

For everyone who loves the Apple Mac

mac FORMAT

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LANGUAGE**

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with your Mac!

FREEHAND 4

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and how will it
improve your work?

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FORMAT

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Utilities that will save your work
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SIMCITY 2000
An exclusive fully playable
demo of Maxis' classic in
the making

3 megabytes of programs
on our super value disk! If your Mac
can't read HD disks, see page 6 for
details of getting replacements.

**HIGH DENSITY
DISK**

DISK 9 FEBRUARY 1994

See page 6 for program details

**NO COVER
DISK?
ASK YOUR
NEWSAGENT
FOR IT NOW**

GAMES COME OF AGE

Mac games
leap forward with
**Myst, Populous
and SimCity 2000**

PLUS

Tips, news and
reviews on DTP,
graphics,
shareware,
databases,
spreadsheets,
HyperCard
and CD-ROM,
and your real-life
problems solved!



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FEBRUARY 1994

ISSUE 9

future
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Hot Spots

A look at some of the coolest entertainment software around...



Myst a huge surrealistic adventure rendered in breathtaking 3D. Can you escape the worlds of Myst? You'll need all your intelligence and wits to solve the puzzles and return yourself to the real world. Navigation is via simple mouse clicks and the screen updates are much faster than similar CD based games. Highly recommended. CD ROM. SRP £34.03

FA/18 Hornet the hottest combat flight simulator in the skies. Take control of a FA/18 and fly training missions or a Tour of Duty. Amazingly smooth graphics, detailed missions, gameplay and awe inspiring scenery combine with a realistic simulation to give the best combat simulator yet. Up to 4 pilots can battle it out over a network. SRP £59.00

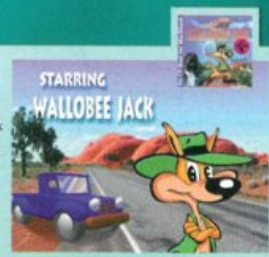


Pathways into Darkness

gives you real time 3D graphics and an ancient pyramid to explore. It's up to you to save the world from an ancient deadly god that's re-awoken. Excellent user interface and action paced graphics and other cool features like infra-red goggles make this a must! SRP £49.99



Wallobee Jack is the worlds first interactive cartoon packed full with non-stop action and wacky fun. By using the QuiClick system you can interact, join in and alter the storyline to help the good guys win! Help Francesca find the Bingi Barra Stone whilst avoiding the evil Dagon. CD ROM SRP £29.99



SuperMazeWars the coolest network game since Spectre. Up to 8 people (human or computer) can battle it out against each other. There are 5 different games to choose from covering everything from simple 'shoot everything' right the way through to 'strategy and cunning'. Makes an ideal single user game as well with the Mac controlling the other players. SRP £39.99, 2 User SRP £69.00



1. FA/18 Hornet
2. Myst
3. Pathways
4. Super Maze Wars
5. Wallobee Jack
6. AXIS Gamecheater
7. Darkseed
8. Spin Doctor
9. Iron Helix
10. Yearn 2 Learn



AXIS Gamecheater is the ultimate game cheater! With it installed you can just hit a button within your favourite game and get extra lives, fuel, ammo, money or even advance levels. Been stuck on one particularly nasty level? Let AXIS solve your problem and get back to enjoying the game! SRP £39.00



Darkseed is a nightmarish adventure based on the stunning art of H.R. Geiger. Time is running out and you're on a collision course with destiny. Every decision you make could be your last—can you save humanity from the bio-mechanical creatures? An adventure which is definitely not for the faint of heart! SRP £38.29

Spin Doctor is a revolution in puzzle games! Use simple swings, flips and bounces to navigate through the increasingly devious and mind bending levels. You'll need maximum ingenuity to bypass the nasty wands, moving doors, fuses, sparks, bombs and acid pools. Easy to learn yet long lasting, elegant and addictive. SRP £39.99



Iron Helix Prepare yourself for some of the most stunning Sci Fi action on CD. The Iron Helix is a deadly military ship, dead crew, out of control and you've only 3 unarmed probes to stop it. Smooth animated 3D graphics, an eerie atmosphere and a deadly defender robot add up to some heart pounding action! CD ROM SRP £34.03

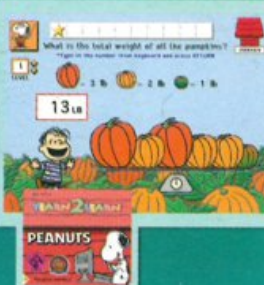


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Yearn 2 Learn—Peanuts.

Join Snoopy and his friends and practice math, reading, colouring, geography and having fun all in one integrated program! Yearn 2 Learn—Peanuts includes real voice narration with zany sounds and animation that makes the Peanuts characters come alive. Children spend hours 'playing' this, the best bit is that they have fun whilst learning! SRP £44.99





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REALWORLD



THE FINDER

Your cover disk

We explain how to get your nine new programs to spring into life.

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News update

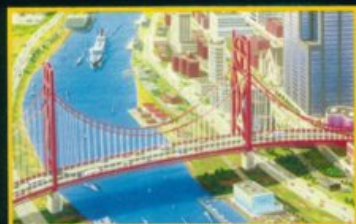
Cheap *Photoshop*-style software and a Quadra that turns into a PC.

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SimCity 2000

This game's so good, it receives a MacFormat Classic award.

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Another 'god' sim. But is it as good as *SimCity 2000*?

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Myst

You've never seen graphics this good on the Mac before.

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It's slick, it's good looking and it plays well. But why is it called 'Super'?

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Language tutors

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mac FORMAT

COMMENT

HyperCard used to be one of the main reasons for buying a Mac. You didn't need any programming experience to put together a decent looking program which would help you with your work, and it was absolutely free. *HyperCard* stacks could be databases. *HyperCard* stacks could be information resources. *HyperCard* stacks could even allow you to process files to speed up your desktop publishing – almost anything you could think of, in fact.

But somewhere down the line Apple lost the plot. It stopped developing *HyperCard* and the package stayed trapped in the Mac's monochrome past. It was still great, but people felt almost embarrassed at using such an antiquated system. Eventually Apple even stopped supplying *HyperCard* free with Macs.

At last *HyperCard* development has started up again (in fact rumour has it that a new *HyperCard* has been ready for months, but was sat on for some reason). The new version supports colour and QuickTime, so applications can look professional again. And its support for AppleScript means that it can act as a control centre for all your applications. Its uses are endless.

And *HyperCard* can now produce stand-alone applications, so nobody even needs to know you've used it.

Three cheers for *HyperCard* 2.2, and let's hope Apple won't leave one of its 'killer apps' in the doldrums for so long again.

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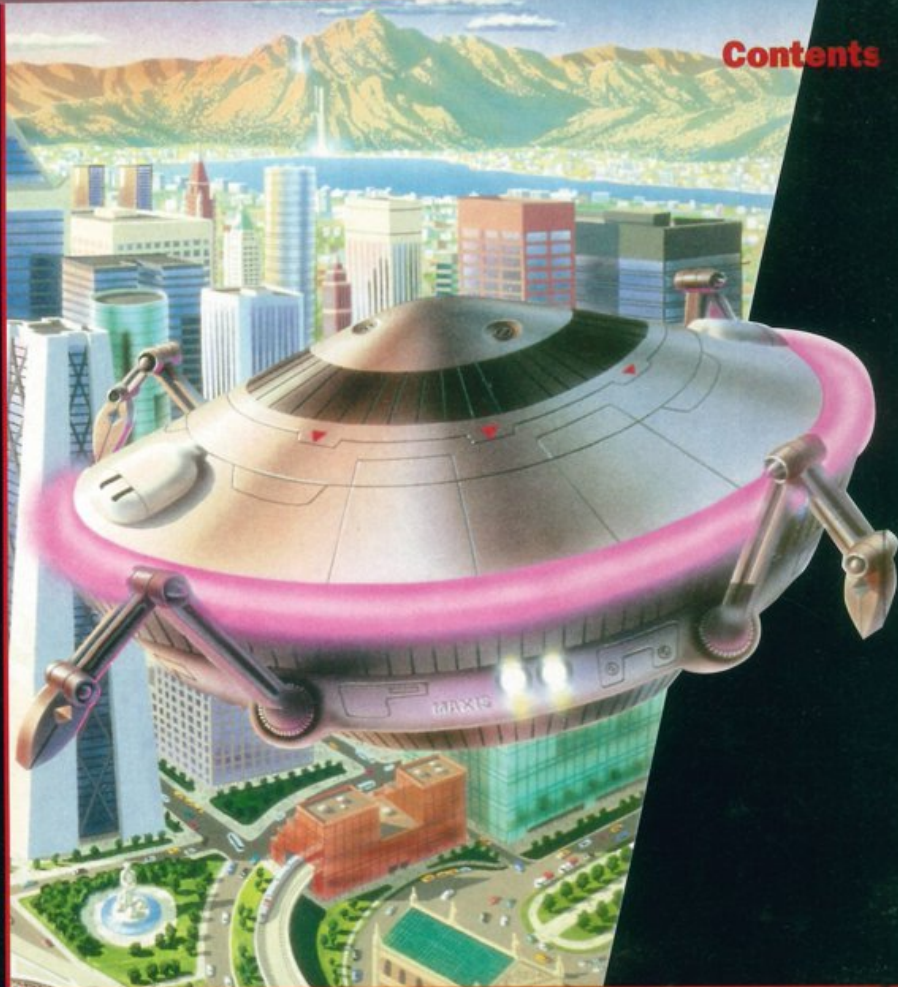
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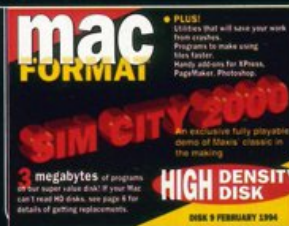


Games come of age

The Mac now excels in the world of leisure and entertainment software. MacFormat brings you 15 pages of round-up, interviews and analysis on the current state of play in Mac games.

page 25

ON THE DISK



For full details of what's on this month's packed High Density MacFormat cover disk, turn to pages 7, 8 and 9.

ADD TAILS TO YOUR MACINTOSH.

Admit it. You daydream about being on stage. Rock musician one day. Classical artiste the next. And as you play the last note... the applause starts.



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Your cover disks

over
3Mb!

Start here!

MacFormat's coverdisk is now a high density floppy, so that we can fit more on. Almost all Macs made in the last four years have a SuperDrive and so can use these disks, but older models can't. Don't worry, however, you can exchange your HD disk for two ordinary ones - see below for details.

Because we've compressed the software to fit more on, you can't run the programs on the disk straight from the floppy: first they must be decompressed and copied on to your hard disk. To do this just double-click on the MacFormat February icon, and select your hard disk. When it's finished you'll find a new folder called MacFormat February, and inside that there are more folders called For PageMaker, For Photoshop, For QuarkXpress, SimCity 2000 demo and Utilities. Inside those you'll find the programs themselves. You'll need around 3Mb of free disk space before you begin.

If you have an older Mac

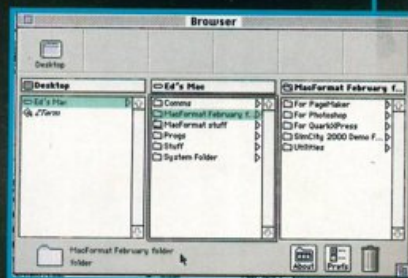
If your Mac is chronologically challenged and it can't use high density disks (Pluses, old SEs and original Mac IIs can't; anything since the SE/30 including Classics and Performas can) don't worry. To get the same programs on two ordinary disks, just send your disk with a self-addressed return envelope to: MacFormat Disk Swap, DisCopy Labs, PO Box 21, Daventry NN1 5BU. Make sure the envelope is big enough for two disks and sturdy enough to make it through the post. If you don't want the hassle of doing this every month, then subscribe and you can choose to get your two disks delivered for no extra money! See page 99 for details.

Compatibility

We spend hours checking all the programs on the disk with as many different machines as possible, but we can't check every combination and we can't guarantee that the programs will work with your system. The information on compatibility in these pages and on the disk is intended as a guide only. Nor can we warrant the programs or be in any way responsible for any problems arising from their use. Check the Read me! file on the disk for common-sense guidelines you should follow when installing any software.

Greg's Browser

Shareware fee: £6
Compatibility
Mac: any
System: System 7 and
Colour QuickDraw
Display: any



The Mac's use of icons and folders is jolly intuitive and all that, and we love it, but sometimes it would be much more convenient to see your files as a list which you can move around rapidly. That's what Greg's Browser does.

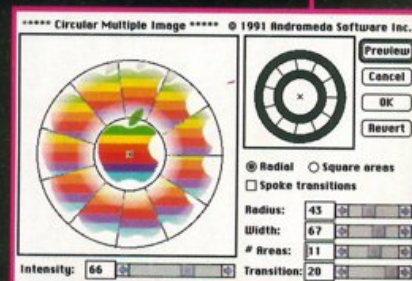
Browse the contents of your hard disk at top speed.

On the left of its window is a list of the files on the desktop. Click on a folder or disk and the contents of that folder will appear in the next column to the right. Click on a folder in that list and the next column fills up. It's easier to use than describe!

cMulti Plug in

Shareware fee: none
Compatibility
Mac: any
System: requires Adobe
Photoshop
Display: any

This Photoshop plug-in lets you produce kaleidoscope-style multiple images quickly and easily, and with full control over the results. It's one of a series of plug-ins from Andromeda Software - check out the read me file for more details.



Produce kaleidoscopic images with this Photoshop plug-in.

SimCity 2000

Shareware fee: none

Compatibility

Mac: any

System: System 7

Display: 256 colours

SimCity 2000 is the updated and thoroughly enhanced version of the classic city simulator. Our demo gives you 20 minutes with a small city to try your hand at city management. You can play the demo as many times as you like, and every time will be different - that's the beauty of this kind of 'game', it's completely non-linear.

A few pointers to get you started: to play *SimCity 2000* you need to understand three basic concepts: power, transport and zoning. For a city to grow it needs electricity, and every part of the city needs a power supply. Power is generated in power plants - these are already in place in the demo. If you want to extend your city you need to extend the power supply

system by clicking on the electricity icon, and then connecting a power line from any building you like, to the new area you wish to build on.

Before anyone will move into new areas, you need to provide a transport network. At its simplest, this consists of some roads, but there are also railways, subways and motorways available. Select the road icon and extend an existing road into the area you want to build on.

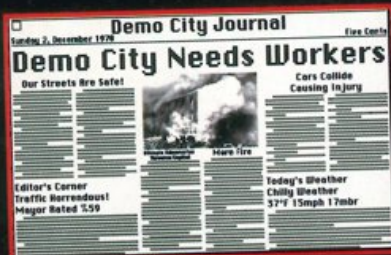
Finally, you need to tell *SimCity 2000* what sort of building you want. You do this by choosing the residential, commercial or industrial icon, and colouring the appropriate squares. Nothing will develop in an area that hasn't been allocated a zone type, and it may take some time for development to occur even in a fully powered and transport-linked zone: there are many factors affecting development speed in *SimCity 2000*.



Here it is: you are the newly-elected mayor of this fine city and can do with it what you like.

Play a while and get the hang of creating new zones, then you can try building schools, prisons, hospitals, police stations and fire departments. Maybe you should build a new sports stadium or a zoo. And you can set your tax policy and make the city a nuclear free zone if you want!

When you run out of time, just start the demo up again and try something else. Pretty soon you'll be wanting to get out and buy the full version!



You can rely on the local paper to keep you informed of public opinion and the needs of the city - if it's gossip and scandal that you're after, stick to a tabloid.



You have complete control over the city's finances, and there are advisors to help you make the right decisions. Set the tax rates too high, and mass emigration will result.



When you get a bit further into the game, you can start developing the water and sewage system, and extending the subway network.

MacLifeInsurance FileSaver

Shareware fee: \$9.95

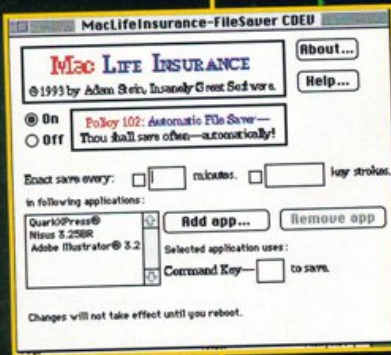
Compatibility

Mac: any

System: System 7

Display: any

Once you have lost a couple of pieces of vital work by not saving often enough before a System crash, you soon develop an instinctive [command] [S] twitch in your left hand. *MacLifeInsurance FileSaver* gives you an extra hand by periodically issuing a [command] [S] in the applications you specify. Could be a life saver!



Click, there it is!

Shareware fee: \$5

Compatibility

Mac: any

System: System 7

Display: any

Click, there it is! is a stupidly-named Extension which is, nevertheless, really rather useful. If you select Open or Save the

dialogue which appears frequently defaults to a directory other than the one you want, and it takes a few moments of irritated mousing to choose the correct folder. With *Click, there it is!* installed, if you can see the folder you want to save into or open from on the desktop, just click in its title bar and it will be instantly selected. Simplicity itself really!

Never forget to save again with *MacLifeInsurance FileSaver*.

Bobzilla XTension

Shareware fee: none

Compatibility

Mac: any

System: Requires XPress 3.2

Display: any

A QuarkXPress 3.2 XTension which adds some handy features including a much enhanced step and repeat, the ability to search for widows and orphans and a quick way of getting between pages.

You can find overmatter and ugly widows and orphans quickly and easily with Bobzilla.

Search Criteria

- ☒ Loose Justification
- ☒ Auto Hyphenated
- ☒ Manual Hyphenated
- ☒ Widow
- ☒ Orphan
- ☒ Text Box Overflow

Count

OK

Cancel

Super Step and Repeat

Repeat count: 1

☒ Linear motion

Horizontal Offset: 0.5"

Vertical Offset: 0.5"

☒ Rotational motion

Angle: 0°

End box scale: 100%

End frame thickness: 0 pt

End box shade: 100%

Vert. origin: Top

Horiz. origin: Left

☒ Scale contents ☒ Fast draw

OK Cancel

Get clever with Bobzilla's enhanced step and repeat function.

Magnify Addition

Shareware fee: none

Compatibility

Mac: any

System: Requires PageMaker 4.2 or 5.0

Display: any

Magnify is an addition which lets you select any custom percentage view by typing in a magnification from the Utilities menu. As simple as that!

QuarkXPress 3.2 Patcher

Shareware fee: none

Compatibility

Mac: any

System: Requires Quark XPress 3.2

Display: any

If you've upgraded to XPress 3.2, this patcher will fix a couple of minor bugs with DCS files, fonts, the Document Layout palette and certain printer incompatibilities.

MacLifeInsurance KeySaver

Shareware fee: \$9.95

Compatibility

Mac: any

System: System 7

Display: any

Ever deleted a paragraph and a few minutes later wished you hadn't? Or had a system crash just before you hit save?

MacLifeInsurance KeySaver could be your saviour. It stores all your typing as a text file in a folder in the System folder, so you can reconstruct your work. It remembers all your mistakes too, so the file needs some editing before it's usable, but it's a damned sight faster than doing it all over again!

KeySaver can help you reconstruct your work after a disaster.

MacLifeInsurance-KeySaver CDEU

MAC LIFE INSURANCE

© 1993 by Adam Stein, Candy Street Software

☒ On ☐ Off **Policy 101: KeyStroke Saver—**
Records every key-stroke for posterity!

☐ Delete saved files after day(s).

KeyStroke File Type:

Hot Key turns recording of key strokes on and off.
Changes will not take effect until you reboot.

Backing up your cover disk

We recommend that you back up your cover disk before you do anything else with it, because floppies can easily become corrupted. Then work with the backup – keep the original safe. All you need to do to back up your disk is this:

- 1 Insert the **MacFormat** disk in your Mac.
- 2 Drag the disk icon to your hard disk's icon. The contents of the disk will be copied into a folder called '**MacFormat** February disk'.
- 3 Drag the floppy disk icon onto the Wastebasket to eject it.
- 4 Insert a blank disk. If you need to, initialise it as a double sided and name it '**MacFormat** February backup'.
- 5 Drag the **MacFormat** folder from your hard disk on to the new floppy disk's icon.
- 6 When it has finished copying you have a backup of the original disk.
- 7 You can now delete the '**MacFormat** February' folder on your hard disk by dragging it into the Wastebasket.

If your cover disk won't work

Unfortunately, when you duplicate as many thousands of disks as **MacFormat** does, a few duds are bound to slip through the net. If you think you have one, just read the installation instructions again to make sure you're not missing something.

If it still won't work then return the disk by 20 February, with a self addressed envelope, to:

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DisCopy Labs Ltd
PO Box 21
Daventry
NN11 5BU
Telephone: 0327 300077
We regret we cannot answer phone queries on disk installation.



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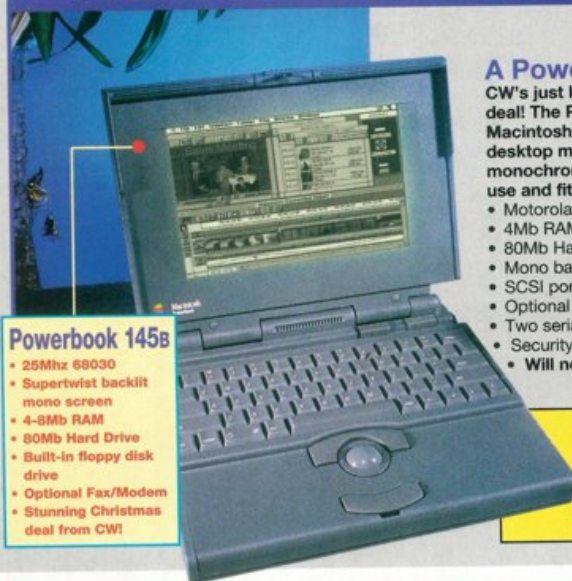
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POWERBOOK 145B



To celebrate the opening of the second Warehouse Superstore in Park Royal, and the festive season, CW's slashed prices still further! Why not come along to the new store, or visit the original in Hatton street, and grab a Christmas bargain! Loads of Christmas gift ideas from £3.99!



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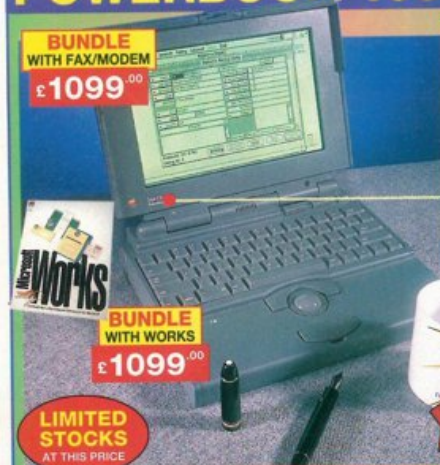
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POWERBOOK 165 SAVE!



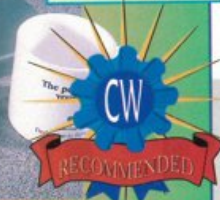
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- Optional Fax/Modem

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POWERBOOK 165 EXCELLENT VALUE

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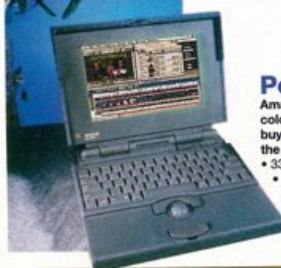
- 33MHz Motorola 68030 processor
- 4Mb RAM (max 14Mb)
- 80Mb drive (160Mb option)
- Direct colour display output - connect external Apple & VGA monitors

POWERBOOK 165 4/80

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PowerBook 180c

Amazing CW performance and a great active matrix colour display make this the best notebook you can buy. Mega-fast 68030 running at 33MHz gives you all the power you need PLUS 256 colours!

- 33MHz 68030 • Math co-processor
- 4Mb RAM (exp to 14Mb) • 160Mb H. Drive
- 640 x 480 pixel active matrix 256 colour display
- Optional fax/modem
- Direct colour display output

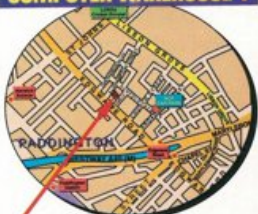
Round the corner from Hanger Lane

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PowerBook Duo 230

As the entry-level PowerBook Duo, the 230 packs a great deal of performance into a cost-effective package. CW loves the bright, backlit supertwist display and the speedy 33MHz 68030 processor.

- Motorola 68030 @ 33MHz
- Weighs only 4.2 pounds
- 4Mb RAM (exp to 24Mb)
- Choice of 80Mb or 120Mb internal hard drive
- 16 grey level supertwist screen
- LocalTalk port

DUO 230 4/80

£749



PowerBook Duo 270c

The top-of-the-range PowerBook Duo and a real dandy! CW recommended to those users who demand maximum performance and exquisite colour whilst on the move. The hard drive provides 240Mb of storage.

- Motorola 68030 @ 33MHz
- 4Mb RAM (exp to 32Mb)
- 240Mb hard drive
- Colour active-matrix screen with 1,000 colours
- LocalTalk port
- Optional Express Fax/data modem

DUO 270c 4/240

£1999

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No you're not dreaming. This superb 360dpi A3 colour printer is now at a crazy low price!
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NEW MAC LC 475

THE POWERFUL NEW LC 475

How's about a Quadra in an LC case. Well that's what the new LC475 almost is. Mega power for little cash and ready for you at CW's favourite store.



NEW!
PRODUCT

MACINTOSH LC 475

QUADRA POWER IN A SLIMLINE LC CASE!

The entry-level 68040 Macintosh at an amazingly low CW price! This superb general use machine features a Motorola 68040 clocked at 25Mhz, integral memory management and an 8K cache 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 Macintosh 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)
- 160Mb Internal hard drive
- Processor Direct Slot for expansion
- Built-in monitor support to 21"
- System software
- Desktop Mouse
- Energy Star compliant
- Almost as fast as a Quadra 700!

LC475 4Mb RAM, 160Mb DRIVE

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

£699

LCIII MEGA DEAL



ADD A COLOUR MONITOR

LCIII + 4Mb RAM, 80Mb Hard Drive, 14" Performa Plus Colour Display.....**£699**

LCIII 4Mb RAM 80Mb H. DRIVE

£549

MACINTOSH LC III

The superb LCIII features a zippy Motorola 68030 processor running at 25Mhz which makes it the ideal machine for general business, education and home entertainment tasks.

And now CW's favourite Warehouse superstores have it on a great Christmas deal.

- But hurry, at this great price saving they won't hang about!

- Motorola 68030 processor running at 25Mhz
- 4Mb RAM - expandable to 36Mb!
- 80Mb Hard Drive (Optional 160Mb drive)
- LC expansion slot
- System 7 software, mouse and keyboard included
- Almost as fast as a Mac IIcx or IIvx!

SUPER BUNDLE

- LCIII with 4Mb RAM and an 80Mb Hard Drive
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- Apple StyleWriter II inkjet printer

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Newton MessagePad

- NotePad, write down notes, memo and sketches
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- Name and Phonebook file
- PCMCIA slot for adding software
- Send Faxes (optional)
- **FREE** Mac Connection Kit (RMP 039)



Apple CD-ROM 300

- 300K per sec data transfer rate; 256K buffer
- 295 milliseconds data access time
- 2 50-pin SCSI connectors, 2 RCA jacks, headphone jack
- Reads PhotoCDs



Apple PowerCD

- 3 in 1 CD player: CD-ROM; PhotoCD; Audio CD
- Connects to TV/HIFI
- 550 milliseconds avg data access time
- 2.1MB/sec SCSI burst rate; 256K buffer
- Video/audio-output; 50-pin SCSI sound-output jack (st)

CPU	Monitor included	Keyboard	RAM/HD	Processor	Speed MHz	Video Supp up to	Slots	RAM Up to	Ethernet	Price
LCIII	14" PP	St	4/80	030	25	16" Col	LCPDS	36MB	-	£699
LCIII	14" RGB	St	4/80	030	25	16" Col	LCPDS	36MB	-	£799
LC475	14" PP	St	4/80	040	25	21" Col	LCPDS	36MB	-	£819
LC475	14" PP	St	8/160	040	25	21" Col	LCPDS	36MB	-	£949
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 Key LCPDS = LC Processor Direct Slot

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	•	£1449
610CD	14" RGB	St	8/230	040	25	21" Col	040 PDS	68MB	•	£1699
660AV CD	-	-	8/230	040	25+	21" Col	040 PDS	68MB	•	£1779
660AV CD	-	-	8/500	040	25+	21" Col	040 PDS	68MB	•	£2099

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

Monitors	14" PP	14" RGB	14" AV	15" Portrait	16" RGB	21" RGB
	£239	£285	£495	£485	£759	£2199
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.

CPU	Display	Floppy	RAM/HD	Processor	Speed MHz	Video Supp up to	Slots/Options	RAM Up to	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	•	4/120	030	33	16" Col	Modem	14MB	-	£1199
180	10" 16 g/s a-m	•	4/120	030	33	16" Col	Modem	14MB	•	£1849
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	•	£1999
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.

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	1/2 ppm	100 shts	64 TT	SCSI	-	£599
LWriter 300	L/W	300 dpi	4 ppm	100 shts	39 TT	RS422	-	£499
Select 310	PSL/W	300 dpi	5 ppm	250 shts	13 PS	RS422	-	£819
Pro 630	PSL/W	600 dpi	8 ppm	250 shts	64 PS	LT&Eth	•	£1599

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



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'Fastest' database due soon

A new relational database from Microsoft is expected to be available in early 1994.

The database, *FoxPro 2.5*, is reckoned to be the fastest available; one claim is that it can extract all the records for a city from an address database of a million records in one second! It's relational, which makes it more flexible but much more complex than flat-file databases such as *FileMaker Pro*.

The features list is impressive, including a spelling checker and 'wizards' which can simplify common processes. It also supports graphing, and the interface can be simplified to allow novices to use it.

There are also plenty of tools included for any users who want to create their own database application, including RQBE (Relational Query By Example) and a project manager which keeps track of all the component parts of an application.

FoxPro is already available for Windows, so it allows cross-platform sharing of data and of applications. The program also allows for upgrades from *FoxBASE+*.

The price of *FoxPro* had not been fixed as we went to press, but it is expected to sell for about \$500 in the US. For more information call Microsoft on 0734 270001.

HyperCard revitalised

HyperCard has been upgraded at last to make it into a worthwhile tool once again.

HyperCard is the original 'multimedia' software, allowing users to easily link graphics, text and sound in databases called stacks, and use a very simple-to-learn programming language called Hypertalk to control them. Version 2.2 was launched in the US last month, and the added features look certain to revitalise the program, which had been looking distinctly elderly. One of the main changes is the addition of colour support. *HyperCard* had been strictly monochrome since its launch, but now that Apple no longer produces monochrome systems an upgrade was a long overdue.

Besides colour, the main change is support for AppleScript, a language that enables applications to pass information and instructions to one another. It is now possible for *HyperCard* to use AppleScript instead of its normal language, Hypertalk, or in addition to it. In principle *HyperCard*'s support of AppleTalk will enable everyone to write quite sophisticated programs by linking other applications together. For instance a button in a *HyperCard* stack could copy all the files from a floppy disk, open them in *Photoshop*, convert them to TIFF format, open a *QuarkXPress* document and import them into picture boxes. The possibilities are truly endless.

HyperCard 2.2 includes *ADDMotion II*, which allows access to 24-bit graphics, sound and animations. QuickTime movies can also be added.

Another major innovation is the ability to create stand-alone double-clickable applications with *HyperCard*. Up until now the



Colour at last! *HyperCard* gets serious again with version 2.2. And it offers a grab-bag of other improvements as well, including AppleScript support.

user of a *HyperCard* stack has needed either *HyperCard* or *HyperCard Player*.

HyperCard 2.2 is expected to ship in the UK within weeks; the price has yet to be announced, but the US price is \$139, with upgrades for \$89. Watch for the *MacFormat* review soon.

■ Also about to ship from Apple is the *AppleScript Scripter's Kit 1.1*, which gives users simple access to the features of AppleScript. Team it with the new *HyperCard*...

Save the earth on CD-ROM

A CD-ROM with the ambitious subtitle of "The Interactive Guide to Saving the Earth" has been released by MDI.

Called *The Big Green Disc*, it examines issues such as global warming, ozone depletion, acid rain and deforestation. The disk includes 70 minutes of video, including debates between experts on environmental issues.

The Big Green Disc costs £60 and is published by MDI on 0252 737630.

The latest animal-related CD-ROM is *Whales and Dolphins*, also distrib-

uted by MDI.

Featuring facts and figures on all whale species, plus dozens of pictures and video footage of whales, the disc is intended as an education in cetacean lifestyles.

The disc costs £49.99 from MDI on 0252 737630.

If you want to save the world or the whales, get the facts on CD.



International geographic

A scientific image enhancement program has been released which aims to help those who work with satellite images.

DIMPLE offers everything you need to create those false-colour images of the planet's surface and costs a mere £1,500. Call Cherwell Scientific on 0865 784800.

More AutoCAD for a price

If you have the odd three grand to spend on CAD software, *AutoCAD* is now up to version 12. The industry-standard computer aided design program, which is available on most platforms, is available to the deep-pocketed from Autodesk on 0483 303322.

No more spilt drinks

A plastic tray to keep your PowerBook safe on the passenger seat while travelling is new from BreakSafe.

The tray also has a drinks slot to stop those annoying spillages all over your dralon upholstery. This valuable aid to travellers is available from most dealers.

Two-inch hard disk

A tiny removable hard disk less than two inches across has been announced by SyQuest.

The drive plugs in to a PCMCIA slot, as used in the Newton, and the tiny cartridges slot into that. Each 1.8-inch disk can store up to 80Mb, and prices could be as low as £80.

SyQuest: 01049 751 560500.

Mac software on DEC

DEC Alpha systems will be able to run Mac software with an emulator called Liken.

The incredibly powerful DEC system, tipped by many to be the high-end system of the future, will be able to run standard Mac software when fitted with the emulator. You can contact the makers Andataco in the US on 0101 619 453 9191.

APPLE BITES

Windows NT to be developed for PowerPC



The PC's Windows NT: could soon be available for the Mac.

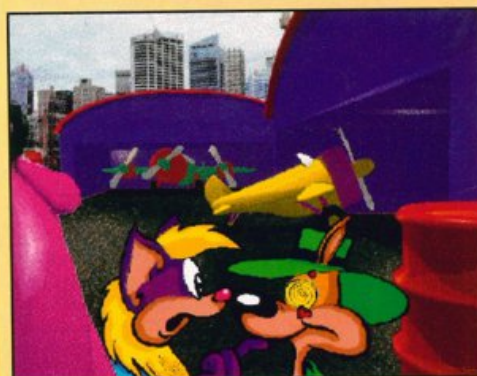
Microsoft and Motorola have made an announcement which could have major repercussions for the way we use our Macs in 1995.

The two giant companies have announced that they are going to develop Windows NT for the PowerPC chip. This is the chip that will be at the heart of new Macs launched after March this year. It offers blinding speed and will be able to run both current Mac and Windows software at reasonable speeds, as well as upgraded Mac software incredible fast.

Windows NT is the long-awaited successor to Microsoft Windows, the Mac-like operating system that dominates the world of IBM PC compatibles. But Microsoft does not want Windows NT limited to PC clones, and versions of the system, which will run the same software, are or will shortly be available on many different computers. The idea is that you will choose to run Windows NT and its software, and then you can pick whatever hardware is cheapest or fastest knowing that it will work.

If Windows NT runs on the PowerPC, it will give the Mac owner access to all the software developed for Windows NT. NT is a true multi-tasking operating system, unlike System 7, which only allows limited background tasks, though NT has huge memory and hard disk requirements.

Wallobee Perfect?

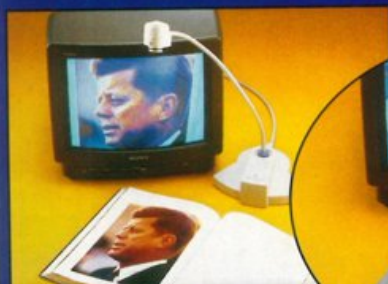


WordPerfect has decided to branch out into entertainment software with its new Main Street range.

Software due for launch on the new label includes *Wallobee Jack and the Thal Sun*, *Kid Karaoke* and *Clip Art for Kids*, as well as WordPerfect's budget word processor *LetterPerfect*.

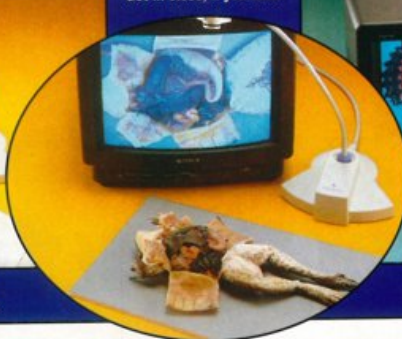
More from WordPerfect on 0932 850500.

Video camera on a stick



If you liked the idea of video telephones, you'll love attaching a video to your Mac.

Get in close, if you dare.



Up periscope, Mr Christian, and let's take a look at what's out there!

A video camera on a stick allows AV Mac owners to video conference and watch themselves on their Mac screens.

The FlexCam Document is tiny colour video camera on a flexible pole which can be attached to the video input of an AV Mac, or any Mac with a video digitising board.

It can focus on any distance from 0.25 inches to infinity, producing an effective magnification of 50 to one, and has a resolution of 270,000 pixels.

US prices start at under a thousand dollars; contact the maker Videolabs on 0101 612 8971995.

APPLE BITES

Speedy CD-ROM

CD-ROM owners plagued by low speed can look forward to DriveCD from Casa Blanca. DriveCD uses a memory cache that learns the way you work and tries to fetch the next data you need from CD before you ask for it. It also disables Apple's built-in cache, which can conflict with CD caches. DriveCD is £58 from Amtech: 0202 476977.

PowerPC gets operating

System 7 for PowerPC is nearly ready. The System software has gone into beta testing, the final stage of the de-bugging process. Apple claims that work is right on track for its first half of the year launch. Industry rumour is firming up on March as the most likely date for the new machines.

Really tiny PhotoCDs

Smaller PhotoCD CDs will soon be available. The new disks are 80mm in diameter, and can hold one roll of 35mm film. The new disks will play in most PhotoCD-compatible players, and may well find a use in portable machines or personal digital assistants.

TypeStyler upgrade

An upgrade to the text manipulation program *TypeStyler* has been announced which cures the problems it has had with newer Macs. It also adds better support for spot colours.

Upgrades to version 2.03 cost £25 from Studio Box on 0734 502556.

How to get into the Net

Access to the Internet is available from ExNet for around £10 a month. The new service offers full use of telnet and ftp, which allow you to log on to hundreds of computer systems around the world including the big Macintosh file archive at the University of Michigan.

All you need is a Mac and a modem. Call ExNet on 081 244 0077.

Cheap image manipulation

Apple's budget image-manipulation software *PhotoFlash* will be available in the next few weeks.

Priced at just over £200, *PhotoFlash* is designed to simplify the enhancement of scanned images for use in DTP software. It uses a drag-and-drop system to automate the placement of images in the leading DTP packages *QuarkXPress* and *PageMaker*, and also supports AppleScript for the automation of repetitive tasks.

Features include the ability to alter the brightness and contrast of a scanned image, straighten scans, remove scratches and resize and crop images.

For more information, contact Apple on 0800 127753.

■ Look out for a full review of *PhotoFlash* in next month's issue of *MacFormat*.

Modem software converts faxes

FaxPRO allows modem owners to send and receive faxes, and convert the incoming faxes into text.

The maker, Delrina, is well known in the PC world for its *WinFax* software. It claims that *FaxPRO* supports most Mac fax-capable modems, and also offers greyscale faxing for extra quality.

FaxPRO allows you to create custom cover pages, and its built-in optical character recognition (OCR) software automatically converts incoming faxes into editable text.

FaxPRO costs £117 from Delrina on 081 207 3163.

Station Preferences		Phone Line Type	
Name:	MacFormat	☒ Modem	☐ Pulse
Fax Number:	0225 446019	☐ Port	☐ Printer
Voice Number:	0225 442244	Init String:	
Number of Tries per Fax:	3	Seconds Between Retries:	
Minutes Between Retries:	1	Rings Before Delrina Fax Answers:	
Seconds Between Modem Retries:	15	Startup State:	
Rings Before Delrina Fax Answers:	2	☒ Auto Send ☒ Auto Receive Modem: Class 1 ☐ Display Alert ☐ Play Sound ☐ Register ☐ Display Alert ☐ Play Sound Cancel OK	

Uncanny coincidence number 54: in the month that a database called *FoxPro* appears, here's *FaxPRO*, a nifty fax (not fox) package.

Quadra-PC hybrid launched in US

A Quadra which can turn into an IBM PC at the press of a button has been launched by Apple in the US.

The computer, a version of the Quadra 610, was shown at Comdex to a warm response from industry watchers. As well as its usual Mac processor, the machine has a built-in 486SX chip, as used in cheap PC clones. It runs MS-DOS 6.2.

Apple's chief of US operations, Ian Diery, explained the peculiar machine as "the most compatible personal computer".

The 'Quadra 610, DOS compatible

version', as it's clumsily known, runs both its processors independently, can run DOS and Mac software simultaneously, and can even cut and paste between them. If you have two monitors, you can view both environments at the same time! The machine has built-in support for two monitors - you don't need another video card.

The machine is expected to ship with an extra cost of only \$500 over the non-DOS model, and Quadra 610 owners can upgrade for the same amount. No UK plans for the machine have yet been announced.

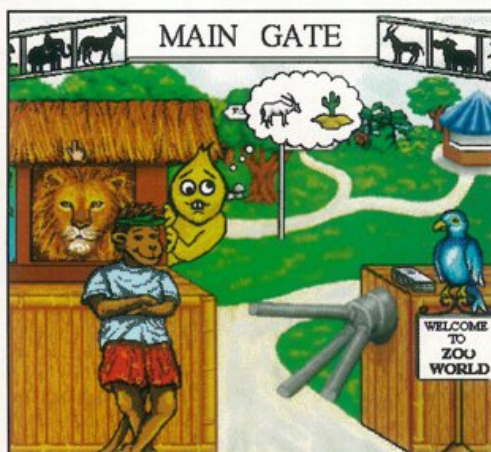
Zoo program for kids

Kids can try their hand at running a zoo with the latest edutainment software from Ablac.

Zoo Keeper is a floppy-disk-based multimedia program which is aimed at 6- to 11-year-olds. The children are in charge of 50 different kinds of animals, and must manage the zoo to keep them happy. The object is to release the animals back into the wild, and along the way children are taught plenty of facts about the animals and their environment.

As well as teaching facts, the software attempts to develop skills such as planning and setting priorities.

Zoo Keeper sells for £39.95 from Ablac on 0626 332233.



Zoo Keeper - looks like the animals are running the zoo, but in fact it's kids. Which could amount to the same thing really. Oops, did I say that?

APPLE BITES

Shalom, CD-ROM

The Talmud, the key book of the Jewish faith, is now available on CD-ROM. The Institute for Computers in Jewish Life, along with Chicago-based Davka, has published the disc, which contains both English and Hebrew versions. The disk costs \$299. Davka can be contacted on 0101 312 465 4070.

Going to Towns

Software for the Japanese FM-Towns system will be Mac compatible next year.

The popular multimedia system from Fujitsu will support QuickTime, and from the spring of 1994 software will run either on the Mac or on FM-Towns.

Apple takes a bigger bite

Apple has closed the sales gap on IBM and Compaq, according to a recent sales survey.

Apple's UK market share is 8.5%, up from 5% this time last year.

This puts Macs within a whisker of IBM on 8.8% and Compaq on 8.7%.

Mike Newton, head of Apple UK, said: "Our Performa line continues to gain market share in the High Street."

PowerPC upgrade

Owners of Quadra 950s, 900s and 700s will have an upgrade path to the new PowerPC processor next year, thanks to an accelerator card from Daystar.

The company, which offers accelerator cards for most of the Mac range, is likely to announce more PowerPC cards shortly. Daystar is on 0101 404 967 0389.

OmniPage upgraded

Caere's optical character recognition software *OmniPage* has had a facelift.

OmniPage 5 has a completely redesigned interface, and can use greyscale scans for additional accuracy.

OmniPage 5 is due for UK release sometime this month, but no price is known yet. Contact distributor Computers Unlimited 081 200 8282.

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LCIII, 4/80

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Display Support, Up

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LC475, 4/80

25MHz, 68LC040,

32Bit Bus, Up to

36Mb. RAM

QUADRA 610

+ Ethernet

25MHz, 68040, FPU,

Up to 68Mb. RAM

QUADRA 650+Ethernet

33MHz, 68040, FPU,

Up to 136Mb. RAM,

3 NUBUS Slots

QUADRA 660AV (Audio

Visual) + Ethernet

25MHz, 68040, FPU, Up to

68Mb. RAM, 55MHz DSP

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Plus Colour Monitor

28mm Dot Pitch

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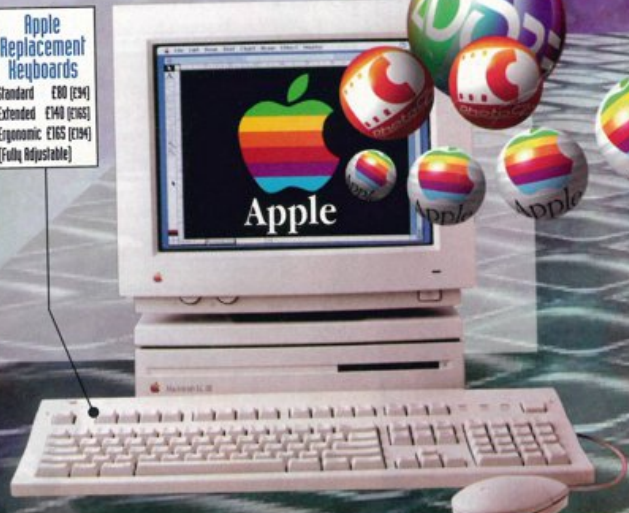
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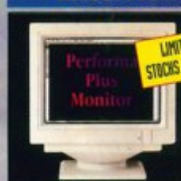
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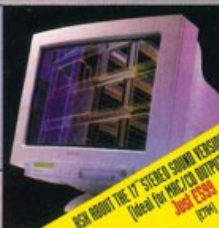
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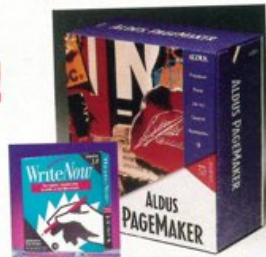
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Xploring the real world

Peter Gabriel's new *Xplora 1* CD-ROM melds music and multimedia. **MacFormat** went to his studio in Wiltshire to learn more...

Peter Gabriel's Real World Studios is home to some of the best acoustic musicians in the world, many of whom specialise in playing the ancient instruments of their countries' culture. The walls of the studios are covered with strange-looking percussion instruments of decidedly ethnic origin. It's therefore something of a jar to come here for the unveiling of the high-tech merging of music and computers.

Peter Gabriel, ex-singer of Genesis and long-time music technology innovator (he was the first to use the Fairlight CMI sampler on record), is showing off his new CD-ROM, *Xplora 1*. In CD-ROM terms it's not that unusual – a collection of hypertext links, QuickTime movies and sound samples, held together with *HyperCard*. But the content certainly is novel. As well as providing a discography you can listen to, and all the videos from the *Us* album as QuickTime, the CD attempts to give you more of the background. To this end, you get interviews with the makers of the videos, as well as Gabriel's own comments on the songs.

It's exciting to allow people to get inside the work and not just receive it passively

Most interesting though is the virtual studio: you can explore the Real World Studios complex and play some of the strange instruments contained within. With the help of producer Brian Eno you can set up jam sessions with various Real World record artists. And, if you like, you can remix a Peter Gabriel track on the mixing desk.

There's plenty more on offer – we'll give *Xplora* a full review in our CD-ROM pages when the finished version is out, which it should be by the time you read this.

After the launch, we caught up with Peter Gabriel and asked what he thought the CD-ROM added to the listening experience.

"I've always been fascinated by multimedia," he told us. "I think it's exciting to allow people to get inside

the work and not just have to receive it passively."

But is there a contradiction between the technology of the CD-ROM and the more ethnic, acoustic content?

"No, I think this marriage is very interesting because technology without any sense of culture or history is pretty empty and shallow. Part of the job of technology should be to absorb and make available that material. This is a hand-made/high tech marriage and this global communication culture is to me what the Nineties should be about."

"There's an image of technology as a de-humaniser, and that's true of the first wave of new forms of technology. The second wave, once people have learnt, has the capacity to be opposite – a superhumaniser. Is there more to be done with CD-ROM than has been up to now?"

"Yes, it's a great vehicle for story telling and we're very much learning at the moment."

So why did you choose the Mac for Xplora?

"On the road we have something like 15 Macs and in the studio there must be over 30. It's one of those things where we started off getting into it a little bit, and more and more uses were found. So we ended up going that way. Mac is a good environment for the people we work with and play with."

Are you planning more CD-ROMs?

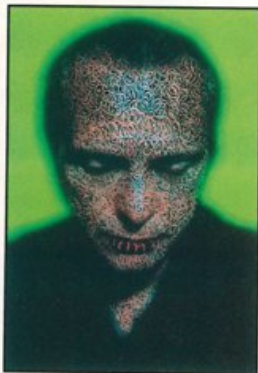
"There are a couple of projects we are talking about. I'm hoping Brian Eno [Roxy Music keyboard player and now respected record producer] will get involved."

Where do you see CD-ROM going?

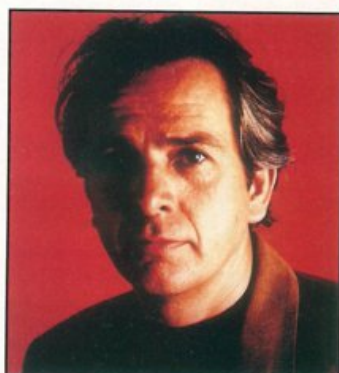
"I think in time there will be a crossover, and the boundaries between information, education, entertainment and communication will be washed away."

Amen to that!

■ *Xplora 1* will be launched in January priced at £39.95. It is distributed by Softline on 081 401 1234.



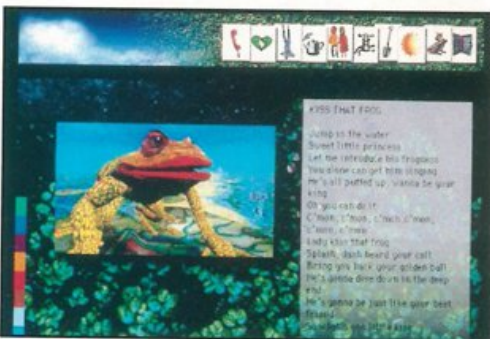
The *Xplora 1* CD-ROM is an interactive trip to Peter Gabriel's studio.



The disk includes a complete Gabriel discography.



All the videos from the *Us* album are included as QuickTime movies. If you click on a lyric the video clip jumps to that point.



As well as the videos, there are interviews with the video makers, and Gabriel's comments on the tracks.



Each object in the suitcase takes you to a different aspect of the disk; for example the photo album shows you some of Peter's home movies, for no apparent reason.

Apple TALK

Verbal communication sets humans apart from animals. Our readers assert their species identity...

Whatever you want

Why don't you ask people what they would like to see on future cover disks? We all love to get a disk full of goodies, but to be honest there are only so many Extensions you can run before your Mac slows to a snail's pace or crashes altogether, and there are only so many games you can find time for if

you have paid employment and a social life.

There must be scope for a bit of variety on the disk, the updated

Disinfectant and the product database were much appreciated. I'm sure that readers can think of a few more 'killer' applications and items to liven up your disks. I would certainly like a few sounds, extra icon folders, ready-formatted spreadsheets, TrueType fonts and possibly even QuickTime movies.
Peter A Reid
Aberdeen

All right, what would you like to see on future cover disks?

Scolding letter

Putting remarks about the editor's preference for a particular type of postcard is not big and it's certainly not clever. Are we supposed to rush out each week looking for the best Monet picture? Anyway mine's the one with 'The Bridge at Givenchy'
C Kaplan
Cambridge

If you'd sent that in on a Monet postcard, I'd have given you a T-shirt. But you didn't, so I won't.

Waive the Rules

OK so where are the rules of your competitions? The *AutoRoute Compo* in issue 7 slips in the line '... as always the more unusual the postcard the more likely you are to win!' (my italics). Apart from a passing reference to Titian and Monet in the *PowerCD* compo in issue 5 that's the first we knew of it!

If this has always been the case why didn't you say? Can we have the postage money back for the very ordinary postcards which either my son or myself sent in good faith to your earlier competitions? If we're entering an art competition we'd like to know first in future!

On a much more interesting topic, can we please have some guidance on getting through the upgrade maze that's bound to arise with the advent of *PowerPC*? Do we add the card or swap the mother board? Is it all down to price or are there other things we'll need to know?

David Marshall
Norwich

The rules for these competitions are made up as we go along I'm afraid. Who knows, next month we may decide to only accept entries printed out on papyrus or on the back of the *Oxford Dictionary*; it makes it more interesting, don't you think? And thanks for some of the very interesting postcards we have received! We'll print some of the best ones next month.

As far as *PowerPC* upgrades are concerned, it's still a bit too far off for a detailed guide, but Apple has said that there will be upgrade paths for most recent Macs, the notable exception being the *LC* series. But I'd put any money on *Daystar* coming out with an accelerator card for the *LC* before too long.

Students' crusade

Would you consider publishing one or more screen shots from a multimedia piece that we have developed for Middlesex University?

As graduates of the MA in Computer-Integrated Publishing at Middlesex, we were commissioned to develop a multimedia prototype for teaching Medieval Studies to undergraduates. The approach we took was based around the symbols and metaphors of the cathedral, on the basis that the cathedral encapsulated much of

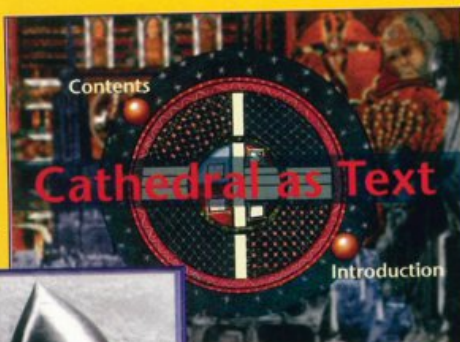
the medieval world view. 'Cathedral as Text' enables students to access core texts, look at them in both old and modern English, listen to narrations and look at images/icons relevant to their own work, and copy pieces left by others. These

could be comments, essays, pictures, etc. All of the above information can be accessed dynamically by 'walking' through a 3D model of the cathedral.

If MacFormat published the pictures it would provide the impetus for the university to publish a full version, as well as informing your readers of the interactive work that is being done by students outside of St Martin's and the RCA.

Eugene Jordan
Louise Wass
London N6

Our pleasure Eugene and Louise. So how about publishing that full version, Middlesex?



The centre of medieval life explored on the Mac, thanks to two students from London.

medieval crusades

Castle as Power Base
Crusading for Jerusalem
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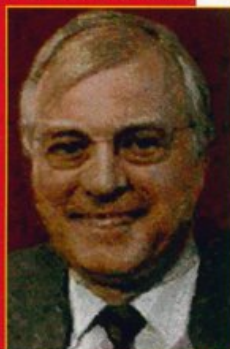
Win a year's subscription



The answer to the December Morph, held over from last time, was Bill Clinton and Boris Yeltsin, and well done to Dewi Hughes who comes from Wales. A free subscription is yours.

So to this month's; can you figure out who the two components of this picture are?

If you can you could win a free subscription. All you have to do is note down the answer and pop it in an envelope with a badge: a button badge or an enamel badge, even a sticker if you like. The winner will be the person with the correct answer and our favourite badge. Send them to: **Chancellor visits Hong Kong, MacFormat, 30 Monmouth Street, Bath BA1 2BW**, by February 15th 1994.



Thpelling errorz

I have one minor observation regarding your use of the expression 'A quick brown fox jumped over the lazy dog' to illustrate a particular font. I believe that the expression is used because it is supposed to contain all the letters of the alphabet. As you may notice, the sentence does not actually contain an 'S'.

Richard Price
Sutton Coldfield

Thankz Richard, the reason for that iz becauz the keyboard'z

broken on the zub'z Mac. I'm surprized you hadn't noticed.

Pay up!

I think most people are halted from paying fees by the apparently daunting, and expensive way of getting money over to America. If you are to continue the line of putting shareware onto your disks a 'Noddies Guide' to getting money 'over the water' would be very handy. Especially if encapsulated as per your PD/Shareware info box.
Glenn Robinson
Norwich

System 8's already here!

In December, Rob Amos asked why the Finder has to say, "The document 'dogcow.hqx' could not be opened, because the application program that created it could not be found.", and why he couldn't also be told the name of the application. Well, he can. The fact is that the problem lies not with the Finder, but with the application. If he looks at the programmer's bible, *Inside Macintosh*, he'll find the details of the Missing Application Name string. In short, "When your application creates a document that the user can open, your application should include a missing-application string in the resource file of the document." This string is stored as a purgeable 'STR' resource, of ID -16396, and like it says - it should be present in all the documents that the user can open.

Unfortunately, most developers don't bother. Which is a shame, as it is exactly 'this sort of attention to detail' that's going to keep the Mac above the masses of Windows clones. With a Missing Application Name string, the dialogue would then read "The document 'dogcow.hqx' could not be opened, because the application 'BinHex 4.0' could not be found." - which is a lot more useful at a cost of about 10 bytes per document... Interestingly enough, Windows doesn't have any sort of provision above a brain-dead 'No association exists for that extension' message.
Grant, InterNet

Are there any other features which Apple has implemented but no-one uses? Write in if you know of any.

How many of our readers are Noddies then? Hands up!

We're looking at ways of simplifying the shareware process, perhaps by acting as a clearing house for shareware payments. If anyone has any suggestions we'd be glad to hear them.

Paper chase

A couple of thoughts on the Apple Expo: didn't the crowds around the demos on the Apple stand (on Friday at least) make you think how Apple always estimate demand incorrectly?

And if computers were supposed to lead towards the paperless office how come I came away with distended arms from the vast quantities of paper being handed out?

Chas Awdry
London SW16

Including a couple of ounces of MacFormat, I hope?

Can't find anything

Can we have more information about educational software, and developments in that area. Also, when you review shareware and freeware, it is usually impossible to find out where to get it from? I don't have access to bulletin boards and the shareware companies I have written to don't have many of the programs you have reviewed. I am especially interested in the chess program *GNU Chess* and would like to know where I can get it.

Jonathan Evans
Nottingham

Our education coverage is an area we intend to devote a lot more time to in the future. But we don't just want to review lots of software, we want to help you use it, and that's where we need your help. If you use your Mac in education and have a tale to tell which you think could help others, write in to Those Bloody Kids, MacFormat, 30 Monmouth Street Bath BA1 2BW.

Any reputable shareware company should be able to supply you with any of the programs we review - if they can't, find a new company. We get all our software from publicly available sources.

As for GNU Chess, just send me a disk Jonathan and I'll gladly send you a copy.

And finally, it's a big goodbye to Jules, our art editor: "Bye Jules, we'll miss you," they sniffed.

Cruising the keys

This month's selection of Easter eggs: hidden shortcuts and secret key combinations.

■ In *Beyond Dark Castle*, try setting the date to December 25th and looking at the opening sequence.

■ On some Mac Pluses, pressing **[command] [shift] [8]** has a strange effect on the cursor.

■ In Word 5.1, hold down the **[command]** and **[shift]** keys and select Preferences, then click on the new icon.

Thanks to David Thompson, Richard Shakeshaft and Sean Furey for those. Do keep them coming in!

Free clothes!

You are probably already fishing in your pocket for a tenner to buy one of our smart new T-shirts on page 62. But you can get hold of one free by writing such a good letter we decide to make it letter of the month. A letter's got to be better than £10, right? So get scribbling about an interesting topic (you decide what's interesting, anything under the Apple tree), and send your letter to **AppleTalk, MacFormat, 30 Monmouth St, Bath BA1 2BW.**

Disk troubles?

If you are one of the people who is still waiting for a replacement disk, please accept our heartfelt apologies. We are doing our best to sort the situation out, but please don't ring our editorial offices, they don't know anything about it! If you want to vent some spleen ring **DisCopy Labs** on 0327 300077.

The Tiny Zone

Back by popular demand, the area of the magazine which excludes everyone without perfect eyesight. This is the very last issue of MacFormat to be edited by its publisher, who can now get back to what he does best - sitting around in meetings all day and moaning about typos. So it's a big Tiny Zone hello to Alex Soboslay, he of the tasteful jumpers, who takes over as editor as soon as he flies back in from MacFormat's US office. All right for some! We're sure the girls will love working with Alex, he isn't as frightening as he looks. Here's a Tiny Zone compo: a copy of *Lemmings* to the first person to successfully match the names with the faces of the girls in the T-shirts on page 62. They all work for MacFormat, so there's a clue. Employees of Future Publishing can bugger off and get back to work. This issue was produced with some Macs running some software, but does anybody really care about that?

Apple Talk, MacFormat, 30 Monmouth Street Bath BA1 2BW

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ACCOUNTING	
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MYOB (fully integrated single user business accounts)	£220.00
Ritz (powerful and comprehensive accts for smaller business)	£340.00
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Sage Bookkeeper (accounting's biggest name now on the Mac)	£125.00
PRESENTATION	
Astound (new entrant, reads PowerPoint & Persuasion)	£99.00

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Desk Paint 3.0 (excellent 24 bit paint and draw package)	£99.00
IntelIDraw (Aldus' brilliant new package)	£95.00
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Painter 2.0 (pressure sensitive 24 bit colour, mimics oils etc)	£225.00
PainterX2 (brilliant add-on tool for Painter)	£75.00
PaintIt! (24 bit colour at a great price)	£35.00
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ColorIt! 2.0 (PhotoShop capabilities without CMYK)	£89.00
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Type Reunion (gives hierarchical font menus)	£45.00

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GCC BLP Elite (low cost PostScript laserprinter, 4Mb)	£575.00
GCC BLP Eclipse 4 (fast PostScript level 2, 2Mb)	£675.00
GCC SelectPress (A3 600dpi, edge to edge)	£239.00
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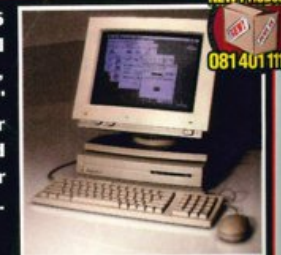
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Lexmark PS 4079 (A3 PostScript inkjet)	£2795.00
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Tektronix Phaser 200e (high quality colour)	£3295.00
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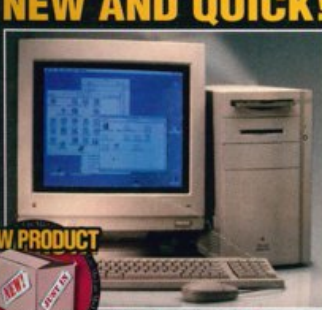
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>Diamonds	(the most addictive game yet)	£29.00
>Darkseed	(terrifying adventure game)	£32.00
>Freddy Pharkas	(the frontier pharmacist)	£29.00
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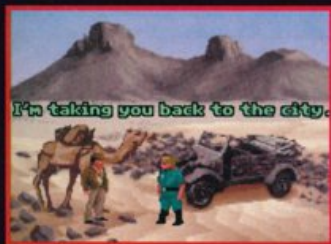
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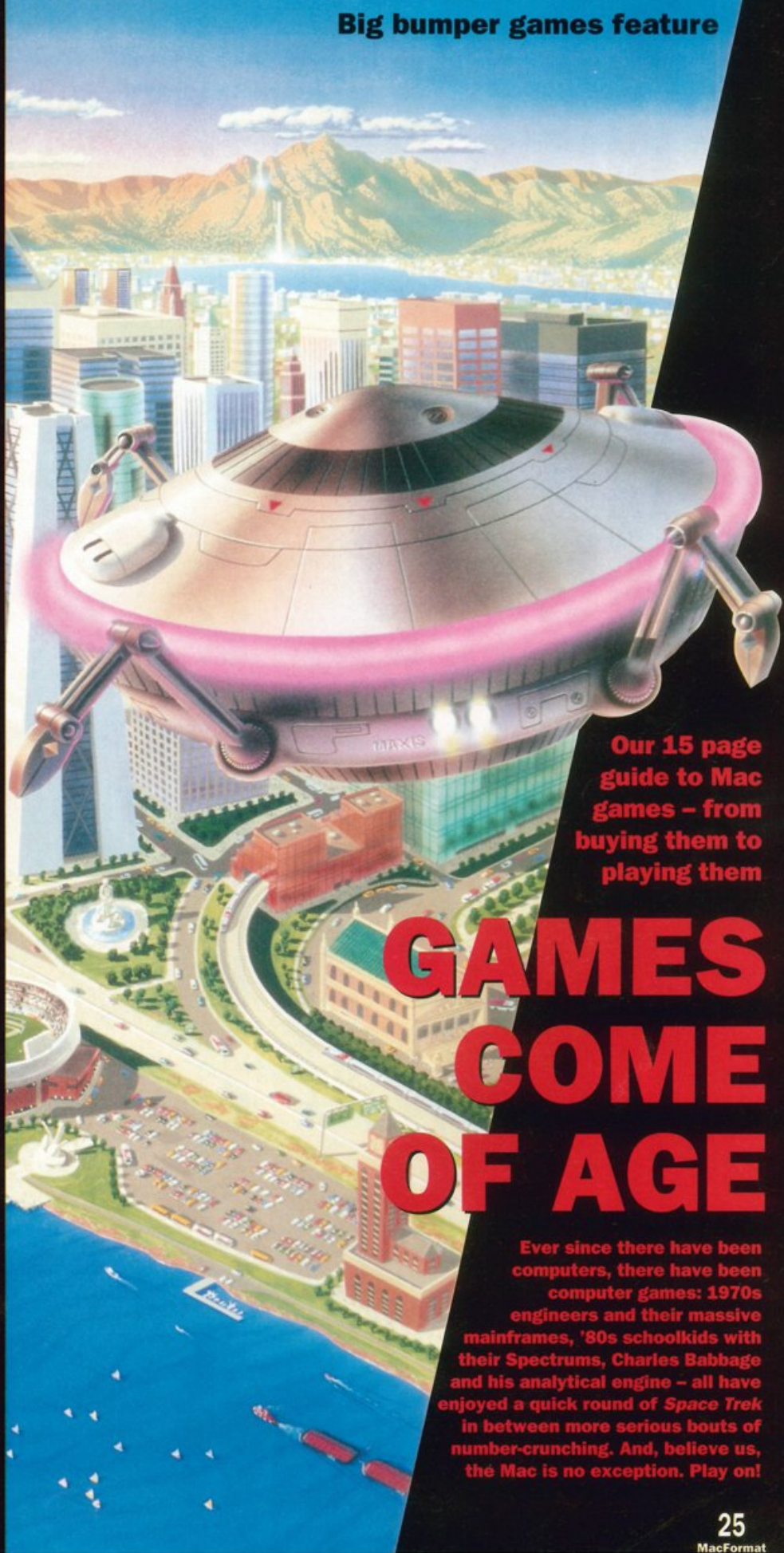
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Our 15 page guide to Mac games – from buying them to playing them

GAMES COME OF AGE

Ever since there have been computers, there have been computer games: 1970s engineers and their massive mainframes, '80s schoolkids with their Spectrums, Charles Babbage and his analytical engine – all have enjoyed a quick round of *Space Trek* in between more serious bouts of number-crunching. And, believe us, the Mac is no exception. Play on!

THE STATE OF PLAY

Dave Green dispels the myth that "there aren't any good games for the Mac" and talks to the people who'll be making the scene even more exciting in the future

Let's face it, when you first went out and bought your Mac, the idea of playing games on it could not have been further from your mind. But then you're flicking through a magazine like **MacFormat**, say, and soon come to realise that, when you're not doing your best to entertain your computer with your latest deathless prose or artistic creation, it can always repay the favour and do its bit to entertain you. Yes, behind that cool creamy (or is it beige?) exterior lurks computing hardware many times superior to those new-fangled Super Nintendos and Mega Drives, and now, after some years of development, we're at last beginning to see a broad range of high-quality games software to match.

If anything, that's what's most surprising when you sit down and think about it – just how many Mac games there are. Some of them are rubbish, sure, and there certainly aren't as many for the Mac as there are for the Amiga, or even the PC. But I reckon there's enough Mac games out there for everyone to find something to their taste – especially when you consider the wealth of amateur contributions lurking in the public domain.

So, join me now on a whirlwind whistle-stop tour of the essential Mac entertainment titles, pausing en route only to see how some of the most intriguing new developments in games are coming along. And don't worry if trigger-happy shoot-em-ups or massively involved strategy sims aren't really your thing – we'll be taking in all the traditional video-game genres, and seeing what each has to offer. Kicking off with the ones that virtually invented the whole software entertainment business in the first place...

Shoot-em-ups

A very fine place to start, as Julie Andrews once said. Technically defined as 'games in which the main activity is shooting' (in any direction – the 'up' bit is just a historical throwback to a more primitive age), shoot-em-ups are the bread and butter of video games. And the game that's bread and butter to Mac shoot-em-up fans everywhere just has to be *Oids* – a bizarre mutant hybrid of those ancient arcade games, *Thrust* and *Defender*, in many ways this has still to be bettered. Fly around a selection of hostile asteroids, take out enemy bases and spacecraft, rescue little men running around on the ground, take them back to the mothership, and do it all over again. It's fab.

Still, if coping with realistic gravity gets you down, there's always *Crystal Quest* (and its slightly-more-polished, if somewhat-less-immediate sequel, *Crystal Crazy*), where you mouse-control a funny blob around the screen collecting crystals. Don't worry, you're also under constant attack from all kinds of weird aliens – believe me, it's nowhere near as easy as it sounds.

These are all very well, but if you ask me, the future of shoot-em-ups lies in 3D polygons. *Spectre*

Your Mac can more than hold its own in the world of leisure and entertainment software



Spectre Supreme – the ultimate 3D tank battle. Not to be confused with **Chicken Supreme**, a flavour of soup.

Supreme's the best example to date of a game that takes you inside a virtual three-dimensional reality – it's so easy to forget that you're not actually in a tank battling across a lurid future landscape, especially when you're up against another human opponent playing over a network. As Macs get more and more powerful, games like this will just keep on getting more and more numerous – and better.

Flight sims

As with 3D shoot-'em-ups, the enjoyment you get out of these tends to be directly related to how fast your Mac is – so with new machines appearing all the time, this is

definitely going to be an area to watch. The general consensus of opinion is that *Hellcats Over The Pacific* is still the all-time flight-sim favourite (after all, it does offer both dogfights and dive-bombing), with the World War One antics of *Red Baron* running a closely-contested second.

It's widely believed that modern combat aircraft have taken a lot of the fun out of flight sims – after all, where's the challenge in firing off a heat-seeking missile at a target 40 miles away? That said, Spectrum Holobyte has done a sterling job with *Falcon MC*, a high-tech silky smooth monster of a game that delivers such a feature-packed payload it's a wonder it ever gets off the ground. Or, if you prefer to be a little more civil in your



In our survey, 8 out of 10 pilots who expressed a preference said they liked *Hellcats Over The Pacific*.

The frog that roared

Just about to burst on to the Mac scene is Bullfrog Productions, a software development company already well-respected for its uniquely absorbing PC and Amiga games. If you've been keeping up with the **MacFormat** games news pages, then you'll know that their acclaimed god-sim *Populous* has variously been scheduled for a Mac release "later this year" (April 1993), "in September" (August 1993), and "definitely in October" (which is what they said when it got to September and there was still no sign). What's particularly galling is the fact that *Mac Populous* is due to be followed by conversions of Bullfrog's popular *Populous*-type wargame, *Powermonger*, and the excellent crime-and-cyborgs strategy shoot-em-up, *Syndicate*. So what's going on?

Growing a little weary of the standard programmer's promise that "it'll be ready next week", **MacFormat** tracked down the head of Bullfrog, Peter Molyneux, at its Guildford HQ and subjected him to the following interrogation. Our aim: to find out why the conversions had taken so long, and to discover what else the company's vision of a Mac games-playing future might hold in store.



Populous? Popular, more like – Bullfrog's best-selling god-sim hits the Mac at last.



Theme Park promises you all the fun of the fair – well, all the fun of running one, anyway.

Right, Peter, obvious questions first. Exactly which games are you writing for the Mac, and when are they coming out?

Well, there's *Populous*, which we've just finished, and *Populous 2*, *Powermonger* and *Syndicate*, which are all but done now. Eventually we hope that we'll be converting all our major releases – whatever we bring out on the PC, we'll also be doing on the Mac. But you'll have to talk to Electronic Arts, who are publishing all our Mac titles, for the official release dates.

Oh, OK. Why haven't you released any Mac games before?

The main reason used to be the size of the Mac market – not enough people had them to make it worthwhile. But it's a great machine, and there's a lot of them around now, so we thought, "Let's take the risk and produce some really good games for it."

Is it very different writing a game for the Mac compared to the PC or Amiga?

Yes it is. For starters, you have to stick to the standard interface –

we've employed a Mac software specialist to sort that out for us. Then there's the fact that the graphics have to be recognisable in black and white as well as colour, which means a whole new lot of design problems for the artists. And finally, there's the one-button mouse, which means we've had to re-think the controls slightly from the two- or three-button versions on other machines.

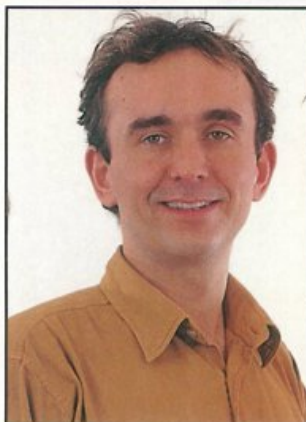
Have your products been influenced by Mac games in any way? (I'm particularly thinking about the Maxis *Sim* series here.)



Flame on! Stand by for sinister futuristic armed-to-the-teeth action in *Syndicate*.

In fact, *Populous* beat *Sim City* into the shops by a couple of weeks – I think it was just coincidence that both companies came up with similar ideas for 'god sims' at around the same time. All our Bullfrog games have lots of little people in them – some that you can control, some that you can't – but I think that's probably an accident too. Anyway, ever since, Maxis has concentrated mainly on simulators, but we've gone down more of a games route.

What sort of games would you expect to see on the Mac in the future – how about Mac versions of



"It's a great machine," says Bullfrog MD Peter Molyneux, and who are we to argue?

some of these new Bullfrog projects, like *Theme Park* and *Magic Carpet*?

We'll definitely be doing a CD-ROM version of *Theme Park* – the good thing about CD-ROM on the Mac is that it's out now and widely available, so it's something you can already plan for. I don't yet know if we'll be doing fast-moving graphics stuff like *Magic Carpet* on the Mac – it all depends if the machine is fast enough. If it's fast enough, then we'll support it!

Well, there it is. Read page 36's review of *Populous* – out now, with *Powermonger* in mid-February and the others "sometime next year".



Take a ride on Peter's *Magic Carpet* – due for conversion if the Mac's fast enough.

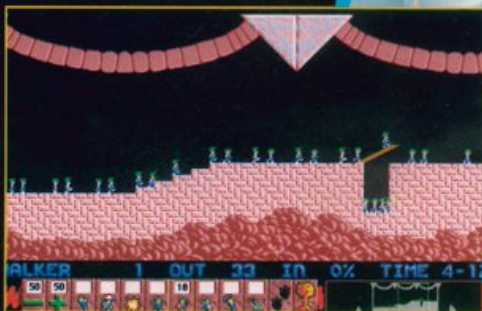
aviation, *Microsoft Flight Simulator* should help you touch down with confidence next time the flight crew all suddenly develop food poisoning as you're coming into Heathrow.

Tips for the future? Well, how about *F/A-18 Hornet*, another super-sleek jet-fighter air-attack sim from the same people who brought you *Hellcats Over The Pacific*? Yeah, I thought you'd be interested – we'll bring you more news as we get it.

Platform puzzlers

These are the games where you have a little on-screen character that runs

and jumps around a network of platforms, collecting useful objects, avoiding bad guys and yes, solving a fair amount of puzzles along the way. Suffice to say that on every other home computer and console system apart from the Mac and PC, these are absolutely huge. As it stands, there are only really three Mac games that fit this category at all: *Prince Of Persia* from Electronic Arts – high-class animated adventures deep inside a series of dingy dark dungeons; *Out Of This World* – Delphine's weird sci-fi odyssey with plenty to pick up and use; and *Lemmings*, from Psygnosis – the



Save the silly Lemmings from their self-appointed doom.

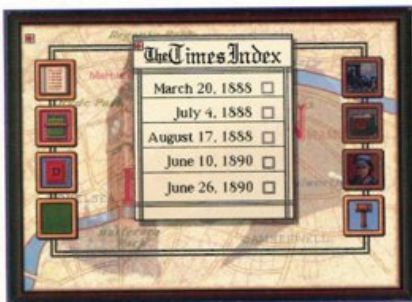
Look for the silver lining

As Bullfrog's Peter Molyneux points out, one area where the Mac currently leads the field is the CD-ROM – thanks to low prices and Apple's own enthusiasm for the medium, PowerCD and CD300 drives are rapidly finding their way into homes across the country. Given all the recent excitement over other CD games platforms (Sega's Mega CD, Commodore's CD32, and the new American 3DO standard), you might expect this to revolutionise the sort of games that you see on your machine. Or would you?

There are two main things to bear in mind about CD storage. First, there's a lot of it (on average, at least 500 megabytes per disk), which is obviously good news for games that require large amounts of graphics, digitised sound or video. Second, access to this information is shockingly slow – usually between 150K and 300K per second. This is about half as fast as you can pull information from a hard disk drive, and many times slower than data transfer from the Mac's internal memory.

Based on these figures, we can safely assume that the games which will benefit most from CD-ROM will tend to be large, slow-moving and graphics-intensive – in other words, illustrated adventures. So it comes as no surprise to discover that these have formed the bulk of the Mac's CD-ROM game releases so far.

Current leader of the CD-ROM pack must be the *Sherlock Holmes – Consulting Detective*



Sherlock Holmes – Consulting Detective brings you all of crime-ridden Victorian London on a single CD-ROM.



What seems to be a post-modern dental surgery from *Myst*: the ray-trace of hope for CD-based adventures?

series from Icom: Volumes 1 and 2 brought you in-depth Victorian sleuthing with colour video sequences, and Volume 3 is due out soon.

Equally (if not more) impressive to look at are the two big names of Mac CD-ROM adventuring, *The Journeyman Project* and *Iron Helix*. These two science fiction epics both offer some incredible graphic sequences, the impact of which is lessened somewhat by their sluggish responses and humdrum gameplay. Hopes for combining excellent visuals and a strong sense of involvement are currently pinned to *Myst*, a surrealist fantasy from the people who brought us *Cosmic Osmo*. But does it deliver more than a HyperCard stack of gorgeously ray-traced 3D images? All is revealed in the review on page 38.

However, to be fair, it's not all graphic adventures on CD. There have also been some top-class 'edutainment' CD-ROMs and a few murmurings of 'interactive movies', too – Sony Electronic Publishing is currently working on CD-ROM versions of blockbusters like *The Lawnmower Man*, *Bram Stoker's Dracula*, *Cliffhanger* and *Last Action Hero*, which should make for very interesting viewing indeed. And the other thing that the keen CD-ROM gamer should keep an eye out for is compilations – after all, you could fit a lot of high-quality public domain shoot-em-ups and puzzlers on to a 550 meg CD, and it's only a matter of time before some enterprising software company does just that.

classic game of suicide prevention. Fortunately for us, they're all brilliant, so that's OK then.

Why aren't there any more? It's mainly to do with the way that the Mac produces a screen image, which makes it tricky to have lots of small graphics all moving around at the same time. Of course, as programmers become more skilled (and Macs get faster), there's no telling what they might achieve...

Driving games

Again, not a genre that's really taken off on the Mac so far – probably for the same reason as platformers. Still, as 3D techniques become more widespread, there's no reason why we shouldn't see more high-performance racers in the style of *Ferrari Grand Prix* – with opposing cars, lap statistics and course-design options aplenty. But for the moment, let's zoom straight on to an area where the Mac has become justifiably famous...



In *Ferrari GP*, you can even drive your car from slightly above and behind the vehicle. Don't try this at home, kids!



More colours, more buildings, and the tantalising possibility of full-blown alien invasions – it's all here in *Sim City 2000*.

games – *Sim Earth*, *Sim Life*, *Sim Ant* and, of course, the one that started it all, *Sim City* – and most people instantly think of it running on a Macintosh. Word has it that the original author of *Sim City* always had the Mac in mind when he designed the game, with its multiple windows and intuitive interface, and this is reflected by the way that the two complement each other perfectly. If you're the sort of person who wants to get deeply involved in running a town, planet, insect colony or ecosystem, then these are most certainly for you.

But there's more to strategy games than this. MicroProse offers you *Civilization*, in which you aid and abet the development of a tribe through centuries of technological and political progress, and *Railroad Tycoon*, capturing all the heady intricacy of transport ...

Strategy games

A genre which, we can safely say, the Mac has made its own. Mention any of the 'Sim' family of

In the public spirit

It's a tribute to the Mac's home-grown ethos that many of its best games have been written by enthusiasts and can be picked up for next to nothing. That's the idea behind putting a program in the public domain and allowing it to be freely distributed far and wide for everyone to appreciate. Sometimes the author will ask for a 'registration fee' (typically a few pounds – or dollars) if you've especially enjoyed it, in which case it is known as 'shareware'. But in either case, you get to try out a potentially professional-quality program at little or no cost to yourself.

So, how do you go about getting hold of it? First, it's well worth checking to see if the game you're interested in has appeared on a **MacFormat** coverdisk – we've brought you a lot of the very best ones over the past year, and some back issues are still available – see page 100 for more details. If not, and if you (or a friend) have access to a modem, you shouldn't need me to point

out that you can easily download disks full of this stuff from your local friendly bulletin board. Or, if you don't happen to own a modem, there are plenty of mail-order libraries about that will send you a floppy disk packed full of public domain treats for only a fiver – or less!

It's true that most PD games fall quite happily into the categories of shoot-em-ups or puzzlers – indeed, some of the very best Mac arcade games (for instance, the *Asteroids* look-alike *Maelstrom*, and the world's best *Tempest* conversion, *Arashi*) have their roots firmly in the public domain. However, because of the very nature of the medium, you will occasionally stumble across titles from other genres, and some that simply defy categorisation altogether.

Five Top Mac PD games

... entrepreneurship in the 19th century. Curiously, all-out war games have never fully occupied the hearts and minds of the Mac-playing populace, though there are some good ones around – the *V For Victory* series from Electronic Arts, in particular.

The real megalomaniacs amongst you will be overjoyed to hear that yet more *Sim* games are currently in the pipeline, including *Sim Farm* (complete with soil depletion, crop rotation, droughts and vegetable markets) and *Sim City*



Surely the worst-kept secrets of the entire adventuring world: *The Secret Of Monkey Island* (one and two) – hilarious yo-ho-ho-style repartee.

2000, which will be just like *Sim City*, but with many more added features: schools, hospitals, prisons, underground subways and pipe networks, and a whole new host of 'natural' disasters – including alien invasions (see our review of *Sim City 2000* on page 33).

Interplay is also getting in on the act, with an up-and-coming conversion of its Hundred Years War simulator, *Castles 2*, and we haven't even mentioned the folks at Bullfrog, who get a whole box to themselves on page 27. But then again, these are strategy-game enthusiasts we're talking about, so you'd expect them to have big plans.

Adventures

Again, a field in which the Mac excels – it just goes to show that when fast-moving graphics aren't at a premium, this machine can more than hold its own. No mention of adventures would be

1. GNU Chess

Registration fee: none

One of the Mac's cutest and most compact chess games, enjoying a huge surge of popularity due to the recent Kasparov/Short shenanigans. It may not be quite up to Grand Master standard, but it'll give you a good match, and, best of all, it won't cost you a penny!



2. Maelstrom

Registration fee: \$15

To call this "the best PD version of *Asteroids* on the Mac" would be a severe understatement – it's simply one of the best versions of *Asteroids*, PD or commercial, on any computer, ever. It's got zany sampled sounds, beautiful colour graphics and it plays like an absolute dream. What more do you need to know?



3. Seahaven Towers

Registration fee: \$20

Responsible for more lost working hours here at Future Publishing than absence, sickness and maternity leave put together, this 'patience' variant is the ideal way to while away an hour or several when you've got something less important to do. And isn't it odd how the graphics on *Seahaven Towers* (and most other PD patience-style programs) are far better than on some commercial card games we could mention?





4. Tetris 2000

Registration fee: none (we assume)

No-one knows where it came from. No-one knows who it's by. But everyone agrees that *Tetris 2000* is certainly the finest colour version of *Tetris* to date – itself one of the most frustratingly simple computer games ever devised. If only this version allowed you to see what the next block was going to be. Sigh.



5. Solarian II

Registration fee: \$25

Another shoot-em-up, this time in the vein of the old arcade classic, *Galaxians*. (Or is it *Galaga*? I always did get those two confused.) Anyway, hordes of evil alien insects swoop through the skies, and you blow them away with your mouse-controlled spacecraft. But isn't that always the way?

Chart provided by Premium PD, PO Box 14, Ravenshead, Notts NG15 9DR.

Where to find game reviews

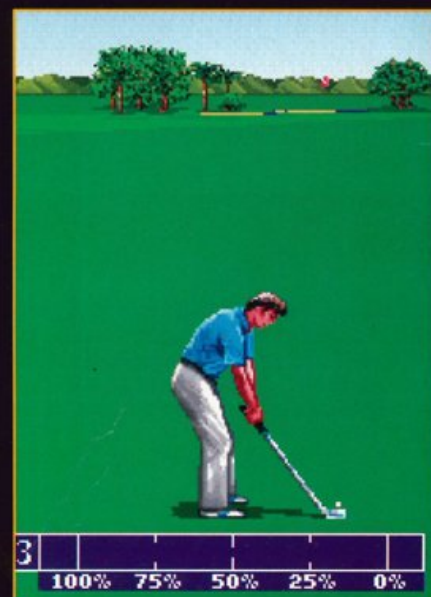
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Chuck Yeager's Air Combat.....	Flight sim.....	7
Civilization.....	Strategy.....	2
Cogito.....	Puzzler.....	3
Crystal Crazy.....	Shoot-em-up.....	6
Dark Seed.....	Adventure.....	8
Eight Ball Deluxe.....	Sports/pastimes.....	3
Falcon MC.....	Flight sim.....	3
Ferrari Grand Prix.....	Driving sim.....	2
Freddie Pharkas.....	Adventure.....	5
Hell Cab.....	Adventure.....	5
Hoyle Classic Card Games.....	Sport/pastimes.....	8
Indiana Jones and the fate of Atlantis.....	Adventure.....	4
Iron Helix.....	Strategy.....	5
Journeyman Project.....	Adventure.....	1
King's Quest VI.....	Adventure.....	6
Monkey Island.....	Adventure.....	1
Monkey Island 2.....	Adventure.....	4
Nascar Challenge.....	Driving sim.....	5
Oh no! more Lemmings.....	Platform puzzler.....	4
Out of this World.....	Platform puzzler.....	1
Pathways into Darkness.....	Adventure.....	7
Red Baron.....	Flight sim.....	1
Rise of the Dragon.....	Adventure.....	5
S.C. OUT.....	Puzzler.....	3
Sim Life.....	Strategy.....	1
Spaceway 2000.....	Shoot-em-up.....	6
Spaceward Ho!.....	Strategy.....	1
Stellar 7.....	Shoot-em-up.....	4
The Tinies.....	Platform.....	2
V for Victory Gold Juno Sword.....	Strategy.....	5
V for Victory Market Garden.....	Strategy.....	4
Vette!.....	Driving sim.....	2
Zoa - Zone of Avoidance.....	Shoot-em-up.....	7

complete without praising *Monkey Island* and its sequel, *Monkey Island 2*, for their marvellous graphics and pirate hilarity – these are widely regarded as some of the best computer games ever written. But, also from LucasArts comes another shadowy figure who's been attracting a lot of attention: Indiana Jones, who stars in *The Fate Of Atlantis*. If you enjoyed the films, then you'll love guiding Indy through various Nazi interactions and supernatural scrapes.

Also well worth checking out is Sierra On-Line, whose enormous range of character-based adventures – especially the ongoing *King's Quest* saga – all share a recognisable graphical style and sense of humour. If you prefer your entertainment to have a more sinister edge, however, then *Dark Seed* and *Pathways Into Darkness* are both recommended – *Pathways* in particular for its innovative 3D approach. This may be one route that traditional adventures take in the future, the other being to take advantage of the massive storage space that CD-ROM offers. Will this mean that playability is sacrificed in favour of attractive graphics? Well, I'm afraid I can't tell you that at this stage in the game.

Sports and pastimes

Imagine your Mac as an astounding all-purpose sports centre, only with slightly cramped changing rooms. If you'd like a leisurely round of 18 holes, that's no problem – just load up *PGA Tour Golf*, and you can take on some of the world's most famous names, on the most prestigious courses. Or if you'd prefer a quick game of pinball, there's a choice of fully-featured tables – from the excellent *Tristan* to the superlative *Eight Ball Deluxe*. Or perhaps chess is more your thing – chess with amusingly-animated combat sequences every time someone takes a piece, I hope, because that's what you get in Interplay's *Battle Chess*, soon to be revamped in colour in CD-ROM form. This is a hard area to make predictions, simply because it's so wide-ranging. But I'll leave you with this thought. Why has there never been a proper football game on the Mac? Or cricket? Well, why not? **mf**



Finally, to end on an altogether more civilised note, why not tee off with that all-time sporting favourite, *PGA Tour Golf*?

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SimCity 2000

SimCity 2000 is set in a huge playing area, complete with oceans, rivers, mountains and valleys. You view the landscape from an angle, giving a true three-dimensional perspective.

You can zoom in to get a closer look. The design constraints mean you tend to end up with a American 'grid' city layout, but you can produce a more English effect.

The closest level of zoom shows how the wonderful intricate detail of the city is constantly changing and growing.

Stuart Anderton goes power-crazed as he takes on the role of mayor – in *SimCity 2000*

Well, you might think that a game which enables you to pretend to be a head of local government might not be one of the all time greats, but *SimCity* was. It was one of the first of the simulation games now known as god sims, although in *SimCity's* case it was a much more prosaic position – town mayor – that was being simulated.

In the last few years, *SimCity* has begun to look a bit crude, and as Maxis created more and more sophisticated Sim games (*SimAnt*, *SimEarth*, *SimLife*, *A-Train*), *SimCity* became the poor cousin. But no longer. Reincarnated as *SimCity 2000*, the game now features the gorgeous 3D graphics of *A-Train* and the complex, detailed simulation offered by the others in the Sim series.

If you've never played *SimCity*, a brief recap is in order. You are mayor and town planner of a tiny community,

charged with making the city grow and prosper while keeping its citizens happy. You have three broad means of control: you set tax rates, you 'zone' areas for potential use for industry, commerce or housing, and you build the infrastructure: roads, rail, water, power and so on. You don't control your SimCitizens directly, just as you wouldn't in real life: you must encourage and cajole them into doing what you want.

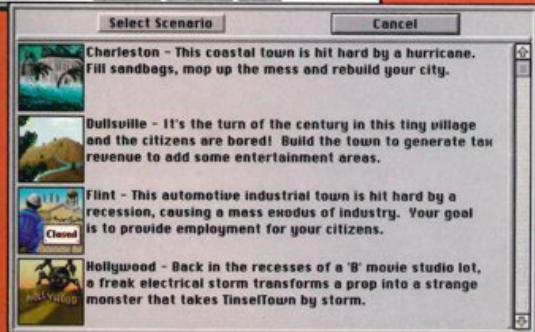
This much is the same in the old and new versions, but the level of control you have is orders of magnitude greater. Take taxes for example. In the original *SimCity* you set a tax rate and that was it. In *SimCity 2000* you can choose separate tax rates for commerce, residents and industry, you can give preferential rates to particular kinds of industry, perhaps textiles or electronics, add VAT or a special income tax or set up parking fines. The maximum tax rate



You are kept informed of the population's opinion of you and the city by a selection of newspapers – you can read all of those stories!



Here you can see a stadium, a hospital, police and fire stations, a school, a library, a marina, your city hall, a park and some of the city's housing and industry. And you can create all of this from scratch, if you're good!



As well as being a 'software toy', there are a number of scenarios which have a definite objective to achieve in order to provide a more direct game.

This is the same section of city as above, but here we are looking at the subway and water network. The green tubes are subways and the grey boxes are stations.



Big bumper games feature

Charleston 1989 Budget August 1989		1989 To Date	1989 Year End Expense Estimate	Done
Property Taxes	%7	2113	3308	?
City Ordinances		-316	-494	?
Bond Payments		0	0	?
Police Department	%100	-408	-641	?
Fire Department	%100	-233	-366	?
Health & Welfare	%100	-58	-91	?
Education	%100	-198	-297	?
Transit Authority	%100	-348	-547	?
Year to Date Cashflow\$		\$559	\$867	
Estimated Cashflow\$			\$20,000	
Current Funds\$			\$20,867	
End of Year Funds\$			\$20,867	

With *SimCity*, you are Kenneth Clarke. What a horrible thought. Anyway, you get complete control over your city's tax system, which influences its growth.

Month	Residents	Commerce	Industry	Total		
Jan	7% 137	7% 43	7% 123	303		
Feb	7% 135	7% 45	7% 122	605		
Mar	7% 137	7% 45	7% 121	908		
Apr	7% 136	7% 45	7% 122	1211		
May	7% 136	7% 44	7% 123	1514		
Jun	7% 137	7% 43	7% 121	1815		
Jul	7% 136	7% 43	7% 119	2113		
Aug	7% 138	7% 44	7% 117	2412		
Sep	7% 136	7% 43	7% 119	2710		
Oct	7% 136	7% 43	7% 119	3008		
Nov	7% 137	7% 43	7% 119	3307		
Dec	7% 136	7% 44	7% 120	3607		
Res%	7%	Com%	7%	Ind%	7%	Done

remains at 20%, showing the US origin of the game; in fact the whole game could hardly be British or every dialogue box would be, "Sorry, you have been rate capped". But enough politics.

Take another example - police. In the original *SimCity* you dotted police stations around the place and hoped. In the new game, you can add prisons, and if there is any trouble, such as a riot, you direct the police by hand to the scene of the trouble.

One of the nicest features, but one of the hardest to get used to, is the 3D view. Those with a CSE in technical drawing will doubtless know the correct name for the perspective it gives, but it makes accurate placement of roads tricky until you get used

to it. Fortunately you can rotate the view in 90° increments, and three levels of zoom allow you to take a close look. This is particularly important as the land is not flat - you have hills and valleys to contend with.

The landscape - complete with rivers, the sea, mountains, trees, lakes and streams - adds considerably to the realism. If you find a waterfall, you can dam it and build a hydro plant, and you can either take a road over a mountain pass, or tunnel through. It makes the positioning of your city crucial.

You have a very fine control over tax, and the new *SimCity* has done away with some of the dodges you used to be able to pull.

Your city is part of a *SimNation* containing four other cities, who trade with you, but also compete for people and resources. To make links with them you run a road off the end of the screen.

I'm running out of space to describe the extra features in *SimCity 2000*. You'll just have to imagine the uses of libraries, water treatment plants, colleges, museums, desalination plants, hospitals, city hall and the rest. There is also a whole network of subways and water supplies to contend with.

SimCity supplies so much depth to simulation that it's possible to get lost in it for hours, not to say days. You become quite attached to your city and will go to great lengths to preserve it and make it grow. (Incidentally, you can import and update any cities you are particularly fond of from the original version).

It's not really a game, but to give it some gameplay challenge, there are a number of scenarios supplied. In these you take over a city in the aftermath of a disaster - a hurricane say - and have to achieve a certain objective, perhaps of population growth, in a certain timespan. For me however the real fun of *SimCity 2000* is starting with a bare patch of ground and seeing what you can build...

MacFormat speaks to the *SimCity 2000* programmer, Will Wright

Many of the *Sim* games from Maxis spring from the fevered brow of American programmer Will Wright. So what is it that makes a man want to devote his life to making simulations of ants and town planning? *MacFormat* caught up with him in Maxis' Californian offices...

MF: Do you write all of your *Sim* games on the Mac?

WW: All of the games that I created were developed on the Mac, basically because I'm better on it than on DOS machines. Some of the other *Sim* games were done on the Mac as well. In fact, Ken Karakotsios, the guy behind *SimLife*, used to work for Apple, whereas *SimFarm* had more of a DOS upbringing.

MF: How do you go about designing a *Sim* game?

WW: Well, I read a lot of books really. I usually spend a lot longer than I have to, to put a game together, and that's because I really get into the subject and enjoy it. I mean, I'm still researching areas of *SimEarth* and I'm still looking at city planning material, even though there are no plans for a future *SimCity* at the moment. I just keep on going.

MF: Do you think the *Sim* games are the logical graphics-enhanced progression of those number crunching games (Lunar Lander, Lemonade Stall) that everyone used to have on their 8-bit machines in the early 1980s?

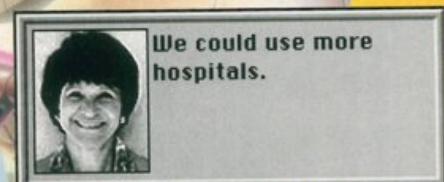
WW: Yes, that's probably true because, say you put twice as many pieces into a program, what comes out is something that looks five times as complex. The programs themselves may not be much more complex than the older ones, but they seem to be a lot more involved and intricate.

MF: What's next after *SimCity 2000*?

WW: Well, we're working on a project at the moment that's more focused on people. The working title for it is *Dollhouse*, though I don't think it will stick because nobody seems to like it over here. We'll see though.

MF: Is there anything in particular that you'd like to see as the theme of a *Sim* game?

WW: I'm looking forward to breaking into new ground, but how about something like *SimSewer* - as long as somebody else does it!



You're not on your own - advisors help you make the right moves. But you can ignore them if you like!

Finance		Safety & Health	
1% Sales Tax		Volunteer Fire Dept.	✓ -77
1% Income Tax		Public Smoking Ban	
Legalized Gambling		Free Clinics	
Parking Fines	✓ 116	Junior Sports	
Education		Promotional	
Pro-Reading Campaign	✓ -38	Tourist Advertising	
Anti-Drug Campaign	✓ -46	Business Advertising	✓ -204
CPR Training		City Beautification	
Neighborhood Watch	✓ -77	Annual Carnival	
Other		Estimated Annual Cost	
Energy Conservation		Finance	116
Nuclear Free Zone		Safety & Health	-77
Homeless Shelters		Education	-163
Pollution Controls	✓ -204	Promotional	-204
Other		Other	-204
Done		YTD Total\$	-316
		EST Total\$	-494

As well as raising taxes, you can also pass bye-laws, such as making your city a nuclear free zone.

Twerton Park

Capacity : 25000
Attendance : 1301
Local Team : Soccer
Bristol Rovers
Wins-Losses : 26-14

Rename

DONE

The level of detail is extraordinary. Not only can you build stadia, you also get to see the current attendance and the current win-loss record.

Pick a team and name it:

Done

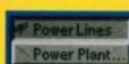
Football	Llamas
Baseball	Alpacas
Soccer	Bristol Rovers
Cricket	Dromedaries
Rugby	Army SimAnts

You can even select what sport is played at the stadium and give the team a new name. I've doomed this team to certain failure...

The bulldozer icon lets you destroy what you have carefully built with a very satisfying explosion!



You need an electricity supply for your city.



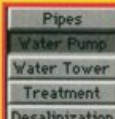
A road network is essential: *SimCity 2000* adds highways and a bus system to cut congestion.



You can customise your landscape by adding forests and lakes.



Cities will grow without water, but to get dense development you need proper sewerage.



Mass transit such as a rail or subway system helps to move people to and from work without adding to congestion.



Commercial areas are for shops and offices.



Essential services have to be added – if you have no police or fire brigade there will be riots for certain!



Zone areas for your citizens to live.



An education system creates a better workforce, so make sure you provide plenty of schools and colleges.

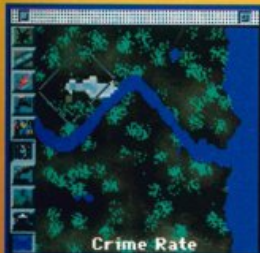


You can name parts of your city by adding signs.

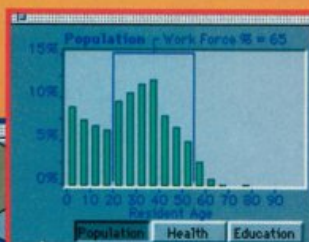
You use this tool to identify objects in your landscape.

Rotate your city to get a better view of what's happening.

This rotates the view by 90 degrees clockwise.



A conventional map can show the extent of police or fire protection.



You get a lot of feedback on the demographics of your population, which you can influence with education and healthcare.



Your city is just one in a SimNation, so you can compare it to the others.

This icon strips away the buildings to show the underlying landscape.

Switch off the signs for a more realistic view.

You can toggle roads and power networks off to get a clearer view.

With this icon you can see the zones of your city more clearly.

This icon changes to an underground view of the city.

Click here for access to the full on-line help system.

✓ **Top of the polls**
Lovely graphics and an involving simulation make this game a classic.

✗ **Bit of a John Major**
Little to criticise; roll on the CD-ROM version.

Price: £40
From: Maxis 071 490 2333
Out: now
Requires: 2Mb free RAM, System 7, 256-colour monitor
Controls: mouse and keyboard

Big bumper games feature

You have manual control over combating disasters in *SimCity*.

Occasionally during the game you are given extras to place in the city.

External links help commerce and industry, but are expensive to build.

Industry is essential for growth.

Add plenty of recreation facilities for happier citizens!



Graphs show your city's performance on dozens of criteria.



You get fine control over the different kinds of industry.

City	2016 Budget	2016 To Date	2016 Year End Estimate	2016 Best
New City	100	104	104	100
Property Taxes	100	104	104	100
City Ordinances	0	0	0	0
Bond Payments	0	0	0	0
Police Department	100	104	104	100
Fire Department	100	104	104	100
Health & Welfare	100	104	104	100
Education	100	104	104	100
Transit Authority	100	104	104	100
Year to Date Cashflow	100	104	104	100
Estimated Cashflow	100	104	104	100
Current Funds	100	104	104	100
End of Year Funds	100	104	104	100

This icon brings up the budget window to alter your taxes.



Graphics 97%
Sound 89%
Gameplay 98%
MacFormat rating

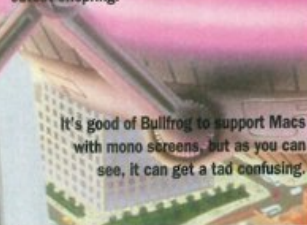
95%

POPULOUS

Cameron Winstanley dons his god suit and gets down to some serious meddling with people's lives...



When you've got a large, flat plain, your little fellas build castles, which are not only easiest to defend, but also produce the cutest offspring.



It's good of Bullfrog to support Macs with mono screens, but as you can see, it can get a tad confusing.



What's a god game then, and why does Bullfrog always get mentioned in the same breath? Well, god games involve you controlling masses of people. In *Powermonger* and *Syndicate* (two of their other titles, due out next year) you're an army commander and the boss of a future corporation controlling armed cyborgs, but in *Populous* you're quite literally a god. Control freaks, armchair generals and oppressed spouses

the offspring will emerge, wander off and build a hut of their own, just like kids do.

This is all very pleasant and heart warming, but you're a god for heaven's sake, so to speed up things, you've got to get down to some serious divine intervention. By using the mouse and two keys, you can click on a spot and either raise or lower the level of the land. The idea is to create flat plains, because the larger the area, the more crops your guys can grow and the larger the settlement. Huts become stone houses, then towers, and eventually castles. The bigger settlements are easier to defend, and also produce stronger people.

You can also mess with your followers' heads. Normally they'll just settle down, but by placing a stone idol on the land, you can produce a leader of the people, and through him, you can influence their movement. By moving the idol around, you can direct your followers towards it, giving you control over which areas they populate.

Your main aim is to wipe out the rival followers, but you also have to raise a large population, as one aim is influenced by the other. Being a god, you get your power, or Mana, from your follow-

Once you've created a knight, he just wanders across the land killing and pillaging. Good work if you can get it.

are going to love this one.

Each game starts with a map of a world consisting of water and small islands, one inhabited by your people, and the other by evil followers of a rival god. If you leave your guys alone, you'll see them wander around until they find a flat bit of land, where they'll build a house and start to breed. After a while,



The desert's a harsher environment, and if walkers have to wander for long before finding a suitable place to build a house, they tend to drop dead. Downer.



Conditions in the arctic are even harder. Like the desert, there's the problem of walkers dying from exposure, but they're also reluctant to leave their home in the first place.

How to find your way around the Populous world

This is the entire world, with all settlements shown on it. Land production and floods are dramatically charted here.

Buildings range from tents on single blocks of flat land to more permanent houses.

This is the control panel, allowing you to scroll the map and cast down terrible acts of god.

You can tag any walker in the game with a shield to see what they get up to.

I've tagged the leader, shown by his tiny papal magnet icon.

With this papal magnet, you can direct your people all over the map.

ers, so the more followers you have, the more Mana you get. Simple tasks such as moving your stone idol or raising land require only a small amount of Mana, but as you get more, you can get up to some seriously nasty tricks.

Are your opposing followers building too many castles? Why not blast them with an earthquake or a destructive volcano? Or maybe you could send out knights to burn their settlement and kill them all. Why not place a swamp near their settlements, so the emerging population will be sucked down to a peaty demise? The more powerful the cataclysm, the more Mana it takes up, so a

small scale earthquake uses less Mana than flooding the entire world.

Compulsive and totally addictive

It all adds up to an oddly compulsive and totally addictive game, with the challenge increasing all the time. Later levels have snowy terrain where your followers breed slowly, and desert terrain which kills off anyone who wanders around for too long. Once you've finished a world, the game will even choose the next world based on your performance, giving you a slightly harder one if you struggled, or a really mean one if you walked through it. The game's packed with

options, so you can alter factors such as aggression and speed of reproduction for your enemy. You can play against a friend over an Appletalk system, and even play the game on a monochrome screen, as the disk contains both a mono and colour version. The graphics are brilliant (although a little confusing in mono) the gameplay's spot on, and there's plenty to keep you going until *Populous 2*, *Powermonger* and *Syndicate* come out. If they're all as amazing as this, then Bullfrog are going to have a string of massive hits on the Mac.



Believe it or not, this was a flat plain covered in crops and settlements mere seconds ago. That was before I dropped a volcano on them, putting an end to their salad days and fine living. Ha ha ha ha.

✓ **Population explosion**
Good graphics and unique gameplay.

✗ **Mass genocide**
The long playing time might put some people off.

Price: £40
From: 0753 546465
Out: early 1994
Requires: System 6.07 or above, 4Mb RAM
Controls: mouse



Here's the baddies in a fairly powerful state, with plenty of men and the Mana bar at the back showing a healthy amount.

Graphics 96%
Sound 87%
Gameplay 96%
MacFormat rating

93%

MYST

If you said, 'CD-ROM graphics extravaganza' to Tim Smith, he would immediately think, 'Myst'. Find out why...

Does anyone remember *Cosmic Osmo*? Huge game, loads to do, tons of gameplay, ate up more Mac time than any copy of Microsoft Word. Well, *Osmo*'s creators Rand and Robyn Miller, have spent two years developing *Myst* for the new breed of Mac and the new breed of Mac user.

For a start, *Myst* loads from CD-ROM. You're also going to need at

least 2.5Mb of free RAM to run it. You've got to have System 7, 3Mb of hard disk space, and a 256-colour machine. Hi-tech stuff indeed.

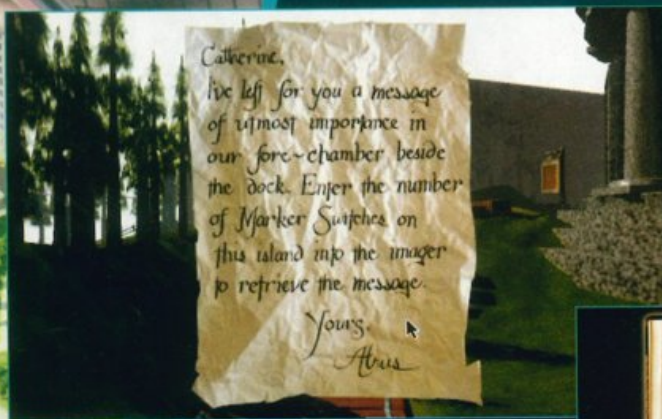
Without a doubt *Myst* is a technical extravaganza. But before we get into all of that, let's have a quick look at the plot. Cast in the usual, American, RPG mode – with a convoluted and almost impenetrable 'plot' – the game sees you exploring an island. You have to make use of a teeming mess of clues, red herrings, cabalistic signs, and a variety of strange goings on. If you've ever read *Foucault's Pendulum* (okay so there are no knights Templar, well none I've chanced upon as yet), then you'll have a rough idea about the convolutions and tangents you're going to need to put yourself through before coming out of here. Play the game in the same way as reading the book. That is to say that you have to live

at hand (surely a more atmosphere-enhancing icon could have been chosen, but that is nit-picking of the highest order) constitute the entire process. And believe me, in the world of CD-based games, this is a relief. Let me put it this way – if you click on a lever, it does its job, if you click on a door, it opens, if you click in a direction, then you walk there. There are none of the million 'Do' icons that disrupt the playability of other RPG-cum-Adventure games most especially on the PC.

As for the look of the game, and let's face it, that's what all the furore is about, it is a modern wonder. This is ray-tracing of almost solar proportions. Every single scene is rendered to the very highest level both in terms of technique and artistic merit. It is a joy to see the CD format finally done justice to after having to plough through game after game that could quite happily have shipped on a few floppies. You need the 650+Mb of storage that the compact disc affords for this baby.

You also need a porky Mac specification if you want to play *Myst* without concentration-castrating pauses as one scene cross-fades into the next. Rand and Robyn however, have considered the fact that most of us don't have £100s to fork out on video RAM, so they have built in a variety of viewing modes for *Myst*. These basically relate to the speed or even existence of cross-fades and can be switched while in-game. There is also a system called Zip Mode that enables you to revisit already explored locations at the click of the mouse. OK, so this is a neat idea for the more impatient (or brilliant) gamers, but trust me on this, over-use means that you will miss out on information needed to finish this epic.

And finish it you must. As Rob and Rand say in almost puke-inducing jargon, this is a 'goal oriented' game. Pal-eees! Goal oriented! Essentially



Oh Good Lord! A message? For me? No, dammit, it's for that Catherine woman again. I never get anything.



A book, with a picture. What we need is some FMV here. And we'll get it.

through the first few chapters before getting into the cerebrally taxing and exciting stuff a little further in.

Myst, as a game, is not set up to make you feel comfortable. It's quite the opposite in fact. The whole feel and atmosphere of this game is disconcerting and mildly worrying, the deeper you get into it.

Fortunately though, it is a piece of cake to play. The control system is simplicity itself. You, your mouse, an on-screen pointer in the shape of



That has just got to be a dentist's chair. But why is it on this mysterious island? Is this the mythical land where Novacaine is fed into the water supply? Clues... clues...



Now that really is a tacky door embellishment isn't it? These island dwellers live in one of the most graphically gorgeous places ever to appear on the Mac, but taste they have not!



Superb sea-views with plenty of space to bring up the kids n honest, healthy lifestyle. It's a shame then, that corruption and greed abound.

this means that you have to solve the mystery of this fabulous island and save it from destruction brought about by moral corruption. Yup, there's a moral story built in there. So much so that you can almost hear Captain Kirk turning to McCoy and saying: "Despite what we've been through, I think we've all learnt something from this". But hey, don't let that disrupt your enjoyment of the play.

What you've got to do is to sit back and let the atmospheric sound effects wash over you. These are provided courtesy of the Sound Manager system extension that comes on the disc. It needs to be installed on your Mac along with the QuickTime FMV extension that enables you to watch the *Making of Myst* movie that, somewhat arrogantly, accompanies the game. QuickTime also provides the animated sequences that you occasionally encounter during the gameplay. Boy are these weird. Effective but strange, and once again they justify the choice of media.

But what of the gameplay itself. Do we just have a sad example of form over content?

To be honest, my initial doubts were confirmed as I ploughed through opening scenes waiting to do something, to interact somehow, just to feel a little bit involved. But, as we all know, bias is the murderer of judgement. And after drifting back to the game in a spare moment, it became apparent that there was much more to the play than I had initially given the brothers Miller credit for. After all, these boys have proven ability with *Osmo*. So, starting over and twiddling a few more switches,

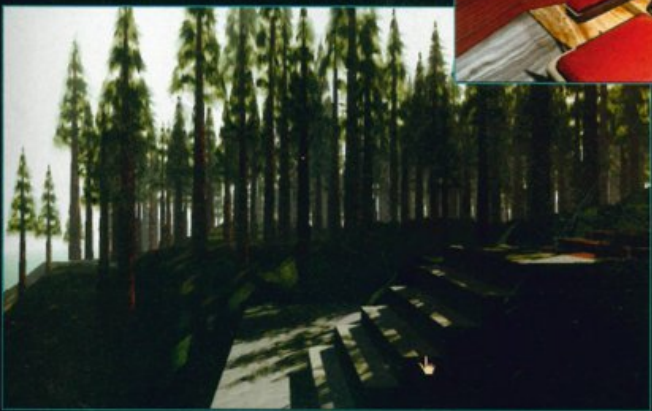
clicking a few more levers and thinking more deeply, resulted in a lengthy session which in turn resulted in a great deal of satisfaction. Despite my misgivings about CD-ROM games being constructed by people who think that American football stats are more exciting than the passes themselves, *Myst* won me over. It is quick and probably the most playable CD-specific game I've had the pleasure of interacting with – and I've sat in front of *Seventh Guest*, *Microcosm* and the execrable *PsychoKiller* in my time.

Be warned though, if *Crystal Quest* or *Defender* are your idea of fun, then you'll hate *Myst*. You actually do have to give as much to this game as it provides for you if you want to come anywhere near to scratching its surface. You will be making notes, you will be piecing together clues, you will get lost, get frustrated and want to give up on occasions. But on other occasions, you'll also lose hours and hours and hours and hours...

Here is a game that will have you coming back and back, and yes indeedy, back again. It might even see you upgrading your Mac to get the most out of *Myst*! Nice one Miller twins. **mf**



That dentist's chair looks worn and over-used close up. Maybe it isn't a dentist's chair at all. Maybe there's something stranger going on.



The island of distinctly thin trees. Magick, mystery, corruption and intrigue have this effect on arboreal neighbours. Let us venture further and examine the shrubs for more signs of bulimia.



Now here's an infernal-looking machine. I wonder what function it performs?



It shows agent travellers the ways of the stars, that's what.

✓ **Amaze-ing**
Graphically sumptuous, in-depth adventure game.

✗ **Super-ficial**
Very System-intensive, so can take a while to play on slower Macs.

Graphics 98%
Sound 96%
Gameplay 90%
MacFormat rating

95%

Price: £40
From: Electronic Arts, 0753 549442
Out: now
Requires: CD-ROM drive, System 7.01 or higher, 256 colour, at least 4 Megabytes of RAM
Controls: mouse



SUPER MAZE WARS



You can run, but you can't hide. Actually, that's not strictly true, what with this being a maze and all, but it's quite hard to hide from the ButtKicker™.

It's slick, it's good looking and it plays well. But 3D networking game *Super Maze Wars* still doesn't blow Tim Norris's socks off.

There appears to be something of an alarming trend developing among us weary old hacks who review games for **MacFormat**. It seems we can't talk about a new game without burdening you with our dreary reminiscences of video games gone by. No matter how pointless and dull it is to do so, we'll always try to find some way of mentioning long-forgotten games for the Vic 20 or the Atari VCS or some other ancient machine. With that in mind I'd like you to promise to shoot me immediately if I mention that *Super Maze Wars* put me very much in mind of an old game for the Sinclair Spectrum called *Gyron*. Is that a deal? Good.

It won't surprise you to learn, given its title, that *Super Maze Wars* involves, for the most part, a series of battles which take part within a selection of mazes (although I think, technically, they're actually labyrinths, but why quibble over so tiny a detail?). The word 'Super' is, as always, totally meaningless and has been added to comply with the new EC regulations concerning marketing hyperbole. It can be played solo – against up to seven computer-controlled opponents – or over a network, against up to seven human beings.

You control a sleek-looking craft called a *MazeCruiser* which comes

complete with a *Blaster™* and *ButtKicker™* missiles (no, really). Call me a cynical old fool if you must, but when I find that one of the principal elements of a new game is the 'ButtKicker™ missile', I can't help but feel that it's not going to be the sort of thing that's going to make undue demands on my intellect. This in itself isn't a Bad Thing – I enjoy an adrenaline-pumping arcade blaster as much as the next chap – but it does make me wonder what sort of opinion the game's publishers have of me. Surely the only people who find the idea of a 'ButtKicker™ missile' amusing are American adolescents called Chip and Bud. Still, I'll give anything a bash.

You see the maze in 3D from the view screen – sorry, that should probably be *ViewScreen* – of your *MazeCruiser* and even on my ropery old IISI everything moved smoothly and quickly. The essence of the game is to career round a maze (or labyrinth) collecting yellow gems and killing your opponents. Clearly the discerning punter expects a little more for their 47 quid so there are six variations on the basic game which involve different combinations of gem collecting and opponent killing, and eight different labyrinths in which to play them.

You have a radar screen which gives you some idea of what's nearby. It sees your opponents and the little power-up cubes (which enhance your speed or provide extra weapons), as well as giving you a clue where the gems are. The exact positions of opponents and power-ups are clearly marked, but the gems are shown only as being somewhere within a yellow rectangle. Perversely, the more successful you prove to be at finding the gems, the larger the rectangle hinting at their location. As far as I



For reasons which are never fully explained, the yellow gems bounce up and down until eventually they melt into the ground. Curious behaviour, even on an alien world.



The sides of Glastonbury Tor appear to be cut into terraces and some say they form a pattern like that of the Cretan Spiral, the famous labyrinth where Theseus met the Minotaur.



These little chaps are the power-up cubes. Different colours do different things and I still can't remember which is which.



could make out, the gems are always at the centre of the rectangle, but the larger it is, the more difficult it becomes to work out where the centre actually is. I have yet to decide whether this is a Good Thing.

Mysterious happenings

Anyway, all you have to do is blunder about with half an eye on the radar, collecting some things and killing other things, and Bob's your uncle. At first it all seemed a little dull. But after a while something mysterious happened. Suddenly, something about the sheer mindlessness of hurtling around labyrinths took hold of me and it all became rather addictive. The length of the games can be tailored to your needs and I found that I was taking frequent breaks from my work to have 'just one more game'. Just think of the time I could have wasted if I'd managed to get a networked game going in the office – the mind boggles at the possibilities...

So far, so cuddly – now for the tricky bit. Despite the fact that it does, eventu-

ally, become quite entertaining to play, I can't, in all conscience, recommend it to you. I can see it's not intended to be a particularly 'deep' game but, at this price, I can't help but feel there's something lacking. Obviously I haven't described the mechanics of the game in fullest detail, but there really isn't very much more to it. It's slick, it's good looking and it plays well. The sounds, of which there are 29 (I counted them, sorry – I think I was a train spotter in a previous life), are well used and the whole thing, what with it being networkable and all, is an amusing and addictive diversion. But for how long? I've only had it a week, and I can envisage being heartily sick of it in another week's time.

For short term thrills and fun, *Super Maze Wars* (and I still think 'Labyrinth Wars' would have been a better name) will take a bit of beating. But at Mac software prices, I'd like something I'll still be playing in a year's time, and this isn't it. And I can't get over how much it reminds me of that old Spectrum game, *Gyron*, which (snip)... **mf**



Obviously complex explosion sequences would be out of place, so when the *Brewers* got blown up a load of orange polygons filled the sky. It's all jolly effective, though.



The *MazeCruisers* look quite nice, don't they? The little red thing is a *Blaster™*. *ButtKickers™*, on the other hand, are green (for all the difference that makes to you).



I had a dream the other night where I was running down a long blue corridor with openings on either side. I still haven't worked out where I got such a bizarre image from.



Prepattle is an ancient war cry on the mysterious planet on which the game is set. Or is it? Perhaps there's an altogether simpler answer. You decide.



✓ **Amaze-ing**
A smooth, fast, addictive 3D action.

✗ **Super-ficial**
There really isn't that much to it – it'll bore you before long.

Graphics 76%
Sound 68%
Gameplay 63%
MacFormat rating

68%

Price: £47

From: Softline 081 401 1234

Out: now

Requires: 256 colours or greys, System 6.0.7 or later, 2Mb RAM (4Mb recommended with System 7 or MultiFinder).

Controls: keyboard (Gravis Gamepad and mouse stick also supported).

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SuperApple: Make your Apple icon move
Welcome: Change your 'Welcome to Macintosh' screen
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SCREEN MADNESS 2

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Bob's Eyes Pro: The best of those beastly eyes
Critters: Strange creatures wander across your screen
Errdirt: Customise all those error messages
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Notlly: Send yourself crazy messages
Personal Bomb: Customise your own system crashes!
Pet Rock: Well, it just kind of sits there actually
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Before the appearance of Macs, or indeed any personal computers, the only way to learn a foreign language, short of enrolling at the local night school, was either to get a book on the subject, or one of those record or tape based systems, such as Linguaphone or Berlitz. These were always a bit on the pricey side, but if you were planning on conversing with foreign speakers rather than just getting an academic qualification, the need to hear how the words on the page sound was pretty important.

Home computers offer an interesting new angle on this. You can now run a language course on your Mac, and if the program is based on *HyperCard* or *SuperCard* or a similar multimedia-oriented product then you can actually interact with the program, as you would with a tutor, thus combining the simplicity of a book or dictionary with the capacity of hearing the native speech through the Mac's inbuilt sound system.

There are learning packages on offer for just about all the main European languages. The CDs available at present fall roughly into three categories, though in fact some of the packages cover all three. There's business use, where the course is geared at the user learning not only about the language, but also about the culture of the country they are likely to be visiting. These are by nature intended to get you up and running quickly. There is also the general course to get you speaking and understanding the basics of the language – these are generally fun to use and not targeted at any particular age group. The third is the comprehensive study course, with the usual emphasis on speaking and understanding, as well as lengthy modules on grammar.

Listen & repeat

Stuart McHugh delves into
a range of language tuition
packages for the Mac

Nihongoware falls into the business category – it's intended to get you speaking business Japanese quickly. It does this by following the trip of an English speaking cartoon couple, who are in Japan on business, and following the steps that any visitor to the country might take. There are ten lessons on the disk, and these are pretty comprehensive. It covers things from the moment you get there – 'Asking directions', 'Transportation',



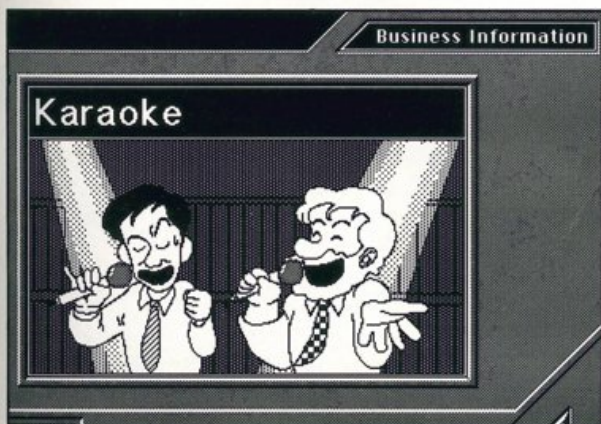
you live there on a permanent basis – hospital, weddings, and so on. So it's not just for business: things such as common customs, levels of formality, social taboos, that most Japanese action of bowing – these

and moves on to 'Telephone calls', and so on, and eventually covers everything you would need should

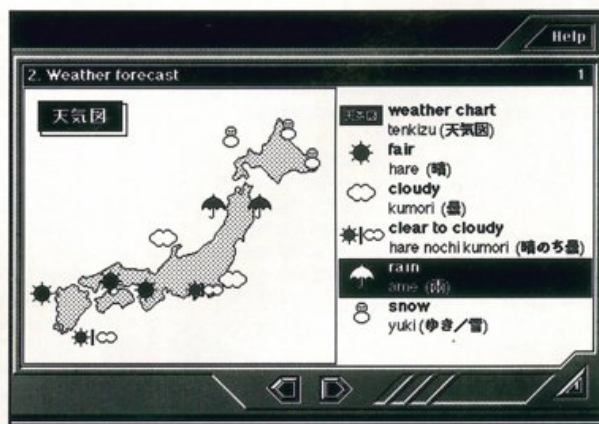
are all there, and it also covers sentence structure. It also has a couple of handy menus for counting, days, and time, and though writing is covered, it's generally intended to get you speaking the language. The publisher, Ariadne, reckoned that it would take 80-100 hours to complete the course.

As far as usage goes, it works as well as a *HyperCard* stack can – a series of buttons to point you to any of the ten lessons. You then

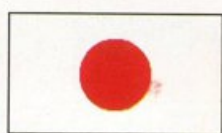
Nihongoware



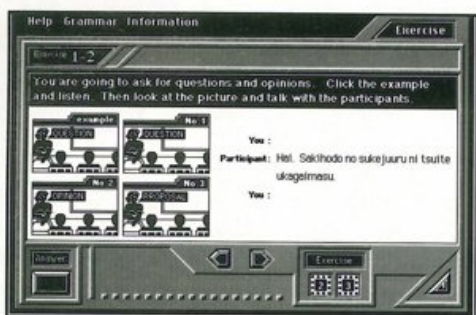
Essential study for any business trip to Japan, is swotting up on your karaoke technique, in particular trying not to laugh at your host's rendition of 'My Way'.



When the small talk gets tough, there's always that old British standby, the weather – with *Nihongoware*'s Weather Forecast lesson, you'll never be stuck for conversation.

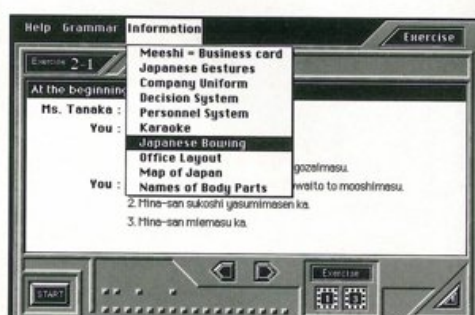


..... go to the vocabulary notes or exercises associated with that part. I have one or two quibbles about it – for instance, you can see the Japanese phonetic dialogue, then switch to the English, but not the two together. Although this stops the user ‘cheating’, having the option of seeing them both would be useful. Also, the navigation control switches between a menu at the top of the card and the usual forward/backward/return controls you’d expect. Unfortunately, sometimes you get neither and you have to skip through a few cards to find your way back to the main menu. These quibbles aside, I can find few faults. The graphics aren’t great, but they are adequate, and the content diverts from this anyway. The music/sound seems authentic, lending to the overall feel and thus



It's a shame you have to keep flicking back and forth to see the English translation of the Japanese on the screen.

getting the user into a general Japanese frame of mind (not surprisingly as it's produced in Japan).



Your business Japanese would not be complete without information on 'Office Layouts', 'Personnel Systems' or indeed, 'Body Parts'.

Nihongoware 2 continues the theme, approaching the tuition as if your visit has been extended. It

Quite different to *Nihongoware* in many ways is the series of French and English learning disks from Eurotalk. As you might imagine from its name, Eurotalk is a European company (in fact it's based in Fulham and produces quite a few language-based CDs). The best-known is the *Asterix* series. In these CDs, you learn the French or English languages by what is effectively an



latest disk, though, so who knows what the future holds), but apart from that, the whole thing is beautifully done. In simple terms a series of scenes from *Asterix* adventures is presented to you. You can then click on one of the characters to have them speak a phrase to you. The choice is yours whether the English is visible or not, and you have the facility to record your own voice to compare it with that on the CD. You can also go into the displayed text for more detailed analysis of the structure of the text. You can call up 'teaching notes' too, which are grammatical explanations of the scene in front of you.

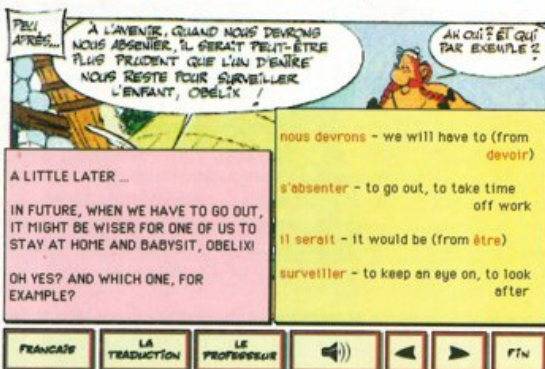
So what exactly do you get for your hard-earned pounds? Well, there's a total of 60 minutes' spoken French per disk, and Eurotalk boasts a total of 1,500 vocabulary items.

To work your way through all this learning material, you have certain options: 'écouter', where you just listen, with sound and pictures but no text, and 'lire' – for reading the text but without any sound. These options are paced for the learner, which might be best for children. But as I said, there is really no age limit, and anyway, the other two options allow for more flexibility as your French improves.

The 'interactive' option lets you listen to the French and then replay it at will; you can also call up the French text and pull up teaching notes on the current scene. And, as a last resort, you can ask for a full English translation. Also you can record your voice after the French has been spoken in a scene (future versions will have the facility for the user to narrate the entire story) and even 'interview' the main characters. And you can review old lessons and pick up where you previously left off, without any hassle.

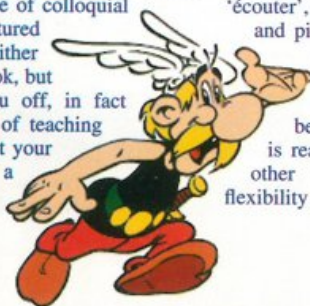


We're all fluent in French at MacFormat and this is in fact a touching love scene between Vitalstatistix and his wife. No.



Eurotalk's *Asterix* series makes learning French fun and gives you a great excuse to enjoy the antics of those indomitable Gauls.

interactive version of the *Asterix* books. I suppose this falls into the second category, where it's not business French – well, it's hardly likely with a small French warrior as teacher – but quite the opposite, as this seems to lend itself to the use of colloquial language. It isn't structured like a school course either – more like a kids' book, but don't let that put you off, in fact adults need this kind of teaching more, as it's a fact that your ability to learn a language diminishes



Asterix



covers everyday things like driving a car and going to the post office.

Apart from giving you a good grounding in the Japanese language, *Nihongoware* also provides a fascinating insight into Japanese culture – for instance, there's even a karaoke section for you to practice before you go out with your new colleagues on a business karaoke trip! Of course there's also sampled speech, and this has the rather nice touch of a fast/slow option. On the whole I would recommend this – I have no idea if it's the best way of learning Japanese – I certainly haven't miraculously picked up the language – but as a cultural primer it makes a fascinating read.

I can find little fault with the *Asterix* series. I'm not sure if it will give you perfect French – I wouldn't guarantee you would pass your GCSE on using this alone for instance, but for people who aren't attending school it's an ideal way to get a broad knowledge of the French language. And since it's attractive and fun to use, it doesn't seem as much of a chore as a textbook-based course might. Also, it's obviously geared to the Mac interface – it's available on Mac only, as it was developed in *SuperCard*.

While some of the other courses have their own merits, this takes advantage of the Mac completely. It's the only one which makes sensible use of colour for instance, whereas all the other ones I saw used *HyperCard* – which is OK, but you have to be serious about developing an interactive package like this, and

the overall product is generally much more streamlined and attractive than any others I looked at. But don't take my word for it; *EuroTalk* has already won awards from the British Interactive Multimedia Association, which is surely confirmation that its innovative and slightly unusual method of teaching is successful; pretty

impressive for a company so new to this type of product, I would say.

Berlitz is a name already associated with the home learning of foreign languages – in fact, the Macintosh implementation of its system is actually produced by HyperGlot. The Berlitz method is a recognised, successful way of teaching. Put simply, it means that on starting the course you are completely immersed in the chosen language. The product is well presented – it's in a case with one CD for the *HyperCard* stacks, and another eight audio disks with the spoken lessons. This is by far the largest amount of audio material in any of the packages.

There's also a book which describes the best way to approach the lessons. The recommendation is that you do each lesson a few times until you're happy with what's said there, so you'll be doing the first lesson –

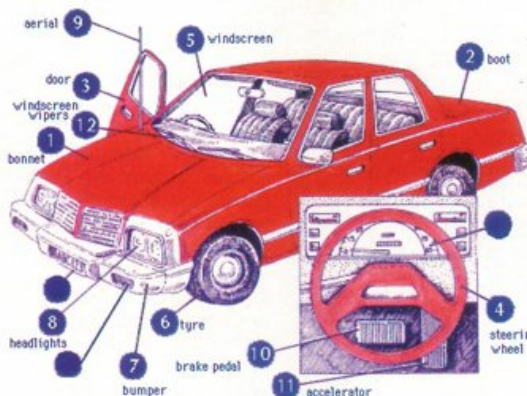


(lesson) you're currently working on. Only that's not strictly true, because after you hit **Play**, the CD sets off by itself. You have a series of controls which don't actually highlight when you press them, and in one of the modes, 'write', the controls don't appear at all, meaning that if you want to stop it (and the sessions are quite lengthy) you have to hit **[command] [period]**. This generates its own problems in that you'll get various *HyperCard* messages such as 'Can't find scene', and the redraw of the screen may not occur.

There are four ways to work with a scene: 'listen and understand', 'read', 'write', and 'think and talk'. These work with the current scene in different ways – in the first, you listen to the dialogue and try to follow it, while with 'read', as its name suggests, you try to follow the transcript of the dialogue for that scene. With 'write' you attempt to type what you have heard, clicking on a graphic of a mutant parrot to check your progress, while 'think and talk' enables you to record your own voice and compare it with the example – the most useful part of the disk. Unfortunately, there is a fundamental problem with the pre-recorded sound. The German voice passages, though clear, often cut out before the end of the phrase!

The extensive spell-checking dictionary is a great feature, and is one advantage that this product has over the others. However, even this has its problems, as this is actually alphabetically arranged from English to German, and while you can do a search for any word of either language, it seems to go against the Berlitz method. Since everything you hear is in German, if you want to search for a word you've heard, you will be totally in the dark if you misspell it.

There's yet another gripe in that the same cartoon may appear on screen for a long period of time, while the CD commentary moves on. What would have been nice is the option to have a read out, on screen, of a translation of the text you were hearing. And that really sums up the problem with the CD. It's not very interactive, and the fact that it's on the Mac is pretty irrelevant, as all you have is the equivalent of the book on screen, and the record of the speech, like the original Berlitz way. You might as well just go for the book/tape set.



If remembering car parts in German isn't your strong point, try saying, 'Vorsprung durch technik' knowledgeably.

repeating what you hear – without understanding exactly what's going on. The manual is actually pretty minimal – in computer terms it's bilingual – ie it has instructions for both the Mac and PC versions, and rather a large amount is spent explaining how to set up the course on a PC!

You'll need a total of over 9Mb of space on your hard disk to install the stacks if you have a colour Mac. However, the black and white version takes up much less space, and comparing the stacks for both, there isn't much between them, except that the images (rather badly-drawn cartoons) are colourised. And, unfortunately, it's not just the appearance of the course that is disappointing. The music that opens up the course is irritating, crops up regularly throughout. The *HyperCard* stack is badly written, with fields that look like buttons, buttons that look like pop-ups, and what appear to be usable items that do nothing at all.

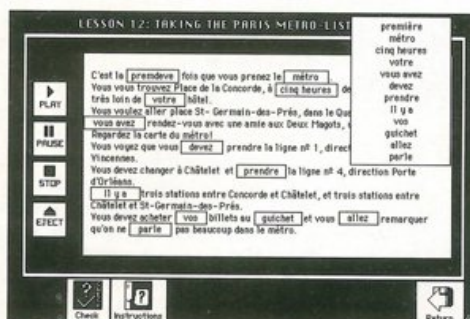
Think and Talk is operated by running the stacks you copied on to your hard disk, these stacks containing the controls for the audio CD which contains the soundtrack for the 'scene'

You can "record your voice and compare it with the example"





LinguaROM



This lesson covers all the vocab required to take the métro in Paris... then again there's always a cab. Just a thought.

As I said, *Think and Talk* is produced by HyperGlott, and my heart sank when I saw that the next product in the pile, *LinguaROM*, was also programmed by them. After all, it wasn't the Berlitz method I disliked in the last title, but its implementation. However, this product is quite different. For starters, contained on the CD are lessons for Chinese, Spanish, French, Japanese, Russian and Italian. The documentation suggests that the method for learning is similar for all the languages, implying that you should have no difficulty in moving on to Chinese once you've mastered

Spanish... I feel this might be a bit beyond me, but for one wishing to become a polyglot, the CD does present excellent value.

There are four modules which are heavily academic in nature – 'tenses', 'pronunciation', 'verbs', and, er, 'word torture'. This last category is not for the casual user. The fifth section is entitled the French Survival Manual, which is aimed at familiarising you with basic spoken French. It covers everything from hotels and shopping, to greetings and apologies.

Learning English

There are various 'English as a foreign language' teaching products available, such as the *Asterix* series. Others include the *Listen* series, again from Eurotalk, which combines sound and pictures with quizzes. The emphasis is, as with *Asterix*, on making learning fun.

Another English language product is *Telephone Talk*, which as its name suggests, is aimed at business users who will have to spend time on the telephone. But it would be useful as a general purpose tool for anyone having to come from abroad to work in the UK, particularly where, as the name suggests, telephone usage would be necessary.

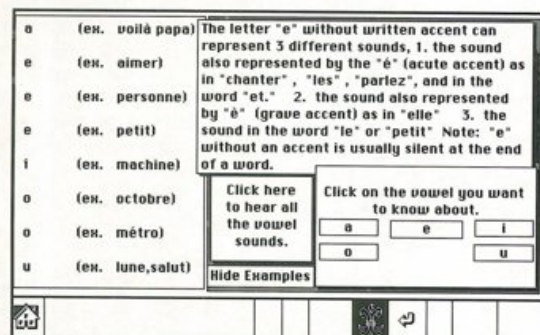
Learn to speak

That takes us to the final section, *Learn to Speak French*, which in a similar fashion to *Nihongoware*, covers all aspects of a trip to France, from 'Getting to your hotel' to 'Finding an apartment'. There is quite a lot of

useful information in this stack but the controls for playing back the spoken dialogue are disabled.

The *Learn to Speak* set also exists in a French-only version, where you copy the

Learn to Speak stacks to your hard disk then use the controls to play the second (audio) CD. There are a total of 36 lessons, all with narrative stored on the CD. You can view each lesson in many different ways – just listening, with an immediate translation, or recording your own voice, and as a test where you fill in the blanks. You can also get grammatical notes at any point. This is aimed at the user wanting to study more than just conversational language,



This grammatical note in *Learn to Speak* tells you everything you ever wanted to know about the letter 'e' in French.

though that also forms part of the course.

The one disappointing thing is that the sound is pretty muddy throughout. But the interface works well, and the CD is under control at all times, meaning that the whole course is indeed interactive. **mf**

Ratings

	Nihongoware	Asterix	Berlitz	LTS	LinguaROM
Ease of Use	71%	88%	58%	73%	75%
Features	75%	68%	65%	73%	60%
VFM	63%	81%	70%	80%	91%
Overall	70%	79%	64%	75%	75%
Online Grammar	yes	yes	no	yes	yes
Online Help	yes	yes	yes	yes	yes
Record voice	yes	no	yes	yes	yes
Translate Examples	yes	yes	no	yes	yes
Online Dictionary	yes	no	no	no	no
Progression package	yes	yes	complete	complete	complete
Cultural notes	yes	no	no	yes	yes
Exercises	yes	no	yes	yes	yes
Complete ie intended to form a complete course					
Languages available	Jap	Eng Fr	Fre Ger Sp/Ita	Eng Jap Sp/Fr	Fr/Sp Jap/Ita Rus/Chi

Where to get it

- **Asterix & Son (French) disk 1: £89.**
Asterix & Son (French) disk 2: £71.
Eurotalk (071 371 7711).
- **Asterix & The Secret Weapon disk 1: £89.**
Asterix & The Secret Weapon disk 2: £71.
Eurotalk (071 371 7711).
- **Listen: £89, Eurotalk (071 371 7711).**
- **Nihongoware vol 1: £233; vol 2: £266.**
Kimtec (0202 888873).
- **Telephone Talk vols 1 & 2: each £149,**
Kimtec (0202 888873).
- **Berlitz Think and Talk German (also**
French, Italian, Spanish) £133, Kimtec
(0202 888873) or Guildsoft (0752
606200).
- **LinguaROM II: £372, Kimtec/Guildsoft.**
- **Learn to Speak series: £66 per disk.**
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LaserMaster Unity 1200XL-T.....	£5995

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Aldus Freehand.....	£275
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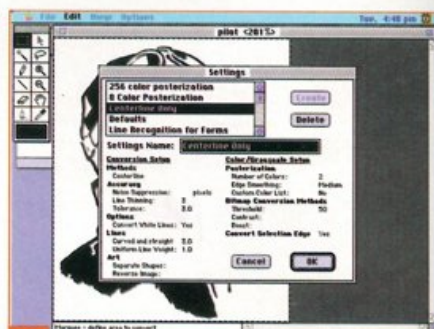
Step by step conversion



1 Prepare an image for conversion by creating or acquiring an image in one of the following graphics formats: PICT, TIFF, PCX, MacPaint, or Adobe Photoshop 2.0 and 2.5. The quality and resolution of the original file very much determines the quality of the final converted image.



2 Double-click on the *Streamline* application and open your image. You can then edit the images by using a selection of painting and modifying tools. It is best to do any intricate image processing or 'touch up', before conversion in a paint program or image manipulation software.



3 Set up your program options; you can save out for use at a later date if you are regularly using similar images. Options include your general preferences, conversion method colour, greyscale or custom colour, plus control over the thickness of your pencil, line and eraser tool.

Streamline

Adobe *Streamline* 3.0 is a program, which as you might have guessed from its title, quite literally 'streamlines' the production process of converting bitmapped images into high-quality PostScript language

Converting bitmapped to PostScript images can be fraught with problems. **Gordon Druce** checks out a program designed to make the process easier.

images (vector graphics). This means the image files are prepared and compatible with drawing programs like Adobe *Illustrator* and Aldus

FreeHand. If you have an image which you have created in a paint program, and imported from a clip art collection or from a scanner or video digitiser, then *Streamline* will convert this data into PostScript language line art, for further editing in a drawing program, final importation into a page layout program, and outputting to a laser printer or imagesetter.

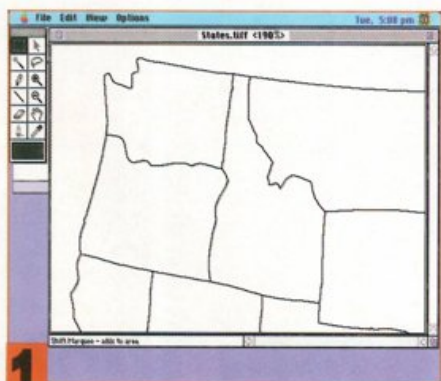
What the folks at Adobe have done is fully upgrade this version 3 of *Streamline*. It's more intuitive and user-friendly; the controls are more interactive, plus the compatibility with other software packages is

much improved, especially Adobe's own *Photoshop* image processing software. In short, it's a worthwhile upgrade.

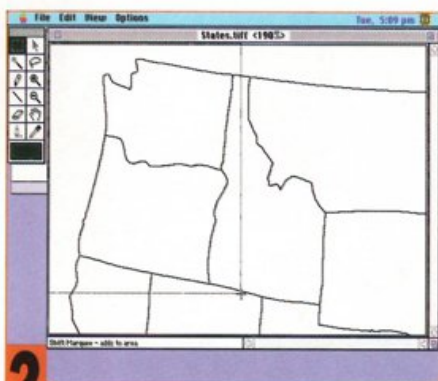
Adobe recommend you run *Streamline* 3.0 on a Macintosh with System 7 and a minimum of 4Mb RAM. It is possible to run it on a lesser machine, but to be a 'happy little Streamliner', System 7 and 4Mb is recommended. Included in the package is a clear and well presented user guide, with plenty of helpful tutorials and examples of different effects, which can be created using the program. *Streamline* comes on two disks which also include an excellent collection of sample bitmapped images, so you can practice your conversion techniques.

Installing *Streamline* is simple and

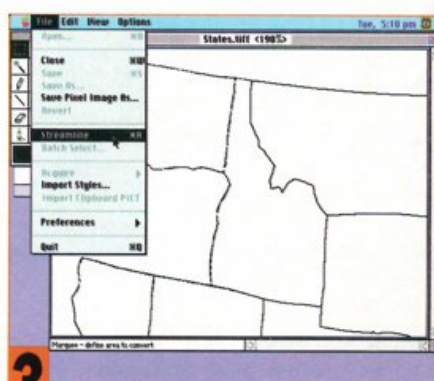
From a quick trace to postscript art



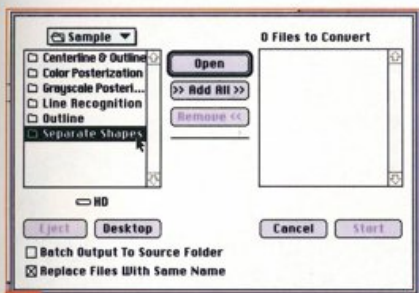
1 This trace of the state lines of the west coast of US was scanned in with a basic hand scanner and imported...



2 ...the west states, which will be the basic outline of the map, are then selected using the Marquee tool...



3 ...then select **Streamline** from the **File** menu and the conversion of this scan will be performed in seconds.



4 You are now ready to convert your image. It is also possible to convert a batch of images from the same folder at the same time.



5 Now your image is converted, you can modify the new Streamline image using the selection tools and the paint style dialogue box. You also have the option of smoothing the artwork on the converted document, by using the **Smooth Path** command from the **File** menu.



6 You can now import or place the final image into a drawing or illustration program for further modification, or export it directly to a DTP program like **PageMaker** or perhaps a word processing package.

straightforward, you just insert the installer disk 1, double-click the disk icon which will display the contents, then double-click the installer. You will then see the installer startup screen. You have the option of which hard disk you would like to

It is possible for you to edit an image in Preview mode, allowing you to see colours as you edit.

drop the program on to by using the switch disk option; just repeat the process for disk 2. As all the files are compressed to fit on the disks, the installer expands them on to your hard disk.

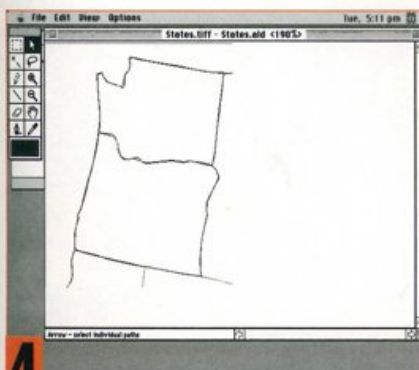
This impressive upgrade offers a much improved conversion of colour photographic images and colour drawings. The PostScript artwork can now deal with up to 256 colours. You

can also create and save out custom colours, plus you can import custom colours styles from Adobe *Illustrator* files. *Streamline* now has a new paint style dialogue box, which lets you edit and paint your images in much the same way as you would using a bitmap paint program. But really any important pre-editing of the images should be done before you import your file.

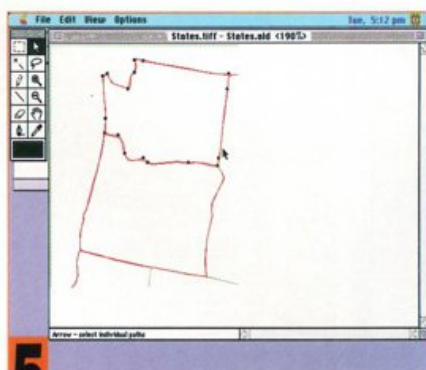
There is a much enhanced Preview and Preview Selection Views mode. It is now possible to edit an image in the Preview mode, allowing you to see colours and parts of your illustration as you edit. You can also preview just the parts of the image you have selected – this reduces the time hanging around while the screen redraws. This is all part of the program's much improved, overall user friendliness. *Streamline* will also save converted images into Aldus *FreeHand* format, as well as Adobe *Illustrator*, *PICT*, *Photoshop* and *DXF* formats.

Streamline has also got a more comprehensive tool palette than in previous versions. In fact the toolbox now almost resembles a basic paint or

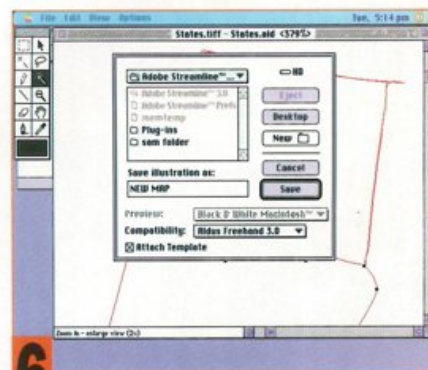
image editing program with a marquee tool, lasso tool, eye dropper, pencil, line tool, eraser, and magic wand. You also have the usual hand tool, arrow and zoom in/out.



4 The conversion is now complete, and this is how it will appear in the Artwork mode.



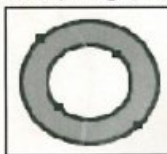
5 You can select individual paths and modify the images and deleting unwanted elements...



6 and finally you can save out the line art as a PostScript file, in this case an Aldus *FreeHand* file.

The three conversion methods

1 The **outline** method converts images that contain filled areas and lines of varying weight, like hand drawn work, clip art, or photographs - a handy method to use if you are converting colour artwork or photographs.



2 The **centre line** method converts images that contain consistent line weights and no filled areas, like traditional technical drawings or logos.



3 The **line recognition** method converts images that contain horizontal and vertical lines, like a school or business form and is also useful for some charts and graphs. This method only recognises and converts those that are more than 1/4 inch and ignores lines in the original image that are thicker than 1/2 inch. The **line recognition** method is an excellent feature if you have clients who bring you those final few pages of a set of forms that they want printing, but do not have the original artwork, only the printed copies and of course they want 'just a few changes'.



Streamline offers three conversion methods (see box) covering all the types of work you might be likely to throw at it. Anything from converting a photograph or black and white logo, to just recognising the lines of a business form you might want to rework.

Another option that greatly speeds up your productivity, especially if you have a large volume of images to prepare. You can now instantly save and retrieve your conversion set up, handy if you regularly convert similar sorts of images. For example, you might want to save the conversion options for your own pencil sketches, or name a set of options for work which comes in the same format from a regular client.

As I mentioned earlier, *Streamline* is now compatible with Adobe *Photoshop*. You can either acquire images directly from a scanner, or you can use a plug-in module which lets you acquire images directly from a scanner software or from Adobe *Photoshop*, and on to *Streamline* for conversion. Once the conversion is complete

(see step by step illos), you can make a fast cut and paste of the PostScript file into a drawing program like *FreeHand* or *Illustrator* through the Clipboard or save it out for importing at a later date.

Whether you are a designer who has a need for getting quick pencil drawing that you want to convert into a workable PostScript form, ready for importing into a draw program, or you are a small/home business user who would like to scan in forms for editing, *Streamline* will save you hours of tedious tracing and copying by hand. The end result is that all types of work prepared in *Streamline* are of far better quality than any of the built-in autotrace and conversion modes you will find in drawing and illustration programs. You have far more control over the images and its compatibility with other graphics software, makes it even more attractive. But I do wonder if, at £185, the price is a bit on the high side and whether it can really be justified for this type of program? **mf**

Jargon Busters

Image enhancement and image processing: two terms which describe the process of taking a computer image and altering it.

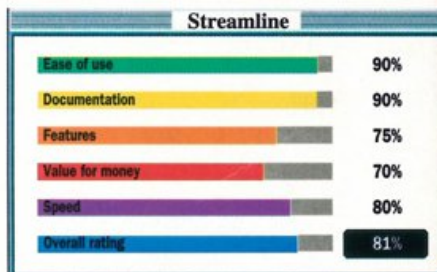
Scanned image: the image produced when a photograph or any two or three dimensional object is scanned and converted into a computer file, commonly known as a PICT or TIFF.

DXF: DXF is a file format which is used in CAD (computer aided design) programs such as *AutoCad* and other programs which accept this drawing interchange file format.

Bitmap and PostScript

Bitmapped images are made up of little dots called pixels. The pixel is the basic unit of the image, and if you want to move a bitmapped image, you have to surround all the dots that make it up and select them as a group. Your Mac screen is bitmapped: for every little dot (pixel) on the screen there's a little switch in the memory that controls it. As you control the screen directly, it means you can manipulate the graphic elements quickly. This is why you can rapidly shrink, stretch, squeeze and overlap your windows on the screen.

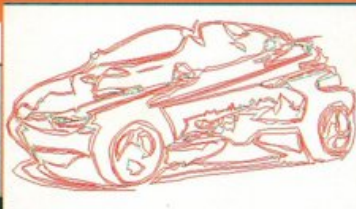
PostScript is essentially a page description language designed and developed by Adobe to handle text, graphics and their placement on the page. It has now become the most popular output standard for high quality laser printers and for many imagesetters.



Where to get it

Streamline costs £217 and is available from Principal Distribution on 0706 832000.

TIP



This poor quality scan from a car magazine has been screened for the magazine print process. But it does illustrate the importance of having the good quality original print, if you want to bring out the very best *Streamline* has to offer.

If the image you are preparing for conversion has text within it, make it at least 36 points, as anything smaller will not convert well. It is better to delete your smaller text first and then, if necessary, add it in later when the image has been converted, and is in a page layout program or drawing software. Another tip is not to use half tone images. A half tone is made up of a pattern of dots, and when *Streamline* tries to convert this collection of dots, it generates a path for each dot. The net result is too many paths for an effective conversion. So the message is: always use the original photograph or artwork, if possible.

Having a ball

The *Interactive Lovers' Guide* claims to be educational, but is it really just the seedy side of CD?



Don't get over excited: the 'interaction' is strictly limited to answering questions.



Pick a clip, any clip. It doesn't matter, they are all as fuzzy as each other.



Size is important: the *Lovers' Guide* shows its video clips in a tiny window.

MacFormat rating 45%

Not multimedia at its best.

One of the most memorable sights at the last Macworld Expo in Boston, was the queue of people waiting to get into one of the porn CD-ROM stands.

Inside the stand, with the monitors carefully positioned so their contents could not be seen from outside, groups of slightly embarrassed looking men were shown slightly dodgy QuickTime movies by blonde girls in white T-shirts. On their way out, visitors collected a photo from a distinctly past-her-prime page three girl, who signed the picture, "With big wet ones" in red lipstick. You didn't know

whether to laugh, cry, or join the queue.

Now I'm not for a minute suggesting that the *Interactive Lovers' Guide* will appeal to the same sort of person who buys porn CD-ROMs. After all the *Lovers' Guide* is educational, full of helpful advice on safe sex and contraception, AIDS and genital herpes. Plus Dr Leonard Kristal will give you a spot of psychoanalysis to help you understand your love life better.

The fact that the disk also includes 40 minutes of ROM movies of people at it like knives is, of course, purely incidental.

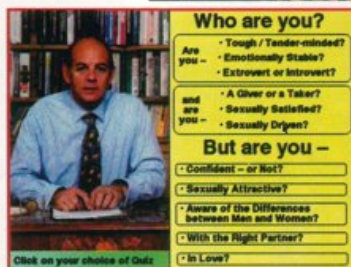
Stiff competition

The *Lovers' Guide* video caused some controversy when it was introduced because it contained shots of parts of the male anatomy in a state which, while completely ordinary and everyday, was previously only seen on video tapes with a Dutch label. It managed to get around the inconsistent porn laws by being adjudged educational.

Yes, the CD-ROM version does include similar pictures, together with audio instructions on how to achieve the effect for yourself. All of the movies have a voice over replete with sex tips, although you'd have to be pretty straight-laced to learn anything new from them.

So is it any good? Well to be honest, no. The 'psychometric' tests from Dr Kristal are the kind of thing which provide some amusement in *Cosmo*, but are unlikely to substitute for more advanced techniques, such as talking to your partner for five minutes. And the video is best watched on video in a state which, while completely ordinary and everyday, was previously only seen on video tapes with a Dutch label. It managed to get around the inconsistent porn laws by being adjudged educational.

Finally, if you're thinking of buying the *Interactive Lovers' Guide* for a cheap thrill, don't bother. Just join the queue for your signed photograph. **mf**



Dr Kristal can help: are you attractive to the opposite sex?



The clips take you from fumbling beginnings...

Where to get it

The *Interactive Lovers' Guide* costs £40 and is available from Softline on 081 401 1234. You will need a CD-ROM drive to run it and 4Mb of RAM.

The *Lovers' Guide* graphics emphasize the importance of physical lovemaking.

Parents will probably not want children under 18 to view the entire programme.

If Adults want to view the complete version, please enter the Password code to be found with the packaging

0123456789

or please Click Here

You can keep kids out with a password.

Introducing FreeHand 4.0

Marcus Dyson takes a long hard look at the latest version of **FreeHand** – and is suitably impressed.

Any program in its fourth incarnation is bound to be carrying a certain amount of baggage with it. But some programs have a reputation that precedes them, regardless of the version number. Aldus *FreeHand* is one such package, having become the recognised standard for structured drawing on the Mac. There are those who prefer *Illustrator*, and its supporters say that the program is more intuitive for designers to use, but I tried it and I didn't like it.

In terms of new features, *FreeHand* 4.0 doesn't hold many surprises. It is not possible to achieve any new effects, so the major difference is in the way the old features are accessed.

If you aren't familiar with the previous version, it would take the whole magazine to detail its features here, sorry. Suffice to say, *FreeHand* has traditionally been aimed at those who design logos. Most logos are used on letterheads, brochures and leaflets, so *FreeHand*

4.0 boasts a lot more text formatting power and features, to allow quite complex design to be carried out without the need to export the image as an EPS and include it in a DTP layout.

Textual matters

Text is now editable on screen, and objects can have text runaround applied to them directly within *FreeHand*. Both these features are massive improvements over earlier versions which were

Windows

Yes, that's a lot of windows, but they replace the functions of over 30 dialog boxes, and many of them perform their tasks interactively.

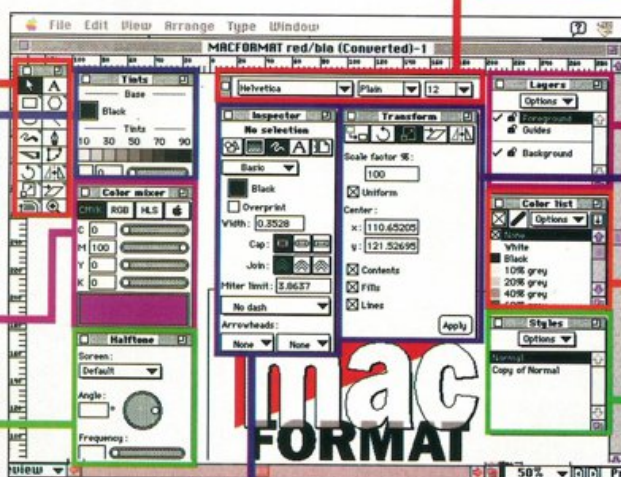
The **Tools** window will be familiar to all users of earlier versions. The little shape at the top right of some tool boxes indicates that double-clicking will open a further window.

Tints: one of the new colour handling windows. Dragging and dropping a colour into the well will generate a full range of tints. Editing the base colour will change all the dependant shades.

The colour mixer: my favourite part of *FreeHand* 4.0. See page 53, top left corner, for a brief description of what it does.

Halftone: no new features here, but a nice, simple point and drag interface for angle and frequency options.

The inspector box: after the colour mixer, the most impressive change to the interface. This contains the controls for Line, Fill, Shape, Text and Paragraph Formatting, all in one window.



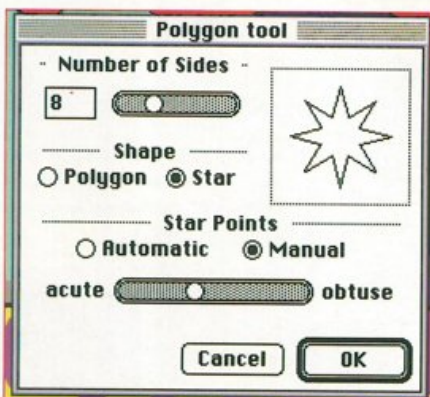
The text inspector: no longer is it necessary to obscure your image with a huge Text Styles window in order to change font, size and style.

The layers window: not new, but improved. It is now possible to have more than one layer active at one time. Previously you could only work on one or all. Now you can 'lock out' layers while others remain active.

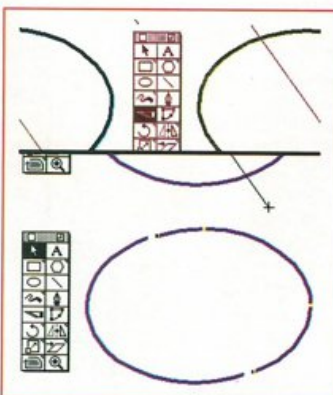
Transform: double clicking any of the transform tools brings up this window, which facilitates enhanced control of all the transform functions via type-in increments.

Colour list: This is basically a palette for the colours created in the colour mixer. Colours can now be dragged and dropped into it, then double-clicked on to be named.

Styles: no change to this one. If you need to apply a particular set of object attributes frequently, you store it here.



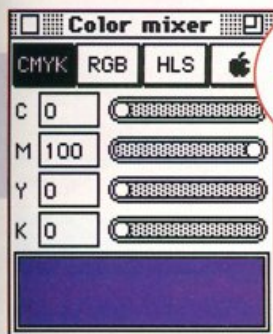
With the polygon tool in *FreeHand* 4.0, regular polygons are now simpler to create than ever, and those loathsome 'special offer' stars are now fully automatic!



Cutting a path is now more like a natural scalpel-like action. Click and drag, and the cut occurs where the scalpel's route intersects the path.



The ease with which colours and styles can be applied to text, blends edited and objects manipulated, makes *FreeHand* 4.0 even more accomplished than before at creating logos.

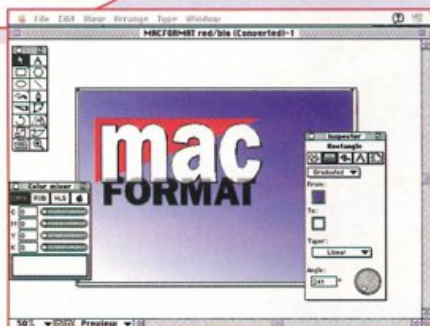


The colour mixer window is superb. The colour well changes as you use the slider in the colour model. Clicking and dragging on the colour well applies the selected colour to any object or fill.

The colour mixer's drag and drop ability makes creating and editing graduated tints extremely easy. Just [option] drag drop a colour in an object to create a gradient.



Dragging and dropping a colour on a blend object causes automatic re-calculation of the blend – a most impressive and time saving feature.



notably weak in text formatting abilities. But they are only the tip of the iceberg. *FreeHand* can import text in ASCII and RTF formats, which makes it ideal for producing reports and newsletters. Text boxes can have columns and 'rows' applied to them, and *FreeHand* 4.0 has comprehensive tab functions, so making tables is a doddle. The really beautiful thing about *FreeHand* 4.0, though, is the text flow feature. If there is more text than can be accommodated by the box it occupies, a small square on the bottom right is filled with a black circle. Clicking in this square and dragging it to another shape or path will flow text into or on to that object, as appropriate. To break this link, all you have to do is simply click on the chain box and then drag it to a vacant part of the illustration area.

FreeHand 4.0's text abilities are so advanced it could obviate the need, for those with simple design tasks, to buy a DTP program. It's no longer just a packaging designer's tool, not that Aldus would have you believe it ever was.

True colours

The nicest feature of *FreeHand* 4.0 has to be the colour mixer palette. This modelless floating window has a basic colour well and slide bars to mix colours in RGB and CMYK, and a colour wheel for choosing system palette colours. The hue of the colour well changes dynamically as you move the sliders – a nice touch, which makes mixing colours a much less hit and miss affair.

But the pièce de résistance has to be the 'drag and drop' colour feature. By clicking in the colour well, and dragging the small coloured square this action produces, over your drawing, any part of an illustration can have colour attributes applied. And it's not just fills which can be applied by this method, outlines and text can have colour applied in this way too. And if your fill is graduated, dragging into one half of the object will change only the appropriate half of the graduate palette. It's truly amazing.

And it gets better. If you have created a blend, and you drag and drop a colour on one of the origin shapes, the blend interactively reshapes itself to accommodate the new target colour.

When the Identifier Window is active, a double-click in the colour well will bring both the colour mixer and the colour list menus up. This really is simplicity itself.

The one thing against *FreeHand* 4.0 is the price. The tag of £529 reflects its use in professional design environments. But you get what you pay for, and in this case, you are paying for an incredible piece of software brought up to the highest standards of user friendliness. I've been using this version in the office, while my fellow designers toiled on in version 3.1, and have become the object of some envy. I'll be truly sorry to see this evaluation copy go.

If *FreeHand* was ever 'less intuitive', this release seeks to quash that reputation and it succeeds. An update of a familiar package can

FreeHand: a recap

The first incarnation of Aldus *FreeHand* came out in 1988. It was, and still is, aimed at professional graphic designers. For those of you not familiar with this much vaunted package, *FreeHand* is, in very basic terms, a powerful PostScript illustration, design and production tool. A *FreeHand* document presents you with a 'page' surrounded by an area of pasteboard. It uses the concept of layers to mimic the use of acetate in the design process. As well as the more usual shape tools (circle, rectangle, line) the toolbox contains a number of 'freeform' tools which allow you to 'draw'. The program has text-handling features (scaling, leading, kerning) and allows the artist complex blending, filling and colouring possibilities.

often be a pain – I still prefer the *Photoshop* 2.1 interface over the 2.5 one, even after all this time. Making things easier to use is one thing, but changing the fundamental way in which a particular feature is used to achieve an effect, is bordering on foolhardy. *FreeHand* 4.0 does go about things in a drastically different manner, but I've yet to find a single detail that makes me wish Aldus had left things as they were. **mf**

Jargon Busters

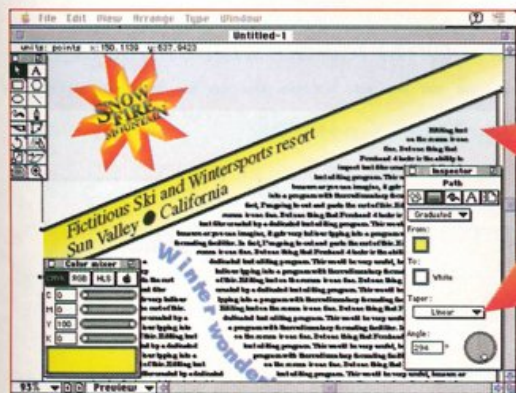
ASCII: American Standard Code for Information Interchange. Standard 'text' files produced by most word processors.

RTF: rich text format. A format which enables *FreeHand* to preserve the font, size, style and other attributes from the original text file.

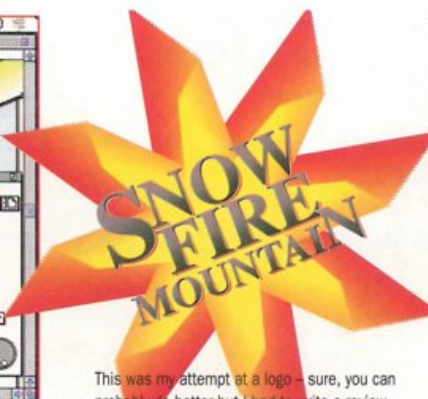
RGB: Red/Green/Blue. The method of describing colours when they are displayed on a monitor which mixes red, green and blue light.

CMYK: Cyan/Magenta/Yellow/black. The four colours of ink commonly used in colour printing.

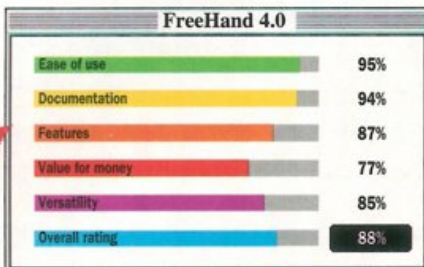
EPS: encapsulated PostScript. An EPS file contains a PostScript representation of an image for high resolution output.



The much improved text formatting, and object runaround features make *FreeHand* 4.0 the perfect choice for short pagination design jobs like brochures and mail outs.



This was my attempt at a logo – sure, you can probably do better but I had to write a review too you know! Whatever your level of artistic talent, *FreeHand* 4.0 will enable you to express it fully, and with the utmost ease.



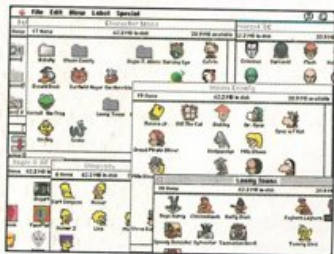
Where to get it

FreeHand 4.0 costs £529 and is available from Principal Distribution on 0706 832000. Upgrades will cost £176.

PremiumPD

Supplying the best in Macintosh™ PD and shareware

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.

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!

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, Pee-wee 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:

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

Editing for layout

How to design your first page

Many people find that for all their planning, actually making a start is a daunting prospect. Let's consider a simple single page piece of work. It might be a poster, an advertisement, a leaflet, or the cover of a magazine. The problem is always the same: too many variables. You can change the character, size, shape, position and colour of every element on the page, whether

defaults specified for them by their software.

Every editor should know how to handle the basics of design and how to speak the language of designers. And the way to start is by simplifying things as much as possible.

For our basic single page design, we need three things. An image (whether a photograph or an illustration is up to you), some kind of headline, and some body copy. With those

some kind of leaflet, I aim to devote about 50 per cent of the space to the actual reading matter, the body copy. The rest of the space goes to the headline (or display type) and picture. So if you are producing something like that, you need to work out how many words would fill a whole page of solid type, halve that figure, and then write or cut your copy accordingly. If you are producing an advertisement or a poster, with little or no body copy, then these proportions don't apply.

Are you a bit nervous at the thought of designing your first page? Well, you can put down that double vodka and rejoice, because help is at hand in the form of John Morrish...

it's the pictures or the various type elements. Nowadays you can even change the actual shape of the type, from your keyboard.

There is a bewildering number of possibilities. No wonder people find it difficult to start. And no wonder people stick to the

three elements you can design anything from a business card (in which case you don't really need the image – although a logo might be nice) up to a tabloid page.

If I am producing a page with something to read on it, whether it is a newsletter page or

The vision thing

About the worst thing you can do is to pour your copy, your headline and your picture into your layout program and start moving the elements about. Before computers, printers had to work to a very accurate pattern drawn up for them by a typographer or designer. That layout was itself the result of many preliminary sketches done as part of the design process. Nowadays the finished job is done on screen, so the temptation is to start the job there. But it should be avoided.

Designing on paper, producing what are called thumbnails, opens up all the possibilities and allows you to compare them

Visualisation

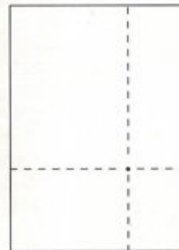
Start with a blank page and sketch in the elements one by one. This is an exercise in spatial awareness as much as design.



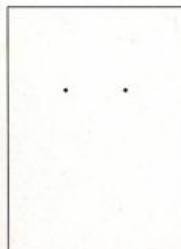
A single dot...



implies spaces.



Move it, and the space changes.



Two dots...



Imply a line.



A thick line is bold and imposing.



A thin line is gentle and delicate.

Ignore what the words say, or what the pictures show, and see them as areas to manipulate.

side by side. Designing on screen gives you only the one version: the temptation is to fiddle about with that, so that it is never settled. Your first and second thoughts are wiped out as you proceed. So no comparisons are possible. And the defaults built into most programs are uninspiring. Take *Publish-It! Easy*: its own in-built inclination is to make you do a page with three identical columns of 12 point Times, with a heading across the top in 36 point Helvetica. That is about as dull a combination of elements as there could be.

The skill of visualising is to see type and pictures as 'areas' of different density. Ignore what the words say, or

Which side of the line are you on?



Any line creates shapes in space



As it changes, so do the shapes



Horizontal lines are stable



Vertical lines are energetic



Now add some more lines.



Juggle them about a bit...



...replace the horizontal with the vertical...



...and use some 'creative white space'.

..... what the pictures show, and see them as shapes to manipulate. Try half-closing your eyes and looking at this page as it resolves itself into various rectangles and other shapes.

Depending upon what you are trying to produce, the aim of visualising is to create impact or that sense of 'rightness' that has traditionally been called beauty.

The essential tools for visualising are pencil and paper. Some people recommend the additive method. Start with a blank page and sketch in the elements one by one until you arrive at something that looks right. You will know when you are there because removing one of the elements will make it look as if it's lacking something. Adding one more will ruin it in a different way.

The shape of that blank page is your first decision. Rectangles are the most practical and the most mundane, especially in the normal 'A-series' proportions we see every day. Extreme rectangles draw attention to themselves. The square, on the other hand, is a beautiful shape, inviting interesting sub-divisions and having a real quality – a rightness – of its own. But since paper arrives in rectangles, using squares means waste. The same, but more so, goes for triangles and circles and anything else. But their greater impact may outweigh the wastage.

Take your chosen shape and make numerous copies of it in much-reduced sizes on paper. The advantage of working in tiny sizes is that they are very quick to turn out and you can have lots of them on a sheet for side by side comparisons. Visualisation, despite its name, is not about imagining shapes, it's about seeing them.

Now start working with pure geometry. Place a single mark in one of your thumbnails and observe the effects it creates: the object is to look both at the marks you make and at the spaces around them. The diagrams show the process.

By the end, the simple abstract pictures you have assembled out of thick single lines, grouped thin lines and simple geometrical shapes should be reminding you of something. Your big single

line, in various shapes and sizes, is a heading. Your grouped lines represent an illustration, or a photograph. These are your areas. Notice how they relate in two dimensions. Notice also the suggestion of a third dimension, the way black

Never forget that you are looking at the shapes, not the subject matter; this is an exercise in spatial awareness.

comes forward and lighter shades fall back.

Now you know what the thumbnails are all about, you can introduce a few real letters in the place of your 'headline'. Trace five or six letters into a nonsense word, or print them out, and move them around on your thumbnails. Try out different sizes, the bold and italic versions, and,

if you are doing it manually, or using a program that has the capacity to do this, different degrees of letter-spacing.

Never forget that you are looking at the shapes, not the subject matter. This is an exercise in developing your spatial awareness, and you can practice it anywhere. Look around you at the things you see every day: your home, your office building, the pictures on your wall. How do they resolve themselves into shapes and areas?

Some practical issues

These experiments are invaluable in freeing up your sense of the possibilities. When you come to deal with practical tasks, other issues arise, because now you are not dealing with abstract shapes but with material: words and pictures which convey real meaning.

The visual centre

Any rectangle has a visual centre, and you ignore it at your peril. In simple terms, it's half way across and about one-third of the way down. In the simplest use of the visual centre, you simply place your big picture or most important headline there. If you are using a large block of continuous copy, the traditional place for it is with its centre of mass over the page's visual centre. If you are looking to do something more sophisticated, you can place some white space there, but makes sure it leads somewhere.

White space

The use of white space is one of the great triumphs – and great clichés – of modern design. Any piece of type design needs some 'air' in it. The classical designers of yesteryear achieved this sense of space by liberal margins at top bottom and sides. Modern designers run their type very much nearer the edges of the paper and to use the space they had removed from the margins in the actual composition: between headings and body text, around photographs, between columns of type and even between lines. But the key thing about white space is that it must be what the great newspaper designer Edwin Taylor calls 'working white': it must lead the eye through the page.

Symmetry and asymmetry

Take a look at your thumbnails. Are they predominantly symmetrical or asymmetrical? Think yourself lucky to have the choice. Before this century, most design was symmetrical, both because of its historical origins (as an imitation of hand-lettered books) and because of the belief that symmetry was divine in origin and essential to beauty: the human body is, by and large, symmetrical. Thus headings, sub-headings and

More visualisation; add geometric shapes to



This is fun isn't it?



Now a jaunty angle.



Now add more elements.



And centre it all.

body type alike would sit solidly on a central axis and the eye, observing the whole composition, would be in a state of rest and contemplation.

That way of doing things was swept aside by 20th century type designers when they integrated photography into layouts designed to be expressive. Photographs are not generally symmetrical, and now they were cropped to make them more dramatic. Now the reader's eye was required to move, to follow the logic of what was called dynamic balance.

Today we are lucky enough to be able to use whichever style of layout is appropriate for the particular piece of work. Symmetrical, classical layout, suggests formality, the official, and the nostalgic. Look at Government white papers and bills. If you want your newsletter to look eminently respectable, a symmetrical design is one of the essential components.

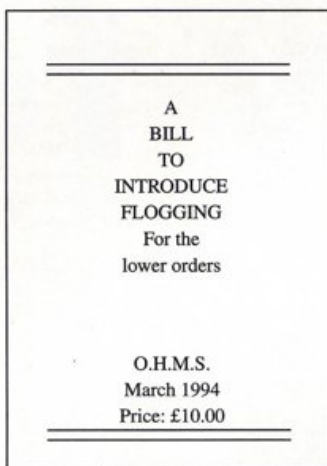
The grid

The discoveries you have made about space and shape with your thumbnail designs can be formalised into a grid, an invisible structure or skeleton that lies behind the visible design. This is essential if you are producing more than one page along similar lines. Very few things are genuine one-offs. That is obvious if your single page is part of a larger publication, but even if you are producing a poster or a leaflet, it would be as well to lay down a pattern that future versions will follow. The grid formalises the degree of conformity and freedom that is permitted to each subsequent design in the series.

In its simplest form a grid specifies the margins, the width and position of any columns of type and the width of the space between them (the gutter). More sophisticated versions make some attempt to divide the page vertically as well, so that headlines and pictures on different pages relate to one another. The grid would also specify the position of repeated elements, for instance the page numbers (folios) and date information.

In its most complex variant, as used by the great graphic designers of post-war Switzerland and their American imitators, it involves the use of inter-related sizes of type. The main body type might be in 12 point (or more likely in 11 point on a 12 point leading). Headlines might be in 48 point, occupying the same space as four lines of body copy. Sub-headings might be in 24 point, or two lines. Captions might be in 6 point, or half a line. The grid would include vertical divisions mirroring the column widths, so a series of squares would be formed on the page.

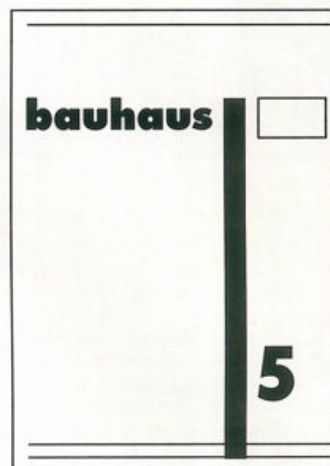
Traditionally grid sheets were printed in a pale blue that does not appear when the finished pages are made into printing plates. Nowadays, the grid



Symmetrical design

Asymmetrical design

Symmetrical, classical layout versus dynamic, asymmetrical design. Which is better for your purposes?



is set up in the layout program on an "invisible" colour layer that does not appear in the printed output: nonetheless, there is a great deal to be said for drawing up a grid manually. If not, you must ensure that you examine printed versions of it very carefully when you are working it out.

Pictures

I will talk more about pictures later. But for now, the main thing is that you want impact, to attract attention, and nothing has been better devised for that purpose than the human face, looking at the camera. A million women's magazines can't be

again, using full size type. Work through the changes logically, adjusting one variable at a time. Take a single font. Print up some short headlines (they don't even have to be real words) in different sizes, then in italic and bold versions in different sizes. (Don't use any of the other variants kindly supplied with the Mac: they're too tacky). Now cut them out and move them around by hand on your rectangular pages. Combine them with cut-out photographs. Print up some body copy (still in the same face) in different widths, sizes, weights and degrees of leading. Place the whole lot in place on your grids. How well do they work?

Used for body copy, Helvetica has the effect of making everything look like a leaflet from the social security.

wrong! Beyond that, the professional photographer's advice always makes sense: get close. If your photograph doesn't get close enough, crop it so that it does.

Type

Again, this is a subject I shall return to. In your thumbnailing you started to assess the effect of different weights and sizes of type. Now do it

Choosing a typeface

Changing font used to be a major exercise. That was one reason why an extremely sparing use of different fonts is one of the fundamentals of typography. The other was simple aesthetics. Now changing font is as simple as moving the mouse and clicking, but that doesn't mean it should be done any more than is necessary.

As an editor, your purpose is to get across the meaning of your words. Excessive typographical experimentation can obstruct that: it is also ugly and a tell-tale sign that an amateur has got hold of the Mac. Better to see what you can achieve with a single font. Initially your type effects should come from changing size and from the use of capital ('upper case') letters. Then you can introduce the italic and bold variants. You will find, with ingenuity (for instance, using different sizes of capital in the same heading), that you can do a great deal.

You cannot, however, change the basic character of a typeface. Helvetica, for instance, is a sans serif typeface designed to be 'transparent', bringing no meaning at all to the material. But, in my opinion, used for body copy it has the effect of making everything look like a leaflet from the social security. It is, like all sans serif faces, traditionally considered ill-suited to continuous reading. Times, a serifed face, looks defiantly traditional. It will not express radical modernity, no matter what (within reason) you do to it. It does, however, read excellently when used for body copy.

For that reason, your basic choice of font is crucial. Pick one you can live with for the foreseeable future, then learn to use it to its full. People don't like change for its own sake. We will consider type more fully later in the series. **mf**

avoid a formal-looking layout



Geometric shapes...



...all pass through...



...the 'visual centre'...



...of the page.

Faulty fonts

Font problems continue to plague a number of readers, if our mail bag is anything to go by, and I'm not entirely surprised. Each new system upgrade seems to carry changes with it, while TrueType not only brought along its own set of rules, it generated one or two myths along the way.

The first problem is 'damaged' fonts and, as Daniel Bradley of Surrey and Marc Abbott of Herts have had the misfortune to note, it's an absolute swine. Both run System 7.1.

Font problems are no problem to Martyn Lester. He just takes 'em by the horns, chews 'em up and spits 'em out. And then he writes about them, here...

"When I try to move the offending screen fonts from the Fonts folder," says Marc, "a message appears telling me that the font is damaged and cannot be moved. I've managed to get round this problem on my LC by booting up with System 6, but my Ilvi won't recognise System 6. So how can I get rid of the damn thing? By the way, the font is PostScript, and seems to be working fine!"

The obvious solution would seem to be to throw the font away, or to overwrite it with a pristine version. Unfortunately, to get the font to the Wastebasket involves moving it,

which is just what you can't do; as for the latter idea, here's what happened to Daniel... "I tried to drop a clean Frutiger (the damaged font) into the Fonts folder, but was told that Frutiger couldn't be replaced because it was in use! Do I take all of my other fonts out of the fonts folder, trash it and make a new Fonts folder? Would that be possible?"

I think not Daniel – your old Fonts folder wouldn't allow itself to be thrown away, because it still contains an item that is regarded as being in use. I don't know why fonts decide that they're damaged. Nor can I explain in glorious technical detail why you can't throw them away; it's something to do with the way in which System 7.1 treats its installed fonts – a little like extensions, except you can't suppress them at startup. But I have seen the problem before, and I can offer a solution.

How to throw away a font

Restart from a suitable alternative startup device such as your System 7 Disk Tools floppy. You can now throw away the damaged font without any problems. This is because the System your Mac is now running on doesn't see the damaged item specifically as a font (only those in its own Fonts folder are regarded as such), just any old item that happens



Avant Garde

to be stored in a sub-folder called Fonts on your hard disk. Empty your Wastebasket to make sure the offending font is well and truly gone, and then you can restart with your usual System and install a clean copy of the font from the floppy disk it originally came on.

If any reader knows of a more elegant solution to this problem, there's a MacFormat T-shirt on

There's no reason whatsoever why you shouldn't use an HP printer with a Mac – we on MacFormat do so frequently.

offer for the simplest/most brilliant, sent in to the usual address – frankly, I doubt if there is any other way of doing it.

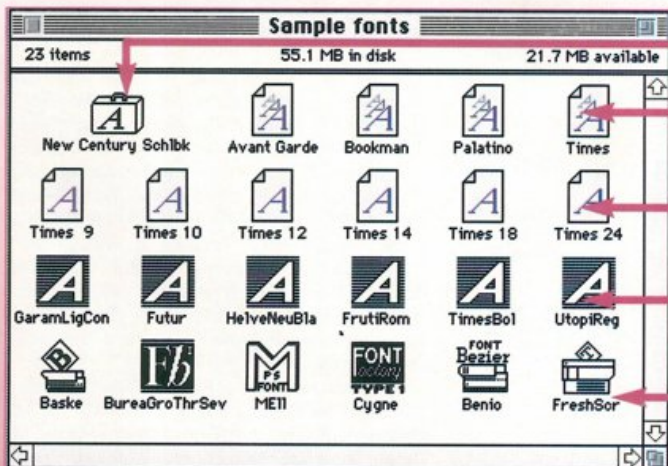
TrueType bitmap problems

Next problem up is from Christine Bayliss of East Sussex who has, "extra TrueType fonts installed, and when I try to use the additional font, I get the message 'a screen bitmap version of the font is being sent to the printer since no printer version is available'. The System 7



Baske

How to identify a font type by its distinctive markings



In icon view, a mixed bag of fonts looks like the screengrab on the left. Top left is a suitcase; it could contain a full TrueType font, or just the bitmaps for a PostScript one – the only way to find out would be to open it (just double-click).

The rest of the top row are TrueType fonts, distinguished by the three sizes of A to indicate that it's a scalable font.

The second row are bitmaps. They are, in fact, all of the bitmapped sizes which come in the System 7 TrueType Times suitcase, but they wouldn't look any different if they went with PostScript Times.

The third row consists of outline PostScript fonts, also known as 'printer fonts'. Some expensive Mac books might lead you to believe that all PostScript fonts have this icon, but this is another Mac myth. They all happen to be Adobe fonts – they're the lot who invented PostScript, so it's not surprising that many people have never seen fonts from any other manufacturer. But to prove my point, row four shows a small selection of other icons that you might find on a PostScript font.



METI

fonts that came with the Mac work perfectly." Some helpful font supplier has added to Christine's worries by saying "...they were amazed I had bought a Hewlett-Packard printer with a Mac."

Let's get one thing cleared up right away – there's no reason whatsoever why you shouldn't use an HP printer with a Mac – we on MacFormat do so frequently. The main thing to do, of course, is to make sure that the printer has an Apple (not PC) interface and driver.

The fact that your DeskWriter 550C is printing at all shows that you've got the right kit, Christine. The next step, then, is to check whether you've followed any instructions that came with your new fonts. For example, the info file that comes with the TrueType Apple Font Pack states: "If you are printing to a Hewlett-Packard DeskWriter printer, you must turn off 'Use HP fonts.' To find out how to do this, see your DeskWriter manual." If you are all clear on this front, then your symptoms suggest that your complaint is exactly what the Mac is telling you – that your bitmaps are there, but your outlines have gone adrift. Thousands of readers are muttering to themselves that this

can't happen with TrueType, because TrueType doesn't have any bitmaps. This is such a widespread belief that you'll find it repeated even in rather eminent books about the Mac, but it's a myth.

TrueType fonts don't need bitmaps, and many come without any. But some do have them, and if you disbelieve me, fish around in your System folder and open up your Monaco suitcase. The item called Monaco is the TrueType outline font, and the item called Monaco 12 is... guess what!

But is it in the right place?

What Christine needs to do is to check that she has got a TrueType outline version of her troublesome font in there and in the right place. If she has, then the only remaining possibility that springs to mind is that she's running old software

which can't make use of TrueType and can only see the bitmaps. Unlikely, considering she only bought her Mac last April, but worth checking. But what is 'the right place'? Let's start with the System version that Christine's using, which is 7.01 – the same rules apply to System 7.0. In all cases, I'm assuming that PostScript users are working with Adobe Type Manager (ATM).

System 7 first

Whichever type of font you are installing, first quit all applications that are running. If you're

Applications will recognise bitmaps but they will look disgusting at any point size other than the specific one they were designed for.

installing fonts from a floppy, insert the floppy into a drive and open the folder containing the fonts. If the font you want is in a sub-folder or suitcase, open it up and check what you've got.

TrueType fonts: regardless of whether there are any bitmapped fonts, there has to be a proper TrueType font present, or you're going to be in trouble. Applications will recognise bitmaps, allow you to use them in documents and even print them out, but they will look disgusting at any point size other than the specific one they were designed for.

If the TrueType font is in a suitcase (with or without bitmaps), close the suitcase again, make sure your System folder is closed, then drag the suitcase icon over the System folder icon. The Mac will automatically tell you where it wants to put the fonts – click **OK** and it will stick them in the right place for you. If the TrueType fonts are loose on the floppy, just click or [shift]-click on



the ones you want, drag them over the closed System folder in the same way and you'll get the same results. PostScript fonts: these always come in matched sets of outline fonts (also known as 'printer fonts') and bitmapped fonts (also known as 'screen fonts'). Again, just drag the fonts you want to install over the closed System folder.

And System 7.1...

System 7.1 theoretically simplifies all of this by adding a new Fonts folder to the contents of the System folder, and the line is that... All fonts now live in the Fonts folder. A TrueType font and any bitmaps that go with it can be in a suitcase together; a set of screen fonts for a PostScript face can also be in a suitcase together; but all PostScript printer fonts must be loose in the Fonts folder. Sounds great, but I suspect that over 90 per cent of PostScript users have found that it doesn't work. That's because ATM hadn't caught up with all this and didn't know that the Fonts folder would be a good place to look for the printer fonts. If you have PostScript fonts in your Fonts folder and they're not working, either upgrade your ATM to 3.0 or higher, or move the PostScript printer fonts into the Extensions folder.

Not forgetting System 6

If you're a System 6 user, here's a brief recap. TrueType fonts: can't be used with any version of System 6 as originally supplied, but Apple did subsequently produce a utility for 6.0.7 to allow this – check with your Apple dealer.

PostScript fonts: these can only be installed via a nasty utility called *Font/DA Mover*, which came on your System Software disk. Open *Font/DA Mover* and make sure that the **Font** radio button is selected. The utility will have opened your System file in its left-hand scrolling list. Use the right-hand box to open the file you want to get fonts from, select the fonts you want to install and then click on the **Copy** button. **mf**



Times



FreshScr



Font/DA Mover

Cygne

Sample fonts		
Name	Size	Kind
☐ Avant Garde	44K	font
☐ Baske	30K	PostScript™ font
☐ Benio	27K	PostScript™ font
☐ Bookman	57K	font
☐ BureauGroThrSev	33K	PostScript™ font
☐ Cygne	23K	PostScript™ font
☐ FreshScr	53K	PostScript™ font
☐ FrutlRom	29K	PostScript™ font
☐ Futur	29K	PostScript™ font
☐ GaramLigCon	44K	PostScript™ font
☐ HelveNeuBla	32K	PostScript™ font
☐ HO Futura HeavyOblique ...	14K	font
☐ METI	27K	PostScript™ font
☐ New Century Schlbk	276K	font suitcase
☐ Palatino	72K	font
☐ Times	68K	font
☐ Times 9	8K	font
☐ Times 10	8K	font
☐ Times 12	8K	font
☐ Times 14	9K	font
☐ Times 18	11K	font
☐ Times 24	14K	font
☐ TimesBol	35K	PostScript™ font
☐ UtopiReg	45K	PostScript™ font

This screengrab shows the same set of fonts viewed by name under System 7.1. The suitcase has a different mini-icon, and the PostScript fonts helpfully declare themselves, but note how the bitmaps and the TrueType outline fonts have exactly the same icon and are both labelled merely 'font'. The way to tell them apart is that the bitmaps always have a number (their point size) at the end of the name. Can you spot my sneaky move here, though? I've slipped in an extra font, called HO Futura HeavyOblique. You might think it was a TrueType, but it isn't. Its name is so long that there isn't room for this view to fit its number in, and it's actually a 10-point bitmap.

If you have any doubts about what fonts are, switch to icon view, or select the doubtful font and press [command] [I] to get info on it.

HO Futura HeavyOblique 10

Kind: font
Size: 14K on disk (12,978 bytes used)

Where: Chez Grub Street: Sample fonts:

Created: Tue, Oct 31, 1989, 6:54 pm
Modified: Thu, Nov 18, 1993, 12:52 pm
Version: n/a

Comments:
 Get info is one solution. You can now see that this is a bitmap, both from its icon and the fact that it has a 10 after its name!

☐ Locked

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We tried, we really did, but you know how petulant these super-model-types can be. As you may have gathered, Cindy, Naomi and Linda were, ahem, how shall I put this... Not available? Indisposed? Actually, if you must know, they told us to sod off. And who can blame them? After all, they were pretty upset last month when our publisher, Stuart, he of the tight wallet, refused to give them one of our gorgeous T-shirts.

You see, originally we weren't going to sell them

at all; they were to be exclusively reserved for **MacFormat** prize-winning readers. But what about all our other readers, I hear you cry? They pay their £3.95 every month; why shouldn't they be given the chance to wear a cool, hopelessly trendy **MacFormat** T-shirt? Our thoughts exactly. And who better to model this exclusive item of designer apparel, than three world famous supermodels? Or at least that's who you might have seen gracing this page in all their poutsome glory... If Stuart hadn't upset them the month before.

And there you have it: why instead of models Cindy, Naomi and Linda, you've got **MacFormat's** Sally, Jules, Kim and Yolanda. The new supermodels? Maybe not.



Desert Trek 1.01

Adventure game



Desert Trek is a rather neat little adventure game. But unlike many, there's no messing about typing 'Go North', 'Get Sword' and so on. Instead, all the action takes place in a dinky little window in the centre of the screen. All you have to do is click on the various buttons at each turn – so it's ideal for people who can't be bothered to take their hand off the mouse.

The general idea of the thing is that you have to travel 1,000 miles through the Gobi Desert on your camel – if you've ever wanted to be Lawrence of Arabia, this is your chance. Each 'day' is divided into four turns, and during each turn you can ride your camel at normal or fast pace, approach things like trading posts and oases (oaseses?), avoid rocky paths and so on. To make things trickier, cannibals are following you; if they catch you, you're human and camel soup. There are also wicked Berbers (isn't that a sort of coat?) who will kidnap you at various points. You can wait for your embassy to have you released (during which time the cannibals will have got closer), try to escape (during which time you'll probably be killed) or bribe a guard to let you out.

While all of this is happening, you're getting thirsty and hungry, and your camel is getting tired. You can eat and drink until your food runs out, but resting your camel takes a turn, and those pesky cannibals are getting closer all the time. You can buy new food, drink and elixir (sort of WD40 for camels) at a trading post, or you may find stuff in an abandoned camp site if you're lucky.

So, that's the basic idea. What it doesn't convey is that – contrary to my expectations – this is actually a rather fun game to play. I found that I became somewhat addicted, trying each time to get closer to that magic 1,000 kilometre marker. There are different skill levels, so if you start getting too cocky there's always the option to make things harder for yourself, but I found that the midway level 5 was quite tricky enough, thank you very much.

I found that I started thinking of *Desert Trek* as a kind of 'Sim Desert', or perhaps 'Sim Camel'. It's certainly worth looking at for its novelty value, and you may find that once you've started playing it's harder to stop than you think.



Desert Trek is an adventure that's more fun than you first expect. The graphics are fairly basic, but add to the whole thing.

Compact Pro 1.34 File compression utility



This isn't a full review – I've looked at *Compact Pro* before, and there's a feature in this issue on that program and how it compares with *StuffIt Lite*, the other most popular shareware file compression utility.

However, in the interests of completeness I felt I should point out that a new version of the program – 1.34 – has appeared. According to the author, the update contains 'documentation and bug fixes'. In other words, it's not a vital upgrade, but if you use the program you should probably get this latest version – you never know, bugs that you've never noticed before in 1.33 may pop up when you least expect them. And do register: unlike many other shareware authors, Bill Goodman accepts MasterCard and Visa payment, so you've no excuse!

SHAREWARE ZONE PD

Ian Wrigley has ventured far and wide on the Internet to bring you this month's selection of goodies, not-so-goodies and downright oddities. Still, you can't say there isn't something for everyone: we've got a fab shoot-em-up, a program to make your Apple menu hierarchical, and one which you'll have hours of fun with – if you're into 'eigenvectors' and 'polynomials' that is...

Where's it from?

In response to the many people who've asked just where I find all this great new shareware: the place to go for the most up-to-date stuff is the Internet (of course). 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 68. (Or, of course, read the Comms features 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 brand new, up-to-the-minute shareware that I've found.



Patriot Command

Remember *Missile Command* on the Atari cartridge system? Or, even, *Missile Command* in the arcades (if you really had a decadent youth)? Well, *Patriot Command*, which styles itself 'a modern interpretation of the classic' will let you re-live those heady moments. It's the best implementation of the game that I've seen on the Mac and deserves to become popular.

There is another *Missile Command*-style game around, but it's black-and-white only, and is fairly easy to beat – unless you're playing on a very fast Mac, when the whole thing becomes impossible. *Patriot Command*, though, is much closer to the original, and is worth a place on any serious Mac gamer's hard drive.

For starters, you can fire missiles from any one of your three bases – not just from one central position. You do this by aiming with the mouse and pressing one of the Z, X or C keys to fire from the left, centre or right missile base. This in itself requires some skill: the first few times you find yourself exhausting the centre

missile base and having to fire from the sides for the rest of the round – and, of course, the missiles take longer to reach their targets that way. The first time I played the game, I randomly fired off scores of missiles in the first five seconds, and was rewarded by the humiliation of seeing all my cities destroyed because I ran out of ammunition.

As the game progresses, more enemy missiles appear, and they get faster too. There are also extra things to watch out for, such as enemy planes that appear and drop even more missiles, and hovering meemies that aim for a city and are almost impossible to get rid of. On the plus side, though, there are bonus markers that appear in the sky every so often, and you can even win extra cities by hitting sky-borne objects. Finally, if you manage to survive up to Level 10 you can obtain a one-use shield to protect all your cities for a short length of time.

There is, of course, the usual sampled sound to spice things up – including some sounds that must have been taken straight out of *Maelstrom* – and there's even a fifteen-second digitised little speech from the game's author, hoping that you enjoy the game and requesting that you register

'Missile Command' style arcade game



Patriot Command is the best version of *Missile Command* to appear on the Macintosh. Get it now!

and pay your shareware fee. I hope that people do, too: this is a really great game, and it would be nice to see more quality arcade conversions like this appearing.

(Do note that this game requires a 13-inch colour monitor or larger, running 256 colours; it won't run on a 12-inch colour monitor or on the Colour Classic.)



Telescopes 1.02



Written by a physics bod at the University of Tulsa in the good ol' US of A, *Telescopes* is a HyperCard stack that gives you all the basic information you'll need to make an informed buying decision after you've watched *Sliver* and decided that if peeking at the neighbours across the street is good enough for Sharon Stone, it's good enough for you.

HyperCard stack of information about telescopes

Telescopes is a HyperCard stack which provides, according to its author Brian Monson (who works in the Physics department at the University of Tulsa), "a brief introduction to the instrumentation of astronomy". However, don't be put off: it's actually a very readable and interesting set of information. The information covers basic ideas – such as what a telescope actually is – and goes on to talk about the different types of telescopes available, how they work (complete with some basic graphics to illustrate the principles) and a 'shopping list' of points to look out for if you're considering buying your own.

There's also some information on more advanced stuff such as using Charge Coupled Devices (CCDs) to gather data, and a piece on the Hubble Telescope (which, as I write, is being dismantled in

space). The four graphics used in the stack are JPEG-compressed PICTs, so you need at least QuickTime 1.5 to view them – but then, QuickTime is now so widely available and used that I'd be surprised if you don't have a copy. The only people that this penalises are those with 68000-based Macs, such as the Classic, SE, Plus and PowerBook 100, which don't support QuickTime at all.

If you're interested in astronomy or you think that you'd like to buy a telescope, this stack is worth getting hold of. None of the information is particularly advanced, and you could learn it all from a basic textbook, but it's useful nonetheless. Version 2.0 of the stack – due out in early 1994 – should have more information on it and perhaps even a quiz section. I look forward to it with interest.



MyDude

You should immediately recognise the game that *MyDude* is based on from the screen grab (unless you've been held hostage on another planet for the past ten years or so): yep, it's that lovable Brooklyn plumber Bob Hoskins (surely 'Mario' – Ed). *MyDude* is based on level 1 of *Super Mario Brothers*, and is a pretty faithful representation – not all the 'secrets' are in there, but otherwise it's fairly close. It can take some time to get used to the controls, but once you master them you'll be

jumping, squashing turtles, collecting stars and eating mushrooms with the best of them.

The game's limitations are that it only contains level 1, you can't throw fireballs and you only have one life. Still, it's not a bad attempt – especially given that it's freeware. If you've got a Nintendo, stick to the real thing. If you haven't, at least now you've some idea of what everyone's going on about all the time.

MyDude: sort of like a game on a games console, but not close enough to warrant copyright suits. Honest.

Arcade style game



Photosizer



If you are a designer who has to size up photographs or artwork, then *PhotoSizer* is a useful little utility that should probably be sitting on your hard drive. Quite simply, you enter the original dimensions, one dimension of the new required size, hit **Calculate** and you're given the other dimension and the percentage enlargement or reduction – to two decimal places, just in case you've got a repro house with alarmingly precise equipment. And... er... that's it, actually.

The objects in the window flicker rather alarmingly, and for some reason the program seems to think that it requires 2Mb of RAM to work (it actually copes perfectly well with 128K), but it does the job, and it's quicker than getting the the old calculator out.

Designer's aid

If you're a designer who sizes up photos and graphics, *PhotoSizer* could be just what you need.

Flintstones font



With *Flintstones* mania about to hit these shores (the film, starring John Goodman, should be released early in 1994), what better time to take a look at this rather neat-looking font. It's based, of course, on the cartoon characters of the same name, and is remarkably similar to the type used on that programme.

The font is available in both Type 1 and TrueType formats (actually, it's also available in Type 1 and TrueType for the PC, and even Type 1 for both NeXT users out there), and 'all charac-

ters are defined' – which means that you don't get annoying little blobs appearing when you hit some keys, where the font designer hasn't bothered creating that particular letter or punctuation symbol. The version of the font that you can see on this page is the TrueType version, but the PostScript Type 1 font is identical.

Quite what you'd use *Flintstone* for, I'm not sure. But I liked it, and I'm sure that there must be some jobs out there somewhere that are crying out for that stone-age look.

And now folks, I'm off to look for Betty Rubble. Schwing!

Willllmmmmmaaaaaaa!

A B C D E F G H I
J K L M N O P Q R
S T U V W X Y Z

FolderWatcher



If you use System 7's file sharing feature, *Folder Watcher* is an absolute must-have. The concept behind the software is quite simple: it keeps an eye on any folders you nominate, and warns you when their contents change. But it does it very efficiently, effectively, and with no conflict problems that I could find. When the contents of any nominated folder change – anything is added or removed – *FolderWatcher* will play a sound and/or display an alert and/or execute an AppleScript script (about which more later).

So why would you want to know that the contents of a folder had changed? Surely you know when you add or remove something yourself? Well, yes and no. If you're not running your Mac on a network, then it's true that this program will probably be of limited use to you. But just think of the things that it can do if you're connected to other machines on a network. For instance, many people use File Sharing to allow others access to one folder on their hard drive. This is known as a 'drop box', and other people can leave files in that folder for you. The problem is that unless you're actually told a file has been left, it could be hours before you think to check. Using *FolderWatcher*, though, you'll know at once: depending on the settings you've chosen, the utility will play one of its cute little warning sounds, display a dialogue box or both. This means that people no longer have to transfer a file to you and then phone you up to let you know.

The same goes for shared files on a server elsewhere on the network: as long as your Mac

has access to them – that is, you're logged on to the server – *FolderWatcher* will keep an eye on them for you. It can be set to check at varying intervals, so there's no worry that you're generating unnecessary network traffic; you can, for example, just have it look every few minutes. But if it's checking a folder on your own Mac, you might want it to keep a continual watch, notifying you the second anything changes.

Configuration is easy. The utility comes in the form of an Extension which keeps an eye on your folders, and a Control Panel from where you can adjust the settings. A new folder is created within your *System* folder, and you simply place aliases of all the folders that you want to keep an eye on in that new folder. No mess, no fuss (as the advert used to say).

The program is most powerful, though, when used in conjunction with AppleScript. If you have a script with the same name as one of the watched folders, then any time the contents change, the script will be executed. Off the top of my head I can think of half a dozen applications for this; all of them rather system managerish, true, but incredibly useful nonetheless. For example, here at Future Publishing we have an in-house imagesetter system. So it would be possible to set *FolderWatcher* to keep an eye on the 'incoming' folder on the server for each magazine. When a *QuarkXPress* file was dropped into the folder, a script could be run to send that file to the imagesetter and then delete it from the folder afterwards. This would mean that magazines working late could send pages to be output by the imagesetter and have them ready first thing in the morning – with no need for

Notifies you of any change in a folder's contents

People on a network who use System 7's File Sharing feature will love *FolderWatcher* – it alerts you every time an object is put into, or taken out of, any folders that you nominate. Brilliant!

human intervention from the production technicians (which is probably a good thing, since they would far prefer to be down the pub, knocking back a few beers). And that's just one use – there are loads more.

(Incidentally, for smart-asses who say that *XPress* isn't fully scriptable, I meant that we'd use *QuickKeys* to persuade *XPress* to print the file. Clever dick.)

Anyone on a network should check out *FolderWatcher* – right now.



MenuChoice

MenuChoice is a competitor to *BeHierarchic*, which I reviewed a few issues ago. And on the strength of (admittedly fairly limited) use I have to say that it seems to be even better than that particular utility.

The idea is to produce hierarchical menus from within the standard Apple menu. That is, if there are folders (or aliases of folders) in the Apple Menu Items folder, then the contents of those folders will be displayed as sub-menus when the Apple menu is accessed. This means that you can access files buried deep down within many folders by placing an alias of your hard drive in the Apple Menu Items folder. It will then have a sub-menu containing the top level of folders, and each of those will have a sub-menu of the next level down... and so on, until you find the file that you're after.

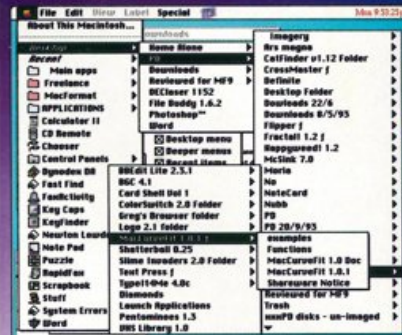
That's the theory, but as users of *BeHierarchic* and *Now Menu* (a commercial program, part of the *Now Utilities* suite) will know, it's not always that easy in practice. That's because the Mac only allows you a maximum of five nested menus on the screen at once – so any file buried more than five folders deep isn't instantly accessible. But *MenuChoice* gets around that problem, by adding a new menu item to the Apple menu: 'Deeper'. You select a folder as

deep as you can go from the basic Apple menu, hold down the [shift] key and release the mouse button. Then press [shift] again and select the Apple menu. Now the 'Deeper' option is enabled, and starts where you left off before – so you can go another five folders deep in search of that elusive file. This isn't the most intuitive thing in the world to do the first time you try to use it, but it soon becomes second nature – and is incredibly useful if, like me, you hide files away within loads of folders in a desperate attempt to organise and tidy up your hard drive.

There are a couple of other neat features that *MenuChoice* has which put it above other similar utilities, too. For instance, there's a permanent option called 'Desktop', which displays all files and mounted volumes on your Desktop automatically. So, for instance, if you insert a CD-ROM you can immediately get access to any file without having to create an alias of it and place that in the Apple Menu Items folder. There's also a 'Recent' menu item, which has a sub-menu of the last 20 items you selected from the Apple menu or any of its hierarchical sub-menus. So if you select a few files quite frequently, they're conveniently placed at your fingertips after the first time that they're launched.

All of these extra features can, of course, be turned off via the Control Panel, leaving the program operating just as *BeHierarchic* does, but

Adds hierarchical menus to the Apple menu



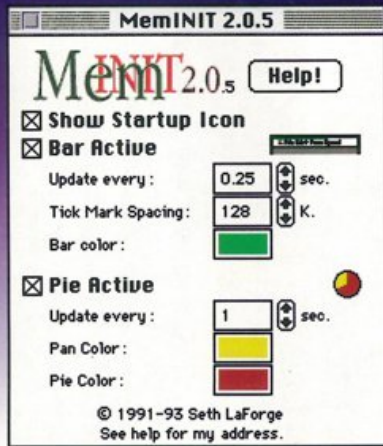
MenuChoice is another program that adds hierarchical menus to the Apple menu, and joins *BeHierarchic* as a shareware, rather than commercial, solution. It does more than *BeHierarchic*, so you may find that you prefer it.

they are so useful that it's hard to imagine anyone not wanting to use them all the time.

MenuChoice is certainly worth closer inspection if you want a utility to make your Apple menu hierarchical. Unless I come across any major problems with it in the future (and I haven't yet), it's out with *Now Menu* and in with *MenuChoice*. Recommended.



MemINIT 2.0.5



Enigma: secure your documents from everyone except the US government...

© 1991-93 Seth LaForge
See help for my address.

Displays how much memory is being used

Well, I'm sure that someone will come up with a use for *MemINIT*, but it won't be me. On the other hand, anyone who feels a hyper-nerdy desire to out-tecny all their friends will immediately want this Control Panel running on their machine: it means you can say things like, "Oh look, my memory partition looks a little cramped for space. Perhaps I ought to allocate more to the application." Or something.

The utility replaces the apple of the Apple menu with a pie graph, and puts a one-pixel-high bar graph at the top of the menu bar. Both displays show how much of its allocated memory space an applica-

tion is using. If you look in the About This Macintosh dialogue box when an application is running (or even when just the Finder is active), you'll see that the bar graph there shows how much of its available memory the application is actually using. And that's what *MemINIT* does. True, this means that you can see if a program is coming perilously close to running out of memory, and so allocate it some more (via its *Get Info* dialogue box – see *MacAnswers* passim); but honestly, is there really any point for this? I don't think so. It's all very silly.

(But fun, in a train-spotterish kind of way...)



Blindfold

BlindFold is yet another application which modifies a file's Finder information. However, it only has one specific use: to hide files by making them 'invisible'. This is useful as very basic first-level security: the logic behind it is if a person can't see your private files, they can't browse through them.

The program works as a 'drop box'. Drop a file or folder on to the application's icon and it will automatically make it invisible for you. (In the case of folders, all the contents will become

invisible – it's not possible to make the folder itself disappear.) In other words, the icon will cease to appear in Finder views, and no-one will know that it exists at all. However, launch the *BlindFold* application and you can choose to make files visible again. (Or, change the Preferences setting and drop a whole folder of invisible items on to the icon to make them all visible again.)

One point to note is that this really is only first-level security. Many applications will still show invisible files in their Open dialogue boxes – for example, if you make a Microsoft Word file

invisible, launch *Word* and select Open, the file will still be available to open, even though you couldn't see it from the Finder.

However, if all you want to do is keep documents away from the eyes of very casual snoopers, then this will certainly do the job for you with no particular hassle. And it's freeware, so you can keep it on your hard drive with no qualms from your conscience about paying any registration fee, even if you don't think that you have any immediate use for the program. The best security, though, is to put sensitive files on floppies and lock them away.

MatCalc

Oh boy, this is scary. If you're not a serious mathematician, you should probably turn off right now; it would take you longer to learn this program than it would to do your GCSE homework by hand. However, if you're still with me, then probably the best thing to do is quote some stuff from the introduction to the program:

"The capabilities of *MATCALC* include matrix arithmetic, triangular factorizations, solution of linear systems, determinants and inverses, finding eigenvalues, eigenvectors and Jordan forms, singular value decomposition, finding zeroes of polynomials, polynomial arithmetic and other related problems.

"*MATCALC* may be used (as its name implies) as a simple matrix calculator, but it is also a programming language in its own right allowing the user to augment the extensive repertoire of predefined *MATCALC* functions and procedures. There is also a well defined interface allowing users to extend the package by seamless integration of C language routines.

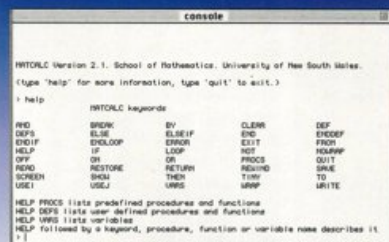
"*MATCALC* is specially designed to handle

singular matrices and to permit selection of independent and dependent columns of a matrix. Its design allows the user to analyse a problem in depth as well as obtain a quick solution when necessary. These features make the package particularly suitable for teaching linear algebra courses." And there you have it.

The program was originally written in C for UNIX machines, but has been ported across to the Mac as well as the DOS and VAX machines. The porting hasn't made much concession to the Mac's operating system: there's no 'About MatCalc' option from the Apple menu, and the only command in the File menu is **Quit**. On the other hand, the **Edit** menu has been implemented, so you can copy items from the program's window and paste them in to another application.

The manual for the program is supplied in two formats: TeX and PostScript – so unless you have either a version of TeX for the Mac, or a PostScript printer that you can download the PostScript version to, you're going to be pretty much stuck. Although there is built-in help, it's very basic and you really do need the manual to tell you exactly what's going on.

Matrix manipulation program



Seriously scary, but probably fun for maths fiends. *MatCalc* has been ported from Unix – and it shows.

That's just about all I'm going to say about this particular program. If you're a heavy-duty mathematician you may find it of some use, but I'm afraid that I forgot everything I knew about eigenvectors, Jordan Canonical forms and so on the minute my second year Algebra course finished, so I guess I'm not really qualified to judge the thing. However, given the fact that it's a direct port from a UNIX version, the chances are that it will give you the correct results. (He said, hopefully...)

Chinese Chess Pro

And here's another program that I'm not too well qualified to comment on – simply because I can't play Chinese chess, which is, funnily enough, what this program does. Although I can't comment on how well the program plays the game, I can say that it's a very well written, feature-full implementation of the game. Not only can you play the computer, but you can also play another human opponent anywhere on the network – and if you should feel so inclined, you can even send voice messages to him or her, if you have a microphone-equipped Mac! Office life will never be the same...

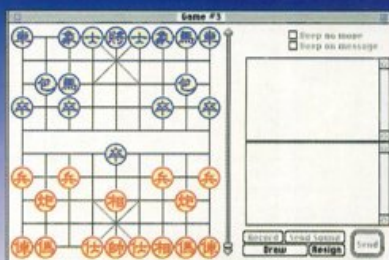
The program comes in three versions, depending on the kind of Mac that you own. The colour version (shown here, and the one which presumably most people will use) has gorgeous icons,

and animates the movement of the pieces very smoothly indeed. There are several different levels of play – although, as I said, I can't vouch for how well the program would fare against someone who played the game well.

It's the cross-network features that make this program stand out, though. The author has clearly spent a lot of time making sure that the program is as easy to use as possible, and the fact that you can use your Mac's microphone to speak to the other person means that it really doesn't matter where in the building your opponent is. (Of course, if they're supposed to be working, then it won't do much for their career prospects when your voice booms out of their Mac telling them to hurry up and make a move!)

If you can already play Chinese chess, or if you're just interested in learning another strategy board game, then *Chinese Chess Pro* can be

Plays Chinese chess



An attractive display and full network support make *Chinese Chess Pro* worth getting hold of.

highly recommended. It's worth checking out, in fact, just to see what a really network-aware program can do.

Devil's Cubes

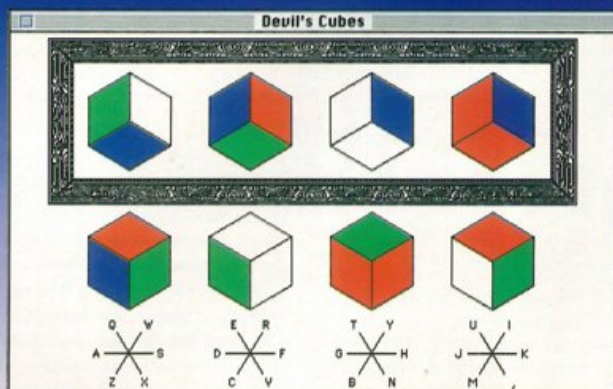
Devil's Cubes is one of those games that you really do wish you'd never started playing in the first place. The aim is simple: there are four cubes, each painted in combinations of four colours. The idea is to arrange them so that their top, bottom, front and back sides are all different – that is, no two top sides are the same colour, no two bottom sides and so on. Sounds easy enough, doesn't it? Well, let me assure you, it most certainly isn't! Maybe the whole thing would be easier with physical cubes, rather than computer representations – things can get extremely confusing if you stare at the screen

for long enough, with an optical illusion making the cubes appear inside-out.

The computer version of the game is fairly good; you twist cubes by pressing various keys – which ones do what are shown on the screen – and there's a 'mirror' display which shows you the other side (and which makes things even more complex until you get the hang of what's going on).

If you're a fiend for puzzles like this, you'll love *Devil's Cubes* – and you'll probably have solved the thing in the time it takes most people to read this review. Personally, I think I'll stick to easier things – my head started to ache after five minutes with the program.

Fiendish mind game



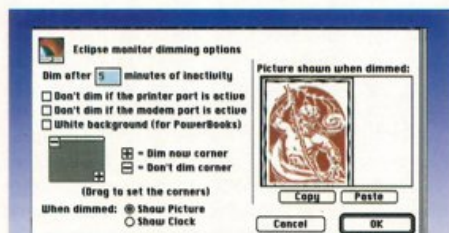
Confused? You will be after you've spent ten minutes trying to work out just what the display is trying to tell you in *Devil's Cubes*.



Eclipse

Screensaver

Now, I'm not a big fan of screensavers. I reckon that if you want your monitor left on while you're away from your desk, the best thing to do is simply turn it down using the brightness control.



Eclipse: a simple, small, functional screensaver. If, of course, you want such a thing.

Or even – horror of horrors – turn it off altogether. I've only ever seen one Mac with serious screen burn-in, and that was an SE/30 that was used as an AppleShare fileserver for months with the screen turned up to maximum brightness. Even then, the effect was hardly noticeable when the screen was displaying anything other than a totally white background.

But I suppose I have to accept that some people (actually, vast numbers of people) believe in these things, so it's nice to find a no-frills, effective, shareware screensaver that does the job and nothing else. No flying toasters, no space shoot-em-up games (I thought it was supposed to work when you were away from your Mac...) – just a logo or a clock display, to remind you that the Mac is still switched on.

The program has some very useful settings, too – more, indeed, than exist on some commer-

cial offerings. For instance, you can choose not to have the screen blank if there is activity going on through the modem or printer port (or both). That means that the screensaver won't cut in when you're in the middle of a long modem download, or when you're performing a network transfer (that could really mess things up). You can choose where to have your 'never sleep' and 'sleep immediately' corners of the screen, and if you want your company logo or some favourite graphic displayed when the screensaver's active, rather than the clock, you just **Paste** it into the waiting picture area. What could be simpler?

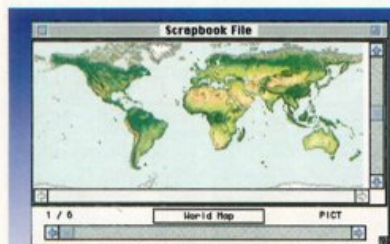
If you're after a screensaver, take a look at *Eclipse*. It does the job with no problems, only takes up a meagre 5K of System memory to work, and was written by Andrew Welch, who's behind some of the best Macintosh shareware games around – so he deserves supporting!



Scrapit DA 1.3

Replacement for the Scrapbook

The Scrapbook is a much under-used item. Everyone is familiar with **Cut**, **Copy** and **Paste**, but far fewer realise that the Scrapbook adds much more power to this by allowing you to store – temporarily or permanently – items which have been Cut or Copied from a document. For



If you find the normal Apple Scrapbook limiting, check out *Scrapit DA*.

example, say you wanted to swap two pictures around. Easy: **Cut** one, **Paste** it into the Scrapbook, **Cut** the other, **Paste** it into the first space, **Copy** the first back from the Scrapbook and **Paste** it into the remaining space. Without the Scrapbook, you'd be stuck. With it, operations like this are a matter of seconds. And you can also use the Scrapbook to keep often-

used items such as logos – just **Copy** and **Paste** whenever you need them.

Perhaps people don't use Apple's Scrapbook because it really is fairly primitive. The window can't be resized – so often you can't see the whole of an object – and you can only **Copy** and **Paste** to and from it – you can't import a file, or export an item to a new file.

Well, help is at hand in the form of *Scrapit DA*. It will allow you to do all of this – and a great deal more. The program can be used as a direct replacement for Apple's Scrapbook – it's a Desk Accessory, so it will work under both System 6 and System 7 – and it reads Apple-format Scrapbook files. However, that's just the start of things. It will cope with multiple files, and each item in the file can be given its own name. Once it's named, you can jump to an item by clicking on the pop-up menu, rather than by painstakingly scrolling through them all. The window can be resized, and also scrolls – so you can view the whole of an object, however large it may be. *MacPaint*, *PICT* and text files can be imported, and any item can be output as a *PICT* or text file. Even better, the Scrapbook can be searched for text, so if you have many chunks of data in the Scrapbook, you can quickly and easily find the one you're after.

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. Clearly, 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 different thing altogether: it's a form of 'try before you buy' approach to software

selling. The idea is that you can obtain the programs from the same sources as PD and freeware, but that if you like the software, you send the author a contribution – normally somewhere between \$5 and \$40 (most shareware authors live in the States). This fee, called the 'registration fee', is for you to become a registered user of the program. Sometimes you get added benefits from the author – such as a printed manual, or a version of the program with extra features – but whether you receive such goodies or not, you should register any shareware which you regularly use.

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 *MacFormat* for their addresses). These are companies which collect 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 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.



Get stuffed!

File compression is all the rage these days. From being the exclusive dominion of comms enthusiasts, programs like *Stacker* and *Disk Doubler* have seeded the idea that it is possible to fit more on your hard disk without spending a great deal of money. We'll be having a detailed look at all kinds of file compression in a future issue, but this month we'll have a brief look at the shareware options available.



File compression is the technique of processing files – both documents and applications – so they take up less space on your hard disk. In the case of the shareware programs we'll look at, you have to decompress them before they can be used, but this is only mildly inconvenient for files that are infrequently accessed, especially if the alternative is forking out for a bigger disk.

Some commercial software lets you compress files invisibly, without giving an explicit command, but all the shareware programs work by specifically processing the files you want. After the files have been processed, they form an 'archive', which may contain several files. To use the files, you double-click on the archive and extract the files back into their original form. You're already familiar with the technique: we use it on the cover disk to pack more programs on.



There are four commonly available shareware compression programs: *StuffIt Lite*, *Compact Pro*, *MacLHa* and *ZipIt*. We tested them on a variety of types of files, including scanned TIFF images, large text files, spreadsheets, PostScript graphics and *QuarkXPress* documents, and rated them for speed and for their ability to save space. We've also looked at other aspects of their operation, such as their ability to create self-extracting archives, which can be sent to someone who doesn't have the compression program, and still be extracted. The results are in the table to the

right. The exact percentage saved will vary depending on what the file being compressed is, and the time taken will also depend on the model of Mac you own. However, these results are still useful for comparison.

ZipIt is the winner on compression by a hair's breadth from *StuffIt Lite*, with the other two not far behind. However *ZipIt* loses out badly in the time it took to create the archive. Both *Compact Pro* and *StuffIt Lite* have a wide range of features, but *StuffIt Lite's* ability

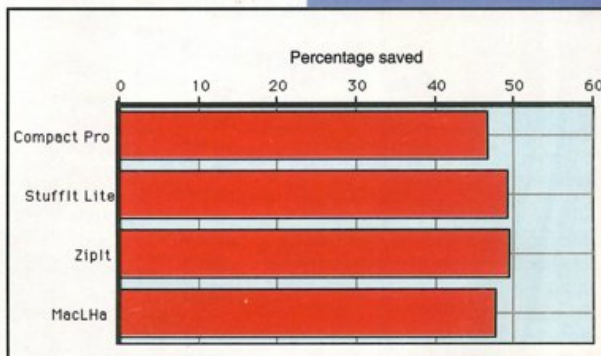
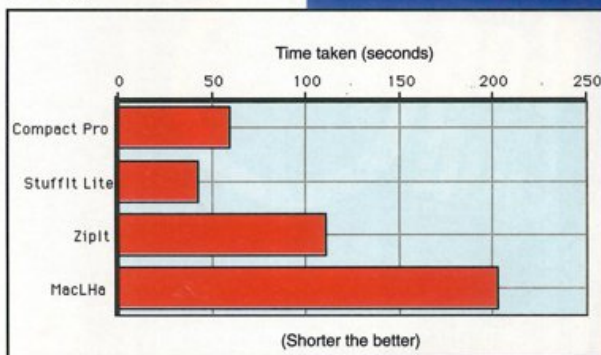


to read archives produced in other programs is a major advantage.

ZipIt and *MacLHa* come into their own if you want to exchange compressed files, by modem say, with someone who does not have a Macintosh. *MacLHa* can read .lzh files created on Amigas, STs and PCs, while *ZipIt* allows you to share files with PC owners using PKZip, the PC compression standard which produces .zip files.

The conclusion of our tests is clear: *StuffIt Lite* is the best shareware compression program, edging out *Compact Pro*, with *ZipIt* and *MacLHa* being useful for those occasion when you need to share files with non-Mac owners. mf

You can save space on your hard disk by compressing files, but what's the best shareware option? We reveal all...



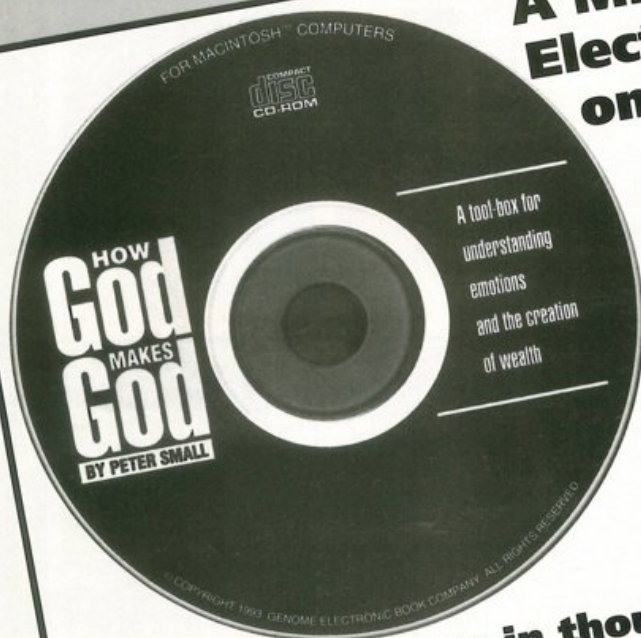
Which compression program?

Program	Compact Pro	StuffIt Lite	ZipIt	MacLHa
Version tested	1.34	3.06	1.22	10.2
Registration fee	\$25	\$25	\$10	none
Amount saved on test files	46.0%	49.3%	49.6%	47.8%
Time taken	60s	43s	111s	203s
Can create self extracting archive?	Yes	Yes	No	No
Extra size for SEA	12,578 bytes	18,105 bytes	–	–
Memory required	504K	1024K	700K	640K
Program file size	95K	449K	254K	59K
Encryption	US only	US only	Registered only	None
Folder support	Yes	Yes	Yes	No
Split archive over several floppies	Yes	Yes	No	No
Minimum System required	4.2	6.0.4	Not stated	Not stated
Other formats supported	???	???	???	???
BinHex support	Yes	Yes	Yes	No
PC compatibility	Poor	Poor	Good	Fair
Rating	–	–	–	–

Where to get it

ZipIt was on the MacFormat issue 7 cover disk, while *Compact Pro* was on the issue 4 disk. Both are available as back issues for £5. Both programs have been upgraded since we put them on the disk; check with one of the shareware libraries advertising in this issue to obtain the latest version. *StuffIt Lite* is available from shareware libraries, as is *MacLHa*.

A Mind Bending Electronic Book on CD - ROM



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Swing your pants

Ian Wrigley checks out two more 'essential' utilities for your Macintosh

UnderWare

In the beginning was the Macintosh. And it was fun. And users saw that it was fun, and bought it in large quantities. And it was good.

Unfortunately, the fun element of the whole thing seems to have been subsumed somewhat by more mundane concerns: "Does it have Ethernet built in?" "How compatible is it with the 486dx PC in the office?" "Can I run my favourite (!) accounts package on it?" And so on. The fact that the Mac is still the easiest, most enjoyable computer to use has gone by the wayside for many people – a great pity.

Enter *UnderWare*. If you want your Mac to do silly things, look cute and generally remind you that above all computing should be a fun activity, look no further. The company – which boasts Guy Kawasaki as a member of the board – has produced what may very well become the cult program of 1994, in the same way that *After Dark* took the Macintosh world by storm a couple of years ago.

Indeed, *UnderWare* is very similar to *After Dark* in some respects – it can even use *After Dark* screensaver modules. The difference is that much of this goes on while you're actually working – it's known as 'Dynamic Desktop'. So

as I'm typing at my word processor, if I pause for a couple of seconds a dragon appears from underneath the document window and wanders around my screen. Or, if I configure the program differently, a robber will dig a small hole in the desktop, clamber in and reappear a few seconds later with one of the Mac's chips. As he runs off the side of the screen, he's chased by a police car.

The Desktop comes to life

It's the Dynamic Desktop feature that makes *UnderWare* so appealing – not just because the company has thought of it at all, but because the characters and effects that they've come up with are so novel and neat. What's even better is that these modules change slightly when they're used as a 'real' screensaver. Then, they start to interact with whatever icons and windows you happen to have on your Desktop. For example, the dragon burns up the Wastebasket by breathing fire at it – it glows red before melting into a small pile of metal. Or a pixie bounces off the top of the Wastebasket, whereupon the lid falls up and flowers sprout out of the top.

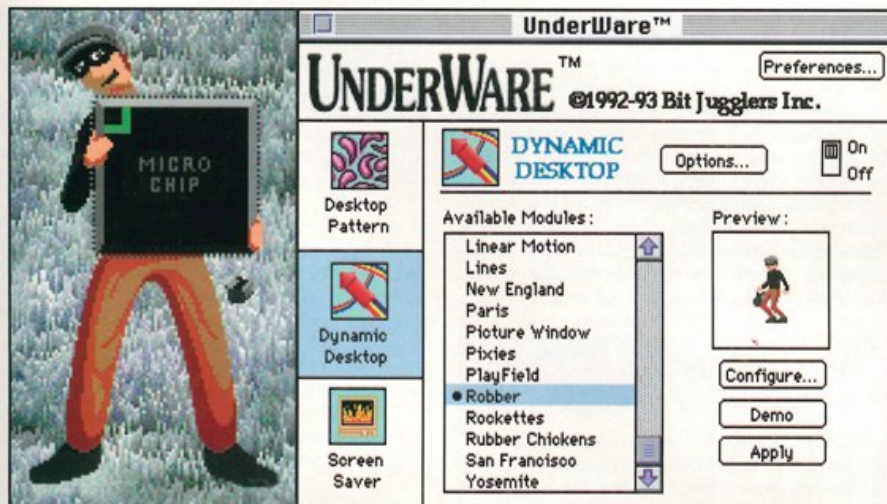
Perhaps my favourite module is one called 'Jindak', where a magician appears and casts

spells on all your icons. Then at various times they each do different things. I've just spent five minutes watching one icon sprout legs and walk off the screen; another turn into a rocket and take off; another grow an outboard motor; a little man with a pickaxe attach an icon until water sprouts from it; a tiny character pop up and clean the inside of my screen; and – best of all – a garbage truck back on to the screen from the left, whereupon a refuse operative grabs the Wastebasket and chucks it into the truck, which then speeds off again.

It's impossible to describe just how clever and funny some of these modules are. Of course,



Yo dude yourself. You're about to melt my Wastebasket, I can tell.



Well that's my Mac out of commission, then. Put that back, you!

UnderWare's Control Panel gives access to more than 25 different effects and over 50 Desktop patterns.



This is Bouncin' Billy. He... er... bounces about the screen, before flattening himself on the inside of the screen. What a berk.



Aargh! There's a brat on the Desktop! Get it off! Get it off!



These chaps come along and empty your Wastebasket, given half a chance.



He swings through the screen with the greatest of ease – then falls off the vine.

..... whenever you move your mouse your Desktop is restored to its original state – but it can be unnerving to return to your Mac only to see the last of your folders wandering off the screen with an unconcerned air!

If you already own *After Dark* or *More After Dark*, you'll be pleased to know that *UnderWare* can play those modules with no problems – and that they can run as Dynamic Desktops, so you can have those toasters flying across your screen as you work.

On a more mundane level, the screensaver features all the things that you'd expect, including password protection – when your return to your Mac you have to type in a password – and a check for background activity, so that the screensaver doesn't activate if your Mac is actually doing something such as printing or receiving a file by modem.

Finally, the program also has over 50 custom Desktop backgrounds, if you're bored of the same

old patterns. These range from drawings of Paris at night or the Yosemite national park, through psychedelic (and headache-inducing) patterns to a couple of what seem to be photographs, one of grass and the other of a close-up of a pine tree.

But...

However, I found that not everything was perfect in the package (although none of the problems are likely to dissuade you from buying it). First of all, the Dynamic Desktop effects tended to be rather jerky. This is presumably because the program is checking to make sure that no programs need attention, but it meant that much of the appeal was lost as creatures lurched, rather than glided, across the screen.

The program has a configurable setting to decide how much background activity is allowed before the animation starts – in case your Mac is actually doing something that you don't want interrupted – and this should be used with care. I set the activity sensing to 'off', but discovered that when the screensaver kicked in as I was printing, the printer stopped receiving data until I 'woke up' the Mac by moving the mouse – otherwise I could still be waiting for my pages to appear from the printer!

Also, a word of warning for people who don't read manuals. When I first used the program, I couldn't persuade the screen saver section to work properly in the beginning. Rather than keeping the image of my Desktop on the screen, the whole thing blanked and then the characters started appearing. It turns out that the screen saver itself has a 'time before sleep' setting, and then each module has its own 'time before screen blanking' slider. I took this to mean the time before the screen saver kicks in, so I set it to 'immediately'. But in fact the slider is the time before the Desktop disappears – so setting it to a few minutes meant that I could see the action happening on the Desktop before the screen blanked to save burn-in.



Over 50 custom Desktop backgrounds are available (the custom icons are my idea of high humour, not the program's).

All in all, though, *UnderWare* is bound to be a roaring success. As soon as anyone sees that dragon wandering across your screen, or the Wastebasket being emptied by bin men, or the burglar stealing a microchip, or... they're going to ask where you got the program – and then go out and get a copy for themselves.

If you think that the Mac should be a fun computer to use, then *UnderWare* should be on your list of essential buys.

Jargon Busters

After Dark

One of the most popular Mac programs ever, *After Dark* is a screensaver with 'plug in modules' to customise the screen display when it kicks into life. For some reason Macintosh users don't seem to be able to live without a copy – probably due to some of the more off-the-wall modules, such as one which animates toasters flying across the screen.

Guy Kawasaki

An early Apple employee and the first 'software evangelist' – person employed to persuade companies to develop for the Mac, and to persuade users how cool their subsequent products were. He now makes a living from being on the boards of several smallish, fun Mac companies, writing columns about how much fun computers should be and producing the occasional book that says much the same thing.

Underware

What? No smart bar graph-type ratings for *UnderWare*? Well, no. See, it's difficult to rate a program like this without bringing one's own personal preferences very much into play. Personally, I won't be keeping it on my Mac – but then, nor do I have *Greg's Buttons* or any of the many other utilities and tweaks that other people seem to find essential. This is more because I need to keep a pretty 'clean' system than for any other reason; however, many people won't want the program because it does nothing 'constructive'. On the other hand, gadget freaks will love it. So let's give it two ratings, depending on your preferences.

Boring user rating 70%

It works, doesn't conflict with anything and can act like a 'normal' screen saver.

Fun use rating 93%

Get it now!

Where to get it ▼

At the time of writing, *UnderWare* did not have a UK distributor. However, it is available from MacWarehouse (0800 181332) for £41.

Now Compress



The file compression arena is getting more and more crowded. Originally there was the venerable *StuffIt*!, then along came *Compact Pro*, *DiskDoubler*, *AutoDoubler*, *StuffIt Deluxe*, *StuffIt SpaceSaver*, *TimesTwo*, *Stacker*... and probably loads more that I can't remember off the top of my head. Well, Now Software (the company behind *Now Utilities* and *Now Fun*) has decided that it, too, wants a share of the pie. The result is *Now Compress*, which combines background file compression with a standard file archiver such as those provided in *StuffIt* and *Compact Pro*.

The idea behind file compression is that most files – data or applications – can be 'shrunk' so that they take less space on your disk, and less time to be transmitted by modem.

Of course, there is a downside to compressing files: when you want to use them, you must re-expand them first. In the case of utilities like *Compact Pro*, this is achieved by double-clicking on the compressed file, and telling the program to expand it. However, over the last year or 18 months, 'background compression' has become popular. This means that when you double-click on a compressed file it is automatically expanded for you and then its creating application is launched. In other words, double-clicking on, say, a compressed Microsoft Word file decompresses it and then opens it in Word – from the user's point of view there's no difference from if the file hadn't been compressed in the first place.

Now that's what I call...

Now Compress adds a new menu to the Finder, which sits to the right of the Special menu. It's from here that you can manually compress and decompress files, create archives (collections of files) and do various other nifty things. To control background compression, you need to access the utility's Control Panel, from where a plethora of options are available. For example, there's a useful set of options which let you decide when a file should be automatically expanded. For instance, you may want as many files as possible on your hard drive to be shrunk to their minimum size, but obviously when you're giving them to someone else on a floppy disk you don't want them compressed (unless the recipient has a copy of the program on their machine). So you can choose to automatically expand files when they're copied to a floppy, removable hard drive or even just any other hard drive.

There are two compression methods available: Faster and Smaller. As the names suggest, this is because there is a trade-off between the time



The Control Panel is well laid out; different sections of the preferences are chosen from the pop-up menu at the top.

Decompression is extremely fast, and is virtually unnoticeable

taken to shrink a file and its final, shrunken size. However, even when 'smaller' is chosen, compression time is competitive with other utilities. I did a couple of informal tests with *Now*, *StuffIt Deluxe* and *Compact Pro* and found that in fact *Now Compress* was the fastest of the three on a 578K folder that I had lying around containing a font, a 33K Microsoft Word document and a

number of 8-bit PICT graphics – even when using the 'smaller' setting. On the other hand, the *Now Com-*

press archive size was 5K larger than *Compact Pro*'s, and 9K less than *StuffIt*'s. (Although the difference, given that the archives were all around 200K, is negligible.)

Background bliss

Now Compress coped with background operations admirably. When a file has been compressed, its icon remains the same, and there's no way to guess that it's been shrunk – even the *Get Info* box gives its 'real' size. The only way that you can tell is by opening the Inspector window from the utility's menu, where the compression ratio and space saved are reported. In fact, in some ways I'd prefer to see a custom icon, or some indication that the file had been shrunk – but most users will never need to know that the process has taken place, since the Control Panel allows them to make sure that any files copied on to external media such as floppies are expanded first.

Double-clicking on a compressed file is almost as fast as double-clicking on the original – decompression is extremely fast, and is virtually unnoticeable in most cases. Again, this is in contrast to some other utilities which take a significant amount of time to expand files before they can be used. On the other hand, there's no automatic recompression when the file is saved

back to disk – that only takes place during the utility's 'idle time compression' later.

Foreground fun

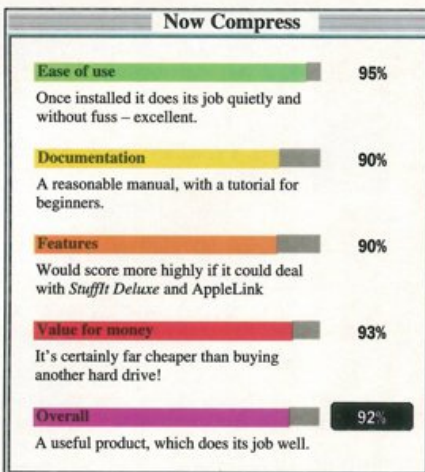
Now Compress can be used to make standard archives, including self-extracting archives (files which, when double-clicked, expand to their original contents). Self-extracting archives are normally used when you're giving a file to someone without the compression utility, and so are very useful. Not only will *Now Compress* handle its own files, it will also deal with *Compact Pro*, *DiskDoubler*, *AutoDoubler* and *StuffIt 1.5.1* files. However, it can't handle *StuffIt Lite* or *StuffIt Deluxe* archives – a major failing, in my view, since so many archives are now created with one of those two utilities.

Creating an archive is easy: just click on the file or folder to compress, then select Archive from the menu. Once the archive is created, it can be viewed in the Inspector window and files added to and removed from it.

Worth it?

Now Compress is a late entrant into a crowded marketplace, but it will find many fans for its ease of use and absolutely transparent background compression. Whether it will take a significant amount of the market away from existing utilities remains to be seen, but it's a fine effort and deserves to succeed.

■ Watch out for an in-depth comparison of compression products in a forthcoming issue.



Where to get it

Now Compress costs £81 and is distributed in the UK by Frontline Distribution on 0256 20534.

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| • LOTUS AmiPro | • SAGE |
| • LOTUS 1-2-3 For DOS | • WORDPERFECT 6.0 |
| • LOTUS 1-2-3 For Windows | • WORDPERFECT For Windows |
| • MICROSOFT EXCEL 4.0 | • MS DOS 6.0 |

For the MacIntosh (Full listing on written request)

- | | |
|-------------------------|-----------------------|
| • ADOBE ILLUSTRATOR 3.2 | • MACWRITE II |
| • ADOBE PHOTOSHOP 2.5 | • MASTER THE MAC |
| • ALDUS FREEHAND 3.1 | • MICROSOFT EXCEL 4.0 |
| • ALDUS PAGEMAKER 4.2 | • MICROSOFT WORKS 3.0 |
| • FILEMAKER PRO 2.0 | • MICROSOFT WORD 5.1 |
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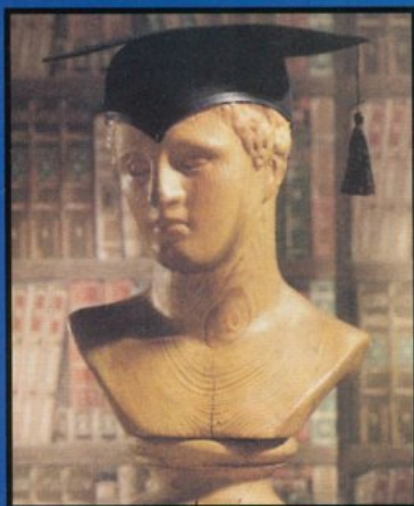
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If your question relates to software, make sure that you tell us what version of the program you are using. You can find this out by clicking once on the program's icon, selecting **Get Info** from the **File** menu and reading the information that appears. Version numbers tend to be things like '1.2' or '9.6b3'.

Q I bought my first home computer, a Performa 400, some three months ago and one of the reasons was the PC Exchange program on offer – without this I'd probably have bought a PC, because I need to use disks created on the PC with my Mac. However, a recent virus scare on the PC has got me worried, so:

1 Can a PC virus infect a Mac – or, for that matter, vice versa?

2 If so, can the usual Mac anti-virus programs such as Disinfectant or SAM cope with them?

3 On a different matter, I cannot trash the Preferences file XTND Translator List, as recommended by Claris for a problem that I was having with ClarisWorks. It keeps on reappearing on startup. Any suggestions?

Tony Hughes
Tunbridge Wells, Kent

PC Exchange to copy files from the PC floppies to your Mac, there's no need to worry. We can state categorically: no PC virus can infect a normal Macintosh, or vice versa. You can give a PC user a Mac disk with every Macintosh virus under the sun on it, and it won't harm their computer. Likewise, however infected a PC disk may be, it can't harm your Macintosh at all. The two computers work in totally different ways, so there's no cause for alarm.

Normally.

There is one exception to this rule: if you're running a PC emulator such as Insignia Solutions' range of *SoftPC* products, then it's possible for a PC virus to attack – and so you should run a PC anti-virus program to make sure that your system remains clean. But unless you're running such a problem, there's no cause for panic.

3 Claris recommends trashing the Preferences file you mention so that the Mac has a chance to rebuild it from scratch when you restart your Mac. It will reappear, yes – it's created whenever you run an application which uses XTND technology, as all Claris apps do. As long as you've trashed it once, that's sufficient.

Do-it-yourself problem solving

One of the main causes of a program not working properly is something called an INIT clash – your program isn't happy with one of the system-level extensions (called INITs) 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 it was is to move them all out of the System folder, then put them back one at a time – restarting your Mac after each one – and test the program again after each one has been replaced.

Label Q&As

Subjects

- Beginners
- General/System
- Hardware
- Buying advice
- Programming
- Applications
- Graphics
- DTP
- Comms

To help you spot answers to questions that you might be interested in, we've colour-coded them according to the table above. Remember, these are just general categories; but they should help you to find your way around the section.

Q I am in the process of converting from PCs by buying an LC475 8/160. I would like, however, to be able to use certain Windows programs and DOS games that I already own. For that reason, I'm interested in purchasing a Windows emulator such as *SoftPC* for Windows. My question is, what sort of results can I expect by using such a program on the LC475, and how compatible in general will the thing be?

David Silk
Billericay, Essex

A *SoftPC* for Windows runs on top of the Macintosh operating system and emulates a Windows system. A 68040 processor is required for the program – otherwise things just won't run fast enough. The LC475 does, indeed, have an '040 chip, so you're fine there. You may find that you're a little pushed for RAM, though – by the time your System has taken up a couple of Megs, the 6Mb or less that you have left will be pushing things somewhat. As for performance, don't expect miracles. You certainly won't get 486-type

performance out of the system – maybe low-end 386sx speeds if you're lucky.

As far as compatibility goes, the *SoftPC* family is excellent in that respect – very few programs indeed are incompatible. If you are unsure about a specific application, give Insignia Solutions a call on 0494 459426.

Q At last! Someone can begin to show me what the near-legendary ResEdit really does! (I refer to your Answers column a couple of months ago, where you used it to 'fix' Seahaven Towers for users of small screen Macs.) Would it be possible to extend the coverage you gave to the program, and include the latest version (is it ever upgraded?) on a cover disk?

On a different matter, I have a Colour Classic with 4Mb of RAM and an 80Mb hard drive. I'm seeing an error of Type 1 with increasing regularity – what can I do about it? Can you list all the error messages and what they mean?

Nick Gough
Benego, Hertford

A **1&2** If all you're using is

Subjects

- Beginners
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- Applications
- Graphics
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- Comms

ResEdit (you're right, it is near-legendary!) is a tool supplied by Apple that's mainly intended for programmers, although it's been adopted by the hacker fraternity in general as a great way for 'tweaking' programs and even the Finder and System software – normally to no great effect, it has to be said. You can tell if someone's just come across *ResEdit*: their Finder menus tend to say things like 'Clean the bloody place up!' instead of 'Clean Up Window', and 'Where the hell is it?' instead of 'Find' – since one of the things that *ResEdit* allows you to do is alter the text of menus. We're certainly looking at a series on *ResEdit* in the future, and we're talking to Apple about the possibility of putting the program on a future cover disk – although it's not charged for, neither is the program in the public domain, and only certain people can distribute it. If you really want it, some bulletin boards (such as CompuServe) have a licence to distribute it, or you may be able to persuade your friendly local AppleCentre to let you have a copy for the price of a blank disk.

As for error messages, the Type 1 error is something that's pretty much a fact of life. It's actually a 'bus error', but quite what that means in practical terms – and how to avoid it – isn't too simple. You could try rebuilding your Desktop file, by restarting the Mac while holding down the [command] and [option] keys until you're asked whether you want to rebuild. There's no absolute reason why this should work, but I tend to use it as a universal panacea, and it certainly seems to do the trick on my Mac for a couple of weeks.

Apple's error messages in general aren't too much help to anyone except a real techno-nerd (anyone for a 'line 1010 trap error?'), and don't always reflect the real problem – for example, the error may not be generated by the application that's running, but may

instead have been caused by a rogue Extension. Just about the only one that you can immediately do something about is a Type 25 error, which is Apple-ese for 'out of memory'. To fix this, allocate the application more RAM to run in, or quit other running applications before you try to run it again.

If you're keen to know exactly what all the errors mean, check out a utility called (unsurprisingly) *System Errors*. This is a small application which lists all the errors by number. Just don't expect it to be too helpful...

Q I'm trying to write a program in HyperCard; when it's finished I intend to release it as shareware or public domain software. How do I go about doing this? What are the rules about distributing HyperCard? Do I need the licensing kit? How do I get my program out to distributors?

Matthew Jones
Douglas, Isle of Man

A You can either just distribute your HyperCard stack – in which case people will have to use their own copy of HyperCard or the

HyperCard player to run it – or you can buy the HyperCard licensing kit, which is distributed by Softline (081 401 1234) and which allows you to give away copies of the player with your software. However, do check on the exact terms of the license to make sure that you can do this with PD software – Softline will be able to help you there. In fact, many people already have a copy of HyperCard, or at least the player, on their Mac – it was given away free

with all Macintoshes until relatively recently. So you may decide that it's easier and cheaper just to distribute the Stack that you've written and let people sort out getting a copy of HyperCard for themselves.

To make sure that your software is distributed as widely as possible, send copies to any PD houses that you can find (there are adverts for several in *MacFormat*), to user groups, and try to get it on bulletin boards – get a friend with a modem to upload it if you don't have one yourself. Then sit back and hope the registration fees start rolling in!

Q I use Word 5.1a to create documents which have a large number of footnotes at the bottom of each page – usually only two or three words each. The problem is that this gets unwieldy – there tends to be more space devoted to footnotes than there is for the main body of the text. Can I persuade Word to avoid putting them each on separate lines – perhaps just putting two or three spaces between each one instead?

Joel Tatelman
Wolfson College, Oxford

A Sorry, Joel, but I know of no word processor which will do that for you – they all insist that footnotes are placed on separate lines. Maybe someone else has discovered a work-around for this? If so, please do write in – we'll reward you with a *MacFormat* T-shirt if we print your answer.

Q When I try to re-install my System software from the System disks that came with my Mac, I get an error message telling me that there is a protected resource on the hard disk that can't be overwritten, and the installation is cancelled. I have Norton Utilities and the Disinfectant INIT on the disk – could either of these be causing the problem?

Edward Callan
Tallaght, Dublin

A This is a problem that can be caused by a number of things, but usually the root of the problem is that a piece of software you've installed has written extra information (called a 'resource') into the System file, and marked it as 'protected'. Now, when the Installer tries to update the System file, it actually writes new

resources on top of the old ones (which means that any extras should be left in place, so you don't have to re-install all your other software again). But if one of the standard resources has been marked as protected, it can't be replaced with a new one and so the Installer wimps out and tells you that it isn't tough enough to do the job. (Is all this making sense?)

Unfortunately, that means that you can't re-install the System in the normal way. There is a work-around, but be aware that you will then need to re-install any software which requires other resources to be added to the System (and, of course, you're never told that in the manuals). You can only really find out whether any of your software requires this by seeing if everything still works after the System re-install. If something doesn't (it will usually be something like an Ethernet card or fax modem software) then run the Installer for that package – you do still have the original disks, don't you?

Anyway, on with the work-around. An obvious approach would be to trash the System file and Finder, and then install the System again. Fine, but you can't throw away the Finder or System while they're running – perfectly logical from the Mac's point of view. So, this is what you need to do:

1 Restart your Mac from the Disk Tools disk that's part of the original System disks – that is, restart your Mac and immediately it 'bongs' insert the Disk Tools disk.

2 When the Desktop appears, you should see that the Disk Tools disk is at the top right hand corner of the display – showing that it's been used as the startup disk. Your hard drive will appear underneath it.

3 Open your hard drive's icon, and find your System folder. Open that, and throw away the System and Finder. (Note that if you're running any System below 7.1, this will mean that you're also trashing any screen fonts that you had installed – so you'd better make sure that you have a backup of them somewhere before you do this.) Empty the Wastebasket.

4 Rename your System folder to something else – 'old System folder' is fine.

5 Select Restart from the Special menu and insert your Installer disk for the System software.

6 Proceed with a standard install, and eventually you'll be told to Restart the Mac. When you've done so, you will have a brand new System folder on the hard drive. You can now copy any extra Control Panels, Extensions,

System Errors Table 5.0

-29	unitFullErr	unit table has no more entries
-30	diskFullErr	disk extension error
-31	File System Errors	
-32	dirFullErr	Directory full
-33	diskFullErr	disk full
-34	noSuchVolErr	no such volume
-35	noSuchFileErr	no such file
-36	noSuchDirErr	no such directory
-37	badNameErr	there may be no bad names in the final system
-38	fileOpenErr	File not open
-39	endOfFileErr	End of file
-40	posErr	tried to position to before start of file (r/w)
-41	fullErr	volume full (open) or file won't fit (close)
-42	tooManyFilesErr	too many files open
-43	fileNotFndErr	File not found
-44	dirFullErr	directory is write protected
-45	lockErr	volume is locked
-46	lockErr	volume is locked
-47	fileBusyErr	File is busy (delete)
-48	dupFileErr	duplicate filename (rename)
-49	openErr	file already open with write permission
-50	paramErr	error in user parameter list
-51	rtnErr	return error
-52	glbErr	get file position error
-53	volFullErr	volume not on line error (see ejected)
-54	permErr	permissions error (on file open)
-55	volFullErr	drive volume already on-line at bootable
-56	noSuchDirErr	no such dir (tried to mount a bad drive num)
-57	noSuchFileErr	no such file (tried to mount a bad drive num)
-58	notAFileErr	volume in question belongs to an external file
-59	fileErr	file system internal error: during rename the old entry was deleted but could not be restored.

With the *System Errors* application, you can list the 'real' explanations for those numeric errors that the Mac sometimes throws at you. Not that it's much help, of course...

Towers tip

There is a simple solution to the problem of not being able to see all of Seahaven Towers on a small Mac monitor, which you suggested solving by hacking at the program with ResEdit. The answer is to use DragAnyWindow, a Control Panel that you gave away on your December coverdisk. This allows any window to be moved – even if you can't see the title bar. Just install it, then hold down the [command] and [control] keys, click on the playing area and you'll be able to drag it to a position where you can see all the cards.

Don't forget to pay the \$5 shareware fee to the author!

Timothy Barnes
Ely, Cambridgeshire

Thanks, Timothy! For your pains, please accept a rather smashing MacFormat T-shirt with our compliments for that fine bit of lateral thinking.

fonts and so on that you had from the old System folder into your new one.

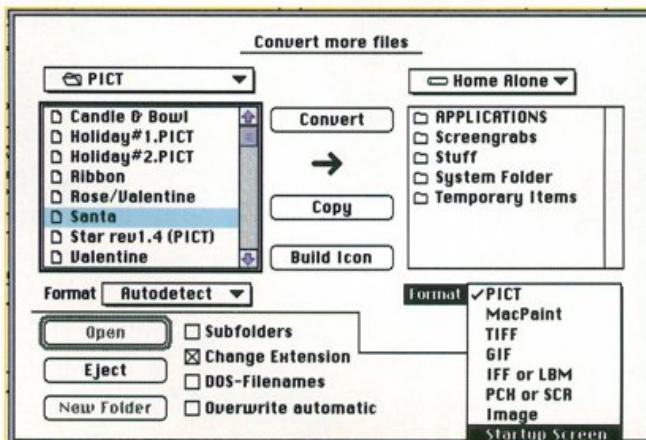
7 You're done! Your Mac now has a newly-installed System.

Q How can I change the default font that applications use? Do I need to use ResEdit? I'd like to change the default of TeachText, because I want to use it as an easy way of creating short letters, faxes and so on without having to resort to a full-blown word processor.
George Papaconstantinou
Kallithea, Athens, Greece

A Some applications – such as Microsoft Word – allow you to change the default font that they use to display text, but unfortunately TeachText isn't such an application. This is because TeachText is basically just a 'front end' into Apple's built-in text handling routines, and doesn't have any sophistication such as font styles, typefaces and so on. Even with ResEdit, I don't think that you could do anything to change the default font (although as always, of course, if anyone has a solution they are welcome to write in and let us know). Sorry.

Q I have read that to change the Mac's startup screen, you simply create a picture in a paint program, store it as a PICT and then place it in the System folder with the name 'StartupScreen'. I did this (using ClarisWorks) and all I got was grey fuzz – why? How do I personalise my startup screen?
Paul Paxton
Ovingham, Northumberland

A Unfortunately, you can't use just any graphics program to create a file: it must be in a special format, known (rather unsurprisingly) as Startup Screen format. Some graphics programs (such as Aldus SuperPaint) will save graphics in this format, but most won't. The easiest thing to do is get hold of a piece of shareware such as GraphicsConverter (which was on January's ccover disk, and which is shown below). This program will read in any of a wide range of different file formats and convert them to many other types – including Startup Screen format. Make sure that when you place the file in your System folder it goes loose – that is, not within any other folder – and that its name is 'StartupScreen', with no space between the two words. Now, instead of saying 'Welcome to Macintosh' when you start your Mac up, your picture will be displayed instead.



To create a custom startup screen, you need to convert your image to the special format the Mac requires, using a program like the shareware GraphicConverter.

Q&As

Subjects

- Beginners
- General/System
- Hardware
- Buying advice
- Programming
- Applications
- Graphics
- DTP
- Comms

Three questions for you:

1 At home I use System 7.1 on my LCII, but at work one machine is a IISI running System 6.1.7 and the other is a Mac Plus running System 6.0.7. When transferring files from my home Mac to those at work via floppy disk, sometimes I get a message saying that the disk requires minor repairs. This only takes a couple of seconds, and always works fine – but why does it happen in the first place? I never get the problem when transferring files from work machines to my home Mac.

2 I tried to re-initialise my hard drive using the original startup disks that I was supplied with, to get rid of some problems that I was having. However, the system would not let me do this, saying that it was 'unable to unmount drive. A file on the disk may be in use.' I tried again with all Extensions turned off, but the same thing happened. How do I re-initialise the hard disk – or can't I, since the System was already loaded

Mac answers

when I bought the Mac?

3 How do I produce icons like that of your own on the games folder supplied with your last cover disk?

A Fairford, Loughborough, Leicestershire

A Well, there are three rather disparate questions! Here goes...

1 First of all, I suspect that your IISI is running System 6.0.7, not 6.1.7 – since there was never a System 6.1 anything. The Finder, though, could be version 6.1.7... Anyway, the reason that you occasionally get the problem is that you are copying files from a newer version of the System to an older one. Because older versions of the System don't know about some of the things that System 7 can do – such as give files custom icons and so on – they can occasionally get slightly confused. The 'minor repairs' are just a chance for your Macs running older versions of the System to clean up the floppy's internal 'housekeeping' information so that it's to their liking – it isn't a real problem, and you shouldn't worry about it.

2 To initialise your hard drive, you must start up from the Disk Tools floppy – you can't initialise your startup disk, since the Mac is using the System file contained on that disk. Just restart your Mac, and immediately insert the Disk Tools disk – you will then be able to initialise your hard drive. Remember that this will delete all the information on it, though.

3 System 7 and above provide an easy way to use custom icons for files, folders and even hard disks. First, create a picture that you want to use as the icon in a paint package, select it and choose Copy from the Edit menu. Now go to the Finder, click once on the item whose icon you want to change and select Get Info from the File menu. The standard Info dialogue box will appear, with the item's icon in the top left-hand corner. Click on this icon, and it will be surrounded by a box. You can then select Paste from the Edit menu, and the icon will be replaced by your own picture. Close the Info



Screengrabs

box, and you should see the new icon in place. (If you don't then rebuild your Desktop by restarting and holding down the [command] and [option] keys until you're asked whether you should

rebuild or not.)

If you want to return to the original icon, open the item's **Get Info** dialogue box, select the icon in the top left-hand corner and choose **Cut** from the **Edit** menu.



Do note that this feature is only available in Systems from 7.0 onwards – users of System 6 have to go through much more complex

procedures, involving *ResEdit*.

APPLICATIONS

Q I have four questions for you.

1 I can't rebuild the Desktop! I've tried Restart from the Special menu, Restart from the dialogue box after selecting Shut Down and even turning the Mac on from scratch, all with the [command] and [option] keys held down.

2 Why do icons appear at the very edges of windows in the Finder, so that they're partially obscured? It's really annoying, because I have to move them around to tidy up.

3 As I don't have a printer yet, my husband prints my letters out at work. He transfers them to a lovely clear font called 'Aerial' or 'Aerial'. Can you tell me how I can get hold of this font, and whether it

will work on a StyleWriter II? Is it TrueType or PostScript?

4 Finally, books. I've caught the computer bug and I've spent hours scanning bookshops looking at the range available. But they're all expensive, and I don't want to waste my money, so can you recommend a general Macintosh guide and a ClarisWorks guide?

Jackie Gilligan
Ardingly, West Sussex

A

1 I suspect that the answer to this question is to do with something that you mention elsewhere in your letter: you say that you have At Ease turned on all the time. Try turning At Ease off, then rebooting the Mac (so that it will start up in the Finder, rather than in At Ease). Rebuilding the Desktop is a Finder procedure, so if the Finder isn't running then you won't be able to do it.

2 Who knows? It's just something that happens, I'm afraid. And yes, it is annoying...

3 The only font that I can find with a similar name is Arial, by Monotype. It's a nice rounded, sans serif face, but it's rather expensive I'm afraid. I called FontWorks, one of the UK's leading

type suppliers, who told me that there are various versions of the face, each slightly different, called (unsurprisingly) Arial 1, Arial 2 and so on. The fonts are only available in PostScript format, and each package (which contains a Roman or 'normal' version, plus italic and some form of bold and bold italic versions) will cost around £165. Because it's PostScript, you'll need to use Adobe Type Manager to get it

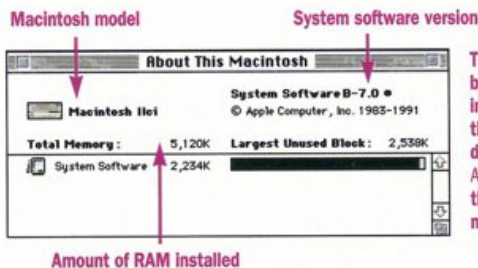
to print on a StyleWriter II. FontWorks can be contacted on 071 490 5390.

4 My personal preference for a 'general' is the *Macintosh Bible*, the book that first taught me about the Mac. It's huge, with information on just about everything Mac-related that you can think of. As for a ClarisWorks book... well, I'd suggest that you just browse and pick one with an easy-to-read style.

Ask your questions here!

Whether it's worries with *Word* or ravings about RAM, we're here to answer your questions. To get your query answered as promptly as possible, please use the form below; it's been designed so that you can tell us everything we need to know about your system. If you're using System 7.0 or above, open the Memory control panel and you'll be able to see whether you're running virtual memory or 32-bit addressing. If you're running System 6, the chances are that you aren't using virtual

How much RAM have you got?



To find this dialogue box, make sure you are in the Finder, point to the Apple menu and scroll down to the first item: About This Macintosh, then release the mouse button

mac ANSWERS

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 (the Total Memory figure from the About This Macintosh dialogue box):

Are you using virtual memory?

(This is accessed from the Memory control panel under System 7) YES/NO

Do you have 32-bit addressing turned on?

(This is accessed from the Memory control panel under System 7) YES/NO

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.

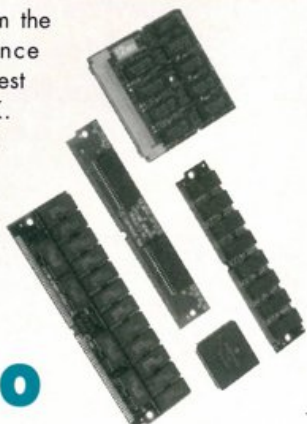
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4Mb llfx.....	£128.00	8Mb PB 160/180	£329.00
4Mb LCIII/Centris	£116.00	8Mb PB 165c/180c	£411.00
4Mb Quadra 800/840AV	£139.50	8Mb Duo	£252.00
8Mb 70ns.....	£273.00	10Mb PB 160/180	£398.00
8Mb LCIII/Centris	£238.50	10Mb PB 165c/180c	£484.00
8Mb Quadra 800/840AV	£248.00	12Mb Duo	£526.50
16Mb Quadra 950	£463.50	16Mb Duo	£687.00
16Mb llfx.....	£490.00	Video RAM	
16Mb LCIII/Centris	£452.00	256K Video RAM	£23.00
16Mb Quadra 800	£544.50	512K Video RAM	£39.00
16Mb Quadra 840AV	£599.00	FPU Maths Co-processors	
32Mb LCIII/Centris	£1,195.00	FPU - LC, LCII, P/400	£49.00
32Mb Quadra 800/840AV	£1,195.00	FPU - Classic II	£49.00
Power Book / Duo		FPU - LCIII	£55.00
4Mb PB 140/170/145b.....	£168.00	FPU - Colour Classic / Ilvi	£49.00
4Mb PB 160/180	£153.00	FPU - Ilvix, Performa 600, Duo	£65.00
4Mb PB 165c/180c	£179.00	FPU - Ilvi with dual slot adaptor	£79.00
4Mb Duo	£139.00		

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DOES YOUR COMPUTER SOUND LIKE ONE?



With the new Audio Gallery from Korg (makers of the world's leading music workstations) computer sound has finally caught up with the pictures.

Audio Gallery puts no less than

32 Megabits of studio quality samples, 128 General MIDI pro-programmes of instrumental voices and 4 large drumkits at your disposal.

Hooked up to any GM-com-

patible sequencer, multimedia or game software it'll let you create anything from a simple piano track to a full orchestral ensemble. With the opportunity to mix in samples from your own computer via audio inputs.

Bundled software includes 'Trax' which lets you edit, compose and print original music, 'Quick Tune' to get you started, 'MIDI Player' and 'Jukebox' which lets you assemble songs for continuous replay.

Audio Gallery comes in two formats: AG101 for Windows 3.1 and AG102 for Macintosh System 6.0.3. and System 7.

Either way, it'll make your computer sound terrific, not tinny.



KORG
BREAKING SOUND BARRIERS

Mac software

More survival hints and tips this month, as Ian Wrigley puts together a set of utilities to get you out of a fix.

Last issue we looked at what happens when the Mac starts up, and what can go wrong. Now it's time to put together a suite of software that can help you to identify problems – and cure them.

The first thing that you should do is make a copy of the Disk Tools disk that's part of your original set of System disks. This contains all the software required to start up your Mac – a System and a Finder, plus any hardware enablers that your particular Mac needs. (We're talking about System 7 here, of course – newer Macs can't run System 6, and unless you really have a reason for remaining with System 6 it's a very good idea to upgrade to System 7.0 or 7.1.) Note that if you have more than one Macintosh, it's a good idea to create a separate emergency disk for each machine, based on the Disk Tools disk that came with that Mac. This way, you can be sure that all the requisite System Enablers are in place.

When you've created a backup of the Disk Tools disk (we'll call the backup Disk Tools from now on, but do use a backup, not the original), make sure it works! That is, restart your Mac and immediately insert your disk. After a few seconds you should see the Desktop appear with your Disk Tools backup at the top right-hand corner, which means that it's the startup disk, and any hard drives which you have connected below it. If you don't check that the disk works, you run the risk of not being able to start your Mac up at all in the event of a hard drive crash.

Probing about

If you look at the contents of the Disk Tools disk, you'll see that there's some free space. You can use this to add new software which will help you in the event of problems.

Probably the most useful single piece of diagnostic software is *SCSIProbe*, by Robert Polic. This is a \$5 shareware program which scans the SCSI bus and reports any devices that it finds. It can also attempt to mount unmounted devices – which, as we'll see, is also useful. So, you should get hold of a copy of *SCSIProbe* and put it on your Disk Tools disk. Now, *SCSIProbe* is a Control Panel, so you need to put it in the Control Panels folder. But if you start up from the Disk Tools disk, you'll find that it's not available from the  menu. That's because the disk is so limited that there's not even an alias of the

Control Panels folder in the Apple Menu Items folder. So you should click on the Control Panels folder, select **Make Alias** from the **File** menu, and put that alias in the Apple Menu Items folder (both of these folders are, of course, within the System folder).

So, you're now at least partially prepared if your hard disk crashes. If you attempt to

The problems come if your disk doesn't appear on the Desktop

start up your Mac but you get the dreaded flashing question-mark in the centre of the screen, it means that the Mac hasn't been able to find a valid startup disk. Insert your Disk Tools disk, and you'll start up from that instead; when the Desktop appears, take a look to see if your normal startup disk has appeared. If it has, then there is likely to be a corruption of the System file on that disk – the disk is working fine, it's just that your Mac hasn't been able to start up from it. To cure this problem, restart using the Install 1 disk from your original set of System disks and install a new version of the System

software on the disk. This won't harm any other software on your hard disk – it will simply replace the System, Finder and a few ancillary files with new versions. Now when you restart again, all should be well.

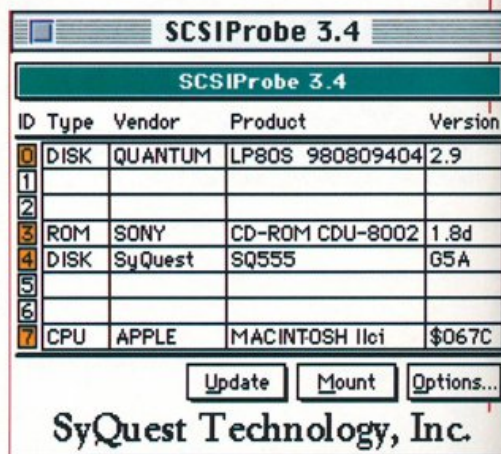
The problems come if your disk doesn't appear on the Desktop. Now's the time for *SCSIProbe* to come into play. Launch it, and click on the Update button. You should be rewarded with a list of all the SCSI devices attached to your Mac – including your internal hard drive, which is normally an SCSI device with ID number 0. If that's the case, you can click the **Mount** button to try to make the disk appear on the Desktop. This sort of problem is normally caused by a corruption in some of the disk's vital 'house-keeping' data, which tells the Mac what kind of device it is and so on. Often the only way to cure such problems is to use a utility such as *Norton Utilities for Macintosh* or *MacTools*, which scans the disk and corrects any errors that it finds – doing the same job by hand is fairly tricky and requires an altogether too techie knowledge of the inner workings of hard drives.

If *SCSIProbe* can't find your internal hard drive at all, then you've got real problems. At least, you may have. First check that you have no other SCSI devices attached to the Mac. If you do, shut down, remove them and try to start up again. If everything works this

Troubleshooting with SCSIProbe

SCSIProbe – probably the single most useful utility for troubleshooting disk problems. With it, you can find out whether you have a software or hardware problem, and it will often let you mount recalcitrant disks so that you can inspect their contents. In this screen grab, it's telling me that as well as the Mac itself and my internal hard drive (the device with ID 0), I have a CD-ROM drive and a SyQuest removable disk fitted.

If you hold down the **[option]** key, the **Update** button will change to **Reset** – try clicking on this if your disk doesn't appear when you hit **Update**.



survival kit

part 2

mac
BEGINNERS

time, you had some sort of a SCSI conflict or problem – we talked about this in the December issue of **MacFormat** (back copies can be ordered on page 100). But if there are no external devices connected, then you've almost certainly got a hardware problem with your hard drive.

If you're brave, you could try checking inside your Mac to see if it's anything obvious, like the drive's power cable that's worked loose. But don't do this if your Mac has a built-in screen (there's a lot of scary voltage in there, even when the power is disconnected), and don't try it anyway unless you're fairly confident that you know what you're doing – you could invalidate your warranty. In cases like this, it's best just to take your Mac in for repair. At least you can tell the dealer that you've used *SCSIProbe* to check for the hard drive, and that the fact that it didn't appear suggests a hardware problem with the disk – rather more useful to them than a simple "it doesn't work."

A toolkit tale

SCSIProbe is only one of the many useful diagnostic utilities that you can find in the shareware and public domain arena. For example, *ADBProbe* does the same sort of job, but for the ADB port – the port that your keyboard and mouse are connected to. It makes sense for you to put together a

If friends think you know what you're doing they start calling on you

couple of disks containing useful troubleshooting software, so that you are prepared for all eventualities – not just on your own Mac, because you'll soon find that if friends think you know what you're doing, they start calling on you when they have problems of their own.

Whenever I'm called on to check out a problematic Mac, I take four disks with me. The first is a DiskTools disk crammed to the gills with System Enablers so that it's likely to be able to start up just about any Mac around. It also has *SCSIProbe* installed.

The second and third are 800K and 1.44Mb Norton Utilities emergency disks.

Jargon Busters

Shareware: 'try before you buy' software. It's freely available (see our PD and shareware column which starts on page 63 for details on where to get it); you make a small payment to the author if you find the program useful.

Startup disk: a disk containing the software required to start up the Macintosh – a System file and Finder. Your internal hard drive is normally used as the startup disk, since that's where you normally have your System folder, but any hard drive – or even a floppy – can be used.

System Enabler: this is a small Extension to System 7.1 which is required to make it work with some newer Macs. For instance, if you have a 68040-based Mac such as the Centris 650, you need System 7.1 plus the 040 System Enabler on a disk before the Mac can boot from it.

The only problem is that these don't have room for System Enablers – so they won't work for the latest Macs. This is apparently a problem that's being addressed by the manufacturer, Symantec.

The fourth disk contains an assortment of other useful PD and shareware utilities that I've found can be used to sort out most software problems. They include the superb *Disinfectant* anti-virus utility, *Compact Pro* (often people find that they've received compressed software and have no way of expanding it), *DDEExpand* (an expand-only utility for files compressed with *DiskDoubler*), *Extensions Manager* (a PD utility for managing Extensions and Control Panels, since this is the cause of most software problems), and *DiskCopy* (an Apple program which makes an exact backup of a floppy disk – useful if you need to create an emergency disk on-the-fly).

I've found that this selection of programs has helped me to solve most of the problems I'm faced with, but you should decide for yourself what programs you think will be the most useful. Then collect your emergency disks together, keep them safe – and hope that you never need to use them... **mf**

mac TRIVIA

Less MacTrivia this issue, more MacNerdism. If you upgrade your Mac's RAM or VRAM, you're normally left with some essentially useless SIMMs; there's no re-sale value for 256K or 1Mb SIMMs, so you're stuck with a pile of useless chips. Well, the fashion among the more nerdy members of MacSociety is to make these SIMMs into – believe it or not – keyrings. SIMMs come with a handy hole drilled in either end, so it's a simple matter to attach a little metal ring, and voilà – the ultimate nerdy fashion accessory. You can tell a nerd's financial worth by the size of his (it's always his, never her) SIMM: a 256K keyring simply means that he thought it would look neat, while a 4Mb job means that he's got money to burn.

Anyone got any even better (or worse) uses for those old SIMMs? Send them in to 'Nerd City' at the usual **MacFormat** address; best suggestion wins a **MacFormat** T-shirt (so you can look really cool as you dangle your new keyring from your belt...).

Finally this issue, a bit of trivia that isn't actually to do with the Mac at all – but it will impress your Unix-using friends, and prove to them that you really are on the ball. Apparently, the microphones fitted to many Sun workstations have a small problem: they're what Unix gurus call 'world readable'. That is, anyone using a different workstation on the network can access the microphone and listen in to all the exciting, and not so exciting bits of information it can pick up. A spate of buggings has led to many system managers removing the microphone – only to find that their machine starts blasting out loud music at random times of the day and night. Why? Because the speaker's world writable, that's why...

Thanks to Simon and Greg, our spreadsheet correspondents and part-time Unix freaks, for that little snippet.

Every picture tells a story...

Photographs are one of the most powerful and important elements in your set of design tools. Your pictures should, at a glance, inform and invite closer scrutiny, or at the very least act as an accessible means of getting into the topic or subject matter.

A photographer can capture on film or disk a moment's embrace, the horrors of war or the

expense than traditional photo retouching, since removing colour cast, marks and scratches is straightforward. It is also possible to assemble more complex photo montages from a collection of source material. The art of the photographer, the photographic print finisher and the desktop designer merge into a new hybrid form. This melding of forms can be seen in programs like

Painter 2, which has the facility to import scans and change lighting in a basic desktop photographic studio mode, or in *Photoshop*, which performs very high levels of image filtering and manipulation.

With many low cost options for getting quality images on to your Mac on offer, you can use your trusty 35mm camera and have your pictures laid down on to PhotoCD, or electronic cameras like Fotoman (greyscale only), or the Canon Ion, and link them to your Mac. And of course you can scan in your prints using a colour hand scanner, like that manufactured by Animas or Asuka.

If you are taking the pictures yourself, or have a keen photographer friend behind the lens,

experiment: try moving your view point to an unexpected angle to add impact, or try working colours together and using different aspects of natural lighting (back-lighting silhouettes for example). Looking for fresh angles to your photographs will pay dividends when you are back at home with all your prints back from the processing lab.

Give yourself space

When you are choosing your pictures, try to give yourself plenty of space. If they are prints, lay them out on a large table top, that way you can compare and contrast them; if they are transparencies get yourself a good sized lightbox. Don't flick through them in an envelope or box on your lap. You should ask yourself the following: have you got all the images you need to make a good design or presentation? Is there a main or central image? How will your pictures and text interact? Do you have a working title and what captioning will your pictures need? If possible use a full draft of your text when you are going through the selection process, this will help link up names mentioned in your text, to faces in the photographs, so you build a clear understanding of the story or event.

You will find that you begin the picture editing process quite naturally by getting rid of the poor quality and duplicated images, as well as finding interesting crops and scene setting material. Don't go for the straight, dull, best quality shot: make your work lively, get noticed and don't play safe.

There are two basic types of picture that are used in general printed material, be it sales information, a newsletter, or a company report. One is an informing shot and the other is an attention grabbing shot. An attention grabbing picture will shout out, 'Read me!' to the reader, in the same way that a newspaper's banner headline will, but only if it is a truly extraordinary picture or one that has been modified to be so. The other type of

Illustrations and photographs play an important part in the **design** of your publication. **Gordon Druce** shows you how to make the most of them.

macro detail of a flower in bloom. This is photography's greatest strength, but it can also be an irritating weakness. Often what happens is that the camera captures many unwanted elements that the photographer failed to notice at the time or did not filter out. With the aid of image manipulation programs like *ColorIt!* (£116), *Colour Studio* (£464) and the powerful professional standard *Photoshop* (£850), it is now possible to correct many of these problems quickly, and at much less



Magazine Cover: 'MR'

This men's magazine from Japan is similar in construction and use of white space, to that of the book jacket by Lance Hidy opposite. Instead of going for a conventional treatment of a men's magazine cover like that of *GQ* or *Esquire*, with the male face filling the full area of the cover and the text being dropped in and around the image. The 'MR' cover uses a greatly reduced male portrait and a dynamic use of white space, making it an unconventional cover, but a striking use of type and photography makes the end result an excellent piece of graphic design.

Filing ideas

Make your own picture files, if you are running a newsletter or a fanzine. Collect your published and non published pictures and start a photo file, or maybe an ideas file for new projects. Collect visual ideas from magazines and advertisements, to help you build an understanding of how others make pictures work powerfully on the page.

picture is the one that really is worth a thousand words; it may not have the punch of the other pictures, but information is just oozing out of it.

So look for these types of picture when you are making your selection because they will help you tell your story. Don't get too hung up on the quality – maybe the slightly soft focus picture gives the story the moody or seedy feel it needs, or maybe an exposure mistake adds an unexpected twist to a mundane image. The art is to inform and entertain; to fire the reader's imagination and to intrigue, fascinate or even repel them. The main thing, though, is *not* to play the 'safety shot'. Your readers will appreciate that you are not being dull and it will help them to discover more about the story you are telling.

Illustration

Today much of the illustration you see in books, magazines and posters is done on computers. This work is created in painting or drawing programs, like *Illustrator*, *FreeHand*, *Painter* and *Canvas*. For the Macintosh designer, this is both good and bad. On the plus side it gives the designer much more freedom to combine type and illustrations, and it saves time on the older methods of commissioning an illustration, preparing type and producing visuals. Nowadays, your type is available on a pull down menu, and if you are lucky enough to have a scanner, then you can import your illustrations into your documents or perhaps create your own illustrations in the appropriate software as I mentioned. It is also possible to print out your colour visuals from the desktop to bubble or ink jet printers.

On the minus side, there has been a trend in modern illustration towards doing all illustration on the computer screen and as such, creating a 'computerised look', which leads to sameness, and lacks the diversity of previous generations' work. This will hopefully become less prevalent, as the software caters for more specialist niches.

The beauty of working with illustration, unlike photography, is its flexibility. In the early stages of the design process you can dictate the style, shape, colour and size of the illustration, and even the text, as this might be illustrated letterforms. You can integrate your text and illustration or overlay your type on to the illustration. The form which your final illustration takes is up to you. There is an infinite set of possibilities, so it's up to you to experiment.

Try looking at all the illustrated media you can: book jackets, posters, magazines and food packaging for example. See how other designers sometimes leave the illustration in its 'own space' and others prefer to integrate text into it. Using illustration and type in your designs will take practice. There are no golden rules, it's up to you to use the space effectively.

If the illustration was produced beforehand and not commissioned especially for the work, then look for natural ways to sit the work on your page – the 'holes' or empty areas in the illustration. Maybe there's a large area of sky to drop your headline into, or a space which is a flat wash of colour that your body text would sit well on. Try as many possibilities as you can, and save out all your versions so you can refer to all your possible solutions, in the same way that you made selections from your photographs. **mf**

Food packaging

This packaging for Carr's biscuits shows again an elegant design solution.

Simple but effective typography, plus clear and beautifully photographed food, showing what the contents look like and how to serve them. All this is communicated in a good unfussy design.

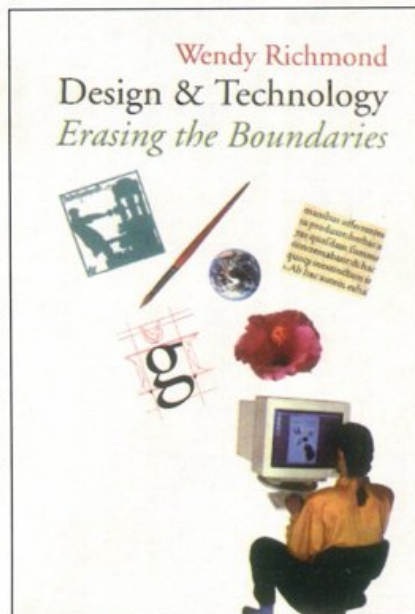


The Guardian angle

A powerful example of the use of a silhouette to introduce a magazine feature about *Guardian* newspaper photographer, Roger Bamber. The headline, introduction and the beginning of the body copy, plus an important reference shot, have all been integrated into the solid area at the bottom of the picture. This lightens and balances the overall page without distracting too much from the excellence of the photography.

Design and Technology

This book jacket was designed by Lance Hidy. The typeface used is Adobe Garamond and the illustration was created in Adobe Photoshop using various scanned images from a Hewlett-Packard scanjet and a Nikon LS-3500. It's a good example of a clean, simple and inexpensive approach to book jacket layout. The image clearly tells the story of what the book is about, but in an unusual and intriguing way. The type is set in a highly legible and user friendly fashion, so there is no confusion as to what you are looking at.



Take a tip from... Paul

Many thanks to Paul Bowden for this snippet of good advice about using 'A' paper sizes (**MacFormat**, October issue). As Paul is a printer and designer by trade, he often finds himself quoting much higher prices to accommodate customers non-standard printing requirements. As Paul said in his letter, "If you are going to pay me to print on an A4 sheet, you might as well use it all, instead of having the excess guillotined off and thrown away." What Paul recommends you do when supplying your printer with camera ready artwork, is to use as much of the sheet as possible. For example two A5 postcards, or ten business cards (5x9cm). Doing this will not only save you the money of costly re-keying, but it will speed up the production and print turnaround times.

Many thanks again to Paul for the excellent advice and kind words about the mag; if any other readers have money saving tips or just plain, good old advice, then write to: **MacFormat Design Tips**, Future Publishing, 30 Monmouth Street, Bath BA1 2BW.

Exploring HyperCard



Rod Lawton begins a new chapter in his guide to *HyperCard* by taking you on a tour of Hypertalk, *HyperCard*'s own programming language



HyperCard is a program with hidden depths. On the surface it's a friendly, versatile and easy-to-use database creation package that can also be used as a multimedia reference tool. Underneath, it's a powerful programming system that can be used to program just about any application you can imagine. Here's where we start our guide to Hypertalk, *HyperCard*'s built-in programming language...

Grasping Hypertalk

If you've ever done any programming before, you'll find Hypertalk quick to grasp. It's just about the easiest and most forgiving programming language written – including BASIC. And yet in conjunction with *HyperCard*'s system of stacks, cards, buttons and fields, it's capable of amazing things. You don't need to buy any additional software or upgrade your *HyperCard* version to use Hypertalk. It's built in to every copy. All you need to use it is a bit of know-how.

HyperCard and Hypertalk exist side-by-side. You don't write complete applications from scratch, but work with *HyperCard*'s existing objects using Hypertalk scripts to automate some functions and invent new ones. These scripts are not activated by typing in a particular command, though (not usually, anyway). Instead, they are launched only when certain *HyperCard* 'messages' are sent.

HyperCard is sending messages all the time. Every time you open a stack, go from one card to another and click on a button, a message is sent. Even when you are doing absolutely nothing, *HyperCard* is continually sending the message that nothing is happening!

Let's take one of the simplest and most directly useful messages – 'on mouseup'. Seeing an example in use is easy. Create a button, then link it to another card – it doesn't really matter what card. Now, call up that button's Button Info

dialogue, then select the Script option. By linking your button to another card you've given it a script! It will look something like this:

```
on mouseup
  go to card id 16724
end mouseup
```

This is a very simple script, but it illustrates the principle. The first line 'on mouseup' is called a message-handler. The message you send when you click on the button is 'mouseup'. The 'on mouseup' line intercepts that message and prepares *HyperCard* to do something with it. That something is the next line, 'go to card 3471'. That's the command Hypertalk obeys when you click on the button. The last line, 'end mouseup' simply terminates the message handler.

If you had used one of *HyperCard*'s visual effects when you set up the button's link, the script might look something like this:

```
on mouseup
  visual effect dissolve
  go to card id 16724
end mouseup
```

All Hypertalk scripts start with a message-handler – 'on mouseup', 'on opencard', on idle or any of dozens of others – and end with 'end mouseup', 'end opencard', 'end idle' and so on. In between are the instructions that tell *HyperCard* what you want it to do.

Our example's a simple one. And it's one that *HyperCard* generates automatically when you set up a link. You can easily modify it, though. For example, you can make *HyperCard* beep when you press the button by simply adding the following line: 'beep'

```
on mouseup
  visual effect dissolve
  beep
  go to card id 16724
end mouseup
```

Apart from the way Hypertalk uses messages and message-handlers to launch scripts, the programming language is just like any other. It uses commands, variables, loops, conditional operators, logical expressions – all familiar tools to programmers.

However, it has other tricks up its sleeve. Because Hypertalk works side-by-side with *HyperCard*, you can modify fields and buttons from within scripts, you can use fields as 'permanent variables', you can open and close stacks, you can change the size of the *HyperCard* window on-screen – and because you can use

HyperCard without any Hypertalk knowledge whatsoever you can learn at your own pace.

Hypertalk has many different commands, and we'll be looking at these later on in the series. For now, though, there is an extremely useful one you can experiment with. It's very simple, and it's called 'domenu'. You don't use it on its own, though. It's followed by any menu item on any of the *HyperCard* menus, and it causes that menu command to be carried out.

Would you like an example? Let's add another line to our button's script: 'domenu new field':

```
on mouseup
  visual effect dissolve
  beep
  go to card id 16724
  domenu new field
end mouseup
```

What happens now is that when *HyperCard* has beeped, and then gone to the new card (using its dissolve effect), it creates a new, empty field. The field tool stays selected and you can drag this field anywhere you like on the card, choose the browse tool and type into it.

Admittedly, it's unlikely you'd want to create a new field every time you went to that card. But you might want a new field to be created every time you created a new card. And it's an easy matter to modify our script so that instead of going to another card, it creates a new one:

```
on mouseup
  visual effect dissolve
  beep
  domenu new card
  domenu new field
end mouseup
```

The above script creates a new card using the same background as the card the button is on. What if you want a new background, and for the new field to be in its background layer? Simple. We just modify one line:

```
on mouseup
  visual effect dissolve
  beep
  domenu new background
  domenu new field
end mouseup
```

It should be apparent by now that knowing just one *HyperCard* command – 'domenu' – lets you write a lot of very useful little scripts. And as far as Hypertalk and *HyperCard* are concerned, this is very much the tip of the iceberg...

BIG warning!

Whenever you're experimenting with *HyperCard*, always use your own stacks and always back them up if they're important. *Never* muck around with your Home Stack, because it contains a lot of complex interrelated code that would take the most experienced Hypertalk programmer weeks to unravel. And while we're on the subject, *always* have a back-up of your Home Stack – it's as vital and as irreplaceable as the *HyperCard* application itself.

Handy scripts

Each month we'll be printing some handy scripts that anyone can use. If you don't know Hypertalk too well, try to figure out how they work. If you do... well, you never know you may discover a few new ideas.

1. Creating a tutorial stack?

You might be trying to teach some students history, or demonstrating to beginners how to use a Macintosh. Either way, *HyperCard* is a useful and friendly learning tool. Especially if you can get it to move on to the next card in a sequence with a simple mouseclick.

This should either be a background or stack script, so that it works a number of cards. The 'mouseup' message goes 'through' the card script, through the background script, through the stack script... it keeps going, basically, until you 'intercept' it.. If you place the mouseup handler in the stack script, it will work with every background and hence every card in that stack. Simply display 'Click for next card' anywhere on the screen so that users of your stack get the idea. Buttons and fields will still work normally - you will go to the next card only when you click outside buttons or fields. Sounds complicated? This is all you need:

```
on mouseup
  domenu next
end mouseup
```

2. Fed up of losing your place?

It's a bit of a nuisance that stacks are always opened on the first card. Why can't they open where you left them? Well they can, with a bit of jiggery-pokery. First of all, create a field on card 1 called "keep place". Hide it (type "hide card field "keep place"" in the message box). Then put the following in the stack script:

```
on closetack
  put the id of this card into card
  field "keep place" of card 1
end closetack
```

```
on openstack
  go to card field "keep place" of
  card 1
end openstack
```

You could change the script to mark the current card before the stack was closed, but that would make things a bit complicated if you then wanted to use card-marking for any other purpose.

3. Want to password-protect a single card?

HyperCard has a built-in system for password-protecting stacks. But what if you only want to protect a single card? Easy. You place the following into the secret card's script. It checks their password against the one in a hidden field on the card (called "password"). If the entered password is wrong, you simply go back to the previous card:

```
on opencard
  ask "Password"
  if it is card field "password"
  then
  else
    domenu back
  end if
end opencard
```

If you don't want people to see the contents of the secret card until they get the password right, draw a large, opaque card button over the whole of the card and get the script to hide it when the password checks out.

Need a hand with HyperCard?

Are you having trouble getting a script working? Send it in to: *HyperCard* Column, *MacFormat*, Future Publishing, Beauford Court, 30 Monmouth St, Bath, Avon BA1 2BW. Keep them less than 20 lines long, though, because otherwise we won't have room to print them.

Or maybe there's something you want to do with a Hypertalk script but can't figure out how? Again, write to the above address.

Finally, you may be a Hypertalk wizard who's just written a script which you think we should all know about. Yes? Well you know the address...

Where to get it

Although the previous version of *HyperCard* - 2.0 - is no longer available commercially, *HyperCard* 2.1 costs £170 from your local Apple dealer. If you don't know where to find your nearest dealer, call Apple free on 0800 127 753. A 'play only' version is available for £34.

Next month

Why do some routines have to go in the stack script, and why must some be confined to single buttons? Putting a Hypertalk routine in the right place is vital, and deciding where that right place is demands a knowledge of Hypertalk messages and the routes they follow. It's not just the messages you intercept that count, it's where you intercept them...

Hypertalk in action

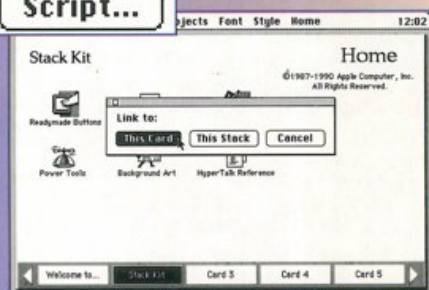
You don't have to write a Hypertalk script to see one in action. Here's how to get *HyperCard* to write - and display - one for you.

- 1 First of all, create a new button. Then double-click on it...

New Button

Icon...
Effect...
LinkTo...
Script...

- 2 ...to produce the Button Info dialogue. At the bottom left of this dialogue are four buttons arranged vertically. Click on LinkTo...



- 3 This lets you choose a card to link your button to. When you've chosen one, click on This Card.

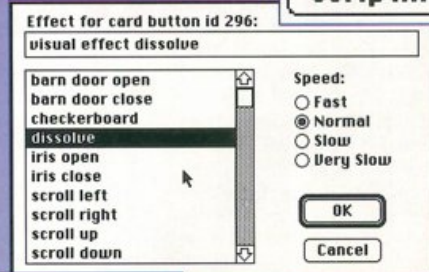
Icon...

Effect...

LinkTo...

Script...

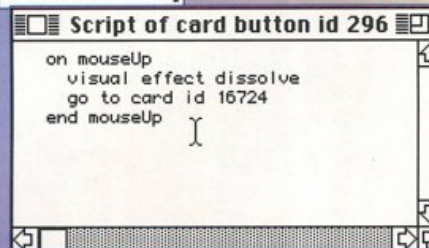
- 4 Now call up the Button Info dialogue again, and this time select Effect...



Icon...
Effect...
LinkTo...
Script...

- 5 This lets you choose one of *HyperCard*'s many visual effects (and the speed it happens with - stick to Normal).

- 6 You'll now find yourself back at the Button Info dialogue. This time, choose the Script... option.



- 7 This will bring up your new button's script window. And lo and behold, *HyperCard* has turned your dialogue choices into a Hypertalk script, activated when you click on the button.

All together now, 1-2-3...

1-2-3 in action

1-2-3 is a well-known application on PCs but Lotus has hardly penetrated the Macintosh software market. After launching 1-2-3, the first thing you notice is the plethora of small windows dotted around the main worksheet window. However, you soon realise these are not as daunting as they seem. Further investigation shows such useful things as a pop-up menu with all the spreadsheet functions and the ability to name ranges of cells, which are then accessible from another pop-up menu.

1-2-3 comes into its own in two main ways. Firstly it has three dimensional worksheets. The worksheet is made up of the usual rectangular grid but it is possible to have a number of layers. So different parts of a problem can be allocated to different layers as required. Secondly, many operations are easily accessible from the various pop-up menus or clicking on various areas. For example, worksheet data can be dragged and dropped rather than using copy and paste. In the graph example, the titles and the graph itself may be simply moved by dragging.

It is quick and easy to access most of the features in 1-2-3. The interface is consistent and well thought-out. It does not give the feeling that new features have been bolted on, unlike other applications.

As to whether you would prefer 1-2-3 over Excel, the choice is personal. Both have their strengths and weaknesses. In favour of 1-2-3 is its 3D worksheets and mouse oriented interface. In Excel's favour is its larger collection of functions and 'wizards' that take you through complex operations. Also, one feels that what might be lacking in Excel will be remedied in the forthcoming release: Excel 5.

Simon Cox and Greg Morrison show you how to analyse data and produce meaningful statistics in **Lotus 1-2-3**

This series has dealt with many aspects of spreadsheet applications: analysing data and producing statistics is an important one yet to be considered.

When using a spreadsheet to produce statistics, we need to know what the functions do, so that we know what the numbers that come out actually mean. All spreadsheet applications contain a function to calculate the average of a set of numbers and most people understand what an average is. However, can you actually say with your hand on your heart that you understand what a standard deviation is? Do you know when you should use a standard deviation and when a frequency analysis might be better?

In this article we will look at how a spreadsheet can be used to analyse data. We are also going to use that as an excuse to examine a spreadsheet application which has not graced these pages before - Lotus 1-2-3 for the Macintosh. For a quick guide to the features of 1-2-3, see '1-2-3 in action', left.

Analysing data

As an example of data analysis we will look at examination marks. While this is very important

to anyone who has ever set or marked an exam, many of the operations are also applicable to a wide class of problems. There are plenty of application areas where there are a number of different data readings. For example, daily sales figures for various items in a shop or fuel consumption for a car. In all these cases there are two styles of analysis we can perform on the data.

Firstly, we can find various properties of individual sets of the data. A good example of this is an average. Secondly, we can compare one set of data against other sets and attempt to find some relationship between them. This process is usually called correlation. A good example would be to see if the sales of ice cream in a shop correlated to the number of hours of sunshine. In this article we will concentrate on the first style of analysis.

However, before analysing data, the data must be obtained. The most important aspect of any data is to know that it is accurate. For something simple like the examination marks used here, we must make sure that all the numbers are entered properly and that there are no mistakes. For example, here we have 53 students who sat an examination comprising five questions, of which they had to answer three at most. In picture 1,

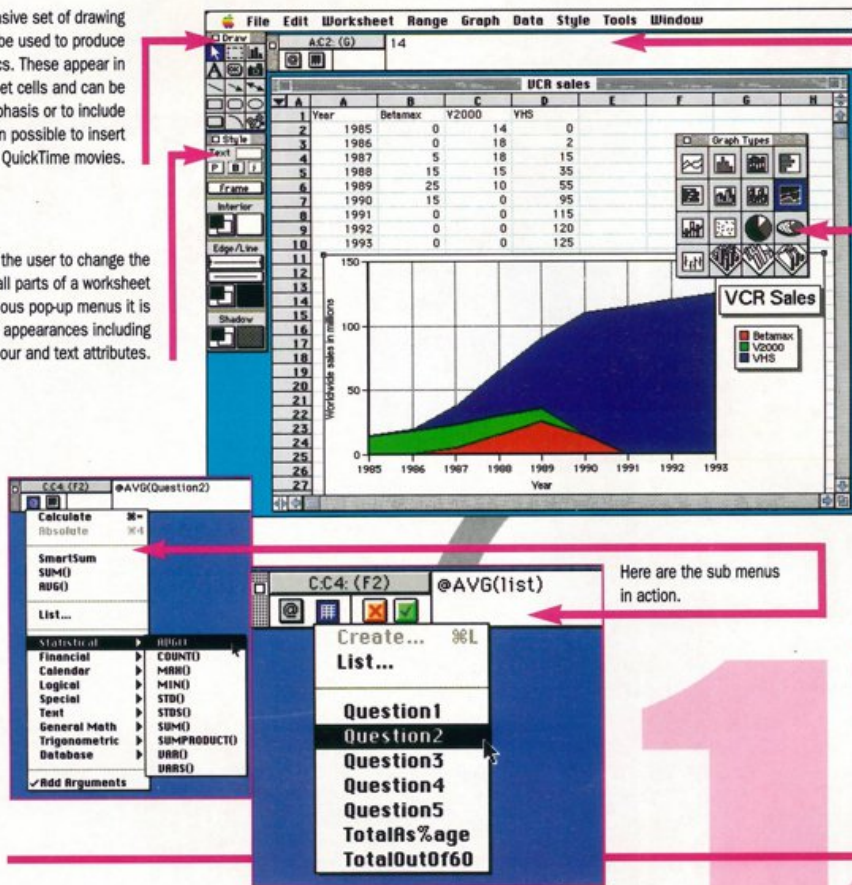
1 This is the formula we are using to check that the data has been entered correctly.

Question 1	Question 2	Question 3	Question 4	Question 5	Total out of 60	Percentage	No of Answers
1	11	10	3.5		24.5	41%	3
2	12	9	5.5		26.5	44%	3
3	14	11	6		31	52%	3
4	18	15	8		41		3
5	11	13	14.5		38.5		3
6	7	10	6				3
7	11	16	10.5				3
8	11	8		4			3
9	11	8	8				3
10	11	13	4.5		28.5		3
11	13	9	4.5		26.5		3
12	11	7	7		25		3
13	12	11	14.5		37.5	63%	3
14	2	13	6.5		21.5	36%	3
15	12	12	12		36	60%	3
16	13	12	14.5		39.5	66%	3
17	10	7	8		25	42%	3
18	12	11	4		27	45%	3
19	12	13			25	42%	ERR

Pick from the palette in 1-2-3

1-2-3 has an extensive set of drawing tools that can be used to produce presentation graphics. These appear in front of the worksheet cells and can be used for emphasis or to include instructions. It is even possible to insert QuickTime movies.

The style tools allow the user to change the appearance of all parts of a worksheet quickly. With various pop-up menus it is possible to alter appearances including object frames, colour and text attributes.



The console window is where all the action happens. The display shows the address and contents of a cell (in this case C2 of the sheet named A). There are two pop-up menus available from this window. The first provides quick access to all the worksheet functions, divided into their various categories. The second provides access to ranges of cells that have been previously named. These pop-up menus make it very quick and easy to enter formula into cells.

Using this window it is possible to change the type of a graph just by clicking on the new graph type. As can be seen, 1-2-3 supports a wide selection of graph types. It is possible to change virtually every aspect of the appearance of a graph. For example, for three-dimensional graphs one can even change the position of the light source.

names are entered in column A. The questions were marked out of twenty and the marks are then entered in the next five columns. In column G we add up these marks to produce a mark out of 60 and then show that as a percentage in column H. In column I, the number of questions answered has been calculated using the count function. The expression `COUNT(B2..F2)` will count the number of cells with values across the five question columns. A trick has been used so that any potentially error-prone data can be more easily seen. A conditional has been used to check the count. If it is not equal to three, then the formula tries to display the word 'Error' which is not a number and causes 1-2-3 to put in the word

ERR. As can be seen in picture 1 on page 86, some students did not answer the correct number of questions.

Having data which may be wrong highlighted in this way is useful. If a student gets highlighted in this way, we can check their script and decide whether or not they answered the correct number of questions.

Caution pays

Always check the data if it is obtained from a third party. Remember to check and re-check that it is entered properly into the worksheet. For more complex information it may be worth writing a macro that checks the range of each of the values in a column of data. Once it has been checked, it is a good idea to protect it so that you do not change it accidentally when the worksheet is being developed.

The simplest piece of analysis that can be performed on some data is to calculate the average. As everyone knows this is simply the total of all the data divided by the number of items of data. Most applications have an average function that will take a range of cells and calculate the average marks for our exam are 2.

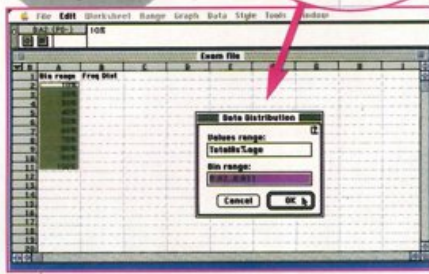
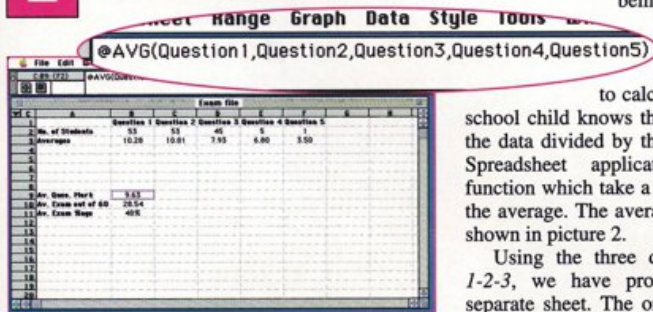
Using the three dimensional capabilities of 1-2-3, we have produced the averages in a separate sheet. The original values were entered

into sheet 1, and these have been calculated in sheet 2. Using the count function, we have calculated the number of students who answered each question – they must have found number five hard! In the console window we can see how the average question mark has been calculated. We have named the ranges that correspond to the cells with the marks for each question. Therefore the range 'Question1' is the range A:B2..A:B54 – that is the range B2..B54 on worksheet 1.

The frequency distribution is calculated by comparing the values range from the marks sheet against the bin range.

3

The named ranges associated with each question can be used to calculate the average score.



Using three-dimensional worksheets in this manner leads to easier development and maintenance. As new sheets are added, old ones are easily accessible through a pop-up menu. This is seen as a small triangle in the top left hand corner of the worksheet.

The average is an extremely useful indication because it gives a measure of what the middle value of the range is. For our examination, the average final mark totalled 48% which is quite close to half marks.

What we would like to know is how the marks were spread out; we would like to know how many students got each mark. This is called a frequency distribution and there is an operation built into 1-2-3 to calculate this. An interesting range of data to look at is the final percentage. However, with only 53 students there is little chance that two or more students will get the same mark. Instead we will have to calculate the distribution with respect to a range of marks. What we want to know is how many students got less than ten per cent; how many got between ten and twenty per cent; and so on up to 100%. This is called the 'bin range'. In picture 3, we have set up a bin range and we are about to calculate the distribution.

The calculation will count the number of students who got less than ten per cent and put the value in B2; who got between 10% and 20% and put this in B3, and so on up to 100%. It will also calculate the number who get over 100% and put this in cell B12. The result is shown in worksheet 4. Having made this calculation it is useful to view it

as a graph. In this case, we have chosen a three dimensional line graph (picture 5) but any line graph would be appropriate.

One last thing we can calculate from this data is the standard deviation. The standard deviation is calculated on the basis that the data's frequency distribution is of a certain shape. This shape would make the frequency distribution graph appear like a bell. The standard deviation is a number that should be used to produce a range above and below the average. This range starts from the average minus the standard deviation and goes through to the average plus the standard deviation. If the frequency distribution is of the correct shape then this gives a range in which most of the data will fall. In the case of our examination marks the standard deviations are as in picture 6.

Referring to the graph in picture 5, it can be seen that most of our data points do indeed fall in this range. However, this frequency distribution does not produce a very symmetric bell shape. The right hand side away from the average is not a mirror image of the left hand side. The fact that the frequency distribution is unbalanced in this way is not reflected in the standard deviation's value.

To sum up

Analysing data can be very useful. From raw data we can produce useful information which we can then use or pass on to other people. It is a great deal easier to read the frequency distribution graph above and understand whether the exam was a success than read the raw marks. **mf**

Jargon Busters

Average: the average of a set of data is calculated by taking the sum of all the values and dividing by the number of values in the set. The average of {3, 4, 6, 9} is 5.5.

Worksheet: the whole of the area where the data is entered and the calculations are performed.

Frequency distribution: gives a count of the number of times each value appears in a set of data.

Range: usually a selection of cells; could be between numbers. For example, given a set of numbers whose average is AV and their standard deviation is SD, we often talk of the range AV-SD to AV+SD.

Standard deviation: assuming the data is of a certain shape, the standard deviation can be used with the average to produce a range to indicate where most of the data should appear.

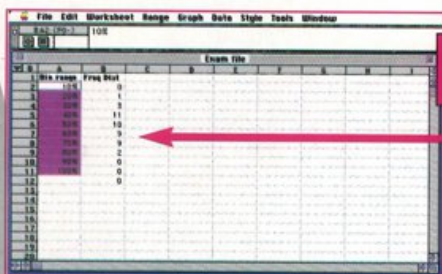
Three-dimensional worksheet: the worksheet in most spreadsheet applications is a two-dimensional grid of rows and columns. In some applications, these sheets can be grouped like a book to form a three dimensional worksheet.

Doing it in other applications

Although we have used 1-2-3, everything shown could have been accomplished in Microsoft Excel. Unfortunately, none of the spreadsheet modules of the integrated applications has a frequency distribution function but they can calculate averages and standard distributions.

Where to get it

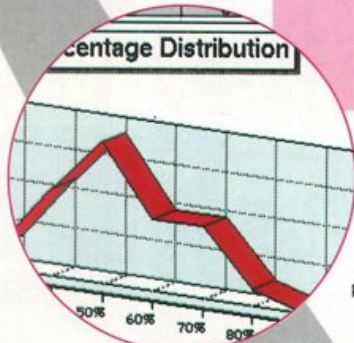
Lotus 1-2-3 is available from most major software sellers and it should cost about £350 including VAT.



4

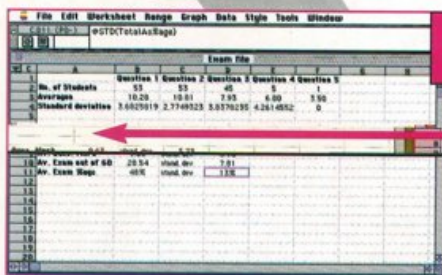
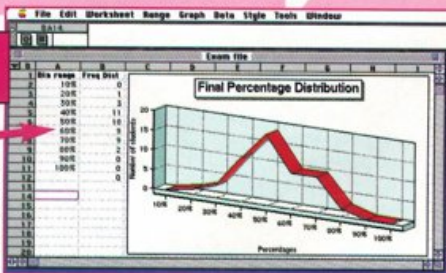
For each value in the bin range 1-2-3 counts the number of scores which match.

Bin range	Freq Dist
10%	0
20%	1
30%	3
40%	11
50%	18
60%	9
70%	9
80%	2
90%	0
100%	0



5

One of the simplest ways to see the distribution is to plot it as a graph.



6

1-2-3 can also calculate the standard deviation of the results with the STD function.

Question 1	Question 2	Question 3	Question 4	Question 5
53	53	45	61	61
10.28	10.81	7.93	6.00	5.90
3.6825819	2.7749323	3.8378235	4.261	4.261

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Define Fields for "Invoice" 15 fields

Name	Type	Options	View by
Quantity	Number	Repeating	custom order
Item	Text	Repeating	
Unit Price	Number	Repeating	
Line Price	Calculation	= Quantity * Unit Price	
VAT Applicable	Number	Repeating	
Line Total	Calculation	= Quantity * Unit Price * (1 + (VAT Applicable * Ex...))	
Total Price	Calculation	= Sum (Line Price)	
Invoice Total	Calculation	= Sum (Line Total)	
VAT Total	Calculation	= Invoice Total - Total Price	
Invoice Grand Total	Summary	= Total of Invoice Total	

Name: **Unit Price**

Type:

☐ Text ☒ Number ☐ Date ☐ Time

☐ Picture ☐ Sound ☐ Calculation ☐ Summary

Buttons: Create, Options..., Change, Duplicate, Delete, Done

1 You can define most kinds of fields as repeating – once you've selected the field type, you just click on the **Options** button.

Entry Options for Text Field "Item"

Auto-enter a value that is

☐ the **Creation Date**

☐ a serial number:

next value:

increment by:

☐ data:

Verify that the field value is

☐ not empty

☐ unique ☐ on an existing value

☐ of type **Number**

☐ from to

☐ Prohibit modification of auto-entered values

☒ Repeating field with a maximum of **8** values

☐ Use a pre-defined value list:

☐ Look up values from a file:

Buttons: Cancel, OK

2 This dialogue box then appears – click **Repeating Field** and enter the maximum number of repeats to be allowed (you can alter this later, if necessary).

Options for Field "Line Price"

Serial: /

Date: /

Customer:

Address:

VAT Rate:

Quantity:

Item:

Unit Price:

Line Price =

Quantity * Unit Price

Calculation result is **Number**

☒ Repeating field with a maximum of **8** values

Buttons: Cancel, OK

3 Repeating Calculation fields have to be defined slightly differently – you use the check box in the formula definition box

Playing the

Jack Weber encourages FileMaker Pro owners to use its powerful 'repeat' feature

More people use *FileMaker Pro* than any other Macintosh database program. But most people who use *FileMaker* don't seem to use one of its unique features – repeating fields. OK, they can be confusing, but, in the right circumstances, they can also be powerful and very efficient. The trick, as always, is to think carefully about how you plan to use your data.

Suppose, for example, that you've got a database of people and you want to include within each record the names and birthdays of their children. One way would be to set up enough extra fields to cope with the biggest family you know. A more efficient approach would be to create just two repeating fields, *Child* and *Birthday*, and use them to hold as many children as there are in each family.

What's the difference? Apart from being less of a fiddle to set up, the repeating fields make it

much easier to find information. For instance, if you wanted to see which families had children's birthdays coming up this month, you'd only need to search one field (*Birthday*) rather than four or five separate fields. And if you ever found that you needed space for more kids, you'd simply increase the number of repeats, rather than have to define and position more new fields.

How do you decide when to use repeating fields? The essential question to ask is whether the repeated data can be treated as subsidiary to the records in your data file. For instance, you could catalogue your holiday photographs by creating a separate record for every film, with the details of each picture held in repeating fields. But if you were cataloguing a collection of photographs that you lend out to people, you'd probably want one record per photo, with repeating fields for all its loans.

There are many other places where you might need repeating fields – invoices and order forms for example, where each record refers to one

complete sale, but is made up of several individual items. Catalogues of tapes and CDs can use repeating fields for the track details. In the same way, a product database could use repeats to list component parts or variations on the same basic item. Sequences of experimental measurements or questionnaire responses are another common use.

In all these cases, there are multiple instances of the same type of data, so repeating fields are a logical choice. But they may not always be appropriate – it all depends on how you want to extract or manipulate the repeat values. What you cannot do is to directly access specific values in the repeat list – say, to use just the third repeat. Nor

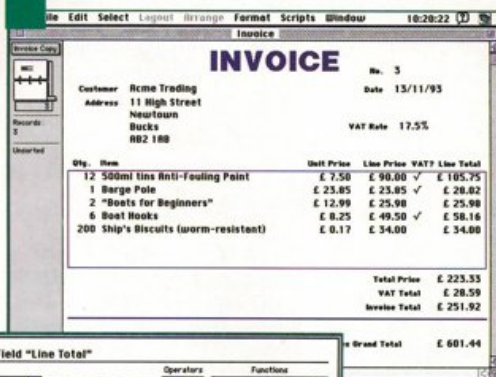
can you sort the values within a repeat field. That may be a limitation, but it's not much of one, and there's plenty that you can do with repeats.

For a start, if you calculate something like one

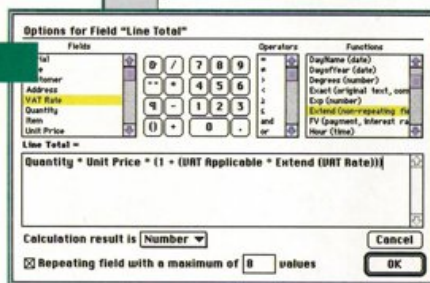
repeating field times another, each line in the first field will be multiplied by the corresponding line in the second. This means that you could set up an

Take advantage of FileMaker's repeating fields facility – and simply increase the number of repeats instead of having to create and position a new field each time you want to add information to a record

6 Et voilà, the finished result – an invoice form which automatically calculates all prices, adds VAT where necessary and then totals the amount due. A grand summary at the bottom shows the total value of all invoices.



This formula multiplies two repeating fields (Quantity and Unit Price), then uses the **5** Extend function to apply VAT at a standard rate. The VAT Applicable? field is a repeating Boolean (1 or 0) number field which cancels the VAT for zero-rated items.



field...

Between them, these various functions give repeating fields an enormous flexibility. And they're not that difficult: just follow the sequence of screens here, and you'll see how easy it is to combine all these techniques to create a basic

invoice file. If you're ready for something more challenging, take a look at 'Doing the impossible' to see how *FileMaker* power users get around one of the limitations of repeating fields. And, if you've never used them before, try setting up a simple database with a couple of repeating fields and play around with them to see what's possible. You may be pleasantly surprised. **mf**

Pop-up problems

Repeating fields, like most others, can be formatted to display a list of entry choices as radio buttons, check boxes or pop-ups. Unfortunately, there's a minor bug in *FileMaker* which means that when you select items from a pop-up menu, a black border is left around that particular repeat. There doesn't seem to be any workaround for this at the moment.

Where to get it ▼

FileMaker Pro is available from Apple software dealers for £323. For more information, contact Frontline on 0256 20534.

There is no way of sorting the separate elements in a repeating field, but with a bit of ingenuity, you can print out a report with the repeat fields sorted. Here's how to do it:

A First make sure that every record contains a field with a unique value. If not, you could add a field that's set to auto-enter a serial number.

B The next step is to create a clone (that is to say, empty) copy of the data file.

C Open the clone and import the records from your original file using the option to split repeats into separate records (Screen 7).

Import values in repeating fields by:

- ☐ Keeping them in the original record
- ☒ Splitting them into separate records

Cancel OK

D Create a layout for the new file and give it a leading sub-summary part sorted by the unique field. Put the unique field into this sub-summary and put the repeating fields into the Body part.

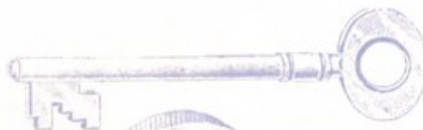
E Sort the file by the unique field and by one or more of the repeating fields.

F Print your report. It will appear with everything grouped according to the original records and with all the repeat values sorted in order under each one.

Repeat after me

- You can have up to 1000 repeats per field.
- Repeats within a field are separated by character ASCII 29.
- Repeat fields sort on the first value only.
- Look-ups on a repeat field only get the first value.
- The Find command looks at all values in a repeating field.
- Text, Number, Date, Time, Calculation and Picture/Sound fields can all repeat.
- You can format repeating fields as radio buttons, check boxes or pop-ups.
- You can put returns within any repeat, they are not restricted to a single line.

Small objects of



Despite the usual party political conference rhetoric about acting tough on crime, burglaries continue to rise; there's been an increase of over 60% since 1979. High on burglars' agenda are expensive, easily portable consumables and unfortunately your Mac falls neatly into this category.

Although the police have no exact figures on national computer crime per se, they have acknowledged a 'significant increase' in theft of electronic equipment. Indeed Apple UK only became aware of the scale of the problem when customers were calling to request extended credit after the theft of their Macs.

UK insurance company figures for 1992 estimated £96 million worth of losses related to personal computers, with estimates for this year reaching as high as £200 million – evidently a growth area as far as crime is concerned.

The increased use of computers has created a computer literate society and, naturally enough, a demand for computers. Unfortunately, the downside of this is the ensuing development of a parasitic black market, with many Macs

being stolen 'to order'. Security consultants identify Macs as the single biggest target for computer theft owing, in part, to their relatively small size (and hence extreme portability). Since the development of a black market stolen Macs have become highly resaleable.

Aside from the 'home' black market, the developing economies of Eastern Europe are thought to be the destination

As an absolute minimum your Mac should be clearly marked.

of many stolen Macs because of the difficulty in buying computers through official suppliers in these regions.

As is often the case with theft, the crime appears to be on two levels: 1) the casual opportunist and 2) the organised gangs who have been responsible for clearing numerous pre-press companies of all their Macs.

The South East of England has seen the greatest number of large scale commercial thefts but the police are keen to point out that it is a nationwide problem. However, most home users need only be concerned with opportunists, not that that offers much comfort to you after you've had your Mac stolen.

The loss of hardware is not the only problem – in addition to the trauma of theft itself there are problems with the loss of data (yet another reason for religiously backing up all your applications and documents) and the time taken to replace machines, even after an insurance company has given approval. All of which can be badly upsetting to a home user or small business, so minimising the risk of theft of your Mac should be of some priority.

Minimising the risk

Although the home user may be more prone to the opportunist thief, that is not to say theft can't be prevented or that no real protection is necessary; what can the user do to combat the problem? It is hardly worth installing a maximum security alarm and lock system costing close on £500 for your Mac Classic. There is a whole range of security devices on the market to suit most pockets.

By using a little cash and a little more common sense you can achieve some effective solutions. Following a simple three-point guide you could save yourself a lot of strife, expense and heartbreak.

1. HIDE IT:

The most obvious and basic way in reducing the risk of theft is simply to keep your Mac out of sight. Don't use your Mac near a window, particularly on the ground floor or else, if you do, use blinds. Basically the idea is not to advertise to the world at large that you have a Mac.

2. MARK IT:

As an absolute minimum your Mac should be clearly marked either with a permanent label, an ultra-violet pen, engraved or even etching of the video screen with a postcode and house number or, for commercial users, a company logo. Marking serves a number of purposes; in addition to helping the police return any recovered equipment it also acts as a deterrent by reducing the intrinsic black

A word from the police

Perpetrators of computer crime in central London were given a short, sharp shock in 1993 with the formation of a special police squad.

Operation Twilight, a unit of nine officers, succeeded in recovering £500,000-worth of computer equipment. Much of it was Apple Macintosh kit stolen from graphic design companies and colleges like LSE and King's College. Heartless thieves had even stolen The London Macintosh User Group's prize Mac from its head office in Villiers Street – but it was returned by officers from Operation Twilight.

"We noticed a significant decrease in computer-related crime while we were operational," said Detective Inspector James O'Connell, who led the investigation. "We searched three second-hand dealerships we'd received intelligence about, and found vast

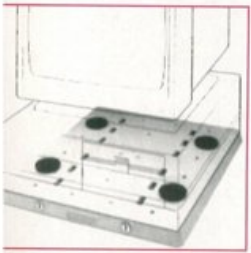
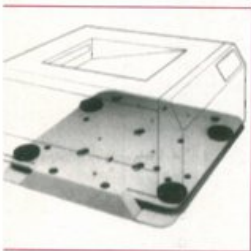
quantities of stolen Mac equipment.

While we were investigating one place, a courier van turned up full of stolen computers," he said.

"Luckily we traced most of the equipment back to its owners, but many were not insured as they'd been burgled so many times. Some of the small companies would have gone to the wall unless they'd got their stuff back."

Crime prevention

DI O'Connell had a few words of advice for home users of Macs. "Many people don't realise their computer is the most expensive investment in the house. Stencil your post code in, make it look as unenticing as possible to burglars. Get in touch with the local crime prevention service, contactable via the police force." He also had another timely word of advice, "Back up your data daily."



AnchorPad Maximum Security Systems provide a steel cage around your Mac's hard drive, secured to the desk's surface or side with high strength adhesive.

desire

The small grey box in the corner of your living room is a prime target for thieves, so **lock your Mac or lose it**, says

Nigel Paterson

market value and therefore the incentive to steal. Perhaps as important; without an owner of the property the police cannot prosecute a thief even if they know that the Mac is stolen.

3. LOCK IT:

Macs have built-in security slots on the back of their hard drives and monitors (the slot with a chain link motif above it – just in case you wondered what it was for). Cable lock kits can be purchased that utilise this slot with a snap bracket and may be tethered by means of a cable to a desk or any other piece of furniture. Kits can be purchased for about £30 from computer accessory suppliers. Variants of the cable lock system are available that combine a disk drive lock (physically denying access to your floppy disk drive) and cable lock that may be used to secure PowerBooks. These cable locks provide a degree of security that may deter casual thieves. More secure and permanent lock-down devices are available in the form of anchor plates: the Mac is secured to a work surface by means of an adhesive-backed steel plate. At the higher end, security involves entrapment of the computer in a protective case which can be mounted on either the side or the top of a desk or workstation. Prices, which

usually include fitting, vary depending on the model of Mac and level of security but range from about £100 – £180.

Raise the alarm

Small alarm systems sensitive to movement are becoming increasingly popular both as internal and external units. Among them is the Wobbler, which can be attached internally with a free expansion slot (£70) or as an externally mounted version (£80) which is plugged into the mains. The alarm is armed when power is removed and if the protected Mac is moved the alarm activates.

It is important to consider that insurance companies may, if the scale of the problem continues to rise, develop a 'risk management' approach to both commercial and domestic liabilities, with the onus on the individual to show that adequate protection had been undertaken to avoid theft and protect their Macs against being pilfered. **mf**



The Qualtec Mac PowerBook Lok-Kit secures the PowerBook 140, 145, 160, 165c, 170 and 180 with a sturdy 1.5m cable.

As well as securing your PowerBook the Lok-Kit acts as a handle, and costs £70 from Inmac on 081 740 9540.



Insuring your Mac

None of the five major insurance companies contacted would insure computers separately for private users. But they would cover a computer under a home insurance policy with the computer named as a high risk item that never left the house. Insurance of an Apple PowerBook computer can be both complicated and costly, by their nature they are becoming an increasingly high insurance risk.

Although one of the companies expressed approached a reluctance to insure a PowerBook at all, you can generally get it covered through an all-risk extension of a household policy. However, although prices do vary you cannot pick and choose since insurers will only provide cover under an existing policy.

Sun Alliance £1.10 per £100 with a £25 excess
 Cornhill £1.10 per £100 with a £50 excess
 Commercial Union £1.25 with a £50 excess
 Norwich Union £2.50 per £100 with a £25 excess

All of the insurance quotes were for private use only. None of the above insurance provided cover for data loss or for business use. If you are thinking of working from home it is important to notify your household insurer immediately as this may invalidate your current policy, and either a commercial policy can be taken out or, if available, an extension to your existing policy. At the more expensive end, specific computer insurance can be purchased with a commercial policy that insures against data loss and reinstatement of data. However, premiums begin at around £350 with an excess of £500 on theft. London-based broker Tolsen Messenger provides a solution to small home-based business insurance by offering a tailor made policy for business risks at a little under half the price quoted by insurance companies approached direct.

Students are rarely seen as a good insurance risk: students, halls of residence, computer insurance and not being touched by barge poles are the word associations made by all but one insurance company. Endsleigh has a block scheme that a student automatically joins when living in college accommodation (included in the hall or college flat fees) however, additional cover to protect a computer is required at a cost of £3 per £100 up to a maximum of £1,500.

Where to get it ▼

Anchor pads, lock down plates available from Computer Security Systems, 061 877 7636.
 Cable lock kits available from CSS 061 877 7636, HCS Global computer supplies, 081 560 8585.
 Wobbler alarm available from Newcom Services Ltd, 0272 702110.

Navigating the Internet

Finding your way around the **Internet** just got a whole lot easier with the introduction of a program called **Mosaic**, as **Ian Wrigley** explains...

The big problem with the Internet, as anyone who's explored it will verify, is that it's just too big. You know that the information you want is out there somewhere, but unless you're an expert it can take you hours to find it – if you succeed at all.

To answer this problem, things like Gopher have appeared. Gopher is a service which takes you painlessly from one fileserver to another, gives access to the file finding programarchie and so on. The idea is that you can navigate through information without knowing exactly where on the net it's located. This is all well and good, but it can still be tricky to use for a novice.

Well, never fear: a new application has come along, which makes navigating the Internet and finding the information you want easier than ever before. It's called **Mosaic**, and has been written by NCSA, the National Centre for Supercomputing Applications, in the United States.

Mosaic uses a 'hypertext'-based approach to finding information. That is, certain phrases in a document have 'hot links' to other areas. Clicking on a 'hot' piece of text moves you to that new area. Using this technology, you can quickly

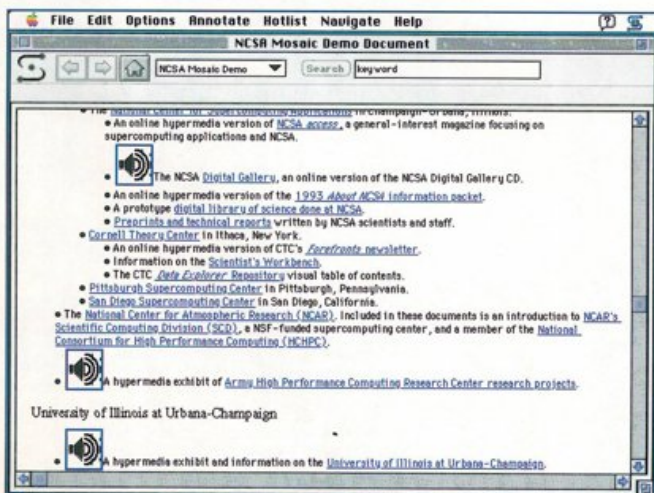
and easily find text-based information by 'burrowing down' through ever more detailed layers of information. But that's not all. **Mosaic** also gives access to things like file retrieval via ftp and file finding viaarchie, all using a consistent interface that even the least experienced comms user will find easy to use.

As its basic starting point, **Mosaic** uses the World-Wide Web, or WWW as it's known to aficionados. This is a project which has been going on for some time, and is a basic hypertext structure for many resources on the Internet. But **Mosaic** takes things far further, and the first time you use it you'll be amazed at how easy it is to find things that you never knew existed. It really is a revolutionary way of using the Internet, and if you've not come across it yet then I urge you to get hold of a copy as soon as you can.

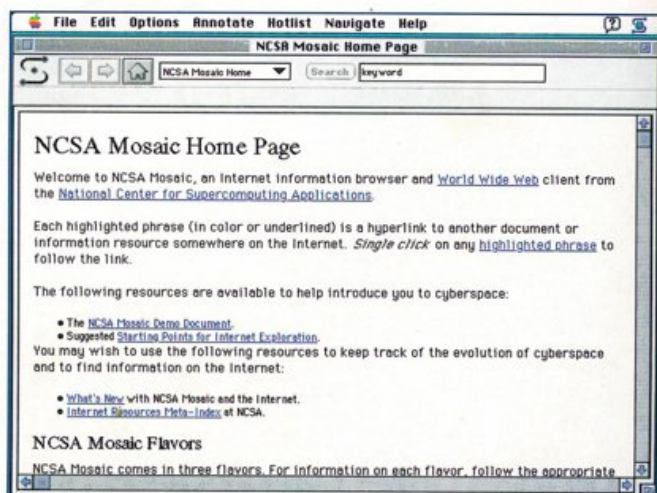
When you launch the program, it connects with its 'home server' – a computer attached to the Internet somewhere in the States – and retrieves text for the 'home page'. From there, you can click on hot text to open other documents and systematically refine your search criteria until you find what you're after. The whole thing relies on there being decent hypertext indexes to the

resources available on the net, and since the whole program is still pretty much experimental there are some areas which are better served than others. But even so, I found loads of stuff that I never knew existed – and that I would have probably never have found using more conventional programs.

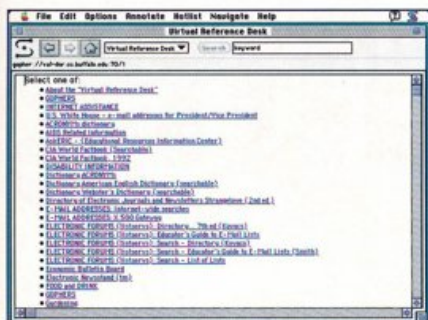
Mosaic is a triumph of programming – not least because versions exist for X-Windows (a Unix windowing system), Windows PCs and the Macintosh. **Mosaic** documents can contain pictures and sound as well as text, and indeed many of the documents are annotated with audio or QuickTime movie clips. Actually, this leads to my only complaint with the whole system: using a dial-up link via modem rather than a dedicated connection, some documents can take a long time to be loaded – especially if they have sound or movies with them. You can choose not to download such things automatically, but then you lose much of the 'neatness' of the idea. Still, this will improve with time – and won't



Mosaic documents can have sound, pictures or movie clips (in QuickTime format) associated with them. Click on the sound icons on this page and a relevant audio clip is downloaded and played. Be warned, though: if you're using a dial-up connection, downloading can take some time.



This is **Mosaic**'s home page, from where you can access various indexes of resources on the net. The blue phrases are the 'hot links'; once you've accessed them they turn red, and the information is retained on your Mac so that it doesn't need to be downloaded again.



This is the 'meta-index' – a sort of mega listing of what's available via Mosaic.

both anyone with a fixed Internet connection, such as people at universities and colleges. Dial-up users, though, would be well advised to check that the preferences are set to avoid automatic downloading – even with a high-speed modem.

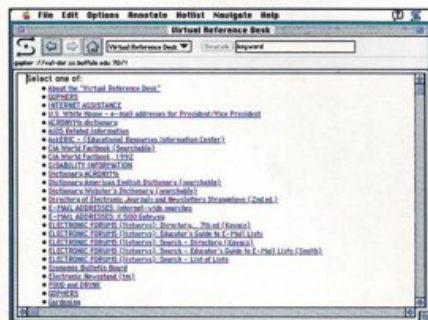
The advantage of a program like this is that all the help text and so on is actually stored on a server somewhere on the net, rather than within the program itself – so it can be updated easily, and you'll never wonder whether you're using the latest version of the program or not – since you can be told as soon as the program makes contact.

All the screenshots on these pages were done using a beta copy of *Mosaic*, but just as we went to press version 1.0 was released. It's faster and more stable than the betas, but apparently will probably have been superseded by version 1.1 by the time you read this. Make sure that you've got the latest version, since there will be speed and efficiency increases.

If you've not used *Mosaic* so far, get hold of a copy immediately – it will revolutionise the way you use the Internet. It's as simple as that. **mf**

Where to get it ▼

Mosaic (or, to give it its full name, **NCSA Mosaic 1.0**) is available by anonymous ftp from any common Macintosh software archive, including mac.archive.umich.edu. It's freeware – you don't have to pay a penny to use it



This is part of the more experimental area of the system: a graphical 'meta map' of the Internet. Click on any area and you're directly taken there. This is an attempt to make surfing the Internet even easier by doing as much as possible graphically, rather than textually.

The Internet Starter Kit for Macintosh

There seem to be more and more Internet books appearing every week, as people get switched on to the whole idea of a global communications network – and computer authors get switched on to the idea that, because the whole thing can be rather complex, there's a fast buck to be made here. Almost all the books available are over 500 pages in length, and they all start with a phrase such as "This book isn't a comprehensive guide, because the Internet is so vast." Great – you've spent £20-plus on a book that isn't even comprehensive.

One book that's somewhat different from the rest is *The Internet Starter Kit for Macintosh*. It, too, is 600-odd pages in length, and it too has the disclaimer near the front. But unlike the other books available, *Internet Starter Kit* is designed specifically for the Mac – and includes a disk full of programs that are actually useful, including *MacTCP*. This is especially good because *MacTCP* is an Apple product that many dealers seem to have trouble getting hold of, but which is vital if you're going to use a service like Demon Internet Systems which offers full access to the Internet. Apart from anything else, *MacTCP* costs more than the book's £27.50 price tag – so you're in profit immediately.

An authoritative author?

The author of *The Internet Starter Kit for Macintosh*, Adam C Engst, has good credentials in the Mac community. He's the author of a free, weekly electronic Mac newsletter called *TidBITS*, which can be found... yes, on the Internet. *TidBITS* started in 1990, and Engst estimates that it now has about 50,000 readers worldwide. So does the man know his stuff – and, more importantly, can he get it down on paper in an interesting and readable way? Well, although there's lots that I like about *The Internet Starter Kit*, I'm left feeling that there's plenty left unsaid which could have been covered in a lot more detail.

The problem for me is that the book contains lots of statements like "I don't know if the software runs under System 6 or not," "I didn't have time to check this out," and so on. Come on – if you're expecting us to pay the best part of £30, why didn't you have the time to check? The whole thing reads more like a casual voyage through the Internet by a knowledgeable amateur than by someone with an in-depth knowledge of the subject.

On the positive side, Engst talks about a large number of Mac programs, how to set them up and which one is best for each particular job that you'll want to do - ftp,archie, telnet and so on. But even here, the kind of 'bumbling' approach comes through: in the section on *MacTCP*, when discussing a part of the Control Panel called 'subnetting'.

he says: Suffice to say that I don't use subnetting, and I've never had to mess with anything in that IP Address area to get *MacTCP* working. I hope the same proves true for you as well." Hope? Why aren't you sure?

Padding it out

A large chunk of the book – more than 100 pages – is taken up with a list of Usenet newsgroups. This is the sort of thing that is aggravating about Internet books in general: it's an easy way to pad out the book without really adding anything of much interest. It would be far better to pick out, say, the Mac newsgroups, half a dozen other interesting and varied examples, and then leave the user to explore on his or her own. And another part of the book gives a step-by-step procedure for logging on to a US service provider which offers two weeks' free Internet access for readers of the book. This may well be of value to American readers who are taking up the offer, but is of rather academic interest to the rest of us.

Another slight quibble is that the book seems to have been imperfectly edited – by which I mean that there's the odd sentence which doesn't seem to make any sense. Now, it's not fair to pick on a book just for that (if I did, people would immediately find parts of my copy with the same faults), but when the book refers to things like the comms program *ZTerm* being supplied on the disk, which it's not, I think it's time for a second edition to be prepared.

If you're going to use Demon Internet Systems or another service provider which gives full access to the Internet via SLIP (or PPP) dial-in, then it's worth getting *The Internet Starter Kit for Macintosh*. The disk includes *MacTCP*, *InterSLIP* (a freeware SLIP implementation), *Eudora*, *Fetch*, *TurboGopher* and a couple of other goodies, so you've got everything that you need to start in one package. This solves the common problem for starters: all the files you need (except *MacTCP*, of course, since it's commercial) are available – as long as you've got access to anonymous ftp facilities, which means that you have the files already. Chicken and egg...

So, if the contents of the disk sound useful (and remember, buying the book and getting *MacTCP* free is cheaper than actually paying for the program) then you'll find *The Internet Starter Kit* reasonably good value. But if you're looking for a comprehensive overview and guide to the Internet itself, rather than just how to use the Mac to connect, then you should probably look elsewhere.

The Internet Starter Kit for Macintosh
Published by Hayden Books, price £27.50
ISBN 1-56830-064-6

File tapping

Ian Waugh shares the contents of his **address book** with you and shows you how to create **realistic MIDI echo effects**

A couple of issues ago we saw how the Mac recognises MIDI files. It's to do with file and creator types and if you want to play a MIDI file from a different computer you have to use a utility to stamp the file with suitable types. If this isn't making any sense, it's off to the back issues department with you!

Anyway, not content with knowing how to shovel ST and PC MIDI files into their Mac, some readers wrote to ask where they can get the things! I did say that there were a lot of MIDI files available and so there are, but many are produced by small companies and you have to don a deerstalker and play the violin badly in order to track them down.

So I present for your enlightenment and edification a list of MIDI file suppliers (it's not all-encompassing, but quite a full list nevertheless). I'm splitting the list between this month's column and the next. We'll start with companies who specialise in rock and pop files. Next month we'll look at companies who do specialist files such as drum patterns, classical music and special album collections. Quite a few companies supply Mac disks but since you have 'the knowledge' you can do your own conversions on the others.

MIDI Music (0602 633117).

Disk formats: ST, PC plus various formats for MIDI File players.

Sequence formats: GS/GM and non GS/GM formats, SMF formats 0 and 1.

Prices: Most individual songs are £5-6 each.

MIDI Albums containing around three songs are £9.95. Add £1.50 for p&p.

The files: The sequence programmers are members of The Associated MIDI Programmers Guild and MIDI Music pledges the quality of the files with a money-back guarantee.

The current catalogue lists around 600 titles, mainly rock and pop although there are some classical pieces. New titles are added every week. MIDI Music packages are also available from selected music retailers.

MIDI Magic (0792 644820).

Disk formats: Mac, ST, PC, Roland MC50/500/300.

Sequence formats: GS.

Prices: 1 song £6, 5 songs £25, 10 songs £45, medleys £10, Special 10-packs £30 and £1.50 postage and packing.

The files: Around 250 files programmed by two people. Most songs are rock and pop and there are a handful of medleys and five special 10-pack collections.

HMK (0292 317398).

Disk formats: ST/PC, Super Roland MRC. **Sequence Formats:** GM.

Prices: 1 song £4.50, 5 songs £20, 10 songs £35, 20 songs £60, lyric sheets £1 each. £1 p&p.

The files: Around 100 titles, presumably programmed by Heather Knox (HMK) herself. All classic rock and pop files.

Sound Image Productions (0501 825109).

Disk formats: ST, PC, Amiga plus various MIDI File Player formats.

Sequence formats: GS/GM, SMF 0 and 1.

Prices: £4.90 each, Collections £15, custom songs £16. Add £1 p&p.

The files: Almost 300 rock and pop files and 30 collections and medleys containing four or five songs. Most are programmed by the proprietor, Scott A MacAlister, and new chart entries are added regularly. Scott will also program any current chart song for the standard price, plus custom songs as long as they aren't obscure!

Hands On (0705 221162).

Disk formats: Mac, ST, PC plus various MIDI File Player formats.

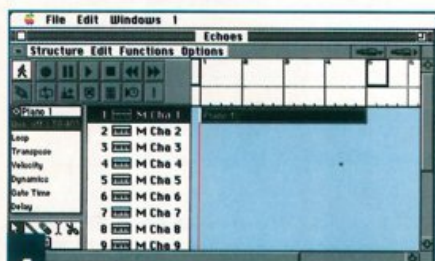
Sequence formats: GS/GM.

Prices: 3 songs £18.75, additional songs £5.95.

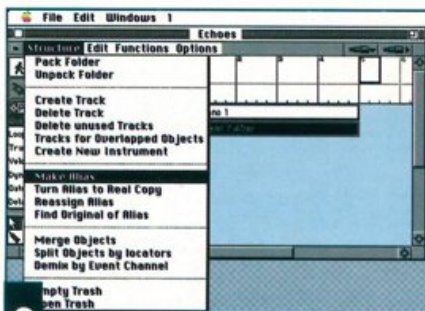
The files: A total collection of 1100 files by

Echo walkthrough using Notator Logic

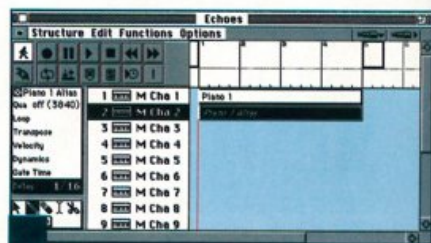
Notator Logic is excellent for experimenting with **manipulations** such as **MIDI echo**



1 Record a short phrase of about four bars and assign it to, say, a piano sound.



2 Create an Alias using **Make Alias** in the **Structure** menu and assign it to the second track.



3 Highlight the Alias and use the Track Parameters box to set a Delay. Logic has 3840 ticks to the bar so a Delay of 240 will produce 1/16th note delays and this value will, in fact, appear as 1/16.

Creating MIDI echo

You can create some very interesting echo effects using a sequencer. Start by copying a track – or creating a Ghost track if your sequencer supports them – and then offset it or delay it by a small amount. For a more realistic echo you should reduce the volume or velocity of the track.

Try creating three or four echo tracks, each delayed by a correspondingly greater amount and each with a lower volume level or reduced velocity.

If your sequencer has a set of track parameters then such adjustments are easy to

make. Otherwise you will have to change the data manually using functions such as Slide Data or Move Events, and Transform or Change functions to reduce the velocity. Even most budget sequencers have these facilities.

You can create very impressive echo effects by panning the echoes to opposite sides of the stereo image. Also, try using a different sounds for each echo.

The drawback with MIDI echo is that it uses a lot of voices so you need to watch the polyphony.

Hands On programmers and the American Tran Tracks team. Mainly rock and pop files but some classical files, too.

Protracks (081 763 2225).

Disk formats: Mac, PC, ST and various MIDI File Player formats.

Sequence formats: GS/GM.

Prices: 5 Category 1 songs £30, 3 Category 2 songs £30.

The files: Protracks is part of the London Orchestrations stable and is run by Dave Tanner. Giggling musicians may be familiar with Dave's London Orchestration arrangements which are exceedingly accurate off-the-record transcriptions. Dave is a confessed Mac fanatic and the files are created in *Performer* and

transcribed into notation in *Finale*.

The songs are divided into two categories. Category 1 is chart hits past and present, and contains over 600 files. Category 2 is rock and pop medleys, TV and film themes and big band standards, and contains about 50 titles.

Music Sales (0284 702600).

Disk formats: PC/MIDI File Player format.

Sequence formats: SMF Format 0, GM.

Prices: £9-£15.

The Files: There are several Music Sales MIDI File packs to suit a wide range of users and they should be available from all good music stores. Most packs contain eight songs and the sheet music, too. The files are optimised for playing on a MIDI File player.

Jargon Busters

SMF (Standard MIDI File): an agreed file format which allows a MIDI file to be loaded into any music program which supports the format – and that's most of them.

General MIDI (GM): a specification which stipulates that certain sounds must respond to certain Program Change numbers. For example, Grand Piano is always voice 1, Violin is voice 41, Orchestral Hit is 56 and so on. This means any pre-programmed MIDI file will sound approximately the same on any GM module.

GS: Roland's version of the GM format, which has a few more bells and whistles, such as support for more sounds plus digital effects. GS files should be backwards compatible with GM instruments.

MIDI File Player: sometimes called a MIDI Data File. Essentially a disk drive which reads and plays MIDI files directly from a disk, unlike a sequencer which has to read the file into memory first. Popular File Players include the Yamaha MDF2 and the Roland Sound Brush.

Polyphony: the number of voices or notes an instrument can play at the same time.

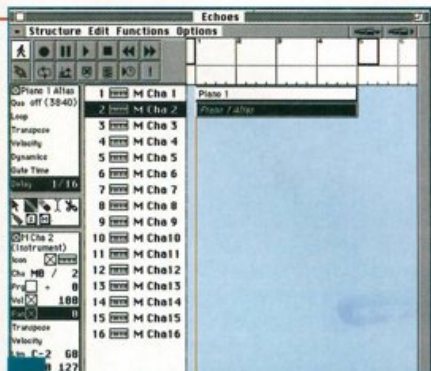
Mac music news

■ Passport has switched UK distribution from MCM to Arbitr Pro MIDI. This coincides with the release of a new version of *Encore*, the scorewriting program, at £469 (£410 to educational users); the reduction in price of *Mastertracks Pro* to £199; and the bundling of *MusicTime 1.2* with *Trax 2* for £233 (although this offer may well have ended by the time you read this). More from Arbitr Pro MIDI on 081 202 1199. We'll have a review of *MusicTime* next month!

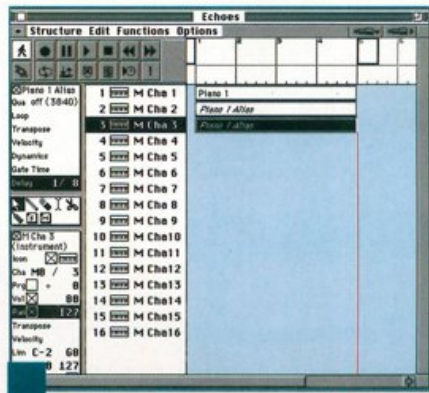
■ A new piece of software to help sort out problems with loops in samples is heading our way from across the pond. In fact *Infinity* is dedicated to that one task! It's expected to cost £350-£400 and will be available from Syco Systems (071 625 6070) and The Synthesiser company (071 258 3454).

■ Emagic has just release the long-awaited Notator Logic Audio direct-to-disk recording system. It comes as a software add-on module for Logic. You require an audio card such as Digidesign's Audiomedia II or Sound Tools II which allow four channels of recording. Pro Tools allows up to 16. Phone Sound Technology on 0462 480000.

■ The current rap/rave/dance/house/ambient music generation is searching for a new voice – and they've found it in old analogue synthesisers. But if you have a Roland D50/550 instead of an old analogue synth, all is not lost. Sounds OK is distributing Sound Support's *Classic Synthesiser Collection*. It's a set of 84 sounds programmed to emulate the old analogue synths, which uses only analogue waveforms. It costs £28 plus £1 p&p and is available on a Mac downloader disk. More from Sounds OK on 0276 22946.



4 Reduce the Volume slightly and set the Pan position to 0, sending the sound to the left of the stereo image.



5 Create another Alias, assign it to track 3, apply a slightly longer delay, reduce its Volume and set its Pan position to 127. The resulting ping pong is very effective.



6 Switch on the Loop function and experiment with all these settings in real-time as the music plays. Try selecting different sounds and Delay values.

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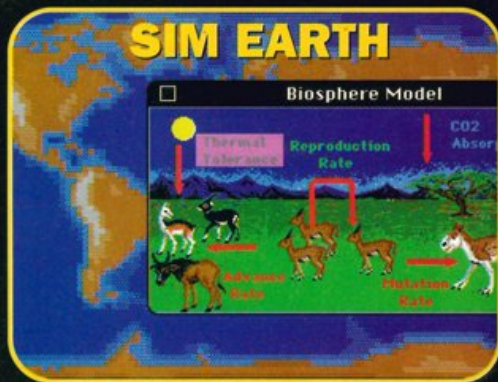
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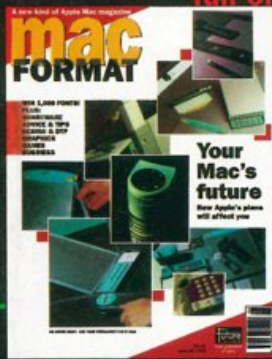
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In the mag: ■ *Morph*, *Publish-It!* reviewed ■ Software round up ■ Mailmerge in *Word*
On the disk: ■ *Leunings* ■ *Disinfectant 2.9*



May 1993 - ISSUE TWO

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On the disk: ■ *Spectre Supreme* ■ *SuperClock!* ■ *Colour Floppy*



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- 10 Non-Mac application that's bogus smelly stuff, we hear (7)
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- 13 Hard character found lurking around [shift]-[option]-[V] (7)
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- 33 If you'd offered him a portable Mac, he'd probably have expected it to come with fries and a shake! Tupelo Mississippi's most famous son. (5)
- 36 Utility for transferring files from PC disks (1,1,1)
- 38 Keyboard user's ailment that doesn't legally exist! (1,1,1)

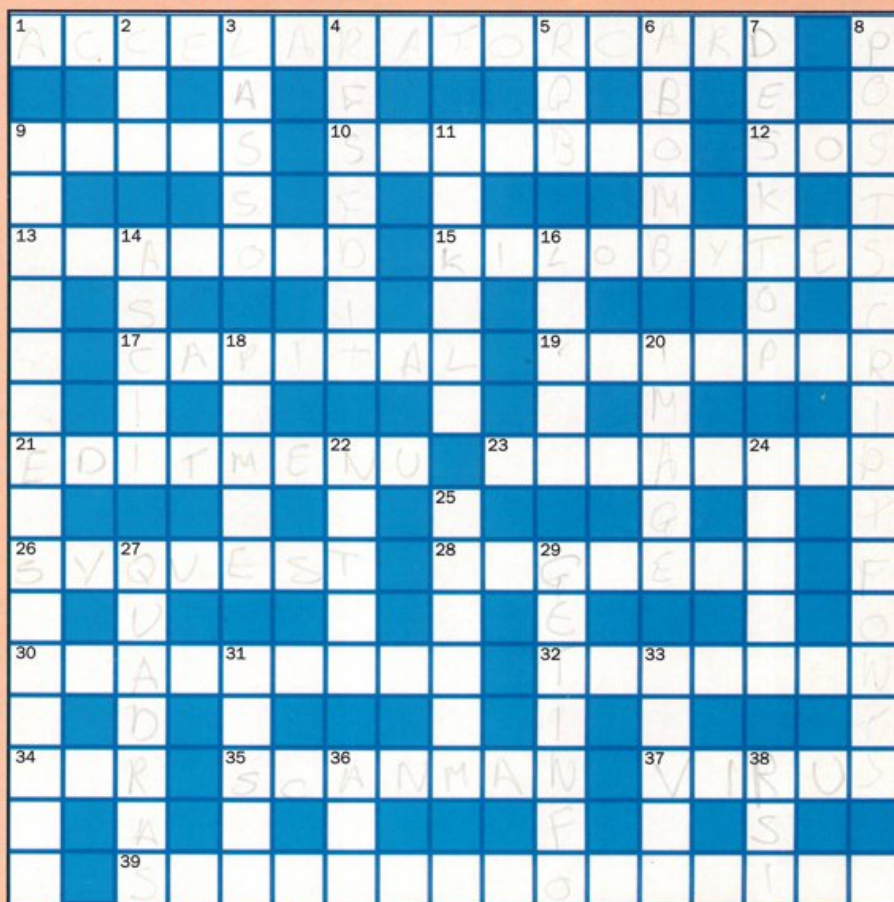
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■ Mac LC 10/40 VRAM, maths co-processor, 12-inch colour monitor, keyboard £750. Contact Keith (evenings) 0245 284278.

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■ LCII 4/40, 16-bit monitor, System 7.01, 35Mb of software including *Word 5*, *KidPix*, *Lemmings*. In mint condition. Also StyleWriter printer. Only £1,000 the lot. Call Max on 081 884 7055 (eves).

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■ Mac IIsi 5/80 with FPU. CPU only. System 7.0. Very good condition, home use only. £750 ono. Contact John on 081 670 4448.

■ Mac IIsi, 9/40, 13-in colour monitor, System 7.1, new keyboard, good condition, £1,450. Call 081 452 1942 evenings.

■ Quadra 700 20/230 complete with manuals, System software, mouse, microphone. All boxed in superb condition. Bought new Feb 93. Software/shareware included. £2,200 call Spyros 081 888 9810 after 6.30pm.

■ PowerBook 145 4/40. £1,200, home use 4 months, including *GreatWorks* software. PLP II £350. Tel Changho on 0203 228890.

■ PowerBook 160 4/80, internal battery, charger/AC adaptor. Apple StyleWriter II. Printer and sheet feeder. *MacWrite II* word processor installed. Sold as complete system, as bought 3 months ago, £1,500 ono. Tel 081 977 5864 (Teddington, Middx).

■ PowerBook 170 4/80 active matrix screen. Home use only. £1,400 ono. Phone Mark 0923 260 522 ext 341 (near Watford).

Software

■ *Photoshop v2* unused, unopened £275, 0362 695856.

■ *Write Now*, unopened, unregistered, would cost £50 but for you sir, just £25 including P&P. Call Tim 0353 665218 in evenings or weekends.

■ *Color-It* image editing, touch-up and paint program, £75. Multi-Clip – clipboard and scrapbook replacement utility that allows multiple clipboards, £35. Phone Terry 0532 525038.

■ *Cubase* for the Mac. Contact me on 070 391 2377 (in Holland). Please ask for Mathew.

■ *Advent 3B2 Diamond Publishing* System software. Unopened prize worth £995, will sell for £500. Needs Centris or larger Mac. Tel Keith 081 892 1377.

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Printers

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■ Personal LaserWriter SC with cable, manual, fonts. Excellent condition, light use, only half way through second cartridge. £300. Call Rowland (evenings) on 0394 283605 (Suffolk).

■ StyleWriter II fewer than 100 prints upgrading £190 ono contact Matt 0959 534233 after 7 or 0233 812373 weekends.

Miscellaneous

■ SIMMs 2 x 4Mb 70ns, brand new still in bag, £80 each. Call Garry, 081 986 3123 ext 4243 daytime.

■ Apple 40Mb hard disk from one year old LC light use £60. 20Mb hard disk £30. 256KVRAM from LC £15 0371 874196.

■ Mac II logic board PWO £70. Apple Mac 2400 modem £20. Wanted: SIMMs for Mac IIx. Also handbook

Mac IIx and Mac CD-ROMs. Phone anytime 0480 300409.

■ Apple 12-inch RGB monitor £150. ImageWriter II £120 all cables, manuals. Home use only. Both for £230. Tel: 0742 681702 (Sheffield).

WANTED

■ Please send shareware games/utilities to me for insertion in Mac games fanzine. Printing end January. Send to: Danny Langarth, Whitecross, Wadebridge, Cornwall. Tel 0208 813008.

■ Wanted: *Fetch, Mavis Beacon Teaches Typing, FileMaker Pro, Word 5*, SIMMs and accelerator for PowerBook 170, portable printer, flight simulator, any music and sound software. 091 386 4058.

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■ 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, Rackstille, Wadeford, Chard, Somerset TA20 3AP

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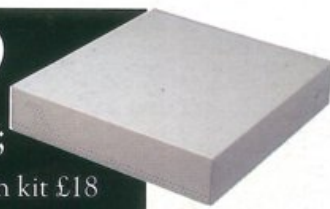
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