

Your complete guide to the Apple Mac

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mac FORMAT

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TIPS

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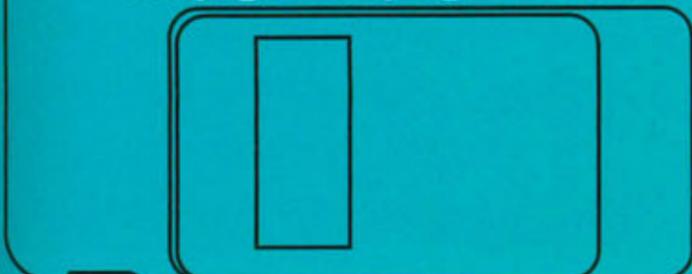
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DISK 6 NOVEMBER 1993

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See page 7 for program details



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MacFormat November 1993

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software available from these selected retail stores

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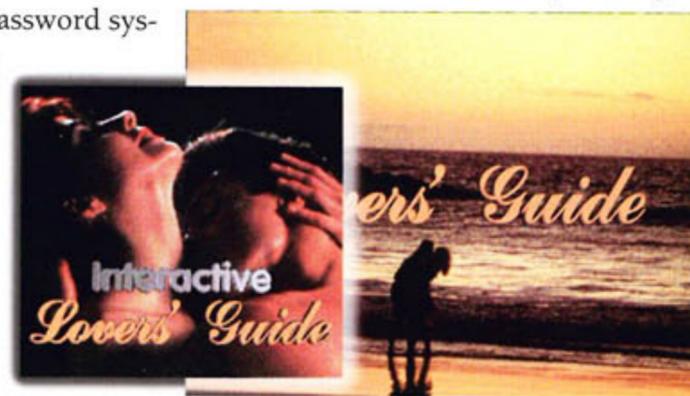
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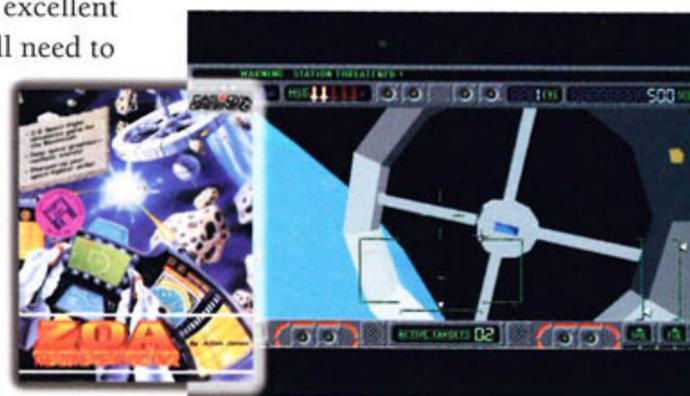
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<p>John Lewis Stores:</p> <p>Aberdeen Brent Cross Bristol Edinburgh High Wycombe Kingston Milton Keynes</p>	<p>Oxford Street Peterborough Welwyn Gdn City</p>	<p>Also available at:</p> <p>Robert Sayle, Cambridge George Henry Lee, Liverpool Bainbridge, Newcastle Bonds, Norwich Heelas, Reading Tyrrell & Green, Southampton Peter Jones, Sloane Square Cole Brothers, Sheffield</p>
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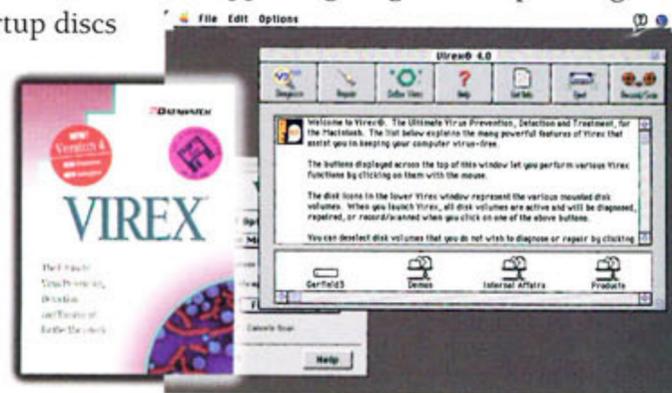
lovers guide is a sensitive guide to sex, desire and communication and is one of the best selling videos ever. It has been adapted and enhanced for CD ROM by combining the material and footage from the video with entertaining, well researched psychometric tests which enable users to enhance their relationships. Using the in-built password system it can be easily turned into an educational aid. SRP £34.03



zoa The Zone of Avoidance. Alone in space on the border, your job is to defend the space station against hordes of asteroids and hostile aliens bent on your destruction. Zoa includes fluid full 3D graphics and excellent sounds. You'll need to sharpen up your space fighter skills before trying this one! SRP £39.99



virex 4.0 is the new version of the popular virus protection package. Virex was the first comprehensive solution to threat of computer viruses. Not only does Virex detect whether there is a virus present it will also remove it. The new versions features include an enhanced interface supporting drag-and-drop testing and a variety of startup discs to work on all Macs which include the dual function Scan/Installer program. SRP £69.99

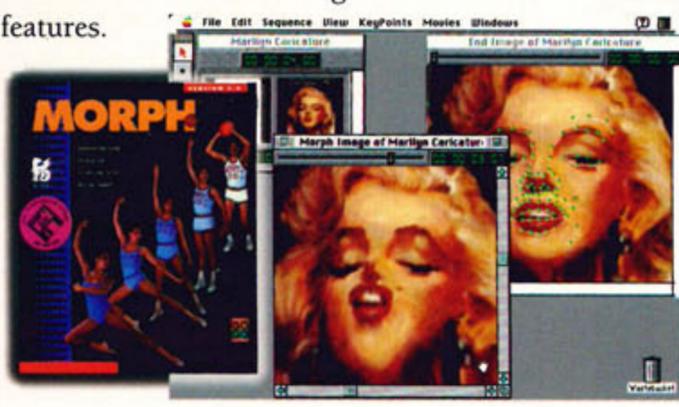


iron helix. Control a robot probe whose mission is to stop a renegade starship on an automated course of destruction. Prevent intergalactic war and the spread of deadly a virus by destroying the doomsday weapon—codenamed Iron Helix. Navigate through dozens of corridors and rooms. Search for ways to stop the looming annihilation while eluding the ships deadly defender robot. Iron Helix takes advantage of the CD ROM and blazes a new trail for interactive virtual media, every scene and all movements happen entirely in 3-D! SRP £89



morph 2.0 is the latest version of the breakthrough application which lets you smoothly transform one image into another. With v1.1 you can take two static images and create a movie of the transformation. With v2.0 you can additionally take two movies and morph between them, you can warp an image (make Mona Lisa smile!) or use the innovative caricaturing features to accentuate various key facial features.

Morph v2.0
SRP £179
Morph v1.1
is SRP £119



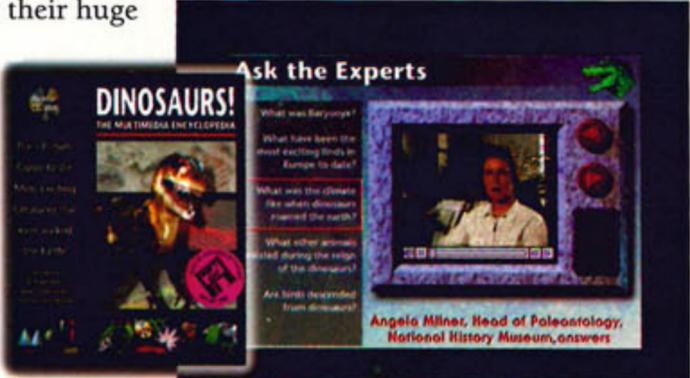
crystal crazy It's back! The all time favourite Crystal Quest now has a sequel and it's even more addictive! Crystal Crazy continues the quest to collect the crystals but this time there are also jigsaws to complete, ridiculous pictures to erase, pool balls to sink and beautifully fragile ornaments to smash against the walls! To aid you in battle try collecting different shields and guns to help increase your chances against those nasties!

SRP £39.99



dinosaurs! The ultimate guide to the most exciting creatures that ever walked the earth! Dinosaurs answers almost every question people have to ask about these fascinating prehistoric creatures. Over 600 megabytes of video, photographs, illustrations, narrations and animation make this by far the most comprehensive dinosaur reference work available. You'll find out how dinosaurs lived and died and how their huge bodies worked.

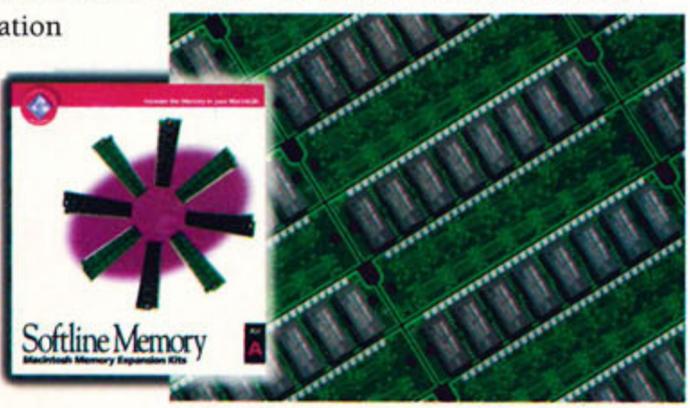
Total and unadulterated dinosaur bliss!
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free demo disk

softline memory The amount of memory you need depends on the software you use and whether you want to have more than one application open at each time. If you find yourself wanting to try more demanding applications or you've already come up against out of memory problems Softline Memory Kit's are the answer. They supply you with everything you need to upgrade the memory of your Mac in convenient boxed Kits. Each Kit contains detailed installation

instructions, SIMMS and an anti static wriststrap. Upgrades from 2MB upwards available.



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 Details of a reseller near me.
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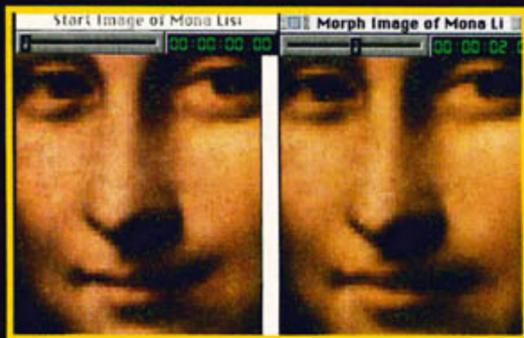
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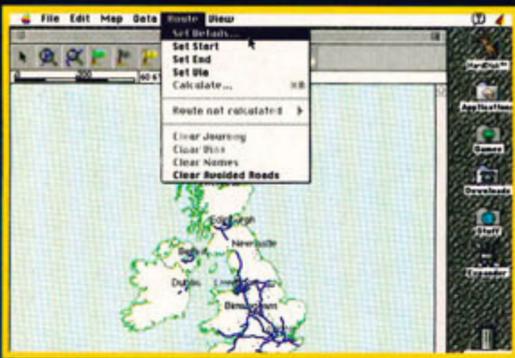


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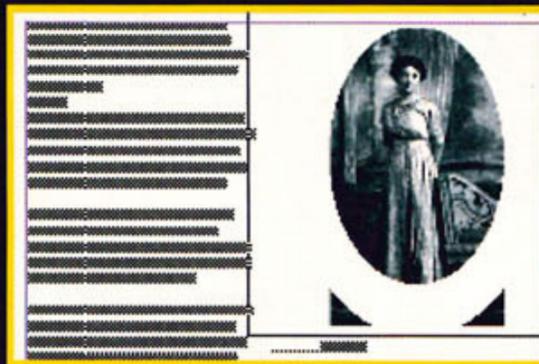
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mac FORMAT

Editorial enquiries:

MacFormat
Future Publishing Ltd
30, Monmouth Street
Bath BA1 2BW
Tel: 0225 442244
Fax: 0225 446019
AppleLink: MacFormat
E-mail:
astorer@cix.compulink.co.uk

Advertising enquiries:
Mike Hawkins 0225 442244

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Subscription enquiries:

Future Publishing Ltd
Freepost, Somerton
Somerset TA11 7BR
Tel 0458 73279 Fax 0458 74378
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The makers of MacFormat are....

EditorAndy Storer
Art EditorJulie Stuckes
Production EditorSally Taylor
Staff WriterKellie Simmons
Production AssistantYolanda Hughes
Art AssistantKim Ellaby
Consultant EditorIan Wrigley
Contributors.....
Simon Cox, Gordon Druce, Martyn Lester,
Greg Morrison, Ian Waugh, Jack Weber,
Cam Winstanley, Rod Lawton, Tim Smith,
Andy Butcher, Tom Madden, Stuart McHugh
Photography.....Ashton James

Production technicians
Simon Chittenden, Mark Gover, Nick Harvey,
Heath Parsons, Chris Stocker, Simon Windsor
Production CoordinatorClaire Fullick

Advertising ManagerMike Hawkins
Senior Sales Executive.....Louise Woods
Classified Ads Supremo.....Warren Burgess

PublisherStuart Anderton
Group Publishing DirectorGreg Ingham
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Scan it!

A scanner is one of the most useful things you can buy for your Mac – opening up a whole new world of possibilities. But how do you go about choosing one to suit your needs and pocket?

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COVER DISK 6

For the big low-down on loading and using this month's High Density MacFormat cover disk software turn to pages 7, 8 and 9



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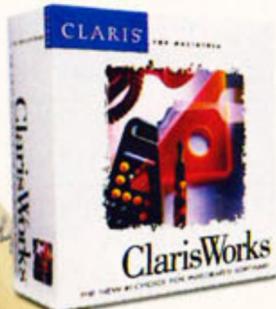
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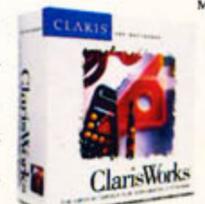
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bigger
than ever

Your cover disk

We've packed three disks' worth of goodies on to this month's enormous disk. Check out these great programs...

Startup Downloader

Shareware fee: \$20

Compatibility

Macs: Any

System: Any

Display: Any



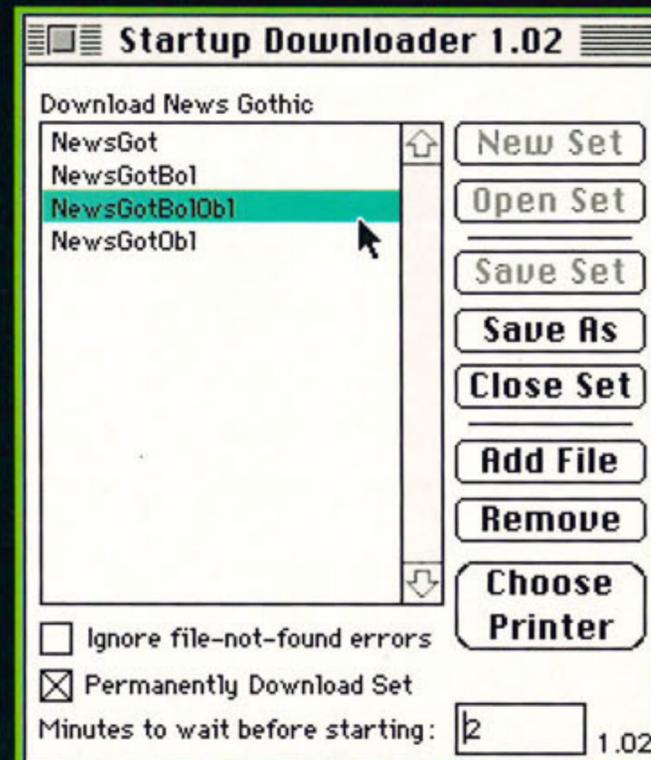
Whenever you print to a PostScript laser printer, your Mac has to download any fonts which are not built in to the printer. That means that for most documents a significant amount of time is spent sending the fonts to the printer.

It is possible to send a font to the printer just once, then it remains in the printer's memory until it is switched off. Then any documents containing that font don't need to download it afresh. Over a day, this can save a lot of time! There are plenty of utilities to do this, but they are mostly inconvenient to use. *Startup Downloader* can completely automate the process and make it transparent.

It's a control panel which lets you select a printer and the fonts to be downloaded to it. It then creates a document which will send those fonts to the printer when double clicked. If you then put that document in the Startup Items folder of the System folder (under System 7; the Read Me file explains what to do with System 6), the fonts will be downloaded

when you start your Mac. You can even set a slight delay to allow the printer to warm up if you switch on Mac and printer simultaneously.

Don't go mad downloading fonts as your laser printer has limited memory, but pick three or four fonts which your documents normally use. (And do remember that almost all printers have fonts like Helvetica and Times already built in.)



Save time by downloading your fonts every morning



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 if your Mac only accepts double density (800K) disks.

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 #6 icon, and select your hard disk. When it's finished you'll find a new folder called MacFormat #6 f, and inside that there are four more folders called Games, Fonts, MacFormat Database, and Extras. Inside those you'll find the programs themselves. You'll need around 2.1Mb of free disk space before you begin. If you bought August's MacFormat (issue 3) you'll have a copy of the excellent *Compact Pro*, which you can use to open the archive and select which programs to decompress - useful if you don't have enough free disk space for them all.

If you have an older Mac

If your Mac is chronologically challenged and it can't use high density disks (Pluses, 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 90 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.

Civilization Demo



This is how you start out. You are the yellow cities and armies, your enemy is in green. A good first move might be to attack the green army with your chariot.

Compatibility

Macs: 2.5Mb free RAM required

System: Any

Display: Any (less than 265 colours displays in B&W)

Many people would argue that *Civilization* is the best game on the Mac – bar none. If you haven't played it yet you have a treat in store.

The object of *Civilization* is to build a society from a single band of wandering settlers to a multi-million person high-tech empire spanning the globe and beyond. Easy. Now, fitting all of that in a demo would be a bit tricky, so on the disk you get a thousand year span to play, starting a couple of thousand years BC. Your civilisation already has a foothold – two cities and some military units, and it has just encountered enemies.

There are two main ways to control *Civilization*. One is move the individual military units. If you move a unit into an enemy unit or city it will attack it. Other commands can be given from the Orders menu.

The other control point is the cities. Click on a city to bring up its complex control screen. From here you can decide what the city is making as its main product, and choose how the population works. See the diagram on the right for more details on this screen.

Civilization is quite complicated, and can be daunting at first, but don't despair. Play the demo a few times to get the hang of the controls, and read the on-line Civilopaedia to work out what things do. Then start setting yourself objectives. You could play to get the largest civilisation possible, or perhaps to make as much money, to wipe out as many other cities or explore as far. When the demo ends you get a civilisation score and percentage; you can play to maximise those. When you have exhausted the possibilities of the demo, go and buy the real game. It's money well spent!

The full version of *Civilization* costs £35 from Microprose, 0666 504399.

Eclipse



Eclipse: a screen saver for people who just want to save their screens

Shareware fee: \$10

Compatibility

Macs: Any

System: Any

Display: Any

There are plenty of screen savers which will march toasters across the screen or beam Mr Spock onto your desktop, but while these programs are very amusing, they aren't always very practical.

Eclipse is a straightforward, no-nonsense screen saver. After a user-determined length of time, the screen is blacked out,

showing only the time, which is moved randomly around the screen. You can customise the font used to display the time, but that's about it.



This simplicity is *Eclipse's* big advantage. Because of it, it uses up only a tiny 5K of memory, and background tasks can carry on uninterrupted because of its low processor demands.

If you want a screen saver to actually save your screen rather than entertain, look no further than *Eclipse*.

Marker Fonts

Shareware fee: \$11 and \$12

Compatibility

Macs: Any

System: Any (requires PostScript printer or ATM)

Display: Any



These are two fonts which simulate felt tip pens. They're useful for cartoons, or just adding an informal note. They are PostScript type 1 fonts, so they need a PostScript printer or a copy of Adobe *Type Manager* to work.

MarkerFinePoint

A quick brown fox jumped over the lazy dog

MarkerFeltWide

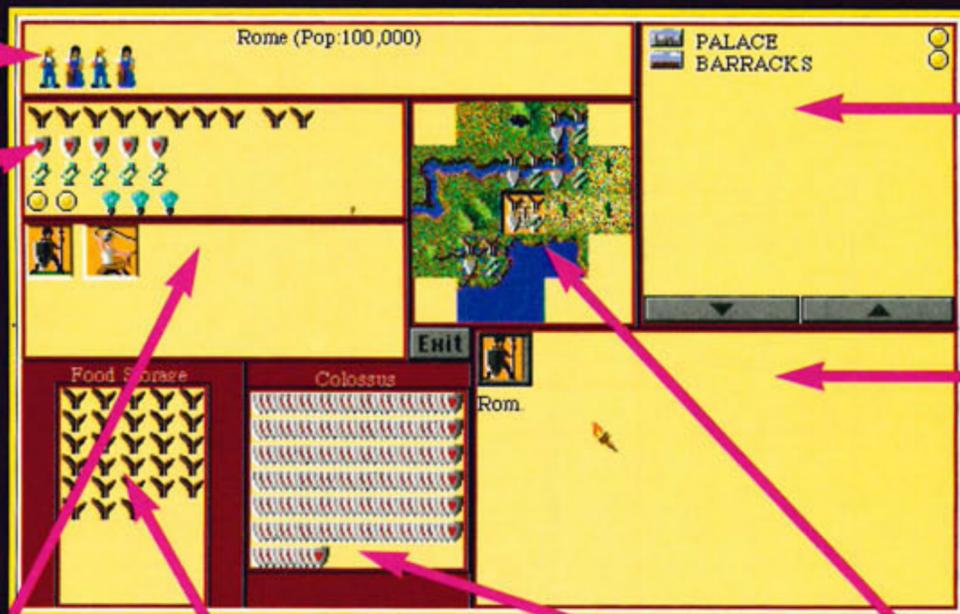
A quick brown fox jumped over
the lazy dog

In the heart of the city...

These are the citizens of the city. These are all content, but if you offend them they change appearance and may cause a civil disturbance.

This box shows what the population of the city are producing. The corn shows food production; the two sheaves at the end are surplus and are put in the food storage box at the end of the turn. Shields go toward making the Colossus. The arrows indicate the amount of trade which is being done. Trade becomes the contents of the next line – coins if it is taken as taxes, or light bulbs which create knowledge for development. How these are split is set by the tax rate in the File menu.

These are the military units which belong to the city. The phalanx is in the city, but the chariot is off fighting the enemy.



The food storage area shows how much excess food there is. When the box fills up with sheaves of corn the population of the city grows.

This shows what the city is currently building (The Colossus, one of the wonders of the world, which brings a lot of extra points). It also shows how far building has got – when the box is filled with shields the item is built.

This shows what buildings there are in the city (a palace and barracks) – each has an effect on the way the city works. For instance, a city with barracks produces stronger military units. The Civilopaedia has details of all the different types.

Here are the military units currently within the city environs – at the moment a phalanx, a good defensive unit.

Here you decide where the citizens work. The window shows the surrounding area; the symbols show what is currently being produced. You can move the population around and the balance of shields, food and trade will alter as different terrain produces different things. For instance, grasslands produce lots of food, sea produces some food and trade, deserts produce little unless they are irrigated.

The Grouch

Shareware fee: None
 Compatibility
 Macs: Any
 System: Any
 Display: Any



Did you watch *Sesame Street* when you were a kid? Or perhaps you still do? Well *The Grouch* puts the Grouch where he likes to be best – the trash can. Beware: show kids this and they might just trash your disk just to provoke him!

Tetris 2000

Shareware fee: None
 Compatibility
 Macs: Any colour
 System: Any
 Display: Colour

Everyone has their own favourite version of the classic puzzle *Tetris*, but as far as Mac versions go. This could be the best. There are no fancy enhancements, it's straight *Tetris* with no frills. As with any *Tetris* clone, play with caution if a deadline is close.



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Backing up your cover disk

We recommend that you back up your cover disk because floppies can easily become corrupted. 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** November 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** November 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 back up of the original disk. You can now delete the '**MacFormat** November' 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 26 November, along with a stamped addressed envelope, to:

MacFormat November Disk
 Disk Copy Labs Ltd
 PO Box 21
 Daventry
 NN11 5BU

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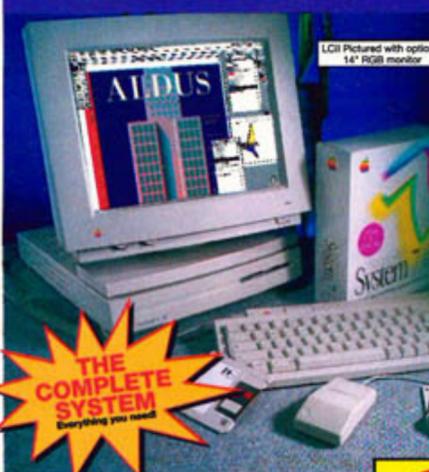
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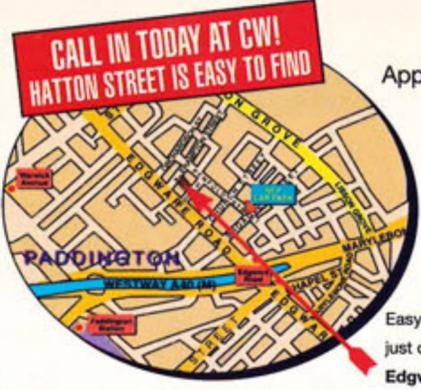


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Apple opens advice line

Mac users in the UK can get direct customer support from Apple through a £95 a year subscription to its Mac Helpline.

The Helpline includes a team of Mac experts, a telephone help service to talk you through any system software problems you may encounter, and advice on which Mac, software or accessories to buy to suit your needs.

On subscribing you get a Mac Helpline Starter Pack with the Helpline freefone number, details of a 50% AppleLink registration discount scheme – only available to Helpline subscribers – an Apple newsletter and a CD-ROM with examples of how to get the best from your Mac.

Observers have been amazed that Apple UK is charging for its technical support. In the States, support is free – and is even available via a toll-free phone number, so customers don't even pay for the phone call. With more and more Macs being sold in the UK by non-specialised outlets such as Dixon's, it is seen as a strange move to make customer support a (highly) chargeable item.

For more information on Apple UK's £95 telephone support line, call the company (free) on 0800 127753.

A dozen Apples due

A 68LC040 version of the LCIII is expected to be released this month, along with many other new Macs, and a range of improvements to many existing models is also due.

The new LC will be known as the LC475. Its '040 processor and price – expected to be far less than \$2,000 – will give it the same performance as a low-end Quadra – far faster than the current LCIII.

However, the 68LC040 doesn't include an integrated FPU (floating point unit), the chip that speeds up some maths intensive programs such as graphics and spreadsheets. Although the addition of an FPU was easy in the LC and LCII – the extra chip was simply plugged into a socket on

the circuit board – the only way to upgrade the LC475 will be to replace its main processor with a full 68040.

Also on the cards for an October release are seven new Performa models – although it's difficult to say which of them will make it to the UK, since Apple doesn't have a policy of introducing Performas simultaneously worldwide. Instead, models are likely to trickle to the UK over the next few months, with some never making it to this country at all.

The new Performas will mirror the LC range, with a few extra options, such as the Performa 460, 466 and 467, which will all be 33MHz versions of the LCIII with different memory and hard disk configurations.

Apple is releasing the new Performas as part of a drive to restrict US sales of the LC family to the education market only by the end of this year. The company will then have three distinct families of Macs: the Performas for home users, the LC family for education and the Quadra family for business.

■ A low cost Quadra, called the 605, based on a 25MHz 68LC040 processor is also due for release, along with two new Duos and a possible '040-based Colour Classic.

For more details on the other new machines, and the demise of the Centris name (but not the machines), turn to page 18.

Apple: 0800 127753.



The LC line is soon to be augmented with a 68040-based machine, offering much greater performance than the fastest current member of the family



A 68040 version of the Colour Classic may appear in October, although it's possible that Apple will hold off on its release until nearer to Christmas

Shortlist cut by half

Shortlist, an organisational package that combines features such as word processing and an address book, has had its price almost halved and now sells for £76.

The program features an address book, diary, contact manager, word processor, mail merge/label printing software and project management.

Shortlist is mainly aimed at PowerBook users, – although of course it works perfectly well on a desktop Mac – and is fully System 7 compatible.

For more information call Amtech International, 0202 476977.



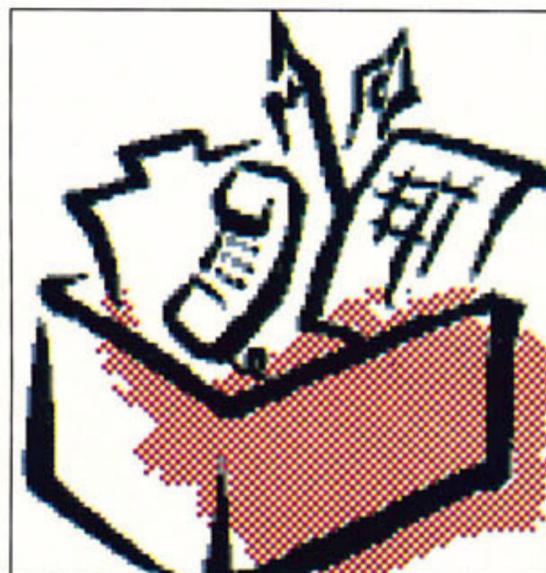
Claris users form exclusive club

ClarisWorks now has its own user group. Membership will be £30 a year; for that users will have a telephone helpline, a

quarterly newsletter, seminars and special offers. The user group will share the same offices as the Macintosh Association, which has full-time staff to give advice and support on software and hardware problems. Macintosh Association members get a discounted subscription if they want to join the ClarisWorks User Group.

ClarisWorks – the package not the user group – includes word processing, graphics, spreadsheet and databases rolled into one package and costs £229. It's one of the most popular Mac packages, with Claris claiming sales of more than one million packages so far.

For more information contact, The ClarisWorks User Group, Macintosh House, 11 South Parade, Oxford, OX2 7JL. Phone 0865 311530.



News on the Macs of the future direct from the US

PowerPC launch recedes

The PowerPC range was due for release in January next year, but it now looks likely that the first machines won't be seen until a later date. Some of the first batch may not appear until 1995.

US Sources say that the January 1994 release date of the PowerPC range is becoming unlikely as the year draws on, and it's expected that the launch date will be some time in mid-March.

The reason behind the delay is said to be due to the original date not leaving Apple with enough time

to manufacture the models; management didn't want there to be any shortages of stock – something which has happened with past product releases, angering both customers and dealers.

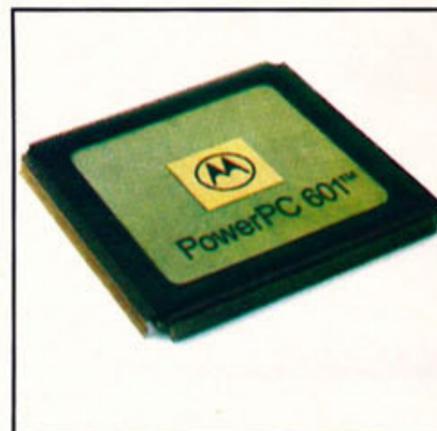
Getting PlainTalk – Apple's speech recognition software – running on the new processor has also been blamed for the delay.

Three products are expected to be released in March. All will be based on a 601 RISC (Reduced Instruction Set Computer) chip, and will have cases very similar to

Apple's current Centris 610 and 650 models. They will run System 7 as well as a 'native' PowerPC operating system, for compatibility with existing Mac applications.

The single slot version will include a processor direct slot as well as a NuBus adaptor, so that users can install NuBus cards. Another machine is expected to have three NuBus slots.

Other models, including the second generation RISC machines from Apple are not likely to appear until 1995.

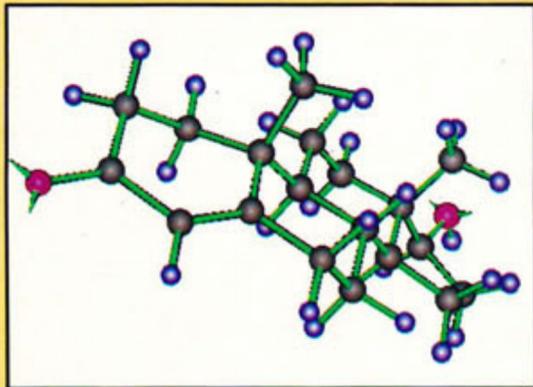


The first generation PowerPCs from both Apple and IBM will be built around the Motorola PowerPC 601 RISC chip

Ball & Stick models molecules in movies

Ball & Stick version 3.5 is a 3D graphics package aimed at scientists who use Macs. Version 3.5 gives users the ability to create movies featuring colour 3D molecular models that can rotate, drift, zoom or track.

Ball & Stick costs £235, with a 15% discount for education orders, from Cherwell Scientific Publishing on 0865 784801.



Ball & Stick: create your own molecular models in full colour. This is testosterone, by the way.

Faster Aldus Fetch retrieval

A faster version of Aldus Fetch, 1.2, has just become available in the US with localised versions for Europe to follow shortly. According to Aldus, search times will be up to 300 times faster, due to a new database engine

developed by Sierra Software Innovations.

Fetch 1.2 costs \$275 in the US. No UK pricing or availability details have yet been set.

Aldus UK 081 568 8868.

Printer price slashed



£59 has been slashed off the price of the Stylus 800 A4 desktop printer from Epson. Launched eight months ago at £445, the printer now costs £387.

"Having gained a significant share of this growing market, we are determined to keep the price of the Stylus 800 highly competitive," said Mark Vagg, product manager at Epson.

The Stylus 1000 A3 wide-carriage ink jet printer, launched last month, will remain at £680. Contact Epson UK on 0442 61144.

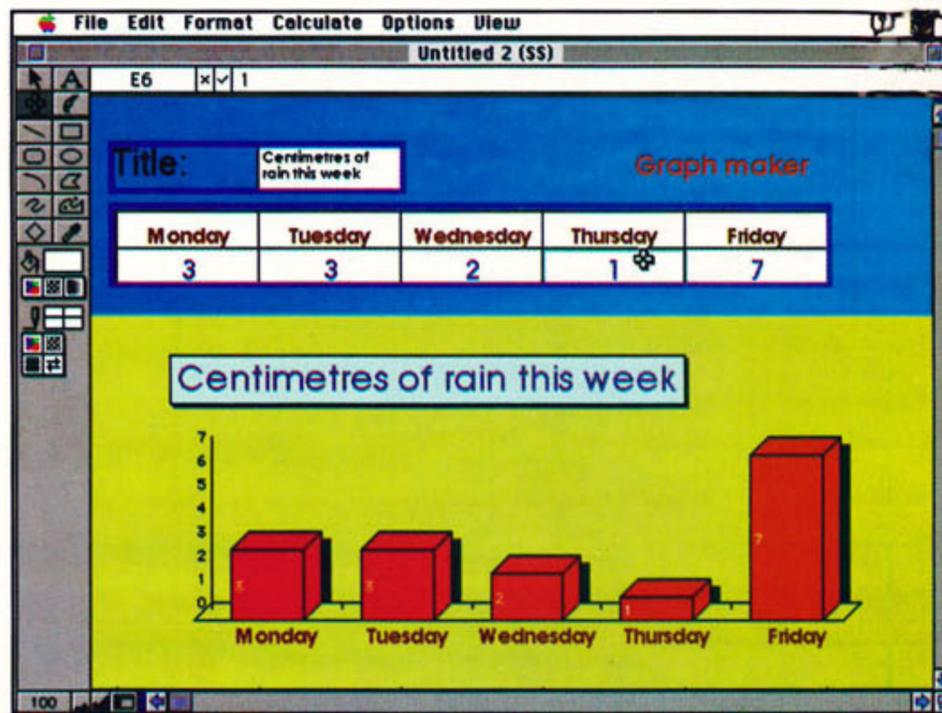
Cheap ClarisWorks schools templates

Primary school children who use the integrated package ClarisWorks will now have access to 30 new curriculum-based templates from Claris.

The templates are pre-created documents that have been designed by educationalists to help teachers conduct class activities using a computer. For example, one template uses the spreadsheet module, with pre-created charts and pictures, so that children can measure and record the height of each of their classmates.

The templates cost £23, and have been developed by Claris with close supervision from Tom Baird, a senior researcher at the Technology Education Research Unit (TERU) at the University of London, who was assisted by two primary school teachers. "The templates exemplify the way particular industry standard software can be used to produce materials appropriate for the individual age, ability and interests of children," he said.

In conjunction with the templates, a ClarisWorks Education User Group, with an £18 subscription fee, has been established. For more information contact TAG Developments on 0474 357350.



ClarisWorks Templates for primary education are designed to allow teachers to use ClarisWorks in the classroom with the minimum of effort. There are 30 templates in the package.

Memory shortage means price hike

Memory costs have increased dramatically over the past few weeks. In some cases, prices have actually tripled in a short time.

In June this year, 1MB SIMMs cost an average of £24. By September, the price had risen to £35.

The price rise is mainly due to a fire at a SIMM factory in Japan. This resulted in panic buying of some of the components used in the manufacture of SIMMs.

According to Performance Direct, a leading SIMM vendor in the UK, many manufacturers are

moving to build the more modern 72 pin SIMMs, which has caused a shortage of the 30 pin SIMMs used in the majority of the Mac range. A spokesman went on to say that because major computer manufacturers are building more low cost computers than ever before, the demand for RAM has been boosted – another cause of the shortages.

If you are intending to buy a Mac in the near future, it's a good idea to buy one with as much RAM as you think you'll require – don't buy one planning to add extra SIMMs yourself.

	25 June 1993	14 September 1993	Increase
1Mb SIMM	£24	£35	46%
2Mb SIMM	£49	£64	31%
4Mb SIMM	£95	£119.50	26%
16Mb SIMM	£434	£499	15%

Figures supplied by Performance Direct

Conflicts solved

Conflict Catcher II is a utility that finds conflicts between your startup files – extensions and control panels – through a series of tests. Unlike other similar utilities, *Conflict Catcher II* finds problems by selectively enabling and disabling startup items, then checking to see if the problem still exists after startup. Other programs tend to rely on a database of

known conflicts – which quickly goes out of date because new software is being released all the time. Because many users don't need to run all of their startup software at the same time, the program allows you to create separate sets of startup software for different situations.

There's also a special feature for PowerBook users who've had to create a RAM disk to improve speed and extend battery life. *Conflict Catcher* costs £69 and is distributed by Softline (081 401 1234).

● For a full review of *Conflict Catcher II*, turn to page 77.



Conflict Catcher II: sorts out conflicts between extensions and control panels automatically



Cable adds flexibility to PowerBook

The **PowerBriK Extender** adds more cabling between a PowerBook adaptor and the actual PowerBook.

The cabling is intended for people who find the normal length of a PowerBook power supply restrictive. It costs £13, but can also be purchased with the **PowerBook Connection Package** which costs £30. **TeleAdapt, 081 429 0479.**

Handy scanner



Caere's OmniScan: with its bundled *OmniPage Direct* optical character recognition software, you'll never need to re-type anything again

OmniScan is a hand-held scanner from Caere which comes with image editing software, an OCR package and fax software. The £539, 256-greyscale device scans at 400 dots per inch.

The image editing software is Caere's *Image Assistant*, a package which features an

'assist mode' for people who aren't confident with the full range of the program's features.

OmniScan is distributed by Computers Unlimited (081 200 8282) and Principal Distribution (0706 831831).

● For a first look at OmniScan, turn to our feature on page 23.

APPLE BITES

Colour crash

If you have a Colour Classic, you may find that it crashes when you try to run *Apple File Exchange*. This is a known problem, and Apple says that the solution – as long as you're running System 7.1 – is to install the Hardware Updater 1.0, which is available from user groups and on-line services such as AppleLink and Compu-Serve.

Bad cheques

Cheques stolen from a Building Society are being used to buy computers and software around Great Britain.

The National and Provincial Building Society says that the stolen batch numbers run from 433401 to 433800, and feature the N&P 'Bee logo'. Anybody who receives any of the cheques should contact their local police immediately.

Apple Expo

Apple Expo is the UK's only Mac-specific show, running from 24 - 27 November in the Grand Hall, Olympia, London.

Exhibitors will include Apple, Microsoft, WordPerfect, Claris, Radius UK and Canon as well as distributors Computers Unlimited, Principal and Softline. For more information contact EMAP International Exhibitions on 071 404 4844.

Future Entertainment show

The 1993 Future Entertainment Show is taking place at the Grand Hall Olympia, London from 11-14 November. Channel 4's show GamesMaster will



be broadcast live from the show, as will a Radio One show. A number of major software companies will be exhibiting, including US Gold, Acclaim Entertainment, Commodore, Sega, Nintendo and Gremlin Graphics. The show is a ticket-only event; if you're interested call the ticket hotline on 051 356 5085.

Cellular PowerBooks

Calling all PowerBook users; Axcell Cellular gives you the ability to send faxes when you can't get to a phone.

It's a cellphone/modem adaptor which supports two different telephones – the NEC P3 and OKI 900 – and can be used with any modem.

There are two cables, one to plug into the PowerBook and one for the portable telephone.

The adaptor normally costs £410, but has an introductory price of £351. The two cellphones supported by Axcell Cellular cost around £300 – and calls, of course, are charged at the normal cellphone rate.

For more information call TeleAdapt on 081 429 0479.

Aesop goes electronic

The Tortoise And The Hare is the third title in Brøderbund's Living Books CD-ROM series, and the first to be based on the classic fables of Aesop.

Available soon (but yet to be priced), the book is aimed at young children, giving them the opportunity to interact with the story.

The animated story, complete with great graphics and sound effects, is based on Aesop's famous fable of the same name, the race between the slow tortoise and the speedy hare with the tortoise coming up trumps.

For more information call Electronic Arts on 0753 549442.



The Tortoise and the Hare follows the familiar Brøderbund Living Books format



Who's this cute creature? You'll have to buy the package to find out...

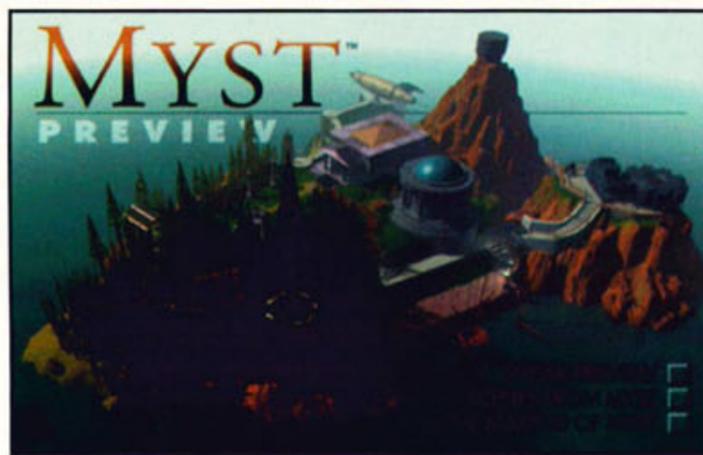
Misteries of Myst

Myst is a CD-ROM game featuring stunning 3D graphics from the programming team who created the children's classics *Cosmic Osmo* and *The Manhole*.

Due for release this month at around £53, *Myst's* storyline is based around an author called Atrus who produces unusual books. The books are described as 'doorways to fantastic worlds', which are referred to in the game as Ages. But the doors are being destroyed so the player – who has fallen into one of these books – has to find out what has been destroying the books, and on the run discovers all the different worlds and what happened to the author himself.

The adventure game includes some impressive photo-realistic graphics and an original soundtrack, and takes up hundreds of megabytes on the CD-ROM. It's played in first person perspective and there are a number of puzzles to deal with along the way.

Electronic Arts, 0753 549442.



Myst: a new CD-ROM adventure game, played in 3D from the character's perspective for an added feeling of reality



Stunning photo-realistic three-dimensional graphics and a great soundtrack are just some of *Myst's* attractions

Dial the Cosmos

Cosmos is a computer bulletin board service, which costs from £20 a year to join. There are no 'per-minute' fees on top of this, although some sections of the board – known as 'forums' – cost extra. Members are allowed on the board for one hour in any day.

The Cosmos Community Notice Board offers information, files and programs as well as 'Conferences' such as the Public Area which contains:

- Anti-Virus software
- Apple News
- Buy/Sell noticeboard
- UK Mac User Groups
- Apple software
- Microsoft Software

Because it's a community noticeboard, Cosmos also caters for special interest areas. If anyone is involved in areas such as cancer support groups, Cosmos will offer to set up a public or private conference for your group or interest. For more information telephone 081 690 2904.

APPLE BITES

Far out!

Far Side Planner/Calendar version 3.0 has been released in the US. It includes a year's supply of cartoon animations from cartoonist Gary Larson, made famous by the newspaper strips, books and greetings cards. The program includes an animated cartoon with animals or people zooming across the screen.

Delrina Corporation, 0101 206 820 7007.

Newt guide

The *Time Out/Newton Guide to London* will be available in December for the Newton MessagePad. It covers art galleries, theatres, eating out and visiting clubs and includes London maps. If the user selects the address of an entry, the location and directions are shown on the map. The guide will come in the form of a plug-in PCMCIA card; no price has yet been set.

Omni cuts

Prices of the *OmniPage* family of Optical Character Recognition software (OCR) have been cut by as much as a third. *OmniPage Professional* has been reduced from £934 to £699, *OmniPage* from £699 to £464 and *OmniPage Direct* from £529 to £269. Caere is distributed in the UK by Computers Unlimited (081 200 8282) and Principal Distribution (0706 831831).

Subs on tap

OnTap is a *QuarkXPress* XTension that has been designed specifically for sub-editors. It adds a number of functions to help anyone who has to edit text with *QuarkXpress* – for example, paragraph indents can be deleted with a single keystroke, rather than via a dialogue box.

OnTap costs £93 from XChange International, 071 637 2966.

It's amazing

Super Maze Wars from the Callisto Corporation is the latest network game due for release soon.

It's a colour update to the popular *Maze Wars* and is similar to *Spectre Supreme*.

As a player, your job is to battle unrelenting robot enemies and networked human opponents.

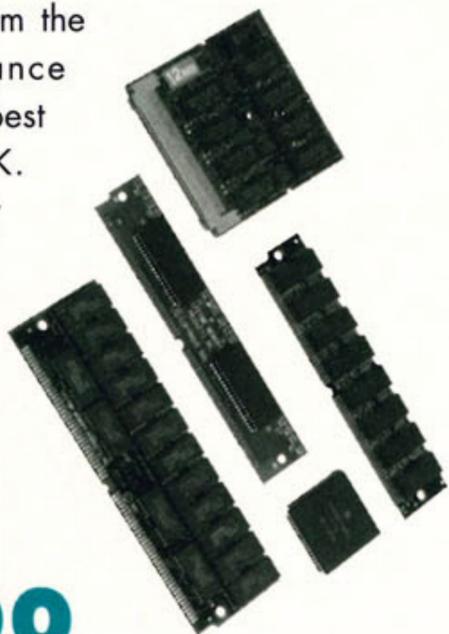
For price and availability details, call Softline on 081 401 1234.

PERFORMANCE

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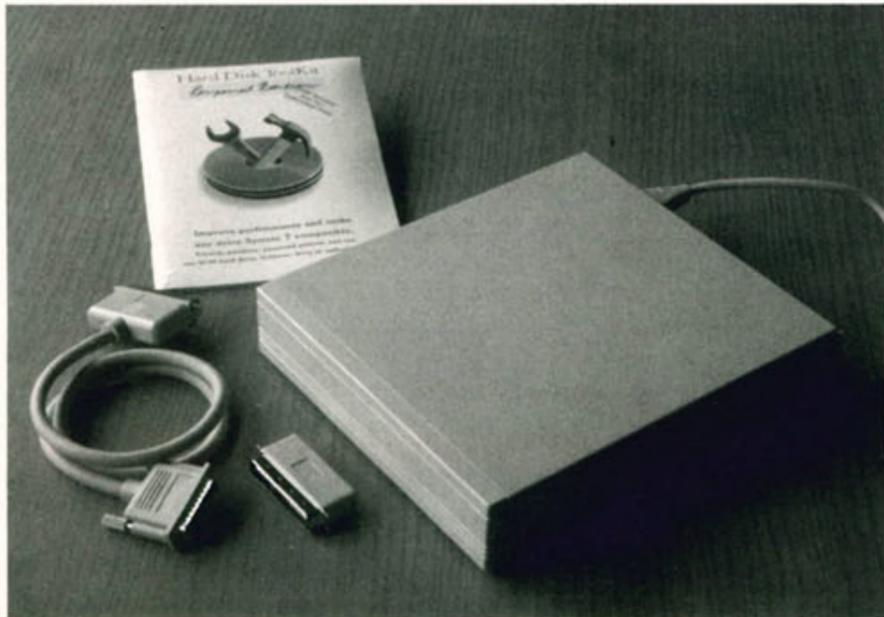


4Mb SIMMS
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2Mb LCIII/Centris.....	£55.50	6Mb PB 140/170.....	£246.00
4Mb 80ns.....	£113.50	6Mb PB 160/180.....	£275.50
4Mb Ilfx.....	£128.00	6Mb PB 165c/180c.....	£309.00
4Mb LCIII/Centris.....	£115.50	8Mb PB 160/180.....	£359.00
4Mb Quadra 800/840AV.....	£139.50	8Mb PB 165c/180c.....	£444.50
8Mb 70ns.....	£258.50	8Mb Duo.....	£233.50
8Mb LCIII/Centris.....	£275.50	10Mb PB 160/180.....	£409.00
8Mb Quadra 800/840AV.....	£271.00	10Mb PB 165c/180c.....	£549.00
16Mb 80ns.....	£469.50	12Mb Duo.....	£510.50
16Mb Ilfx.....	£490.00	16Mb Duo.....	£626.00
16Mb LCIII/Centris.....	£474.00	Video RAM	
16Mb Quadra 800.....	£549.50	256K Video RAM.....	£23.00
16Mb Quadra 840AV.....	£634.00	512K Video RAM.....	£39.00
32Mb LCIII/Centris.....	£1,398.00	FPU Maths Co-processors	
32Mb Quadra 800/840AV.....	£1,398.00	FPU - LC, LCII, P/400.....	£49.00
Power Book / Duo		FPU - Classic II.....	£49.00
2Mb PB 100/140/170.....	£77.50	FPU - LCIII.....	£55.00
4Mb PB 140/170.....	£157.50	FPU - Colour Classic / Ilvi.....	£49.00
4Mb PB 160/180.....	£169.00	FPU - Ilvx, Performa 600, Duo.....	£65.00
4Mb PB 165c/180c.....	£233.00	FPU - IIsi with dual slot adaptor.....	£79.00

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128Mb Optical

The TEAC 128Mb Optical mechanism is less expensive and more reliable than a hard disk. This safe removable drive conforms to the ISO Standard and comes with an

extended 2 year warranty. Included in the price is a 128 Mb Verbatim cartridge, all cables and a copy of FWB Hard Disk Toolkit drive software.

128Mb External Optical

£675.00

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525Mb	Quantum	10ms	£559.00	£629.00
1.2Gb	Quantum	9ms	£929.00	£989.00
2.4Gb	Seagate	8ms	£1,849.00	£1,925.00
128Mb Optical	Teac	45ms	£625.00	£675.00
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128Mb Verbatim Cartridge			£26.00	
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The third dimension

MacroModel 1.5 is a three-dimensional modelling program which creates 3D graphics from a 2D reference image. It's aimed at professional designers, graphic artists and CAD (computer aided design) users. This new version includes a slew of new tools such as a Bézier pen, twist, bend and taper tools, and an improved 3D extrude feature.

MacroModel 1.5 sells for £1,408, or £1,585 when bundled with Pixar Renderman. It's available from Computers Unlimited, 081 200 8282.

Laser in colour

Colour laser printing on the desktop is at last possible thanks to a much smaller machine from QMS – although the price is still prohibitive for all except large users.

The QMS ColorScript Laser 1000, launched in mid-September, contains four toner cartridges, one each for cyan, magenta, yellow and black toner. Unlike previous colour laser printers, which tended to be extremely large, the ColorScript Laser 1000 only uses one 'marking engine' to place the image on the paper, and transfers the four coloured toners to this engine using a new technique involving a flexible rubberised belt, rather than the conventional solid drum found in most laser printers. Output is to plain paper – no special coating is required.

The ColourScript Laser 1000 prints at eight pages per minute (ppm) when outputting black-and-white, and 2ppm when producing colour work. It has serial, parallel and AppleTalk interfaces, which can all operate simultaneously, spooling jobs until the printer is free, and comes with a 60Mb hard drive and 65 built-in fonts as standard. The resulting output is high quality, with only a small amount of colour bleed, and is good enough for business documents,



QMS' new ColorScript Laser 1000 delivers colour from a desktop laser for the first time

presentations (the printer takes standard overhead transparency sheets) and so on.

QMS' UK managing director Moira Craig is keen to point out that the printer is not primarily aimed at the graphics industry. "It is an important breakthrough in the future of office and business printing," she said.

Cost? A mere £11,744 from QMS on 0784 430900.

Complete reference for fonts

An updated version FontBook, billed as 'the ultimate indispensable reference' to fonts, is now available from FontWorks. It contains samples of over 8,000 different typefaces, listed in alphabetical order and also in stylistic order for easy reference. The book includes technical, historical and typographic information about fonts, and contains section dividers designed by some of the most highly regarded typographers in the world, such as Erik Spiekermann, Gerard Unger and Neville Brody.

FontBook costs £30 plus £3.50 postage and packing; but anyone ordering before 30th November will get the book for £20 plus the £3.50 handling fee.

To order, call FontWorks on 071 490 5390.



Optical Oscar

The Oscar 128Mb rewritable optical drive is claimed to be the fastest available for the Mac. It stores data on 3.5-inch removable optical cartridges, and its access time – often the limiting factor with such drives – is 30ms, which makes it comparable with medium-speed hard drives. Data transfer rate is 1.09Mb per second, which again means that users shouldn't find the speed limiting – especially since such drives are often used for archiving and backup.

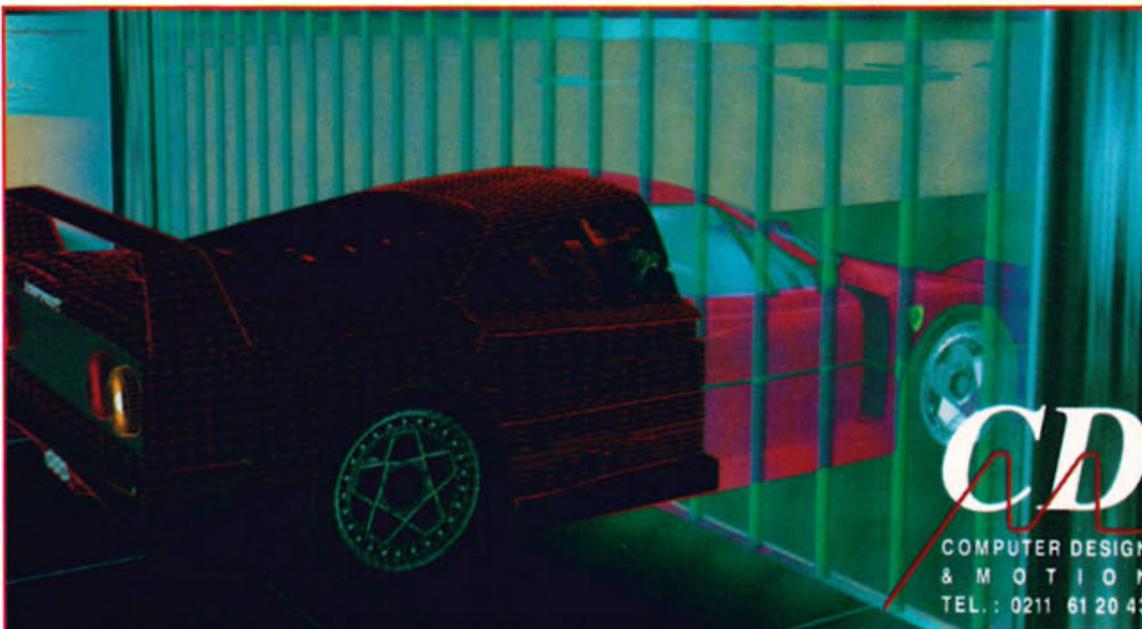
The drive has a retail price of £1,169, although distributor Lockside Computer Solutions expects the street price to be somewhat lower.

Lockside Computer Solutions: 0635 528303.

Digital colour output – at a price

Pictured right is output from Fuji's new A4 digital colour printer, the Pictography 3000, which is now available from distributor Phase IV Systems. The printer uses a unique digital imaging process which, according to Company Manager Steve McDaniel, "to all intents and purposes produces a photographic image." He believes the printer to be the only one currently available which uses this technique.

The Pictography 3000 will set you back a rather hefty £22,000. Details from Phase IV Systems on 0865 883355.



October revolution

Apple's traditionally launches a slew of new Macs in October each year, and this month will be no exception. As well as the LC475 detailed on page 12, other new machines are likely to include a replacement for the Centris 610 with a full 68040 processor (the current 610 contains a 68LC040), Duos with active matrix displays, and the renaming of all Centris Macs as Quadras in an attempt to re-structure the desktop product line.

Sources suggest that the Centris 610 will, along with the full '040 processor, get a clock speed increase from 20MHz to 25MHz, while the 650 will increase in speed from 25MHz to 33MHz. Both will be renamed Quadras, as will the recently-introduced 660AV. A new, low-cost Quadra likely to be called the 605 will also make an appearance, sporting a 25MHz 68LC040 chip. It will ship in a new casing even thinner than the LC family's, with no room for an internal CD-ROM drive (although, of course, external SCSI units will still be supported).

Two new Duo models should appear: both will have active matrix displays for better quality, but while the Duo 250, with a



The Centris 610 is due to be upgraded to have a full 68040 processor, rather than its current 68LC040

33MHz 68030 processor, will be capable only of displaying 16 levels of grey, the 270c will support up to thousands of colours.

In the US, Apple is attempting to split its machines into three distinct areas: Performas for home use, LCs for education and Quadras for business. However, since the education market is less vital for Apple in the UK – and because the Performas don't have such a prominent market position over here – this is unlikely to happen in Europe in the near future.

New Newton on the way

Apple showed models of a number of 'prototype' Newtons at the August Macworld Expo in Boston. These were described by Apple officials as 'ideas which may or may not happen in the future', and included a 'My First Newton' model and a device with an integrated phone.

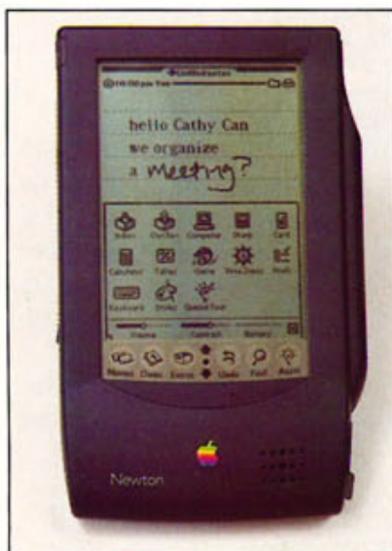
One model, though, had a rather more 'finished' look than the rest, and may in fact be released in the near future. Rumours are already circulating the the device,

which is roughly ten inches wide by eight inches tall and incorporates a much larger screen than the current MessagePad, is in an advanced stage of production. One reason for these rumours is that the casing of the 'prototype' looked very much as though it had been made from moulded plastic, rather than created as a one-off. An observer at the show said that to create the mould for such a casing would cost in the region of \$50,000...

Apple sells others' apps

Apple US is to distribute encrypted third-party applications on a CD-ROM, in a similar method to UK company Instant Access. To buy a program, purchasers will phone up with their credit card details, and in return will be given a code which 'unlocks' the application and allows it to be transferred to their hard disk. Manuals will be stored electronically on the disc.

The CD-ROM will only be available in the US for some time after its launch, but is likely to appear here if it proves successful.



Upgrades to Newton software

A little under two months after the Newton was launched in the USA, it has already undergone four operating system upgrades. These have been supplied in the form of plug-in PCMCIA cards, which add a 'patch' in RAM to cure bugs in the machine's original ROM.

The upgrades cure problems with memory management, which in earlier models meant that the machine had to be reset frequently (although

The Newton's handwriting recognition has been improved with a bug-fix to the operating system, recently released by Apple

this doesn't actually lose any data), and improve handwriting recognition.

Some users have complained that there seems to be a new software upgrade every week or so, but Apple's policy in freely shipping out PCMCIA cards to any registered user who requests an upgrade has helped to reduce criticism. However, confusion was increased when a number of Apple's US support staff started shipping upgrade 1.03 via AppleLink to Newton users before the patch was officially supposed to be available (it was withdrawn a few days later and replaced with version 1.04).

Although the Newton hadn't starting shipping in the UK at the time that MacFormat went to press (the official launch date was September 16th), it's expected that UK Newtons will ship with operating system software version 1.04. Customers in the US who have purchased the Newton fax modem will be able to download future patches to the operating system free of charge via a toll-free bulletin board number, but at the time of going to press it was unclear whether this facility would be available in the UK.

• Apple UK is rumoured to be talking to two companies specialising in paging systems, with a view to launching a Newton paging service early in 1994. An Apple spokesman did not deny the rumour, but would not comment further.

mac **FORMAT** COMMENT

Deciding when to buy a Mac is always difficult. You know perfectly well that within a few months of taking the plunge something faster, nicer and cheaper will have been released. However much you peruse magazines like MacFormat, Apple always seems to have a secret machine tucked away that it's waiting to launch just as soon as you've parted with your hard-earned cash.

This is one of the facts of computer life, and always has been. Traditionally, the only sensible way to console yourself was to realise that you bought the machine that you did, when you did, because that's what you needed and that's when you needed it.

Traditionally. However, over the last six or

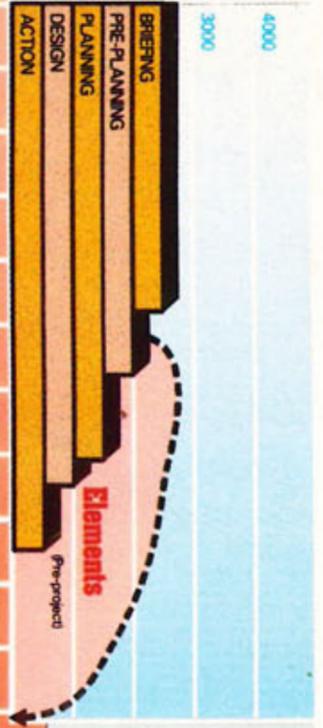
nine months Apple has rewritten the rules somewhat with what many see as an increasingly crazy pricing strategy. Sure, you expect the cost of machines to be reduced as the company tries to clear stocks in readiness for new models; but (to take one example) you certainly don't expect the street price of a machine like the Centris 610 to be effectively halved in the first six months of its life. That isn't stock clearance – it's ridiculous.

If you haven't yet bought (say) a 610, you may well be wondering why we're complaining – after all, surely the cheaper the better? Well, yes and no. It's fine if you are just about to buy – but not quite so nice if you forked out for the thing at the original price less than half a year ago.

There's absolutely no excuse for such radical changes in the pricing structure. If the machines were originally priced correctly, then they must surely be selling at a loss now – not something that Apple would want to be doing. And if they were overpriced initially, then someone in the marketing department hasn't been doing their job properly.

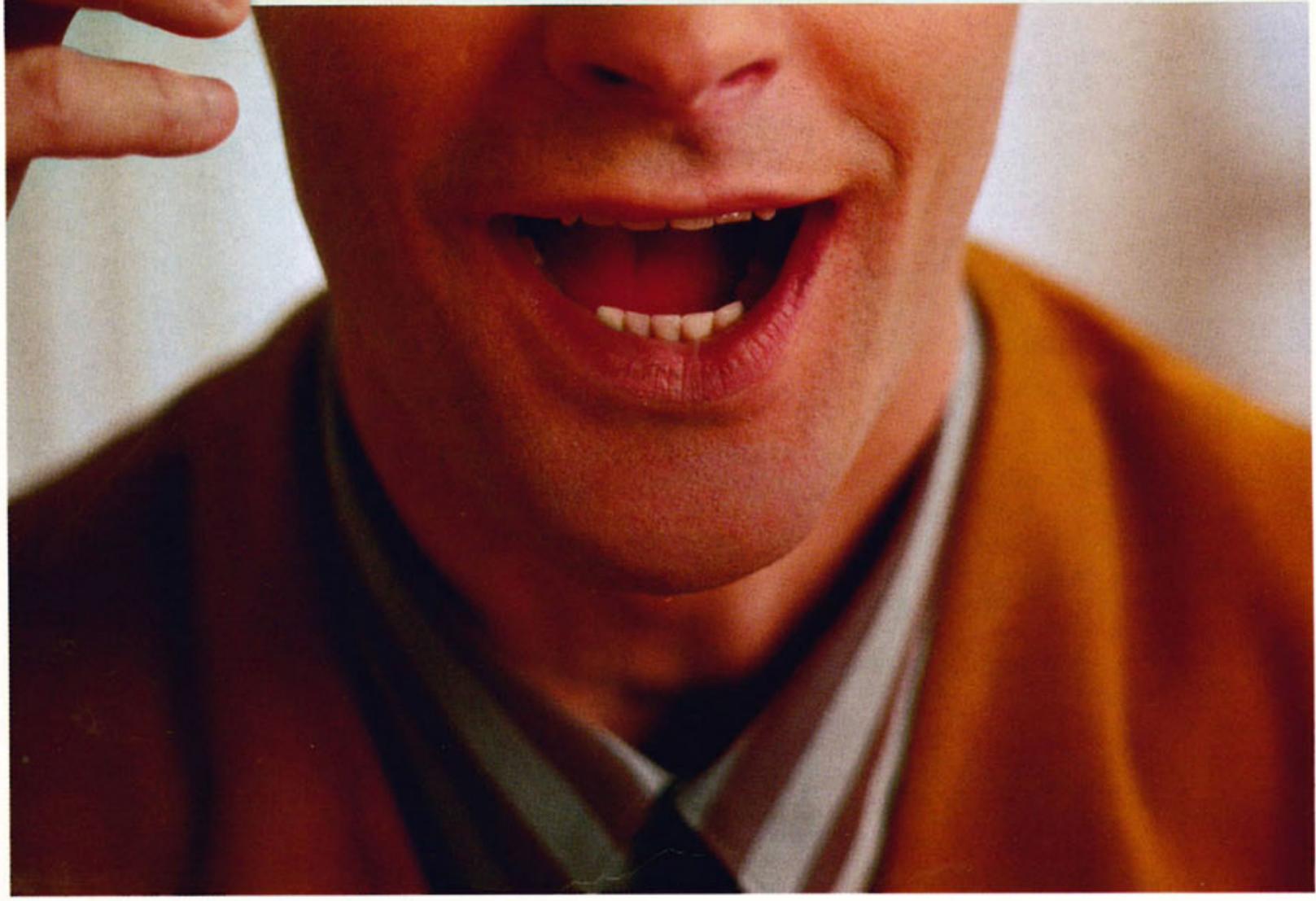
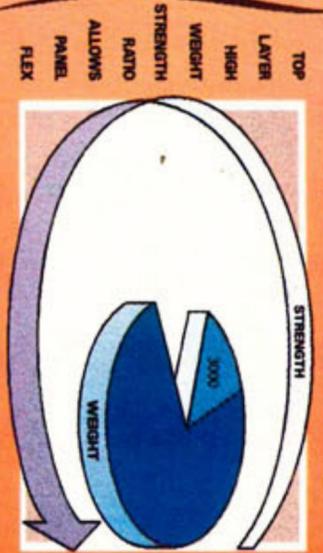
Although people buying a Mac for the first time must be ecstatic at the incredibly low prices of much of the Mac range, Apple is doing itself a great disservice to its existing customers by effectively devaluing their equipment so soon after they bought it.

Please note: we're in no way advocating high prices for Macs – the lower the better, since that way as many people as possible can get their hands on one of the best computers ever made. All we're asking is that Apple takes a long, hard look at its pricing policy – and injects a little consistency into it.



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P R O J E C T

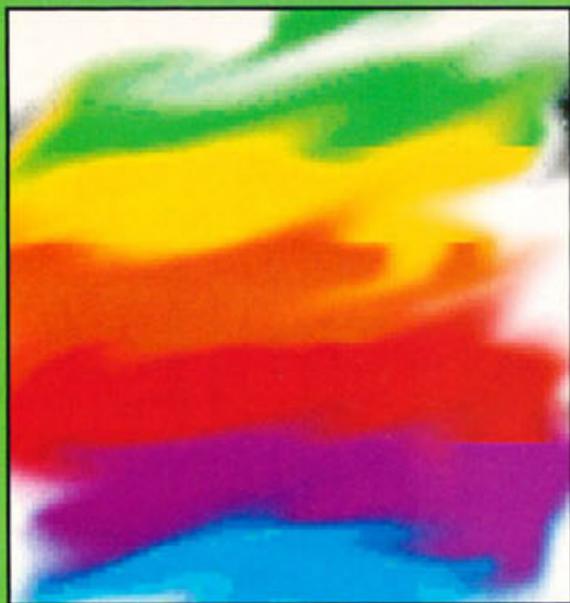


“When I saw the great discounts on printers HP are offering Mac users, I couldn’t believe my eyes.”

“Interior design, that’s my line of business. So every piece of literature my company produces needs to ooze style and flair. Because of this, we’ve all got Macs but they’re of little use if you haven’t got a printer that can do them justice. The trouble is justifying the price of buying top quality printers. That isn’t a problem with HP’s DeskWriter range. They have now been reduced by up to 30%. And they weren’t even expensive to start with! The HP DeskWriter 510 gives great black and white printing. The HP DeskWriter C

gives the option of black and white and colour when my staff need it. Then there’s the HP DeskWriter 550C – the printer I’ve got. This produces the most eye-catching colour I’ve ever seen and makes my graphics jump off the page. I don’t know how Hewlett-Packard DeskWriters manage to produce such high-quality output at such a low price. But I’m glad they do. Because of how impressive my presentations now look, I’ve put my charges up!”
Call Hewlett-Packard on 0344 369222.





TALK

Pleased, peeved, irate, enraged, amused, amazed, stunned or astounded? Whatever your feelings – about anything in the Mac universe – make sure you write in and tell the Editor, Andy Storer, at:

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

A heretic writes...

I've always believed that the Mac is special and shouldn't be cloned. And I'm sure loads of other people do too. So how can Apple decide to allow the Mac to be cloned? How can Apple write System 7 for PCs? How can Apple continue to develop the Mac if System 7 is out en mass on PCs? Think up Apple!

Steven Checkley, Droitwich, Worcs

Whoaa! there Steven – Mac clones are still some way away, and I don't see System 7 running anywhere on PCs yet either. But Apple might argue that it's only by joining the clones that it can continue to underwrite its enormous R&D budget. In the end it all depends on what you think makes the Mac a Mac. Is it the system software, the applications or the hardware? It's all three, I guess. But I wouldn't complain if Mac clones cost half the price of Apple equivalents and if System 7 replaced Windows as the world's favourite operating system. It'd make life a lot easier – and easier on the wallet too.

Sound advice

Why does audio take up so much disk space? You mentioned a mere minute of sound taking up 10 Megabytes! I'm sure other people would like to know this as well.

Steven J Humphrey, Taunton, Somerset



Send in all your letters to the Editor, or fax him direct on 0225 446019 – the more the better!

Well, it all depends on the rate that you sample it at – if you want CD-quality stereo you have to sample incoming audio many more times a second than if you want mono Mac speaker quality sounds. Look at it another way – a CD can contain 72 minutes of music, taking up around 650Mb of data. That's 9Mb a minute.

Ducking and diving

Here's a tip for anyone out there like me who has a CD-ROM with a demo version of *Color-It!* but doesn't have an actual paint package (one with save, export and print functions enabled). Have you tried using *Flash-It* to grab pictures created in it and exporting them to another package? I use *Color-It!* to create pictures then grab them with *Flash-it* and paste them into the *ClarisWorks* paint module. Hell, it's not as good as having the package but it works and it's free. Keep up the good work.

Matthew R. Fox-Wilson, Aylesbury

Good one – and all anyone who doesn't have *Flash-It* but is running System 7 has to is hit [command] [shift] [3] to activate the built-in screen grabber.

That Classic tip

How glad I was when I spotted your magazine, with its treasure of hints, tips and reviews. Many thanks – you have made me very happy on numerous occasions already. One of the things I especially liked was a note from Fredrik Dehner in the August edition about starting up the Classic with [command] [option] [x] [o] to start up from a ROM-based System boot disk. I tried it immediately, and it worked!

When I bought the Classic, I thought, who in the world needs 2MB or RAM? I figured that

Roll on System 8

...or handy little suggestions where you can post us the improvements you'd like to see made to your Mac. When we've got a good batch we'll send em off to Apple HQ and see what its coders reckon. This month's wanna-see is from Rob Amos of Roxton, in Beds. "If each Mac file has a unique four character Creator code, why doesn't System 7 tell me which application created a program instead of 'could not open the document, because the application that created it couldn't be found'?" Why indeed? Sounds a good idea to me.

two Megs was about enough to fill six books and I expected to easily multi-task five to ten programs in that much space. Those great expectations sure didn't last long – System 7 used up about half the amount of memory before I started! But, once I started up the Mac from the secret System 6.0.3 built in, I had an enormous 1700K left. The ROM System has more advantages, however. For instance, have you ever tried re-initializing your hard disk with a System on floppy disk? I have, and had to change disks a few hundred times before even the System folder was properly installed. I tried it again using the internal system and found initializing had become easy. Also, when I restart with System 7 after having used the ROM-based System, the desktop file is automatically rebuilt, thus keeping my Mac fit and fast. Thank you, Apple Computer, thank you, **MacFormat**, and thank you, Mr. Fredrik Dehner!

Sierk Meijer, The Netherlands

Thanks Sierk, glad to have been of help, and thanks Fredrik. The reason this only works on the Classic was that one version of the machine was intended to be useable on a network, with no internal hard disk and probably no floppy drive either. So they burnt System 6.03 in to the ROM and, fortunately, left it there.

High or what?

Dear Sir,
I would like to set the record straight. There are more than 6 million Tibetans, some of whom do indeed use Macs. The world's first national daily newspaper to be produced entirely using Macs was from Bhutan, a country which uses a dialect of Tibetan.

One reason as to why there may be a less than average number of Tibetan Mac owners is that most of the country is at an altitude of more than 10,000 feet – the maximum operating altitude which Apple specifies for its machines.

Andrew M Brannan, Keswick

Cripes. I never realised. I wondered why we got so few letters from there...

Paying the price

Why didn't I wait? Why did I subscribe to a magazine before they were offering their introductory goodies?

Cruising the keys

Here's this month's bunch of £5-winning hidden secrets from your favourite keyboard:

Here's another little known feature of the PowerBook range. Alas! It only works on PowerBooks:

Turn on Balloon Help, and turn [caps lock] on. Now, using the track ball, move the cursor to the up arrow in the menu bar. You will then be faced with the original code names of all PowerBooks!

Richard M J Shakeshaft, Atherstone, Warwickshire

Here's three:

- Pressing [option] while emptying the Wastebasket turns off the warning message while you are emptying, and will empty locked files.
- On some Macs without the Programmer's Switch, pressing [control] [command] [power key] forces a restart.
- If your Mac is asking for a disk that is on the desktop but it no longer recognises the disk, pressing [command] [.] a few times will override the problem and avoid you having to restart.

Matthew Cooke, Bournemouth

Here's a few more 'hidden secrets' for you (it's amazing what you can find when you start looking!):

- *PageMaker* – hold down the [command] key while selecting **About Pagemaker** to get a list of installed Additions.
- Colour control panel – click on 'sample text' a second time to get the author's name.
- *TeachText* – hold down the [option] key while selecting **About TeachText** to get more info about the program's authors.

William Sandison, Lerwick, Shetlands

It was just the same when I bought my Macintosh LC with a bank loan two years ago; just prior to them being sold with System 7; with only 2Mb RAM; a tiny 12-inch screen; and before the prices fell through the floor and the hardware improvements shot through the roof!

Why should those with the balls to take a risk be punished? I hope you will reward my initial loyalty (and last month's subs cheque) by also sending me a free copy of *Prince of Persia*.

Neil Clark, Warrington

Hmmm. Yes, it's just one of those things. We are always trying to give the best deal possible to our subscribers, so the subs offer is improving all the time. When we first started we were a bi-monthly magazine so a year's subscription was only for six issues and we couldn't afford to give a free gift away. Now that a sub is for 12 issues we can afford two. You can, of course, extend your subscription for another 12 issues and get the gift – see page 90. Or just sit back, happy in the new-found knowledge that a copy of *Prince of Persia* is on its way to you, and only you, right now.

Time and time again

In the August issue you carry an advertisement from IND with a form at the bottom which, if returned before July 29th, qualifies one for an entry into a draw. Could you please send details of the time warp program that renders this possible, and is it System 7 compatible?

Alan Emmerson, Lockerbie

The program you refer to is *Event Horizon* and it requires System 32 running on an Apple-Sony Vortex. It's on its way real soon now and is relatively expensive. As for the advert, well that's just some human who needs a soft reset.

No Trojans here

With reference to the anti-virus program *Disinfectant*, I am curious to understand why it is

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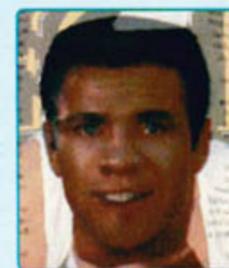


So just which two faces did we merge last issue to make up the world's most famous living morph? Well, it was just one face and it is, of course, Jacko – but his sister's name is La Toya Jackson, not Janet Jackson, Diana Ross or Boy George.

Confused? Well it's just Michael, right? Like full stop. Anyway, forget it, the winner of a free year's sub is... ta da da da... Kevin Lack of Northampton. Well done Kev, and hard luck to the millions of other readers who also got it right...

All you have to do to win this issue's free sub is work out which two faces comprise the almost charmingly effete yet viciously clinical macho-morph on the right and send the two names on a card to: 'Looks like trouble to me', MacFormat, Future Publishing, 30 Monmouth St, Bath BA1 2BW.

Oh and no, it isn't Donny Osmond and Mike Tyson.



that before a disk can be checked for viruses it must also be unlocked. Although I understand that it must be unlocked to be put right, I have trouble understanding why it must be unlocked for checking purposes. After all, we've all heard of 'Trojan Horses', and I must confess that if I were writing a Trojan Horse virus program, I could not think of a better way of doing it than writing it in the guise of an anti-virus program.

Richard Brooks, Reading

Richard, it's simple. What you have is a Trojan Horse masquerading as *Disinfectant*! Only joking. I think you must be mistaken because *Disinfectant* doesn't ask you to unlock a disk before it checks it. It's the worse possible thing it could do for the reasons you point out. Send me the version of *Disinfectant* you're using and I'll have a look at it.

It's black and white

Why do you refuse to review any games that run on a black and white Mac? I realize that there are not many B/W games available but of your 16 reviews since issue 3, only three or four games were also for B/W machines. Thank you for your time, wisdom, magazine and wastebasket space (where this letter will probably end up).

Barry Pollard, PortStewart, N. Ireland

We don't choose to ignore mono games – it's just that most new releases are for colour systems. But hang on until issue 9 – we'll be doing a comprehensive round-up of every game ever released for the Mac.

MacFormat 6 was produced on two IIs, an LCII, a Classic II, a IISI and two Quadra 700s, all networked to a Spectraset 2200 outputting film at 2,400 dpi at 150lpi. In-house copy this month was written with *Word again* – which really is damn fine edge core gear again. All 84 editorial pages were kissed and snuggled up to by the almost Catherine Deneuve-like *QuarkXPress 3.11*, while *Capture* sneaked quick peeks and passed them on for personal perusal by *Photoshop 2.5*. Favourite pastimes this issue were Buxton Spring water, pastami bagels and muffins. *MacFormat 7* is out November 2nd!

FUN WITH SPILL-CHOCKERS: PART 1

Here's a new spot suggested by Rob Bailey of Petersfield in Herts, who's just won himself £20. Rob writes: Most spellcheckers don't understand names and give large numbers of alternatives that most of us ignore. Those of you with extended dictionaries should be able to come up with some brilliant alternatives. Here's a few *PageMaker 4* came up with:

Clint Eastwood – Chink Asteroid
Julia Roberts – Jolly Leopards
Willie Carson – Woolly Creation
Sylvester Stallone – Self-styled Stallion or Silverside Stealer
David Platt – Deviant Pilot
Graham Taylor – Dream Teller
Ian Wright – I'm White
Mike Atherton – Molecule Authority or Macho Threatener
Telecom – Tycoon
Benetton – Bayonetting
Star Trek – Streaker
Eastenders – Stinkers
and finally...
Cliff Richard – Retired

So there you go. Any other readers with on-line dictionaries who would like to contribute, please send your libel action candidates to Spilling Chockers, **MacFormat**, 30 Monmouth St, Bath BA1 2BW. Just a little tip from me – try politicians, they're especially good victims. I'll pay a fiver for the best ones we print and get the sack after Cecil Parkinson sues us.



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Epson GT 6500 LE	745

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Scan it!

Ian Wrigley throws light on choosing, using and understanding scanners

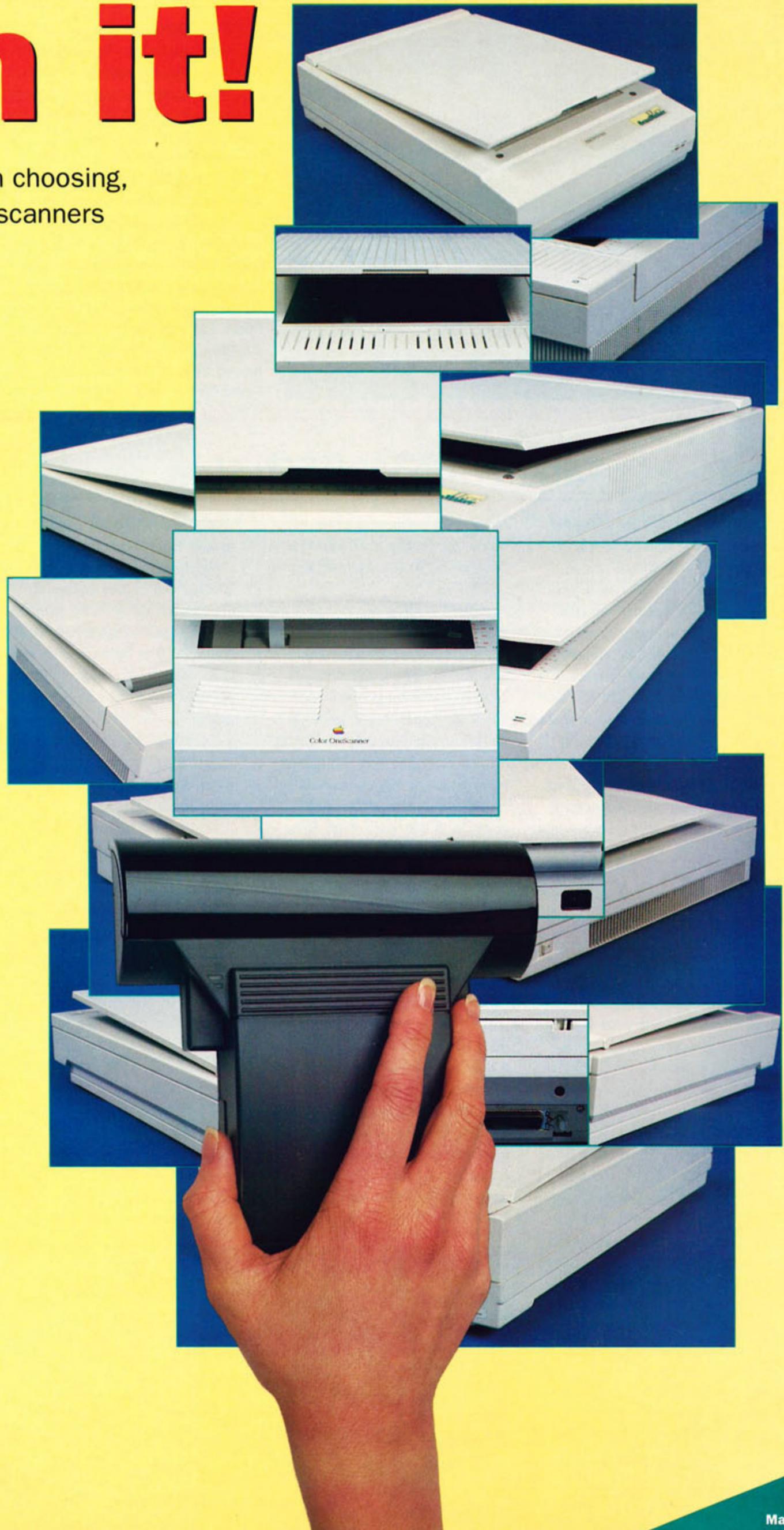
In the early days of the Macintosh, you didn't scan anything yourself; everything – black-and-white or colour – was sent to a bureau, which charged you the earth for the service. But as more and more people started seeing the possibilities that desktop publishing offered, companies quickly began producing desktop black-and-white – and even some greyscale – scanners so that the whole process of page composition could be performed on the Mac.

Now, some ten years after the first Mac appeared, desktop scanning has become the norm. It's quite common to see scanners attached not only to Macs used as graphics workstations, but also to normal business machines – because the scanner can do much more than just input images, as we'll see.

And as desktop scanners became cheaper, they also increased in sophistication. These days, if you're buying a flatbed scanner it's actually quite difficult to find a greyscale-only device; almost all the flatbed scanners on the market are now colour machines. Good quality colour, too – many magazines now rely on desktop colour scanners to input the vast majority of their colour images, only using a bureau for the really high-quality scans required for, say, the cover.

Over the next few pages we'll take a look at the principles behind scanning; talk about the points you should bear in mind when shopping for a desktop scanner; give some hints to get the most out of your machine once you've bought it; and print some scans created by some of the many devices on the market.

A scanner is one of the most useful peripherals you can buy for your Mac. To see just how useful, read on...



EPSON GT-6500



The GT-6500 comes bundled either with *Photoshop LE* or, for a little over £300 extra, with the full version. It's a 24-bit colour device, with an optical resolution of 300dpi x 600dpi, interpolated to a maximum of 1200dpi.

In use, the scanner performed faultlessly. The *Photoshop* plug-in was simple to operate, and scanning was reasonably fast. Image quality appeared good, and overall it's a good choice if you want a colour flatbed scanner.

Price: £1,146 (*Photoshop LE*); £1,498 (full *Photoshop*) (but shop around for lower prices)

From: Epson, 0442 227478

Talkin' 'bout resolution

It may seem at first sight that the higher the resolution of a scanner, the better quality image you will end up with. Well, to some extent this is true – but remember that the higher the scanning resolution, the more disk space is required. Even a relatively small greyscale image scanned at 400dpi takes up well over a megabyte of space, and a 600dpi colour scan is likely to eat up 10Mb or more.

Fortunately, there's a practical limit to the resolution you need to scan at to get decent results – and, not surprisingly, it all depends on what you're going to do with the image after it's been scanned. For starters, if you're only going to be displaying your scans on the Mac's screen – perhaps for incorporation in a computerised presentation, or just as a custom desktop pattern – then it's pointless to have an image that's been read in at several hundred dots per inch – the Mac's screen is a 72dpi device, so that's all you need to scan. (Some third party monitors are 88dpi, but only relatively few.) However, (and here's where a tiny bit of maths starts to come in), if you're going to use the scan at twice its original size, then the effective resolution halves. For example, say you scan a 1-inch x 1-inch picture at 100dpi, but you want to display it at 2-inch by 2-inch. You've doubled the size of both horizontal and vertical dimensions, so you'll only see 50 dots per inch in either direction – you've effectively reduced the scan to 50dpi. For that reason, you need

to take into account the final output size of the scan when you're determining which scanning resolution to use.

When you're going to output an image to paper (or film, if you're going to have it professionally printed), things get a little more complicated. This is because greyscale and colour images can't be directly printed; they have to be turned into 'halftones'. This is all fairly technical, and is handled by whatever program you're using to print the image, but you do need to know the 'line screen' frequency that is being used, measured in lines per inch (lpi). We won't go into exactly what this means, but if you're printing to a laser printer you're likely to be using a 53lpi or 56lpi screen, while if you're outputting to an imagesetter the line screen will probably be more than 100lpi (common values are 133lpi and 150lpi, but your printer will tell you the screen that you should use). You normally set this line screen either from the **Print** or **Page Setup** dialogue box, although it really does depend on the software that you're using.

The actual resolution that you

should scan at, to get good quality results, is given simply by:

Resolution (in dpi) = 2 x line screen (in lpi) x size multiplier

The size multiplier is the proportion of the original image size at which you're going to be outputting your scan. For instance, if you'll be printing at the same size as the original, the size multiplier is 1. If you're going to print at twice the original size, the multiplier is 2, while half size means that the multiplier is 0.5.

There is no point scanning at more than the resolution given by the above formula (although some professionals say that you should use the number 2.5, rather than 2). You won't get results that are any better, and you'll just end up with huge file sizes. On the other hand, scanning at any less resolution could reduce the image quality, so if your scanner has pre-set resolutions, you should scan at the next highest.

If you're still confused by the whole thing, the table below should help. For given line screens and output sizes, it shows the minimum resolution at which you should scan (in dots per inch).

Size of output, compared with original					
	50%	100%	200%	400%	
Line screen (lpi)	53	53	106	212	424
	56	56	112	224	448
	100	100	200	400	800
	133	133	266	532	1064
	150	150	300	600	1200

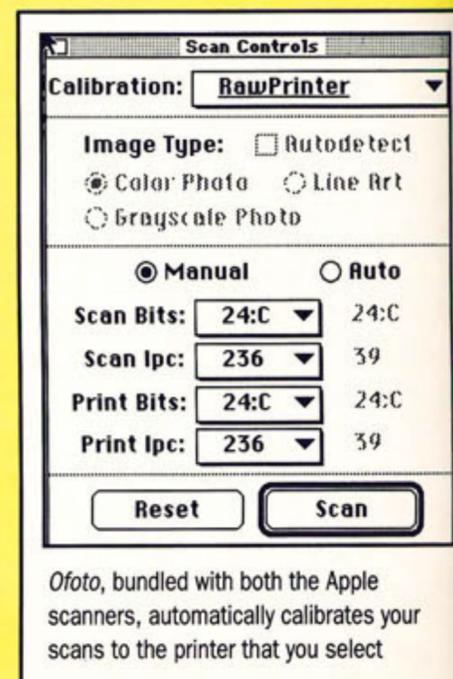
Buying a scanner

There are plenty of things that you need to look out for when buying a scanner; some obvious, some less so. But the first thing that you need to do is decide exactly what you are going to use the device for in the first place.

This may sound obvious, but it's worth thinking about for a moment. Where you're going to use the images, whether OCR (Optical Character Recognition; see the boxout) is going to be important to you, what software is bundled or whether you already have your own – all of these are important considerations. But then again, so is just what you're going to be scanning in the first place. Illustrations from huge, heavy, thick old books? Bet they won't lie flat on the glass of a normal desktop flatbed scanner, so perhaps you'd be better off with a handheld device. Very large images? So how good is the supplied software at matching the edges of two partial scans? Very detailed images? Make sure that you've got a steady hand if you buy a hand scanner...

And so on. To aid your decision-making, on these pages we've given a run-down of scanner basics, and taken a brief look at five typical scanners – three colour flatbeds, a greyscale flatbed and a greyscale hand-held machine. There are plenty more on the market, but these are a reasonable, representative selection.

By the time you've finished this feature, you should have a fair idea of how scanners do their job, and what you'll need to ask the salesman to make sure that you buy the right machine for your requirements. Finally, on page 28 we've printed sample images from the five



Ofoto, bundled with both the Apple scanners, automatically calibrates your scans to the printer that you select

scanners that we tested, together with the same picture scanned by the high-end repro house scanner that MacFormat normally uses for high-quality colour work, so that you can see the difference.

Basic electronics

Although the technicalities of how scanners work are pretty complex, the fundamentals are reasonably simple. The scanning 'head' consists of a row of tiny photosensitive cells. As the head makes tiny steps across the scanning area, light is shone on to the image, and the amount reflected back is registered by the cells. The internal workings of the scanner then convert this information into an electronic representation of the image, and that's passed down the SCSI cable to your Mac, where whatever receiving software is being used (normally a *Photoshop* plug-in) turns it into a digital image on the screen.

The 'resolution' that a scanner works at is the number of individual 'dots' that an image is turned into by the device. The higher the resolution, the more accurate to the original the scanned version is (although see the 'resolution' boxout for practical limits to this). Resolution is normally measured in 'dots per inch' (dpi), and it's easy to see that a scanner's horizontal resolution is equal to the number of photosensitive cells across each inch of the scanning head. In most desktop devices, there are 300 such cells, so the horizontal resolution is 300dpi. Vertical resolution is determined by the number of steps that the scanning head makes per inch. This, again, is normally 300 in desktop devices, although some now have a vertical resolution of 600dpi, as they take twice as many steps.

The colour's the thing

These days, most scanners tend to be colour devices; improvements in technology have meant that it's almost as cheap to manufacture a colour scanner as it is to make a black-and-white one.

Greyscale scanners make one 'pass' of the image that they're scanning – that is, the head steps across the image just once. However, things get more complicated when colour is being scanned; the human eye 'sees' colour in terms of red, green and blue, and that's also what the scanner must do. There are two ways to do this: either

MICROTEK SCANMAKER II

There are two ScanMaker IIs in the range: the II, which comes with *Photoshop LE*, and the IIXE, which has a full version of the program. Both are full 24-bit colour devices, and work at a resolution of 300dpi by 600dpi, interpolated in the scanner to 600dpi by 600dpi, and by the driver software to 1200dpi by 1200dpi. They're good, relatively fast machines, and worked well in our tests. It's well designed, right up to the cover which lifts up and off for scanning thick documents.

Price: ScanMaker II £1,169;
ScanMaker IIXE £1,522.

From: Computers Unlimited
081 200 8282



RGB v CMYK

We've said that colour scanners and monitors work in RGB (red, green, blue) mode, so a scanned image can be displayed on your Mac's screen with no trouble. It's when you come to outputting the image on to paper that things get more complicated, because print uses a different colour model, known as CMYK (cyan, magenta, yellow and black, the K part of the name). Whenever you see any printed colour in a newspaper, book or wherever, it will have been made up of a combination of these four colours. (Look at a colour picture through a powerful magnifying glass and you'll

see the individual coloured dots, grouped together to make up the total image.) So to prepare a scan for output, you need to convert the RGB image to CMYK. Unfortunately, this isn't a particularly easy process, and powerful software such as *Photoshop* is required to do the job properly.

Be aware, too, that the colours you see on your screen won't necessarily be reproduced perfectly when the scan is printed. Some colours which are easy to create using the RGB colour model are virtually impossible to print with CMYK inks – and vice versa.

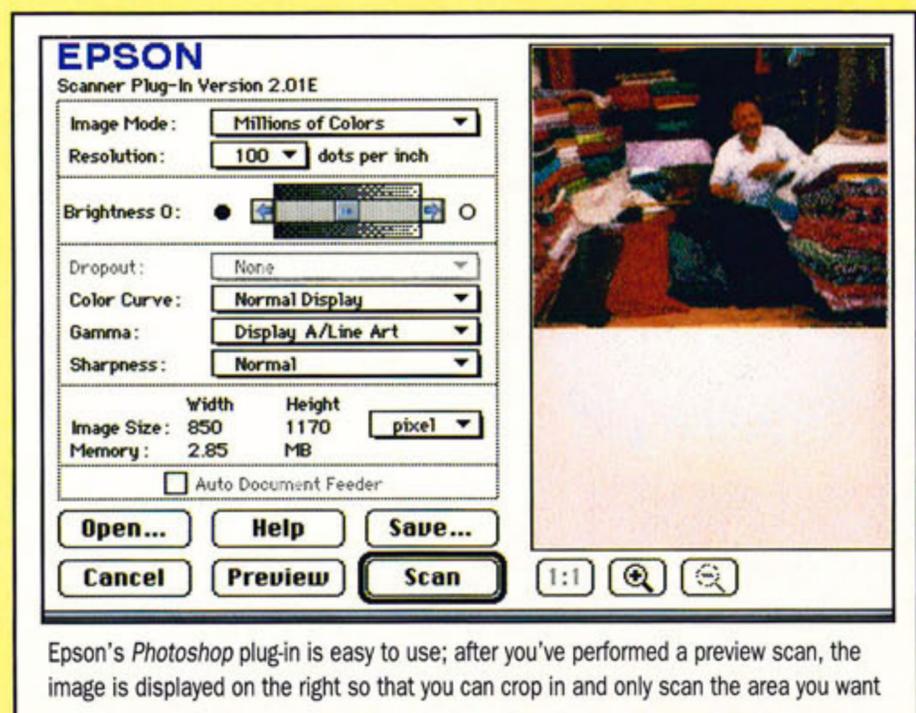
Software

Gone are the days when scanners came with their own, often hastily put-together scanning applications. These days, with a few exceptions, scanners tend to offer *Photoshop* plug-ins to acquire their images – and, as an added bonus, you get a version of *Photoshop* included free with the scanner. Plug-ins are simply extra modules that enhance the functionality of the program – in this case, by allowing it to control the scanner so that the image is directly placed in *Photoshop*, rather than coming via some other program – all in all, it's a far more sensible option.

Many of the lower-cost scanners bundle *Photoshop LE*, which is a cut-down version of the main package, lacking some of its more sophisticated features. This isn't a problem for most users – unless you have a colour scanner and want to create CMYK separations of images, to be placed in page make-up packages or whatever.

The LE version of *Photoshop* can't convert images from RGB to CMYK, so you'll have to upgrade to the full version of *Photoshop* to do this. Alternatively, many scanner manufacturers have bundles which include the full version of the

program for just £100 or £200 more than the LE version – so it's worth checking that out before you buy your scanner, and considering whether it's sensible to go for the slightly higher-cost option in the first place.



Epson's *Photoshop* plug-in is easy to use; after you've performed a preview scan, the image is displayed on the right so that you can crop in and only scan the area you want

APPLE ONESCANNER



Apple's OneScanner is now a little old in the tooth, but that means that you may be able to find one at a bargain price. It's an 8-bit greyscale scanner, which comes with *Ofoto* scanning software rather than *Photoshop*. It runs fairly slowly, but the results are good, and *Ofoto* is incredibly easy to use – it does all the work for you, automatically calibrating your scanner so that it produces the best possible results for whatever output device you're using.

Price: Apple doesn't give recommended retail prices, but you should be able to find one for around £700 from Apple dealers.

Bit depth

Contrary to popular belief, resolution isn't the be-all and end-all to the getting good results from a scanner (greyscale or colour). Just as important, if not more so, is the device's bit depth.

Bit depth is a measure of how many levels of a colour are recognised. It's the same measurement as is used to describe how many colours a monitor can display, and is expressed as a power of two (yes, more maths...). A one-bit monitor can only display two colours – black or white – because two to the power one is two. A four-bit monitor displays 16 colours or greyscales, because two to the power four is 16, an eight-bit monitor shows 256 colours or greyscales, and so on. It's the

same with scanners: a four-bit greyscale scanner can recognise 16 different levels of grey, an eight-bit scanner can deal with 256 different levels.

Now, an eight-bit greyscale scanner is as good as you'll need for greyscale images. That's because only 256 different levels of grey are practically distinguishable by the human eye. For this reason, you'll never see, say, a 24-bit greyscale scanner. Colour, on the other hand, is a rather different matter. To represent accurately what the eye sees, you need rather more than 256 levels of colour – several million, in fact. It turns out that for practical purposes, you need to scan 24-bit colour (16.7 million different colours) – so all

decent colour scanners are 24-bit models (or, at the expensive end of technology, even more). Fortunately, this isn't as horrendously expensive to manufacture as it sounds. You see, colour is made up of red, green and blue light – and if you can recognise 256 different shades of each, then the resulting composite image can have $256 \times 256 \times 256 =$ yes, 16.7 million different shades. A colour scanner works by shining different coloured lights on to the image so that only one of red, green or blue is recognised at any one time – and that means the same type of head that's used for a greyscale scanner, which can recognise 256 different shades, can also be used in a colour machine.

the scanning head makes three passes of the image, shining a different-coloured light each time so that only one of the red, green or blue components of the picture is detected, or the head makes just one pass, and the three colours are rapidly strobed as it is doing so. Whichever way is used, after scanning, the red, green and blue sections of the image are electronically merged together by the scanner and sent down the SCSI cable to your Mac.

Proponents of these two approaches are each fervent that their method is the best. Until relatively recently, the one-pass camp claimed that making three passes of an image was more likely to result in registration problems. What this means is that tiny inaccuracies in the mechanics of the scanner could mean that when the red, green and blue images were electronically 'overlaid' to produce the final, full-colour image, they might not match exactly, producing a less-than-perfect image. However, scanner mechanics have now evolved far enough that this really isn't a problem any more – and because it's cheaper to make a three-pass scanner, this is the method that is most commonly used in desktop devices. On the other hand, one-pass units do tend to be slightly faster, since the head only travels across the image once.

Interpolation

Although most scanners work at 300dpi, you may see in the literature that a scanner 'interpolates' the data to give 600dpi resolution. This can often give good results – but you should realise that interpolated 600dpi isn't quite as good quality as true 600dpi scanning. Interpolation is the process of examining two dots next to each other, finding the 'average' of the two and creating a new dot between them which is given that average value. In practice, this is a reasonable thing to do: it's a fair bet that, if you were to scan at true 600dpi, then the interpolated dot from a 300dpi scanner would, indeed, have something very close to this calculated value.

You often have to look quite hard before you see that a scanner is in fact only a 300dpi device using interpolation to get 600dpi resolution – manufacturers are quite coy about the whole thing. Some tell you that they use 'hardware interpolation'; this simply means that the scanner does it before the data is passed to the computer, rather than the scanning software doing the job. This means that it's faster, since the scanner has dedicated electronics for

APPLE COLOUR ONESCANNER



The Colour OneScanner is, quite simply, a colour version of the OneScanner. It, too, comes with *Ofoto* for easy scanning, but works in 24-bit colour. Although the image quality is generally good, its big problem is speed – it's s-l-o-o-o-w. Scans took far longer than with any of the other machines on test, for no apparent reason, and the extra time could well be a factor to consider when you're deciding whether or not the Colour OneScanner is the machine for you.

Price: Again, Apple doesn't set a price, but street price from Apple dealers is around £1,100 or less.

this purpose, but otherwise it's just the same as if it were done at the Mac end.

All the Mac I'll ever need

If you're going to buy a scanner, you may also need to consider upgrading your Mac. For starters, you'll need plenty of RAM – 8Mb should really be considered an absolute minimum for anything like serious work, and much software struggles with less. Also, if you're going to be scanning 24-bit colour images it makes sense to invest in a monitor capable of displaying 24-bit colour. Finally, the faster your Mac is, the less time you'll spend sitting waiting for *Photoshop* (or whatever) to manipulate your image.

All of which, of course, adds rather significantly to the cost of buying a scanner in the first place...

The right tool for the job

If you are going to be producing four-colour separations for printing, make sure that the scanner you buy includes the full version of *Photoshop*, if you don't already own it, so that you can convert the RGB scans to CMYK – the *LE* version won't do the job. On the other hand, if you already have *Photoshop* then there's very little point in buying a bundle with the full version – see if you can persuade your dealer to do you a price for just the scanner and *Photoshop* plug-in, instead.

CAERE OMNISCAN

Caere's OmniScan is a hand-held 8-bit greyscale scanner, which comes with its own scanning software: Caere's *Image Assistant*. Also bundled is OmniPage Direct, an OCR (Optical Character Recognition) package. Although hand scanners have some limitations – notably the fact that they can only scan 'strips' of an image at a time – the OmniScan performed very well. *Image Assistant*, though, felt rather buggy – it wouldn't work in 32-bit mode, for instance.

Price: £539

From: Principal Distribution, 0706 831831.



Optical character recognition

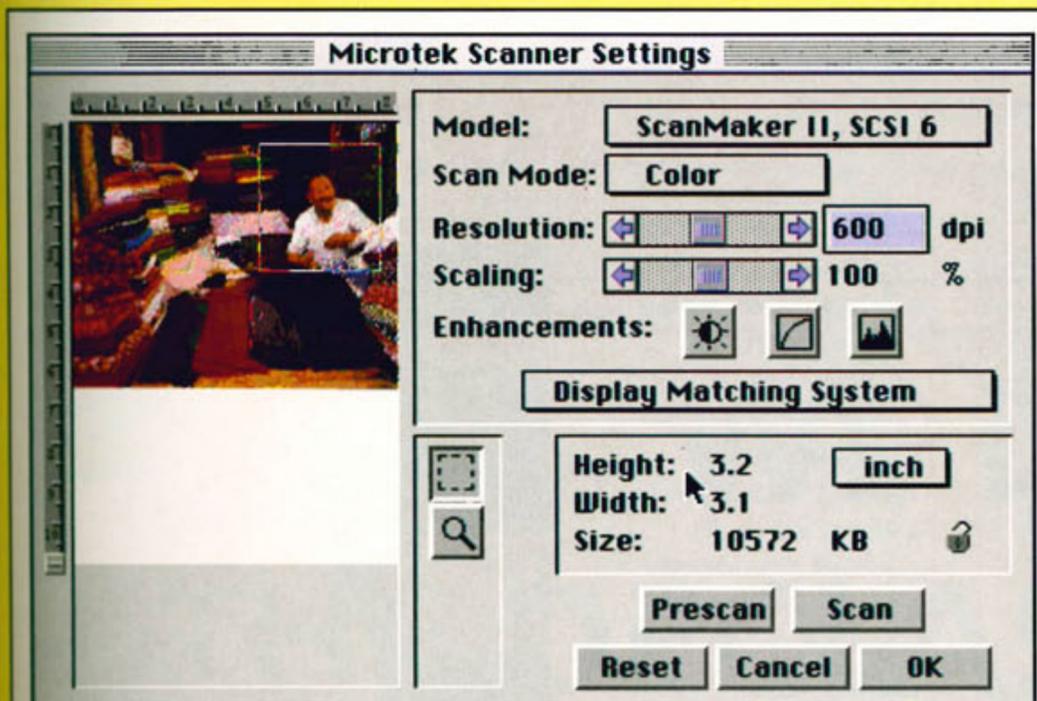
Many people buy scanners simply for their OCR (Optical Character Recognition) capabilities. OCR is the process of taking a page of text and scanning in that text so that it can be imported into a word processor or whatever. Just scanning the page won't do – all you're left with is a TIFF file, which you can't do anything further with, since it's just a graphical image. An OCR program, on the other hand, will take that TIFF and actually recognise the text, so that you can alter it, import it into another program and so on. Sophisticated OCR packages will even do things like recognise pages with multiple columns of text, graphics and so on, and attempt to work out how the text should flow when it's been recognised.

OCR works better with some documents than others. Most software will give you almost 100% recognition of a clean, typewritten sheet (that is, it will make virtually no errors as it's reading in the text), while a fuzzy dot-matrix printout will prove trickier for the

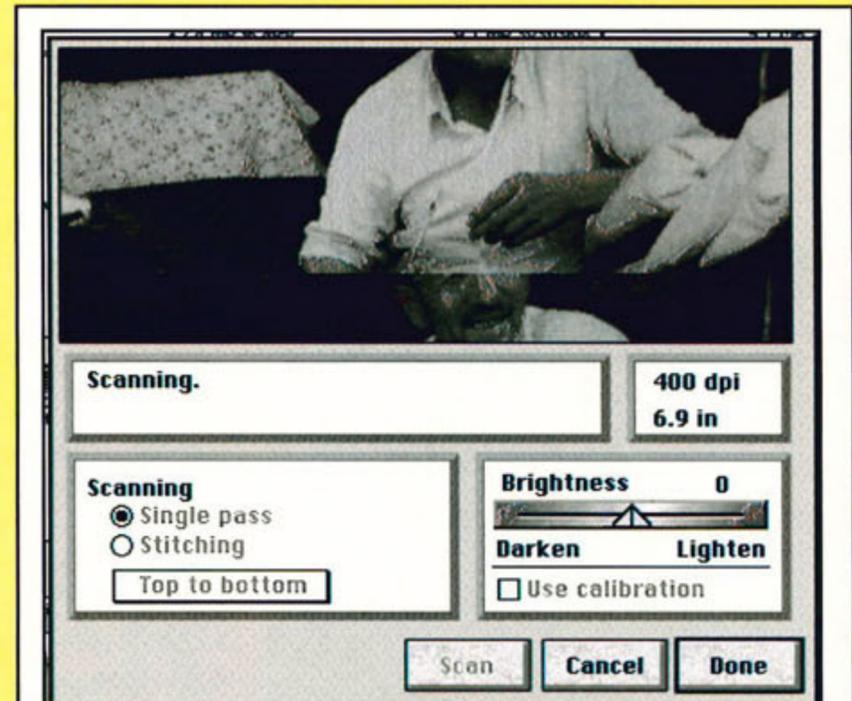
program. In some cases, recognition will be so bad that it would be quicker to re-type the text than to correct the OCR'd version. But much of the time, it's far faster to correct an OCR program's occasional mistakes than it is to copy-type several hundred words.

Some scanners come with bundled OCR software; Caere's OmniScan hand-held device, for example, comes with *OmniPage Direct*, a powerful program which recognises scanned text and places it straight into your document as it's scanned, without going through an intermediate application. If you buy a scanner without OCR software and later decide that it's a feature you need, check to make sure that the software supports your scanner directly – otherwise you'll need to save each page of text as a TIFF and then import it into the OCR application later.

Don't expect miracles from Optical Character Recognition – but if you have decent originals, it can save you hours of re-typing and give great results.



The ScanMaker II's *Photoshop* plug-in identifies the SCSI ID of the scanner for you – although the number of people who have multiple scanners connected to their Macs is probably fairly small!



Caere's OmniScan comes with *Image Assistant*, a *Photoshop* work-alike. As you drag the scanner across an image, a scrolling window shows you where you are.

Scanners in action: a practical test of quality

Reproduced below are test images from the five scanners that MacFormat has looked at, along with the same image produced by a high-end scanner at our repro house. Do note that they

are not the best that the scanners can do; calibrating a scanner correctly for printed output is a process that takes a fair bit of trial and error, and we can't be sure exactly how

the pictures will look until we see the finished magazines ourselves. Still, they should give you a basic idea of the sort of thing that desktop scanners are capable of...

EPSON GT-6500



The GT-6500 was one of the fastest scanners we looked at. The image seems rather more vibrant than those produced by the other scanners – perhaps too vibrant, although this is due to lack of calibration, rather than any inherent problem with the scanner itself.

APPLE COLOUR ONESCANNER

Apple's colour scanner was very slow in operation, and the scanning software, *Ofoto*, refused to believe that the original was a colour image – so we had to override the default settings. There was no calibration file for imagesetter output, either, so we used a generic option.



MICROTEK SCANMAKER II



On screen, Microtek's scanner seems to produce the best-looking image – although things may be different when the magazine is finally printed. (All this means, of course, is that the Microtek's default calibration was more suited to the screen than the others'.)

APPLE ONESCANNER

The OneScanner, although rather long in the tooth, still produces excellent grey-scale images – and a low street price means that it's well worth considering if you don't need to produce colour work. Shop quickly, though – it's likely to disappear before much longer.



OMNISCAN



The OmniScan is hand-held, which means that it can only scan a width of six inches or so at a time. However, the software allows you to 'stitch' sections together – if you have a steady hand and scan each strip parallel to the others. It gives decent quality, too.

LINOTYPE-HELL DC360

For comparison, this image was scanned on our repro house's Linotype-Hell DC360, a monster of a machine that costs a cool £160,000 and requires year of training to operate. Theoretically, it should be far better quality than any of the other scans...





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Digital and DirekTek introduce Ethernet* with the DEClaser 1252E. Heading up the range of high quality, value for money laser printers, the 1252E includes all the features of the DEClaser and DEClaser *plus* printers but also incorporates Ethernet for faster and more sophisticated networking capability.

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* 10 Base 2 & 10 Base T supporting: ◆ EtherTalk ◆ Novell ◆ LAN Manager

WE DID. THE DECLASER 1252E.

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Andy Storer modifies a few Monas with the help of the amazing *Morph 2*...



Mixing and morphing

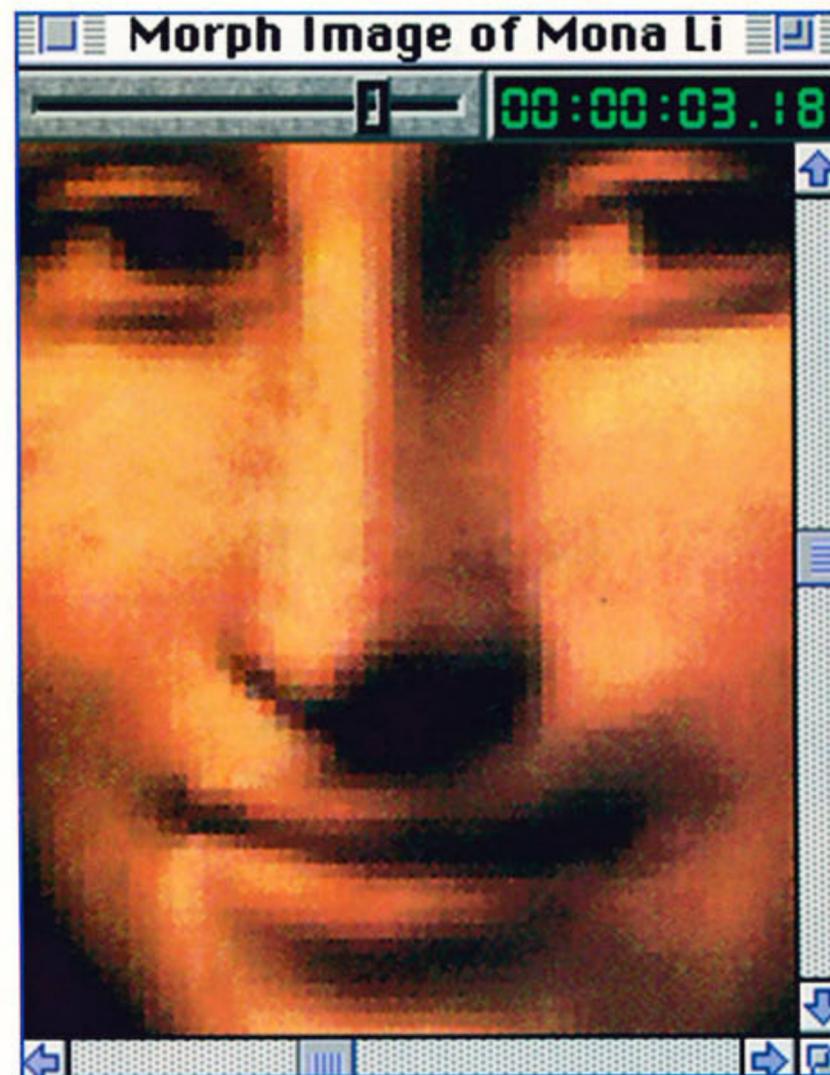


Exactly what is a morph? Well, to be precise, it's a two-dimensional spatially-warped crossfade - but why not just think of it as a mix of two images where elements of each have been moved to an intermediate position between each other.

But we could be faffing around all day trying to define the art of morphing with words so just take a look at the pictures here and over the page and let's save us all a thousand words.

Because morphs speak for themselves and if you've ever seen *Terminator 2* you'll know what they're all about. When we reviewed Gryphon Software's *Morph 1.1* back in issue 1 we were pretty impressed - enough to give it 90% at any rate. And being so easy to use, we produced our own creepy creations for our letters pages.

Despite *Morph* being possibly the most fun program ever released for the Mac, the deciding factor on whether you purchase it or not is



likely to depend on whether you have the facilities to import good quality images into it. If it's snaps of yourself and friends you want to morph then a Photo CD compatible CD-ROM drive would do the trick; you could load in any pictures you've taken on 35mm film and have had transferred to CD. But for most people, *Morph* will come into its own with images derived from a decent colour scanner.

New features

Gryphon has managed to rectify two major problems found in *Morph 1.1* which meant you had to spend even more money to use it effectively. It only supported screen images - that's pictures of 72 dots per inch each. Fine, if all you're doing is taking screen grabs with System 7's built-in screen recorder. But if you were combining source images from different formats; say a TIFF and a EPSF, you not only had to convert them both to 72 dpi PICTs, but also modify their file sizes so they were

exactly the same. In order to do this you really needed to own *PhotoShop*, or *Colour MacCheese* if you could find it. Then you could begin the time consuming business of mapping the two images with key-points ready for morphing.

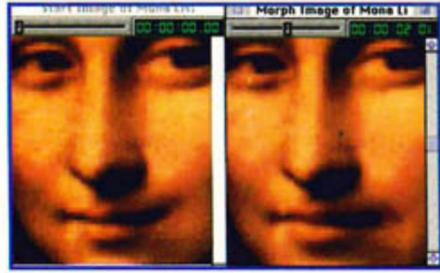
With *Morph 2* these limitations have thankfully been remedied. Okay, so you still need a scanner, video grabber or PhotoCD drive, but now you can mix any two images irrespective of their resolution or file size. And while version 1.1 enabled you to save out your morphs as QuickTime movies there was no way you could mix and morph two movies to create a third. With *Morph 2* you can work with movies, drawings, text and scanned images in colour or black and white.

So with easy importing now taken care of, what about the main enhancements? Well, *Morph 2* features two new processes - warping and dynamic morphing - and with a little patience the results can be rather impressive...





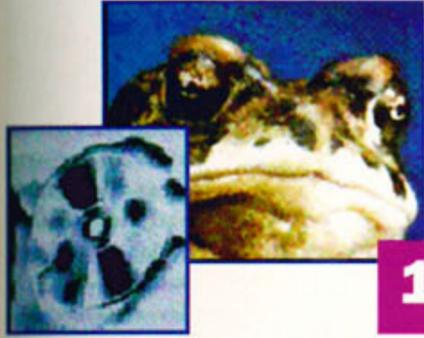
Warping



This is the warp effect we're after. Subtle huh? Make small changes like this enough times and you can alter anything and anyone

Select the images or movies to be used as sources. These can be:

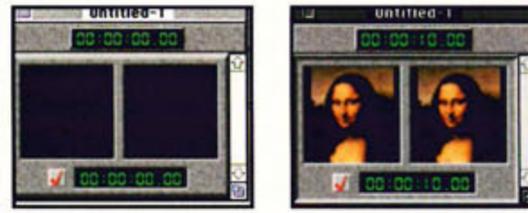
- screen grabs
- QuickTime clips
- scanned images or slides
- any illustration created on your Mac
- frames from 2D and 3D animations
- captured video frames



1 Here we're going to be using 5 principle images - Mona, who's a PICT and 4 QuickTime movies from Apple's excellent QuickClips CD-ROM. We could have edited them if necessary using Adobe's *Photoshop* for the still and Adobe's *Premiere* for the clips



2 Let's cheer old Mona up a little shall we? We load *Morph* to be greeted with an empty Storyboard window. If we click on the either of the black squares, the start and end image windows, we can then load a source image into each one. A thumbnail of each will appear. Notice how the duration counter has changed to read 10 seconds. Each image can then be opened from the Windows menu.



Because we're going to put a smile on Mona's face rather than change her into, say, a frog, we're using the same picture for both the start and end images

In this case though we're not mapping corresponding points from one image to another as in a traditional morph - what we want to do is modify the points in the end image so they're slightly out of sync with the start image. This will give the effect of warping Mona's features. Since we want to make her smile even more famously we should pay particular attention to her mouth. The grabs below shows this more clearly



3 Next we open the start image and begin to set the key points. These are the points in the start image which will move to specific places in the end image. It's best to open both images and use the zoom tool to enlarge them before beginning to add them. You'll see the corresponding points appear in the other's window as you place them. Then it's just a question of dragging the corresponding point in the end image to the appropriate position. This is really the crucial operation - the more you add, and the better the correspondence, the smoother the resulting transition will be.

Once you've mapped all your keypoints you are ready to make a morph movie. First of all you make a test morph just to check everything lines up. If you're happy, you go to Export Movie in the File menu. Here you choose what frame rate to save the movie out at; the higher this rate the smoother it will be. To aid this, you can select keyframes to be inserted every few frames too. But since the frame generation process takes a while, start by using low frame rates. The resulting movie can then be replayed and adjusted before creating a final high frame rate version.

4



Subtle repositioning of corresponding key points leads to significant changes when a morph movie is eventually created....



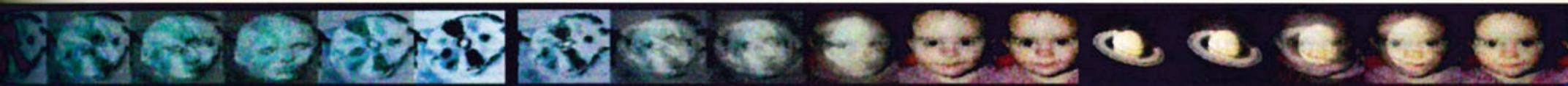
Here the individual morph frames are being generated - closing Mona's eyes requires quite a bit of skill though



What we had to do was progressively stretch the keypoints representing the top of Mona's eyelids further downwards...



5 And finally here's Mona showing us how absolutely chuffed she is to be gracing the pages of MacFormat after all these years and not stuck half way up some wall in Paris being gawped at by millions of geeks with cameras...





Dynamic morphing

Here we've taken two QuickTime clips - one of a frog and one of the businessman. What we want to do is morph them so we can produce a third QuickTime movie which shows one changing into the other...



First of all we select the clips and place them in the storyboard window



We add the keypoints to frog's features and link them together in the normal way



But when we check the end image we find they need repositioning to map the guy's face



What's more, we have to make sure it's a good map throughout the entire movie so we need to check it every few frames

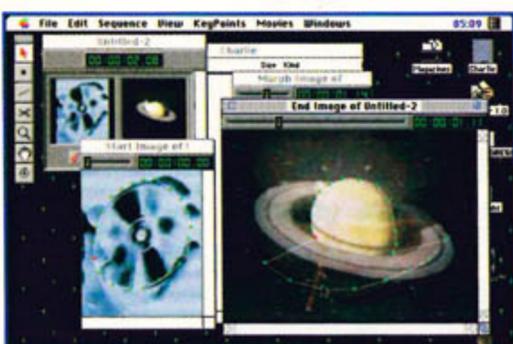


As you can see from these two frames from the resulting Quicktime clip, our mapping wasn't particularly accurate. What's needed are more keypoints - more accurately positioned throughout - and more key frames



Making dissolves

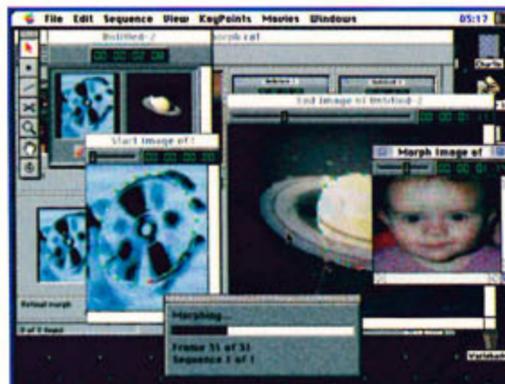
Or how to link loads of small clips into longer ones...



What we're doing here is mixing two QuickTime clips together to create a dissolve effect. We're mapping a fly-by of Saturn with the hi-tech discus strip above. But we don't want a dynamic morph, just a dissolve, so we don't provide too many keypoints for the mix



Once we've exported it as a movie, we make another using a still image of little Charlie and the fly-by of Saturn - mapping her face with Saturn's. What we're after is a final movie which begins with the strip on the left, dissolves through the strip above and ends as the strip on the right



While we can't show you how this final movie shifts in terms of dissolves, what we can do is say that we needed to pay a little more attention to colour mapping. Morph lets you select specific colours you want to include or exclude from any effects.

Moving morphs

Finally we've taken the clip of this guy twice - as a start and end image - and displaced the keypoint mapping to distort him



This is perhaps the easiest effect to use because once you've selected their keypoints in the original image all you need to do is drag them to a new end point. Morph quickly works out the distortion automatically as it processes each frame in the sequence.

What you need to morph

- A Colour Classic, SE/30, LC, Mac II, Centris Performa or Quadra series Mac
- System 7 or higher
- A colour monitor
- QuickTime version 1.6
- At least 10Mbytes of hard disk space
- At least 5 Mbytes of RAM

Morph 2	
Ease of use	94%
Documentation	94%
Features	97%
Value for money	96%
Versatility	96%
Overall rating	95%



So should you buy it?

Morph 2 is an essential purchase for anyone with a scanner, a video grabber or a collection of QuickTime clips. It's simply the most fun Mac program available.

Where to get it

Morph 2 is available from Softline on 081 401 1234 and costs £210. Upgrades from 1.1 are £72





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All ready to roll

Let's digress straight away. Remember me singing the praises of Softline's purple circular promo mousemat last issue? How it features the fastest surface known to mankind and easily kicks hardware accelerators permanently into touch? Well, Softline were so touched they sent us their entire remaining stocks to give away! If you turn to page 106 you'll find out how you can get your hands on one – just remember though that the phone numbers the mats are publicising are out of date. But who cares? – what we're talking about is a perfect surface. And it's free. So remember Softline's new number is 081 401 1234 before you send in your SAEs for the monsters.

This last month hasn't been a particularly good one for me since I've spent most of it in pain. Sorry to start on a downer but the Doc reckons I've got repetitive strain syndrome from too much typing. It's not so much typing though as mousing. If you use a Mac all day you're forever using the mouse and if you consider the way you hold it, with your hand semi-clenched, then those muscles in your forearm get a little tight. Mine are like rocks and they're killing me.

So I've started to use my right hand instead for mousing – which slows me up, but at least I'm losing the permanent pain stretching from my shoulder to my fingertips. Anyhow, the Doc was next to useless – "Occupational hazard...pain killers...light exercise...come back if it persists" so I'm going to look into physio and acupuncture. I mean, this has got to be sorted right? Bread and butter and all that. And if any of you have encountered similar symptoms and come up with effective remedies, do write and let me know – we'll run it as a feature in the magazine. I'm sure there's good advice to be passed on.

Funnily enough, when this was in full swing



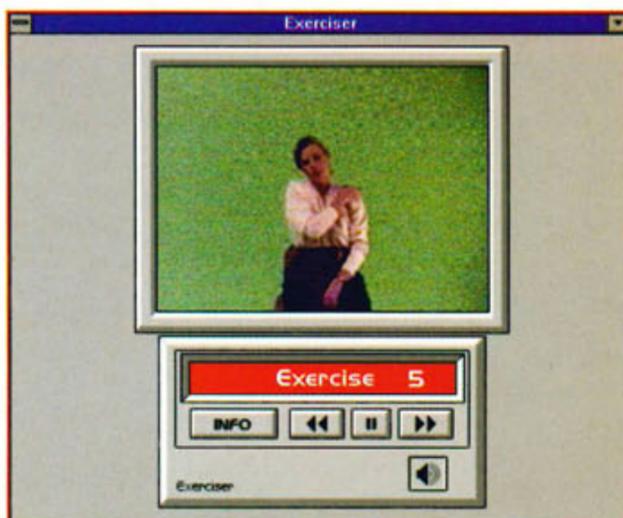
Clicking on any of *Exerciser's* ten work-outs launches you straight into a movie. You can set it to run one automatically

Editor, Andy Storer chooses the best from the rest of the new software and hardware releases arriving at **MacFormat** this month

what should come through the door but a package of software from Sweden called *Exerciser*. Billed as the the world's first Terminal Exercise Program, *Exerciser* has been developed to help you avoid the usual shoulder, neck and back disorders developed through static work. You can configure it to cut in on whatever you're doing after a preset time and remind you to take time out. And at this point it plays *QuickTime* movies of women in green leotards showing you how to do ten different exercises without leaving your chair. And all this to the strains of Bach. Interesting concept to say the least.

Roll on speech commands

Like I said, there are ten different exercises that stretch your body from your torso and up – breathe in now – shoulder stretches, shoulder lifts, shoulder rolls, head rolls, neck stretches, back and shoulder stretches, torso rotations, chest stretches, side stretches and spine stretches – okay breathe out – exhausting just reading about it. Developed using *Macromind Director*, the program is simplicity itself to use – you just copy the movements of the women on screen and click a couple of buttons to move to the next exercise.



Here we are in Exercise 5 about to undergo a spot of torso rotation. Hit the speaker button and Bach will accompany you

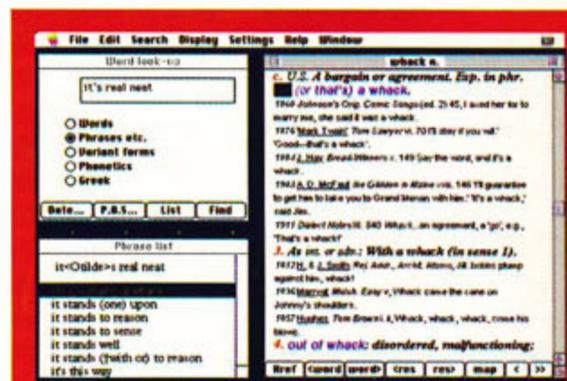
Most importantly though, is that you can set it to cut in at preset times. Since a few minutes every 2 to 3 hours is apparently enough to stay loose it just goes to show what an increasingly robotised young chappie I'm becoming.

Perhaps it's the Mac I'm using. My Mac [adopts Whisky and Water sprawling drawl] 'just doesn't understand me'. Not like the lovely Quadra 840AV I bumped into at the IPEX show last month. As you've no doubt read in our news pages, the AV machines feature Digital Signal Processors which enable you to pull video or audio straight into the Mac without the need for NuBus or PDS cards. This new Quadra really is the bees knees; apart from being the fastest Mac ever, and having composite video and 16-bit audio capabilities built-in, it's also got the facility for speech recognition. Okay, so you need a North American accent for the time being but [adopts West Coast drawl] "localised versions are gonna happen real soon now" Which is just as well because I'll probably end up limbless otherwise. Whether a £4,000 Mac is any substitute for acupuncture I've no idea but I guess it'll be sometime off before the AV converts speech to text and commands in any usable way. And as far as laying out pages is concerned – even further off. But I'd like one all the same.

I'd also like all 20 volumes of the Oxford English Dictionary Second Edition on CD-ROM for free instead

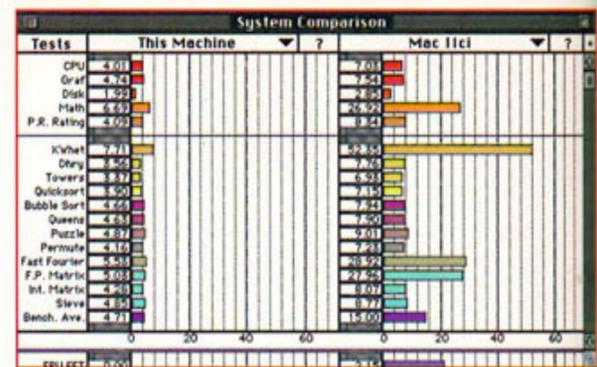
of the cool £500 it's going for. It's, as they say, real neat for anyone requiring heavy-duty word crunching. It's got 500,000 words, 2.4 million quotations, 137,000 pronunciations, 249,000 etymologies and 577,000 cross-references all waiting in a few clearly-organised windows with a wealth of legible detail. In short, it's definitive. But it's not some dressed-up spell-checker and it's not too stable either; I couldn't get it to multi-task under System 7.1 without bombing. It's just that it's the bible of language and if you're a power-writer it'd be indispensable. I'm not, and never was, even before mousey crippled me, so for me its main use is the fun and interest derived from browsing through quotations and etymologies. If you're after a thesaurus and spell-checker then buy *Thunder 7* or something like it – buying OED2 for these purposes would be like buying a pub when all you want is a pint.

Talking about going over the top, we have a Quadra 800 in the office for a week while Kim waits for her new 700 and I've been running a few tests on the office Macs with *Speedometer*. This is a great shareware package which performs a series of benchmarking tests to arrive at the relative power of any Mac it's running on. The main tests produce figures which point to the CPU and graphics handling speeds relative to a base level which is deemed to be the Mac Classic. Now if you seriously want to persuade your boss that your old Mac II really is an old bat these days, *Speedometer's* program for you. So just to prove to my boss that using this 16MHz 68030 Iivi is like playing water polo in a pool of treacle



So there we have it! – 'it's real neat' originally derives from 'really whack'...or something.

Mac	CPU speed	Graphics speed	Overall performance rating	% faster than a IIvi	reference price	power per £
IIvi	3.99	4.77	4.13		£1,150	1.00
IIsi	5.44	5.71	6.21	150.36%	n/a	
LCIII	6.86	7.18	7.81	189.10%	£995	2.19
IIci	7.03	7.54	8.34	201.94%	n/a	
IIfx	7.69	7.33	9.07	219.61%	n/a	
Centris 610	12.63	14.64	12.74	308.47%	£1,550	2.29
Quadra 700	15.72	19.4	23.17	561.02%	n/a	
Quadra 800	21.36	28.84	29.43	712.59%	£3,995	2.05
Mac Classic = 1.00						



While the figures in the table on the left only show data for each machine's CPU and graphics performance, Speedometer's benchmarking includes dozens of different tests designed to indicate comparative machine power

here's a little table above I knocked up the other day. And there's some interesting figures. Like the Quadra 800 being nearly 30 times more powerful than a Classic. As you can also see, the Centris 610 does look like being the best value for money, and is, coincidentally, what the boss happens to have at home. Shrewd chap, the boss.

But getting back to that new Quadra 840AV for a moment, that'd probably be the best value since it's got built-in sound and video capabilities that'd knock you back, oh a cool £1,500 or so at least if you bought them as cards, and in any case it beats the socks off a Quadra 800 speed-wise. So one of those will do nicely thanks.

Back to reality

Anyway, enough of blue skies and back to earth. I came across a \$15 shareware word processor the other day - *FlashWrite* - which I've been using most of the time. It sits in the menu, loads up more or less instantly and is fast. Besides which it only takes up 20K of RAM. It's not as versatile as my all-time favourite shareware word processor, *Vantage*, which later became *McSink*, but it's handy to have open all the time in the background for taking notes. I just put its alias in my Startup folder and use it alongside the organiser we included on last issue's cover disk, *Do-It-All*. For me, the trick is to be able to tap in notes whenever I want and with no messing about typing into different boxes and clicking buttons etc etc. I just want to get in, take notes and get out, otherwise I may as well just use stacks of Post-It notes. So I find working between *FlashWrite* and *Do-It-All* a quick and easy means of staying ahead.

Or trying to. Because the big thing about the Mac is that there's always been loads of fun software produced for it - nutty stuff like

MacEyes and *Cosmic Osmo*, *After Dark* and well, millions of bits and bobs all designed to make the Mac such a relaxing machine to work with. So when a program like *Now Fun!* arrives in the post, you know trouble lies ahead. *Now Fun!* is a collection of control panels you use to modify your cursor, colours, sounds, backgrounds and screensaver settings. In short, it's the most comprehensive customisation package I've ever come across in the one box and is extremely tempting. It's chock-a-block full of alternatives and additions: 111 sounds, 65 cursors, 31 screensavers and 46 desktop backdrops; far more than I can write about here. Just to say then that highlights for me were a suite of preset desktop

The big thing about the Mac is that there's always been loads of fun software produced for it...

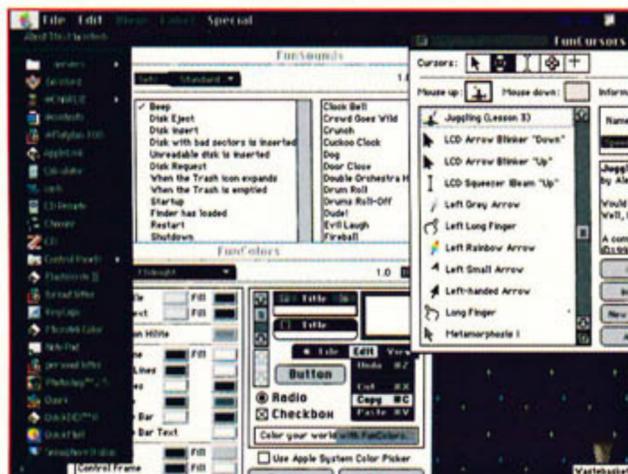
colour combinations to alter the appearance of your windows, menu bars and backgrounds, a rather neat fractal screensaver, and more loony sounds than I care to remember. In total what you have is the ideal solution to the boredom of having just a handful of customising programs - you buy one big one with hundreds! I'll try and save two pages for it in a forthcoming issue to go into more detail.

For backgrounds of a more serious nature you could take a look at Letraset's *Phototone Backgrounds*. This is a CD collection of 564 images in PICT format, for use in any colour imaging program, stored at A4 size at a resolution

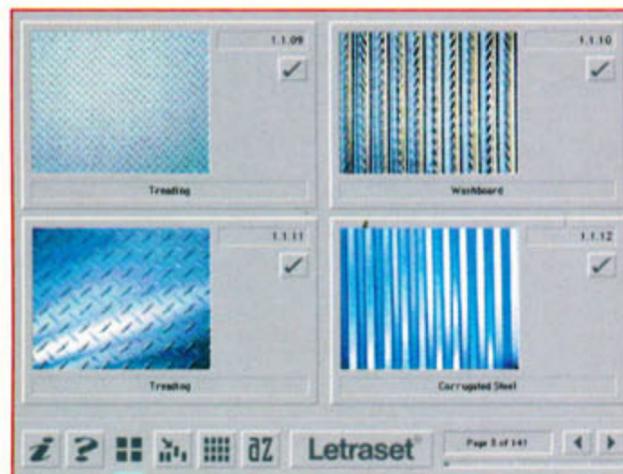
of 72 dpi - the Mac's screen resolution. The idea is that you pay £50 for the backgrounds to use in visualising page-layout or in multimedia presentations. But if you want print quality from any of the images you'll need to buy the high res original from Letraset dealerships nationwide. To make this process a piece of cake, each CD has its own built-in ordering system which is updated as it's browsed and can automatically generate an order form. In addition the CD carries working model versions - with Save and Print options disabled - of *FontStudio* and *LetraStudio* as well as accompanying *QuickTime* movies. Oh and then there's the small addition of 210 Letraset Fontek fonts for experimenting with. These are screen fonts only so you'll need to buy the PostScript version if you want to use them in print. So it's a CD well worth tracking down - particularly if you're into multimedia since Letraset allows its free use in video or computer applications. Otherwise I guess as long as you don't sell them on, you could also use them as desktop backgrounds - they're absolutely superb quality and 564 different images a day would last you nearly 18 months!

Sell yourself on disk

Of course, mucking about with custom sounds and backgrounds on your Mac at work may make the next inclusion in this month's round-up of new products somewhat relevant. *Interactive CV* is a single disk application put together by Paul Carry who, obviously enough, uses his own curriculum vitae as the demo file. And it's really polished - I mean I'd employ the guy for a start. I'm not clear whether it's intended as just a demo of what Paul's capable of producing or whether he's offering to turn your own career history and ambitions into a smart multimedia entertainment for a flat fee. Either way it's worth getting hold of



Just a few selections from the range of customising control panels found in *Now Fun!* - this colour scheme is Midnight



Phototone comprises the best collection of abstract images for use as backgrounds I've ever seen - all 564 of 'em



Letraset's own browser allows you to view and select in more detail before copying the A4-sized images into other programs



Paul Carry's *Interactive CV* looks good, sounds good and might well land you that job. As long as there's a Mac there

since it shows off excellent design with easy to use programming in *Macromind Director*.

But when it comes to programming, the coders at Macromedia really take the biscuit. Their *Macromodel 1.5* is a brilliant 3D modelling package which enables you to quickly convert 2D reference objects into fully-rendered three dimensional models. With such power at your finger tips you need a fair amount of grunt on board to run it and a thick wallet to match. But we're talking professional modelling here that can, say, take a scan of a photo of a car, trace its outline and generate a 3D glossy metallic version with your own custom fins on the boot. CAD-wise it's pretty accurate – with precision placement available down to six decimal places – and you can import/export a whole bunch of file formats. But it's also really handy for text. We had great fun producing all manner of headlines on Jules's Quadra which would have taken something like *Typestry* an eternity. Since all your system's fonts



Macromodel 1.5 brings a whole new range of high-resolution surfaces and textures to precision design. It may cost more than a *Centris 610* but that's the price you pay for quality

are available you can easily produce solid 3D cinematic style titling that's twisting and turning all over the shop in every colour and surface texture you can imagine. I could have easily spent days playing around with it but then, unfortunately, I have other things to do. And one program I use a lot which makes my work much easier is Kudo's *Image Browser*.

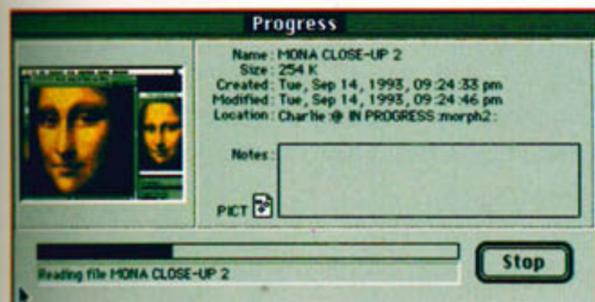
Problems with pics?

Version 2 of *Image Browser* arrived the other day and the original application, which we reviewed in full in issue 3 (back issues available on 0458 74011!) has been beefed up to recognise more file types. Basically, it works by scanning any folders you select for images, animations and

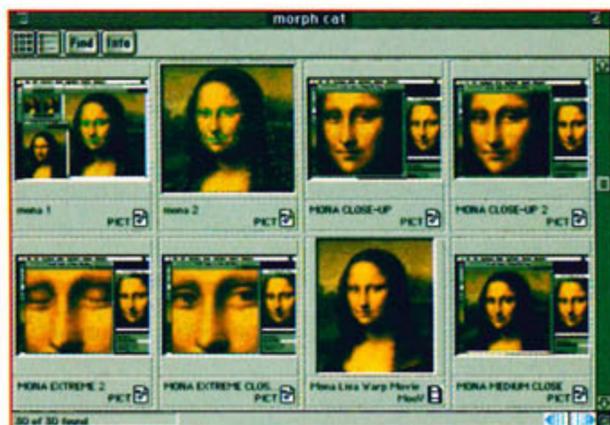
movies and displays them as thumbnails in a catalogue. Once you've created a catalogue you can add notes to each of the images – so, for instance, if you want to find a picture you know you have that's got a girl and palm tree in it, you can do a keyword search on those two elements and hey presto, *Image Browser* locates it for you. Anyone who works with images should get hold of it because it just cuts down on time so much. Even more ingenious is the facility to be able to open a catalogue at the same time as either *QuarkXpress* or *PageMaker* and drag the required picture straight into the desired picture box. Where it really comes in handy though is when you're after a picture or movie that's on a CD-ROM. Take the Letraset Photone CD I mentioned above – 564 images – now Letraset thoughtfully includes its own browser but if it were a shareware collection or a compendium of *QuickTime* movies like Apple's own *Quickclips*, you'd never know where to begin. So Kudo's latest baby wins my award for 'saving-me-enough-time-to-play-around-with-other-things-more-than-I-should-be-doing'. And could possibly be the most useful program I've come across so far this year.

Well that's about it for this ish, except I finally, literally, got my hands on one of Apple's adjustable keyboards which I'm using to finish this article. I'll give you my impressions on it next time but for now I'll just say it looks and feels a treat. All I need now is Apple's new ergonomic mouse to see how big a difference that'll make. Hopefully they should both help me return to the land of the living limb-wise. See you next month and have fun! **mf**

Kudo Image Browser



If you flick back a few pages to the *Morph 2* feature you'll see there's a fair few grabs on the three pages. Originally I'd taken 58 grabs to illustrate the piece with – a nightmare!



Luckily, keeping track of what pic is which is easy with Kudo. All you have to do is get it to scan a particular folder and it produces a catalogue of the images and movies it contains.



You can select any image or movie and examine it in more detail as a preview. You can also add descriptive keywords to images so you can find them even faster. In short, it's the biz

Unwrapped and unplugged this October:

Product	Distributor	Phone	Price	System requirements
Exerciser	Hypermedia Technology	0104646143081	£39	6.07+, Mac II+, 2Mb RAM
Quadra 840av	Apple	freephone Apple	£ 3,819	n/a
Oxford English Dictionary	Oxford University Press	0865 56767	£495	6.07+ any Mac, 2Mb RAM
Speedometer	shareware	n/a	\$30	Any Mac
FlashWrite	shareware	n/a	\$15	Any Mac
Now Fun!	Frontline	0256 463344	£49	7+, Mac PLus, 2Mb RAM
Phototone Backgrounds	Letraset	071 928 3411	£50	7+, Mac II+, 3Mb RAM
Interactive CV	Paul Carry	0703 319371	£n/a	7+, colour Macs, 2Mb RAM
Macromodel 1.5	Computers unlimited	081 200 8282	£1,408	6.07+, Mac II+, 8 Mb RAM
Kudo Image Browser 2	Principal	081 813 5656	£229	7+, any Mac, 4Mb RAM

Mac on the

NextBase has, perhaps unwittingly, come up with the first piece of Macintosh software that can help save your marriage. There are plenty of programs designed to bust apart relationships – *Monkey Island* is a good one for that – but *AutoRoute* can help take the stress out of one of the great argument-starters in life: navigating on long journeys. With *AutoRoute* you need never again fight over whether it's quicker via the M42 or just carrying straight on up the ring road.

AutoRoute touts itself as the "intelligent road atlas", and barring a slight reservation over the 'intelligent' part, that's what it is. In essence you tell *AutoRoute* where you are, where you want to go, and when you want to get there and it will print out a set of directions and a map.

Most of us know the way from where we live to most sizeable places, but it's the journeys between two unfamiliar towns where *AutoRoute* comes into its own. You might know how to get from where you live to Northampton, but what's the quickest way from there to Stoke? Quite.

So how accurate is it? The map data in *AutoRoute* is provided by the Ordnance Survey – it's a digitised version of the OS's Route Planning Map. That means that there is a fair chance that the quaint hamlet of Upper Slaughter isn't in the database (you can always choose the nearest village), but it does guarantee that the data that is there is spot on. A good start.

The algorithms in *AutoRoute* claim to be able to find the quickest and shortest routes, as well as routes matching your driving style preferences and a few alternatives for good measure. Picking

Throw away that tattered 1986 road atlas – *AutoRoute* puts Britain on the Mac. Stuart Anderton gains a little help getting from A to B...

a good local point of argument as to the best route (Bath to Trowbridge – no direct road and at least three viable alternatives), *AutoRoute* came up with just one possible route – and that wasn't the most commonly used one. I thought at first it might just be a problem with the road database – that the map wasn't detailed enough to show the smaller roads – but they were there. I had to tell *AutoRoute* it couldn't use the A4 before it would come up with the other two alternatives. So although it found an acceptable route, it didn't deliver on its promise of alternatives.

Out on the road

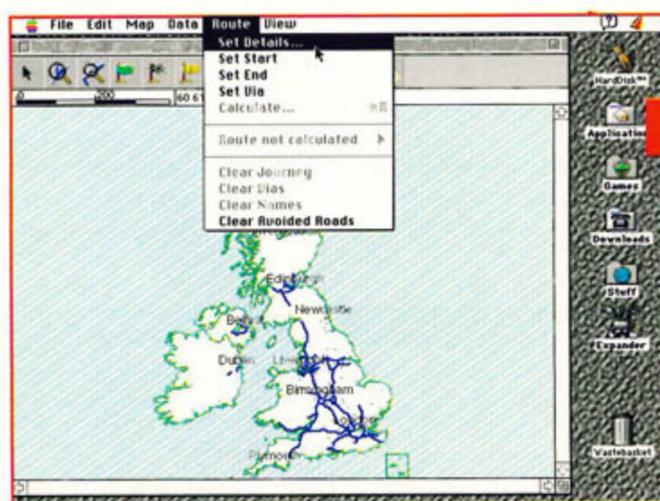
However the 12 miles from Bath to Trowbridge is not the kind of problem *AutoRoute* was designed for, so it was time to try a practical test. A bank holiday weekend barbecue in the Midlands provided an ideal opportunity to try out the program on a real drive. Getting from Bath to Banbury is not a simple journey. It involves cutting across country on minor A roads, and there are plenty of choices to be made. So I consulted *AutoRoute*. It recommended a route I

had never considered – driving towards London on the M4, then cutting north to Oxford and joining the M40 to Banbury. This route, the program reckoned, was 12 minutes quicker, despite being 34 miles longer than the cross country route. So I tried it – getting there by using the *AutoRoute* suggested journey, coming back the more direct route. And *AutoRoute* was right.

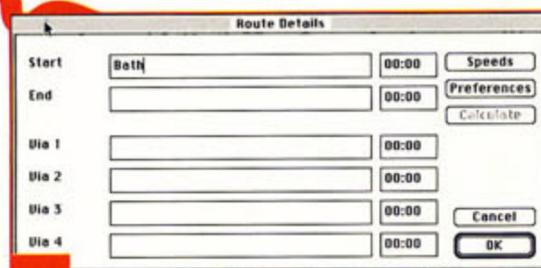
So the 'engine' of *AutoRoute* provides good recommendations for long distance journeys. But I do have to stop here and say a few harsh words about *AutoRoute's* user interface.

I first used *AutoRoute* in 1987 on an IBM PC clone, and sadly the interface is still recognisable from then. Menus and dialogue boxes are used very poorly. *AutoRoute* has a predilection for doing things with hierarchical menus when really it shouldn't. For example, an option in *AutoRoute* is to show railways and stations. To switch this option on, you go to the **Data** menu, and choose the **Railways** option which provides a pop up menu that lets you toggle Railways on. You then go back to the menu and do the same for Stations, and finally you go back to the same menu again and do it yet again to toggle Display. That's three visits to the menu bar for something that could have been one menu option and a dialogue box. Some **Data menu** options have 12 items to toggle, all of which have to be laboriously selected individually. Very annoying.

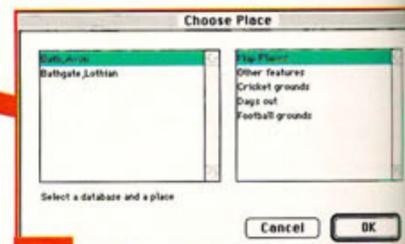
Almost all the options are set in the same irritating way. *AutoRoute* may save you miles of travelling but its user interface adds plenty of unnecessary mouse miles! Another example: if you enter a start time for your journey you must



1 Let's take *AutoRoute* on a trip. On November 20th it's Bath's crucial rugby game against Leicester in the Courage League, but how to get there and when to leave? First, choose **Route**, and **Set Details**.

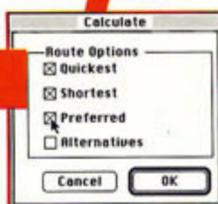


2 This is the main route entry dialogue. Enter the start city (Bath) and hit [tab].

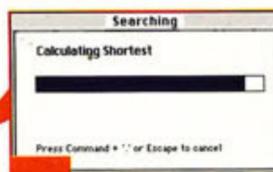


3 *AutoRoute* gives you a list of places to choose from with similar names. Irritatingly it does this even if you type the name correctly. Highlight 'Bath, Avon' and click **OK**.

Finally you can click on **Calculate** to choose what type of routes to search for. Let's ask for the shortest, the quickest, and the one which best matches our driving



7



8 Then *AutoRoute* does the hard bit – it's acceptably fast on all but the very oldest Macs

Time	From	Road	Dist	Dir	Toward
12:34	DEPART Bath on the	A4	1 mile	N	Hildenhead
12:38	Turn left onto	A46	5 miles	N	Stroud
12:49	At Cold Ashton stay on the	A46	4 miles	N	Stroud
12:54	At M4 J18 turn left onto	M4	10 miles	W	M4 J19 M52
13:01	At M4 J20 turn left onto	M5	65 miles	NE	M5 J14
13:47	At M5 J4a turn off onto	M42	22 miles	E	*Check access*
14:03	At M42 J7 turn off onto	M6	13 miles	E	*Check access*
14:12	At M6 J2 turn off onto	M69	16 miles	N	M69 J1
14:23	At M1 J21 M59 J5 turn off onto	A46	1/2 mile	E	
14:24	Turn off onto	A563	2 miles	S	
14:26	Turn left onto	A426	2 miles	N	
14:29	Take the	Unknown	1/4 mile		
14:30	ARRIVE Leicester City				

9 Here's the quickest way, which matches our preferences best

Day tripping

road again

type it in using a colon between hours and minutes, and using the 24 hour clock. If you use a full stop it doesn't warn you, it just assumes you meant a fraction of a minute. If for example you put 11.15 as a start time, it thinks you meant 11 and a quarter minutes past midnight!

More user interface gripes: I'd used *AutoRoute* for three days before I figured out how to zoom in to a particular area on the map. I had thought that such an option might be associated with the magnifying glass icon, but no, instead you use the normal cursor, select an area then when the cursor is inside that area it turns into a magnifying glass and you click to zoom. Of course!

Enough gripes. *AutoRoute* offers extra facilities besides finding your way between towns. Additional databases contain more place information, and overlays containing extra map graphics are also available. Several are bundled with the program, including a database of places of interest and things to do, and map overlays of railways and built-up areas.

The additional databases mean that you can ask *AutoRoute* to find a route directly from, say,

Alton Towers to the Queen of the South ground. (And it's educational! I now know where all those strange named Scottish clubs are, and that Ayr are nicknamed The Honest Men.) The databases also have the phone numbers of attractions.

As well as the British map, maps are available of most European countries and of the States, at the same price as the UK version, so *AutoRoute*

ularly handy to take with them on journeys. If you have enough memory, *AutoRoute* is surprisingly light on disk access. Although I wouldn't recommend the maps in monochrome, the direction sheet is perfectly legible on a PowerBook screen.

AutoRoute works pretty well. It tells you how to get from A to B as quickly as possible. It's not too good over short distances, and its interface is lousy. It could be improved (how about a most economical route as well as shortest and quickest?), but it's the only one of its kind, and, despite my reservations, it's fun to play with.

My final reservation is the biggest though: at £176 it's too damned expensive for most people, and I fear *AutoRoute* Mac will suffer the same wholesale piracy as the PC version (at one point *AutoRoute* was reckoned to be the most widely pirated piece of software on the PC). That would be a great pity. I look forward to *AutoRoute* Mac 2.0 with a truly Macintosh user interface, and a £90 price point. Then *AutoRoute* will be an essential buy. **mf**

You need never fight over whether it's quicker via the M42 or carrying straight on

could be an invaluable travel tool for holidays. The foreign maps include hotel information.

The maps in *AutoRoute* are fully customisable, even if negotiating the menu system to customise them is tricky. When you finally have them as you like you can save them to be used in DTP or graphics programs, so creating a party invite with a map is easy. The directions can also be copied to the clipboard as a graphic for easy pasting into faxes or whatever.

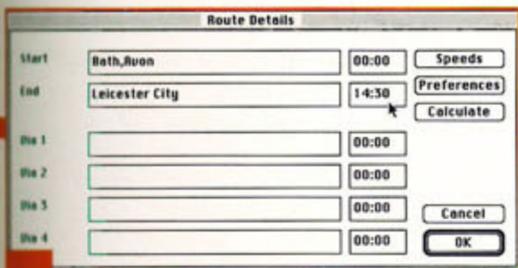
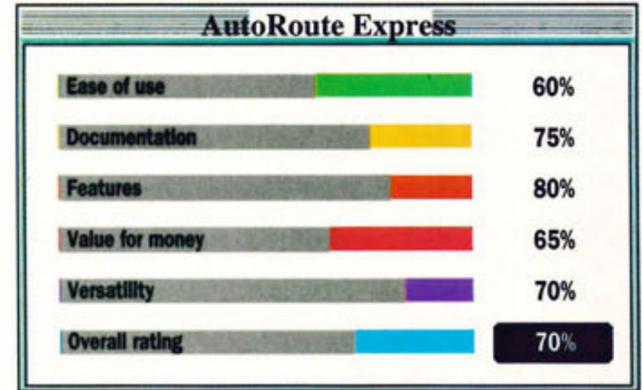
PowerBook owners will find *AutoRoute* partic-

What you need is...

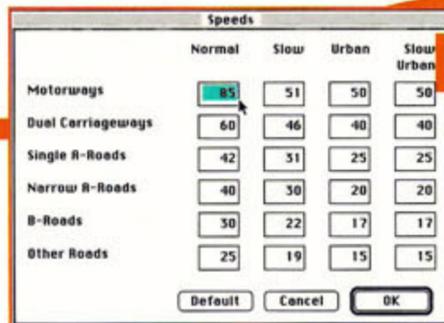
AutoRoute needs 2Mb of free memory and at least System 6.0.7 to run. It will run on both colour and monochrome systems, but is incompatible with the Plus and SE. Our copy was also incompatible with the Classic, but NextBase is seeking to cure this.

Where to get it ▼

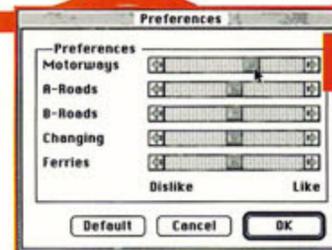
AutoRoute Express is published by NextBase on 0784 421422. It costs £176.



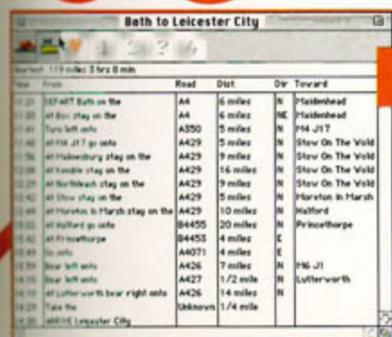
4 The Tigers' ground isn't in the database, it only holds the inferior game's stadiums, but fortunately the Leicester City ground in Filbert Street is only a couple of hundred yards from the rugby ground



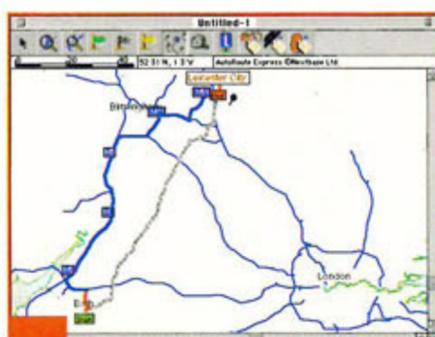
5 *AutoRoute* lets you enter average speeds for different roads and road conditions by clicking **Speeds**. Its defaults are fine, except for the motorway settings which tend to be excessively legal. Let's put in a more realistic motorway top speed.



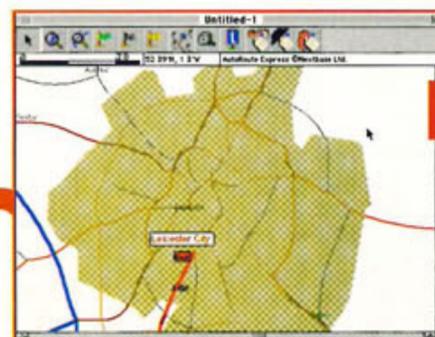
6 You can choose what types of roads you prefer by clicking **Preferences**, so if you hate motorway driving you can say so. The 'Changing' preference allows you to instruct *AutoRoute* to vary the driving conditions to alleviate boredom.



10 And this is the shortest, and the one you'd probably get from a casual look at the road atlas. 21 miles shorter but over an hour slower. I think the motorway route looks best.



11 The map display shows why - solid motorway all the way



12 If you need more detail, you can zoom in to see, for example, that the ground is on the south side of the city

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Write Now 3.0 (fast straightforward WP, a doddle to use)	£135.00

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QuickDex II (phenomenal rolodex card type database)	£32.00
SuperQuickDex (includes powerful print capability)	£55.00
TouchBase Pro (networkable contact database)	£65.00

BUSINESS

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AutoRoute Express (UK route and distance planner)	£135.00
DateBook Pro (UK version, appointment calendar)	£65.00
In Control (best to-do list manager has outliner, columns)	£85.00
Smart Alarms multi user (tuss free net diary/reminders)	from £125.00
Now Up-To-Date (simple, quick calendar and reminder system)	£59.00
SPREADSHEETS	
BIPlane (excellent, low cost, full featured spreadsheet)	£75.00
Lotus 1-2-3 (works with all PC & Unix versions)	£275.00
Microsoft Excel 4.0 (leading spreadsheet, many great features)	£225.00
BUSINESS GRAPHS & CHARTS	
Cricknet Graph (original colour graphing program)	£120.00
DeltaGraph Pro (popular, varied 2D & 3D graphing tool)	£95.00
GraphMaster (very good and system 7.0 savvy as well)	£180.00
INTEGRATED SOFTWARE	
ClarissOffice (Resolve MacWrite FileMaker MacDraw QuickMail)	£299.00
ClarissWorks 2.0 (market leader of the integrated world)	£159.00
Microsoft Works 3.0 (WP, DB, Comms, Draw, Spreadsheet)	£99.00
WordPerfectWorks (WP, DB, Comms, Draw, Paint, SSheet)	£145.00
PROJECT MANAGEMENT	
MacProject Pro (powerful, straightforward and flexible)	£375.00
MacSchedule 2.5 (budget project scheduling)	£125.00
Microsoft Project (full featured for most requirements)	£365.00
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Classic Accounts (small business cash book/cash based VAT)	£49.00
MacMoney 3 UK (best home accounts & budgeting package)	£75.00
MYOB (fully integrated single user business accounts)	£220.00

Path 2 (best for small business, sales purchase nominal invoicer)	£85.00
Ritz (powerful and comprehensive accts for smaller business)	£340.00
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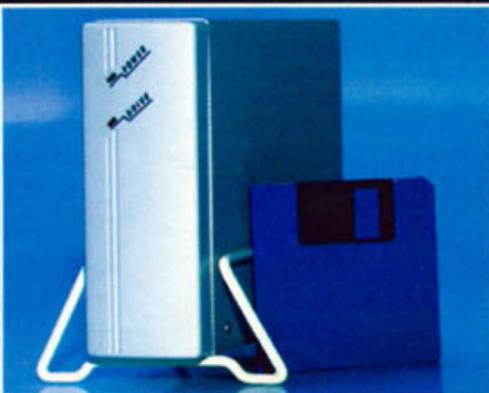
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50 TOP PAGEMAKER TIPS

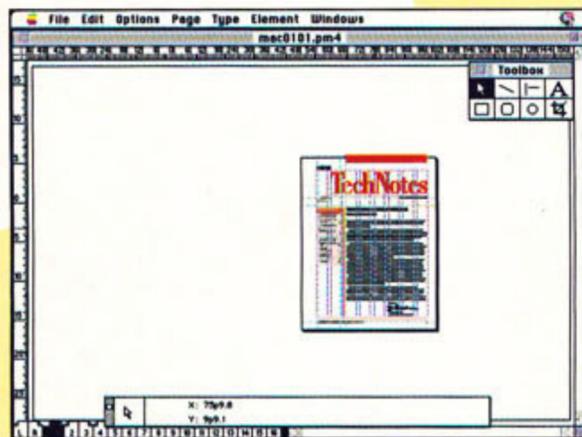
Aldus *PageMaker* has the reputation of being an easy-to-use package. Here, Tom Madden and Stuart McHugh show that simplicity doesn't necessarily mean lack of power

VIEWS

There are plenty of keyboard shortcuts in *PageMaker*; indeed, it's just about possible to get around without the mouse, should you wish. But combining the two devices can lead to some very fast navigation.

1. Command key

All views are logical and simple and listed on the menu – [command] [2] for 200%, [command] [4] for 400%, and so on. But also,



[shift]-Fit in Window – ([command] [W]) gives a view of the entire pasteboard.

2. View size

[Command] [option]-click toggles between Actual size and Fit in Window with the point clicked on as the centre. Adding the [shift] key makes the views Actual and 200%.

3. Fit in window

To Fit in Window on changing page – shift-click on the page icon.

4. Page view

Going to Page View with the [option] key held down will change view for all pages.

5. Page cycle

To get a quick view of all the pages of a document, [shift]-Go To page cycles through each page in that file.

GETTING AROUND

6. Next page

[Command] [tab] takes you to the next page. As with many other commands, adding [shift] gives you the opposite, ie previous page.

7. Dragging the pasteboard

Holding down the [option] key then clicking brings up the grabber hand. You can drag the entire paper/pasteboard around the window. [Shift] constrains the movement to left/right.

8. Changing cursor

[Command] [spacebar] toggles between the caret and the pointer cursors.

9. Dialogue boxes

To get through a mountain of dialogue boxes hold down [option] and click OK if you want to OK all dialogues.

CONTROL PALETTE

10. Control palette fields

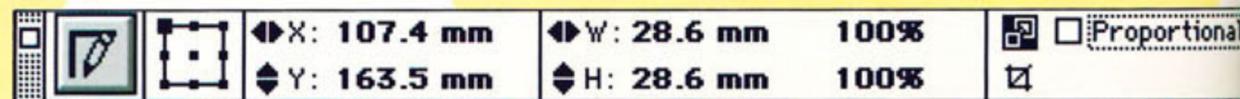
The [tab] key takes you from field to field in the Control Palette, and the arrow key moves left and right in text fields.

11. Numeric keypad

If your Mac has a numeric keypad you can use it for Control palette operation. The keys 1-9 form

a square corresponding to the reference points for a selected graphic. Selecting the correct key alters the current reference point.

■ To toggle a reference point between 'Move' and 'Stretch' mode, hit the [spacebar]. Or use the [S] and [M] keys.



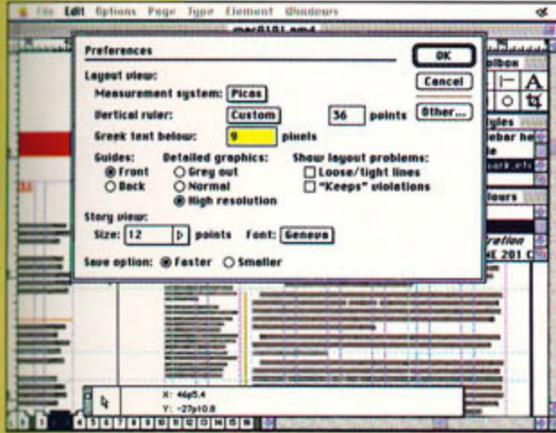
12. Using Nudge

■ Clicking on Nudge moves the object one pixel, thus (assuming a 72 dpi monitor) a one pixel nudge is one point. If you're at 200% that's half a point.

IMPROVING SPEED

13. Text redraw

One way of improving performance is to speed up text redraw. There are two **Preferences** options for this. **Greek text** 'hides' text and gives you a grey line showing where it is. You can specify the point size of text to be hidden, increasing it to greek all text in the document. Things may take a while otherwise, particularly when scaling fonts.



14. ATM

If you have Adobe *Type Manager* installed, the 'Other...' **Preferences** dialog presents you with the chance to use *ATM* to speed up text redraw. Use this in conjunction with the *ATM* Control Panel, assigning as much memory to its font cache as you can reasonably afford.

15. Graphic display

You can also increase redraw speed by altering graphic display. Placed images, typically scans, can take ages to redraw. You can simply grey these out using the 'Grey out' option. 'Normal' resolution will also speed things up in comparison to working in High Resolution, while giving you some idea of the content of the picture.

16. Screen resolution

You can override this setting for any placed bitmap object, by holding down the [control] key as the graphic begins to display.

17. Colour control

Another way to increase re-draw speed is to turn off the colour in the **Monitors Control Panel**, or come down from 24-bit to 8-bit colour.

18. Saving As

Working with a larger file will inevitably slow things up. The way *PageMaker* works is to append changes to a document, meaning that all your older work will be in the file. To avoid this, choose *Save As*, and give the file the same name, thus saving it on top of itself and overwriting unnecessary details stored in the old, bulkier file.

19. Interrupt redraw

To interrupt redraw, simply click the mouse. This is especially useful for large 24-bit TIFFs. ■ To redraw again, simply select current page view. So, if you're displaying at 100%, hit [command] [1].

20. New story

To start a new story simply enter [command] [E]. To edit an existing one, triple-click (with pointer tool) on text block.

21. Text shortcuts

Whether you are marking up many lines of text – as suggested in the **Story Editor**, or making quick adjustments in **Page View**, there are a few shortcuts to make this simpler. Here are a few of the most useful:

In the Story Editor

- Delete character on right – [option] [delete].

TEXT EDITING

- Search – find control characters using [^]. Eg. [^] [P] will find carriage returns.

In Layout mode

- Increase/decrease point size by 1 point – [command] [option] [shift] [>] or [<].
- Up to next menu size (from 14 point to 18 point, for example) – [command] [shift] [>] or [<].
- Normal style – [command] [shift] [space].

22. Selecting text

Key shortcuts for editing text; double-click selects a word. (note that this also includes the trailing space). Triple-click selects a paragraph.

23. Navigation

Combining the arrow keys with the [shift] key will select one letter at a time. Adding the [command] key will move or select one word at a time. With the [command] key, however, they work one paragraph at a time.

24. Styles

To create a style based on an existing one, select any text formatted with the desired style. Then [command]-click on **No Style** in the **Styles** palette. You will see the first style's name in the 'Based on' box. Choose a name and click **OK**.

IMPORTING TEXT

25. Story import filter

The **Story import filter** allows you to place text from other *PageMaker* documents into the one you're working on. But it has other uses...

- You can merge stories by [shift]-selecting. Make a new document, then **Place** the file containing the stories you want to merge. [shift]-select the ones you want, and place. Beats cutting and pasting!

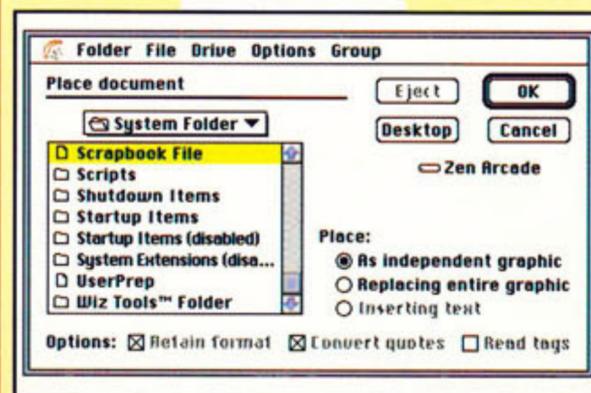
26. Checking filters

To see what other filters you have installed, hold down the [command] key and select 'About *PageMaker*'. This will let you know why that *XYWrite* document came in with all the formatting missing...

IMPORTING GRAPHICS

27. Scrapbook

Instead of opening the **ScrapBook**, cutting from it, and pasting again, you can simply place by selecting the **ScrapBook File** (in the **System** folder) and positioning the place cursor where you want the graphic. The icon tells you



how many images are in the **ScrapBook**, and clicking repeatedly will place another image each time. Select the pointer to stop. This applies for any file you decide you don't want to place, and you can also use [shift] [f1].

28. Text as graphic

You can also treat text as if it's a graphic, resizing and distorting it. Do this by cutting the word, pasting it into the **ScrapBook**, then **Placing** it back into the *PageMaker* document.

29. Grouping graphics

Similarly, you can select graphics and group them together for stretching and other manipulation. Arrange them as you want, [shift]-select them all, cut them to the **ScrapBook**, and place them back into *PageMaker* again.

MANIPULATING GRAPHICS

30. Constraining graphics

Using the [shift] key constrains drawing of lines to 45 degrees, boxes to squares, and ovals to circles. (Trivia: *PageMaker*-speak for these three primitives from its Toolbox is, not surprisingly, LBOs).

31. Multiple paste

If you use the **Multiple Paste** feature in v4.2, you will know how powerful it is. In fact, this was a feature in 4.0, known as **PowerPaste**. Here's how to use **Multiple Paste** even if you haven't upgraded...

Using the [option] key will ensure that a copied object will be pasted in exactly the same place as the original. (Even in 4.2 you still need to use this key for pasting on top of the original). Normally it's a bit offset, so you can see where it is. Moreover, dragging the pasted object to another point on the page, then pasting again, will mean the distance between the three objects is now identical. This feature is incredibly useful for making forms, tables, and so on.

32. Layered objects

If you end up with a lot of objects layered, and can't quite click on the one you want, [command]-clicking in the same position cycles through layered objects, highlighting the next one each time. Use with [command] [F] and [B] to send the selected object to the Front or Back. Select using [command]-click.

33. Compressed TIFF files

You can even compress a TIFF file from within *PageMaker*. Simply select the file you want to compress in *PageMaker's* **Place** dialog. On clicking **OK**, hold down:

[command] [option] for 'moderate' compression

[command] [option] [shift] for maximum compression.

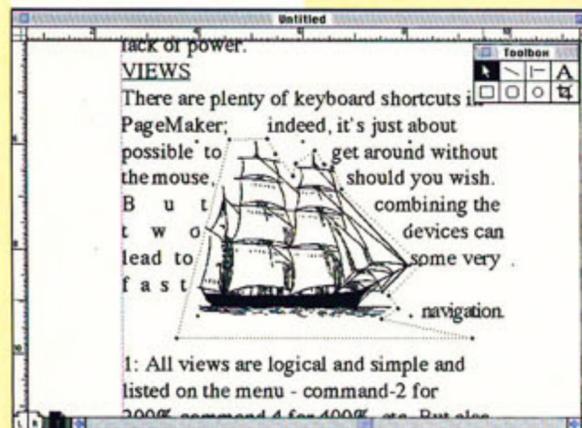
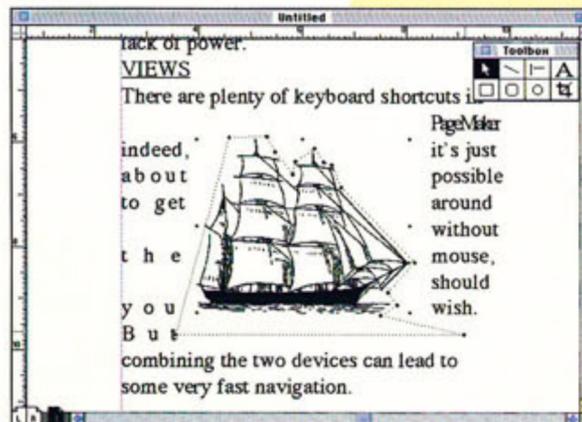
Frankly, you might as well always go for maximum compression, as it won't take that much longer, but will save space.

This will create a new file in the same folder with a suffix - P, L, LD, or LD2, depending on

the type of graphic you selected.

To decompress either type of TIFF, go to **Place** again, select the file, and use [command] [OK]. This time the letter U will be added to the filename.

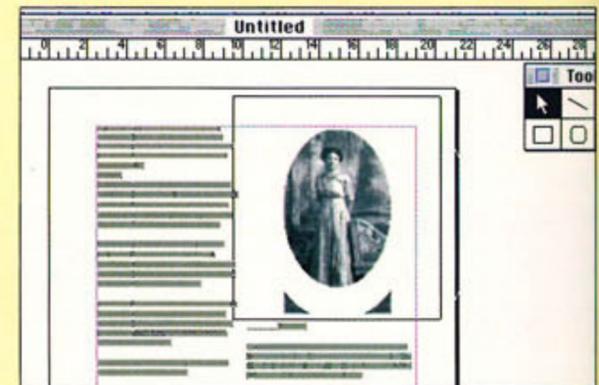
34. Run-around text



If you're text-wrapping round an object, it can take a while for the text to reflow every time you make the smallest of moves. However, holding the [spacebar] while moving points stops text redraw.

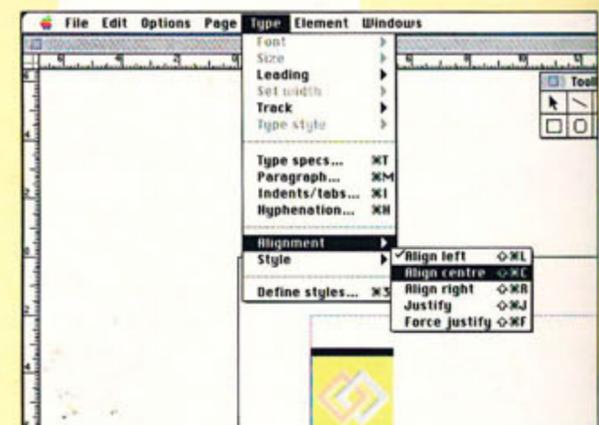
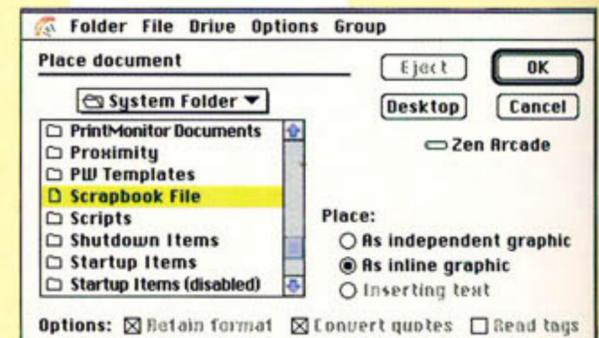
35. Circular cropping

Cropping a graphic to a circle or oval: draw a circle with a **Fill** of 'None'. Also give it a **Line style** of 'Reverse' and weight of 12 point. **Cut** it, and **Paste** it to the Scrapbook. Then **Place** the circle back from the Scrapbook file (it will be the first image there, so click only once), and then return to the pointer tool. You will then have the selected circle, which you can



stretch and position to fit over the image you wish to mask.

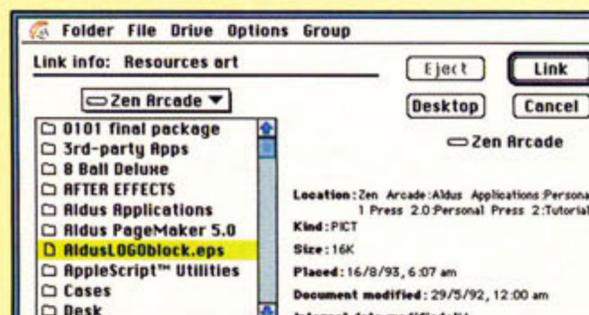
36. Centred graphics



If you want to centre a graphic you could spend ages measuring it and placing it against guides, and so on. Better still - make it an inline graphic (by selecting this option in the **Place** dialogue box), then put it into a text block (which, naturally, has no text). This text box should span the width of the page or column which you want the graphic to be centred in. Then simply select the graphic using the text tool and set **Alignment** to 'Align Centre'.

GRAPHICS & LINKING

37. Placeholder



You don't need to re-place graphics, which is useful if you set up a placeholder. Instead, select

the graphic, go to **Link Info**, and find and 'Link' the replacement graphic. The new graphic will take the place of the old one.

38. Linked files

If you move a folder which contains linked files, *PageMaker* will lose the links to the files. Instead of relinking all the files individually, it's possible to add a that folder to *PageMaker's* search path. (So it's a good idea to get into the habit of keeping linked graphics together in the same folder). Go to the **Links** dialog box, and click **Link Info**. Then find and select the file

Link to "AldusLOGOblock.eps" instead of "Resources art"?

Yes

No

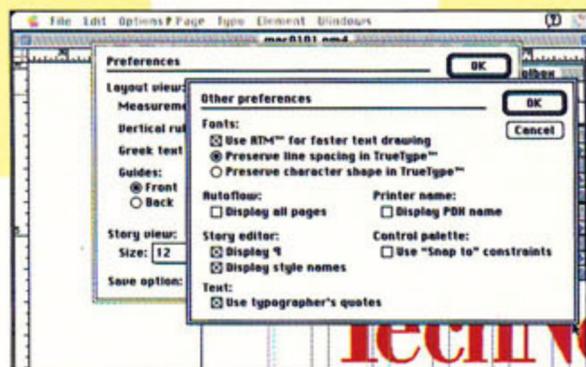
you want to relink. When clicking **Link** hold down the [option] key. *PageMaker* will automatically look in the folder for the other files, and link those it finds.

PREPARING FOR PRINTING

39. Storing documents

Of course, if you haven't got into the habit of storing all your documents in one folder, then when you come to copy your publication to send it to a bureau, or even just to back it up, you may forget some of the documents that make it up. Fear not, when you save your file, simply check 'Copy remote files for printing'. This will physically copy the files and maintain their links to a new location, be it server, cartridge, or floppy disk (if large enough!) (Version 4.0/4.01 users: Copy linked documents – in 4.01. [option]-copy to reveal this feature.)

40. PostScript printing



There are large advantages to printing your publication to disk as a PostScript file when you are having a document typeset at a bureau. You should have no problems with missing graphic problems (provided you check the 'include images' button). Likewise, there should be no problems with System/Finder version. The only thing to watch for when you make up a PostScript file is that you print to disk using the correct PPD.

It would be worth getting a PPD from the bureau matching their imagesetter, especially if they may have amended this. With *PageMaker* 4.2 their PDX would also be required.

PRINTING

41. Faster printing

Speed up printing of documents containing TIFFs by using the 'Optimized' option. This removes scan information which cannot be used to improve the printout.

42. PICTs to TIFFs

Replace PICTS with TIFFs. Often, an unusual PICT may cause printing problems. However, TIFFs and *PageMaker* work pretty well together

(Aldus had a lot to do with defining the TIFF specification) so this often improves things.

43. Graphic quality

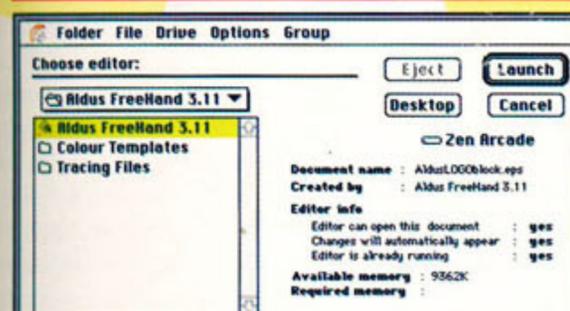
The simplest problem you might encounter is poor quality graphics on the printout. It could just be that the graphic isn't linked. If it's over 256K in size (and most TIFFs are) it won't be stored automatically in the publication, so you may need to search for and link it. (See 'Graphics and linking').

44. Magic stretch

On printing a bitmap graphic, particularly black and white scanned images, moiré patterns may appear which weren't visible on screen. This occurs because the resolution of the image isn't an exact multiple of the printer's resolution. *PageMaker* provides a way around this – simply hold down the [command] key while stretching or shrinking the image, and the image size will jump between the various possibilities which will guarantee a smooth printout.

MISCELLANEOUS

45. Linked graphics



If you have a graphic placed from *FreeHand*, *SuperPaint*, *Illustrator*, or many others, placed into a *PageMaker* document, and you want to edit it, there's no need to go to the Finder to launch the graphics program. Instead, [option]-double-click on the graphic, thus launching the program with the original linked file.

46. Editing PICTs

Also, should you, for instance, want to edit a

MacDraw PICT but you don't have the program, [shift] [option]-double-click will give you the chance to select the application to use.

47. Set defaults

To set defaults, stored in the PM4 Defaults file, close any open documents in *PageMaker* and make menu settings you want for your preferred working system. These can be on any active menu.

INDEXING

48. Finding index entries

Obviously you wouldn't want to use 'Change' to index every occurrence of a word. Instead, the selected word will become a level 1 topic of an index entry if you press [command] [shift] [;].

- To find an index marker character, go into the Story Editor, and Find [^]. To find the index marker for a particular word, type [^]; then the word. This assumes the marker is immediately before the word; if you originally indexed it as in the previous tip then this will work fine.

49. Removing entries

To remove an index entry, select **Show Index**.

To remove entries from this publication only, use the [command] key, otherwise you will remove the entries from any other publications in the Book list. Then:

Click **Remove** for the selected entry.
[Command] [shift] – remove only cross-references.

[Command] [option] – remove only index entries with page references.

[Command] [option] [shift] – remove all index entries.

- If you have problems with indexing – for example, if the index seems corrupt or in some way scrambled – remember that this is a very memory-intensive operation, and extra RAM may have to be assigned to the application.

HYPHENATION

50. Discretionary hyphen

The discretionary hyphen ([command] [-]) is for stopping words breaking where you don't want them to. The most common example of this might be a trademark. To stop a word breaking at all put this before the first character of the word.

- Keep words together with a nonbreaking space – ([option] [spacebar]).

- Nonbreaking hyphen – [command] [option] [hyphen].

- Also nonbreaking are the following characters – em space ([command] [shift] [M]), en space ([command] [shift] [n]), thin space ([command] [shift] [T]) and en-dash ([option] [hyphen]).

Back to basics

If you're panicking at the thought of running a newsletter or similar publication, don't, because help is at hand. Martyn Lester has put together some essential guidelines to get you up and running

is that Gordon Druce has already been applying his expertise to these matters in his **MacFormat** Design column. But there's a much more important reason too, and that is that design is not the first step on your DTP journey, and if you try to make it so, you will be storing up a lot of trouble for later on.

Ars gratia artis perhaps, but outside of pure art, the idea of design for design's sake just won't wash. Design has a function, and in the case of publishing its job is to help communicate a particular set of material to a particular readership. So to choose the right design, it's vital that you begin by identifying what it is that you're working with and who the readers are.

Set out below are five key questions that you should begin by asking yourself, although you won't necessarily want to tackle them in this order. Even if you are taking over an existing publication rather than starting one from scratch, it's useful to go through all of the following. It's never wise to assume that what you've inherited is anything like perfect.

1: Who is the publication aimed at?

This affects or can affect a number of considerations – and the general tone of the publication is the first of these. The whole feel and appearance of a performance report for the

middle management of a chain of retail outlets may be quite different to that of a newsletter aimed at staff who work behind the counter for exactly the same company.

Always remember that you are not producing your publication for yourself, but for the people you are expecting to read it. So take some time out to ask yourself who they are, what information they will want, and what form they will be happiest to receive it in. As an extreme example, you wouldn't want to blot your copybook with the local Rotarians by zapping them between the eyes with psychedelic page layouts, so identify your readership before making any other decisions.

Keeping design considerations aside for a moment, remember that an important subset of the tone of a publication is the language in which it is written. If the readership you are catering for would be most comfortable reading *The Guardian*, they are not going to feel particularly at home if you present them with a publication written in the style of *The Sport*, and the converse is equally true.

Granted what you know about your readers, make some notes on the kind of language and construction you think you should be aiming at. You should then refer back to this from time to

Unless all of your readers have excellent eyesight, go for good legibility

time and make sure that you're delivering what you set out to – and that should apply to the way you handle headlines, captions and so on, not just the main text of the publication.

Another consideration which may be affected by knowledge of your readership is the size and style of the type you choose. It's a dangerous thing to assume that if you can read something, then so can your audience – it's not always true. Eyesight has a tendency to deteriorate with age, for example; so while you can get away with small, or condensed, or wacky type in a fanzine for teenagers, it would be inconsiderate, to say the least, to do the same in a document explaining payment system changes to your company's pensioners. Part of this process is not to make

Scheduled programmes are interrupted this month while I tackle the following poser. 'Help! I've just been asked to run a newsletter, and I don't have any desktop publishing experience. What do I do?'

On the basis that every journey starts with a single step, let's change that question from 'What do I do?' to 'Where do I begin?'. And the short answer is: nowhere near your desktop publishing software.

One reason that I'm not about to get involved in showing you how to set about working up design styles and page grids for your publication

Just what is legible legible legible legible legible type ?

Keeping design considerations aside for a moment, remember that an important subset of the tone of a publication is the language in which it is written. If the readership you are catering for would be most comfortable reading *The Guardian*, they are not going to feel particularly at home if you present them with a publication written in the style of *The Sport*, and the converse is equally true.

While the type on the left is legible for readers with good eyesight (and will make even them tired fairly quickly), you would need to choose something more like the example on the right for readers with poor eyesight, or if you knew your document would have to be legible to someone who needed to refer to it (say) half way up a mountain in a tent with a dim propane lamp. Once you know your readers, the other decisions begin to make themselves.

Keeping design considerations aside for a moment, remember that an important subset of the tone of a publication is the language in which it is written. If the readership you are catering for would be most comfortable reading *The Guardian*, they are not going to feel particularly at home if you present them with a publication written in the style of *The Sport*, and the converse is equally true.

half-baked assumptions, but try to find out the facts. For example, all six of you on the committee of the Melchester Rovers supporters club may be under 25, but can you trust this to be true of all of the club members that the newsletter will be going out to? Almost certainly not.

Unless your readers can be guaranteed to have excellent eyesight (they're all RAF pilots perhaps), you should play safe and go for good legibility; if you know for certain that an appreciable percentage of readers will have poor eyesight (or that, for some reason, your publication will often be read under poor lighting conditions), then it makes sense to opt for what would normally be thought of as large type.

And remember to apply the same consideration to detail of drawing or the size of written annotations in any diagrams you use – it's no use making the text in your car maintenance booklet nice and large but then using a tiny diagram with illegible labels so that the reader can't follow what's going on.

2: What is the nature of the written material you will be handling?

It is not at all wise to make design decisions, such as how many columns per page your grid will be composed of, without giving consideration to a number of characteristics of your copy. For example, will there be long articles, each filling a whole page, or even several pages, or do you expect to have a lot of smaller pieces of copy? The two would not normally be handled in the same way.

Or perhaps there will be permutations of the above – some medium-large and some small items mixed together; or some sections of long features and other sections of smaller items. If the latter, then you will probably want to formulate not just one but two complementary design styles – perhaps a three-column grid for your long features and a four- or five-column one for your small news.

It's not just the length of items, but their contents which may make a difference. If the copy is to be standard English prose, then there should be few restrictions on your options in terms of column widths, but this will not be true if any of a number of less common elements are involved. If you expect to run passages of verse, for example, then you will want to exclude narrow column measures, because broken lines of poetry are a distraction and an irritation. And if you break any lines of programming code printed in your publication, when the reader comes to type them into their computer, the program simply won't run.

Similarly, if you expect to have to incorporate mathematical equations, chemical structures, or strings of musical notation, make sure you form some impression of what widths they will need before you formulate your design – it's very annoying to have to go back and start your grids again from scratch when you find you haven't left enough room to fit in your material.

The converse can also apply. If you know that there will be a lot of short lines, such as lists of people's names with only one name per line, then you will probably want to avoid using wide

Column widths – the right way

**Gas! GAS! Quick, boys! – An ecstasy of fumbling,
Fitting the clumsy helmets just in time;
But someone still was yelling out and stumbling,
And flound'ring like a man in fire or lime...
Dim, through the misty panes and thick green light,
As under a green sea, I saw him drowning**

– and the wrong way

**Gas! GAS! Quick, boys! – An ecstasy
of fumbling,
Fitting the clumsy helmets just in time;
But someone still was yelling out and
stumbling,
And flound'ring like a man in fire or
lime...
Dim, through the misty panes and
thick green light,
As under a green sea, I saw him
drowning**

It is important to know what kind of material you are going to be using before making up a design grid, rather than designing first and later finding that what you've chosen doesn't match up to what you want to print. The example above uses a measure wide enough to make sure the lines of the poem fit. But on the left is an example of a grid using columns too small for the material to work effectively

column measures which have room for seven or eight words per line – you'll end up with large patches of space through your document.

3: What illustrative matter do you expect to be involved?

This is an important design criterion, and the more work you can put into evaluating your illustration requirements beforehand, the fewer problems you are likely to face later on.

You may, for example, be able to work out that you will frequently need to use diagrams, and that these will not be decipherable unless used above a certain size. In this case you will want to make sure that the design grid can accommodate spaces of the right dimensions.

Alternatively, perhaps you know that you will want to print a variety of different kinds of photographs or other illustrations which will need to be used in a broad range of shapes and sizes to make the most of them. To be able to achieve this, you will have to consider your grid options from the point of view of which of them offer the greatest degree of flexibility.

4: Who is producing the material?

As well as putting the publication together, will you also be the person who generates all of the copy and illustrations? If so, everything will be relatively straightforward, but if these will be

coming from other contributors, there may be several ramifications for the way you work.

To begin with, you will need to agree with your contributors what form their material will arrive in. Merely arranging with someone that they will provide text for an article, for example, can present a range of pitfalls if the two of you don't understand the same thing by 'provide text'. If you are expecting a floppy disk, but they hand in typewritten copy, you are going to have to type it all in on your Mac. And if it arrives on floppy but in a word processor format that your software can't read, you will be worse off still,

If someone else is to print the publication for you, talk it through with them

because you won't even be able to read the copy to type it back in.

Your contributors will need to know of any decisions you have made on the tone and language you want the material to be couched in, or you will face unnecessary extra work in changing their submission after it arrives.

If possible (and appropriate), you should issue some sort of style guide for writers, noting any peculiarities of the way you have decided to handle written copy, or which options are preferred where there are alternative ways of saying things. For example, if your newsletter were for the local Macintosh users' group, you would note whether you wanted to see 'megabyte', 'Megabyte', 'MegaByte', 'Mbyte',

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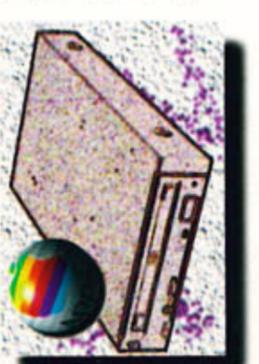
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Gordon Druce explains why, in design, less is not only more but is essential if you are to communicate your message clearly and effectively

Talking **loud** and **clear**

The power and versatility of today's desktop publishing programs mean you can easily incorporate any number of weird and wonderful graphic effects into your documents. It also means that if you're not careful you can just as easily end up with a document that has been designed to death.

The DTP overkill scenario is a familiar one: designers and non-designers alike, sit down in front of a Macintosh for the first time, load up a DTP or draw program and suddenly those 'creative juices' start flowing everywhere. There's no stopping them – ten different typefaces in the same document, bending and breaking

type, graduated tints on all the text panels-outs, boxes and rules around everything on the page, drop shadows on everything in sight; to say nothing of the time and effort that's gone into achieving this grand level of chaos.

After a while normal behaviour is restored and it begins to dawn on them (hopefully) that what they have done has blocked out any chance of communicating their message in any meaningful way. They have lost track of the very thing they set out to do: communicate clearly and effectively. So this month we are taking a look at some useful tips to help you become more productive and a better communicator

The use of white space is an advantage in helping you communicate

with your printed matter, highlighting some of the hidden dangers in using too many graphic tricks and techniques in your work.

Two common problems with people taking their first steps into the field of DTP (common with design students and untrained designers) is a tendency towards claustrophobic pages or designs.

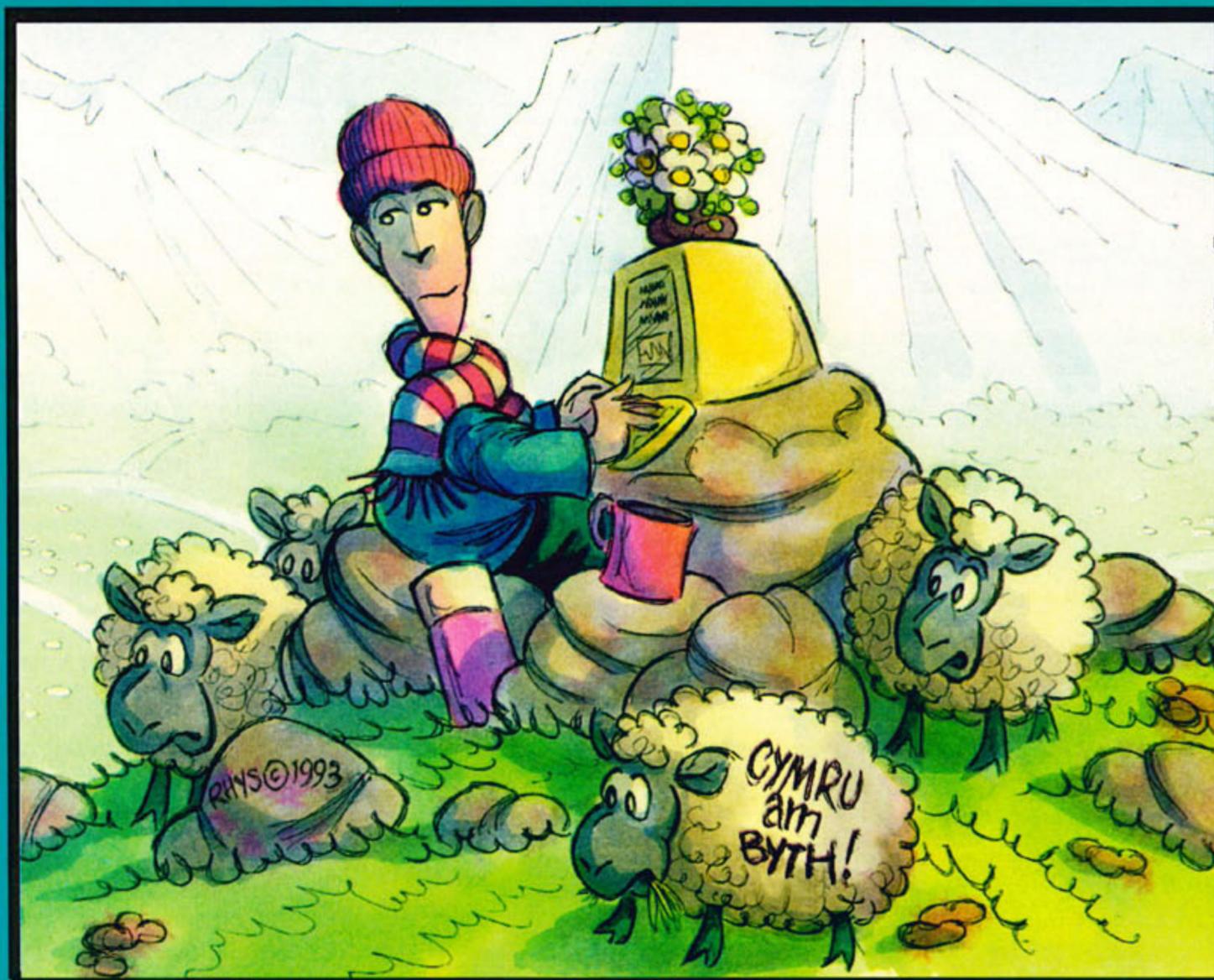
Claustrophobic documents occur when you are trying to say too much in the space you have allocated and by using too many graphic elements (boxes, tints, rules and flashes) in a valiant attempt to make it more digestible for the reader, but instead compounding the problem.

This can be remedied by getting the writer to trim back the words to a more suitable length or, if this is not possible, then talking to the writer about running the less important parts of the material in a smaller point size at the bottom of the page or in a side bar or panel, thus allowing your page some breathing space.

At the other extreme (not quite

so common) is leaving odd holes or gaps of white space in the designs. This is a slightly easier problem to cure. As the use of white space is a positive advantage in helping you to communicate your message. It's just knowing how to use it to best effect. So don't place your text into a two or three column grid and leave a hole of white space at the end of your document. Use the space wisely; you can give more prominence to your headline text and grab your readers' attention, by giving it more air to breathe. Alternatively, use the space to float a picture in, helping to give it greater impact.

One of the first things a desktop designer learns is never to work in isolation (see left!). Unless you have a close, happy working relationship with your client, project manager or editor then it doesn't matter how technically skilled you are with your designs and layouts, you cannot forget the content itself. So liaison is the name of the game when you're concerned with authors and photographers; in fact with anybody involved with the material you are handling. Also when



Avoid the temptation to go overboard with special effects

you are thinking about your designs, try to switch viewpoints; think of it from the reader or customer/author's point of view. This way you can sometimes find obvious flaws, which can be hidden when you are concentrating hard on your design work.

Everybody hates a smart ass, so when it comes to desktop designing, avoid the temptation to go overboard with your software special effects, especially when it comes to using type. In general don't set type into wacky shapes or irregular columns. This may

well look fun or unusual but when it comes to reading, it's just a headache. Use flush-left type (sometimes called range left type) for headlines and body text. Also use regular column widths and heights. All these conventions will help make your document read more easily.

Angling your type is OK, but only when used on short lines of text, like say a 'teaser' line or on the top corner of the front cover of your newsletter or fanzine, as a 'cover flash'. If you put angled type into your document you will disrupt the reader's flow and you don't want any chance of her or she being distracted from your document. While on the subject of distractions, don't use the underline feature, common in most DTP programs. This erodes the readability of your text, as a segment of the characters' descen-

ders (see MacFormat issue 1 DTP section) are masked by the underlining, making words harder for the reader to picture. This only adds visual pollution and confusion to your page. There are many better ways to highlight your important text. Try using a bold typeface or italics.

A good indicator of quality design is the consistency of space between your design 'building blocks': your pictures, captions, call-outs, headlines, rules, box outs and your columns of body text. The reader is more sensitive than you think to these inconsistencies. When asked he or she will not say, "Oh but the captions are all different distances from the pictures". But they will say that the work looks "untidy" or "shoddy", which will undermine your message and make the reader feel that your document is not really worth them spending valuable time on. So keep a close eye on your spacing of graphic elements; particularly on the spacing of graphic devices at the top of your page or document, eg the space between headlines and the top of your grid, the height your main text starts in the grid, where sub headlines sit and where photos or diagram captions fall and of course, line up your columns at the bottom of the page. Remember to let your document breathe, don't be mean with the

Underlining before and after

Check paragraph one
Check *paragraph* one
Check **paragraph** one

The underline feature in most DTP programs is not a good idea. Instead, highlight the text by italicising or boldening it.

space you allocate to your page 'furniture'.

I think the most common DTP design error, has to be a popular misunderstanding about the use of large numbers of typefaces in your documents on the understanding that this will 'jazz up' a piece of work and therefore make it more interesting to the reader. The effect is in fact the opposite.

Your work will look amateurish and chaotic. When it comes to choosing typefaces you will need a generous portion of self discipline. Use one or two typefaces in your documents and use them with care, a variety of point sizes, weights, and styles within the font family will add 'colour' to your work and by using only one or two typefaces your work will appear clean and professional.

Finally, in the words of the German architect Ludwig Mies Van Der Rohe, where design is concerned, "less is more". mf

Fancy a day out in London?

Whether you are a design student who's 'Mad about the Mac' or just a Macintosh fan who's become intrigued by the world of art and design, I can highly recommend a trip to visit the British Design Museum at Butlers Wharf in London. The Design Museum houses an excellent permanent collection of product design and has a number of Macintoshes running hypermedia programs, featuring profiles of famous and influential designers and architects plus many other interesting exhibitions, workshops, seminars and a good little bookshop. The museum is open every day from 10.30am to 5.30pm, til 6.30 at weekends. Admission is £3.50.

For recorded information about what's going on call 071 407 6261.

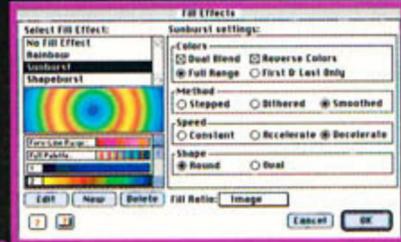
Improve your brushwork

BrushStrokes - tool Box



The text tool is versatile

The selection tools: rectangle, freehand and polygon



Paint bucket, with easy-to-use fill options

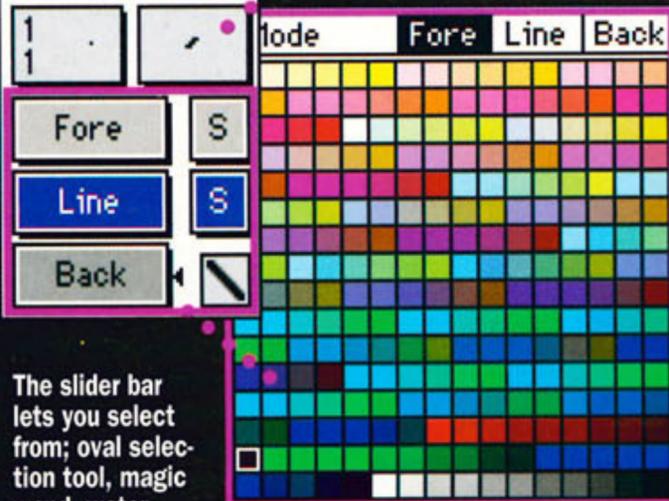


Spray can tool with test pad for checking effects



the brush tool showing a collection of the modes available

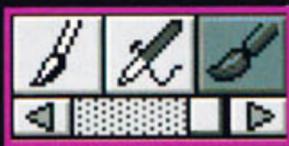
Brush palette



Pattern and colour palettes plus the anti-aliasing tool



These are the shape tools all highlighted with their fill and line colours



The slider bar lets you select from; oval selection tool, magic wand, water drop, sharpener, brush, airbrush and the impressionist tool

Way back in 1984, Claris launched an innovative painting program for the Macintosh called *MacPaint*. *BrushStrokes* is a colour version of this program which has come a long way since its humble beginnings. The program offers the novice artist or the young 'wanna be' Macintosh painter an excellent introduction to 24-bit painting.

Claris has packed the program with a good selection of tools and features and every effort has been made to help the new user feel at home, including an intuitive and friendly interface. In just a few minutes you can pick up the fundamentals of the program; particularly with the help of the special guide for novice painters which comes free with the program. This 66-page, full colour guide (entitled *How to paint with BrushStrokes*) shows you how to use the tools from the program and is a smart introduction to the world of painting and drawing. It gives you the lowdown on everything from basic colour theory and perspective, all the way through to good clear step by step guides on how to draw and paint portraits, landscapes and still life, with screen by screen instructions on how to paint fruit and flowers.

I think one or two other major software vendors could learn from Claris' good sense and supply this kind of excellent 'edutainment' style book with their entry level programs, as this not only adds value to the package, but is of great help and encouragement to Macintosh users who have only rudimentary artistic skills. Also many owners are using packages like *BrushStrokes* to generate budget business and educational graphics and this type of 'how to' book is of great benefit to them.

A great set of tools for a beginner...

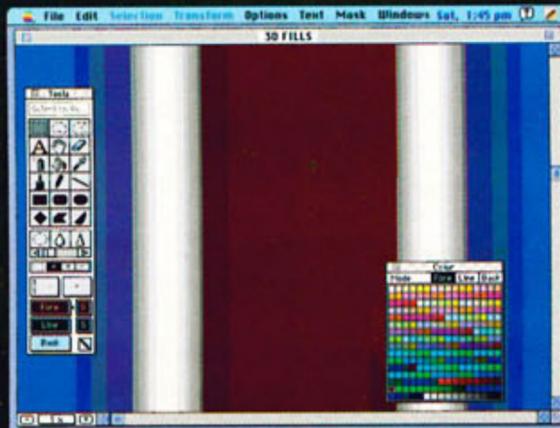
Installing *BrushStrokes* is simple and straightforward: you just insert the program disk and double click the disk icon which will display the contents; then double click the installer icon and you will then see the installer startup screen. You have the option of which hard disk you would like to drop the program on to by using the switch disk option. The rest is simple, the machine will prompt you as to which disk it requires. As all the files are compressed to fit on the disks, the installer expands them on to your hard disk. Remember that you must have 2Mb RAM free to run the application.

BrushStrokes has a great set of tools which rivals the best of the budget Macintosh paint programs, including that of the powerful and highly acclaimed entry level package *Color-It!* (reviewed in the August issue of *MacFormat*). There is just one tool box which houses all of the following:

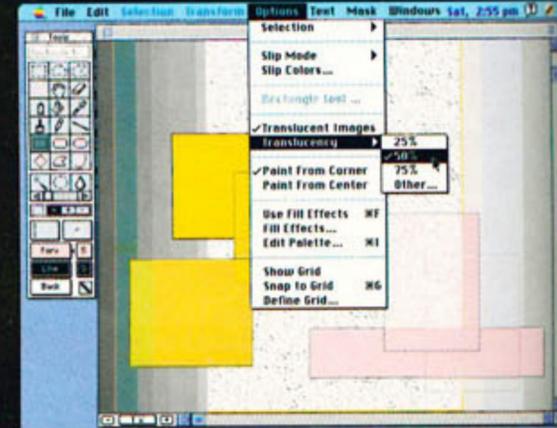
BrushStrokes filters



You can create some neat effects with the impressionist tool - not very easy on the eye, though...



Using the fill tool you can create some effective backgrounds for business and educational graphics



BrushStrokes uses plug-in filters, in this case Aldus Gallery Effects' 'note paper' and Transparent modes

Gordon Druce shows you how to develop your artistic potential with an exciting, new Mac painting package called *BrushStrokes*

selection tools, paint brush, paint bucket, shape tools, spray can and an eraser. It would be good if it was possible to edit the eraser, as it is a bit cumbersome to use on detailed work. There's also the eye dropper, pencil, magic wand and (my only real gripe with *BrushStrokes*) the magnification tool. Why must we have the magnification tool down at the bottom of the tool box or the working document in a '+' and '-' style? It now seems standard practice on good creative Macintosh software to have a dedicated magnifying glass icon, which you just click on to activate and then, to close in on a spot, simply click on it.

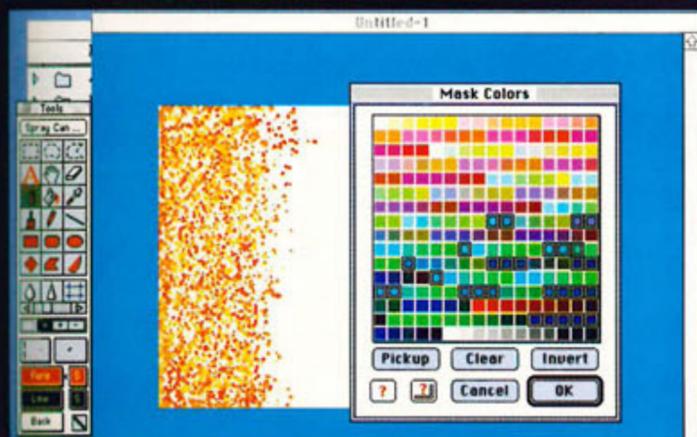
Everyone needs rulers

While I'm in gripe mode, I will mention the grid; this is useful but could be helped by having a set of rulers. It's tricky to work up to more technical painting or illustrations without the aid of rules. That said, this is a minor failing in an otherwise excellent program.

If you are lucky enough to have access to a hand or desktop scanner, then by saving your images out to PICT, *MacPaint* or TIFF file formats, you can then pull them into *BrushStrokes* and give new treatments to your snapshots or illustrations for importing into DTP software later. You can add or subtract parts of your picture, mask and paint, retouch or filter, distort, rotate, slant and add perspective.

While using *BrushStrokes*, the feeling that pervades the whole program is that of a clear, well presented, carefully thought out, professional piece of software that is effortless to use. All tools have hot keys, all modes are marked clearly for line colour, foreground and background colours. There are 'tear-off' paint palettes and brush windows plus pop-up menus for your painting style – anything from smear or slide to blend or colourise. One neat tool is the impressionist tool which is not a patch on the wonderfully sophisticated tools of the same name in Fractal Design's *Painter 2* program, but you also pay something like £200 more for features of that quality. You can create some striking stippling, smudging and marbling effects, although they are probably more reminiscent of 1960s Action art than something Claude Monet might have painted. It is also possible to use this tool for cloning images and works rather like the rubber stamp tool.

The *BrushStrokes* tool palette provides anti-aliased control over all the shape tools, line tool and the text tool. This will only work when you are running *BrushStrokes* on a Macintosh with System 7 available. What anti-aliasing does is smooth the transition between adjacent images, which leaves your image without 'jaggies' (sharp stepped



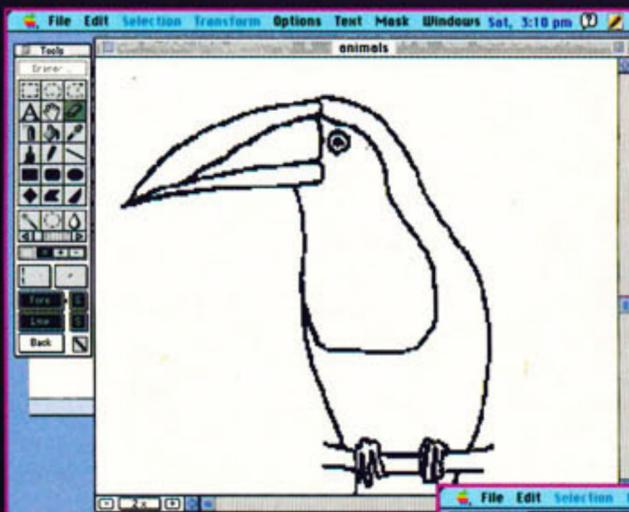
How the masking tool works: select the colours from the palette that you want to cover up and click OK

Paintings from clip art

BrushStrokes comes with a good selection of simple clip art.

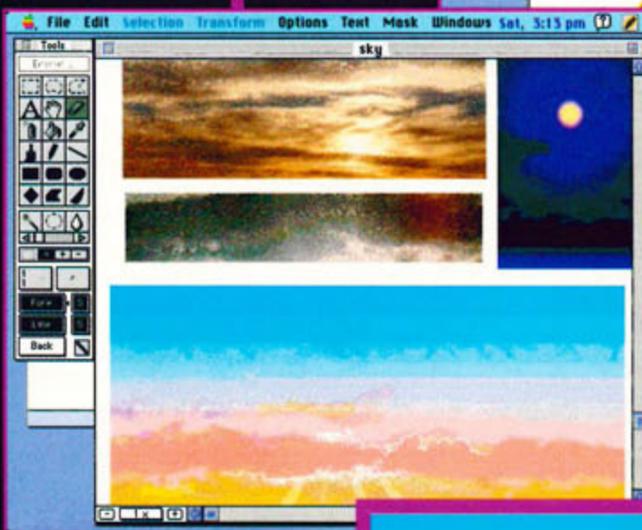
If you're a novice painter or you're the kind of person who always says "but I just can't draw", then this clip art can be both fun and a great training aid, as you can build up pictures from samples of other artists work.

This way you can learn about composition and how other artists add life and colour to their paintings. Below is a simple step by step guide to building a picture using clip art that comes with the program...have fun!



Select your line art from a clip art disk or from *BrushStrokes*' own gallery. Open and Save as....you can save out two or three images so you can try different compositions later...

...then you can add colour and depth using the paint brush (for flat colour on the birds head and body) pencil (adding textures to the branch) and spray can tool (for softer work around the beak)...



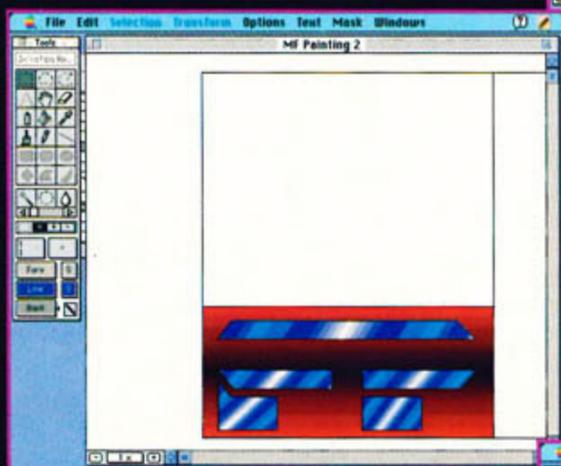
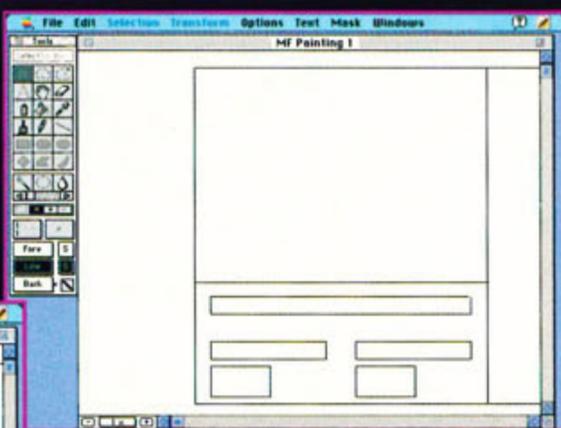
...you can now prepare your background – you may generate this yourself or use an image from a clip art library. This selection from the 'sky effects' are supplied with the *BrushStrokes* program. You can sample a section and adjust the brightness and contrast, so it suits the colour balance of your other images...

.....Now you can paste them together and do a final tidying-up job on any of the rough edges. With the combination of the two images you have a very effective montage. Which could be further enhanced with more details like other birds flying in the distance or more foliage in the foreground.



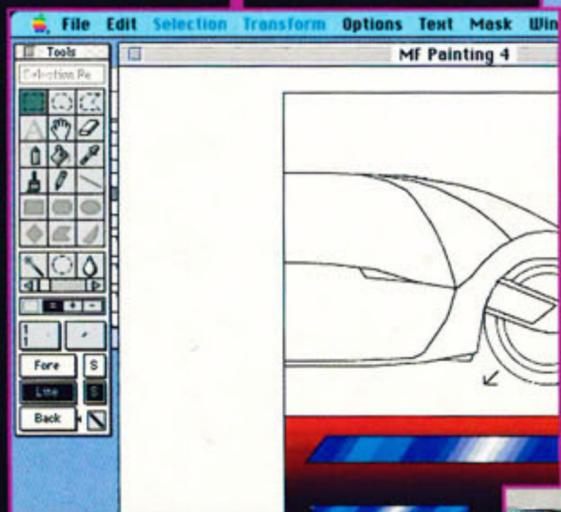
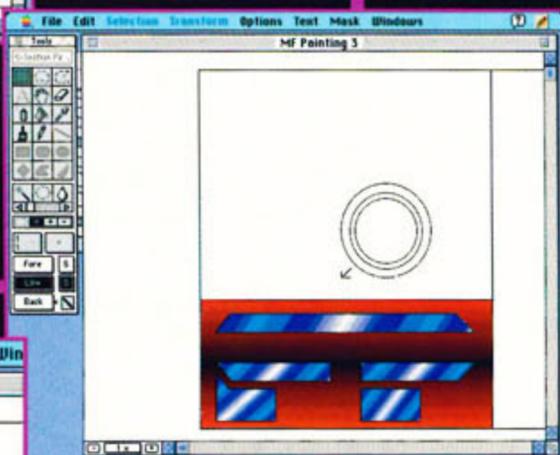
Creating an illustration of a futurist motorcycle in BrushStrokes

The first step is to open a new document. Then create a outline and/or grid for your illustration. This can be done quickly by using the box tool.



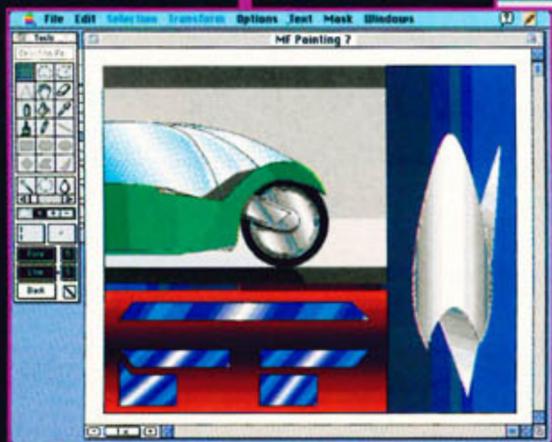
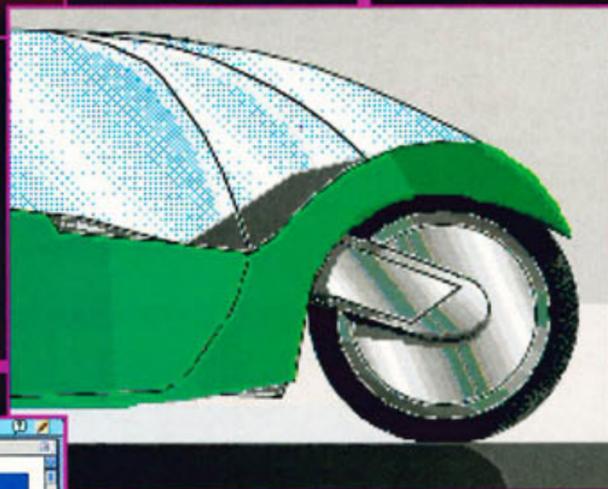
The fill tool comes into its own, adding metallic and fades to the picture.

Now draw the outline of the wheel. This is done by using the oval Selection tool from the slider bar options, below the shape tools in the tool box...



...the flowing lines of the motorcycle are then added using the polygon tool and freehand with the pencil plus some work with the line tool...

...shading is then added to the bike's screens and side panels using the gradient fills (fading from sky blue to white). Then it's time to add shade and colour to the wheel; this is done with a mixture of pencil work and more gradient fills to give a chrome look...



...then finally an abstract logo is built up by using the Oval selection tool and distorting it using 'perspective' from the Transform menu. Finally, more gradient fills are used to give it a 3D feel.

look on the edge of your text and shapes). There is also a fine set of filters with the option of custom filters, allowing you total control over treatments to your images. The basic filters are brightness, contrast, smoothing, sharpening, mosaic and embossing, but *BrushStrokes* also supports Aldus *Gallery Effects* (which you get a sample file of, with the program; in this case it was the 'note paper' effect) plus you can also add *Photoshop* plug-ins.

If the the idea of a blank digital canvas fills you with dread, then *BrushStrokes* has a superb collection of clip art which includes sky, water, animals and many more, so you can sample images from the gallery of clip art, adding your own interpretations.

As well as having a novice painter's guide included, *BrushStrokes* also has a good clear, user's manual, illustrated with work done by artists using the software, which act as inspiration, as well as giving you some idea of the ranges of painting styles which are possible in the program - everything from sci-fi fantasy art to modern portraiture. The last part of the manual covers some of the more advanced techniques which are available in *BrushStrokes*. These include masking (or the Macintosh equivalent of an airbrush artist friskket) which is used to shield areas of your image from the 'overspray' of the airbrush tool or spray can tool. This masking feature is good for this level of program and gives you control over selection of the mask, creating colour masks, remasking, modifying the mask and inverting it.

When it comes to saving out your creation you only have two file formats to save out to: PICT and TIFF. It would have helped to have added a few others like say GIFF or EPSF, which are available to you in Timeworks' *ColorIt!* program. Also when it comes to output there is no support for colour separation.

So should you get a copy?

I could say, pay the extra 90 plus quid and go for something like *Color-It!* from Timeworks, which is an excellent piece of software and great value for money, plus it has the advantage of support for a pressure sensitive graphics tablets (if you are thinking of getting one). But that said, what *BrushStrokes* offers is ease of use, great tutorials and an effortless learning curve. On this fact alone, I think it's worth recommending to anybody who is contemplating their first colour painting program, as *BrushStrokes* has pretty much all you will need to get started as well as the chance to add to it at a later date, in the form of third-party plug-ins.

I would also highly recommend *BrushStrokes* to those of you with kids who are really too old for the likes of *KidPix* or *Paint It* and require more powerful features and control, as *BrushStrokes* is ideal for this level of user. **mf**

BrushStrokes		
Ease of use		90%
Documentation		95%
Features		75%
Value for money		85%
Versatility		80%
Overall rating		85%

Where to get it ▼

BrushStrokes 1.0 costs £123, from Frontline on 0256 20534. The program is currently being bundled free with the HP 550c DeskWriter which retails at £633.

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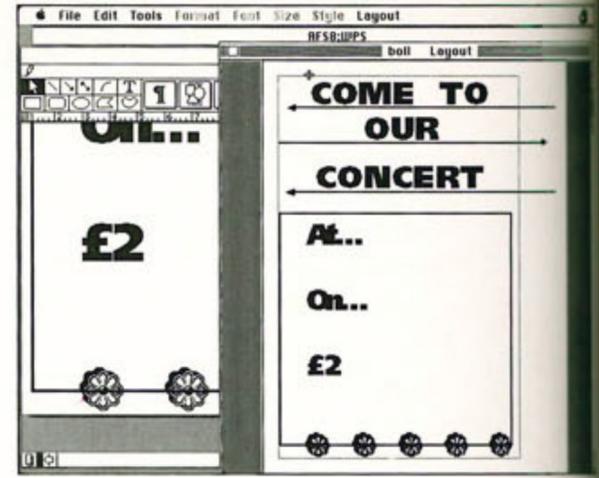
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WP v DTP

which is better?



So what if you don't have any jazzy pictures, or the ability to use multicolours. You can still create informative posters.

More! More! More! There you sit with your word processing skills honed to a fine edge, happy that you've been making the most from your investment and from your limited experience, happy with life. Happy until you walk into an Apple Centre or a wealthy friend's house and see them using a desktop publishing program. Then the old envy rears its ugly head. You see pictures being placed with text running around them like Sally Gunnell running around Crystal Palace. You see tinted backgrounds, drop capitals, you see Pantone-matched, five colour separated text ready to be output to a full-blown Linotronic. You see green and then red! Then you see a graduated tint of green to red running as a backdrop to 192 point headline over a 256-colour image! What has all your hard-earned WP knowledge been for?

You can slave and slave and slave over a document and still it will never have the flair or edge that a DTP'd document will have. Is it time to give up, or save up a few hundred pounds in order to buy *PageMaker* or *XPress*? Wait!

Before we go any further down this path, stop and answer the following questions:

- What documents are you trying to create?
- How many people are you trying to create the documents for?
- What are you attempting to say?
- What resources do you have at your disposal on the Mac?

Word processing is often seen as the poorer relation of **desktop publishing** and for your average publishing house this is true. But what about the majority of Mac users? Tim Smith looks at some short cuts...

The chances are that you don't need to produce four-colour pages packed with images. The chances are also that your machine is not capable of these (you need a minimum of 8Mb RAM and at least a 80Mb hard disk to really think seriously about DTP).

And most importantly, the chances are that your 'readers' don't need or expect fancy images that look more impressive than they actually read. The conveyance of information is your prime function as a well-rounded Mac WPer. But, for

the record, what are the perceived differences between DTP and WP?

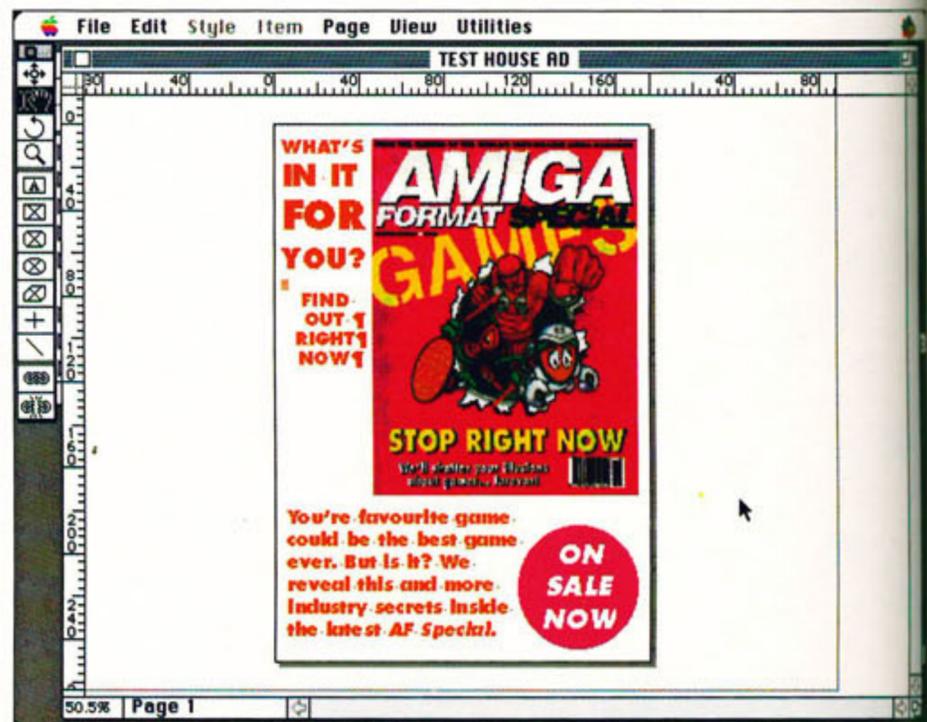
One argument revolves around the use of graphics. A few years ago, the notion that the use of pictures could only be achieved in a DTP package was a truism. However, with programs such as *Word*, *Nisus*, *ClarisWorks* or *GreatWorks* available, all of which can use graphics in a limited form (usually PICT files or clipart), this distinction has blurred to the point of obfuscatory nonsense.

So what about colours and working flexibility? A program such as *QuarkXPress*, which we use to layout these pages, enables you to freely rotate text, use many more graphics formats, thousands of colours, graduated tints and more. All well and good for professional magazine work, but no-one seriously thinks about actually writing copy in *XPress* (well, no one with an ounce of native intelligence, anyway). And for the most part, unless you have to use complex images and you need the thousands of colours, no one creates flyers, novels, essays or other less colour-graphic intensive tasks in anything other than a good word processor.

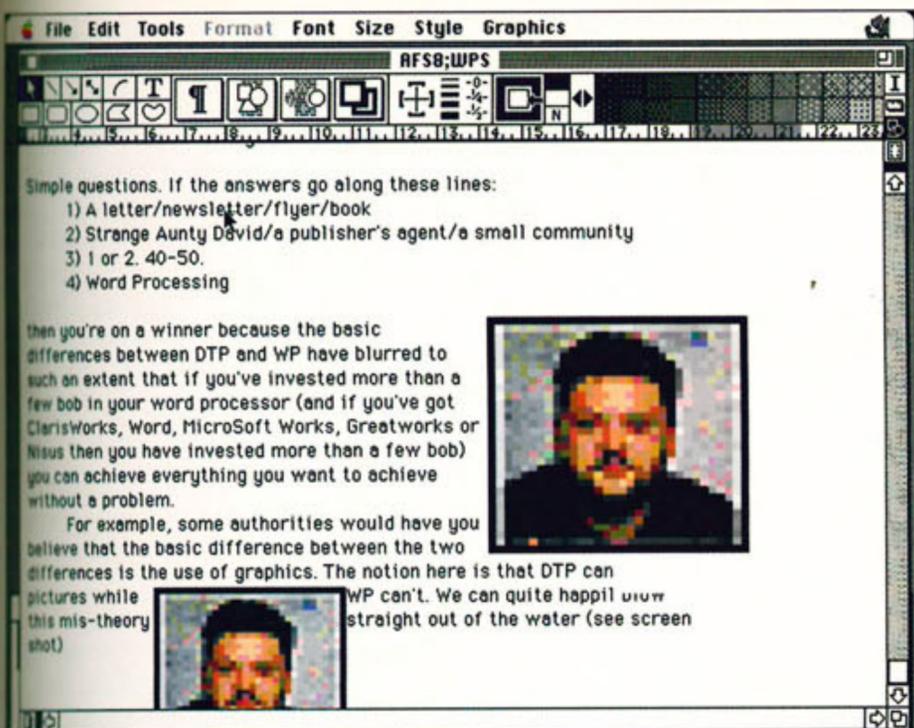
When it comes down to it, you are looking at outputting the final product as the defining factor. It is technically possible to output a finished page (such as the illustration shown on these pages) from a word processor to a Hyphen Spectraset at 2.5K dpi (dots per inch). It would take a great



Created in *Nisus*, this little flyer uses black and white text with a black and white graphic. It does its job and would work well in a small circulation, big impact, area.



Here's one we created in *QuarkXPress*. This is all well and good for full-colour reproduction and a couple of thousand print run, but do you need to take all those overheads with you? Probably not.



The one thing you don't want to do is go wild with pictures. If your word processor (or word publisher as we should call it) enables graphics use, then don't just use them for their own sake.

deal of fiddling, and would be utterly pointless. The average laser printer can output at 300dpi, and that's very high quality indeed – the number of good fanzines at that quality is rare because most of them are produced on dot matrix or daisy-wheel monstrosities. Most people don't have any problem at all reading a 300dpi document, and the notion of 2,500dpi begins to be absurd. It becomes all the more absurd when you realise that the paper stock you would require to do 2,500 dpi any justice would set you back considerably more than your average ream of cartridge paper. The money you are saving by behaving sensibly and learning to create stunning pages with your WP instead of investing in a DTP program you don't really need, also begins to make sense.

The worlds of DTP and WP are moving closer each month, much as the worlds of PD text editors and full-blown word processors are converging. If this trend keeps up then facile arguments about DTP v WP will be forgotten. For now though, it is unnecessary for you to think outside of the remit of your own application – be it *Word* or *Works*. In fact, you should concentrate more on using your word processor to the best of its abilities – none of the beggars come that cheap anymore.

With that in mind, here are some ideas you could make use of to get more from your word-publishing:

I'll use the most basic example of DTP you can find anywhere. The Poster: be it the local fête, a cricket match, school sports day or gig, the best idea is to work in straight A4 and then use a photocopier to blow the finished product up to A3 – save on that laser-toner! If you are using an image or two, set your printer up to output at around 150 dpi. You don't need the full 300 because much of the finer detail will be lost on the passers-by and browsers. If you can output to greyscale, all well and good because this gives you plenty of scope to play the text off against the image. If you can only print to B&W however, all is not lost. You can still get away with some extremely effective and eye-catching designs simply by using text properly and using the old stand-by of Zapf Dingbats. It would take a whole column to explain the useages and abusages of the Dingbats from Zapf but, suffice to say, that if you are stuck sans images you can always rely on them to help you out. But do be sparing with them.

That should give you food for thought and something to get you started. The golden rule really is to keep it simple though – as you can see from my attempts at design, having an eye for the capturing image takes a little while longer! If at all possible, avoid having colourful images as a major part of your design ideas. If you can't, then buy a decent DTP program... and of course, **MacFormat** to show you how to use it. **mf**

Five tips for desktop publishing with a word processor

- 1** Rough out what you intend to do with pencil and paper. This saves time in the long run.
- 2** Switch your Mac to Greys. The chances are you won't use colour reproduction, so there's no point in wasting your time with colours.
- 3** Work with empty picture boxes to save on memory, as well as electricity bills!
- 4** If you're designing a double page that's going to be folded, remember the gutter. This is especially true if you're using headlines that go across the spread.
- 5** Avoid circular boxes when starting out. They might look pretty, but they're also very difficult to run text around without ending up with widows and orphans.

Jargon Busters

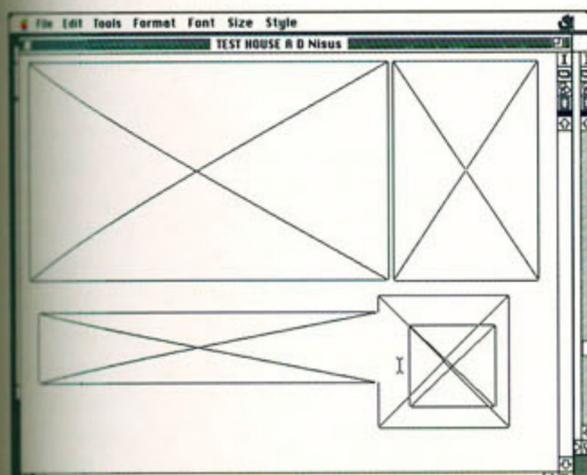
Objects: in the world of DTP, as soon as you put something on the page – be it a box or a piece of text – it becomes an Object

Drop shadow: a text effect that can, if used properly and with a keen eye, enable you to place text over some quite complex backgrounds. Most decent WP programs come with a Shadow option on the **Style** menu.

ICT, TIFF, EPS: these are all picture file formats. Don't be fooled into thinking that, just because you've got a powerful computer, it will be able to make use of every file format under the sun. Check your software. By the way PICT stands for Picture(!), TIFF is Tagged Interchange File Format, and EPS is Encapsulated PostScript.

Marquee: the box that appears when you use your mouse to select something on the page

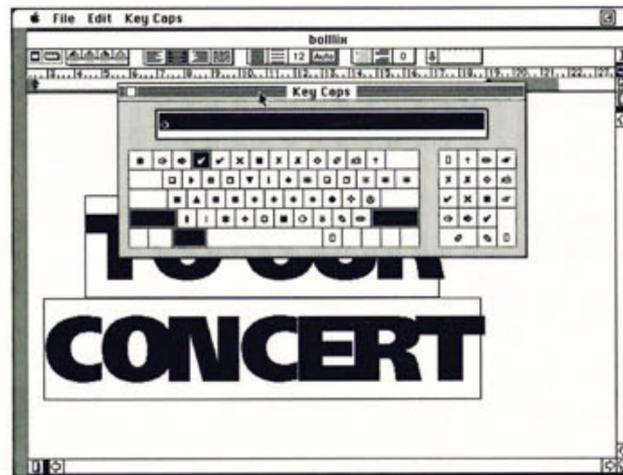
Rotating: very few word processing programs enable to rotate objects, for the very good reason that this is thought usually unnecessary. However, a program such as Nisus enables you to place text in a box and then rotate the box by 90 degrees to give some snazzy effects.



This is the way to work. Your word publisher, no matter what it is, will not be up to the task of refreshing screens with loads of graphics on them. So work in rough to begin with.



This is the basic rough with elements in place. Had I bothered roughing the whole thing on paper, I would have saved even more time and electricity bill money, though. Think ahead.



The mighty Zapf Dingbat has come to the aid of more pros than any of them would ever admit. And Keycaps from Apple Menu Items is your route in. Sparing use of Dingbats reaps rewards!

The cost of credit

Simon Cox and Greg Morrison show you how to ease the shock by setting up a spreadsheet to work out your bills – before they drop through the letter box

Paying off loans and credit cards is never easy. It is made harder by the way the banks calculate interest and the small amount of information they give you on how they actually calculate it. This article looks behind the statements and shows you how to produce



worksheets that will help you understand what is going on. We start by looking at simple fixed rate personal loans and variable rate loans like mortgages. Finally, we tackle the credit card bill.

How does it rate (or what does APR mean)?

Before looking at examples it is necessary to understand a little about how interest is calculated. At school, the maths teacher told us about compound interest but it's been a long time, so let's recap.

Assume £100 is placed into a savings account that gives 10% interest per annum. This means at the end of the first year our £100 will be worth 10% more ie £110. If this is left in the account for another year it will be worth another £11 more – that is 10% more of £110 – which is £121. This is called compound interest and could be calculated with a simple spreadsheet. However there is a formula for this which is:

$$\text{Amount} = P \left(1 + \frac{R}{100} \right)^n$$

where P is the original amount (the Principal), R is the interest Rate as a percentage and n is the number of years it has been compounding interest. So for the example above this formula becomes

$$\text{Amount} = 100 \left(1 + \frac{10}{100} \right)^2 = 100 \times 1.1^2 = 100 \times 1.21 = 121$$

Most spreadsheets have a function to calculate this called FV for 'future value' – in this article we will use *ClarisWorks* to do this.

The calculation shown above was based on an Annual Percentage Rate (APR) where the interest is calculated once a year. Often when borrowing money, an APR is quoted but the interest is calculated monthly. Sometimes an expression like '1.45% per month which gives an effective 18.9% APR' is used. Unfortunately, the monthly interest rate is not a twelfth of the APR – it must be calculated using the above formula. So, if I borrow £1 at 10% APR, then the bank would want £1.10 at the end of the year. This figure can be put into the above formula and used to calculate a value for R which will be the monthly interest rate. The formula above becomes

$$1 + \frac{APR}{100} = \left(1 + \frac{R}{100} \right)^{12}$$

$$\frac{R}{100} = \sqrt[12]{1 + \frac{APR}{100}} - 1$$

This formula can now be used to calculate the monthly interest rate from the APR. It can also be used to calculate the daily percentage rate from a monthly or annual interest rate by changing '12' to the appropriate number.

Functions used

- DATE:** changes a date of the form YY/MM/DD into a serial number. DATE(1963;4;7) is 21646
- DAY:** returns the day number of a date expressed as a serial number. DAY(21646) is 7
- FV:** Future Value – calculates compound interest
- INDEX:** returns a value from a range of cells
- MOD:** the arithmetic MODulo function returns the remainder after a division i.e. MOD(14;12) is 2
- MONTH:** returns the month number of a date expressed as a serial number. DAY(21646) is 4
- NPER:** the Number of PERiods function calculates the number of payments required to pay off a loan
- PMT:** the PayMenT function calculates the required payment to pay off a loan in a certain time
- ROUND:** rounds off a number to a certain number of decimal places e.g. ROUND(3.4;0) is 3
- ROW():** a function that returns the row number of the cell in which it is written
- SUM:** returns the sum of a range of cells
- YEAR:** returns the month number of a date shown as a serial number. YEAR(21646) is 1963

Loans

Loans usually come in two forms: ones with a fixed interest rate (like personal loans) and ones with a variable interest rate (like mortgages). We will construct a spreadsheet that shows a table of repayments to illustrate how the loan is being paid off.

One thing that was not discussed above is how to calculate a monthly payment – that is to pay off a loan at a given interest rate over a certain time, how much must be paid per month. Most spreadsheets have a function called PMT that does this piece of hard work. For a loan paid off monthly, PMT takes three arguments: the monthly interest rate; the number of payments to be made; and the initial amount to be borrowed.

Our aim is to produce a general worksheet which can be used for different sorts of loans. It will be set up for a fixed interest rate at the start and will calculate the repayments required. However, flexibility will be built in to handle the possibility of an interest rate change.

	A	B	C	D	E
1	Mortgage amount	£ 3000.00			
2	No. of years	1			
3	APR	18.90%			
4	Starting Date	1/10/93			
5					
6	Date	APR	Monthly	Pay per month	Remaining
7					£ 3000.00
8	1/10/93	18.90%	1.45%		
9					
10					
11					
12					

Credit card bills

Credit card bills are interesting because they are very complicated and hence much harder to understand. On most credit cards everything is fine as long as a full payment is made each month. If not then some very complex rules come into play to calculate interest. These rules are further complicated by the way things are explained on the statement.

Before looking at how a bill can be calculated, the interest rate must be considered. Most cards seem to quote a monthly rate but calculate interest daily. This is complicated by the fact that there are different numbers of days in a month. To calculate this in a worksheet, produce a table with the number of days in each month in one column and the interest rate in the next column.

	M	N	O
1	31	0.0528%	
2	28	0.0585%	
3	31	0.0528%	
4	30	0.0546%	
5	31	0.0528%	
6	30	0.0546%	
7	31	0.0528%	
8	31	0.0528%	
9	30	0.0546%	
10	31	0.0528%	
11	30	0.0546%	
12	31	0.0528%	
13	Monthly rate =	1.65000%	

The numbers in column M are the number of days in a month. In cell M2 a formula has been placed that decides the number of days in February on the basis of whether or not it is a leap year. These interest rate values

can now be referred to in other parts of the worksheet.

Take a credit card bill and enter into a worksheet the balance brought forward and the purchases. The balance brought forward should be that after any interest or payments are made but before any purchases have been added.

In *ClarisWorks*, the worksheet starts off looking like figure 1. All the initial data has been entered in the top left hand corner and these are referred to with absolute references in the table – so E7 contains the formula $=B\$1$. This means, the table can be moved without losing reference to this information. The cell C8 is highlighted and is displaying the formula to calculate the monthly interest rate. When we showed how to do this above, 100 was used as a divisor at various points. This is implicit here as percentage formats have been used. The twelfth root has been calculated by raising to the power of one twelfth.

In the cell D8 a PMT formula must be placed to calculate the monthly payment, as shown: note a trick has been used to calculate the number of repayments. When this spreadsheet is used, 'fill down' can be used for the required number of rows. In column D, the amount to pay per month will be calculated based on the amount remaining, the number of payment periods remaining and the APR. To calculate the number of payments remaining, the number of years (in cell B2) is multiplied by 12, and then the current row number (with ROW()) is subtracted and eight added on. For the next month on the row below, this calculation will equal 11. To finish off, a formula to calculate the remaining amount can be placed in E8, which will be the amount in D8 plus interest less the payment.

In the next row, a formula can also be put in A9 to add one to the month. Then put a reference in B9 to B8 and fill down the rest of the row.

The formula to calculate the date is shown at the top. The worksheet can now be filled down for the rest of the loan.

This is the resulting worksheet for a year. With this spreadsheet, the interest rate can be changed half way through the life of the loan. If the annual interest rate falls at Christmas to 17%, the new APR can be entered into B11 and the sheet will then recalculate.

This worksheet could be expanded to calculate repayment mortgages. However, as shown at the moment it will only recalculate the gross repayment – more work will be required to calculate the repayment with tax relief. For endowment and pension mortgages, only the interest is paid so a simpler spreadsheet can be used that calculates the monthly interest.

Jargon Busters

Absolute reference: a reference to a cell that does not change when moved. Usually written with '\$' signs i.e. \$A\$4.

Power: as in '5 to the power 3' (written 5^3) is $5*5*5$. Can also calculate roots so ' $25^{(1/2)}$ ' is the square root of 25 which is 5.

Range: a 2D selection of cells. For example, in *ClarisWorks* the top left four cells are A1..B2.

Relative reference: a reference which will change when moved. So if the cell A5 contains the relative reference A4 and is copied to B6, the reference becomes B5.

Serial number: how dates are represented in worksheets. This is usually the number of days after 1 January 1904.

As we can see from the statement above, the next payment may be in June and there are purchases from April which will attract interest. We need to calculate how many months there are between the date of the transaction and the payment being made. We do this in column E with the formula shown:

There will always be interest between the brought forward date and the payment date. The formula calculates how many more months have to be taken into account. For a payment in June, all the transactions will attract interest for the days of June but some will attract interest for some of May and April. So for the purchases in April, there will be interest for the rest of April, all of May and part of June. The calculation is not just a simple

subtraction as that would not work over a new year. The formula works correctly by using a modulo function.

We are now going to have to calculate the amount of interest for each item in each month. For each item there will be two calculations: the number of days of interest in that month; and the actual amount at the end of the month.

In F2 is the number of the month we are interested in, which for the first case will be two less than the month of the payment. The interest rate for the month is in F3 and is found by using the INDEX function into the table constructed earlier. Below that is the formula to calculate the number of days of interest. It is an IF statement that first decides if interest was paid in this month. If so it indexes into the table of the number of days in the month and subtracts from that the day of the transaction. The values in column G are the result of a compound interest for the number of days in column F for the interest rate in F3.

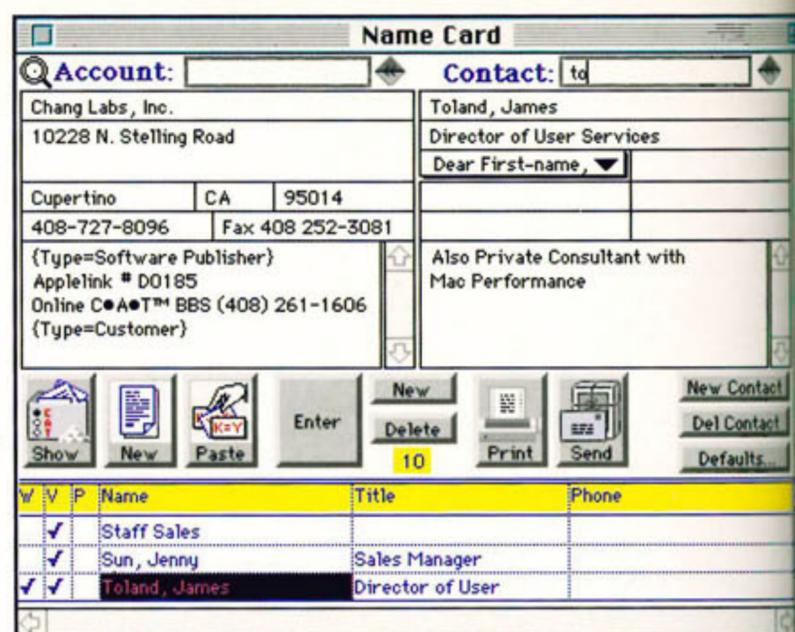
Similar columns can also be produced for the next two months though care must be taken to get the right numbers.

The total interest for the period will now be the sum of the values in column L. This can be added to the previous balance and the payment subtracted. This will give a new balance which will gain interest up to the statement date.

The balance shown in C17 is the value in C15 after interest has been calculated. The interest shown in C16 is the sum of the interest on the brought forward balance, the purchases and the balance after payment. Finally in C18, the number of payments of the same size as this month required to pay off the credit card has been calculated. To do this the NPER function has been used. The result has been rounded to give a whole number of months.



The three main elements of C.A.T. are its database of contacts, the documents that relate to those contacts, and the templates that you create as layouts for each document type



This looks like a normal address book, but actually consists of two related files, one for accounts (ie companies), the other listing contacts (people)

Is it a database, a graphics program, or a word processor? Well, C.A.T. is all of these things and more. Jack Weber explains...

A C.A.T. for your mouse

Sad but true: a crummy program with a clear purpose will often be more successful than the insanely great software that doesn't fit into any neat category. *HyperCard* is the classic example, but there are others like *Stella* or *Mathematica* – applications which are so versatile that you could easily end up not knowing what to do with them. The database business has one, too. It's called C.A.T. and, like those other programs, it's very flexible, very powerful and very easily misunderstood.

It's billed as a 'contacts manager', which is fair enough, but doesn't really do it justice. In fact, C.A.T. (the name stands for Contacts, Activities and Time) is a full relational database which also happens to have word processing, graphics and basic calculation features attached. It's been around almost as long as the Mac and, over the years, has been transformed from plain C.A.T. to the recently released C.A.T. IV version 1.0.

So what's it for?

The program's role is to provide a framework for managing all the documents, appointments and notes relating to a large number of business contacts. To be really effective, you need to let C.A.T. run the whole show: correspondence, invoices, appointments diary, business reports – the lot. Setting this up could take some time, but you don't have to do it all up front and once you've created a few letterheads, memos, standard letters,

There are numerous other contact managers on the market, but none that are as flexible at C.A.T.

custom forms and so on, you'll begin to see the full benefit of C.A.T.'s approach.

Essentially, what C.A.T. does is to combine the whole process of document layout, mail merge and scheduling into one application, then store the details of what you've done in the database. Every time you set up a meeting, dispatch a letter, log a phone call or send out a mail shot, C.A.T. records the who, what and when of the event. If you then want to see all the invoices ever sent to Acme Corporation or all the letters written last Tuesday, you just call them up.

You can attach a future date to any activity, in which case it will appear in your To-Do lists, and automatically disappear when it's been done. You can even tell C.A.T. to automate link sequences of activities. This can be used, for example, to prompt a follow-up call ten days after sending out a brochure, or to schedule subscription reminders at yearly intervals.

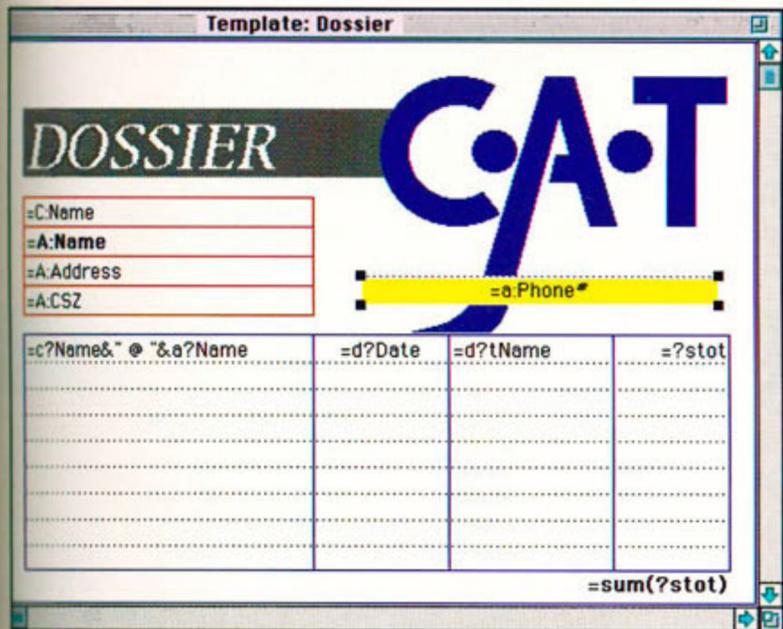
C.A.T.'s word processing and graphics abilities can't compare with dedicated

Tidbits from the database world...

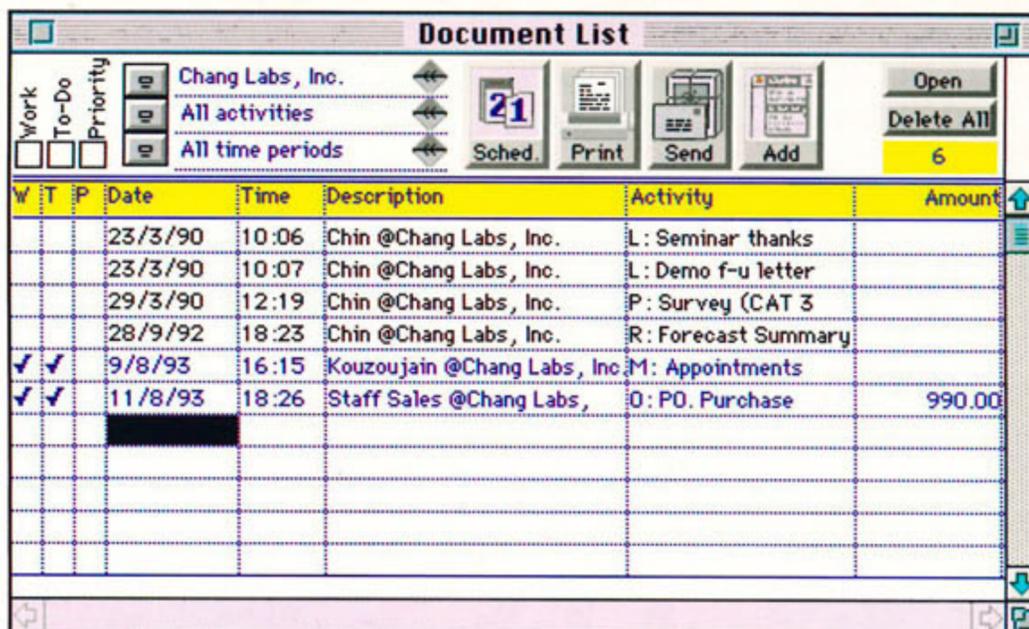
Rumour has it that a programmable relational version of *FileMaker* is being developed for release in 1995. If it's as good as the flat-file program, this could be a real killer application. Then again, if it's delayed as much as *MacWrite Pro*,

we'll have something to look forward to until 1997. Speaking of anticipation, what ever happened to *FoxPro*? When Microsoft bought *FoxBASE+*, it looked like this ageing but powerful database might get a new lease of life. It did, but only for Microsoft's own operat-

ing systems, DOS and Windows. The latest word is that *FoxPro* for the Mac will hit the streets early in 1994. Even more interesting is a hint that Microsoft may have other Macintosh database goodies up its sleeve. Watch this space for more details...



Designing a template for a new document type. The codes in the boxes are references to fields in the database or in other templates.



As your database fills up, you can view documents by account, contact, type and date. Every activity has a document attached, and you can create or modify the activity and document types at any time.

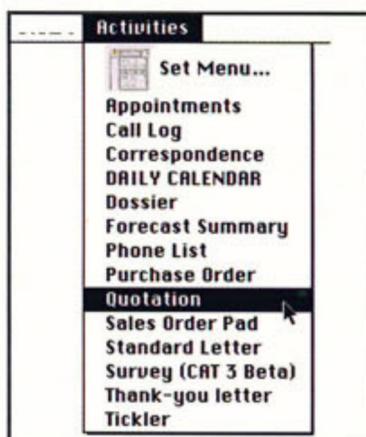
programs, but they're certainly adequate for creating most forms and letters. You design each document type as a template, which could be something like an expenses report, an appointment reminder or a letterhead layout. Then you create specific documents by linking a template to a contact name and filling in any blanks.

Documents are central to all of *C.A.T.*'s activities: you can't, for example, simply schedule a meeting; instead, you have to first create a meeting document and then schedule that. This can feel strange at first, but the document need be nothing more than a small note on the screen, and the consistent logic of it all does make sense once you get used to this method of working. One particularly nice feature is the program's ability to export records to another *C.A.T.* database while maintaining all relational links. This makes it very easy to move data and documents

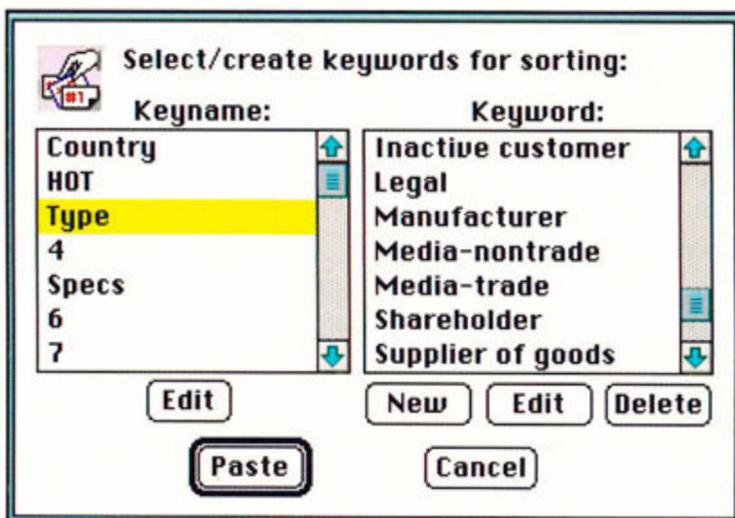
between users, or to update your office files from a PowerBook after you've been on the road for a few days.

Furry friend

There are numerous other contact managers on the market, including some very good ones, but none combines document creation and data so flexibly. *C.A.T.* isn't a universal solution though; anyone who works in an ad hoc fashion may be better off with a conventional address book and word processor. Where it wins out is in handling large groups of similar contacts – patients, club members, sales prospects, mail order customers, subscribers to a newsletter and so on. *C.A.T.*'s publishers promote it very much as a program for sales people, which may be an attempt to give it a clear purpose in life, but it deserves to be used more widely and more imaginatively than that.



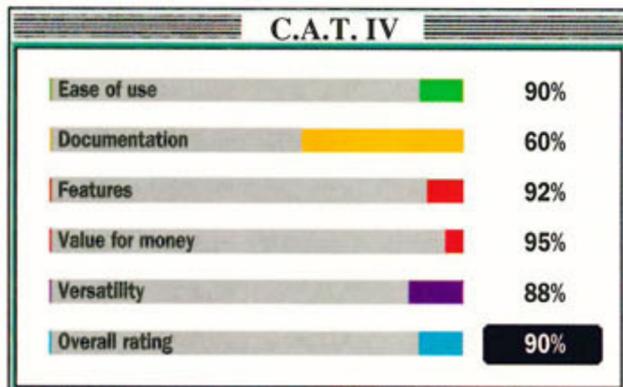
Having customised your templates, you can customise the menus to show commonly-used document types or specific views of the database



Keywords grouped into different categories let you classify contacts, so it's easy to retrieve groups of records at the same time

Where to get it

C.A.T. IV costs £464 and is distributed by Can Do Ltd on 0452 527603. If you're serious about trying it, the company has an excellent demo version.

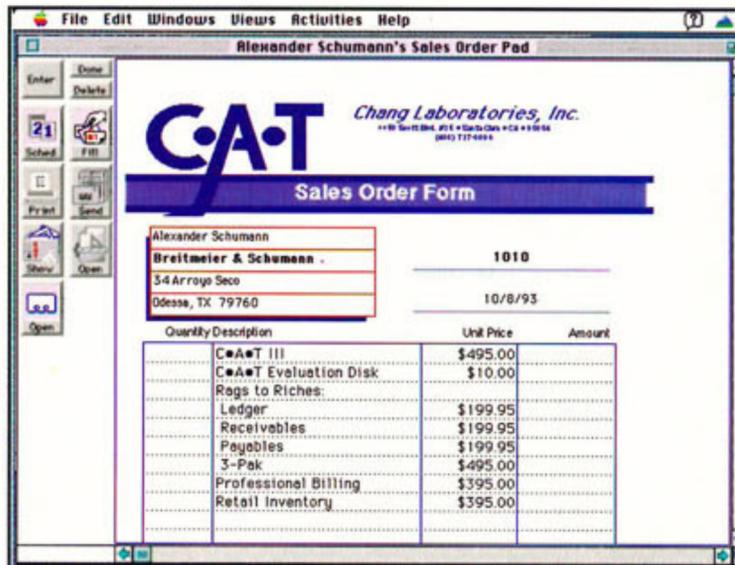


What needs fixing in C.A.T.

1 The documentation – information is scattered randomly through the guide, tutorial, help screens and within preset templates. It's not even complete – try looking up anything practical like how to set tabs, and you're on your own. What's really weird

is that earlier versions of the program used to have quite decent manuals. **2** On-screen help – this includes four windows of quotes from reviews saying how wonderful *C.A.T.* is. Come on guys – someone who's just paid £400 for your product and is

confused by it doesn't need this. And you can quote me on that. **3** Address Card formatting – yet another US product that makes no concessions to the rest of the world. You can live with this, but it should have been properly localised.



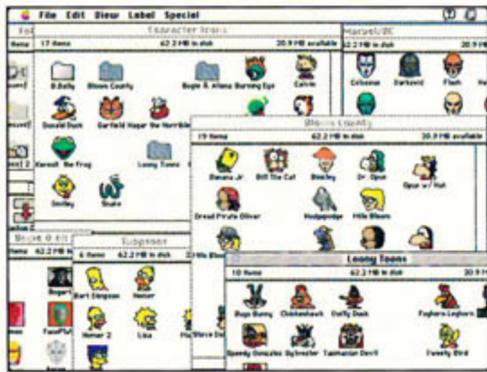
A finished document ready to print, with some data entered automatically from the database, and some entered by hand

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Only £5 per disk!



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.

B101

This disk contains the superb **BiPlane 2.0** – best shareware spreadsheet on the market – plus **Cal 3.02**, a shareware calendar creator which can be shared with other people over a network (when you register your copy), **MiniWriter**, a neat little word processor in the form of a desk accessory, and **ToDo**, a 'to do' list organiser.

B102

On disk B102 is the whole **Address Book** suite of programs. Address Book is a very powerful utility similar in operation to the commercial DynoDex address book database, and the disk contains not only that program but also utilities for converting files from a range of other database packages to Address Book format.

GAMES

G101

Maelstrom – quite simply the best shareware shoot-'em-up around. Requires a 13-inch, 256-colour monitor.

G102

This disk requires a 256-colour monitor, and features **Diamonds** – control a bouncing ball as it darts around the screen, knocking out bricks as you go; and **Storm** – based on Tempest, the classic arcade game.

G103

Similar to Marble Madness, this great game requires a combination of logic and hand-to-eye co-ordination to complete. You can even play across a network!

G104

A range of strategy games, including **Backgammon** and **Chess** – play against the computer in these two age-old games; and **Mombasa** – remove the matching blocks to clear the board.

G106

The truly brilliant **Solarian** – a 256-colour masterpiece based on the classic arcade game Galaxians. Seriously addictive!

G111

Nine different card games, including **Forty Thieves**, **Blackjack** and **Precision Cribbage**. No Mac fan should be without this excellent collection.

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.

HYPERCARD

Please note that all HyperCard disks require HyperCard 2.0 or higher, or the HyperCard player – which is commercial software.

H101

Mozart Catalogue – the complete works of Mozart, along with their Köchel numbers and the approximate date and place that they were composed.

H102

H G Wells – two classics from the master of science fiction: *The Time Machine* and *War Of The Worlds*, both in HyperCard format.

H103

Shakespeare – four of the Bard's plays, beautifully presented in HyperCard.

H104

Twin Peaks Trivia – everything you wanted to know about the quirky TV programme...

SOUNDS

We have a wide range of Sounds disks, each containing the great **SoundMaster** program, which allows you to assign sounds to Mac actions such as Restart, Eject Disk, Shutdown and so on. For example, **S101** contains samples from *The Simpsons*, *Alien*, *Terminator* and *Twin Peaks*; **S102** has samples from the cult kids' TV cartoon *Trapdoor*; **S105** gives you sounds from *Good Morning Vietnam* and *Star Wars*; **S106** features *Star Trek* and **S107** is full of *Wizard Of Oz* goodies.

'EXTRAS'

X101

Three high density disks telling you everything you wanted to know about the **JFK Assassination**, in HyperCard format. Sending in your shareware fee entitles you to another, free disk. Because there are three high density disks in this package, the price for X101 is £10.

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



DiskDup+

Easily duplicate floppy disks

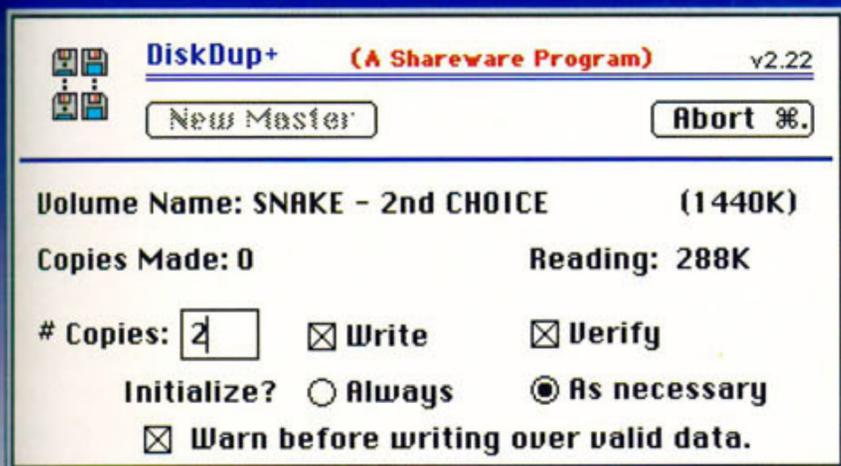
Apple has a program called *DiskCopy*, which allows

you to easily make one or multiple copies of a floppy disk – and the copies are exact duplicates, which is useful if you want to make a backup of something like your Norton *Utilities* emergency disk, since this crams more on to a floppy than is normally possible. Apple even ships some software in an archive format which requires that you use *DiskCopy* to re-create the original disk format – for instance, older versions of the System software are available on AppleLink in *DiskCopy* format. Unfortunately, it's not always too easy to get hold of *DiskCopy* itself – very few

people have a license to distribute the program, even though it doesn't cost anything.

That's where *DiskDup+* comes in. It's a shareware replacement for *DiskCopy*, and does a fine job. You can specify the number of copies of a disk that you want made, whether or not to verify the data as it's being written and so on. It copes happily with *DiskCopy* image files, so any software in that format is readable, and if you've registered your copy of the program you can even mount disk images without having to write them to floppy first – an extremely useful feature.

If you need to duplicate disks, or just want to back up your precious original application disks, *DiskDup+* is well worth getting hold of.



DiskDup+: a worthwhile, freely-distributable alternative to Apple's *DiskCopy*, which can be tricky to find since Apple restricts its distribution



DragAnyWindow

Why is it, that whenever a modal dialogue box appears on the screen (that is, one that you can't

move or avoid, such as the 'Save As...' or 'Do You Really Want To Quit' dialogues), you desperately need to see something in a window underneath it? Sometimes, for example, you want to know what the file was originally called, if you're doing a 'Save As' for backup purposes. But because the Save As dialogue box covers up the window's title, you're stuck. Complain no more: this shareware program allows you to move those pesky windows around on the screen with impunity.

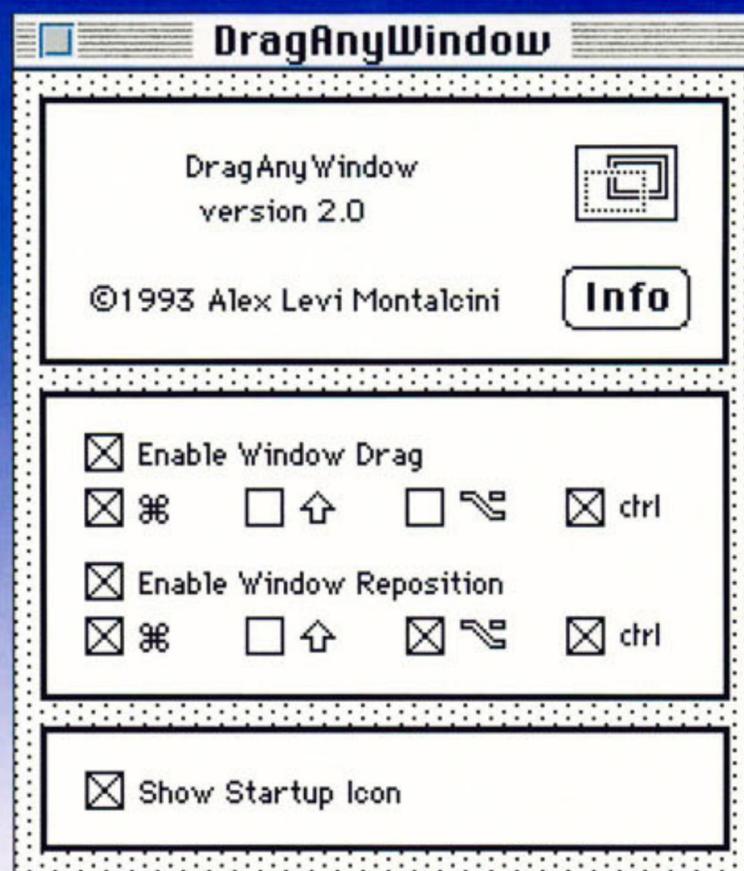
Configuration is via a control panel: you decide what combination of the standard modifier keys (Command, Control, Option or Shift) you'll need to use if you want to move the window, and also which you use to automatically reposition it. Then just hold down those keys and drag with the mouse to move the window. Or hold down the second set, click anywhere on the screen

and the window will automatically be repositioned to centre on the mouse – even if some of it is hidden off the edge of the screen.

Normally, this type of program tends to be susceptible to incompatibility problems more than most – and many System errors can be directly traced to badly behaved utilities that try to do such things. However, I've been using *DragAnyWindow* for a couple of weeks now with no incompatibilities at all. (Well, I'm not sure of the cause of one crash in that time, but on a Mac loaded to the gills with odd and unusual Extensions and utilities, it's certainly not fair to blame it on this program rather than any other.) It works with the programs that I use regularly – things like Microsoft *Word* and Adobe *Photoshop* – and the only problem I've found is that occasionally you'll come across a program which doesn't redraw the contents of a window after a dialogue box has been moved – but even then, there are no crashes.

This is certainly a program worth getting hold of – especially for people with smaller screens.

Allows you to move all windows around the screen



DragAnyWindow: an excellent little utility which allows you to move windows around the screen – even if they weren't designed to be moved

SHAREWARE ZONE PD

Ian Wrigley brings you his monthly round-up of shareware goodies including a program for Mac knitters (yes, that's right), a program for exiled US Republicans and a little gem that takes the hassle out of sending PostScript files to a printer

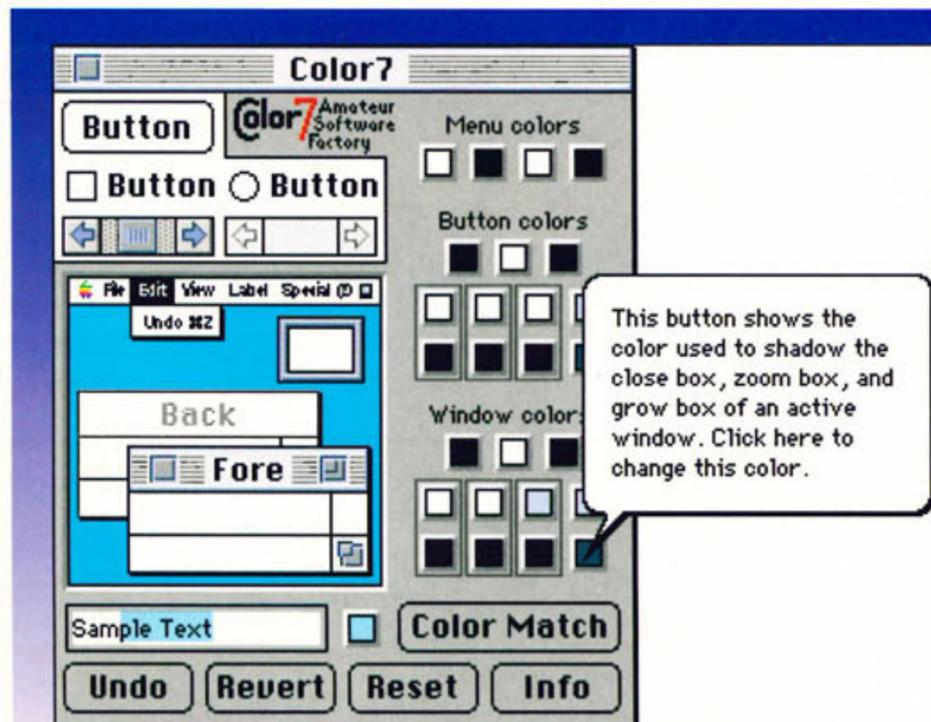


Color7

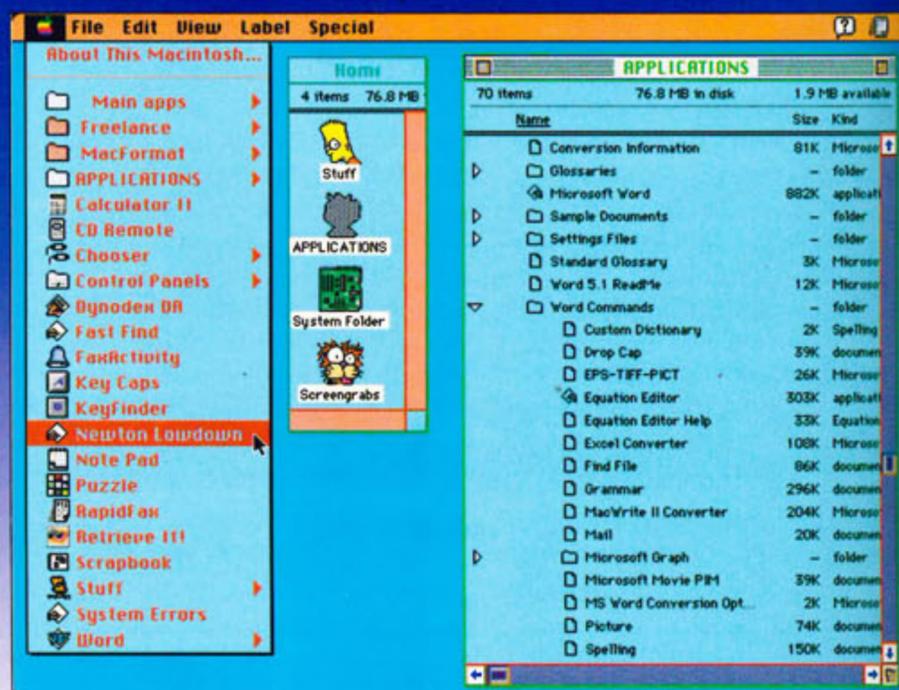
Customise the colours of menus, windows, buttons, and so on

When System 7 came along, it was praised for its use of 3D-ish icons for some things, like the scroll bar controls, Close and Zoom boxes and so on. However, much is still flat and boring – buttons in dialogue boxes, for a start – and the menus are still that boring old black and white. Well, *Color7* is designed to get around those restrictions. (Non-System 7 users and people with black-and-white monitors can skip on down to the next review now – this won't make any difference to you.) You can choose your own colours for just about anything on the

screen (although you can't get that neat 3D effect that *Greg's Buttons*, on *MacFormat* issue 5's cover disk, gives), and these changes should be reflected in all applications. However, I found that sometimes *Color7* had trouble updating windows – so my attractive powder blue window background occasionally had white stripes after I'd resized the window. Other than that, the program seems to work fine – but if you really want to customise your user interface, I'd still go for *Greg's Buttons* rather than *Color7*. It gives the cool bas-relief effects without letting you do quite such gross things to the basic appearance of your screen.



Color7 has been well programmed: Balloon Help is built in, and loads of different options are available. It's rather crowded to all fit in one window, though.



You can do some of the grossest things imaginable to your Mac's appearance using *Color7*. Fortunately it allows you to restore sanity at the single click of a button.



Drop•PS

Sends PostScript files directly to a printer

This is a program that you may never have a use for; but I dug it up from an Internet archive because it did exactly the job I needed at the time, and I thought that I'd share it with you because it does that job extremely well.

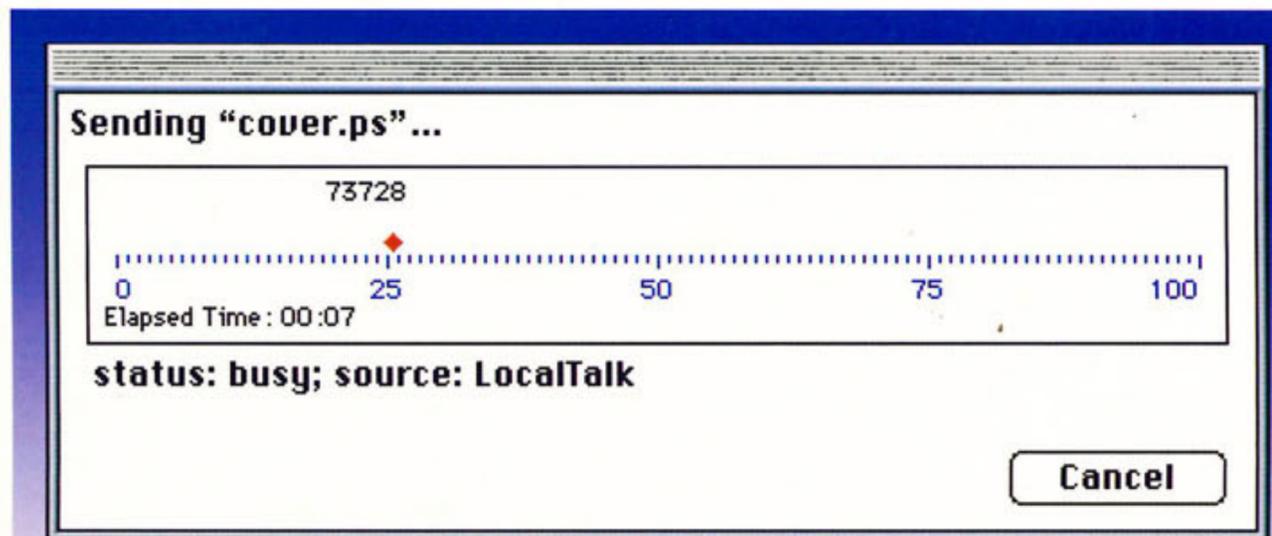
Drop•PS is designed for people who need to print out PostScript files, to a PostScript laser printer. Now, that's not the same as printing to a laser printer from within an application; instead, it's used if you are supplied with a PostScript file which you want your printer to interpret. There are various situations when this may occur.

Imagesetting bureaux often get PostScript files, rather than files in an application's normal document format (a PostScript version of a page rather than a *QuarkXPress* document of that page, for example). Often, in fact, files are preferred this way; there's no chance that opening the document in the bureau's version of *XPress* will cause text reflow or any other horrors. Or you may know someone with a Windows PC or a Unix workstation, using a program which can generate a PostScript file, but who doesn't have access to a printer. Using *Drop•PS*, you can output the file for them – regardless of the fact that you don't have the same type of application on your Mac.

Just get them to give you a disk containing the PostScript file, and you're away.

Now, *Drop•PS* isn't the only method of getting a PostScript file to your printer: one of Apple's System disks has a printer utility which allows you to download PostScript files, and many printers come with their own, similar software which again accepts a PostScript file for download. However, *Drop•PS* does have a couple of advantages. The first is that it shows you the progress as your file is downloading – so you have some idea of how long you're likely to have to wait before the job is finished. Secondly, and more importantly, it's a 'drag and drop' application (if you're using System 7). That is, you can drag a PostScript file to the application's icon and it will automatically be downloaded – there's no need to go through the 'Open' dialogue box, as is the case with Apple's software. Best of all, though, is that this drag and drop operation applies to more than one file. You can drop a group of files, a folder or even a disk on to the application – all the files will be downloaded, one after the other. This is brilliant: I had a dozen or so PostScript files to download, so I just dragged them all to *Drop•PS*, made sure that the printer had enough paper loaded and went off down to the pub. Using Apple's supplied utility, I'd have had to sit there watching each file download so that I could set the next one off.

Increased Guinness consumption is just one reason why I can heartily recommend *Drop•PS* if you're ever in the situation of having to send PostScript files to an output device.



Drop•PS: a graphical display gives you full details of what's going on, and you can send large batches of files to the output device at once, rather than one at a time

Freeware

Carte

Carte, written by a guy called Art Min, is apparently based on a game called Uno; you play against a maximum of five computer opponents, each one of which has its own digitised voice to tell you when it's nearly finished playing its hand. The idea is basically that you match either the colour or number of the card on the 'discard pile' with one from your own hand; that then becomes the colour and/or number that the next player must match. If you can't play a card, you must draw an extra. There are 'wild cards', which can be used to change the colour being matched, and forfeits which apply to the player after you: draw two cards, skip a turn and so on. When one player has no cards left, the values of the others' hands are calculated and added to a running score. The winner is the player with the least number of points when one player

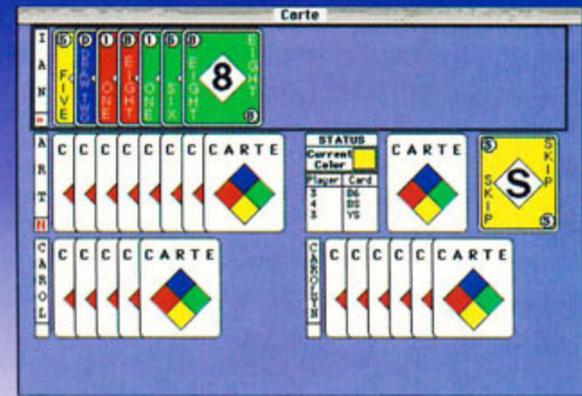
has reached a 'ceiling' score. The rules, then, are simple to get the hang of, and the game plays well on the computer.

The opponents are shrewd, and are fairly hard to beat. There's more strategy required than you'd think at first, and before long the whole thing becomes pretty addictive. There are a couple of 'cutesy' features: if you don't play for a while, the computer will subtly clear its throat to point out that it's your turn (something which can be extremely disconcerting!), and eventually it tells you to hurry up.

Each time a player has only one card left, its digitised voice announces this – but since each player only has one phrase, that can soon begin to grate. Fortunately you can turn the sound off if it starts getting aggravating.

There aren't that many card games where the computer actually provides an adversary for you – most are variations on one form or other of

Card game, you against computer opponents



The computerised opponents even have digitised voices that tell you to hurry up if you're slow to make your play!

Patience – and *Carte* makes a pleasant change. It's certainly worth checking out if you're a computerised card game fan.

Shareware

BabySmash!

If you have tiny children who love to get at your Mac and bash the keys to see what happens, normally destroying hours of work – inevitably the day before you're due to give it to the boss, the tax man, teacher or whoever – you have two options: (1) lock them in a cave until they're adults, or (2) get a copy of *BabySmash!*

There are disadvantages with both solutions: locking them in a cave could result in them singing *Chitty Chitty Bang Bang* for the rest of their lives, while a copy of *BabySmash!* may well put paid to your keyboard's longevity. Let me explain.

The program, quite simply, makes sounds and draws shapes whenever any key is hit or the mouse button is pressed. The only way to quit the program is to hit the [command] [U] and [/] keys simultaneously – something that a toddler won't be capable of. (Actually, you can 'force quit' the program if you're running System 7 by hitting [command] [option]

[escape], but again this is unlikely to be a problem with little kids, unless, of course, they are avid readers of *MacFormat*.)

The shapes drawn are simple rectangles, ovals and so on, in a range of different colours, while the sounds range from simple beeps through boings and pings to sampled dialogue – there's certainly plenty of variety, and should at least keep your offspring occupied until you realise what's going on and charge back into the room with threats of Child Catchers with long noses and pointy boots.

The only problem I can see with *BabySmash!* is that any self-respecting two-year-old is likely to smash the keyboard into smithereens within minutes of finding a Mac running the program. Still, those of you lumbered (blessed?) with offspring will probably love it for the safety it affords your work when you leave it unattended.

On the other hand, employing the guy with the big nose and silly hat does have a certain appeal... (in other words, Daddy – Andy).

Keep the kids occupied on your Mac

Shareware

TrashMan

TrashMan is designed to automate the emptying of the Wastebasket in System 7 or above.

Why? Because ordinarily it doesn't empty until specifically

told to do so by the user – which is great in many cases, but can mean that you've loads of disk space tied up storing files that you really don't want any more (after all, that's why you've thrown them in the trash in the first place). On the other hand, not having the Wastebasket automatically empty each time you restart or whatever (which is what happens if you're running any System before 7.0) has often been a saviour for me, as I suddenly realise that I've thrown the wrong file away. As long as I haven't emptied the trash, it's still sitting there and can easily be recovered. Otherwise I have to resort to Norton's Undelete utility, which is often a problem since my disk normally runs a about 95% full – so the chances to actually being able to recover a file are minimal.

People, then, naturally split into two groups: those who compulsively empty the Wastebasket every single time they throw something in there, and people who forget until they realise that there are 10Mb of

unwanted files in there. (Gosh, have I just invented a whole new branch of psychology? Well, perhaps not...)

TrashMan solves both kinds of people's problems, by automatically deleting files after they've been in the Wastebasket for a user-specified number of days, hours and minutes. This way, you can set the delay long enough to be able to salvage something you've trashed by mistake, but not so long that you run out of disk space waiting for the files to disappear. It's one of those things that Apple should have included in the System software to start with: a good, simple idea that becomes invaluable after you've used it for a while. It works well, and seems to cause no problems or conflicts with anything else. My only real complaint is that I had to read the instructions about three times before I got the hang of what the *TrashMan* Emptier application, which is also supplied, actually does. Turns out it will delete those files in the Wastebasket from a specific disk, if that disk is dragged to the icon. It will also eject the disk afterwards, handy if you want to make sure you've emptied a floppy's Wastebasket before you give it to someone else.

Whether you're a compulsive emptier or a closet hoarder, *TrashMan* is an excellent piece of software – check it out.

Automatically empties the wastebasket for you



TrashMan: a System 7 utility which automates the process of emptying the trash. Useful if you find that you're spending more time selecting Empty Wastebasket than actually working...



MacEmatics

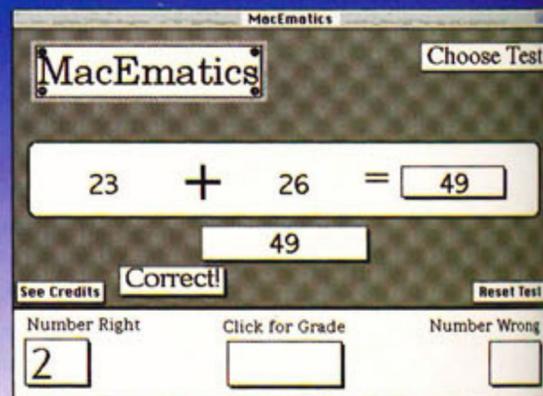
'MacEmatics is a HyperCard stack which tests basic (and not so basic) arithmetic: addition, subtraction, multiplication and division. It contains sampled sounds (such as Homer Simpson saying "Dohhhh!" if you get a question wrong) and will keep track of the number of correct and wrong answers you give. At the end of the test, your percentage of correct answers is available. The questions are displayed large and clear, and clearly the program has been designed to be easy to use for small children.

Unfortunately, it doesn't quite achieve that design aim. The process to start a test is convoluted: after answering a couple of questions, such

as how many sums you'd like to be tested on, you're then told to click on another button to decide what sort of sums they'll be – why not ask that in the basic dialogue? Also, it seems quite possible to fool the program so that hitting Return when a test has finished is taken as a 'wrong' answer – something that's easy for the programmer to trap. There's also the slightly worrying point that every time I started the program, I was told that there was 'no such menu item' – which suggests that perhaps the program hasn't been debugged as thoroughly as it might have been.

It's a shame, but I can't really recommend MacEmatics. Instead, keep up with our HyperCard tutorial series and have a crack at writing your own.

Maths test HyperCard stack



MacEmatics: a HyperCard stack intended to teach basic arithmetic. Unfortunately, it wouldn't have been awarded a teaching qualification



GradeBook

Now this, on the other hand, is definitely worth checking out if you're a teacher who wants to computerise your records of pupils' marks.

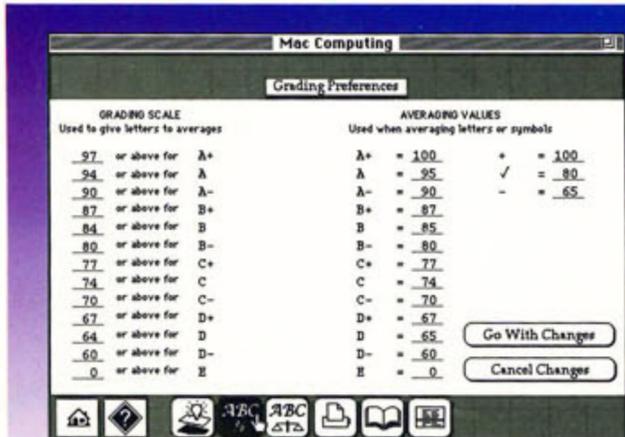
Again, it's a HyperCard stack – but it's just as good as a dedicated application written in any other programming language (although perhaps not quite as fast).

It's true that the program was written by an

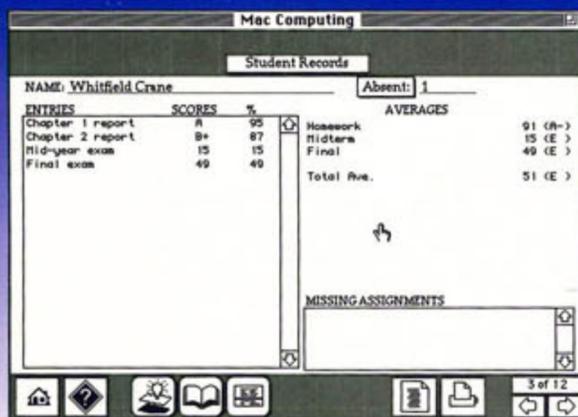
HyperCard stack for teachers

American. But its beauty is that it's not restricted because of that – things like grading systems are so user-configurable that you can use your own methods, no matter how esoteric they are. For example, you can have simple 'yes/no' marks (perhaps for attendance), letter grades or scores (percentages or just marks out of a given total) for each of the 'events' that you set up, you can record absences, you can set each letter grading to have an equivalent percentage so that a student has a running percentage mark throughout the year, and so on.

It only took me about ten minutes before I was totally confident navigating around the user interface, but an excellent and comprehensive help system is there at all times if you get confused or lost in an option. This really is an impressive example of what HyperCard can do; it could certainly be used to keep a class' records with no trouble, and I can heartily recommend it for further examination to any Mac-owning teachers.



GradeBook is flexible enough to allow just about any marking system to be used



Individual reports can be produced for any student. Looks like Whitfield should pull his socks up...



Shutdown Delay

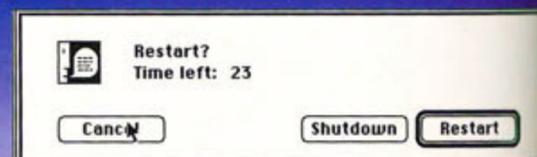
How many times have you hit Shutdown or Restart, only to realise just after you did it that it wasn't what you wanted to do at all? Enter Shutdown delay, a nifty little utility that will solve your problems for you.

It's configured from a Control Panel, where you decide how long the delay will be between selecting the Shutdown or Restart command from the Special menu and the action actually taking place. (You can also define modifier keys, for example Command and Option, whereby holding them as you select the menu item means that it's acted on immediately.)

Now, when you choose Shutdown (or Restart) all open applications are quit as normal, but then a window appears counting down the time until the Shutdown takes place. You can click a button to make it happen immediately, turn the Shutdown into a Restart (or vice versa), or cancel the operation altogether.

It's small, it's neat, it works like a dream and it should be on everyone's Mac. If you set a short enough delay – say, five seconds – you'll have enough time to bail out of an annoying Restart that you selected by mistake when you meant to empty the Wastebasket, while not wasting much time when you really did want to perform the action (and, of course, if you can't be bothered to

Just what it says – delays Restarts and Shutdowns



Shutdown Delay: useful if you find that your fingers slip and you're always selecting Restart rather than Shutdown from the Special menu

wait five seconds, you just hit the Restart button or press Return and it'll happen immediately). Well worth checking out – and the \$5 shareware fee certainly won't break the bank.



SiegeWatch

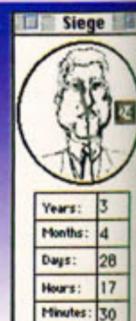
This program is for any exiled Republicans reading this magazine: it displays a clock with the current time and date, and also the years, months, days, hours, minutes and seconds until the swearing-in of the new President of the United States. The program uses the Maps Control Panel (it requires System 7) to compensate for whereabouts in the world you are, since the

swearing-in takes place at noon in Washington DC, and we do need to be accurate about these things...

Totally pointless, but for anyone earning more than \$180,000 a year, who's just been hit by Clinton's 'absolutely crippling' 36% top-rate tax band (we should be so lucky over here...), I'm sure it will serve as a heartening reminder that President Jefferson Airplane III won't have control for more than a few more years (months, days, hours, minutes, seconds).

Counts down the time left in the Clinton administration

SiegeWatch: keep a check on the number of minutes Bill, Hil and Socks have got left in the White House





MacGrid

Mines is a game which first appeared on Windows-based PCs some time ago,

and which has appeared on just about every computer platform since then. It's a logic puzzle which, although seemingly simple, is actually very addictive indeed.

MacGrid is just one such version for the Mac, and is played on a rectangular grid. When you start, each cell of the grid is blank; all you know is that under some of the squares are mines, which will explode if clicked on – so ending

the game. Your task is to discover which are the safe cells. To aid you in the job, if you click on a safe square a number appears on it, telling you how many mines are in adjacent squares. If you suspect that a square contains a mine, you can 'flag' it by Command-clicking – a flag is drawn on the cell, so that you remember to avoid it. If you manage to click on all the non-mined squares, you win the game.

The problem with the *MacGrid* implementation of this game is that it's not particularly easy to start. Many versions give you a larger playfield, with some squares already

uncovered, and hence showing the proximity of mines. However, since the *MacGrid* playfield is rectangular, and no hints are given, it's quite often the case the the first square you click on contains a mine – in which case you lose automatically. Still, once you've got a game going all versions of the game are the same, and at least *MacGrid* gives you options for the size of the board, number of mines and so on.

If you've never played a version of *Mines*, you should check this out – but be prepared to have to junk it after a couple of days, so that you can get back to doing some work!

'Mines' game – a logic puzzle



MacGrid: Yet another Mac version of the popular Windows game *Mines*



ColorKnit

For some reason, there seem to be a huge number of computer-owning

knitters – but not that much in the way of software to cater for this, ahem, fascinating hobby.

Still, *ColorKnit* goes some way to answering the demand; it provides you with a way of designing your patterns before you put wool to needle. It's a successor to *Knit*®, and works in black-and-

white or colour. In many ways, *ColorKnit* resembles a fairly basic paint program. A small tool palette allows you to select the colour to draw in, and there are the standard pen, brush and eraser tools.

However, all 'painting' takes place on a user-definable grid – just as you'd fill in squares on a piece of paper if you were designing your pattern by hand. A 'camera' tool allows you to clone a section of the design, and when you think you're happy with your design you can

display the picture as though it had been stitched (the small squares become V-shaped, to simulate a knitted appearance) to check things out. The design may then be saved as a PICT.

It's clear that a lot of thought has gone in to the program, and numerous small touches – such as the fact that you can move the grid relative to the pattern – mean that MacKnitters should find this program invaluable. It beats drawing things on paper, anyway.

Design your knitting patterns on the Mac



ColorKnit: design lovely woolly jumpers on the Mac, then go out and buy a T-shirt instead. Still, it beats using a pencil and paper...

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.

The shareware idea benefits both users and authors. Users get to try out a program before they buy it, while the author saves money on things like marketing and distribution. Unfortunately, many people treat shareware as if it were PD – they use the programs all the time, but never send payment to the author. Now, while it's true that sending money overseas isn't as convenient as just writing a sterling cheque out, it's still your duty to do so. If shareware authors don't see any money coming in, they are more likely to program purely commercial products in the future – which is a great shame.

Where to get it ▼

You can obtain PD and shareware from a number of different sources. First, there are the commercial PD houses (check the adverts in *MacFormat* for 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 1200baud 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

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.

HyperCard menu tour

Rod Lawton shows you more of HyperCard's incredible potential in the second part of our guide to its menu structure



This month we round up our whistle-top tour of the *Hypercard* menus. It's not been possible to examine every option in detail, but at least you should now have a good idea of the options on offer. Enough, at least, to try them out for yourselves.

Note that you effectively get a different set of menus when you use the Hypercard painting tools – the 'standard' Objects, Font and Style menus are replaced by Paint, Options and Patterns. These alternate sets of menus are detailed separately below.

The 'standard' menus

OBJECTS MENU

Objects	
Button Info...	
Field Info...	
Card Info...	
Bkgnd Info...	
Stack Info...	
Bring Closer	⌘+
Send Farther	⌘-
New Button	
New Field	
New Background	

Button/ Field Info...

These options are only available if you have the appropriate type of object selected. They give information about the objects' styles

and properties plus the chance to redefine them. (You get the same dialogue by double clicking on fields or buttons with the appropriate tool selected.)

Card Info..., Bkgnd Info..., Stack Info...

These three options are always available, and give you status information about all three, such as the number of buttons on a card, the number of cards sharing a background and the number of backgrounds in a stack. The **Card Info...** and **Bkgnd Info...** dialogues let you protect against deletion and eliminate them from future searches. The **Stack Info...** dialogue lets you resize the stack (and hence all the cards in it).

Bring Closer, Send Farther

Buttons and Fields can overlap, and you might want to change their 'stacking order'. This is a somewhat makeshift way of doing it, but it works (the **Info...** dialogue gives you an object's 'rank' on a card). Note that objects on the background are always behind objects on a card.

New Button, New Field, New Background

These three are all pretty self-explanatory.

FONT MENU

Font	
⌘	Athens
C	Futura Condensed
	Cairo
✓	Chicago
CL	Futura CondensedLight
	Courier
	CPCFont
CHB	Futura CondExtraBold
	FreshScript
	Futura Book
	Garamond
	Geneva
	Glyphs
	Helvetica
L	Helvetica Light
LB	Helvetica Black
	London
	Los Angeles

Every screen font installed in your system is available to *HyperCard*. (Go for fonts that display well – printed output is usually a secondary consideration.)

STYLE MENU

HyperCard offers eight different text styles plus six pre-set font sizes (and an option for choosing one of your own). No surprises here, except for the last style on the list. This has special relevance for 'hypertext' applications:

Style	
✓	Plain
	Bold
	<i>Italic</i>
	<u>Underline</u>
	Outline
	Shadow
	Condense
	Extend
	Group
	9
	10
✓	12
	14
	18
	24

words together so that *HyperCard* recognises the whole phrase instead of just the one word of it you clicked on. The **Group** option does just that. It's of little interest in normal use, but when we get on to hypertext, it's crucial.

Group

HyperCard is not just a sophisticated database, it's a hypertext authoring tool too. With a hypertext system, simply clicking on a word can bring up a definition, an explanation or take you off to another card altogether. But because you can have key-words, key-phrases and even key-statements, you need a way of 'grouping'

Paint	
⌘	Select
⌘A	Select All
	Fill
	Invert
	Pickup
	Darken
	Lighten
	Trace Edges
	Rotate Left
	Rotate Right
	Flip Vertical
	Flip Horizontal
	Opaque
	Transparent
	Keep
⌘K	Revert

selection tools and dragging.

Select All

Selects the whole card paint image (not buttons and fields). Or, if you're working on the background, the whole background paint image.

Fill

Has the same effect as using

the paint bucket tool, but you have to select the area you want filled first, instead of just positioning the bucket tool.

Invert

Gives you a negative image of the area selected. Black pixels are swapped to white and vice versa.

Pickup

By placing a shape over a patterned area and using this command, you can make the shape 'pick up' the underlying pattern and then move it away, retaining this pattern.

Darken, Lighten

These darken or lighten the selected area by randomly switching the

The painting menus

PAINT MENU

Select

This selects the last thing you drew. It's quicker than using the relevant

Tip of the month

With Power Keys selected (**Options** menu), the following keyboard shortcuts are available while the painting tools are being used ('selected area' means any part of your picture selected with either the Select tool or Lasso tool):

- A Select all
- B Choose black pattern
- C Draw centred on/off
- D Darken selected area

- E Trace edges in selected area
- F Fill selected area with the current pattern
- G Grid on/off
- H Flip selected area horizontally
- I Invert selected area (makes 'negative' image)
- L Lighten selected area
- M Draw multiple on/off
- O Make selected area opaque
- P Pickup
- R Revert (to last version 'kept')
- S Select (the last thing drawn)
- T Make selected area transparent

- V Flip selected area vertically
- W Choose white pattern
- [Rotate selected area 90 degrees left
-] Rotate selected area 90 degrees right
- 1 Makes lines 1 pixel wide...
- 2 ...2 pixels wide
- 3 ...3 pixels wide
- 4 ...4 pixels wide
- 5 ...5 pixels wide
- 6 ...6 pixels wide
- 7 ...7 pixels wide
- 8 ...8 pixels wide

colour of a small proportion of the pixels in the area.

Trace Edges

Places a pixel-wide line around the selected object. You can best see the effect by trying it out for yourself.

Rotate Left, Rotate Right

Rotates the selected area 90 degrees in the appropriate direction. There is a better 'free rotate' option in the Options menu.

Flip Vertical, Flip Horizontal

Produces a mirror image of the selected area.

Opaque, Transparent

Black pixels will always be 'opaque' but white pixels will either be truly white or transparent, letting you see what's behind them. These two commands let you choose whether the selected area is transparent in this way or not.

OPTIONS MENU

Options
Grid
FatBits
Power Keys
Line Size...
Brush Shape...
Edit Pattern...
Polygon Sides...
Draw Filled
Draw Centered
Draw Multiple
Rotate
Slant
Distort
Perspective

Grid

HyperCard 'objects' – buttons and fields – can be positioned freely anywhere on the card, but they can also be made to snap to an invisible grid for rapid, accurate alignment.

FatBits

Cards are usually viewed at 1:1 magnification, but you can zoom in to edit graphics on a pixel-by-pixel level with this option. (You can get the same effect by double-clicking on the pencil tool.)

Power Keys

This sounds a lot more potent than it actually is. The 'power keys' are a set of keyboard short-cuts for common painting commands (see this month's tip).

Line Size...

This adjusts the thickness of the line-drawing tool (double-click on the tool to get the same effect).

Brush Shape...

Again, you can also modify this by double-clicking on the brush tool. Most of the effects have novelty value only – standards have moved on since *HyperCard*'s mono bitmapped display.

Edit Pattern

Thirty-two bitmapped patterns are provided, but you can edit them at will either by selecting this option or double-clicking on any of the patterns on the Patterns Palette. You're then provided with a window (like the desktop pattern editing window) that lets you edit the pattern pixel-by-pixel.

Polygon Sides...

HyperCard can draw polygons with any number of sides. Here's where you choose the number.

Draw Filled

By default, *HyperCard* draws squares, circles etc 'hollow'. However, it can draw them ready-filled with a pattern of your choice. When 'draw filled' is selected, the relevant paint tools icons are filled.

Draw Centred

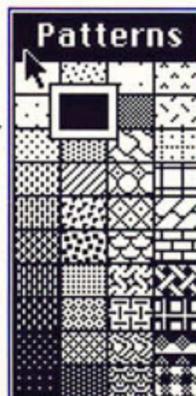
By default, squares and other shapes are drawn from the top left-hand corner. This option lets you draw them around a centre point. Useful when drawing non-rectangles at a precise location.

Draw Multiple

You needn't draw just one shape. This option lets you repeat it any number of times. Great for playing with but of questionable value otherwise.

Rotate, Slant, Distort, Perspective

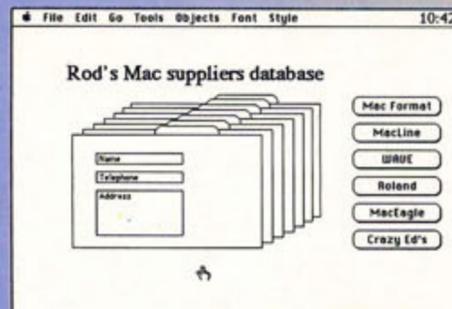
All four commands need a paint area to be selected with the marquee tool. They provide a bounding box with four 'draggable' corners. **Rotate** gives genuine free rotation, **Slant** moves one side of the box relative to the other in a shearing movement, **Distort** lets you drag one corner relative to the others, while **Perspective** does the same, but confining it to vertical or horizontal movement. Try these out to get the idea, though even then it may not be terribly obvious!



PATTERNS MENU

This is a tear-off palette, just like the Tools Palette. Use it to select the fill pattern, filled drawing pattern and brush pattern. (Double-click on a pattern to edit it.) **mf**

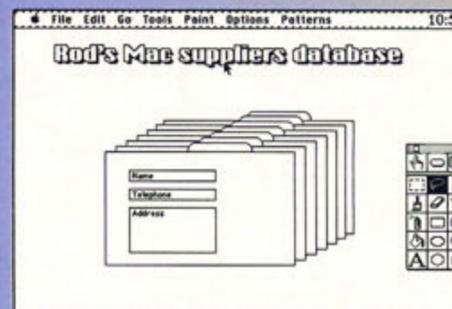
DIY HyperCard database stack: part 3



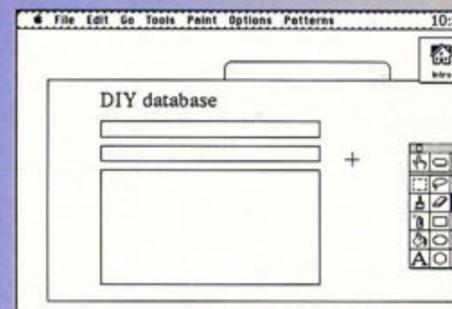
1 We ended up last month with a perfectly functional little database – except that it looked a bit too functional. Since we're looking at the painting menus and tools this month, let's use those to make the display look a bit more interesting.



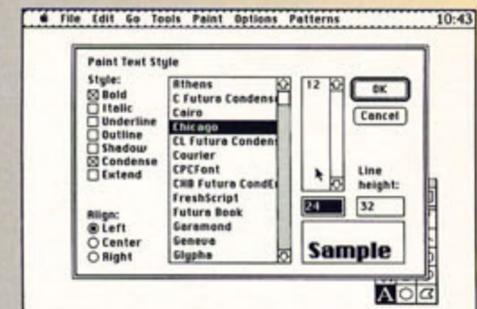
3 The only problem with this is that Chicago doesn't have a 24pt screen font – which means you get jagged-looking characters. But this is easily cured by double-clicking on the Pencil tool or selecting **Fat Bits** and 'smoothing out' the edges.



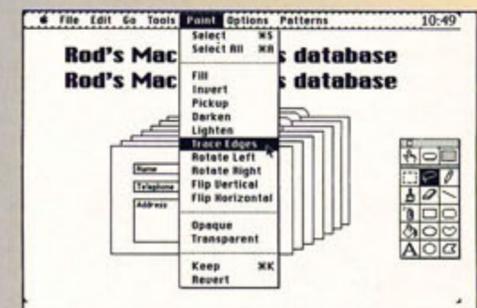
5 All you have to do now is drag the modified text back over the black original, offsetting it slightly to create the 'shadowed' look. There is a text style called 'Shadow' but it's not as effective or controllable as when you do it manually.



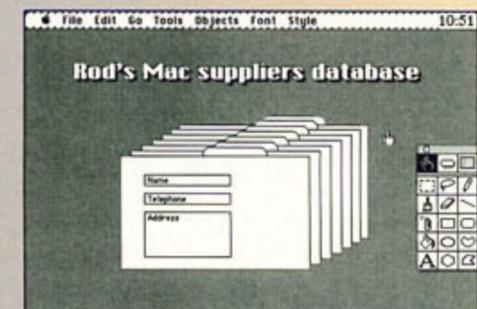
7 Now we've sorted out the title card, let's quickly do something with the index cards themselves – in fact, let's make them look more like index cards. First, using the rectangle and the round rect tools, draw a 'card' around the fields.



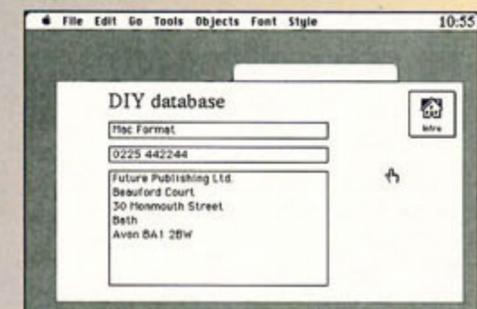
2 The first thing we can do is go for a bolder heading. Chicago is one font that everyone has, so let's use that. Double-click on the Text tool to bring up the text dialogue, which lets you choose font, size and style. We'll go for 24pt Chicago condensed bold.



4 Now we can create a shadow effect by first selecting the heading with the Lasso tool, then [option]-dragging to create a copy, then selecting **Trace edges** from the Options menu. This will make the text characters white with a black outline.



6 Now use the Lasso tool to select both the heading and index cards. Copy and then delete them. Now you can fill the screen with a pattern and paste down the heading/index cards again. Or you could have 'filled' around them for that matter.



8 Now fill the space around the 'card' with the same pattern as before and we've suddenly got something that looks like a database. (Note: if the painting tools aren't affecting the image, it's because you're trying to edit the card layer not the background!)

Where to get it

Although *HyperCard* version 2.0 is no longer available commercially, *HyperCard 2.1* costs £170 from your local Apple dealer. To find your nearest, phone Softline on 081 401 1234. A 'play only' version is available for £34.

NEXT MONTH

HyperCard buttons are central to designing and building your own stacks. Find out what they do, how they work – and the enormous range of styles and effects available.

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Orwell: Record & Send sounds over a network
QMRRecorder: Put voice messages on QuickMail.
SaintEdit: Great text editor for instant access
Talk2Me: Make your Mac an intercom
Shutdown Later: Make your Mac turn itself off later
AltWdef: Turns any open window into an icon
Alias director: Get your aliases under control

Power 2 (Sys 6) Over 1250K

KeyTools: Speed up your keyboard use with shortcuts
FlashWrite: Special pad for taking and editing notes
Mouse2: Make your mouse move twice as fast
ProSwitch: Instantly switch between programs
Unstuffit Lite: The ultimate file compressor
Boom202: Speed up the way you save files
MacPassword: Protect your Mac from prying eyes
Apollo: Have all your favourite programs on a menu
NOTES: Post-It type notes
Speedo: See how your Mac compares to others
Stylus: Powerful Text Editor with built-in fonts!

Latest top-line leisure

Hot games 1

Beamwars: Tron- style fast action bike game (colour)
Blade: Arcade action shoot-em-up (colour)
BattleShips: Play this classic against your Mac
Classic Daleks: One of the all-time great Mac games
Canfield: Play Solitaire on your Mac
Eliza: Talk to your very own Mac psychiatrist
Mac Defender: Brilliant conversion of the classic
MacTrek: Help the Federation defeat the Klingons
MacTurnover: A great version of Othello/Reversi
StuntCopter: Pilot a crazy attack chopper

Hot games 2

Risk: Great Mac version
BlackJack: Popular version of Pontoon
8 BALL: Brilliant pool simulator
Brickles Plus: Just like Breakout (colour)
Biorythm: The top Mac biorythm program
Glider: Guide a glider through your home
Core Wars: Great conversion of this old time favourite
Orion: Fantastic spaceflight simulator

....bags more games in our catalogue

Time-saving business tools

Timesavers 1

MiniWriter: Apple menu pull down word processor
theDirectory: A Rolodex for your Mac
Phones: Easy to use phone number database
Ck21: Easy to use home accounting software
DOITALL: Reminders and diary and appointments
Easy Envelopes: The easy way to print envelopes
Macsee: Load Mac disks on a IBM PC
Doswasher: Mac to IBM and back for text files
FileTypeer: Essential for changing file creators
HideFiles: Make sensitive files invisible

Timesavers 2

Personal finance: Simple but sophisticated accounting
Meeting Cost Monitor: Cut the time you spend in meetings
MacSink: Very powerful Apple menu word processor
Smart Calendar: Great calendar with built in reminders
Niff: Converts your DOS & Unix text files to Mac and back
Dateprog: Calculates the number of days between two dates
Little Black Book: Handy quick reference database
MailMenu: Use voice paging over your network!

Easy to use graphics programs

View-it!

BMP2PICT: Convert PC BMP pictures to run on your Mac
FolderView: See all your PICT files in any folder at once
Imagery: Great graphics converter for PC, Amiga and Atari
Imagjpeg: Uncompress JPEG graphics files
Imagutil: Mega collection of various graphics utilities
Picdecomp2: View all your JPEG files
Superconvert: Convert any TIFF file to EPS
Gifconverter: Load, view and convert GIF graphics files

...many other graphics utilities can also be used

Create-it! Over 1250K

UltraGrabber: Capture any part of your Mac's screen
Theatre Maker: Add backgrounds to your QuickTime movies
Popcorn: Easy to use QuickTime movie viewer and editor
Rays: Brilliant ray-tracing program
Deskpic: Put a full screen picture on your desktop
Rename: Photoshop plug-in for renaming PICTs
Wildmagic: The great QuickTime enhancer
Pico: Image-processing for colour Mac II range
Banner Maker: Print your fonts as BIG as you want
ScreenSnap: Guaranteed to take a snapshot of ANY screen

Pro Presentation tools

Extra fonts

Windsor: TrueType font
Architect: TrueType font
Goudy: Postscript 1 font
Rhyolite: Postscript 1 font
St-frans: Postscript 1 font
Thomas: Postscript 3 & TT Font
Mira: TrueType font
Andesite: TrueType font
Ashley: Postscript 1 font
Ballet: Postscript 1 font
Caraway: Postscript 1 font
Art Deco: 30's style font

A great selection of fonts from Art Deco to Hi-Tech

Perfect print

Keys: Make sure you've got curly quotes on print outs
Batchprint: Select any files to print without loading
T12win: TrueType converter
Serial DA: Run any printer connected to your serial port
Daisy: Run any Daisy Wheel printer
Typebook: Get a print out of all your fonts
Multispool: Printing in the background for non-laser printers
Sdw22: Connect your Mac to a HP Deskwriter
Proprint: Output to any printer but only text
Hpdj: Use the HP DeskJet printer with your Mac
Fontmaster: Excellent font display and lister

...Do you have a program you want us to find?

Desktop fun

Audio studio Over 1350K

Star Trek: Top sounds from the cult TV series
SoundTracker: Play Amiga, Atari and PC sounds
HAL alert: 2001's computer on your Mac
Deadterm: Make your Mac talk like Terminator Arnie
Sound Manager: Instant control over sounds
Big Ben: The most famous chime in the world
SoundMaster: Add any sound to any action!
RapMaster: Play rap music on your Mac!
SoundExtractor: Get sounds from other programs
Twin Peaks: Great collection of sounds from TV series

ask for a catalogue for more

Please help us to help you

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 Tick here if you own or plan to own a CD ROM Drive

WIN!

£1,400-worth of Hitachi 17MVX

colour screen

You can see lots more, in much greater detail if you use a 17-inch screen instead of the more common 14-inch screen with which most Macintosh users are familiar. This is why MacFormat has teamed up with Hitachi New Media to offer you the chance to win one of their top quality 17MVX 17-inch colour monitors, the perfect solution for graphics and desktop publishing applications.

The 17MVX uses Hitachi's FST technology which, with a true flat screen to maximise the display area, means a sharper, distortion-free and flicker-free image. Much more compact than most 17-inch monitors, the 17MVX can be connected directly to the Apple Mac and Apple's Quadra 8.24 card (at resolutions up to 832 x 624 pixels) as well as most third party adaptors. Colour purity is ensured through the use of an Invar Shadow mask which prevents thermal distortion while ensuring enhanced colour definition and image contrast.

As well as being one of the best-performing, highest-quality monitors available, the 17MVX also meets the latest health and safety regulations for display screen equipment. A low radiation monitor, it conforms to the very stringent Swedish MPR II standard for radiation emissions. It is also supplied with a tilt-and-swivel stand to ensure the best viewing positioning.

To enter the competition, simply answer the following three questions, complete the tie-breaker and send your entry to: Hitachi monitor competition, MacFormat, 30 Monmouth Street, Bath BA1 2BW.



The Hitachi 17MVX 17-inch low radiation flat screen monitor – let's run over those specs again. It's silica coated, 0.28mm tri-dot pitch CRT with INVAR shadow mask and dynamic focusing, thus maximising image clarity and performance. Resolution support is up to 1280 x 1024 pixels at 60Hz and 1024 x 768 pixels at 75Hz.

1 What does FST stand for?

- a) Flatter Squarer Tube
- b) Faster Squatter Tube
- c) Firm Stumpy Tube

2 Which country sets the MPR II standard?

- a) Turkey
- b) Sweden
- c) Brazil

3 What sort of mask does the Hitachi 17MVX use for colour purity?

- a) Invar
- b) Face
- c) Batman

4 Complete in not more than 17 words: 'I need a Hitachi 17-inch monitor because...'

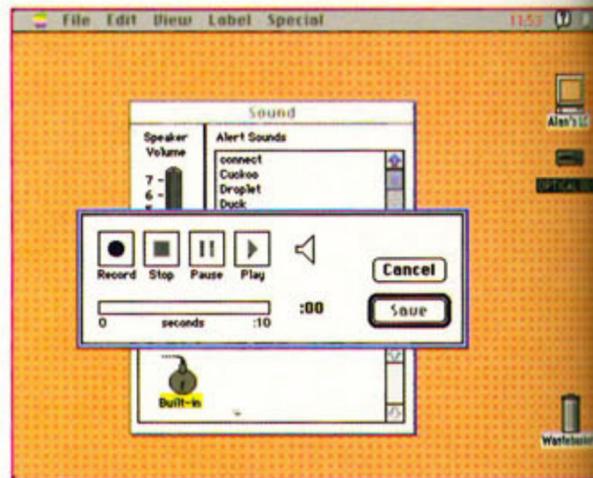
Employees and their relatives of Future Publishing, Hitachi New Media and Harvard Public Relations are not allowed to enter. No cash prize will be offered as an alternative. In all matters relating to this competition, the Editor's decision is final. All entries to be received by Thursday November 11. Only one entry per household, please.

Sound bytes back

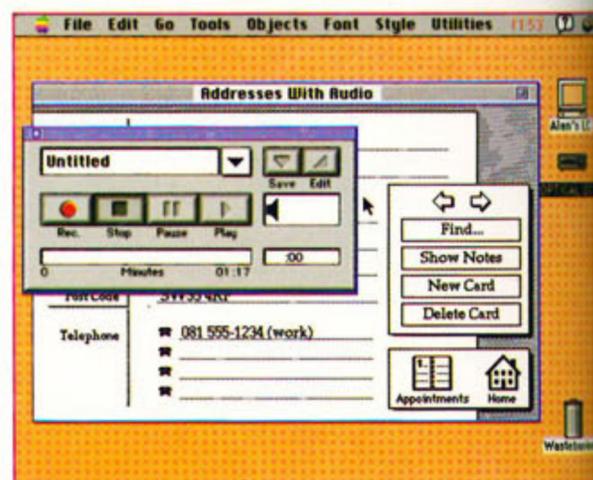
It's time to get rid of those boring beeps and eeps and create some wild and whacky new sounds for your Mac – Alan Taylor shows you how to make some noise...

Twelve steps to sound practice

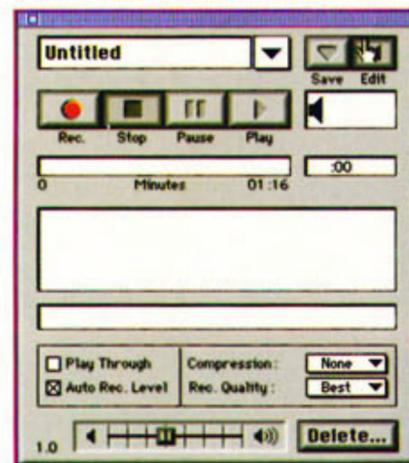
Before starting *HyperCard*, use the **Get Info** command in the **File** menu, and allocate as much memory as you can spare to it. You should then be able to record very long samples, particularly if you set the sample rate to **Good**. Now record a radio news bulletin. When finished, you should find it fairly easy to cut and paste words and sentences to create some very silly news lines. A news bulletin is very good for practising editing speech as the delivery is very even.



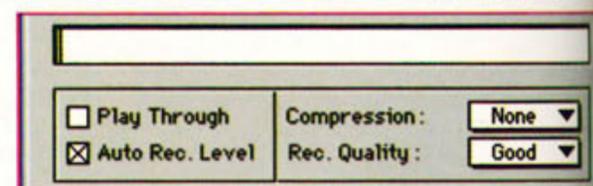
1 Most people seem to make their recordings via the Sound Control Panel (just press the 'Add' button). Unfortunately it offers no editing facilities, so it is better to use the more versatile *HyperCard* Audio recording palette as found under the **edit** menu in stack 'Appointments With Audio'.



2 The *HyperCard* recording palette offers a number of additional options, these are revealed when you press the edit button to expand the palette.



3 If you are recording via the microphone do not select **Play Through**, or the speaker will squeal when the microphone is brought near. When playing sounds from a tape though, this setting will make the sound audible through the Mac speaker.



4 The amount of storage used is proportional to the quality. In order to minimise storage requirements, record at the lowest acceptable quality for the intended purpose. There is no better way than to make test recordings and assess them by listening. You need to bear in mind how your

Although all new Macs since the Classic come with a microphone, recording and editing sound is something you may not have got around to exploring.

There are two reasons for this. Firstly, the little microphone supplied by Apple has its limitations and secondly, there's no built-in sound editing facility. So how do we overcome these oversights?

I prefer to make my recordings onto audio cassette and then sample from that recording into my Mac. The advantages of this approach are that your recordings will not pick up the sound of the Mac cooling fan, you can make your recordings anywhere you like, and you can keep recording until you get the best version of the desired sound. Those recording via the Apple microphone can try using an extension lead of the type used for stereo walkman headphones to move the microphone further away from the noise produced by your Mac and achieve clearer recordings.

Tape recorded sounds can be fed into the Mac by connecting the phono plug output from your cassette to the adaptor supplied by Apple, which plugs into the mic socket on your Mac. The adaptor reduces the level to suit the Mac's input and also converts any stereo recordings to mono.

Flushed with success, you might be tempted to record all manner of whacky noises to customise your Mac. It once seemed hilarious to have my Mac sing, "Always look on the bright side of life" whenever it encountered an error, but when you

are trying to rush through some work, it can be most frustrating to have to wait for the the Monty Python team to finish singing before being allowed to continue.

Similarly, a recorded expletive can seem funny at the time, but can cause diplomatic incidents when replayed at inopportune moments.

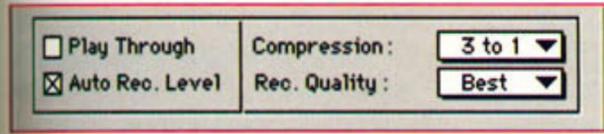
If you wish to be able to call upon a number of sounds, it can make your system file very large when they are stashed away in the Sound Control Panel. A better method is to put them into the Scrapbook. You use the same cut and paste technique, or if you prefer, you might like to create a special sound scrapbook so that you can have a large selection of gems readily available.

Users of System 7 only need to put sounds into a folder and can audition them by double clicking.

So having improved the quality of your sound input device, how do you start to edit your recordings? Well forget the sound control panel – this provides no editing facilities to manipulate sound recordings whatsoever. There is a low-cost solution though and that's to use *HyperCard*. More specifically you need the Audio stack bundled with it which will give you a very powerful sample editor. The editing possibilities need not be confined just to topping and tailing sound effects. A sound can be pasted into any point of another sample, allowing you to make sequences. When you are skilled, it is possible to edit music in the manner of some disco records, but it is easier to practise on speech.

sounds are likely to be used. For a substitute for the alert sound, simply listen to it on the internal speaker. If the sound will be heard on headphones plugged into the Mac or alternatively through a hi-fi system – then listen in that way.

There are two variables that will affect the quality and the amount of memory used: Rec Quality and Compression. Rec Quality affects the number of samples taken per second. The options are Best (22,000 per sec) and Good (11,000 per sec). A recording made at the Good setting will use half the memory of a similar recording at Best.



5 Compression is only available when recordings are made at the Best setting. The 3:1 setting uses one third of the memory compared to Best, and 1:6 uses just one sixth. Clearly either of these settings will be more economical than Good recordings. It is difficult to recommend which settings to use as one type of sound will be degraded badly by modest compression, whereas another sounds fine when fully compressed. However, you need to be aware that the selection of Best or Good sampling rate affects how the sample is recorded, and compression affects how the sample is stored to disk, recording in Good will allow you to make a recording of twice the length even though a compressed recording will occupy less disc space. You will see confirmation of this in the time left indicator below the Play button.

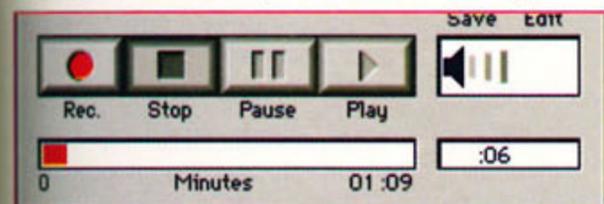


6 One other important factor affecting the quality of the recording is the recorded level. We need to ensure that the loudest peaks of our recording are just within the maximum that the Mac can accommodate. If these peaks are too loud, then they will be truncated ('clipped') and if they are too quiet, the quiet elements of your recording will be lost in the background noise ('quantization noise').

Put simply, too quiet a level makes the recording hissy, and too high a level makes the loudest parts distort. Another practical advantage of uniform recording levels is that different sounds can be played one after the other without the volume having to be adjusted from one to the next.

The great advantage of using pre-recorded sounds from a tape recorder is that the level will be the same each time we replay it. If we deselect the Auto Record Level facility, we can precisely adjust the replay level from the cassette to make the bars shown on the speaker symbol momentarily turn red at the very loudest point. The optimum is for the loudest part to fully modulate the input but not to overload it. However, the Auto Rec Level facility can still be used if you prefer.

All the same criteria apply to recordings made via the microphone directly into the Mac. As there is no manual way to alter the record level other than adjusting the microphone distance, it will usually be preferable to switch on the Auto Rec Level. Record level can be checked prior to the actual recording.



7 We are now ready to record the sound. There is a thermometer style indicator of RAM usage, and at the right hand end of it, a number indicates the maximum length of a recording in minutes and seconds. Press the record button

and stand by to play your tape, but wait until the red thermometer line starts moving. Play your sound, and press stop afterwards. The smaller box to the right of the thermometer indicates the duration of the recording.

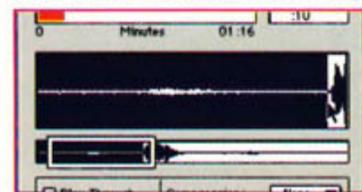


overview window has a white selection rectangle which can be moved. As we move it, the area within the rectangle is displayed in the edit window. Clicking and dragging on the centre of the rectangle moves the edit window forwards and backwards along the sample, while clicking and dragging on the left or right edge of the rectangle adjusts the size of the rectangle. Making the rectangle very short allows a detailed view of a small part of the sample, while lengthening the rectangle allows the whole sample to appear within the edit window.

This first recording shows the word 'Goldilocks' recorded three times, you will see in the overview window that the first is too high in level, the second is too low, and the third is just right. The display is nothing more than a graph of amplitude (positive and negative about a central horizontal zero) plotted against time, and it is very easy to identify individual parts within a sequence of sounds.



9 This recording above is of the sentence "We can identify each word". Each element of sound makes a distinctive shape and it is a simple matter to see where the first word starts and then identify the following words.

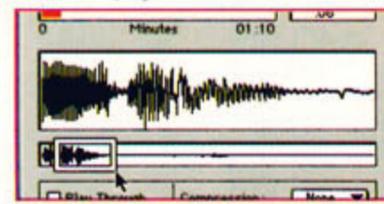


sample – including a gap at the beginning and a gap at the end. The simplest manipulation is to discard these unwanted bits to clean up the recording. If we adjust the selection rectangle so that its left edge is at the extreme left of the overview window, and its right edge is a small distance into the wanted recording, we see in the editing window a display of all the rubbish before the sound starts. If we highlight an area within the editing window by clicking and dragging across it, the area is shown inverted. This selected area will be the only sound heard if play is pressed. If you try it on your recording you will be able to pick out which part of the waveform represents which sound – it's easier to try it than to explain it.

If we select the area from the beginning, to just a whisker

8 The sound will be displayed in graphical form in two windows. The upper, larger one is for editing – we shall call the edit window, while the lower one – the overview window – displays the whole recording allowing you to select which part you want to work on in the edit window. The

before the wanted sound starts, when we press play, we should not hear any wanted audio. When satisfied that the selected area is solely unwanted sound, we can press delete to erase it. When a recording is cleaned up in this manner, it starts instantly when it is played.



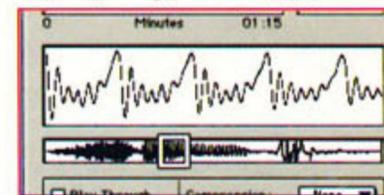
straightforward, trimming the end takes a little more judgement. Again it is a matter of trying it and listening to the result.

We can adopt one of two strategies, either delete the bits we don't want or keep just the bits we want.

Let's start by highlighting the area at the end that you suspect is unwanted and listen to it. If you do not hear any wanted-sound it can be deleted.

Alternatively, if you adjust the selection rectangle to put all of the sample into the edit window, it is a simple matter to highlight what looks like the whole of the wanted sound and press play to listen to it. If you don't like what you hear, reselect a longer or shorter section until you are happy with what you hear. Press **[command] [X]** to cut it to the clipboard, **[command] [A]** to highlight all the rubbish that's left, **delete** to get rid of it, and **[command] [V]** to paste the desired sound back – just like cutting and pasting anything else. This second approach seems a little bit more complex, but in practice, it is very easy and allows you to 'top and tail' the recording in one quick operation.

If you need to try again there are several ways to re-record. When the Sound palette is collapsed to its original size, any subsequent recording will overwrite the original. If you leave the sound panel expanded, then the new recording will be placed at the edit point within the edit window. If you have done nothing, this will be the end, but otherwise it will be where you left it. If you wish, you can start a second recording inserted at any point within the first. Should you need to erase your original, a fast way is by using **[command] [A]** followed by **delete**.



12 If there is an unwanted sound within your sample, careful highlighting of the offending area will allow you to delete it, although I would recommend using **[command] [X]** rather than delete as it is easier to put it back again should you get it wrong. This process will be easier if you adjust the selection rectangle to the smallest size that covers the area in question, then the sound shown in the edit window will be displayed in the clearest detail. If you create a very tiny selection rectangle on a short sample, it is possible to display the actual waveform of the sound in a similar manner to an oscilloscope. Under these conditions, you can try to edit at a point when the waveform crosses the central zero axis, this is when the signal is momentarily zero and edits can be performed in this way without introducing clicks or discontinuities.

Having now trimmed our masterpiece, we might like to put it in the sound control panel to allow its use as an alert sound. Start by highlighting the whole sound by **[command] [A]** and selecting it to the clipboard using **[command] [C]**. Then open the Sound control panel and click **[command] [V]** to paste the sound. You will then be prompted to name the sound and it will be placed in your Sound control panel. **mf**

Tip

When you choose a word or sentence, make sure that it fills the greater part of the edit window, and when you select it, also select the space that follows it prior to the next word. Then when words are butted together, the timing sounds natural. Even taking out a simple word like 'not' can transform a story. If you have recorded a few

sentences, it might be easier to work on it if you break the recording down into sentence lengths or less, and keep them in the Scrapbook. Similarly your assembled work can also be popped into the Scrapbook to preserve it as the work progresses.

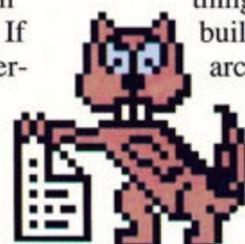
I have even used these techniques to assemble a sound track for a business video. The major problem was synchronising the sound and vision.

Are you into Internet yet?

you're using Demon or some other system which allows you to use *MacTCP* to access the Internet, you can use a program called *TurboGopher* (you'll find it from most major Mac FTP sites), which gives you a graphical user interface on the system. *TurboGopher* logs on to a gopher client somewhere in the world (you don't need to know, or care, where) and provides you with a list of possible services that you can then peruse. Many of these are displayed as folders, because they are in fact categories of service – as you 'burrow' through the Internet, you'll finally be led to an actual service which does what you want.

Gopher is intelligent

The beauty of *TurboGopher* is that it is reasonably 'intelligent'. It has things like the ability to FTP files built in, so you can search archives for files and retrieve them without leaving the program. However, if a service that you select requires, say, a Telnet connection then *TurboGopher* searches your hard drive, finds a Telnet program (assuming you have one) and



Ian Wrigley goes ferreting around the Internet again, and meets a small furry creature

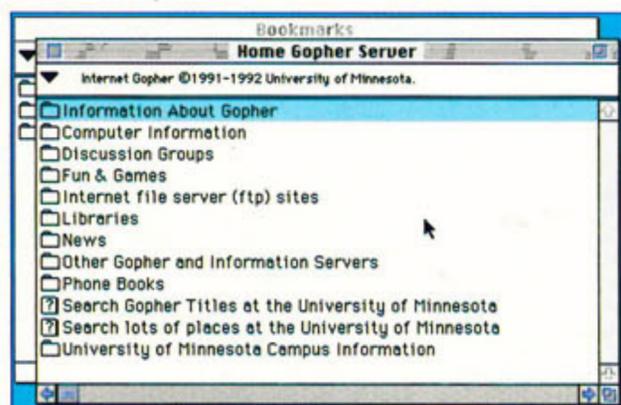
which categorises resources and allows you to find information rapidly by subject, rather than in a great random 'soup' of information.

To access the Gopher system, you need what's called 'client software' – a program which links in to the system itself. If you're using a text-only interface to the Internet (such as that provided by CIX), you'll have to use a text-based client: to do that, telnet to either 'consultant.micro.umn.edu' or 'gopher.uiuc.edu'; log in with the user name 'gopher'. However, if

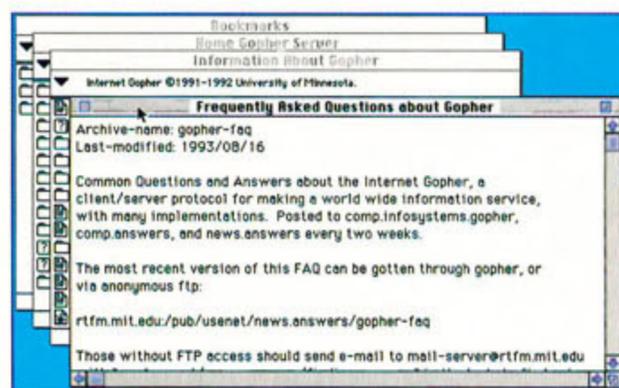
The August issue of *MacFormat* featured a comms column on accessing the Internet, and the incredible range of resources available there. The problem with the Internet is that there really is just too much available: you find yourself getting sidetracked, and before you know it you've spent an hour or two chasing up a file or service that you didn't really want, while in the meantime you've forgotten what you were actually after! The secret to getting the most out of the Internet is to decide, before you log on, exactly what it is that you're after – and

then don't allow yourself to be sidetracked! Unless, of course, you just want to browse...

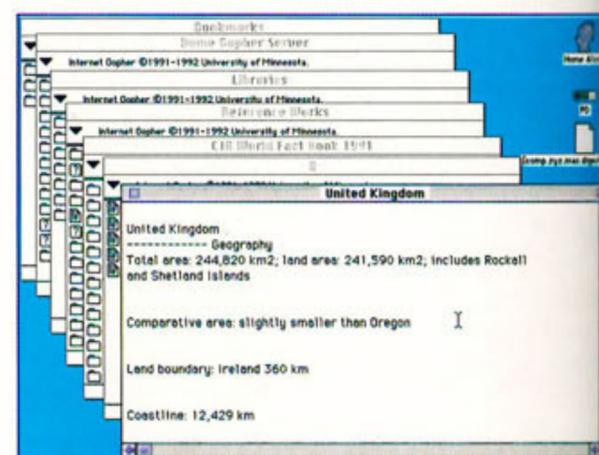
Probably the most useful tool for navigating around on the Internet is something called Gopher, a service



TurboGopher is remarkably easy to use: just double-click and you're immediately provided with a range of basic categories to browse through



One of the first things that you should do is read *TurboGopher's* documentation – which is itself available via Gopher



Here we've burrowed down to the CIA World Factbook 1991, which contains information on every country in the world

Cruising the Internet the easy way

The *Mac Internet Tour Guide*, subtitled 'Cruising the Internet the Easy Way', is another of the growing number of books about the Internet. Since commercial Internet service providers began to realise that there was a market in providing low-cost connections for 'end users' as well as large companies, authors have also realised that there is a market in guiding those same end users around the Internet.

This is one such book, and looks at things from a Mac user's point of view – which is nice, since it means that there aren't huge chapters on 'rm', a Unix news reading program, and other such things which are of no interest to the Mac fraternity. It does a pretty good job of discussing the various basic things that you can do – e-mail, news, FTP, Telnet, Finger, Gopher and so on – and mentions Mac shareware and PD programs that you use to do those things. However, the book often reads like an advert for a commercial

program, *TCP/Connect II*, which was written by InterCon Systems Corporation. The reason that I'm not keen on this is that the program costs a hefty \$495 – compared with the \$10 or \$20 shareware fees that you could pay instead. True, *TCP/Connect II* comes with a bundled copy of *MacTCP*, which you otherwise have to buy for about \$60, but even so it's just not on to plug a commercial program so heavily in a 'general' book.

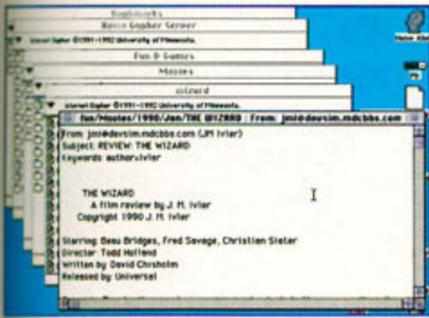
Most of the book takes a 'hands-on' approach, telling you exactly what to do to use the various Mac programs available – but that's something you can find out by reading the manuals, and again, there is frequently an annoying comment like, "It's hard to beat the bargain you get with a piece of quality freeware like *Nuntius*, but I generally use *TCP/Connect II* to read and post network news articles." Plug, plug.

The book comes with a free disk, but even this isn't as useful as it might at first seem. It contains

Eudora, an e-mail program, and *Fetch*, an FTP program, plus *StuffIt Expander* since the two programs are compressed. But *Eudora* requires your Internet provider to have a special kind of mailing program (it needs a POP server, for the technically minded) which many don't have, and *Fetch* doesn't come with full documentation. And you don't get a copy of *MacTCP*, so you'd still have to buy that anyway.

If you're new to the Internet, this book might well prove useful. But a much better read is *The Whole Internet, User's Guide and Catalogue*, by Ed Krol (O'Reilly & Associates, ISBN 1-56592-025-2) which, although not Mac specific, contains a much wider range of information and talks about all the important Mac programs.

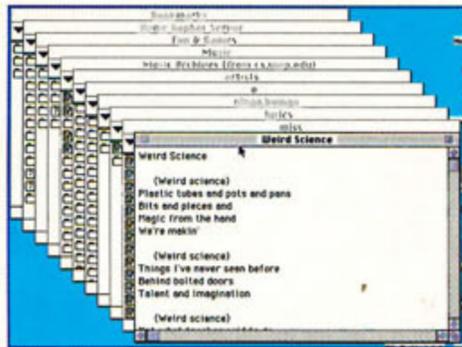
The *Mac Internet Tour Guide*, by Michael Fraase. Ventana Press, ISBN 1-56604-062-0. We got our copy from Computer Manuals, 021 706 6000. It costs £25.95.



Want information on a movie before you go to see it or rent the video? Or just because you fancy answering a Trivial Pursuit question on it? No problem! (The Wizard is a little-known Fred Savage film, by the way...)

automatically launches it. When you've finished and you quit, you're automatically taken back to Gopher. Or, if you download a file, it will automatically ask you whether you want to launch an application appropriate to that file – for example, in one of the screenshots on this page, I downloaded a GIF (graphics) file, and I was asked whether I wanted to open a viewing program to look at it.

Gopher is a service that it's easy to overlook: after all, you already have an FTP program, a Telnet program and so on, so why bother with one that combines the two? It's only after you've used it for a while that you realise just how powerful Gopher really is – it's far more than 'just' FTP and Telnet, it's more like a librarian helping you to navigate around the vast Internet library of resources. **mf**



It's not all serious: the Internet contains just about anything you could ask for – including song lyrics from almost every band (including the really good ones, like Oingo Boingo).

Jargon Busters

FTP: File Transfer Protocol. A way of retrieving files from file servers scattered around the Internet.

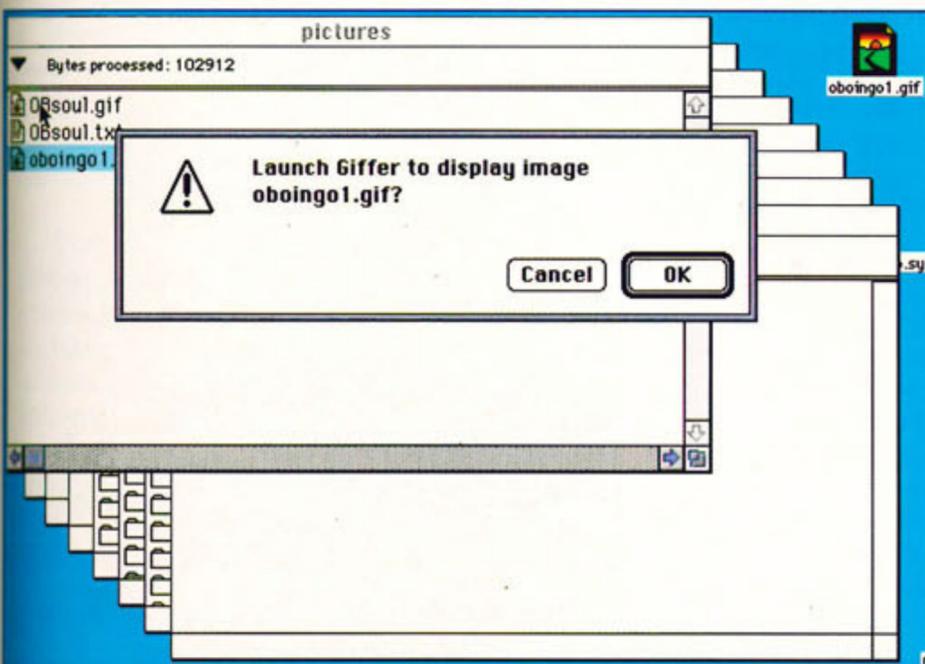
Internet: a vast network of computers spanning the globe. You can find just about anything you want – be it the complete text of a Shakespeare play or the latest shareware – as long as you know where to look.

Service Provider: a company which provides end-users with a connection to the Internet.

Telnet: a method of remotely logging on to computers on the Internet.

Getting on to the Internet

To find the services that we're talking about this issue, you need to have access to the Internet in the first place – not just e-mail, but full access. CIX (voice: 081 390 8446) gives a command line interface-based gateway, while Demon Internet Systems (voice: 081 343 3881) allows you to use 'real' Mac programs, giving you a graphical interface to the whole thing which is much more user-friendly. If you're at college or university, you may already have Internet access – talk to your Computer Science department to see if they can help. Oh, and if there are any other commercial Internet services providers out there, let me know about you!



TurboGopher's 'intelligence' makes it really easy to use. Here, I've downloaded a GIF graphics file – so the program automatically asks whether I want to open a program to view it.

File formats

Many people use comms, and connect to bulletin boards or the Internet, for one reason only: so that they can get hold of shareware and PD software. But finding and downloading the software is only part of the battle; once it's back on your Macintosh, you'll almost certainly find that it isn't immediately usable, since it has been stored in a compressed or encoded form.

Fortunately, the format that a file has been stored in is normally flagged by adding an 'identifier' – that is, a suffix to the program's name which describes how it is stored. So here is a list of the common suffixes, and how to extract files which have been encoded with each one. Note that often more than one is used: for example, you may find a file called, say, 'superapp.sit.hqx'. The secret to getting at such a file is to work from the outside in – that is, first deal with the 'hqx' part of the file, then with the 'sit' part.

.cpt *Compact Pro* was used to create this archive. *Compact Pro* itself, or a later version of *Stuffit*, can be used to decompress the archive.

.hqx For some reason, this is the suffix that's appended to files which have been converted into 'BinHex' format. This is a way of turning a Mac document or application into what appears to be a random jumble of characters; it's useful because BinHexed files can be stored on Unix, DOS or whatever systems with no problem. For this reason, often a file is first compressed with something like *Compact Pro* and then converted to BinHex – leading to file names such as 'myapp.cpt.hqx'. To turn a BinHex file back into a real Mac file, use *Compact Pro* or *Stuffit*, both of which have 'convert from BinHex' options available.

.pit This is likely to be a very old file! *PackIt*, a long-obsolete utility, has been used to compress the file; use *Stuffit* to decompress it.

.sea Short for Self Extracting Archive. You don't need to use any external program to access files of this type; double-click and they'll automatically expand (the programs on **MacFormat's** cover disk are supplied in self extracting archive format). Programs which can be used to create such a file include *Stuffit*, *Compact Pro* and *Disk Doubler*. Note that, although 'sea' files are very convenient for the recipient, they tend to be 10K or 12K larger than if the file had merely been compressed into 'sit' or 'cpt' format – so small files are often not made self-extracting.

.sit A version of *Stuffit* has been used. To expand it, you should either use the commercial *Stuffit Deluxe*, or the shareware *Stuffit Lite*. If you have a copy of the shareware *Stuffit 1.5.1*, you may not be able to access the application – it could have been compressed with a later version. In that case, upgrade to *Deluxe* or *Lite* (which are much better anyway!).

.z This file has been compressed using a Unix utility. A freeware utility called *MacCompress*, by Lloyd Chambers, will decompress the file for you. You should be able to find *MacCompress* on the same archive as you found the Mac file that had been '.z'ed.

This list covers all the major file compression and conversion types that you are likely to come across. The only other one is '.Z' (not to be confused with '.z'), which is used to compress all files stored on the FTP file server 'src.doc.ic.ac.uk', which is the largest UK repository of Mac shareware and PD. *MacCompress* sometimes copes with files of this sort, but I've had occasional trouble. However, don't panic: if, when you log on to the server for anonymous FTP you put a plus sign ('+') before your e-mail address, then the machine will decompress the files before it sends them to you. Pretty neat!

Get in contact!

If you have any questions, or comments, Ian Wrigley can be reached on AppleLink as 'I.WRIGLEY', CIX as 'iwrigley' and on the Internet as 'ian@vampire.demon.co.uk'.

When you've finished working, hit

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mac
FORMAT

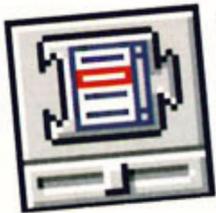
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Conflict Catcher II – keep control of all your control panels

Anyone who has been bitten by the PD/shareware bug will know the fun of trying out new utilities and neat little ‘hacks’ – some incredibly useful, others sublimely pointless and junked almost as soon as you’ve loaded them on to your Mac. But such people will also undoubtedly know the annoyance of startup conflicts and problems, as the 17 different new Extensions and Control Panels all vie for the Mac’s attention – and fail at some point. There’s nothing more frustrating than spending a couple of hours trying to work out just what, exactly, is causing your Mac to freeze seconds after the Desktop has appeared; dragging files in and out of the System folder to isolate the problem, and restarting every time. It’s amazing just how annoying the ‘bing’ of a restarting Mac can become...

Mac users power will be aware of ‘startup managers’ such as *Extensions Manager*, *Extension Kit*, *Now Startup Manager* and the like. These programs take much of the work out of installing software, since they allow you to effortlessly enable and disable extensions and control panels, but there’s still the basic problem of finding out exactly which piece of badly-behaved software was causing the problem in the first place.



don’t want the software to load because you want to reduce the amount of RAM used up by the System to the minimum. No problem with *Conflict Catcher*: specify two sets, one with the *ARA* software and one without, then hold down the appropriate key as your Mac starts to load the required set of extensions. You can decide which extensions to load ‘on the fly’ by holding down the space-bar while your Mac is starting up.

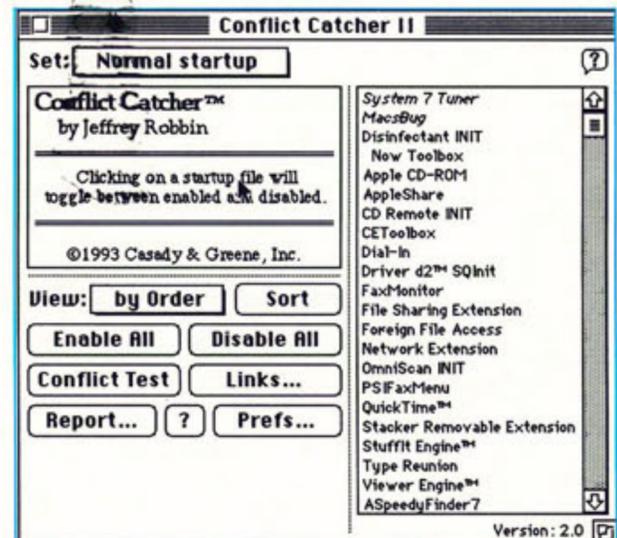
But the program is more powerful than just that: it also introduces the concept of ‘links’ (which, it should be pointed out, also exist in Now Software’s *Startup Manager*). These are sets of extensions which are grouped together for various purposes. For instance, a ‘grouped link’ of software ensures that whenever one member of the group is loaded, so are all the others. For instance, *AppleTalk Remote Access* requires that three startup files be loaded; not loading them all means that the software won’t work properly. So the user can select these three items as a startup group; then you can be sure that either all or none of them will load at startup. Another type of link is ‘Incompatible’, which is used to make sure that only one of a group of extensions is allowed to load – for instance, you wouldn’t want more than one screensaver active at the same time.

Conflict Catcher also allows you to select the order in which extensions and control panels load – for example, ensuring that the *Disinfectant* Extension loads before everything else. All in all, the extension manager portion of the software is powerful, easy to use and well implemented. But it’s the *Conflict Test* that many users will find invaluable. This involves the program selectively enabling and disabling extensions, with you restarting your Mac between each attempt and telling the program whether the conflict still exists or not. At the end of the test session (which can take some time if you have a large number of extensions), *Conflict Catcher* should have worked out just which startup documents were causing the problems, and can disable these for you.

The program is ‘intelligent’ in its method of disabling files, and seems to work well – although it’s very difficult to test exhaustively, since Sod’s Law states that when you want to test such a problem, your Mac works faultlessly for the first time in living memory. However, because the compatibility testing relies on switching software on and off between restarts, it’s pretty robust and it’s hard to think of a situation where the problem couldn’t be resolved – although such a resolution could take some considerable time to achieve.

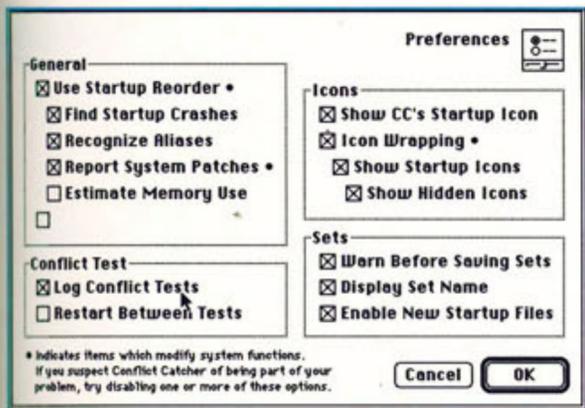
If you seldom add new startup documents to

Ian Wrigley burrows into his hard drive to uncover more tools that make life with your Mac that little bit easier



If you are having problems with conflicting System extensions, *Conflict Catcher* will automatically test them for you and isolate the troublesome ones.

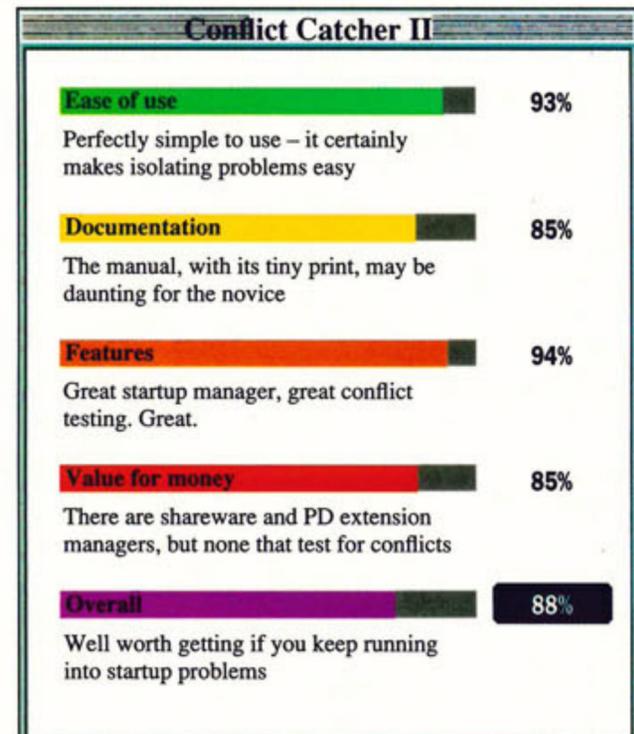
your basic System, then *Conflict Catcher* isn’t likely to be particularly valuable to you. Software junkies and system managers, on the other hand, may find that it’s just what they’ve been waiting for – it’ll pay for itself in terms of the time you normally spend curing problems.



Conflict Catcher's Preferences section allows you to customise exactly how your Mac deals with Control Panels and Extensions when it starts up

Conflict Catcher II is designed to solve these problems. At first glance, it’s simply another extension manager – albeit just about the most sophisticated one around. However, it also includes procedures to identify clashing software – automating the normally slow and laborious task, and requiring only that the user restarts the Mac every so often and observes if the problem is present or not.

The extension manager allows you to specify different ‘sets’ of extensions and control panels that will be loaded when the Mac starts up. For example, perhaps you sometimes use *AppleTalk Remote Access*, but at other times



Where to get it

Conflict Catcher II requires System 7 (although an earlier version of the program is included on the disk for System 6 users). It costs £69 and is distributed by Softline, 081 401 1234.

Power To Go – a suite of PowerBook utilities

Last issue I took a look at Connectix *PowerBook Utilities (CPU)*, a package designed to help you get the most from the PowerBook. This time it's the turn of *Power To Go*, one of the new programs from Claris' ClearChoice range – a line of software developed by third parties, which Claris is marketing.

The whole point of PowerBook utilities is to make portable computing easier; they do this by adding things like security (stopping people picking up your machine when you've left it unattended for a couple of minutes and reading your private work), screen savers (if you leave an LCD screen on for more than about 24 hours, some of the pixels get 'tired' and stop

One of the problems with a PowerBook is that you never seem to have quite enough disk space

working properly until they've been rested – turned off – for a couple of days), battery management and so on.

Power To Go does all this, but also adds another very useful feature: it includes *StuffIt SpaceSaver*, a very neat compression utility from Aladdin Systems.

Basic features

After installation, *Power To Go* does all the things that you'd expect of such a utility. It's configured by the usual multi-module Control Panel: each section of the package brings up a different configuration screen. As with the Connectix product, multi-user support is included: each user can have a different setup, including password, so that a shared PowerBook is 'personalised' for whoever's using it at the time. One improvement over *CPU*, though, is that if a password is set for startup, you can specify the user via a pop-up menu – *CPU* doesn't allow that, so if you don't have the password for whichever user shut the machine down, you're stuck.

Although all the basic features are present in *Power To Go*, they're not always implemented quite how I'd like them. For example, rather than putting a battery display in the menu bar (as most other PowerBook utility packages do), *Power To Go's* is on a separate, floating palette. This is fine – except that a PowerBook's screen really is too small for this sort of thing. True, you can close the palette and then bring it up again via a hot-key command, but a permanent

display, along with a clock, in the menu bar would be much nicer.

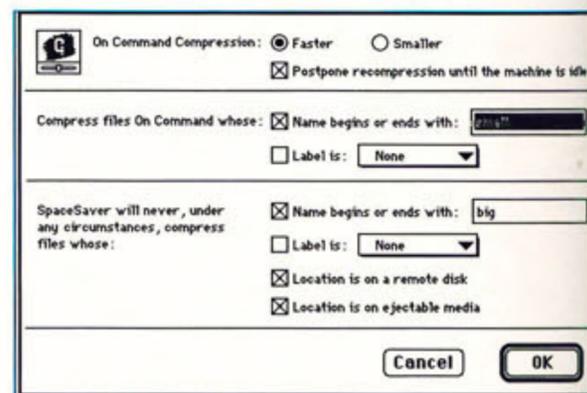
Also, many of the options – such as the screen saver and security – insist on having 'mouse sensitive' corners of the screen. That is, if you move your mouse to, say, the bottom left-hand corner of the screen, the PowerBook automatically requests a password. This is common practice with screen savers, but is normally something that can be disabled. Not so with *Power To Go*: if you want the feature, you must also put up with this method of enabling it. For a screen saver, this isn't too much of a problem: if you move the cursor to the 'sensitive' corner by mistake, a quick tweak of the trackball and you're back in business. But it's very, very frustrating to have to enter a password each time you accidentally knock the trackball hard enough to move the cursor into the fatal spot.

Password protection itself is fairly good: you can't avoid the startup password by holding down the [shift] key (which turns off all normal extensions and control panels), and although the Force Quit keystroke – [command] [option] [escape] – does bypass the 'sleep' password request, it does nasty things to other applications, too, such as not displaying the contents of any windows.

Saving space

One of the problems with a PowerBook is that you never seem to have quite enough disk space – especially if you have one of the older models, which only came with a 20Mb hard drive. To counter this, *Power To Go* includes *StuffIt SpaceSaver* – probably one of the cleverest compression utilities around. Rather than altering your disk driver (à la *Stacker*), *SpaceSaver* allows you to specify exactly which files or folders are compressed – simply by adding a keyword to the item's name. For example, if you've set the keyword as 'small', add that word to the end of a file or folder's name and it will automatically be compressed. Rename the item without the word 'small' and it will be expanded. All this takes place without you really noticing, except for a bit of extra disk activity, and if you've compressed an application then when you double-click it will automatically be expanded and launched.

As well as *SpaceSaver*, *Magic Menu* is included in the package. This is an extra menu which sits to the right of the *Special* menu in the Finder, and allows you to compress and expand files simply by highlighting them and selecting the appropriate menu option. It deals not only with *StuffIt* files but also with archives created by AppleLink and *Compact Pro*, so

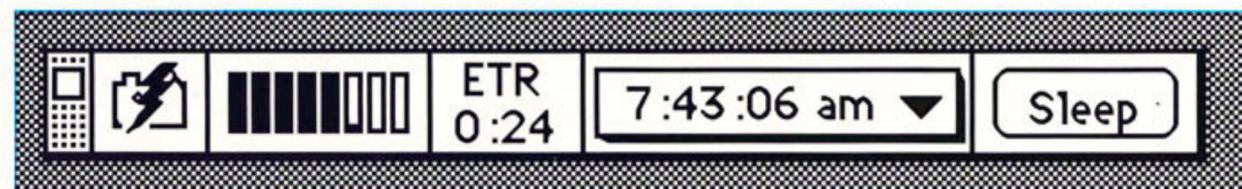
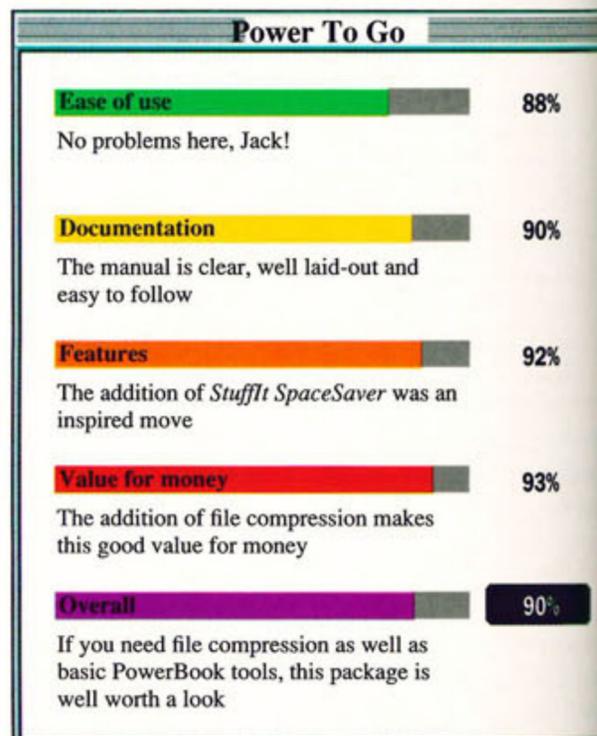


StuffIt SpaceSaver will automatically compress any file or folder which contains a user-specified name – a brilliant idea, and one that makes compression totally transparent

you'll be able to decompress the vast majority of archived files that you're likely to come across in normal Mac usage.

Worth it?

I found some of *Power To Go's* 'features' a little annoying – the floating battery palette and the program's insistence on 'mouse sensitive corners' for password protection, for example – and without the inclusion of *SpaceSaver* I'd have to come down on the side of Connectix *PowerBook Utilities*. However, *SpaceSaver* starts to tip the balance back towards *Power To Go*, and makes the choice much harder. In the end, you have to decide whether you need file compression. If so, then its other features are certainly good enough to be usable with no complaint, and it can be recommended. But if compression isn't something that you feel you need, my preference is still – just – for Connectix *PowerBook Utilities*. **mf**



Power To Go displays battery usage in a floating palette, rather than in the menu bar. Fine, except that the PowerBook's screen is small enough anyway, without needing anything else cluttering it up.

Where to get it ▼

Power To Go costs £81 from Frontline Distribution, 0256 20534.

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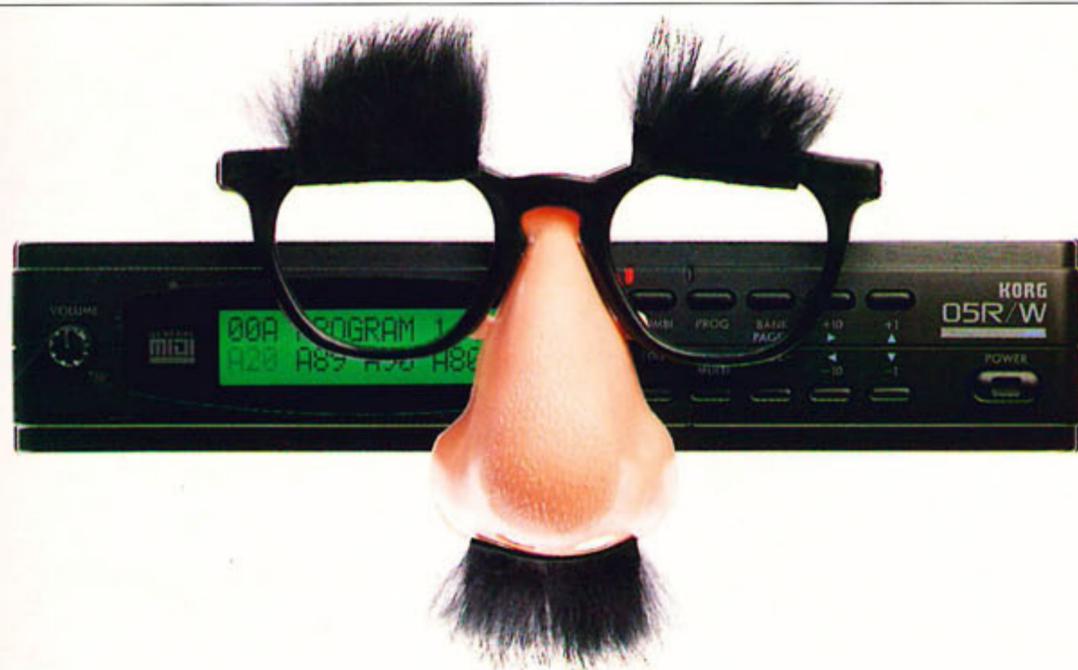
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BREAKING SOUND BARRIERS

Voyage of

Ian Wrigley continues his foray into the inner workings of

Disk drives – for both hard and floppy disks – are obviously vital parts of your computer. Without a floppy drive, you'd have all sorts of trouble getting data in to and out of the Mac, while a hard drive allows you to store vast amounts of data, programs and so on cheaply and easily. This wasn't always the case; the first Macs had no hard drive, no way of attaching one, and floppies were limited to storing 400K of data. On the other hand, since the basic machine only came with 128K of RAM, this wasn't too much of a problem – no applications larger than that were going to be written, so 400K was plenty of space. As the Mac's RAM and sophistication grew, though, Apple realised that something had to be done, so the SCSI expansion bus was included to allow the connection of storage devices like hard drives, and floppies became capable of storing first 800K and then, with the advent

of the SuperDrive, or 'FDHD' drive, 1.4Mb of data.

It's perfectly possible, of course, to go through your Mac-using life without having any idea of how disk drives work. However, a little knowledge can often come in useful – for example, if you're trying to solve a problem that's occurred – and can often prevent you from running into problems in the first place. So, read on for a grounding in the basics of what goes on when you insert your floppy into the Mac, or power up your hard drive...

Floppy facts

If you (carefully) slide back the metal shutter on a floppy disk, you'll see a dark coloured disk of what looks like cassette tape-type material. That's the actual floppy disk – the plastic casing and shutter are merely to protect it because it is, indeed, pretty similar to a cassette tape in the way it works. Data is stored on the disk by magnetising

tiny particles on the disk's surface – in very much the same way as sound is recorded on a cassette. Recording is done by a pair of 'heads' which sit on the disk, one on the top surface and one on the bottom, while the disk rotates at high speed between them.

Data is stored in 'tracks'. These can be thought of as 'rings' of data, which get smaller as you move closer to the centre of the disk. Probably one of the best analogies I've found is in the manual for Norton *Utilities* for Macintosh: "Imagine touching your index finger to an ink pad and then holding it just above a record spinning on a turntable. If you were to touch the spinning record lightly with your inky finger, you'd leave a finger-width ring of ink on the record." If the record were a disk, and your finger the drive head, then the trail that you left would be one track of data. An 800K Mac disk has 80 of these tracks on each of the two sides

Hard disks spin far faster than floppies – 3,600 rpm, to be precise

of the disk; the outermost (furthest from the centre of the disk) is track 0, the innermost is track 79. Because there are two track 0s (top and bottom of the disk), two 1s and so on, they are referred to as 'side 0 track 0', 'side 1 track 0', 'side 0 track 1', 'side 1 track 1' and so on. The top and bottom tracks together are referred to as a 'cylinder', for reasons which date back to when the design of storage devices was rather different to what it is today, so the two track 0s, top and bottom, are collectively known as 'cylinder 0'.

We're almost there now; one more bit of techie information and we're ready to talk about how data is actually stored on the disk. That information is that each track is broken up into 'sectors', small sections of the track. On an 800K Mac disk, there are between 8 and 12 sectors per track, depending on how close the track is to the centre of the disk (the closer to the centre, the smaller the track). On most Mac disks, each sector can store 512 bytes of information.

Hard wares

Let's take a break for a second to look at the difference between floppies and hard drives. And actually, as you might expect, there really isn't that much difference in the basic way that they store data – using tracks, cylinders and sectors. However, physically there are many important differences. The first is that hard drives spin far faster than floppies – 3,600rpm, to be precise. This extra speed, and the fact that much more data is crammed on to the disk, means that it's no longer possible to have the read/write heads actually touching the disk's surface – instead, they 'float' just above it on a cushion of air created by the disk's rotation. They still need to be very close, in order to be able to read and write the data, and

The inside of a hard drive



The hard disk is a large-capacity data storage device which uses rapidly spinning rigid metal platters to store information. These platters float on a cushion of air only ten millionths of an inch high!

diskovery

your Macintosh. This month he takes a look at disks

in fact the air cushion keeps them about ten millionths of an inch away. If they were to touch the disk's surface, you'd have a 'head crash', which would result in the destruction of your data, so the disks are made out of far more rigid material than floppies, so that they won't bend, and hard drives are constructed in a 'clean room', with filtered air, so that no dust particles can get inside the unit – a dust particle is far more than one ten-millionth of an inch in size, and would cause all sorts of problems.

The other difference is that there is often more than one 'platter', or disk, in a hard drive unit. It's fairly cheap to add extra platters when you're manufacturing a drive – each just needs another pair of read/write heads – and each platter effectively doubles the drive's storage capacity.

Data storage

So much for the physical aspects of a disk. Now we'll look at how your programs and data are actually stored by the Mac. The Mac thinks of each disk as a 'volume'. In fact,

there can be more than one volume on a hard drive, if it's been partitioned – that is, if the Mac has been told to treat it as two or more separate units. Within the volume are, as well as all your files, several vital pieces of information which the Mac needs to know in order to store and retrieve things. This information normally take up the first few sectors of the volume, and contains data about what files are stored where, what space is free on the volume and so on. The information is split up into various different areas, known as things like the boot block (which stores some vital information needed for the Mac to start up), the volume information block (which lets the Mac know where other vital information is stored – a sort of 'index' to the drive), the volume bit map (which keeps a record of which parts of the disk are used and which are free) and so on. It's not too important to know exactly what all these different areas do – but it's useful to be aware that they exist.

When you come to store a file on

no means definitive, though – and at least one 'smiley dictionary' has been published (it's incredible what people will fork out money for...).

: -) Smile
;-) Wink
:- (Unhappy
:-P Sticking tongue out
:-O Shocked
:-X My lips are sealed
:-)) Very happy (or double chin)

You'll also see many TLAs (three letter acronyms) and FLAs (work it out...) splattered around, by people who can't be bothered to type all the words out. Again, here are just a few...

IMO In my opinion
IMHO In my humble opinion
ISTM It seems to me
IYSWIM If you see what I mean
ROFL Rolls on floor laughing
<g> Grin
RTFM Read the flippin' manual

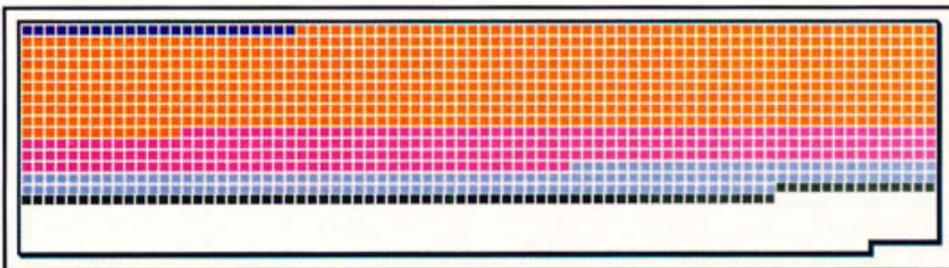
mac TRIVIA

'Smileys'

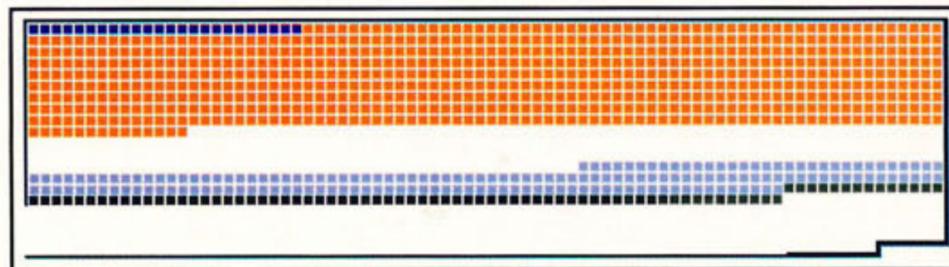
If you use computer bulletin board services (BBSs), you'll often see small collections of punctuation thrown around for no apparent reason. These are 'smileys', and are used to convey emotions in people's writing. (Some would say that people should be able to convey their 'tone of voice' through their prose alone, but perhaps that's just being churlish...) To understand smileys, just turn your head on one side as you look at them... yes, those parentheses, dashes and colons miraculously turn into little pictures of people's heads!

So, here are a list of just a few of the more common ones. It's by

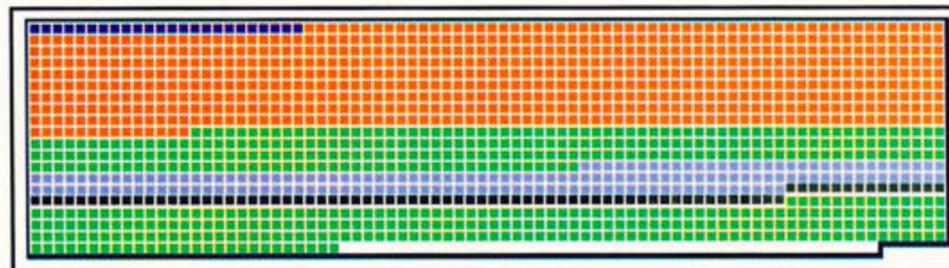
Fragmented files



Here's a typical disk, with four files stored on it (represented by the different colours). Because they were added one after the other, they are not at all fragmented.



Now, we've deleted the pink file, so there's some space on the disk. The Mac doesn't shuffle the other files around to fill the space – it just marks it as blank.



When we add the green file, fragmentation occurs. The Mac fits it wherever it can – which means that part goes where the pink file originally was, and the rest is put elsewhere.

the disk, the Mac first looks in the volume information block, to make sure that there's actually enough room on the disk to store the file. Then it splits your file into 'blocks', puts them on the disk wherever there's free space and stores the location of each block in the catalogue tree – so that it can find them all later. Blocks are groups of sectors – usually two or three – that are the smallest amount of data the Mac can write. On disks under 20Mb in size, there is one sector per block – so a block is 512 bytes. On larger disks, two or even three sectors make up a block, so it's 1K or 1.5K in size. The Mac deals with blocks rather than sectors because it can write information much faster.

As your file is stored, the blocks used just happen to be the first free ones that the Mac can find. With a totally blank disk, this will mean that the blocks are stored one after

each other – but if there's already data on the disk, with some space left by previously deleted files, then it's quite possible that the blocks won't all be next to each other. This is known as 'fragmentation', and severe file fragmentation can have quite an effect on the speed at which you can access data. If all the blocks are next to each other, the disk head doesn't need to move very much – just stepping from one track to the next as it reads the sectors. However, if your file is fragmented, the drive head must jump about as it tries to find the blocks one after the other – and that can take some considerable time.

Because of this, it's a good idea to defragment your disk, using a utility such as SpeedDisk (part of Norton *Utilities* for Macintosh) or Central Point *Optimizer*, which collects all the blocks together and makes files contiguous again. **mf**

Feeling groovy

Ian Waugh shows you how to inject some 'feel' into your sequencer tracks and checks out *Audioshop*, a program for your CD-ROM drive

One of the major criticisms levelled at music produced with the aid of sequencers is that it is robotic, mechanical and lifeless. There is a solid scientific reason for this although a full explanation involves delving into psychoacoustics which is a study of the way we perceive sound.

Without boring the pants off you, what it boils down to is this – if we listen to a repetitive pattern, after a while our brain releases chemicals which block out the sensation. Everyone has experienced this. A noisy fan in the office, a bicycle wheel which needs oiling, the tick of a clock – after listening to them for a while, all these sensations fade

from our awareness unless someone or something draws our attention back to them.

This effect applies to music, too. If you listen to a rhythm on a drum machine, your brain will eventually become bored with it. When playing the same pattern, a live drummer will vary it ever-so slightly, so removing the boredom factor for the listener. In common parlance, musicians refer to this as 'feel'.

Even in classical music which is supposed to be played 'exactly as written', those performers who produce the most moving or 'feeling' performances are those who vary the timing slightly. This has been proved by careful study of

great pianists. We can use this knowledge to good effect, not only with drum patterns but with other music lines, too. If you fully quantise a pattern you run the risk of making it 'brain boring'. Although certain types of music such as techno require rock steady timing, there's no reason why you can't apply these ideas here, too.

There's another effect you can use to good advantage, concerning the placement of bass and snare drums. If the snare is placed ahead of the beat, the effect is lighter than if it is placed behind the beat.

The resulting feel depends on how far from the beat the hit is. Pushing a snare further and further

behind the beat produces a correspondingly heavier feel. Bringing it ahead of the beat makes it snappier and then pushes the rhythm.

Finally, even if the hits are offset, if they are repeated throughout the song the boredom factor can still be invoked. Don't apply the same offset to all the hits and try applying a randomise function if your sequencer has one. We're not talking massive amounts of movement here – offsets and variation of a few milliseconds can turn a boring groove into one which sits 'in the pocket'.

There'll be more compositional hints and tips in future music columns.



Shop around

Many people these days have a CD player. Many computer users also have a CD-ROM drive. Most CD-ROM drives can also play audio CDs so if you don't already have a CD player, a CD-ROM drive can be a very cost-effective buy.

Apple's CD Remote will let you take charge of your audio CDs but if you fancy something with a bit more pazazz, check out Opcode's *Audioshop*. The program draws a picture of a mega hi-tech CD player on screen with more buttons than a tailor's dummy. You can start, stop and loop tracks and create a Playlist so selected tracks play in a certain order.

But *Audioshop* has another trick in its caddie – it can record and edit digital audio. Now before you start jumping up and down with excitement, it's as well to point out that this is Mac digital audio, 8-bit quality we're talking about here – the stuff Mac sounds are made off. Still, it's fun.

Audioshop can integrate digital audio with CD tracks in the Playlist. The package includes a

couple of disks of music examples and sound effects for you to experiment with.

Audioshop supports six Mac audio formats. It prefers AIFF (Audio Interchange File Format) which is the default format and used by many audio applications. It can handle the snd Resource format used by the Finder to produce System sounds and it can save sounds in *HyperCard* and *MacroMind Director* snd Resource formats.

It also supports the *QuickTime* format – more fodder for the Multimedia crew – and the *SoundEdit* format. *SoundEdit* doesn't seem to be widely used here but it's the States' premier sound recording and editing software – and so it should be, costing as it does around £200. *Audioshop* sneakily makes *SoundEdit* documents appear as *Audioshop* documents.

You can record in mono or stereo at sampling rates from 5-44KHz. Although the sampling resolution is only 8-bit, Opcode says the program will be compatible with future Macs which have 16-bit resolution. Hmm...

The Editor shows the sound in traditional waveform format and you can cut, copy and paste bits of it as you see fit. You can alter the volume

and pitch of selected parts of the waveform and scale the effects to produce fade ins and outs, for example. There's a Reverse function and you can apply Echo, Vibrato and Flange effects.

Okay, I admit it! *Audioshop* is a little ostentatious if you only want to playback audio CDs. But isn't that the nature of technological gizmos anyway? However, it does have practical uses in the field of Multimedia. In education, too, it can be used for sound editing and even album remixing and track re-ordering.

The manual suggests *Audioshop* can be used for voice mail but this smacks to me of a solution looking for a problem – anyone out there actually using voice mail and prepared to admit it? How many words do you get per K compared with word processor files? And who pays the phone bills when you send the files down a phone line with a modem?

Finally, *Audioshop* is simply a great way to mess around with sound. And do you need any other excuse than that?

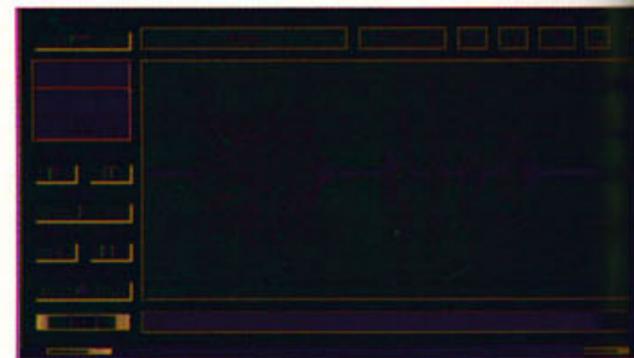
Audioshop costs £90 from: MCMXCIX, 9 Hatton Street, London, NW8 8PR. Tel: 081 963 0663.



The main *Audioshop* Player window and the Playlist



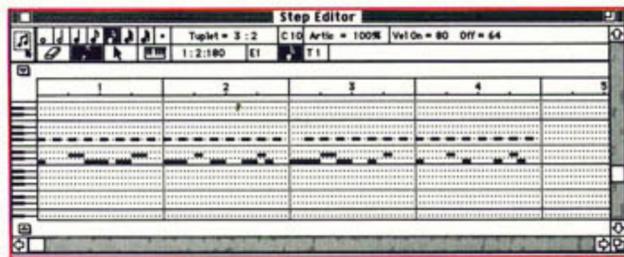
You can adjust Echo, Vibrato and Flange parameters separately



The Editor uses traditional sample-editing processes

Hitting the groove

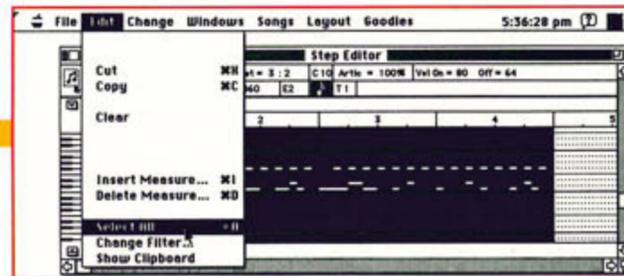
The following shows you how to alter the feel of a drum track by changing the placement of the snare drum hits. This example uses Passport's *Master Tracks Pro* but you can use similar processes with most sequencers.



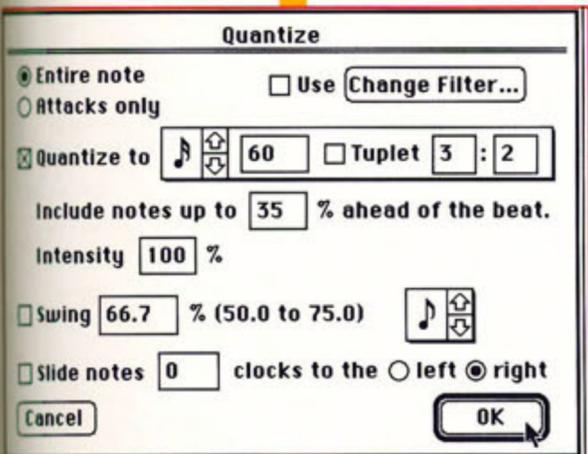
Record a drum pattern of two or four bars. Here a four-bar groove using (from bottom to top) bass, snare and hi hat is shown in *Master Track's* Step Editor



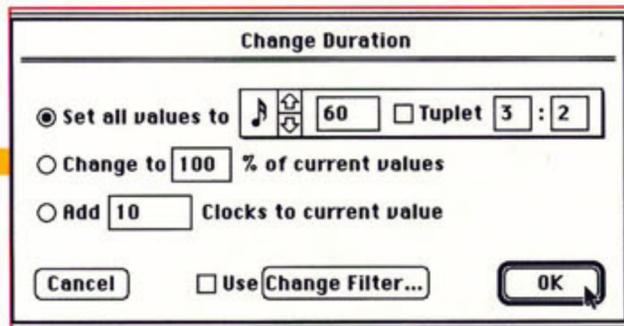
Make the track loop so you can play the track and hear the changes as you make them on the fly (this may not be possible with some sequencers)



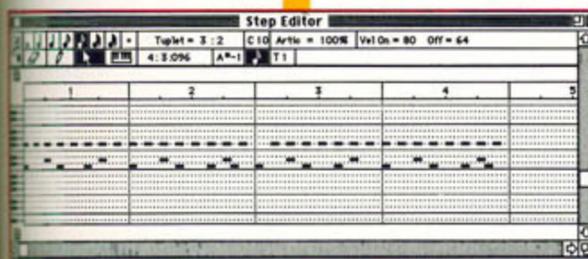
You will be better able to see the effect of the changes you make if you quantise the track. **Select All** the events



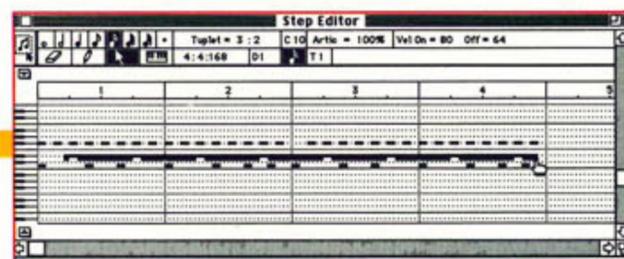
Quantise the entire notes to 16th notes with 100% intensity. This is your rock-steady, robotic, computer rhythm!



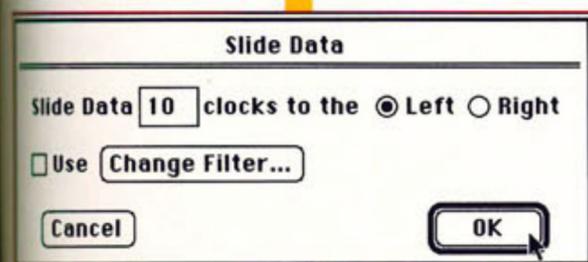
Drum notes don't need a duration so change the length of all the notes to 16th notes, too



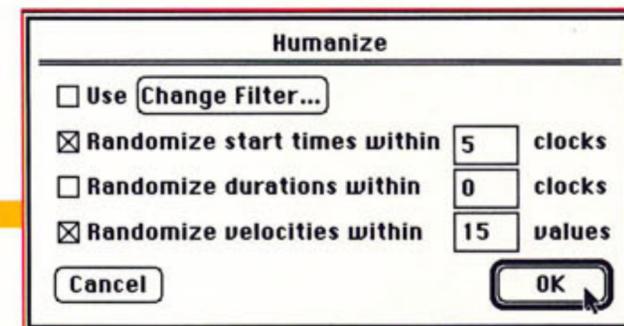
The result will look something like this. It makes the note placements very easy to see



Select just the snare hits by clicking and dragging – or however you select a group of notes in your sequencer



Use the **Slide Data** function (sometimes called Delay) to move the snare hits to the left and right by small amounts. Listen to the effect this has on the groove.



Finally, randomise the start times slightly and the velocities to humanise the pattern. Easy does it. The result is a drum pattern with feel!

Book of the month

The *Studio Musician's Jargon Buster* has the best book cover you'll ever see after seven pints of lager and a vindaloo on a Saturday night.

It's a glossary of around 1,500 terms which you may come across at the point where music, technology and recording meet. It's a large format book, well laid out and with several diagrams where required to assist the reader with explanations.

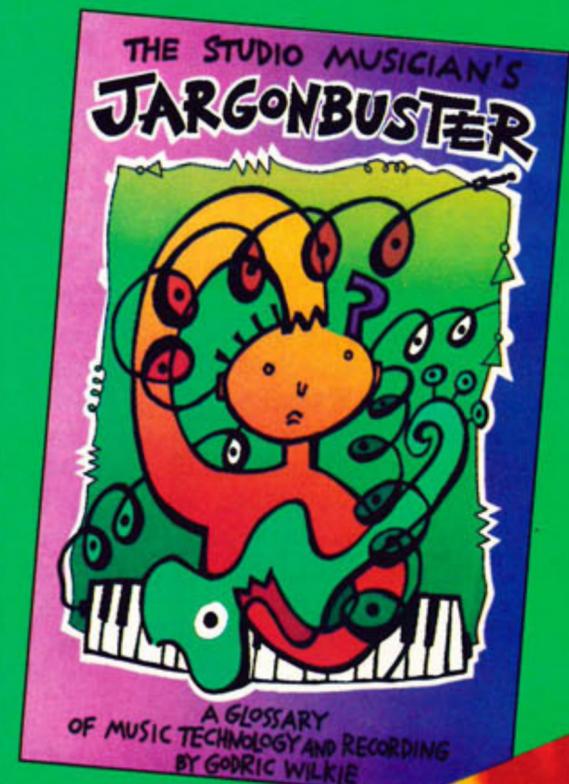
A nice feature is the route map which shows how the nine main topics of the book – musical styles, music, electricity, recording, sound, synthesis, MIDI, digital audio and computing – link together. Each topic contains several key words, and connecting lines show how the topics cross reference to each other.

While the book is extremely informative, the definitions do oscillate in character between humorous and techie. Compare: "Session Musician: a professional musician whose career is mainly spent playing in the recording studio rather than in live performances. Usually recognisable by their pallid complexions and large banks accounts" with "Signal-to-Noise Ratio: the amount by which a signal exceeds the noise with which it shares a path. It is expressed in negative dB(v) with the peak signal at 0 and the noise (hopefully) some amount below. In a more general sense, it is the ratio between information and anything that masks or corrupts it."

I hope that's clear. And incidentally, many session musicians actually do play live – the unnamed master musicians who provide the majority of the music on tours with name bands.

But I still like the book and it has already helped me out with a few techie definitions about digital audio.

The Studio Musician's Jargon Buster is published by Music Sales and costs £13. It should be available from all good book and music stores. In case of difficulty contact Music Sales on 0284 702600.



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All you have to do is fill in the form on page 84 – or photocopy it if you don't want to cut up your precious copy of **MacFormat** – and then post or fax it to us.

Please note that we are unable to answer questions over the phone – so there's no point ringing us up with technical enquiries. We are also unable to enter into personal correspondence – even if you enclose an SAE. We can only deal with questions through the pages of **MacFormat**.

Please do try to fill in as much of the form as you can. After all, the more details we know about the setup of your Mac and the way you are using it, the more likely we are to be able to find a solution to your query or problem. There's no point asking something like "Why won't my document print from *ZingWord 9.2*?" if you don't tell us what kind of printer you're using!

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 OmniDirect in the United States, when I was visiting the country. However, it won't work with my System software (either 7.0.1 or 7.1): it requires a US System.*

If I get the US version of the System software, will all my other applications run? Alternatively, is there a way of switching between UK and US Systems? Or is there another solution altogether?

Ranulph Glanville
Southsea, Hants

A

This is a problem that a number of people have experienced. The reason is that some software developers in the States have built in routines which check to see which version of the System software you're running – if you buy a US version of an application, it requires a US System to run. The developers who do this claim that it's so people

will use the 'proper' European distribution channels, rather than buying from grey importers who can't give proper technical support and backup.

The way to get around this is, as you say, to use a US version of the System. All your other software certainly should work under a US System – it's US versions of programs imported into the UK that developers want to stop, not the other way around. However, if you do run into problems you'll have to put UK and US versions of the System on to your hard drive. To switch between them, use a PD or shareware package such as *System Switcher* or *Blessor*, which allows you to tell the Mac which particular System folder it should use.

If you are not happy with this method of what is essentially import control and restriction of buyer's choice, I suggest that you send a strong letter to the manufacturers. Who knows – if enough people do so, attitudes may change.

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 saying that 'Extensions are 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.

Q *When my Mac is switched off and then on again, the following things happen:*

- *The date in the General control panel changes to 27/8/56*
- *The time changes to 12.34pm*
- *The mouse tracking changes from fast to slow.*

I have replaced the System twice and checked all the System Extensions, none of which seems to be causing the problem. I have a Data Technology Hyperflexy SCSI device connected – could it be this? Any ideas?

Reece Bawden
Cork, Ireland

A

I don't know much about the Hyperflexy, but there's an easy way to check if it's causing the problem: disconnect it, remove any Extensions or Control Panels associated and see if the problem persists. I suspect that it will – SCSI doesn't

Label Q&As

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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

affect things like the date and time.

A more likely cause is that the internal battery, which is used to keep track of things like the date and time, may be running out – although they generally last for five years or more before they need replacing, and in your note you say that your LC is only a year old. You can replace the battery yourself: check out the September issue of **MacFormat**, pages 80 and 81 for a picture of the inside of an LC II, and you'll see the battery just to the right of the System ROMs (labelled 'E' in the photograph). Just make sure that you buy the correct kind of battery – use of the wrong kind could damage your Mac. If you don't feel confident about doing the job yourself, a dealer will do it for you – it should only take a minute or two.

However, before you do that, try 'zapping' the PRAM (Parameter RAM), which is the small area of memory where all the details like time and date are stored. It's possi-

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ble (although unlikely) that a corruption in this section of memory is causing the problem. To zap the PRAM under System 7 or later, you should restart your Mac and hold down the [command], [option], [P] and [R] keys simultaneously. The Mac will appear to restart normally, but after a couple of seconds will 'bong' and restart itself again. You can then take your fingers off the keys – the PRAM has been well and truly zapped. You'll find that some things, such as the number of colours that your monitor is displaying, may have changed, but you can soon set these right.

Q I have a number of questions for you. (We only have space for some of them in this issue, I'm afraid – Ed.)

1. Microsoft Word's on-line help (and the documentation) describes the Flesch-Kincaid level for readability as an educational grade level. However, it doesn't really give you an indication of what these grade levels mean. Can you elucidate?

2. I have a friend who uses Microsoft Word 2 for Windows. How can I get Word for Windows files to my Mac with the formatting and so on preserved? I notice that in my Commands folder I have the necessary file format conversion files. The only problem is, how do I use them?

3. I own Norton Utilities, and I've been using it for a while now. However, I haven't used SpeedDisk on anything other than floppies so far, since the manual warns that some hidden

protection files are sometimes destroyed by optimising the hard disk. I don't want to re-install software on the disk after optimisation – quite apart from the inconvenience, I've made so many customisations (especially in Microsoft Word) that I don't want to have to go and re-customise everything again.

T F Ismail
Ilford, Essex

A

1. This is one of the options from within the Grammar checking module of the program. The grade level is the grade (year in school) that someone would have to be in to understand the document. To be honest, this doesn't mean very much – as long as you, and your intended readers, can understand the thing then it's fine!

2. Converting Word for Windows files is easy. Use Apple File Exchange to access the PC disk in your Mac's floppy drive, and copy the file to your hard disk. Then launch Word and select **Open...** from the **File** menu. Assuming that you've installed the Word for Windows converter when you installed Word in the first place, you should see the Word for Windows file in the **Open...** dialogue box – and file conversion will take place automatically. If the file doesn't appear in the dialogue box, select 'All Files' rather than 'Readable files' just below the scrolling list of files – your Word for Windows document will then be visible.

3. You shouldn't worry too much. SpeedDisk doesn't actually destroy any files – it just moves them around. So program configurations,

such as your special menu settings in Word and so on, will remain intact. However, some programs (although very few these days) have a copy protection scheme whereby they hide an invisible file in a certain place on the hard disk during installation from the master disk. Every time they're run, they check to see if the file is there – and if it isn't, they refuse to work. Since disk optimisation is almost certain to move such a file, the program won't find it and will assume that it's not a legitimate copy.

You can tell if you have such an application because the manual will warn you that you must de-install it using a supplied program if you want to put it on another hard disk – often, you are told that you have a maximum of two or three installs, after which the 'key disk' is useless. None of the applications that you list in your letter uses this method of copy-protection, and indeed virtually no programs these days do – Apple frowns on this particular way of copy-protecting programs, since they don't follow the Mac programmers' guidelines.

Q I have a problem: my Control Panels window has shrunk (I'm running System 6.0.7). I've tried everything I can think of to cure this, but nothing seems to work. I need to alter some settings, so can you please suggest a solution.

Andrew Banks
Douglas, Isle of Man

A

If you start experiencing problems with System software like that, the easiest (and best) thing to do is to re-install the System. Do this by starting with the System software disk called Install 1 that came with your Mac, and click on the **Install** button (after selecting your main hard drive, if you have more than one connected). Don't worry: any

fonts, Extensions, Control Panels and so on that you have added to the basic setup won't be deleted; the Installer program is intelligent enough to keep them when it puts the new System software in place.

Q I have an LC II, which came with System 7.0.1. As you probably know, there is no dedicated LC II software in the 7.0.1 package, just the old LC. As that is an '020 machine, it seemed a bit dumb to install it, so I did a custom install and put the next level software up, that for a IIxi. Staff at my local AppleCentre just rolled their eyes when I told them this, and said that I should either upgrade my Mac or downgrade the software that I've installed to the LC version. However, I do want the LC II's speed increase – which presumably I wouldn't get if I installed software for the LC. Even though I installed IIxi software, the Mac still knows it's an LC II – it says so in the 'About this Macintosh...' window.

Stephen Peach
Romsey, Hampshire

A

You've become a little confused, here, about what the options in the Custom Install part of the System software do – perfectly understandable, since it isn't really explained that well.

All the possible options – install for Classic, LC, IIxi, IIcx, IIci and so on – are the same basic software – System 7.0.1. The difference is that some Macs have different hardware to others, and the System software needs to know about this – so there are slightly different versions to take the differences into account. I stress: from the user's point of view, there is absolutely no difference in the software. If you just do a standard Install (don't hit the **Customise** button), the Installer will work out which version of the software is the best for your Mac, and will put that in place for you. Whatever, installing the LC version of the System software won't slow your Mac down in any way.

Q As a newcomer to the Mac, I eagerly installed the BeHierarchic program that you had on your recent cover disk. A short while after installing it, my Mac began to totally freeze about every one in five times I tried to shut it down. Each time, after a wait of 20 minutes, I was told that a System Error

Document Statistics

Counts:		OK
Words	201	
Characters	1167	
Paragraphs	6	
Averages:		
Sentences per Paragraph	2	
Words per Sentence	15	
Characters per Word	4	
Readability:		
Passive Sentences	7%	
Flesch Reading Ease	60.5	
Flesch Grade Level	8.9	
Flesch-Kincaid	8.6	

Microsoft Word has a built-in grammar checker which gives fascinating facts like the Flesch Grade Level – used in the States to measure educational grade levels

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had occurred; the only way to get any further was to switch off and start again. After this happened a few times, I deleted every BeHierarchic file I could find, and the problem seems to be gone. Is BeHierarchic to blame, or is it my Mac?

Secondly, when I opened the *About This Macintosh* recently the 'Largest Unused Block' figure was constantly varying between 2945K and 2927K. It hasn't happened before; is this normal or is there a problem?

Andrew Scott
Kinrossie, Perthshire

A With regard to your first question, it's possible that *BeHierarchic* was conflicting with some other Control Panel or Extension that you have installed; the only way you can tell is to remove all the Control Panels and Extensions from your System folder, then return them one at a time, restarting each time, until the problem recurs – it's pretty certain that the last file you returned to the System folder is the offender. (Don't bother removing any of the Extensions or Control Panels that are part of the standard System software – they all work fine together.)

If you don't have any other Extensions installed and *BeHierarchic* still doesn't work, then it's one of those bits of black magic that occasionally happens, I'm afraid – the program just doesn't like your particular set-up. I know that this isn't a particularly scientific standpoint to take – but anyone who's used Macs for much time will confirm that it's the only possible explanation for some of the things that can happen!

As for your second question, don't worry about the 'juddering' memory display. This just means that the System kept taking tiny bits of free RAM for its own use, and then returning them when it had finished whatever it needed to do. It's a perfectly normal way for the memory display to behave.

Q I'll probably have to increase the size of the internal hard disk unit of my Performa 400 before much longer. Has anyone experienced any difficulties doing this? I'm particularly concerned about reloading the System from the backup disks that I've made using the supplied utility.

Darwin Moir
Bridge of Don, Aberdeen

A You shouldn't have any problems reloading all your software from your backup disks, as long as you used the backup utility correctly. However, a better bet would be to add an external SCSI hard drive, rather than replacing your current internal unit. By doing this, you get both the capacity of your internal unit plus whatever size external drive you buy – so, although external units tend to be a bit more expensive, to cover the cost of the casing, power supply and so on, in real terms it's a more sensible option. Any hard drive advertised as working with a Mac (which means all the ones advertised in *MacFormat*) will work – your Performa is, after all, just a Mac with a different name on the front.

Q I recently bought a Mac LC II 6/160 with a 14-inch colour monitor. I also bought the game *Monkey Island 2*. However, the scrolling speed appears to be slower than that on my friend's Mac – although he has a Mac LC 4/40 with 13-inch monitor, which I thought should be slower than mine. Also, when I use PageMaker 4.2 my friend notices that my Mac seems to take longer in displaying the work that I'm doing than it would if I were doing it on his machine. Do I have to buy something extra to speed my machine up?

Kenneth Arnold
Coventry

A Let's start this one off with an interesting (although not strictly relevant) fact: the actual screen size of the 13-inch and 14-inch monitors are in fact identical. Apple renamed the monitor to fall into line with PC manufacturers, who had been calling similar screens 14-inch

because they had been measuring from the edges of the display, rather than the visible area (which Apple had, more honestly, been doing).

Trivia over. The reason that your Mac is displaying things more slowly is that you have your Monitors control panel set to 256 colours, while your friend's LC is only displaying 16 colours. That's because the LC II comes with enough VRAM (Video RAM) to show images in 8-bit (256 colour) mode, while the standard LC only has enough VRAM for 4-bit (16 colour) mode. Your solution is to go to the Monitors control panel and select a lower bit depth: setting to 16 colours should be fine, and you ought to see that your Mac really is faster than your friend's. To get 256 colours on your friend's monitor, he or she will have to buy a 512K VRAM SIMM (available from any dealer who supplies memory, although make sure that you specify VRAM, not standard RAM).

This, incidentally, is a valuable general point. If you find that your Mac is running slowly, and you don't actually need colour for a particular job, you'll find that switching to black-and-white will, in many cases, speed things up quite radically. This is because (in very basic terms) it's got less information to deal with, and less data to shift around in its memory. Of course, this only works if the application you're using does lots of drawing to the screen – DTP programs and the like are good examples – and not if the program spends most of its time number-crunching (spreadsheet users, for example, won't see much performance increase by reducing the number of colours displayed).

Q As I understand the reply to a letter printed in issue three of *MacFormat*, QuarkXPress 3.1 has a built-in copyright 'guard' to prevent people from running off copies and either selling them or giving them to people. This I can understand, and I assume that other manufacturers have similar devices hidden away in their software. However, I'm confused because, to quote the PageMaker manual, "before you install the program, make a backup copy of each of the disks in your PageMaker package; use these backup disks to install PageMaker."

So, could I use those backup copies? If so, why can't I do the same thing with XPress or, say, Excel 4.0 – I tried making a copy of the disks but the

installer kept refusing to accept my backup copy. Is there any point making backups, and if so why is it recommended in all the manuals?

George Rowley
Leeds

A Different manufacturers use different schemes for copy protection: some companies, like Quark, are very strong; many put no copy protection scheme on their disks at all.

QuarkXPress requires that you insert a 'master floppy disk' each time you run the application, until you have registered the program. At that point, you get another small program which alters the main *XPress* application on your hard drive so that it doesn't ask for that master disk. This is a good way for Quark of ensuring that its users register their copies – and, incidentally, provides a level of copy protection. *Microsoft Word* and *Excel* require that you 'personalise' the first installation disk that you use: it writes your name on to the floppy, so that anyone 'borrowing' and installing the application on to their hard drive would end up with a copy bearing your name – again, an incentive not to 'lend' people software, since it's obvious where it was pirated from.

Most manufacturers, though, don't have any copy protection scheme at all (mainly because users hate the inconvenience that such schemes often involve). In these cases, it's highly recommended that you back up the original disks and install from your backups. That way, you can keep the originals safely locked away – if an original disk becomes corrupted, it's a lot of hassle to have it replaced, whereas if a backup gets damaged you can just make another one.



Q I have just obtained a Mac IIxii from a friend, but he hasn't been able to find the System disks for System 7. Parts of this System are missing from the hard drive, but I have other software on the disk. If the disks come to light, can I just install them on the hard drive using the Easy Install procedure as detailed in the reference manual, or must I do something else first? Also, I intend to explore HyperCard in the near future: can you recommend a good, cheap book?

J J Longhurst
Honingham, Norfolk

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A When you find the System disks, yes, just start up with the first disk and click Easy Install – it won't move or harm any of the other files that you have on your disk.

As for *HyperCard*: our very own Rod Lawton is an undoubted expert on the subject, so check out his regular tutorial column here in **MacFormat!**

Q I've just bought a copy of ClarisWorks 2 and for the most part I'm very happy with it. However, I can't find any way of customising envelopes in ClarisWorks for use on my StyleWriter II, as I could in my old copy of Microsoft Word 4.0. The only envelope size (C5) available in the Page Setup menu isn't really much use for normal correspondence. Is there, perhaps, some useful piece of software that could help me to solve this problem?

Ann N Walker
Bramhall, Stockport

A Ann actually sent us another letter after this one, saying that she'd solved her problem, but it's a question that many people have asked, so let's tackle the subject here anyway.

Ann's solution was to install the *Address Book* program which we put on September's **MacFormat** coverdisk. This allows you to print envelopes in a wide range of sizes, with no problem. The other way of dealing with the problem is rather more 'brute force', but produces equally good results. Just because the StyleWriter software doesn't come with a specific setup for a particular envelope or paper size, doesn't mean that you can't use stationery that size. For example, to print on A5 paper, put it in the printer, moving the paper guide so that it's snug against the paper. Then all you need to do is adjust the margins in your word processor so that you're only attempting to print to this width of paper. (The easiest way to do this is to get your application's text ruler to display its measurements in inches or centimetres, and use a 'real' ruler to measure the actual width of the paper.) If you're feeding in envelopes 'lengthwise', you'll want to set print orientation, from the Page Setup dialogue box, to make text print on its side, too.

To print properly on an envelope, you'll find that you need to move the address around on the

page until it sits in the correct place when output. Experiment by printing on paper and comparing that with where the address would appear on the envelope (it's cheaper than experimenting with real envelopes!). Once you've got things right, save the document as a Stationery pad (or, if you're using System 6, Lock it by clicking once on its icon from the Finder, selecting **Get Info** from the **File** menu and checking the 'Locked' box). Now, whenever you need to print an envelope you launch this document, overwrite the 'placeholder' address with the real details, and print. Because you've locked the document or opened it as Stationery, you don't need to be worried that you'll change anything permanently.

Q 1. Is it possible to rename a disk after it has been initialised? I tried **Erase Disk**, but the icon still has the same name. Any attempt to rename it at the icon just clicks it off.

2. As I add and remove data and files on the hard disk, will I leave wasteful little gaps or is the hard drive intelligent enough to store and compact data efficiently?

3. Now that I have paid out my hard-earned cash, I see that I could have bought a Performa at Dixons for a lot less money. Please reassure me that my LC is much, much better!

Steve Hatfield
Richmond, N Yorkshire

A 1. To rename a disk, click once on the name of the disk and don't move your mouse for half a second or so. You should see the disk name highlighted, at which time you can type to replace the existing name with whatever you want. **Erase Disk** (from the **Special** menu) deletes all the contents of the disk, but doesn't change the name. Note that you can't change the name of a floppy if it has been write-protected (if the little plastic tab has been moved so that the hole is visible in the corner of the disk case). 2. Don't worry – the Mac is far too intelligent to waste space on your hard drive like that! For a basic introduction into what goes on when the Mac stores data, check out this issue's **Beginners'** section, on page 80 of this issue. 3. Sorry, but I'm going to have to disappoint you. The Performa 400 is identical to an LC II – except that it has some extra software bundled with it. The way Apple's prices have changed recently, though, means that it's currently cheaper to

buy a Mac, plus monitor, plus the software, from an Apple dealer than it is to buy a bundled Performa! (And my local Dixon's is advertising £100 off a PowerBook 145 in its window, making it the bargain price of just over £1,300 – a 145B at list price costs less than that!)

Q I have five questions for you: 1. I was delighted to discover *BeHierarchic* on your issue 3 cover disk. However, whenever I attempt to open any script in *HyperCard*, my Mac crashes displaying a variety of System errors and I have to restart. Why is this, and what can I do about it?

Q Could you please tell me if there are any joysticks available for the Mac. Are there enough games that use joysticks to warrant getting one anyway?
Matthew Jones
Douglas, Isle of Man

A There are a couple of joysticks available, although they tend to be rather expensive – upwards of £70. However, you might like to take a



■ Check out **MacFormat** issue 3, page 74 for a photo walkthrough of how to install SIMMs. Back issues are available at £5 each from **MacFormat** subscriptions on 0458 74011.

2. I assumed that when using *BeHierarchic* I could choose, in the settings, to make sub-menus appear only when I held down a key – for example, the [option] key. Is there any way I can get it to do this?

3. *Desktop Textures* is lots of fun, and just what I wanted, but is there any way of making the patterns any larger?

4. When putting fonts into the System folder, I am confronted with a dialogue box that says "Fonts need to be stored in the Fonts folder in order to be available to the Macintosh. Put 'whateverfont' into the Fonts folder?" It then gives me the choice between **Cancel** and **OK**. But sometimes I don't want the font to go into the Fonts folder (especially if it's a printer font), I just want to be able to bung it loose into the System folder as I would be able to with any other folder. Why isn't there a third option: 'No', which when clicked would simply put the font into the System folder so that I wouldn't have to open it and stick the font in manually? Is there a way to change the dialogue box?

5. Why can't you copy files on to floppy disks, duplicate files, compress files, empty the wastebasket and so on in the background, so that you can get

look at the Mac GamePad, which costs £43 from Zye Technology (0293 538666). It's a controller similar to those found on Nintendo systems, and we like it a lot here at **MacFormat**. Software on the Mac is generally written for keyboard or mouse control, but to get around that a Control Panel supplied with the GamePad simulates key presses when you hit a button or press the joystick in a certain direction. Because of this, the GamePad can be used with the vast majority of Mac games (although there are one or two which are incompatible).

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on with other things in the meantime? Why wasn't this built into System 7?

Aeon McNulty
Oxhey, Herts

A

1. I've no idea why this should happen: I have no such trouble on my IICI, and I haven't heard the problem reported by anyone else. To be honest, it doesn't sound like something that *BeHierarchic* is causing; check to see if you have any other 'odd' Extensions or control panels installed.

2. Sorry, but you can't do this. The settings options are to tell *BeHierarchic* when to check all the folders in the  menu for new items – you can check every time, which could make the  menu a little slow to access, or you can check only when you hold down a specified key – in which case, the program assumes that you've exactly the same things in all the folders accessible from the  menu as you had last time.

3. Nope: *Desktop Textures Volume I* will only let you install patterns at that size. Any bigger and you'll have to use something like the shareware *!DeskPic*, which allows you to replace your entire desktop pattern with a single picture.

4. Sorry to keep being negative here, but you can't alter the dialogue that your Mac throws up when you try to put fonts, control panels or System Extensions into the closed System folder. The Mac is genuinely trying to be helpful, here – you want to do something which is, as far as it's concerned, pointless. Actually, if you're using a recent version of Adobe *Type Manager*, or not using it at all, then there is no point putting printer fonts loose into the System folder – they should, indeed, go into the Fonts folder. It's only if you're using ATM 2.0.3 or below that you need to keep the printer fonts either loose in the System folder or in the Extensions folder – it can't find them if you put them in the Fonts folder (although the screen fonts should still go there).

5. The Mac isn't, basically, a full multi-tasking machine. Apple couldn't build 'real', pre-emptive multi-tasking into System 7 because very few applications would have been compatible – and because the System wouldn't have worked on older Macs (Apple has always made a point of ensuring that System software is 'downward compatible' to all machines in the Mac range). It's possible that a future version of the System software might be truly multi-tasking, but we're likely to see that implemented on PowerPC-

based machines, rather than the current family of 680x0-based Macintoshes. Until that happens, I'm afraid that some things, such as formatting disks and emptying the wastebasket, will continue to take hold of the Mac and not allow you to do anything else at the same time. On the other hand, once you've put, say, a file duplication into action you can click on the window of a background application and be taken straight to that application – the Finder will finish the duplication later. And some compression utilities do work in the background – *DownLine*, a shareware program, is specifically designed to do that so that you're not interrupted as it's working.

Q *The LC IIs in the school I teach at are already networked for printing, and I've read that System 7 allows for 'file sharing'. Is there any benefit to my classes if this is used rather than have each application on each machine, and if so, what are the copyright restrictions on file sharing?*

Alasdair Bailie
Newtownards,
Northern Ireland

A

File sharing isn't really designed for allowing many people to use one application off a central machine; this would be rather slow, and only one person at a time could use the application. Rather, file sharing is designed to allow people access to common files without having to pass them around on floppy disks. One common setup is to have a Mac designated a 'file server', which contains copies of all documents that you want other people to

have access to. When someone wants a copy of the file, they just log on to the file server and drag the file to their local hard disk – just as if the file server were simply another hard drive.

File Sharing can become restrictive with large numbers of Macs – there's a limit to the number of machines that can be connected to a file server at one time. However, it's great for passing documents in workgroups, or in a classroom environment. For instance, here at MacFormat each person 'shares' a folder on their Mac (that is, allows other people access to it across the network using file sharing). That way, we can pass around copy, screengrabs, *QuarkXPress* files of magazine pages and so on without being swamped with floppy disks.

Q *I have had problems when trying to change back to the original desktop patterns that came with my LC II, after installing and using the Desktop Patterns Vol I program that came with issue 3 of MacFormat. Now when I try to change back to the original patterns, they seem to appear in black-and-white.*

Akira O'Connor
Stanmore, Middlesex

A

You must make sure that you use Desktop Textures to install the 'Control Panel Compatible' pattern. You should then find that you can use the General control panel as normal to change your desktop pattern. Click on the little arrows above the image of the screen to choose between a range of different built-in patterns, or edit your own

using the editor to the left of the screen image. Note that any 'custom' desktop patterns that you created before installing *Desktop Textures* may well have disappeared – you'll have to design them again, I'm afraid.

Q *I have been trying to use the tip to speed up the StyleWriter as described in the letter on page 22 in the September issue of MacFormat. My problem is that when I try to do this, my Mac crashes with the message: 'Sorry, a System Error occurred. Unimplemented trap. I'm using a Classic with 4Mb RAM and System 6.0.7. Have you any suggestions, as I would love to be able to speed up my StyleWriter without having to upgrade to System 7?*

Douglas Telford
Grantham, Lincolnshire

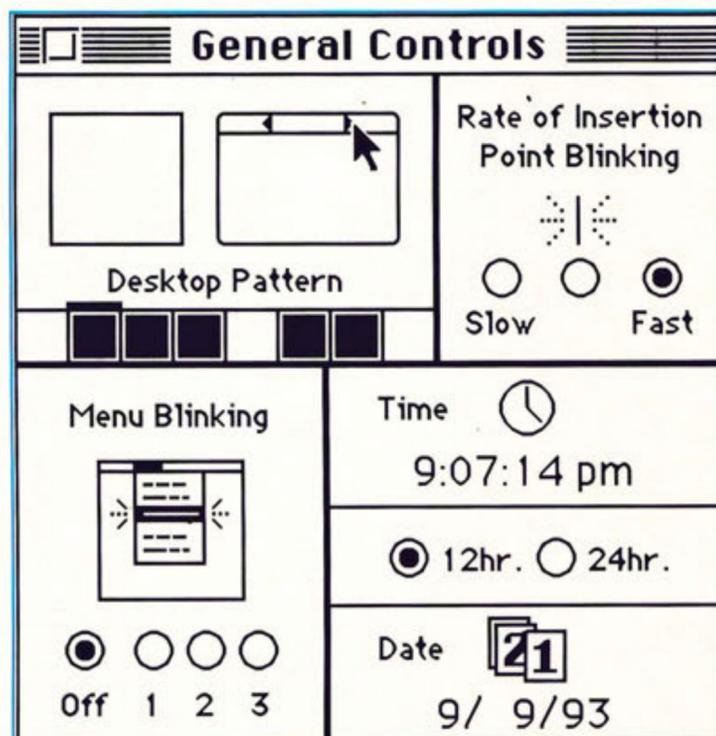
A

Having re-read the tip that you describe, I have to say I'm not surprised it doesn't work. It's very much a kludge, trying to 'fool' the Mac into accepting a driver that wasn't designed to work with System 6 at all. You're extremely unlikely to get good, consistent results, and can resign yourself to frequent System crashes if you try it – unless you just happen to be lucky (see the comments on black magic earlier...). If you do want to speed up your StyleWriter (and the new driver is well worth getting – it really does make a noticeable difference) you will have to upgrade to System 7, I'm sorry to have to tell you.

Q *1. Is it possible (affordably) to change an internal 800K drive to a SuperDrive, or use an external high density floppy drive?*

2. I've been told by two third-party suppliers that there are problems with '030 accelerators for the SE. Is this true?

3. Is there any significant difference between SCSI 1 and SCSI 2? I have a scanner with a SCSI 2 interface, that works fine if it's used alone – that is, with no other SCSI devices connected – but when I daisy-chain it with other peripherals it somehow appears to interfere with the other



To change your Desktop pattern after you've removed *Desktop Textures*, click on the arrows in the General Control Panel

devices. This can result in the Mac booting up from a drive which is not selected as the startup device, or the Mac not being able to find a startup disk at all. The SCSI chain seems to be terminated correctly – any suggestions?

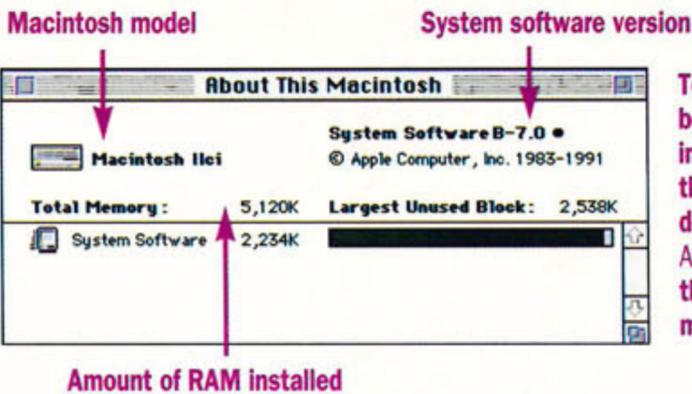
Phil Johnson
Eastbourne, East Sussex

also read and write standard Mac high density disks.
2. I don't know of any particular problems with '030 accelerators for the SE, although some are bound to be incompatible with some applications. The best thing to do is tell your dealer what applications you're going to be using, and get a guarantee that you can return the board if it proves incompatible.
3. SCSI can be a real pig to set up correctly – despite official claims that it's dead easy, and that as long as you set your terminators correctly nothing can go wrong.

A SCSI 2 device should work fine with your Mac, which uses the original SCSI standard (no Macs yet use SCSI 2), although you won't get the speed increase that SCSI 2 offers. If you have problems connecting other devices, try swapping their positions in the SCSI chain – some prefer to be 'nearer' the Mac than others – and try running with no terminators, in case one of your peripherals is internally terminated.

Incidentally, if you have no drive selected as a startup device in your Startup Disk control panel, then the Mac will try to start up from any external boot drive before it uses the internal drive – so make sure that your internal drive is highlighted.

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

A

1. It should be possible to replace your internal 800K drive with a high density one, but it's likely to cost rather a lot. Apple is fairly strict about not supplying internal Mac parts like the disk drive to non-approved dealers, and they aren't allowed to pass them on to anyone else, so you'll have to have the upgrade done by an official Apple Centre – which will cost you. There are a couple of third-party, external floppy drives around, but the only one I've tried connected via SCSI and didn't seem to do a particularly good job. On the other hand, if you're thinking of getting a larger hard drive, you might consider one of the 21Mb 'floptical' units that are available. These can store up to 21Mb of data on an optical disk the same size as a normal floppy, and the real advantage is that they will

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 memory (unless you have a third-party utility which allows you to do that); you're probably not using 32-bit addressing, either. Do detail all external peripherals that you're using, even if you're not sure whether the information is relevant or not.

Please note that we can only answer queries in the pages of the magazine – no matter what bribes you send, we can't enter into personal correspondence! (Although feel free to send bribes anyway...) And since some questions are answered by specialists who don't work in the office all the time, we can't answer technical queries by phone either.

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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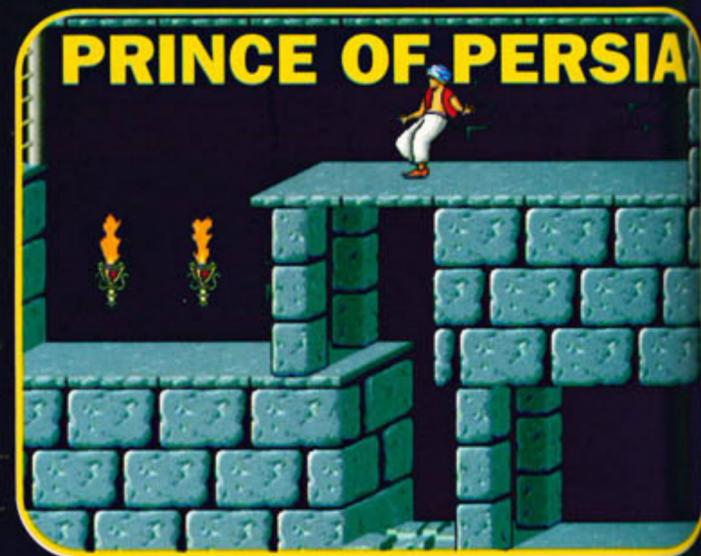
MAC F



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When it comes to getting educated, would you prefer a reference book or a CD-ROM disc? Kellie Simmons discovers that new technology is becoming the firm favourite.

There are lots of facts to consider when choosing reference material for educational use: money, size, durability and how up to date the material is.

Reference books look good sitting on your shelf ready to be opened and browsed. They also give that 'well read,' feel to your living room. They're excellent information providers and compared to the CD-ROM discs, a damn sight cheaper.

So what do the discs have to offer that books can't? Many of the CD-ROM reference discs are almost as expensive as the CD-ROM drives, so they've got to have lots of little goodies to make them worth buying.

Here are three recent entries to the MacFormat CD-ROM reference library and this is our verdict.

1993 Guinness Multimedia Disc of Records



The Guinness Multimedia Disc of Records has more than 3,600 records of information packed onto one disc

Norris McWhirter never ceased to amaze me with his profound knowledge of every single record ever broken. As a child I was desperate to be in the audience of *Record Breakers* so that I could ask him a really obscure question that he wouldn't have the answer to. I never did.

The 1993 Guinness Multimedia Disc of Records is a bit like Norris' brain. It's jam packed full of record breaking facts and provides more than a little paragraph on each subject.

As far as the books are concerned, you tend to get a picture and a few written details but the CD-ROM version offers pictures, words, speech and video footage of certain events.

A handy tool bar at the side of the screen helps you access records easily. You can browse



Word Search is one of the best ways to locate a topic. Type in a relevant word and click on 'Word Search'



The Random Record Explorer includes more than 400 photo and text records for you to peruse at your leisure



Once you've found what you were looking for you can read the text, view the picture and - in most cases - play a movie

through entries, find a certain record through a word search - just type in a word that's related to the record and it'll look it up for you - and you can make a note of a records whereabouts using the Bookmark facility.

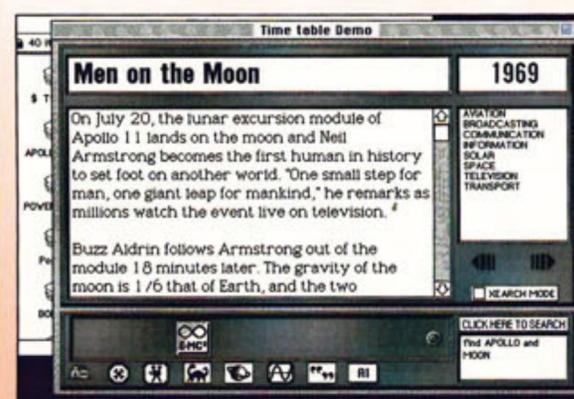
There is definitely more to this than the book version. And, rather importantly, it's easier and quicker to look subjects up. There are more than 3,600 new and updated records which are certainly spiced up with the video and audio clips. This is a great learning tool for kids and adults; and is exactly what CD-ROMs should be used for.

Price: £60

Distributor: Mindscape, 0444 246333

Rating: 79%

Time Table of History



Time Table of History is aimed at the young scientist studying the subject at school or college

Time Table of History supplies you with information on science and technology right from Earth's creation to man's first steps in space. All in all there are 6,000 stories compiled from over 200 different sources. This wealth of text information is also accompanied by audio, graphics and video clips.

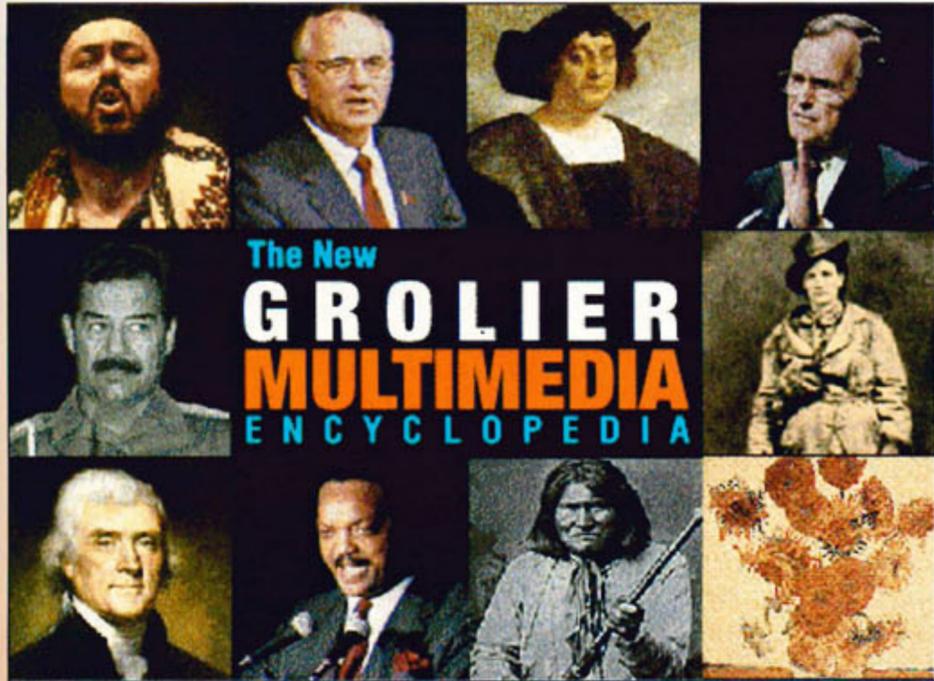
In short, it's is an ideal learning tool for anyone studying sciences at school or college.

Price: £100

Distributor: Mindscape, 0444 246333

Rating: 78%

The New Grolier Multimedia Encyclopedia



The New Grolier Multimedia Encyclopedia has more than 33,000 articles, 3,000 illustrations, full colour maps and some great video sequences. It's great for anyone in education

With more graphics, video, animation and information than you can shake a stick at, *The New Grolier Multimedia Encyclopedia* is packed full of diverse information.

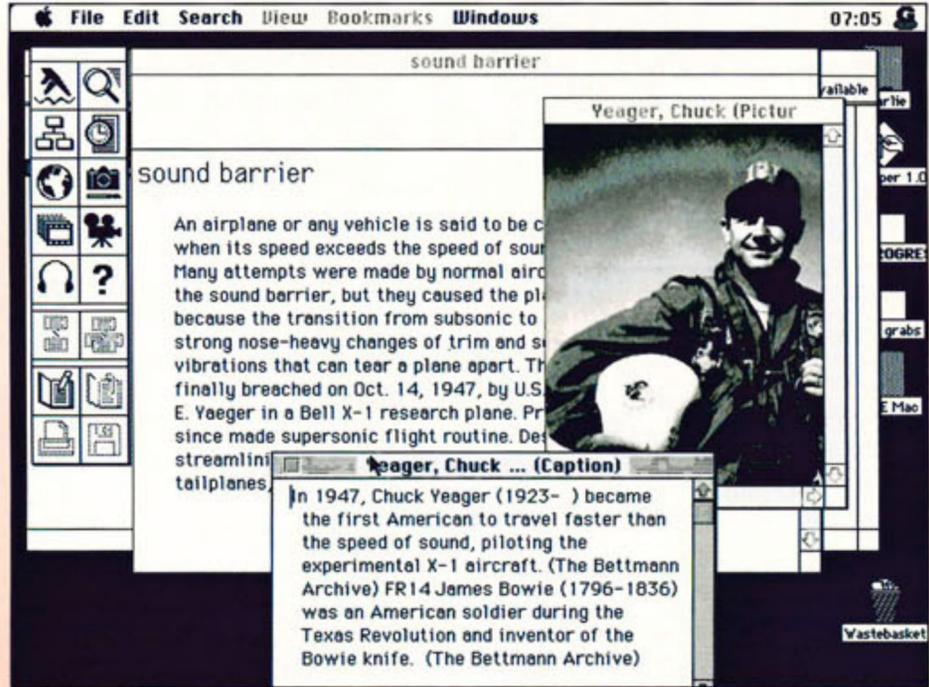
Here are the figures: 33,000 researched articles, 3,000 illustrations, full colour maps and some great video sequences.

I love this technology in museums and now it's available for the home user. The illustration of events using video, animation and speech is fantastic; facts, figures and history talk to you – enough to keep you interested for hours.

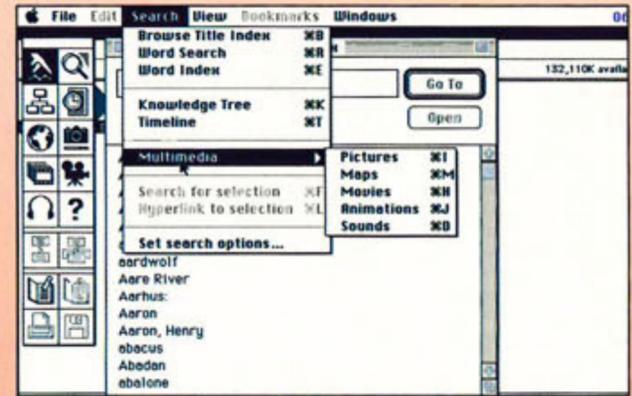
I still love books but for speed and interaction,

but this is a winner for anyone in education – teacher or student. I would even suggest parents with CD-ROM drives – and children – clubbing together and getting this as a reference learning tool for themselves and their kids.

Price: £292
Distributor: Mindscape, 0444 246333
Rating: 80%



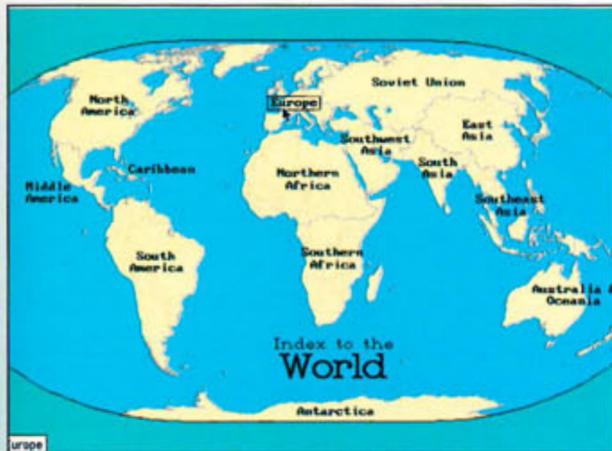
When playing a movie or opening a picture you're also given the option of adding captions. So you can include linked articles, pictures and captions on the screen at the same time



To play a movie click on the camera icon in the tool bar or click on 'Multimedia' found in the 'Search' menu

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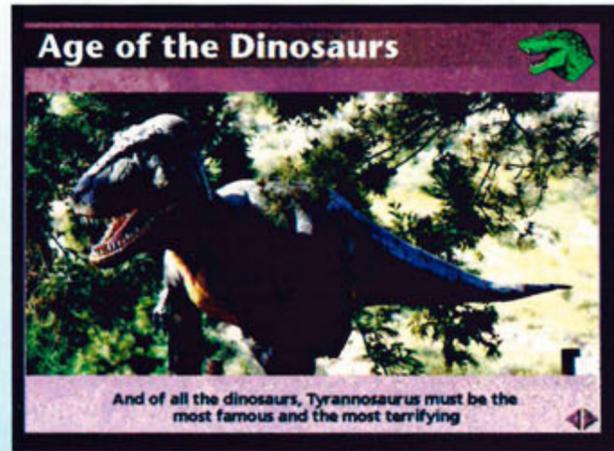
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World Atlas isn't just full of maps. There are also loads of files of information on more than 250 subjects including the population of each country, education, health, crime, government and the economy.

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Dinosaurs are definitely in vogue at the moment, so if your having problems knowing your T-Rex from your Triceratops, *Dinosaurs!* by MDI should answer your questions perfectly. There's even some video footage of the prehistoric beasts – pretend of course – in action!

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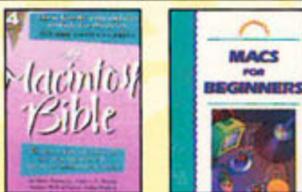
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6.nn = Earliest system requirement, M = Mono, C = Colour required, M&C = Mono or Colour, nMB = Minimum RAM requirement, 0n0 = Processor requirement (if applicable), 256, Thousands or Millions = Colour requirements (if applicable).

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E.C.T.S. – wossat then?

Mac games info can be gleaned from a number of channels. The one most widely used (by me, anyway) is talking to marketing people on the telephone. But a couple of times a year these people can be found at brightly-decorated stands in a big hall under one roof orbited by hacks such as myself.

They're called trade shows which means that only industry people are invited and Joe public isn't allowed in.

ECTS (European Computer Trade Show) is one example that took place recently. It's full of games peeps eager to beckon you into yet another booth to experience the ultimate flight sim, adventure or shoot-em-up.

It's my job to make sure I get hold of the latest info, sample the latest games on offer, talk a lot, and get sore feet. This is the result...

Are you absolutely sure about that date?

(Software man): 'Yeah, it's coming out in October.'

(Me): 'But I told the readers it was going to be ready in September because that's what I was originally told!'

(Software man): 'Yeah well, it's definitely October.'

So there you go. Electronic Arts says that *Populous* will be available in October – but there's no price yet.



The next time *Populous* is mentioned in **MacFormat**, it will be in the form of a full review and not on this page. It's available soon – we mean it this time

Give us a break

Breakline – believe it or not – is a cross between pinball, miniature golf and breakout.

Published by Kalisto – the guys who introduced us to *The Tinies*, *Cogito* and *S.C.OUT* – it's described as an action game which is a cross between pinball, miniature golf and breakout.

There are more than 100 levels to play around with and Kalisto promises me that it's going to be great. As soon as it's available I'll let you know. Mindscape is on 0444 246333.

GAMES PREVIEWS

Eagle-eyed Kellie Simmons keeps you posted on the latest games to hit the Mac scene

In a nutshell...

■ *Take a Break* is a crossword puzzle game from Sierra. It costs £35 and should be available as we speak.



■ *Sim City 2000* from Maxis has finally been given January as its official release date. The game is a massive improvement on *Sim City* (which was superb anyway) and looks absolutely gorgeous.



■ *Fist* from SuperVision is a fantasy CD-ROM role playing game. You play the hero of a solo fantasy adventure which is set in a castle called Mammon. It's based on a telephone game by a guy called Steve Jackson who is one of the leading authors in the adventure and role playing game world – so there. *Fist* also features oodles of lurvely graphics to gawp at.

All at sea

The folks at Three Sixty Pacific have been mighty busy. First off there's *Harpoon II*, the sequel to er, *Harpoon*.

The new version promises a brand new user interface and features things like a graphical interface with a tool bar with all the command and control options that will let you create multiple game windows.

It says here that *Harpoon II* is set to become THE standard in historical naval situations. Strategic enthusiasts take note.

And there's war

Victory at Sea is another strategic offering from Three Sixty Pacific, the US company that also produced the *V for Victory* range (see **MacFormat** issues four and five!). It's a World War II naval game – funnily enough – and has been designed by a guy called James F Dunnigan, a world-renowned military expert.

Players can plot out multi-leg courses throughout the game through the point-and-click process. There is also the ability to zoom in on all the action and there are *QuickTime* videos of real pacific war footage.

Priced at £45, *Victory at Sea* is visually stunning and looks like it's going to be a vast improvement on other strategic games. Electronic Arts can be found on 0753 549442.



Victory at Sea looks set to be a huge hit with the strategic war fans among you

More baby frogs...

I went on to be 'reliably' informed of some more release dates of the other fantabulous releases from Bullfrog, a design and production company that makes gorgeous games.

Powermonger is scheduled for January, *Populous II* in March and *Syndicate* in June. So watch this space for more info. Or give Electronic Arts a call on 0753 549442.

Game reviews in this issue

This month's reviewers have taken to the skies, had a dip in the Pacific, built a load of cities and finally been driven crazy enough to pay a visit to the Doctor...

Carriers At War

Strategy is the name of the game here. Take to the waves... *page 96*

A-Train

Choo-choo train keeps riding. Add-on to this train spotters! *page 96*

Kings Quest VI

The sequel to the sequel to the sequel etcetera. But has it improved? *page 98*

Castle Of Dr. Brain

Prepare to be educated with Dr Brain and his many cerebral teasers *page 98*

Crystal Crazy

Our reviewer gets hooked on the sequel to the popular *Crystal Quest* *page 100*

Spaceway 2000

Take to the roads in the sky in this arcade game with a difference *page 100*



The page where Mac games players can offer hints, tips and advice to each other. This issue includes tips for *Monkey Island 2* *page 98*

CARRIERS AT WAR

No I don't
wanna play
'I spy'

Cameron Winstanley torpedoes his way across the Pacific all the way to Pearl Harbour, as his strategic battle skills are put to the test

Vice Admiral Nagumo made an error of judgement on the morning of June 4th 1941, that not only resulted in the sinking of Japan's main aircraft carriers, but turned the tide on the war in the Pacific. The events took place near the American base on Midway Island, and the error Nagumo made was to order the rearmament of his attacking bombers with conventional high explosives rather than

torpedoes (for use against ships). By attacking the land bases first, he left the way open for American carrier-based bombers, that attacked the carriers before all the torpedoes could be taken back into storage. The effects of American bombs landing amongst Japanese ordnance devastated the carriers.

Now if you've got this far and failed to be

So long suckers - hello Hawaii!

interested, then I'd stop right now, because there's no way you're ever going to buy this game. To put it mildly, *Carriers at War* is a specialised interest sort of game, and to even begin to appreciate it, you've got to have an almost consuming interest in WW2. The game sets out to recreate the war in the Pacific from the infamous attack on Pearl Harbour on December

7th 1941 to the final engagement on April 1st 1945, and includes major battles such as Midway and Guadalcanal and smaller actions such as the battle of the Coral Sea. All the battles covered are detailed in a comprehensive and interesting 136 page rule book that covers the historical facts of the war in the Pacific as well as details of tactics of both sides.

It's a good thing that the manual's laid out so well, because



Getting hundreds of planes to take off from boats must be a pretty involved, time consuming, complicated and confusing business, and strangely enough, so is playing this game



Although pilots from both sides suffered appalling rates of attrition, they did get to wear cool leather jackets instead of some drab overalls with big pockets in the knees



This is the original USS Enterprise, which was mistakenly credited as being sunk by the Japanese more times than any other ship in the American fleet

Spot the difference

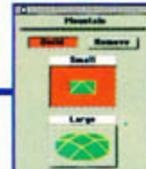
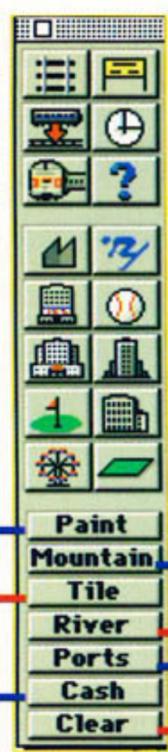
Paint land gives you a choice of six terrain types



Tile lets you place structural things on the map



Cash lets you configure your cash reserves to start



Mountains: big or small, this lets you build 'em



River lets you add lakes, islands and er, rivers



Ports - as its name suggests - lets you add seaports and airports



Clear allows you to cut selections from the map

A-TRAIN CONSTRUCTION SET

Kellie Simmons blows the whistle on this *A-Train* add-on

This is an add-on module to the game *A-Train* which we reviewed in issue three of *MacFormat* and gave a massive 86%. The aim of the original is to build a railway network plus city - within a certain budget - and keep building until you're mega rich.

What the *Construction Set* adds to the original scenario is that it gives you the power to build landscapes, lay tracks, make

trains, construct and edit out towns and cities without having to worry too much about money.

If you're an *A-Train* player you won't notice any difference on first entering the game, but scrutinise the screen a little longer and you'll notice that the Financial and Depot windows have been replaced by Map editing buttons.

They are the gems that allow you to build and destroy cities,



Most of your time is spent looking at map screen like this covered with dots and lines, so bear in mind that most of the other pictures on this page are just pretty ones from various information screens

the game's one of the most complex ones I've ever seen (and I've seen a few) – just playing through the tutorial took an entire evening. Since it was a fairly simple and one sided affair, the manual walks you through the Pearl Harbour attack, with you playing the Japanese commander. Once you've got to grips with the basics of the game, such as setting way points for the attack groups, sending out combat air patrols to search for the enemy and then arming up and targeting waves of bombers, you can put the rulebook aside (although you'll have to keep referring to it)



and go for all out war. The major plus point of the game is its flexibility, since unlike board wargames, you don't have the restriction of moving across a map covered by a grid, so can put any ship or plane anywhere. You're also not hindered by history, so it's entirely feasible that you could play the Americans at Pearl harbour and launch your planes before the attack, which would be a bit of a cheat since you know where the Japanese are coming from but would be an interesting experiment in changing the course of history.

You FORGOT the parachutes

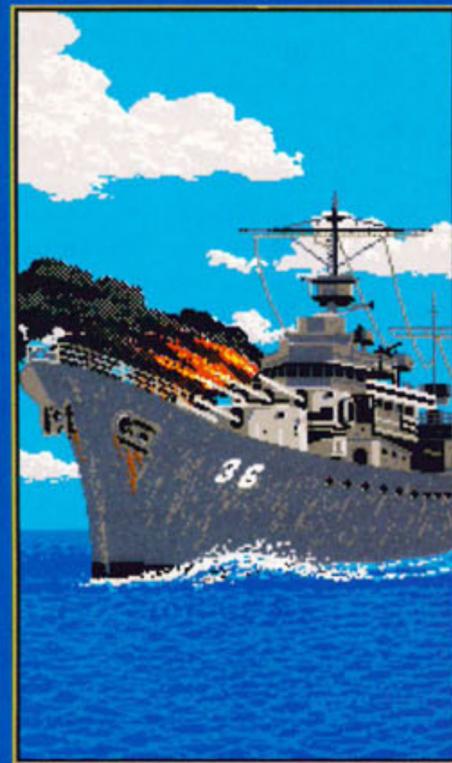


The Japanese were taking the war to their enemy, so had to make do with small carrier based planes, but on the plus side they all had phenomenally cool sounding names such as Zuikakas and Zeros

Also, you can play a single commander and leave control of the majority of the forces to the computer, so if you lose, you can blame it on someone else.

An almost superhuman level of patience is required to play a single scenario due to the game's complexity and speed. The game's amazingly slow, and it's a matter of pace rather than the system you play it on, so get used to the idea of going off to make cups of tea while you play it. Since launching an air attack requires clicking on several screens and repetitively ordering each unit to take off, it takes ages to achieve anything.

The purpose of a review is to provide a clear buying guide, but in



Naval battles, bombing and general mayhem is represented by a series of little animated sequences and some weedy sound effects

this case the end score's to wargamers, since anyone who's into arcade games or adventures will be baffled by its complexity. Balancing up the facts that it's well thought out, detailed and has a user friendly player interface, but is slow and tortuous even for a wargame, the question is 'Do I really want to spend the next few months fighting the Pacific war?'

✓ **Home and dry**
The game's historically accurate and incredibly detailed

✗ **Out to sea**
You could spend the rest of your life trying to finish this game

Price: £45
From: Softline 081 401 1234
Out: Now
Requires: Can only be played on colour Macs, System 6.07 or higher. Memory: 2Mb RAM (System 6.07) or 4Mb RAM (System 7)
Controls: mouse and keyboard

Graphics 80%
Sound 32%
Gameplay 67%
MacFormat rating

59%

trains, tracks etc at your leisure, and I mean leisure because it's just as slow as *A-Train* (although more fun than waiting for the 9.37 from London Victoria).

You're given a choice of six 'examples' to play around with but you can also build your own city or start on a saved game. *A-Train Construction Set* breaks the limits

found in *A-Train* – often budget related – and gives you more of a creative challenge. If you've already got *A-Train* and like it you'll probably find buying the *Construction Set* is £18 well spent. If not then it's worth bearing in mind that it's going to cost you £40 to get the original before you can add this module on.



Familiar huh? It may look like another *A-Train* screen but the difference lies with the new commands at the bottom of the tool bar



Use the new commands to build landscapes, lay tracks, make trains and construct cities til your heart's content. If you're not satisfied you can easily edit them out again

Price: £18
From: Softline 081 401 1234
Out: Now
Requires: Any Mac, 2.5Mb RAM (Colour with System 7), 1.5Mb RAM (black and white under System 7), System 6.0.7 or higher. You'll also need the original *A-Train* (£40 also from Softline)
Controls: mouse and keyboard

✓ **On the right track**
Seriously addictive, *Construction Set* makes *A-Train* look even better

✗ **Off the rails**
A bit slow, and the music's pointless

Graphics 80%
Sound 40%
Gameplay 84%
MacFormat rating

68%

King's Quest VI

Heir today, gone tomorrow

The *Kings Quest* games are the Friday the 13ths of the Mac world – the sequels just keep coming. Andy Butcher explores the latest.



There's nothing like a nice stroll along the beach on a hot summer's day, even if you have just been ship-wrecked...

Difficult isn't the word for reviewing the latest game in a successful series, so I'm going to split you into three groups. If you've played and enjoyed one or more of the previous five games, then you're Group A. If you've played a *Kings Quest* before, but didn't like it much, you're Group B. Finally, if you've never played one before, you're Group C.



Bad guys always have a host of bad habits. This one's been hitting the peppermints again. No, seriously.

The first two are easy. Group A – go out and buy this, you're sure to love it. It's bigger, better and more involved than before, with a much less linear plot. As for Group B, if you were expecting something different, don't bother. If you didn't like the previous games, you won't like this. As for Group C, well...

In *Kings Quest VI* you are the handsome Prince Alexander of Daventry. In an effort to seek out your true love, the beautiful Princess Cassima, you put to sea, seeking her homeland. Rather carelessly you managed to wreck your ship only minutes from your goal, and find yourself washed up on the Isle Of The Crown, part of the Land Of The Green Isle, and Cassima's home. Unfortunately, all is not sunshine and roses. It turns out that the aim of the game is to save the kingdom from strife, reunite the islands and win Cassima's hand in marriage, then have a short break for lunch.

The game uses a 'point and click' interface. Each location takes the form of a single screen, and the game is played by choosing an action

Castle of Dr. Brain

Kellie Simmons gets ever-so-slightly frustrated as she attempts to wander through the corridors of *Castle of Dr. Brain*...

Castle of Dr. Brain is a brain teasing game for 12-year-olds and upwards with the aim of teaching subjects such as maths and 'science' while having fun at the same time. All I can say is that maybe there's something in this game that can only be seen by 12-year-olds. Maybe I'm stupid. Whatever the case may be, *Castle of Dr. Brain* has foiled me. My brain feels like it's been flambéd and if I were a kid of secondary school age I'd have lost patience quickly.

So here's the brief: Doctor Brain has put an ad in a paper. He's looking for a new lab assistant and as the player you decided to go for it. There is a series of brain teasing tasks that Dr. Brain has set to test your skills starting at the front door. Opening a door is a simple task – unless it

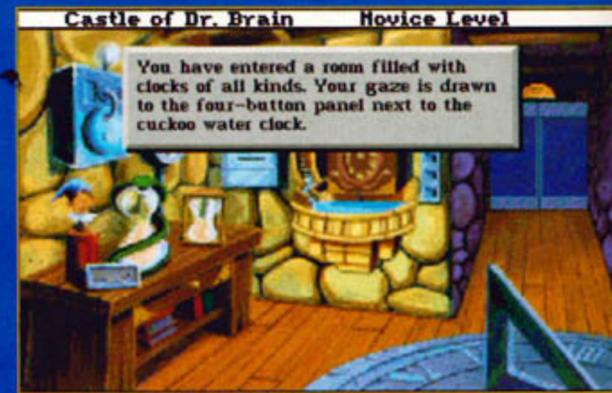
DIFFICULTY



This is where the puzzle game starts. You may think opening a door is easy – not if it belongs to Dr. Brain



Click on doors or drawers in rooms and corridors and you'll be confronted with lots of difficult puzzles and brain teasers



It takes ages to get from one location to another and some of the tests are damned annoying. This is one of them

and clicking on the desired area, person or object. The game is based around a series of puzzles and problems, and by solving them you progress further and further.

Kings Quest VI's major advance over the previous games is in the 'openness' of the game. Instead of a series of puzzles which must be solved in order, one at a time, the game gives you several at once, and the order in which you solve them is up to you.

The graphics and sound are predictably excellent throughout, and most of the puzzles are fairly logical, making solving them an exercise of thought rather than luck. So what's the problem? Well, two things. The main one is a matter of taste – I found the whole setting and atmosphere of the game to be almost unbearably twee and fairy tale-like. The game lacks the humour of *Monkey Island* or the atmosphere of *Indiana Jones*, and I ended up lacking the motivation to play it. Secondly, there is a lot of sitting around and watching animations that you've seen before, and no way to interrupt the sequence. The long-winded death scene becomes very boring after the second time you've sat through it, and just moving around previously visited locations can take a long time, in which nothing new happens. In short, if you liked the previous games, or



Take a leaf out of someone-who'd-sue-if-we-printed-his-name's-book and beware of small boys offering a good time



Guards. There are always guards. Luckily these two are impressed by rank, so just pull some on them...



...so why's he only given us 75 per cent?

enjoy problem-solving based adventures and aren't worried by the sanitised Americanisms of the atmosphere, *Kings Quest VI* is a great game – it's big, involved and certainly value for money. If you prefer more action or atmosphere, then look elsewhere.

Price: £30
From: GameTek 0753 553445
Requires: 4Mb RAM, System 7.0 or later, 8 bit graphics card (256 colours), 25Mb hard drive
Controls: mouse, keyboard short-cuts

✓ **Saving the day**
 Huge in size, non-linear gameplay and logical puzzles set against excellent graphics and sound

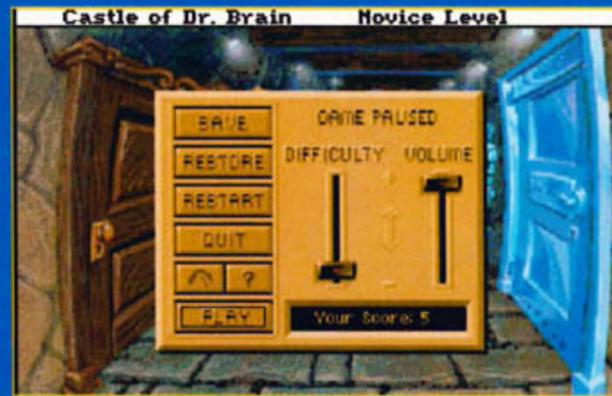
✗ **Damsels in distress**
 Sickly sweet fairy tale setting, lack of recognisable humour, slow moving with repetitive sequences

Graphics 80%
 Sound 70%
 Gameplay 76%
 MacFormat rating

75%

belongs to Dr. Brain. It takes a while to figure out how to get past it and subsequently through each corridor and room leaving a long wait between each puzzle. In all fairness, this is an educational game and when you eventually realise what the game is about, the puzzles really give your brain a good work out. However, it is difficult. It's a bit like attempting to take an exam that you haven't bothered to revise for and I can imagine that younger players will be continually seeking advice from parents. But then maybe that's the idea.

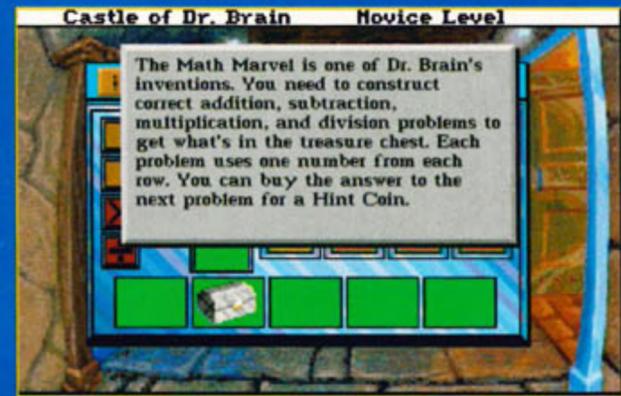
Gameplay controls consist of the standard point-and-click techniques familiar to anyone who has played Sierra games. Unfortunately the controls are a little slow and shoddy which is aggravating to say the least, especially when you're confused by a particular



Levels range from novice to difficult but the puzzle don't change, you just get fewer hints

puzzle. Although the game offers a number of that range from Novice to Difficult the puzzles stay the same. The only difference is the more difficult the level, the fewer hints you get.

Castle of Dr. Brain is great for serious puzzle



Use a hint coin if you get stuck on a puzzle. You get one free on starting the game but have to earn the others.

fans and anyone who fancies their chances at becoming a member of MENSAs. It's difficult, even at novice level, but there are some impressive graphics and gameplay is sure to last for ages – so long as you don't get too cheesed off.



Although daunting, after several attempts some tests give you that 'easy when you know how' feeling

✓ **Top of the class**
 Excellent as far as the educational side is concerned with some rather good graphics to boot

✗ **Stand in the corner**
 Mind boggling at first. Difficult to control and a bit of a slow mover

Price: £40
From: Softline, 081 401 1234
Requires: Colour Macs only with 2Mb RAM running System 6.0.7 or later. Supports Roland MT-32 and CM-32-L

Graphics 79%
 Sound 69%
 Gameplay 69%
 MacFormat rating

72%

CRYSTAL CRAZY

Expert games player Rod Lawton checks out a sequel to one of the first shoot-em-ups for the Mac and finds that he's still *Crystal Crazy* after all these years

If you've never played *Crystal Quest*, *Crystal Crazy's* predecessor, you haven't lived. And you probably haven't suffered repetitive strain

injury, spots before the eyes, or total loss of leisure time, either. The principle behind both games is pretty simple. You play the game on a single non-scrolling

screen, and the idea is to collect all the crystals while avoiding and/or shooting the baddies that swarm out of portals on either side of the screen. Once you've got all the crystals, a portal opens and you can scuttle out, hopefully picking up a time bonus too.

Behind this apparently simple gameplay lies a game demanding nerves of steel, ultimate mouse finesse and incredible will-power. Not to keep playing it, that is.

The secret's in the inertia of your little sheep, the speed and

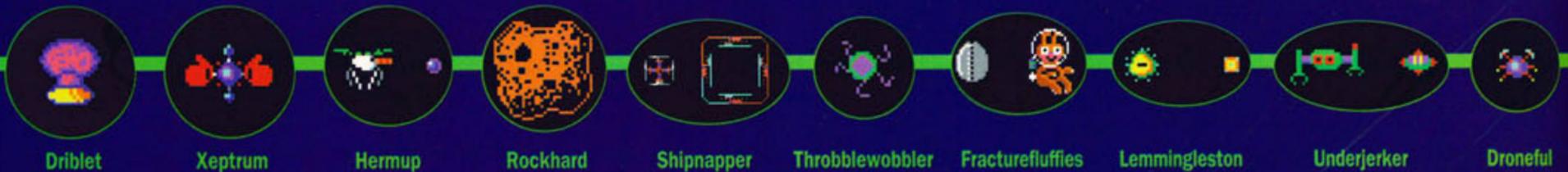


Look at all those lovely, delicate ornaments. Your job is to smash them to bits...



This is your basic job - collecting all the crystals without getting killed

Baddies galore...

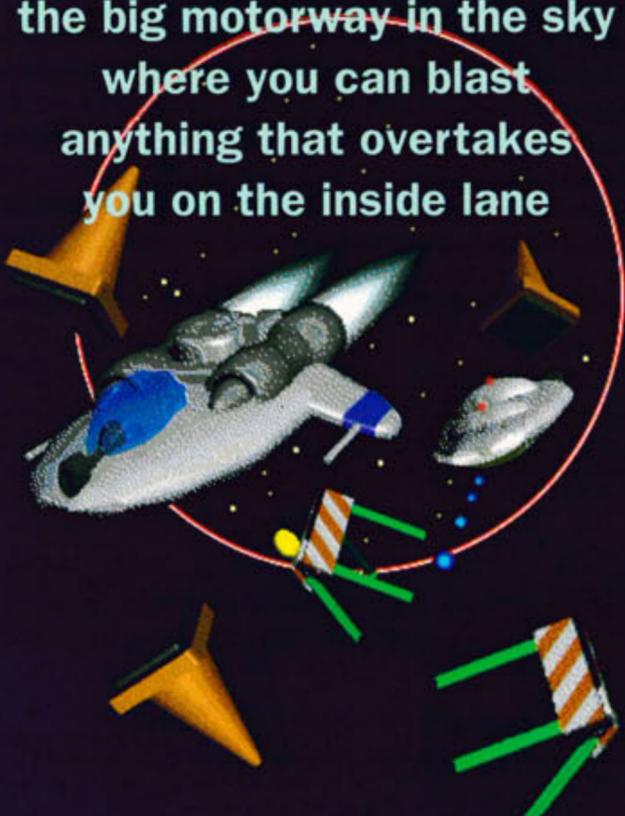


Spaceway 2000

Kellie Simmons takes to the big motorway in the sky where you can blast anything that overtakes you on the inside lane

Spaceway 2000 is to arcade games what 2 Unlimited's album *No Limits* is to music - after a couple of plays they both become repetitive. *Spaceway 2000* is a shoot-em-up arcade game with a slightly different theme. Gameplay takes place on an intergalactic freeway - it's a US game - packed full of aliens in hot pursuit. The object of the game is to blast them out of

your path with the use of laser canons and shields as well as picking up things such as crystals (the more you manage to get, the more ships you get at the end of each level) and crates which are opened after each level (or what the game calls 'wave') to find all sorts of unexpected objects which can help you during gameplay. The look and feel of *Spaceway 2000* is similar to the old-time arcade game *Asteroids*.



Set on an intergalactic freeway, the aim of *Spaceway 2000* is to blast oncoming 'traffic' out of your path



The more levels you get through, the more points you score, which ultimately gets you on to the high table

Aaaaaaaahhh!

variety of the nasties and the wonderful, wonderful sound effects. That much is carried over from the original game into *Crystal Crazy*.

But there's a lot of new stuff, too. The original *Crystal Quest* baddies, wonderful as they were, have gone. Instead there's a new lot, just as vicious, just as persistent and just as daft. Those nasties that don't try to collide with you will try to shoot you. But you can shoot back – this time with your



built-in pop-gun plus five pick-up weapons of varying destructiveness. Every time you collect a crystal, kill a nasty or finish a screen within the time limit, you get extra points. You can also pick

these up during play by catching the bonus crystals, bonus points, and bonus multipliers. Other things to look out for are Exit Anchors, extra ships and smart bombs... *Crystal Crazy* is better than

Crystal Quest. It looks better, it's even funnier and there's more variety. It's fast, funny and addictive. It's also the biggest test of mouse control ever.



The intestinally-influenced bonus screen. Your time bonus is converted into points.



Assembling a four-piece jigsaw can't be too hard – unless you're being shot at, that is...

✓ Pick-up points
Fast, dangerous and addictive test of reflex and nerves

✗ Put-down plot
There isn't one

Price: £47
From: Softline 081 401 1234
Publisher: Casady & Green
Requires: any Mac
Controls: mouse or keyboard

Graphics 80%
Sound 70%
Gameplay 88%
MacFormat rating **79%**

Weapons box

- Captivator:** it, er, captivates...
- Super-Gun:** blasts anything
- Explosive shots:** better than nowt
- Multi-Gun:** fires in all directions
- Guided Missiles:** a bit slow



As far as the controls are concerned keys can be configured (by clicking on the Configure keys icon in the Options menu) to suit you. You can rotate your space ship to the left or the right as well as increasing the throttle and the all important fire button. There is quite a wide choice of weapons ranging from weak lasers to smart bombs, two engines and three shields. There are oodles of enemies and they get faster and more frequent as the levels progress and each one has a point tag ranging from 50 to 2,000.

The things that save this game from travelling down the slippery slope of repetitiveness are the stunning graphics – but don't gaze at them for too long 'cause you'll get killed – and the number of enemies you have to contend with.

If you're into arcade games or you just want a break from anything that's likely to tax the brain *Spaceway 2000* is a great game to while away the hours to. But compared with other arcade shoot-em-ups, don't expect too much of a difference. This game is pretty standard, if repetitive entertainment.

Graphics 80%
Sound 70%
Gameplay 72%
MacFormat rating **74%**

Zap this little lot then...

- ASTEROIDS** 1,300 points
- STREET SLIDERS** 1,300 points
- DRONES** 500 points
- GUN BOATS** 600 points
- BUNKERS** 1,500
- LUGGERS** 400 points
- WALL CREEPS** 900 points
- PYLONS** 50 points
- BLOCKERS** 1,400 points
- ENEMY MINES** 700 points
- GUARDS** 1,200 points
- FLIES** 500 points
- GRAVITY WELLS** 1,800 points
- TRAINS** 1,000 points
- PROTECTORS** 2,000 points
- POLICE CARS SLOW DOWN!**

✓ Cruising
Stunning graphics and oodles of enemies to shoot at. Enough to while away the hours with, anyway

✗ Snoozing
The idea is good but it's still pretty much a standard shoot-em-up

Price: £47
Publisher: Casady & Greene
From: Softline: 081 401 1234
Out: now
Requirements: can take from 1 to 8Mb RAM depending on monitor
Controls: mouse/keyboard



GAMEBUSTERS

Times they are a changing at GameBusters HQ. Not content with the usual passwords, hints, and tips crammed on to one page, Kellie Simmons tops the usual ingredients with a bit of game trivia to spice things up a bit...

Triv or treat

Whatever happened to a game called *Oids* for the Mac? It was a kind of shoot-em-up arcade-type game that was around quite a few years ago. I can't even remember the name of the people who made it. All I know is that I can't find it anywhere.

Anon

Hmm. Thanks for writing in, 'Anon'. This took a lot of hard work, namely me making a zillion cold calls to tons of game publishers in the US. But I'm pleased to tell you that I've been successful in my quest for this little classic.

Oids is published by a US company called FTL Games/Software Heaven Inc. and is distributed in the UK by Softline. It's a lot like *StarRoids* (which was on MacFormat issue 3's cover disk). You're sent on lots of missions to rescue people stuck in buildings scattered around various planetary systems while avoiding various hazards and dodging lots of bullets.

It's a shoot-em-up, it's addictive and if you don't mind I think I'm on a mission to get the highest score in the office. Bye. *Oids* costs £34 and is available from Softline 081 401 1234.



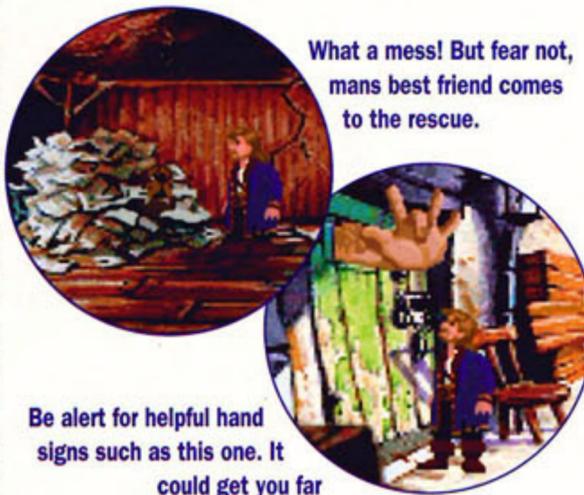
Oids is one of the many classic Mac games still available and just as addictive as the latest arcade games



There are better places for Guybrush to hang out at than a jail on Phatt Island. Use the tips to help him escape.



Use the crazy straw in the green drink and you too can lob your flob the furthest



What a mess! But fear not, mans best friend comes to the rescue.

Be alert for helpful hand signs such as this one. It could get you far

Monkey Island 2

Dear Mac Gamers

Here are some tips for the brilliant (best ever mate – Kellie) game *Monkey Island 2*:

- To escape from the jail on Phatt Island, pick up the mattress, pick up the stick then use it on the bone of the skeleton. Use the bone on the wall, pick up the key and then use it in the cell door.

- To win the spitting contest use the crazy straw plonked in the green drink then use the ships horn. As soon as the spitmaster goes to investigate, pick up the flags.

- When he comes back, enter the spit contest and spit in this order: Swish-swish, Hoooooock, Chwwwwwk, Ptooiie. You should now win the contest!

- To get the map piece in the tree house, pick up the dog outside Elaine Marley's mansion and use it on the map pile.

- The code for the next winning number for the Wheel of Fortune of Phatt Island is the number of fingers that the guy first holds up.

Alastair Lawrie, Edinburgh, Scotland

(Great stuff Alastair, have twenty quid on us for providing the best tips in yonks.)

Hellcats over the Pacific

Dear ladies and gentleman (ooh-er Mrs! – Kellie) I have found an excellent way to destroy all enemy fighters in *Hellcats over the Pacific*. Press [control] [X] and you'll find that enemy fighters are tumbling down one after another. However, the destruction of fighter planes is not registered.

Stefan Dabel
(nice try Stef)



Get scribbling!

If you have any hints, tips, cheats, trivia or want some more games info get scribbling to GameBusters, MacFormat, Future Publishing, 30 Monmouth Street, Bath BA1 2BW

Lemmings

Hurrah! The final installment of the *Lemmings* passwords. Here's 30 levels of Mayhem:

1. NJMNLFELHX
2. HMFJFINMHQ
3. MFHFAJLNHX
4. FHFJLMOHQ
5. HFANLMFPHN
6. FINLMFHQHW

7. FAJHLDIBIW
8. IJHLDFICIP
9. NHLDFADIN
10. HLDIFINEIV
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WIN! WIN! WIN! WIN!

The fastest purple mousemat in the entire universe!

Yes, it's true - Softline's purple promo mat is the peripheral equivalent of a hardware accelerator and after the Editor raved on and on about them last issue top Mac distributor Softline cleaned out their cupboards and gave us their entire stock. So we've got 400 of these little beauties to give away and what's more you don't even have to answer any questions to get your mouse on one. So what do you have to do? Easy, just send a stamped-addressed A4 envelope to: 'Purple Turbo Monster', MacFormat, 30 Monmouth St, Bath, BA1 2BW. There's a couple of little catches though - What we'd like you to do is give us a list of 5 feature articles you'd like to see in MacFormat. And a couple of photographs - one of you and one of the person you'd most like to be morphed with! We'll do the rest. And the first 400 we receive will get a free mega-mat!

ARE YOU A WINNER? (because you might have just won a compo!)

So who was it then? Just who was it who won the Newton MessagePad Apple kindly donated to us in issue 4? Well step forward G Taggart of Sutton Coldfield. Yes, G, it's you!! You lucky blighter - now you can join the next revolution before the rest of us - absolutely free!

So what else have we got to give away? How about that neat laser DirekTek donated - the Oki OL 400a? Well the winner of this great printer is... wait for it... Martyn Bray of Kew! Well done Martyn - send us a neatly laid out letter some time.

And finally, what about those 15 copies of the amazing hard disk

doubler, *Stacker*, we had to give away courtesy of Stac Electronics? Stand in line Mark Roper of Camberley, Jason Eames of Sheffield, K Bennett of Huntingdon, L Wilks of Poole, D Kennedy of Preston, Paul Bouwman of the Netherlands, David Dale of Paisley, Giles Hill of Wimbledon, Gauran Thakker of Hong Kong (we had that Chris Patten down in Bath for a while you know - keep him), Tor Rafsol Loeseth of Bergen, Norway, S Graham of Eaglesham, Sue Barnes of Woking, AJ Kane of Camberley and D Wyatt of South West London. Well done all! But if you were unlucky don't despair, we've got prizes running every month so next time it could be you!



NEXT MONTH: GOING ON-LINE

...OR HOW TO CHOOSE A MODEM AND ENTER THE WORLD OF COMMS

Yes, catch our mammoth guide to all you need to know to get up and running with on-line systems. We'll show you what to look for when buying a modem, what software is the easiest to use and where you can phone to download all the Mac public domain and shareware you're ever likely to want. And that's besides all the useful information systems you can connect with. There's a whole world waiting out there and it need only cost you £100 to get started.

So what else do we have lined up? There's an in-depth review of the incredible *Illustrator 5* for starters, plus the first of a series of tips and hints all about *Claris Works*. Oh and there's all our regular columns plus loads of Mac Answers and shareware reviews.

So until then, this is MacFormat from rainy Bath saying Ciao.

MACFORMAT 7 : NOVEMBER 2

WITH YOUR NEXT EXCLUSIVE COVER-DISK INTO THE BARGAIN!

Well that's it for this one then - except for the Tiny Zone - far away from the pressures of point size. So what do you reckon about this new Newton jobbie then? We like it down here because it's small and smart too. But us Zoners want real handheld power - none of this halfway house malarkey. We want a cellphone in there, a fax, a dictaphone and a TV. Oh and a CD player. Then we'd be happy. Oh and some decent games like on GameBoy. Which we also like 'cos it's small but it ain't that smart. We reckon this Newton jobbie is a bit of a hard master though. We've heard how after all it's you who does the learning. Like how to make your handwriting recognisable to the little beauty. Which, when you think about it, means the Newton really is smart. Smart enough to let your fingers do the walking anyhow. Meanwhile you've got a long term relationship with ...well it's like meeting a gorgeous foreigner - you know what you want to do but you can't make yourselves understood until you know each other better. So do we reckon this is how machines will evolve? - into semi-intelligent servants? Maybe, but we'd lay bets on us humans having to do the evolution. It's us who's gonna have to change - become more like androids ourselves. Take your Mac for instance, it's the smartest, friendliest machine ever invented but look how it's modified your habits and behaviour. And once speech recognition arrives it'll be changing the way you speak. Yep, these machines are devious devices alright. And the faster we stop using them the better. What we need to do is to start turning into them.

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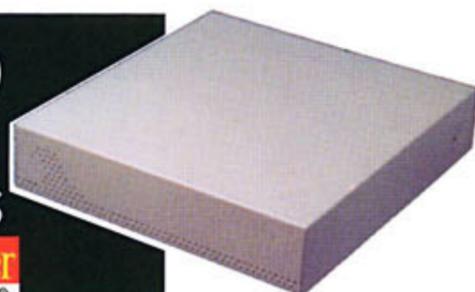
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1000 Mb £869



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seek times are average, "effective" seek times are all faster.

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