interesting graphic fills, textures, brushes and pen effects – great fun, and ideal for an older child or student. At the price, it covers both the paint and draw bases very well, but for higher-level users there are one or two features which still need some work, notably the type handling and anti-aliasing. However, for anybody looking for a budget route to having both a drawing and painting package on their desktop, this hybrid application is excellent, both in value for money and fun.

Gordon Druce

The Flowers tool from the Draw and Paint plug-in is great fun, used here in conjunction with an 'acid/rave' fill. You also have the option of adjusting the shape and size of the petals.



Another new tool in the *SuperPaint* toolbox is the Bubbles tool. This will produces a stream of bubbles that vary in size according to the speed and direction of the pointer.

SUPERPAINT 3.5

Available from Principal (0706 832000), price £150.
More information from Aldus UK, 031 220 4747.

Ease of use Straightforward, intuitive controls.	85%
Documentation Quality manuals supplied.	90%
Features Not as many as there could have been.	75%
Value for money Good route to budget paint/graphics.	90%
Speed A bit sluggish even on a speedy Mac.	60%
MACFORMAT RATING	80%

MacGOLD ☎ 0723 582100

Open Monday - Saturday 9·00am - 8·00pm
Sunday 12·00pm - 4·00pm

We sell ALL SOFTLINE products ☎ for prices

ALL OUR PRICES INCLUDE VAT & DELIVERY

GAMES - call for others

A-Train & A-Train Construction Set	£39.99
American Civil War (SSG)	£34.99
Aqua Blooper Piper	£39.99
Ashe-The Game Cheater	£37.49
Battle of Britain 2	£39.99
Breakline	£26.99
Bridge, Omar Sharif	£32.99
Carriers at War	£37.99
Caeser Deluxe	£35.99
Chess Champion 2175	£28.99
ChessMaster 3000	£33.99
Chuck Yeager Air Combat	£37.49
Civilisation	£34.99
Crosswords Deluxe...NEW	£27.99
Crystal Crazy	£38.99
Darkseed	£37.99
F/A-18 Hornet	£49.99
Flight Sim 4 (Microsoft)	£42.99
Falcon MG	£43.99
Hellcats, Spectre & Super Tetris	£45.99
Hellcats Mission Disk	£28.99
Hoyles Classic Card Games	£34.99
Hoyles 28 Games of Solitare	£29.99
Indiana Jones & Fate of Atlantis	£38.49
Indiana & Last Crusade	£27.99
Kings Quest 6	£37.49
Leisuresuit Larry 5	£26.99
Leisuresuit Larry 6	£39.99
Lemmings & Sim City bundle	£29.99
Lemmings Holiday Pack	£17.99
OH No More Lemmings	£21.99
Nascar Challenge	£26.99
Oids	£33.99
Patton Strikes Back	£20.99
Playmaker NFL Footbal	£21.99
Panzer Battles	£34.99
Pathways into Darkness	£44.99
Pax Imperia	£43.99
Prince of Persia	£29.99
PGA Tour Golf Course Disk	£16.99
Railroad Tycoon	£29.99
Red Baron, Kings Quest 5, Rise of Dragon	£46.99
Red Baron	£34.99
Return to Zork	£TBA
Risk	£34.99
Rise of the Dragon	£33.99
Scrabble Deluxe	£30.99
Secret of Monkey Island 2	£39.99
Secret of Monkey Island 1	£28.99
Sim Ant	£34.99
Sim City 2000	£32.99
Sim City & Lemmings	£29.99
Sim Life	£35.49
Sim Earth	£34.99
Star Trek 25th Anniversary	£35.99
Spaceway 2000	£37.99
Spin Doctor...NEW	£37.99
SuperMines	£33.99
Super Maze Wars	£37.99
Shanghai II	£27.99
Sword of Sodan	£39.99
Tristan Pinball	£29.99
Unlimited Adventures	£34.99
Valkyrie Helicopter sim	£19.99
Vette	£40.99
V for Victory Pack (Games 1,2&3)	£54.99
V for Victory 4	£33.99
Victory at Sea...NEW	£49.99
WarLords	£29.99

UTILITIES - a selection

After Dark & More After Dark	£39.99
Conflict Catcher 2	£57.49
Disney Screen Saver...NEW	£35.99
Snoopy Screen Saver	£33.65
Marvel Comics Screen Saver	£27.99
Star Wars Screen Saver	£TBA
MacMoney UK 4-0	£69.99

HINT BOOKS - call for others

7th Guest	£15.99
Indiana Jones & Fate of Atlantis	£11.99
Monkey Island 2	£11.99
Star Trek	£11.99

CD-ROMS - call for others

7th Guest	£39.99
A Hard Days Night	£26.99
Animals of San Diego Zoo	£42.49
Arthurs Teaching Trouble	£33.99
Best of Macintosh Shareware	£44.99
Battlechess	£37.99
Cats	£33.49
CD Fun House Shareware 8-0	£34.99
C-H-A-O-S Continuum	£59.99
Dictionary of Living World	£119.99
Desert Storm	£29.99
Darkseed CD ROM	£38.99
Dinosaurs	£49.99
Distant Suns 2-0	£99.00
Graliers Encyclopedia 1994	£Call
Guiness Disk of Records	£49.75
Hallwells Film Guide	£21.99
Hell Cab	£73.99
Info-Mac 2 Shareware CD	£29.99
Iron Helix	£33.99
ITN World News	£58.99
Jazz: Multimedia History	£51.99
Journeyman Project	£33.99
Just Grandma and Me	£33.99
Lifesaver	£57.99
Legend of Kyrandia	£49.99
London	£33.99
Lunicus...NEW	£54.99
Magic Death	£49.99
Microsoft Art Gallery	£49.99
Microsoft Musical Instruments	£52.99
MYST	£33.99
New kid on the Block	£33.99
Putt Putt Fun Pack	£25.75
Putt Putt Joins the Parade	£25.85
Redshift	£59.75
Rodney's Wonder Window	£34.99
Rebel Assault - Star Wars	£TBA
Software Toolworks Sampler	£6.99
Spaceship Warlock	£76.99
Space in Motion	£74.99
Space Shuttle	£23.99
Wallabee Jack	£29.99
Xplora 1 Peter Gabriel	£34.99

EDUCATIONAL - call for more!

Bannermania	£29.99
Backyard	£33.99
Creative Writer	£TBA
EarthQuest	£45.99
Fine Artist	£TBA
Kid Cuts	£30.99
Kid Pix	£29.99
Kid Works 2	£38.99
MacGlobe	£33.99
Mario is Missing	£41.99
Mavis Beacon 2	£35.99
Millie's Math House	£39.99
Number Maze	£47.99
Printshop Deluxe	£45.99
Putt Putt Joins the Parade	£27.99
Reading Maze	£47.99
Spelunx	£33.99
Treehouse	£34.99
Tortoise & the Hare	£34.99
Yearn 2 Learn - Peanuts	£44.99
Yearn 2 Learn - Snoopy	£44.99

CABLES

2m Printer cable	£10.99
2m Printer extension cable	£10.99
1m SCSI System cable	£16.99
1m SCSI Peripheral cable	£18.99

CD ROM CADDIES

Caddy each	£7.99
5 Pack	£36.99
10 Pack	£71.99

GRAVIS GAMEPAD - £39.99
Auto configures to your current game, includes removable joystick handle. Use Left or Right handed. You can connect 2 pads to a single Mac for two player games

GRAVIS MOUSESTICK II - £69.99
Superb, programmable 5 button joystick. The choice of serious pilots!

DYSAN Bulk HD disks
Guaranteed - Inc Labels

20 disks	£14.99
50 disks	£33.99
100 disks	£57.99

TDK Branded and disk boxes also available. Prices inc VAT & P&P

ORDERING & PAYMENT:
Visa/Mastercard/Switch/Connect accepted. Make cheques/PO's payable to MacGOLD of PO Box 63, Scarborough YO11 3YW. All prices include VAT & UK P&P. EEC & Overseas orders by telephone & credit card only. E&OE. Prices & specifications may be subject to change without prior notice. Check compatibility before buying as goods are not supplied on a trial basis.

EX-RENTAL SYSTEMS FOR SALE

Second-user equipment with peace of mind.

We currently have in stock a large number of Ex-Rental Apple and DOS systems for sale, all featuring a THREE MONTHS WARRANTY for parts & labour. And like all of Vernon's equipment, these computers & printers have been maintained to promote our image as a service company.

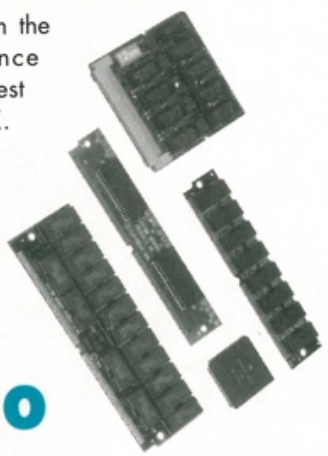
Call Vernon Computer Rentals on 071-720 7000 and ask for the X-Rentals Department.

VERNON
Computer Rentals

PERFORMANCE *direct*

UK'S LOWEST MAC MEMORY PRICES

Because we buy direct from the manufacturer, Performance Direct can offer you the best memory prices in the UK. We back all our top quality upgrades with a 5 year warranty, 30 day money-back guarantee, next day delivery and free fitting guidelines.



4Mb SIMMS
£101.00

Show us a lower Memory quote from any other UK supplier and we will do our best to beat It !

1Mb 80ns	£33.00
2Mb 80ns	£60.00
2Mb LCIII/Centris	£56.00
4Mb 80ns	£101.00
4Mb IIfx	£124.00
4Mb LCIII/Centris	£112.00
4Mb Quadra 800/840AV	£121.00
8Mb 70ns	£273.00
8Mb LCIII/Centris	£225.00
8Mb Quadra 800/840AV	£239.00
16Mb Quadra 950	£463.00
16Mb IIfx	£490.00
16Mb LCIII/Centris	£426.00
16Mb Quadra 800	£513.00
16Mb Quadra 840AV	£565.00
32Mb LCIII/Centris	£1,175.00
32Mb Quadra 800/840AV	£1,175.00
Power Book / Duo	
4Mb PB 140/170/145b	£155.00
4Mb PB 160/180	£155.00
4Mb PB 165c/180c	£155.00
4Mb Duo	£139.00
6 Mb PB 100	£269.00
6Mb PB 140/170	£199.00
6Mb PB 160/180	£247.00
6Mb PB 165c/180c	£249.00
8Mb PB 160/180	£285.00
8Mb PB 165c/180c	£359.00
8Mb Duo	£239.00
10Mb PB 160/180	£388.00
10Mb PB 165c/180c	£399.00
12Mb Duo	£469.50
16Mb Duo	£687.00
Video RAM	
256K Video RAM	£23.00
512K Video RAM	£39.00
FPU Maths Co-processors	
FPU – LC, LCII, P/400	£49.00
FPU – Classic II	£49.00
FPU – LCIII	£55.00
FPU – Colour Classic / IIvi	£49.00
FPU – IIvx, Performa 600, Duo	£65.00
FPU – IIsi with dual slot adaptor	£79.00

30 DAY MONEY BACK GUARANTEE – NEXT DAY DELIVERY – LONG WARRANTIES – FREE TECHNICAL SUPPORT

Access

Tel: 0784 477 477

VISA

Performance Direct, 27 Station Rd Egham, Surrey TW20 9NN. Fax 0784 477 377.

CD-ROM round-up

Take a spin with the latest stack of CD releases.

Instant Access to Entertainment

Packed with more than 130 games, utilities and entertainment titles, this interactive CD is great value for money for anyone with a CD drive. For £40 you get the CD plus two complete games worth £75. Besides *Breakline*, reviewed on page 92 in this issue, buyers can also choose to unlock full working versions of either *HellCats, ZOA, Pararena, Crystal Crazy, Spaceway 2000* or *Glider* as their second game. In the entertainment category, there are encrypted versions of classics like *Falcon MC, F/A-18 Hornet, Prince of Persia, Eight Ball Deluxe* and *Spectre Supreme*; a demo of each can be copied to your hard disk to get a taster. Highlights of the utilities and graphics packages include *Morph, Colour Paint, DynoPage, Norton Utilities* and *Conflict Catcher*. Try them all, then choose which you want to pay for a full version of. Best of all, the price of the locked programs is about 20% off recommended retail prices according to IA.

■ ***Instant Access to Entertainment CD* costs £40 and is available from IA on 081 205 2596. It requires a Mac LC or better with a minimum of 4Mb of RAM and System 7.**

MACFORMAT RATING **90%**

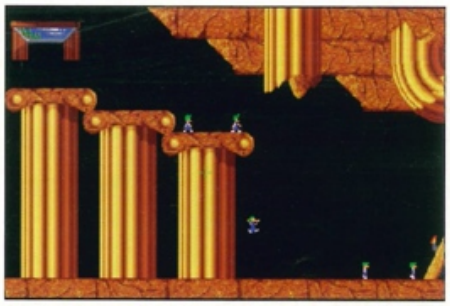
Navigate your way through 600Mb of code comprising over 130 encrypted games and utilities on Instant Access's great-value entertainment CD.

Mac Essentials

Apple's first offering from its Software Dispatch division brings together more than 70 applications from the fields of information management, comms, networking, graphics, education and finance. There's also various fonts, utilities and clip art as well as Apple's System 7 Pro in encrypted form. Again, decryption of any program is enabled after a phone call to Software Dispatch. While the range of software here is more varied than the *Instant Access* ROM, there are fewer titles in total. But the disk costs significantly less and again there are many quality products on offer. Highlights from the disk include *Lemmings, Spectre, Acrobat Exchange, AccessPC, Safe and Sound, Letrastudio, DesignStudio* and *Videofusion*, so there should be something in amongst that lot to suit everyone's tastes. And if you're thinking of buying a new Mac with a built-in CD drive, now's an excellent time to do it because a free *Mac Essentials* CD is currently being bundled with all new CD-equipped models.

■ ***Mac Essentials* costs £6, will run on any Mac with a CD drive and is available from Apple on 0800 127753.**

MACFORMAT RATING **90%**



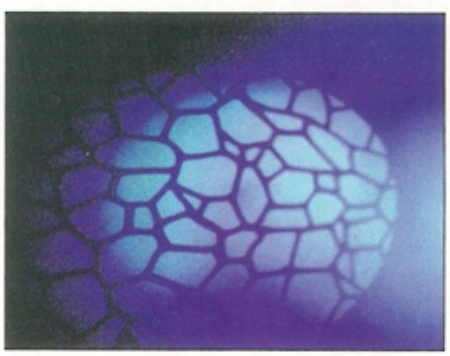
For the paltry sum of £6, demos of over 70 unlockable applications, including *Lemmings, Letrastudio* and *Safe and Sound*, can be found on Apple's own *Mac Essentials* CD.

Quadra Photo Library Vol 1

Clip art, media and photography is a growing market with a bright future made possible by the storage capacity of CDs, so more and more disks are emerging which act as a one-stop shop for a range of graphic samples. In this case, it's a collection of 100 copyright-free photographs from UK company Quadra, whose first outing invites you to build your own library for as little as £1.40 an image. For this you get the supplied photographs in both PICT and Photo CD format, in five resolutions up to 3072 x 2048 pixels. Of course, ploughing your way through this number of stills takes some time, so Quadra has thoughtfully included thumbnail versions as well as a QuickTime-based slide viewer, which enables you to flick through the assorted images at speed. The ten topics covered here span the range of subjects most sought after by pre-press agencies handling consumer, food, fashion and technical advertising jobs. The stills are sufficiently high quality to make the collection a worthwhile purchase, particularly if you compare its per image price against that (over)charged by traditional stock photo agencies. In sum, not a bad variety of images but, at this price, only for those with regular pre-press needs.

■ ***Photo Library Vol 1* will run on any colour Mac with a CD drive and is available from Quadra on 0488 683936 for £140. Alternatively you can subscribe to a monthly service which brings you 12 similar CDs a year for £1,080.**

MACFORMAT RATING **90%**



Even if you only use a handful of Quadra's clip photos, you can always use the rest as a source of desktop backgrounds!

Info Mac III

What a disk! Buy a ROM drive now is all I can say. For it's disks like *Info Mac III* which will do more to ensure a massive growth of CD-ROM than any extravagant multimedia offerings. With 572Mb of assorted shareware and demos for an outlay of £38 – that's 15Mb for a quid – the only expense involved here is the amount of time you take to sample the 24 different areas included. Like the games folder, with its

164 titles, or the 38 *HyperCard* stacks and 46 'electronic' books. Or how about this? 43 applications and 27 games for the Newton! For most people though the relevant material will probably be found in the utilities, graphics and business folders. And although you should honour the shareware principle by sending off your dues for any program you mean to use regularly, there's more than enough here to make the disk pay for itself in no time at all. What's more it's all brand new up-to-date shareware direct from the States. A MACFORMAT must-have.

■ ***Info Mac III* is available from Network Analysis on 0203 419996 and costs £38. It will run on any Mac with a CD drive, though individual files may require specific system requirements.**

MACFORMAT RATING **92%**

With more shareware than you can shake a stick at – *Info Mac III's* 572Mb of programs will keep you busy for months and months.

MUSICAL INSTRUMENTS

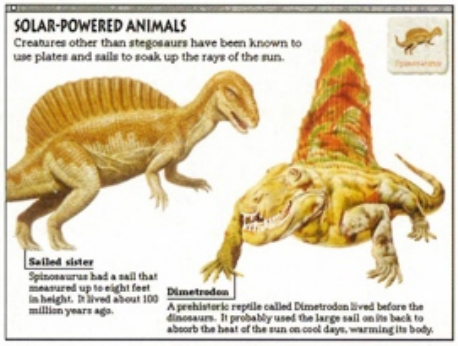
It may look weird but you could use it to knock out a jolly good beat and join some wild post-modernist Euro synth group. Or maybe not.

Microsoft's venture into the home user market, buying up copyright materials left, right and centre, seems to be paying off with the release of titles like *Musical Instruments*, in which you can hear and play more than 1,500 sound samples from 200 instruments. What's more there's 500 high-quality photographic images accompanying this little lot plus masses of text to complete the picture. You choose to view the instruments by global region, the type of ensemble they're used in or alphabetically. Each option calls up neatly laid-out screens with icons to trigger sound samples and more detailed information. The perfect purchase for that budding young musician.

■ **To run *Musical Instruments*, available from Gem on 0279 412441, you'll need a colour Mac with 4Mb of RAM, a CD drive and £58.**

MACFORMAT RATING **90%**

DINOSAURS



They were big, they were mean and they sure were ugly... Microsoft's *Dinosaurs* is full of interesting facts about these fascinating prehistoric creatures.

It may be a little too late to cash in on *Jurassic Park*, but Microsoft's *Dinosaurs* should nevertheless do well in the home market since it draws together 200 fact-filled illustrated articles about these prehistoric monsters supplemented by over 1,000 illustrations and photographs. In amongst the 800 pop-up windows are icons leading you to recreated sound effects and QuickTime video clips as well as 'fact cards' – presentation documents full of the facts you've selected all ready for printout. While it's perhaps a little too esoteric for most adults, kids will love it (for about half an hour at a time!) especially if you hook up the audio through your hi-fi. All in all, *Dinosaurs* is a seamless multimedia outing through a 150 million year time line chock full of sharp teeth, armour plating and growling sounds.

■ **To use *Dinosaurs* you'll need a colour Mac with 4Mb of RAM and a CD drive. According to Microsoft's PR, it costs "less than £50 from regular retail outlets".**

MACFORMAT RATING **88%**

I bet anyone reading this $100 million that Spielberg's kids already own *Dinosaurs*.

SUPERSONIC

You might mistake *Supersonic* for a fully-fledged flight sim with masses of multimedia thrills and spills, but you'd be wrong. What you have instead is a cross between *Jane's Fighting Planes*, a cockpit simulator and four rather poor little games. And since the flight sim part of the mix is based on an F-16 you might be much better off checking out the *Falcon MC* game for its atmospherics and dogfighting. But if realism is your thang, then close-up photos of actual fuel gauges, rudder controls and other assorted minutiae should keep you happily clicking away in your cockpit for hours. It's not all that dull though – at least there's stats on more than 100 different military aircraft and missiles and video footage of the beasts in action – but the enduring feeling is one of attention to detail bordering on tedium. Which would be OK if the games bundled here were exciting. But they're not. So it's for the pro-flight freaks only I'm afraid.

■ ***Supersonic* requires a colour Mac with 2.5Mb of RAM free and a CD drive. It retails at £50 and Gem on 0279 412441 handles its UK distribution.**

Andy Storer

MACFORMAT RATING **60%**

It may have been around since 1964, but the Blackbird spy plane still cuts a good profile.

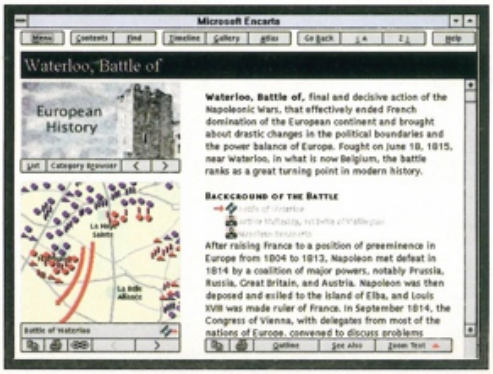
TRY AND BUY

Whether it's the future of software purchasing remains to be seen, but at least the concept of encrypted applications on CD-ROM, which you can try before you buy, is an innovative one. Instant Access was the first company to offer such a novel opportunity to Mac CD owners and Apple wasn't slow in following with its *Mac Essentials* ROM. Both of these let you run demos of programs. You then phone an 'enablement' number, where in return for your credit card details, you're given the code to unlock the application on the disk. Pretty nifty, really.

Feed your brain.

CD-ROM Today

Educate.



Inform.

Entertain.

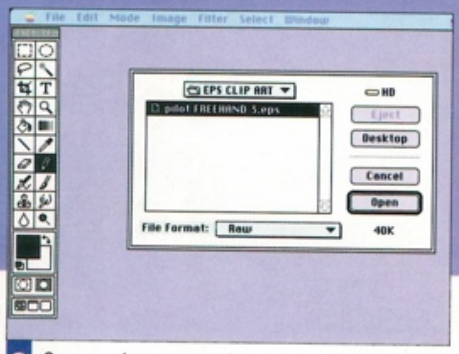
We'd like to help you explore the amazing new world of CD-ROM for the Mac and PC.

Our magazine, complete with 600Mb disc, is out on March 31st – Easter weekend.
See you then!

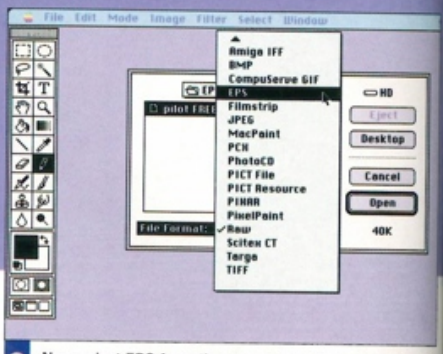
Future PUBLISHING

MODIFYING A CLIP ART EPS IMAGE

1 This is the original EPS clip art image, imported into a DTP program. But what if you want to modify it first?



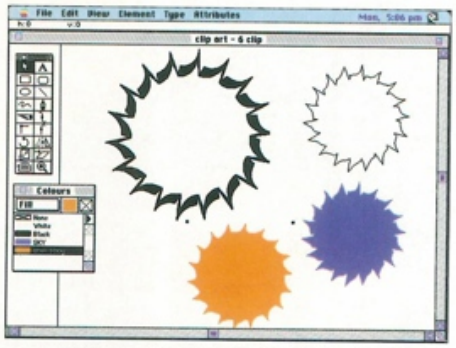
2 Open your image processing or painting program, in this case *Photoshop*, and select your clip art EPS file.



3 Now select EPS from the pop-up **File Format** menu and open your document.

Designing with clip art

A practical guide on incorporating ready-made graphics in your work...



A 'splash' border from an instant art CD-ROM collection...

...becomes an abstract element on an audio CD sleeve.

Following on from our guide to clip media last month (MACFORMAT issue 10, March), here are a few pointers to using clip art in your Mac documents.

If the idea of drawing or painting graphics fills you with horror, then clip art may be the solution. It's now possible to buy excellent quality artwork, commonly available in EPS file format, in a multitude of styles. It is supplied as an exported file, ready for inclusion in a page layout package, for editing, sizing and cropping.

Much of it comes as *FreeHand* or *Illustrator* files. You can then open these files into the appropriate programs and alter them to suit your needs. This can be useful if you wish to create a logo or trademark, as you can import, modify and add text to a simple graphic to create a new one. In fact, some clip art libraries offer disks filled with graphic elements with this type of logo construction work in mind.

There is also a large number of companies and libraries which offer images for use in advertising. Among these images are common logos and trademarks plus corporate symbols and international service marks. Most of these advertising and media clip art disks are covered and registered by their owners, and are therefore cleared for editorial and advertising usage.

Have some fun

Once you have found yourself a good source of clip art, you can use it 'as is' – just import it directly into your DTP software – or you can start to have some fun by loading it into a drawing or painting program to modify it to suit your own needs. This can be just the simple adding of some type to personalise the work, or a more elaborate montage of three or four clip art elements, which then generate a new illustration.

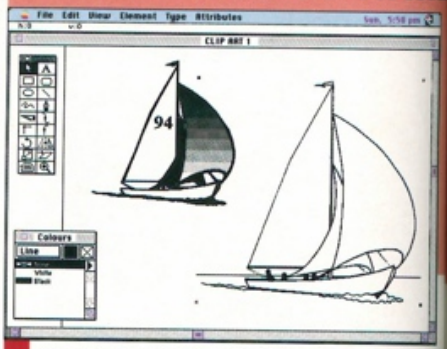
Remember these clip art images work like all picture elements in your design, as an emotional magnet, helping to pull the viewer into the page. It can be a simple letterhead which is made memorable by the strategic placement of a graphic, or a border which runs through a booklet or brochure, giving it a polished and professional feel.

However, it's best not to think of clip art as the 'quick fix' solution to a design problem. Clip art can be the raw material to help you create more powerful and effective designs.

Technical concerns

Macintosh clip art is most commonly available in two graphics file formats: TIFF and EPS. TIFF stands for Tagged Image File Format, a bitmapped image that can be any size and have any resolution – although 300 dpi is the usual standard. Most TIFF clip art is of material originally created and imported into the Macintosh

FOUR WAYS TO MAKE



1 This basic line drawing of a yacht has been personalised here by adding a black fill and type to the sails.

4 Your image is now ready for you to alter and enhance. Select the brush style and colour control you require.

5 When you have finished editing the image, save out and it's ready for importing back into your DTP program.

A QUICK GUIDE TO USING CLIP ART

- Shop around for your clip art – standards vary a great deal. (See the box at right for some suppliers.) Send off for samples before you buy, or talk to your local supplier and look at some printed examples.
- Some clip art can be modified in a painting or drawing program, so you can use it to create your own personalised logos and trade marks.
- When using clip art borders, take care not to go overboard and smother the type and illustration.
- When promoting events, try integrating a clip art map and directions into your design or use the map to show other outlets for your goods and services.
- Make sure the clip art you select is consistent with your other work.

via a scanner, so expect your backgrounds, borders, photographs and some cartoon art to be in this format.

There are TIFFs for just black and white images, TIFFs which hold greyscale information and others which will support colour – it all depends on the software you create or save your image in. So pay attention to the TIFF information that your software will support and remember if you are using a friend's clip art from another type of computer platform: although it may have been saved out as a TIFF image, it is not necessarily compatible.

It may be a good idea to call your clip art supplier and find out whether the artwork you want is compatible with your layout or painting software before you take the plunge.

Clip artwork which started life on the Macintosh is commonly saved in EPS file format (Encapsulated PostScript). This is a combination of a PICT image which tells the screen what it should be displaying and a file containing PostScript code that lets the printer know how to print the image. It is worth quickly mentioning the PICT and PICT2 file formats as these are used for transferring object-oriented graphics created in draw programs. PICT2 files use QuickDraw, which is used to display images on the Mac's screen.

Problems with EPS files

On the whole, most clip art suppliers hold on to their original files and just distribute the EPS files. Modifying these is possible with programs such as *Photoshop*, which allow you to import EPS files so that you have full control over editing your images.

However, lower-end programs are less likely to let you import EPS files direct. Yet there are ways around the problem if you use image processing or file conversion software which supports the EPS standard. Software like *DeBabelizer* can be used to perform the conversion from an EPS file to a format which can be read by your particular painting or image editing software, say PICT2.

Another way around this is to print out your clip art image at the best quality possible, then re-scan and save it as a TIFF image. This won't give you brilliant quality results, but if the image is simple, you may be able to edit it with your paint program, as even the most basic supports TIFFs.

Gordon Bruce

CLIP ART CONTACTS

CD-ROM

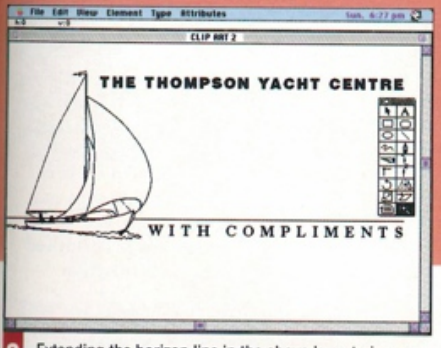
There are plenty of suppliers and tons of great clip art on CD-ROM; these are just a few notable ones:

- Magnum Software (0884 820240) produces *Instant Art*, a CD-ROM packed full of maps, cartoons and clip ad artwork.
- KimTec UK (0202 888873) stocks a large collection of clip art including ad art, art clips, business backgrounds, combat clips, EPS Pro and images with impact, including Visa and Mastercard symbols as EPS files. This is a highly recommended clip art collection.
- FOS-CD (O296 682233) has one of the largest collections of CD-ROM clip art in the UK, which includes: *Clipables*, *Color Magic Clip Art*, *Fresh Art* and *Full Spectrum Clip Art*. Plus a CD-ROM from Italy called *Imaginario*, which has 500 original files on subjects like love, war, kids, home, leisure, food, work, music and animals.

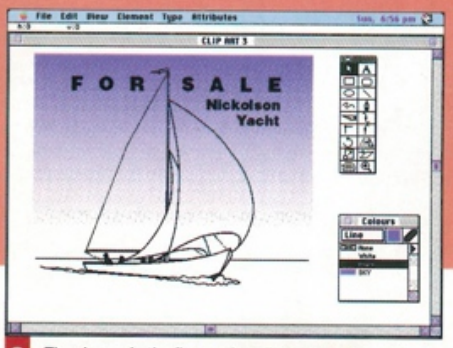
DISKS AND BULLETIN BOARDS

- MacLine (081 401 1111) has a great selection of clip art on disk, including *Wet Paint*, *Map Art*, *Designer's Resource* and *Publishers' Resource*.
- Kingsway Computers (0742 750623) and TomaA Direct (0742 750623) offer special disk packs filled with clip art, which include EPS and *MacPaint* files of office and household items plus disks covering sport and cartoons.
- Bulletin boards hold a wealth of clip art. Check out shareware and PD on page 75 for details of how to get hooked up.

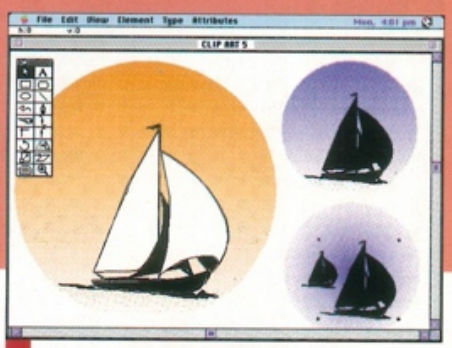
MORE OF CLIP ART



2 Extending the horizon line in the above layout gives you an ideal place for a line of text.



3 The shapes in the flag, main sail and the spinnaker create natural lines for you to flow your type around.



4 Add backgrounds and silhouettes by creating a simple shape and overlaying your clip art.

Exploring HyperCard

Once you know what HyperCard's messages are, you can intercept them; then, you can do virtually anything...

HyperCard looks like a database. A rather pretty and versatile database, but a database nonetheless. It has some nice touches, in that you can add buttons and icons to take you to other cards. And you can add mono bitmapped images to your cards too (*HyperCard 2.2* supports colour – see page 34).

On the other hand, it's not unusually fast, and apart from some occasional interactive adventures and tutorial stacks, it doesn't seem to get used for much else. Which is one of the Great Mysteries Of Our Time.

Let's approach it from another angle. Most of us are reasonably happy with the Mac applications we've got, but have special needs or jobs not particularly well covered by commercial software. Or you know what you want to do, but you don't want to fork out the moolah for a commercial package that would do it.

Wouldn't it be great if the Mac had a really simple yet powerful programming language – a bit like BASIC on other machines, but less techie, faster and more powerful? In fact, our ideal programming language would have to be able to produce all the Mac menus, dialogues and windows we're familiar with. And without getting immersed in terrifyingly complex hardware calls and direct memory addressing and all that malarkey.

This is all pretty transparent, isn't it? It's obvious that I'm going to say if you've got *HyperCard*, you've already got this mythical and fantastic programming language – Hypertalk.

So if it's so great, how come we don't see more Hypertalk applications around? Well, I can suggest a few reasons for this:

1. Programmers are a pretty macho bunch. Machine code is the 'hardest' language to program in, but you can use C without sacrificing too much street cred. But using any high-level language like Hypertalk (or BASIC) is professional and social suicide within the programming fraternity.

2. When was the last time you saw an ad for *HyperCard*? The documentation that came with the demo version of *HyperCard 2.0* briefly mentioned Hypertalk, but gave no indication of its power. Considering that *HyperCard* has long since been Apple's 'baby', this is amazing.

3. Even the full *HyperCard* Developer's Kit (hardly promoted heavily) simply describes the Hypertalk language and its commands – it doesn't begin to demonstrate what you can do with it. The fact is that you only find out what *HyperCard* can do by mucking around with it for hours on end. Then it gradually dawns on you as you explore more commands and the ways they can be used together that you can practically write all your own software...

Message handlers

So how does *HyperCard* do its stuff? That's what we've been looking at for the last couple of issues. It's all to do with Hypertalk. Last month we looked at how Hypertalk 'intercepts' messages, and the paths the messages take on their way from buttons, fields and cards, through a hierarchy of stacks and back to the *HyperCard* application itself.

As an example we used the 'mouseup' message – sent whenever you click on a *HyperCard* object – and the 'opencard' message – sent whenever you close one card and open another.

These are just two of Hypertalk's messages. These are the rest (upper-case letters are used in these message names, but this is only to make the meaning clearer – Hypertalk doesn't distinguish between upper and lower case):

THE STORY SO FAR

This series is aimed at anyone with a copy of *HyperCard* – either the full application or the demo version bundled with new Macs up until 1991. *HyperCard* is not just a database, and not just an interactive learning aid. It is an extremely powerful multimedia tool which contains its own programming language. In fact, it's the easiest way there is of creating your own custom Mac applications...

All you need to know is how *HyperCard* works. Which is where this series comes in. In MACFORMAT 4 we began by asking what *HyperCard* is and touring the *HyperCard* 'components': stacks, backgrounds, cards, fields and buttons. In MACFORMAT issues 5 and 6 we explored the *HyperCard* menus and what the options do. Then in MACFORMAT 7 we turned to buttons – what they do and how to design them – and took a look at a button's 'script'.

Next came creating, customising and handling fields (MACFORMAT 8). 'Shared text', 'Lock text' and other options were explained.

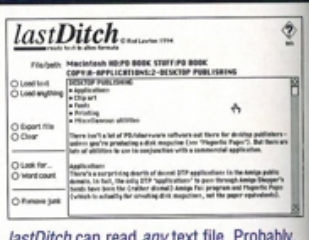
MACFORMAT 9 introduced Hypertalk, *HyperCard's* built-in programming language, as well as the 'domenu' command. And last issue we looked at intercepting *HyperCard* 'messages' and tracing the 'message path'.

If you missed any of these issues, turn to the MACFORMAT back issues service, page 94.

ON THE COVER DISK

On this issue's cover disk there's a very handy *HyperCard* stack called 'lastDitch', the text editing utility to use when all else has failed. (You need *HyperCard* to run it.) You can elect to load only text files or all files. The stack loads them into memory (very quickly) and displays the contents in a scrolling field. *HyperCard* fields can display a maximum of 30,000 characters, and if the file is longer than this it is broken up into blocks which can be displayed consecutively.

This stack can also export files in ASCII format. If you like, you can load a file and then export it immediately. The exported version can be read by anything that can read ASCII. So if your favourite word processor has trouble with an alien format, run the file through this stack first.



lastDitch can read *any* text file. Probably.

The stack will also do very fast word counts, and you can also check for words or phrases. This feature is limited to text in the currently displayed block.

Anyway, that's enough explanations. Try it out...

Messages sent to buttons

`newButton`
Sent whenever a new button is created.

`deleteButton`
Sent when a button is deleted.

`mouseDown`
Sent when the mouse button is first depressed.

`mouseStillDown`
Sent continually while the mouse button is being pressed.

`mouseUp`
Sent when the mouse button is released – this is the 'mouse' message most commonly used.

`mouseEnter`
Sent when the mouse cursor enters a button's rectangular area.

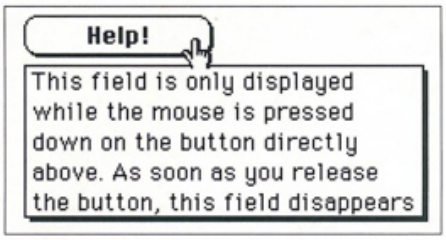
`mouseWithin`
Sent continually while the mouse cursor is within the button's rectangle.

`mouseLeave`
Sent when the mouse cursor leaves the button's rectangle.

So you see there are many more ways you can use a button other than clicking on it!

For example, you might be creating a stack to be used by someone else. In which case you might want to incorporate some sort of on-line 'help' feature...

When you click on a button you actually carry out two actions – you press down and then you let go. This sends a 'MouseDown' message, then a 'MouseUp'. It's standard practice to intercept the 'mouseUp' message to carry out whatever function the button is designed for. But you could first intercept the 'mouseDown' message and use it to display a 'hidden' help field, in the following way:



This grab speaks for itself. By using the 'mouseDown' message you can display 'help' information for buttons – much friendlier than a separate documentation file.

```
on mouseDown
  show field "button help"
end mouseDown

on mouseUp
  hide field "button help"
  --carry out button function
end mouseUp
```

('Show' and 'hide' are two Hypertalk commands that can be used to show/hide fields, buttons, the 'menuBar' and 'message box'.)

The 'mouseDown' handler shows the 'help' field. When you let the button go, the 'help' field disappears and the button carries out its function. (You could just as easily use the 'mouseEnter' message to show the 'help' field and the 'mouseLeave' message to hide it.)

Messages sent to fields

`newField`
Sent when a new field is created.

`deleteField`
Sent when a field is deleted.

`enterInField`
Sent when the Enter key is pressed while the insertion point is in the field.

`returnInField`
Sent when the Return key is pressed while the insertion point is in the field.

`openField`
Sent when you click on a field to edit it.

`closeField`
Sent when you click outside a field after editing the contents.

`tabKey`
Sent when the Tab key is pressed while the insertion point is in the field.

Fields can send three more messages, identical in effect to the equivalent 'button' messages:
`mouseEnter`
`mouseWithin`
`mouseLeave`

In addition, if you take a look at the Field Info dialogue you'll see that fields can be 'Locked'. This doesn't just mean that you can no longer click on them to edit them. It also means they can send three more messages, again identical to the 'button' equivalents:
`mouseDown`
`mouseStillDown`
`mouseUp`

In the above cases the messages can be intercepted by handlers in the scripts of the buttons or fields clicked on (except in the case of the 'newButton' or 'newField' messages – these will not have scripts or handlers yet). The messages then pass through the card script (irrespective of whether they were sent from card or background objects), then the background script, then the stack script and so on.

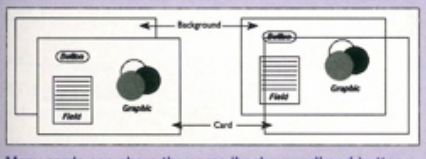
From this list you can see that *HyperCard* fields are more than just containers for text. They are, in fact, just as versatile as buttons. They can't have icons, true, but they can do something very useful. If you click on any text in a locked field, *HyperCard* can retrieve the text

JARGON BUSTERS

Background: all cards have a surface (card) layer and a 'background' layer, which can be shared by any number of cards.

Button: a *HyperCard* object that you click on to cause something to happen. By using Hypertalk you can 'program' buttons to carry out far more complex and useful tasks.

Card: what you see when *HyperCard* is running is a 'card'. You can have (effectively) as many cards as you like in a single stack. They can share 'backgrounds' with other cards or be unique. You could say a 'card' was equivalent to a 'screen'.



Many cards can share the same 'background' and buttons and fields can be placed on this background layer.

Field: *HyperCard* 'fields' (equivalent to 'fields' in a database) can hold a maximum of 30,000 characters of text. A card can hold any number of them.

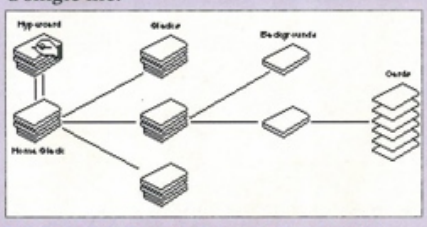
Handler: analogous to a mini-program or macro. These are automated routines that can be activated in response to a 'message'.

Message: a message is sent through the system every time you click the mouse, move the pointer, change cards, edit text... there are several dozen *HyperCard* 'messages' (see main text) and they can be used to trigger 'handlers', or mini-programs.

Message path: Hypertalk works by 'intercepting' messages and then acting on them. These messages take a hierarchical path through the system and they can be intercepted at any of several points.

Script: this sounds like another word for 'program', but it's not. 'Scripts' are actually containers where you store 'handlers'. Buttons, fields, cards, backgrounds and stacks all have scripts.

Stack: this is a collection of cards that forms a single file.



The *HyperCard* 'hierarchy' of cards, backgrounds and stacks. A 'stack' is equivalent to a file.

or its location within the field. Try placing this handler in the script of a locked field:

```
on mouseUp
  get the clicktext
  if there is no card it
  then
    flash
  else
    go card it
  end if
end mouseUp
```

When you click on a word in this field, if there is a card with the same name you go straight to it. Otherwise, the screen flashes. This is the basis of a powerful hypertext system. It doesn't require much more work to turn this handler into one which will go to the appropriate card if it exists and, if it doesn't, will create one and open it for you to edit...

Messages sent to cards

The above is just the tip of the iceberg. There's another batch of messages which are sent to cards themselves rather than buttons or fields:

`newCard`
Sent to a card when it's first created. Since a new card won't have a script, this must be intercepted by the background script.

`deleteCard`
Sent when a card is deleted.

`newCard`
`deleteCard`
`openCard`
`closeCard`
Sent to a card when it is opened or closed.

`openPalette`
`closePalette`
Sent when a *HyperCard* palette is opened or closed. This is a rather specialised feature we'll leave for now.

`openPicture`
`closePicture`
`mouseDownInPicture`
`mouseUpInPicture`
Sent when the *HyperCard* 'picture' command is used. We'll tackle this in a future instalment.

`close`
Sent when you close a card or stack with the 'close' box or the 'close window' command.

`mouseDown`
`mouseStillDown`
`mouseUp`
These messages are equivalent to the button and field versions. They are sent to the card when you click outside any buttons or fields.

`returnKey`
`enterKey`
`tabKey`
These messages are sent to a card whenever any of these keys are used – except when the insertion point is within a field (in which case the message goes to that field first).

`startUp`
Sent to the first card displayed when *HyperCard* is launched.

`idle`
A very useful message indeed. Sent 50 times a second when nothing is happening...

`newBackground`
`deleteBackground`
`openBackground`
`closeBackground`
These should all be self-explanatory by now. Note, even messages relating to backgrounds and stacks are first sent to the current card.

`newStack`
`deleteStack`
`openStack`
`closeStack`
Equivalent to the background messages above.

`suspendStack`
Sent to the current card when you go to another stack.

`resumeStack`
Sent when you return to an already open stack from another one.

`suspend`
`resume`
These messages are sent when you launch another application with the 'open' command – they don't work under Multifinder, though.

`quit`
Sent when you quit *HyperCard*.

`moveWindow`
Sent when you change the size or the position of the card window.

`help`
This message is sent when you choose the **Help** option from **Go** menu. You can intercept it to use your own Help stack.

In addition to the above messages, there are others that use 'parameters'. This means they are followed by a particular value or specifier:

`show menubar`
`hide menubar`
Pressing **[command] [spacebar]** toggles the menu bar on and off. These messages are sent when you do this.

`arrowKey param`
The parameter in this case is 'left', 'right', 'up' or 'down'. This means the message identifies the specific arrow key that's been pressed.

`functionKey param`
If you have an extended keyboard, using any of the function keys sends this message.

`commandKeyDown param`
This message identifies a key pressed in conjunction with the **[command]** key.

`controlKey param`
As above, but using the **[control]** key.

NEED HELP?

Are you having trouble getting a Hypertalk routine working? Send it in to: *HyperCard* Problems, MACFORMAT, 30 Monmouth Street, Bath, Avon BA1 2BW. Keep them less than 20 lines long, though, because space is limited.

Or maybe there's something you want to do with a Hypertalk handler but can't figure out how to go about writing one? Again, write in to the above address.

`keyDown param`
This message is sent every time you press a key! You can use it to intercept and handle any keyboard input. Very useful...

`doMenu param1, param2`
Finally, here's a message that uses two parameters. These respectively identify the menu item used and the name of the menu.

Many of the above messages are for specialised uses. Others are of limited value. One that you will find particularly useful, though, is the 'idle' message. Fancy an on-screen clock/date display? Try putting this handler in the card script:

```
on idle
        put the time into card field
"time"
end idle
```

('The time' is a *HyperCard* function. You can also display 'the long time' to include seconds and 'the date' and numerous variants.)

Remember, the idle message is sent 50 times a second, so your on-screen 'clock' is updated with the same frequency.

Until next time...

This has been a brisk run-down of Hypertalk messages, but given your knowledge of Hypertalk so far, you should be positively overflowing with new ideas.

Before you go, though, there is one problem with the 'clock' script above. Every time *HyperCard* updates the clock, it removes the insertion point from any field you're typing into. And if you've got the clock displaying seconds as well as hours and minutes, that will make typing impossible.

There is a solution, and it only adds a single line to the 'idle' handler that updates the clock. The first person to write in with that solution gets a mystery prize... *Rod Lawton*

NEXT MONTH

We know what all the *HyperCard* messages are, we know where they go and we know how to intercept them. Now what can we do with them? Hypertalk offers many more commands than 'domenu'. And some of them are very powerful indeed... Plus, we look at some of the scripts sent in by MACFORMAT readers.

ALL PRICES INCLUDE VAT & DELIVERY – NO HIDDEN EXTRAS

MACFORMAT promotions

MACFORMAT has scoured the land for the best prices on the best products to bring you this unmissable selection...

100 classic Monotype fonts for under £50!

In an extraordinary deal, MACFORMAT brings you 100 superb fonts from one of the world's leading type foundries, Monotype.

These fonts have been chosen to provide you with a huge armoury of really classy faces to use. They are TrueType fonts, and come with the TrueType INIT, so they can be used with either System 6 or 7 – full installation instructions included. They work with any printer, including LaserWriters and StyleWriters, and look excellent on-screen, with no 'jaggies'. You won't find a better value way of adding style to your documents anywhere!

100 TrueType fonts
Price: £49.95
Order code: MFFONT

600Mb of programs!

The BMUG PD ROM contains over 600Mb of the best shareware software from all over the world, collected by the Berkeley Macintosh Users Group and put on one CD-ROM (1994 edition).

BMUG PD ROM CD
Price: £39.95
Order code: MFBMUGCD

Add style and originality to your documents with these amazing fonts...

Abadi light condensed
Abadi condensed
Abadi bold condensed
Abadi extra bold condensed
Albertus
Arial light
Arial light italic
Arial black italic
Arial light condensed
Arial condensed
Arial bold condensed
Baskerville semi-bold
Baskerville semi-bold italic
Bell
Bell italic
Bell bold
Bembo
Bembo italic
Bembo semi-bold
Bembo semi-bold italic
Bembo bold
Bembo bold italic
Centaur
Centaur italic
Centaur bold
Centaur bold italic
Colonna
Ellington
Ellington italic
Ellington bold
Ellington bold italic
Engravers Old English

ENGRAVERS
Footlight light
Footlight light italic
Footlight bold
Footlight bold italic
Garamond
Garamond italic
Garamond bold
Gill Sans light
Gill Sans light italic
Gill Sans
Gill Sans ital
Gill Sans bold
Gill Sans bold italic
Gill Sans extra bold
Gill Sans ultra bold
Gill Sans condensed
Gill Sans bold condensed
Gill Sans bold extra condensed
Goudy Old Style
Goudy Old Style bold
Goudy Old Style catalogue
Goudy Old Style catalogue italic
Joanna
Joanna italic
Kino
Lydian
Lydian cursive
MATURA
News Gothic
News Gothic italic
News Gothic bold
News Gothic condensed
News Gothic bold condensed

Nimrod
Nimrod italic
Nimrod bold
Nimrod bold italic
Onyx
PERPETUA LIGHT
PERPETUA BOLD
Photina
Photina italic
Photina bold
Photina bold italic
Placard condensed
Plantin light
Plantin light italic
Plantin
Plantin italic
Plantin semi-bold
Plantin semi-bold italic
Plantin bold
Plantin bold italic
Plantin bold condensed
Rockwell light
Rockwell light italic
Rockwell
Rockwell italic
Rockwell bold
Rockwell bold italic
Rockwell condensed
Swing bold
20th Century ultra bold condensed
fi ffl ¼ ½ ⅛ ⅜ (Plantin Expert)
fi ffl ¼ ½ ⅛ ⅜ (Plantin Expert italic)
fi ffl ¼ ½ ⅛ ⅜ (Plantin Expert bold)
fi ffl ¼ ½ ⅛ ⅜ (Plantin Expert bold italic)

ORDER NOW! CALL THE HOTLINE ON 0458 273279

Excel, Word and FileMaker help

In the same series of Black Mouse guides are books teaching you the best of Microsoft *Excel 4*, Claris *FileMaker Pro* and Microsoft *Word 5*. All are available at the same bargain price.

***FileMaker Pro* book**
Price: £7.95
Order code: MFFMPRB

Microsoft *Excel* book
Price: £7.95
Order code: MFEXCELB

Microsoft *Word* book
Price: £7.95
Order code: MFWORDB

Style victims

Yes, you too can be the proud wearer of one of these strictly limited edition MACFORMAT T-shirts. Available in large and extra large in a fetching dark blue, these T-shirts are ideal to impress your friends with your Mac knowledge.

MACFORMAT T-Shirt
Price: £9.95
Order code: MACFTSL (large), MACFTSXL (extra large)

Need help with ClarisWorks?

If you need to know more than the manual tells you, then try this Black Mouse guide to *ClarisWorks*. Inside you'll find pages of practical advice and worked examples to help you get the most from your software. Special MACFORMAT offer – £2 off RRP.

***ClarisWorks* book**
Price: £7.95
Order code: MFCLWKSB

The essential shareware collection

No fewer than ten high density disks, packed with the very best shareware and freeware programs. No demos, just top-notch shareware software. Too many to list, but included are the latest versions of: *Disinfectant, SoundMaster, Apollo, BeHierarchic, FileTyper, Maelstrom, Graphic Converter*, and over 100 more. All programs work with System 7 and a colour monitor – some require them. Ten disks for just £19.95!

Shareware collection vols 1-10
Price: £19.95
Order code: MFSHARE1

SCSI problem solver

Our Mac answers section is frequently asked about problems with external SCSI devices, like scanners or external hard disks. Nine times out of ten the query can be traced to a problem with termination – the last device must either be terminated internally (the manual will tell you if it can be), or you must fit an external terminator. They can be little blighters to get hold of, so MACFORMAT has got some for you.

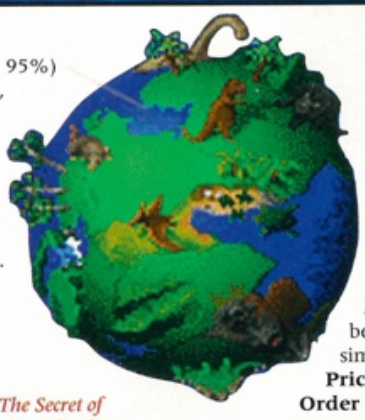
SCSI terminator
Price: £14.95
Order code: MFTERM

THE MACFORMAT CLASSICS

In the last year, MACFORMAT has awarded its coveted Classic award to just four truly outstanding games. We think these games are the ultimate in gaming on any computer, not just the Mac, and we are proud to offer them to you direct from the magazine. They're a must, simple as that.

Myst
(MACFORMAT February, 95%)
An adventure that has you exploring an island world with enthralling puzzles to solve and luscious visuals. This graphics extravaganza comes to you on CD-ROM.
Price: £39.95
Order code: MFMYST

Civilization
(MACFORMAT June, 95%)
Start with nothing, conquer the world and reach the stars in just 4,000 years. Simply the most addictive strategy game ever written.
Price: £34.95
Order code: MFCIV



LeChuck's Revenge: The Secret of Monkey Island 2
(MACFORMAT September, 95%)
A graphic adventure from LucasArts full of excruciating wit and fiendish conundrums, with a superb soundtrack, lovely animation and memorable characters. In short, it's one of the best adventure games ever conceived.
Price: £39.95
Order code: MFMONK2

SimCity 2000
(MACFORMAT February, 95%)
The updated version of the original Macintosh classic, *SimCity 2000* is a beautifully illustrated and finely detailed simulation with hours of gameplay.
Price: £37.95
Order code: MFSIMC

Get networked!

Networking two Macs means you can move files without using floppies, run applications on the other Mac, and share printers. You'll need one kit per Mac (includes about 2m of cable) and an extension cable if your Macs are further than 2m apart. System 7 is required (not inc.).

AppleTalk connector kit
Price: £29.95
Order code: MFNET
10m extension cable
Price: £19.95
Order code: MFEXT

THIS MONTH'S MACFORMAT SPECIAL

Our special offer for April is the infuriating puzzle game *The Tinies*. At least one member of the MACFORMAT staff got quietly addicted to this game, which sees you moving the aforementioned Tinies around so they can sleep better. Sounds pointless, and I suppose it is, but it kept Kim up half the night. *The Tinies* has a recommended retail price of £39.95 but MACFORMAT can offer *The Tinies* to you at the amazing price of £14.95 – that's more than 60% off! Like the man said, this offer can't last long, so cheque books out and get puzzling!

The Tinies
Price: £14.95
Order code: MFTINY

Expect lots of face-pulling when *The Tinies* are awake, but get them into their sleep pods and they'll look practically angelic (in a primary colour sort of way).

The silliest software ever!

UnderWare is a screen saver, and it can customise the desktop background, but it's much more than that. It's fun. In fact it's downright silly. *UnderWare* animates the screen as you work! Tarzan swings in and collides with the window, a thief makes off with your 68000, babies crawl everywhere, a dragon burns holes in the desktop and so on. It even runs *After Dark* modules in the same way. *UnderWare* has to be the ultimate Mac customiser! We gave it 93% in February's issue. Imported direct from the US, where it costs $59.95, MACFORMAT brings you total silliness for just £34.95.

Underware
Price: £34.95
Order Code: MFUNDER

The ultimate value modem

Back in October we offered you the chance to buy the US Robotics Mac & Fax modem at a very special price, and the response was overwhelming. So we've decided to give those of you that missed it a second chance!

The Mac & Fax is a super-fast modem that can transfer data at up to 56,000 bits per second – 20 times as fast as a typical 2400 modem. It does this by combining raw speed (14,400 baud) with the v32 compression system which shrinks the data before sending it. The modem works with any on-line service, and comes complete with a Mac cable and all the software you need to access computers worldwide.

As well as being a modem, the Mac & Fax includes software which enables you to send faxes direct from your Mac, simply by printing from your document as normal, and the Mac & Fax can receive faxes too.

All in all then, it's pretty fab and you definitely shouldn't be without it. Our price for this remarkable piece of kit? Only £299.95!

US Robotics Mac & Fax modem
Price: £299.95
Order code: MFMODEM

HOW TO ORDER FROM MACFORMAT PROMOTIONS

MACFORMAT welcomes credit card orders by phone on our hotline – 0458 273279 – or you can use this coupon.

Please send me the items I have listed below

TOTAL £.....

(Overseas orders: please add £5 per item (£10 for the modem). Payment must be by credit card or by Sterling cheque drawn on a UK bank account.)

Please indicate method of payment:

☐ I enclose a cheque made payable to Future Publishing for £.....

☐ Please debit my Mastercard/Visa (delete as applicable) with £.....

Signed.....

Card no.....

Expiry date.....

Name.....

Address.....

.....

.....

.....

Postcode.....

Send this form or a copy (no stamp required) to: MACFORMAT mail order, Future Publishing, FREEPOST, Somerton, Somerset TA11 7BR.

Product.....Order code.....Price.....

Product.....Order code.....Price.....

Product.....Order code.....Price.....

Product.....Order code.....Price.....

great reasons to subscribe to

MACFORMAT

In MACFORMAT you get more than 1,000 pages of the latest news, helpful advice, essential tips, incisive reviews and top-class writing. MACFORMAT not only gives you the hard information you need to get more from your Mac, it does it with its own unique style. And it's more fun than any other Mac mag!

On our cover disks you get more than 30 megabytes of the very best shareware and freeware, and demos of all the very best games. We get our software from all over the world, and sift through hundreds of programs every month to bring you top quality software, just as soon as the programmer's finished it!

You get a choice of free gift worth up to £90 when you subscribe. If you want to use PostScript fonts with a StyleWriter, or just improve the quality of text display, you can have *Adobe Type Manager*. If you want to have no hair left in a week you can have the infuriating *Lemmings*. Or if you want to create an entire planet you can have *SimEarth*. The choice is yours.

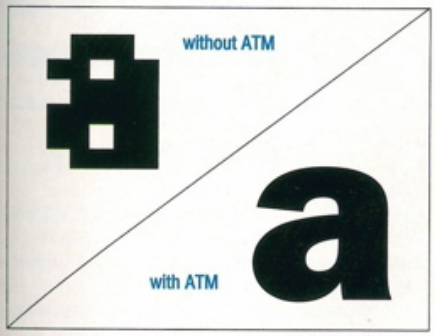
You get great discounts on our mail order special offers. Our promotional offers are selected to bring you hardware and software at the keenest possible price, and subscribers get regular money off the prices advertised in the magazine. You can save hundreds of pounds! Details are in the subscriber's newsletter.

When you subscribe to MACFORMAT, you get all this without having to lift a finger – it just arrives through your door, regular as clockwork. No price rises to worry about, no trekking through the rain to find out that your favourite magazine has sold out. Your copy of MACFORMAT is guaranteed, every month!

YOUR CHOICE OF FREE GIFT

Adobe Type Manager

FROM ADOBE, RRP £94



Adobe Type Manager is, quite simply, essential. It enables you to use ordinary PostScript fonts on any printer, including the StyleWriter and HP DeskWriter. It also gives a superb on-screen appearance to PostScript fonts, especially at large sizes. Jaggies disappear and what you see is actually what you get. See the example above.

Lemmings

FROM PSYGNOSIS, RRP £45

Lemmings is a true classic game, and you don't even shoot anything. Your mission is to save as many lemmings as possible, but the silly buggers insist on walking over cliffs, drowning themselves and getting trapped in holes. Only you can save them! An enthralling and irritating puzzle game, guaranteed to have you addicted in minutes.

SimEarth

FROM OCEAN, RRP £41

You start with the primordial soup and an empty planet. What you end up with is up to you! Maxis, maker of *SimCity*, got carried away and simulated an entire planet, and its geology, animal and plant life. If you can manage an ecosystem then you could create a swarming multitude of life. Otherwise it's a lifeless desert in store for this planet...

Your no-risk guarantee

If you subscribe to MACFORMAT, you can cancel your subscription at any time and we will refund you for all unmailed issues, no questions asked.

MACFORMAT SUBSCRIPTION FORM

Please send to MACFORMAT subscriptions, Future Publishing, FREEPOST, Somerton, Somerset TA11 7BR

Yes! I would like to subscribe to MACFORMAT for 12 issues and receive my free software

Please indicate your choice of free software (tick as appropriate)

☐ Lemmings ☐ SimEarth ☐ ATM

Please send me ☐ UK subscription **£47**

☐ European Community subscription **£59**

☐ Rest of World subscription **£79**

Offer expires April 20, 1994 MAC/MAG/04/94

Please debit my Visa/Mastercard with £..... or

I enclose a cheque payable to Future Publishing for £.....
(cheques must be in Sterling drawn on a UK bank account)

Signed ..... Date.....

Card no. ..... Expiry date .....

Name.....

Address.....

.....

.....Postcode.....

MAC ANSWERS

GOT A PROBLEM WITH YOUR MAC? WE'RE HERE TO SOLVE IT!

Whatever your Mac problem, we're confident that MACFORMAT's team of experts can solve it. All you have to do is fill in the form on page 71– or photocopy it if you don't want to cut up your precious copy of MACFORMAT – and then post or fax it to us. Include as much detail as you can about your setup and the software you are running, in particular the version number (highlight the program icon and select **Get Info** in the **File** menu or press [command] I).

Please note that we are unable to answer questions over the phone – so there's no point ringing us up with technical enquiries. We are also unable to enter into personal correspondence – even if you enclose an SAE. We can only deal with questions in these pages.

Do-it-yourself problem solving

One of the main causes of a program not working properly is something called an INIT clash – this ominous-sounding term means your program isn't happy with one of the system-level Extensions (INITs in System 6) that are running.

Fortunately, it's easy to check if this is the case. First of all, restart your Mac without any System Extensions (INITs). If you're running System 7.0 or above, that means restarting the Mac and holding down the [shift] key – a message telling you 'Extensions off' will appear. For any System version below 7.0, move all the Control Panels and INITs out of your System folder and restart the Mac.

If your program now works, it must have been unhappy with one or more of the INITs. The only way to work out which one is the culprit is to move them all out of the System folder, then put them back in one at a time – not forgetting to restart your Mac after each one – and test the program again after each one has been replaced.

Future of Macs

GENERAL

Q *1. Is the Mac becoming 'obsolete' with the release of PowerPC? Will people stop (or drastically reduce) the production of Mac software? I'm only 11 years old, and I hope that my LCII will last me until I finish school – so this is important to me.*
2. Why is it that when I boot up my Mac, only a partial amount of my Apple 14-inch monitor gets filled? There's a black border around the screen, and no program seems to make use of the space. Is there a way of using the whole area of the screen?
3. Why, when I click on 'add' in the Sound Control Panel, can I only record 10 seconds of sound?
4. Is it possible to get hold of a program to spell check in a foreign language like French or Spanish? I have Microsoft Works *and* ClarisWorks, *but they only check in English.*
Owen Gerrard
Christchurch, Dorset

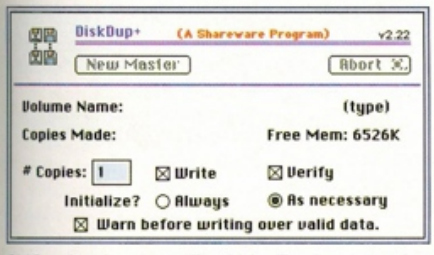
A **1.** No, the Mac is not becoming obsolete! You can rest assured that, with a user base of more than 11 million Macs, software and hardware companies won't stop producing 680x0 Mac-based products for some considerable time. What we'll see is that products start appearing for the Power Macintosh and 'classic' Macs at the same time – it will be many years before the 680x0-based Mac is regarded as an obsolete machine – even though almost all Macs produced are likely to be based on the PowerPC chip by this time next year. And by the time you've finished school, who knows what computers will look like? You'll probably be able to get a supercomputer with voice recognition and direct plugs into your brain for £3.50 by the time you're 18!
2. Unlike televisions, no monitor uses the full visible area of the screen for its display – after all, you need to be able to see right to the very edges of whatever information the computer is displaying. There used to be a product called *MaxAppleZoom* which allowed some old Macs to slightly expand the visible area of a 13-inch monitor, but I don't know of anything that will do the same operation on your LC II. Rest assured, though, that it's not a fault of your Mac or monitor.
3. Apple just decided that ten seconds was a reasonable length of time – after all, the sounds recorded in the Control Panel are intended to be used as 'system beeps', and you wouldn't want a three-minute beep every time you did something wrong! (Also, the amount of disk space taken up for such a long sound would be extortionate.) There are plenty of products available which enable you to record longer sounds, if you want to do so – both shareware and commercial.
4. To spell check in a foreign language you simply need the appropriate foreign dictionary file. Software sold in the UK has a UK dictionary, but it might be possible to acquire foreign language dictionaries from some companies. You could try giving Claris a call on 081 756 0101 and Microsoft on 0734 270000, although I don't think that either company sells separate dictionaries for its *Works* packages – only for their high-end word processors.

Macintosh Basics tour

GENERAL

Q *1. In the process of tidying up my files, I trashed the Macintosh Basics tour, thinking that it would be on one of the System disks if I wanted it back. I've since discovered that it isn't, and although I don't need that bit of software now, are there any other similar surprises awaiting me?*
2. On receiving my ClarisWorks *upgrade, I backed up the floppies as per instructions, but several attempts to load them were refused, with the comment that they were the wrong disks. I eventually used the master disks successfully. I've had exactly the same problem when trying to re-install the System from copies of my System disks. On the other hand, all my copies of* MACFORMAT *disks have caused no problems. All the copies of System disks and* ClarisWorks *that I've made seem OK when loaded and opened to view their contents. Please explain!*
3. I'm interested in using my Mac for music, and I want to do three separate things: notate/compose directly on-screen from the keyboard and mouse; input directly on-screen from acoustic instruments or taped recordings of them; convert the digital input from an audio CD, played on a CD-ROM drive, into musical notation. What can I use to do these things?
Phil Keen
Lancaster

A **1.** The Macintosh Basics (an introductory tour of your Mac) is often put on the hard drive before the Mac is shipped, but isn't included on the System disks. However, that's the only thing that isn't included – everything else is on the set of disks that you received with your Mac.
2. The problem comes about because Apple's *Installer* (which most software companies use to let you install their applications) is very particular about the disks it uses. Your copies must be exactly the same as the originals, and that means that all the files should have the same names, and the disk itself should be named identically. The easiest way to make sure that you have exact copies is to use a utility like *DiskDup+*, which is shareware and should be available from any PD or shareware company which advertises in MACFORMAT, along with user groups and bulletin boards. This makes an



DiskDup+ is a shareware utility which will make exact copies of your files – useful for backing up master disks.

exact copy without you having to drag-copy to your hard disk, and is well worth obtaining. Indeed, certain disks (such as the *Norton Utilities Emergency Disk*) must be copied using just such a utility – a drag-copy simply won't work, since there's hidden information on the floppy which must be duplicated for the copy to work.

3. For the first of your queries – composing directly on the screen using your keyboard and mouse – I'd like to direct you to MACFORMAT's excellent monthly music column. Just about every notation program will let you do this, and we've run reviews of a number of such programs over the months. As for the second and third queries, though, I'm afraid that you're out of luck. Computer music uses a standard called MIDI, which stands for Musical Instrument Digital Interface. This is a method whereby instruments send out electronic messages to each other detailing which note they are sounding, what sound sample they're using and so on. With a MIDI interface for your Mac, you can control electronic MIDI instruments, and there are even MIDI interfaces which you can buy specially for electric guitars which convert their data to MIDI. For any other acoustic instrument, though, I'm afraid that this is pretty much impossible, and similarly you can't interpret the data from a compact disc and turn this into MIDI.

RAM expansion

HARDWARE

Q *1. Everywhere I read I'm told that I can only expand my Performa 400 to a maximum of 10Mb of RAM. To reach this, my Getting Started manual says that I need to add two 4Mb SIMMs. According to my maths, though, 8Mb plus my basic 4Mb setup equals 12Mb, not 10Mb.*

2. I'd like to install a maths co-processor. Can you outline my options, please?

3. Is the PDS (Processor Direct Slot) exactly the same for the LC and LC II?

Carl Keeley
Basildon, Essex

A **1.** Your Performa 400 can only access a maximum of 10Mb of RAM. In your 4Mb machine, you have 4Mb soldered on the main circuit board and no SIMMs (single in-line memory modules) in the two SIMM slots. To upgrade your RAM, you must add two 4Mb SIMMs – but even when you've done that, the computer will only be able to 'see' 10Mb. There's no way around this, I'm afraid.

2. Maths co-processors are used to speed up calculation-intensive operations (for example, rendering ray-traced graphics). All maths co-processor upgrades are pretty much the same; take a look at the adverts in MACFORMAT and consider whether you're likely to want any 'extra options' or whether a simple co-processor is enough. If the latter is the case, then buy the cheapest that you can find.

3. You should buy PDS cards for the exact make of Mac that you own, since the interface differs depending on the specific processor that your Mac has. For example, the LC uses a 68020 chip, while the LC II has a 68030 – and hardware which fits into the PDS slot needs to take that into account.

Virus protection

SOFTWARE

Q *In MACFORMAT you say that I should use the anti-virus program* Disinfectant. *I already have* More After Dark, *which includes Virex-D; can I also use* Disinfectant, *or will this make my Mac crash? Which is the better of the two to use, or are they both the same? Also, I have a number of communications tools, for example the Serial Tool and Text Tool in my Extensions folder, and also files like Foreign File Access. Can I throw these away?*

E Branley
Northumberland

A The problem with any anti-virus software is that you must ensure that it's up to date – otherwise any new virus has a chance of sneaking through. As long as you're sure that the version of *Virex* you have is up to date, you'll be fine; otherwise, get hold of the latest version of *Disinfectant* (3.3 at the time of writing – it was yours free on MACFORMAT cover disk 10; see page 94 to order back issues) and make sure that you install the *Disinfectant* INIT. It's perfectly possible to run both at the same time, although there really isn't much point.

If you don't use a modem or serial link to communicate with other Macs, you can get rid of the Comms Toolbox files in your System folder. However, Foreign File Access and its ancillary files (like ISO 9660, High Sierra and the like) were installed when you installed your CD-ROM drive, and enable you to read CDs that were created for systems other than the Mac – including audio CDs. So you really shouldn't throw them out, unless you're sure that the only CD-ROMs you'll ever be using are Mac-only discs.

Mac Plus possibilities

HARDWARE

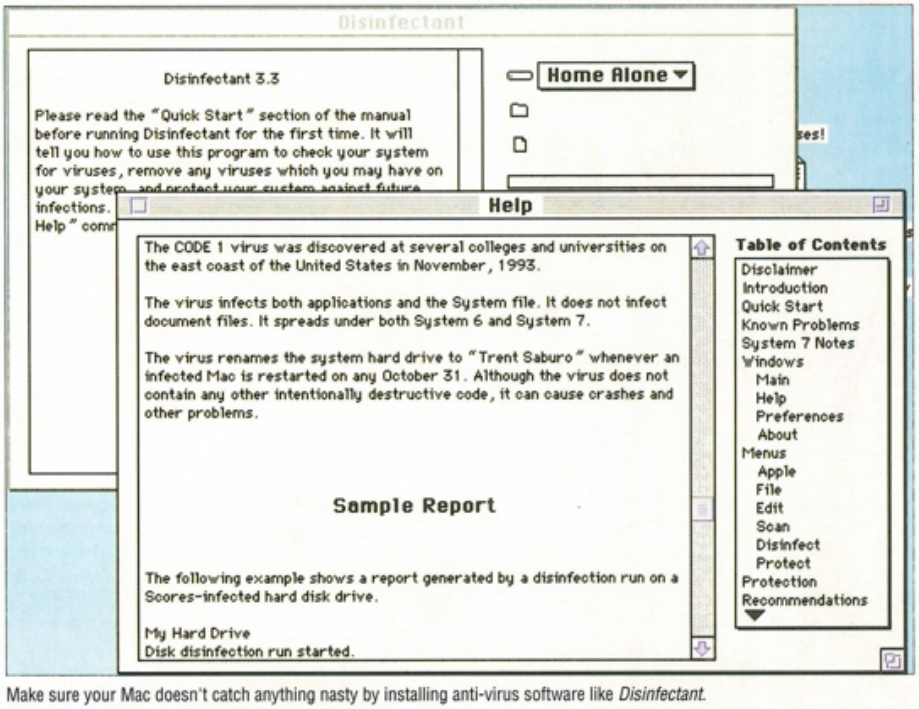
Q *I have recently purchased a 1Mb Mac Plus with an external floppy drive and printer, all for £75 (good price or what?!). The Mac is running System 5.0, and has MacWrite 4.5 and MacDraw 2. However, after looking through MACFORMAT I'm aware that the operating system is a bit 'chronologically challenged', as is the machine itself, and that some of the software currently on offer (such as your cover disk) won't run.*

I've worked with PCs for some time, but as a newcomer to the Mac I need some help. Can I:

***(a)** Run System 7 on this Mac?*
***(b)** Upgrade the RAM using SIMMs?*
***(c)** Plug in an extended keyboard?*
***(d)** Plug in a joystick?*
***(e)** Drive printers that I use at work, such as the Hewlett-Packard DeskJet 510?*
***(f)** Run MIDI software without any additional hardware?*

Pete Przyszlak
Upper Sapey, Worcester

A Wow – a great price indeed! The Mac Plus is a fine machine for many tasks – I know of one magazine (not MACFORMAT!) where a network of Pluses is used for all editorial staff to



Make sure your Mac doesn't catch anything nasty by installing anti-virus software like *Disinfectant*.

input copy. However, the news as regards most of your questions is not so good, I'm afraid.

(a) System 7 is only supplied on high-density disks, so you physically wouldn't be able to read the System disks. Even if you got someone to copy everything you needed on to double-density disks, you'd find that System 7 consumes over 2Mb of RAM and will run very slowly indeed on a Plus, so you'd certainly need a hard drive and extra memory as well. It would be a good idea to upgrade to System 6.0.2 or later for the vastly improved features, but if you find you can't get hold of that, all in all, sticking with the System you've got is probably a good move.

(b) You can upgrade the RAM in a Mac Plus to a maximum of 4Mb. Make sure you specify which machine you've got when you order the SIMMs, to ensure you get the right ones.

(c) The Mac Plus doesn't use the ADB (Apple Desktop Bus) system for connecting the mouse and keyboard, so you need a specific Mac Plus keyboard; I don't know of anyone who produces an extended keyboard which will work with the Plus.

(d) Joysticks tend to plug into the ADB port, and since the Plus doesn't have one, this won't be possible.

(e) You'd need a package like PowerPrint (see our feature on printers on page 40), which costs rather more than your Mac did! Also, there's the likelihood that such software won't work with System software as old as 5.0. Finally, the printer drivers probably wouldn't fit on a floppy disk along with your System software, so unless you have a hard drive the whole thing is impractical.

(f) You need a MIDI interface for any Mac to access MIDI instruments – there isn't one built in to any Mac, I'm afraid.

Amiga to Mac

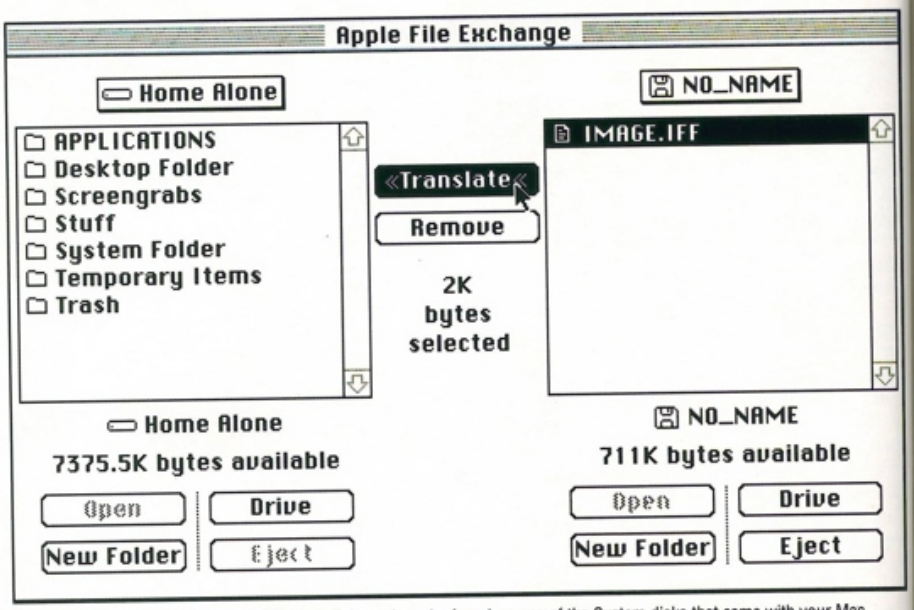
GENERAL

Q *On your January issue cover disk there was a program called* GraphicsCoverter. *I have some friends who have an Amiga with graphics images that I'd like to put on my Mac, but how can I get the graphics from an Amiga floppy disk to my Mac? My friends don't have a PC emulator, since as far as I know they don't exist on the Amiga.*

Ivor Lewin
Newbury, Berkshire

A This is a problem that many people have, since the Amiga can't directly write Mac disks and there are no Mac programs which can read Amiga disks. Fortunately, though, there is a way – via PC-format disks. There are two ways of creating floppies in PC format from your Amiga. If you are running Amiga Workbench 2.1 or above, you'll have a utility called *CrossDOS* installed. This enables you to format, read and write disks in PC-compatible format. If you're using Workbench 2.0 or below, you need to get hold of a shareware program called *MessyDOS*. This should be available from any of the public domain software houses which advertise in magazines like our sister title *Amiga Shopper*, and again enables you to write disks in PC-format. Once you've formatted a disk and placed the Amiga graphics you're after on it, you can read the disk on your Mac by using *Apple File Exchange*. This is a Mac program which enables you to read PC-format disks, and you'll find it on one of the System disks that come with your Mac. (Performa owners should have *PC Exchange* installed as part of their basic software setup; this will automatically read PC disks for you.)

Oh, and by the way, there are three or four PC emulators available for the Amiga, if your friends are interested...



Apple File Exchange lets you read PC-format disks and can be found on one of the System disks that came with your Mac.

Thousands of colours

HARDWARE

Q *I have a Mac LC with an Apple Basic Colour Monitor. Which of these is the limiting factor which produces only 16 colours and not 256 – and what can be done to increase the capability to 256?*

MS Cooke
Fareham, Hants

A The limiting factor in this particular case is the LC. In its basic form it can display 256 colours on a 12-inch monitor, but only 16 colours on a 13-inch (or 14-inch) monitor. To increase this to 256 colours, you need to get yourself a VRAM (Video RAM) upgrade, which will allow you to display 256 colours on your monitor, or 'thousands' of colours on the 12-inch colour monitor.

32-bit QuickDraw

SYSTEM SOFTWARE

Q *I have a fairly simple question to ask about 32-bit QuickDraw, which I found on a printing software disk that came with my StyleWriter II. I can't find 32-bit QuickDraw anywhere on my LCII's hard disk, and it wasn't automatically installed by the StyleWriter installer. Do I really need it, or is it there and hidden by System 7.1? And if I do need it, where do I put it? It says on the box of a game I recently bought that I need "at least System 6.0.5 with 32-bit QuickDraw," but the game was perfectly fine without it.*

Julian Stephenson
Dorchester, Dorset

A 32-bit QuickDraw is present in the ROM (read-only memory) of all new Macs, so you don't need to worry – it's built into your Mac. If you install System 7 on an older Mac which doesn't have it built in, System 7 will automatically have it included within the System file – so again, no need to worry. It's only if you have an old Mac running System 6 that you might need the separate file – and if you do, the Installer software will put it in the correct place (loose in the **System** folder) for you.

Quadra conundrum

GENERAL

Q *Apart from rebuilding the Desktop weekly, how can I keep my Quadra 700 happy? What use is the programmer's switch on my Quadra; can you give me any useful commands that I could use? What advantages do I get from upgrading to System 7.1 from 7.0.1, bearing in mind that I own* Photoshop 2.5.1, *which included* QuickTime 1.6 *on the disks. Finally, I'm thinking of upgrading to a Quadra 950. Would it be a wise move?*

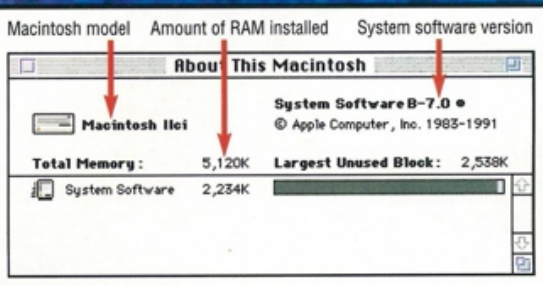
M G Westwood
Bushbury, Wolverhampton

A Rebuilding the Desktop is a good move, and you should probably run a utility like *Norton Utilities for Macintosh* (£128 from Principal Distribution, 0706 831831) over your hard drive every week or two to make sure that it has no hidden problems. You should probably also defragment your hard drive (using *Norton SpeedDisk* or something similar) every month or two as well. Apart from that, though, your Quadra doesn't need any special care.

There are two switches on most Macs. One (with a triangle on it) will restart your Mac, although you shouldn't use this unless you are

HOW MUCH RAM HAVE YOU GOT?

Obvious but true: even the same models of Mac can have different amounts of memory or run different System software. To solve your problem, we need to know all about your setup, and this is where you can find out. Make sure you are in the Finder, point to the **Apple** menu and go to the first item **About This Macintosh**, then release the mouse button.



sure that your Mac has crashed. The other (called the Interrupt button or 'Programmer's switch') drops you into a 'debugging' environment, which is only really useful for programmers. If an application crashes, you could try hitting the button and typing **G FINDER** then hitting the **[return]** key – this may take you back to the Finder (you'll lose any work in the crashed application, though), but normally it won't have much effect.

You won't get much advantage from upgrading to System 7.1 from 7.0, other than a newer version of *QuickTime* (which you have already) and slightly better font handling (System 7.1 has a Fonts folder, rather than installing fonts directly into the System file). I have been using System 7.0.1 happily for two years, and have had no need to upgrade to 7.1 – most people using 7.0 are probably in the same boat. Watch out for System 7.5, though, due out sometime around the middle of the year. This will have several extra features built in, and will probably be well worth upgrading to. Don't hold your breath too long, though – these things have a habit of appearing rather later than expected.

As for upgrading to a Quadra 950, although it offers plenty of room for internal expansion, I'd suggest that you take a good look at the Power Macintosh family that Apple has just released. PowerMacs are far faster when running 'accelerated' applications, and are cheaper than a Quadra 950 too. See our special report on pages 13, 20 and 21 this issue.

Quit or close?

BEGINNERS

Every time I quit a file in QuarkXPress *I have to return to the Finder in order to select another document to be loaded. Can you tell me how I can rectify this problem and remain in* XPress *after quitting a program?*

Spencer Harris
Wolverhampton

When you've finished with a document, you can click the 'close' box which is in the top left-hand corner of the window or select **Close** from the **File** menu. This will close the window and hence the file. You can still see the Desktop because the window which was obscuring it has gone, but by selecting **Open** from the **File** menu (make sure you don't click on the Desktop first) you can open a new document directly in *XPress*. It sounds like you're selecting **Quit** to close a document, which quits the whole application, rather than just closing the current document. *Ian Wrigley*

MACANSWERS

If you send in a question for the MACFORMAT experts to solve, please fill in and include this form (or a copy of it). And please make sure that you include all the relevant details – version numbers of software and so on – so that we have the best chance of helping you. Send your form and question to:
Mac Answers, MACFORMAT, 30 Monmouth Street, Bath BA1 2BW, or fax it to us on 0225 446019.

Name .....

Address .....

.....

.....

Your Mac
(For example, Performa 200, IIfx, PowerBook 145):

.....

Approximate age of machine: .....

System version
(see About this Macintosh screenshot above):

.....

Amount of RAM
(Total Memory figure from the About This Macintosh dialogue box):

.....

Are you using virtual memory? .....**YES/NO**
(This is accessed from the Memory control panel under System 7)

Do you have 32-bit addressing turned on? .....**YES/NO**
(This is accessed from the Memory control panel under System 7)

If your Mac has an external monitor, list the make and model; if you are using a video card, give details:

.....

.....

Details of any SCSI devices connected
(eg CD-ROM drive, hard drive, scanner):

.....

.....

Details of any other relevant hardware which could help us to answer your question:

.....

.....

.....

Now, use this space to describe your problem or question. Include as much relevant information as possible. Please continue on a separate sheet if necessary.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

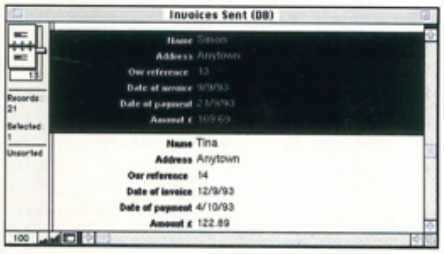
Looking after business

Got your own business? Here's how to analyse your cashflow by combining the use of spreadsheet and database modules.

Spreadsheets are very handy for analysing data and producing useful information, but one of the greatest problems is getting the data in the first place. Once you've decided where to get the data from, it must often be manipulated to get it into the right form before it can be analysed. In this article we will look at how data can be extracted from a database and transferred into a spreadsheet. The example we will use is from a small business which wants to analyse its cashflow based on the payment of invoices received and sent out. We will use the database and spreadsheet modules in *ClarisWorks*.

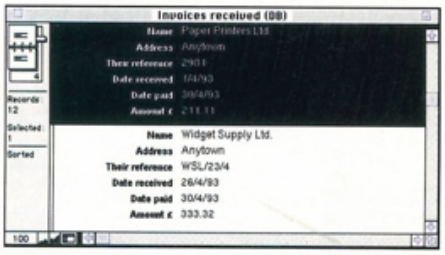
The original data

We will produce two databases. The first contains details of the invoices we send out. It will need to contain the name and address of who the invoice should be sent to; the amount owed; the date the invoice was sent; the date the invoice was paid; and a reference for your own purposes. Some example records for this database are shown below:



When setting this up some tricks were used while defining fields. The 'Date of invoice' is set to enter the date when created automatically. Also, the 'Our reference' field is set up to automatically enter a serial number into. It is tempting to make the 'Date of payment' field enter a date when the record was modified, but then this would change whenever the field was modified, which may not be desirable.

We will also set up a similar database with details of invoices we have to pay. Again this will have fields for the name, address, a reference and the amount. However this time the dates will be for when the invoice was received and when it was paid. Some example records are shown below:

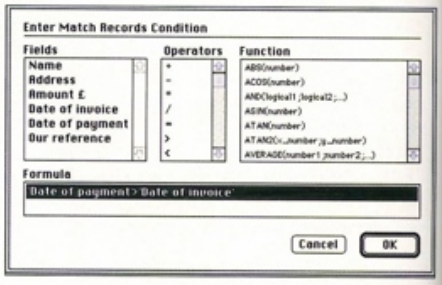


We can use the automatic entry facility to enter the date into the 'Date received' field. If we had wanted to add our own reference we could have added this.

Setting up databases like this in *ClarisWorks* is simple. We can use the various layout facilities that are available not only to display the information, but also to produce address labels, which can be used when mailing out cheques.

Getting the data out

As invoices are entered into the database it will soon become too unwieldy to browse through it by hand to find individual entries. What we will want to do is select sets of records that interest us. To carry this out in *ClarisWorks* we use the 'Match Records' operation, which produces the dialogue box shown below:



Using this we can enter criteria for the records we want to find and then *ClarisWorks* will highlight them. The criteria shown above will highlight all the invoices that have been paid. Other useful ones are:

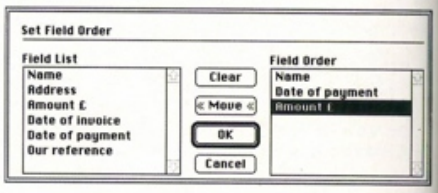
- 'Date of payment' = 0
  Find unpaid invoices
- 'Date of payment' – 'Date of invoice' > 28
  Find people who took longer than 28 days to pay.
- MONTH('Date of payment')=4
  Find invoices paid in April

It is possible to set up quite complex queries but unfortunately *ClarisWorks* has no direct way of naming and saving queries. Instead they can be recorded as macros and played back. When constructing macros in this way with *ClarisWorks*, some care must be taken as it is not possible to 'see' what the macro does without running it. In other applications macros are dumped as text and can be read like programs. Therefore, it is a good idea to tell *ClarisWorks* to 'Show all records' before each query and to 'Hide unselected' records at the end of each macro – a neat way around the problem.

Getting ready to transfer

Say we are interested in invoices that have been paid either by us or our customers. We can construct queries that will select these records and these can be copied to the clipboard and pasted into a worksheet. However, this will transfer the whole record, which will contain fields like the reference which we will not want in the worksheet.

The easiest way to hide these extra fields so that only the fields we require are copied is to change the layout of the database. Selecting **New Layout** from the **Layout** menu produces an options dialogue box, where the best option to choose is columnar report. This will produce a table rather like a spreadsheet. Once we have dismissed this dialogue, the following dialogue is shown:



DOING IT IN OTHER APPLICATIONS

All the integrated 'Works' applications have similar facilities and what we have produced here in *ClarisWorks* could have been produced in any of them. Spreadsheets like MS *Excel* also have built-in database facilities which could be used in a similar way. With a dedicated database application, more flexible queries can be developed and they may have the ability to write information directly to a spreadsheet application.

Choosing fields

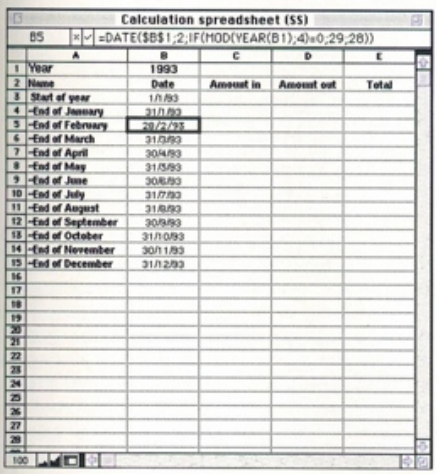
Using this dialogue it is possible to choose only the fields we require. Here we have chosen the name, the payment date and the amount. Applying this layout produces the result below:

The worksheet

The data we want is now in a useful enough format to transfer to the spreadsheet module. Having done this we ought to decide what information we want. It would be useful to produce a cashflow analysis showing what money has come in, what money has gone out and what our current balance is.

To make this slightly more interesting we will add to this the problem of producing an entry for the end of each month.

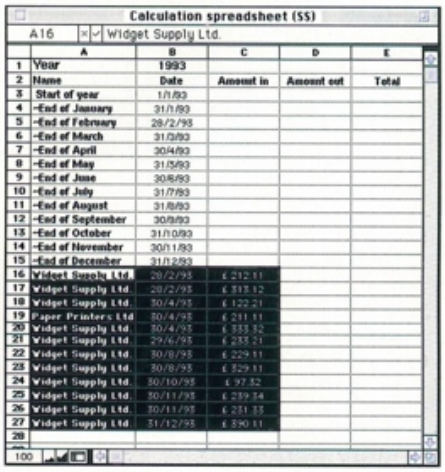
We will want a worksheet into which we can copy the payment details. The basis for the worksheet that could usefully carry all this information is shown below:



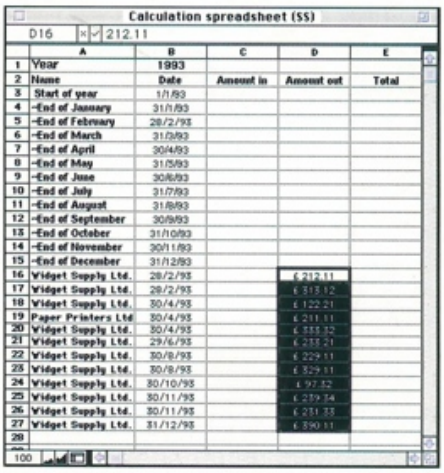
The interesting facet of this worksheet is the rows which contain the '~End of ...' the month entry. Note that the entry for February has been set up in such a way to decide whether or not it is a leap year. When we paste in the details from the database we will paste them after these entries and then sort by the date in column B and the name in column A.

The ~ at the beginning of each entry guarantees that when we sort the worksheet, the end of month total will appear at the end of each month as required.

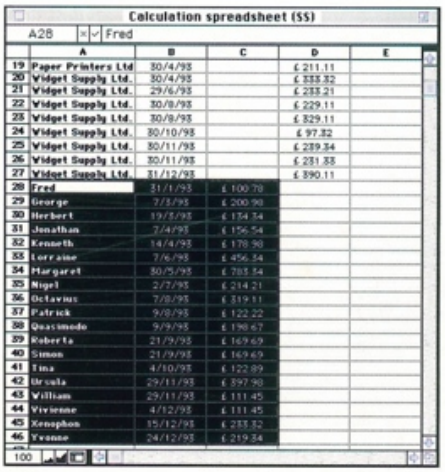
To see how this works, we can now paste in the results from the database. Firstly, we will paste in the details of the invoices we have paid, as shown in the next column:



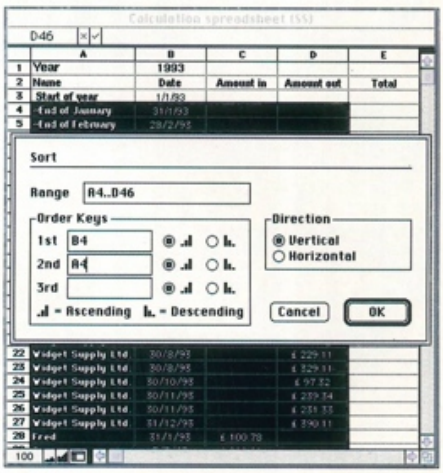
The amounts will have to be moved from column C to column D, as these numbers represent outgoings, to give the result below:



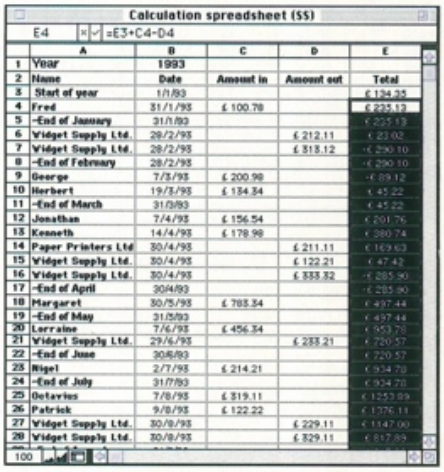
Using the other database, we need to extract the details of invoices we have sent, which represent money paid to us. When pasted in this gives:



We now need to sort these three sets of entries. After we select the payments in, the payments out and the monthly totals, they are first sorted by date in column B and then by name in column A, which gives the result shown next:



We can now enter the amount of money we start the year with in cell E3. Into cell E4 we enter the formula '=E3+C-D3', which will calculate the balance and fill down to show our standings as each invoice is paid.



Having obtained information from the database and put it into a spreadsheet we are in a much better position to analyse it.

Integrated applications such as *ClarisWorks* provide a unique platform to build collections of spreadsheets, databases and documents which can be used to manage small businesses. We could have built a complete money management system that produced everything from financial reports to the address labels for the bills.

Simon Cox & Greg Morrison

JARGON BUSTERS

Field: a piece of information, like a name or phone number, in a database record.

Macro: in *ClarisWorks*, this is a recording of actions performed in the application which can be replayed at a later time.

Query: a set of criteria which can be used to select records in a database.

Record: an individual entry in a database.

Mygate COMPUTING

Upgrading your Macintosh has never been easier .....

As the leading UK supplier of Macintosh memory and enhancements Mygate Computing is driven by providing the best upgrade solutions in the most cost effective way.

BEST PRICED MEMORY

We will endeavour to match any proven advertised price on Macintosh memory

Desktop Macintoshs	
1mb 30 pin	£31
2mb 30 pin	£59
4mb 30 pin	£104
16mb 30 pin	£465
4mb LCIII/475/Centris	£110
8mb LCIII/475/Centris	£235
16mb LCIII/475//Centris	£459
4mb Quadra 800/840av	£115
8mb Quadra 800/840av	£240
16mb Quadra 800	£485
16mb Quadra 840av	CALL
32mb LCIII/Cent/Quad	CALL

PowerBook or Duo	
PB 100 4mb	£179
PB 100 6mb	£249
PB 140/145/170 4mb	£179
PB 140/145/170 6mb	£249
PB 160/165/180 4mb	£179
PB 160/165/180 8mb	£349
PB 165C/180C 4MB	£189
PB 165C/180C 8MB	£389
PB 165C/180C 10MB	£449
Duo 4mb	£135
Duo 8mb	£239
Duo 12/20/28mb	CALL

VIDEO RAM

Increase available colours

256k VRAM SIMM *For LCIII/Colour Classic*	£20
512k VRAM SIMM *For LC/LCII/Perf. 400/Duo Dock*	£35
512k VRAM Kit *For Centris/Quadra*	£40
1MB VRAM Kit *For LC475/IIvi/IIvx/Performa 600*	£70

ACCELERATORS

Speed up your Mac up to 6 times

DiimoCache 50MHz	459
DiimoCache 50MHz w/FPU	549
Adaptor for above (SE/30,II/x/cx/si)	49
Harris 16MHz SE/Classic	109
Harris 25MHz 68030 SE/Classic	199
Formac Pro33 68030 LC/LCII/Perf400	289
Formac Pro40 68040 Centris/Quad	CALL
Mobius Speedster 040 25MHz	CALL
Mobius Speedster 040 33MHz	CALL

MATHS CO-PRO'S

LC/LCII/Performa 400	£45
Classic II	£45
IIvi/Col. Classic	£45
LCIII	£52
IIvx/Duo Dock/Perf 600	£64
IIsi with 2 PDS slots	£85

MEMORY • APPLE SYSTEMS • PERIPHERALS

APPLE SYSTEMS

LC III 4/80 Bundle w/monitor	£695
LC 475 4/80	£749
Quadra 610 4/160	£929
Quadra 650 4/160	£1249
Quadra 800 8/230	£1939
Quadra 840 AV 8/500CD	£2879
Quadra 950 16/1000	£3189
Duo 230 4/120	£995
Duo 250 4/120	£1629
Duo 270C 12/240	£2339
PowerBook 145B 4/80	£895
PowerBook 165C 4/80	£1285
PowerBook 180 4/120	£1775
PowerBook 180C 4/120	£1999

SPECIAL OFFERS

Fax Modem Send/Receive Mac/PowerBook	£95
Low cost ADB Mouse	£29
Low cost ADB 3rd Party extended keyboard	£69
Texas Instruments PS-23 Postscript Laser	£549
Philips Brilliance 2010 20" Monitor	£995
Syquest 44MB drive w/cables & cartridge	£269
525MB Internal Fujitsu Hard drive	£399
2 GIG External Hard drive	£1075
128MB External Optical drive (Fujitsu)	£599

STORAGE & BACKUP

HARD DRIVES	Warranty	Int	Ext
80MB	1	£110	£179
170MB Quantum	2	£159	£229
270MB Quantum (New)	2	£239	£309
330MB Seagate	2	£295	£365
525MB Fujitsu	5	£399	£470
1.0GB Fujitsu/Micropolis	5	£649	£725
1.7GB Micropolis	5		CALL
2.0 or 3.0 GB DEC/Micropolis	5		CALL
SYQUEST Include cable, software and 1 cartridge			
44MB	2		£269
88MB /RW44	2		£395
105MB	1		CALL
OPTICAL/CD ROM Includes cables and 1 cartridge or caddy			
21MB Floptical	1	CALL	£289
128MB MO Fujitsu	2	CALL	£599
650MB MO	2	CALL	CALL
1.2GB MO	2		CALL
Apple CD-ROM 300 w/cable+terminator	1	CALL	£235
DAT Include all cables and 1 Tape			
2 GB DAT	1	£649	£729
2-8 GB DAT	1	£725	£809
4-16 GB DAT	1		CALL
Retrospect Remote 2.0 software for 4 users			£135

Educational & Government departments welcome to purchase with official orders. Please call for a free product guide.

MONITORS

Nokia 17" Trinitron	£675
Philips 17" Trinitron	£709
Philips 20" 2010 Brilliance	£995
Philips 20" 2082-DAS Trinitron	£1499
Philips 21" 2110 Brilliance	CALL
Sony 17" 1730 Trinitron	£745
Sony 20" 2036 Trinitron	£1599
Sony 20" 2038 Trinitron	CALL
Radius PrecisionColour Pivot	£789
Apple 14" RGB Trinitron	£249

PRINTERS

HP DeskWriter 310	£189
Hewlett Packard DeskWriter 510	£219
HP DeskWriter 550C	£399
HP LaserJet 4M 600dpi Laser 8ppm	£1399
HP LaserJet 4MP 4ppm	£1049
HP LaserJet PS/1200C 4ppm	CALL
Texas MicroWriter PS-23 Laser 5ppm	£549
Texas MicroLaser Pro 600 dpi Laser 8ppm	£989
Apple StyleWriter II	£235
Apple LaserWriter Pro 630	CALL
Apple LaserWriter Pro 810	CALL

MISCELLANEOUS

Powerprint - print to IBM printers	115.00
AppleTalk or PhoneNet Connector Kits (2 Metre)	15.00
AppleTalk 5/10 Metre Extension Cable	7.50/12.50
LC or PowerBook to VGA Monitor Cable	13.50
3rd Party ADB Extended Keyboard	69.00
CD-ROM Drive spare caddies	6.50
SCSI System or Peripheral Cable	15.00
SCSI PowerBook Cable HDI-30	35.00
SCSI Terminator	13.50
HP DeskWriter Black/Colour Cartridge	21.00/22.00
StyleWriter I/II Ink cartridge	15.00
Oki/GCC PLP II/BLP II Toner/EP Cartridge	19.50/165.00
Double/High Density Floppy Discs Box of 10	8.50/12.50
44MB/88MB Syquest Cartridge	48/69
128MB/650MB Optical Cartridge	27/79
Ethernet Cards for LC or Nubus Macs	89
Ethernet Transceivers Centris/Quadra-10-base-T/thin	59

All prices exclude VAT and delivery. Payment is at time of order and can be made by VISA, Access, Mastercard, AMEX or cheque (payable to MYGATE LTD). Prices subject to change without notice. Offers subject to availability. All trademarks are acknowleged. E.& OE.

Mygate Computing

Unit 11 Southbrook Industrial Estate Southbrook Road Lee London SE12 8LG

Tel: 081-318 1424 Fax: 081-318 1802

VISA MasterCard AMERICAN EXPRESS

Shareware and PD

Another soupçon of low-cost and no-cost software from that vast larder of programs that is the Internet...

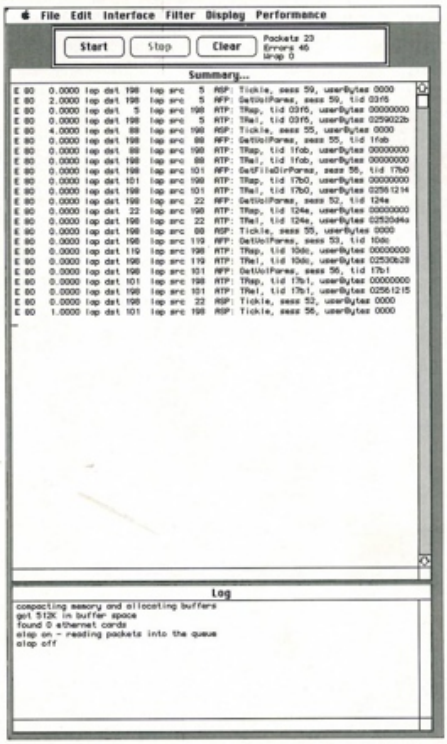
Watch1.7.1

FREEWARE — **Network analysis tool**

Watch is a network debugging tool that will only really be of interest if you have an understanding of how information is sent across an AppleTalk or EtherTalk network in the form of 'packets' of data, and what each of those packets means. *Watch* keeps an eye on your network and reports all the packets of information that it receives. More than that, it can actually decode them and let you know what each one was.

Perhaps a brief explanation might help. Data is transmitted to and from your Mac and all other network devices in the form of 'packets' of data – tiny chunks of information, normally less than half a kilobyte in size. These are transmitted every time your Mac wants to do anything at all on the network – connect to a file server, use a printer or simply when you open the Chooser to see what services are available.

The theory goes that if your network is having problems, then by analysing the packets that are transmitted, a true techie can work out what's wrong and how to fix it. In reality, what most of us do when faced with network problems is simpler: check each machine to see which can see what other devices, and locate the problem that way. However, if it's your heartfelt desire to prove how in-depth your Mac knowledge is, this is probably an essential software tool. At the very least, you can put it on the Mac of anyone complaining and impress them by inspecting the packets and humming in a knowledgeable way...



Watch can help you to investigate the packets transmitted on your network – and thus help to solve any problems.

Factor Hopper

SHAREWARE $5 — **Maths tutor game**

Factor Hopper is a surprisingly enjoyable and addictive little game. When you run it, a screen appears containing a square grid of numbers. The idea is to reduce all the numbers to 1, by hopping one number over another. However, you can only do this if the hoppee is a factor of the hopper. For instance, you can hop the number 6 over the number 2, since 2 is a factor of 6. The 2 is turned into a 1, and the 6 is turned into (6 times the number of the square it lands on divided by 2). It's all much clearer when you see the board itself, but the program has been written in an odd way and won't multi-task or allow itself to be screengrabbed. This minor problem aside, though, it's more challenging than you'd expect, and with a customisable grid size will keep more advanced mathematicians, as well as beginners, happy.

If you're a teacher and you're introducing the idea of factors, or a student who's just learned about them, or even someone who dimly remembers the concept from long-ago days, try *Factor Hopper* – it's certainly interesting enough to while away a couple of hours when you should be doing something else.

And hey – you can almost justify it, because it's educational!

WHERE'S IT FROM?

People often ask us, just where do you find all this great new shareware? The place to go for the most up-to-date stuff is (of course) the Internet, the international comms network. I keep an eye on the Usenet news group comp.sys.mac.digest, where every week or so a list of new shareware is posted by the administrators of the Macintosh anonymous ftp site mac.archive.umich.edu. It's there that I find all the software that you see here.

If none of the above made sense to you, then stick to the other sources of shareware listed in the 'where to get it' box on page 79. (Or, of course, read our Comms pages until you start understanding terms like 'anonymous ftp'.) But if you've access to the Internet, or can use anonymous ftp in any form, then check out the umich archive (or its UK mirror, which is at src.doc.ic.ac.uk). It's the best source of up-to-the-minute shareware I've found.

PD AND SHAREWARE – WHAT EXACTLY ARE THEY?

PD is short for 'public domain'; it's software that may be freely shared around among users – there is no fee to pay. It can be obtained from PD houses (companies which specialise in collecting together and distributing this sort of software, usually for a fee), user groups and bulletin boards.

Actually, most free software isn't PD – it's what's known as 'freeware'. This is because putting a piece of software into the public domain deprives the author of any rights to, or control over, that software. So someone else can modify it, claim ownership of it and even sell it as a commercial package. Most programmers are not at all happy at that sort of thing, so the concept of 'freeware' was created. This is software which you can use for no charge, but which the author still retains rights over. For example, many freeware authors specify that their programs must not be altered, and may only be distributed if they are accompanied by the documentation files. For simplicity, though, most people still refer to this type of software as 'PD'.

Shareware is a form of 'try before you buy' software selling. You can obtain the programs from the same sources as PD and freeware, but if you like the software, you send the author a contribution – normally somewhere between $5 and $40 (most shareware authors live in the States). In return for this 'registration fee', you often get upgrades or documentation, so it's well worth paying up.

Wedding Planner 1.0

SHAREWARE $10 — **Plan your life sentence**

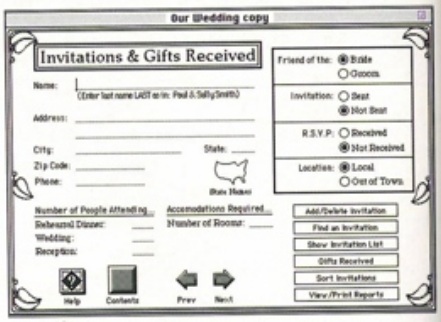
There seem to have been an outbreak of weddings in the MACFORMAT office recently; too bad this program didn't appear six months ago – it would have made Kim's job much easier. The program is an application based on *HyperCard*, although there's no need for you to have a copy of *HyperCard* yourself – the program ships as a self-contained application.

The idea is that it contains all the information and reminders for you to plan your wedding, right down to printing out the invitations using the special TrueType font which is included in the package. The authors are a husband-and-wife team, so presumably it does actually work...

Once you've entered a couple of basic things like the names of the couple who are to be manacled in holy wedlock, you are presented with a menu of possible options. These include things like your budget, guest list, calendar of dates for the event and so on. There are also several pages of notes and reminders for what you need to do, who should provide what and all those other important details.

After you've almost broken up arguing about the guest list, you can output the invitations and also keep a list of what present you've asked each guest for (make sure it's something that can be divided in two when the inevitable split happens). *[Cynical today, aren't we? – Ed]*

Although the program is localised for the US (budget figures are expressed in dollars, for example), it would no doubt still come in handy for anyone planning a marriage, just about anywhere in the world. However, I suspect that most people will keep a written copy of all the information, too – it's a traumatic enough event without finding that your hard drive has crashed the week before and you don't have a backup of all the data...

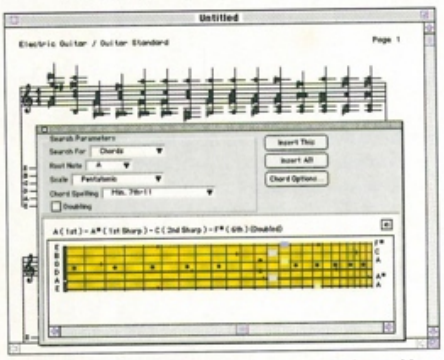


As if organising a wedding isn't hard enough, now your spouse-to-be will spend all night using the Mac...

Fret Navigator 1.2

SHAREWARE $25 — **Musician's tool**

Fret Navigator is, according to the Help system, "a flexible chord and scale book for all types of stringed instruments." So if you're not a musician, skip to the next review now.



Fret Navigator: One for the serious musicians in the world.

Actually, if you don't have a fair amount of patience, you should skip this anyway, since this program – although really very fully-featured and sophisticated – can take a hell of of lot of getting used to.

The program has the tuning of many instruments built in, but even if you're the only person in the world who uses something really obscure like a Bratislavian woodcutter's harp, the program will cater for you since you can define your own tuning, number of strings and so on. Once you've done this, you can start to play about with the program.

It will find chords for you, you can doodle about (either using a fretboard or the representation of a piano keyboard), put the chords and arpeggios that you find on to musical staves for later printing, and many more options. Once you've created your masterpiece, you can either play it on the internal speaker (although my IIci wouldn't play chords with more than four notes in them), or output it via a MIDI adaptor if you have such a thing attached to your Mac.

Unlike many programs, this one doesn't actually have all the chords stored initially. Instead, it creates them on-the-fly, which results in far more flexibility than most chord-book-type programs. And the range of different chords and scales that it can play is stunning. If you've ever wanted to play like Joe Satriani, this is the program for you; it will find that pentatonic A# minor diminished seventh without batting an eyelid. The only problem then is persuading your fingers to play the bloody thing without tying themselves in knots.

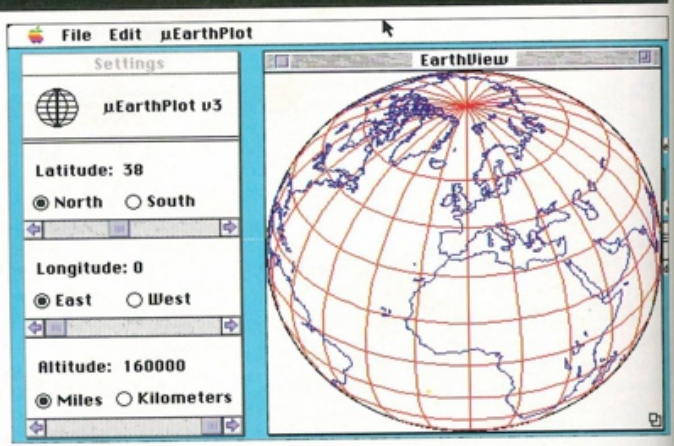
Not, then, a program for an absolute beginner, but well worth checking out if you're a serious musician, regardless of the instrument that you play (as long as it has strings – and the only acceptable instrument that doesn't have strings is a drum kit...).

EarthPlot

PUBLIC DOMAIN — **Plots the earth**

This is an interesting, if rather limited program. It's quite simple: set the latitude, longitude and height above the earth and the program will display the view of the planet that you would get from those co-ordinates. It can be set to create the image as a bitmap or a PICT for export to the clipboard, so that you can then paste the image into other applications. You can also set various other options such as whether to have the lines of latitude and longitude drawn or not. All in all, probably not the most useful application in the world but interesting in its own way, and maybe it will find some use in schools. Oh, and the full source code is included (the program is public domain, which means that you can do what you want with it, including altering it), so it may be of interest to anyone learning to program the Mac in C.

Be aware that the program is the result of many different people's work, so it might not be the most elegantly-coded application ever. Still, it should give an idea of how to handle multiple modeless dialogue boxes and so on.



If you want to know what it's like to be 160,000 miles above the earth, now's your chance.

CrossPuzzler demo

COMMERCIAL $59 — **Create crossword puzzles**

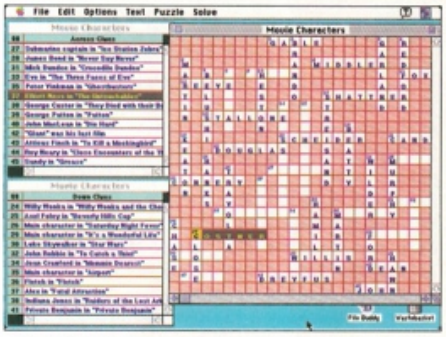
This is a demo for a commercial product. We don't usually include such demos in the shareware section of the magazine, but this particular demo comes with enough example crosswords to make it fun to use in its own right.

The full program really is rather powerful. You enter a series of words and their associate clues, then set a couple of options such as the size of the grid and let the program get on with generating the finished crossword. This can take some time if you have a lot of clues and only a small grid, but the finished version will still be produced in a far shorter time than if you were doing the thing by hand. After you've created the crossword it can be printed out – again, there is a range of options depending on whether you want the clues on the same page and so on – or saved and exported in PICT format for placing in another application.

You can also 'play' the crossword directly on the screen – with added extras such as a 'solve' mode which displays the correct word if you're stuck or, if you only want a hint, just the letter that fits in a particular cell.

The demonstration version has the Save feature disabled, and any crosswords printed out will have the word 'demo' printed across them. However, it's still worth checking out – and plenty of example crosswords are included for you to play.

The only real criticism that I have with this program is that it wouldn't satisfy professional crossword compilers like MACFORMAT's own Martyn Lester (who does crosswords for a number of magazines as well as writing for us). The reason is that professional compilers start with a grid, which is normally reflected about one or more axes, and fit words in – rather than starting with a list of words and then creating a grid to fit. The program does give you the option to try and create a grid reflected about one axis – vertical, horizontal or diagonal – but all the puzzles I generated failed to look anything like symmetrical. Still, you can't really blame the program for that, and for many people it won't be a problem. If you create crosswords for newsletters and the like, it would be well worth your while checking out the demonstration version of *CrossPuzzler* to see if the commercial program is worth buying.

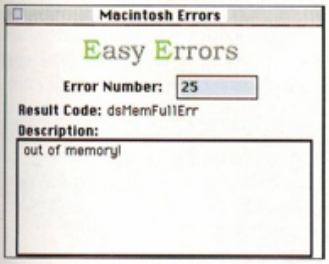


if you have to create crosswords, take a look at this demo of a full commercial package.

■ If you run *QuarkXPress*, check out the *The PuzzleMaker XT* demo on the MACFORMAT cover disk this month, and see the review on page 36.

Easy Errors

FREEWARE — **Displays explanations for eror numbers**



Mac and Newton errors at a glance.

This program is probably of most use to programmers, but it will also no doubt be of interest to anyone who wonders what, exactly, that cryptic error number really means. It's a very simple application: type the error number into a dialogue box and the explanation appears. As with other programs of this type, no real attempt is made to explain why the error might have occurred – but that's because generally the causes are just too varied for it to be worth attempting an explanation. The reason that my applications seem to be bombing with 'Type 1' or 'Bus' errors about 90 times an hour is almost certainly not the same reason your Mac is doing similar things. On the other hand, knowing that the problem is an out of memory error, or a full disk error, may help you sort things out.

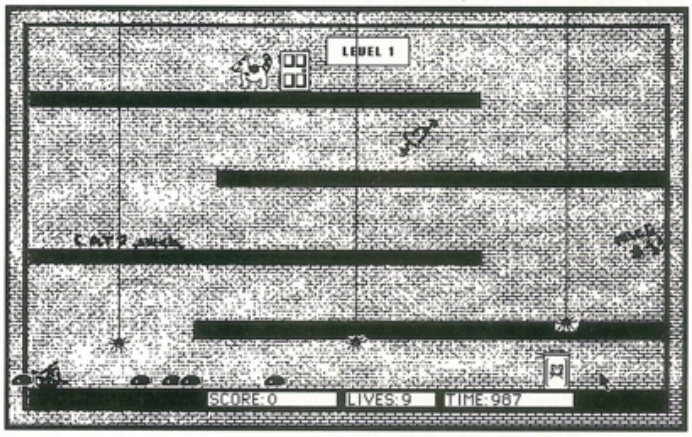
The difference between *Easy Errors* and most other such programs is that this one includes error numbers for the Newton as well as the Mac. Again, this is probably only really of much use to developers, but it's already saved me poring through the documentation to find the reason for my application bombing out when it wasn't supposed to.

CatWalk 1.1

SHAREWARE $10 — **Platform game**

I'm only really mentioning this game to save you the trouble of downloading it yourself. It makes you wonder why people bother releasing some of the programs that you find on the Internet (and, presumably, bulletin boards around the world). I realise that writing a Mac application is not the easiest thing in the world, and I know the glow of satisfaction that you get when you finish with something that works and doesn't actually crash every three minutes. But I'm afraid that none of that excuses something as ropey as *CatWalk*. The author says that it was first written in the mid-1980s, and has since been ported from Pascal to C and upgraded. Well, to be honest I'd hate to see the unupgraded version. I'm sure that it was considered reasonable when the Mac Plus was first around, but these days it's a serious nonstarter. In the 'good old days', anything that had moving graphics was considered amazing. I realise I may be more jaded now, but I at least require a game to stop me falling asleep at the desk.

The idea is that you guide a cat around the screen, 'pouncing' on rats and carrying them to a trash container for extra points. When you've killed all the rats on one level, you move on to the next. However, the graphics are dreadful (and in black-and-white even for colour Macs), the movement is jerky and the whole thing just feels more like something written for the ZX80 than for a Macintosh.



In the olden days, a man called Clive Sinclair invented a computer called the ZX80. It had one kilobyte of RAM, a massive four kilobytes of ROM and used your television as a display. The keys were touch-sensitive things, and every time you pressed one the screen went blank. This is what games looked like on that particular computer. 'Nuff said?

Keep It Up 1.1

SHAREWARE $30

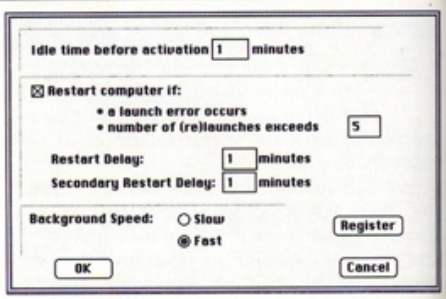
Keeps selected applications running

If you need to have certain applications running all the time on your Mac, *Keep It Up* could be just what you need. It's a small program which sits in the background and monitors any applications that you select. If they quit – either 'unexpectedly' or because the user has quit them – then they will automatically be re-launched, together with any documents which you specify. This can be useful if, say, you use a Mac as a fileserver but people also use it as a normal machine. A user might quit the file-serving application by mistake (or even on purpose), which would render the server useless. Or, if you're running a slightly flakey piece of software, it might bomb out every so often with the 'this application has unexpectedly quit' message. In both of these cases, *Keep It Up* will attempt to re-launch the application – and if it can't, it will restart the Mac.

The program is fairly easy to configure, although you should read the instructions carefully to make sure that you choose the correct settings. Then simply put aliases to the applications or documents that must always run in the correct folder, put an alias of *Keep It Up* in your Startup Items folder and you're away.

For people who have fileservers and the like, this program, while not perfect, should save at least some wasted system administration time. And the author also has another program which he claims should automatically restart your Mac if it experiences a System error. With both programs in place, a system administrator should never need to go near the server again!

Keep It Up costs $30 if you buy a single copy, but multiple copies are $20 each and a full site licence, for unlimited copies, is $250 – and is worth considering if you have a large network.

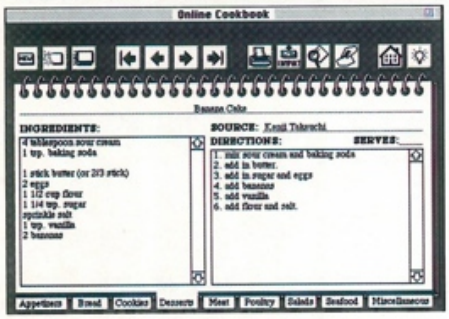


If you have any applications which must be running on Macs all the time, *Keep It Up* could be what you're looking for.

Online Cookware

SHAREWARE $5

Organise your recipes



Online Cookware is an example of a well-programmed *HyperCard* stack. It's just a pity that it does something that no sane human would want to take advantage of...

Ah, this is the stuff! In the early days of computers, when people felt that they had to have an excuse in order to buy one for the home, two major reasons were thought up by the marketing teams in charge of selling the things: "it can keep track of your personal finances" and "it can help organise things like your recipes". I know of no-one who does the former on their Mac, and until very recently I knew of no-one who'd even consider the latter. Well, now I know of one person: the author of *Online Cookbook*, a *HyperCard* stack which allows you to do exactly that.

In fairness, I should say that the stack itself is very nicely implemented, with card-index-style selection for the various kinds of recipes – 20 are included with the basic stack – and a fast and easy-to-use interface. It's just that... well... how many people do you know who keep their Mac in the kitchen? How many people have the time and patience to put all their recipes on the computer in the first place? How many people... well, you know what I mean. Since the early days of computers, the marketeers have come up with several new and more compelling reasons to own a Mac than to sort out recipes and keep track of how little money we have. I suggest that you keep your recipes on scraps of paper like the rest of us, and leave your bank balance $5 better off by not bothering to use this program.

CatFinder 1.31

SHAREWARE $30

Fast cataloguing of disks

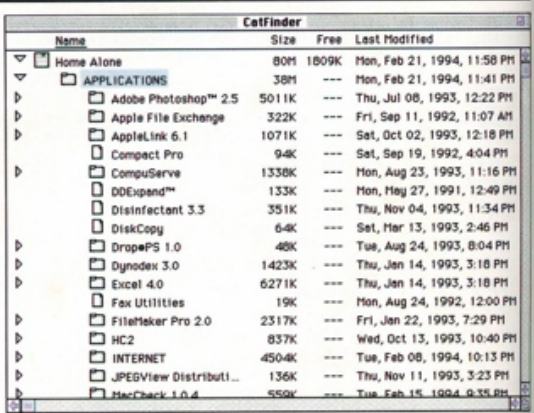
We've looked at *CatFinder* before, but this is a pretty major upgrade, and the program is interesting enough that it's worth another visit.

CatFinder provides a way of cataloguing disks – hard disks, floppies, even CD-ROMs. The idea is that this way you can search a disk for a particular file much faster than using the Finder's **Find File** command; the only disadvantage is the storage space taken up by the program's catalogues. However, this really isn't much of a disadvantage – especially when you consider the speed of the Find feature.

The program can be set to catalogue your floppy disks automatically, simply by feeding them into the drive one by one; *CatFinder* will read the contents, spit the disk out and wait for the next one. Once you've catalogued the disks, the program will even print out disk labels for you (although I must confess that I did experience a crash while trying to customise the label setup. However, this may well be because I was running about a million Extensions at the time).

The program's real usefulness, though, becomes apparent if you have a CD-ROM drive or any other form of slow-access storage medium, such as an older optical disk. For example, I have three or four CD-ROMs full of shareware and PD software – as do many people. The problem comes when I want to find a particular piece of software. Loading each disc in and using the Finder's Find File command can take – literally – half an hour, since CD-ROM isn't the fastest storage medium in the world. Using *CatFinder*, though, I can perform the same search almost instantaneously. This is well worth the space taken up on my hard drive to store the catalogues – and even if you kept them on a separate floppy, the time saved is well worth it.

CatFinder is one of those programs that becomes more useful the more you get to know it. I'd certainly recommend that you check it out if you find keeping track of files on floppies, hard drives and CD-ROMs is becoming a chore. And if you use a lot of CD-ROMs, you will save considerable time searching for files.



CatFinder 1.31: an upgrade that's indispensable if you need to catalogue floppies or large-capacity hard drives.

Bajoran font

SHAREWARE $5 — **Trekky font**

Here's another rather decent font, in both TrueType and PostScript Type 1 formats. It's based on the lettering used in *Star Trek: Deep Space Nine*, and for that reason will immediately become immensely popular with all those people who have entire shelves full of expensive videotapes of the entire series (and there do seem to be a lot of those people, although goodness knows why). It consists of capital letters only; if you use the **[shift]** key, the capitals become bolder. There's some punctuation, so it's possible to write whole sentences in the thing, although it's only really likely to be used for headings.

If you run a *Star Trek* fanzine (there are dozens about) or just want to impress your mates, *Bajoran* is worth a bash.

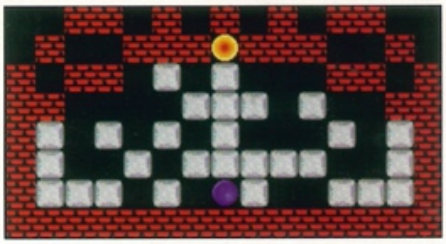
It's a font, Jim, and just as we know it. Oh, and it comes in TrueType and PostScript Type 1.

DeadEnd 1.1

SHAREWARE $10 — **Strategy game**

DeadEnd is best described as a game of skill and strategy. It's one of those challenging games that you don't think will be particularly interesting, but soon become addictive. The aim is to guide a small blue ball to the exit (shown in orange on the screengrab). The ball can push any brick along provided that it has room to take a 'run up', and that the brick has somewhere to move when it's pushed (the ball doesn't have the strength to push two or more bricks at once). That's where the strategy comes in: you have to work out where to push the bricks so that your ball can make its way to the exit and not become blocked in. The first couple of levels are easy, but after that things get harder, and you'll find that more and more often you get yourself into a dead-end – which is where the multiple-level Undo feature comes in quite handy.

Ages ago a Desk Accessory called *Polar* played a similar sort of game, and if you're running a black-and-white Mac you should look out for that. But if you want the full-blown thing, complete with music and sound effects, *DeadEnd* is a good implementation.



DeadEnd is the sort of game that you play when you're sick for splatting little green aliens, and you want to give your brain a little exercise instead of just your fingers.

Cron 1.0

FREEWARE — **Unix-alike scheduling application**

Unix users will probably be familiar with the *Cron* utility. It's a utility which performs tasks at given times of the day, or at given time intervals. For example, it can remind you when it's time for lunch, prompt you to save your work every 15 minutes, do a backup at 3 o'clock in the morning and so on.

Well, now *Cron* is available on the Macintosh. It's very similar to the Unix version – down to the fact that it isn't what you might call totally user-friendly! If you've never used a command-line-based interface before, this might come as something of a rude awakening to you. The program takes its input from a text file called 'crontab', which contains all the instructions that the program needs. The instructions must be in a specific format, detailed in the documentation, and it can take some time to get the hang of how to schedule things properly. However, once you're used to it you will be surprised just how powerful the utility is. The program comes with a sample crontab file which does a variety of tasks, some of which are specific to the author's setup and some of which are far more general – such as starting a screensaver after a set amount of idle time, for example.

Much thought has clearly been put into the Mac port of *Cron*, and several Mac-specific options have been added to make the whole thing a little more pleasant to use. The source code is also included so you can see just how things are done.

Cron runs as a 'faceless' background application – that is, it doesn't appear in the **Applications** menu once it's been launched. This means that you can put an alias to the program in your **Startup Items** folder and forget that it's there – there's no danger of quitting it by mistake. It only takes up 32K of memory while it's running, so you don't need to worry about losing loads of RAM.

All in all, *Cron* is a neat and efficient little utility. Time spent learning how to construct a crontab file to your personal requirements is rewarded by your Mac automatically performing routine tasks without you needing to remember them yourself. All it takes is a willingness to deal with a somewhat more primitive control system than Mac owners are used to – no dialogue boxes here, just a text file of commands – but if you can deal with that, you'll find *Cron* well worth getting hold of.

WHERE TO GET IT

You can get hold of PD and shareware from a number of different sources. First, there are what's known as commercial PD houses (check the adverts in this issue MACFORMAT for their contact addresses). These are companies which collect shareware and PD software, package it on to disks and then sell it on to you for a moderate charge.

Next come bulletin boards. To access one of these you'll need a modem, of course, but once you're connected you will find that there's a wealth of software available.

If you use the CIX bulletin board (modem phone 081 390 1244, any speed from 1,200baud upwards, log on as 'new'), check out the 'files2' and '93.files' topics in the 'mac' conference – and, of course, our own 'macformat' area. If you use CompuServe (voice phone 0800 289378 for an information pack) there is a multitude of different Mac areas; check the manual and the monthly magazine for details.

Finally, many Mac user groups (see page 100) have a range of PD and shareware available; and, of course, you can swap it with your friends – it's not software piracy, all of these programs are freely distributable.

Anarchie on the Internet

Anarchie is a neat little shareware program that makes navigating the Internet that much easier. And now it's available to you for just $10...

The Internet contains tens (probably hundreds) of thousands of files, ranging from neat little Unix utilities, through public domain Mac applications which beat commercial programs hands-down, all the way to the text of famous books or historical documents (like Magna Carta, the American Declaration of Independence and the Maastricht Treaty – well, two out of three ain't bad) and even things like press releases from the White House. The problem, of course, is finding what you want without spending the rest of your life looking for it.

Enter *archie*, a file-finding utility designed for just such a job. Fairly early in the Internet's life, the problem of finding the right file was recognised, and a team of people invented *archie* to simplify things. Every so often, an archie 'server' will connect to all the file storage sites (known as FTP sites) that it knows about, and get a listing of all the files that they contain. Then a user can simply connect to this archie server and do a search for a filename. If the name is found, the server will then display the name of the computer which contains the file and the directory path, so that the user can connect and download the file.

All this sounds pretty simple, but in practice *archie* can be a real pain to use. For starters, it's a Unix-based program, so ease of use wasn't necessarily the primary consideration to the program's authors. You need to remember a number of command-line options before you can search for a program, and to access the server in the first place you need to use the *Telnet* program, which itself isn't exactly a dream piece of software.

Fortunately for the sanity of Macintosh users everywhere, Peter Lewis has created a program which does the whole thing for you with ease and elegance – and all for just a $10 shareware fee. The program is called *Anarchie*, and puts a

GETTING CONNECTED

To use programs like *Anarchie*, *Fetch* and so on, you need to find a 'service provider' which gives you full access to the Internet. The most popular in the UK is Demon Internet Systems, which can be contacted on 081 343 3881 (voice number). You'll also need a copy of *MacTCP*; Demon can sell you a book called *The Internet Starter Kit* (reviewed in MACFORMAT issue 10, March 1994) which contains this and a number of other programs to make starting up easier.

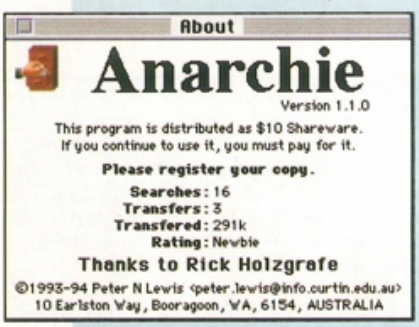
JARGON BUSTERS

FTP: File Transfer Protocol. A method of retrieving files from remote computers – akin to 'downloading' them.

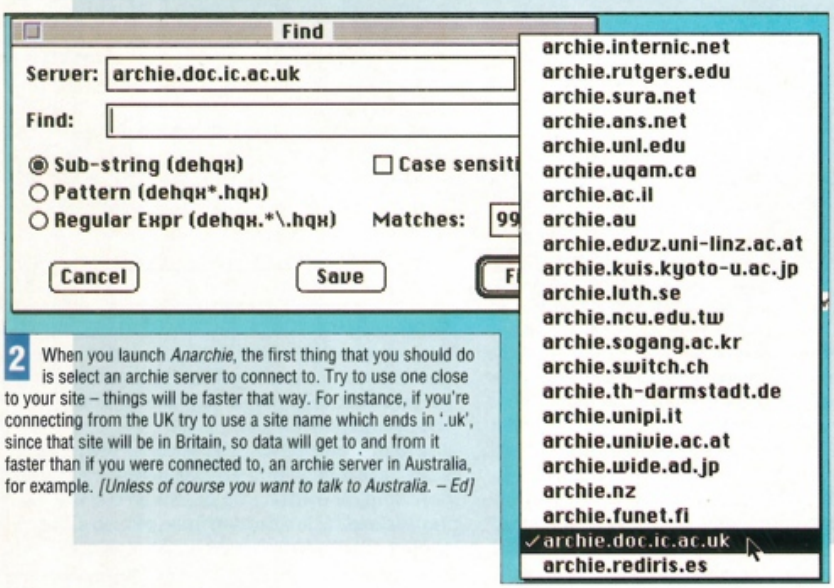
Internet: A huge, loosely connected network of computers spanning the globe. Just about all university computers are connected, as are a large number of companies and many tens of thousands of individuals.

HOW TO USE ANARCHIE

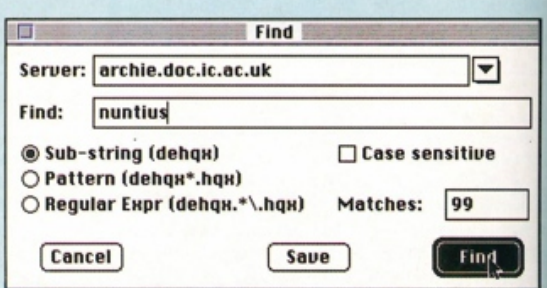
The Internet is big. Really really big. You have no idea how big it is. What you need is some sort of, oh, Hitch-hiker's Guide to it, really. Well, *Anarchie* is just about that, and automated to boot.



1 *Anarchie* is an automated 'archie client' for the Mac. It even keeps track of how many times you've used it, and gives you a rating depending on your Internet activity. It looks like I've got some way to go before it thinks that I know what I'm doing!



2 When you launch *Anarchie*, the first thing that you should do is select an archie server to connect to. Try to use one close to your site – things will be faster that way. For instance, if you're connecting from the UK try to use a site name which ends in '.uk', since that site will be in Britain, so data will get to and from it faster than if you were connected to, an archie server in Australia, for example. *[Unless of course you want to talk to Australia. – Ed]*



3 Enter part of the name of a file that you want to find. Remember that the name won't be exactly as it is on the Mac – most computers can't use spaces in their filenames, for example. Here we're looking for a version of the popular newsreader Nuntius.

A basic set of Internet tools

Those of you who are new to the Internet may be more than a little bewildered at the number of different programs available as shareware and freeware, to help you navigate the cyberspace. But don't worry – many of them are very specialised and you probably won't actually need to use them at all. What you need to get started is a basic set of 'tools' that will let you look around, send and receive e-mail, and get hold of any other programs that you want at a future date. So, this is what we think you should consider a basic setup:

Anarchie (see opposite page)

This is an excellent archie client, which is simplicity itself to use. It allows your Mac to search for, and retrieve, any file that you think might exist on the Internet. No self-respecting Mac cybersurfer should be without it.

Fetch

Although *Anarchie* will get files from FTP servers for you, *Fetch* is the Rolls-Royce of Mac FTP applications. Loads of options and shortcuts mean that retrieving files is easy.

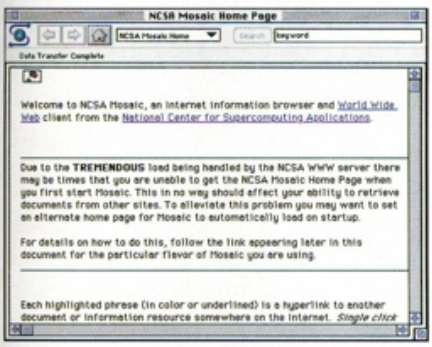
LeeMail

This is a no-frills, simple-to-use mail application which lets you send letters to anyone with an Internet address.

Mosaic

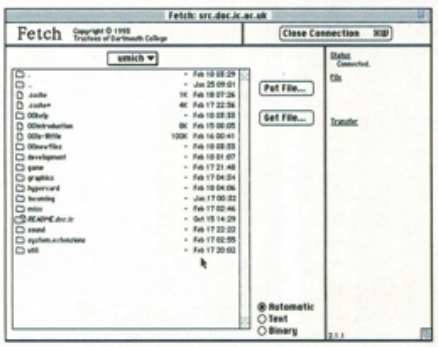
Probably the most exciting Internet application around, *Mosaic* puts a user-friendly front-end on the tens of thousands of computers connected to the 'net. Simply by clicking on 'hot links' you are connected to the correct server and given the information you request. You, the user, never need know exactly what computer the data is stored on – that's all handled in the background by *Mosaic*. Try this superb application just once and it's guaranteed to revolutionise the way you use the Internet.

As well as these, you might want to get hold of some newsreading software – try *Nuntius*, for preference – and other applications like *TurboGopher* and *NCSA Telnet* (both Internet utilities). But *Anarchie*, *Mosaic*, *LeeMail* and *Fetch* are plenty for now – you'll be able to do just about everything from these four programs. And the real beauty is that they're all shareware or freeware – so your total software costs should run in at well under £75!



Mosaic uses a 'hypertext'-based approach to finding information which makes navigating the Internet a cinch.

LeeMail: an easy-to-use e-mail application which should be perfectly adequate for most users.



Fetch is an FTP application that makes retrieving files as simple as pointing and clicking.

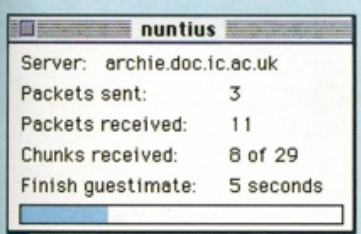
neat window-based interface on the system. But that's not all this gem of a program does; once you've used *Anarchie* to find a file, the program will automatically connect and FTP it (that is, download it) for you, without the need for you to quit and launch a dedicated FTP program such as *Fetch*. You can even use the program as a standard FTP application, since it will enable you to connect to any FTP site simply by giving its name.

As you'll see from our step-by-step guide to using the program, it really is simplicity itself. If you use the Internet at all, *Anarchie* can be highly recommended. The shareware fee will pay for itself virtually straight away in terms of time saved by not having to mess about using a command-line interface, and what's more you'll be the envy of your PC and Unix-using friends when they see just how elegant the whole thing is.

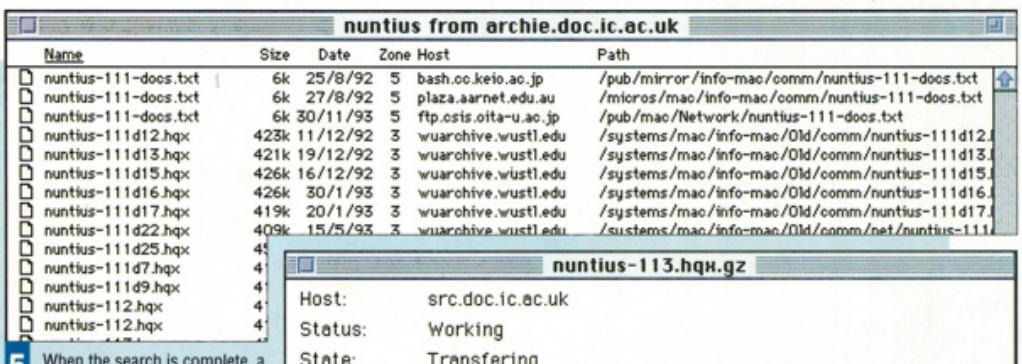
Ian Wrigley

WHERE TO GET IT

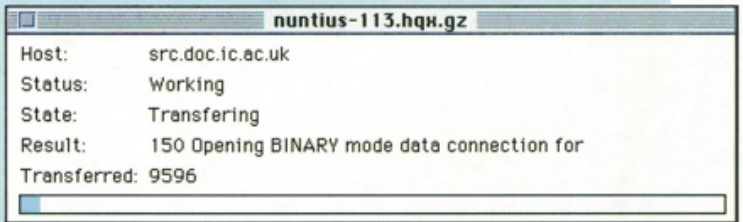
Anarchie is a shareware program that costs $10 to register. Shareware is available from the Internet itself or bulletin boards such as CIX (see page 79), but if you don't have access to either of those, try the commercial PD houses (check the adverts in MACFORMAT).



4 As *Anarchie* works, it gives you a visual indication of how it's doing and how long you can expect to wait before it's finished. Don't rely on this guestimate too much – it's only a rough approximation. However, unless you're very unlucky your search should be finished in less than a minute.



5 When the search is complete, a scrolling list of all the files appears in a new window, detailing the file name, directory path and computer where it's located. Choose the version you want, on a computer as close to you as possible, and double-click on the file.



6 This launches the FTP (file transfer) portion of the program, which will automatically connect to the FTP server and download the file for you. Magic!

CALL FOR YOUR FREE CATALOGUE 081 401 1111

Britain's oldest Macintosh mail order company MacLine

MacLine

FAX 081 401 1112

081 401 1111

MILL HOUSE • MILL LANE • CARSHALTON • SURREY • SM5 2WZ

SUPERMAC & Apple

A superb Quadra, 20" colour monitor and video card at a super low price.

Quadra 840AV 8/500 CD	£2875.00
20" Hitachi Monitor	£1425.00
20" Trinitron Monitor or	£1995.00
24 bit card	£695.00
Thunder card or	£1895.00

WORD PROCESSING

MacWrite Pro (powerful yet straightforward WP) £145.00
Microsoft Word 5.1 (market leading WP heavyweight) £189.00
Nisus 3.4 (graphics, GREPS, macro language, 3200 undos) £199.00
WordPerfect 3.0 (hot new version of famous PC WP) £119.00
Write Now 3.0 (fast, straightforward WP, a doddle to use) £44.00
Concise Oxford Dictionary (the concise thing on floppy disks) £45.00
Oxford Thesaurus (the whole thing on floppy disks) £45.00

DATABASES

4th Dimension 3.0 (heavyweight of the databases) £595.00
4D Light (cut down version of 4D) £99.00
Helix Express (no procedural language, for non programmers) £245.00

SPECIAL OFFER

RING NOW! 081 401 1111

Apple CD300

The perfect tool for accessing the world of CDROM and Multimedia and yours for only.....

£159.00!

FileMaker Pro 2.0 (best flat file DB ever - everyone needs it) .. £225.00
FoxPro (fast DB with great interface, reads dBase) £55.00
ACT! (excellent contact management) £175.00
DayMaker (best time/calendar manager for busy schedules) £89.00
DynoDex (best tool for managing/printing contacts) £39.00
QuickDex II (phenomenal rolodex card type database) £32.00
SuperQuickDex (includes powerful print capability) £55.00
TouchBase Pro (networkable contact database) £65.00

BUSINESS

AutoRoute Express (UK route and distance planner) £125.00
DateBook Pro (UK version, appointment calendar) £65.00
In Control (best to-do list manager has outliner, columns) £85.00
Smart Alarms multi user (fuss free net diary/reminders) from £125.00
Now Contact (information management) £65.00
Now Up-To-Date (simple, quick calendar and reminder system) £59.00
BiPlane (excellent, low cost, full featured spreadsheet) £75.00
Lotus 1-2-3 (works with all PC & Unix versions) £275.00
Microsoft Excel 4.0 (leading spreadsheet, many great features) £225.00
Power Macros for Excel (shows off Excel's macro language) ... £25.00
Business Plan Toolkit (Excel based budgeting and forecasting) £69.00
Cricket Graph (original colour graphing program) £120.00
DeltaGraph 3.0 (popular, varied 2D & 3D graphing tool) £115.00
GraphMaster (very good and system 7.0 savvy as well) £180.00
Microsoft Office (Word, Excel, PowerPoint etc at bargain price) £375.00
ClarisWorks 2.0 (market leader of the integrated world) £159.00
Microsoft Works 3.0 (WP, DB, Comms, Draw, Spreadsheet) ... £99.00
WordPerfectWorks (WP, DB, Comms, Draw, Paint, SSheet) ... £145.00
MacProject Pro (powerful, straightforward and flexible) £375.00
MacSchedule 3.0 (budget project scheduling) £210.00
Microsoft Project (full featured for most requirements) £335.00
MacMoney 4 UK (best home accounts & budgeting package) ... £59.00
MYOB (fully integrated single user business accounts) £220.00
Ritz (powerful and comprehensive accts for smaller business) £265.00
Ritz Median (the baby brother) £169.00
Pegasus Entry Level (best package, grows with your needs) £325.00
Sage Bookeeper (accounting's biggest name now on the Mac) ... £125.00
Astound (new entrant, reads PowerPoint & Persuasion) £95.00
Persuasion 2.1 (high end presentations with outliner) £255.00
PowerPoint 3.0 (powerful, intuitive, easy inteface) £225.00

GRAPHICS

Freehand 4.0 (Professional PostScript drawing & text) £335.00
Illustrator 5.0 (Professional PostScript drawing, text & layout) ... £365.00
Streamline (superb PostScript auto-tracing tool) £129.00
BrushStrokes (quality paint from Claris) £89.00
Canvas 3.5 (high end draw/paint package using layers) £245.00
Desk Paint 3.0 (excellent 24 bit paint and draw package) £99.00
IntelliDraw (Aldus' brilliant new package) £95.00
MacDraw II (powerful, easy to use draw package) £145.00
MacDraw Pro (hugely powerful, doubles as presentation tool) £275.00
Painter 2.0 (pressure sensitive 24 bit colour, mimics oils etc) £235.00
PainterX2 (brilliant add-on tool for Painter) £95.00
PaintIt! (24 bit colour at a great price) £33.00
SuperPaint 3.5 (24 bit colour, paint & draw) £110.00
Collage ("collage" Photoshop files together) £225.00
Gallery Effects (professional special FX collection) £79.00
Kai's Power Tools (amazing filters for Photoshop) £75.00
Paint Alchemy (marvellous brush SFX for Photoshop) £55.00
PhotoShop 2.5 (pros choice, king of the image enhancers) £545.00
TurboCAD (powerful, budget CAD) £79.00

DESKTOP PUBLISHING

Fetch (superb image database system) £235.00
Kodak Shoebox (image database system) £169.00
PageMaker 5.0 (fabulous new version) £475.00
Personal Press (entry level easy to use DTP) £69.00
Publish It Easy 3.0 (MacUser US best DTP winner) £89.00
Quark Xpress 3.2 (the professional's choice) £610.00
Acrobat Exchange (view docs without parent application) £105.00
LetraStudio (powerful headline font manipulation software) £175.00
Typestry (create 3D fonts with textures) £175.00
TypeStyler (manipulates PostScript fonts) £119.00

FONTS

Adobe Fonts (all available) ..... from £60.00
Adobe Type on Call (CD Rom of all the typefaces) £59.00
ATM (smooths screen and print fonts) £65.00
ATM Plus Pack (Adobe versions of rest of the Laser fonts) £120.00
Adobe Type Sets (collections of Headline fonts) ..... from £79.00
Fraction Fonts (creates proper fractions) £45.00
Fluent Laser Fonts (120 excellent PS & TrueType fonts) £69.00
Monotype Fonts (much of the famous library is now on the Mac) ..... call
Super ATM (view documents without the fonts installed) £79.00
FontStudio (fab full featured font foundry from Letraset) £175.00
Fontographer 4.0 (most professional PostScript font creator) £295.00
FontMonger (converts Type 1 & 3 to TrueType) £79.00
Metamorphosis Pro (converts Type 1 & 3 to TrueType) £95.00
Type Reunion (gives heirarchical font menus) £45.00

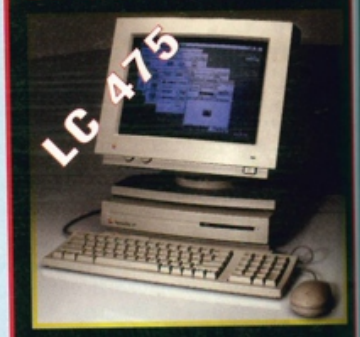
PRINTERS

Digital DEC Laser (300dpi A4 laser, PostScript level 2) £599.00
GCC BLP Eclipse 4 (fast PostScript level 2, 2Mb) £775.00
HP DeskWriter 510 (superb new inkjet, Appletalk) £199.00
HP Laserjet 4ML (quality, low cost 300dpi laser) £875.00
LabelWriter II (mini thermal printer produces sticky labels) £220.00
Texas MicroWriter (300dpi A4 PostScript laser) £585.00
WriteMove II (perfect PowerBook printer!) £350.00
HP DeskWriter 310 (portable colour inkjet) £199.00
HP DeskWriter C (great budget colour inkjet) £265.00
HP DeskWriter 550C (colour and mono in one) £435.00
PowerPrint (driver and cable for non-Apple printers) £125.00
Freedom of the Press Classic (mono & colour) £69.00

SCANNING

Epson GT6500 (up to 1200 dpi colour with PhotoShop) ..... from £695.00
Microtek ScanMaker II (great quality colour 1200dpi) ..... from £595.00
Microtek ScanMaker II XE £825.00
ScanMaker II Transparency Unit (adaptor for ScanMaker) £545.00
Ofoto 2.0 (colour scanner control software) £265.00

SPECIAL OFFER



8Mb of RAM 160Mb Drive, Performa Plus 14" Colour Monitor and Keyboard.

£935.00

OmniPage Direct (OCR directly into applications) £175.00
OmniPage Pro (top of the range) £465.00
ScanMan (best selling handheld, 32 greys, 400dpi) £195.00
OmniScan (handheld with best built in OCR, needs 4Mb) £365.00
TextBridge (Xerox enters OCR market) £99.00

HARDWARE

Axion (gives you 4 serial ports instead of 2) £95.00
Gravis MouseStick ADB (perfect for Flight Simulators) £69.00
Gravis GamePad (perfect for other games) £39.00
Extended Keyboard (15 function keys, numeric pad) £65.00
Wacom Graphics Tablets (best pressure sensitive) ..... from £325.00
Logitech MouseMan (small alternative mouse) £45.00
Daystar PowerCache (the best accelerators, all Macs) .. from £275.00
Daystar Turbo 040 (68040, faster than a Quadra) ..... from £545.00
ThunderStorm (radically speeds up PhotoShop) £545.00
Math Co-Processor (speed up your Classic II or LC) £55.00
VRAM Mac LC & Quadra (adds more colours) ..... from £29.00

EDUCATION

Kid Desk (desktop for kids, protects your own data) £29.00
KidsTime (5 classic learning programs for the 3 to 7 year old) .. £32.00
KidsMath (takes kids from counting to applied arithmetic) £32.00
KidPix (wonderful paint program with sound effects) £27.00
KidPix Companion (more amazing tools for KidPix) £26.00
KidArt (educational art for KidPix,Maps,Homes,Sport) ..... each £17.00
NumberMaze (award winning arithmetic tutor) £36.00
ReadingMaze (from letter recognition to sentence construction) £36.00
Spelunx (brilliant learning environment pretends to be a game) £29.00
Storybook Weaver (build your own stories) £23.00
Swamp Gas Europe (geography learning game) £32.00
Yearn to Learn: Peanuts (basic learning skills) £36.00
Yearn to Learn: Snoopy (5-9 age group learning skills) £36.00
Visions (detailed astrological horoscopes and charts) £36.00
Albebra (the perfect tutor) £45.00

POPULOUS

Ever wanted to play God? Now here's your chance. Your task is simple. Lead your people and conquer evil using natural disasters that you control, such as volcanoes, earthquakes and floods. There are over 500 worlds to conquer, from cruel ice to parched desert lands.

The MAC ..... 4 Star rating
Mac Format ..... 93% rating

£29.00

MacLine Policy

*Credit cards will not be charged until the order is shipped.
*If a partial order is despatched, the balance is sent free of additional shipping charges.
*All goods are sent by a courier service. A signature will be required on delivery.
*Same day delivery in London area is available.
*Defective goods are replaced immediately.
*Refunds will only be given on unopened packages that are returned within 7 days of receipt.
*Prices are correct at the time of going to press. E&OE.

ALL PRICES ARE EXCLUSIVE OF VAT & POSTAGE

CALL FOR OUR FREE CATALOGUE

Access AMERICAN EXPRESS VISA

Authorised Reseller

Ordering & Payment

*To order call Monday - Friday, 9.00 am to 6.00 pm.
*DELIVERY. Add £4.00 for three working days delivery.
Add £6.00 for next working day delivery.
Add £12.00 for AM next working day delivery.
*Add VAT to the total price, including shipping (except on books). *Payment is by credit card, cheque or money order.
*Government depts, Ed.establishments and Plc companies are welcome to purchase with an official order subject to status.
*International orders accepted with credit card only. Shipping added at cost.

MEMORY

£32.00

SIMM	1Mb SIMMs - 80ns (1 * 2)	£32.00
SMM2	1Mb SIMMs - 80ns (1 * 8)	£35.00
SM2MB	2Mb SIMMs - 80ns	£69.00
SM4MB	4Mb SIMMs - 70ns	£115.00
SM8	8Mb SIMMs - 70ns	£275.00
SM16	16Mb SIMMs - 70ns	£545.00
SMN4	4Mb SIMMs (72 pin) - 60ns	£115.00
SMN8	8Mb SIMMs (72 pin) - 60ns	£250.00
SMN16	16Mb SIMMs (72 pin) - 60ns	£545.00
SPDS	PowerBook Memory (all sizes)	call

Prices change regularly so please check before ordering

Calculus (complete course) £45.00
Geometery (complete theory and practice) £45.00
EarthQuest (heralds a new type of multi curricular learning) £34.00
Eco Adventures (environmentally aware adventure game) £39.00
EuroStack 2.0 (info gathering resource for Europe) £55.00
LocationMaker UK (county maps database shell) £35.00
Fun Physics (making education enjoyable) £63.00
MacGlobe (complete world info, maps. Essential) £39.00
Decimals & Fractions Maze (helps older kids) £39.00
Physics (complete course in classic mechanics) £45.00
Typing Instructor Encore (good training from basics to touch) £25.00
Voyager Astronomy (fascinating desktop planetarium) £105.00
Where in World is Carmen DeLuxe (geography based) £49.00

CD ROM

CD ROM Toolkit (speeds up CD access) £59.00
Arthurs Teacher Trouble (interactive story book) £29.00
Beethovens 9th (the symphony and all about it) £65.00
Beethovens String Quartet 14 (the quartet and all about it) £45.00
Mozart Magic Flute (the opera and all about it) £45.00
BMUG (huge collection of public domain and shareware) £75.00
Cats (if you like cats, this is for you) £29.00
Creepy Crawlies (multimedia database of snakes, spiders etc) .. £35.00
CD Fun House (50 mb of games) £40.00
Cosmic Osmo (childrens interactive adventure game) £35.00
Countries of the World (600 mb of compressed software) £195.00
Distant Suns (astronomy based cd) £65.00
Dictionary of the Living World (earth data, award winning) £85.00
Dinosaurs (the "must have" CD of the year) £45.00
Grandma and Me (delightful kids story) £29.00
Groliers Encylopaedia (21 volumes, 9 million words!) £195.00
Halliwells (the famous film encyclopaedia on CD) £19.00
HellCab (interactive adventure game) £59.00
Iron Helix (fantastic space adventure) £29.00
Learn to Speak French (aah... learn to speak French) £59.00
London (interactive multimedia guided tour) £29.00
Lover's Guide (the famous educational video) £29.00
Macbeth (the Scottish Play) £65.00
Musical Instruments (Microsoft's excellent entry) £39.00
MYST (magical mystery adventure) £29.00
Oxford English Dictionary (the whole thing on CD ROM) £425.00
Red Shift (superb astronomy program) £55.00
Shakespeare Complete Works (at your fingertips) £65.00
Sherlock Holmes Complete Works (elementary dear reader) . £59.00
Silly Noisy House (animated audio toybox) £39.00
Small Blue Planet (pictures, geography of the planet) £49.00

SIM CITY AND LEMMINGS BUNDLE

Two of the best games ever, brought to you in this specially packaged bundle. Drive yourself wild saving those little critters, the Lemmings from their self inflicted doom. Then build and control the city of your dreams with the classic Sim City.

Only £24.00

Space Shuttle (yes, it's all about the shuttle) £29.00
Spaceship Warlock (fabulous animated game) £69.00
Tortoise and the Hare (well....) £29.00
The Journeyman Project (amazing 3D adventure) £29.00
Wallobee Jack (wonderful interactive kids cartoon) £27.00
Xplora (Peter Gabriel's amazing multimedia CD) £29.00

UTILITIES & DA's

At Ease (secure Finder replacement) £35.00
Conflict Catcher II (INIT manager and more) £49.00
CD ROM Toolkit (speeds up CD access) £59.00
CopyDoubler (radically speeds up copying) £37.00
DiRectory 5.0 (best floppy and/or hard drive file logger) £59.00
Hard Disk Toolkit (the best formatter and checker) ..... from £59.00
InitPicker 3.0 (choose to use or disable your startup Inits) £42.00
Inline Sync (syncs files between PowerBook & Mac) £75.00
MacTools 3.0, (inc free Snooper and Alert) £99.00
Norton Utilities 2.0 (best selling utilities now includes SUM) £79.00
Now Utilities 4.0 (8 essential utilities) £79.00
Power Utilities (Disk Express and other great utilities) £79.00
Public Utilities (new disk saver program) £79.00
RAMDoubler (actually doubles your available RAM!) £49.00
Retrievelt! (finds text on your hard drive) £59.00
Square One (terrific icon based application launcher) £32.00
SuperDoubler (diskdoubler and autodoubler bundle) £65.00
Stacker (doubles your disk capacity) £69.00

Xplora 1:

Peter Gabriels Secret World

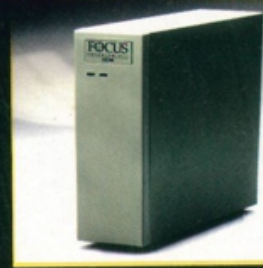
Xplora 1- Peter Gabriel's Secret World is an evolution on the interactive experience. On start-up you see an image of his head. The lips take you to the album (us) and you can listen to the tracks and watch the videos. The nose allows you behind the scenes and lets you wander around Real World Studios. The Ears allow you to listen and interact with other Real World albums containing music from around the world, you can go on further and explore and play the instruments used. The eyes take you into Peter's world and you can view home videos and browse photos. The whole CD is well thought out and as you explore you discover many other related events and pathways to tread. There are various themes running the whole way through as well, one being to collect various items in order to get yourself a present, which is unlocked and copied to your hard drive.

TimesTwo (automatically doubles disk space) £99.00
A.M.E. (very sophisticated data security) £99.00
Citadel (lock your info from prying eyes) £59.00
MacPrefect (secures most aspects of the Finder) £30.00
DeskTape (treats DAT as if it were a 2Gb drive) £250.00
DiskFit Pro (reliable low cost backup) £89.00
Redux (best value backup program on the market) £49.00
Retrospect 2.0 (most sophisticated archival backup) £159.00
Retrospect Remote 2.0 (THE solution for network backup) £289.00
Virex 4.0 (best virus tracer & eradicator of all) £59.00
After Dark 2.0 (famous screen saver with many modules) £26.00
More After Dark (25 new modules inc cult Lunatic Fringe game) £23.00
After Dark/More After Dark Bundle £45.00
Calculator Constructor 2 (create custom calculators) £59.00
Calendar Maker (CE Software's version) £35.00
CDU (excellent collection of Desktop utilities) £49.00
CPU (excellent collection of PowerBook utilities) £49.00
Disney Screen Saver (simply magical) £27.00
DynoPage (allows printing of anything to filofax paper) £39.00
Exposure Pro (screen dump utility with paint tools) £82.00
First Things First (alarms, reminders, to do's) £45.00
Now Up-To-Date (calendar and reminder system) £65.00
QuicKeys 3.0 (macro maker, time saver utility) £110.00
QuickDex II (lightning fast DA database, essential) £32.00
Smart Alarms (easiest quickest reminder/diary system) £49.00
Star Trek (screen saver based on the cult series) £26.00
StopWatch 3.0 (client & project time/activity monitoring) £85.00
Stuffit DeLuxe (famous file compression program) £59.00
Suitcase 2.0 (manage your font menus sounds and F Keys) £45.00

ENTERTAINMENT

➣**Another World** (great animation and sound) £19.00
✔**Axis** (cheats for dozens of popular games) £34.00
✔**Crystal Quest 2** (Britain's favourite game) £22.00
✔**Crystal Crazy** (sequel to Britain's favourite game) £34.00
✔**Glider** (fly a glider through eerie house, great fun) £29.00

HARD DRIVES



Need some extra storage space? Try our Focus Hard Drives using the best drive mechanisms around – Quantum, Fujitsu and Micropolis – these drives are fast, affordable and ultra reliable.

Capacity	Internal	External
170Mb	£185.00	£245.00
240Mb	£245.00	£295.00
525Mb	£525.00	£635.00
1200Mb	£895.00	£995.00

Syquest Removable Drives from £275.00

✔**Indiana Jones** (wonder what this one's about?) £29.00
✔**Lemmings / Sim City Bundle** (the ultimate bundle) £24.00
✔**Mission Starlight** (addictive space shoot-em-up) £22.00
✔**Mutant Beach** (adventure type, great graphics) £32.00
✔**Oh No! More Lemmings** (more suicidal mayhem) £17.00
✔**Pararena** (battle opponents in rollerball rink) £22.00
✔**Prince of Persia** (brilliant animation graphic adventure) £25.00
✔**Sky Shadow** (shoot 'em up from the Crystal Quest author) £22.00
✔**SpaceWay 2000** (arcade shoot-em-up) £34.00
✔**Spectre** (brilliant tank battle game) £33.00
✔**Spectre LAN Pack** (3 user pack for network battling) £59.00
✔**Spectre Supreme** (now even better) £49.00
✔**Spin Doctor** (revolutionary arcade game) £34.00
✔**Super Maze Wars** (maze style shoot em up game) £34.00
✔**Super Maze Wars** (two user pack) £59.00
✔**Tetris** (award winning colour Soviet game) £29.00
✔**The Tinies** (stop the creatures taking over) £19.00
✔**SuperTetris** (if you liked Tetris, well..) £35.00
✔**Wordtris** (Tetris with words) £25.00
✔**ZOA—Zone of Avoidance** (new from Casady) £34.00
✔**A-Train** (create a railroad empire) £29.00
✔**Civilisation** (create your own) £29.00
➣**Chuck Yeager's Air Combat** (fly with Chuck) £34.00
➣**Hellcats** (WWII F6F flight simulator, best graphics) £39.00
➣**Hellcats Mission Disk** (8 more missions) £25.00
✔**Microsoft Flight Simulator** (serious, realistic, accurate) £35.00
✔**Scenery Discs** (Europe, Pacific, Mid West, East Coast) ... each £22.00
✔**Pathways into Darkness** (shoot the evil maze monsters) £39.00
✔**Pax Imperia** (control a star spanning empire) £32.00
✔**PGA Golf** (far and away the best Golf game) £25.00
✔**Populous** (want to play God?) £29.00
✔**PGA Golf Extra Courses** (3 more course for PGA Golf) £12.00
➣**Red Baron** (WWI Flight Simulator) £27.00
✔**Sim Ant** (control an ant colony) £29.00
✔**Sim City 2000** (design and run your own city) £29.00
✔**Sim Earth** (design and run your own planet) £32.00
✔**Sim Life** (play Mother nature) £29.00
✔**Tristan** (classic pinball game) £11.00
✔**Vette** (race a Corvette through San Francisco) £37.00
✔**Darkseed** (a terrifying adventure game) £32.00
✔**Mission Thunderbolt** (huge graphic/text adventure) £32.00
➣**Secret of Monkey Island** (a classic) £28.00
➣**Secret of Monkey Island II** (LeChuck's Revenge) £35.00
✔**3 in Three** (puzzles and riddles from Cliff Johnson) £22.00
✔**Battle Chess** (animated and powerful game) £25.00
✔**Bridge** (from novice to advanced playing levels) £24.00
✔**Chess Champion** (best Chess game) £25.00
✔**Shanghai II** (great graphics, addictive brain teaser) £25.00
✔**Nemesis Go Master V5** (a cross between draughts and chess) .. £35.00

KEY ✔ works on most Macs. ➣ Colour Macs only
Please check whether your chosen game is compatible with your Mac when ordering

MacLine publishes a regular newsletter and catalogue. If you would like to receive them please telephone us or fill in and return the card below.

Please place me on your mailing list: MFAPR

Name .....
Company .....
Address .....
.....
.....
.....
Post Code..... Phone.....

MacLine Britain's first Macintosh mail order company

THE CHEAPEST, QUICKEST AND MOST EFFICIENT WAY TO BUY

Check this out

The 1994 MACFORMAT World Chess Championships are here. And the contenders? *ChessMaster 3000, Chess Champion 2175, Battle Chess* and *GNU Chess*.

Gary Kasparov once told me he expected a chess computer to be World Champion by the year 2000. He reckoned it was inevitable – largely because rather modestly gifted players like himself were consulted on the programming algorithms. But as if rapidly protecting a vulnerable board position, he quickly added, "It's not that I couldn't beat it, it's just that I'd no longer have the energy to explore by then". And in that I can rightly compare myself to young Gazza there, because chess programs absolutely drain me too. I've been playing them regularly since 1984 and they're bloody relentless; sharp, incisive and vicious. Rather good, in other words. And as such, their most enduring feature has to be their Take Back Move option because unless you're a budding Kasparov it's about the only way to beat 'em...

So I've been using that option a lot over the last two weeks while playing four Mac chess programs, *ChessMaster 3000*, *Chess Champion 2175*, *Battle Chess* and *GNU Chess*. But rather than passing on the results of my own illegal encounters I thought the best

CHESSMASTER

The best of the lot, *ChessMaster* offers just about everything apart from a modem hook up. One great feature is on-line advice – which goes into a detailed analysis of your current position. Presentation is lavish: you have 11 smoothly animated 3D sets of different pieces to play with and a library of 150 classic games to study, from Philidor to Kasparov, and even Frank Poole's game against Hal 9000 in *2001*. Since you can modify various attributes of chess play – levels of aggression, material versus positional strength, treating draws as losses and so on – you need never play the same opponent twice.

ChessMaster won easily against *Battle Chess* and *GNU Chess* but got a run for its money with *Chess Champion*. In fact, I ran them against each other ten times because opening plays differed so much each time. But on balance, *ChessMaster* had the edge.

CHESS CHAMPION

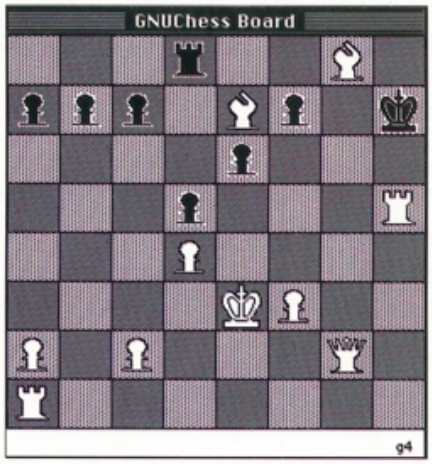
A powerful player with a wide range of features, *Chess Champion* claims an ELO rating of 2175, though, of course, this is hard to verify. All I can say is that it trounced me, even when I lowered its strength of play. While not as impressive as *ChessMaster* graphically, it does have the ability to learn as it plays, by adding stronger openings to its library. You can also randomise its openings to avoid things getting too repetitive.

Chess Champion did make up for one particular, quite spectacular, loss with some very imaginative plays. In the final analysis though it just didn't quite match up to its closest rival.

What's on offer?

	ChessMaster	Chess Champion	Battle Chess	GNU Chess
3D board	yes	yes	yes	no
Set-up board	yes	yes	yes	no
Take back	yes	yes	yes	yes
Force move	yes	yes	yes	yes
Replay	yes	yes	yes	no
Hint	yes	yes	yes	yes
Sound	yes	yes	yes	no
Modem play	no	yes	yes	no
Time controls	yes	yes	yes	yes
Print moves	yes	yes	yes	no
3D perspective	no	yes	no	no
Learning	no	yes	no	no
Best line	yes	yes	no	no
What if?	no	yes	no	no
Detailed advice	yes	no	no	no
Classic games	yes	no	no	no
Play style	yes	no	no	no
Solve for mate	yes	no	no	no
Tutor	yes	no	no	no
Chess sets	11	2	1	1

A *GNU* way of playing chess



While *GNU Chess* may well be a great little shareware chess program – load it up now and see what I mean – it does have its little foibles. In a nutshell, it cheats! Take the screen shot here: the black King was mated but *GNU* refused to accept this and continued to play. Also, in a forked king and rook position earlier in the game, it moved its rook out of danger, completely ignoring the fact it was in check. Best of all, though, is its rather emotional response when it does acknowledge it's about to be mated: in most cases it simply crashes! So, who knows, maybe it's human after all.

thing would be to get the programs to play against each other in a chess league.

Now, to be honest, it hasn't been possible to give this tournament the attention it deserves because each program should really play the best of 20 games against each of the others. And, even at only 30 to 45 seconds a move that's about 240 hours of solid play. So I settled for a competition based on the best of three games and set each of the programs to play at their strongest by referring to their opening books, thinking during their opponent's time, using best play mode and only thinking for 30 seconds. A winner eventually emerged, but it was a close run thing – here's why...

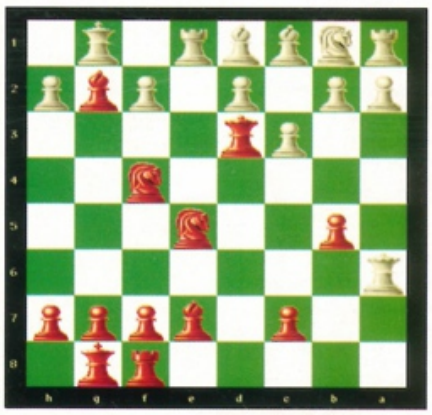
Opening attack

One thing you notice about all chess programs these days is the variety of opening attacks and defences they'll play. These are all based on 'book' openings – tried and trusted means of gaining long-term positional strength right from the outset. But chess being a game of infinite possible moves, book openings typically only cover the first dozen or so moves on each side. From then on in it's anyone's game, and the key to success lies in balancing predicted positional strengths for strategic gain. Taking pieces is merely a tactical aside – after all, it's easily possible to mate an opponent without capturing any of his pieces! But this isn't to say the chess programs we're looking at here take such a philosophical approach. For all of them, and in particular *GNU Chess*, they'll target any unprotected piece, having been programmed to maximise long-term strength by removing an opponent's defences as quickly as possible.

The effect it has on you as a player is to make you very, very careful. Caution, whether you're black or white, is the best policy. But of course, some move combinations will rip right through any defence if the position allows it. Here we're talking about sacrifices – where material is traded for less than its value in return for a solid mating opportunity. And in this respect, chess programs have always been considered limited – putting more emphasis on material strength and trying to win by attrition. Which is why chess programs playing each other will invariably continue to provide a dull and empty end game.

Yet one match between *Chess Master* and *Chess Champion* produced a truly stunning combination by the former of three sacrifices leading to a mate 12 moves later! And while a few of the games here indeed went on for more than 70 moves, *Chess Master* in particular displayed some truly ingenious combinations. So chess theory is improving; all the programs I looked at here, except *GNU Chess*, play at around 2000 on the ELO world chess rating

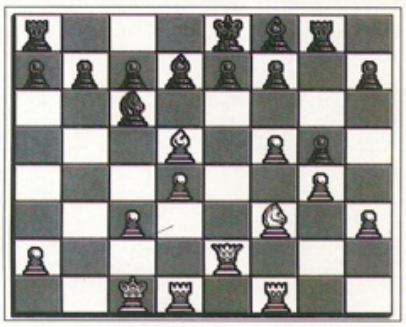
Make HAL's move



Courtesy of *ChessMaster*, here's a position from the game between Frank Poole and HAL 9000 in *2001: A Space Odyssey*. He may be en route to Jupiter and soon to crack up, but young HAL, playing black and about to move, knows how to polish off an opponent. Can you see the move he made which resulted in poor Frank giving up the ghost one move later?

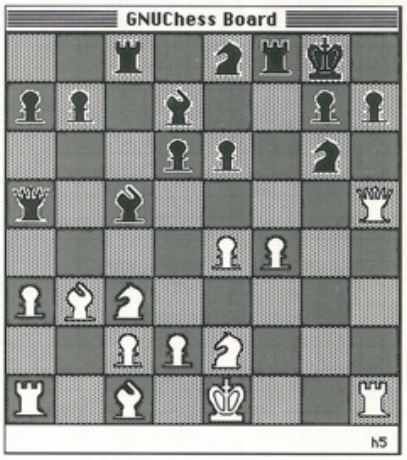
Send your two moves on a card to 'Old Red Eyes' neat win', MACFORMAT, 30 Monmouth St, Bath BA1 2BW. First correct entry out of the bag on Friday April 29 wins a copy of the very chess-like *SimCity 2000*.

BATTLE CHESS



A curious program, *Battle Chess*. The thing is, I really don't think it's actually all that smart, even when you take into account that it faffs about for what seems like hours, animating 3D pieces as they punch and hack each other up in what is known in chess circles as 'taking a piece'. Queens shuffle their robes up and down the board and zap their targets, knights hack pawns to death with broadswords – I don't need to go on, you get the picture. All that puffery aside, at the end of the day, it doesn't match up to any of the other contenders here – either in features or in performance.

GNU CHESS



GNU is a black-and-white shareware implementation and is easily the fastest of the programs to get up and running if you want a quick game. It's low on looks and features but makes up for these with instant responsiveness. Just like playing speed chess and all over in less than 30 moves in three minutes for most people. It's also got some really great bugs. Perfect for that PowerBook, it's on your cover disk so why not give it a whirl?

■ MACFORMAT does indeed bring you your very own copy of *GNU Chess* this month – see page 7 for more details.

scale – that's about candidate master level. In comparison, a grandmaster comes in at 2450, the top mainframe chess computer, Deep Thought, a respectable 2445 and the average human achieves 1400. Gazza has the highest rating of anyone ever. 2750 and counting...

RESULTS SERVICE

And the results are as follows...

Chess Master v Chess Champion	1.5-1.5
Chess Master v Battle Chess	2-0
Chess Master v GNU Chess	2-0
Chess Champion v Battle Chess	2-0
Chess Champion v GNU Chess	2-0
Battle Chess v GNU Chess	2-1

THE MACFORMAT CHAMPIONSHIP RATINGS

ChessMaster 3000 works with any colour Mac and costs £40 from Mindscape on 0444 246333.
Chess Champion 2175 works with any Mac and costs £35 from Oxford Softworks on 0993 823463.
Battle Chess also comes as a colour CD-ROM product but this review is based on the mono £30 version from Electronic Arts on 0753 549442.
GNU Chess is shareware and on your cover disk!

	Features	Strength	Variety	Value	Overall
CHESSMASTER	95%	94%	92%	83%	91%
CHESS CHAMPION	88%	92%	92%	88%	90%
BATTLE CHESS	80%	86%	84%	80%	82%
GNU CHESS	60%	82%	76%	98%	79%

Gamebusters

Read all about it... spend the day at 'combat school', win a rather smart T-shirt... oh, and get your gaming tips here, too.

■ First off some news... On May 28 at The Cross nightclub in Kings Cross, a rather special day event will be held. It's the first-ever combat school for *HellCats Over the Pacific* and *Leyte Gulf*! Organised by MacUniversity in association with GraphSoft, the day will give you the chance to mix with fellow aces, learn some new tips and techniques and finally compete in the first All England *Hellcats* Combat Trophy. Along the way you'll also be treated to a preview of GraphSoft's new A10 aerial combat sim and be able to try out a full body cockpit simulator. Oh, and MACFORMAT is sponsoring the event, so there may be one or two of us wandering/flying around too. Entrance to this all-day shoot-em-up is £10 – more details on 071 582 3702. See ya there.

You too could be shooting down England's finest hellcats if you visit the special combat school day event in May.

■ Right then, who's been lucky enough to win one of our fabulous T-shirts this ish then? Remember, all you have to is send us games tips, tricks, techniques, access codes, cheats and even used tenners to 'Gamebusters', MACFORMAT, 30 Monmouth St, Bath BA1 2BW and if we print any of them, the limited edition shirts will be winging their way to you.

So on with the tips:

Civilization

A fast way to find an opponent's city is to **Find City** in the **File** menu and highlight a name you don't recognise. Try it...
Michael Rasmuson, Cardiff, Wales

SimCity

To get the most money possible from tax payers without making them angry, set the December tax rate to 20% and then in January, the new fiscal year, set it back to between 0 and 7% – your inhabitants won't notice a thing.
Jens Krohn, Helsingborg, Sweden

Here's one for owners of the original *SimCity*. Try holding down the **[shift]** key and typing 'FUND'. This will automatically give you £20,000 and can be repeated over and over again to your heart's content.
Alaric Moore, Brighton, Sussex

Secret of Monkey Island

The immortal Guybrush Threepwood can actually die! After talking to the 'important pirates', go and plunder the governor's mansion, and let Fester chuck you off the pier, then hang around for ten minutes and watch Guybrush change colour. Then this immortal will die!
Robert Harkess, Hove

Railroad Tycoon

When you have full funds (£32 million) and take over another railroad you'll get all your money back when you own 100% of it.
Alex Madden, Woodbridge, Suffolk

Spectre

Try holding down the **[option]** key as you play to select what level you want to start on. Also type GOD as you play, for a special view.
Anon, Oxford

Operation Intercept

On the key definition screen, select **[caps lock]** as fire and press it down in the game – your ship will have autofire!
Allan Langride and Scott Harris, Inverness

Another World

Here's the first 12 codes:

1 LDKD	2 HTDC
3 CLLD	4 LBKG
5 XDDJ	6 FXLC
7 KLFB	8 DDRX
9 HRTB	10 BRTD
11 TFBB	12 TXHF

Stig-André Rosseland, Drammen, Norway

Take Your Mac on the Road

Before you hit the road on business or head off on holiday, check the route with AutoRoute Express, the colourful, computerised road atlas, with simple-to-read maps and easy-to-follow directions. Forget fumbling with fold-out maps or messing with mileage charts. AutoRoute Express takes the trouble out of travel.

Just tell AutoRoute Express when and where you're starting and where you're heading. Set your driving style, from lead foot to laid back. AutoRoute Express takes it from there, showing the quickest routes. Or the shortest. Or the best alternatives... whichever route is right for you.

On full colour maps, zoom in for details or zoom out for the whole picture... Route directions show how far to go, how long it takes, where to turn, what signs to look for... A personal driving guide to print out and take along.

AutoRoute Express is accurate and fun to use. And best of all, it pays for itself, saving up to 20% of driving time and costs. AutoRoute Express: the intelligent way to get from here...to there.

For your copy of AutoRoute Express or a FREE working copy, fill in and cut out the coupon below and send it to NextBase Ltd, Headline House, Chaucer Road, Ashford, Middlesex TW15 2QT. Or call 0784 421422 or fax 0784 420072.

AutoRoute Express for Macintosh features:

- *Plan routes between 10,000 places on 100,000 miles of road using the updated 1993/94 UK and Ireland map*
- *View route details, directions and the whole journey at once*
- *Access commands quickly with comprehensive tools*
- *Choose map displays for customised printouts*
- *Add detailed maps to your word processor or DTP documents with fast, easy cut-and-paste*

Macintosh version requirements: minimum 2MB of free memory (4MB recommended), System 6.0.7 or above (System 7 friendly), hard disk (uses 3MB), supports any Apple Macintosh computer except a Macintosh Plus, SE or the original 128K or 512K Macintosh.
Map background © Bartholomew, Edinburgh

NextBase Ltd, Headline House, Chaucer Road, Ashford, Middlesex TW15 2QT

☐ Please send me my free working copy of AutoRoute Express for Macintosh

☐ Yes, please rush me my copy of AutoRoute Express for Macintosh (UK). I enclose my cheque/credit card no. for the full amount of **£149.95 + VAT** (£176.19 inc P&P & VAT)

Access/Visa no: _____

Expiry date: _____

Name: _____

Address: _____

_____ Postcode: _____ Tel: _____

**NextBase Ltd, Headline House,
Chaucer Road, Ashford, Middlesex TW15 2QT.
Tel: (0784) 421422 Fax: (0784) 420072**

AUTOROUTE EXPRESS

MF/4/94

All the game information comes to you from these dialogue things. I ought to make some sort of joke about Captain Slog.

STAR TREK 25th Anniversary

Step into Captain James T Kirk's shoes and go star trekking with Spock, Scotty and the unnamed crewman in the red shirt who always gets killed...

You start out by taking part in a training exercise. I never even saw the other ship before it shot me to bits. Still, eh?

Our first mission. Copy protection is afforded by the need to consult the manual for the co-ordinates of your destinations.

Click on a crew member to get them working. Mr Sulu, take us into standard orbit if you please. (Whatever that is).

Wherever you go, there you are. We're inside a shed on Pollux V. Take a look around and see what you can see.

Computer games – the final frontier. These are the point-and-click graphic adventures of the '60s TV series *Star Trek*; their 'couple of hours in the evening after a hard day's work on your Mac' mission to explore strange new worlds ("I'm sorry, we can't explore this new world, it's not strange enough"); to seek out new life and new civilizations; boldly to go where no man has gone before. No, that's not right. Curse these word processors and their grammar checkers.

Keen fans of the series now call themselves 'Trekkers' rather than 'Trekkies' – no one knows why, but it's probably an image thing. It'll do them no good, though; a rose by any other name would still be thought of as a bit weird if it knew all the *Star Trek* scripts by heart, wouldn't it? Anyway, such keen fans will notice that since we're boldly going where no man has gone before, rather than the more egalitarian 'no one', this must be a game based on the original series rather than the significantly more entertaining *Next Generation*. Actually (he says, re-reading the opening paragraph of his review), anyone who can read will have noticed that it's about the original series because I gave the game away in the second sentence. Tch.

You are Captain James Tiberius Kirk and you're in command of the Star Ship Thingy as you'd expect. You accept mission orders from Star Fleet which are transmitted over the sub space whatnot and displayed on the big view screen how's-your-father at the front of the bridge. Each of your bridge officers does what you'd expect them to – Mr Sulu steers the ship, Mr Scott points out that he doesn't know how much more she can stand, Mr Chekov

STAR TREK WHO'S WHO

Here we are on the bridge of the good old USS Enterprise, just as it looked back in 1960-something. Recognise anyone?

Scott: bizarre Scottish engineer played by a Canadian. Continually lies about how long it will take to complete a job so he looks good when he finishes sooner.

Chekov: has an accent almost as unconvincing as Scotty's. Was the token Russian in the '60s series to show that in the future the Cold War would be forgotten.

Spock: famous for his pointy ears, mostly. Leonard Nimoy later appeared in *Mission Impossible* and that wasn't very good either.

Uhura: what on earth is that thing growing out of her ear?

Kirk: overacting at its most embarrassing. How a man with so little wisdom and self-control could ever have risen to the rank of captain simply beggars belief.

Sulu: dour, oriental gentleman played by real oriental gentleman called George. Mostly seems unimpressed by, well, mostly everything.

Hang on, you've got to let me say it. I've always wanted to say this... *Energise.* Hmm, it wasn't quite as exciting as I thought it would be.

Here we are on the surface of Pollux V, and no papier maché in sight. Perhaps that bloke can help – or maybe even explain this 'big ball', 'little ball' control thing...

writes impressionistic plays about the Russian middle class at the end of the nineteenth century and Mr Spock gives advice on child care. No, that's not right.

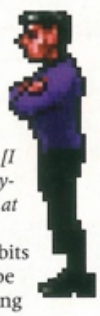
You control the action by moving your pointer round the screen and clicking on things. You can call up a little icon which enables you to change your pointer into a pair of eyes (for 'look'), a mouth (for 'talk to'), a hand with a big ball in it (for 'use' – don't ask me why) or a hand with a small ball in it (for 'take' – your guess is as good as mine). At first it's all a little bit fiddly but it doesn't take long to get the hang of it and I quickly forgot about the mechanics of the interface and threw myself into the game.

Naturally it wouldn't be *Star Trek* if you just spent your whole time flying the Enterprise about the place without ever visiting strange new worlds made up almost entirely of papier maché caves. So to give the full-on *Star Trek* feel you also get to beam down to alien worlds and solve puzzles in the time-honoured adventure game style. You meet strange alien people, help some, kill others, and generally have a pretty exciting time of it all.

One of the problems with adventures like this is that you often have to spend a fair amount of time getting to grips with the technology of the fantasy world you've moved temporarily into. Whether it be swords and sorcery or high-tech gadgetry, it's usually

unfamiliar and confusing. Not so with *Star Trek*. Unless you're one of those rare people who've managed to cut themselves off from popular culture altogether over the last 25 years (politicians, judges, members of the Viewers' and Listeners' Association) you can't help but be thoroughly familiar with the technology of *Star Trek*. Everyone knows what a phaser does and few people wouldn't know that they should use a tricorder to analyse their surroundings if, say, they were in an unfamiliar papier maché cave thousands of light years from home.

The familiarity of the setting also works against the game a tad. There are a great many people who can't stand *Star Trek* and who would actually buy a plane ticket to foreign parts to avoid it. If they did, they'd miss a playable and entertaining game. Then, of course, there are the Trekkers who are going to think that this fairly ordinary, run-of-the-mill, vanilla adventure is thoroughly fabulous. Who's right? Who can say? *[I should think that, for the money we're paying you, you ought perhaps to have a stab at saying, if it's all the same to you. – Ed]*



There are some good 3D flying bits with some shooting of Klingons to be done, and there's a fair bit of exploring and adventuring too. It's good, but it's not particularly sparkly. The graphics and animation are excellent, as are the sound effects (get hold of *SoundExtractor* and install them in your System *now*). But if the truth be told I can't say I was particularly gripped. I always had the feeling that, rather than being inside a new and exciting world, I was watching the action from outside, as if, perhaps, I were watching it on the telly.

Shall I sum up? Yes, I think so. Trekkers will love it. Those who are ambivalent about *Star Trek* will find it entertaining but not too thrilling. While, as Mr Lincoln so very nearly said, if you don't like this sort of thing, then you'll find that this is the sort of thing you don't like.

Tim Norris

STAR TREK

Price: £47. From: InterPlay, 0865 390029. Out: now.
Requires: a 256 colour Mac running System 6.0.7 or higher with at least 1.5Mb free RAM; 68030 processor or better recommended. Controls: mouse.

Graphics Everyone looks about right to me.	85%
Sound Just like the real thing.	90%
Gameplay A bit ordinary really.	80%
MACFORMAT RATING	85%

This looks promising. I'll bet if we make our way into that mysterious cavern there'll be papier maché aplenty.

This is much more like it – tedious remarks from Mr Spock, fake rocks, and the chance to use our phasers at last.

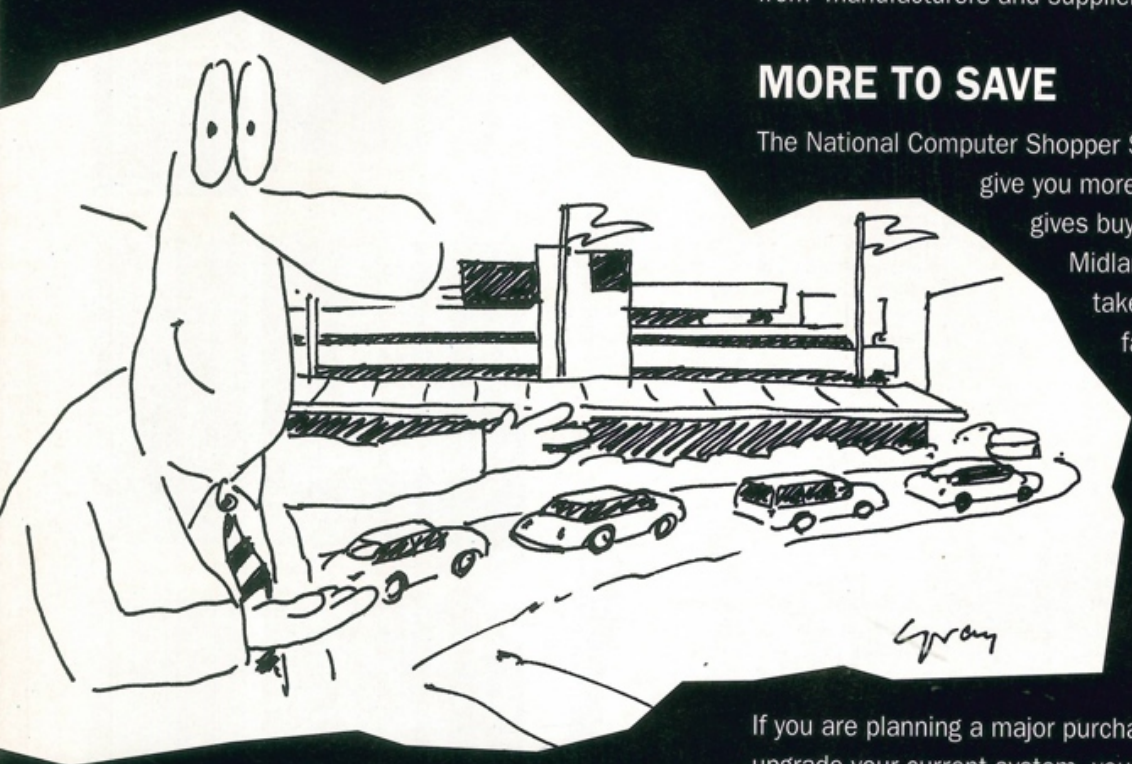
Ensign Everts is the disposable crew member. He's not famous, so if anything goes wrong, he'll be the one to die.

The place t

This Spring the successful Computer Shopper Show comes to Birmingham for the first time. So if you're looking to buy a new computer, software or peripherals, you now have a bigger and better choice than ever before!

multimedia, CD-ROM upgrades and software, plus dozens of new products launched for the first time at the show.

It's your chance to see the latest kit in action, to try before you buy and get instant answers direct from manufacturers and suppliers.



MORE TO SAVE

The National Computer Shopper Show doesn't just give you more choice. It also gives buyers in the Midlands the chance to take advantage of the famous Computer Shopper Show **special offers** and **free buying advice centres.**

MORE TO BUY

The National Computer Shopper Show brings over 100 leading companies to Birmingham's National Exhibition Centre. Anything you might want to buy is here - PCs, notebooks and portables, popular software applications on DOS and windows,

If you are planning a major purchase, or just want to upgrade your current system, you'll buy better and cheaper at the National Computer Shopper Show.

Don't miss the UK's largest PC buying forum - now for the first time in Birmingham!

MAKE THE RIGHT DECISION

For your advance tickets and a chance to save £2 per ticket on door prices, either phone our box office or clip and return the coupon opposite.

ABCDEFGHIJKLMNOPQRS

If you can't book in advance, bring this coupon with you on the day and get £1.50 off your entrance fee.

BLENHEIM

o be to buy

NEW! MAC BUYING ADVICE CENTRE

NATIONAL COMPUTER SHOPPER show

NEC BIRMINGHAM 24–27 MARCH 1994

Sponsored by Computer Shopper Magazine

Ticket prices

	Full Price	Advance Price	YOU SAVE
Adult	~~£7.00~~	£5.00	£2.00
Under 16	~~£5.00~~	£3.50	£1.50
Family of 4	~~£21.50~~	£16.00	£5.50

Book now - phone the box office on:

021 767 4343

HOW TO GET TO THE NEC

By road: The NEC is off Junction 6 on the M42 which can be reached via the M40 and M6.

By rail: Birmingham International station is right at the heart of the NEC. InterCity provides a half hourly service from London Euston - hourly evenings and Sundays. Direct trains are available from many regional centres. For fares and timetable information please contact your local station or telephone enquiry bureau.

2 FOR 1 TICKET OFFER

If you book your National Computer Shopper Show tickets in advance and you're travelling to the show from London Euston, Watford Junction and Milton Keynes, you can get two Saver or SuperSaver rail tickets for the price of one. Simply phone the box office or use the form opposite to book in advance and we will send you full details of this offer with your National Computer Shopper Show tickets.

INTERCITY

COMPLETE AND RETURN TO: National Exhibition Centre Limited, PO Box 3348, Birmingham, B40 1NS

CLOSING DATE FOR APPLICATIONS: Monday 21 March 1994

PLEASE SEND ME: _____ (Qty) tickets @ £5.00

_____ (Qty) tickets @ £3.50

_____ (Qty) tickets @ £16.00

☐ **I ENCLOSE A CHEQUE PAYABLE TO:** NEC Limited

£_____ for _____ tickets (total).

☐ **PLEASE DEBIT MY ACCESS/VISA ACCOUNT:**

Account No. Expiry date:

Signature _____

Mr/Mrs/Ms. _____ Initial _____ Surname _____

Position _____

Company Name _____

Company Address _____

_____ Postcode _____

Home Address _____

Postcode _____ Day time phone no. _____

Please tick your main reason for attending the show:

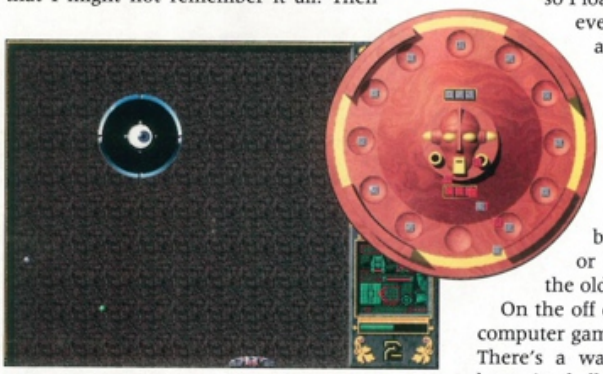
☐ Home use ☐ Business use ☐ Both M ABCDEFGHIJKLMNOPQRS

Breakline

Have some fun with bouncing balls, special weapons and a paddle.

Things, they say, are seldom what they seem. I never believed 'them' until just the other day when I was given *Breakline* to review. Until then I'd thought that most things were pretty much what they seemed. At least they seemed to be. But *Breakline* isn't at all what it seems.

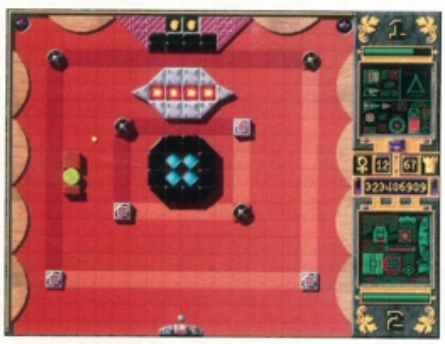
In line with my new policy of always reading the manual before I settle down to play a new game I began to study the instructions. There was much talk of 'Highways of the Void' and 'The Portals of Mirage' and I began to worry that I might not remember it all. Then there was something about an 'Era of the Trader Lords' and a few pages about runes and I was sure I'd never get to grips with it. Still, nothing ventured, nothing gained and all that, so I loaded it up. Gosh, I thought, I hope everything's going to be all right. But all is not what it seems. Guess what the game is. No, go on, guess. The clues are all there... Trader Lords, Hidden Fortresses, Citadels of Traders. Do you give in...? It's *Breakout*. With knobs on. No, really. They're highly polished ornamental brass knobs, but in essence it's nothing more, or less, than a neat new version of the old arcade game, *Breakout*.



Obviously, when I say it's '*Breakout* with knobs on' that's not to say that all the knobs are especially pretty or interesting.

On the off chance that you're new to all this computer game malarkey, allow me to explain. There's a wall made from blocks. There's a bouncing ball. There's a bat or paddle. You control the side-to-side movement of the bat and you must use it to direct the ball towards the blocks. If you hit the blocks they disappear and you are obliged to make them all disappear before you can proceed to a new level. Should you miss the ball and allow it to fall off the bottom of the screen you lose a life. You have only a limited supply of lives. It's simple and fun.

It was made a bit more fun when another game, *Arkanoid*, came along and added exploding blocks, power-ups and extra weapons. So, if you're going to be pedantic about it, this is *Arkanoid* with knobs on. Your bat/paddle is now a space ship-type-thing armed not only with the ability to bounce balls at blocks but also with a couple of special weapons.



Ah. Now here's the obligatory 'wall a long way down the screen that's difficult to get rid of' bit.

Keep alert, move your ship/bat/paddle, use your special weapons with care and, er, well, that's it. That's almost certainly why the manual got so carried away with the plot – there's not much entertainment to be had from 'keep the ball bouncing and don't let it fall off the bottom of the screen', is there? At least not if you're writing an instruction manual. If you're playing the game, though, it's as much fun as it ever was.

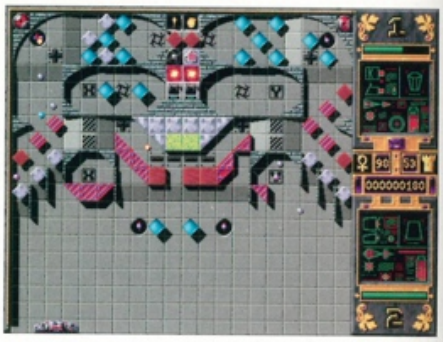
The curvy walls add a little something to the proceedings – they make it more difficult to predict where the ball will go.

If you can get over the 'but I can get half a dozen PD versions of *Breakout*' feeling, then you might want to invest in this one. As with so many games these days there's nothing particularly innovative about it but then, as the Ed said to me only the other day, there's nothing new under the sun. He claimed he'd thought of that all by himself and when I pointed out that it was Solomon who had said it he said, 'Ah, well, you see, there's nothing new under the sun.'

Tim Norris

It's just a simple game about bouncing balls into walls. Ignore the dim-witted plot, settle back and enjoy the action.

This table looks a bit like a cockerel with a ribbon in its hair. Or a man with a long nose made entirely of melted latex.



As you've probably gathered, there's little you can say about these screenshots. They very nearly speak for themselves.

BREAKLINE

Price: £30. From: Mindscape, 0444 246333. Out: now. Requires: a 256 colour Mac running system 6.0.7 or later. Controls: mouse

Graphics Clear, clean, well animated.	86%
Sound Yes, it does, rather.	77%
Gameplay As excellent as it ever was.	90%
MACFORMAT RATING	87%

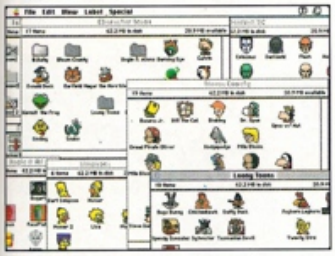
PremiumPD

Supplying the best in Macintosh™ PD and shareware

At Premium PD we are committed to supplying the best PD and shareware available at low prices. If you don't see what you want here (we can only fit a small selection on this page), write to use – we're bound to be able to find it. Write for our full catalogue, or simply use our Shareware Search Service.

Only £5 per disk!

ICONS



I101

If you're running System 7, you really must get hold of I101: loads of icons to replace the standard, boring old disk, folder and file icons. No 'hacking' is required: just copy and paste these great, colourful icons in place. Full instructions are provided on the disk.

GAMES

Here's just a selection of the games disks we have available. As usual, just write for a full catalogue!

G101 Maelstrom – A superb version of Asteroids. Requires 256-colour monitor to run.

G102 Diamonds – Steer a bouncing ball around the screen, eating up blocks on the way. Brilliant graphics and samples. Requires 256-colour monitor. **Storm** – brilliant version of the Tempest arcade classic.

G103 Oxyd – Partially based on Marble Madness, this game runs in colour or black-and-white. It requires a combination of logic and hand-eye co-ordination to complete.

G104 GNU Chess – Excellent implementation of *the* classic strategy game. **Backgammon** – plays a good game, runs on any Mac. **Mombasa** – remove the matching blocks to clear the board.

G106 Solarian – Another superb arcade-style game, based on Galaxians. Requires a 256-colour, 13-inch monitor.

G107 Beam Wars – If you've ever seen the Light Cycle race in the film Tron, you'll know what to expect! **MacBzone** – blast your opponents in 3D. Both games require colour.

G109 Three adventure programs, including the granddaddy of them all, **Crystal Cave**.

G111 Nine different card games, including **Forty Thieves**, **Blackjack** and **Precision Cribbage**.

G114 3D Checkers – Play against the computer or a human opponent, on a 3D board. **Battle Mac** – Battleships updated for the computer age. **Billiards, Darts** – Two pub games converted for the Mac, believe it or not. **Connect Four** – A tiny program that plays the game of the same name.

G115 Mac Avenger – Great colour shoot-em up. **Roboids II** – Colour platform game.

SOFTWARE SEARCH SERVICE

If you know of a PD or shareware program, we can find it for you. Just let us know the name, and give a brief description of what it does (so that we can try to find any similar programs, which we'll put on the disk for free). This service costs £5 per program, and takes up to seven days.

SOUNDS

All Sounds disks contain SoundMaster, which allows you to assign sounds to a wide variety of Mac operations such as startup, shutdown, insert disk and so on.

S101 This disk includes sounds from **The Simpsons** (have Bart say "Okey Dokey" as you shut down), as well as samples from **Alien**, **Terminator** and **Twin Peaks**.

S102 Trapdoor sounds – a large collection of sounds from the cult kids' TV programme.

S103 A range of sounds from **Quantum Leap**, **Twin Peaks** and others.

S104 The Three Stooges produced some of the world's most quotable phrases. Now your Mac can quote them!

S105 Good Mooooorning Vietnam! Sounds from that classic film, plus some great **Star Wars** samples.

S106 A disk full of samples from **Star Trek** – the original TV series.

S107 Did you know how many quotable bits there were in **The Wizard Of Oz**? Well, here's a disk full of them!

S108 Monty Python, **Peewee Herman**, **Clint Eastwood** and **Arnie the Terminator** feature on this miscellany. "I'll be back!"

S109 Another collection from a variety of sources, including **Pavarotti**, **The Blues Brothers** and part of the **Happy Trails** theme.

HYPERCARD

(All disks require HyperCard)

H101 Mozart Catalogue – Everything the great man composed, listed by Köchel number, and date and place of composition.

H102 H G Wells – Two classics from the master of science fiction – The Time Machine and War Of The Worlds – in HyperCard format.

H103 Shakespeare 1 – Four of the Bard's plays, beautifully presented in HyperCard.

H104 Twin Peaks Trivia – Everything you wanted to know…

MISC...

X101 JFK Assassination Series –A three High Density disk package, consisting of HyperCard stacks which tell the story of the JFK assassination and look into the motives behind the murder, the prime suspects and what conspiracy theories have arisen since. The disks include sound clips, and make fascinating reading. Requires HyperCard. ***£10 for the three-disk set.***

X102 Ritz Starter Accounts – Brilliant shareware accounts package from this well-know British company. Check it out – it probably does everything that you need.

This is only a small selection of what we have available – write for our full catalogue!

Please rush me the following disks within two working days. I enclose £5 per disk: F2/94

_____

Please find me the following program(s). I enclose £5 for each program:

_____

_____

Name _____

Address _____

_____

Send orders to: Premium PD, Dept F, PO Box 14, Ravenshead, Notts NG15 9DR

Selling fast

Hurry! Catch up on all the reviews and features you've missed before it's too late!

ISSUE 1

March 1993 ■ On the disk: *Lemmings; Disinfectant 2.9* ■ **Inside:** *Morph* and *Publish-It Easy* reviewed; Software roundup ■ But you're out of luck – this issue is completely sold out!

ISSUE 2

May 1993 ■ On the disk: *Spectre Supreme; SuperClock!* ■ **Inside:** *MacWrite Pro, Painter 2, ClarisWorks 2* reviewed; hardware roundup ■ But – oh dear – you've missed out on this one too...!

ISSUE 3

August 1993 ■ On the disk: *Arashi; BiPlane* ■ **Inside:** *Paint It!, Colour It!, StuffIt Deluxe* reviewed; The future of the Mac; using charts and graphs ■ Sorry, too late! (See a pattern developing?)

ISSUE 4

September 1993 ■ On the disk: *Address Book; Ritz Starter Accounts* ■ **Inside:** *Fetch, Image Browser* and *Stacker* reviewed; essential software; the Newton on test ■ Limited quantity available

ISSUE 5

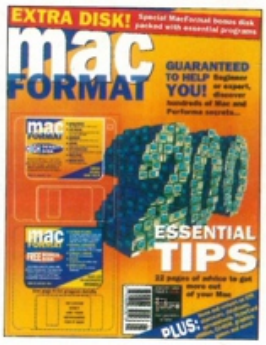
October 1993 ■ On the disk: *Do It All!, PopChar, Greg's Buttons* ■ **Inside:** Computing on the move; PowerCD on test; Photo CD software; 50 *QuarkXPress* tips; what you can do with Dingbats

ISSUE 6

November 1993 ■ On the disk: *Civilization, Eclipse, Tetris 2000* ■ **Inside:** How to choose and use a scanner; *Morph 2, AutoRoute* and *C.A.T.* reviewed; 50 *PageMaker* tips; defragmenting your hard disk

ISSUE 7

December 1993 ■ On the disk: *Disinfectant 3.2;* seven handy *Quark* add-ons; 35 programs in all! ■ **Inside:** Complete guide to comms; *Astound, QuickKeys* and grammar checkers reviewed



ISSUE 8

January 1994 ■ Double disk issue! On the disks: *NIH Image, Graphic Converter, Maelstrom, AutoRoute demo* ■ **Inside:** Over 200 essential tips; *WordPerfect 3* and Adobe *Dimensions* reviewed

ISSUE 9

February 1994 ■ On the disk: *SimCity 2000 demo; Greg's Browser; QuarkXPress* 3.2 patcher ■ **Inside:** Bumper games guide; *SimCity 2000, Myst, Populous* and *FreeHand 4* reviewed; Mac security

ISSUE 10

March 1994 ■ On the disk: Over 30 useful TrueType fonts; *Disinfectant 3.3; Apollo* launcher ■ **Inside:** Integrated 'Works' packages head-to-head; Clip art and media; education reviews

MACFORMAT BACK ISSUES ORDER FORM

Please send me the following back issues of MACFORMAT for just £5 each including packing and postage: (please tick the issues you want)

- ☐ Issue 4, September 1993
- ☐ Issue 5, October 1993
- ☐ Issue 6, November 1993
- ☐ Issue 7, December 1993
- ☐ Issue 8, January 1994
- ☐ Issue 9, February 1994
- ☐ Issue 10, March 1994
- ☐ *Special offer:* **any five available issues for £20 – SAVE £5!**

BUY FIVE & SAVE £5!

Total £ .....

I enclose a cheque / please debit my ☐ Visa ☐ Mastercard

Please make cheques payable to **Future Publishing Ltd**

Card no ..... Expiry date .....

Name .....

Address .....

.....Postcode .....

Signature .....

Please return this form to MACFORMAT back issues, Future Publishing, Somerton, Somerset TA11 6BR

Settle new scores

Could you use a scorewriter that'll cost you less than a fiver? How about a new Cubase manual? Plus, catch up on the latest in Mac music news...

Even though there is now some very inexpensive music software for the Mac, it still costs money. MACFORMAT readers know there is a vast range of Mac PD and shareware, but you have to dig a little deeper to find PD music programs. I've been digging and I've unearthed a few. Most are utilities, some are very interesting, and though there are one or two sequencer types, the commercial programs, it must be said, are several degrees more sophisticated.

Nevertheless, I did discover a scorewriter called *Lime* which is well worth a mention. It's actually a demo program which restricts you to a three-page score – but that's the length of most sheet music anyway.

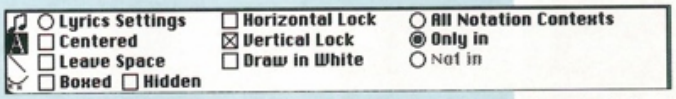
Lime is certainly a comprehensive program. It supports a full range of note durations, beaming and accidentals plus symbols such as staccato and accents, ties, slurs, guitar symbols, arpeggios, grace notes and rehearsal marks to name but a few.

You enter notes by selecting a duration and then either clicking the notes on an on-screen keyboard or playing them on a MIDI keyboard.

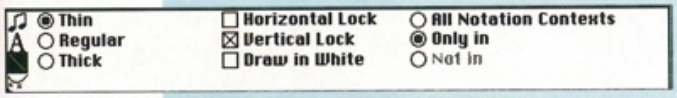
The on-disk manual is very helpful, although it only gets into diagrams when it reaches the musical examples. By that time you're halfway through its 129 pages. It's in *Word* format, however, so you need to be able to read this format to get the best out of it.

The program can run a bit slowly. It was written in C and there's a folder containing programming examples for the experimenter. It was written by two university boffins, which perhaps explains why part of the user-interface is not as intuitive as Mac users would like, with much holding down of keys, mouse clicking and dragging. But then, it has to be said that commercial music programs are not all as

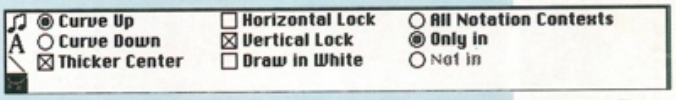
Lime uses graphic menus such as this one to select notes and other functions. Use this menu to select notes, rests, accidentals and various music symbols.



This menu gives you comprehensive control over the placing of your lyrics. In particular, it includes the ability to space out the notes to accommodate long words.



This menu enables you to draw lines on the score. **Horizontal** and **Vertical Lock** ensure your lines will be straight, whilst **Draw in White** erases black areas of the screen.



Lime also enables you to draw curves and specify the thickness of the line at its centre. The other options offered here are similar to those in the **Line** menu.

FREE FOR THE TG

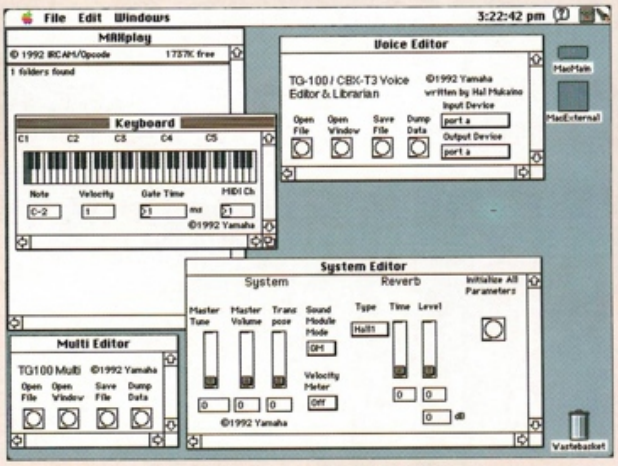
Like some free software? Wouldn't we all! Well, if you have a Yamaha TG100 and ring the hi tech division and speak to the boys and girls there very nicely they will send you a *TG100 Editor* absolutely free, gratis and for nothing.

I'm not going to regale you with an in-depth review of the program – it's free and if you have a TG100 you should get a copy, 'nuff said? – but there are some aspects of the program worth looking at.

First, it was written in MAX, an object-oriented language for MIDI programmers which was originally developed by IRCAM, a world-famous technical research centre in Paris, and which has been ported to the Mac by Opcode Systems.

Secondly – partly because of the way MAX works, I suspect – the editor is based on a series of windows. There are four modules – three editors, and a utility:

- The System Editor enables you to edit the TG100's System mode and Multi Common settings, although you cannot store the changes you make to these settings to disk.
- The Multi Editor edits the TG100's multi part settings, and you can save these to disk.
- The Voice Editor edits individual voices, and you can save up to 64 voices in a single file.
- The Software Keyboard enables you to use your Mac to control the TG100 in place of a MIDI keyboard.



Yamaha's absolutely free (there's no catch, honest!) *TG100 editor* consists of lots of windows which do lots of useful things – one at a time.

There are two additional pieces of software. One contains System Exclusive data files for sequencers which cannot handle Bank Select Messages, which give you access to the TG100's banks – GM, Internal, DOC and C/M. The other converts a voice/multi data file created by the *Editor* to a standard MIDI file for use in your sequence data.

It's not the most, er, integrated editor but the bits are easy enough to use. The program will also work with the CBX-T3 which is a TG100 look-alike bundled in Yamaha's *Hello! Music!* pack.

It's really good to see a company like Yamaha supporting products with free software. Let's hope it catches on. In the mean time, you can get your free editor from Yamaha on 0908 366700.

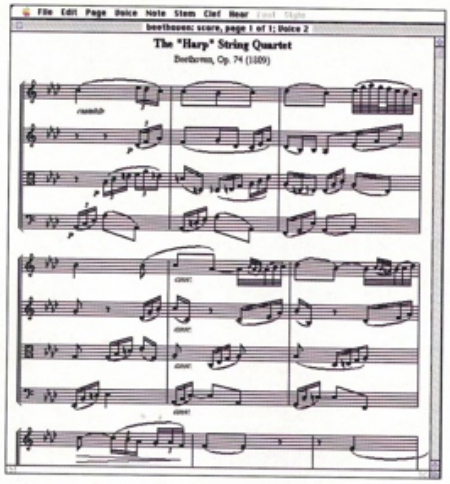
friendly as we would like, either.

Having said that, *Lime* is a demo of a more complete program. You are, of course, urged to buy the full version, but nowhere in the program or manual is a price given. Needless to say, it's American and I'm not aware of any UK distributor for it. In fact, there may not even be a USA distributor, it may only be available from the developers. However, if you want to try your hand at scorewriting and don't want to spend any dosh, get this!

Lime Demo is available from Stormont Software, which has an excellent approach to software distribution. You pick the programs you want from the catalogue and get charged by the disk – £4 for HD and £2.50 for DD; the price is the same no matter how many programs are on it. Stormont is on 0232 487923.

If you have a favourite PD music program, send it in to us at MACFORMAT, 30 Monmouth Street, Bath BA1 2BW, so we can share it with other readers.

Ian Waugh



Here's an incredibly impressive score produced in *Lime*. Note the phrase marks, the hairpins and music instructions.

JARGON BUSTERS

C: a computer language used to create the majority of Macintosh programs now on the market.

M*ROS: MIDI Real-time Operating System. Allows communication and synchronisation between several different applications, although *Cubase* is currently the only M*ROS compliant software for the Mac.

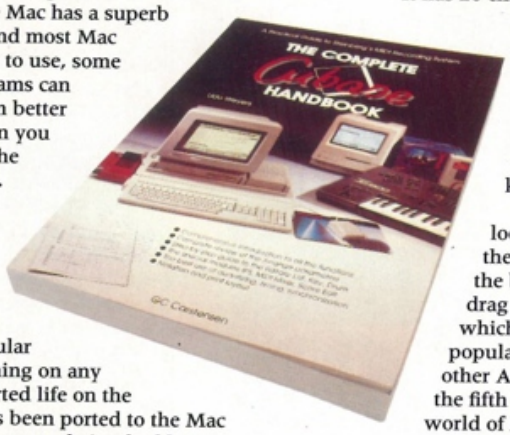
MIDI: Musical Instrument Digital Interface. A standard that enables electronic instruments and devices like your Mac to pass data to each other.

Sequencer: a computer program (or dedicated piece of hardware) designed to store musical data, usually in MIDI form, enabling you to edit the stored data.

The Complete Cubase Handbook

Do you ever get the feeling that technology is too complex? Or that manuals are inadequate? Yes, you and everyone else. Don't you find it amazing that so many pieces of software attract third-party manuals telling you how to use them? You'd imagine that software developers would produce good manuals to accompany their software in the first place, wouldn't you?

Although the Mac has a superb user-interface and most Mac software is easy to use, some advanced programs can still benefit from better instructions than you tend to find in the average manual.



Which neatly brings us to the *Complete Cubase Handbook*. *Cubase* is one of the most popular sequencers running on any computer. It started life on the Atari ST and has been ported to the Mac and the PC. The manual ain't bad but, as with any program of such complexity and sophistication, a few more detailed explanations and some tutorials would not go amiss.

The *Cubase Handbook* is based primarily on the ST version of the same program, and although the Mac interface is slightly different, all the functions work in essentially the same way.

It's a thorough job of 384 pages. Unlike those books which aim to augment and supplement the manual, this is a complete replacement for it. It even has installation guides – including one for the Mac.

It has 20 chapters which will take the beginner from first step to expert level, and even more experienced and adept users are bound to find something here which they didn't know before.

The second chapter looks at basic functions, the third tackles Parts – the building blocks you drag around the screen which helped make *Cubase* so popular. The fourth looks at other Arrange functions and the fifth plunges you into the world of MIDI.

Additional topics are introduced chapter by chapter. You'll learn about the vagaries of Logical Edit, how to use Mixer Maps – and create your own – and there's a chapter on the much-misunderstood IPS (Interactive Phrase Synthesiser). Each of the editors has a chapter to itself and there are sections on timing, quantisation, notation, synchronisation and M*ROS.

In short, the book covers just about everything you could possibly want to know about *Cubase* – and then some. Highly recommended.

The *Complete Cubase Handbook* costs £24.95 and should be available from all good music stores. In case of difficulty contact Music Sales, Distribution Centre, Newmarket Road, Bury St. Edmunds, Suffolk, IP33 3YB. Tel: 0284 702600.

MAC MUSIC NEWS

■ Hands On, purveyor of MIDI files and ancillary software and equipment, has moved premises for the third time in as many years. This coincides with the launch of a Bulletin Board which will give pre-registered users immediate access to Hands On's vast range of MIDI files. The system contains a demo of every file, so you can try before you buy and, thanks to savings in p&p, the files have been further reduced to £3.50 each.

The BBS is on-line 24 hours a day on 0705 783 400. Hands On is now at: The Software Suite, 11 Warfield Avenue, Waterlooville, Hampshire, PO7 7JN. Tel: 0705 783 100, Fax: 0705 783 200.

■ Make a note of these dates in your diary: 22–24 April. This is when the MEMS – MIDI and Electronic Music Show – takes place at Wembley Exhibition Centre. The past few years have seen the show grow into the premier UK event for hi-tech music equipment and music software.

There will be advice centres and seminars, free to all visitors. Admission is £8 or £5 if you book in advance. More from Westminster Exhibitions on 0222 512128.

■ About a year ago, Dr T transferred UK distribution to Key Audio. Since then the Good Doctor has rationalised both his product range and his prices. The reductions are considerable and there is lots here to interest the Mac musician.

Music Mouse (£29.95) enables you to create music by, er, moving the mouse; *OvalTune* (£29.95) gives you control over graphics and sound and lets you create 'videos' of your performance; *M* (£79.95) was one of the very first interactive music composition programs; and *Jam Factory* (£79.95) is an 'improvisation and live performance processor'. For the kiddies there's *Adventures in Musicland* (£39.95), a collection of games for children of all ages (it says here), based on Lewis Carroll's *Alice in Wonderland*.

We'll be checking out some of these programs over the next few months. More from Key Audio on 0245 344001.

FM 17 on sale now, don't miss it!

HEAR THE *FM* CD – ESSENTIAL LISTENING FOR *ALL* MUSICIANS

21 PAGES OF IN-DEPTH REVIEWS

64 MINUTES OF GREAT SOUNDS

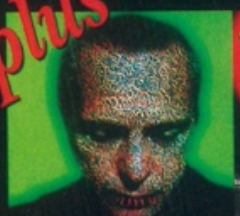
100s OF 2ND-HAND BARGAINS

FUTURE MUSIC

MAKING MUSIC WITH MODERN

£2,000 worth of prizes to be won

plus



◆ YAMAHA TG300 ON TEST

◆ P.G. ON CD-ROM

◆ BECOME A MASTER REMIXER – A-440 SHOW YOU HOW

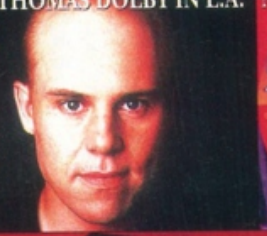
MASTER DELAY

GET MORE FROM YOUR EFFECTOR WITH OUR ON-DISC TUTORIAL

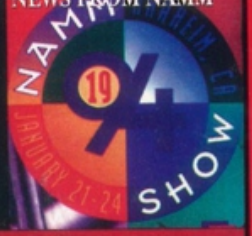
◆ *FM CD exclusive!* Hear the Deep Bass 9 and Summit K2K in action

◆ STATESIDE SPECIAL

THOMAS DOLBY IN L.A.



NEWS FROM NAMM



◆ SUMMIT K2K – THE ULTIMATE SOUNDCARD?

Make sure you reserve a copy of *FM* with your newsagent.

Name .....

Address .....

.....

Postcode ..... Telephone .....

Dear Newsagent, please reserve me a copy of *Future Music* every month, starting with issue 18, on sale Tuesday 22 March.

FM is published on the third Tuesday of the month and is available fully SOR from your local wholesaler.

MAG*SAVE

Calling for BACKUP

Essential tips on how to avoid data loss disasters – and how to repair the damage if the unthinkable happens.

There are two lessons that every computer user learns the hard way: first, that you can never back up too often. Second, that no matter how often you back up, fate will eventually find a way to give your precious files a one-way ticket to oblivion. That being so, here's a pessimist's guide to some of the things that can and will go wrong with your database, and what you can do about them.

Staying out of trouble

Frequent backups are the basic essential, but think before you save. Make sure you never overwrite your last backup with the current one, and remember to keep at least one copy a long way away from the original, preferably in another distant building, so that whatever disaster vapourises your computer doesn't take the replacement data with it. That much applies to anything that's kept on disk, but databases need additional care. Apart from doing regular backups, you should also periodically export a copy of every data file as tab-delimited text. If disaster strikes, this can be read by any other database application that you can lay your hands on, or even by any spreadsheet or word processor. If it comes to that, you could transfer the data to a PC, Amiga or whatever and it will still be usable in an emergency. But beware of using compression software on the text file – it will be unreadable until you can replace the software to expand it again.

The other advantage of keeping text copies of your data is that programs such as *Norton Utilities* and *MacTools* are usually able to recover deleted or damaged text files much more effectively than other types of file.

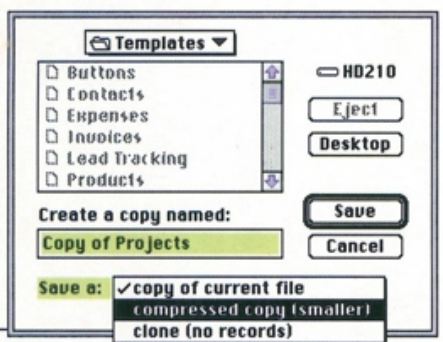
How frequently you should back up depends, of course, on how rapidly the data file is changing. Ideally you'd update the backup whenever any record is added, deleted or modified, but that's hardly practical if you have to quit the application every time. The only program that makes it easy to save two copies as you go along is *4th Dimension*, though you do have to buy an extra module called *4D Backup* to do it. Obviously, you'd also need to have two separate disks permanently on-line. With anything less than that, backups are still a vital safety net, but you'll need a different strategy to prevent the loss of more recent data.

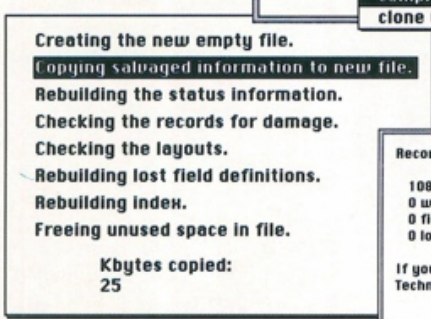
Work in progress

Calamity comes in many forms. Stupidity, system crashes, power cuts and assorted mysterious glitches can strike at any time. They may not necessarily harm what's already on the disk, but what about all the work you've done in the current session?

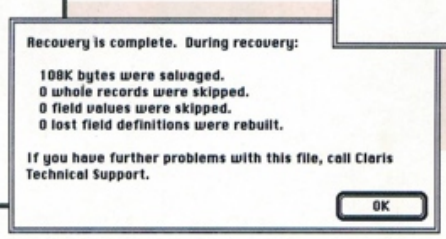
Most types of application, such as graphics programs or spreadsheets, usually keep document changes in memory until you specifically issue a **Save** command. Databases are different – most of them save every change as it's made, usually whenever you click **OK** or hit the **[enter]** key. *Helix Express* is an exception – this always waits for a **Save** command, though it does let you specify a time interval for regular auto-saves. The integrated packages don't even provide that – neither *ClarisWorks* nor Microsoft *Works* will save data until you tell them to and they don't offer auto-saves – you're on your

Stay out of trouble by using *FileMaker Pro's* **Save as** command. Periodically replacing each file by a compressed copy reduces the likelihood of crashes. Creating a clone, which is a database with no records, is useful if you need to make changes to an existing file.



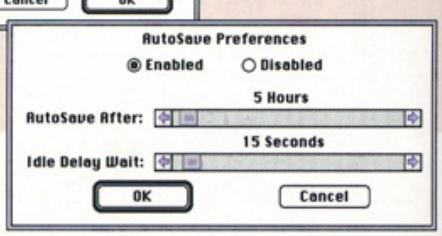


If disaster does strike, *FileMaker's* **Recover** command is the business. This is it in action, working its way through a damaged file to rebuild the structure and recover the data.



When it's finished, **Recover** tallies up the results. Usually, it will manage to restore everything to normal, but even if it can't, it will still rescue as many records as it can.

4D Tools is a utility for checking and fixing *4th Dimension* files. **Recover by tags** is a last resort option that will extract data from a badly damaged file.



Autosave lets you fine tune how frequently *Helix Express* will save changes and how much inactivity it will then need to decide that it's safe to save. Most other applications do all this instantly, but since *Helix's* saves tend to be slow, you don't really want it interrupting you.

own with these. Mind you, immediate saving is a mixed blessing – it's reassuring if you're being sensible, and a pain in the proverbial if you've just deleted a thousand records by mistake.

The best approach to protecting work in progress and insuring against such blunders is a log file. This saves the full details of every change, as it's made, to a separate file. In this way, if something does go wrong, you can always return the database to its earlier state. Only two applications provide logging facilities – *4D Backup*, which combines immediate saving with optional backup and logging, and *Helix Express*, which lets you create a log file to track changes in between manual or automatic saves. If a crash does occur, *Helix* will notify you next time you open the database and offer the choice of incorporating the logged changes or leaving things as they were.

So far, I've assumed that any work you're doing involves data, but be careful also when working with the database structure – changing layouts, field definitions and so on. This can be more risky than simple data entry, because any disaster may affect the whole file, not just one record. If you do need to alter the structure of an established database, do it on a copy. It doesn't even need to be a copy with data. For example, in *FileMaker* you can use **Save as** to create an empty clone file. Make any changes to this clone, then import the data from your original file. Use it for a while and only then, if all is well, delete the original.

Picking up the pieces

You might manage to avoid avoidable disasters. But then there's the other sort. If your Mac does go belly-up while you're working, chances are that any open database file will get damaged. Don't panic – you probably haven't lost much data, if any. It's just that you can't use it. Fortunately, the better applications provide various means of repairing the damage, which usually has to do with indexes and various internal pointers not being set correctly. *4D*, for example, comes with a utility called *4D Tools* to check, repair or, in the final resort, extract data from a frazzled file. *Helix Express* has a rather more basic one called *Helix Utility*, which can check and do simple repairs to collections (*Helix* data files). *FileMaker* too scores well in this respect, even though it gets a thumbs down for not providing any backup or logging options. When you try to open a damaged *FileMaker* database, it will tell you either that minor repairs are being done, which is quick and painless, or that you will need to recover the file. With large files, this can be a very long process, but it's safe and usually effective. All you have to do is choose the **Recover** command from the **File** menu and select the damaged file. But do make a backup first, because if the recovery gets interrupted, you'll be in really deep trouble. If the file is very large, and you have a recent backup, it will often be faster to use that and update it rather than go through the recovery process.

If you're using an application with no recovery facilities, such as an integrated program, or if the repair fails for some reason, you'll have no option but to restore from a backup. The same, of course, applies if your hard disk suffers a terminal illness. But before you recycle it as a doorstop, try *Disk First Aid*, *MacTools* or any other disk-fix programs you can find. Better still, try all of them – they work in mysterious ways and, often, one will succeed where another has failed. Remember that physical disk damage is actually pretty rare; the most common reason for a disk becoming unreadable is corruption to its catalogue or driver software. Provided you don't attempt to reformat it, most of your data should be intact.

A general precaution for avoiding data corruption is to run a clean System with plenty of memory and disk space to spare. Install the System and database on to a newly formatted disk, and avoid any but the basic Apple-issued Extensions and Control Panels. The cost of replacing a business database can easily be much higher than the cost of buying an extra Mac and using it to do nothing but run the database. Since all the main database applications allow multi-user access over a network, it's no real hardship to keep the data files on a separate machine.

Remember that disaster will strike eventually. So make regular backups – they're less trouble than sleepless nights. *Jack Weber*

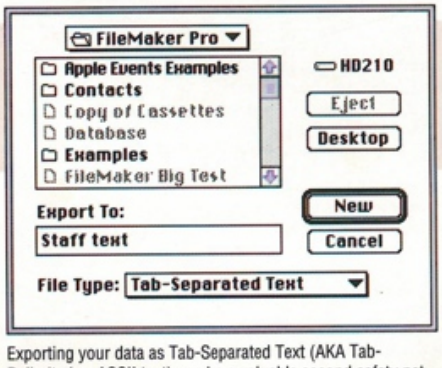
TEN WAYS TO LIMIT YOUR LOSSES

1 Make rolling backups so that you always keep the latest two or three before you begin re-using the backup disks.
2 Make a separate backup by exporting the data as a text file.
3 Avoid adding Extensions and Control Panels to your System folder – they may cause crashes.
4 Always create a log file if your software supports this (*4D* and *Helix Express* do).
5 If your database application provides a command or utility for checking file integrity (many do), run it periodically, especially if the data file is heavily used.
6 Use *FileMaker Pro's* Save as command to create a compressed copy every now and then; this eliminates wasted space and can reduce the likelihood of crashes.
7 Use *MacTools* or *Norton Utilities* to check for early signs of disk catalogue damage.
8 Make any structural or layout changes only on a copy of the data file.
9 Integrated programs are particularly vulnerable, so save your changes frequently.
10 If your hard disk bites the dust, don't under any circumstances reformat it until you've tried every recovery option – unless, of course, you have an up-to-date backup.

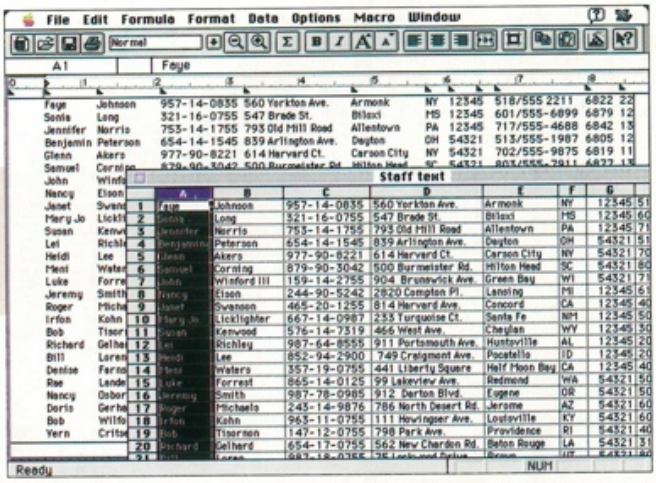
WHERE TO GET IT

4th Dimension	ACI	0625 536178	£934
ClarisWorks	Claris UK	081 756 0101	£229
FileMaker Pro	Frontline	0256 20534	£323
Helix Express	Helix	0642 343455	£318
MacTools	Central Point	081 848 1414	£116
Microsoft Works	Microsoft	0734 270001	£120
Norton Utilities	Principal	0706 831831	£128

In Custom mode, *Helix* lets you create a log file which records all changes to disk as you make them. When you next save, the main file is updated and the log file is cleared, ready to start again.



Exporting your data as Tab-Separated Text (AKA Tab-Delimited or ASCII text) can be a valuable second safety net.



Here the text file has been opened by *WordPerfect* (behind) and *Excel* (in front). In an emergency, any word processor or spreadsheet will let you carry on working with the data.

Free reader ads

Got some kit you want to flog? Well you've come to the right place...

FOR SALE

Macs

■ Mac Plus, 2.5Mb RAM, external 40Mb hard drive, floppy drive, keyboard, mouse, all leads. £280. Tel: M Islam, 021 449 3034 after 6pm.

■ Mac Plus with hard drive and Microsoft *Word*, light use only. Excellent condition £350 ono. Contact Belinda Nelson 0702 348878.

■ Mac Plus 4/30 £360. Also ImageWriter LQ, prints A3 size, offers. Tel: 0832 272804 after 6pm.

■ Mac SE 4/45 with TurboSE accelerator, internal and external floppy drives (not HD), System 7.0, carry case. ImageWriter II. Also Cambridge Z88, 160K RAM, MacLink software. All cables inc. second Z88-Mac. £500 ono the lot, or might split. Tel: Allan 0782 838288 (Stoke-on-Trent).

■ Mac SE/30 8/40, System7.1, tilt & swivel base, extras. Excellent condition, owner upgrading, £600 ono. Tel: Greg, 081 673 8377 (eves).

■ Mac Classic with 4Mb RAM, System 7, manuals, covers and box. Home use. £400. Also StyleWriter, £120. Tel: David, 0225 445383.

■ Mac Classic 4/80 boxed with manuals, System 7, excellent condition £500. Tel: Tim, 081 661 7065.

■ Performa 400 4/80 Performa 14-in monitor, StyleWriter printer, books. £750 ono. Tel: 0603 403024 (days), 0603 665450 (eves).

■ Mac LC 4/40, colour monitor, StyleWriter, *ClarisWorks*. Superb condition, boxed with manuals. £750. Tel: Tim, 081 544 0549.

■ Mac LC 4/40, 14-in colour monitor, System 7.01, all manuals £475 ono. Tel: Jim, 0343 842283 (eves).

■ Mac LC 6/40 12-in Apple colour monitor, maths co-pro, external stereo speakers, carry-case, System 7, microphone. Offers over £600. Tel: Julian, 0753 858264 (eves).

■ Mac LC 4/105. 12-in monitor, manuals, boxed. Home use only. £600. Call 0782 744439.

■ LCII 4/40 14-in high res monitor, as new, boxes, manuals, light home use only. Includes *ClarisWorks* with manual and games and utilities. £800 ono. Tel: Kevin, 0243 606590 eves.

■ Mac LCII 8/80 12 months old, set up to run small office. £875. Also StyleWriter £150. Tel: 0752 82823 (eves).

■ LCIII 4/80 14-in RGB monitor, System 7.1, boxed with manuals, 3 weeks old £900 ono. Tel: Matt 091 281 2257 (eves).

■ Mac LC 475 8/160, over £500 of software, manuals. 14-in hi res monitor £1,300. Tel: 0223 240014.

■ Mac IIsi 9/120, 19-in Radius TPD mono monitor and card, keyboard £1,100 ono. Contact Brian, 0992 561165.

■ Mac IIcx 8/80, external Qisk 40 Mb disk, Apple A4 monitor, LaserWriter IISC, extended keyboard, DTP software, many extras £2,000. Tel: Mike 0734 730379 (Wokingham).

Software

■ *Rise of the Dragon* £15, *Red Baron* £15, *Kings Quest V* £15 or all three for £40. Phone Mark on 0743 232242.

■ Adobe *Audition* (*Photoshop 2.5* and *Premiere* limited editions) opened, but unused. Disks, CD, manuals, registration card, £170 ono. Tel: Dawn, 071 836 5070 (days).

■ *Omnis 5*. Original disks and manuals, £95. Tel: 0905 357522 (work).

■ *Secret of Monkey Island* £25, *Pathways into Darkness* £25, SQIV £20, *Lemmings* £15, *Prince of Persia* £15, *A-Train* £15, *Robosport* £15. Tel: Max, 081 994 7055.

■ Adobe Type set, 30 typefaces, unopened, unused, £200. Tel: Richard, 337326 after 6pm.

■ *ClarisWorks* £40, *Norton Utilities* £30, *Quickdex* £10, *Stuffit Deluxe* £15. All original disks, manuals and packaging. Tel: Mike (0347) 810685 (York).

■ *ClarisWorks* unopened, £70. Tel: 0480 455629 after 7pm.

■ Microsoft *Works 3.0*, brand new, unopened, £75. Tel: Craig 061 344 0123 (day), 061 330 8100 (eve).

■ Microsoft *Works 3.0* with manuals, unopened. *WriteNow 3.0* with manuals, unopened. £70 Tel: 0270 661641.

■ *Strata Vision 2.6* and *Infini-D 2.0* for sale both boxed, manuals, £300 and £200 respectively. Tel: 0724 762130.

Miscellaneous

■ Radius Precision Colour 24X high performance Macintosh graphic card new, boxed, cost £1,250 plus VAT, bargain £850. Also MS *Works* unopened box £60 Tel: 0934 811300.

■ Apple 12-inch monitor RGB colour. Home use only. Excellent condition: £150. Apple ImageWriter printer £100. Contact Richard on 0742 668094 (Sheffield).

■ Dovefax fax and data modem for Mac. 9600 fax 2400baud data, Hayes compatible. Software and manual. Good condition, £85. Call Paul 0752 673814 (daytime).

■ Plotter, Roland DXY 1300 8 pen A3, £575. Tel: 0905 357522 (work).
n 2Mb SIMMs (LCII) £75. Tel: 031 557 5944 after 6pm.

■ PowerPrint, printer drivers and cable as new £75. WonderPrint, Greyscale for non-greyscale printers, new £30. SoftPC 2.51 £50. Supra 2400 modem PSU, no cable £30. Tel 0485 72253 eves only.

■ 4 X 250K SIMMs from IIcx upgrade. Offers: 0203 633348.

■ Motorola 68882 maths co-processor (FPU) 16MHz. £30. Tel: M Islam 021 449 3034 after 6pm.

■ 12-in monochrome monitor £30, Gravis joystick with software £20. All in original packaging. Tel: Mike, 0347 810685 (York).

■ Performer full colour scans exclusive and original. 600dpi TIFF format. Write to: PB 41 B-2020, Antwerpen, Belgium. Strictly non-commercial!

■ 40Mb internal hard disk from Mac LC only one year old, £50. Tel: 0371 874196.

■ FPU for Mac LC/LCII plugs into PDS slot. £30. Tel: 041 332 1360.

■ Canon CLC10 colour scanner, colour printer, colour photocopier with Mac interface. In new condition. £2,700 ono. Tel: 0273 671886.

■ StyleWriter I&II ink cartridges refill £6. Call Dan at 0493 330441.

■ PSI Comstation One fax/modem. Six months old, excellent condition. Lots of PD software for connection to BBS and Internet. £100. Tel: Robert, 081 941 7746.

■ DeskWriter C colour inkjet. Requires PSU hence £120 ono (PSU £55 + VAT from HP). Also Microsoft *Word 5.0* unregistered. £100. Tel: Darren, 091 477 1156.

WANTED

■ I need a second-hand printer – either a StyleWriter I or II. If you can help a desperate student please phone Sowel on 0227 459268.

■ Quadra 610CD 4/160, CPU only! In a reasonable condition. Not too expensive as it's for a student. Call before 3pm weekdays only on 031 441 4414.

■ Latest versions of *QuarkXPress*, *Page-*

MACFORMAT READER ADVERTISEMENT FORM

Name .....
(Not for publication)

Address .....

.....

..... Post code .....

Telephone .....

Date .....

Category

For Sale ☐ Wanted ☐
Swap Shop ☐ Contacts ☐
Help Wanted ☐ Help Offered ☐
Fanzines ☐

User Groups New entry ☐
Updated entry ☐

For your free advert, please use this coupon or a photocopy. Only the words in the squares will be printed – use one square for each word and remember to include your contact phone number!

All ads are accepted in good faith. MACFORMAT cannot guarantee insertion in a particular issue, and reserves the right to refuse or edit any ad. We can accept no responsibilty for typographical errors or any losses arising from the use of this service.

Private advertisers only. Trade ads will not be accepted, including anyone advertising the sale of PD software.

MACFORMAT is not a forum for selling pirate software. If you are selling software, you must include a signed statement that you are selling the original issue disks and including all original manuals and documentation, and that you have not retained any copies of the software.

I have read and understood the conditions for the inclusion of my free reader ad.

Signed .....

Send your form to: **MACFORMAT reader ads, 30 Monmouth Street, Bath BA1 2BW.**

USER GROUPS

Need hands-on help with a Mac problem? Want to swap shareware or freeware, or just meet other Mac enthusiasts? Try a user group near you...

■ Berkshire Mac User Group meets monthly (on the second Friday) in the Reading/Newbury/Basingstoke area. Bias towards design/DTP and general interest in solving Mac problems. Ring 0734 813669. (MF 16)

■ Hampton Court (Riverside) Users Group has a new phone number: 081 224 1187. Small newish group welcomes new enthusiastic members. (MF 16)

■ London Macintosh User Group. Facilities include: telephone support for full members, shareware at reduced prices, monthly mag, monthly meetings in London presented by leading hardware and software manufacturers. Full details: 43 Villiers St, London WC2N 6NE. Tel: 071 930 3757. (MF 16)

■ Informal group of users with a regular newsletter via ICR computing service. Workshops for training, software and hardware support in a PC-dominated environment. Contact Raymond Henry, Haddow Labs, ICR, Sutton SM2 5NG. (MF 16)

■ Mac user group. Send large SAE for free newsletter. All levels. Non commercial. Ref MF, 9 Burrill Drive, Wiggington, York YO3 3ST. (MF 16)

■ Macintosh Association of Users in EEC, 4 Chiou, Athens, 15231, Greece. Tel 6725485. Meetings Wednesdays 8–10pm, Saturdays and Sundays 12–2pm. We are a non-profit organisation. Please help us by donating books (misprinted, used; by surface mail), disks, programs, CD-ROMs etc for our library and program for the handicapped. (MF 16)

■ Mactivity International – the biggest user group in Europe. Divisions in Scandinavia, Estonia, Germany, Benelux. The only number we have at the moment is Belgium Tel. 32 80 64 77 13. (MF 16)

■ National postal user group. Monthly newsletter on disk. Includes competitions, special offers, reviews, cover disk, etc. Send a self addressed envelope for info to: Mac Shareware User Group (MSUG), 21 Milldown Avenue, Goring-on-Thames, Reading RG8 0AS. (MF 16)

■ Stavanger Macintosh User Group was established in 1986 and has over 50 members. It normally has eight meetings a year on various topics. Contact Jan Frick, Chairman, Rogaland University Centre, PO Box 2557, Vllandhaug, N-4004 Stavanger, Norway. (MF 16)

■ The Computer Textile Design Group. We are trying to build up a panel of advisors who can help inexperienced computer users with their problems. Contact Maggie Dunn, Wynnstay Cottage, Lamin Gap Lane, The Fosse, Cotgrave, Notts NG12 3HG, enclosing an SAE for a membership form. (MF 16)

■ The Southwest Macintosh Users Association. Membership is £17 pa but the first 100 applications will be given founder member status. Contact the Club Secretary, SMUA, Firs, Rackstile, Wadeford, Chard, Somerset TA20 3AP. (MF 16)

Your user group will be listed here free of charge for six issues, then deleted to help weed out defunct groups. The number at the end of each entry is the last issue in which that entry will be included. If you want your group's entry renewed (or corrected), just send in the coupon a couple of issues in advance. If you run a group not listed here, send us your details!

Note: this list is provided as a service for amateur, non-profit-making user groups. MACFORMAT does not endorse or recommend any particular group and cannot be held responsible for any losses or problems you might suffer.

Maker and Microsoft *Word* for Mac. Tel: 0722 337762 before 6pm.

■ Divinity student needs *Trivial Pursuit* (type of) program where I can input my own questions and answers. Robert Skynner, Fyfe House, Hillhead Halls, Don Street, Aberdeen AB9 2WU.

■ Classic II 4/40 or LCII 4/40 wanted for Northern Ireland. Will pay £400 cash for good example. Tel: 0405 266058.

■ PowerBook 100. Will pay cash on viewing. Can you help? Tel: Matt, 071 437 4884.

■ Mac for student. Must have hard drive. Cheap but reliable please. Will collect/pay postage. Tel: 071 229 7633.

■ RAM wanted for LC. Two 2MB or 4Mb. Tel: Stuart, 0666 880434.

■ Broken SE, FD HD, Classic or Classic II. Anything with broken hard disk or monitor considered. Tel: Hugh, 041 875028.

SWAP SHOP

■ *SimLife* (boxed with manuals) to swap for *Civilization*, *Lemmings*, a flight sim or others. Tel: George, 0223 464673.

■ Yet another Mac user who wishes to swap shareware, freeware etc. Interested? Please reply to Edward Shryane, Belclare, Tuam, Co Galway, Ireland.

■ Fujitsu 330Mb internal SCSI unformatted , will swap for either *Painter 2.0* or A5 graphics tablet although anything will be considered. Tel: Paul, 0582 411327 anytime.

CONTACTS

■ A Mac addict would like to start a BBS for other Mac users. I would like to talk to anybody who is interested in helping. I would also like to contact other Mac users in the South West (south of Bristol). Please write to MAC ADDICT, Lane End, Oak Tree Lane, Tavistock, Devon PL19 9DA.

■ Mac owners wanted to swap shareware and PD by post. Fast reply guaranteed. Write to: Davor Lovric, Velebitska 67, 58000 Split, Croatia.

■ I use an LC and software like *XPress*, *Illustrator* and *Photoshop* and I try to create multimedia documents. I am also happy to exchange all exotic shareware and freeware. Write to: TABONE, Jean-Pierre, Poste Restante, 31000 Toulouse RP, France.

■ Please send shareware games/utilities for insertion in Mac games fanzine. Also distribute them for you. Danny, Langarth, Whitecross, Wadebridge, Cornwall. Tel: 0208 813008.

Buying advice

Whether you're buying by mail or in person, here are some sensible precautions to bear in mind. Note that everything here applies to buying from a business; most of it does *not* apply to buying from a private seller in MACFORMAT's reader ads pages.

Always be absolutely clear about what is included in the price (postage and packing? Any necessary cables etc? VAT? By law, an advert must say *explicitly* if VAT is not included; if it doesn't, VAT *is* included). If you're buying in person, check that everything is there and it all works properly before you leave the shop. If you're buying by mail, ring the supplier first to confirm the price and availability, and ask what your options will be if there should be any problem. Always keep all receipts and make records of all correspondence, whether it's by mail or by phone.

Buying by mail

When your order arrives, check everything carefully. If anything is missing, contact the supplier immediately. If something doesn't work, make obvious checks (the fuse, etc), but don't try to repair it. If there is anything you're not happy with, don't use the product – if you do, you could be deemed to have accepted it.

If there's a problem

Whether you bought it by mail or in a shop, the law says a product must be:

1. 'of merchantable quality' (that is, broadly speaking, it must work),
2. 'as described' (in the advert or in person – and this one criterion also applies when you're buying from a private seller, not a business), and
3. fit for the purpose for which it was sold or for the purpose you specified when you ordered it.

If it fails to meet any or all of these criteria, then you are entitled to return the goods for a refund, receive compensation for all or part of the value, or get a replacement or free repair, depending on the seriousness of the defect. These are the 'statutory rights' that adverts always say are 'not affected' by any extra guarantees. The supplier cannot change or deny these rights.

If you're not happy about something, always contact the supplier first and politely explain your problem. Most problems are sorted out at this stage with no fuss. If not, put your complaint in writing and send it to the manager or owner – ask for the correct name and job title. Give the supplier a reasonable time to reply – say ten days or so.

If the problem is still not resolved, you may need to take some sort of legal action to enforce your rights. This need not cost you a lot. Seek advice from a solicitor (ask about the free advice scheme) or from one of the following (check in your local phone book): Citizen's Advice Bureau, Trading Standards Office (listed under your local council), Office of Fair Trading, County Court (ask about the 'small claims procedure').

How to protect yourself

If you are buying goods of more than £100 in total value, always try to use a credit card. That way, in the unlikely event of anything going wrong, you will be legally entitled to claim against the credit card company as well as the seller, even if the seller has gone bust. You may also get extra insurance – check with your credit card company.

If you order from an advertisement in MACFORMAT and do pay by cheque or postal order, in strictly limited circumstances after a company has gone into liquidation, MACFORMAT may be able to help you, up to a maximum of £100 or 50% of the purchase price, whichever is the lower, per order.

If you are in this position, please write to Catherine Wetton, Reader Services, Future Publishing, 30 Monmouth Street, Bath BA1 2BW, within 30 days of the date your order was placed, and enclose full details including proof of purchase.

mac FORMAT CLASSIFIED

0225 442244
SIMON RICHARDSON

ADVERTISING RATES
£20 + VAT per single column centimetre (4 column page). Discounts offered on series bookings.
Spot Colour 10%

Classified
MAC FORMAT,
Beauford Court,
30 Monmouth Street,
Bath, Avon BA1 2BN

We accept cheques for payment.

Dinach Shareware

Send for a copy of our massive 30 page Catalogue! It's packed with loads of the latest Shareware & PD software, including Games, Utilities, Fonts, Control Panels and System Extensions.

Discs are only £3.50 each (inc. P&P).

Special Offers :
Any 3 discs £10.
Any 5 discs £15.

Dinach Shareware,
PO Box 1076,
Glasgow, G3 6LD.

Send a SSAE for the full Catalogue.

IMPROVE YOUR PERFORMANCE
PROSPECTS, ABILITY AND CREATIVITY

TRAINING
XPRESS
ILLUSTRATOR
PHOTOSHOP

COMPUTER TYPOGRAPHY
ELECTRONIC GRAPHIC DESIGN
DIGITAL PRINTING METHODS
IN THE NORTH WEST
ALL LEVELS - REGULAR DATES
ON-SITE OR AT OUR CENTRE
CALL PHILIP ON (0704) 544535
AND START WORKING TO YOUR FULL POTENTIAL
SOUTHPORT COLLEGE - PROGRESS TO SUCCESS

Not enough resources? Share it!

PortShare™ Pro/Lite (£145/£70)
- share any serial port with any Mac on your network
- access shared devices via virtual ports
- redefine modem and printer ports

LineShare™ (£90)
- share a line between fax, data and voice comms
- run AppleTalk Remote, fax receiver and terminal emulators at the same time.

ScanShare™ (£90)
- share a scanner with any Mac on your network
- protect the scanner with a password

PortConnector™ (£70)
- access CTB tools from older comms software
- use AppleTalk Remote Access via X25, TCP/IP or ISDN

Infomac CD-rom III is here! (£32); the latest CD of software from the world's largest online Mac archive.

Off-the-shelf packages not suitable?
- consultancy
- custom-written applications
- expertise in serial, AppleTalk and TCP/IP comms

Communications *solutions* from
Prices do not include VAT
Mastercard/Visa accepted

Network Analysis Ltd 0203 419996
sales@network-analysis-ltd. co. uk 0203 690690 (fax)

We can transfer your data between Amiga, CPC, PCW, BBC, PC and Macintosh formats.
3"/3.5"/5.25" disks. Text scanning.
Details (SAE please)
MAPEJ (MF)
Meadow View, Quinta Crescent,
Weston Rhyn, Oswestry,
Shropshire SY10 7RN
Tel: 0691 778659 Fax: 0691 777638

PRINTING FROM MAC DISKS

HAVE YOUR STATIONERY, BROCHURES, POSTERS, POSTCARDS OR LEAFLETS PRINTED ANY SIZE ANY COLOURS.
PHONE SPLASH PRINTING FOR INSTANT QUOTES AND THE BEST PRICES TODAY

081 906 4847

Shale Systems

Macintosh Repairs

MAC REPAIRS &
SECOND USER MACS

- APPLE™ CERTIFIED TECHNICIANS
- ONE- DAY SERVICE TURNAROUND*
- HARD DISK RECOVERY AND REPAIR
- NETWORKS-MEMORY-UPGRADES
- EXPERT ADVICE AND PRICES BY PHONE

Tel: 0926 613734

Style Writer I & II ink cartridge refills

£6 same day service

Send Empty Cartridge & £6 to: **DGAY**,
63 King Street, Great Yarmouth
NR30 2PP Tel: 0493 330441

BUY & SELL

New & Used

We Buy and Sell
full range of Apple Macintosh from
SE to Quadra
Memory, Monitors, Printers
Fast Repair, Upgrade&Installations
ALL Guaranteed

Hi-Tec Computers

TEL: 081 471 1984 FAX: 081 470 2551

SEXY Sound Clips

ITS HERE!

The disk you've all been waiting for...

Slip this disk into your drive and listen to your Mac seduce you!

30 Top Quality Sexy Sound Clips exclusively recorded by an *EROTIC MODEL* just waiting to be played!

No special software needed - listen straight from the Finder or use a utility like Sound Master or Kaboom and listen to your day to day mactivities sound a little sexier!

To order your 1.44MB Disk packed with sounds just send £12.95 Cheque/P.O (inc. P&P) payable to Mixline to:
MIXLINE, FREEPOST, HERTFORD SG13 7YD.

ADULTS ONLY. COMING SOON - SOUND CLIPS FOR THE GIRLS...PLEASE ENQUIRE

Buy this now!

Over 200 items! All on one disk £7.50 available?

GIZMOS

icon art for your Mac

Gizmos are original designs created specifically as Mac icons. Easily copied on to any folder on your Mac (we show you how) you get over 200 on each disk! Simple and fun to use, just send a cheque for £7.50, payable to **Gizmos**, along with your name and address to: **Gizmos, 423 Manhattan, Fairfield Road, London E3 2UQ** and we'll send you your Gizmos disk by return (p&p included).

Shareware & PD for the Mac&Newton

No set Disks - you choose.
£4 for HD and £2.50 for DS.
For free catalogue write to:
Stormont Software,
61 Lochinver Drive,
Belfast, BT5 7AJ
or call:
0232 487923

BUYING OR SELLING?

Talk to us first.

The full range of Mac Quadra, IIci, IIsi, LCII...etc. Printers, Memory, Parts, Monitors

FAST REPAIR SERVICE.
PART EXCHANGE WELCOME

HARDWARE SOLUTIONS

344 Kilburn High Road
London NW6

071 624 2446

FAX: 071 624 8272

CRIKEY!
I'm finding it hard to make ends meet since **Quodport** started selling Security Kits for the Macintosh for only **£29.99** plus £1 P&P.

To order one call:
(061) 274 3797

SHAREWARE

Finder enhancements, Menu utilities, Productivity enhancers, Disk utilities, Virus killers, Applications, Graphics utilities,Fonts, Disk accessories

220 Shareware True Type **FONTS** £15 FULLY INCLUSIVE

8 Disks of Shareware True Type fonts. £2 each inc P & P, or all 8 for £15

Send SAE for sample sheets & lists. Cheques to:
R Bolam, 29 Broom Road, Rotherham S60 2SW

PC's & APPLE MACINTOSH

North London's Leading Specialists in Multimedia Computers. Dealers for IBM, Compaq, Novell, Macintosh, Hewlett Packard, Canon.
For the latest PCs Macs and peripherals at competitive, flexible rates call

INTERLINK

Computer Up-Grades, Software, Networking and Maintenance
Free Consultancy on Your System Requirements
Call Interlink on 081 880 3833

RECRUITMENT

Mac CD-ROM software at Low Low prices!

CD-ROM

Call for our FREE Catalogue!

Education
CountDown (maths fun) £25
Learn to Speak French £65
How Computers Work £55

Entertainment
A Hard Day's Night £25
Adv of Seymore Butts (Adult) £59
Arthurs Teacher Troubles £29
Cab rides to hell £75
Digital Dancing (Adult) £59
Iron Helix £85
It's a Bird's Life (kids) £39
Journeyman Project £69
Putt Putt Joins the Parade £35
Virtual Valerie (Adult) £59
Sherlock Holmes £39
Spaceship Warlock £69
Take Five (stress buster) £39
Victor Vector: Vampire £45

Reference
Amazing Universe £65
Dinosaurs £49
Groliers 91 Encyclopedia £69
Groliers 92 Encyclopedia £199
LIFEmap - Animals £25
LIFEmap - Animals/Backbones £25
LIFEmap - Organic Diversity £25
World Factbook 1993 £25

Shareware
BMUG £49
CD FUN House £39
Class Room £39
Game Room £39
GEM CD £75
Kids Room £39

FREE delivery on orders over £25, please add VAT to all prices. We Accept VISA/ACCESS/SWITCH.

CD-Xpress 2 Beal Road, Ilford, Essex, IG1 4QF 081-518 4151

CD-ROM DIRECT

Over 350 **Mac** titles! FREEPHONE now for latest Catalogue. New titles arriving daily!

Journeyman Project £29.00
The temporal security zone is your responsibility, (watch out for the rips!) Incredible virtual world interface.

Virtual Valerie Still on top! £55.00

Digital Dancing (dance the erotic) £29.00

Hellcab To hell and back in a yellow cab (If you're lucky!) £59.00

Myst The alltime great to date, surreal/st science fantasy adventure gives pause for thought £29.00

FWB CD-ROM Toolkit Supercharges £49.00
CD-Roms 1000%+. Excellent product, excellent price!

Spaceship Warlock £59.00

The Tortoise and the Hare £29.00
Brilliant and witty teach/learn reading tool

Darkseed $35.00 7th Guest $57.00

Lowest price! VISA/ACCESS accepted. Prices exclude VAT and Next Day Delivery. E&OE.

CD DIRECT , 15 Ensign Business Park, Ensign Way, Hamble, Hampshire SO3 5RF
Tel: 0703 455115 Fax: 0703 453231

0800 317864

SLIDE IMAGING - £4.95

For the complete imaging service from MAC & PC
Pict, Postscript, PCX, Targa etc.
from Persuasion, Powerpoint, Freehand, Corel, Harvard, Freelance and many more.

Processing, Rostrum, Ohps, Reprographics in-house

Call TC Visual - 0734 834310/834672

CAMBRIDGE · BIRMINGHAM · LONDON · MIDDLESBROUGH

OPPORTUNITIES FOR MACINTOSH PEOPLE

Mediatec are one of the UK's leading specialist Macintosh recruitment agencies. We have clients throughout the UK looking for people with skills at all levels in Sales; Marketing; Technical Support; System Management; Training; Engineering; Programming; Design and Typesetting. If you have skills and/or experience that you feel would be of interest to our clients, and you'd like to know what opportunities they can offer you, send your CV today, quoting reference MF 4/94, to Sonia Parchment at:-

MEDIATEC
The Bond, 180-182 Fazeley Street, Birmingham B5 5SE.
Tel: 021-766 5292. Fax: 021-766 5303

MEDIATEC
The Recruitment Resource

PUTTING THE RIGHT PEOPLE..IN THE RIGHT PLACE

MACINTOSH SHAREWARE & PD SOFTWARE

SYSTEM 7 UTILITIES £9.95
Over 4 Megabytes of essential tools and enhancements for System 7 users.

TT FONT PACK £16.95
A huge collection of the best True Type Fonts for System 7 users. Includes over 100 True Type Fonts.

EPS ART PACK £16.95
Nearly 10 Megabytes of the best EPS logos and Clip Art. Includes Business, Sports, Animals etc.

To order the Disk Packs displayed, send a cheque or PO (payable to "TomA Direct").

Latest & Greatest
Fonts, Games, Graphics, Art, Education, Utilities.

£2.50 DD disks, £3.50 HD Disks

For a **FREE CATALOGUE** leave your **NAME & ADDRESS** on our **Hotline (0941) 107761** (24hrs/7 Days) (Not an answerphone)

TomA Direct, 16 Connaught Street, Marble Arch, London W2 2AF

MacMedia

DTP & COLOUR BUREAU

TYPESETTING
PAGE MAKE-UP
UNIOTRONIC OUTPUT
FILM & BROMIDE
COLOUR & MONO SCANS
COLOUR PROOFING
COLOUR SEPARATIONS
MAC/IBM DISK PROCESSING & CONVERSION
FONT SUPPLIER
MODEM LINK

Mac Disk to 4-Colour Sep. Service

109 BLACKFRIARS ROAD LONDON SE1 8HW 071-401 8579/80

Bar Code Generation

MacBARCODA

With a colour option that works

All the vital features for safe, high quality bar code production. All the popular bar code types. Compatible with all major page-makeup and graphics software. The highest precision barcoding package available for the Mac.

For Sheet-fed Labels

Version 2.0 of the easy-to-use, Postscript label printing package. Any label size & sheet layout with bar codes, text, graphics, sequential numbering and mail merge.

Label Designer

For Reel-fed Labels

macthermal

The easiest solution for printing short-run multi-variation labels on reels with powerful text, graphics, and bar code facilities. Compatible with the range of Zebra reel-fed thermal printers.

Ask about our range of fixed and portable Bar Code Readers

Contact the experts-

Computalabel

Station Road, Stoney Stanton, Leicester LE9 4LJ UK
Tel 0455-274999 Fax 0455-274900

MEMORY EXPANSION

MEMORY

Low Profile Simms

1Mb - 80ns	Quadra 700/900/950, IIci, Performa £31-00
4Mb - 80ns	Standard SIMM £109-00
4Mb - 70ns	Centris 610/650, LCIII £112-00
4Mb - 60ns	Quadra 800 ..... £119-00
8Mb - 60ns	Quadra 800 ..... £249-00
8Mb - 70ns	Centris 610/650, LCIII £235-00
16Mb - 70ns	Centris 610/650, LCIII £545-00
16Mb - 60ns	Quadra 800 ..... £625-00
1Mb - FX/NTX SIMM	£35-00
4Mb - FX SIMM	£135-00

Power Book and DUO

Duo 210/230 - 4Mb module..£179-00
Duo 210/230 - 8Mb module..£289-00
160,180 - 10Mb module.....£425-00
165 colour - 6Mb module.....£289-00
180 colour - 10Mb module.....£469-00

Video RAM

512Kb LC, Duo, Vi, Vx £35-00
Quadra/Centris 512Kb £40-00

Prices exclude VAT and delivery

KINGSWAY UK LTD
18 Foxfield Close, Northwood, Middlesex HA6 3NU
Phone: 0923 836473
Fax: 0923 836474

MEMORY

PD SOFTWARE & SHAREWARE

We've been distributing shareware for the Mac since 1988 and we have 1,000's of satisfied customers.

SPECIAL OFFER PACKS

50 FONTS £24.99
50 fonts from our PD & Shareware collection in Adobe Type 1 format for ATM or in TrueType format for System 7.

BEST CLIP ART £22.49
5 Disks of clip art.
PACK #1 - EPS FORMAT includes office & household, tools, computers etc.
PACK #2 - MAC PAINT FORMAT includes household items, sports, people, cartoons etc.

SYSTEM 7 ENHANCEMENTS £17.49
4 disks of utilities & add ons to enhance your use of the Mac with System 7.

FREE CATALOGUE
Please write or phone for a copy stating MACINTOSH.

Pay by cheque/PO or Credit Card
Make cheques to KINGSWAY

KINGSWAY COMPUTERS
MAC DEPT, 72 GLENCOE RD, SHEFFIELD S2 2SR
TEL (0742) 750623

MacPow!

Shareware for the Macintosh

10,000 titles

Disks available from £2.50. inc P&P.

Special Offers this Month
150 TrueType Font Pack £19.99
30 Games *(your choice)* £9.99

Free Catalogue on Request

96. John Street . Brierley Hill
West Midlands . DY5 1HF
Tel/Fax. (0384) 481728 - before 9.00pm

MAC REPAIRS

- 2, 4 & 8 Hour on-site repair service
- While-u-wait in-house repairs
- Collection and delivery service
- Data recovery *free estimates*
- Component level repairs
- Memory & hard disk upgrades
- Secondhand hardware *with warranty*
- **Established over 8 years**

1 Parkgate House
Broomhill Rd
London
SW18 4JQ
Tel: 081-871 5009/4187
Fax: 081-871 4188

Honeylight COMPUTERS LTD

MAC CD's - phone for free catalogue - prices include vat !!!

Swiss Family Robinson ..£29.00	Arthur'sTeacher Troubles...£35.00	Virtual Valerie (XXX) £59.00	Journeyman Project.....£49.00	Traci, I Love You (XXX)£29.00
Seymore Butts (XXX).....£49.00	Secrets (XXX) £29.00	Shakespeare £29.00	Dinosource.....£49.00	It's All Relative.....£49.00
Vital Signs £49.00	Always Arthur.....£39.00	Legend of Oz.....£49.00	Red Shift £60.00	Distant Suns v2 .....£79.95
Scissors Stones.....£49.00	Spacetime £75.00	Money Money Money.....£29.00	Wild Places £24.00	New Kid on the Block...£35.00
Just Grandma & Me £35.00	Deception £39.00	Other Side of Chelsea.....£39.00	Dinosaur Safari £39.00	Forever Growing Garden£44.00
Desert Storm £29.00	Photostock Image £99.00	Tortoise and The Hare £35.00	Supertoons.....£29.00	Rock Rap 'n Roll £49.00
Hawaii Mystery Tiki £39.00	Animals of San Diego Zoo. £24.00	Penthouse Interactive (XXX).£85.00	Iron Helix.....£39.99	Hell Cab £59.00
Spaceship Warlock.....£59.00	Bingi Burra Stone.....£29.00	Hidden Obsessions (XXX)£35.00	Sherlock Holmes 3.....£49.00	Magic Death £44.00
New Family Bible.....£34.00	Myst.....£35.00	Carmen World Deluxe £49.00	Putt Putt £35.00	Putt Putt's Fun Pack £30.00

EMERALD CREATIVE TECHNOLOGY
RAPID HOUSE, 54 WANDLE BANK, LONDON SW19 1DW

All prices **include** VAT. P&P = £2.50/order.
Most CD's also work on IBM PC's.
Please phone for advice, and for full free catalogue.
Visa/MasterCard/Delta/cheques accepted.

STOP Don't throw that toner cartridge away... Recharge it and halve your toner costs!

Get the facts on our well-proven service - 'phone or write (FREEPOST) for an information pack.
Your own cartridge is recharged,with carriage paid both ways.
We also sell new toners, DeskJets, disks, laser labels and specialist laser stationery.

SUPERCHARGE
FREEPOST Unit 3B 25 Gwydir Street CAMBRIDGE CB1 1BR
Telephone: (0223) 350136 Fax: (0223) 301341

The Southwest Macintosh Users Association

For the Mac Mad !!

The Firs
Rackstile
Wadeford, Chard
Somerset, TA20 3AP

PAY NO MONEY NOW!!

Attention All who are Mac Mad your chance to join the nation-wide user group and experience the lighter side of MACing-it !!

• Freebie utilities • Seminars
• News • Views and Help.

Just tell us your name, address and Macintosh owned. and we will send you a membership form.

ADVERTISERS INDEX

APPLE CENTRE WARRINGTON 26
APPLE COMPUTER UK 16, 17
BLENHEIM 90, 91
COMPUTER WAREHOUSE.....10, 11
DABS PRESS 39
HARWOODS 46, 47
HOLDENS COMPUTER SERVICES ...26
MAC GOLD 52
MAC WAREHOUSE 19
MACLINE.....82, 83
MYGATE.....74
PERFORMANCE DIRECT 52
PISA SYSTEMS 12
PREMIUM PD 93
SMI GROUP LTD.....87
SOFTLINE.....IFC, 3
TASHA.....6
VERNON COMPUTER RENTALS 52
WAVE .....IBC
SCAN GRAPHIC .....OBC

MACFORMAT

Editor .....Alex Summersby
Contributing Editor .....Andy Storer
Production Editor .....Sally Taylor
Production Assistant .....Yolanda Hughes
Consultant Editor .....Ian Wrigley

Art Editor .....Mark Nottley
Deputy Art Editor .....Kimberley Fenton

Contributors Nick Aspell, Simon Cox, Paul Deery, Gordon Druce, Rod Lawton, Martyn Lester, John Morrish, Greg Morrison, Tim Norris, Tim Smith, Ian Waugh, Jack Weber

Photography.....Stuart Baynes Photography
'System' illustration .....ReidSmith Studio, Bath

Production Technicians.....Simon Chittenden, Mark Gover, Brian Hook, Jon Moore, Chris Stocker, Jason Titley, Simon Windsor

Future Publishing Mac Systems support
Avi Abadi, Christian Goddard, Nick Harvey

Production Coordinator .....Claire Fullick
('bye, Claire – hope motherhood agrees with you!)

Advertising Manager .....Mike Hawkins
Advertising Sales Execs .....Warren Burgess, Simon Richardson

Publisher .....Stuart Anderton
Managing Director .....Greg Ingham
Circulation Director .....Sue Hartley
Chief Executive .....Chris Anderson

Printed in the UK by TPL (UK) Ltd

A word on prices...
We try to ensure that all prices quoted in editorial pages in MACFORMAT are accurate at the time of going to press, and they are all inclusive of UK Value Added Tax at 17.5%. This may not necessarily be the case with prices appearing in advertisements, so we recommend that you always contact advertisers before ordering to confirm prices and availability.

Copyright © 1994 Future Publishing Ltd. All rights reserved. No part of this publication may be reproduced without written permission from the publisher. MACFORMAT is an independent journal, not affiliated with Apple Computer, Inc. The Apple logo is a registered trademark of Apple Computer, Inc. 'Apple', 'Macintosh', 'Macintosh Performa', 'Mac' and the Mac logo are trademarks of Apple Computer Inc. All trademarks and copyrights in this issue are recognised, and have been acknowledged where possible. If we have failed to credit your copyright, please contact us – we will be happy to correct any oversight.
MACFORMAT welcomes contributions for publication but we regret that we cannot return any submissions. Any correspondence sent to our editorial address will be considered for publication unless you specifically state otherwise, and we reserve the right to edit published letters for reasons of space, clarity or legality. We regret that we cannot reply to letters personally, even if you include an SAE.
We regret that MACFORMAT cannot accept responsibility for any errors or omissions or for any losses arising therefrom, but it is our policy to correct any errors of fact whenever practicable.

Without prejudice, it's... the Tiny Zone!
Hello and welcome again to the Tiny Zone, the section of MACFORMAT that may be fine print but isn't full of legalese. What's the point, eh? I mean, it's all very well and good saying "We recognise all trademarks", blah blah blah, but at the end of the day if we've used the name 'Performa' or something we've used it, haven't we? It would just get ridiculous if we really had to acknowledge everything – the magazine's name would become something like MACBYFORMAT™, for a start, wouldn't it. And what's more, you simply wouldn't believe what has been trademarked. 'Hell', for instance. No word of a lie: 'Hell' is a registered trademark of Linotype-Hell, the high-end imagesetting people. Look, ring them up and ask them if you don't believe me. Why on Earth™ would I lie to you? But then, they must have different laws Overseas. In the UK, there are all sorts of rules about what you *can't* trademark – proper names (there's a word processor for the Commodore Amiga called *Wordworth*, for instance, because they weren't allowed to trademark *Wordsworth*); common phrases (the software PostScript interpreter we look at this issue is *Freedom of Press*, because they weren't allowed to trademark *Freedom of THE Press*); ordinary words, unless spelled oddly (like Terry's *Waifa* biscuits). But what do they have in America? "The most intelligent grammar checker you can buy.™" "The Macintosh Printing Solution.™" "*Simply* powerful software.™" "The art & science of color.™" "The best thing next to your Mac.™" You get the idea. Marvel Comics and DC are allowed to *share* the trademark 'super hero', despite the fact that the term has been in common use as a generic since World War II and *The Super Heroes* was a title published by someone else in the '60s. Smacks to me of restraint of trade, or cartel trading, or whatever it was that British Steel got done for last month. Er, allegedly. Without prejudice to any matters pending appeal, sub judice, in flagrante delicto or ex cathedra. So here's a Tiny Zone competition: a free subscription to the first reader who can name who those five American trademarks belong to. American readers have an unfair advantage, so they also have to tell us who published *The Super Heroes* in the '60s. Entries to The Tiny Zone Competition Nobody Finds, at the usual address. All rights reversed.

Next month

You know that your Mac is the business for a vast range of applications, from graphics to spreadsheets. You also know that buying applications for the Mac can be... well, sometimes a bit of a strain on the wallet. So how much do you think you'd have to pay for a *complete suite* of programs for the whole range of Mac uses? £200? £100? As little as £50? Find out next month exactly how little it could cost you to kit yourself up for just about everything you'd want to be doing on your Mac!

PLUS: don't miss your chance to *win* what may be the ultimate *high-end* suite of applications – the complete Aldus Collection, including *PageMaker, FreeHand, Fetch* and *Persuasion*!

■ Why is it that no matter how much disk space you have, it never seems to be enough? It's one of those Great Mysteries of Life, right up there with who watches *People of the Valley*. That 120Mb hard disk seemed so huge when you got it, yet now there seems to be no room on it anywhere... So what can you do about it? Next month in MACFORMAT you can learn exactly what your options are. An external hard disk? Removable cartridge drive? We'll examine all your choices for adding extra disk space and help you decide which is right for your data storage needs.

If you thought *Prince of Persia* was brilliant, don't miss the *exclusive* demo of the sequel in MACFORMAT next month!

■ PLUS An exclusive fully-playable demo of *Prince of Persia 2*! The original *Prince of Persia* (that's it there in the middle of this page) was acclaimed as one of the most graphically brilliant games ever, on any computer format – and it had plenty of challenging gameplay to boot. The sequel just has to be seen to be believed. Even if you've never played a game on your Mac before, you mustn't miss next month's MACFORMAT cover disk!

■ PLUS The latest news from around the world; the hottest games definitively reviewed, including the new CD-ROM title that's touted as the fastest, most spectacular thing you've ever seen on a Mac; your Mac problems solved in MacAnswers; the new 'budget' DTP package with a spec list that could challenge *PageMaker's*; and MACFORMAT's regular comprehensive coverage of just about everything you can do with a Mac!

MACFORMAT 12 goes on sale on Thursday April 7th. Reserve your copy with your newsagent now, or turn to page 66 for our special subscription offer!

Are you a winner?

The crossword in MACFORMAT 9 seemed to fox some readers, but the first correct entry drawn from the box, and winner of the *Concise Oxford Dictionary* and *Oxford Thesaurus, Electronic Editions*, was Graeme Provan of Clydebank, Glasgow. The ten runners-up, who each receive a MACFORMAT T-shirt, are D Fairminer, Richmond; V Bennison, Sutton Coldfield, W Midlands; Trevor Harris, Lampeter, Dyfed; JM Dudley, Great Milton, Oxford; AR Bright, Burton-on-Trent, Staffs; Roger Green, Windsor; Sabre Gilmartin, East Molesey, Surrey; David Marshall, Norwich; Nick Wray, London N3; and Simon Farnsworth, Brading, Isle of Wight.

In MACFORMAT 7 in December we had ten copies of *AutoRoute Express* up for grabs, courtesy of NextBase. And the winners are: PR Reed, Wokingham, Berks; M Ware, Bristol; Feike L Hookenbos, Someren, Nederlands (ideal for when you next visit the UK, Feike!); Greg Ross, London W2; Nigel Hatton, Southsea, Hants; Simon Williams, Cowbridge, S Glamorgan; K Mary, Lancaster; Chris Carman, London SE15; Adrian Pitkin, Bournemouth; and Kathy Dubois, Hazleton, Glos. Congratulations, all!

If you won a competition in an earlier issue of MACFORMAT and still haven't received your prize, please get in touch if you haven't already and we'll sort it out – some addresses were mislaid in one of our office moves. We especially want to hear from you if you are R Blakely from somewhere in London or PF Lilley from Manchester, and can prove it...

MACFORMAT PRIZE CROSSWORD SOLUTION

Well done, everyone who managed to solve our crossword in MACFORMAT 9 correctly. The lucky winners are listed above. For those who complained that it was a trifle tough, here are some notes on those clues which left some people adrift.

5 Abb. for raster image processor (the PostScript interpreter in a high-end printer such as an imagesetter) – as well as for 'rest in peace'.

6 The second sentence referred to The Jam's *'A' Bomb in Wardour Street*, which appeared in the singles charts in 1978, 1980 and 1983, but this was really no more than a bonus hint – there was plenty to get the answer from in the first half of the clue.

10 Sham/poo – an application not for the Mac but for your hair.

14 Big-hearted Arthur was Mr Askey, which is how this acronym is pronounced.

19 American desk accessory for cropping and scaling Clipboard contents – admittedly obscure, but the Cutty Sark reference surely gave it away.

23 Just as the clue describes it. Trickier to solve if you'd never used System 6, but possible to take an educated guess at it.

34 Abb. for International Vehicle Registration.

36 Abb. for Apple File Exchange.

39 Clue should have read 'System 6 disk...', but stymied solvers ought to have spotted that I blatantly gave the answer away in the clue to 23!

16, 24, 25, 28, 30 and 32 incorporate anagrams.

Perhaps I'd better make the next one a bit easier...

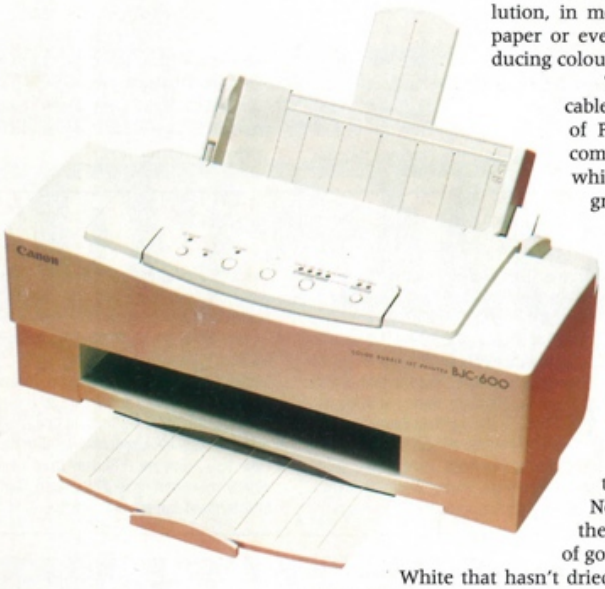
Martyn Lester

A	C	C	E	L	E	R	A	T	O	R	C	A	R	D		P
		D		A		E				I		B		E		O
A	L	I	A	S		S	H	A	M	P	O	O		S	O	S
L				S		E		L				M		K		T
D	I	A	M	O	N	D		K	I	L	O	B	Y	T	E	S
U		S				I		A		U				O		C
S		C	A	P	I	T	A	L		C	L	I	P	P	E	R
P		I		O				I		I		M				I
E	D	I	T	M	E	N	U		H	D	B	A	C	K	U	P
R				M		I		B				G		I		T
S	Y	Q	U	E	S	T		A	U	G	M	E	N	T		F
U		U				R		L		E				E		O
A	N	A	L	O	G	O	U	S		T	R	E	A	S	O	N
S		D		A				A		I		L				T
I	V	R		S	C	A	N	M	A	N		V	I	R	U	S
O		A		I		F				F		I		S		
N		S	Y	S	T	E	M	T	O	O	L	S	D	I	S	K

Win a complete colour solution

Colour your world with a Canon BJC-600 colour bubble jet printer, complete with cable and software, worth £850, courtesy of Canon and Pisa Systems.

Always wanted the option of colour output? Tired of having to go to a bureau for colour proofs? Then you need the Canon BJC-600 colour printer. Since it's a bubble jet, it's whisper-quiet in operation, and it's a compact 16 x 10 x 7 inches, so you'll hardly notice it's there. It's capable of an impressive 170 characters per second in Letter Quality mode and 360 dots per inch resolution, in mono or colour, on plain paper, coated paper or even transparency film – perfect for producing colour proofs or overhead transparencies.



The complete package comes with a cable and easy-to-install software courtesy of Pisa Systems, including a QuickDraw-compatible printer driver and *Backgrounder*, which enables you to print in the background (so long as you have enough memory available). We gave it a detailed testing in MACFORMAT issue 10, March, and it earned an outstanding 91% rating. Now you have the chance to win one of your own.

All you have to do is answer the three simple questions below and send us your answers on a postcard or the back of a stuck-down envelope. Employees of Future Publishing, Canon or Pisa Systems, and their families, are not eligible to enter. No multiple entries are allowed, unless they are engraved on the lid of a nice set of gouache paints with a big tube of Chinese White that hasn't dried out. The editor's decision is final (on this, if nothing else), and the closing date is Friday 22 April.

THE QUESTIONS

1. Colour printing uses a system called CMYK. What does 'CMYK' stand for?
(a) Colour Match Yield Kinetics
(b) Corrected Mechanical Yellow Keying
(c) Cyan, Magenta, Yellow, Black

2. The Canon BJC-600 is a bubble jet printer. What is another term for 'bubble jet printer'?
(a) Inkjet printer
(b) Laser printer
(c) Dye sublimation printer

3. What is Pisa famous for?
(a) The invention of the pizza
(b) The size of its piazza
(c) Its leaning tower

Easy, no? Just send your entries to: Canon colour compo, MACFORMAT, Future Publishing, 30 Monmouth Street, Bath BA1 2BW.

0800 765432

4GB turboDAT £999

inc Retrospect Remote 2.0, installation kit

MacUser Awards 1993 WINNER

150Mb tape £499

tape	int/ext	media
150MB	/£499	£16
2Gb DAT	£829/899	£10
2-8G DAT	£929/999	£10
4G Turbo	£929/999	£16
4-16 Turbo	1029/1099	£16

Best Buy MacUser

BACKUP BY DANTZ RETROSPECT

Since our DAT was a 5-mouser best buy, we've doubled the buffer size for even smoother backup, doubled the warranty to 2 years, doubled the speed and doubled the capacity! No wonder it won the best peripheral category of the MacUser awards!

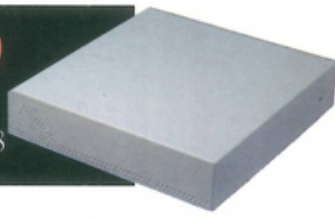
MacUser

3 year warranty

hard disks over 500 Mbytes optional on other drives

1GB disk £749

UK installation kit £18



hard	disks	seek	int/ext
50	16		£88/138
120	15		£139/199
210	12		£169/239
240	15		£229/299
330	12		£329/399
520	9.5		£399/479
1000	9.5		£679/749
1200	8.5		£879/959
2000	8.5		1199/1279
4000	11		2399/2549

seek times are average, "effective" seek times are all faster.

Our 1000MB drive outperformed every other 1GB drive in MacUser's 1993 gigabyte drive test. Real world performance of all the other 1 Gb drives tested was up to 130% slower. Yet none had a lower cost per megabyte. And our bargain120 MB drive is between two and six times as fast as typical 20-120MB drives,with sustained transfer rates over 2MB per second. Why not upgrade?

Powerbook & pocket drives too!

SONY M.O.

£24, £22(5), £19(50)

128Mb Optical £589

disks from £19 UK installation kit inc 5 disks £99

The fujitsu is the fastest mechanism on the market. We add a double shutter bezel and two year warranty. Ask for our data sheet: "Choosing an optical drive".

now you have a choice...

Fujitsu MO £589

Fujitsu's MO is also available in Fujitsu's own upright enclosure; single shutter bezel, one year warranty. UK Mac installation kit and five disks £99. We also offer matching hard drives and DAT. Prices as zero footprint enclosures.

	drive	media
21Mb flopty	£299	£18
44Mb Syquest	£239	£44
88/44Mb Syq	£299	£69
105Mb Syquest	£289	£40
128Mb Optical	£589	£24
1.2/1.3GB MO	1899	£78

98% of orders shipped from stock. All external drives (except 21Mb flopty, 105 Syquest) have 90-270V power, twin 50 way SCSI, pushbutton ID switch, platinum grey "zero footprint" aluminium housing. Installation kit comprises UK mains cable, SCSI system cable, terminator.

Warranty: 1, 2 or 3 years. **Delivery**: £8 next day. **Prices exclude VAT.**

Payment with order by cheque, Access, Visa or Mastercard

Call free for product literature, or to go on our mailing list.

Sales 0800 765432 Enquiries 0392 444840 fax 0392 364345

Over 200 products including **MEMORY**, premium quality **CABLES** from £4, **MEDIA** including disk, tape and optical.

WAVE is a division of Computer Capability Ltd

8 Newbery Centre, Exeter Airport, EX5 2UL Devon

WAVE

THE UNEXPECTED

£33,950. A LOT LESS THAN YOU'D EXPECT TO PAY FOR A DRUM IMAGESETTER. But that's the special offer price for the new **Scantext ColorStar**, a PostScript imagesetter that uses Scangraphic's proven drum imaging system for top quality colour work. With an imaging area of 328 by 610mm, and resolutions up to 3252dpi, the ColorStar can produce full A3 output with screen values up to 300lpi. And there are no hidden extras – the price includes a powerful Adobe PostScript RIP, fitted with an Ethernet connection for rapid data transfer. Scangraphic designs and manufactures its own drum imagesetters, colour scanners and retouching workstations with high speed networking options. As an authorised Apple VAR, we can also supply and integrate Macintosh computers and software to create complete PostScript-based pre-press systems.

scan graphic

For more information on a range of pre-press solutions designed to grow with your requirements, please contact Scangraphic Visutek Ltd, Caxton House, Randalls Way, Leatherhead Surrey KT22 7TW. Telephone 0372 378652. Fax 0372 379420.