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See page 6 for program details

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Glasgow, Argyle St
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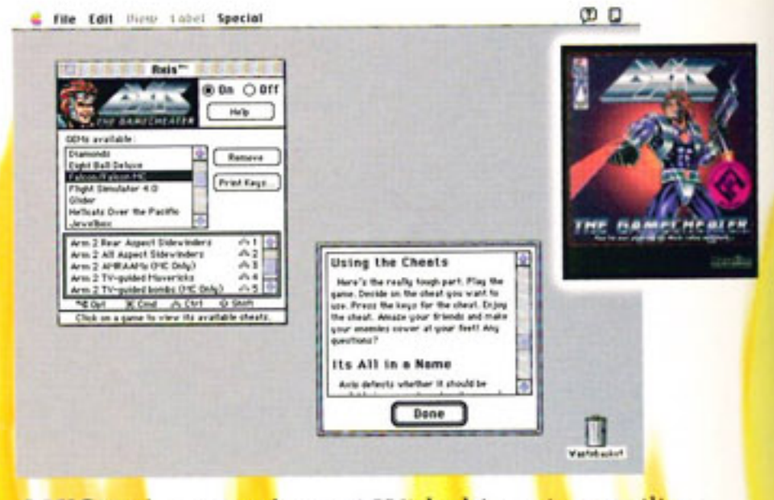


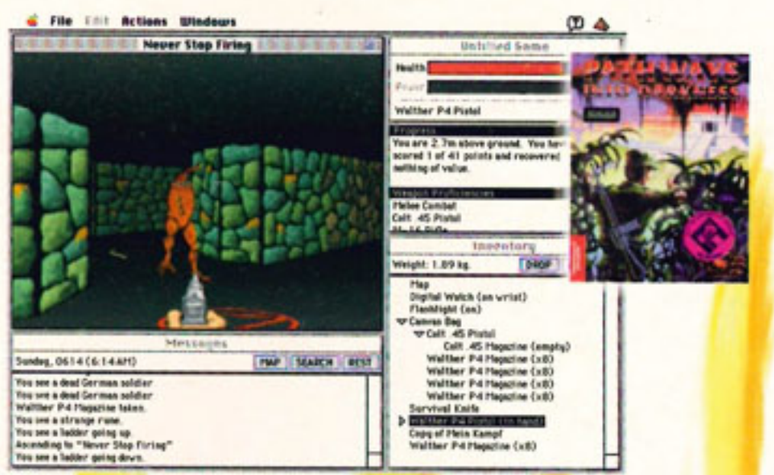
AXIS *is* the gamecheater! With this unique utility installed you can override predefined game functions in all your favourite games—add extra time, lives, ammo, money or fuel. In some cases you can jump to different levels or screens, all from a single key press. Now you can finally crack that seventh level and get back to enjoying the rest of the game. With AXIS installed you are invincible!
SRP £39.00

Myst is currently the hottest CD adventure game out there. The graphics, video, sound and plot are simply stunning. You are dragged into a surrealistic world and you only have your wits and intelligence to free yourself. The storyline is huge in scope and perfectly detailed, expect to spend many, many hours in Myst. As the box says 'Myst is the surrealistic adventure that will become your world!'
CD ROM SRP £34.03

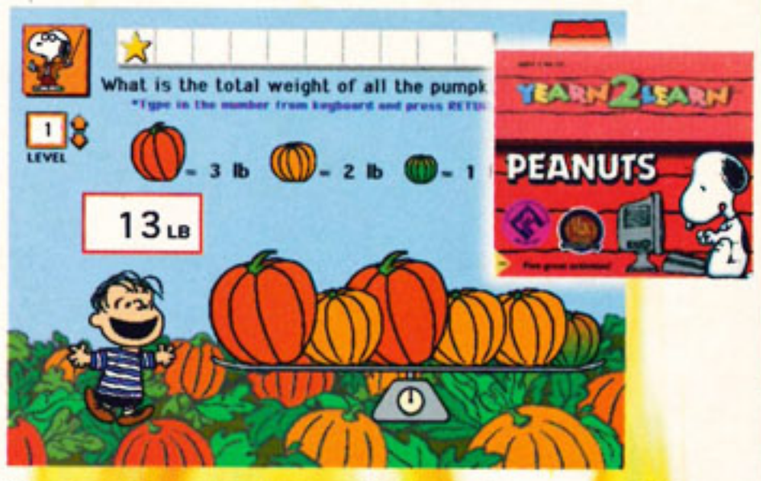
Darkseed is based on the fantastic artwork of H R Giger (of Alien fame). You're plunged into a nightmarish world of bio mechanical nasties, simply from waking with a slight headache! Time is running out and you are on a collision course with destiny, every decision you make may be your last... so choose wisely, all of humanity is depending on you. A game not for the faint hearted! SRP £38.29

Hot Stuff!

FA/18 Hornet is the latest and greatest flight simulator from the people who brought you the best selling Hellcats. This time you're in the FA/18, flying either training missions or 'tour of duty' with super-smooth graphics. Now there's more detail, missions, weather conditions (night flying is a must), action and fun. Upto 4 people can play over a network for the ultimate simulation!
SRP £59.00

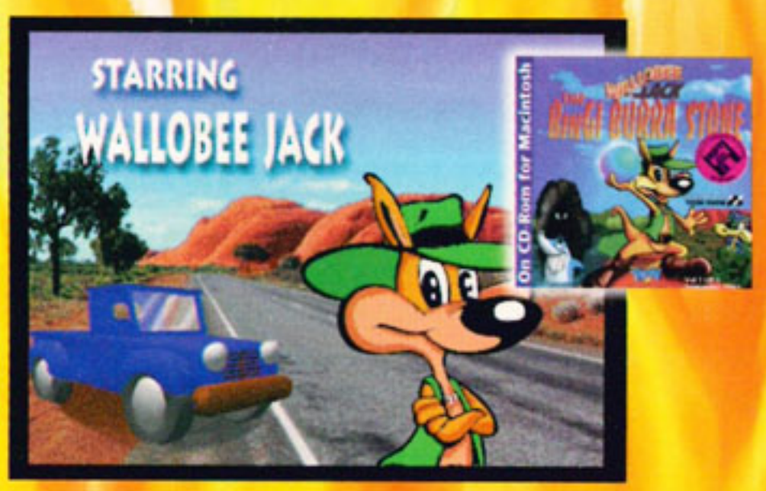


Pathways in Darkness gives you real time 3D graphics and an ancient pyramid to explore. You're the last surviving member of a special forces team sent to destroy an evil ancient god. All you have is your wits and skill to solve the adventure and escape alive! First of it's kind on the Mac, Pathways has excellent graphics, gameplay and a well thought out user interface.
SRP £49.99



Yearn 2 Learn—Peanuts. Join Snoopy and his friends and practice math, reading, colouring, geography and having fun! Yearn 2 Learn—Peanuts includes real voice narration with zany sounds and animation which make the Peanuts characters come alive. Children can spend hours 'playing' the educational activities, using the electronic colouring book or simply having fun whilst learning!
SRP £44.99

Super Maze Wars is the hottest network game since Spectre. It includes an easier interface, more skill and strategy, more players and more fun!
SMW contains 5 games, from simple 'shoot everything' to the devious 'fox and hounds'.
Up to 8 players, either Human or computer generated, can play in one game. Also great fun for single players!! Single User SRP £39.99
Two Pack SRP £69.00



Wallobee Jack is the worlds first interactive cartoon. Get ready for some non-stop cartoon sound, animation and wacky fun you can interact with. Left alone these digital toons will make up their own story, but by using your mouse and the Quiclik Interaction System you can alter the story line and stop the fiendish Dagon. Help Francesca find the Bingi Burra Stone in Australia.
CD-ROM SRP £29.99

Spin Doctor the truly revolutionary arcade game! Using simple swings, flips and bounces you have to navigate the levels and collect the goal dot. You'll need maximum ingenuity to bypass nasty coloured wands, moving doors, fuses, sparks, bombs and acid pools.
Simple, elegant and extremely addictive with hundreds of levels guaranteed to keep you amused!
SRP £39.99

Karaoke. Out from the shower straight into your Mac. The ultimate in Karaoke on your Macs' screen. You can sing along with the tracks and alter the instruments, generally DJ your way to heaven. Plenty of musical material available in the form of software 'albums'. Fun for family, friends and drunken parties.
Requires General MIDI Sound Module. SRP £49.00

Iron Helix. Prepare yourself for some of the most stunning Sci Fi action on CD. The Iron Helix is a deadly military ship, without a crew, out of control and you only have 3 robot probes to stop it.
Smooth 3D animated graphics and an eerie atmosphere combine with a deadly defender robot add up to some heart pounding suspense!
CD-ROM SRP £34.03

Oh No More Lemmings!
They're back! The hairy green rodents are trying to throw themselves off high buildings and under deadly machinery, again. Now you get another 100 levels of lemming puzzling to negotiate along with more classic toe-tapping music!
Doesn't require the original Lemmings in order to run. SRP £25.52

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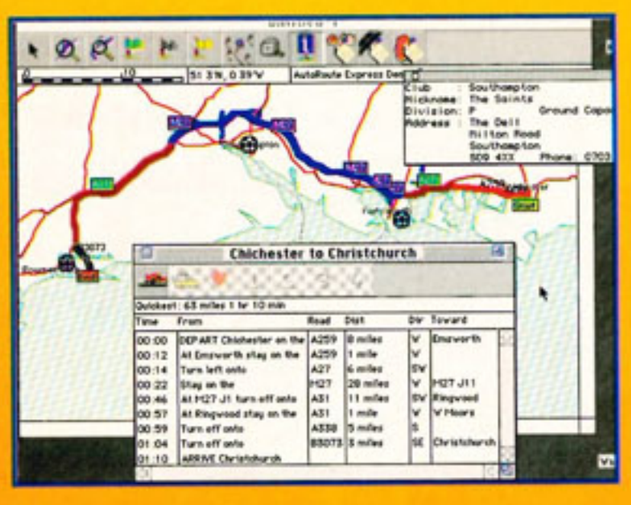

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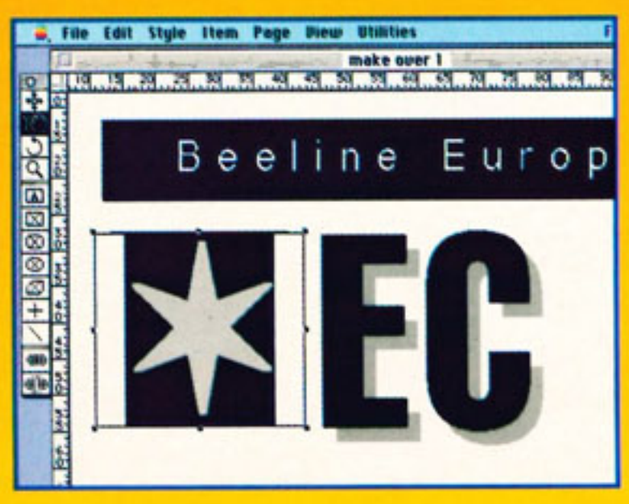

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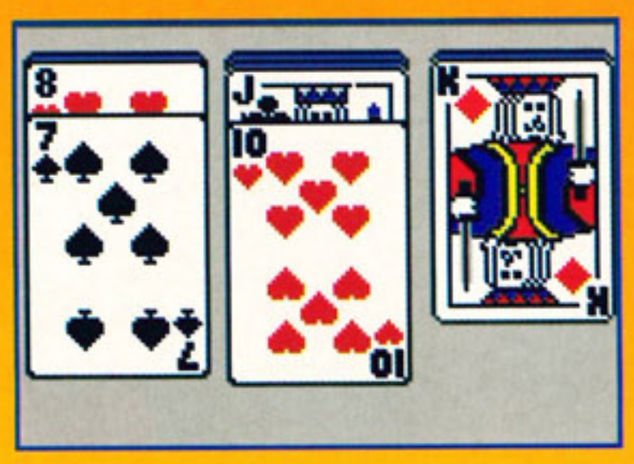

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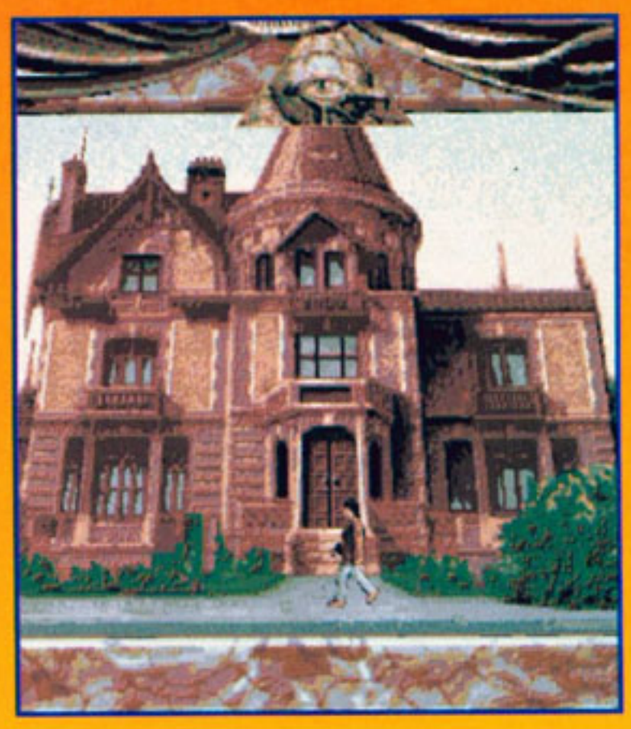

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mac FORMAT

COMMENT

I had a phone call last Saturday from a highly distressed chap whose hard disk had crashed, and he had mislaid his Disk Tools disk. Could he borrow mine? Unfortunately he has a Centris 610 and I have a LC III, and the enablers don't match. There would have been no point in lending him my disks – they wouldn't work.

Enablers, for those without a 1993 vintage Mac, are the little files which allow System 7.1 to work with new Macs. The idea, sensibly enough, is that whenever a new Mac comes out, Apple simply produces a new enabler rather than a whole new version of the System, avoiding the "which is the current version" question forever.

But there's a problem. These new Macs need the enabler to run System 7.1, and they need System 7.1. One day your disk crashes and you stick in your *Safe and Sound* or *Norton Utilities* disk and... nothing happens. It won't work without the enablers and System 7.1. And you will look in vain in the manual of any disk recovery program you can name for instructions about what to do. Eventually with the aid of a rather techie disk editor I managed to create an emergency disk for the 610, but only now with the release of *MacTools 3* has any commercial software addressed the problem.

At last owners of new Macs have a troubleshooting program. About time.

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Essential Tips

Over 200 gems of wisdom from our panel of Mac experts. Tips on games, tips on DTP, tips on databases, tips on the Finder: they are all here. We guarantee that whether you're a beginner or an expert you'll pick up dozens of useful hints from our unprecedented 22-page tips extravaganza. p25

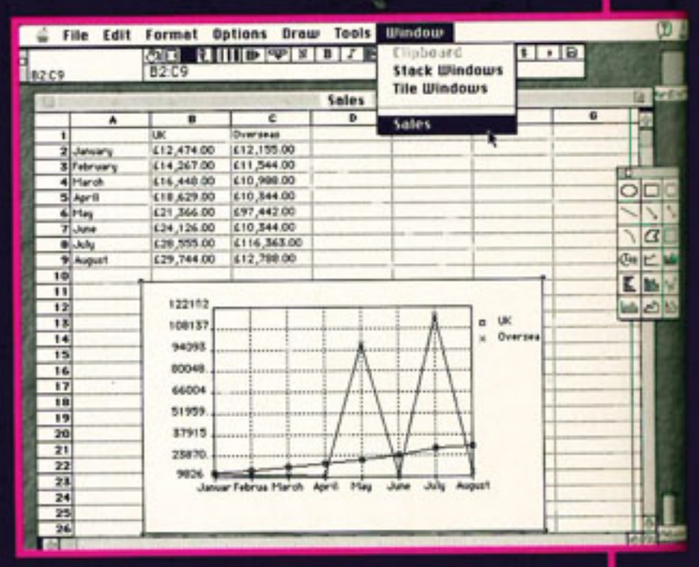
TWO DISKS!

For full details of what's on this month's double dose of MacFormat cover disks, turn to pages 6, 7, 8 and 9.

Your cover disks

Mariner

Disk: 8A
Shareware fee: $40
Compatibility
Mac: any
System: any
Display: any



Mariner: all the functions most people will ever need in a spreadsheet.

A few months ago we gave you the shareware spreadsheet *BiPlane*. Since then we've had a number of letters at MacFormat suggesting that another shareware spreadsheet, *Mariner*, is better. Well, now's your chance to find out!

***Mariner* has most functions that you'd expect from a spreadsheet, and it's more than good enough to handle your finances or simple accounts. This shareware version only operates for 28 days if you don't register it.**

Start here!

This month MacFormat brings you an extra bonus – two disks! Disk A is our usual huge high density disk, while disk B contains over 1.5Mb of extra software.

Each disk operates independently, but you use them in the same way. Because we cram as much software as possible on to the disks, we compress them with *Compact Pro*. Before you can use the software you need to first decompress it on to your hard disk, and then follow any further installation instructions in the Read Me files which come with the programs.

To decompress the disk, double click on the 'MacFormat January' icon. Use the dialogue box which appears to select your hard disk, and then click Exctract. In a few moments a folder will be created on your hard disk which will contain all of the programs from the disk.

You'll need just over 4Mb of free space on your hard disk before you start to decompress all the programs (2.5Mb for disk A and 1.5Mb for disk B), but if you have *Compact Pro* from August's disk you can extract individual files by opening the 'MacFormat January' file from within *Compact Pro*.

If you have an older Mac

If your Mac is chronologically challenged and it can't use high density disks (Pluses, old SEs and original Mac IIs can't; anything since the SE/30 including Classics and Performas can) don't worry. To get the same programs on two ordinary disks, just send your disk with a self-addressed return envelope to: MacFormat Disk Swap, DisCopy Labs, PO Box 21, Daventry NN1 5BU. Make sure the envelope is big enough for two disks and sturdy enough to make it through the post. If you don't want the hassle of doing this every month, then subscribe and you can choose to get your two disks delivered for no extra money! See page 66 for details.

Compatibility

We spend hours checking all the programs on the disk with many different machines, but we can't check every combination and we can't guarantee that the programs will work with your system. The information on compatibility 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 for installing software.

Adder

Disk: 8A
Shareware fee: none for individuals
Compatibility
Mac: any Performa
System: requires At Ease
Display: any

Adder is a little program which simplifies installing programs from floppy disk into At Ease, the Finder replacement supplied with Performas. With *Adder* installed, adding more programs is simply a matter of clicking on the *Adder* icon and inserting the disk.

Make installing programs in At Ease a breeze with *Adder*.

Maelstrom

Disk: 8A
Shareware fee: $15
Compatibility
Mac: any
System: any
Display: 256 colours

Maelstrom is the ultimate version of *Asteroids* and it'll only cost you $15 shareware fee if you decide you like it. Not a bad deal, eh?

If I said that *Maelstrom* is a shareware version of *Asteroids*, it would be true but extremely misleading. *Maelstrom* is the ultimate *Asteroids*, with smooth-scrolling 3D 256-colour graphics, wonderful sound and as many power ups and extras as a game fan could want. *Maelstrom* is so well done that it's amazing that it's not a full commercial game; it's certainly better than some that companies charge £30 for. If you keep it, and you will, make sure you register as these people need encouraging – another game from the same stable is due very soon.

A quick cheat for the impatient – hit 'L' on the title screen and you can go to any level. Try level 40 with TurboFunk on and see how long you last!

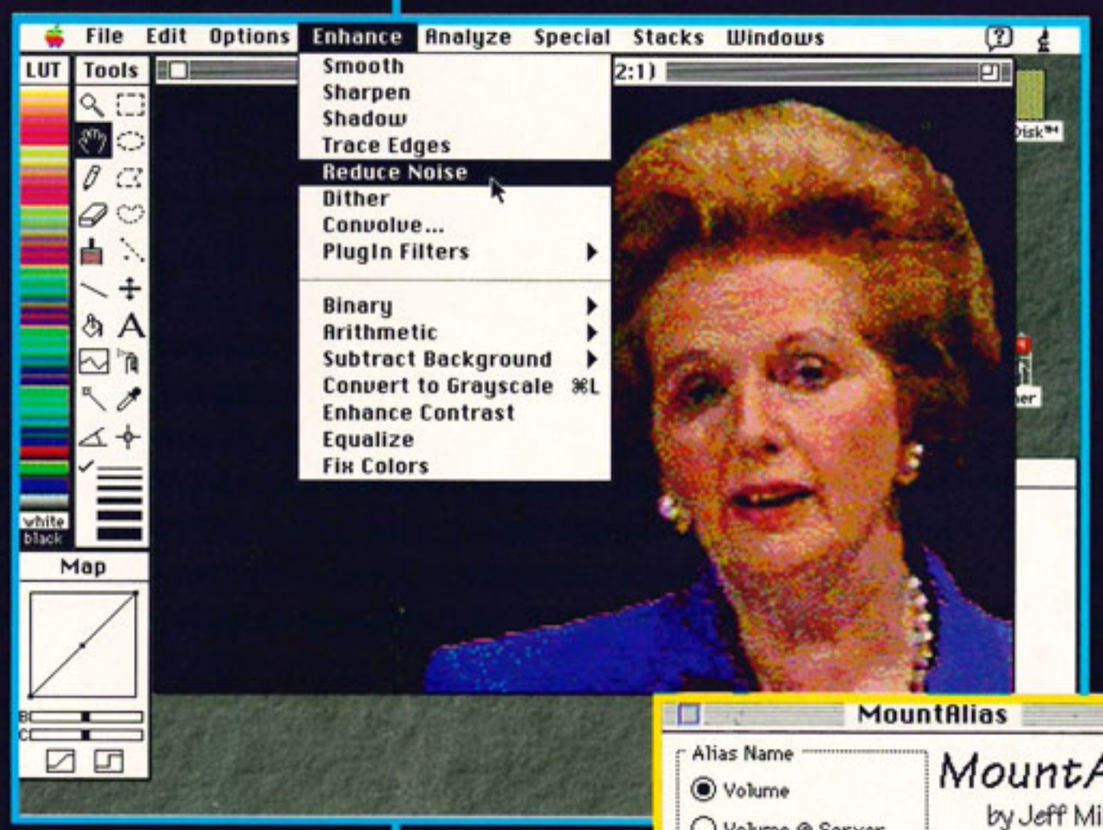
NIH Image

Disk: 8A
Shareware fee: none
Compatibility
Mac: Minimum 4Mb RAM
System: any
Display: 256 colours

NIH Image is an extraordinary program: a PD image manipulation program that does many of the same things as *Photoshop*; in fact it even accepts *Photoshop* plug-ins!

NIH Image was originally developed as an aid to analysing medical images from brain scanners and the like, so it is full of quite impenetrable options for numerical image analysis. In fact on the disk is a macro for analysing your cerebellum structure, if you happen to have a CAT scan of your head lying around. But *NIH image* works just fine on more conventional images too!

NIH Image can work on TIFF and PICT images and has the ability to alter brightness and contrast plus manipulations such as smoothing and sharpening.

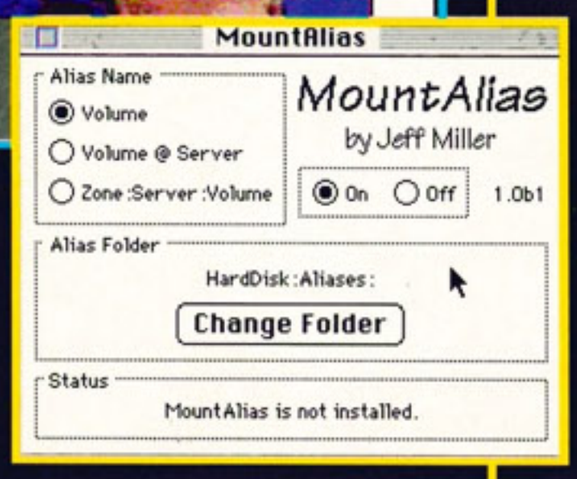


If only this option existed in real life. *NIH Image* gets to work on Lady Thatcher.

MountAlias

Disk: 8B
Shareware fee: none
Compatibility
Mac: any
System: System 7
Display: any

If you frequently access a number of different AppleShare file servers it's useful to have aliases to them so you can log on instantly. *MountAlias* is a control panel that automatically creates such an alias every time you mount a new server, thus saving you time and effort.



MountAlias: save time when using AppleShare.

SmartKeys

Disk: 8A
Shareware fee: none
Compatibility
Mac: any
System: any
Display: any

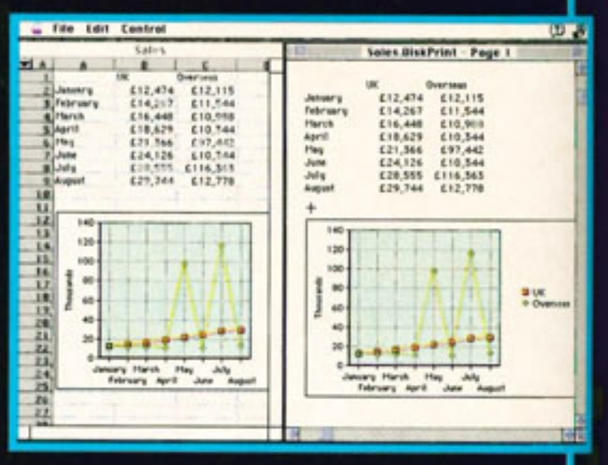
SmartKeys **helps to get you out of bad Macintosh typing habits and will improve the look of your documents. For example it will convert straight quotes into proper curly ones as you type, or will strip out double spaces after a full stop. It can also catch double capitals (a common one for me when I'm two-finger typing flat out), and can convert 'f i' and 'f l' to ligatures as you type. Two hyphens become a proper typographer's dash.**

You can set *SmartKeys* to bleep whenever it corrects something, so you can use it to train yourself to get better as you go along.

Moiré: a colourful screen saver.

DiskPrint

Disk: 8A
Shareware fee: $15
Compatibility
Mac: any
System: any
Display: any

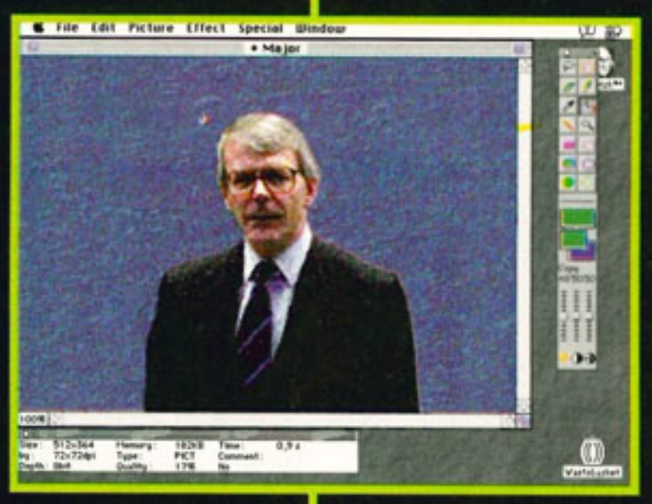


On the left is the original Lotus *1-2-3* document, on the right the *DiskPrint* page which can be sent to anyone, whether they have *1-2-3* or not.

You may well have read recently about programs for sharing documents between people who don't have the same application: Adobe's *Acrobat* has stirred up a lot of interest in the field. Well *DiskPrint* is a shareware program which does much the same thing. When installed, it appears in the Chooser. If you select *DiskPrint* instead of your usual printer, then, when you print, a copy of your document is saved to disk which can be viewed and printed by anyone, whether they have the same program as you or not. So you can create a document in Lotus *1-2-3* and send it to someone who doesn't have a spreadsheet.

GraphicConverter

Disk: 8B
Shareware fee: $25
Compatibility
Mac: any
System: System 7
Display: 256 colour



GraphicConverter: gives you the power to edit graphics, wherever they come from.

Graphics buffs get a real bonus this month with *GraphicConverter*. This remarkable program can read just about any graphics format, PC, Mac Amiga or ST. Once converted you can then edit the graphics, alter their colours and so forth. In combination with *NIH Image*, also on the disk this month, you can achieve virtually anything with graphic images of whatever format. Between them these programs provide extraordinary graphics power for a tiny cost.

CommentKeeper

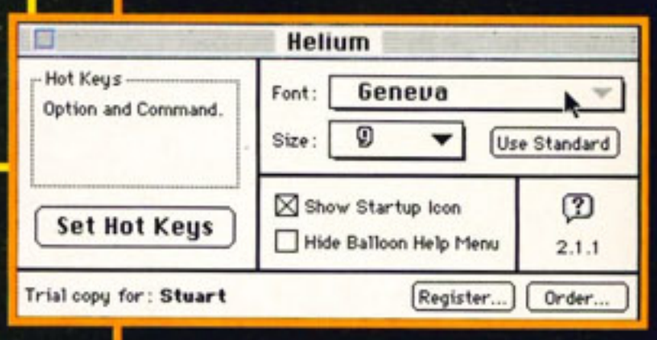
Disk: 8B
Shareware fee: none
Compatibility
Mac: any
System: System 7
Display: any

When you read the Mac Answers section, half of the answers will tell you to rebuild the Desktop. Indeed, this is the first resort whenever your Mac starts acting strangely. When you rebuild the desktop (by holding down [shift] and [option] on restarting) you force the Mac to look again at the contents of the hard disk, eliminating errors. Unfortunately, rebuilding the desktop deletes any comments you have given to files in their Get Info boxes; with *CommentKeeper* installed, they will be saved.

Helium

Disk: 8B
Shareware fee: $7
Compatibility
Mac: any
System: System 7
Display: any

Many applications use System 7's balloon help system to give extra information on the program. But many find balloon help awkward to use; with *Helium* you just hold down selected keys to momentarily activate it until you've got the information you need.



Instant access to balloon help with *Helium*.

ApplWindows

Disk: 8A
Shareware fee: none
Compatibility
Mac: any
System: System 7
Display: any

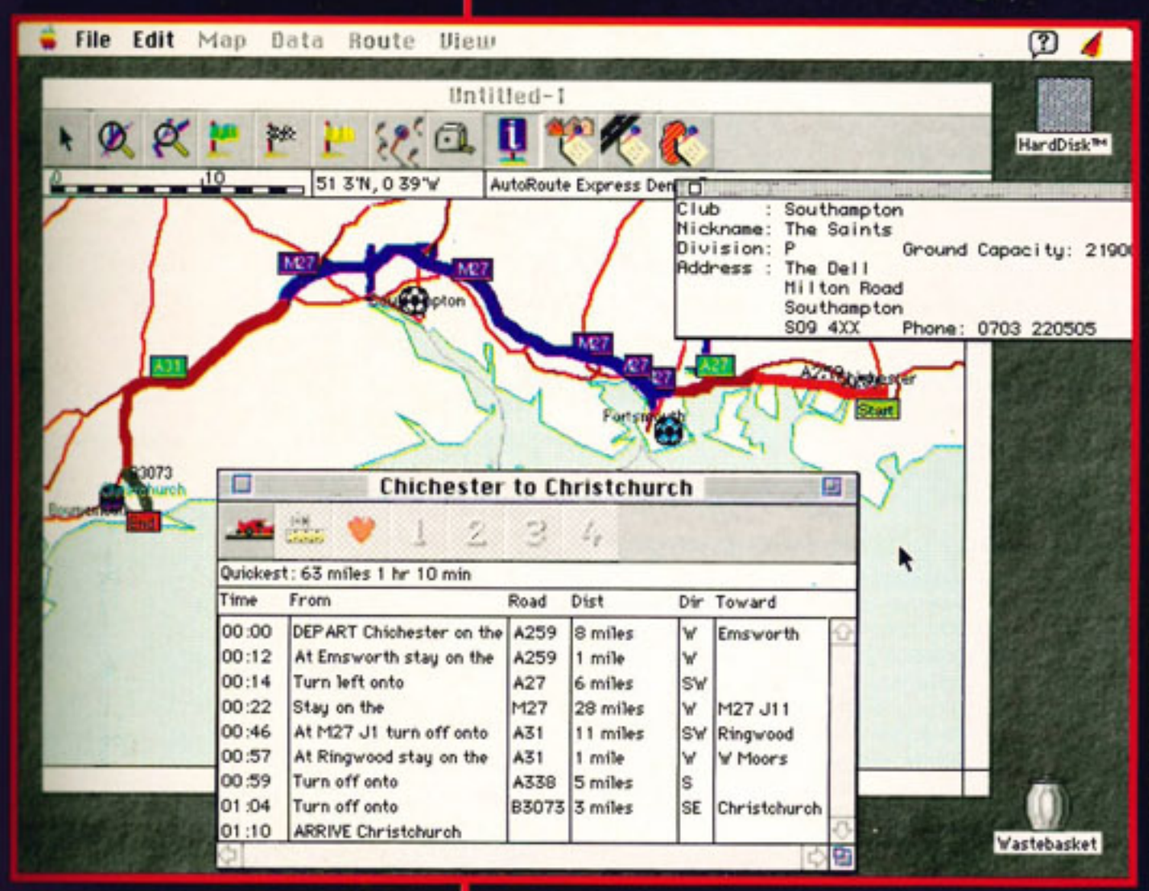
ApplWindows **does for the Application menu (in the top right corner of the screen) what *BeHierarchic* on August's MacFormat disk did for the menu. When you have several programs open, *ApplWindows* makes each program's option on the menu have a sub-menu which shows each open window that the program has, so you can go directly to it. When you have half a dozen over lapping *ClarisWorks* windows, this can save a lot of time.**

ApplWindows **also restores the old System 6 method of switching applications by clicking on the icon, and gives you control over automatic hiding of inactive applications so you can keep an uncluttered screen.**

Go instantly to any open window with *ApplWindows*.

AutoRoute Demo

Disk: 8B
Shareware fee: none
Compatibility
Mac: 68020 or better needed
System: any
Display: any



AutoRoute: find your way from A to B by automobile and save up to £50 on the usual price!

AutoRoute **is the electronic road atlas we reviewed in the November issue of MacFormat; now you have the chance to put it through its paces for yourself.**

Our demo is a fully working one, with the exception that you can only plot routes in part of the south of England. The real program's map includes all of the UK and Eire, as well as additional information on days out and attractions.

Get started with the demo by entering start and finish towns in the Route menu, and calculating a route. Use the 'more detail' command to see more of the map. A compatibility point: be sure you have a printer selected from the Chooser or the demo won't load.

If you like what you see of *AutoRoute*, then MacFormat is pleased to be able to offer our readers an exclusive special deal. All readers are eligible for £25 off the usual price of £149.95, plus MacFormat subscribers can get an incredible £50 off! Just fill in the coupon below.

Backing up your cover disk

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

1 Insert the **MacFormat** disk in your Mac.
2 Drag the disk icon to your hard disk's icon. The contents of the disk will be copied into a folder called '**MacFormat** January 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** January backup'.
5 Drag the **MacFormat** folder from your hard disk on to the new floppy disk's icon.
6 When it has finished copying you have a backup of the original disk.
6 You can now delete the '**MacFormat** January' folder on your hard disk by dragging it into the Wastebasket.

If your cover disk won't work

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

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

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

We regret that we cannot answer telephone enquiries on faulty disks or disk installation.

Save £££s on AutoRoute with MacFormat

This month only we can offer you the full version of *AutoRoute Express* for £124.95, a saving of £25. If you're a subscriber you can get *AutoRoute* for an extraordinary £99.95 – that's £50 off! This is just one of the advantages of subscribing to MacFormat – as well as getting 12 issues delivered to your door you also get a copy of *Lemmings* free, and mail order special offers. See page 66 for subscription details.

Yes! I'd like to order a copy of *AutoRoute Express* at MacFormat's special offer price:

❑ **£124.95 (open to all readers) Code: MACAR** ❑ **£99.95 (subscribers only Code: MACSUBAR**

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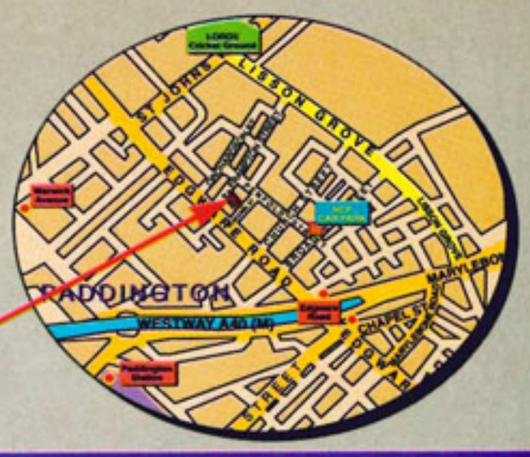
OPENING SOON!

THE CW TECHNOLOGY STORE
Another branch of CW will open in November. - It's gonna be a dandy!

Easy to find - just off **Edgware Road, London**



Mail Order Store

UK's Premier Macintosh

NEW MAC LC 475

THE POWERFUL NEW LC 475
How's about a Quadra in an LC case. Well that's what the new LC475 almost is. Mega power for little cash and ready for you at CW' favourite store.

LC475 4/80 WITH 14" PERFORMA PLUS COLOUR DISPLAY + STD KEYBOARD
£899.00

MACINTOSH LC475

It's the fastest LC ever and here at CW! This little beauty packs a 20Mhz Motorola 68040 processor, and that means bundles of power for business, entertainment and education applications.

- Motorola 68040 processor running at 20Mhz
- 4Mb RAM (max 36)
- 80Mb hard drive
- LC expansion slot
- Built-in monitor support to 21"
- System software
- Desktop Mouse
- Energy Star compliant
- Almost as fast as a Quadra 700!

LC475 4Mb RAM, 80Mb DRIVE

LC475 NO KEYBOARD 4Mb RAM 80Mb HARD DRIVE **£799** EX VAT £934 inc VAT

LCIII MEGA DEAL

CHEAPEST COLOUR MAC

MACINTOSH LCIII

The superb LCIII features a zippy 25Mhz Motorola 68030 processor which makes it the ideal machine for general business tasks and home entertainment. AND now The Warehouse has it at a great CW price. Better hurry - at this saving they won't hang about!

- Motorola 68030 processor running at 25Mhz
- 4Mb RAM (max 36)
- 80Mb hard drive
- LC expansion slot
- 16" monitor support
- System 7 software, mouse and standard keyboard included

LIMITED OFFER

LCIII 4MB RAM, 80MB DRIVE

LC111 4Mb RAM 80MB HARD DRIVE KEYBOARD **£599** EX VAT £704 inc VAT

LCIII 4/80 14" PERFORMA PLUS COLOUR DISPLAY TILT SWIVEL BASE .28 DOT PITCH **£699.00**

TOP CW VALUE

Classic II 2/40

ALL THE HARDWARE YOU NEED FOR LESS THAN £400!

Perfect for work, education and entertainment the Macintosh Classic II comes complete with Keyboard, Mouse, System 7 software.

- 2Mb RAM (easily expandable - see sidebar)
- 40Mb internal Hard Drive
- Built-in 9" mono screen
- Compact and portable - the ideal computer where desk space is at a premium
- The complete system

CLASSIC II 2Mb RAM 40Mb Hard Drive **SAVE £399**

2 Megabyte Upgrade **£69.95**

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Newton IS HERE AT CW!

Newton Message Pad

The Message Pad™ is for anyone who needs to gather, organise and communicate information. With Newton CW can organise his life, take notes, turn doodles into drawings, format and print letters, communicate with his PC, - even send a fax!

- NotePad - Write down notes, memos, sketches
- To-do list - Schedule events, things-to-do etc
- Names & Phonebook file - So easy to use
- PCMCIA slot for adding software

MESSAGE PAD INC REC-CHARGE BATTERIES & CASE **£519**

NEWTON MESSAGE PAD INC BATTERIES & AC ADAPTOR **£499**

NEWTON SOFTWARE CARDS IN STOCK!

CW has got the lot + loads of PCMCIA cards from business application to great entertainment titles. eg: Columbus Mystery capers and Fortune 500. We also have in stock a great selection of Newton accessories.

ONLY **£2445**

ONLY **£4790**

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A3 COLOR PRINTER FOR LESS THAN £600!!

Look at the features, check the spec and the oggle the amazing CW price. No you're not dreaming. This superb 360dpi A3 colour printer is now at a crazy low price!

- 360dpi ink-jet engine for superior quality
- ColorSync
- Plain paper
- 64 scalable TrueType fonts
- SCSI connection
- Prints to A3!

APPLE COLOR PRINTER APPLE COLOR PRINTER SAVE £££'s **£599**

Apple Select 300 *LIMITED OFFER*

A LASER FOR THE PRICE OF AN INK-JET!

Whoops! CW's done it again. Here's a LASER printer for everyone. Why compromise on an ink-jet when you can have smooth text and graphics for the same money?

- 300dpi Apple laser printer
- Networkable via GrayShare
- Superb graphics
- 250 sheet A4 tray
- 39 TrueType fonts

SELECT 300 LASER APPLE SELECT 300 LASER SAVE £541 **£399**

Apple Select 310 *LIMITED OFFER*

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YES! A quality 300dpi Adobe Postscript A4 laser printer with 39 scalable fonts and speedy 5 page-per-minute operation. These have been selling like hot cakes so hurry, last few left.

- RISC processing
- Great graphics
- True Adobe Postscript
- Prints from Mac or Windows
- 250 sheet tray
- A4 paper size

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Powerbook 165
- 33Mhz 68030
- 16 grey level Supertwist backlit screen
- Runs external colour monitors direct
- 4-14Mb RAM
- 80Mb Hard Drive
- Built-in floppy disk drive
- Optional Fax/Modem

POWERBOOK 165 EXCELLENT VALUE

A 33MHZ MACINTOSH NOTEBOOK FOR UNDER £1000!

Terrific value greyscale Powerbook features a supertwist display providing 16 levels of grey letting you display crisp text and CW stunning graphics. It's also CW fast with a Motorola 68030 running at a speedy 33MHz - that's quicker than a IIci and IIvx!.

- Motorola 68030 processor running at 33Mhz • 4Mb RAM (max 14Mb)
- 80Mb drive (160Mb option)
- 16 grey level backlit screen
- Direct colour display output - connect external Apple & VGA monitors

POWERBOOK 165 4/80

POWERBOOK 165 4Mb RAM 80Mb H. DISK **£999** EX VAT £1174 inc VAT

LIMITED STOCKS AT THIS PRICE

Mac Quadra 950

SAVE ££ ON THE MOST EXPANDABLE MAC TODAY!

The Quadra 950 combines superb expansion options with CW blinding speed. If you're a serious user into graphics & high end publishing or if you're constantly running out of slots you need this machine.

- 33MHz 68040 with integrated PMMU & math co-processor
- Built-in Ethernet • 5 NuBus + PDS slots
- CW Massive maximum 256Mb of RAM
- 3 internal 5 1/2" storage bays
- Built-in video up to 24bit on 16"

Let CW build a 950 configuration for you!

CW SPECIAL DEAL

QUADRA 950 8Mb RAM 230 Mb H. DRIVE SAVE! **£2495**

Colour Duo & More Deals

PowerBook Duo 270c

This is the Duo CW loves. A speedy 33Mhz 68030 processor, co-processor, beautiful Active Matrix screen displaying 1,000s of colours and built-in monitor support!

- 68030 processor running at 33Mhz
- 4Mb RAM
- 240Mb Hard Drive
- Active Matrix 1,000s col display
- Built-in monitor support

DUO 270C 4/240

POWERBOOK DUO 270C 240Mb DRIVE 4Mb RAM **£1999**

PowerBook 145B
- 25Mhz Motorola 68030
- Backlit Supertwist
- 4Mb RAM. 80Mb H.Drive
- **Very Limited Offer**

POWERBOOK 145B 4Mb RAM 80Mb Drive **£949.00**

Duo 250
- 33Mhz 68030
- Active Matrix screen
- 4Mb RAM. 200Mb H.Drive
- Built-in monitor support

NEW! DUO 250 4Mb RAM 200Mb Drive **£1699**

Duo 230
- 33Mhz 68030
- 16 grey level screen
- 4Mb RAM. 80Mb H.Drive
- Built-in monitor support

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Mac Quadra 650

THE MAC YOU'VE BEEN WAITING FOR!

And at a CW price you didn't expect. What an amazing piece of kit this is. Masses of power from the Motorola 68040 processor running at a Quadra 800 matching 33Mhz, built-in video to 21", 3 Nubus slots, space for an optional CD-ROM drive, PDS slot and much more.

- 33MHz 68040
- 4Mb RAM (max 136Mb)
- 160Mb Hard Drive
- 3 NuBus Slots • PDS Slot
- Built-in video up to 21"
- Built-in Ethernet

QUADRA 650
- 33Mhz 68040
- 3 Nubus slots
- Optional CD
- Monitor support

NEW! PRODUCT

QUADRA 650 4Mb RAM 160Mb HARD DRIVE **£1299**

NEW AV MACS + GREAT DEALS & BIG DISCOUNTS ON QUADRA'S

CW SPECIAL DEAL

Macintosh Quadra 610

CW gives you all the power of an '040 Macintosh for less than a grand! The Quadra 610 is ideal for DTP, graphics & other power hungry applications. Plus, like all Quadra machines, it has Ethernet built-in!!

- Motorola 68040 processor running at 25Mhz
- 4Mb RAM (max 68Mb)
- 160Mb Hard Drive
- 21" Monitor support
- Optional CD
- Mouse, System software, Microphone included

QUADRA 610 4/160

QUADRA 610 4Mb RAM 160Mb DRIVE ETHERNET NO MONITOR **£975**

CW SPECIAL DEAL

Macintosh Quadra 800

Maximum oomph at reasonable cost. Now CW can offer the superb 33Mhz Quadra 800 at a greatly reduced price. The 800 is a serious user machine designed for high-end graphics, DTP and modelling.

- Fast Motorola 68040 processor at 33Mhz
- 8Mb RAM (max 136Mb)
- 230Mb hard drive
- Monitor support to 16bit on 16"
- 3 NuBus slots
- 5 internal bays
- Optional CD-ROM
- Mouse, System software

QUADRA 800 8/230

QUADRA 800 8Mb RAM 230Mb HARD DRIVE **£1999**

CW LIMITED OFFER

Macintosh Centris 660AV

Advanced Multi-Media functionality & 16bit audio! CW loves the great video capabilities and the on-board DSP chip for speedy graphics editing and CD-quality sound. Amazing capabilities!

- Motorola 68040 processor running at 25Mhz
- 55Mhz DSP chip
- Built-in GeoPort for connection to ISDN, PABX & direct fax capability
- Optional AV monitor inc. stereo speakers & mic
- Built-in CD-ROM

CENTRIS 660AV 8/80 CD

660AV + CD ROM 8Mb RAM 80 Mb DRIVE **£1499**

NEW AT CW NOW

Macintosh Quadra 840AV

The most powerful Macintosh made and a real CW powerhouse! 40Mhz Motorola 68040 with a 66MHz DSP chip means CW blistering performance for video, audio and graphics applications.

- Fast Motorola 68040 processor at 40Mhz
- 8Mb RAM (max 136Mb)
- 500Mb or 1Gig hard drive
- Monitor support to 24bit on 16"
- 3 NuBus slots
- On-board 66Mhz DSP
- Built-in CD-ROM
- Mouse, System software

QUADRA 840AV 8/500 CD

QUADRA 840AV 8Mb RAM 500Mb Drive CD ROM **£2999**

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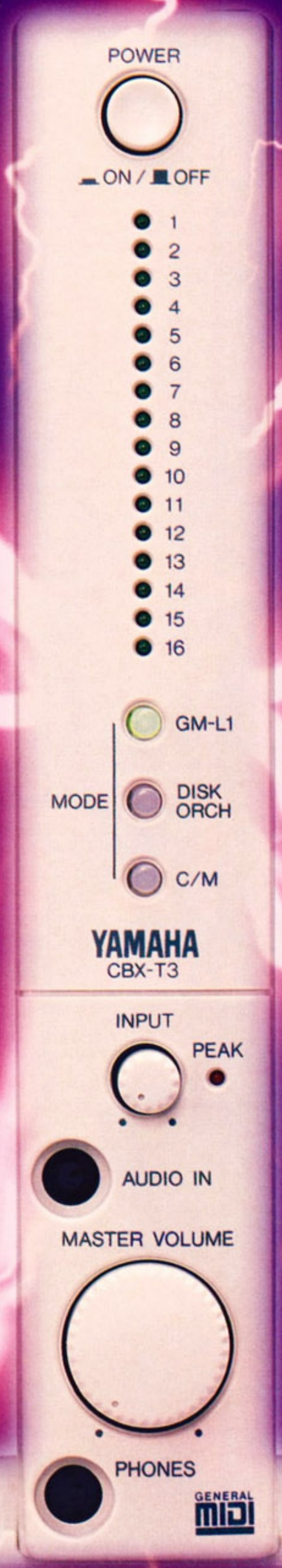

Get the power of the world's leading music company into your computer.

Yamaha introduces *Hello! Music!* – a professional desktop music system and multi-media expander for PC* and Mac™.

At its heart, CBX-T3, a CD quality sound generator with 192 instrument and special effects voices, 10 drum kits, reverb, chorus and more.

***Hello! Music!* comes complete with Cubase Lite™ and Music Box™ by Steinberg, the world's No. 1 music software authors.**

And to get you off to the right start, we've included all necessary cables and connectors.

Even a built-in MIDI interface.

Plus 20 General MIDI songs at no extra cost.

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* Requires Windows™ 3.1. All trade marks acknowledged.

Mac, TV and CD in one case

Just as Apple seemed to have abandoned the all-in-one-box concept for Macs, it's re-introduced it with an extraordinary piece of hardware called MacTV.

MacTV is a combined Macintosh, television and CD stereo system in a smart all-black case.

The machine, which has raised a few eyebrows, is being test marketed in the US. It has a tuner built in to the motherboard so its monitor can act as a 14-inch TV, and it has an ordinary remote when it's being used as a telly or CD player. Sockets at the back allow the connection of a video.

But the MacTV is also a fully-fledged Mac, featuring a 68030 processor running at 32MHz, 5Mb of RAM and a 160Mb hard disk. The Mac can grab stills from the TV, but not moving images.

MacTV is bundled with a load of software, including *ClarisWorks*, *Mavis Beacon Teaches Typing*, *World Atlas*, *Space shuttle*, Grolier *Multimedia Encyclopaedia* and the Time *Almanac*.

Apple is just trying out the product in the States, with a production run of only 20,000. Brodie Keast of Apple US told **MacFormat**: "This is a special edition of the Mac. We hope to learn more about the needs of this market and apply that knowledge to future products."

So perhaps by next summer we'll be able to switch off our spreadsheets and turn on the World Cup at the click of a mouse!

This is what the MacTV looks like – it's an artist's impression since although the product has officially been released, no photos exist...

Apple gets the picture

Apple is expected to launch a colour still video camera next year, according to Californian sources.

The camera has the code name 'Venus', and is expected to cost less than $600 (£400) when it arrives in the spring. It should be adapted to deal with both NTSC and PAL images, so that it will work in the UK.

Apple in the US is about to release *PhotoFlash*, an image manipulation program designed to make the work easier for novices. With this software and its colour printers, Apple will be able to sell a complete colour system from camera and scanner through to output.

New shop brings multimedia for kids to the high street

A shop featuring Mac educational software and claiming to be the first 'multimedia children's retailer' has opened in Kingston.

5-12 Fun Learning is in the Bentall Centre in Kingston, and features a Performa 600 to demonstrate the software on offer.

The company plans to open three more shops in the south east next year. This is an ambitious move, made possible because of the increasing number of CD-ROM drives being sold by Apple.

5-12 Fun Learning: 081 974 8900.

Putting the 'power' in PowerBook

A new range of powerful super-Duos will put the Mac back at the cutting edge next summer.

The PowerBook range has slipped from being the most desirable portable around in recent months, and Apple has over a billion dollars' worth of the machines stockpiled as sales have slumped. So Apple is planning to up the stakes with 68040 machines next year, designed to make PowerBooks trendy once again.

Up until now, '040-based portables have been impossible because of their high power consumption and heat output, but Apple has solved these problems with better batteries and ingenious use of the metal frame of the PowerBook Duo as a heatsink.

The new Duos are expected to be available with either active matrix greyscale or colour screens, and to have a 60LC040 chip running at 25MHz. US prices should be just over $4,000.

APPLE BITES

Speedy 600

Performa 600 owners can now have 68040 speed thanks to DayStar Digital's new Turbo 040 accelerator card. The card is claimed to provide speed increases of up to 500%, and is also compatible with the IIvi and IIvx. It's the latest in a long line of accelerators from US company DayStar, which provides cards for almost all Macs. It should be available from all DayStar distributors.

Grolier is go

The *1994 New Grolier Multimedia Encyclopedia* is now available on CD-ROM. New in this edition are 'Multimedia Maps', animated maps which provide narration on important historical events such as Magellan's voyage and the US Civil War.

The CD-ROM has around 10 million words and 33,000 different articles. It costs £288, and is available from Optech on 0252 714340.

Go Fetch!

Aldus *Fetch 1.2* is now available. This upgrade to the mixed media database includes better cataloguing, faster image retrieval and improved network access. *Fetch* catalogues graphics and QuickTime movies, allowing users to browse up to 100,000 items and display thumbnail versions.

***Fetch 1.2* costs £229; users of version 1.0 can upgrade for £29.**

Aldus: 081 568 8868.

Smooth stuff

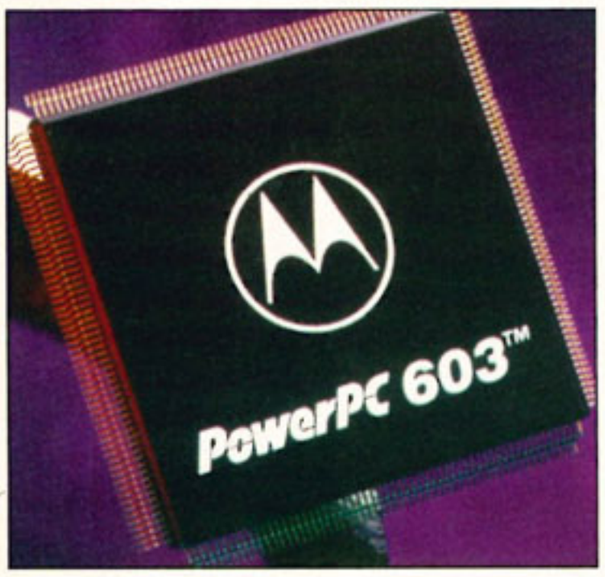
Graphics professionals will be pleased to hear that Adobe *Streamline* has been upgraded to version 3.0. The program converts colour and mono bitmapped images into PostScript graphics, and the new version includes extra image processing tools, a new user interface and better compatibility with *Illustrator* and *Photoshop*. *Streamline 3.0* costs £217, from Adobe authorised resellers.

Net know-how

Three new books on the Internet, that 'electronic highway' of more than 7 million computer users linked by modems and networks, are being released by McGraw-Hill. *The Internet Guide For New Users* costs £22.95, *The Internet Complete Reference* is also £22.95, and *The Internet For Everyone* sells for £26.95. The first title is available now, the other two are published in December and January.

PowerPC 601 gets even more powerful

The next-generation Power PC Macs moved closer to reality this month with a series of announcements from Apple and chip maker Motorola.



The PowerPC 603 chip will be the first to go into a new family of portables from Apple.

Apple confirmed that Power PC Macs are still on course for the first half of next year, and announced that the specification of the basic machine is to be improved. Because of better than expected production quality, the basic PowerPC Mac will contain a PowerPC 601 chip running at 60MHz rather then the 50MHz previously announced. That will give the base Macs a valuable 20% speed hike.

Motorola has also announced an 80MHz version of the 601 chip, and that's expected to make its way into Macs before the end of next year.

Also this month, Motorola announced that it had made the first successful chips for the second in the PowerPC range, the 603. The 603 is designed as a low power consumption PowerPC chip for use in PowerBooks. (Someone at Apple really loves the word 'power'). That puts the 603 chip almost exactly a year behind the 601, which "had first silicon" as the jargon goes, last autumn. On that basis we should see PowerPC PowerBooks in early 1995.

No hassle if you have the Tools

The popular disk utility *MacTools* has been upgraded to make data protection simpler.

MacTools 3.0 features a number of enhancements to the disk fixing and file recovery program.

For users of new Macs such as the Quadra 610 or Performa 600, *MacTools 3.0* allows you to create emergency disks with the appropriate enablers, at last allowing third party disk recovery programs to work on these machines.

If you accidentally throw away a file and empty the Wastebasket, *MacTools*' TrashBack facility adds an item to the **Special** menu which will instantly bring back the deleted file.

MacTools can also perform background checking of disks if the Mac is idle, which can lead to the early identification of problems. Disk fixing has been improved, with the identification of damaged System files and applications.

Virus protection has been enhanced to include scanning inside *StuffIt* archives.

MacTools 3.0 costs £116 from Central Point on 0525 877877. Upgrades are £57.

Throw away your keyboard

Now you can control your Mac with handwriting rather than the mouse, with a system from Communication Intelligence.

The device, named MacHandwriter, uses a CalComp graphics tablet combined with special handwriting recognition software to give you complete control over your Mac with a pen.

Communications Intelligence claims that its device has better handwriting recognition than the Newton, but unlike the hand-held it can't read joined-up writing.

The system is being launched at $199, increasing to $399 later. Communications Intelligence: 0101 415 802 7888.

MacHandwriter: no more keyboard hassles if you have this little beasty.

Who on Earth...?

Carmen Sandiego is still hiding out, this time in a Deluxe version of *Where in the USA is Carmen Sandiego?* The educational program is enhanced with many more pictures, speech and 300 extra clues, and teaches American geography in some detail.

Carmen USA costs £59.99 from Electronic Arts on 0753 549442.

Apple monitor offers better colours for less

A budget high performance 14-inch monitor will be launched by Apple next year.

The Apple Colour Plus display is intended to partner the new low-cost 68040 machines such as the LC 475 (see MacFormat passim).

With a 0.28mm dot pitch, the monitor can display the standard 640 x 480 pixel desktop with "vibrant colours and easy to read text," says Apple.

UK pricing is yet to be announced, but the Colour Plus is selling in the US for $305.

● After only having one 13-inch monitor for years, this is Apple's third new device in just 18 months.

More software on CD

A scheme called Software Dispatch is about to start up in the US, with demos of software distributed on a CD-ROM which also contains the password-protected full versions. If want to buy the software you phone up with your credit card number and are given the password.

Software will get even easier to buy next year when Software Dispatch goes into the CD-ROM distribution business.

Over 50 developers are supporting the scheme, including Claris, Adobe and Symantec. It will operate in competition with a similar system from Instant Access, whose own system has now been in operation for several months.

Software Dispatch is likely to come to Britain next year, when a CD-ROM with UK versions has been prepared, and when they've corrected the spelling of the title.

MacWrite gets an upgrade

***MacWrite Pro 1.5* will make an appearance at the beginning of December. The upgrade is now fully System 7-savvy, with support for AppleScript, AppleEvents, QuickTime and Apple's new electronic mail system, PowerTalk. This means that users of System 7 Pro will be able to e-mail people from within the program, rather than using a separate program.**

There are improvements for other users too, though, including table-of-contents creation for people with large documents, and many automated tasks such as batch file conversion, batch printing and mail merge using a database from Claris' *FileMaker Pro*.

Because *MacWrite Pro 1.5* is AppleEvent-aware, users will be able to include graphics from programs such as *MathType* and *Expressionist*, two mathematical formula editors, and edit them directly from those programs.

MacWrite Pro 1.5 will cost £206; upgrades from version 1.0 will be £23.50 including postage and packing.

Claris: 081 756 0101.

Massive upgrades due from Microsoft

The countdown to major new versions of Microsoft's flagship applications *Word* and *Excel* has started.

Windows versions of *Excel 5* and *Word 6* have been shown, and the Mac versions of these programs will be out early next year.

Microsoft has taken a 'core code' approach which means that the Windows and Mac versions will be extremely similar, and there will also be increased interoperability between *Word* and *Excel*.

All the programs will share consistent menu bars and tool bars, and the user interfaces will be adapted to make them as similar as possible.

Excel 5 will feature a version of Microsoft's *Visual Basic* language instead of its current macro language. The same language, which supports AppleScript, will be added to *Word* later.

Both applications use OLE (Object Linking and Embedding) 2.0. This means, for example, that if you paste some data from an *Excel* spreadsheet into *Word*, it remains "live" in *Word*. If you click on it, you go into *Excel* automatically to edit it, and any alterations are fed back to *Word*.

New features include an "IntelliSense" system which in *Word* can correct your spelling as you type, and in *Excel* can watch what you do and suggest easier ways to do the same thing.

No pricing or release dates have been announced.

● At the same time Microsoft will be updating its presentations package *PowerPoint* to version 4. It shares many of the same interoperability features, and will also use the *Visual Basic* macro language.

More XPress upgrades

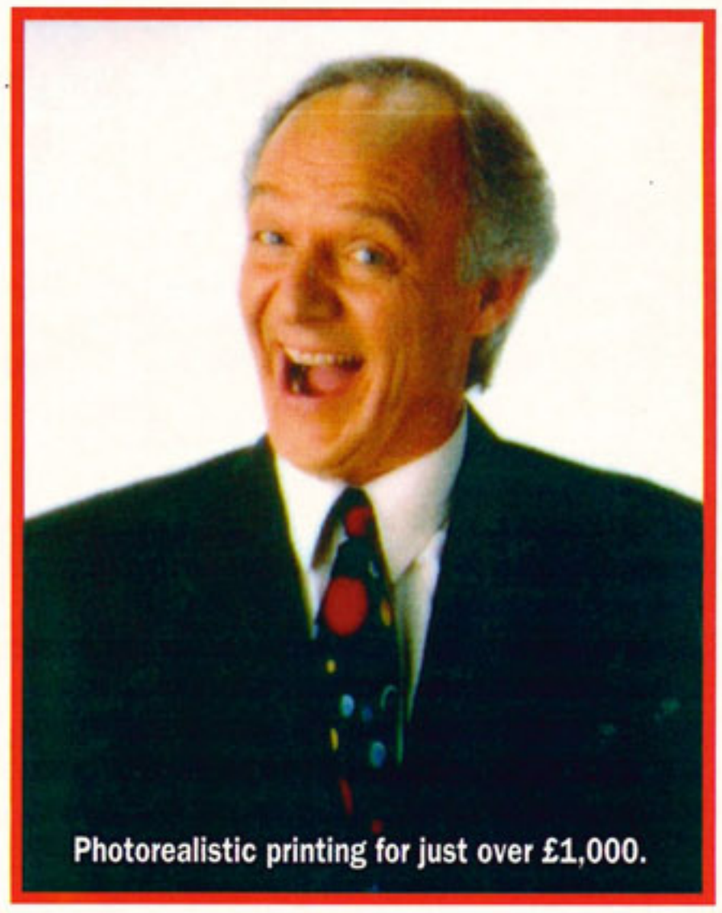
Hot on the heels of *QuarkXPress 3.2*, released last month, comes news of version 3.3 which should be available by the end of the year. It will sell for the same price as the current version, and will have a few new features; upgrades from *QuarkXPress 3.2* are likely to be free, but no firm UK decision had been taken as we went to press.

Additions to the program include variable-shaped text boxes (such as circle and diamond-shaped boxes), support for Undo when multiple items have been deleted, and two new XTensions that will let users directly import JPEG-compressed images and PhotoCD files.

The program will also automatically add any spot colours which exist in imported EPS files to the Colours palette – a feature much in demand from people who use the program.

No firm upgrade pricing has yet been decided for the UK upgrade, but details will be available from Quark Systems Ltd on 0483 451717.

● It's surprising that version 3.3 is available so soon after 3.2; the extra cost to the company in shipping out new versions for free will not be something that it welcomes.



Photorealistic printing for just over £1,000.

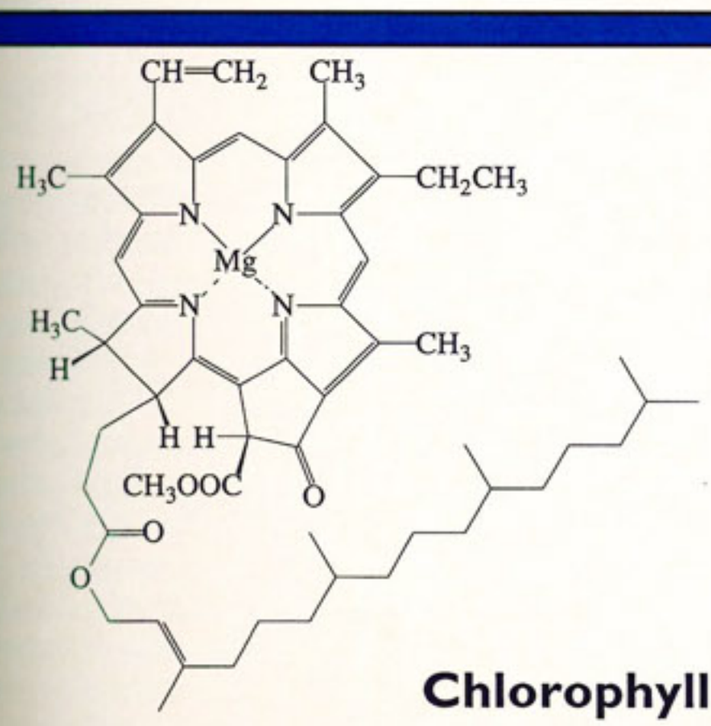
Great colour output for just over a grand

CD Revolution is claiming a major price breakthough in photo realistic dye sublimation printing – a printer for just £1,175! Most dye sub cost over three times as much as this.

The firm's Primera printer is basically a colour thermal transfer printer, but with the addition of the dye sublimation kit (included in the price) it can output photo quality images up to 210mm x 254mm.

Images take about 10 minutes to print, and you get between 25 and 100 from a cartridge.

We'll be taking a look at the Primera to see if it's as good as it sounds soon, but in the meantime you can contact CD Revolution on 0932 562000.



Chlorophyll a

Get manic with your molecules

Chemists needing to draw molecular diagrams will have their lives made easier by the new version of *ChemIntosh*.

***ChemIntosh 3.0* has a number of enhancements, including a chemical 'syntax checker' to catch simple errors, and the addition of colour.**

***ChemIntosh 3.0* isn't cheap: it costs £469 from Cherwell Scientific Publishing on 0865 784800.**

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FREE BrushStrokes with every HP DeskWriter 550C – while stocks last.

Buy the HP DeskWriter 550C for just £539 RRP, and we'll give you a free copy of Brush Strokes, worth £125.

The HP DeskWriter 550C offers high quality 300 x 300dpi in full colour on plain, glossy and special paper or even on transparencies. It's got 13 built in fonts and plugs straight into your Mac via its AppleTalk interface.

BrushStrokes, a new 24-bit painting program from the Claris Clear Choice label, offers all the functionality of high end paint programs serveral times its price. It even comes with a free collection of clip art images, objects, borders and backgrounds by a renowned artist.

Contact your local Apple Dealer to see either the DeskWriter 550C or BrushStokes in action, or phone any of the dealers listed on this advertisement.

Available from all good dealers, including:

Abtex Business Solutions Ltd,
Glasgow.
041 226 3250

AppleCentre West London,
Hayes.
081 573 7797

Callhaven plc,
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071 410 9191

Fairhurst Ltd,
Wilmslow.
0625 525694

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0602 505352

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Newcastle Computer Services plc,
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0661 825515

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Visas for Mac users

MacVisa, from Hi Resolution Systems, provides system managers with total control over who uses the Macs on their networks. Users must log in, which means that managers have access controls for different users and user groups, print audits, password protection and much more. It will be launched at the Apple Expo show at the end of November.

● Hi Resolution says that it has now sold over 20,000 copies of its *MacPrefect* application, which controls access to Macs. It is a popular choice for schools and colleges, where the system administrator wants to control access to certain functions such as Control Panels.

Phone Hi Resolution on 0892 724050.

Toaster trouble

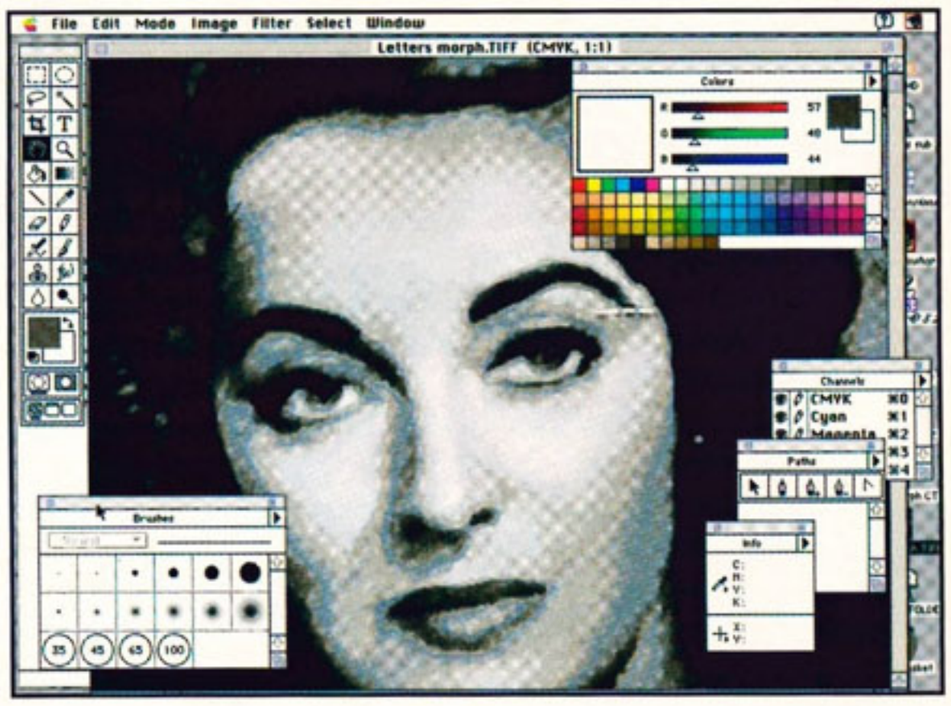
A jokey screen saver is being taken very seriously in San Franciso. *Opus N' Bill* from Delrina is a screen saver which features the cartoon penguin taking pot-shots at a bunch of flying toasters. Innocuous enough, except that Berkeley Systems' *After Dark* screen saver is well known for its flying toasters, and the company has taken exception. A law suit has been filed in San Francisco!

Give two top programs an Audition

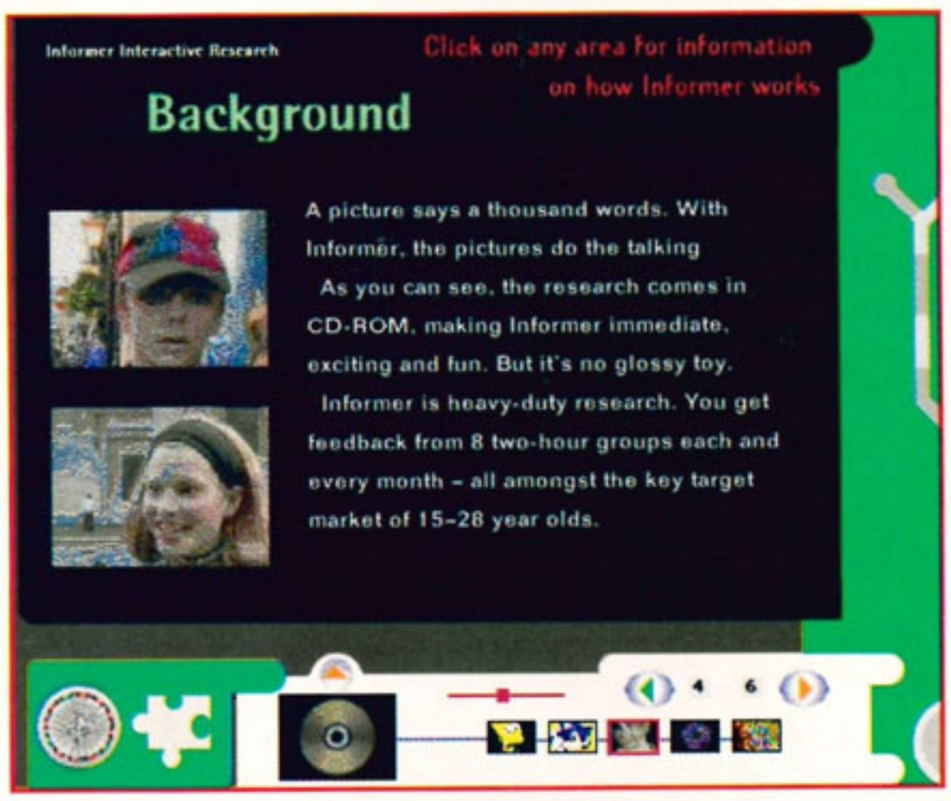
Anyone who wants to experiment with Adobe's *Photoshop* and *Premiere* programs can now do so at a low cost, thanks to a new package called *Audition*. This includes Limited Edition (LE) versions of the two applications and a CD-ROM containing more than 700 photographic images, QuickTime movies and technical tips for getting more out of the products.

***Audition* costs just £229 – a fraction of the price of the full versions of the two programs. And even better, upgrades to the full versions are just another £229 each, making the package a very attractive proposition to anyone who wants to get involved in image manipulation and QuickTime movie editing.**

Adobe *Audition* should be available by the time you read this, from all Adobe authorised resellers.



Adobe *Photoshop LE* is the slightly limited version of the world's best image manipulation program. And you can get it – and *Premiere LE* – for just £229.



If you're involved in youth marketing then a new product, *Informer*, may be of interest to you. It is market research on a CD-ROM of QuickTime movies of vox-pop interviews designed to "demystify the youth market." Graham Hall Research: 071 734 5710.

First new viruses for months arrive

Two new Macintosh viruses have been discovered in America – the first to have been released in several months.

Neither of the viruses has yet been sighted in Europe, but already a new version of *Disinfectant*, 3.3, has been released to cope with the danger. *Virex*, *SAM* and other commercial, shareware and public domain applications have also been updated.

The Code 1 virus is a 'stealth' virus which can avoid most virus detection software by watching for anti-virus activity and hiding itself. Its only effect is to rename your hard disk to 'Trent Saburo' on October 31st.

The other new virus is MBDF B, which does no intentional damage but may crash your Mac. Both, of course, should be avoided at all costs!

APPLE BITES

Mac on Unix

Owners of high-end Unix systems will soon be able to use Macintosh applications thanks to a version of the Mac's operating system and Toolbox which Apple has ported to workstations made by IBM, Sun and Hewlett-Packard.

The 'portable Toolbox' is expected to be released early next year, and will mean a far larger user-base for Macintosh applications than exists at present.

Aussie PD

A shareware CD-ROM with a distinctly antipodean feel has been released in Australia.

***The Mac Community Archive* includes PD and shareware from Australian and Kiwi software authors, plus large amounts of 'Australiana' such as the constitution and maps.**

The disk sells for A$79 from Australian user groups.

Macs by mail

After years of insisting that Macs could only be bought through shops, Apple has launched its own mail order catalogue. Called *Apple Direct*, the catalogue will be mailed four times a year to over 150,000 people. Orders can be placed on a free 0800 number. The move is designed to help boost Mac sales, already up 60% year-on-year.

Apple Direct: 0800 767000.

Floppy fun

A slightly different floppy disk drive will be fitted to future Macs.

The new drive is similar to the ones fitted in PowerBooks, and features a dust cover.

Apple had planned to fit a manual eject drive like the ones in PCs, but backed down after a very negative reaction from customers and developers, who feel that it would detract from the Mac's user interface.

Cross comms

A Macintosh version of the popular PC comms package *CrossTalk* is available now.

***CrossTalk* uses a highly graphical interface to simplify comms, and has its own scripting language. It has been available on the PC for some time, and has a large and loyal user base.**

The program is available from DCA on 0494 473483, price is around £185.

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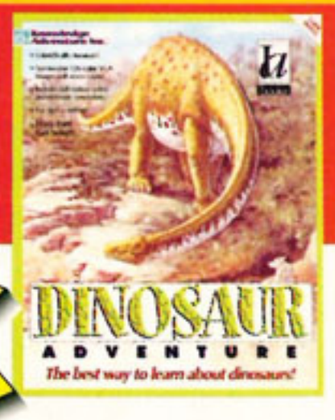

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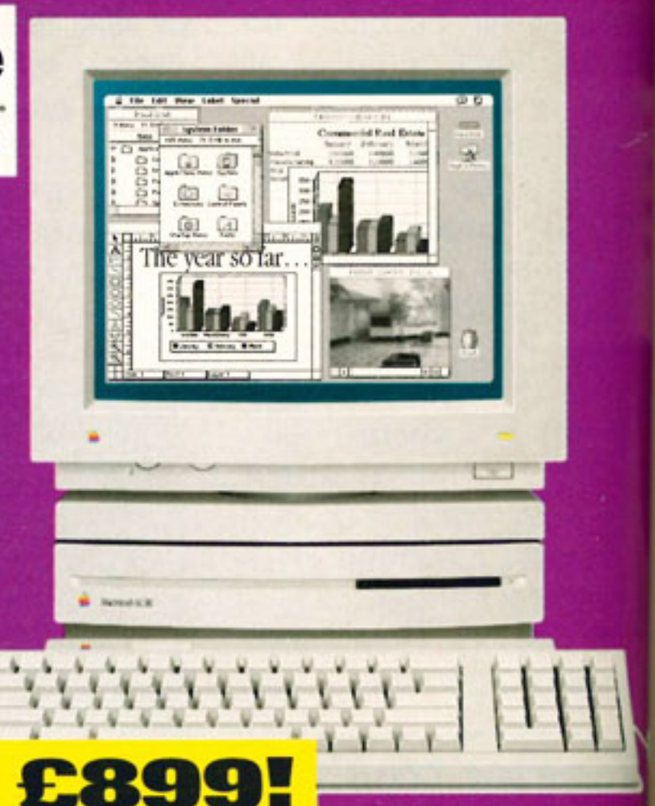

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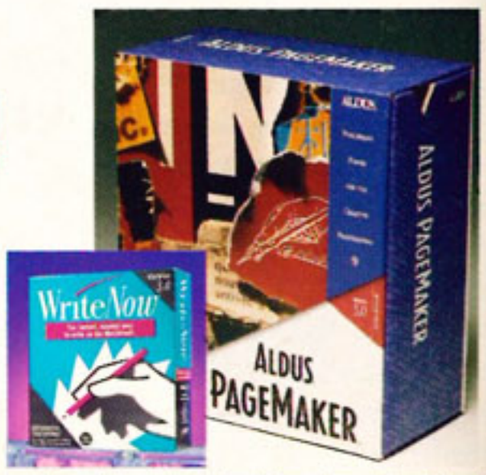

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Oh no! They're back!

A special edition of *Lemmings for Christmas* is due out now. Featuring 40 new levels with suitably seasonal music and festively-garbed lemmings, it costs £15. Psygnosis: 051 709 5755.

FreeHand: now more powerful

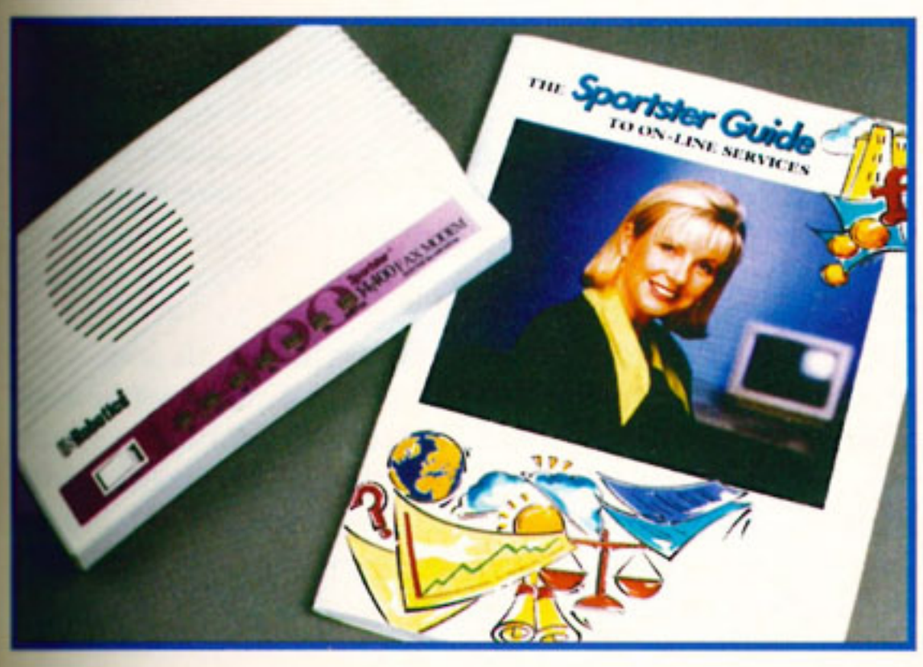
Aldus' flagship illustration program *FreeHand* gets an upgrade this month. Version 4.0 is designed to be easier to use and even more powerful. The release follows an upgrade to the program's main competitor, *Illustrator* from Adobe.

New features include better text handling, with kerning and automatic hyphenation support; floating palettes; 'drag and drop colours', where the user drags a colour from the Colours palette directly on to an object or line; and support for many DTP-type facilities such as multiple columns, text wrapping and text block linking.

Sources in the United States suggest that the program will cost the same price as current versions, but UK pricing and availability had not been decided at the time of going to press.

FreeHand 4.0 is likely to receive its first public showing in the UK at the Apple Expo show, and should be released soon afterwards.

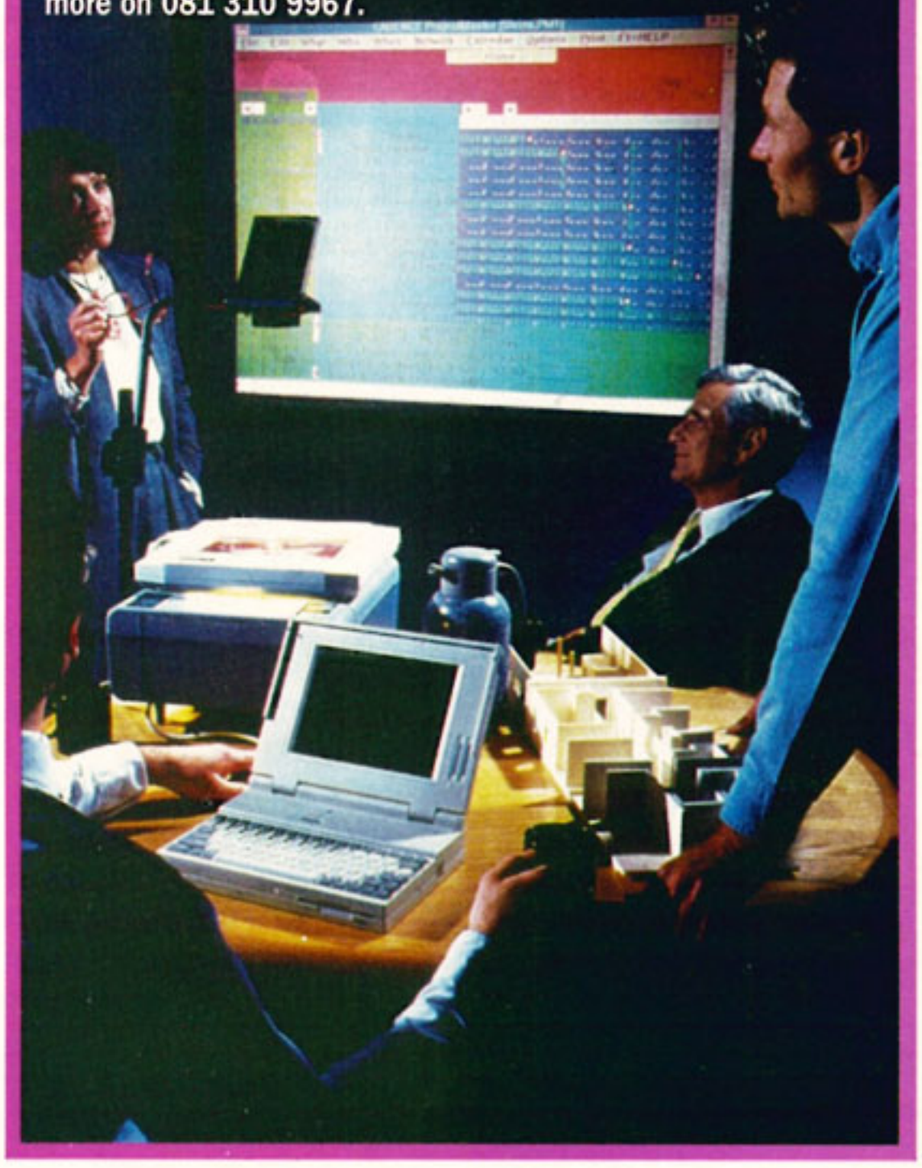
Aldus UK: 031 220 4747.



The Greene comms guide

What TV personality Sarah Greene doesn't know about comms isn't worth knowing. Apparently. That's why US Robotics has chosen her to endorse the company's new *Sportster Guide to On-Line Services*. For your copy of this essential publication, complete with a picture of Smilin' Sarah on the front, call Sally Roberts at US Robotics on 0753 811180.

If you need to use an LCD projection panel, but can't afford the £3,000 or so they cost, then it might be worth contacting Sahara Visual Systems, which operates a hire scheme through their dealer network for as little as £80 a day. Call Sahara for more on 081 310 9967.



Macs are cheaper – it's official...

Macs are cheaper than PCs, according to a study run by the Connecticut, USA, research group Gartner.

The researchers calculated the total cost of owning a Mac system over five years, including the purchase price, administration costs, technical support and operating costs. They found that the total cost of a Mac is $31,000 (£21,000), whereas a Windows PC was $36,000 (£24,000) and a DOS machine $40,000 (£27,000).

Most of the saving came in reduced training and technical support costs. And this survey was done before the latest price cuts and the introduction of incredible value machines like the LC475 – so the difference is even larger now.

Disk space galore

***TimesTwo*, the disk compression software, now gives even more disk space and claims increased reliability.**

TimesTwo 2.0 features new disk optimisation software which is reckoned make compression up to 40% faster than the old version. The new version has the option to create a tiny uncompressed partition on the hard disk for emergency use.

TimesTwo effectively doubles the size of you disk drive by compressing all the data on it. It does this invisibly, and the only noticeable effect is a slight slowing down of the Mac.

TimesTwo is available from DirekTek on 081 845 5969, price to be announced.

Ready, set...

The veteran desktop publishing package *Ready,Set,Go!* has been upgraded to give it more multimedia potential.

Version 6 add a slew of features such as graduated tints, EPS export, trapping support, automatic drop caps and multiple master pages.

It also allows you to create slideshows, and supports QuickTime. *Ready,Set,Go!* is available from Manhattan Graphics on 0101 914 725 2048 for $395. It will be distributed in the UK through normal sources.

SCSI replacement

A super-fast connection system many times quicker than the current SCSI (built in to all Macs) is under development by Apple.

Called FireWire, the system is being designed in conjunction with Texas Instruments. It's intended to provide a connection system for hard drives, scanners, CD-ROMs and VCRs to allow data to flow much faster, enabling multimedia applications which are currently impractical.

FireWire will use low cost cabling and miniature connectors, rather than SCSI's bulky wiring.

Apple TALK

Just look at this little lot – *Monkey Island* scare stories, long walks in Hungary and a prisoner with a Quadra...

Mostly harmless

My dad has a II series System 7 Mac and is very protective about it – understandably seeing how much it cost. However I think he has gone too far. I read your review of *Secret of Monkey Island II* and decided to buy it, thinking it would surprise everyone. It came, but within one day I was forced to send it back because he was convinced it was dangerous and would wreck his machine. I'm convinced that there must be other dads like mine out there somewhere, so please will you just state that games which are programmed for the Mac won't mess it up.

I have read every issue of **MacFormat** and even dear old Dad reckons it's a damn good publication.

Sam Adams, Ashorne, Nr Warwick

Well Mr Adams, your son is right, there's no more chance of *Monkey Island* damaging your Mac than there is of *Word* blowing up your hard disk. (Note to Microsoft lawyers: that means none, OK?)

All change

Why don't you change the games you're giving away with the subscription, as I have both games you are offering at the moment.

James Golland, Hove

Shazam! Your wish is my cliché. The new game is *Lemmings*. Let me guess, you've got that too...

Not thrilled

When I discovered **MacFormat** I was thrilled. Interesting articles to read, beautiful layout and a cover disk containing *Compact Pro* which helped me to prolong the life of my Macintosh SE and its 20Mb hard disk.

Now I am not so thrilled any more. First of all I can no longer read your high density cover disks, so the joy of buying the magazine and rushing home to see what is on the disk has gone. Secondly, I immediately returned my cover disk on September 8 as you offered to swap the high density disks for two ordinary disks. What kind of weird experiments are they carrying out in your 'Disk Copy Labs'?

Please show me that I am wrong in thinking that you are not interested in the market segment of small users with outmoded Macs who still buy magazines at newsstands, and send me my disks by return of mail.

Evert Baarspul, Brussels

Apologies to everyone who sent disks to be swapped. Teething troubles at the duplication plant meant that there were delays, but you should all have had your disks by now, and future swaps will be seen to more speedily. Remember you can subscribe and get the disks sent straight to you without the swapping business; and you get *Lemmings* free! No? Well it was worth a try...

Missing Macs

The one thing I feel has always been missing from **MacFormat** has been an in-depth review of past, current and future Macs. This is particularly the case in today's very confusing market. A series of comparisons on basic features, price and speed/power would be very useful – particularly against an 'old faithful' benchmark such as an SE. Likewise your coverage of new Macs is far too sketchy.

Anon

Reviewing Macs is an area we've steered clear of, not least because we reckon most of you have Macs already, and to be honest there's not much you can say besides quoting various megabytes and megahertz. For an instant history of the Mac, and speculation on future Macs, see our feature in August's issue.

Plea for help

Greetings from Romania!!!
You will be surprised to get a letter from a perfect stranger. My name is Stanculescu Marin and I like computers. I could say that they are my hobby, but I don't think I could ever afford one. Please publish my name and address in your computer magazine and ask people if they could provide any kind of computer donation. Also, I would like to subscribe to your magazine, but I don't know how to do it.

Stanulescu Marin
Str. Ciuruleasa, Nr 3
Sect 4, OP7, Cod 75445
Bucuresti
Romania

Your wish is our command, Stanulescu. And good luck with your search for a Mac...

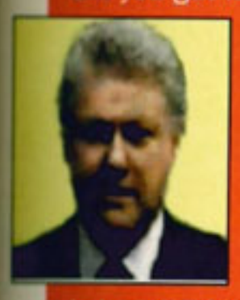
Cruising the keys

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

- In *Photoshop 2.5* hold down **[option]** while selecting 'About Photoshop' to get a secret screen. Then hold down the **[command]** key while selecting 'About Photoshop' for an extra special splash screen.
- Press the interrupt switch if you have crashed and type 'G Finder' to return to Finder.
- If you hold down the **[option]** key when selecting Tidy up Desktop under the Special menu everything on your Desktop will be put in rows.
- Open the Labels Control Panel, delete all the Apple labels, leaving all the labels blank. When you next select labels from the menu bar, against each colour there is a single letter, which together spell ALAN JEF.

Thanks to Charles Atwood, Morten Borg and Roy Graham for those. Any more?

Win a year's subscription



Did you get last month's morph? Well I can't tell you who it was yet because this issue of the magazine is going on sale at AppleExpo at the end of November, while last month's magazine is still on sale elsewhere, so to save cheating I'll tell you the answer next month.

This month's challenge is in sultry black and white. Can you work out who the two lovely ladies are we've merged together to get this picture? I'll give you a clue, they are both film stars. You'd never have guessed would you?

If you know who this is, write the answer on a postcard, as silly or exotic a postcard as you can find, and send it to **'They knew how to make films in those days', MacFormat, 30 Monmouth Street, Bath BA1 2BW.** The sender of a correct entry on our favourite postcard wins a year's subscription.

On the other hand

I have used a number of your articles to help the company make purchasing decisions. Our latest is a PowerBook 165c, based on the article in your October issue.

N Cooling, Abingdon

Our coverage of new Macs is good enough for some then? Thank God for that.

Too much publishing

I think that you are spending too much time with professional publishing articles. Obviously these are subjects on which most of your staff are most qualified to comment but surely that is not the point of your magazine. You started off well by covering most levels of Mac use, and I hope that you will keep more to the down-market side of enthusiasts and hobbyists.

Surely all the other magazines are catering for the owners of *QuarkXPress* and mega-bucks printing setups? Sure, we all want to know what the big boys are doing, but we don't have the expense accounts or the equipment. Please use a bit more savvy and don't turn into another excuse for a collection of adverts.

Vincent Barker, Sheffield

We intend to keep recognising the needs of enthusiasts – we're all enthusiasts here! But we also want to give practical advice to all Mac owners. We don't consider that's becoming like the other magazines: we want to give tips and tutorials that help people use their Macs, whether they are at home or in the office.

Much more music

Music, music, music! Macs are probably the best computers for sequencing in studios there are – they're certainly the most friendly and professional. Atari ST? Rubbish. What a joke. Please treat the Mac as a serious musical tool. Let's have solid software articles every month and help support this wonderful machine.

Shane Daly, Hendon.

Macs are indeed brilliant as musical tools. Can I just insert a shameless plug here for MacFormat's sister magazine *Future Music*? *Future Music* has regular Mac coverage every month and is, as the marketing people so eloquently put it, packed with news, reviews and tutorials guaranteed to help you get the most from your musical set up. And it's got a CD every month with samples and demos of the latest instruments. There, I feel much better now I've got that off my chest.

Photo questions

In the October issue there was an article about PhotoCDs. So, I can import my photo via CD-ROM to Mac, but then what? What can I do with the picture? Import it into DTP program, fine, but is there a *Basic* programming language that can import these pictures? I have made *Basic* programs using the Atari ST and Amiga. For example the *STOS* programming language on the ST can load digitised pictures, but those pics only use 16 colours. If I could use Mac and the *Basic* language to make programs and use PhotoCD pics in these programs… is this possible?

Juha Toivanen, Finland

I think this letter was in the wrong pile and was meant for Mac Answers, but since you're here I may as well answer you. Yes, there are Basic languages for the Mac but I wouldn't recommend them, especially not for handling graphics. What it sounds like you need is *SuperCard*, which has a built-in Basic-like language, or even good old *HyperCard*, if you can get hold of the extra utilities you need to import colour pictures. In either case you'll need a utility to convert the PhotoCD pictures into standard Mac PICTs before you can use them. If you want to get into this kind of thing, programs like *Passport Producer* or Macromind *Director* are brilliant, but also extremely expensive.

I can see clearly now

Please remember that the human eye uses light to see with. Text on dark coloured backgrounds is therefore hard to read, especially in poor light, especially by people with refractive errors and spectacles (like me) and people over 45 with bifocals (like me).

Dark reasonable sized print on a pale background will mean we can glean more of your grains of wisdom.

D Churchill, Tilehurst

We'll try to keep things as legible as possible Mr Churchill, although saying that guarantees that our artists will decide this paragraph looks best in pale red on a dark green background with yellow polkadots.

Long walk

I look forward to receiving my copy in Hungary, but please try to avoid packing dealers' price lists. If they want to send me one they can do, but if a letter or package weighs more that half a kilo the postman will not deliver it – I have to travel to the central post office to collect it. You cannot imagine the aggro – equivalent of you going to central London to get a magazine!

Ian Shires, Budapest

A brisk walk to the post office will do you a power of good Ian!

Stuck inside

I am a prisoner so I cannot send you a photo of myself or of my girlfriend to morph together. Her name is Tracey. However I would like a mouse mat for my Quadra.

Ian Ogilvie, D-Wing, HM Prison Littlehey Perry

They have Quadras in prison? My local secondary school doesn't even have a Classic. Anyway, I'll send you a mouse mat Ian, and all the best to you and Tracey.

Free clothes!

By the time you read this our crate of *MacFormat* long-sleeved T-shirts will have arrived and we'll all be wandering around the office looking suitably magazine branded. Much as we want to keep them all, you can get hold of one either by sending us a tenner or writing such a good letter we decide to make it letter of the month and send you one free. A letter's got to be better than £10, right? So get scribbling about an interesting topic (you decide what's interesting, anything under the Apple tree), and send your letter to AppleTalk, MacFormat, 30 Monmouth Street, Bath BA1 2BW. Do it.

Well here's MacFormat issue 8, then. Kim's back from her honeymoon, so Jules wasn't quite so harrassed this month. Yolanda's back is getting better too, so even Sally didn't have too much to moan about. She did anyway, though.

The issue that you're lovingly fondling was thrown together with the help of a couple of Quadras, many lesser Macs and Ian's cute little PowerBook 100. Applications in favour this month included the omnipotent *QuarkXPress 3.1* (when are we going to upgrade, then?), *Photoshop*, *Nisus*, *UnderWare* and Microsoft *Word*. Talking of omnipotence, many thanks to Hugh McDaid, who's provided us with a contact address for the Dalai Lama. Interested parties can drop him a line c/o The Private Secretary To His Holiness, Thekchen Choeling McLeod Ganj, 176219 Dharma Sala, H.P. India. Cool!

Favourite things to do this month included being rude to the Consultant Editor and appointing a new editor any day now…

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

The perfect word processor?

Tim Smith takes a look at *WordPerfect* version 3, and finds that he likes it very much.

This is a cracker, it really is. For years and years, *WordPerfect* has suffered from ageist remarks as well as sneers about its thoroughly clerical (as in office rather than Archbishop of Canterbury) and PC-based heritage. And for years the WordPerfect Corp seemed to bury its head in the sand while mumbles emerged from just below the topsoil about units shifted and successful user-bases.

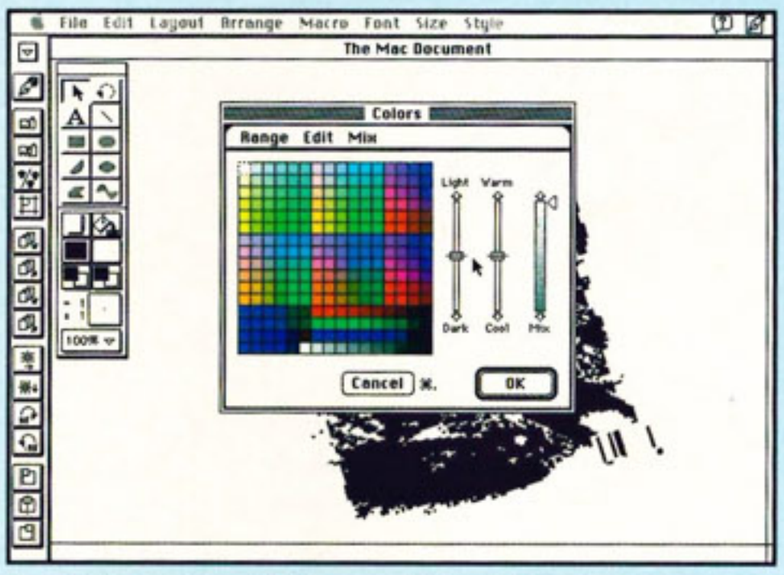
Then, Microsoft came up with its gaudy, slow and system heavy Windows operating system for the PC world, and all the cross-platform developers were forced to reconsider their formerly command-line-based programs.

Because Windows attempts to emulate the fluidity and success of Apple Computer's System 6, 7 and 7.1, by use of menuing systems, application-to-application publishing and interdependence, programmers have been forced to create applications that are easy to use. This, in turn has translated to the Mac conversions.

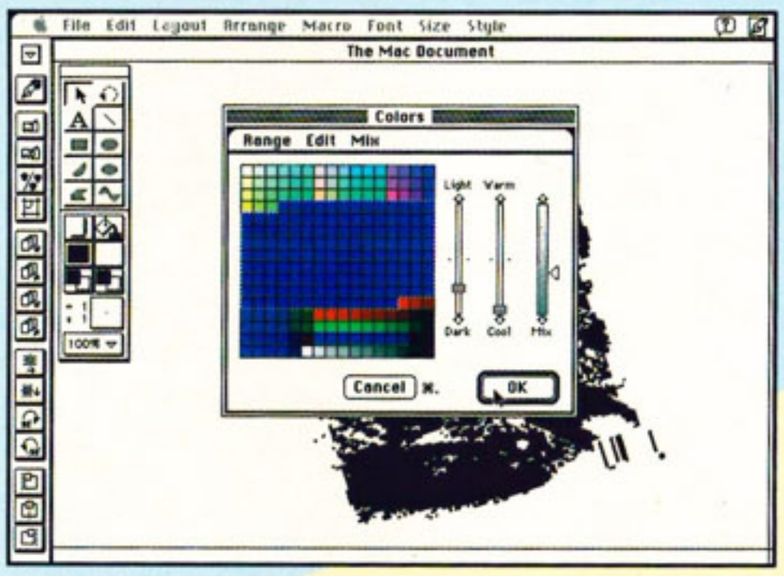
The upshot of all this is *WordPerfect 3 for the Mac*. And as upshots go, it went. Let's start with the fact that the program really doesn't know whether it is a word processor, a word publisher, or a full-blown DTP set-up. The things you can do with imported and created graphics seriously put Microsoft *Word* in the shade for now. For example, it is the first program outside of *XPress* or *PageMaker* that I know of that enables you to rotate graphics boxes.

This is no mean achievement, and it really does have a strong benefit in the presentational sense of document creation. Now, you can jazz up your standard letters, your recipes, your fanzines, anything, in a highly professional manner without having to chuck them out to some friend with a copy of *XPress*, or to an agency that will charge you the Earth for the same task.

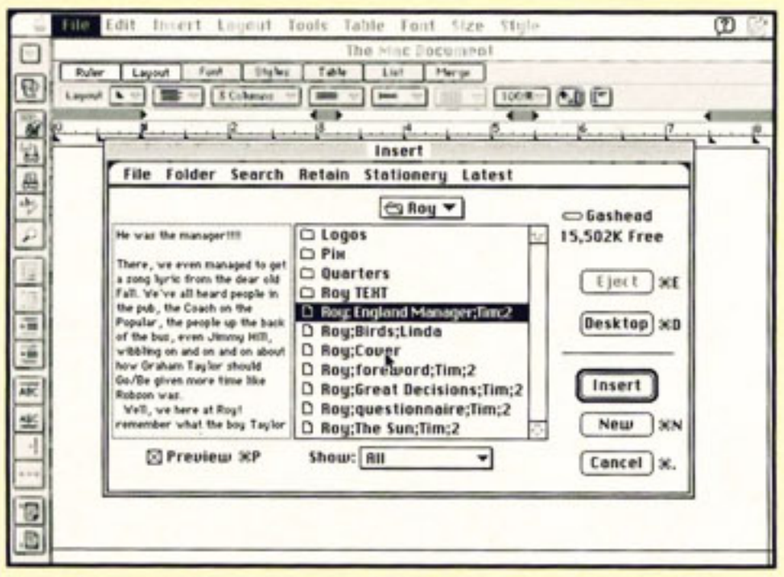
In fact the graphics side of *WP 3* is probably its most impressive feature. I'll explain this in a second, but first the question has to be posed as to exactly what WordPerfect is expecting to achieve with this program. Okay, I've had a little rave about it, but it is still more of a jack of all trades than an adept at any one area. For example, if you wanted to bang out some words for basic letters with the occasional bit of text jazzing – new fonts, italics, bolds and so on – then you'd probably be better off with *Word*, *Nisus* or *McSink* for speed and ease of use. If, on the other hand, you wanted some seriously powerful DTP tools, then you really would have to look to Quark, or Aldus' babies for power use. *WordPerfect*, for all of its admirable catching up with the rest of the Mac world from the depths of PC-hell, still falls between both stools with a quite audible crash, bang, wallop. So, for the specialists, this is really not worth too close a look. However, for those of us who want to dabble in as many areas of Macdom as possible, this could be the ideal solution.



Just when you thought it was safe to call it a word processor, *WordPerfect 3* enables you to muck around with the colour palette for graphics...



...like this for example. What we have here is the ability to edit the mid-range in this palette to create warmer, darker, sharper or stranger hues.



Importing text from other applications is also a dream. Not only can you pull the text in, you can also look at it first.

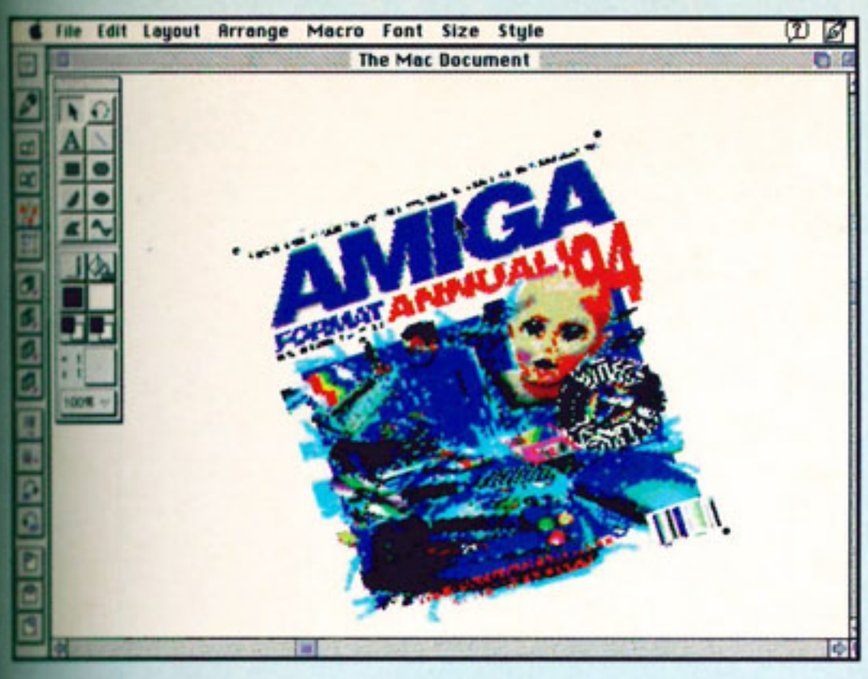
Anyway, back to the obviously good points about this much improved program. Aside from the ability to import graphics in PICT and PostScript form (among others, but these are the most useful) you can also create your own using freehand tools such as the awesomely useful Bézier curve. This is incredibly useful for the construction of easily identifiable icons (good for corporate and personal identification and smart looking documents). It is also quick, easy to understand and comes with the ability to use 256-colour tints for a really plummy look.

Built-in captioning and text positioning also add to the power of these graphical abilities. Combine this with user-definable colour palettes, picture rotation, box resizing, and an incredibly useful zoom function that enables you to see an entire page on screen, then zap into it for some serious editing work, and you have a suite of tools that will not have you tumbling off the learning curve in a confused death plunge, and won't leave

If you want to copy a section of text, all you need do is hold down the option key and drag

you moaning for more for quite a long time to come either. All in all, a big thumbs up for the WP people, both on what they've included and on what they've decided to leave out.

Now on to the text tools. And here I have to give a nod to macros. For some reason, macros are not an integral part of Systems 7 or 7.1. This is bonkers because the Mac operating system is crying out for this kind of labour saving device – yes I know you can buy third party macro creators but... well the point I'm grasping for is that *WP 3* comes with a very powerful macro option that enables you to control it and any other WP-compatible programs on your system. This works in tandem with WP's ability to use AppleScript in order to create system-wide macros. The usefulness of this cannot be



Oh God! What a horrible mess. Fortunately for us, *WordPerfect 3* comes with the ability to alter colour graphics on the fly.

Not just alter – if you're happy with your graphics, you can also add caption boxes easily, then send them behind the picture.

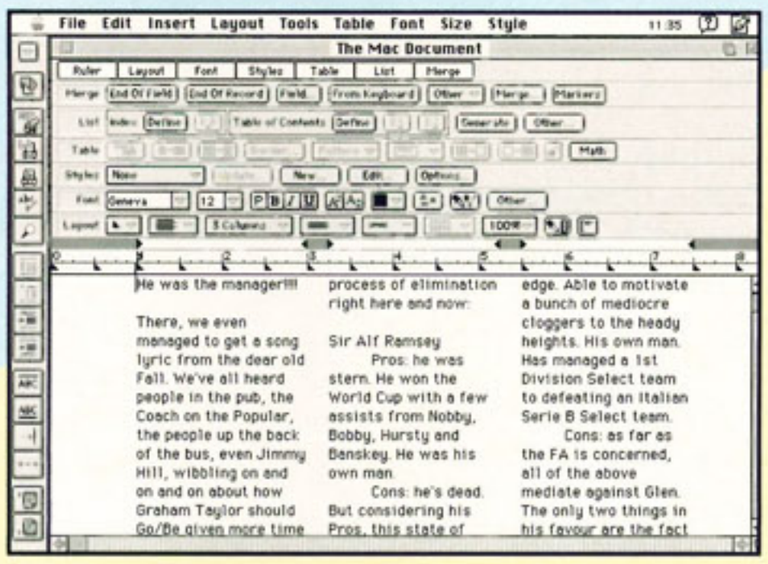
overlooked because it enables you to turn your Mac into *your* Mac, tailored to the way you as an individual work. This makes using *WP 3* almost second nature after a day or so of macro creation.

The next outstanding, and long awaited, feature that this program lobs at you in its devil-may-care, I'm-really-rather-good way is Drag and Drop. This knocks the now aged cut and paste (also available) into an absurdly cocked hat. Basically it enables you to highlight areas of text and simply drag them around the document and drop them into place. If you want to copy a section of text, all you need do is hold down the **[option]** key and drag. The reason I rate this so highly is that it enables you to keep concentrating on the document and, most importantly, not clog up available RAM with chunks of text that you only needed to save for a few seconds. We should have this available in all applications now. This is also true of the function that enables you to move tables created in *WP* around – and to and from documents without having to cut and paste. Table-creation is a piece of cake, as is equation editing, finding and exchanging and text formatting. Even style creation makes many other peer programs look a bit slothful.

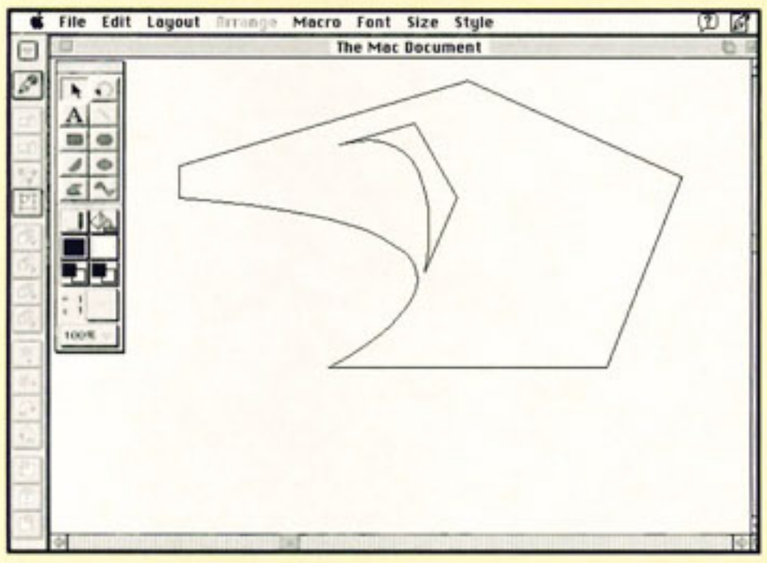
The one bell that really did annoy me to start off with was the over-use of cosmetics. This came to a head with the font menu which, when you pull it down, re-draws all the available fonts on your system. It looks lovely and enables you to show off to your less font-endowed friends, but is there any real need to have this slow method of font choice built-in as standard? No there isn't.

But customisation is the name of the game here. Everything from creating your own action buttons to having a million and one status bars at the top of the screen. But make sure that your Mac is well armed with RAM, if you want to use this at any speed above crawling. My 8Mb IIsi coped admirably, but it was still a little too slow for serious word crunching.

So, aside from a few gripes, it must be said that *WordPerfect 3 for Macintosh* is a vast improvement on its antecedents and a welcome addition to the host of applications already available to us. An excellent all-round tool rather than a serious specialist device. **mf**



Print in columns if you like, and you don't have to go through a trillion option boxes to do so. Just click and write.



A group of Bézier curves lurking on the page, waiting to be turned into something reasonable. A useful tool indeed.

The grammar-checker. There are two schools of thought regarding these devices: word snobs and real people.

Grammar, grammar, we love you

Aside from its millions of other functions, *WordPerfect* comes with the industry's favourite (it says here) grammar checker in the form of *Grammatik 5* – despite the fact that they could have spelt Grammatik properly – this little gem will come as a real boon to those people who spend the majority of their time writing and rewriting business letters.

Let's face it, a good letter can get you through the front door and into a position where you can make a deal. However, in the current economic climate – a definite buyers' market – the chances are that you will have to pop more than one letter to your prospective partner. Having probably forgotten all the rules of grammar they taught you at school, and having not caught up with all the new ones, a good grammar checke distinct advantage. Not onl all your basic erro division these enable you and conc over with

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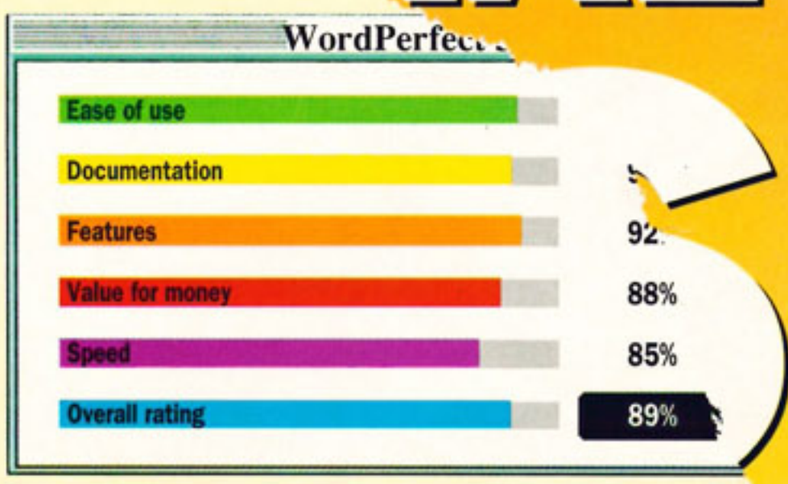

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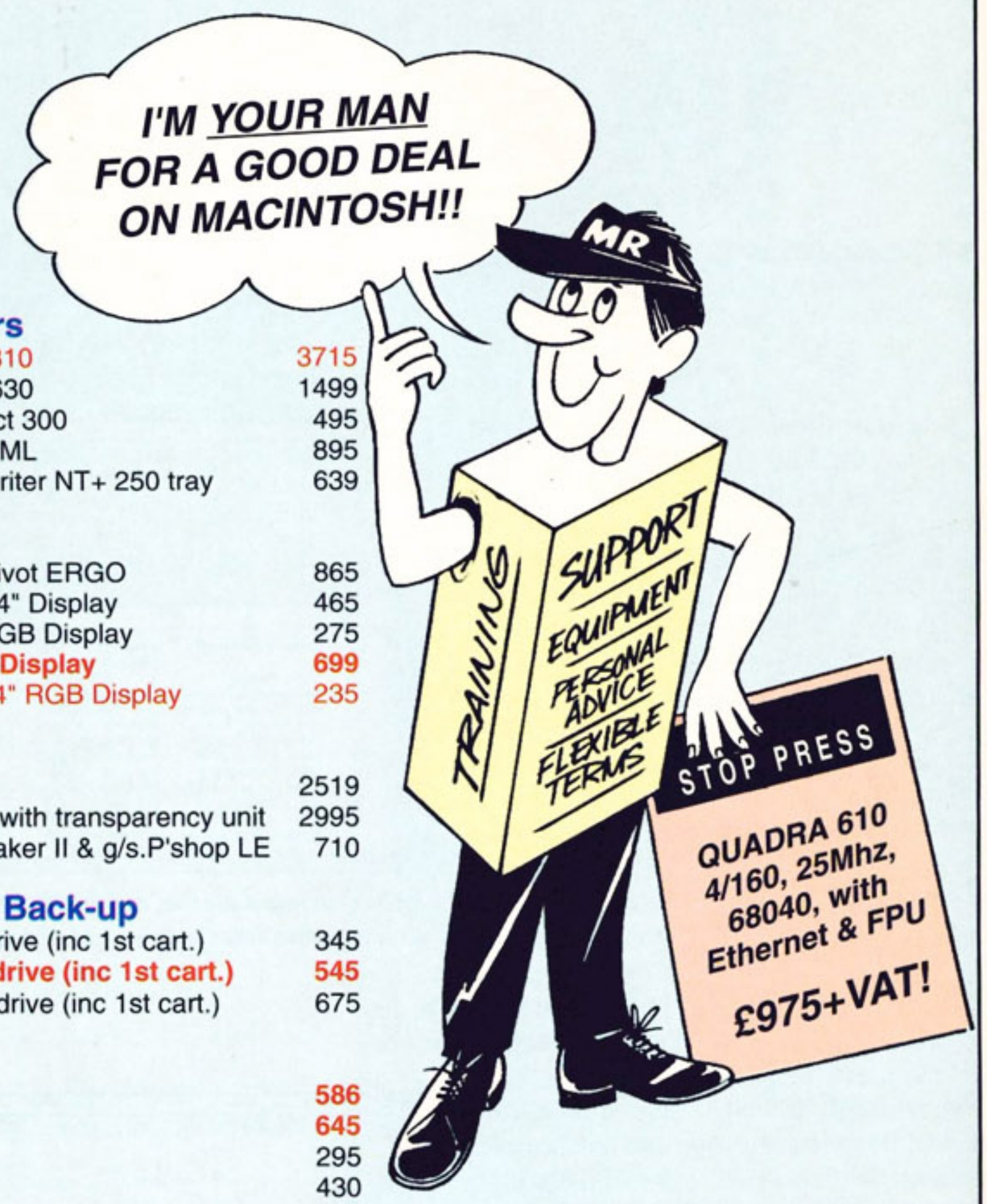

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And, for your chance to get involved in the MacFormat quest for tips, turn to page 48.

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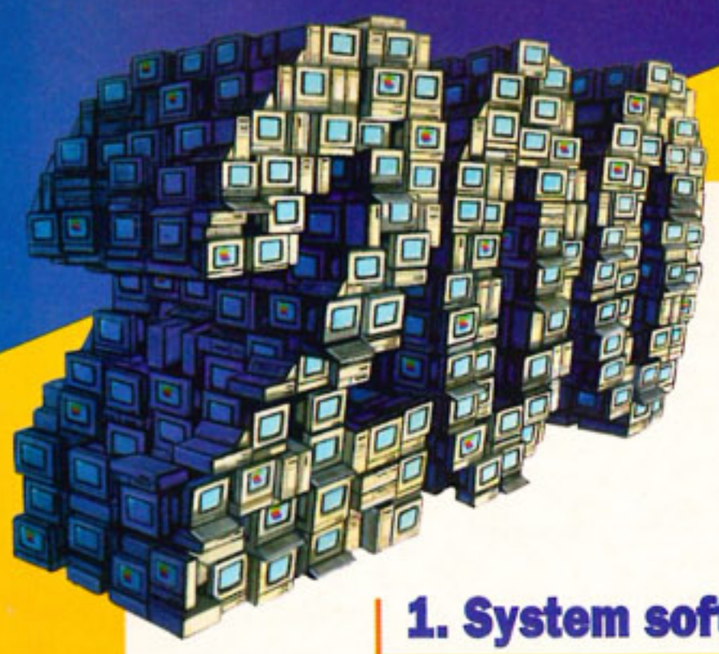
ESSENTIAL TIPS

BEGINNERS



If you're setting off on your voyage of Mac discovery, or want to know more about the Finder, these tips are for you – courtesy of Ian Wrigley

1. System software

Use the latest version of the System software that your Mac can run – more and more software is now written to require System 7.0 or above, for example.

2. Custom icons

Using custom icons under System 7 can slow down the time it takes to redraw your Desktop – worth thinking about if you've got a slow Mac.

3. Mystery disk

If your Mac is asking you to insert a disk that you don't have with you any more, hold down the **[command]** key and hit the full-stop key a few times to get rid of the message.

4. Backing up work

Back up your work! Do it on a regular basis – Sod's Law states that a crash will happen just when you can least afford to lose files.

5. Tidying the desktop

Holding down the **[option]** key and selecting the **Special** menu turns the **Clean Up Window** command into **Clean Up by Name**, which organises icons alphabetically.

6. Creating duplicate files

Holding down **[option]** while dragging a file from one folder to another places a duplicate of the file in the destination folder, rather than actually moving it.

7. Emptying the Wastebasket

To avoid being asked for confirmation every time you try to empty the Wastebasket, click on its icon, select **Get Info** from the **File** menu and turn off the 'warn before emptying' checkbox.

8. Checking for viruses

Make sure that you always have the latest version of the freeware *Disinfectant* anti-virus program on your Mac (version 3.3 as of November 10th) – and install the *Disinfectant* Extension, which keeps a check to make sure no viruses sneak in.

9. 32-bit addressing

If you have more than 8Mb of RAM installed, make sure that you turn 32-bit addressing on (from the Memory Control Panel) so that you have access to it all.

10. Shutting down

Always turn off your Mac by using the **Shut Down** command in the **Special** menu – never just switch it off at the back, unless it's crashed and you've absolutely no other option than to use the switch.

11. Freeing up disk space

To keep as much disk space free as possible, remember to do a trawl through your System folder periodically to check for files which may have been left by applications you no longer have. For instance, applications often create a 'preferences' file, recording their settings, which is kept in the Preferences folder within the System folder. If you've ditched an application, ditch its preferences file too. Also, look out for files called strange names like 'Temp000001'. These are created by some applications as they're working, and are usually deleted when you quit. But if you've had a crash, they sometimes sit around afterwards, taking up disk space. Trash them!

12. Uncluttered display

Holding down the **[option]** key when you double-click on a folder will open the new window and close the one you were in at the same time. This is handy if you don't want your display cluttered up with windows that you're only going to have to close later anyway, and is known as 'burrowing down' through your disk's folders. If you're not sure whereabouts the folder is whose window you're viewing, hold down the **[command]** key and click on the window's title. A pop-up menu will appear, displaying all its enclosing folders.

13. SCSI devices

If you have one or more SCSI devices attached to your Mac, make sure that you turn them on and off in the correct order; failure to do so could result in your Mac being damaged. Although it doesn't matter which order you turn the individual SCSI devices on, it's vital that your Mac is the last thing to be switched on. And when you've finished work, shut down your Mac before you turn the SCSI devices off. Never, never turn on a SCSI device when the Mac is running. You may have done it in the past with no ill effects, but you're courting disaster. Remember the rule: the Mac must be last on and first off.

14. Crash positions

If your Mac appears to have crashed while you're working in an application, don't immediately panic and restart – you may be able to save work that you've done in other currently running applications. First, try clicking on the Desktop to see if you can switch out of the current application. If you can, go to any others that you have running via the Application menu at the right-hand side of your menu bar and save your work. If you can't switch to the Desktop and you're running System 7 or above, hold down **[command]** and **[option]** then hit the **[escape]** key. Confirm that you you want to 'force quit' in the dialogue box and with a bit of luck you'll be returned to the Finder. Save any work from other open applications and then restart the Mac.

15. Faster Finder

Optimise the Finder to get as much speed from it as possible. For example, in the General Control Panel turn off menu blinking – by default a menu blinks three times when you select an item, but in fact you don't need it to blink at all – and turning the feature off saves you a couple of seconds each time. Likewise, set the mouse double-click speed to the fastest in the Mouse Control Panel – you've still got over a second to get the two clicks in, and any slower runs the risk of the Mac interpreting two separate clicks as a double click by mistake.

16. Black and white

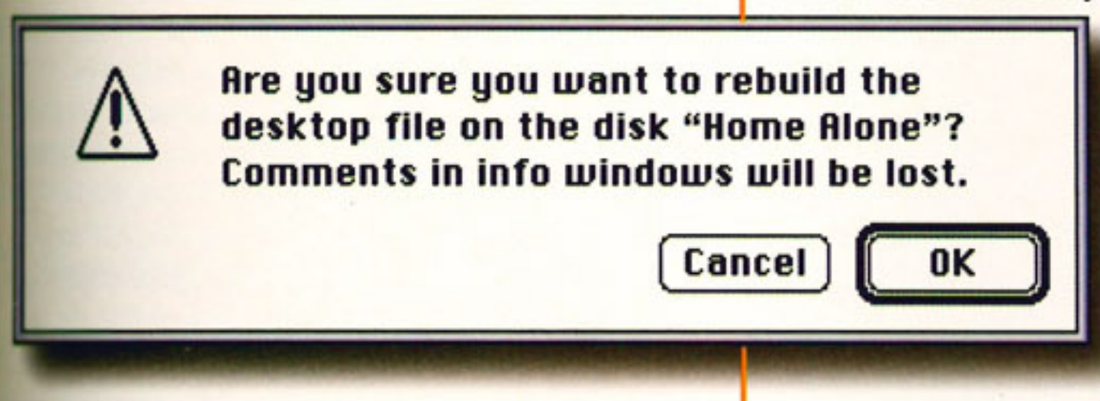
Your Mac will run faster if the display is set to black-and-white, rather than however many colours the monitor is capable of showing – you'll notice a marked difference if you change from displaying 'millions of colours' to just black-and-white. Put an Alias of the Monitors Control Panel on your Desktop, or loose in the Apple Menu Items folder, so that you have quick access to it whenever you need to change the screen mode, rather than having to go via the Control Panels folder itself. Alternatively, get hold of one of the numerous shareware utilities that allow you to rapidly change modes.

17. Free up more RAM

If you find that you're running out of RAM, remember that every Extension (INIT in pre-System 7 parlance) that you have installed is taking up some RAM – so see if you really need all those widgets. You can also increase the amount of free memory by

reducing the RAM cache setting (in the Memory Control Panel). Adobe *Type Manager* (*ATM*) also requires a chunk of RAM set aside; this is alterable from within the *ATM* Control Panel. Don't use virtual memory unless you have to – it will slow your Mac down radically. (Owners of Macs with a 68000 processor such as the Classic, SE, Plus and so on don't have the option of virtual memory – it requires a 68030 or higher, or a 68020 with a PMMU chip added.)

18. Rebuild the Desktop



The Desktop file can grow to be unnecessarily large if you don't rebuild your Desktop on a regular basis.

Probably one of the most important things that you can do on a regular basis to ensure that your Mac stays well behaved is to rebuild the Desktop by restarting with **[command]** and **[option]** held down until a dialogue box appears asking you to confirm that you want to rebuild. The Desktop file is an invisible file held on your hard drive that keeps a record of what applications you have installed, what icons to use to display documents created by those applications and so on. As you add and delete applications, the Desktop file can grow to be exceptionally large – rebuilding it will radically reduce its size, so saving you hard drive space. Also, if the Desktop file is not rebuilt you'll find that you have problems such as not being able to launch an application when you double-click on a document created in that application.

Rebuilding the Desktop should only take a minute or two on all but the slowest Macs; in System 7 and above a progress bar appears to show you how much of the job has been done, while users of System 6 and below just see the watch cursor until the process has been completed. Don't worry if it does take more than a minute or two: the chances are that you have a lot of applications on your hard drive, and the Mac is taking a while to check them all out.

You should rebuild the Desktop about once a week or so. Make it a regular thing, say, to do so first thing on a Monday morning.

19. Memory allocation

When running MultiFinder (if your Mac uses System 6) or System 7, allocate applications as much memory space to work in as possible. This will help them to run as fast as possible, and will lessen the chance of them bombing out due to lack of memory. To choose how much memory to allocate to a program, click once on its icon and then select **Get Info** from the **File** menu, or hit the keyboard shortcut **[command] [I]**. At the bottom right hand corner of the Info window will be displayed a recommended memory setting and the actual setting. You can increase this by typing over the numbers already there. It is possible to reduce the amount of memory below the recommended amount if you're really short of space, but it's not recommended – your application may not run at all, and if it does you will quite probably find that it's not very reliable and will crash at random times – normally just when you're at a critical point in your work. System 7.1 displays a 'minimum memory' figure, and you should not allocate a program less than this amount.

When deciding how much memory you should give programs, take into account the amount of RAM that your Mac has, how much the System is using (find that out by selecting **About This Macintosh** from the menu) and which programs you will want to run simultaneously. For example, if you have a Mac with 10Mb RAM installed, the System is taking up 2,000K and you want to run *Photoshop* and Microsoft *Word* at the same time, you have around 8,000K to allocate between the two. *Word* is happy with the recommended amount of RAM (1,024K in version 5.1), but *Photoshop* works best with lots of memory to play with – so change its allocation to 6,500K or so. Remember, though, that if you do this you won't be able to squeeze a third program into memory at the same time – you'll have to quit one of the ones that's already running. It's normally best to leave 1Mb or so free if you can spare it.

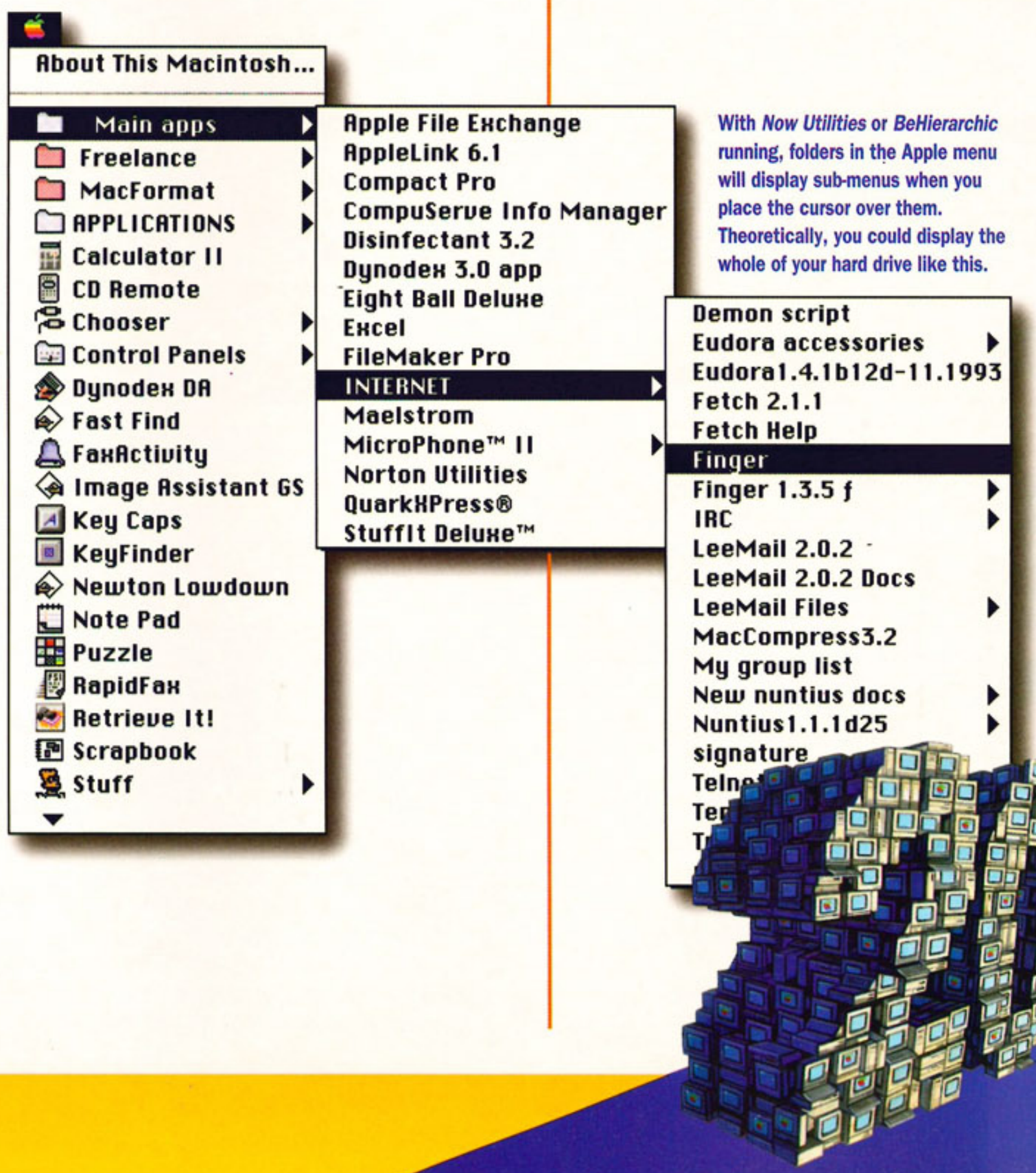
20. Apple Menu Items

Make full use of the Apple Menu Items folder. Any document, application, folder or alias put in the Apple Menu Items folder (which you'll find within the System folder) will appear in the menu – so you can put aliases of your favourite applications there and have instant access to them. When you select an object in the menu, it's just as if its original were double-clicked – so applications launch, documents are opened in their creating application and folders appear open on the Desktop.

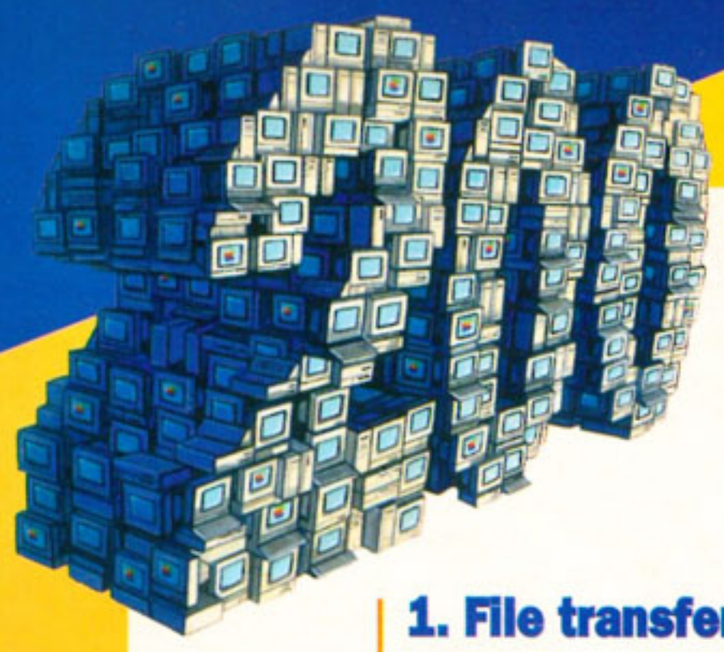
To get the most out of the menu, get hold of the shareware program *BeHierarchic* (or the commercial *Now Utilities*). When that's running, any folders (or aliases of folders) in the menu will display a small arrow next to them – move the cursor down to the folder and a sub-menu will appear, showing its contents. Should one of its contents be another folder, then it too will show a sub-menu… and so on. Doing this, you can access the whole contents of your hard disk by making an alias of the disk and placing that alias in the Apple Menu Items folder.

If you find that your menu is getting unmanageably long, you can arrange items in folders – one for applications, say, and another for documents. Since you can access the contents of folders directly when you're running *BeHierarchic*, this is just as convenient as having them directly in the menu.

BeHierarchic is an excellent program, and one that every System 7 user should have. (Of course, in an ideal world Apple would have built it into the System software in the first place…)



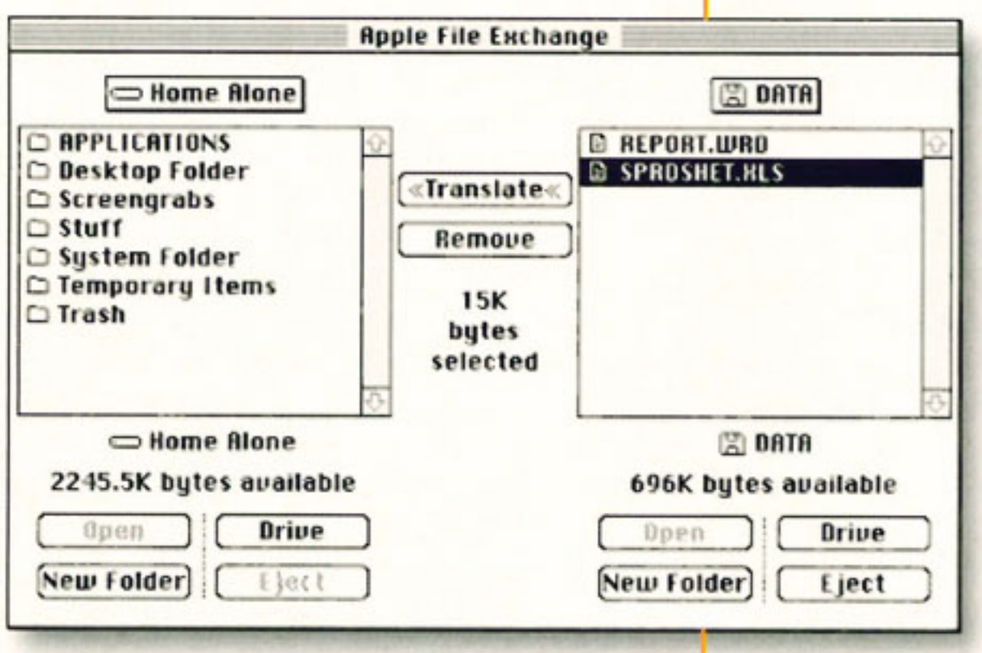
With *Now Utilities* or *BeHierarchic* running, folders in the Apple menu will display sub-menus when you place the cursor over them. Theoretically, you could display the whole of your hard drive like this.



If you think of yourself as a Mac power user, take a pew becaues Ian Wrigley has produced these tips especially for you

1. File transfer

It's possible to transfer data from any computer which can write MS-DOS-format disks – and that doesn't just mean IBM-compatible PCs. The Amiga, for example, can write DOS disks; newer machines come with a built-in utility called *CrossDOS* which does this, while older machines can use the shareware *MessyDOS* to do the same thing. And the Atari ST family will write DOS-format disks if you use the right commands when formatting the disk.



Use *Apple File Exchange* to read MS-DOS files – you'll find it hidden away on one your Mac's System disks.

To read the disks, you either need a commercial piece of software such as Apple's *PC Exchange*, or *Apple File Exchange*, a free program which you'll find on one of the System disks that came with your Mac. It's not automatically put on your hard drive when you install the System, so some people don't think that they have it – but it's lurking away on one of the System disks just the same.

To use *Apple File Exchange*, simply launch the program and then insert your DOS (or, indeed, Mac) formatted disk. The program will read its contents and produce a scrolling list of all the files, which you can then translate on to your Mac's hard drive. The program can even be used to format disks in MS-DOS format, if you require – use the **Erase Disk** command from the **File** menu, choose 720K from the available options that are displayed and select MS-DOS.

Once a file has been translated you can eject the disk, quit *Apple File Exchange* and launch an application capable of reading that file's format. Just double-clicking on the file won't work, since the Mac doesn't know what application it should use to read the data – you must open the file using the **Open** command from within an application.

2. Connecting SCSI devices

If you want to attach more than one external SCSI device to your Mac, prepare for hassles while setting things up. Although in theory it should be easy, in practice it can take several hours of crashes, swearing and fiddling about before everything works properly together. Remember the golden rule: there should be a terminator at each end of the SCSI bus. Your Mac's internal hard drive is terminated already, so that's one end taken care of – but you must make sure that you use an external terminator on the end of the last device in the external chain if it's not internally terminated. Note that this is the physical chain of devices we're talking about – it doesn't matter if SCSI ID numbers don't follow the same sequence as the order in which the items are connected.

In some cases, you'll know that things aren't connected correctly because the Mac will refuse to boot up – instead, you'll get the 'sad Mac' displayed on the screen. If that's the case, try altering the order that you've connected things, add or remove terminators and so on. Eventually you'll find a solution that works…

A rather more subtle problem is where the Mac starts up perfectly well, but you find that you're frequently getting Type 1 System errors ('Bus errors') or the Mac keeps crashing for no apparent reason. This is likely to mean that you haven't got SCSI termination sorted out properly; the SCSI devices are just about working, but aren't really happy. Again, shut down the Mac and rearrange the order of things, or make sure that you have a terminator connected to the end device.

Finally, don't despair – you'll eventually get everything working. I find that threatening the Mac with a trip to the junk shop often produces excellent results…

3. Software bargains

Don't buy any commercial software until you've checked out what's available in the world of PD and shareware! Although the Performas come with *ClarisWorks* bundled, you'll often find that you want extra software to do other stuff – and, of course, non-Performa Macs have no bundled software at all. Maybe you want utilities like 'To Do list' managers, diaries, address books and the like, perhaps a spreadsheet or a word processor, or just a game or two to pass the time.

Well, all of the above – and much, much more – is available for a tiny sum, via shareware and public domain software. Rather than buying a massive spreadsheet package such as Microsoft *Excel*, for instance, perhaps something like *BiPlane* would do. *Address Book* is a perfectly good contacts manager, *Do It All* will handle any diary entries you throw at it, and *Solarian II*, *Diamonds* and many others are shareware games which rival any commercial offerings. Even after you've paid your shareware fees, the cost is far less than if you'd gone into a shop and bought similar programs off the shelf.

If you do decide that you need a commercial package, there are sometimes great bargains to be had if you shop around. For example, many companies sell previous versions of programs at a fraction of the price of the version currently shipping . Now, you may find that the older version does exactly what you want it to do anyway, without any need to upgrade. But even if you do want the upgrade, you may well find that the original purchase price plus the upgrade fee is still much less than you would have paid to buy the latest version at full price.

4. Cheaper cabling

If you're about to buy a Mac-compatible printer and want to connect it up, don't go for the obvious cabling option and buy extremely expensive, 'official' AppleTalk cables. These cost several tens of pounds each, and are completely unnecessary if your set-up consists of only one Mac and one printer. Instead, buy a simple serial cable – normally referred to as an ImageWriter cable. This has the normal 8-pin connector on both ends, and will link your Mac and printer perfectly well. The Mac doesn't know that it's not a 'proper' AppleTalk connector, so everything works just as if you'd bought the real thing – at a saving of £30 or £40!

5. Managing extensions

Install an 'Extension manager' program (there's one called exactly that which is freely available, or a few shareware alternatives exist). These programs keep track of any Extensions and Control Panels that you have installed, and allow you to enable and disable them easily – there's no messing about dragging them in and out of the System folder.

GENERAL

6. Don't use virtual memory

If you find that your Mac is forever short of memory, buy a RAM upgrade rather than using virtual memory. Virtual memory uses an area of the hard drive to emulate RAM – but since the hard drive is many times slower than real RAM, you'll find that your Mac works much more slowly. If you insist on using virtual memory, never increase the memory size to more than twice the amount of physical RAM installed – for example, if you have a 5Mb Mac, don't set virtual memory to give you any more than a total of 10Mb. The more virtual memory you use, the slower the Mac will be – and any more than double the physical RAM will result in such a decrease in performance that you may well find the Mac unusable.

7. Reading unreadable disks

If you receive a high density disk which someone has created on a Mac but which your machine can't read, it's likely that you've got a disk which has been formatted as a double-density, rather than a high-density, device. This happens if someone has an old Mac with a drive which can't deal with high density disks – when they format the disk, the Mac just formats it as though it were double density.

To read the data on the disk, cover the hole which marks the disk as high density (on the opposite edge of the casing to the 'write protect' hole) with tape – that should fool your Mac into thinking that it's a double density disk.

8. Keeping two System folders

Try never to have more than one System folder on your hard drive at once. This can lead to all sorts of problems – installers may put Extensions in the wrong folder by mistake, you may forget which is 'active' and so on. If you really have a need for two Systems (for example, if you want to have a copy of System 6 because some old software doesn't run with the System 7.1 that you normally use) then get hold of a PD program such as *System Blesser* or *System Switcher*, which allows you to specify which System you want to use to start up (called the 'blessed' System folder).

If you want to retain one System while installing another, you have to fool the Mac into thinking that the currently resident System folder isn't actually a System folder at all. You can do this by moving the Finder out of the System folder (put it on the Desktop or in another folder), renaming the folder to something different, then using the standard Installer disks. These look for a folder containing the System and Finder, and upgrade that folder. Since you don't have such a thing, a new folder is created – called System folder – with the new software inside it. You can now copy the Finder back into the old folder, and hey presto – two System folders on one hard disk.

9. To share or not to share

If you're using System 7's File Sharing feature, beware: if you publish your entire hard drive, anyone with access can browse through all your files, delete stuff, copy applications from your Mac and so on. It's far better only to publish one folder, which you can then use as a 'drop' folder – you can put things in it that you want others to be able to access, and people can put files in it that they want to give to you. This way, no-one can get at your main hard drive. Beware, too, that anyone with physical access to your Mac can create a new user – so keep an eye on the Users and Groups Control Panel.

10. Using aliases

Put aliases of your favourite applications on to the Desktop. Then you can drag files to them – even if the files weren't created in that application. For example, I have an alias of Microsoft *Word* on the Desktop. If I download a large text file from a bulletin board, double-clicking it will normally attempt to load it into *TeachText* – which will fail if the file is over 32K in size. Dragging it on to the *Word* icon will launch *Word* and then automatically open up the file – no need to load *Word* and then find the file using the **Open** dialogue box.

Save time and effort by making aliases of your applications.

11. Emergency ejections

Always have a paperclip handy for emergency ejection of floppy disks if they get stuck – push the end of the paperclip into the tiny hole on the right of the disk drive.

12. Don't overload

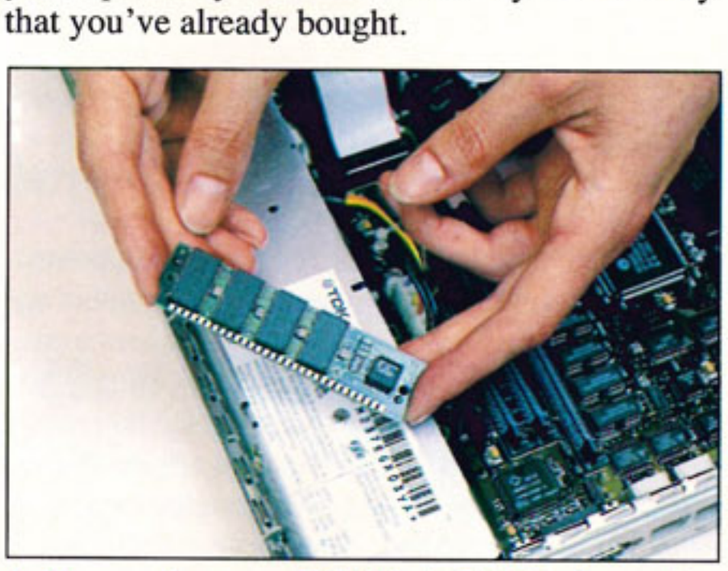
Don't load up your System file with too many custom sounds that you've recorded with the built-in microphone – it could be the cause of any crashes you've had.

13. Allocation of ATM memory

If you use PostScript fonts, give Adobe *Type Manager's* RAM cache as much memory as you can spare – it will speed up the screen drawing of documents with lots of fonts.

14. Buying RAM now

If you're buying a RAM upgrade, go for as much as you can afford – if you need to add more later, you'll probably have to throw away the memory that you've already bought.



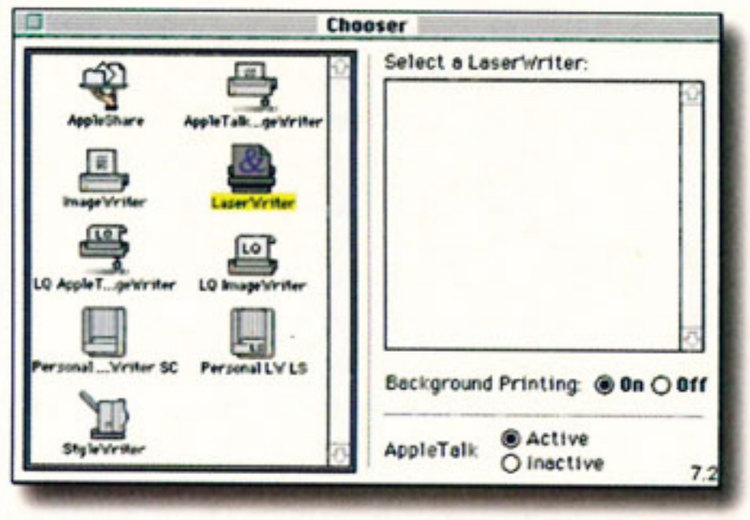
And here we have some RAM. Nice isn't it? Don't you wish you had more? Well if so, buy as much as you can afford.

15. Stopping extensions

Holding down **[shift]** will stop all Extensions loading in System 7 when you switch on – handy if you want to start your Mac up quickly.

16. Background printing

If a document refuses to print correctly, check if Background Printing is turned on in the Chooser – this sometimes causes problems.



Background Printing can be pretty handy, but every now and again, you might find it's responsible for a print problem.

17. Throw away preferences

If an application is behaving in an odd way, try throwing away its Preferences file (normally in the Preferences folder within the System Folder).

18. Automatic software removal

Pressing **[option]** when using the Installer supplied with some software changes the 'Install' button to 'Remove' – totally removing the software from your hard disk automatically.

19. Protecting the screen

You don't need to buy a screen saver unless you really want one; if you're going to leave your Mac on for a long time, just turn the monitor's brightness down – or unplug it altogether, leaving the Mac switched on.

20. Install SCSI Probe

If you have a SyQuest removable hard drive, install the shareware *SCSIProbe* utility in your Control Panels folder. Now, hitting **[command] [spacebar]** will mount a cartridge if it was inserted after the Mac was turned on, without the need for any dedicated driver software.

Martyn Lester shares some of his vast DTP knowledge with 20 useful tips to help you create successful publications

1. Plan ahead

The real secret of successful desktop publishing is: don't just let it happen – plan it! If this doesn't sound particularly secret (or even specific to DTP), that's because it isn't – but most people spend far too little time paying any attention to this apparently obvious point.

Start off with a clear idea of who you are creating any given publication for, what they will want to get out of it, and what you want them to get out of it (which won't always be precisely the same thing). Make your decisions about the design, tone and content of your publication with a view to satisfying these needs.

If you are using other contributors, invest some time and effort in letting them know what your aims are and how you want to set about achieving them. It will save you time in the long run if your contributors supply material which is already in a style and format that you can work with comfortably, rather than something that you have mess around converting to your requirements.

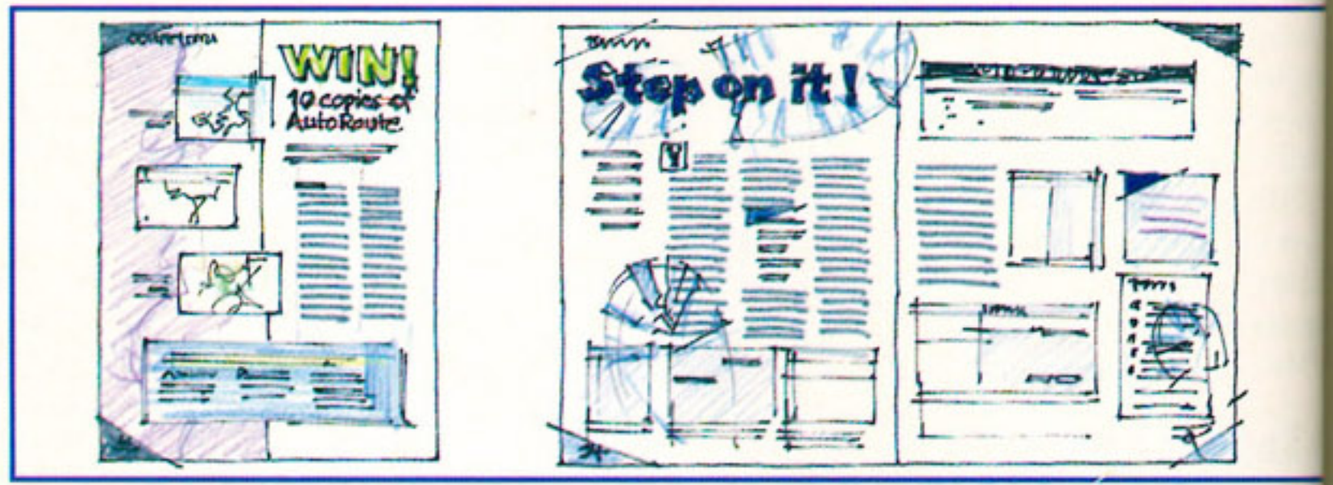
Even if you can't control all of the material you will be working with – which is the ideal situation – at least make sure that you know what to expect and when to expect it. Use this knowledge to source, commission or generate supplementary material (eg suitable illustrations) without having to wait for the main items to arrive.

Prioritise your material. Have a firm idea which items (or which parts of a larger feature) are so important that you must use them, which you particularly want to use, which it would be nice to use, but only if there's room, and which are merely available if you find you need them. If you already know this before you start to lay out your document, then you won't be struggling to make decisions about sizing, cutting and padding when you really ought to be concentrating on designing.

2. Make rough drafts

Although the paper-free office is a seductive concept, it's all but a myth. Never stubbornly refuse to use a piece of paper when it would be helpful to you – that's pointlessly counter-productive.

If a document is going to be tricky to design, try planning with a pencil and paper first. You can make a rough freehand sketch much more quickly than you can try a layout on the Mac, so you can use the time it would have taken you to make just one on-screen experiment to knock out several alternative thumbnails on paper, and then choose the best.



It is often easier and more effective to think on paper before transferring your ideas onto the screen. Sketch simple 'thumbnail' sized layouts in order to decide on a basic structure for your design.

If it is possible for you to incorporate 'non-computer' illustrations in your documents, then give them equal consideration. Don't reject a good traditional graphic in favour of a mediocre Mac-generated one just because the latter would be a less troublesome option.

Don't trust the way that things look on the monitor to be an accurate guide to how they will look in the finished publication. Choose between photographs by spreading them on a table or light box, not by looking at rough scan files on the screen. Evaluate other illustrations in the same way, producing print-outs of computer-generated graphics if you can. Unless you are 'desktop publishing' presentations, your consumers will be reading your publication on paper, so pay them the courtesy of visualising how your material will work in print, not on screen.

Make paper proofs of your pages – documents proofed on screen tend to contain a lot more missed errors. Furthermore, they are a technology-independent reference for colleagues, clients or other interested parties to look over, and you can send them to bureaux or printers so they can check that nothing is going wrong. If the worst comes to the worst and all your files and backups get lost or corrupted, you can use the proof as your guide to making an emergency rebuild.

3. Illustrate your material

Possibly because they are more comfortable with their language skills than their artistic talents, many desktop publishers treat graphics as very much a subsidiary aspect of document design. Usually the person in charge of a publication – anything from a small club newsletter to a national newspaper – comes from a writing background, and will tend to protect written copy, sometimes misguidedly.

Illustrations are not just there to break up the text – they have an important role to play, and you should take the trouble to make the most of their potential. Unless you are designing thoughtlessly, each illustration you intend to use will have been chosen for a function, even if it's a purely decorative one. Very few graphics can fulfil their role – be it to please the eye, set mood or context, or convey information – if when used, their size is no bigger than that of a postage stamp, so have faith in them and give them the space they need.

While not all pictures are 'worth a thousand words', many deserve to see you cut back a couple of hundred words of writing in order to have room in which to do their job. Not only will this raise the impact of your design, the potential spin-off is that it will force you to tighten up on unnecessarily verbose copy too.

If you choose to use a photograph or other illustration full frame (showing the whole image) make sure you're doing so as an active decision. Look at each picture and decide how much of it is attractive, informative or useful in setting another part of the image in context. If you need all of it, then that's fine. But if you don't, then crop it – then you can use the important parts of the image bigger than if you try to fit the whole picture in.

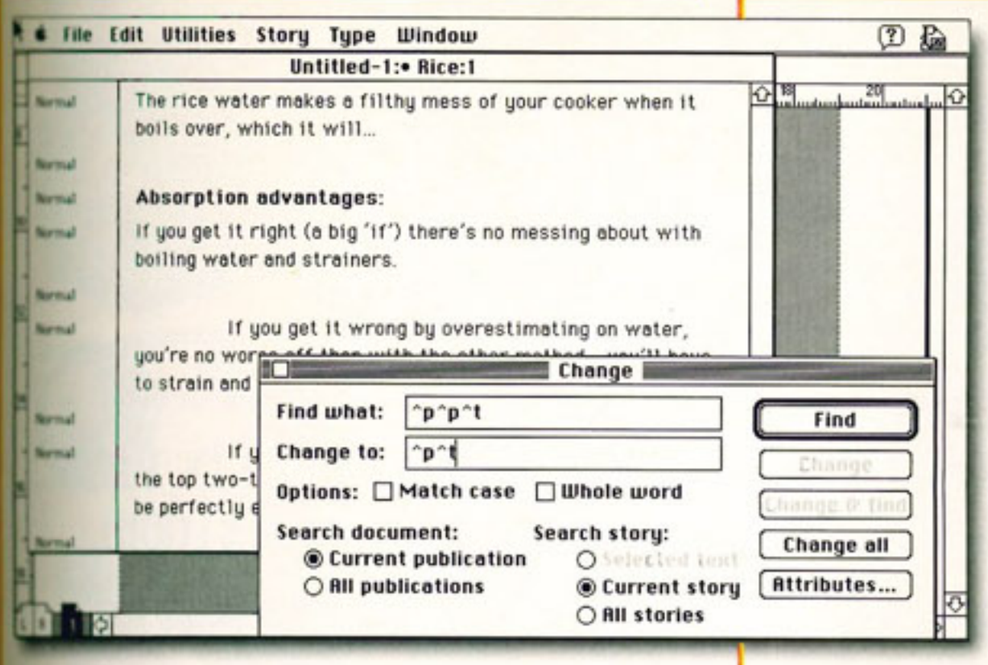
4. Meaningful headline

Unless entertainment is your paramount consideration, make sure that headlines, standfirsts (introductory copy) and captions are clear and informative – that they tell the reader what is going on. Beware of being 'clever' – you may have no problem in understanding your joke, pun or witticism, but will the reader?

As a rule of thumb, if any sundry text item of this sort can only be understood after reading the article, then it's a mistake to use it. Headlines, standfirsts and captions are useful tools for drawing your audience into reading the article. By all means make them interesting, amusing, even intriguing, but don't waste their potential by making them incomprehensible.

DTP

5. Find and change facilities



Save valuable time by using the Find and Change facility to look for double paragraph returns and replace them with single ones.

Don't restrict use of your word processor or DTP package's search and replace facilities to merely changing words; check to see if there are any codes which you can type in to find such things as paragraph returns and tabs. (For example, to locate 'carriage' returns in *PageMaker* or Microsoft *Word*, you would type **[^p]** in the Find and Change dialogues).

Then, if you receive copy that's formatted wrongly, you can automate cleaning it up, rather than wasting time doing it manually. For example, if copy arrives with unwanted line spaces between the paragraphs, you could simply search for double returns and replace them with single ones.

6. Using design

Use design to show the reader what your priorities are. If everything on your page has the same tone and volume, the reader has no guide to where he should look first.

Draw attention to your main item by any or all of the following: starting it at or towards the top of the page; giving it a prominent headline; using large or bold type; calling out extracted bold quotes from it; allocating more space to it than other items.

Try not to use two illustrations of the same size – choose the one you most want people to look at and give it the most space.

7. Know your tools

It is well worth exploring your software before you start (not forgetting that it does come with a manual) so that you have a reasonably clear idea of just what it can and can't do. In the long run, all the work will pay off – for one thing, you won't waste time either trying to do the impossible, or in approaching what should be a relatively quick and easy task by the most long-winded route possible.

And learn the limitations of your and other people's hardware – your desktop printer, the imagesetter at your DTP bureau, the photocopiers at your print shop or the press at your printers – so that you don't waste effort on producing material which is unsuitable to the technology being used

8. Learn the short cuts

If you are going to use the same design grids, typography or page elements on a frequent basis, then make all the use you can of whatever template, library, type and other style palette facilities available to you.

Investing the time in setting up templates and palettes will not only save time, it will also cut down on mistakes and mismatches.

Learn the keyboard/mouse shortcuts for regularly used operations, and if your software permits, allocate new shortcuts to items such as paragraph styles – an amazing amount of time can be expended fishing around in sub-menus and dialogues.

9. Ensuring legible text

Remember that, unlike its on-screen representation, a printed document is a three-dimensional object. For example, the outside edges of pages are easily accessed by a flick-through, but items towards the inside will only be seen when the publication is held fully open at that spread – that's why we put page numbers at the outside.

Don't forget that even independently designed pages may share a relationship. For example, if you end one article on a left-hand page and start a new one on the right, they are facing each other, and their design should take account of what they will look like as a spread.

10. The finished product

Make sure your text is legible. The most basic rules are:

- Serif typefaces are generally easier to read than san serifs;
- Text set in small letters is easier to read than in capitals;
- Lines more than about 70 characters long (including spaces and punctuation) are difficult to read, lines of less than 20 characters tend to break unattractively;
- The visual space between lines of text should be larger than that between words, and long lines need more spacing than short ones;
- Ranged left text is easiest to read, followed by justified – only short items should be ranged right or centred.

11. Break up text

Long, unbroken articles can be daunting to read. Try to divide them up by extracting material of secondary importance and turning it into subsidiary items such as panels, margin notes, tables and so on.

12. Illustrating statistics

Look for opportunities to illustrate statistical or similar material with graphs and charts. The right choice of graph will make trends or comparisons much more immediately apparent than a string of figures.

13. Go easy on fonts

Don't use too many different fonts in one document. Instead of adding variety, it will create visual confusion. Many of the most professional publications in the world get by on just a couple of typefaces.

14. Avoid confusion

Beware of making your designs over-complicated and over-ornamented. A page crammed with competing focal points is like a group of people all trying to talk to you at once – you end up hearing none of them.

15. Beware default settings

Don't settle for the default settings of your software unless you're sure that's what you want. The defaults for such things as auto leading or character spacing, for example, are 'right' only for a small range of type sizes.

16. Remember to save

Save, Save, Save! It's all too easy to forget while you spend a couple of hours struggling with a long, complicated design – and then crash. More time gets wasted on work lost like this than on anything else, especially if you include…

17. Check disk space

…not remembering to Save until the file is too large to fit the space left on your hard disk. Unless you have hundreds of Mb to spare, check how much room there is on your storage device at the start of every session.

18. 'Save As' regularly

Save As from time to time. It means that if your 'live' file corrupts, you've only lost the work since the last Save As. In some software, a Save As also produces more compact code than a Save, so your finished file will be smaller.

19. Four-colour printing

For four-colour printing, make sure the colours in your documents (and imported graphics) are created in or converted to the CMYK model, with 'process separation' specified. Otherwise, you'll end up with more than four plates!

20. And finally... greeking

If you can't avoid placing pictures in your document early on in the design, you can get around screen redrawing delays by greeking (greying them out) after you have sized and cropped them. Greeking small text also helps.

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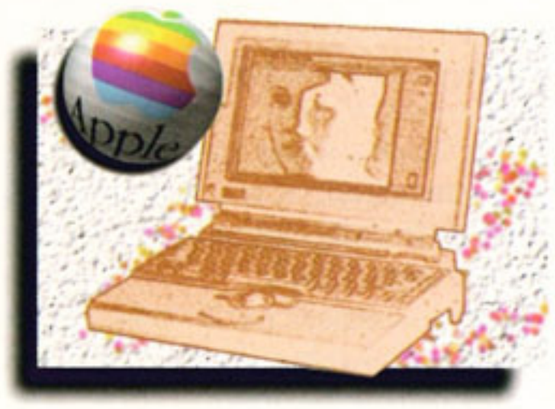

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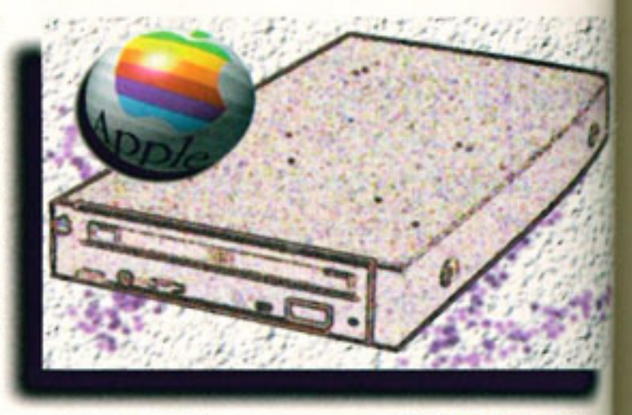

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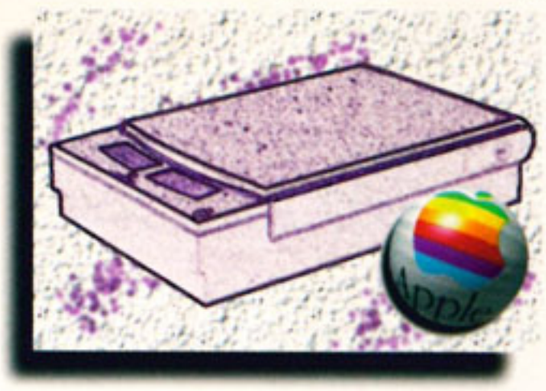

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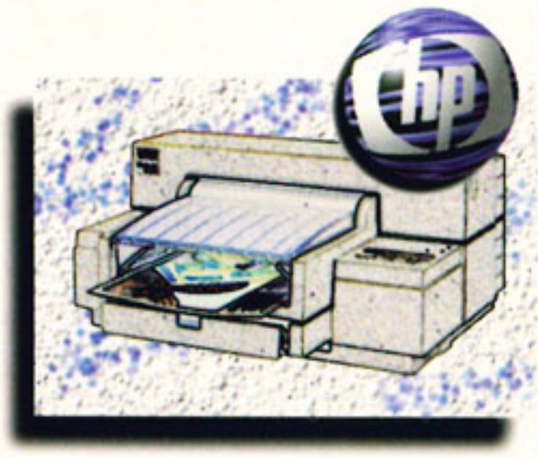

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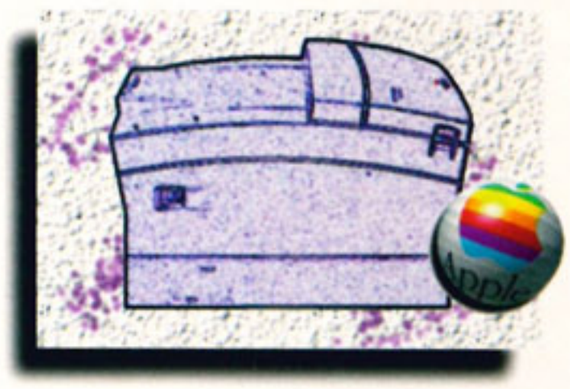

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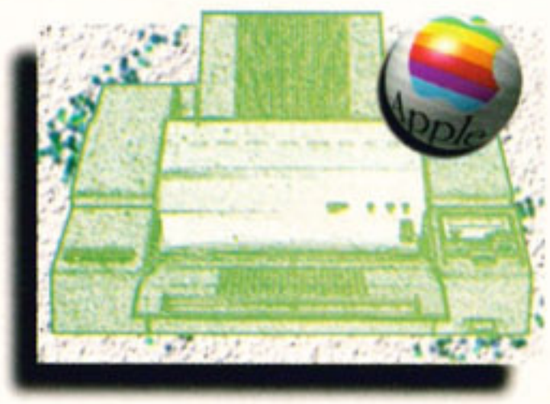

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SPREADSHEET

If you use spreadsheets, Simon Cox and Greg Morrison have got some hints and tips to make juggling with numbers much easier

1. Absolute v relative

Know the difference between absolute and relative references.

2. Stationery pads

Use stationery pads for frequently used worksheets.

3. Protect and survive

Protect what you don't want changed.

4. Working with dates

Remember when working with dates that there are different numbers of days in each month so don't just add one to the month.

5. Working with charts

A picture is worth a 1,000 words but make sure that a chart is not worth a different 1,000 to everyone who sees it.

6. Plan ahead

Plan what you want the worksheet to do before you try and make it do it.

7. Start afresh

Do not be afraid of the wastebasket – it is better to write a new worksheet that works rather than rewrite an old one until it works.

8. Make use of tests

Use lots of test data before using the worksheet for real.

9. Try and try again

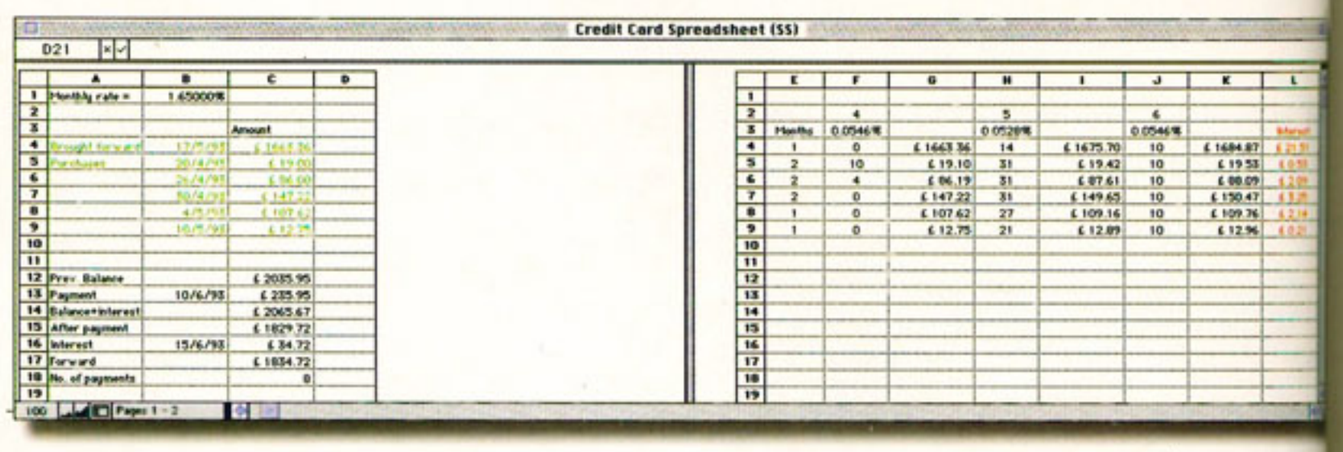
Never believe the first results you get out of your worksheets.

10. Garbage in garbage out

A spreadsheet is like any other computer program – if you put garbage in, you'll get garbage out.

11. Structuring worksheets

As a worksheet gets larger, it becomes more complex and it becomes increasingly important to structure it properly. It is very hard to add structure to a worksheet as an afterthought, so it is best to do it from the start. Most applications present the worksheet as a large area and do not provide any way of structuring it. However, one way to add some structure is to use



Using page breaks can prevent a worksheet becoming too large and unwieldy to work with. Using layers will achieve the same effect in a 3D worksheet.

page breaks. In *Excel*, after Page Setup is used, it will display page breaks which divide the worksheet into separate areas. In *ClarisWorks*, this method works even better as page breaks can be added by hand and the worksheet can be seen as separate areas in Page View mode.

If you use an application that supports three dimensional worksheets (such as *Lotus 1-2-3* or *Mariner*) then separate layers can be used to provide the same effect. Don't be afraid of using more than one layer or page for your worksheet.

Having set up the separate pages, they can be used for separate tasks. A good practice is to use the pages to the left for those parts you want the users to see and the pages to the right for working areas.

If page breaks can be added manually, they can be very useful to cut out areas that aren't meant to be seen. If you want to print out part of a worksheet then it is easy to insert page breaks and then print out the required section.

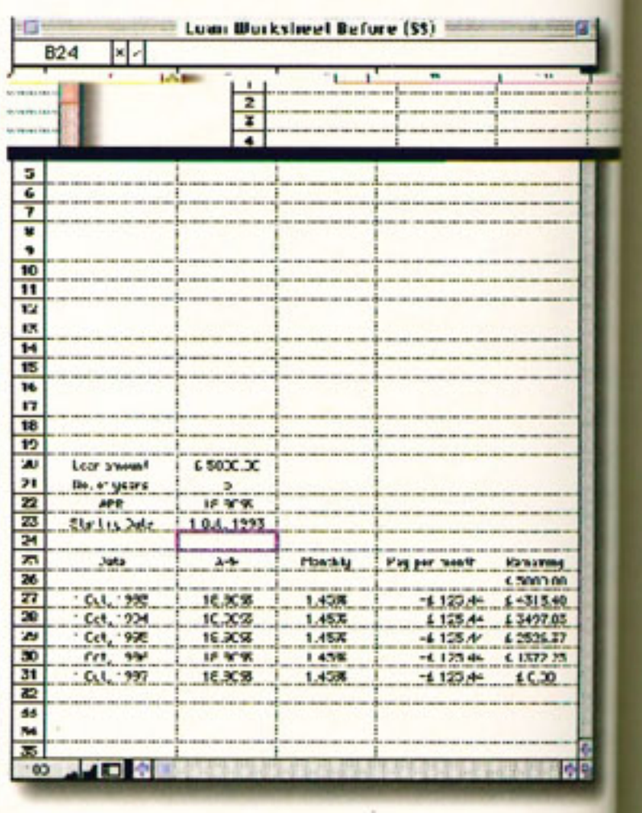
In the screenshot, a credit card worksheet has been split up in this way in *ClarisWorks*. The parts that appear on the statement are shown on one page and the working area is shown on another page. This is particularly useful on smaller screens where separate parts of the worksheet can be moved between quickly.

12. Worksheets

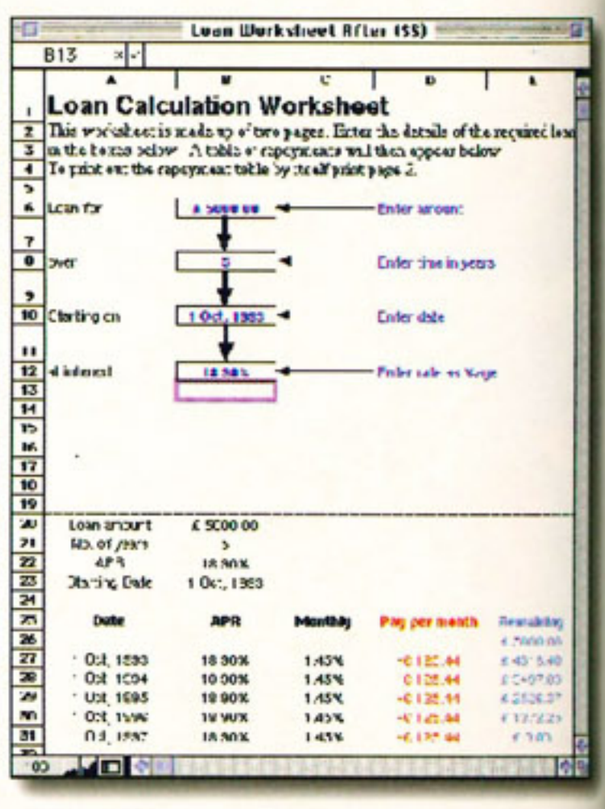
If you are producing worksheets which are going to be used by other people then there are various things you can do to make their (and your) life easier.

One of the most important changes you can make is to the appearance of the worksheet. Above right is a worksheet that contains only the required information to produce a loan table and below right is an improved version.

The most notable difference is the addition of an information area to the top of the worksheet. This includes the instructions and a set of boxes to enter data into. These boxes are highlighted and there are individual instructions for each box. The fonts used have also been changed from screen fonts (like Geneva) to those which are resident in most laser printers



Before you pass on a spreadsheet for a colleague to work on, you can make several improvements. Above is a basic spreadsheet without any refinements.



The same spreadsheet with improvements. It has been split over two pages and there are detailed instructions at the top, as well as by each box.

(such as Helvetica and Times). This means that the table will look better if printed out. The worksheet has also been split over two pages so that the table can be printed out separately. Finally some colour has been added to attract the user to certain areas.

Before finally giving the worksheet to a user, all the cells except for those into which the user should enter information should be locked. In this way the user cannot change the way the worksheet behaves by accident. Also, it may be worth turning it into a stationery pad so that the user only works with copies.

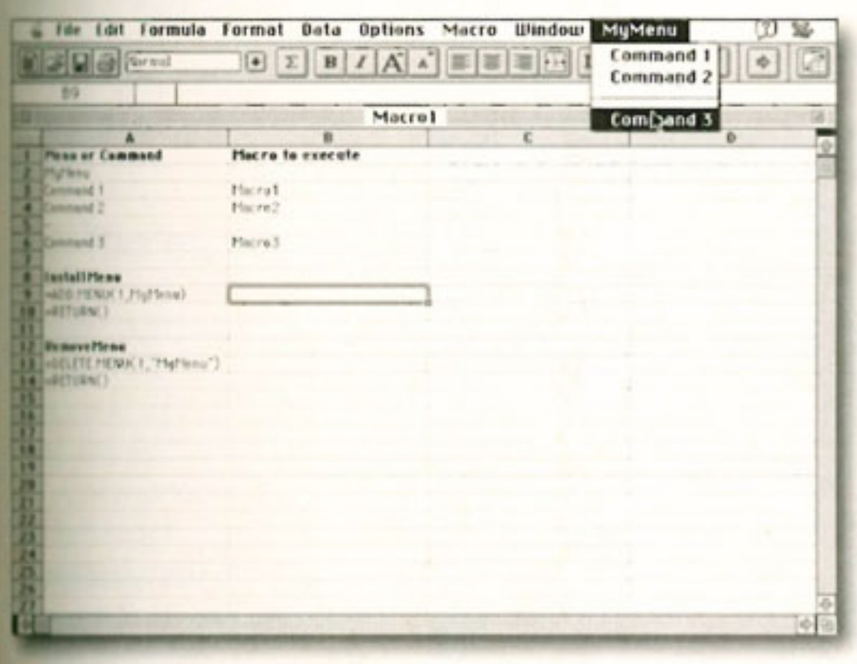
13. Excel – custom menus

When developing large worksheets in *Excel* it is often useful to define macros that implement complex operations that are to be performed more than once. Macros can be associated with command key combinations or buttons in dialogues. However, the best place to put them is in a separate menu and *Excel* allows the user to do just that. With a custom menu, macros are easily accessible and their command key equivalents can be more easily remembered. Moving commands to the menu bar also helps remove clutter from worksheets and makes your worksheets more friendly.

Making a custom menu is straightforward. First set up an area of a macro sheet with a menu definition. This takes the form of a table which contains: the menu name in the first column; in the second, the menu title as it will appear and a list of menu items; and a list of the commands the menu items execute in the third column. After having defined the new menu, execute the command: **Add_Menu(1, MyMenu)** to put it into the menu bar. The number one specifies that the menu is to be added to the standard menu bar. By default the menu is added after the usual *Excel* menu entries. This allows full access to the standard menu bar and your new menu. The screenshot shows a small menu defined in a macro sheet and the result in the menu bar.

Once the menu is installed selecting a command will execute the macro associated with the menu item. The menu will be available in all worksheets and macro sheets that are open. This can be useful for adding commands when developing applications.

When building complete applications in *Excel* it is possible to replace the menu bar completely. This can be very useful as it limits the commands available to the user. However care must be exercised as it can be very confusing if you get rid of the standard menus such as **File** and **Edit**.



The best place to put macros in a worksheet is under a custom menu in the menu bar. That way you have easy access to complicated operations.

14. Choosing the right chart

When presenting information, a chart can often help. To misquote, 'A picture is worth a thousand cells'. However, selecting the right type of chart is not straightforward. The chart should enhance the data and get the correct message across. The rules for selecting a chart type are easy:

1 Select a chart which is simple. Avoid the over-the-top 3D shaded version if the 2D version does all you need.
2 Pie charts highlight an individual area and are good for comparing related data.
3 Line charts are good for showing trends.
4 Bar charts are simple and a good way of comparing several data areas, such as the sales by three companies on a month by month basis.
5 Use colour sparingly.
6 Plan the message, then choose the chart.

15. Frequently used values

There are often cases when writing worksheets when one value from a table is needed. To allow this, most spreadsheet applications have an INDEX function which takes a cell range, a row and a column. The row and column values are numeric expressions that must be within the given range. As these rows and values can be any numeric expression, it is possible to use the result of another calculation. In particular this calculation could be the result of another INDEX operation. It is therefore possible to index through a number of tables to produce a result.

16. Mixing Excel worksheets

When producing a report, you may sometimes find you require information that has been produced in *Excel*. Rather than transferring some part of worksheet or a chart via the clipboard, it is much easier to use Publish and Subscribe. When you do this there are two things to remember to do. Firstly, when publishing something, check the options. *Excel* will publish things in four formats, including as a picture or in Richer Text Format. However, it is often the case that you do not need all these. Disabling the ones you do not want will make saving and publishing faster. Secondly, if you want to stop publishing something then check the Links dialogue under the **File** menu. This lists all the parts of the worksheet that are currently published.

17. WP and spreadsheets

When producing a *ClarisWorks* document that requires some information from the spreadsheet module, it may not be necessary to create a separate document. Instead the spreadsheet can be incorporated into a frame. To create a document with a table of figures and a chart of those figures, do the following. Click on the spreadsheet tool and then drag out a spreadsheet. Enter into this the data you want and make a chart from it, placing the chart where you want it in the document. Don't forget that you can turn off all the column and row headings for the spreadsheet from the Display dialogue.

18. Excel workbooks

One of *Excel's* biggest advantages over the competition is the addition of workbooks. Workbooks help you to organise a group of related worksheets and macro sheets into a single document. By moving all the documents into a single workbook it ensures that any references between sheets can be calculated easily. This is a major bonus, as often when using related sheets a dialogue appears asking if you would like to update external references. The workbook also makes sure that all related spreadsheets are saved at the same time. This can save time when working with large 20 or 30 worksheet applications. If you are working on applications that have a large number of spreadsheets then workbooks are a must.

19. Outlining Excel tasks

Many spreadsheets are made up of different levels of data. For example a sales report may have individual sales consultants' totals which are then summed to give a regional total and these regional totals are the summed to give a national total. This layering of data can take up a lot of space on a worksheet and can obscure the real information when trying to compare regions. To combat this, *Excel* includes an outliner. The outliner allows different levels of data to be shown at the same time and hides whole sections of the spreadsheet with one button press. The same could be achieved by hiding rows and columns. But the outliner manages many layers of information and allows information to promoted and demoted to suit the application.

20. Auto–open in Excel

When writing applications in *Excel,* it often helps to have a macro run when the worksheet is opened. This might allow a set of options to be presented to the user or perform some housekeeping. In *Excel* the way to do this is to set up a macro called AUTO_OPEN. This macro will be executed every time the worksheet is opened. There is also an option for closing a macro sheet as well. This is particularly useful if a set of results need to be saved. This auto close takes control of the saving of results away from the user and into the hands of the application designer.

Gordon Druce shows you some design shortcuts in the form of 20 graphics tips – so load up those art packages and start getting graphic

1. Saving space in Canvas

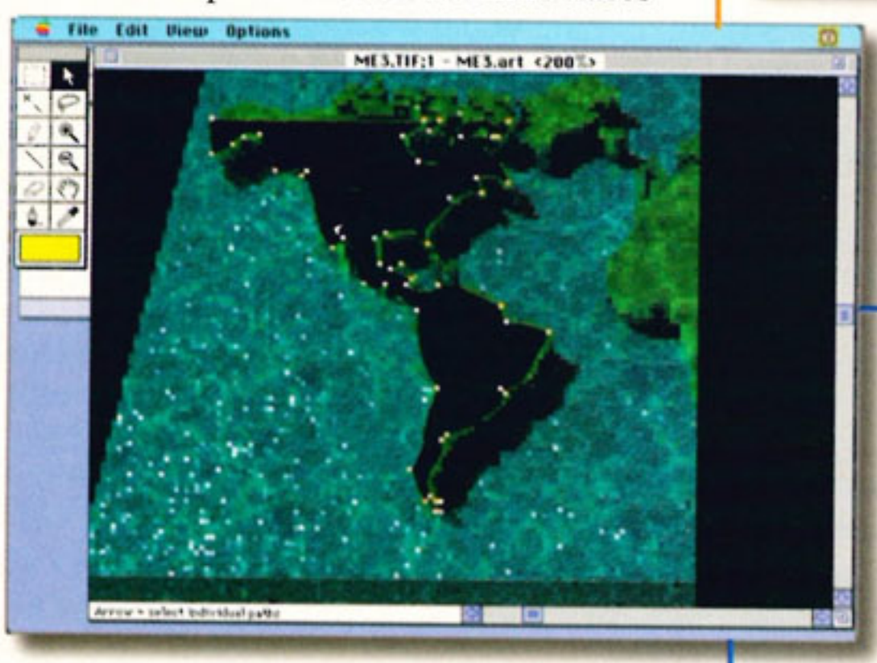
If you are working in *Canvas 3*, then you will find it takes up valuable disk space and RAM. You can save on some memory space by pressing the space bar while *Canvas* is loading. It will then display a selection of tools – you can switch off the tools you rarely use.

2. SuperPaint X-ray

When using *SuperPaint* hold down **[command]** and select the Lasso tool. You will now be in what is called 'X-ray' mode. This means that no white areas of the object will be selected, even if it is completely encased by black. Another neat trick in *SuperPaint* is to hold down **[option]** when you are using the eraser tool – this changes it from a sixteen pixel square to an eight pixel square.

3. Neater PostScript graphics

If you have to generate a lot of PostScript maps, and you work from scanned originals, this is a tip for you. Try getting yourself a program called *Streamline* by Adobe. This piece of software takes traces



Adobe *Streamline 3* is an excellent program for tracing bitmapped scans and converting them to files.

of bitmapped graphics and converts them into PostScript. It does a much neater job of it than *FreeHand* and *Illustrator's* built-in features.

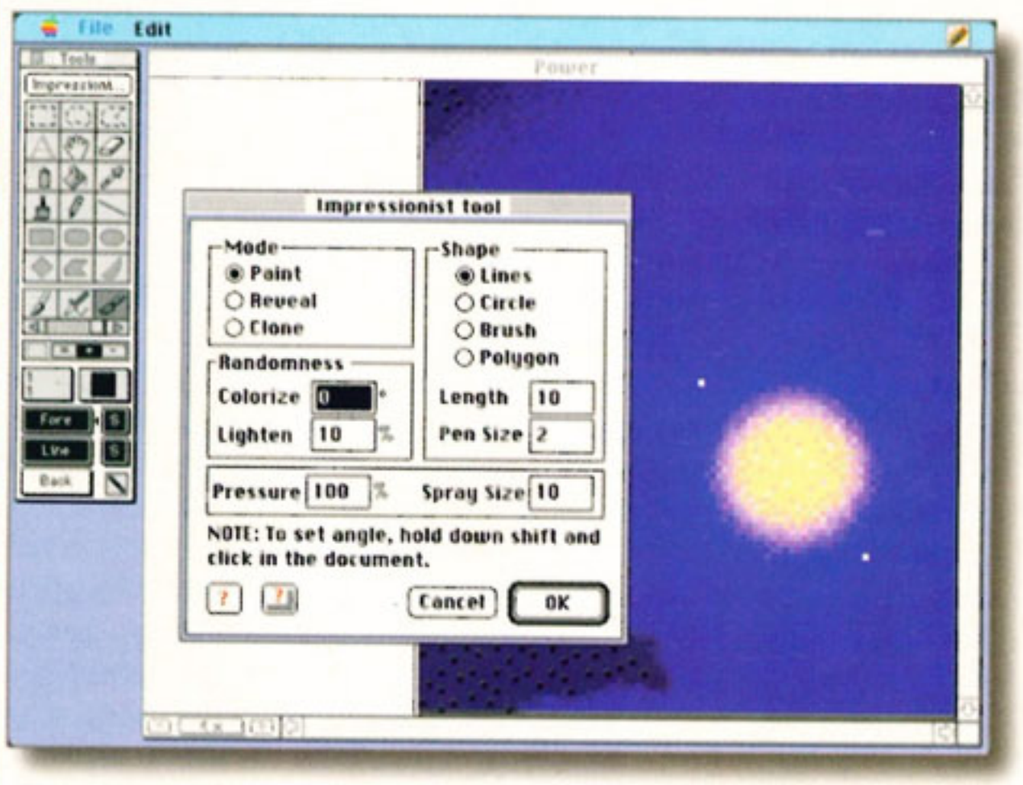
4. Nudge those pixels

Many painting and drawing programs let you move objects pixel by pixel. This is called nudging and can be controlled by the Left, Right, Up and Down arrows which run along the bottom right hand side of your keyboard.

This is very useful when you are making finite adjustments to layouts and drawings.

5. Double–clicking

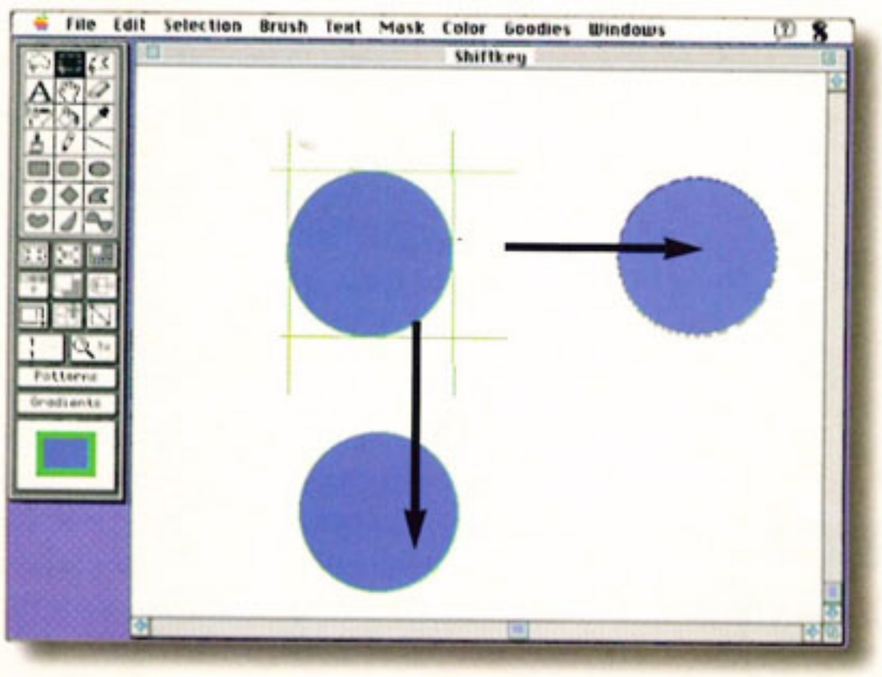
Another function common in many painting programs is double-clicking on icons in the tool palette. This usually lets you make useful shortcuts. For example double-clicking on the brush icon calls up a menu which controls the shape and style of your brush or if you are using more advanced painting programs like *Painter 2*, the controls can be tuned to a pressure sensitive graphics tablet.



Double -clicking on icons in the tool palettes gives you speedy access to changing the shape, size and pressure of brushes, pens and spray cans.

6. Shift key shortcuts

If you hold down the **[shift]** key in most paint programs, you will find that it constrains the tool you are using – in one form or another. Usually, if you hold down the **[shift]** key at the same time as a tool is selected, your drawing will be restricted to horizontal or vertical directions. If you have a shape tool selected, it will hold the shape you draw in equal proportions of length and width.



Select your shape and or line, then hold down the shift key and your movements will then be constricted to just the horizontal and vertical plane.

7. Using your eraser

If your particular paint program does not have a very friendly erasing tool, here are three alternatives you could try:

- For deleting large areas use the selection tool or lasso. Select, then hit delete and that will erase the selected area.
- For more delicate areas of erasing, select an appropriate brush size and shape and of course a spot of white paint or whatever your background colour is, and away you go.
- If you have some really detailed erasing to do, use the magnification tool to zoom in and then select the pen tool to change the pen colour to white (or whatever your background colour is). You will now be able to erase at a pixel-by-pixel level.

8. Guides on and off

Clearing guides from drawing and DTP programs can be a drag. So next time you're using *QuarkXPress,* try pressing

down the **[option]** key and double-clicking on the ruler bars, or if you are in *Illustrator* try **[command] [6] [delete]**.

9. Labels

If you have ever spent a fruitless afternoon trying to get text to line up on a word processor, or DTP document, so you can accurately print out your self adhesive labels, then can I recommend a program called *MacLabel Pro* from Avery? It has excellent templates for everything from disk labels to video cassette labels, and is quick and simple to use.

10. Copying and pasting

Copying and pasting selections can be time consuming. So try making a selection, then press **[option]** while moving your selection; instead of the whole selection moving, you will find that a copy of the original just rips away, so you can place it anywhere you like in the document. Making multiple copies is easy. In most programs if you hold down **[option]** and **[command]** you will find that you get multiple copies. The slower you move the selection, the more copies you get.

11. Gathering material

No amount of Macintosh technology is going to make you a better artist. Few people can draw well on their first attempt. So try gathering reference material, then collect and compile a folder, or make a scrapbook of useful images.

If you are lucky enough to have a hand scanner, say the excellent *ScanMan* from Logitech, you can pull in some images from magazines and your own photographs. This is a great starting point – don't worry, it's not cheating if it helps you get started.

12. Trading inspiration

Teach yourself to analyse your pictures and illustrations. Also look out for good and bad design: examine all the posters, CD covers, magazines and direct mail that come your way. Determine what it is you like or dislike about them. Ask yourself why is a particular design so effective, or why is it not working quite as well as it might? It is a good idea to surround yourself with inspirational images, make a file of your best work and collect your favourite work by other artists. These may help you with your own design solutions, or act as a springboard to ideas of your own.

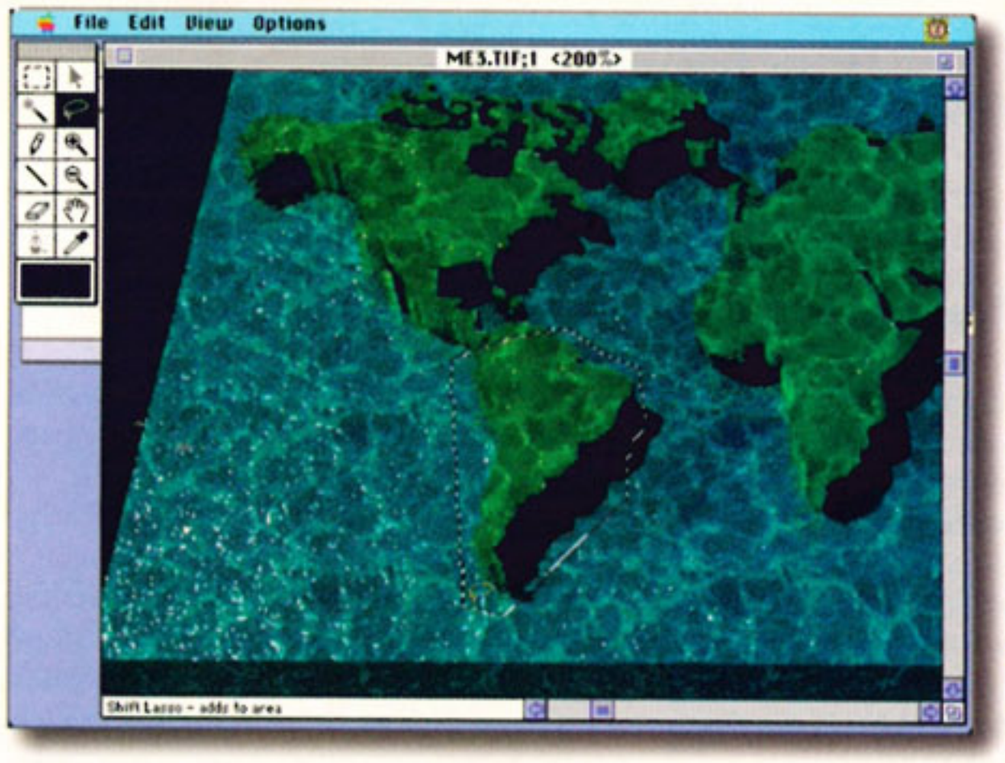
13. The message is important

Graphic design has to be relevant. All your design work must stand or fall on its ability to make it as effortless as possible, for the person to read and understand your message.

A newsletter full of opinions on scientific breakthroughs for example, requires a completely different treatment to that of a newsletter covering updates on the activities of a classic car club.

Your designs should follow your reader's natural inclination to read a publication from the upper left of the page to the bottom right.

14. Lasso tool



In most graphic programs, the lasso tool will automatically snap closed in a straight line from start to end point.

When using the lasso tool, it is not necessary to draw a full loop around your image. In most programs the loop will close automatically, from the start point, in a straight line to the end point, of your lasso move.

15. Turn it upside down

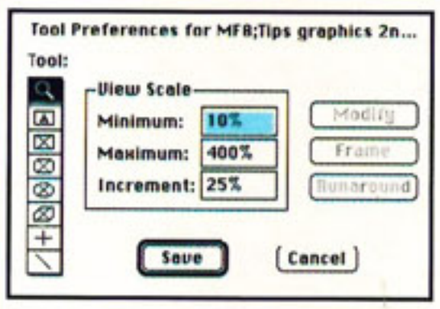
Contrast is a very important part of helping you to communicate your message. A quick way to check if your work has a good balance of contrast, is by printing your page out, then turning the artwork upside down. Viewed in this way, your eyes are not distracted by the tendency to read or look at individual words or pictures. By looking at the work upside down, you are forced to consider the overall colour or contrast of the artwork.

If you look at high-impact publications (popular hobby and kids' magazines or advertisements targeting these people, they will have lots of light and dark areas plus dynamic illustrations, to make it a lively and attractive read.

16. Go easy on the effects

Don't let your over-enthusiasm and the powerful special effects capabilities of some Macintosh software get in the way of communicating your message clearly and concisely.

17. Customising magnification



Become more efficient by editing the magnification tool's settings.

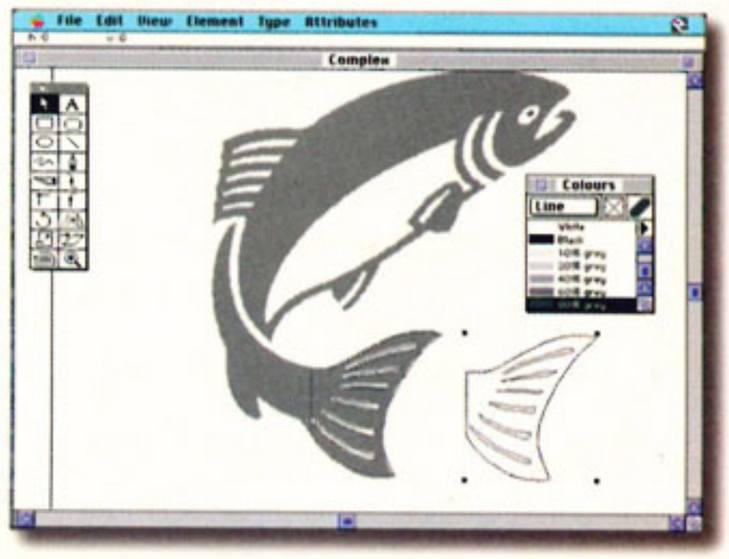
When using your magnifying tool in paint and DTP programs, it is sometimes possible to edit the amount of magnification, if you are setting up a template or default grid. By changing the setting from say 25% increments to 50% or 100%, then saving your document, you will speed up your productivity. Also, a lot of designing software lets you draw the magnification tool over the area you wish to highlight.

18. Technology first

Understand how your Macintosh works. Many designers and artists buy a Macintosh without much understanding of the inner workings of a computer. This can lead to groans and grumbles when things 'crash'. So glean as much information as possible on how the technology works, this will hopefully give you one or two less headaches.

19. Auto trace

If you are working with *FreeHand* or *Illustrator's* auto trace tool, on a bitmapped object it will trace the whole image. If instead of clicking the tool you drag it on the object, the tracing will start on the point you started on and finish where you stopped dragging. This way you just get a segment of the object traced.



In *FreeHand* its simple to trace a portion of your image by using the auto trace tool and dragging it over your selection.

20. Sit up properly

A seat that supports your spine properly is essential if you are spending a lot of time working on a painting or illustration in front of your Mac. Incorrect posture can cause all sorts of nasty problems, so don't say you haven't been warned…

While on the subject of health, a tip from my optician – blink often whilst working at your screen, to keep your eyes moist, as they tend to dry out because you are staring at the screen for long periods of time.

If you can, set your computer desk up by a window, so that every now and again, you can focus on a horizon, or at least an object that is further away than the end of the room. This will help prevent future eye strain.

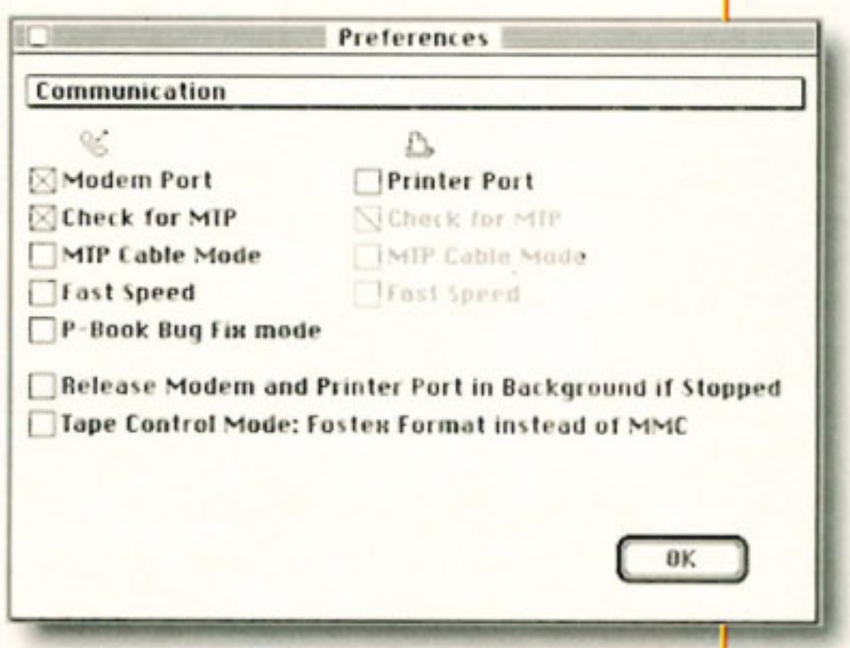
MUSIC

Making music isn't as easy as it seems, which is why Ian Waugh has put together 20 essential Mac music tips for you...

1. Having a Preference

Many sequencers automatically load a file called Autoload, Preferences or Setup which contains settings such as MIDI port assignments, instrument lists, track parameters and so on. Customise this and use it to save time. If your sequencer doesn't load a Prefs file, simply create a blank song with your preferred settings.

You can create several Prefs files for different projects and equipment – one for working with a General MIDI instrument, one with tracks transposed for orchestral scores, one set up for external synchronisation and so on.



To load your preferred settings automatically, customise your setup in the Preferences page.

However, as soon as you load the file, save it again with a different name otherwise you'll overwrite the original!

2. MIDI Thru

Put your keyboard into Multi or Performance mode so it can play several sounds at once via MIDI. Turn Local Control off. This disconnects the keyboard from its sound generators.

Turn MIDI Thru on in your sequencer. This will transmit incoming MIDI data back through the MIDI out socket. Most sequencers transmit this on the channel of the currently-selected track. So, for example, if you assign track 1 to MIDI channel 1, track 2 to channel 2 and so on, you can select a MIDI channel and hear the sound assigned to it simply by selecting the corresponding track in the sequencer. This is far easier than selecting a new transmission channel on your keyboard.

It's necessary to turn Local Control off otherwise you will hear double notes – those you physically play and their copies coming from the sequencer.

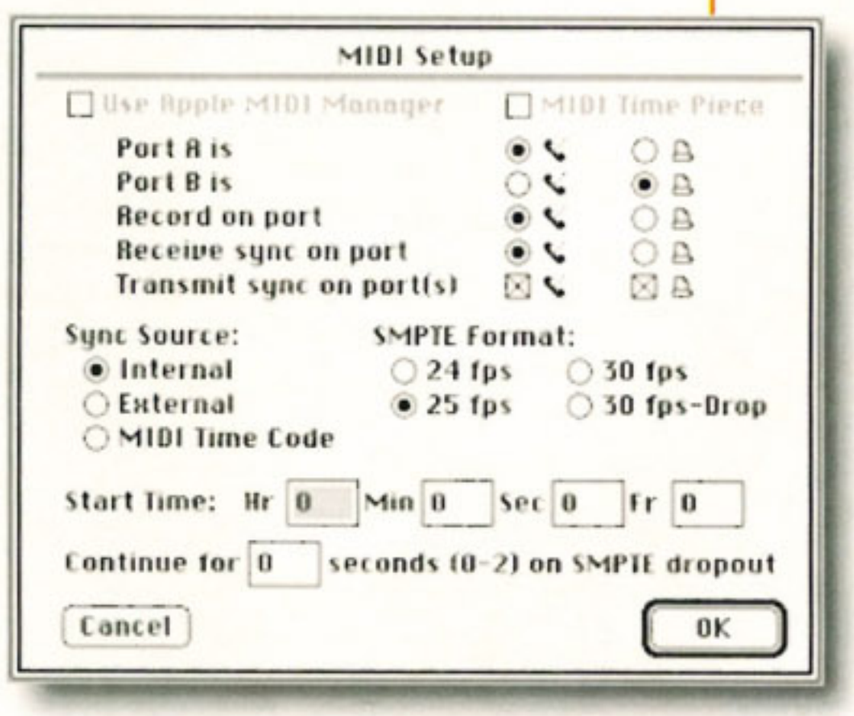
If your keyboard doesn't have Local Control, see if your sequencer has a MIDI Thru Channel Off function. This lets you specify a channel which Thru data will *not* be transmitted on. Set it to the channel your keyboard is transmitting on.

3. 32 MIDI channels

You can connect a MIDI interface to the Mac's Modem or Printer port – or both. Most sequencers let you assign a track to a port as well as a MIDI channel. You can, therefore, access another 16 MIDI channels by buying a cheap MIDI interface and plugging it into the other Mac port (make sure your sequencer can support two ports, first).

This is especially useful if you are using a General MIDI module, which automatically responds to data on all 16 MIDI channels, and you want to use another synth module, too.

Even with traditional synths and samplers, an additional 16 MIDI channels will increase your polyphony, cut down on any potential MIDI timing problems, allow you to play MIDI guitar parts in mono mode (if you don't have a MIDI guitar you can ignore this) and generally give you more scope for arranging and organising your music.



Select printer and modem ports in your sequencer's MIDI setup page to access 32 MIDI channels.

4. Manual machinations

I know you hate the thought of it, but read your sequencer's manual! Look for keyboard shortcuts – you'll be surprised how many functions are available from the Mac keyboard which cannot be accessed using the mouse.

Also check out the more esoteric functions of your sequencer which you haven't yet explored such as data manipulation and transformation functions.

5. Taking note

If your sequencer has a Notepad – use it! Make notes about the song you are creating and include details of all external equipment, how they are connected and their settings. You may think you'll remember it all but I can guarantee you won't!

If your sequencer doesn't have a Notepad – use your word processor and create an Info file to accompany each song. You'll thank me for this little piece of advice one day...

6. Mr Drummer

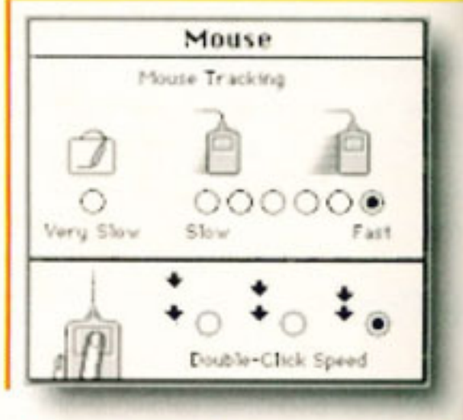
So not all great songwriters are great drummers. Don't be afraid to use 'building block' files such as the *Dr Beat* series from Heavenly Music (0255 434217) to help produce drum tracks.

Use arrangement programs such as *Band-In-A-Box* to lay down a basic backing track which you can develop (if you want to) into a fuller arrangement.

7. Saving graces

Save everything! Don't discard any takes or improvisations. There may just be a line in one of your doodlings which is exactly what you need. When the song is complete, then you can discard the dross. Saving alternate takes does not use a lot of disk space and it's recoverable when the song is finished.

8. Speedy Gonzales



Set the tracking and double-click speed to fast in the mouse Control Panel, for a more efficient mouse.

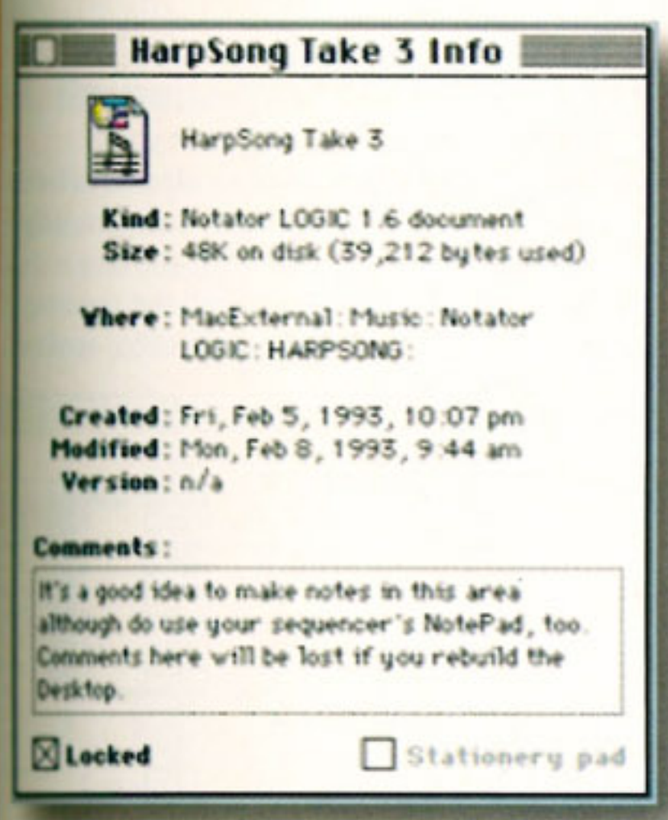
To speed up operation of your sequencer (and this goes for all your other Mac applications, too), open the Mouse icon in the Control Panel and set its tracking speed and double click speed to fast. If it feels weird at first, you know what they say about practice... Once you get used to it, it'll greatly improve your efficiency.

9. Backed up

Back up your work. Would you rather spend time making a backup or spend time recreating work which is lost due to a software/hardware failure? Your system never crashes? And politicians never lie. Ignore this tip if you will, but when you do lose some work you'll be sorry…

10. Locked up

Lock your files. This is a good short-term option against deletion or change. From the Finder, highlight the file and select the Get Info option from the **File** menu. Click on the Locked box so it becomes checked. This will prevent you inadvertently altering a file.



Use the Mac's built-in ability to lock files to prevent deletion of important material prior to backing it up.

11. Quantisation

One of a sequencer's major benefits is its quantise option which pulls errant notes into line with the beat. One of the most vexed questions in sequencing is whether to quantise or not.

If you are producing dance music or any other type of music with a strong pulse, then full quantisation can be a good option. However, for any music requiring 'feel', full quantisation can make the piece sound too precise.

Unless you require absolute precision, always use partial quantisation. This is usually set as a percentage. For example, a setting of 75% will pull the notes 75% of the way towards the beat they should be on. Partial quantisation preserves the human timing inaccuracies which make music sound interesting while still helping to correct poor timing.

12. Drum tracks that groove

Nowhere does a computer make its presence known more than in drum tracks. Many sequencer users create a two-bar drum pattern and play it throughout the entire song (with the odd amendment for intros, fills and endings). After all, it's so easy to do.

Copy a basic pattern throughout a song by all means but then alter it slightly. Change the drum sound (see Tip 13), change the velocities, add an extra hit every now and again or take a hit away, move a drum slightly off its beat or add some Latin percussion during the chorus.

In other words, introduce irregularities into the overall pattern which a human drummer might play. They need only be small but the ear will acknowledge them subconsciously and this will help remove the feeling that the drum parts were created on a computer.

13. Toning up for drums

When a human drummer hits a drum, he or she never hits it in exactly the same place twice so the sound or tone is never exactly the same all the way through a piece – as it is with drum sounds from a synthesiser.

You can introduce tonal variations to your drums by altering their pitch. Like other sounds, most drums respond to pitch change instructions such as tune and pitch bend. If you can change the tone by applying one of these instructions to a drum sound, apply it to, say, some of the hits in a hi hat line and listen to the difference.

Pitch changes can also be used in real-time to create drum sounds such as the Indian tabla. If you have a sampler and some ethnic drum samples, there will probably be tablas complete with pitch bend. However, you can create your own by applying pitch bend to drums such as tom toms and bongos.

14. More feet

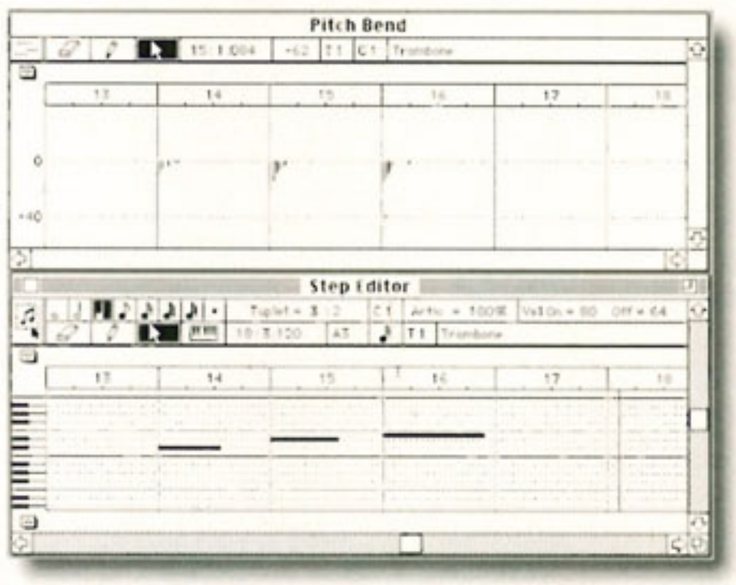
The timing resolution of sequencers can vary from 160-480ppqn (pulses per quarter note): 160 and 240 should be fine for most users but those with an acute sense of timing may occasionally wish for even greater timing accuracy particularly in slow pieces.

You can double the timing resolution by doubling the tempo – simple as that. But note that all duration and quantisation values will be half the normal value. For example, to quantise to an eight note, use a quarter note and so on.

15. Better wind parts

Creating convincing orchestral instrument music lines isn't simply a matter of using the right sound – you have to play the line the way an instrumentalist would play it.

You can increase the authenticity of wind and brass parts by applying pitch bend at the beginning of notes so they rise up to the pitch. This is most easily done by drawing in pitch bend in a graphic editor. You can create several shades of bend and paste them onto the beginning of notes. Don't forget to leave spaces between phrases – wind players have to breathe, too, you know!



Use a Graphic Editor to draw Pitch Bend on to the beginning of notes played by wind instruments to improve their realism.

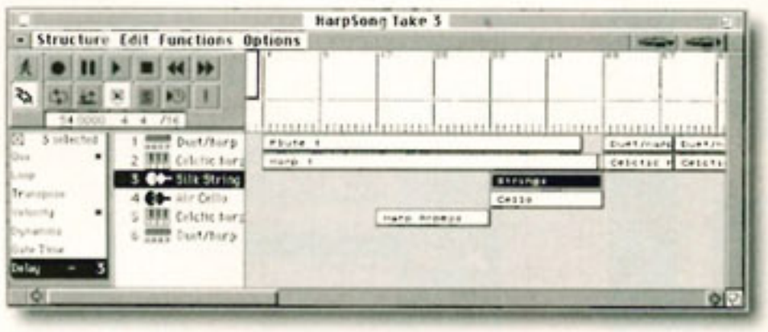
16. Standard MIDI Files

If saving files to disk for use in a MIDI File Player, save them in Format 0.

Most sequencers can read both Format 0 (all MIDI channels on one track) and Format 1 (MIDI channels on separate tracks) MIDI files. But many MIDI File Players can only read Format 0 files (although some newer machines can also read Format 1) which are slightly more efficient when files are played directly from disk.

17. Slow hands

Sounds with a slow attack such as strings can often seem to be behind the beat due to the delay in reaching maximum volume. Use your sequencer's delay or offset function (use negative values) to move tracks containing these sounds slightly in front of the beat.



Add a negative delay to a music part with a slow attack so it reaches maximum volume on the beat.

18. Tempo tactics

To make a piece of music change tempo, say to create a rallentando at the end, record it at one tempo and insert the tempo changes afterwards. This keeps the note/bar relationship intact and makes it easier to add other parts.

When transferring sequences via MIDI from one device to another, slow down the tempo to ensure better timing accuracy.

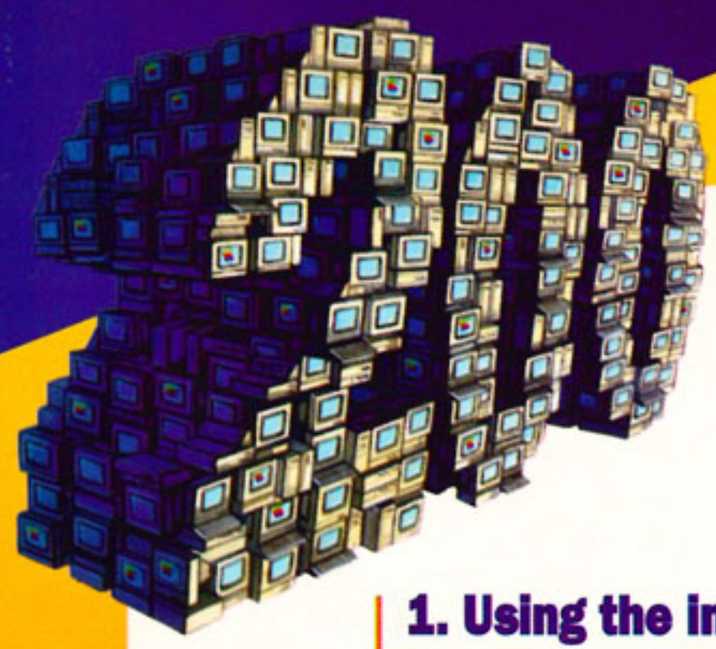
19. Managing controllers

You can record the pitch bend or mod wheel while you're playing the keyboard. In fact, it's a good idea to record it onto a separate track. It's easier to edit if it's not mixed in with note data and you can record several 'takes' on different tracks without recording the notes again.

20. Thinning memory eaters

If you are running out of memory, check for large amounts of pitch bend, mod wheel or continuous controller data and use the Thin Controller function to reduce it – but don't forget to save your work first.

DATABASES

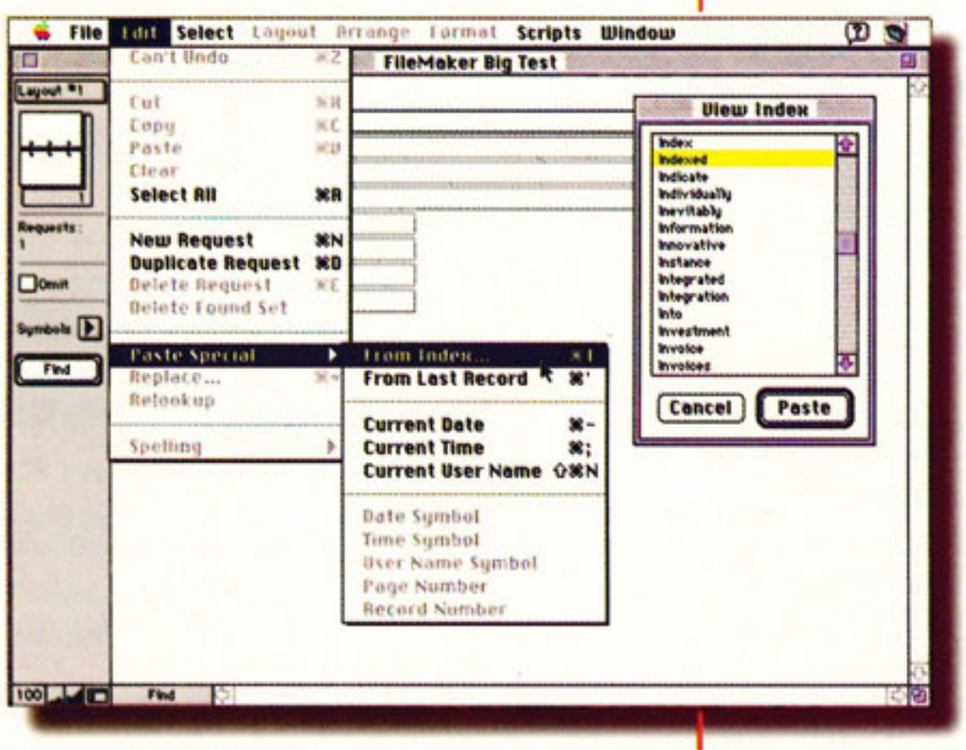


If the thought of another session tidying up a database makes you ill, never fear: Jack Weber is here with 20 top tips to make light work of it

1. Using the index

Nobody takes indexing as seriously as *FileMaker*, which indexes every single word, number, date and time. Other database programs generally index field contents in their entirety or just on the first few characters. *FileMaker* is also unique in giving you access to the values that are indexed (though not to the list of records where they occur).

Look for **Paste Special** under the **Edit** menu and you'll see a sub-menu that includes the item From Index… (it's also accessible by typing **[command] [I]**). Any time that a field has been selected either in Browse or Find modes, **[command] [I]** will display a small scrolling window which lists every word or number in that field throughout the whole database. Double-click on any entry and it will instantly be pasted into the field.



FileMaker's command for showing the index is well hidden. Better to click in a field and press [command] [I].

There are three ways you can use this: In Find mode, it provides an easy way to enter search criteria without the risk of typos. In Browse mode, it acts as a glorified pop-up of all existing values, which can be useful if you need to enter values that are already present. Again, this acts as a safeguard against simple mistakes or ending up with correct but inconsistent entries (eg polythene and polyethylene) – something that can easily happen when different people enter data.

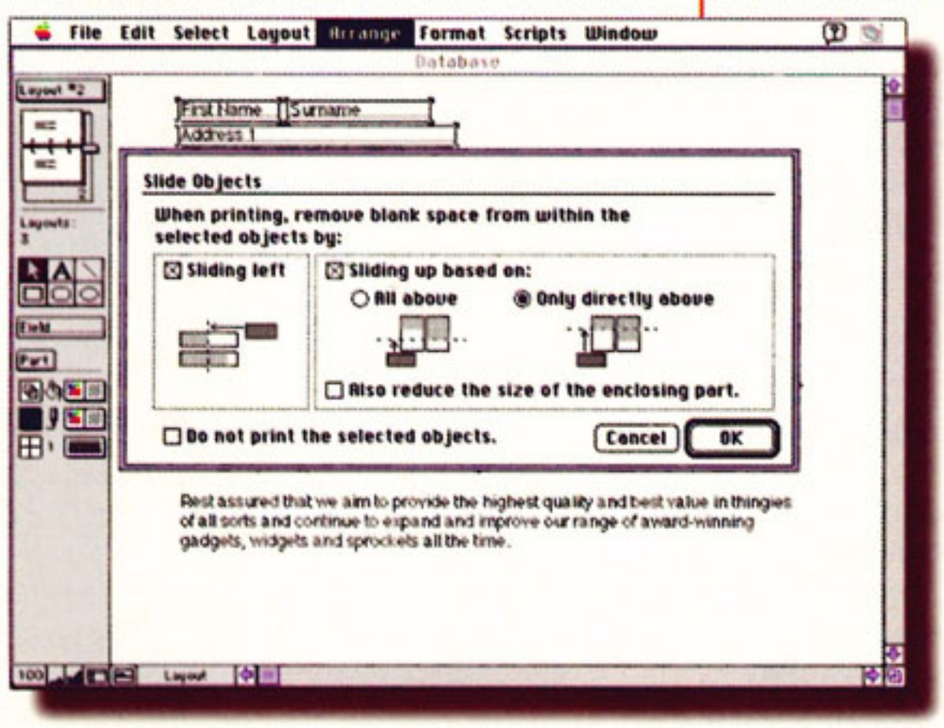
The third use of **[command] [I]** is to check an existing file for errors. Any large database is guaranteed to contain typos, and spotting them can be a pig of a job. The index gives you a neatly sorted, alphabetised list that you can easily look through to spot the one number that has a letter in it or the two versions of polythene.

2. No more merge misery

Mail merge is one thing you can do without. If you know how. Two database applications, *4th Dimension* and *FileMaker Pro*, provide a way out of the usual tedious routine by letting you create your master text document as a layout within the database itself.

4D does this best and, for many jobs, can produce results every bit as good as a word processor. All you need to do is to open a new custom layout then use the Text tool to create a text area (make sure it stays within the Detail area). Now type your letter. Wherever you need to embed a field value, just **[option] [click]** over the insertion point cursor and a pop-up list will appear from which you can select any field in the master file. **[Option] [shift] [click]** provides a pop-up list of all the related files and their fields. When you're ready to merge, find the records you want by using the **Select** menu, then **Print**. *4D* will automatically flow the text to incorporate the embedded fields seamlessly.

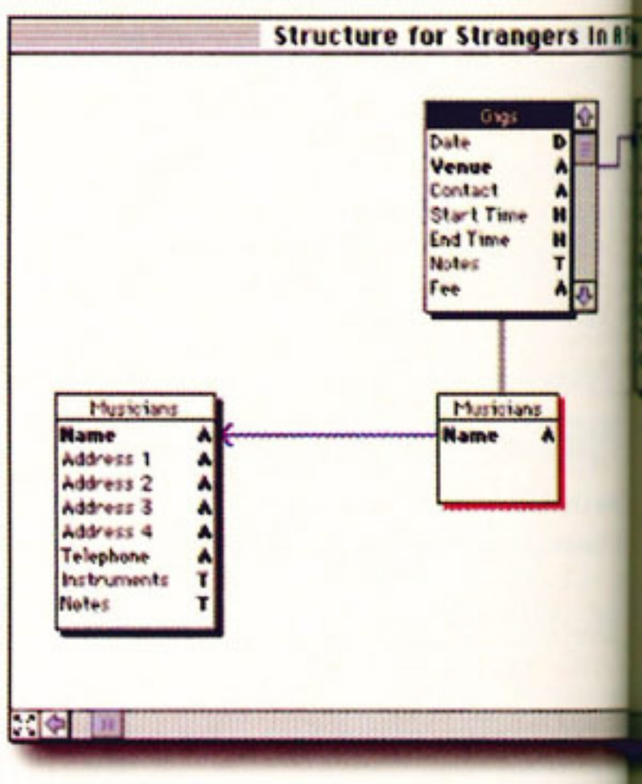
FileMaker can't really match that, but, for simple layouts, it can still do a lot. The trick is to use the **Slide Objects** command to compensate for variable field lengths. This works perfectly well for tightening up blank address lines or removing gaps between fields. What it cannot do is to re-flow everything if you try to embed fields within a multi-line block of text. The basic routine in *FileMaker Pro* is to open a new layout, use the Text tool to place blocks of text, then drag the Field icon to position any fields. Depending on how they're arranged, you then select the fields and text blocks and choose to slide them left or up. Check the effect in Preview mode before printing.



Form letters can be created directly within *4D* or *FileMaker*. This is *FileMaker*'s Slide Objects dialogue which you'll need to use.

3. Be prepared

It may sound obvious, but plan your database before you begin – ideally, before you buy the software. Don't worry initially about whether you need a flat-file or a relational program, just list all the separate bits of information that you'll need, broken down into fields. You'll find they tend to fall naturally into hierarchies – a Post Code field doesn't have much purpose except as part of somebody's address. These groups are an indication of how things may need to be split into separate files.



Plan the structure of your database before you begin. *4th Dimension* lets you do this graphically.

Say you run a band and want to keep track of gigs, invoices and so on. You might end up with three data groups: Gigs, Venues and Invoices. Each venue may host numerous bookings so you won't want to type in its address on every invoice, better to get it automatically from a separate Venues file. Similarly, the Gigs file could pull a contact name from the Venues file without you having to enter it each time. These are called many-to-one relations because you may

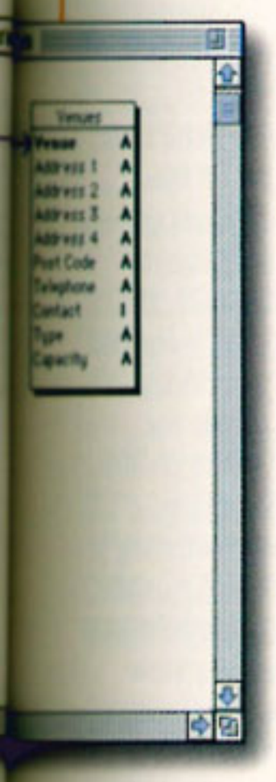
do many sessions at each venue, but any gig can only be in one place. Gigs and Invoices are different – this is actually a one-to-one relation (one booking = one invoice), so you may be better off combining them into a single file.

A simple flat-file program couldn't cope with all this because of the many-to-one links, though you could use *FileMaker*, which does provide many-to-one look ups.

Suppose, though, that the membership of your band is a bit fluid: you may need a separate file of musicians so that you can keep track of who played when and how to divide up the cash. This is a many-to-many relation – each person may play on many occasions and each gig involves several people. Now you're deep in relational territory and really need to look at *4D*, *Omnis 7* or Helix *Express*.

4. Re-build regularly

All database programs accumulate chunks of unused space each time you add, modify or delete records. In principle, this does no real harm, but the database will take up more room on your hard disk, run more slowly and may eventually become more prone to crashes. A spot of regular housekeeping is needed to keep things ship-shape.



Most database applications include some means to do this. With *FileMaker* you need to do a **Save As** and choose **Compressed Copy**. In *Omnis 7* the **Utilities** menu has commands which do a similar job. Some other programs provide a separate utility that you need to run periodically – *4D* has one called *4D Tools*, Helix *Express* comes with Helix *Utility*.

5. Avoiding Claris crashes

If you find that *FileMaker Pro* or *ClarisWorks* keep crashing during startup, the cause is likely to be a corrupted font. When you launch these applications, they go through all the currently installed fonts and produce a special file called ClarisFonts which allows them to display actual typefaces in the **Font** menu. Before you check every font, lock ClarisFonts using the **Get Info** command (ClarisFonts should be inside the Claris Folder in your System Folder) and try to launch once again. If the problem is cured, that confirms that a font was to blame.

6. Import irritation

Importing is slower than exporting because the new records are being indexed as they arrive. Some programs (eg *4D*) allow you to switch off indexing during import and do it later. There's also an undocumented equivalent in *FileMaker Pro*. Because *FileMaker* doesn't index non-numerical data in number fields, you could re-define any text fields as number fields, import your new records, then change the field definitions back again when you have the time to allow indexing. The only big danger is that number fields can only hold 255 characters – if you try to import longer text, it will be permanently truncated.

7. *FileMaker* repeating fields

FileMaker's repeating fields are unique in the world of Mac database programs. They act, in effect, as sub-records, allowing you to append subsidiary data such as line items to an invoice record. They also manage to cause frequent confusion. Current versions of *FileMaker* make it quite easy to split repeating fields into separate records, but the manual provides no guidance on how to import data into repeating fields. The trick is to separate each repeat with character ASCII 29 (use Microsoft *Word's* **Insert Symbol** command or a utility such as *PopChar* to find it). As always, put tabs between fields and returns between records.

8. *ClarisWorks* copy summaries

One of the less familiar features in *ClarisWorks* is the **Copy Summaries** command. This lives under the **Edit** menu while you have a database document open, and provides a way to paste summary fields into a spreadsheet or word processor document. Summary and sub-summary values are often needed when you create tables or charts for use in another document, but they can't be accessed by the normal **Copy** command. Hence the need for **Copy Summaries**. Once you've moved to the spreadsheet or word processing module, you just paste the summary data in in the normal way.

9. Cut out entry mistakes

All the major database programs provide ways of reducing mistakes when entering data. These range from auto-entry of default values, through checking for unique values, to providing pop-up lists of preset values for you to select from. When you're setting up the database, think carefully about the options for each field – how predictable in content or format is the data likely to be? Some programs, such as *4D* and *FoxBase+*, can match things like catalogue numbers against standard templates. Even if you use a value list to select from, you can normally include an option to allow other values.

10. Use a word processor

If you're importing large amounts of text data, you may encounter fields or records jumping out of step. The problem is normally caused by spurious delimiter characters (usually tabs, quotes, commas or returns), but tracking them down can be tricky. The only database application that allows you to preview how the incoming data will match your fields is *FileMaker Pro*, but you have to step through record by record, which may be too laborious a job. An alternative is to open the text file with a word processor. By setting tab positions to reveal fields as columns, displaying hidden characters, and doing a search for repeated tabs and the like, you can often clean up the data so that it imports correctly.

11. Index first

Always index any field that you're likely to sort by or to search.

12. If unsure, tab-delimit

If you're unsure which export format to use, go for tab-delimited text. That's the format that just about every other program, be it a spreadsheet, a word processor or another database, can deal with easily.

13. Keep it separate

Divide up your data – keep First and Last names, County and Postcode separate. This will give you much more flexibility when it comes to creating reports, sorting data and so on.

14. Quick copying

In *FileMaker Pro*, **[command]** **[shift]** **[']** copies a field from the previous record and moves to the next field.

15. Word process then import

If you're entering lots of data, use a word processor with tabs set for each field, and import the text to your database when you've finished – it's often quicker.

16. Text not numbers

Format phone numbers and similar data as text – use number fields only if you need to calculate or sort in numerical order.

17. Cross-platform sharing

If you need to share databases directly between Macs and PCs, choose *FileMaker Pro*, *FoxBase* or *Omnis*.

18. Two words as one

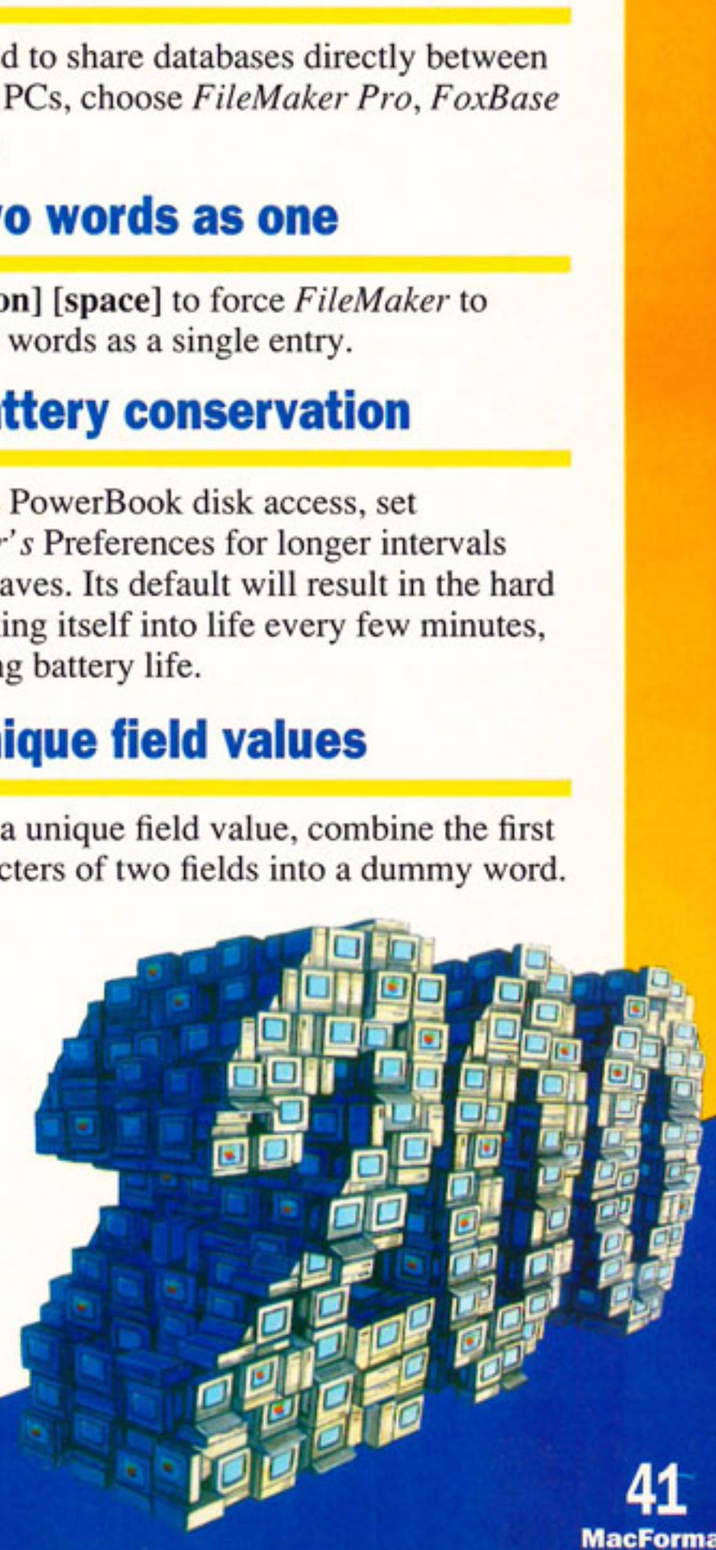
Use **[option]** **[space]** to force *FileMaker* to index two words as a single entry.

19. Battery conservation

To reduce PowerBook disk access, set *FileMaker's* Preferences for longer intervals between saves. Its default will result in the hard drive kicking itself into life every few minutes, so reducing battery life.

20. Unique field values

To create a unique field value, combine the first few characters of two fields into a dummy word.



Ian Wrigley sits at the keyboard, and out pop 20 tasty tips for all you modem users that want to become smooth operators.

1. Save on charges

Work out what you're going to do before you go on-line – you'll save on-line charges if you know exactly what you want.

2. Work off-line

Do as much work as possible off-line. You can write e-mail messages in a word processor, Copy them and then hit **[command] [V]** to paste them in on line, for example.

3. Watch the time

Keep a track of the time you spend on-line – that way, you won't be shocked at the end of the month when your credit card is debited or the bill comes in.

4. Avoid peak rate

Try to avoid connecting in peak hours – cheap rate phone calls are much… er… cheaper!

5. Call after 7pm

On the other hand, don't call between 6pm and 7pm. Most people do (it's the start of cheap rate time), and systems can slow down because of the increased load.

6. Go local

See if the service you want to use has a local access point, rather than requiring you to call long-distance.

7. Hayes compatibility

Make sure that any modem you buy is Hayes compatible – there are still some old, non-compatible dinosaurs around.

8. Hang up

When you've finished on-line, make sure that your modem has actually hung up the line – otherwise you'll still be paying for phone on on-line charges. The 'OH' light (or whatever it's called on your particular device) should go out, showing that you're no longer 'off hook'.

9. Swap addresses

Give your e-mail address to people – it's surprising how many companies and individuals have access to some form of e-mail system through which they can contact you. You don't have to use the same service – most can now talk to each other.

10. Pick up AT

Learn the basic 'AT' commands – they're in your modem manual – so that you can use a modem with even the simplest comms program. That way, you can use other people's kit to check for e-mail and the like when you don't have access to your own setup.

11. Check out shareware

Don't buy a commercial comms package until you've checked out what's available on the shareware scene.

The most popular comms package around is called *ZTerm*, and is a $30 shareware offering. It includes macros, scripting for automating connections, and has just about all the file transfer protocols you're ever likely to need – including ZModem and CompuServe's QuickB. For most people it's perfectly adequate, and although it can take a little getting used to, it's well worth checking out before you splash out £100 or more on a commercial program.

You may even find that you're satisfied with whatever software the manufacturer has included with the modem in the first place. Often this is pretty primitive, but for many people it's adequate – and has the added advantage that it's free. At the very least, the supplied software will allow you to log on to a bulletin board and download *ZTerm*!

If you decide for whatever reason that you do want a commercial package, see if it's been 'localised' for the UK (or whatever country you'll be using it in). Many offer added extras such as automated connection scripts for services like CompuServe, GEnie and America Online – but those scripts are only applicable for use in the United States, so for Europeans they're useless and don't actually represent added value for money. (On the other hand, of course, they don't actually detract from the package itself.)

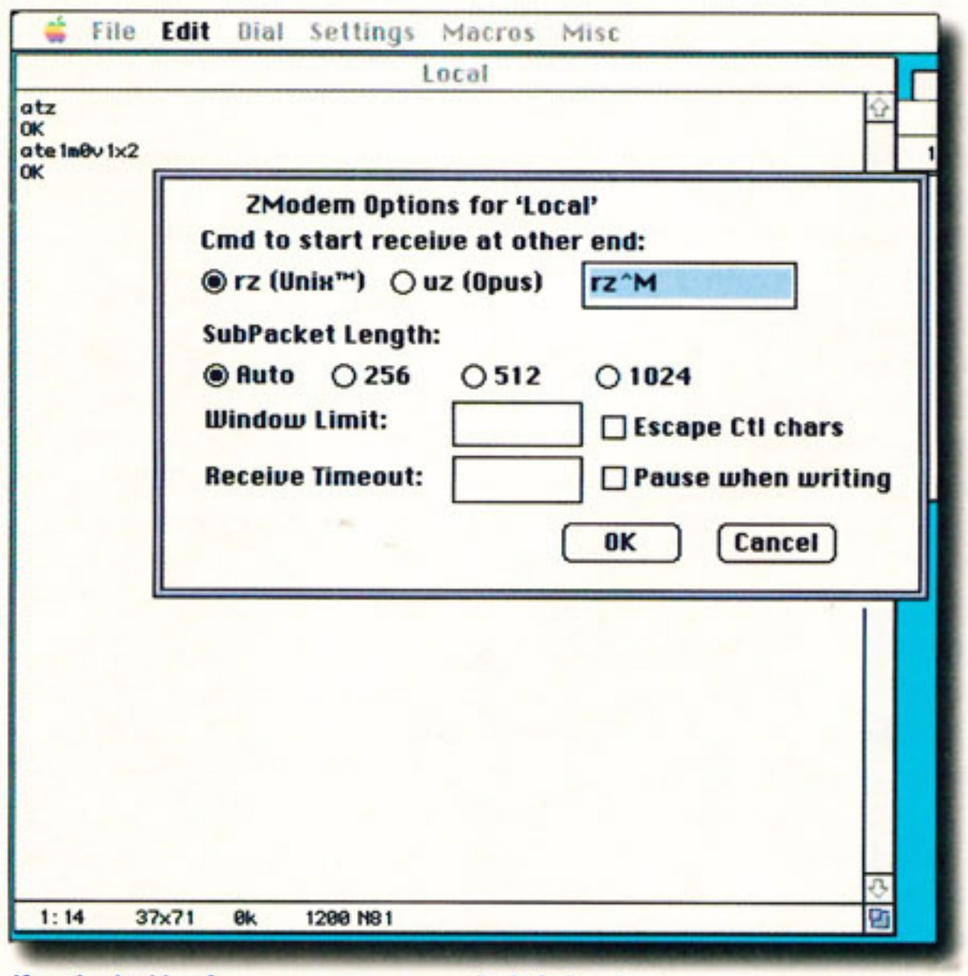
12. Go for speed

Buy the fastest modem that you can afford. It's tempting to go for one of the very cheap 2,400baud modems that are available at the moment, but first think about the advantages that a high-speed device could give you.

For starters, you'll save on phone bills. If you intend to download a lot of files, you'll drastically reduce the amount of time that it takes with a 9,600baud or above modem – and the less time you take, the lower your phone bills will be. It's not just the phone bills, either – many services charge you on a 'per minute' basis for connection, so the less time you're on-line, the lower the price you'll have to pay.

You'll soon find, too, how frustrating it is to have your Mac tied up for 20 minutes or so, downloading a relatively small (200K, say) file if you only have a slow modem. The same file can be retrieved in two or three minutes if you have a 14,400baud modem – allowing you to get on with other things far sooner (and allowing other people access to your phone!)

Note, though, that the above tip isn't as important if all you're doing is checking for e-mail once in a while, and only use your e-mail account for a few minutes a day. In this case, you'll take more time navigating the remote system than you will actually transferring data, so high speed won't make much difference at all. Even then, though, you're bound to be tempted by files from time to time – even if it's just the latest version of *Disinfectant*. And those file transfer times soon build up…

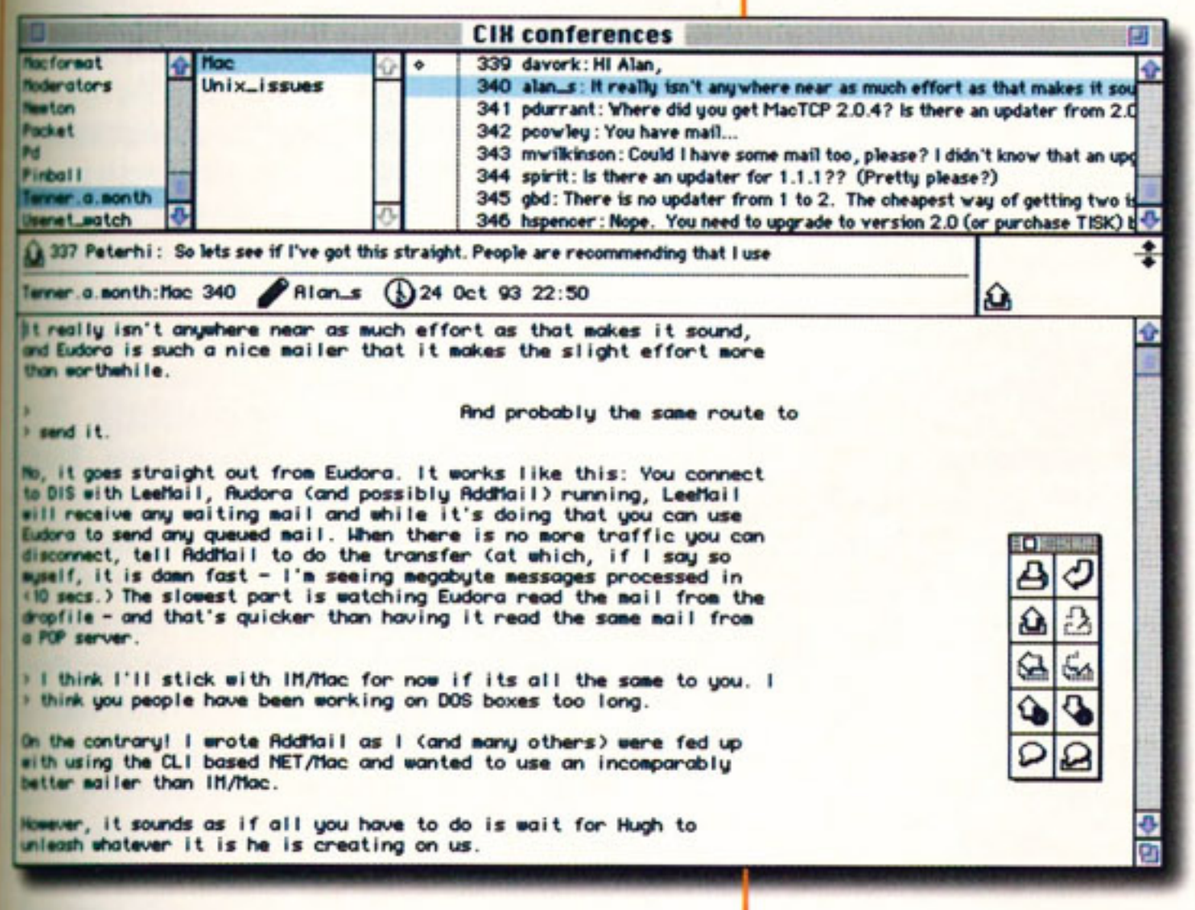


If you're looking for a comms program, don't fork out a fortune until you've taken a look at the shareware *ZTerm* – power at a very reasonable price.

COMMS

13. Off-line readers

Find out if there's an off-line reader (known as an OLR to comms aficionados) available for your favourite services – and if there is, use it! OLRs can save you a fortune in phone bills and on-line charges, by allowing you to do most of your work while you're not actually connected to the service. What they do is download all the data that you'd normally peruse on-line – messages, e-mail, conference proceedings and so on – log off and then present it to you – either in the form that you'd see it if you were connected, or often in a more user-friendly manner using menus, multiple windows and the like. For instance, the CIX conferencing system has an extremely popular Mac off-line reader called *Semaphore II*. All you have to do is issue a couple of commands when you're connected to CIX and all your conferences and mail will be downloaded to the Mac. You then read them in to *Semaphore* via a simple menu command, and browse at your leisure, replying to messages and mail whenever you want. Finally, you export those replies, briefly log on to CIX again and upload them – the work of a minute or so at the most. Since many CIX users are joined to several conferences (several hundred, in some cases, the actual message browsing time can be anywhere up to an hour – so doing this off-line makes a great deal of sense. Best of all, *Semaphore II* is only £10 shareware. If you start getting hooked on CIX, this will pay for itself in under a week – CIX charges more than £3 an hour for peak-time access, and it's easy to be connected for more than that at one time.



Semaphore II is an off-line reader designed for the CIX conferencing system, one of the most popular in the UK. It's a shareware program, and only costs £10 to register.

There are off-line readers available for many popular services, including CompuServe (*CompuServe Navigator*). Even AppleLink allows you to compose replies to memos off-line and then connect just to send them – which, given its exorbitant connection fees, is a bloody good thing!

Be aware, though, that the faster your modem is, the more useful an OLR will be – because you'll spend less time on the phone.

14. Have a Pretzel!

If you are likely to be using a Viewdata service such as Prestel, be warned that many comms programs don't support this standard – it's a European thing, not used in the United States where many comms programs are written. However, help is at hand in the form of *Pretzel*, written in the UK by Paul Russell. Its sole purpose in life is to connect to Viewdata services, and it does so extremely well. It's well worth the £10 donation to charity that its author requests in lieu of a shareware fee. *Pretzel* is available on-line from bulletin boards, or PD houses and user groups.

15. Correct cabling

If you have a high-speed modem, it's essential that you have the correct cable to get the best data throughput rate possible. If your modem was supplied as a 'Mac package', the chances are that the cable is correct already, but if not you should get hold of a 'hardware handshaking' cable. This is specially wired to get the fastest speed possible from modems; if you use a 'normal' modem cable everything will still work, but you will find that data transfer speeds aren't as good. When you're using a hardware handshaking cable, make sure that your comms software is set up accordingly, using 'CTS and RTS (or DTR) flow control'. (Don't ask – it's complicated.)

16. Get approved

When buying a modem, consider whether BABT approval is important to you. It's illegal to connect a non-approved modem to the phone line, and if you're caught you could be liable for a fine or even having your phone disconnected. Many modems are now approved – if they are, they'll display the green triangular 'approved for connection' sticker, and the manufacturer will probably promote the fact in adverts. Non-approved modems are still widely available, though, and many tens of thousands of people use them with no ill effects…

17. Reducing file size

Compress any files that you will be uploading to a remote computer using a program such as *StuffIt* or *Compact Pro*. These applications can drastically reduce the file size – and the smaller the file, the shorter the time it will take to be transferred. If you're not sure that the recipient has the compression program, make your file a 'self extracting archive' – so all the recipient has to do is double-click and the original file will be expanded automatically.

18. Beware call waiting

If you're connected to a digital phone exchange (more and more exchanges are becoming digital), beware – the 'call waiting' feature can interfere with your comms usage. If you have call waiting switched on, then you can swap between two phone calls on the same line. While you're talking to one person, the phone will beep if someone else is trying to get through – at which point you can put the first person on hold to deal with the second call. The problem is that if your modem is connected to the phone and someone else tries to call, the beep sound will confuse the modem – sometimes it just results in corrupted data, but occasionally it will make the modem drop the line altogether. The solution is to disable call waiting while you're modeming – ask your phone company for the key sequence to do this.

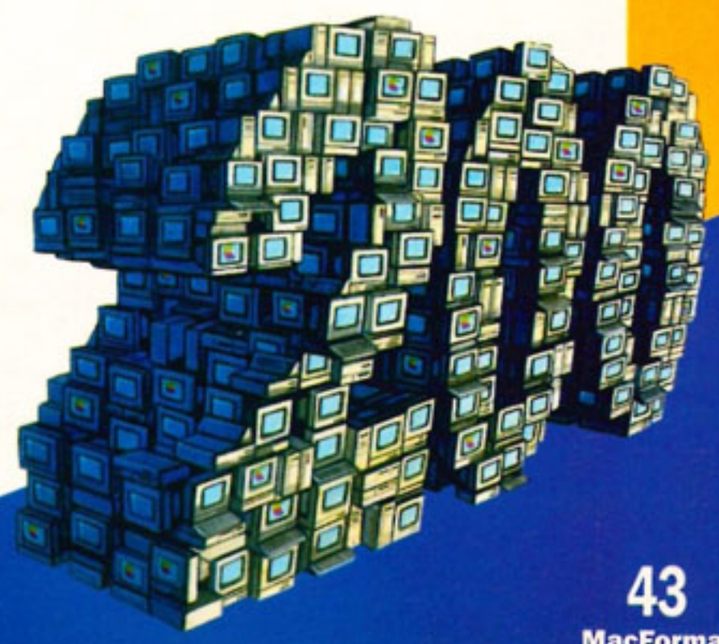
(Incidentally, call waiting is a service for which you pay extra – so if you don't know whether you have it or not, the chances are you don't.)

19. Use ZModem

Use ZModem to upload and download files wherever possible – it's the fastest commonly implemented file transfer protocol. What this means is that it's optimised to take as short a time as possible to transfer files – other protocols can send a lot of extra data down the line along with the actual file, which slows the whole procedure down. Next slowest is YModem, and below that comes XModem – considerably slower, but by far the most popular (since it was one of the first to be developed). If you're downloading from CompuServe, use QuickB if your comms software supports it.

20. Optimum settings

Oddly (and annoyingly), a modem's factory-set defaults may not be the optimum settings for fast data transfer. Check in the manual to see if a 'setup string' is given; if so, you should send this to the modem each time you switch it on. This will make sure that the modem is geared up to send and receive data at the highest speed possible. Some comms software has built-in settings for specific modems with an optimal setup string already in place; if yours isn't listed, try contacting the manufacturer or distributor to find out if they know of the best setup string to use. Or ask on-line on a bulletin board – someone else is bound to have already solved the problem.



HYPERCARD

Devotees of *HyperCard* listen up: Rod Lawton has 20 top tips to pass on to you. Read and digest.

1. Saving copies of stacks

HyperCard saves changes all the time, so there is no 'Save' menu option. This is good in one respect, bad in another – temporary experiments all too easily become permanent decisions! Before experimenting then, save a copy of your stack (**File** menu), just in case…

2. 'Free in stack' message

The Stack Info dialogue contains a nasty surprise for the unsuspecting. Underneath Size of Stack (my Home stack is currently 106K) it says Free in Stack (mine currently says 35K). What? I've got a 40Mb hard drive, a stack only 106K in size and 35K is all I've got left? Actually, no. This figure refers to wasted space. *HyperCard* cannot automatically reclaim space left by deleted objects. You have to use Compact Stack (**Edit** menu) to do this. Phew. Wouldn't it be simpler if the dialogue simply said Dead Space in Stack?

3. Seeing buttons/fields

Some buttons and fields can be transparent. Some can be hidden by other objects. Some can be hidden deliberately. And it's pretty difficult to select a field or button when you don't know where it is. However, press the **[option]** and **[command]** keys down simultaneously, and all the card and background buttons' outlines appear. Hold down the **[shift]** key too and all the fields become visible as well. Now, at least, you know where they are (background objects have thicker outlines than card objects).

4. Exit script window

When you've finished editing a script you might be used to clicking the script window's close box – and having to put up with that irritating "Are you sure" dialogue. However, if you simply press Enter (not Return) you skip it completely.

5. Unlocked fields

If you want mouseclicks to activate field scripts, the field has to be locked, which is a bit of a drag if you're continuously modifying the contents. It's just as well, then, that if you hold down the **[command]** key, the insertion point changes to the browse tool and you can click on the field as if it were locked…

This speeds things up no end when you're editing the field's contents and checking its script works as it should as you go along.

6. Using fields as globals

What do you do if you want to use a variable in more than one script? You define a global variable. What do you do if you want the variable to survive a shut-down, or quitting and then restarting *HyperCard*? You put the value into a field. Global variables – who needs 'em?

7. Timing scripts

Hypertalk programming is like any programming. No matter how you do something, there's always a quicker way. And you can find out how much quicker it is by just putting two extra lines in your script, one right at the start, the other right at the end:

```
put the ticks into tm
put the ticks-tm into msg box
```

This tells you how many ticks (1/60ths of a second) your script took to execute. As a timing method it's quick 'n' dirty. But it works well enough for comparisons.

8. Card, background, stack

When you edit card, background or stack scripts you have to put up with plodding through the respective Info dialogues. Unless you know the keyboard short-cuts, that is. These are:

[option] [command] [C]	**Card script**
[option] [command] [B]	**Background script**
[option] [command] [S]	**Stack script**

9. Transparent buttons

Imagine you've got a card-sized picture of an engine. And you want the user to be able to click on any one component to go to a card explaining that component in detail. Don't mess about with icons and button styles – simply draw a transparent button over the relevant bit of the picture. The quickest way is to select the button tool and then option-drag – this creates a transparent button by default.

10. Copying objects

You can copy, cut and paste buttons and fields just like text and graphics. Or, if you want duplicates of existing objects, there's a quicker way. Select the object with the appropriate tool, then simply **[option] [drag]** to create and position and copy, in one single action! (Don't forget that holding down the **[shift]** key at the same time constrains objects to vertical or horizontal movement.)

11. Locking fields

You don't just click on buttons to activate scripts. Fields can have scripts too. Normally, clicking on a field just places the text insertion point in that field. But lock the field first (Field Info dialogue), and all sorts of interesting things become possible. *HyperCard* can identify the word/s you click on and can pinpoint their position (line number etc) within the text. So, for example, by clicking on a technical term you could activate a script that takes you to a card containing a definition of that term. *HyperCard* normally only recognises single words in this fashion, but if you select whole phrases and apply the Group style (**Style** menu) these become contiguous text – ie *HyperCard* treats them as single words. Fields can do lots of other things, too – often more efficiently than buttons.

12. Background 'shared' text

Normally, background fields contain different text on each card sharing that background. But if you click on the Shared Text option in the Field Info dialogue, the same text appears on each card with that background. However, you can only insert and edit this text while in Background mode. So it looks like you can have one type of text or the other… whereas in fact you can have both! Try it – create a normal background field, type in some text, then select Shared Text. Your original text disappears. Now type in some 'shared text' in background mode. Quit background mode and the shared text is still there. This is where it gets interesting, though. From now on, whenever you toggle between standard and Shared Text mode, the two lots of text are alternately visible. In other words, your field is sharing two lots of text simultaneously. Uses? How about instructions or reminders about what specific fields are for and how to use them?

13. Intercepting tab key

HyperCard, like other databases, hijacks the tab key. It doesn't indent your next paragraph as you type. Instead it selects the whole of the next field. This can be annoying, and there's no getting round it – unless you cheat. This script does the trick:

```
on keydown whatkey
    if chartonum(whatkey) = 9
    then
    put numtochar(9) before the selection
    else
    pass keydown
    end if
end keydown
```

The script intercepts all keyboard input, spots when you've hit the Tab key (ASCII code 9) then puts this character before the insertion point. All other keystrokes pass through unmolested. (Although you can trap any keyboard input you like in this way.) Put this script in your card script, background script or stack script, depending on how widespread your use for it is.

14. Card window sizes

If you've played around with *HyperCard* 2's **New Stack** dialogue box and **Stack Info** dialogue, you'll know that cards can be practically any size (even though all cards within a stack must be the same size). But the card size is independent of the card window size. This can be smaller (though never larger, obviously) than the card size.

To change the window size either call up the Scroll palette **[command] [E]** and drag the window around within it, or hit **[shift] [command] [E]** and look out for a small sizing box to the bottom right of the card window. Drag on this to change the window size. Note there's a standard Mac zoom box to the far right of the title bar. This toggles between full card size and your new, reduced window size.

15. Making a new card the 'first'

The first card in a stack is always the first one you see when you open that stack. Which makes it rather annoying that, once in place, it's impossible to shift. You see when you create a new card, or paste in a previously copied one, it's always inserted behind the current card. There's no way of pasting or creating one in front of it. So if you want to change the first card in your stack you have to be a little sneaky. First, past your 'new' first card in behind the current first card. Then cut this current first card – your new one then appears. Paste down the 'old' first card and it will appear behind the 'new' one. Crude, but effective.

16. Increasing script speed

HyperCard has a reputation for being powerful but slow. Hypertalk is like any other programming language, though – the smarter the programmer, the quicker it gets… Here are four tips for speeding things up:

- Lock the screen. Unnecessary screen updating during a job not only looks messy, it slows things down tremendously.
- Carry out operations on variables, not fields. If you have to carry out a sort, for example, copy the contents of a field into a variable, then do it, putting the variable contents back in the field afterwards.
- You don't have to go to a card to get data from it. You can refer to it by name or number – for example:

get field "information" of card 42

is much quicker than:

go to card 42
get field "information"
domenu back

- Don't create new stacks when you can simply create a new background.

17. Navigation palette

It's pretty easy creating buttons to help you navigate through your stacks, but it's still a bit of a drag. Particularly since it's quite unnecessary. If you've got *HyperCard* 2, try calling up the message box, **[command] [M],** and typing:

palette "navigator"

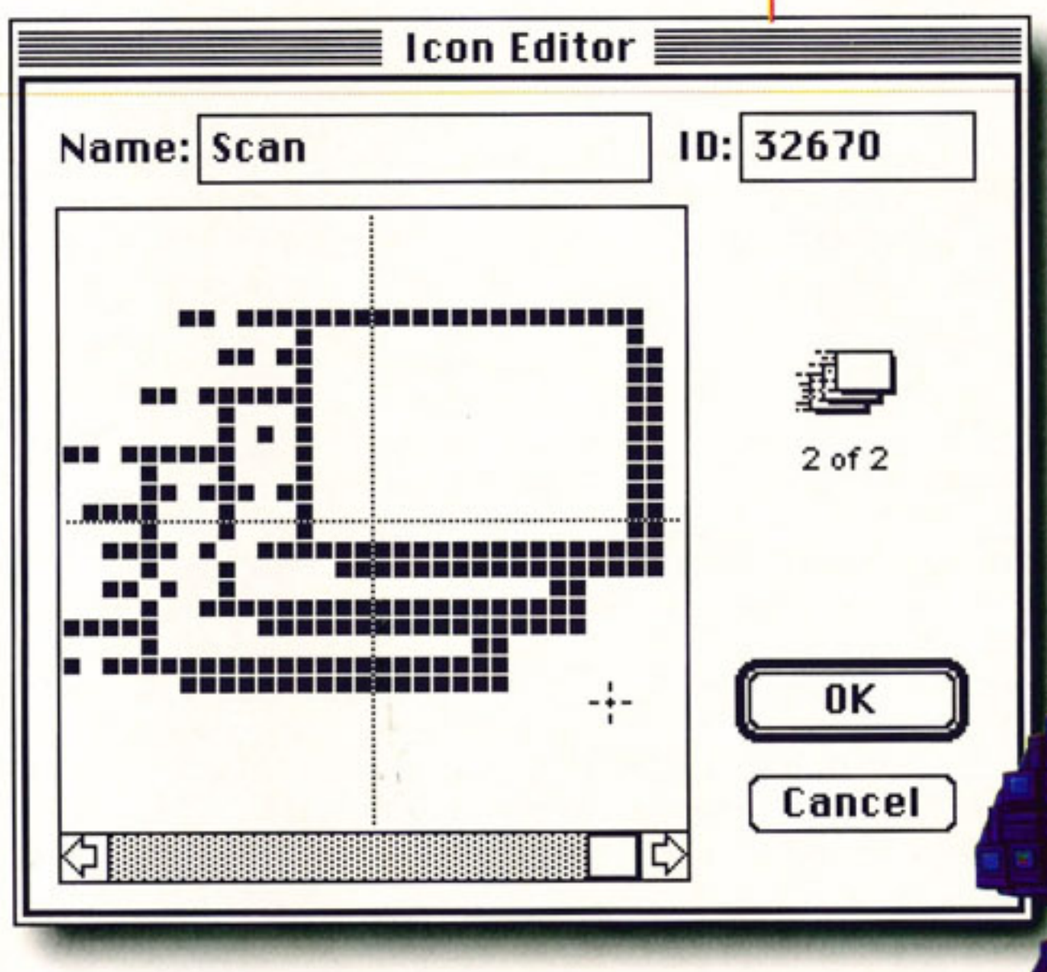
then hitting Return. Spooky, huh? This palette provides just about all the basic navigation functions you could ask for, and you can drag it around the screen at will – including outside the card window. If you buy the full *HyperCard 2.1 Developer's Kit* (from Frontline on 0256 20534) you can even build your own palettes! To get rid of this navigation palette, simply click on the close box, top left. That is, if you ever do want to get rid of it again…

18. The 'Magic' password

If you bought a Mac that came with version 2 of *HyperCard*, you'll notice that it's a demo version only. *HyperCard* has five 'user levels': Browsing; Typing; Painting; Authoring; Scripting. Only the first two are available in this bundled version… unless, that is, you do the following: go to the last card in the Home stack, call up the message box **[command] [M]**, type 'magic' and press Return. And, as if by magic, all five user levels are now available. Simply click on the one you want. You now have a fully working version of *HyperCard*.

19. Using the Icon Editor

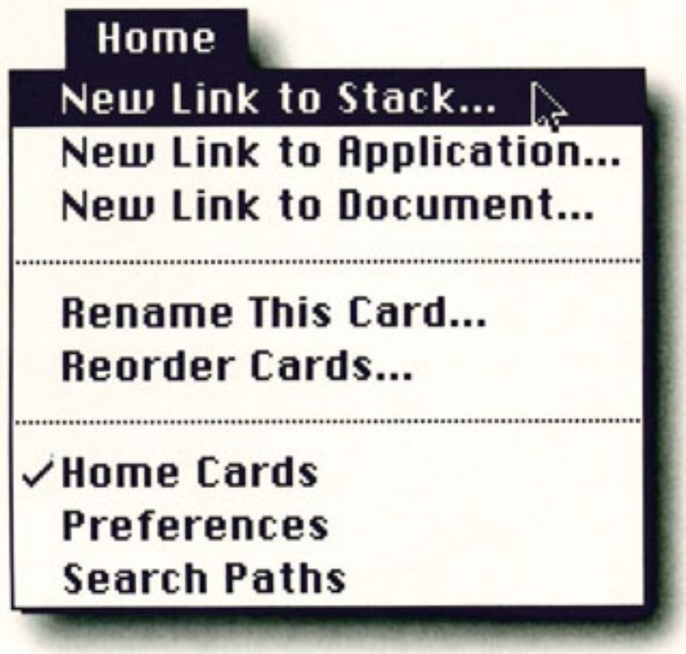
There are a wide range of standard *HyperCard* icons on offer – you see them all when you click on 'Icon…' in the Button Info dialogue. But you can also design your own, using *HyperCard's* built-in Icon Editor (you'll find it on the **Edit** menu – or simply hit **[command] [I]**). You can duplicate, edit and name icons, and although the drawing tools are limited, they're quite adequate. All the icons in your stack are visible via a scrolling window, and you can create buttons from within the Icon Editor (via its **Edit** menu). The Icon Editor also lets you keep track of the icons actually in your stack and those 'borrowed' from the Home stack (this can get confusing otherwise).



HyperCard's Icon Editor is a quick and efficient tool for designing your own buttons. It also makes it easier to keep track of the icons in your stacks.

20. Home Stack 'Home' menu

HyperCard 2's Home stack has an extra menu on the far right – **Home**. The options on this menu let you customise this stack to create a personal launching pad for all your Mac applications. The first three options (New Link to Stack… New Link to Application… New Link to Document…) prompt you for stacks/applications/files via the standard Mac file dialogue, then automatically create buttons to



You'll only see this menu in the Home Stack. It lets you customise your Home Stack for your own needs.

launch them. If you're feeling particularly organised you can also re-order or rename your Home cards (maybe one for stacks, one for applications etc.) with the next two options, while the last three options navigate between the Home cards and the special Preferences card (where you set the user level and other bits and pieces) and the Search Paths card (best left alone). One word of warning. Always, ALWAYS keep a backup of your Home Stack. It's easy to fiddle with and vitally important. It contains dozens of complex HyperTalk routines central to *HyperCard's* operations. If you lose them, it won't work. If you fiddle with them, you'll never work out how to get them back to the way they were.

GAMES

If it's games tips you're after, look no further because Stuart Anderton has put together 20 of the best, sent in by you, the readers.

1. Lemmings

When you get absolutely stuck in the taxing levels of *Lemmings*, you can try these codes to get a new challenge:

FOCIKLMOFT
HLELGIOEGJ
LGENMMEPGV
LFLGAJNFHV
GMOLNNHIHN
GGKKMFJJHM
OJHMFLGKHT

2. Harpoon

In *Harpoon*, never leave formation set-ups as they are, since at best, they are not very good, and at worst they are completely useless. Wait until all aircraft are launched and then reconfigure the formation. ASW ships should be furthest out, followed by the long range AAW ships, then an inner ring of mixed ASW and AAW with the main units. Make sure ASW air units are as far as possible from the ships as some torpedoes have a long range.

Leave radar off, but launch helicopters to patrol overhead with radar on, as this gives radar coverage without giving away your ships' position. Try not to use active sonar as it will be detected at a much greater range than it detects.

3. Flight Simulator

In Microsoft *Flight Simulator* there is an aircraft carrier off the coast of San Francisco. It's possible to land on it but taking off is hard because it's tricky to align yourself before take off. You can use the Set Location command to overcome this. Go to San Francisco airport using the Airports command in the World menu. Use the Set Location command with the following parameters:
North: 17418.9991
East: 05008.0065
Altitude: +000148
Heading: 053.79
This puts you at the end of the carrier's runway, and with judicious use of flaps you can take off.

4. Pirates

In *Pirates*, sailing east is much harder than west given the prevailing winds. The clouds represent squalls, which are more likely to throw you off course. If you see one coming you can try to avoid it. It helps to have a more manoeuvrable ship like a sloop. Galleons are nearly impossible to steer through or around things.

It helps to learn how to tack. Generally, to sail upwind, sail 45 degrees from the wind. If the wind changes, then you should, too. Tacking is much easier for sloop-rigged boats (sloop, barque) than for square-rigged boats. Basically this has to do with how.
close you can set your sails to the wind without disturbing smooth airflow over both sides. The practical angle is to never sail anything larger than a barque.

5. Mission Thunderbolt

In *Mission Thunderbolt* always carry a crowbar. This item can do triple (or even quadruple) duty. First, in the very early stages of the game, it may be your best hand to hand weapon. Second, you can carry it instead of all those crazy keycards and use it to open locked doors and boxes. Third, you can use it to deactivate traps on boxes. And finally, you can use it to tear down walls (albeit slowly) – don't use your main weapon to do this, as tearing down walls dulls weapons quickly.

6. Leyte Gulf

In *Leyte Gulf* when dropping torpedoes, try to maintain an altitude of 250 or less. Also, keep your air speed to below 140 knots. But if your airspeed is too slow, the torpedoes will explode on impact. Try to stay above 80 knots. When approaching a target, remember to sight the ship and find out in what direction the ship is travelling. Approach the target oriented to the bow and aim slightly ahead. AAA gunners are deadly, so try not to travel in a straight line, use your rudder and zig-zag to the target. Try not to shoot back, maintain your concentration on the target.

7. Hellcats

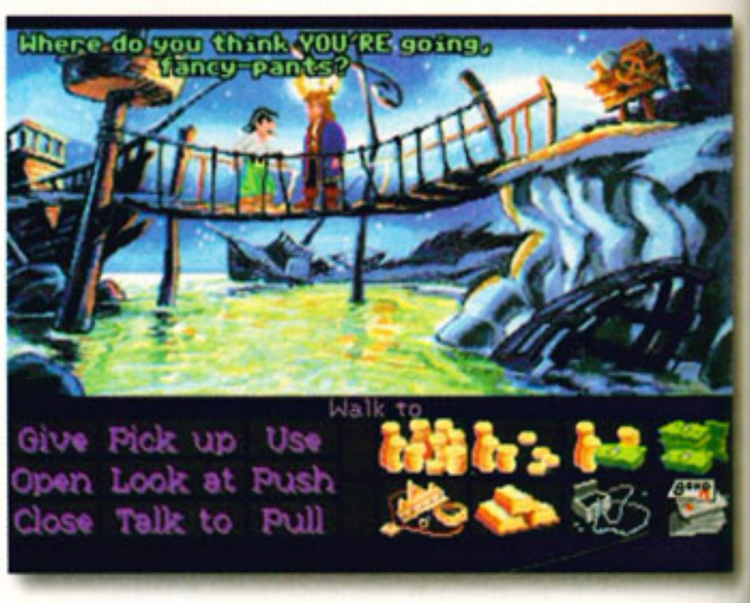
In *Hellcats over the Pacific*, have Instant Replay in the **File** menu set to 'on'. When you crash, quickly press **[escape]** and select either End Mission or New Mission from the **File** menu. A dialogue box will come up asking if you want to end the current mission now. Click on the End Mission option. this will save your character rank and total points. Unfortunately you don't get any points you would have accumulated had you not crashed.

8. Monkey Island 2

This is the solution to level one of *Monkey Island 2*. Pick up the shovel beside the bridge then walk over, where you will be mugged by Largo. Walk to Wally's shop and pick up the pile of paper. When Wally rubs his eyes grab his monocle. Walk to the hatch and ask the barman about business. Use the paper on Largo's spit. Go outside and walk to the window. Pick up the knife on the table then go back outside again. Walk to the upper deck and pick up the bucket. When the pirates stop you, ask if it's theirs. Walk to the path at the right of the bridge and go to the cemetery.

Walk to the graves on the hill and dig Largo's grandad's grave. Then go to the swamp and fill the bucket with mud and go back to Woodtick. Walk to the ship on the far right and use the knife on the rope. When the innkeeper leaves pick up the bowl, go into the room and take the toupee. Close the door and put the bucket of mud on the door then walk to the back of the room; Largo gets tricked and goes to the laundry. When Largo leaves, follow him and go back to his room. Close the door and take the ticket. Go back to the laundry and give the ticket to Mad Marty. Go to the swamp and use the coffin to go to the voodoo hut. Ask the voodoo lady about Largo. When she asks, give her the four items and leave with the voodoo doll.

Go to the beach and get the stick then go to Woodtick. Go back to Largo's room and use the pins on the voodoo doll. Leave the voodoo hut again and go to the upper deck. Use the string on the stick and use the combination on the box. Use the cheese squigglies on the box, and when the rat goes in, pick up the string. Open the box, pick up the rat and walk to the window. Use the rat on the Vichyssoise and go back outside. Go into the bar and ask about the stew, and when the barman fires the cook take the job. Climb out of the window and go to the path, then go to the peninsula. Give the monocle to Captain Dred and when he asks, give him the 20 gold pieces.



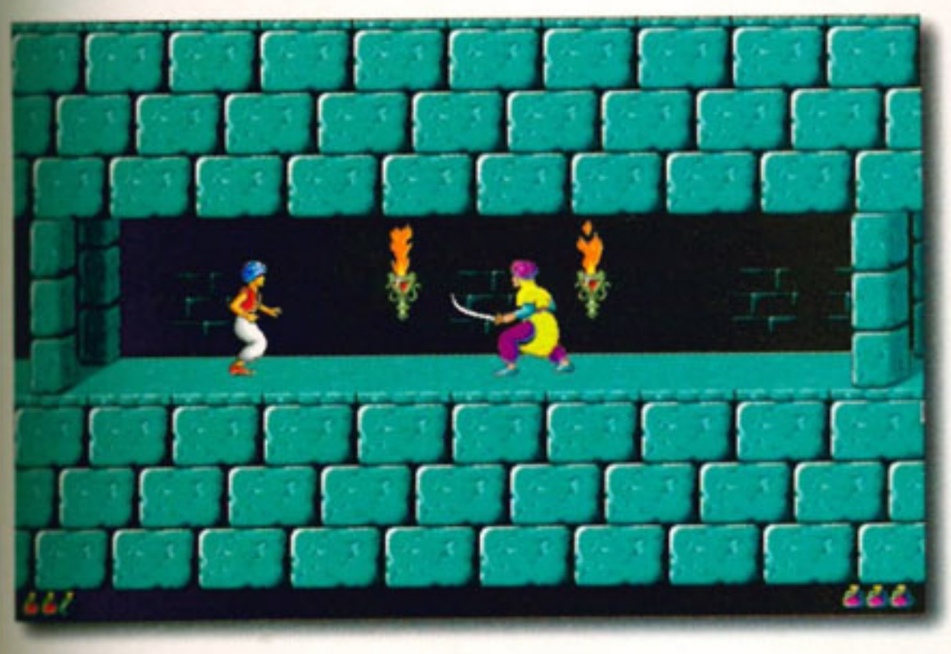
Get from here to the end painlessly with our playing guide, but there's no way to keep all that money I'm afraid, Largo will have to have it.

9. Prince of Persia

In *Prince of Persia* on level 2 there are two secret rooms which are handy when you need to get back to full energy. The first room is after the first man. After killing him go into the room on the left, go past the spikes and climb up one storey. Jump up again and a loose panel above you should fall down. Above is a secret room containing a useful potion. The second secret room is after you kill the third man where you are at the point where you have to leap across a chasm and fight the fourth man. The second panel from the right is loose. It hides a secret room containing two potions.

There's also a secret level on level three. After climbing as high as you can leap to the right, you should land on top of a pillar. Keep going along to the right until you are on the last one. The second panel from the right is loose. Above is a secret room.

On level 7, kill the first man off and go through the top part of the level until you come to the part where you fall down and grab hold. Let yourself fall to the second platform and go through until you reach the platforms to go up to the man. Instead of going up, do a big jump to your left, and jump over again to the gate. Go through and you can get the extra potion and get through the gate to open the door to the next level. This way you've missed quite a bit of the level and got an extra potion.



Hidden rooms await in *Prince of Persia* – assuming you can get passed the vizier's henchmen that is.

10. Civilization

In *Civilization* the best policy is to expand as fast as you can. Always have at least half your cities churning out settlers. As well as growing fast, it stops cities getting so big that they go into disorder. Discover the wheel early, and take out any neighbouring civilisations. Also go for Map Making, and explore with triremes – even empty ones. Two Wonders to aim for are Pyramids to let you switch to democracy for rapid growth, and a Great Library, which lets you keep up scientifically on emperor level.

If your enemies develop tanks, go all out to steal the technology using diplomats, or if that fails, mount an all out assault on an enemy city. Alternatively, set your tax rate high and buy any outlying city. If you have a strong economic base it is possible to win solely though using diplomats and cash.

If an enemy civilisation grows too large, attack its capital city. If it falls there may be a civil war resulting in two separate smaller civilisations.

To 'disband' a former enemy city you have defeated but no longer wish to exist, stop attacking when the highlight around the city disappears, meaning that it is undefended. Wait a turn, (during which the computer will build a defender), and attack again. Eventually, unless the city has city walls, you will reduce the city size to 1. You can then destroy it when you march in.

In some versions of *Civilization*, hold down **[shift]** and type all the numbers from 1 to 8. this will allow you to see the whole world in the map, and open up enemy cities to see inside them.

Raise taxes to buy enemy cities in *Civilization*. If you switch to Republic or Democracy, that helps the cash roll in.

11. Indiana Jones

In *Indiana Jones: Fate of Atlantis,* to depossess Sophia of Nub Ab Sal in the lava pit room in Atlantis you have to say the right things to the Doctor in order to make him experiment on himself, not you. But if you also want to save Sophia, you have to convince her to give you the necklace, and then throw it in the lava pit.

12. SimCity

In *SimCity*, the best arrangement for residential units is in a three by three square. Leave the central square empty or develop it as a park, and loop a road around the perimeter of the square. This maximises transport links, environmental values for housing value and proximity to others for rapid-growth. If you add a mass transit network later, then you can have branch lines touching each unit.

13. Might & Magic

In *Might & Magic III* you will need to get a guild pass for Blistering Heights before you can actually finish the quests. You will find the Eagle's Guild (Blistering Heights) pass in a chest in the room labelled Demon H.Q. You'll have to kill the baddies, open the chests inside and a 'ghost' will give all your party members a guild pass.

14. PGA Tour Golf

In *PGA Tour Golf*, it is worth putting in plenty of work on your short game to guarantee plenty of pars. You should never underestimate the effect of wind if you're playing less than a five iron. When you're out and about on the putting green, always select a length just short of the distance and play 100%, that way you won't overrun, cutting out three-putts. If you select a distance under 3ft, it doesn't matter how hard you hit it, if the club is set to 5ft. Watch out for steep slopes when you do short putts.

15. Pirates

In *Pirates*, when fighting big ships that are likely to pound the hell out of your barque, stay upwind of them, and just weave back and forth, sending broadsides downwind.

16. Harpoon

In *Harpoon* you can't shoot down torpedoes, but you can try and avoid a torpedo by turning your convoy away from the torpedo and going at flank speed. Also, search for the subs before they fire.

17. Railroad Tycoon

In *Railroad Tycoon* if you need cash go to the regional map and hit **[shift]** **[4]**. This will put $500,000 in the bank. Do this as often as you like, but once you get to about $32,000,000, the bank resets to zero.

18. Maelstrom

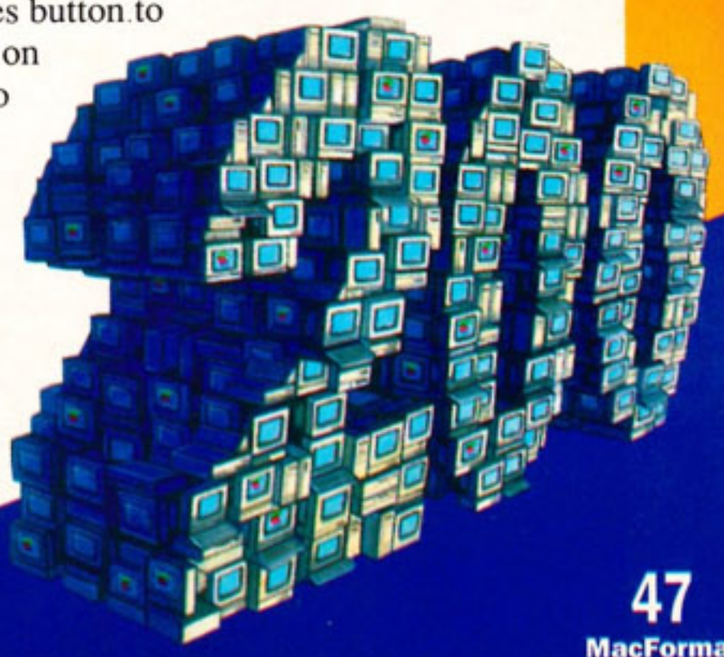
In the shareware shoot-'em-up *Maelstrom*, press L to select what level you start on, and get 'Turbofunk', a special speeded up mode.

19. Vette

In *Vette*, on course three turn around at the start and head back off the end of the Bay Bridge. It looks just like water off the end, but drive off to find a secret island.

20. A-Train

In *A-Train*, when you lose by running out of cash click on the New Game button, cancel, then go to the game tool bar and either click on the Subsidiaries button to sell one or on the Bank to borrow some money.



Well, Naomi begged, Cindy pleaded and Linda wept. But we were adamant. These designer T-shirts are for the readers, girls. Sorry.

T-SHIRTS

WIN

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Cover VERSIONS

The cover of your newsletter is the most important page. Gordon Druce shows you how to improve your design.

Since **MacFormat** started it has covered many of the fundamentals of graphic design, typography and page layout. All this information is fine, but the difficulty comes in applying these theories and making practical use of them in your own work.

I am sure many of you appreciate the importance of grids and appropriate typography. But it's not so easy when it comes to putting this knowledge into practice on a specific project.

This month, I will show you how you can take a real world job (in the shape of the front cover of a newsletter) and adapt and improve it. It's based on a newsletter I received about a month ago that I felt it was in need of a face-lift. That's not because it was bad in any way – in fact it's full of good information, is clear and user friendly – but it fails to engage the reader, and make the most of what it has to offer. It lacks the character which will help it become a voice of authority in its field. I have copied the original, so it is close in look and feel to the actual newsletter I received. For the makeover, I have only moved one element – which was on the back page of the original – and placed it in a narrow column on the front page. (I have not addressed points relating to the writing and editing since those subjects are dealt with in the DTP pages of **MacFormat**).

No previous experience

You do not have to be a design grand master to achieve this kind of makeover. Just follow some of the fundamental rules which have been discussed in **MacFormat**. This is not a master class on the complete design solution to your next newsletter cover. It's just the application of some of the rules you may or may not be familiar with. There are two important points to keep in mind when you are working on your projects. The first is the need for consistency in all aspects of your work – this will stop your layouts looking like crazy paving – whether it's in the consistent type from the same family or the placement of pictures and captions. The other aspect is contrast: if you concentrate too much on consistency your newsletters may become 'dry' and wordy, with no visual entertainment. So you need to add contrast, to make the pages more visually interesting. Aid the story-telling or communication process by highlighting important information. This is the balancing act you have to play: make your work full of contrast but not to the detriment of consistency. Remember also that it is a newsletter you are producing, not a brochure. So work on a strong logo or name plate for your production and have a clear table of contents in a prominent place on your front page.

Creative 'white space'

White space is not only the domain of the 'art school' designers. White space is an important part of any publication, big or small. When you are using white space in the context of your document, then it's worth remembering that having large white borders to your pages helps to draw attention to your pictures and text by isolating them from the reader's environment.

At its most basic level, white space lets the reader hold your publication by leaving comfortable areas of non-printed page for the thumbs. There is a tendency for the first-time newsletter designer to cram in as much information as possible. This will give your publication a flat, grey, bloated feel, making it difficult to read and unfriendly; let the page breathe, leave plenty of white space on the borders and particularly on the top and bottom of your pages. This will make your publication much more accessible. But don't just leave it at that – make your headlines, subheads and drop-quotes sing by leaving white space around them. You will find that you and your readers' eyes are drawn towards the words or pictures which are surrounded by white space. Try setting a headline in a smaller point size, and surrounding it with much more white space – you will find that it often grabs the reader much more than a larger headline which has been crammed into the page.

Unbalancing your pages

This may sound strange but often you can fall into the trap of balancing up your pages too much. This can have a dull effect; don't get me wrong, I think the two and three column grid structure is sometimes right for material, but often this structure is used more by default settings than by design. So try using a grid based on varying column widths. Run a narrow column down one side, for example. This will give you space for box-outs, side bars, pull or drop quotes and space to enlarge your pictures into.

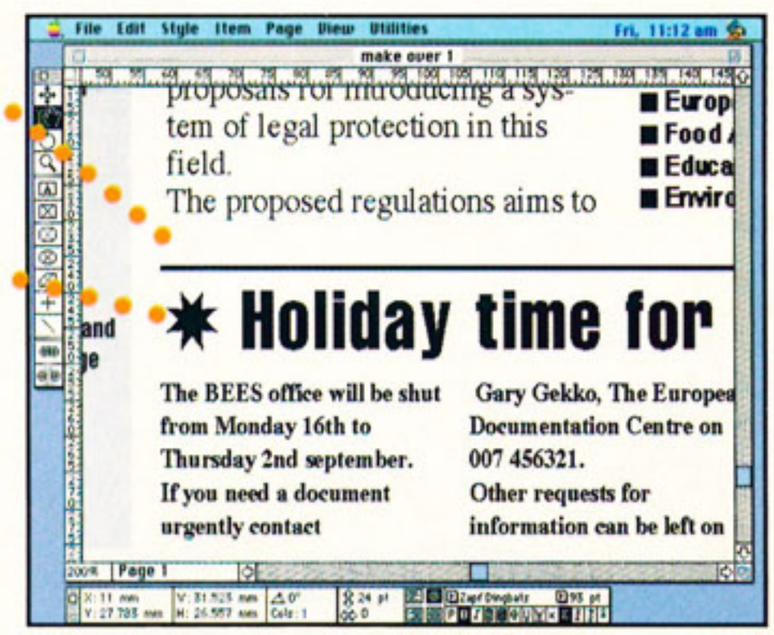
Working on one page of your document at a time is fine for your newsletter cover, but inside look at your pages the way your reader would; not as a left hand page then a right hand page but as one large area (called a spread). The two halves of the spread must work together in unity

Work out a powerful name plate or logo and use white space to give it prominence at the head of your newsletter.

Use only two typefaces for your publication and take care to communicate the right feel.

Let your page breathe by leaving plenty of space between stories.

The simple but effective use of a Dingbat, or appropriate graphic, next to a headline will help to add contrast and visual interest to the page. But don't overdo it or you will kill the effect you are aiming for.



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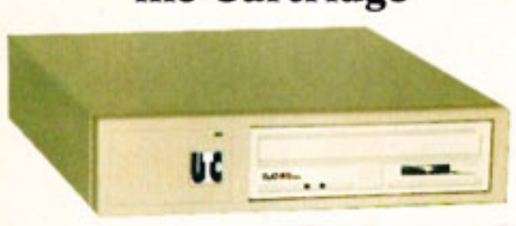

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to create the right visual impact. Don't have, say, two headlines of similar size and weight, looking as if they read as one, because they will clash.

Typefaces

Take care when choosing the typeface for your newsletter. In the example makeover there are only two faces: Times and Helvetica. I have kept these faces because the original used these and many people use them, if only for ease of output. If possible though, get yourself a type specimen book from a font library or good book shop. Look out for a typeface which suits the feel of your publication. Do you want to communicate a modern, contemporary, upbeat look or a more sedate, calming feel?

Consistency in your use of type is important, so use only a couple of faces and sizes throughout the publication. Plus your headlines, subheads and body copy should remain consistent from page to page and of course from issue to issue.

Boxes

If they are used well, boxes add effectiveness to your layout; use them badly and they can choke a good design. A common problem seems to be boxed newsletter pages containing boxed features (and I have even seen boxes within the features). So steer well clear of box-out overkill! Only box-out when you've got a good reason for doing so. That way it will appear on the page as important extra information and so add value to your production.

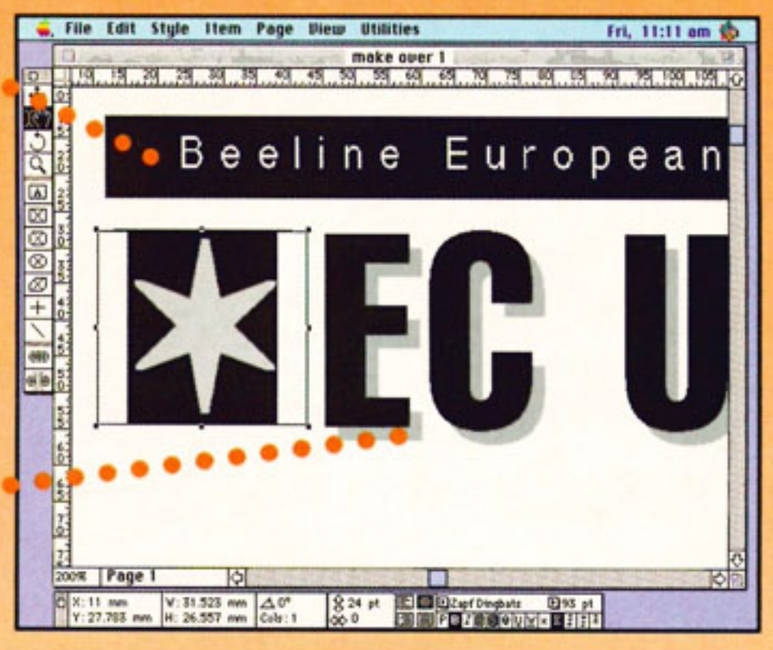
Don't use shadows on your boxes as this is often thought of as the mark of tabloid layout, or novice DTP design, in the reader's mind. (Unless of course the tabloid look is right for your fanzine or newsletter!)

Restraint

A lot of Macintosh DTP software has made it very easy to produce plausible newsletters. With the explosion of desktop publishing has come a large amount of over-used graphic elements. I have already talked about boxes and their misuse.

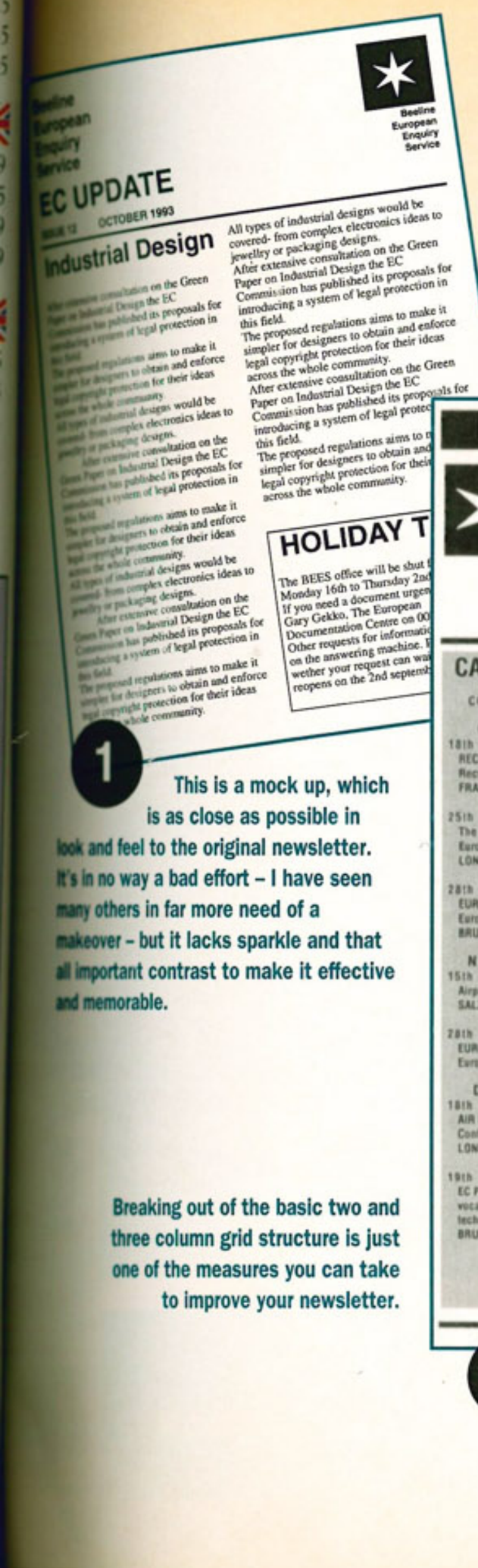
Try adding contrast between your organisation's name and the title of your publication. But at the same time make them harmonise by using fonts of the same family.

Many DTP programs have a built-in drop shadow effect – if you have to use a drop shadow, create a more subtle one than the one on the right, as this is a rather cumbersome (built-in) one.



But you will often see rules, borders and reverse outs over-used to an alarming degree (I recently received another newsletter which had 20 rules on the front cover alone). So if you are using these devices you should ask yourself: is this really necessary, or could I do it in a more effective way with white space, or a more adventurous set of column widths? On the whole it is always better to err on the side of simplicity and restraint. So try not to 'over cook' your cover page. **mf**

Remember to give your newsletter a consistent look, not only inside and on your cover page, but from issue to issue.



This is a mock up, which is as close as possible in look and feel to the original newsletter. It's in no way a bad effort – I have seen many others in far more need of a makeover – but it lacks sparkle and that all important contrast to make it effective and memorable.

Breaking out of the basic two and three column grid structure is just one of the measures you can take to improve your newsletter.

2 This was an intermediate design which did not work as well as the final makeover. I think it lacks punch and does not have enough contrast or mixture of type sizes and styles.

3 This is the final makeover. A calendar of events, which was previously hidden away on the back page of the newsletter, has been moved to the front as a narrow column with much more contrast.

Let me know how you get on with your newsletter makeovers. Maybe we can feature a few of the best in a future issue with more hints and some of your tips for improvement.

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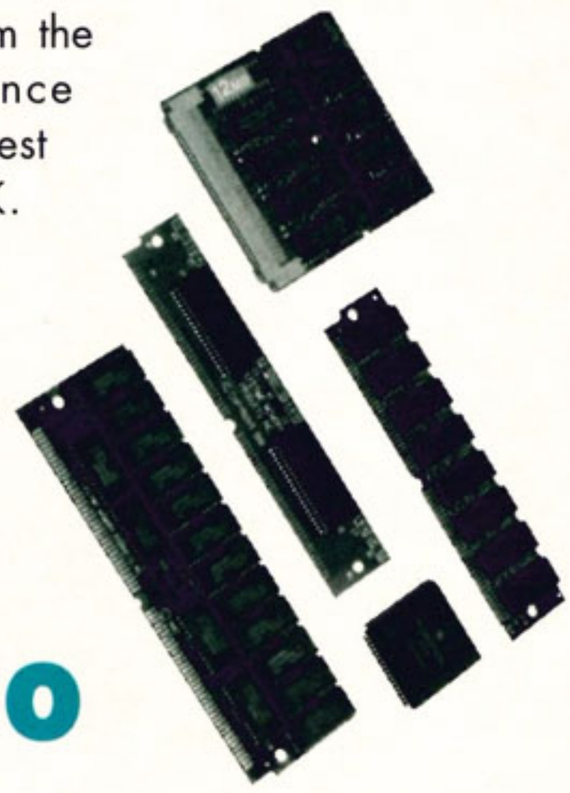

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Different dimensions

Is a program that lets you create 3D effects at an affordable price too good to be true? Gordon Druce gives you the lowdown...

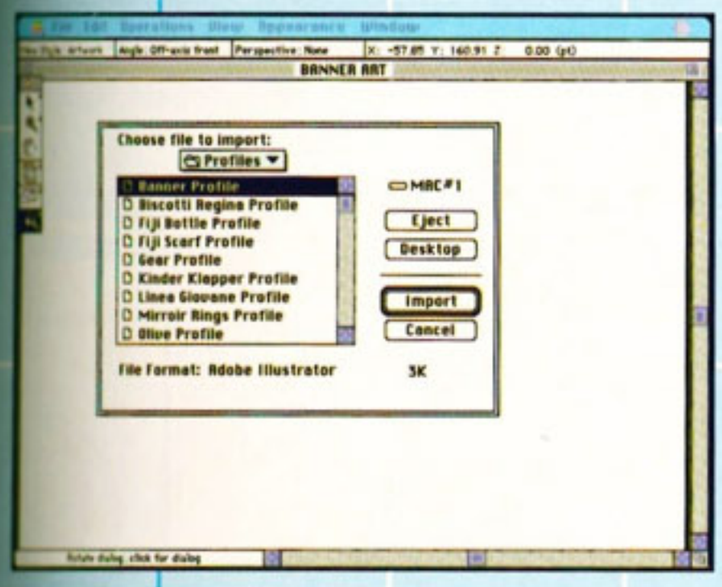
Special effects, once the domain of video production companies, high end repro houses and photo labs, have now become commonplace in many design studios – even the well-heeled freelance artist, may have these effects sitting on the desktop.

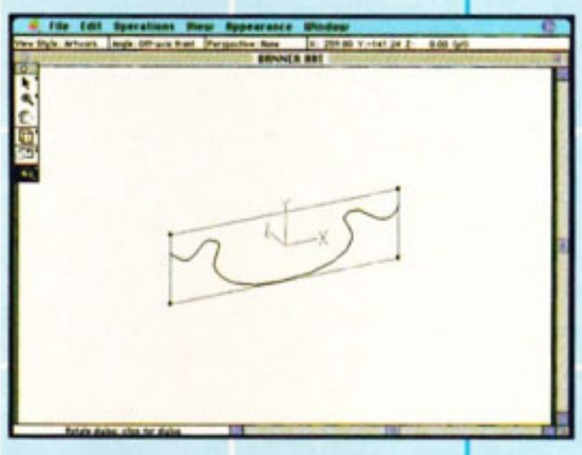
All this advancement in the professional field of Macintosh print and desktop video has direct benefits for the home enthusiast. It makes it possible for what was once a costly special effect to become a more affordable package.

Take a package like *Morph 2* (reviewed in November's **MacFormat**). This is a good example of what was once a big thing in the movies. Morphing effects are now available to the home desktop market for just a few hundred pounds. Another such effect is 3D type – OK it's not as flashy I admit, but it was once primarily seen in film and videographics work. Up until a few years ago, 3D type would have been a laborious job for an artist/animator to produce whether for film or print. 3D type, in fact 3D drawings of all kinds, would take a lot of costly man hours – and this without any of the flexibility of their new, digital counterpart.

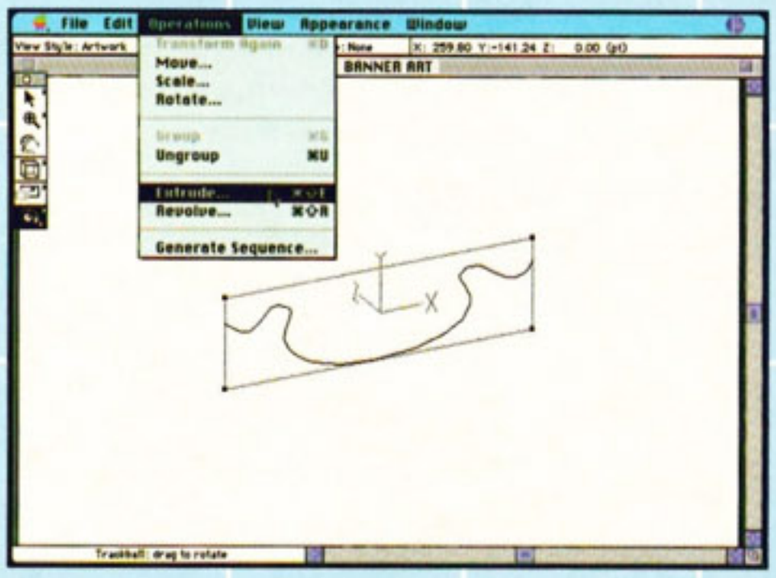
What used to be a tedious job has been automated to some degree, by means of more and more powerful machines, running increasingly sophisticated software. Programs like *Mac Renderman*, *Swivel 3D Pro*, *Infini-D*, *MacroModel* and many others, have made 3D rendering a far less painful task. Excellent as these programs are, they are still costly to a home

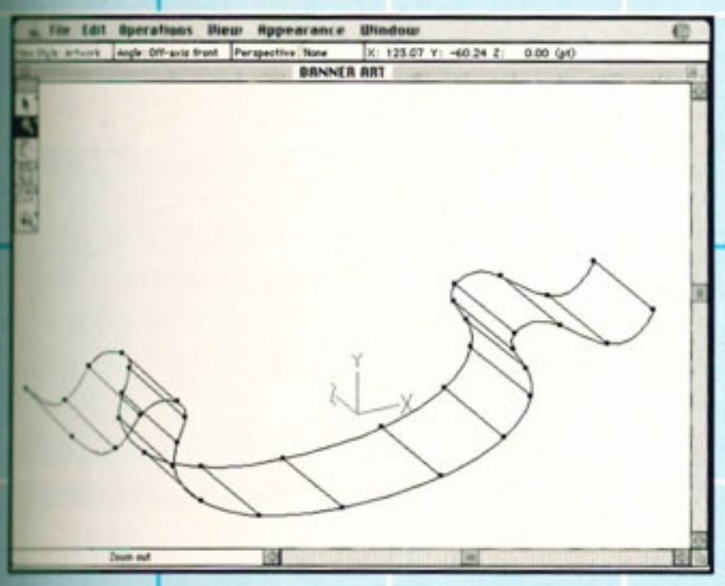
Drawing a three dimensional banner

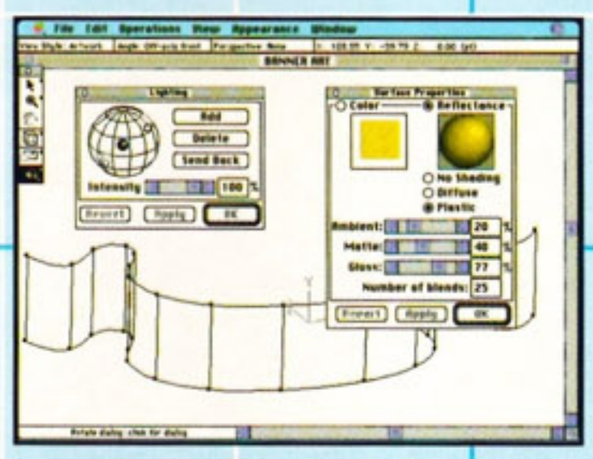




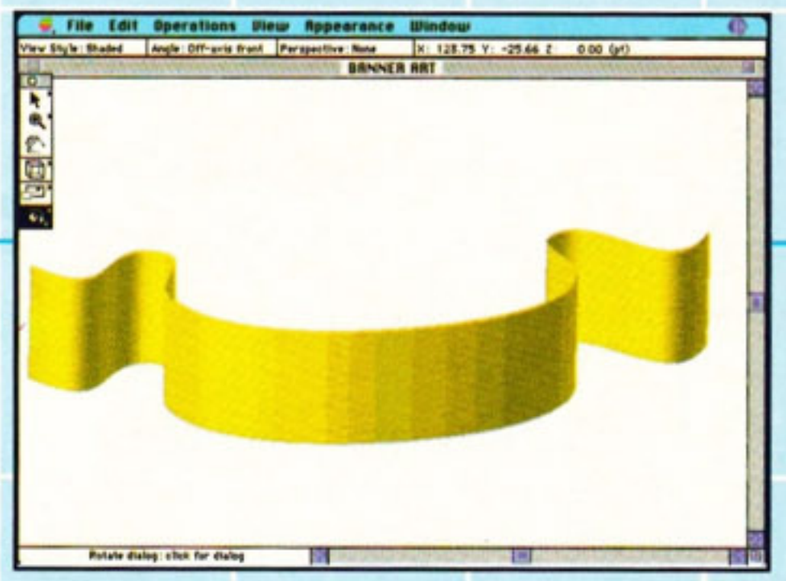
Select your banner profiles from the Profiles folder. Select Extrude from the Operations menu; if you leave it to the default settings your banner depth will the same as shown.

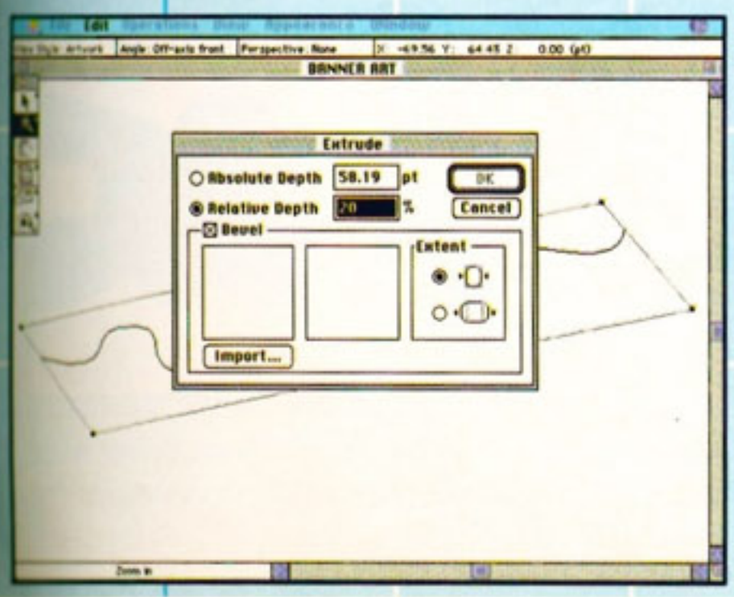


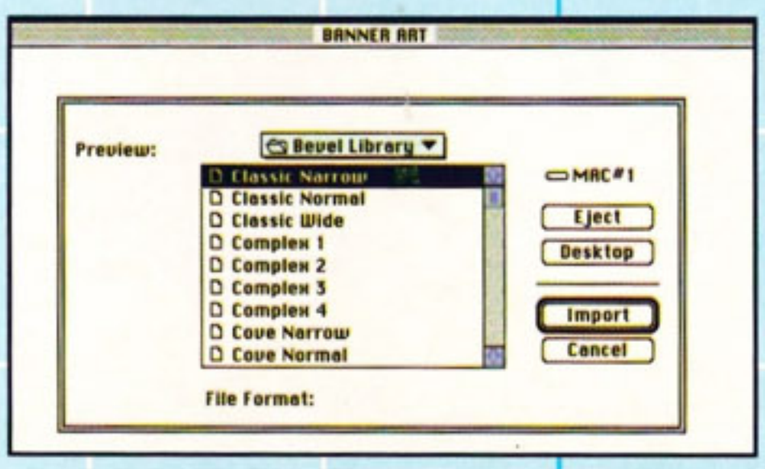




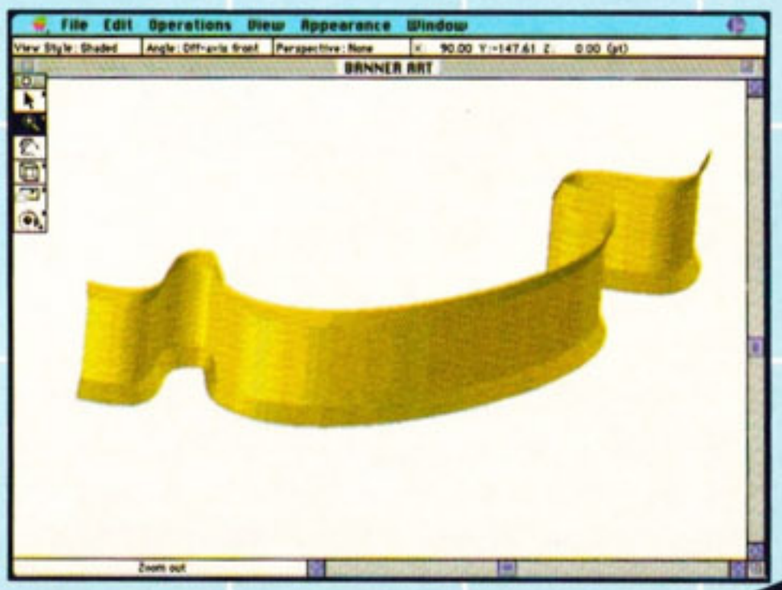
Rotate the banner to the desired angle and add in some surface properties, lighting effects and colour. Next look at it in shaded render mode. It is now ready for importing.





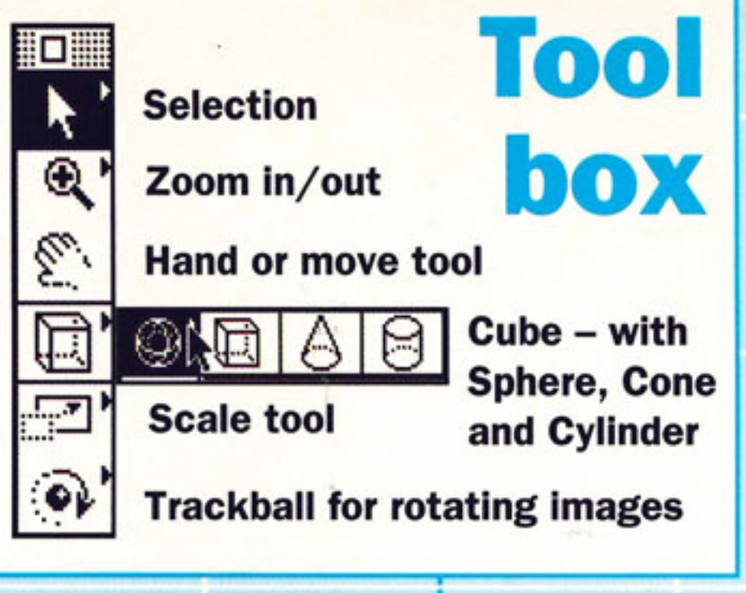


If you'd like a bevelled edge on your banner, click on the Bevel option in the Extrude dialogue and import your desired bevel, before you extrude your work. Then proceed as above.

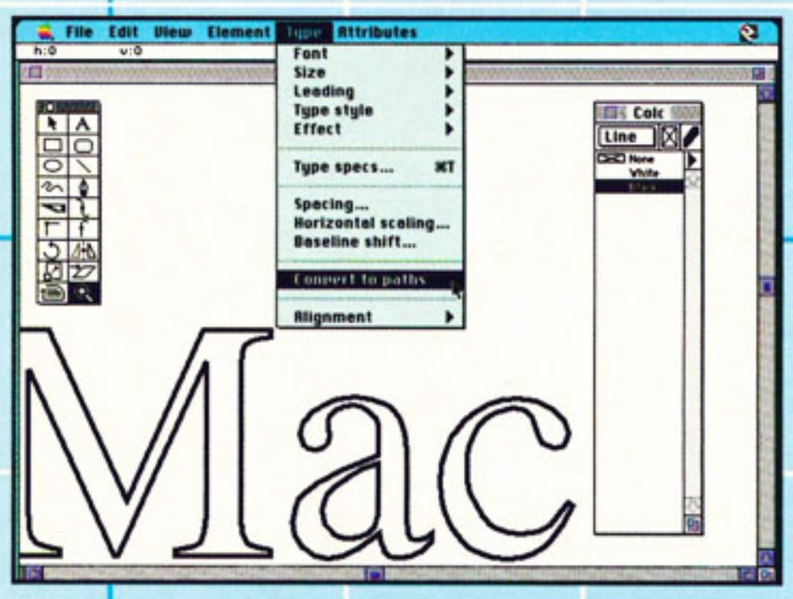


graphics enthusiast, even if he or she has adequate hardware to run it on. With prices ranging from anything between £300 to £1,400, this kind of software is out of the question unless you have a professional need for it. So where does that leave the Macintosh designer who would like to take his first steps into the world of 3D drawing and rendering, but lacks the cash?

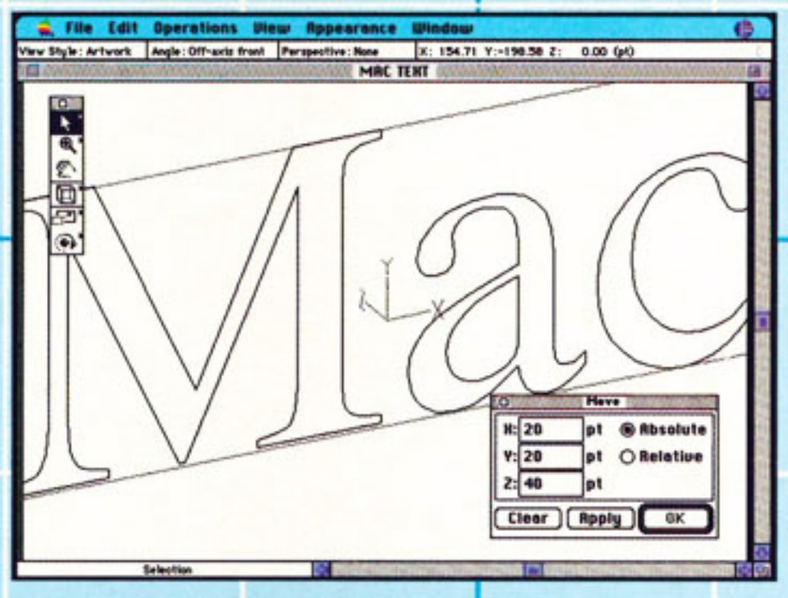
Well, what the folks at Adobe have come up with is a companion software package to their hugely, popular drawing program *Illustrator*, called *Dimensions*. This 3D drawing program costs £188 and what it does, at its most basic level, is take your imported *Illustrator* files (or *FreeHand 3.0* files for that matter) and extrude them into a three dimensional image. Now for t designer who does not have the time or money learn some of the more costly and complex 3 programs mentioned earlier, this is good ne indeed. It also means you can take your existi 2D *Illustrator* or *FreeHand* files and render the three dimensional, so all your logos and lab designs can be quickly converted. Anyone w has slaved for hours using graduated blends shade objects in *FreeHand* or *Illustrator* will impressed by the speed with which you can n produce effects in *Dimensions*. Anything from 3D visual for a new packaging idea to a simp technical illustration for a newsletter or inform tion sheet, can be drawn up and extruded to 3D



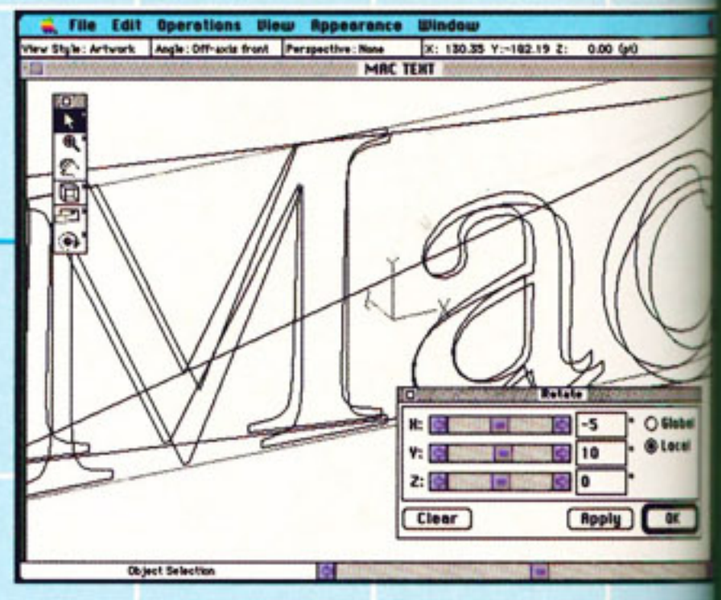
Importing and extruding text



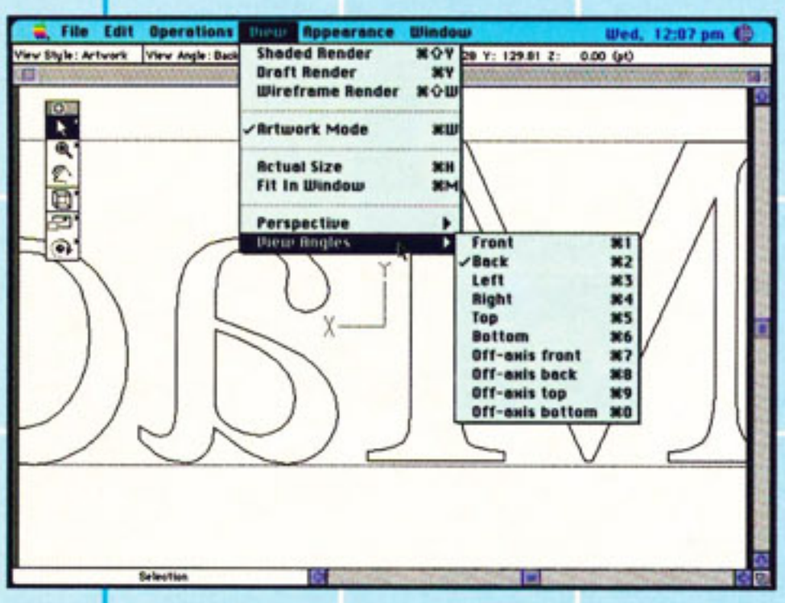
1) First off prepare the text you wish to make 3D. This can be done in *Illustrator* or *FreeHand*. When you type in the document you must covert it to paths as above.



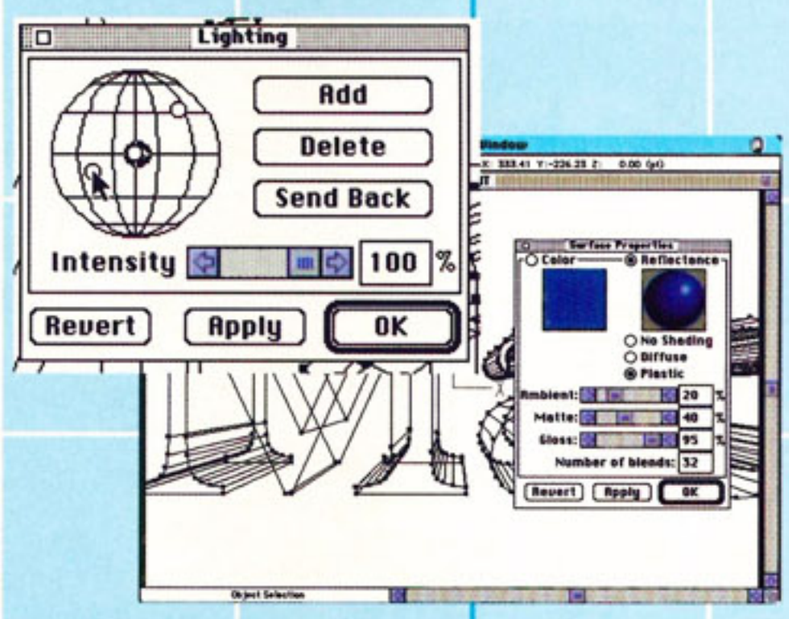
2) Now save out your text file and open *Dimensions*. Go to the File menu and open your *FreeHand* or *Illustrator* file; it will appear in the artwork mode ready for working on.



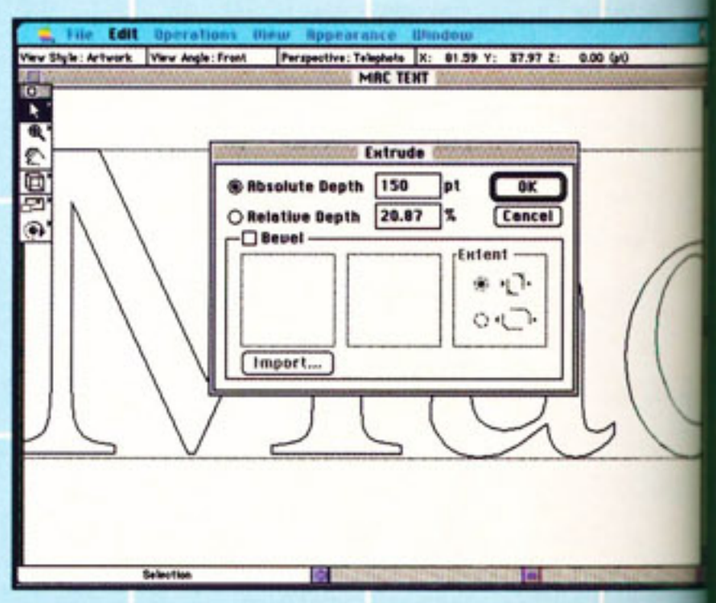
3) Your basic controls over a shape, or type in this case, are found in the Operations menu. Moving, scaling and rotating the type is very straightforward.



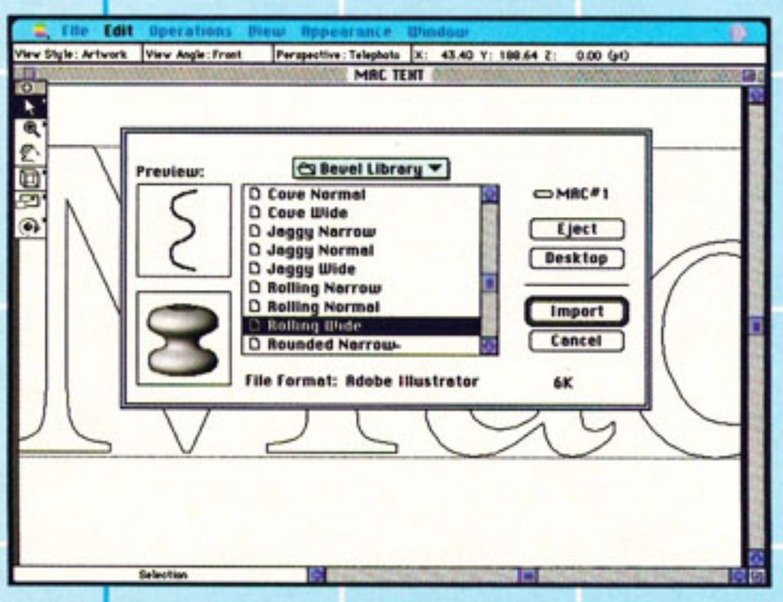
4) If you would like to quickly view your type or illustration from a different angle, then that is simple to achieve with keyboard shortcuts.



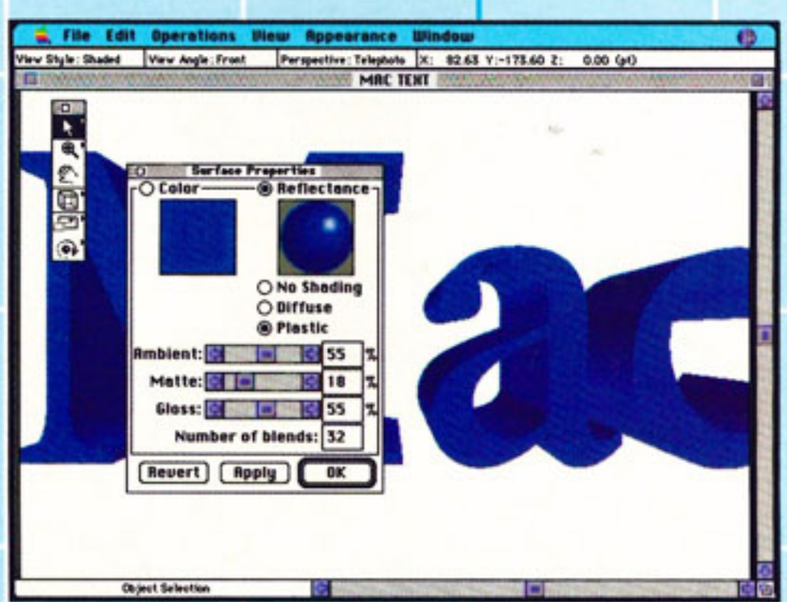
5) If you wish, it is possible to add colour and lighting to your type by simply selecting these two dialogues from the Appearance menu.



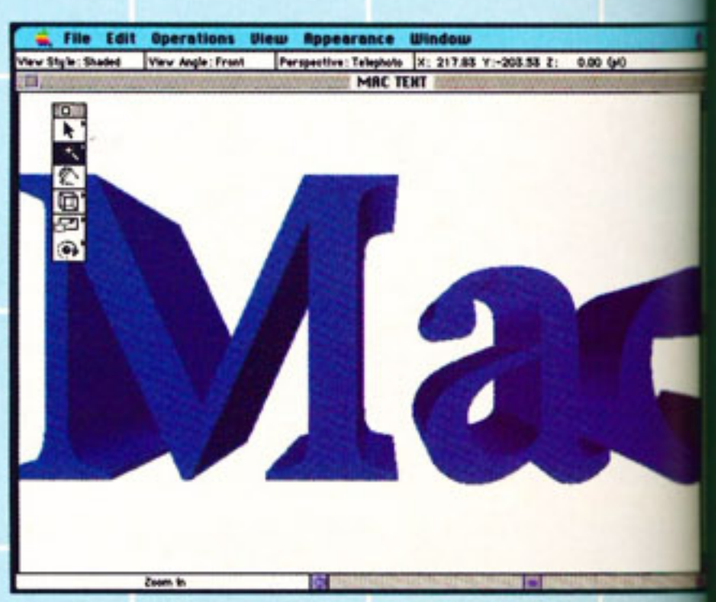
6) Now you can transform your text into 3D by using the Extrude dialogue, which is under the Operations menu. This lets you set up the amount of depth you want for your text.



7) As part of the same Extrude dialogue you can call up a Bevel library which houses a number of effects, with a preview of the bevel as you select. (No bevel has been set above.)



8) Now you have your 3D text. If you are not happy with say the lighting and reflectance then select again from the Appearance menu and modify the setting until it's right.



9) The finished product. Your document can be saved out and then imported to drawing programs for use as headlines or a part of an illustration in DTP packages.

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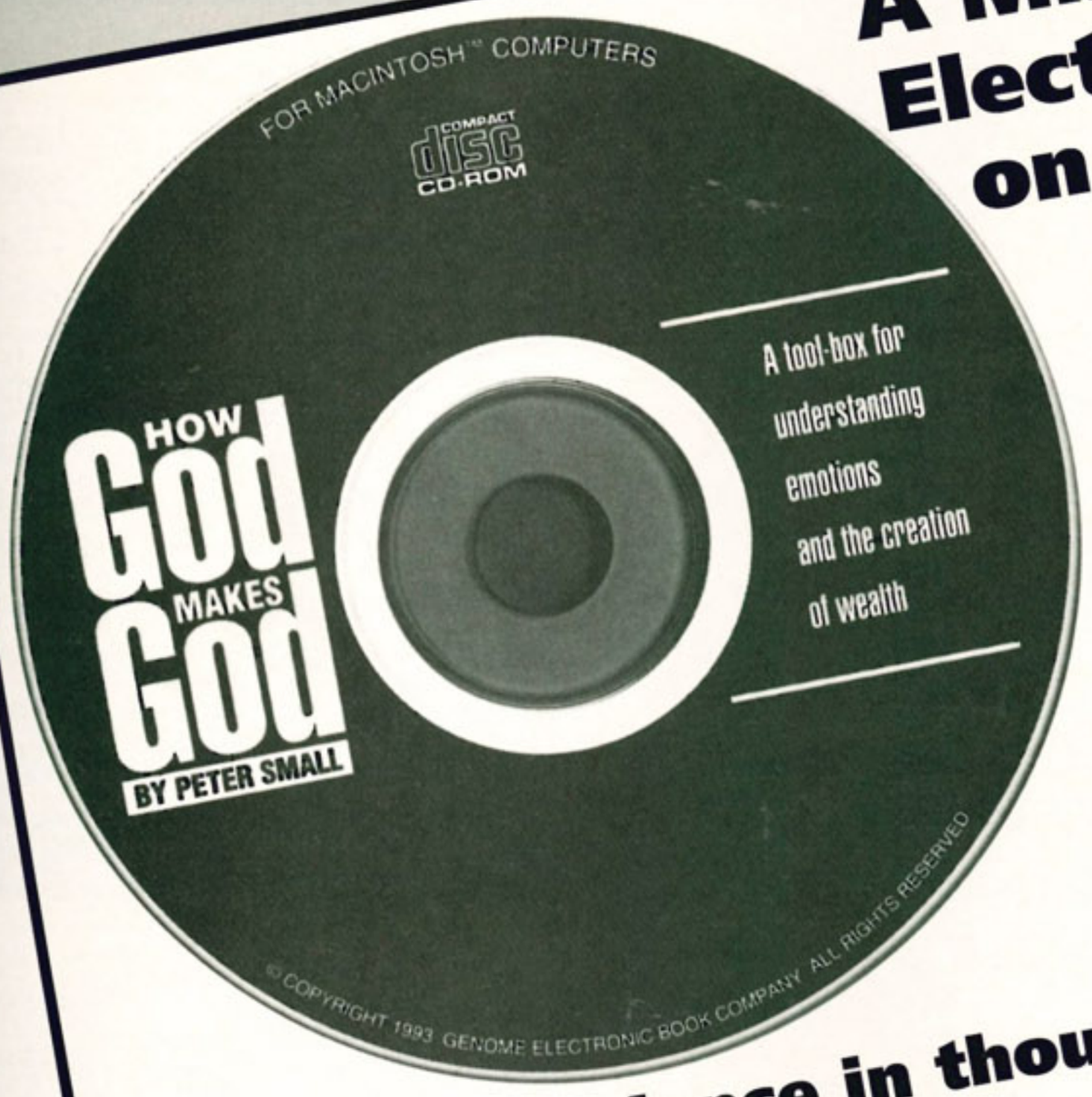

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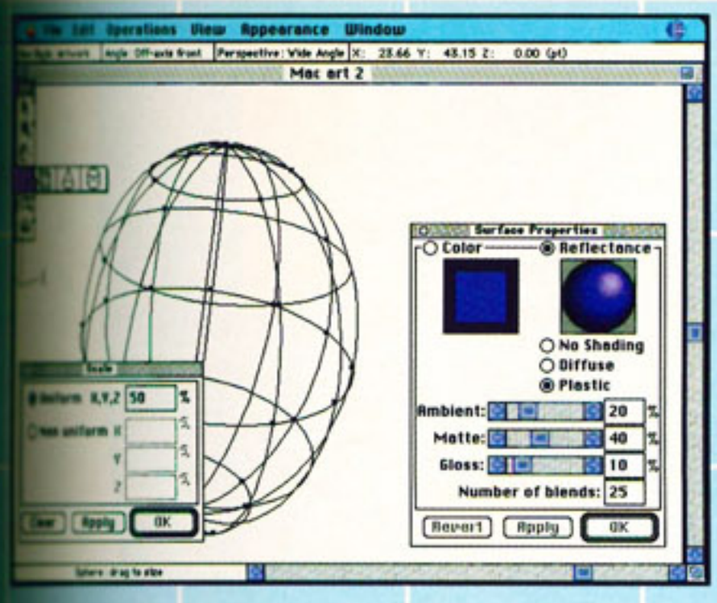
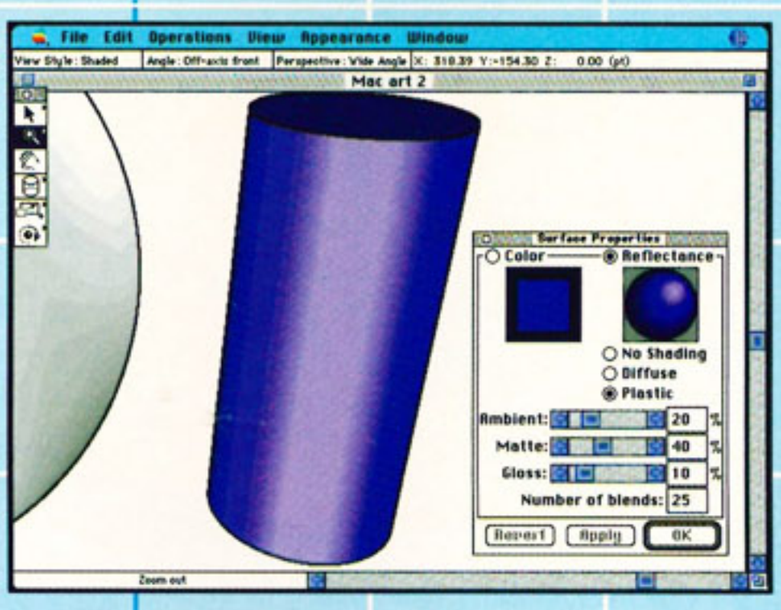
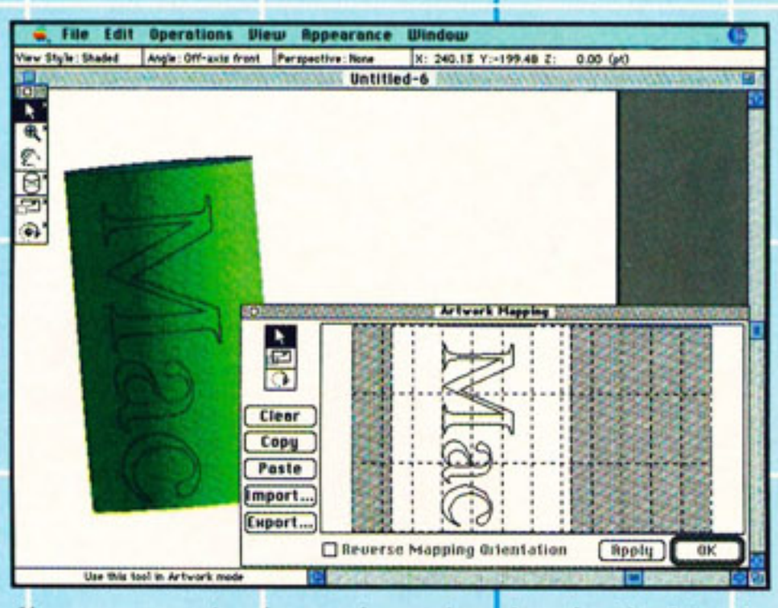
Creating and shading 3D shapes



Using the shapes tool from your tool box, select the type of shape – cone, cube, cylinder etc – and draw out your shape.



It will appear at first on screen as a cube, then depending on what shape has been selected, it will redraw to that shape.



You can wrap artwork around your shape by using the Artwork Mapping mode in the Appearance menu.

no time at all, and what's more there are no outputting headaches as they are PostScript files. *Dimensions* does not work in the same way as other 3D modelling programs, it uses editable, resolution independent Bézier curves, like those used in PostScript-based drawing programs, so it's no problem importing them to DTP and drawing programs, and scaling them to any size, as they will keep their clear, sharp edges.

Dimensions comes on three disks and has a clear and concise 120 page handbook with tutorials plus a quick reference card for keyboard shortcuts. At the back of the handbook there is a gallery section which contains a neat showcase of work done in *Dimensions*. The program contains sample files so you can follow the showcased work. It also gives examples of how to integrate *Dimensions* artwork into other programs, such as *Photoshop*, or back into *Illustrator*, for further enhancement. There are colour examples of all sorts of work from poster art and packaging designs, to the humble business card, with an explanation of how the artist achieved each effect.

You will need a Macintosh with at least 4Mb of RAM on board, and on the software side you will need some sort of drawing program. Obviously *Dimensions* is designed to sit alongside Adobe *Illustrator*, but it works just as well alongside Aldus *FreeHand 3.0*, Deneba *Canvas* or indeed any application that accepts and creates files in *Illustrator* or *FreeHand 3.0* format. Remember you will need a program with these specifications to print files created in *Dimensions*.

There are two main ways to get started in *Dimensions*. One is to import an *Illustrator* or *FreeHand 3.0* file. A tip when you are importing is not to leave any guides or rules on your artwork, as this causes havoc when the file is imported into *Dimensions*. Clear your file of guides then you can extrude, rotate, scale, add lighting and colour to your artwork.

The other way to get started is by opening a new document from the file menu. You can then begin drawing with what are called the primitives: a set of drawing tools and four basic 3-D objects: a cube, sphere, cone, and cylinder. These are found in your tool box which houses six tools: selection, zoom (magnifier), handtool, 3D drawing tools (primitives), scale tool and a trackball tool for rotating a 3D object. The selection tool has four modes for controlling objects and groups of objects. This may all sound very complicated but when you are driving *Dimensions* around, it's simple to select elements, change perspective and drop new colour on to objects; although when you apply a solid colour, say orange, to an object, *Dimensions* only adds black instead of a mix of the four colours to produce its 3D shading. This tends to make the colours feel a bit grey and muddy.

Even a novice user will be producing plausible 3D work within a few hours of sitting at their machine

The experienced *Illustrator* user will quickly get the hang of the new tools and it will not be long before you get some stunning quality 3D illustrations out of it. Even a novice user will be producing plausible 3D work within just a few hours of sitting at their machine. This entry level pitch is very much what *Dimensions* is all about. It's an introduction to 3D. It does not pretend to be as sophisticated as the likes of *Mac Renderman* or *Swivel 3D Pro*, but it does at least give you a basic understanding of working in 3D and would be ideal as a training program for schools and colleges.

Once you have imported your work you can add in bevelled edges to your type or objects. You can change the colour and reflective properties of artwork, create simple animation sequences and even map two dimensional PostScript artwork on to your 3D objects. This is excellent if your work involves packaging design of any kind since it is child's play to draw up a box or carton in 3D, then drop in a logo or illustration. Alternatively, you can produce 3D banners with text and lines mapped to it. If you are working on point of sale display artwork or packaging, *Dimensions* is a very economical way of adding a 3D capability to your Mac set up, assuming you already own *Illustrator* or *FreeHand*.

As a companion program to the massively successful *Illustrator* program, *Dimensions* is an excellent package. Anybody who has honed their Macintosh drawing skills working with *Illustrator*, will have no problem making the transition to *Dimensions*. This aspect of building on your existing skills is a good one because many designers trained or otherwise, may feel apprehensive about learning a new set of skills for working in 3D. I think in the past many '2D Artists' may have been put off working in 3D by unnecessarily complicated software, coupled with the need for a power hungry (ie costly) machine.

Anyone who has looked at 3D software in the past and felt intimidated by its tools, controls and the price, should have a close look at *Dimensions*. It makes the shift from 2D to 3D, a seamless one, and as such should win a lot of fans. If you've spent hours in front of say *Illustrator*, blending and shading your artwork, *Dimensions* could make life much easier for you. **mf**

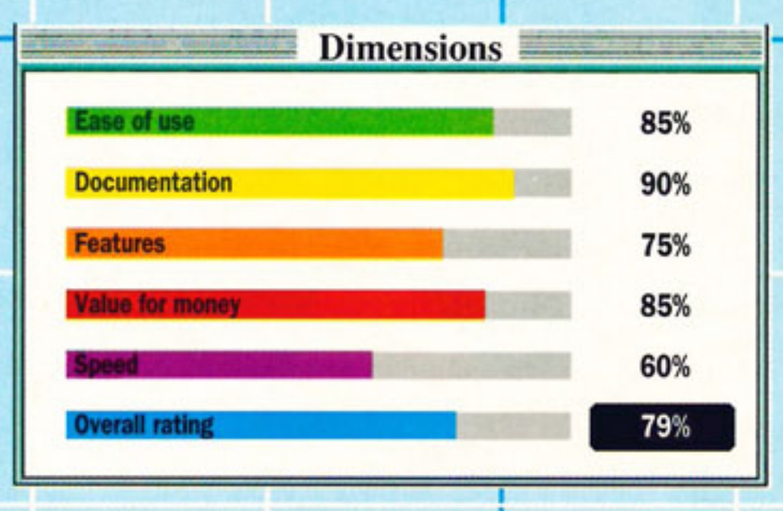
Jargon Busters

Bevel: To cut or add to artwork as it is expanded into the third dimension.

Extrude: To add depth to a path or to artwork.the path or artwork can be bevelled as it is extruded. (See Bevel)

Group: To combine two or more objects so that they act as a single object.

PostScript: A computer language invented by Adobe that is used to define the appearance of type and images on the printed page.



Where to get it

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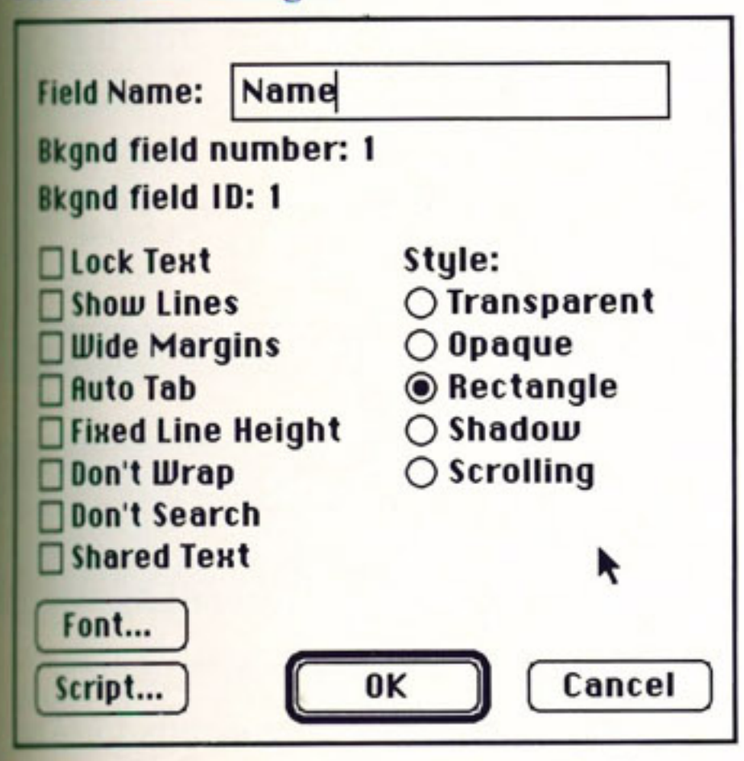
Exploring HyperCard

HyperCard's real strength lies in text – handling it storing it, retrieving it and finding it. Rod Lawton takes a closer look at _HyperCard_ 'fields'...

Text in *HyperCard* is stored in 'fields' – the same sorts of fields as you find in ordinary databases. But *HyperCard* fields are a bit more versatile than you might be used to. They come in a range of styles, for a start, while the text inside them can be any font, size and style. And *HyperCard* fields possess quite a few other useful properties too.

In fact the best way to see what *HyperCard* fields can do is to select a field and then take a look at the **Field Info** dialogue, reached from the **Objects** menu.

The Field Info dialogue



This dialogue looks very similar to the **Button Info** dialogue we looked at last time. Here's what the various options mean:

Field Name: this is blank by default. It's not absolutely necessary to give each field a name, but it can be a useful reminder of what it's for. And it's quite useful later on when you get involved in scripting.

Bkgnd (or Card) field number: this shows you the order in which fields were created. Just like most ordinary databases, the **[tab]** key takes you from the contents of one field to the contents of another. You can alter this number using the **Send Farther** and **Bring Closer** commands on the **Objects** menu.

Bkgnd (or Card) field ID: this number is unique within the stack. No two fields will have the same ID number. This isn't very relevant unless you get as far as scripting, and even then names can be more useful for identifying fields than IDs (easier to remember at any rate).

Lock Text

If you lock a field's text you make it impossible to edit until you unlock it again. This is useful if you don't want other people to fiddle about with the contents.

Show Lines

This displays dotted lines to indicate the text's baseline within a field. Note that it doesn't work with scrolling fields. There's no explanation why not, but there we are.

Wide Margins

If you've chosen a field style with borders (rectangle, shadow or scrolling), this option can give better-looking fields – it stops the text butting right up against the borders.

Auto Tab

When you press the **[tab]** key you move straight to the next field (a standard database short-cut). Selecting the **Auto Tab** option means the same thing happens if you hit the **[return]** key. This is handy where you're typing in a lot of routine one-line information (like names and telephone numbers) – it's more instinctive to hit the **[return]** key between items of information than it is the tab key.

Fixed Line Height

HyperCard normally sets the line height within fields automatically, according to the size of the text. By clicking this box, however, you can choose your own line height, via the **Font** dialogue. Be warned, though: if you use a larger font size within the field, you may lose the tops of the characters.

Don't Wrap

Normally, lines of text longer than the width of a field 'wrap round' to the next line, as in word processors. Selecting this option restricts them to single lines on-screen. (Just because text 'disappears' off the edge of a field doesn't mean you've lost it. Think of each field as a kind of 'window' on the text inside.)

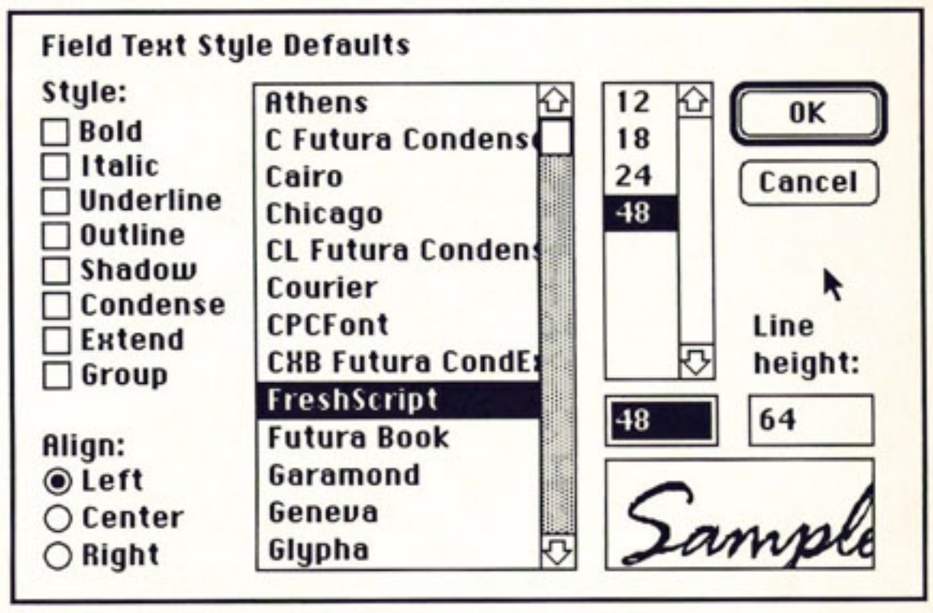
Don't Search

You can speed up *HyperCard's* text-searching functions by eliminating irrelevant fields. This option is checked automatically when you select **Shared Text**, below.

Shared Text

Fields created on a card background will appear on each card sharing that background. But the text in that field on each card can be different. However, it's also possible to have the same text appearing on each card. With this option selected, you can only edit the text in Background mode. Note that it's possible to have two lots of text in one field – 'background' text and 'card' text. This option toggles between the two.

Font...



This option takes you to the field's **Font** dialog, where you can set the font, its size, its style and its alignment (note that *HyperCard* can't manage justified text, only left-aligned, right-aligned and centred). You even get to see a sample of the chosen style in a window on the bottom right. The Line height option can be altered, but your changes will only take effect if the Fixed Line Height box has been checked in the **Field Info**

Hypercard Tip

There are many keyboard short-cuts for handling text in fields, and they're not displayed by the menus:

Select all the text in the field	**[shift] [command] [A]**
Embolden the selected text	**[shift] [command] [B]**
Condense selected text	**[shift] [command] [C]**
Apply field's default text style	**[shift] [command] [D]**
Change to the next font	**[shift] [command] [F]**
Group text	**[shift] [command] [G]**
Italicise text	**[shift] [command] [I]**
Outline text	**[shift] [command] [O]**
Underline text	**[shift] [command] [U]**
Increase font size	**[shift] [command] [>]**
Decrease font size	**[shift] [command] [<]**
Increase line height	**[shift] [command] [+]**
Decrease line height	**[shift] [command] [—]**

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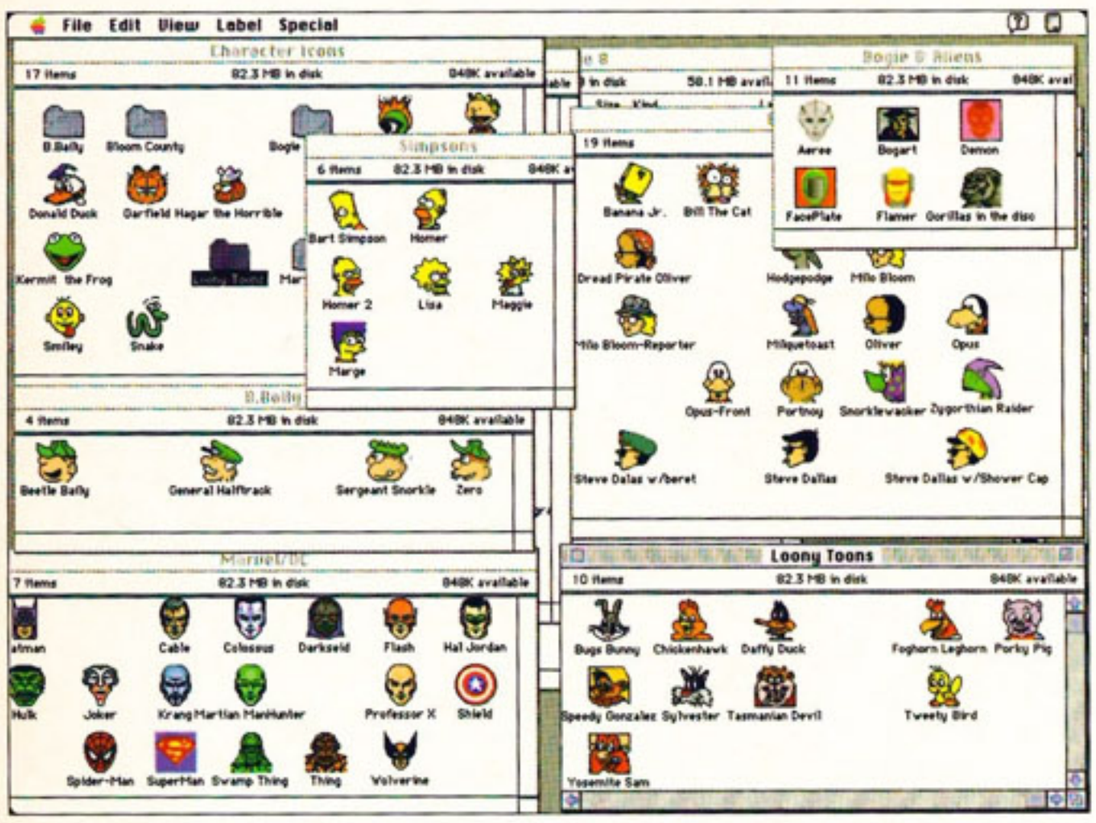

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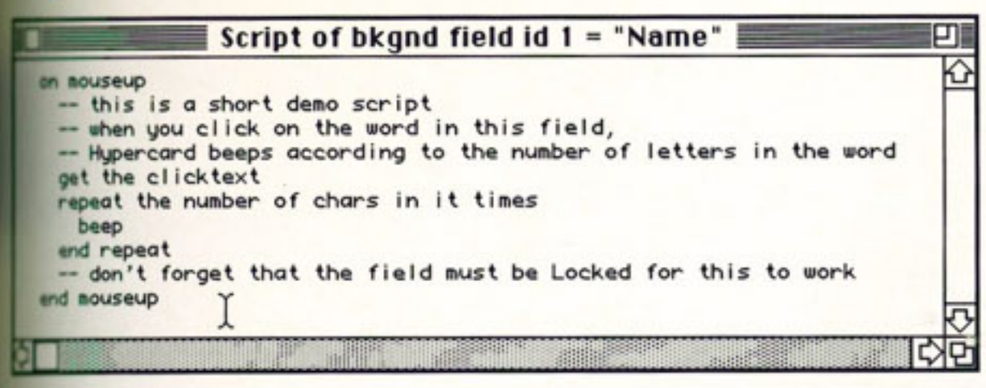
dialogue. The changes you make in this dialogue only affect the default font style for a field. You can still change the style of text within that field manually.

Script...



That's right, it's not just buttons that can have scripts. Clicking on a field can also cause something to happen, but only if the field is Locked. More on this later when we cover *HyperTalk*.

Style:

Just like buttons, fields can come in a range of styles. Take care when using Transparent or Opaque fields because these have no borders, and unless you select the Field tool they're completely invisible! If you want to enter text into them, you have to have a pretty good idea where they are on the screen... The difference between these two styles is that any paint image on the card shows through a transparent field, while an opaque field covers it up. Rectangle fields are surrounded by a one pixel-wide border, Shadow fields have (not surprisingly) a 'shadow' beneath them to create a three-dimensional effect and scrolling fields come complete with a standard Mac scroll bar to the right.

Creating, sizing and moving fields

You can create a new field in one of two ways – either by selecting **New Field** from the **Objects** menu, or selecting the **Field** tool and command-dragging out the outline of your new field. In both cases the default text style is Geneva 12 point, and the field style is Rectangle and Transparent respectively.

To move a field you need to first select the **Field** tool and then the field itself, then drag it with the mouse from the centre. To resize a field, select it as before, but this time drag from one of the corners.

Fields can be copied in the same way as buttons – firstly by selecting the field and then using **Copy** and **Paste** from the **Edit** menu, or option-dragging to produce your duplicate field. Copying an existing field can be quicker than creating a new one.

Paint text vs. field text

Remember that there's a very big difference between text created with the paint tools and text typed into field tools. Once it's been created, paint text can't be edited. That's one point. Secondly, paint text will always print bitmapped, even if it's been created using an outline (PostScript) font. By contrast, outline fonts used in fields do print as high quality fonts.

Paint text can be useful for displaying field labels on background, but you can do the same thing with a background field containing shared text – and you can edit it later.

Incidentally, you can change field text to paint text at any time by selecting the text in the field, copying (or cutting it) and pasting it down outside the field either on the card or background layer.

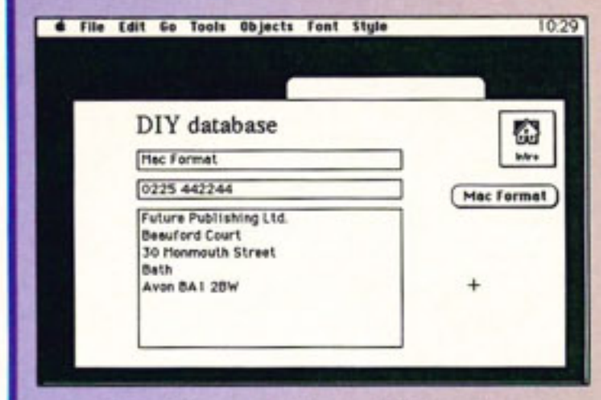
Delete with care!

When you delete a card field, you delete all the text it contains – there's no getting it back. When you delete a background field, the consequences are even more serious – this action deletes all the text in that field on all the cards it appears on. *HyperCard* does display a warning message, but it's all too easy to OK it without thinking. **mf**

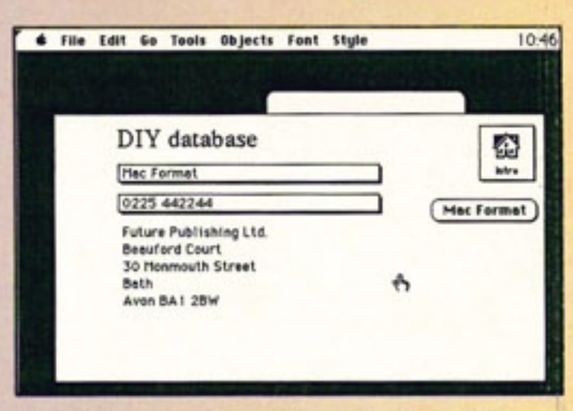
Next month

We've looked at all the basic *HyperCard* building blocks – stacks, backgrounds, cards, buttons and fields – but what can you do with them? Find out how *HyperCard* can produce training guides, interactive reference sources, even adventure games...

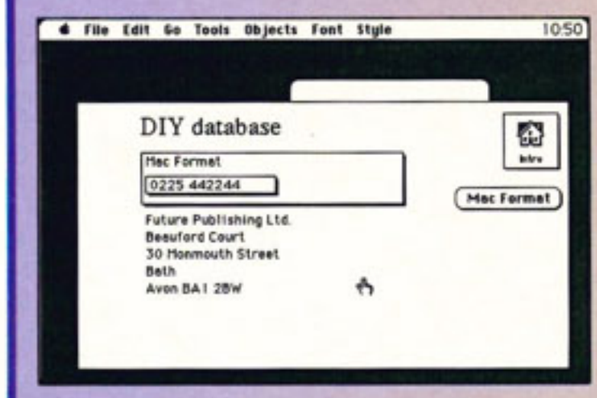
DIY HyperCard database stack: part 5



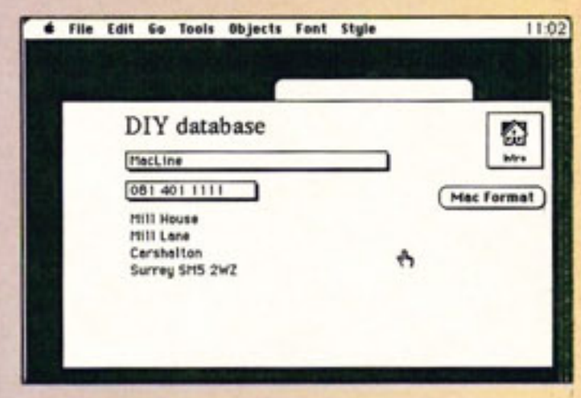
1 This is how we left our DIY database. looking last month, having copied the button that takes us to the **MacFormat** card. We've already experimented with *HyperCard's* painting tools and buttons, but the fields we're storing our text in are still in their default style.



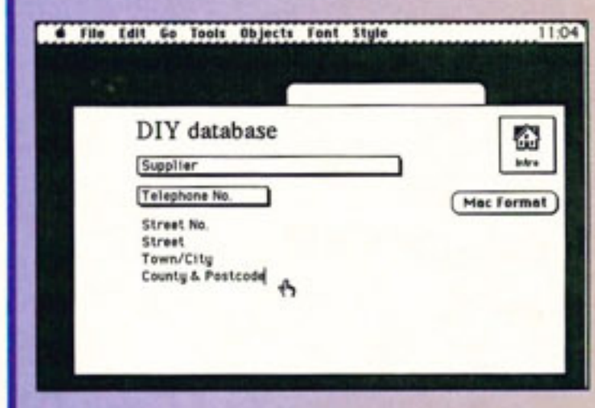
2 You can change the style of a field by using the Field Info dialogue. Here we've given the supplier's name and telephone number a three-dimensional 'shadow' style, while we've taken away the rectangular frame for the address.



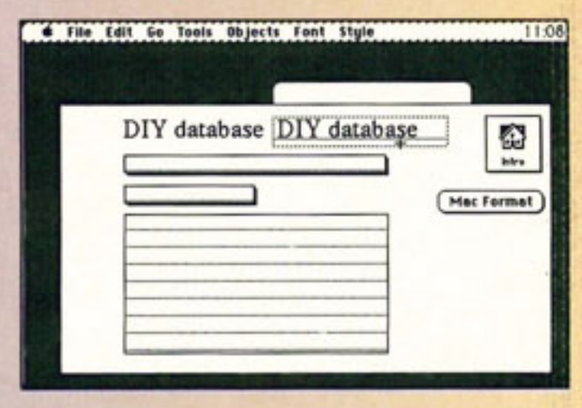
3 Fields can act as graphic devices too! Here we've simply increased the size of the supplier's field to create a layered effect. This relies on the phone number field being in front. You can change the order using the Bring Closer and Send Farther commands.



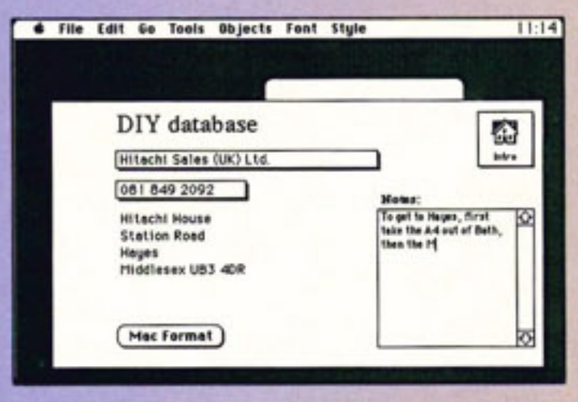
4 Fields created in the background (like those in our database) can have two different types of text, depending on whether the field's 'Shared text' property is selected or not. If it is not selected, each card contains different text...



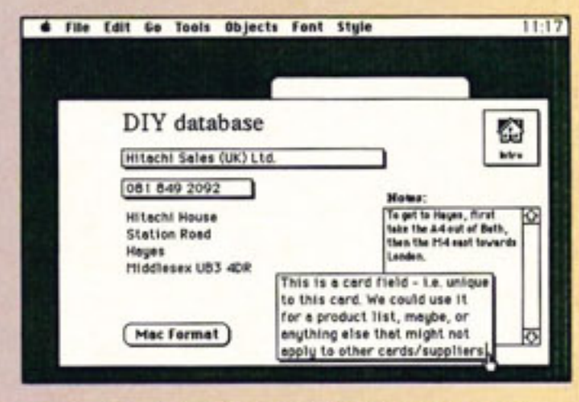
5 ...While with 'Shared text' selected, each card carries the same text (in this case, a kind of text 'template'). Note that you can only edit shared text in background mode. Note also that both kinds of text can exist in the same field!



6 Shared text is particularly useful when inserting labels or titles to appear on all cards. Paint text will always print bitmapped, but any outline font in a field will print properly. We can replace our paint-text title with a field containing shared text.



7 Always remember the difference between card fields and background fields. Here we've created a scrolling 'Notes' field in the background, because we want it to be available on all cards (for directions, for example).



8 However, if we want additional fields (say for product lists) on some cards only, it makes more sense to create individual card fields for those cards. It saves clutter on those cards that don't need them.

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 dealer, call Apple free on 0800 127 753. A 'play only' version is available for £34.

CD ROM ROUND UP

MacFormat now has a sister magazine entirely devoted to CD-ROM, *CD-ROM Today*, but don't bother looking for it in W H Smith, as it's only available in the States at the moment. However with all that CD-ROM expertise on tap, we've asked the staff of *CD-ROM Today* to tell us about some of the latest CD-ROMs to be published over there.

Many of these CD-ROMs don't have official UK distributors yet, so we've given a US contact number, but try the leading British CD-ROM importers such as KimTec (0202 888873) or Softline (081 401 1234) first, as they are always adding to their lists.

One of the strangest CD-ROMs to be seen recently is *The Tao of Cow* (Quanta Press, 0101 612 379 3956). You could describe it as a database about cows, but it doesn't contain much practical information, more a sort of eastern philosophy meditation on the essence of cows.

Similarly West Coast in its appeal is *Small Blue Planet* (Now What Software, 0101 415 885 1689). Unlike most atlas CDs, this o is based on satellite photograp although conventional maps are al included. A 'chronosphere' mod shows where in the world is in dayli at any given time, and uses satell data to show the artificial light visi from space. '3D' topographic ma show mountain ranges with gr clarity, and there are satellite pictu of major conurbations.

A more conventional atlas is *Wor Atlas* from Software Toolwor (Mindscape 0444 246333). One of t first of its kind, it has been substantia enhanced with the addition of hundre of colour photographs and QuickTi video clips on the major features every country in the world. It feature comprehensive database on ea country, including travel information.

Time-Life's series of science boo has a great reputation for maki complex subjects clear, and Ti Warner Interactive (0101 818 9 9999) is transferring some of the titles to an interactive CD-RO format. One of the first, appropriat enough, is *How Computers Wo* Much of the 'book' consists narration over the top of a slide sho but the CD is interactive with games make subjects clear and a built- version of the Logo programmi language to help teach programmi principles.

One CD-ROM which almost defi explanation is *Wild, Weird and Wo*

Set course for distant suns

I can still remember being woken up at the age of four to watch the moon landing; for years afterwards I was fascinated by space and stars. I would have loved *Distant Suns* then, but unfortunately Steve Jobs neglected to invent the Mac for another 10 years or so.

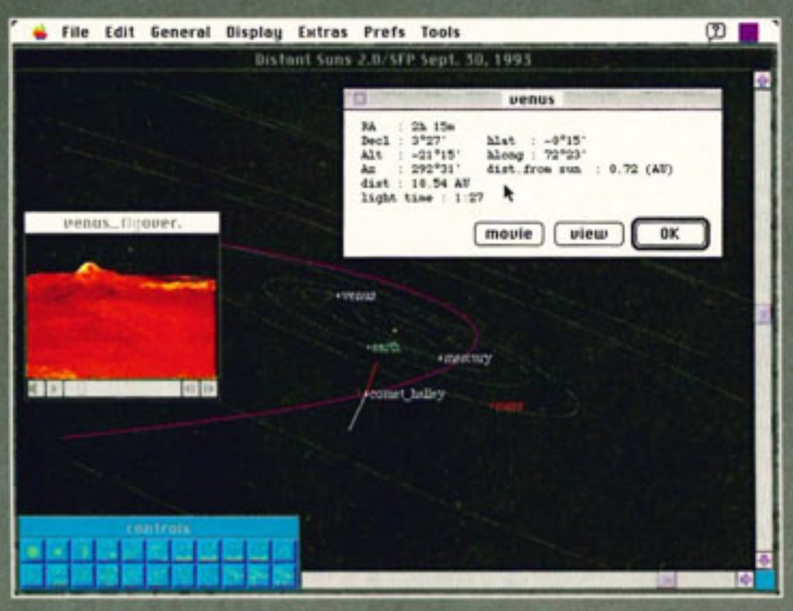
These days would-be astronomers are more fortunate as Virtual Reality Laboratories has just released *Distant Suns 2.0* on CD-ROM. *Distant Suns* is a Mac-based planetarium.

At its simplest you tell the program the date and time, where on earth you are and what direction you are looking in and it will tell you what you are looking at. Double clicking on a star or planet brings up information about it, including pictures and QuickTime movies in some cases.

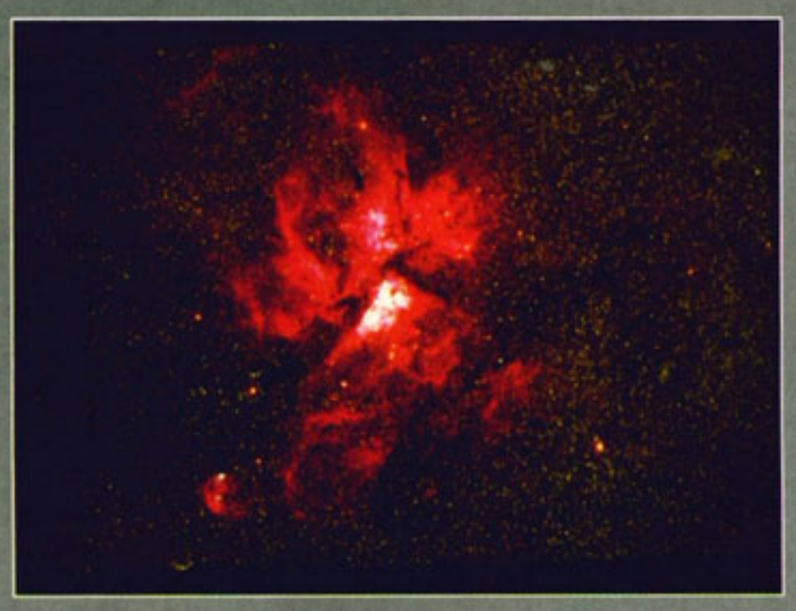
The CD-ROM comes with a database of 1,500 pictures and 37 QuickTime movies. It also differs from the floppy disk version of the same program in having the NASA SkyMap and Hubble star catalogues on the disk – over 16,000,000 stars in all! There's also an audio soundtrack, of which the less said the better. The user interface is a bit unconventional, revealing the program's Amiga roots, and the program's authors are clearly not fans of using capital letters for proper nouns, but it's functional enough. Speed is a problem, especially when you begin to calculate planetary motions, but with such a huge database I suppos that's inevitable.

Distant Suns costs £50 from Emerald Creativ Technology on 081 715 8866.

Distant Suns rating **80%**



Distant Suns makes pointing your telescope the right way easy, if you have your Mac outside...



On the CD-ROM are hundreds of, frankly, unhelpfully named pictures. This nebula has a codename of NCC1701.

Our office is about half way up, just left of centre. You can s Yolanda waving out of the window if you look closely.

Distant Suns is so comprehensive, it even includes the man in the moon's telephone number.

When it comes to digitised pictures, *Distant Suns* runs rings around its competitors. Sorry.

MPI Multimedia, 0101 708 535 1540). It contains 250 QuickTime movies with no linking theme other than their strangeness. For example there's film of a man with canvas wings jumping from the Eiffel Tower, and of someone with a helmet having bowling balls dropped on their head. Seriously odd.

Mammals: a Multimedia Encyclopaedia from the National Geographic Society (based in Washington, no phone number given) returns to a favourite theme of CD-ROMs: animals. It contains a database of pictures, text, sound and maps of mammals from around the world, and the usual games to make things interactive. Not frightfully imaginative though.

On the games front, *Lunicus* (Cyberflix, 0101 615 573 8849) is a maze-based shoot-em-up which claims to be the fastest CD-ROM ever created. It supposedly achieves this by carefully storing files which need to be accessed sequentially next to each other on the disk, and having multiple copies of commonly used files to cut seek times. The game itself wins no prizes for originality; you must save the world from invading aliens by exploring corridors and shooting things. But it is fast and we'll be giving it a full review soon.

Finally for this month is *Americans in Space* (Multicom Publishing, 0101 206 622 5530). Americans are eternally proud of their astronauts, and this CD has dozens of movies plus pictures and narrations on all of the US's many space projects. I would have loved it as a kid, but is space exploration exciting to the children of today?

■ In the December issue of **MacFormat** we reviewed *Wallobee Jack* and gave a Canadian phone number. You'll be glad to hear that the program is now distributed by Softline, so you can ring them on 081 401 1234.

CD-ROM news

■ A new edition of *The New Grolier Multimedia Encyclopaedia* is due out featuring 'multimedia maps' and narrated essays. Available from Mindscape, 0444 24633333.

■ *Dracula Unleashed* is the latest CD-ROM game from ICOM (now part of Viacom), creator of the *Sherlock Holmes* series. The game includes over 90 minutes of video.

■ Richard Scarry's brilliant children's books now have a CD-ROM equivalent in *Busytown* from Paramount Interactive (0101 415 812 8200).

■ Sanctuary Woods will release *Once Upon a Forest*, an environmentally aware CD-ROM early next year. 0101 415 578 6340.

■ Electronic Arts will next year release *The Labyrinth of Time*, described as an epic fantasy of time travel and adventure.

Bring your child's books to life

Broderbund's *Living Books* series is a set of interactive cartoon books aimed a young children. Two of the latest titles are *The Tortoise and the Hare* and *The New Kid on the Block*.

The Tortoise and The Hare is an Americanised version of the fable by Aesop. Intended for under 8s, it's extremely well done, with quality artwork and animations. As with all *Living Books*, you have the choice of having the program read the book to you (the narrator is a crow), or a more free-form interactive approach. In interactive mode, you can click on virtually anything on the screen and get an amusing animation in response.

I found the main disadvantage of the program was its American accent and spelling, but if you can live with that. *The Tortoise and The Hare* will enthral any child.

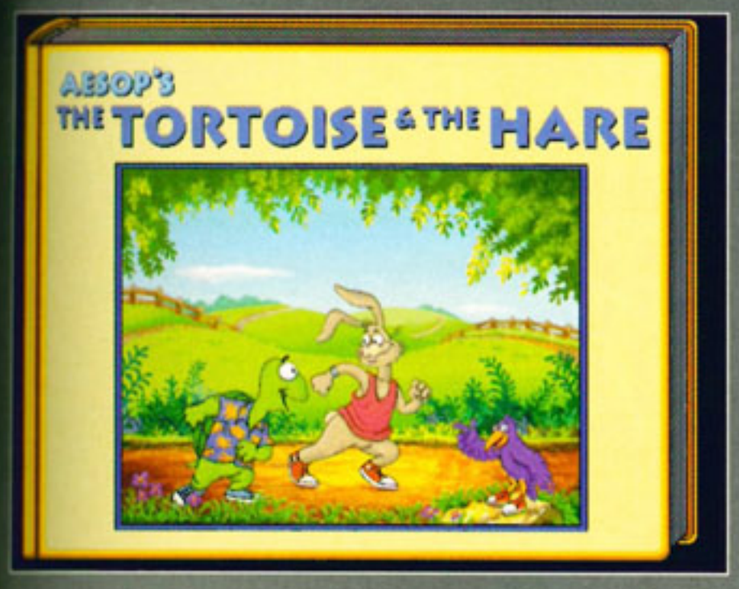
The New Kid on The Block is a set of poems by Jack Prelutsky. Again they can either be read out loud by the program, or you can click on a line of a poem and see an appropriate animation.

Intended for slightly older children (up to 12 years old), the poems are very silly and the drawings, by New Yorker cartoonist James Stevenson, are nicely done.

Both *Living Books* come with a conventional book in the box, and cost £40 from Electronic Arts on 0753 549442.

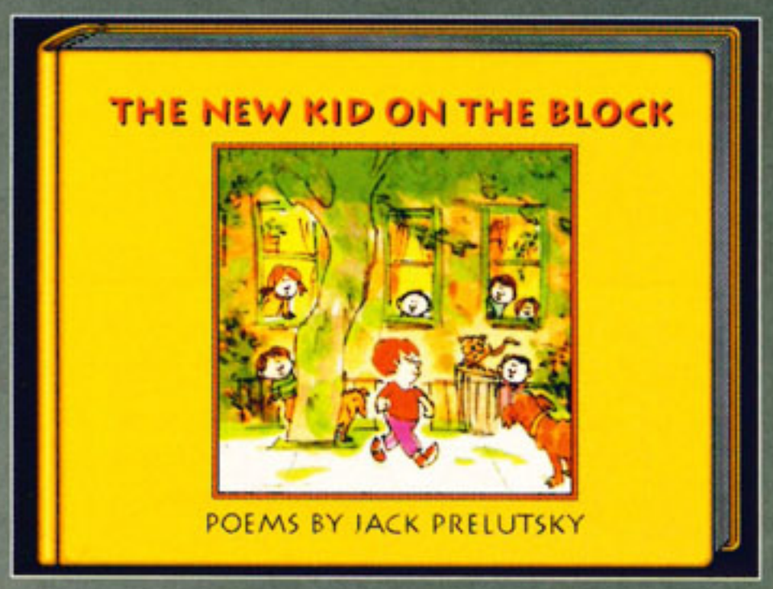
The Tortoise and The Hare rating 85%

The New kid on the Block rating 80%



Broderbund's animated story book series of Living Books updates the Greeks with a cartoon Aesop's fables.

If you click on any object it will perform a little animation: each screen will keep a kid happy for ages.



New Kid on the Block has a strange and occasionally sick sense of humour, sort of Roger McGough-esque.

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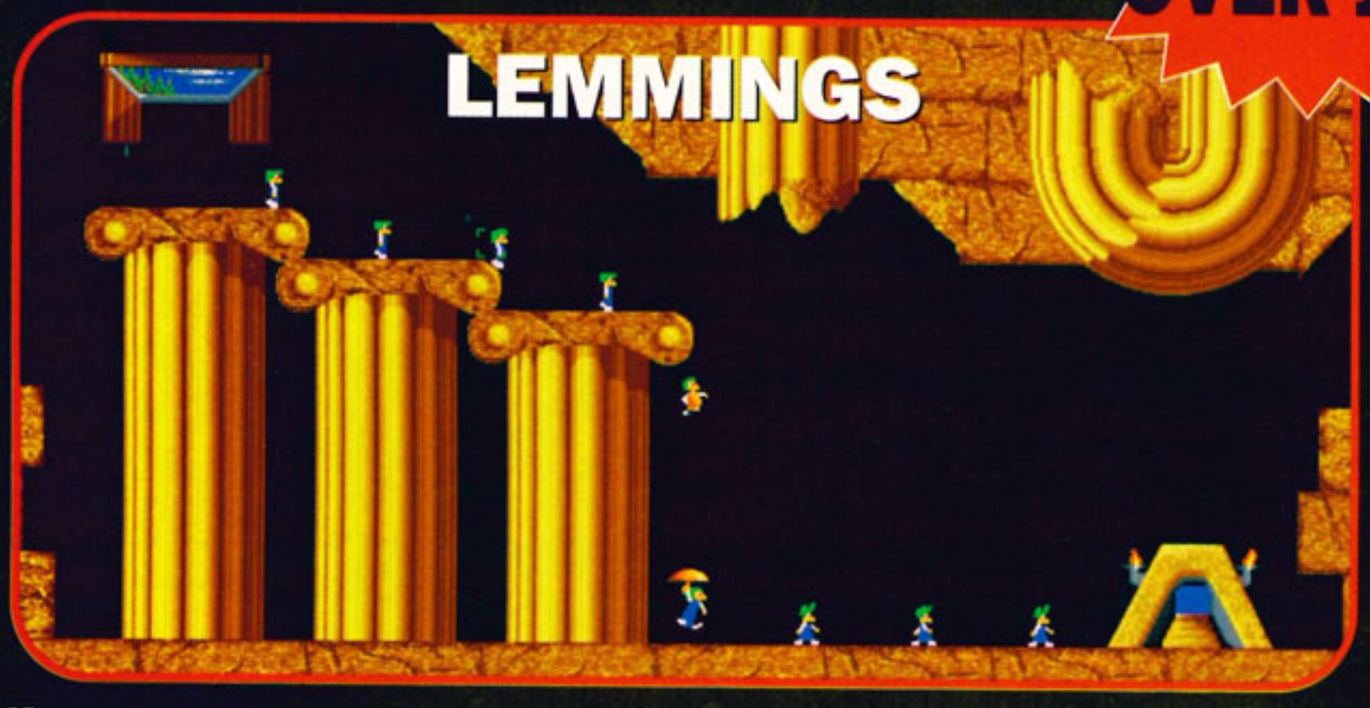

If you haven't played *Lemmings* then you haven't lived. You have sworn much either, or spent half the day trying to work out a particularly devilish puzzle, or woken up in the night humming that tune. The object of Lemmings is to save as many of the little blighters as possible, which is tricky as they insist on diving off cliffs, drowning themselves and walking into mincing machines. You can control certain lemmings, and the others will follow to safety – if you get it right! There are 120 levels to work out.

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mac BEGINNERS

Mac + software

This month we take a break from hardware, as Ian Wrigley sets up a basic survival toolkit.

So far in the Beginners' series we've looked at the basic Macintosh hardware and specific elements such as the hard drive, SCSI port, adding RAM and so on. This issue, though, it's time to look at some basic software survival tools, to help you when things go wrong and your Mac won't boot up despite the fact that all the hardware is functioning correctly.

To make things easy to follow, I'll assume that you are running some version of System 7 on your Mac – 7.0, 7.0.1, 7.1 or 7.1P (for Performas). However, don't worry if you use System 6 – whenever possible I'll mention the differences between the two.

Of Systems and Finders

Before you can fix a software problem, you have to know a little bit about how things are supposed to work. When you first turn your Mac on, it makes the familiar 'bing' (or 'thong', if you're using a new Mac) and then performs some hardware checks on things like its RAM, processor and so on. Assuming that everything's OK, you'll see the 'happy Mac' displayed; if there's a hardware problem, on the other hand, the screen will turn black, you'll hear an arpeggio (four notes, rising in pitch, played one after the other) and a picture of a Mac with a 'sad face' will appear on the screen. Under that will be two lines of hexadecimal characters, which tell the initiated what the problem actually is (allegedly, no-one has ever produced a totally comprehensive list of all the possible error codes).

If this happens, don't immediately panic: things may not be as serious as you might think. For example, if you've installed a new SCSI device, the Mac may be having problems with termination (see our December issue for more details on this) and this may be the cause of the error – in which case switch off, remove all SCSI devices and try to restart again. Also, try booting from an emergency disk (see below) – the problem may be on your hard drive. If neither of these approaches works, though, it's time to take the Mac to see a specialist – it's not likely to be a problem you can cure yourself, unless you really know what you're doing.

Anyway, once the internal checks have come up OK and the happy Mac is on the screen, the computer then looks for a System file. This contains the 'operating system' – instructions which tell the Mac how to display images on the screen, how to interpret key presses and mouse clicks, and all the other 'behind the scenes' things that the Mac must do. The System file is normally contained within the System Folder on your hard drive; however, if there's a disk containing a System in the floppy drive when the Mac starts looking for the System, it will use that one instead (which is handy, as we'll see). If no System file can be found on any attached hard drive or inserted floppy disk, you'll see a flashing question-mark icon on the screen. If one is present, the 'Welcome to Macintosh' image appears.

The Finder is in fact an application just like any other – except that you can't normally quit out of it

After finding the System file, the Mac then looks for any 'Extensions' (INITs in System 6 parlance) and Control Panels that are present in the System Folder. These add extra functionality to the Mac and can be considered, to all extents and purposes, to be extra bits of the System. As they are loaded into memory, you'll see their icons appearing at the bottom of the screen. Finally, the Mac tries to load the Finder. This provides the Desktop, menu and so on that you're familiar with, and is in fact an application just like any other – except that you can't normally quit out of it, since if you did that the Desktop would disappear. If no Finder is present, the Mac will tell you so – and your only options will be to Restart or Shut Down, since the Finder is normally needed before anything else happens.

Problems, problems

Now that you know (in simplified form) what happens when the Mac starts up, you should be able to see that there are various areas where problems can occur; they are:

- Hardware problem (we've dealt with that already)
- No System file
- Corrupt System file
- Problems with Extensions
- Problems with the Finder

Fortunately, there's something we can do about all of these; what we need to do is create a 'survival toolkit' which helps us work out what's wrong. And (unless you're running System 7.1P) Apple provides just such a disk, in the form of Disk Tools – one of the original System disks that came with your Mac. (A quick note for Performa users here: Apple doesn't supply a set of System disks with the Performa, which means that if you have a System crash you're in trouble. I'd suggest that you fork out the £30 or £40 now to get a copy of System 7.1, so that you'll be able to re-install the System and deal with other such problems as soon as they occur. It's extra expense, but it really is well worth it in the long run.)

On the Disk Tools disk is a System folder containing the System and Finder, plus two extra tools – *Disk First Aid* and *HD SC Setup*, which we'll talk about in a little while. The important point is that this floppy contains both the System and Finder, so it's what is commonly known as a 'startup disk' – that is, it contains the files that the Mac requires to start up correctly.

Remember that if a floppy with a System

The Centris family, Color Classic et al

Since System 7.1, Apple has introduced a new way of updating the System to cope with new machines. Previously, a whole new System version was released – 7.0.1, for instance, was at least partially released to cope with new Macs which appeared after 7.0 – but now Apple wants to stick with one version of the System and instead use 'System Enablers' to update things for new Macs. The System Enabler sits loose in the System folder, and acts rather like an Extension – it's a kind of 'plug in' to the main System file. If you have a Mac which requires one of these, you should find that your Disk Tools disk already has the System Enabler on it; you must include this updater on any startup disk that you create.

survival kit

and Finder is inserted into the drive when the Mac's looking for those files, it will be used in preference to the System Folder on the hard drive. That means you can force the Mac to start up from this floppy simply by inserting it immediately after switching the machine on – and thereby bypassing any problems with the System file on your hard drive. The hard drive icon should still show up on the Desktop, but the floppy disk icon will be above it, showing that that's the disk you started up from.

Before you do anything else, you should make a backup copy of Disk Tools – then put the original safely away

Before you do anything else, you should make a backup copy of this disk – then put the original safely away. Check that your copy works OK by booting from it, then keep it handy – it forms the basis of your emergency toolkit.

Solve those problems!

So, let's assume that for some reason your Mac isn't starting properly. What you need to do is identify the problem, then take the appropriate action.

■ Flashing question-mark.
The Mac hasn't found a System file on your hard drive. Insert your copy of the Disk Tools disk and the Mac should boot from that. Now, does your hard drive's icon appear underneath the Disk Tools icon on the Desktop? If not, then you've got potentially major hard drive problems – see the box out 'hard drive horrors' for more details. If the disk appears, then you've either got a corrupt System or a problem with how the disk is storing your data. Run *Disk First Aid*, which is on Disk Tools; if there's a problem it will attempt to cure it (although it's only much good for pretty basic trouble – anything more complex will require a third-party program such as *Norton Utilities*, which can be highly recommended). If it's a System corruption, though, you'll need to re-install the System; to do this, reboot and insert your Install 1 disk, then follow the instructions that appear. Don't worry – only the System Folder will be changed, none of your other work will be touched. Even things like Extensions and fonts should be retained. Now you should be able to reboot from the hard drive with no trouble.

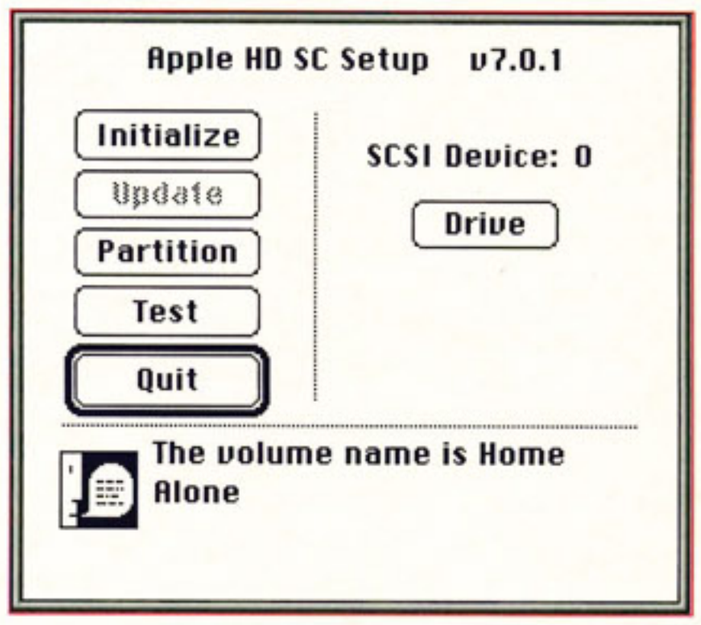
■ Mac freezes while the 'Welcome to Macintosh' message is displayed – nothing happens for several minutes, the cursor is stuck in one place and so on.
This is almost certainly a conflict between two or more Extensions (known almost universally as an 'INIT clash'). The thing to do is stop the Extensions loading, reboot, remove them all, then replace them one by one, restarting each time until the problem occurs again – you can then tell which Extension is the problematic one. To stop Extensions loading, restart the Mac and hold down the **[shift]** key; underneath 'Welcome to Macintosh' you should see a message telling you that all Extensions have been turned off. You can then take them out of the System Folder. Note that this doesn't work for System 6 or below; in this case you'll have to reboot using your emergency disk, and then remove all the INITs from the System Folder on your hard drive. **mf**

mac TRIVIA

There's not much room for MacTrivia this issue, but here's an interesting little snippet. Macintosh was originally the code-name for the project, but Steve Jobs, one of Apple's founders, insisted that it become the final name – despite the fact that it cost the company around $2million in out-of-court settlements over trademark disputes. Why 'Macintosh'? Well, no-one knows for sure, but rumour has it that it's because Mackintosh is a type of apple. And spelling clearly wasn't a strong point in the early days...

Hard drive horrors

If your hard drive doesn't appear on the Desktop even after you've rebooted from an emergency disk, either some of the disk's basic information has become corrupted (possible) or you've got a hardware fault (unlikely). Assuming that you're using the internal Apple hard drive as your System disk, and that it was originally formatted using an Apple driver (likely unless you're a 'power user'), you can use *HD SC Setup* to check things out for you. Launch the program, click 'Drive' until you find your startup disk and click on the 'Update' button; this will update the disk driver – a low-level piece of software which the Mac uses to access data on the disk. No data should be lost – although if there's a real problem, there is no guarantee that all your data will be recovered by this or any other method. Note that if you choose 'Initialise', all the data on your hard drive will be lost – it's just like formatting a floppy disk.



HD SC Setup can save your life if the hard drive doesn't appear on the Desktop

NEXT ISSUE:

We'll be back with more pointers on troubleshooting those problem disks and we'll have a selection of extra tools that you should add to your emergency toolkit without delay!

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Aurora: Change all your window and menu colours
SuperApple: Make your Apple icon move
Welcome: Change your 'Welcome to Macintosh' screen
Sniff: Give your Mac a cold!

SCREEN MADNESS 2

Boaster: Fill your startup screen with bogus icons
Bob's Eyes Pro: The best of those beastly eyes
Critters: Strange creatures wander across your screen
Errditor: Customise all those error messages
MouseOdometer: How far *does* your mouse walk?
NeXT: Make your Mac look like a NeXT
Notify: Send yourself crazy messages
Personal Bomb!: Customise your own system crashes!
Pet Rock: Well, it just kind of sits there actually
Visage: Change your hard disk icon in a flash
Windows 3: Make your Mac look really crap!
Zipple: Animate your Apple menu icon

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DESKTOP FUN

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Deadterm: Make your Mac talk like Terminator Arnie
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SoundMaster: Add any sound to any action!
RapMaster: Play rap music on your Mac!
SoundExtractor: Get sounds from other programs
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Classic sound clips from two of the classiest cult films of all time – **Blade Runner** and **Mad Max** – for you to customise your system

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Turn your Mac into a virtual reality workstation with stunning sound effects and clips from **Lawnmower Man** and **The Fly**

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Goudy: Postscript 1 font
Rhyolite: Postscript 1 font
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Mira: TrueType font
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PERFECT PRINT

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Batchprint: Select any files to print without loading
Tt2win: 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 displayer and lister

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 ST
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 supplied

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
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SHAREWARE ZONE PD

In his usual search for the cream of the PD and shareware crop, Ian Wrigley boldly ventures across the Internet to find PD and shareware goodies. This issue, he's dug out a couple of versions of *Pacman*, a program to download software to a Newton and much more...

Bachman

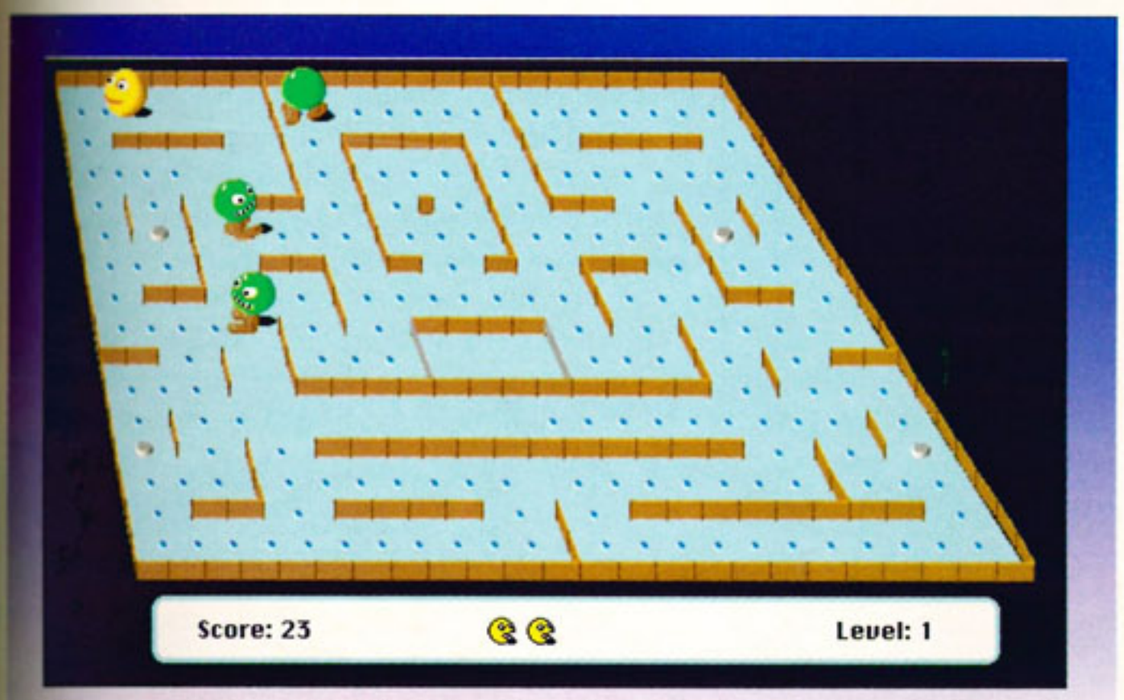
Three-dimensional *Pacman*

SHAREWARE $15

A few issues ago I took a look at a black-and-white version of *Pacman*. Now I've dug up two colour versions of the game; one traditional (see later in the column) and *Bachman*, an interesting-looking 3D implementation of the game.

As always, the idea is to run around gobbling up all the little dots on the board while avoiding the meanies (called, in this version, 'tomato heads') which chase around after you. Eat a 'power pill' and you turn into the aggressor – for a few seconds the tomato heads turn red and you can temporarily banish them to their den by running over them.

Bachman is a pretty good implementation, with a couple of neat twists – such as a 'biscuit' that you can fire at your tormentors to put them off a little bit. If you're a *Pacman* fan, it's certainly worth a try. The author says that the program is free for personal use, but that a $15 fee will get you a game editor to design your own levels, plus the latest versions of all his other games. That alone makes it worth sending off the fee.



Pacman comes over all three-dimensional in *Bachman*. There's a great sampled guitar riff at the beginning of the game, too!

SmartSaver

Network aware backup program

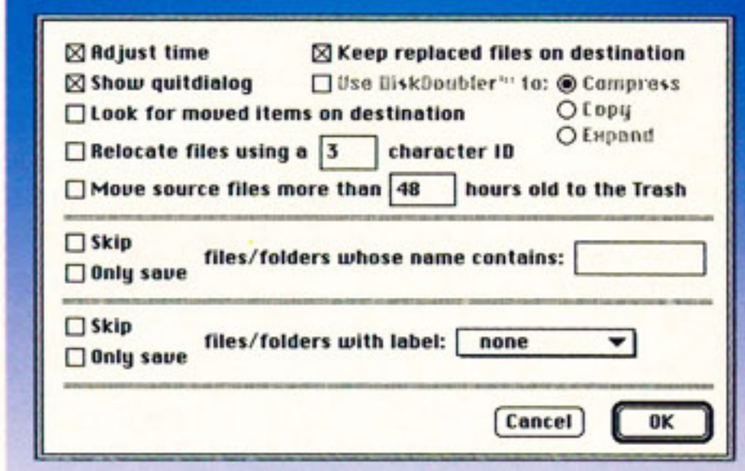
SHAREWARE $50

We all know how important it is to back up data, right? And we all know that we don't actually bother doing so – at least, not until after a major disk crash that loses all that vital work that couldn't be replaced. There are plenty of backup utilities around, of course, but none seem to do exactly what you want them to – they're too complex, or too simple, or too much hassle, or just not quite right for your particular method of working.

Well, *SmartSaver* could be the answer: it's easy to use, but remarkably powerful and fully-featured. It's also network-aware, and you can do some great stuff if you've got the program installed on more than one Mac. It requires System 7 to run, something that's becoming more and more prevalent these days. If you're not yet running System 7, you should seriously think about upgrading anyway. So what's the downside? For once in the shareware world is the price: a $50 fee is requested, which is more than a little steep for shareware. The only other program I know that asks this sort of price is *BiPlane*, which costs $70-odd. But with even classic programs like *StuffIt Lite* only running in at $25, perhaps the author of *SmartSaver* should re-consider the fees that he's charging...

Anyway, back to the application. Once you've set up source and destination locations (they can be anywhere on the network, as long as you've got the requisite privileges to log on to that particular Mac) the program will back up all of your source data to the destination file. After that, though, only items which have changed will be backed up in the future – which can save a lot of time if only a few new files have been created, and only one or two others changed. If you're running the program in the background all the time (which is recommended; it only takes up a 150K memory partition), it will prompt you to do a backup when you select **Shut Down** from the **Special** menu.

It's when more than one computer is running *SmartSaver* that things get really interesting, though. For starters, you can force one Mac to do a backup by sending it a command from within your copy of *SmartSaver*. You can also send a message to any other copy of the program on the network (the message appears on the user's screen), and you can even shut down a Mac remotely. This means that a system administrator, say, can have one copy of the program running on the file server and one on his or her own Mac. To do a full system backup, all they have to do is send the backup command from their own Mac to *SmartSaver* running on the fileserver, and the whole job is done automatically without having to dig around in the wiring cupboard or wherever your fileserver is kept.



SmartSaver: a network-aware, powerful backup system. If you've got a network of Macs, it's well worth checking out. It's a bit steep at $50, though!

If you're in the market for a powerful, yet easy-to-use backup system, *SmartSaver* may well be what you've been looking for. But at $50 a copy, I suspect that it will only be companies, and not individuals, who can afford to use it. A shame, that – it's certainly a good program.

Find Stuff

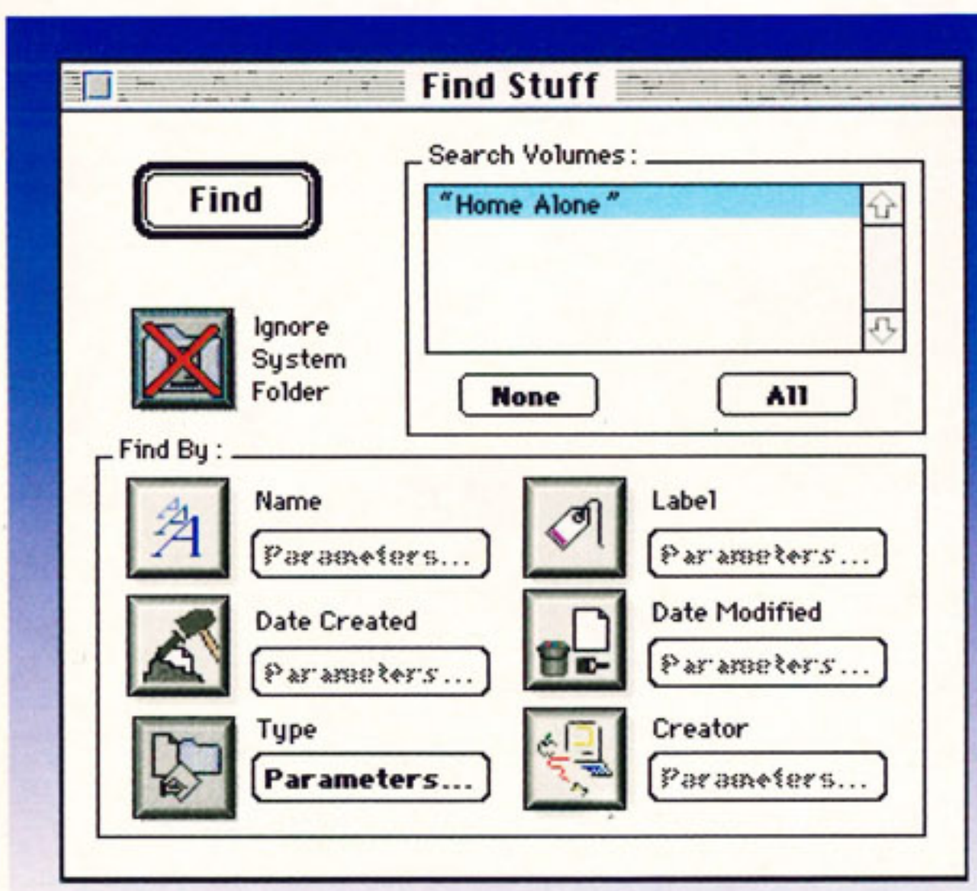
Very powerful 'find file' utility

SHAREWARE a postcard

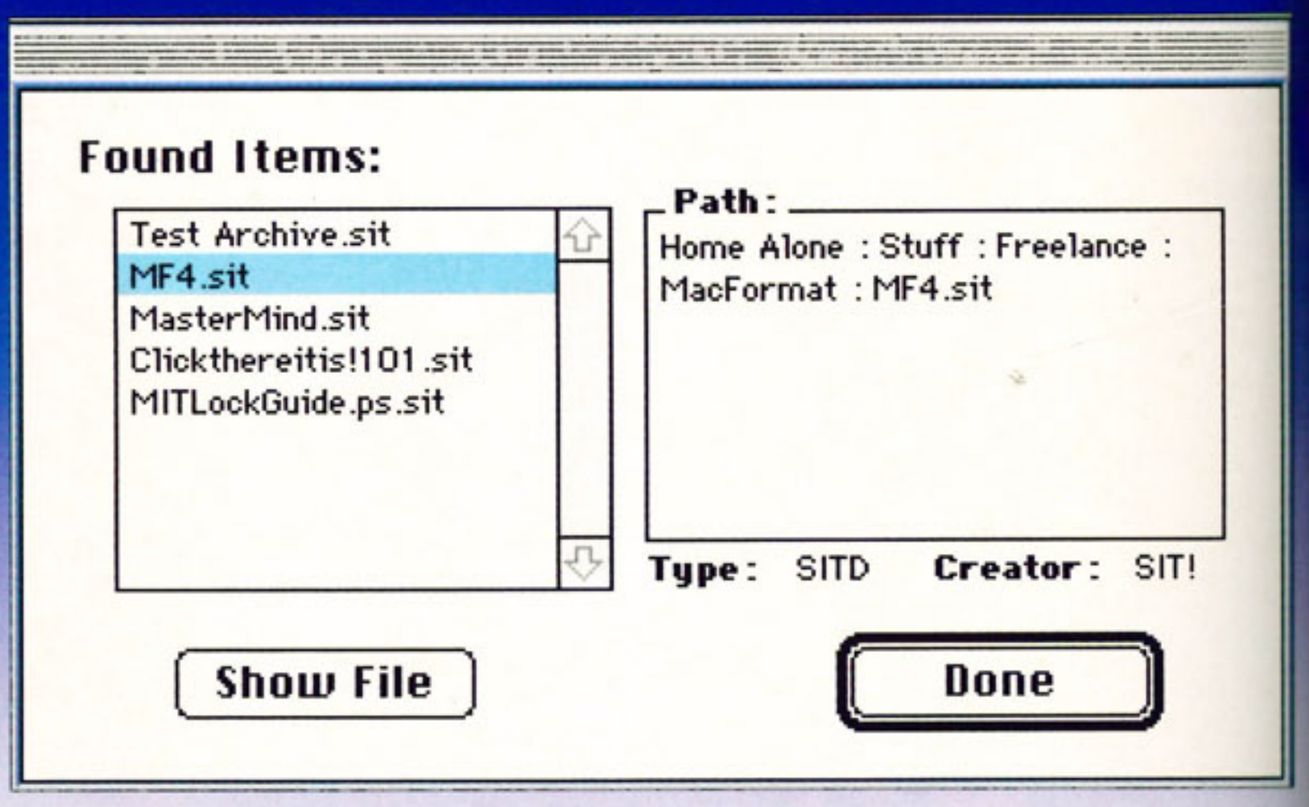
Find Stuff is exactly what I've been waiting for. There are plenty of other 'find file'-type programs around, but this one adds something that's conspicuously missing from all the others I've seen: the ability to find a file based on its type or creator. For many people, that isn't something that's particularly important – but occasionally what you want to do is, say, find all Microsoft *Word* documents created after the tenth of last month – and you don't care about any files created in other programs. Well, now you can do that using *Find Stuff*.

The program's interface is easy to get along with: click on the type of find that you want to do, hit the Parameters button to enter your data, choose the volume(s) to search and off you go. When files are found, their full path names are displayed for your reference, or you can click on the Show File button to bring up the Finder window containing the file. From the Preferences window you can choose to have the program automatically bring up the 'find by name' dialogue when it's launched, so if that's the way you normally use such a utility you won't be faced with any other choices – unless you choose to be.

The program seems to be at least as fast as System 7's built-in Find function, and its extra features make it an excellent substitute. It's well worth the postcard asked as a shareware fee – and the author could have quite happily requested money for this little gem, since it's just as good as some commercial programs. It's now residing in my Apple menu, and I never bother using System 7's Find command any more. Recommended.



Find Stuff adds 'find by creator' and 'find by filetype' to the standard bevvy of find commands that you can expect.



Once files have been found, you can view their paths or open the folder that contains them. More usefully, click on Show File and the window containing it will appear on the Desktop.

StringThing

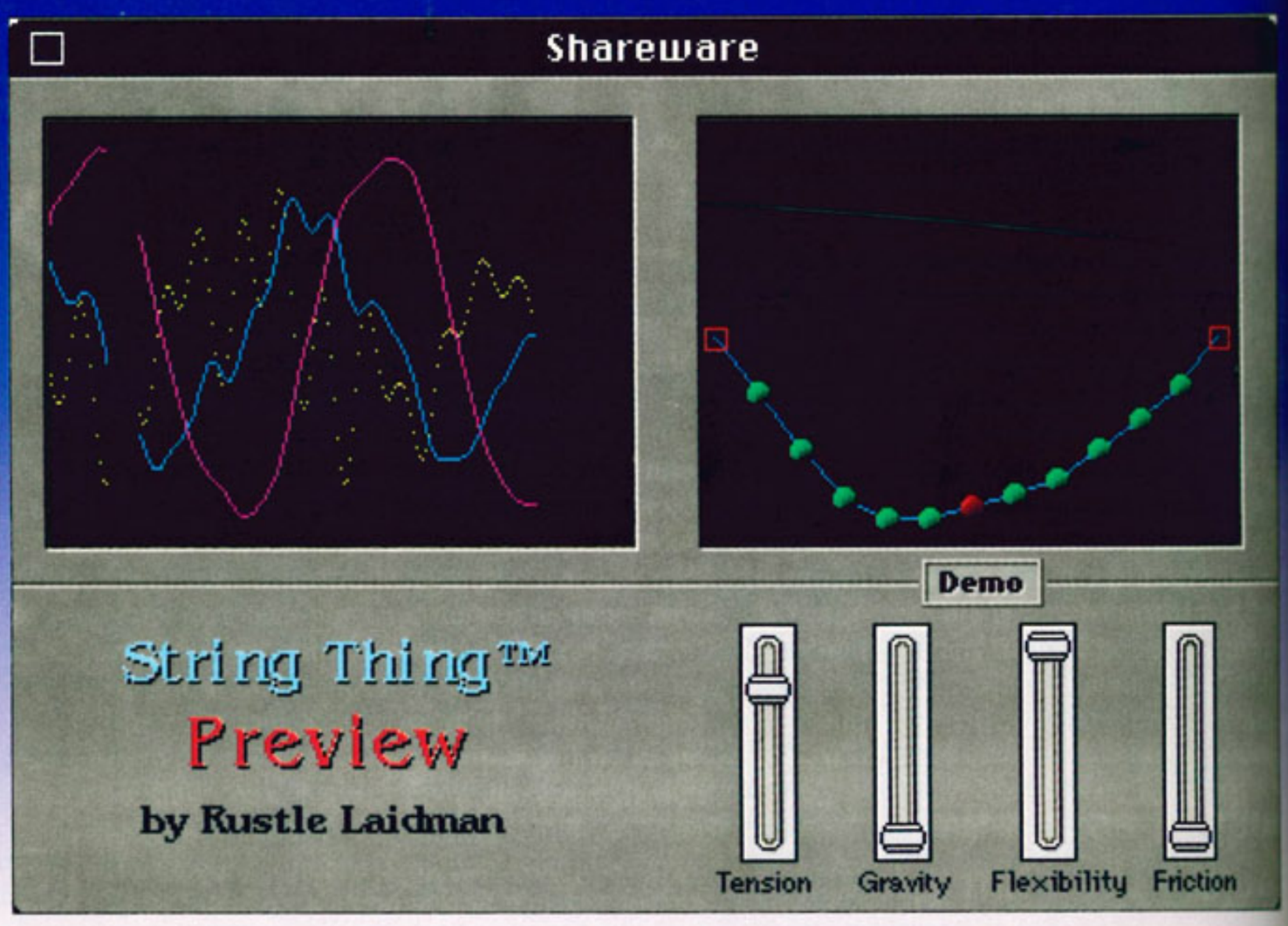
Physics simulation of vibrating string

SHAREWARE $25

Remember the physics lessons where you watched strings vibrate, stuck weights on the ends of springs and stuff like that? Now you can do it in the privacy of your own front room, thanks to *StringThing*. The version available freely is a demonstration copy of the program, so many of the features are disabled, but it does allow you to see the power of the full application and includes controls for you to vary things like the friction, gravity and flexibility of the string and weights. There's also a rolling display of a string with just one weight, showing simple harmonic motion, damped oscillation and so on.

The full version of the program allows you to hang up to 64 weights on the oscillating string, to set its initial conditions and shape, choose whether to oscillate one of the end points or not… anything that you'd want to do to demonstrate this kind of thing in a physics lab. There's also a full-sized 'plot window', where the displacement of the weights is graphed against time, to demonstrate the waveforms of things like simple harmonic motion (God, I hated that when I was at school).

The 'home version' of the program costs $25; the 'institution edition' is $65 – and it's well worth science teachers blowing the budget.



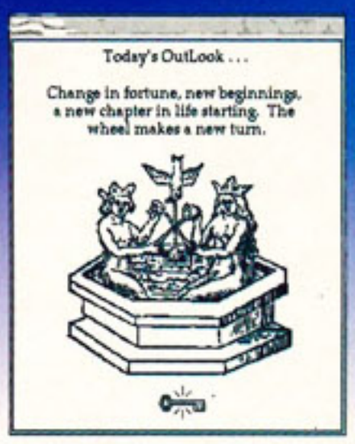
StringThing: explore the wild and wacky world of weights on bits of string without even going near a physics lab.

Rosarium

Fortune telling program

Well, according to the program this is based on the *Rosarium Philosophorum* from 1550 (whatever that is). It's dead simple to use: a window appears, in which is a picture of a fountain and a little key icon. Click on the key and you're given today's outlook – today, for example, I can look forward to a change in outlook, new beginnings, a new chapter in life starting. The wheel, apparently, makes a new turn (whatever that means).

All very silly stuff, but stick it in your Startup Items folder and at least your friends will have something to scoff at when they use your Mac. $5 gets you a colour version of the program – I suspect that most people will just trash it, though. On the other hand, maybe it's accurate – spookily enough, I saw a metal box on the road today with not one but four wheels, all turning…



No more Russell Grant for me – I've got the old *Rosarium* to tell me what to look forward to now!

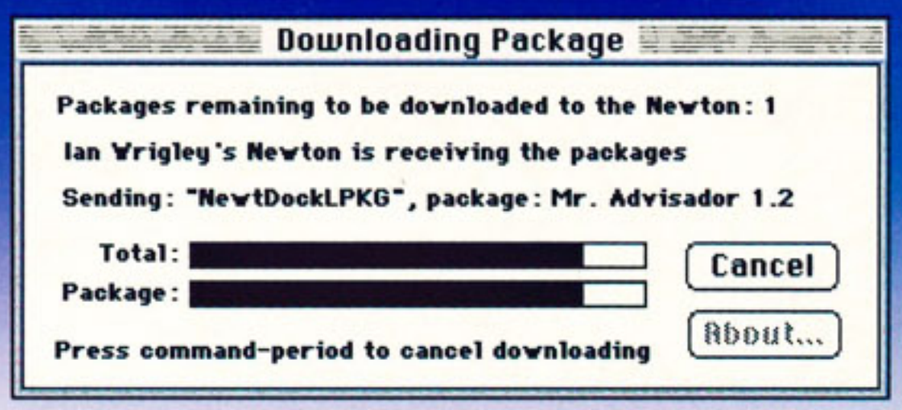
Newton Package Downloader

Download software to your Newton MessagePad

When Apple released the Newton, it also started selling a beta version of its developer tool, the *Newton ToolKit* – and within days people had started writing public domain and shareware applications for the Newt. The problem is that these applications are almost invariably supplied as 'packages', which have to be downloaded using the *Newton Connection Kit* – something which is due to start shipping any time now, but which will cost about £100. People with the *Newton ToolKit* could fudge things and 'cheat' the program into downloading other people's packages, but since the *ToolKit* costs almost $800 it isn't exactly in wide circulation.

Enter the *Newton Package Downloader*, a totally free program from the rather wonderful Peter Kaas. Now, all you have to do is connect your Newt to your Mac using AppleTalk (or, if you prefer, just a standard serial cable), drag the packages you want to the *Downloader's* icon and away it goes, downloading happily for you.

If you have a Newton, there's plenty of PD and shareware now available – from great games to 'proper', serious applications. And now there's a free way of getting the things from your computer to your PDA. Anyone with a Newt needs a copy of *Newton Package Downloader* – it can't be recommended highly enough.



Finally, you can download all that great PD and shareware Newton software without waiting for the *Newton Connection Kit* to shop.

Click, there it is!

Tool for easy negotiation of Open and Save dialogues

This is an extremely neat piece of software, and one that I'd recommend to anyone who doesn't use something like Norton's *Directory Assistance* or Now's *SuperBoomerang*. It allows you to easily select a folder into which to save documents (or from which to load them), without having to negotiate through the standard pop-up menu for half an hour to get to the place you want. With this System extension (which requires System 7, by the way) all you do is choose the **Open** or **Save** command from your application as normal, and then click on any window that's visible in the Finder. The dialogue box will automatically change to show that folder as the destination for your file. It's hard to appreciate how useful this is until you've actually used it for a while – and then you wouldn't be without it. If the dialogue box obscures the Finder window that you want to select, that's no problem either: the program allows you to drag it around on the screen (something that's not normally possible).

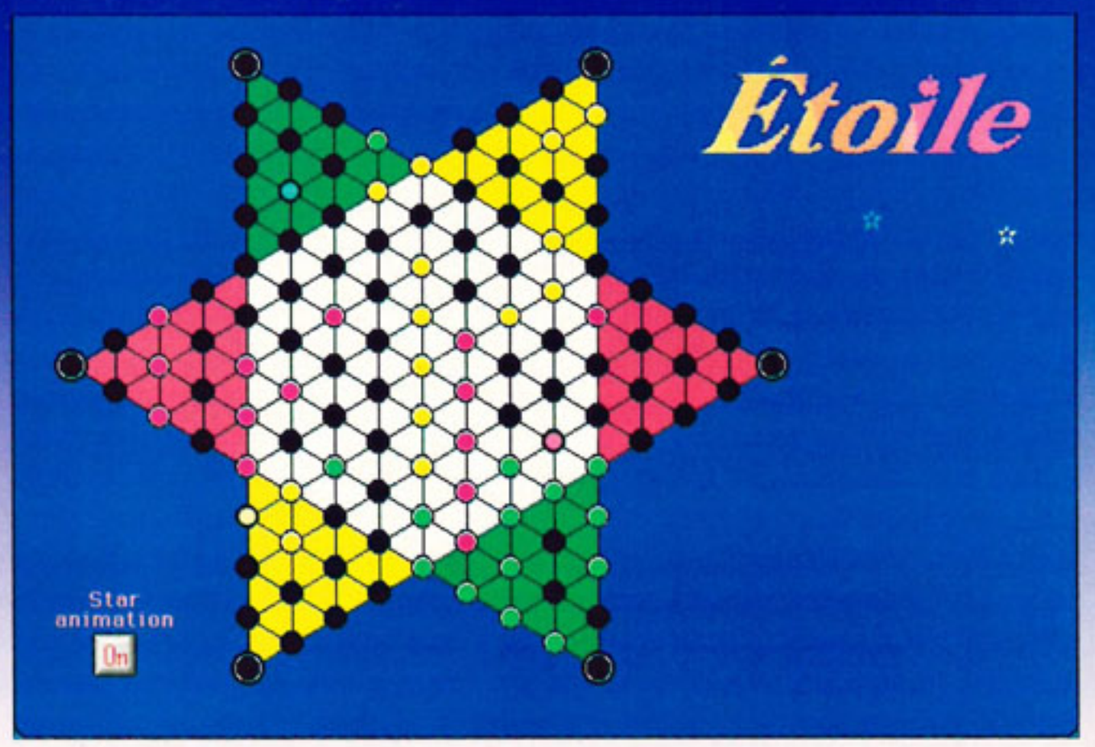
The only problem I found was the expected one: that normally your document window takes up most of the screen, so you can't actually see the Finder window that you want. However, I found that I soon got into the habit of opening the required window in the bottom right hand corner of my screen, so that the word processor (or whatever) didn't obscure it. And people with large monitors, of course, won't have this problem anyway – they've got far too much screen real-estate for their own good!

Etoile

Strategy game

Etoile is based on that infuriating 'hop the pegs' game that everyone except me seems to know how to play. The game doesn't come with any instructions, either, so it took me a good ten minutes to work out quite what the rules are – and here's a brief summary, in case you fancy the game but don't know quite what to do. The idea is to move all of your pegs from one side of the board to the other, before the computer (which plays the other two opponents) does likewise. Pegs can move one space at a time, but they can also hop over another peg of any colour – and you can do multiple jumps, so when the mid-board is well populated you can sometimes move right across in one fell swoop. The only exception to this is the 'king peg' (I'm sure it's got a proper name somewhere): this can't be hopped over, and must end up at the top of the triangle when the game is finished.

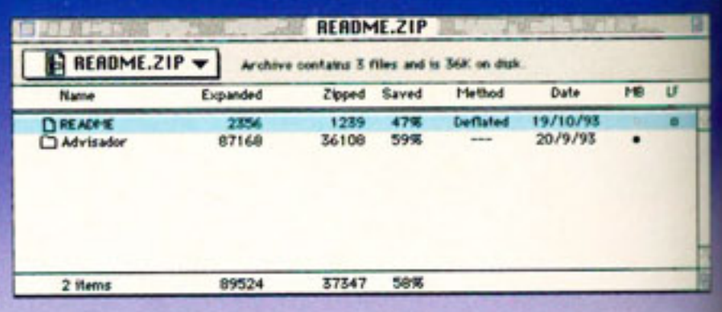
That's all there is to it, really. I found the game to be fairly addictive, but after about five minutes of playing my eyes started to swim from the different, closely-spaced colours on the board – and I'm sure that if I'd played for too much longer I'd have ended up with a splitting headache. Still, if you liked the original board game (whether it was called *Etoile* or not I can't say) you should find this challenging and fun. I had a deprived childhood and wasn't subjected to the game, so I'm making up for it now.



Etoile: hop your pegs over to the other side of the board before the computer.

ZipIt

File compression program



PKZIP is the standard file comression utility in the PC world - comparable with *StuffIt* and *Compact Pro* on the Mac. Now *ZipIt* allows you to access Zipped files on your Mac.

Zip is a popular standard for file compression in the PC world – in fact, virtually all PC compressed files are in some form of Zip archive or other, often created with the *PKZIP* program. Until now, the only Mac programs designed to specifically handle this format have been difficult to use – they haven't had a proper Macintosh interface, or they've been unreliable. But *ZipIt* changes all that: it's just as easy to use as a program like *Compact Pro* – which, indeed, it resembles greatly. If you can use *Compact Pro*, you'll be able to use *ZipIt*.

The program is fully compatible with archives created with the latest version of *PKZIP*, 2.0, and supports the 'deflate' compression method used in that program – although it can be forced to write 1.0-compatible archives, if you prefer.

To make things even easier for Macintosh users, the program will automatically convert files to MacBinary format, and will deal with BinHex archives. If you don't know what these are, the chances are that you won't need them – but for those that do, this should save a considerable amount of time and messing about with other programs such as *Apple File Exchange* to convert files to MacBinary. In addition, if the archive contains text files which have been saved from a Unix workstation or a PC, in which case they'll have odd characters at the end of each line, *ZipIt* will automatically convert the file to Macintosh format if you want it to – again, this saves endless search and replaces in your word processor to get rid of the rogue characters.

Registration of the program entitles you to a copy which supports encryption of archives – but only if you're in the United States, because the encryption method used is DES (Data Encryption Standard, devised by a department of the United States government), which US companies can't export. I mention this in case you have encrypted PC archives which you want to extract on your Mac – you won't be able to, even if you register your copy of the program. It's a stupid US regulation, but one that doesn't look likely to change in the near future, I'm afraid.

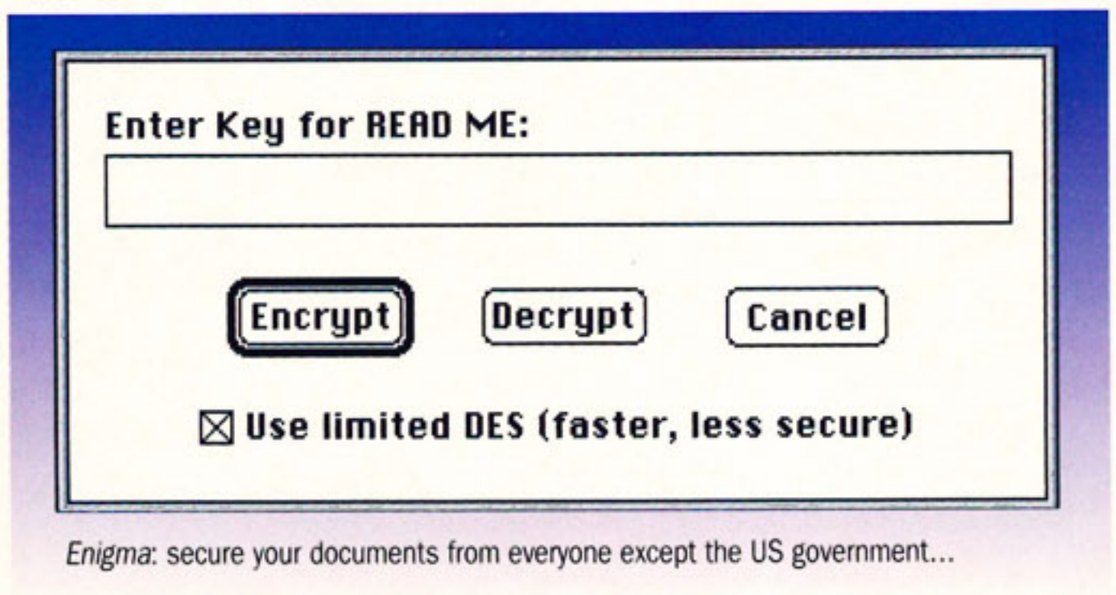
That aside, *ZipIt* will no doubt become extremely popular: its user interface is easy to get the hang of, and its extra options such as the automatic translation of text files mean that any Mac users with PC-owning friends will welcome it with open arms. Who knows – we may even see the Zip compression standard becoming popular in the Macintosh world in its own right...

Enigma 2.1

Encryption program

Talking of file encryption (see above), if you do need to keep your documents private then you could do worse that check out *Enigma 2.1*. It uses an encryption scheme which is based on DES but which doesn't implement the full algorithm – and so is available internationally. For anyone interested, it only uses a 32-bit key instead of the full 64-bit key, and part of the f-module has been removed. If you don't understand that (unless you're a cryptographer, you probably won't), how about this: it would take a professional around a day, using an LCII, to break the code using brute-force methods (assuming that the first 8 bytes of the file would be enough to tell whether the decryption had been successful). If you have data so secure that you think this might be a problem, then you don't need a program – you need a large safe!

The program is simple to use. Drop a file on to *Enigma's* icon and you'll be prompted to give a 'key', which is the password used to encrypt the file. Specify its destination name and in a second or two the encrypted version will appear. If you drag an encrypted file to the program's icon, the same thing will happen in reverse – give the correct key and the original will appear before your very eyes. If you give the wrong key, you'll just get garbage.



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

Of course, just encrypting a file and then throwing away the original isn't enough: an expert with a disk editor or a program like Norton *Utilities* could conceivably retrieve your deleted original, and so read its contents. For that reason, a utility called *Burn-It* has been included, which irretrievably deletes a file by writing zeroes to the portion of the disk where the file was stored, then renaming the new file, and finally deleting it. Unless someone was prepared to pull apart your hard disk in a clean room and use several hundreds of thousands of pounds-worth of equipment, your data is perfectly safe. And, as above, if you know people who are likely to do this with your data, you should have your kit guarded 24 hours a day by big men with ill-fitting suits anyway.

As with *ZipIt*, US and Canadian users can send $15 for a version of *Enigma* which includes the full implementation of DES – using that, it would take our expert with his LCII over a million years to crack a file. However, again this can't be obtained outside the US and Canada – doing so would put the program's author at risk of a prison sentence, since it's considered a felony to export any product which implements DES. Rather ludicrously, the DES algorithm is considered a 'munition' by the US government. But since the free version of *Enigma* should be perfectly adequate for all except the most paranoid of users, this probably won't bother you.

Pacman

Great copy of the arcade classic

And now here's the other *Pacman*-style game that I promised you this month. You'll have to take my word for it, since it's rather unhappy about having its screen grabbed, but this is probably the closest to a perfect copy of *Pacman* that the Mac world has seen. It really is brilliant: the screen is identical to the original, the little ghosts charge about, even the sound is a reasonable facsimile of the original. I could find no documentation for the program, so I have to assume that it's freeware (if anyone knows differently, please drop me a line) – and it should have pride of place on the hard drive of anyone who holds a sneaking fondness for the times when arcades only had *Pacman*, *Space Invaders* and *Galaxians* among the fruit machines.

Golgotha

Skeleton font

Golgotha is a capital-letters-only font which, as you can see, is made up entirely of skulls. Not, perhaps, the most pleasant of ideas, but it should liven up party invitations, heavy metal concert posters and letters to granny.

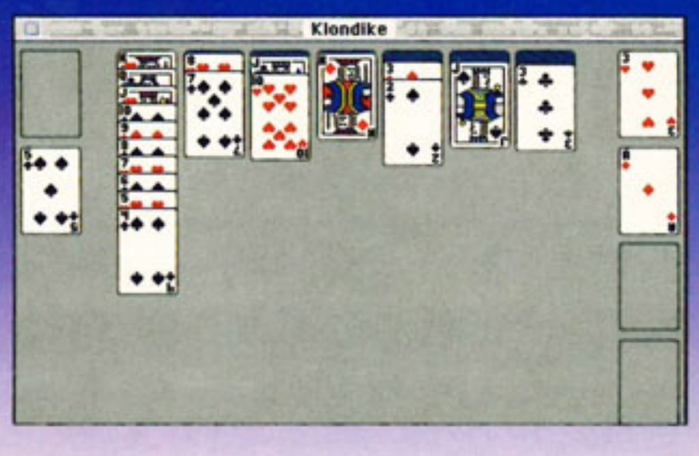
ABCDEFGHIJKL
MNOPQRSTU
VWXYZ

SpoydWorks Solitaire

A collection of card games

SHAREWARE $5

This collection comprises six games in one – all of them different variants on the card game Patience, or Solitaire if you prefer. The advantage of a program like this is that disk space is saved since all the games are in one program – so things like the pictures of the playing cards only have to be stored once for all the games, rather than duplicating them six times. The disadvantage of this particular version, though, is that it plays a rather odd version of some games that I thought I knew. For instance, the standard 'Klondike' game shown in the screengrab, which most people know as the normal game of Patience, differs in a number of ways from the version that any other program plays. Cards are dealt from the pack one at a time, instead of three at a time, and once all the cards have been dealt on to the discard pile there seems to be no way of re-dealing them – in other words, you've lost. On the other hand, the whole application only takes up 146K, so you've not much to lose by keeping it on your hard drive for those days when you're just feeling too lucky, and need an impossible game of cards to bring you down to earth…



"*Solitaire*'s the oddest game in town...". It certainly is when it's part of the SpoydWorks suite.

Skychart 2000.0

Star atlas – and more

SHAREWARE $20

If you're an astronomer, you really ought to get hold of *SkyChart 2000.0*. It's a fully-fledged star atlas, but it does much more than just show the positions of object in the sky as viewed from the earth – you can also animate the display to show how objects will move, set up location and date so that you can observe things like eclipses, and even see how the sky would appear if you were on another planet! The program comes with over 500K of astronomical data already entered, and you can input the details of other bodies if you wish.

It should be said that if you're not already au fait with basic astronomical terms ('right ascention', 'perihelion' 'magnitude' then you'll struggle to begin with – the manual is comprehensive, but does assume that you know what you're talking about. However, even for the interested beginner there are a wealth of features worth exploring. And it's certainly interesting to look at the night sky as viewed from a different planet!

We should point out that *SkyChart* requires a maths co-processor to run. It's incompatible with *SoftwareFPU*, a shareware patch that fools the Mac into thinking that a co-processor is installed, and although a non-FPU version of the program is included, it's limited and takes forever to do even the most basic tasks. On the other hand, if you're a keen astronomer then this program may justify the cost of that upgrade by itself!

***Skychart* is a great program for any budding astronomers. On the other hand, if you've no knowledge of basic astronomical terms like 'perihelion', then perhaps you should read a text book first...**

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 1,200baud upwards, log on as 'new'), check out the 'files2' and '93.files' topics in the 'mac' conference – and, of course, our own 'macformat' area. If you use CompuServe (voice phone 0800 289378 for an information pack) there is a multitude of different Mac areas; check 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.

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Hidden meaning

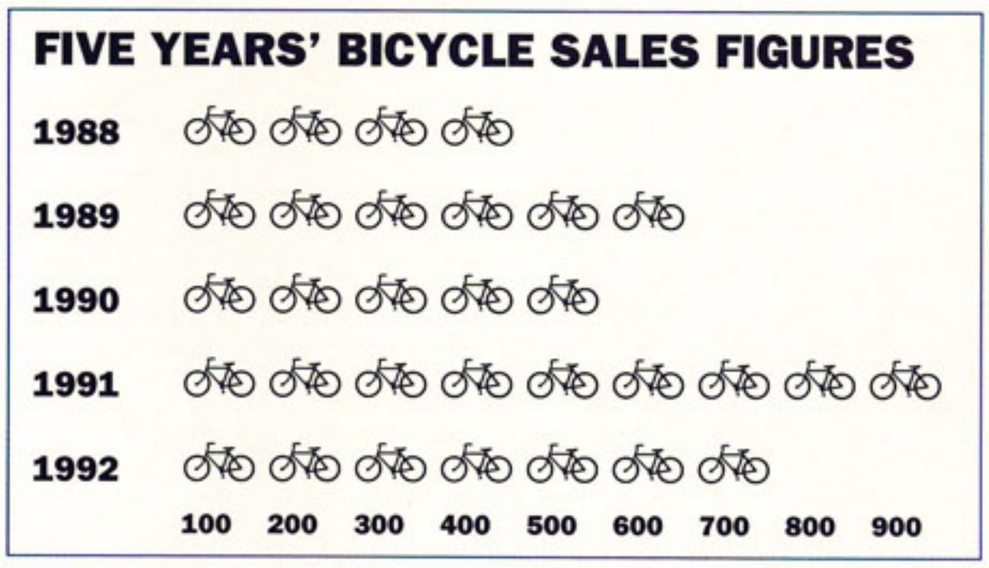
They look dinky, and you're dying to use them for something other than the odd bullet point... Martyn Lester shows you some original uses for symbol fonts.

Cassandra, the great *Daily Mirror* journalist whose column closed during World War 2, resumed with the famous phrase: "As I was saying before I was interrupted..." As this is the column I originally promised would appear in the November issue, perhaps I should offer up the same sentiments.

In October, we looked at some basic but effective uses for small shapes and icons in various documents, and how convenient it can be to use symbol or ornamental fonts for this – in particular, Zapf Dingbats. A further, less than obvious, trick with Dingbats and other special characters is to use them grouped into lines and columns as fancy rules and boxes – you'll find a whole page of ideas and suggestion for this overleaf.

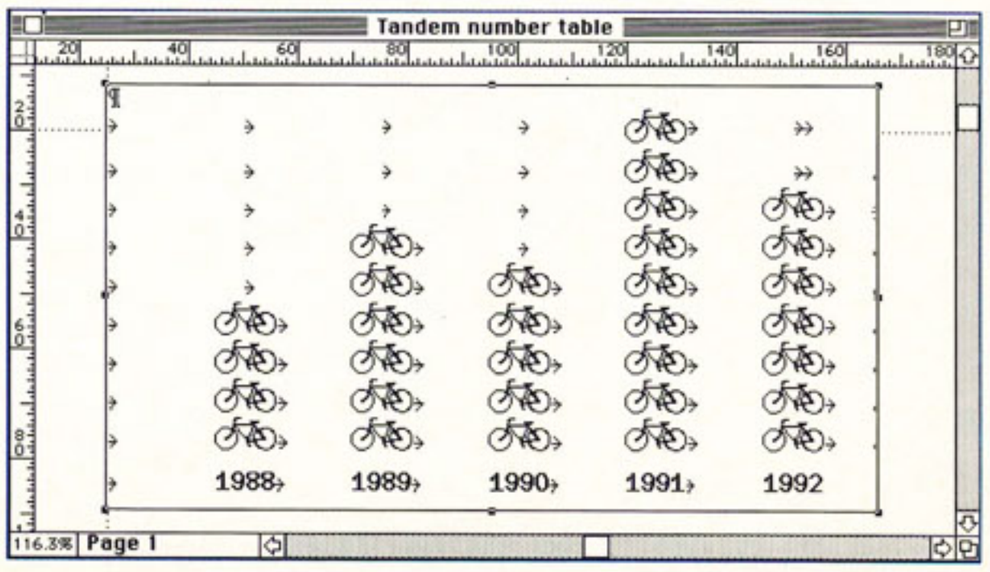
Another suitable use for genuine pictograms (as opposed to abstract shapes) is in various kinds of graphs and charts. At the most basic level, you can place symbols as labels at the end of lines on a multiple line graph, both adding to the visual impact and making the graph easier to follow. For example, in a line graph with separate year-by-year statistics for all of the various types of transport using a bypass, you might place small icons of cars, lorries, buses and motorcycles at the end of their respective lines – this is particularly helpful to your readers if you don't have colour available, and can therefore only differentiate the lines by weight and shade.

Using pictures to make up the rows or columns in bar charts or histograms can also be a little more interesting to look at than plain rectangles. A top art package such as Adobe *Illustrator* is capable of some marvellous effects of this type, but if you can't afford to lash out on the extra software, very reasonable graphs can soon be knocked out if you have a symbol font which contains suitable icons for the job. Because you only need to use quite basic text handling proce-



Graphs can be made a little more fun if you use pictograms rather than rectangular bars or columns to represent quantities, provided you are dealing with relatively vague, round figures. If you have a font which contains a suitable character for your purposes, a bar graph of this sort is a piece of cake – it's a completely standard text table, and all you have to do is fiddle with size and line spacing until you get the result you want. In the example on the left, I've used Franklin Gothic Heavy and – **[option] [F]** in Carta – it's been tracked out to set the bicycles a reasonable distance apart.

Making your graph as a vertical-columned histogram takes a little more work. Software permitting, make each column up from a one-character-wide text box and type in suitable characters (and returns) until you have the right height for the column. If, for any reason, you can't do it that way, the longer-winded approach is to do it all as one tabulated text box, as in the example on the right. It helps to be clear about what you are aiming for, because with this method you have to build from the top down. If you want your labels to centre on the columns, remember to use centre (and not left or right) tabs.



Fab fonts

Adobe's Type Set Value Pack (see page 78) contains 30 fonts – Carta being one. Of the others, two are small decorative collections – here are the characters in Minion Ornaments...

...and this is the complete character set for Adobe Wood Type Ornaments 2...

The script faces have been selected for their five quite distinct personalities, from the jotted down with a felt pen look of Dom Casual through to the more elegant lines of Bellevue.

Bellevue **Biffo** *Pepita*
Dom Casual *Nuptial Script*

Again, the 17 decorative display fonts have been compiled to offer a particularly wide choice of weights and flavours. Note that Castellar, Ironwood, Lithos Regular, Mesquite and Stencil come in capitals only, while Copperplate Gothic has small capitals rather than lower case characters. Here they all are...

AG Old Face Outline
Barmeno Extra Bold
Blackoak
Bodoni Poster Compressed
CASTELLAR
Colossis Bold
COPPERPLATE GOTHIC
Gill Sans Ultra Bold
Goudy Text Lombardic Capitals
Berthold Imago Extra Bold
IRONWOOD MESQUITE
Rockwell Extra Bold
Runic Condensed Willow **STENCIL**

The rest of the set is comprised of five text faces, all of them shown here in 8/9 point. This paragraph is set in a condensed cut of the ever-popular Gill Sans.

Joanna Regular is a new font to me – quite a chirpy little slab-serif. It has a true, separate italic rather than just a leaning-over version of the roman cut – compare the single-deck 'a' to the regular double-deck 'a'.

Letter Gothic is a monospace font like Courier - all characters take up the same width. Prestige Elite is non-proportional too - you will almost certainly have seen it on typewriters.

dures, this is a pretty quick and simple way of working (see my examples on pages 77 and 79).

If you don't have the right fonts, and can't get hold of them or afford drawing software, don't despair. Take some time to think about what you *can* do with any drawing tools that are available in your DTP package.

I set myself this very problem for the 'influenza deaths' chart on page 79, and decided that I could create a basic but usable person icon using nothing more complicated than the *QuarkXPress* polygon tool. I found that if you draw the icon at several times the size that you will want to use it, when you scale it down, the rough edges of your work will soon become much less apparent.

Charts like that one are a very effective way of using small symbols. You can 'work to scale', by having one oil barrel representing one million barrels in real life for example, but these charts are at their best when there's a one-to-one relationship. The best recent example I've seen was when a Sunday supplement charted up deaths related to terrorism in Northern Ireland, year by year for the last 25 years. The reader's knowledge that each person icon on the chart represented one actual death was a particularly powerful and effective use of graphics.

Perhaps the most obvious place for symbols is on maps and street plans. One of the most

How to make your own rules...

If you have only ever designed documents using the much-vaunted wonders of desktop publishing, you will probably find it difficult to imagine why old hacks like me should ever, under any circumstances, hark back to the days of paste-up technology – or 'the stone age' as some of my colleagues like to think of it.

The view is an understandable one, but based on the false assumption that DTP software offers all of the tricks of the trade that were available to the old scalpel-and-glue merchants – and that's still not the case. How much software offers you mitred corners on shadowed panels, for example? It's a useful effect that you can still see in many tabloid papers, but rarely in anything which is desktop published – it requires the designer to make a couple of triangular masks, and all too many computer users think that if something isn't automated, it's too much hassle to do.

One of the things I regret most is that the new technology rarely offers the equivalent of such products as Letraline – a range of many and varied patterns printed on sticky tape which those of us who pasted up newspaper pages used as rules and box borders. Most DTP software offers a pretty grim selection of rules to choose from, but there is a way to increase your options, and that is to create your own rules merely by stringing together lines of font characters. Here are just three examples of 'rules' made up with characters from the font Zapf Dingbats…

✪✪✪✪✪✪✪✪✪✪✪✪✪✪✪✪✪✪✪✪ **Dingbats [shift] [J]**

❖❖❖❖❖❖❖❖❖❖❖❖❖❖❖❖❖❖❖❖ **Dingbats [V]**

❧❧❧❧❧❧❧❧❧❧❧❧❧❧❧❧❧❧❧❧ **Dingbats [option] [S]**

Adding a copy of Dingbats to your armoury is much cheaper than buying applications software to create extra effects, and a lot less trouble to implement. Of course, there are many more Dingbat characters to choose from than the three shown above, and the choice of rules that you can produce becomes even wider if you alternate two different characters – here are some examples…

▲▼▲▼▲▼▲▼▲▼▲▼▲▼ **Dingbats [S] and [T]**

✪☆✪☆✪☆✪☆✪☆✪☆✪☆✪ **[shift] [J] and [shift] [K]**

As I noted in this column a couple of months ago, one of the few occasions where the Mac's Outline type style option can actually come in useful is in modifying pictographic or shape characters in special fonts. This applies equally to rules created in such fonts, and here's what happens to a couple of my previous examples when outlined…

❖❖❖❖❖❖❖❖❖❖❖❖❖❖❖❖❖❖❖❖

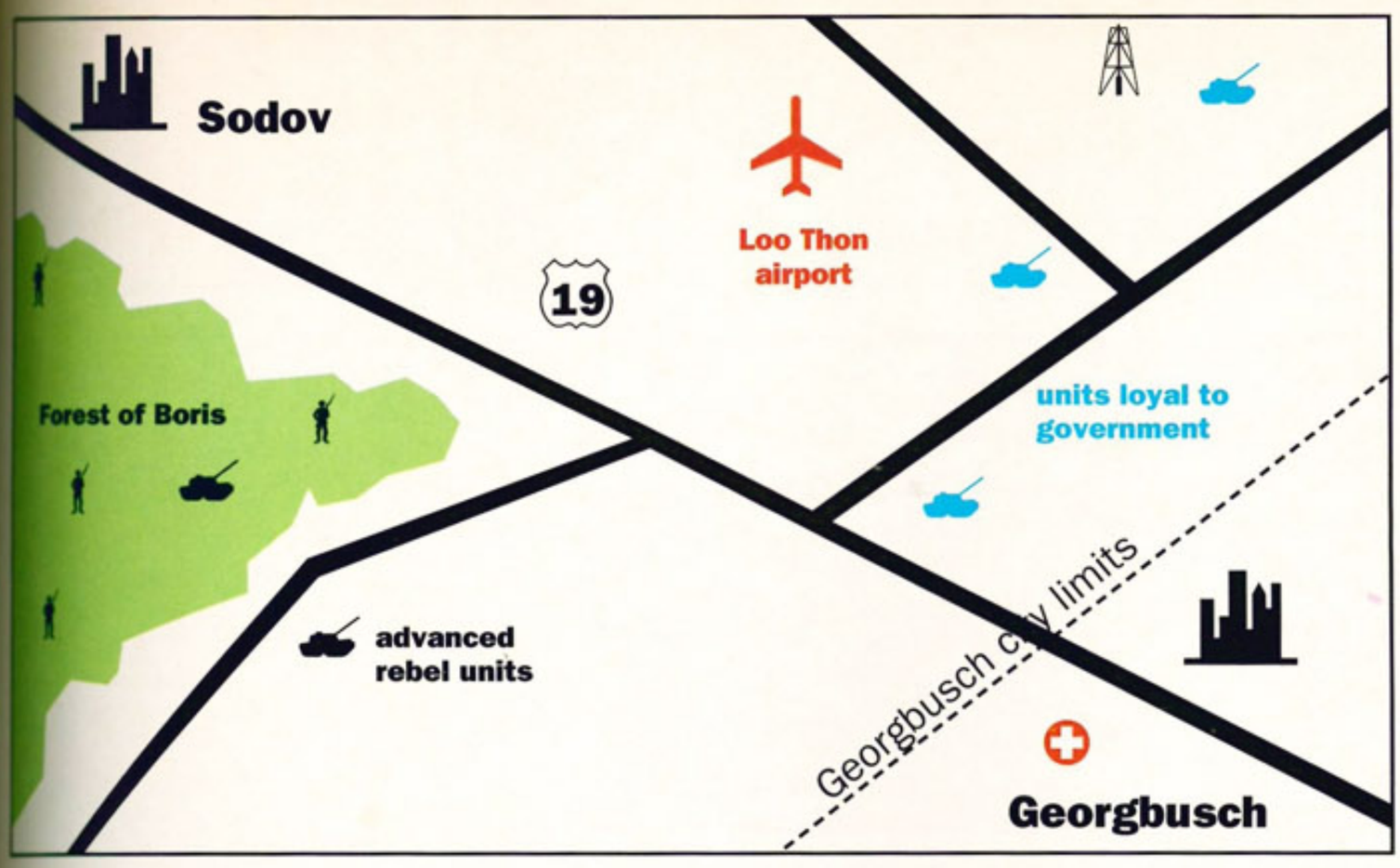
△▽△▽△▽△▽△▽△▽△▽△▽△▽△

Another trick is to make heavier fancy rules by laying a tint behind the characters, or even reversing them white out – and if you're working in colour, you can be as wild as you like…

✦✦✦✦✦✦✦✦✦✦✦✦✦✦✦✦ **Dingbats [shift] [F]**

❤❤❤❤❤❤❤❤❤❤❤❤❤❤❤❤ **Dingbats [option] [6]**

★★★★★★★★★★★★★★★★ **Dingbats [shift] [H]**



One of the most obvious uses for symbols is in mapmaking – either for the kind of map shown above or for a street plan. To produce a really impressive map, it's best to work in a good drawing package, but you can often get by with less resources if need be. This map used nothing but a Polygon tool and text boxes – the symbols are all from the Carta font.

DEATHS FROM INFLUENZA

1861–1890	11
1881–1910	14
1911–1940	21
1941–1970	5

Icons can work well in tables, particularly where the symbol has a one-to-one relationship with the thing it represents. I have drawn up the 'body' icon using my DTP package's Polygon tool , then reduced it in size, duplicated and grouped it for use in the table. However, you may find this method slows your Mac up a lot more than just using a symbol font.

widespread fonts in the States, Carta, is bought by so many people because it meets precisely this function. Carta is less popular outside the States, because many of its signs are US-specific (not many of us need a symbol for California Highway), but quite a few of its characters (see page 78) are useful anywhere.

In tracking down the current price of Carta, I was delighted to discover that you can get it with 29 other varied fonts and *Adobe Type Manager* – if you are a TrueType user, you'll need *ATM* to make proper use of PostScript fonts – in something called the Adobe Type Set Value Pack. I have reproduced examples in the 'Fab fonts' panel on page 77, because I reckon this set's a bargain, and perfect for 'jobbing' work such as leaflets, tickets and posters.

Check with your font supplier for a price on the Adobe Type Set Value Pack. As usual, my copy was kindly supplied by FontWorks (071 490 5390) who sell it for just £46. **mf**

You are not, of course, restricted to using Zapf Dingbats for making your own rules. All sorts of odd 'pi' characters can be pressed into service, along with a few of the non-alpha-numeric characters that are commonly found in 'normal' fonts – here is a row of **[option] [6]** followed by a line of alternating **[option] [comma]** and **[option] [stop]** in Franklin Gothic Heavy…

§§§§§§§§§§§§§§§§§§§§§§§§§§§§

And you can have even more fun if your particular software offers kerning controls so that you can squeeze characters until they overlap each other. Here's what happens if you back-kern those two ≤ and ≥ characters shown above, followed by the results of mildly and then wildly overlapping the simple < and > that you can see on any keyboard…

If your DTP package features text rotation facilities, then don't forget that any rule created in this way can be turned around and grouped into decorative borders for illustrations or panels. The border for this page, for example, is made from four grouped single-line text elements containing **[option] [shift] [7]** in Zapf Dingbats, three of them rotated through 90, 180 and 270 degrees.

Even if you aren't able to rotate text elements, it is still possible to make your own frames, provided you can create and place small independent text boxes. All you have to do to make the vertical members of the frame is to create text elements that are of the requisite depth and just one character wide – that's how I put together the frame for the photo below.

Finally, some creations in the Symbol font that comes with all Macs – absolutely free if you can be bothered to type them in…

⊕⊕⊕⊕⊕⊕⊕⊕⊕⊕⊕⊕⊕⊕ **[option] [X]**

≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈ **[option] [9] as outline**

ΩΩΩΩΩΩΩΩΩΩΩΩΩΩ **[shift] [W] back-kerned**

The content of the photograph above isn't important to my theme – as I write this caption, I don't even know what image we'll use – but the frame is. It may look as if it must be part of a special rules package, but all it really involves is a group of four text boxes containing the Zapf Dingbats card suits characters.

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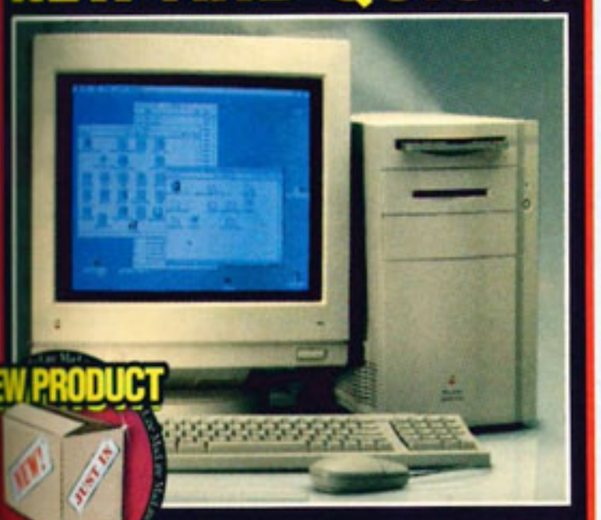

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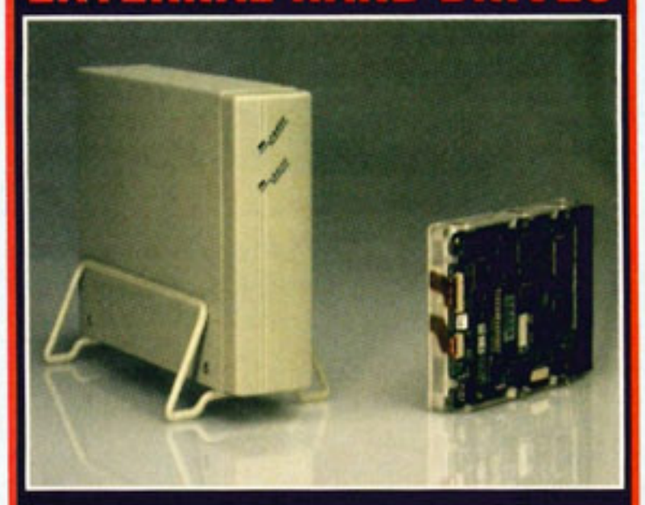

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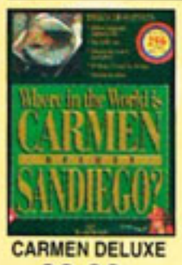

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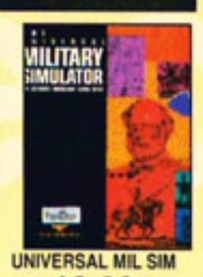

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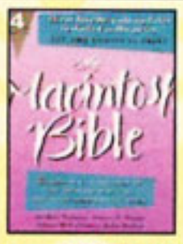

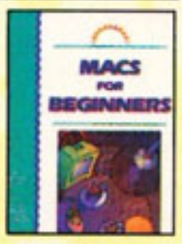

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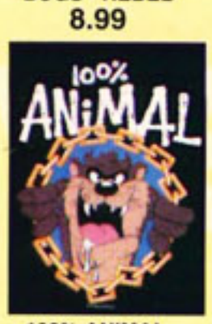

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Editing for DTP

Scheduling, budgeting and assessing resources

This month John Morrish gets stuck into the practical side of planning your publication, as he shows you how to assess your needs and organize your time and money

Last time was all about *what* to publish. This month we're going to deal with *how*.

Producing a publication is a big job. But it can be made more manageable by breaking it down into a series of steps, and then working out which you can do yourself and which you will need help with. That's the purpose of the flow chart of production processes.

Any publishing job will include many of these processes. You will notice that you can do several of the jobs simultaneously: but only if there are several of you.

The key moment in the process, when you are truly editing, is flat-planning. You will already have planned the issue in rough, but at the *flat-planning* stage you have to accept the realities of what you is available. See the diagram below: a series of small rectangles, grouped in pairs, represent your pages. Now decide where everything is going. Your original lead story may be weak: replace it with two shorter ones, and re-plan. Someone may have brought you some brilliant pictures and you want to find space for them. These are *editing* decisions.

If you have been selling advertising, you will have worked out how many pages you want to give to it and how many you want to keep for editorial. That is called the ad/ed ratio. If you sell more advertising than you anticipated, you can either throw out some of the weaker editorial and let the ratio change, or you can do a bigger issue. If you sell too little advertising, you can make your issue smaller or find some extra editorial material to fill the space: but your costs will rise. These are *publishing* decisions.

With the various tasks set out for you, it is time to consider your needs and your resources. Of these, human resources are by far the most important.

The skills you'll need

Producing a publication needs various skills, but they don't all have to be yours. Obviously, there are the verbal and literary skills you need to interview people, write up stories and features, brief other writers, and 'sub-edit' people's work (which means turn it into publishable material). Then there are the practical skills needed to design the publication, produce individual pages following that design, to produce illustrations and cartoons and to handle photographs. Then there are organisational skills that will help you get the work done. Above all, there is a need for leadership: someone must give the publication a clear sense of direction.

Computer companies in general, and Apple in particular, have fostered the fantasy of omnipotence: the idea that with your little grey box and an ever increasing supply of fancy software you will be able to do anything. Not so. It is often better to seek help or to get advice. For instance, if you intend to get something printed, you must talk it through thoroughly with the printer. And if the printer can't spare you the time to explain things to you in language you understand, then find another printer.

You should be honest about assessing your own skills. Why not list the skills you think you will need, starting with those you think you have, moving through those you think you can learn, and ending up with those you would not attempt? Here's mine:

You can do brilliant work with down-market software and your own down-market machine

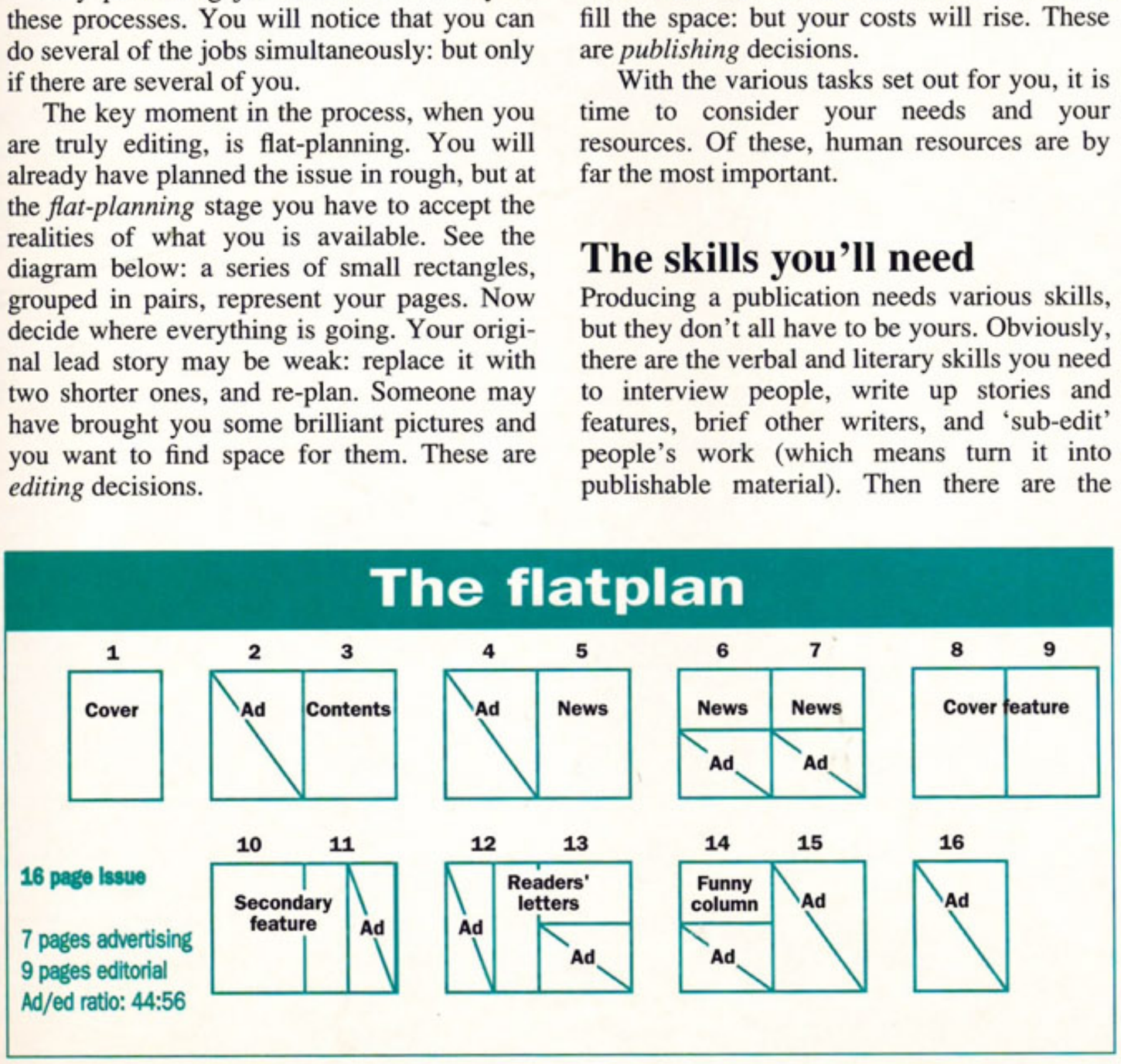
Best: Writing, interviewing, researching, editing, choosing pictures, laying out pages, budgeting and scheduling, publication design.
Worst: Illustration.

The first few I feel confident about, because of my training and years of practice. But I would not fancy designing a whole publication, and if I live to be 100 I will never be able to draw. If I want illustrations, I will have to get someone else to do them. But your table might be quite different. You might be very good visually, less confident with words.

I shall, in the course of this series, be offering advice on improving your skills, but for now, try to work out what you can do yourself – and what you can't.

It is easy to commit yourself to something

The flatplan



and then find you don't have the time to do it. Set yourself some practice tasks and work out how long it takes to do them: key in some words; edit some copy; transcribe the tape of an interview; design a page. All these take longer than you might imagine. Now assess how you are going to fit these tasks around the demands of your week. The editor of one football fanzine told me that his 36-40 page A5 magazine, typed in but with only minimal layout, takes him anything up to 120 hours to produce (including writing much of it).

The first decision you make might be to reduce your planned frequency of publication, or bring in people to help you. But remember, if a task takes you three hours on your own and then you bring in two friends, you cannot expect to do it in one hour: organising, dividing and checking the work will take time too.

Equipment and software

Some advertisements will do their best to convince you that to publish at all you will need a top of the range Quadra, a 24-bit colour display, *QuarkXpress*, *Photoshop* and the rest. Not so. For most people publishing for their own purposes these things are like taking a Ferrari to do the shopping at Tesco's. Of course, if you want to work in colour and run *Photoshop*, you'll probably need a Quadra. But if you have *Photoshop* and the Quadra you either know what to do with it already or you're getting training. Either way, this column isn't going to help you.

With the current chaos in the hardware market, you can expect anything you buy to halve its price in six months and be obsolete three months after that. Is it any wonder that the best advice is to make do with what you already have, or can borrow, and only move up to something else when you can justify it in terms of your workload? Any machine you already have is bound to be worth more to you than it will fetch second-hand. The clunkiest old Mac Plus (or even a PC!) will be useful one day, even if it is just for keying in or editing raw copy. In any case, the most useful pieces of equipment you acquire may not even be electronic. A good, big desk, a notice board and a filing cabinet are absolutely essential: there is no such thing as the paperless office in the world of publishing.

Unfortunately, different issues arise when it comes to software. You can do brilliant work with down-market software on your down-market machines. Most word-processors can handle simple columnar layouts. *ClarisWorks*, which many of you will have got free with your

If you are very well organised you may well have three or more issues under way at any one time

Performas, is capable of excellent results. *Publish-It! Easy*, a strange, quirky, crunchy beast of a program runs at an acceptable speed on really puny machines: if you are producing your own camera-ready artwork, from your own printer, in black and white, it's excellent.

Unfortunately, everybody else in the world of DTP will be using expensive machines bought for them by their bosses, and software to match. So you will be pursuing a rather lonely trail. The hours you put into learning *Publish-It! Easy* (as opposed to learning to design, which is a different matter) will be wasted if you ever want to join the mainstream, where *Quark* (and to a lesser extent *PageMaker*) rules. Sad, but true.

Try taking *Publish-It! Easy* files to a bureau and you will see what I mean. The same goes for *ClarisWorks*: despite being one of the most successful Mac programs ever, the bureaux don't want to know. Similarly with TrueType fonts, despite the support of the mighty Microsoft and the decidedly less mighty Apple. So, if you can afford it, go for *Quark* and work in PostScript on a machine capable of it: the LCIII is about your starting point. On the other hand, you can buy *Publish-It! Easy* and a non-Postscript laser printer for the same price as a copy of *Quark*: there's no wonder it gets pirated.

A PostScript laser is essential for proofing if you are taking stuff to a bureau. PostScript lasers also let you run type at an angle (an effect just as easily achieved by old fashioned manual cut-and-paste, if you must), produce lines narrower than 1pt, tints (of a sort) and use EPSF (Encapsulated PostScript File) graphics. But if you are mainly dealing with type, a simple QuickDraw printer is just as good for a lot of purposes, not to mention quicker and cheaper.

If your intention in buying a PostScript printer is to produce your own camera-ready artwork rather than using it to proof your bureau-bound pages, then you ought to go the whole hog and buy a 600dpi laser.

Then there's scanning. Well, it is cheaper than it used to be, and the results are better, but the files are huge and unwieldy, which means going back to *Photoshop* and the Quadra and all the rest. There is a lot to be said for taking your originals to the printer and letting them scan them in. My local photo-setter quoted me £8 as the starting point for a high-end monochrome scan, to be 'stripped in' by him. That means physically assembling it into the film that is used to make the printing plate. You can get an awful lot of those for the price of one scanner, not to mention the rest of the hardware and software costs, and they will look much better.

The truth is that you will find there is a gap between what you need and what you actually have in all these areas: skills, time and equipment. Obviously, that gap can be bridged with money, but rather than driving yourself into debt it is better to see what can be achieved by the manipulation of time. That is especially important if you are persuading other people to spend some of their time helping you, or borrowing other people's equipment during their slack periods.

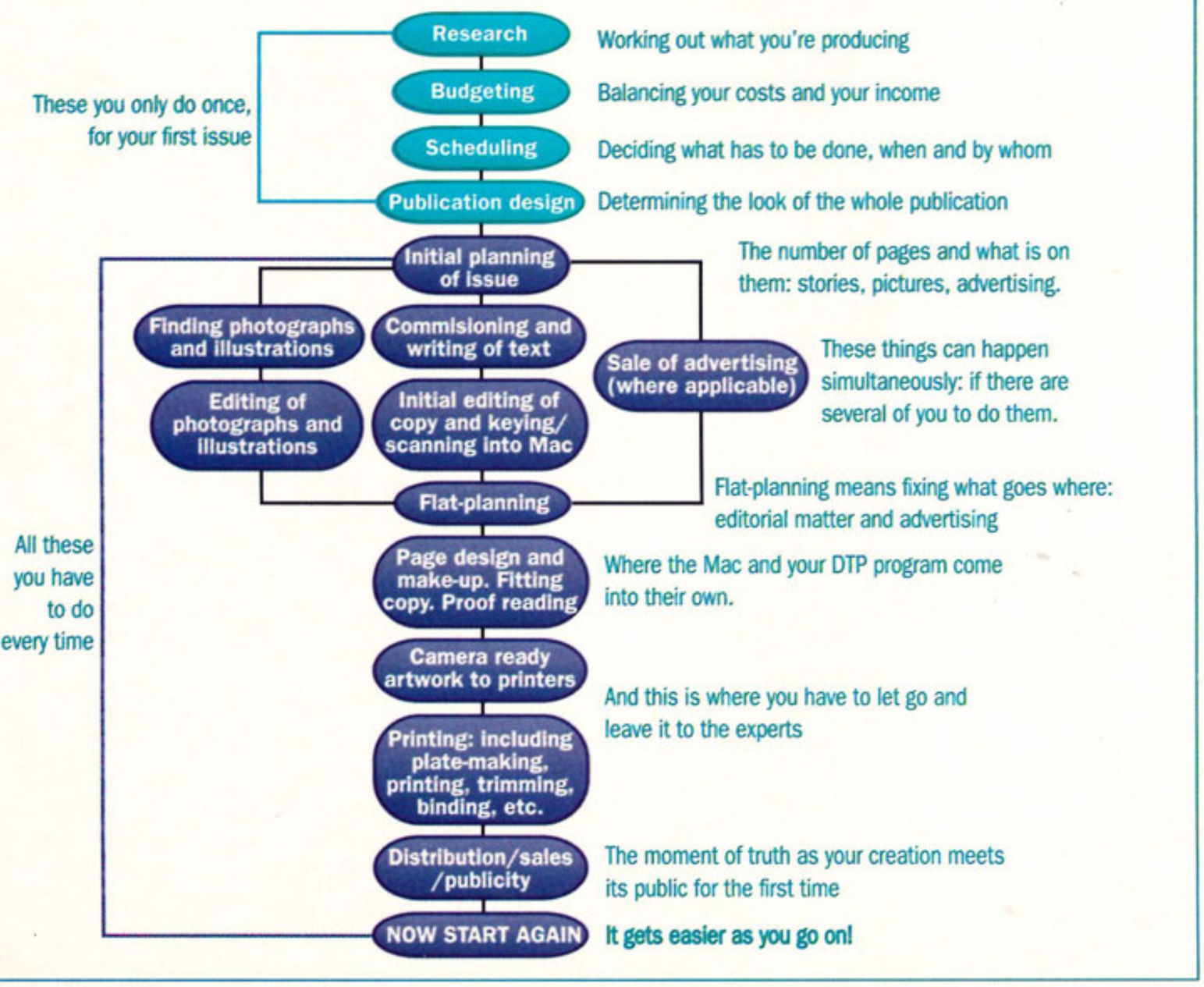
There are two devices used to help us handle time and money. The first is the schedule and the second is the budget.

The schedule

The schedule sets the deadlines for various parts of the production process and ensures that things come together at the right time. I would start with the date you want your publication to appear and work backwards, allowing a realistic time for each task. It is up to you how accurately you pass on details of your deadlines to your collaborators and others: you can give them false deadlines in an effort to get them to do their work on time, but if they realise that you have done this you will never be able to give them a real deadline again.

One area where you must not play this kind of game is in the printing schedule. Printers need to keep their machines fully occupied. If you fail to present your material at the agreed time, you may miss your 'slot' and then have to wait days to get back on the machines. This could be disastrous.

Flow chart of production processes



People will be expecting to see you publish on the day you originally agreed, and it is as well not to disappoint them.

On the right is a schedule for a one-off publication. The times I've allowed for each part of the process are not terribly realistic, but the sequence of events is accurate. See the diagram on the right.

Be very careful about weekends. Weekends are ideal for catching up on the stuff you can do yourself. But beware: no-one else is working, and you won't be able to find anyone on the telephone, so if you need any extra facilities, equipment or services you'll be in trouble.

What I have shown is a linear structure, in which one person works on one issue at at time. If you have several people, you can introduce parallel activities at various points in the chart.

And if you are doing a regular publication, the process will be different again. For a start, you only need to do all that research, budgeting and scheduling once. Not only that, but you will need to start work on issue two as soon as you are physically free of issue one. You might, if it's a fairly infrequent publication, start commissioning as soon as you send your artwork to the printers. More realistically, you will need to have commissioned work sufficiently early so that you can start editing issue two as soon as issue one is on its way out of the door. If you are very well organised, and there are several of you, you may well have three or more issues under way at any given time.

So, the schedule helps you organise your time. What about your money? Frankly, if you are considering spending any more than pocket money, you want real financial advice before you commit yourself. But however much or however little you propose to spend, you will need to do some kind of budget.

See the diagram below. You'll notice I have started with income. I have assumed that you're selling 1,000 copies at 50p: but you will have to be selling them on a street corner to realise the full figure mentioned here. If you put them in anyone's shop, or employ anyone to distribute them, you'll only get a proportion. If you sell subscriptions, it is customary to offer a discount or a free gift, so again, we have overestimated the likely income. Then there's advertising income (we have been very optimistic) and other income, which could be the gift from granny I have mentioned here but might just as easily be a grant of some sort. Of course, if you are doing an in-house newsletter the whole cost will come direct from one source: but you still need to do the budget to keep an eye on your expenditure.

If you want to do regular issues, you will need to find some way of incorporating all your start-up costs as well as the cost of each individual issue. The best way might be to do an annual budget, to show what you can expect to spend and earn in a year. But that won't be much use without a cash-flow forecast, in which time and money are combined. This not only tells you what you are spending and earning, it is supposed to tell you when you are going to spend or earn it.

If you are serious about setting up a publishing project, you will obviously need to look at the money side of things much more closely. I recommend you find a book on starting a small business or, better still, attend one of the numerous courses run by the government's Training and Enterprise Councils. They are free, and very helpful. **mf**

Budget for a simple, one-off publication

	A	B	
1	**INCOME**		
2			
3	**Copy sales**	**£500.00**	This supposes you sell 1,000 copies yourself at 50p and keep all of it. You also have 200 subscriptions at full rate. You'd have to do very well to sell £500 worth of advertising, but what the hell. And your granny gave you £100.
4	**Subscriptions**	**£100.00**	
5	**Advertising**	**£500.00**	
6	**Other**	**£100.00**	
7			
8	**TOTAL**	**£1,200.00**	
9			
10	**EXPENDITURE**		
11			You don't really have to pay for writing: these are incidental costs. You do pay something for copywrite photographs. You got a bit of help with editing and design and wanted to buy a few drinks for the workers.
12	**Words**	**£100.00**	
13	**Pictures**	**£100.00**	
14	**Editing help**	**£100.00**	
15			
16	**Design help**	**£100.00**	
17	**Equipment hire**		
18			
19	**Laser costs**	**£20.00**	The laser costs are paper and toner. Your bureau is quite a high cost, proportionately.
20	**Bureau**	**£200.00**	
21			
22	**Printing**	**£500.00**	But not as high as your printer.
23			
24	**Promotion**	**£50.00**	A few posters.
25			
26	**Sundries**	**£30.00**	Telephones, tea/coffee, champagne, caviar.
27			
28	**TOTAL**	**£1,200.00**	You broke even! If only life were that simple...

One person, one-off schedule

	A	B
1	Week 1	
2		Budgeting
3		
4		Scheduling
5		
6	Saturday	
7	Sunday	
8	Week 2	Publication design
9		
10		
11		
12		Issue planning
13	Saturday	
14	Sunday	
15	Week 3	Write and commission words and pictures
16		
17		
18		
19		
20	Saturday	
21	Sunday	
22	Week 4	Sub-edit words and pictures
23		
24		
25		
26		Final flatplan
27	Saturday	
28	Sunday	
29	Week 5	Make up pages, fit copy and proof-read
30		
31		
32		
33		Artwork to printer
34	Saturday	
35	Sunday	
36	Week 6	Pre-press
37		Printing
38		
39		Finishing
40		Distribution
41	Saturday	
42	Sunday	
43	Week 7	Distribution
44		PUBLICATION
45		On sale
46		
47		
48	Saturday	
49	Sunday	
50		

NB this schedule is meant to show the sequence of events rather than the actual timings.

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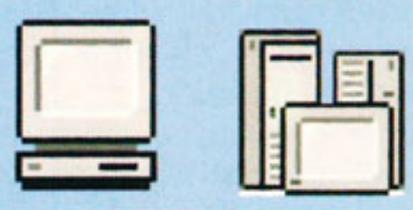

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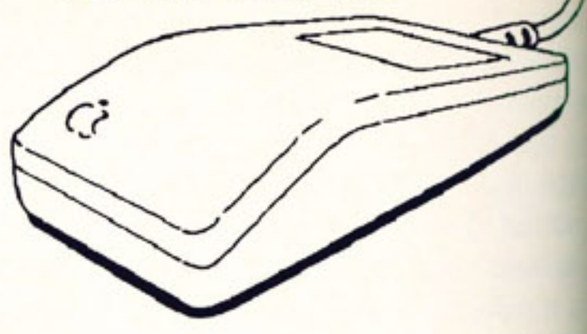

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IN CONTROL

Ian Wrigley decides that his life is just too disorganised, and goes in search of the perfect tool to help him get his copy in on time...

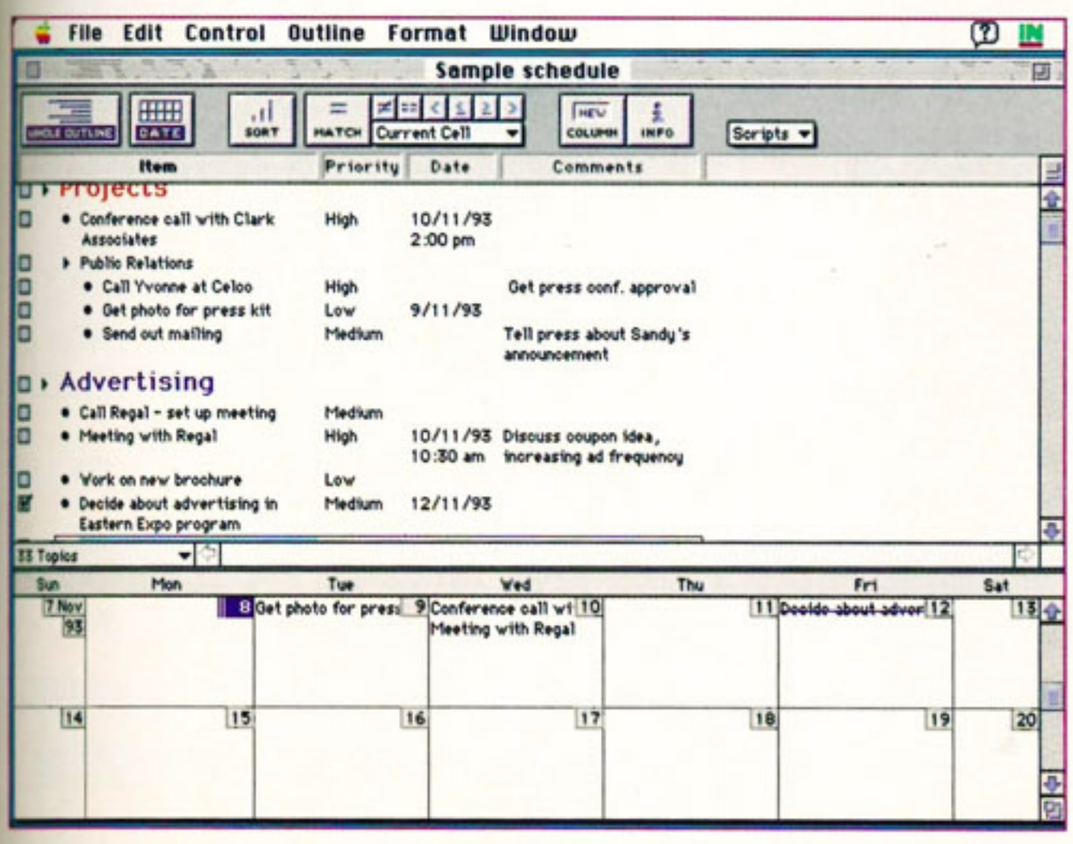
This program is billed as "the only To-Do List Manager that lets you organise all your activities." That's an impressive claim, and at first glance *In Control* seems to be a fairly standard version of such programs; however, the more you use it, the more flexible you realise it is – and it's now part of my standard suite of software, residing on my PowerBook and desktop Mac and doing its best to control my increasingly disorganised life.

The first thing you see on opening the manual is, unfortunately, a quote from a book called *Why We Make Lists*, by Caroline Knapp. This didn't do too much to make me confident of the program's utility – the people who buy books with names like this will make my next opus, *Why People Are Daft Enough To Buy Books That State The Obvious*, a best-seller. Still, persevering, it turns out that the manual is actually written in a clear and easy-to-follow style, although the rather useful 'picturebook tour', with annotated screenshots of all the program's normal displays, means that for the most part you'll only have to revert to the manual when you want to do something well out of the ordinary anyway.

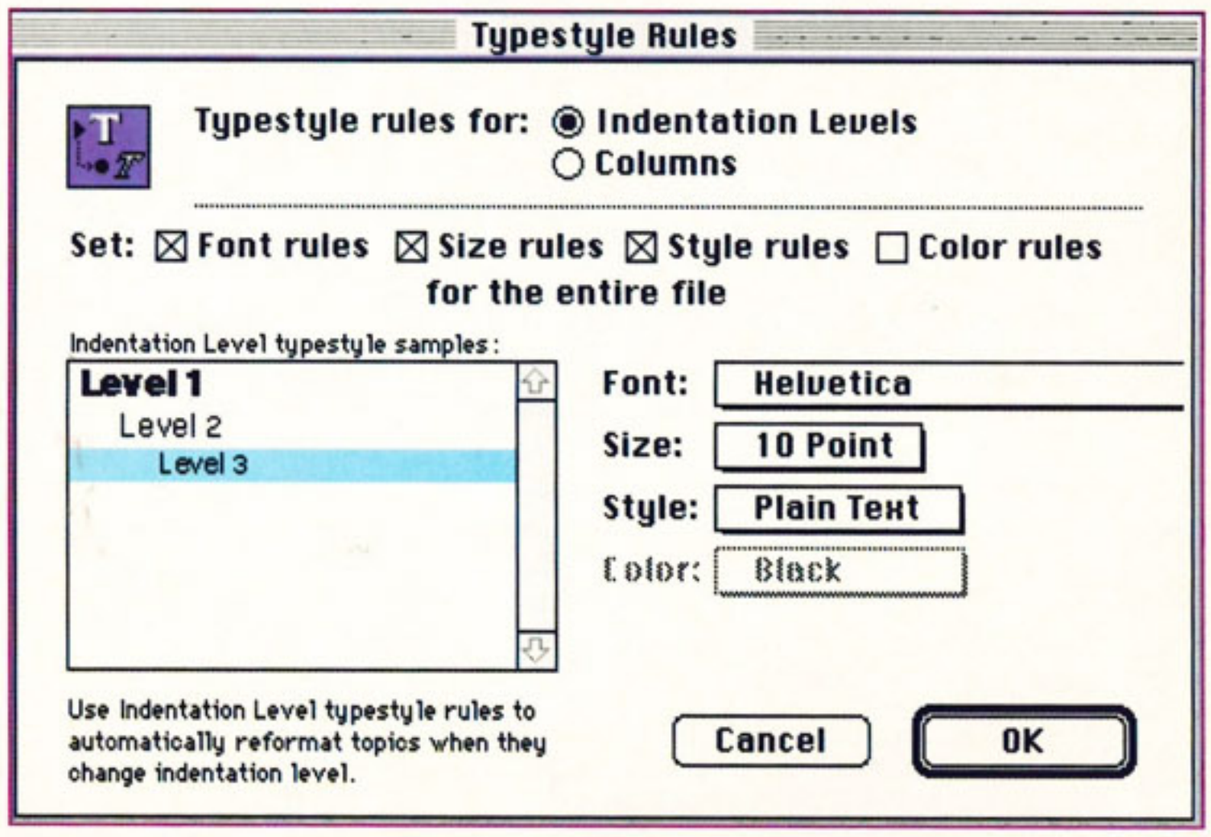
While we're talking about the documentation, though, I should point out that the on-line help is something of a joke. In these days of hypertext and hot links, it's unacceptable that a program's on-line help should contain 14 pages that must be browsed one after the other. There's a table of contents on the first page, but no way to jump to the section that you're interested in, and certainly no clicking on a word to display other, linked subject areas. Clicking on an arrow 13 times to find out some information on the usage of a program feature isn't my idea of user-friendly – it would be quicker to look in the real manual.

Let's be positive!

Having complained a little, I'd like to now make amends by saying that the program itself is an excellent example of a personal information manager (PIM). It's easy to use, and certainly isn't short of features. The basic display is a To Do list, with nested sub-topics for more complex tasks. In this, it acts very much like an outliner, and shares many features with such programs. For example, you can easily promote or demote a topic simply by dragging it left or right on the screen, and moving a topic up or down in the list is done in much the same way. Any item can be given a different colour, to make things stand out on screen; 14 are pre-defined (and given names like 'Pewter', 'Dust' and 'Raspberry'), or you can select your own from the standard Apple colour picker. When you print out a list, the format is largely customisable – for example, you can change the standard bullet points and triangles so that each topic begins with numeric formatting (1, 1.1, 1.2.1 and so on) or odd, alphabetical-style outlines. Or, of course, you can have no leading characters at all.



The main display. It's here that you list all your jobs, and also display your calendar. You can select how large the calendar is by dragging the divider between that and the list up or down.



The To Do list works much like an outliner; you can set the typestyle for each of the first three different levels to differentiate them on the screen.

The list has multiple user-definable columns, so you can (for instance) have sections on each topic for a date, priority, person to contact, type of activity and so on. These columns can be set to be dates or text, and support pop-up menus for data entry if the information is likely to be one of a few set values.

Fields can also be 'auto entry' – that is, as you type the first few letters of a word or phrase, it's automatically filled in for you. I find this somewhat disconcerting, but you may like it.

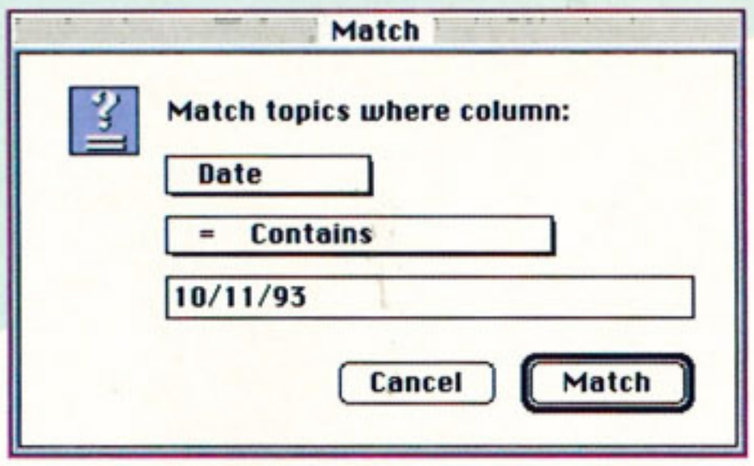
Columns can be moved left and right in the display simply by clicking and dragging on the name marker. In fact, this is a trait carried right through the software: you can move or change most things just by dragging them around.

The other major section of the program is a calendar/diary display, which appears below the To Do list. This contains meetings, tasks which have to be completed by a given day and so on. The beauty of the program is that all of these entries are mirrored in the To Do list. So if you give a date to any item in the list, it is automatically entered in the calendar. And dragging an item from one date in the calendar to another automatically changes the date in the To Do list. (You can also drag an item from the list to the calendar, whereupon it will automatically be assigned the date that you have chosen.)

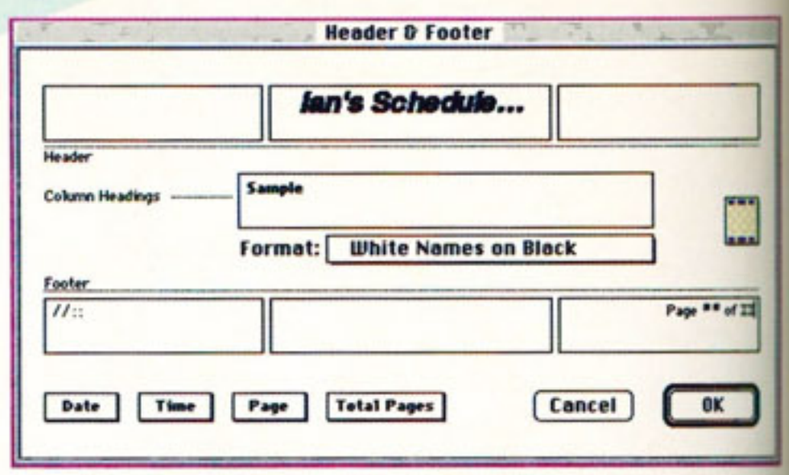
In Control is superior to _Do It All!_ in a number of ways; you should certainly take a look at it

The only complaint I have with the idea of a combined calendar and To Do list is that *In Control* doesn't change the priority of a job as you come closer to deadline time. Presumably this is because there's no automatic priority field in the list: you select your own labels for how important a job is, or use none at all, rather than using some imposed ranking scheme. However, it would be nice to have a task change in priority the closer you came to its deadline. On the other hand, maybe this is a bad way to work in the first place – to do only the highest priority tasks, and to leave everything else until it's right on deadline. I'm sure that Ms Knapp, author of the famous *Why We Make Lists*, would disapprove of such an ad hoc scheme of doing things.

Once you've created your list and schedule, you're likely to want to actually do some of the tasks. To make life easier for you, there are powerful matching commands built in to the software so that, for example, you can display just the items with top priority, or only unfinished topics from one particular job. Scripting is also available, so that if you commonly perform a specific series of actions – say, print out a status report which lists all the tasks you've completed this week – it can be automated for you.



Once you've got a list of jobs, you'll want to display only selected ones (to fool yourself that you've got less to do than you really have). That's where the Match command comes in.



Your output is totally customisable, right down to the font and style of the header and footers used on your printout. Either the To Do list, the calendar or both can be output.

Included with *In Control* is a copy of *DynoPage Lite*, a cut-down version of the extremely impressive printing utility from Portfolio Software that we reviewed a few months ago in **MacFormat**. *DynoPage* will allow you to print to just about any paper format, including Filofax-style sheets; the *Lite* version has fewer different document types, but still includes formats such as standard Filofax paper, so you can print out your To Do list and schedule and carry it with you when you're away from your Mac. This alone makes the program far more useful – the inability to keep your lists and schedule in a usable format when you're not at your desk has always been a limitation of other such software.

Worth the money?

There are a few shareware and public domain To Do list managers available – most notably *Do It All!*, which was on the October **MacFormat** cover disk. So the question is, should you go out and pay money for *In Control*, when you could just fork out your $15 shareware fee for *Do It All!*?

Well, obviously the answer depends on your own circumstances; but despite the fact that *Do It All!* is an impressive piece of software, *In Control* is far more powerful and feels much more complete. It's also far easier to use – *Do It All!* can be tricky until you've got the hang of what's going on. *In Control* is also relatively network-friendly: if you have one central file of tasks available to a number of different people, then it can be viewed by more than one at once (although only one person can write to the file at a time).

In Control is superior to *Do It All!* in a number of ways; I'd suggest that it's probably worth the extra money to many people, and you should certainly take a look at it if you feel that you need such software. (It's possible to create a demo of the application from within the real thing, so if you have a colleague who already uses the software they can legally create a limited version.)

All my previous attempts at using such software have failed within a week, due to them being just too cumbersome to use properly, and to the fact that I couldn't print out my data in a form the meant it was easily transportable (for me, that means in a Yuppyfax). But I've been using *In Control* for a while now, and I haven't yet found it restricting. I've even become that little bit more organised – and for me, that alone makes the program worth its weight in gold. **mf**

Where to get it

In Control is distributed by Softline, 081 401 1234. It costs £117.

In Control

Ease of use	**90%**
After ten minutes you'll be totally at home with the program.	
Documentation	**85%**
The manual's fine – but the on-line help needs improving.	
Features	**95%**
Does everything that you could wish for in such a program.	
Value for money	**90%**
If it makes you more efficient, it's well worth the cost.	
Overall	**90%**
If your days are disorganised, *In Control* could help.	

Using time management software

To use a program like *In Control*, many people will have to alter the fundamental way that they work. Most of us stagger from one job to the next, and only make lists in a futile attempt to avoid more important tasks. I know that in times of crisis I can have as many as half a dozen different To Do lists on the go at once, all headed with messages like "urgent" and "do this now" and "oh God, what am I going to do about this lot". This approach just won't work with time management software: you've got to accept that all the items on the list need doing, and use the program to schedule when you're going to do them all. At first, it's easy to spend more time shuffling things around to avoid them than actually doing anything productive – which means that after a week or so you have a diary with a dozen things on each of the three days before a deadline. However, after a while you'll find that the software gently starts to take over things for you: you accept that if a job's scheduled for a certain day then that's the day that it needs doing. I hate to say it, but *In Control* may have actually changed the way I work for the better...

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Ian Waugh casts a sensitive eye over an offering for classical music enthusiasts, comes up with more rhythm programming tips – and revives the question of 'feel' in a drum track

The Pianist

Are we allowed to be frivolous as we lurch into another year? I do hope so.

Frivolity comes in the shape of *The Pianist*. It's an interesting, amusing, mildly educational program which holds within it more than 200 pieces of classical music.

These have been recorded by classical pianists on an 88-note weighted keyboard. They have not been step recorded or quantised so what you get is a 'live' performance. To play them you'll need a MIDI interface and a sound module, preferably with a piano sound.

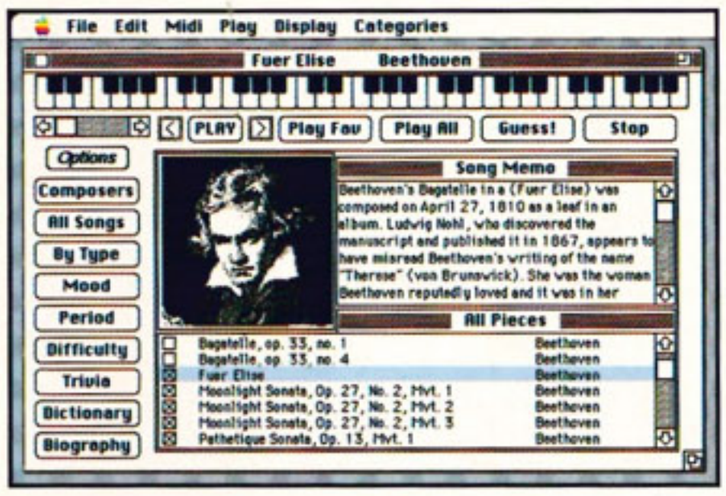
You can select the pieces for playing in a number of ways – by composer, by period, by mood, by difficulty or you can create your own list of preferred pieces.

When the songs play there's a picture of the music's creator and a few words about the composer and the piece which is playing. An on-screen keyboard shows the notes as they play.

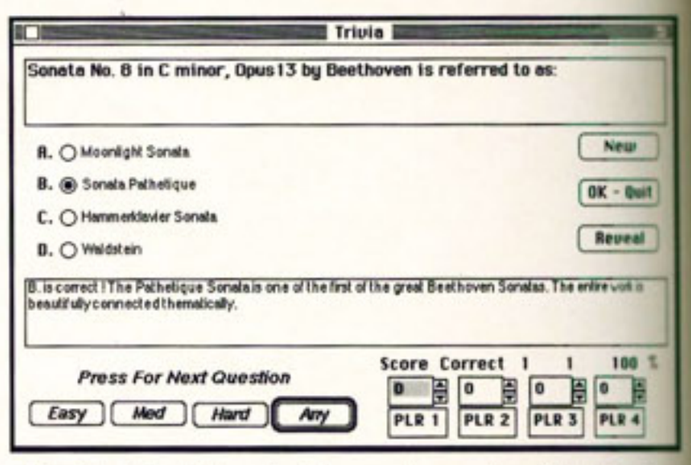
There is a set of biographies about the composers plus a dictionary which contains all those foreign musical terms. There's also a trivia quiz which lets you choose easy, medium or hard questions. These cover a wide range of music subjects. The program will keep score and up to four people can play. You can also play 'name that tune' which is good fun – until you're familiar with all the pieces.

Over 30 composers are represented in the music selection although composers such as Bach, Beethoven, Chopin, Schumann and Tchaikovsky are by far the most popular. The music isn't all piano pieces – there are many piano arrangements of orchestral works, too.

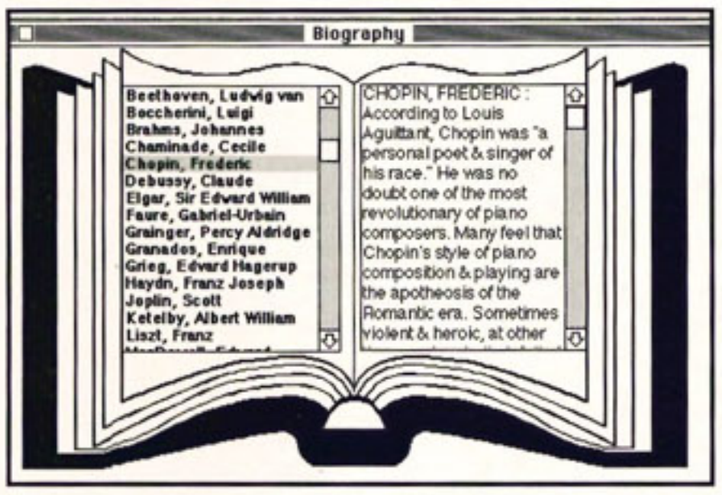
The Pianist is good fun and you certainly get a lot of music for you money – on a price-per-piece basis (I've worked this out) it's less than 25p per file. Definitely one for the classical music fans.



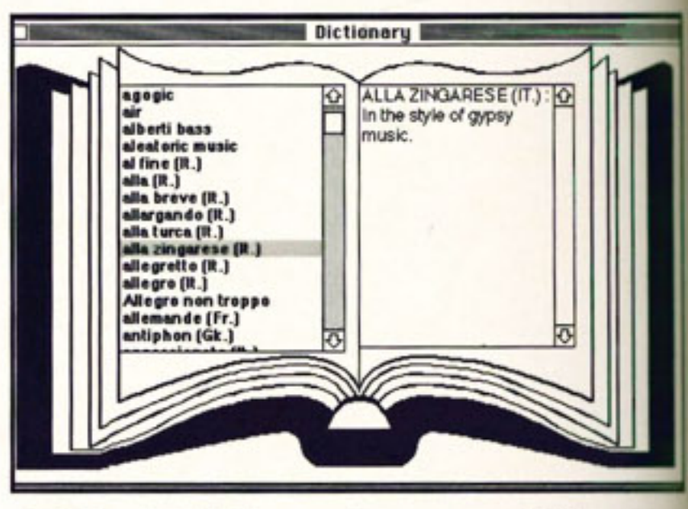
In spite of the spelling error (Für Elise), *The Pianist* is informative, fun and easy to use.



The Pianist's trivia quiz lets you choose the difficulty of the questions and keeps score of your mistakes.



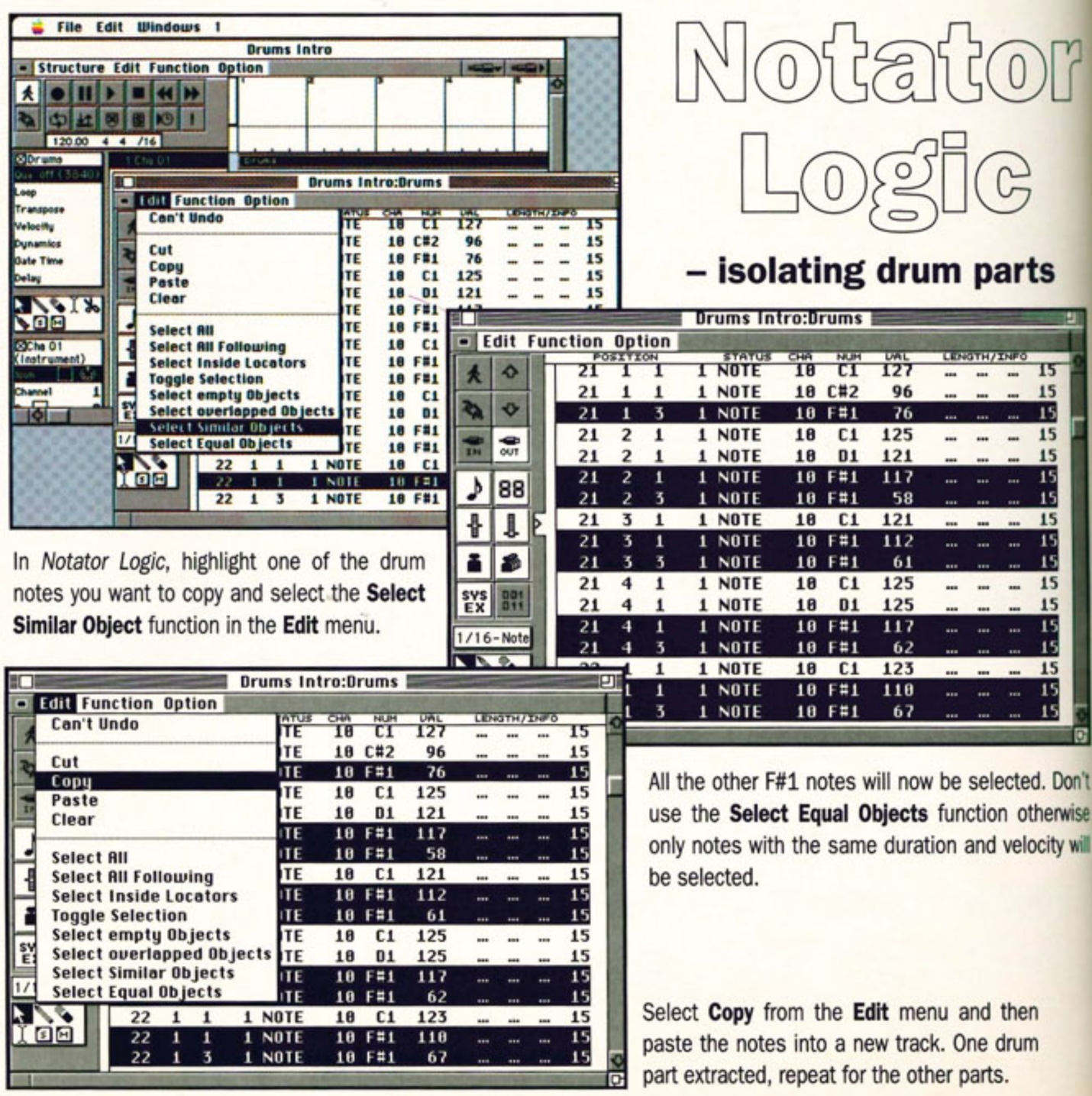
The Pianist contains a potted biography of more than 30 famous classical composers.



And I thought 'Alla Zingarese' was a type of Italian pasta with cheese sauce (yum)!

Notator Logic

– isolating drum parts

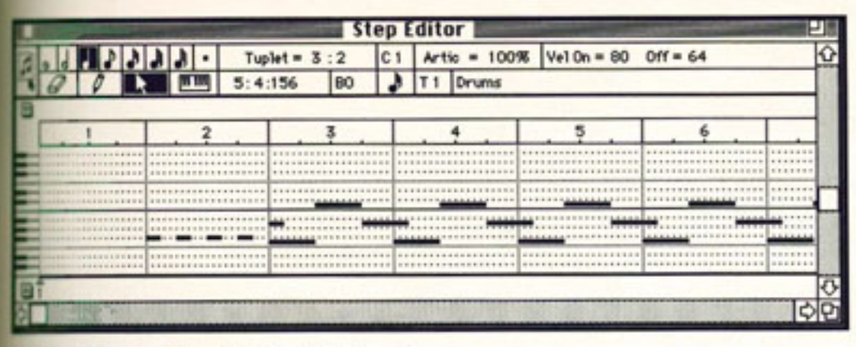


In *Notator Logic*, highlight one of the drum notes you want to copy and select the **Select Similar Object** function in the **Edit** menu.

All the other F#1 notes will now be selected. Don't use the **Select Equal Objects** function otherwise only notes with the same duration and velocity will be selected.

Select **Copy** from the **Edit** menu and then paste the notes into a new track. One drum part extracted, repeat for the other parts.

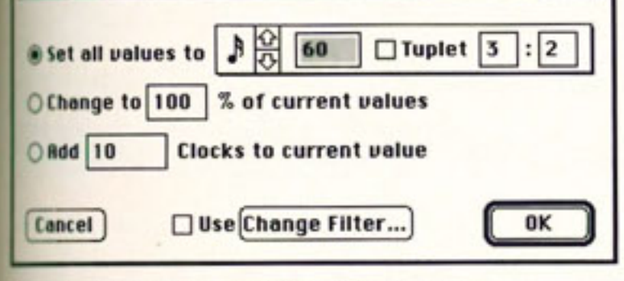
Drum track tricks



Master Tracks Pro's Step Editor. A typical drum part after quantisation may look like this.

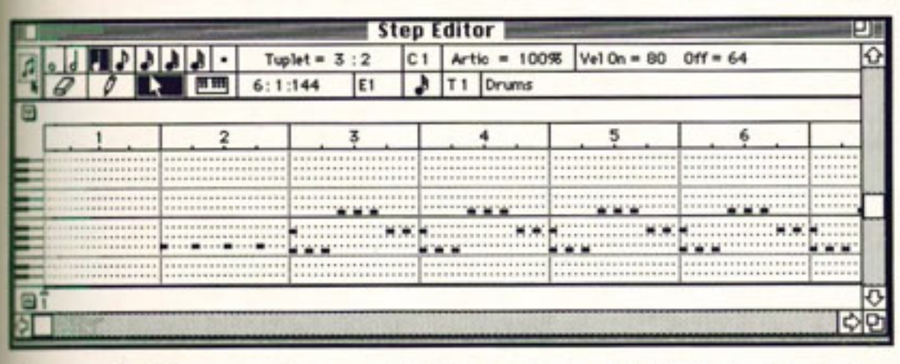
Since rhythm programming seems so popular, we'll look at some more drum-related tips. First we'll see how to improve the legibility of your drum scores.

Most drum sounds are 'one-shot' sounds. That is, they respond to a Note On message and play the sound through to the end regardless of whether you release the key. That is, the duration of the note is not important. You can use this knowledge to make your drum parts easier to see by changing all the drum durations to 32nd notes, for example. You'll find this makes the drum parts easier to read and understand in a piano roll editor.



Use Charge Duration to select 32nd notes.

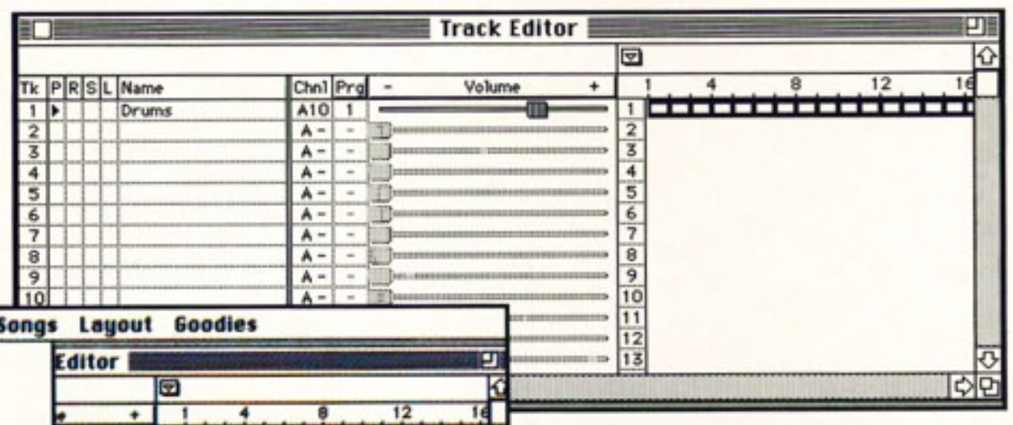
When creating a drum pattern you may want to try a particular drum line with a different sound – say tambourine instead of hi hat or agogos instead of bongos. This is most easily accomplished if you record each drum on a separate track. All you need do then is transpose it to the note value of the new sound. For example, if hi hats use F#1 and the tambourine is F#2, you would simply transpose the track up 12 semitones. In fact, when creating drum patterns, it's good practice to record each drum on a separate track if you can. When you're happy with the results you can merge the tracks if you wish.



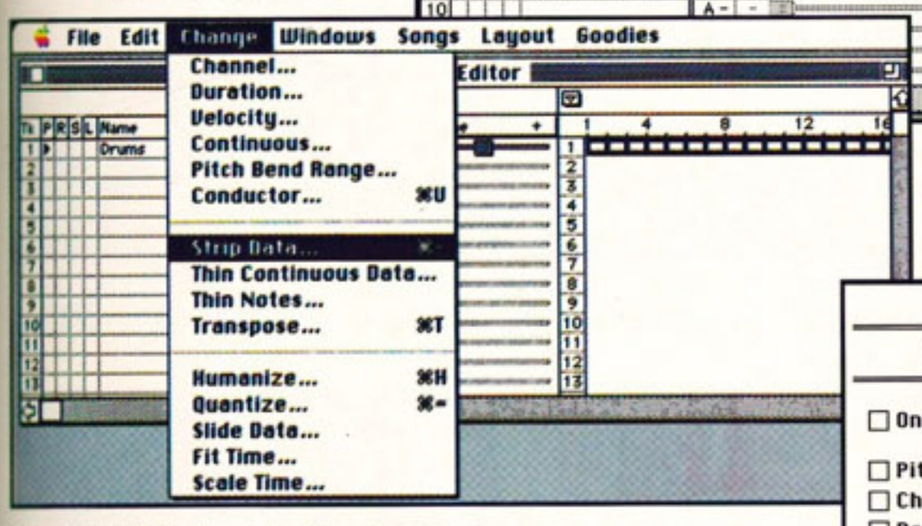
The new durations reveal many individual notes which were hidden by the previous durations.

But what if all the drums are already on one track? Here you need to use your sequencer's more advanced edit facilities to split the drums and put each one on its own track. You need a facility to either copy or remove selected events. See below for an explanation of how to do this in *Notator Logic* and *Master Tracks Pro*.

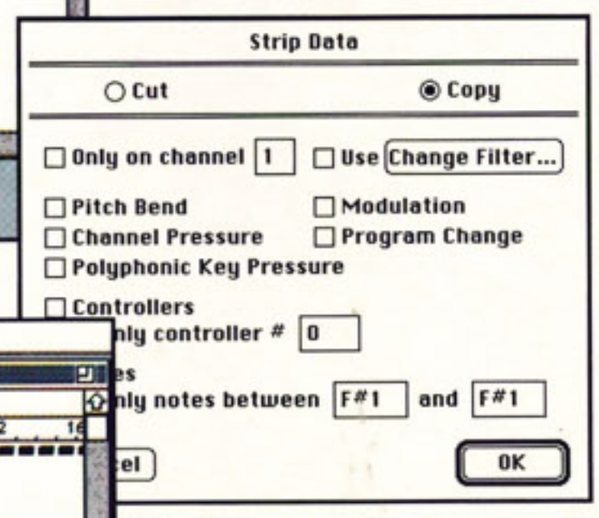
Master Tracks Pro



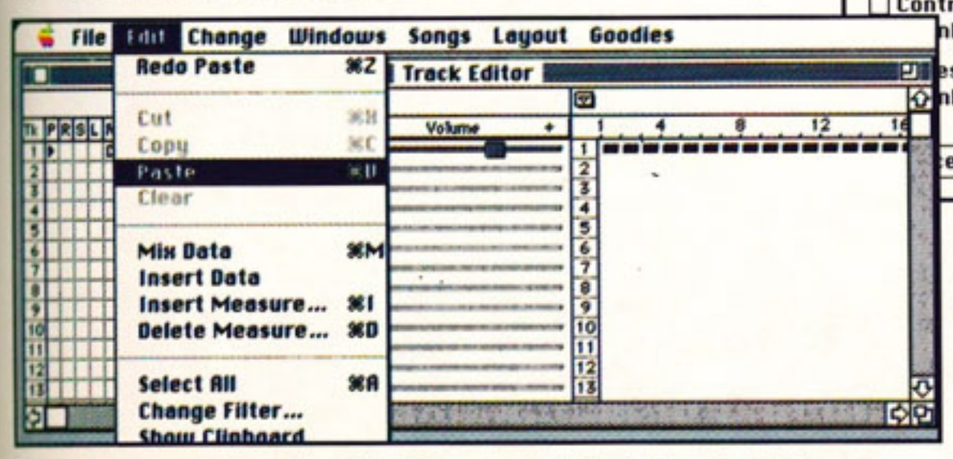
In *Master Tracks Pro*, select the drum track containing the drum parts you want to isolate.



Select **Strip Data** from the **Change** menu.



Enter the name of the note you want to isolate and select either **Copy** or **Cut**. **Copy** will retain the original drum track in case of errors.



Place the cursor at the start of Track 2 and select **Paste** from the **Edit** menu. Repeat for the other drum parts.

Beat this!

Although these pages are primarily about music hardware and software for the Mac, if an interesting bit of outboard gear comes along which could be of use to you in your musical endeavours, we'll happily take a look at it.

Such an item is the *Mega Beats* sample CD. It's interesting for two reasons. First – it's cheap. While most sample CDs cost about £50, the *Mega Beats* CD is only £19.95.

Secondly, at a time when second-hand analogue musical equipment is changing hands at silly prices – often more than the item originally cost! – *Mega Beats* brings you all the sought-after sounds produced by the old drum machines.

It contains over 700 sounds from 30 drum machines and here's the list for the technophiles – Roland CR78, TR505, TR606, TR626, TR707, TR727, TR808, TR909, R8; Yamaha RX5, RX11, RX21L; Korg DDD1, KPR77, DDM110, DDM220; Boss DR550, DR55 (Dr Beat); Simmons Kit, Linn 9000, 2; Sequential Tom; Alesis HR16, HR16B; Casio RZ1, Emu Drumulator; Akai XR10, XE8, Oberheim DBX; and Dr Bohm Digital Drums.

Between them they must contain all the major sounds used by House, Rave, Dance and Techno record producers. With a sampler and a little time you can create drum maps of the sounds you need. It's almost worth buying a sampler for!

More from Patchworks, 211 Frederick Road, Hastings, East Sussex, TN35 5AU. Tel: 0424 436674, fax: 0424 434338.

Where to get it

***The Pianist* costs £49. More from Arbiter Pro MIDI, Wilberforce Road, London, NW9 6AX. Tel: 081 202 1199.**

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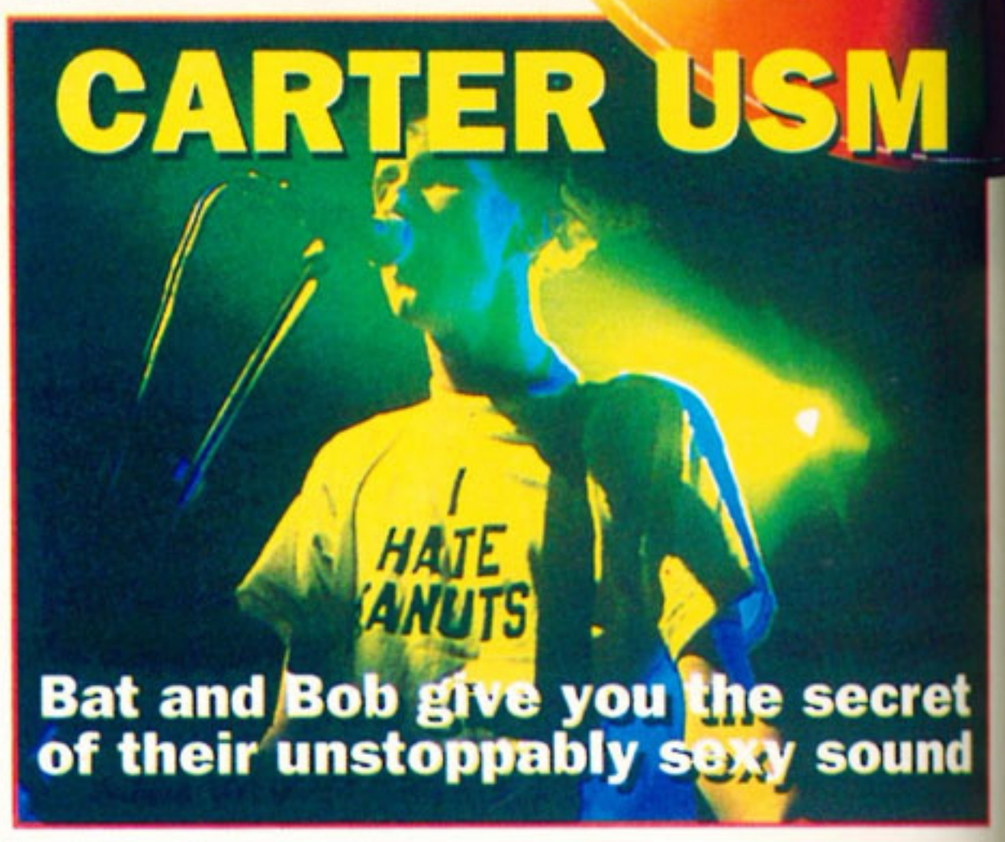

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KORG i1 i3 MODULE

◆ On test: Korg i3, Roland E-86, Fostex 380S,

REMO DPM MEGA

Simmons HexaHead, *SeqWin* for PC,

VINTAGE TEST

Otari DTR-7, Roland P-55 and more ◆

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mac ANSWERS

Got a problem with your Mac? We're here to solve it

Whatever your Mac problem, we're confident that **MacFormat** can solve it. Whether it's a beginner's question about the Mac or some specific query over a particular piece of software, our team of experts will try to come up with a solution to your problem.

All you have to do is fill in the form on page 97 – 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'.

Do-it-yourself problem solving

One of the main causes of a program not working properly is something called an INIT clash – your program isn't happy with one of the system-level extensions (called INITs) that are running.

Fortunately, it's easy to check if this is the case. First of all, restart your Mac without any System Extensions (INITs). If you're running System 7.0 or above, that means restarting the Mac and holding down the **[shift]** key – a message telling you 'Extensions off' will appear. For any System version below 7.0, move all the Control Panels and INITs out of your System folder and restart the Mac.

If your program now works, it must have been unhappy with one or more of the INITs. The only way to work out which one it was is to move them all out of the System folder, then put them back one at a time – restarting your Mac after each one – and test the program again after each one has been replaced.

Label Q&As

Subjects

- Beginners
- General/System
- Hardware
- Buying advice
- Programming
- Applications
- Graphics
- DTP
- Comms

To help you spot answers to questions that you might be interested in, we've colour-coded them according to the table above. Remember, these are just general categories; but they should help you to find your way around the section.

Q *I recently bought an LCII, and I'm very pleased with it. However, some applications seem a bit slow, so I'm considering an accelerator upgrade. However, I'd like to know what this will and will not do. For instance, I assume that it wouldn't send the pawns in* BattleChess *zooming across the board, but would it reduce the game's thinking time? What about search times in my* ClarisWorks *database, or scrolling and cursor speeds in a word processor? In short, as a general user of* ClarisWorks *and hopefully in the future of DTP and scientific applications, is it worth it?*

Secondly, when I try to open the 'read me' files on the ***MacFormat*** *cover disk, I get a message telling me that the file cannot be opened because the application which created it is missing. Is this because I have deleted the* TeachText *application, which I thought was no longer required? Or is there something else wrong that I've overlooked?*

S J Hatfield
Richmond, N. Yorkshire

A

First of all, buy an accelerator. This will speed up absolutely everything, with the exception of disk access, that your Mac does – processing ('thinking') time, screen display speed and so on. However, that doesn't necessarily mean that your *BattleChess* pieces will hurtle across the screen so fast that you can't see them. Many programs have a special routine which makes sure that things such as this are done at a more or less constant speed, regardless of the machine that the program is running on. If you're finding applications slow, you should certainly consider an accelerator – and in a future issue of **MacFormat** we'll tackle the whole subject in a major feature.

Secondly, you're correct: the reason that you can't read the 'read me' files is that you've got rid of *TeachText* from your hard drive. Most people create their read me files in this program because it's one that everyone owns: Apple includes it on the System disks, and it comes with many other programs as well. It's a good idea to have a copy of *TeachText* lying around on your hard drive: it only takes up 36K or so, and many software authors use it to create basic documentation. However, if you don't want it on your drive, don't worry: you can still read the file, since it's just plain text format. Simply launch your word processor (*ClarisWorks*' word processing module, for instance) and select **Open** from the **File** menu. You should then be able to see, and read, the file. (The only exception to this is if a file has been saved in '*TeachText* Read Only' format, in which case your word processor may not recognise it. If this has happened, see if your word processor has an 'Open any file' command; if not, you'll have to put *TeachText* on your disk briefly. These days, we create our Read Me files in a stand-alone document format, but many software companies distribute last minute information files and the like in *TeachText* format to use the minimum amount of space on the hard disk.

Q *Three questions for you:*
1. *The version of the Performa operating system which my machine has installed creates an empty Applications folder on the Desktop each time the Mac is booted up. I don't have a use for this, as I use a folder on the hard disk for my applications, and access them from the* Launcher *or from the Apple menu. Do you have a suggested use for this folder or, even better, a method for making it go away?*
2. *My hard disk appears to be missing about 1.6Mb of space. This is constant, and is approximately equal to the amount of System software loaded. Is this normal?*
3. *What is the relationship between onboard VRAM and colour depth on different sized monitors and at different resolutions?*

Darwin G Moir
Bridge of Don, Aberdeen

A

1. The folder is being created by *Launcher* itself, rather than the System software. To stop it being created, you'll need to disable *Launcher*, by dragging it out of the Control Panels folder, so that it doesn't load at Startup.

2. By 'missing 1.6Mb', I assume that you mean the figures for the amount of space 'in' the disk and the amount of available space add up to 38.4Mb, rather than the 40Mb that you thought you should have. The reason for this is that when a hard drive is formatted, it doesn't use up the total amount of space available, but leaves a little spare. This is so that if there's a problem with one of the sectors on the hard disk (the actual physical area where data is stored), the System can use some of the spare space instead. (This is a simplified explanation, but it should give you some idea of what's going on.) If you re-format your hard drive using something like Apple's *HD SC Setup* or a third-party utility like *SilverLining* or *FWB ToolKit*, you may find that you recover several hundred kilobytes of space (remember that you'll erase all your data in doing so). However, you'll never get an absolute 40Mb of space.

3. The relationship depends on the model of Mac that you have. You can't vary the resolution that a monitor is displaying, unless it's a very expensive 'multi-sync' device – and, in fact, there are few if any occasions when you'd want to do this. Apple monitors are mostly set at 72dpi (dots per inch), which gives you a true 'what you see is what you get' display.

Q *I have heard that it is possible to re-initialise the internal hard drive, re-install the System software and regain as much as 10Mb of disk space. Is this true? If so, could you describe how to do it, what risks may be involved, what safeguards to make first and to indicate whether the process would invalidate the Apple warranty?*

John Sweeney
Draycott, Derby

A

As we say in the reply to the question above, it's certainly possible to regain some 'lost' space by re-initialising the hard drive, but the figure of 10Mb that you quote is wildly optimistic – I'd expect 1Mb or 2Mb at the most.

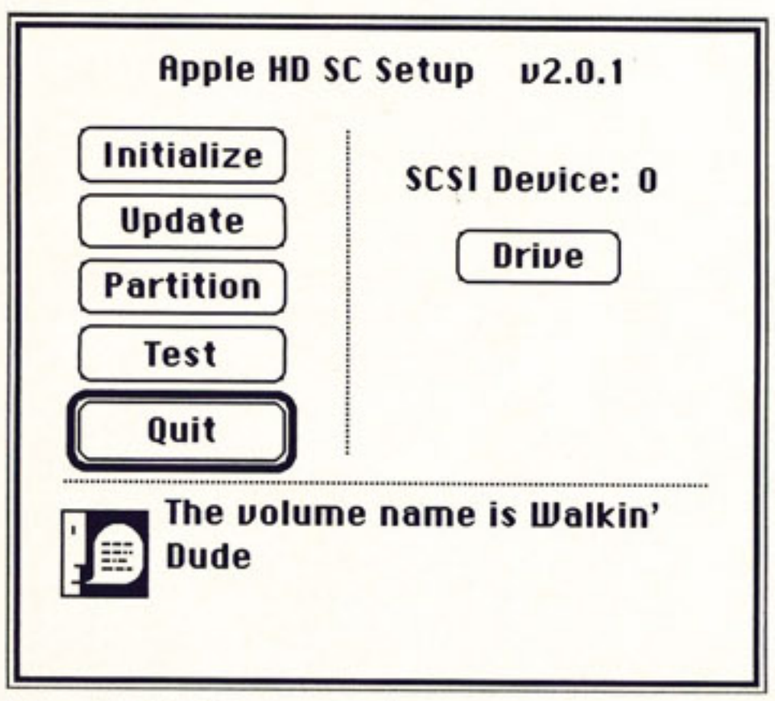
The process is simple. Back up all your data (don't forget any fonts or Extensions that you've installed into the System folder), then restart your Mac using the Disk Tools floppy that came as part of your original System disks. Launch the application *HD SC Setup*, and partition your disk with the maximum amount of space possible. Then reboot again using the Installer 1 disk and proceed with a standard System install.

Things to watch for: first, it's possible that *HD SC Setup* won't recognise your internal disk. This is because it's only set up to format 'real' Apple hard drives, and many Macs are now sold with internal drives from other third-parties. That's not to say that they are any better or worse than Apple-badged drives; only that Apple's formatting utility won't work correctly with such drives. If this is the case, then you'll have to get hold of a third-party formatting utility.

Secondly, make sure that all your Install disks are fine before you start the Install. That's because if one is corrupted, you won't be able to properly install the System software, and you'll have to find another set of System disks from somewhere.

The easiest way to check this is to do a 'System refresh' – that is, to Install a new System over the top of the current one before you erase anything. If one of the disks is damaged, your original System will be left intact.

Alternatively, you could just restore your whole hard drive from the backup that you took before you re-initialised it – that would work just as well. This isn't a process that will invalidate your warranty, so you're safe there – it's essentially a software thing that you're doing. Do remember, though, that backing up and restoring all your data will take some considerable time – you might want to think about whether the whole process is worth it, for the sake of a few hundred kilobytes of extra space at the end of the process.



By using *HD SC Setup* you can gain some extra space on your hard drive. Select Partition and make sure that the available space on your hard drive is set to the maximum possible.

Q&As

Subjects

- Beginners
- General/System
- Hardware
- Buying advice
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Q *On rare occasions I have call for a PostScript printer, but for the majority of the time my Select 300 is fine. However, I'd like to know whether there is any software available which will allow PostScript/custom patterns such as those in* FreeHand *to be printed on non-PostScript printers. If so, will they run on my Select 300 with standard memory installed?*

George Palmer
Handsworth, Sheffield

A

The only way to do this is to use a PostScript interpreter such as *Freedom Of Press*. This takes PostScript and processes it on the Mac to generate the printer's bitmap image – a 'true' PostScript printer would do this itself. There's no way to do what you want without a PostScript interpreter of some kind, I'm afraid – whether it runs on the Mac or in the printer.

Q *After reading one of the comms articles in* ***MacFormat****, I purchased a full one year's subscription to the Internet. I even bought a Mac software utility and TCP/IP connection for the Mac! However, I'm unable to find anyone who can assist me in setting up the software to enter the world of Internet. Is there anyone who can 'hold my hand' to make the successful connection?*

John Cunningham
London EC2A

A

From your letter, I assume that you've subscribed to Demon Internet Systems, and that the TCP/IP connection you have is *MacTCP*. If this is the case, then you've almost (but not quite) got everything that you need to get connected to the service. You will also need a program called *MacPPP* (there are others available, but *MacPPP* is one of the best and is free) to allow *MacTCP* to use the modem port. PPP stands for Point to Point Protocol, and is a common standard (SLIP, Serial Line Internet Protocol, is the other). The folks at Demon are now expert at the technicalities of setting a *MacTCP* connection up, and they'll hand-hold you if you give them a ring on 081 343 3881. (If it's not a Demon subscription that you've got, then give whichever service provider you're using a call – they should be equally able to help you.)

Q *I'm one of those many buyers, new to Macs within the last year, who got completely stuffed by buying a IIvi 4/40 at what now are silly prices. With the avalanche of new products and prices plummeting, I feel (understandably) a little betrayed, not only by Apple but also by the dealer who continued to assure me what a good buy I was making when they must have known of forthcoming events. Now I never even see the name IIvi listed anywhere.*

My main problem is this: I realise that I have insufficient RAM and hard drive space, but I don't know the most cost-effective way of improving the situation. Should I buy SIMMs and an external disk drive to add on, or should I cut my losses by aiming for one of the newer machines and simply changing completely? I use my Mac mainly for word processing; I'm a writer and director for trade, but I need the facility for graphics for presentation of programme ideas.

Another problem I have is that whenever I am printing a document, even a one-page letter, I have to wait and cannot work on something else while the document prints. As much of my work runs to many pages, this wastes quite a lot of time, and not having to wait is a feature of my old Amstrad that I greatly miss (the only feature, I might add!). I simply have to watch the message 'spooling to disk: x% complete' each time. Am I missing something screamingly obvious in the manual, or am I doomed to message watching?

Will Brenton
Croydon

Subjects

- Beginners
- General/System
- Hardware
- Buying advice
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A

It might soothe your angry thoughts towards your dealer if we told you that it's quite possible that they didn't know until very shortly before the product line was changed. Apple keeps information to itself for as long as possible, and it's quite common for journalists to see new Macs (under a non-disclosure agreement) less than a month before they're released, while dealers are often told only a couple of weeks before launch. Likewise, Apple's price cuts over the last 12 months have left us all fairly shell-shocked, and I've heard of a number of dealers who have ordered large quantities of machines only to find that prices have been cut within days of receiving them at the old, higher price.

Your dealer was right: the IIvi is a good machine, and at the time the price was reasonable – it's only since then that things have changed. It's accepted wisdom in the computer world that whenever you buy something, an improved version will immediately appear at a much reduced price. You just have to console yourself with the thought that you bought the Mac when you did because you needed it, and that you've been using it since – something that you couldn't have done if you'd have waited.

On to your specific questions. Personally, I'd be inclined to buy some extra memory and an external hard drive, rather than try to trade your Mac in. You don't say that you're unhappy with the speed of the machine, and since you'll almost certainly lose money if you sold it, you'd be better off sticking with what you've got for now. I say for now, because next year Apple will be introducing the PowerPC, and has promised to make upgrades available for people using Macs in cases such as the IIvi has. There's no way of predicting the price of such an upgrade (it won't be peanuts, that's for sure), but if speed isn't a major issue right now then perhaps waiting might be the best option.

As for your printing problem, you don't say what kind of printer you're using, so it's difficult to tell. However, it sounds as if you're using a printer such as GCC's Personal Laser Printer, which has its own special printer driver. If that's the case, then you're stuck with waiting, I'm afraid – that's the way these printers work. You might like to check in your manual to see if you have an option for 'background printing', though. Some output devices offer this feature, where printing occurs in the background while you get on with other things.

Q *I recently bought 256K of add-on VRAM (Video RAM) for my Mac Colour Classic, and reset the Monitors Control Panel to 'thousands' of colours from its normal 256 option. Question one: how can I tell that the System is using the extra memory? I use* Aldus SuperPaint 3.0 *without problem, but both* Hellcats *and* PGA Tour Golf *object (and fail to run) unless 16 colours or 256 colours are selected. Question two: How can I tell that* Aldus SuperPaint *is using the extra display memory? Question three: is the orientation of the chips (down or up) on the VRAM board important?*

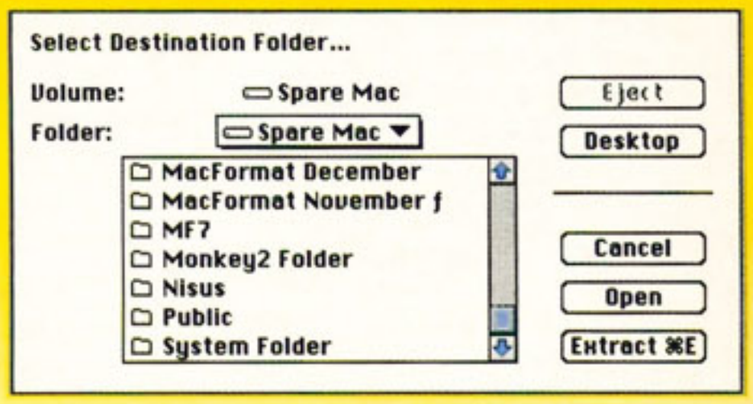
Andrew Humphries
Milton Keynes

A

If your Mac could originally only display 256 colours, and now has 'thousands', then it's certainly using the extra VRAM – that's the only way that the extra colours would be made available. As for your other questions, many games (such as the two you mention) require a specific number of colours to work correctly – you've got a surfeit of wealth with 'thousands', so the program requests that you reduce the number displayed. Regardless of the program that's running, the System uses as many colours as you've set in your Monitors Control Panel – so it's not a case of a program itself using all the available colours. Oh, and if your VRAM wasn't inserted correctly, the display almost certainly wouldn't work at all!

Q *I'm not new to Macs – I have used them for three years as a student at college – but I've found that having one of my own is a whole new ball game. I'm used to having everything set up for me, so I have some fairly basic questions now that I'm doing the whole thing myself.*
1. *For starters, I'm having problems using the* ***MacFormat*** *cover disks. I've made backup copies as instructed in the magazine, but when I try to open the disk I get a dialogue box on screen, with various options such as Eject, Desktop and Extract. What's happening? Why can't I get into the disk?*
2. *Can you explain memory to me? I have read the instructions about RAM in the manual, but I don't really understand it. In the pages of* ***MacFormat*** *there are advertisements for massive amounts of memory – 2 to 8Gb, for instance. Why advertise for such large amounts of memory when, for example, my LC can only be expanded to 10Mb? How can a computer be extended in such a big way? Can the hard disk be extended? What do I do when my hard disk gets full? I'm worried that if I get the programs I need –* PageMaker *and Microsoft* Word, *for example – that putting them in the machine will take up all the memory and I won't be able to do anything with it.*
3. *I can't afford to get any major programs at the moment, but is it a false economy to look at shareware? Is it really any good?*
4. *I notice that there are many different types of graphics – EPS, TIFF, PICT and so on. Are they all compatible with each other, or do you need separate programs to deal with each one?*
5. *Given what I've asked about graphics, would my choice of graphics program in the future affect the sort of printer that I need to buy?*

B Ward
Sheffield



Getting at the contents of our cover disk is simple when you know how. Double-click on the icon and you'll get this dialogue box. Then just select a place on your hard disk and click Extract.

A

Well, that's certainly a major set of questions! I'll try to answer them all here, but they've also been passed on to the various columnists, so they may well print more in-depth explanations of many of these points in the coming months.
1. This is the easiest question to answer. Because we cram so much on to the **MacFormat** cover disk, we've had to compress all the programs using an application called *Compact Pro*. This creates a 'self extracting archive' – a mini-application which re-creates the original files and folders on your hard drive when you launch it. The dialogue box is asking you where on your hard drive you want the software to be placed – just select a place on your hard disk and click on the Extract button.
2. There are two different sorts of 'memory': RAM (Random Access Memory), which is what the computer uses to work when it's switched on, and which it needs to run applications. Then there's storage space on your hard drive, which the Mac uses to store applications and their ancillary files, all your documents, the System software and so on. Unlike RAM, the hard drive doesn't lose its data when you switch the Mac off. Typically, a Mac will have somewhere between 2Mb (megabytes) and 20Mb of RAM, while hard drive sizes vary between 40Mb and 2Gb (gigabytes) or more. When a hard disk gets full, you can simply buy another and plug it in to the back of the Mac, via the SCSI port – you then have access to it and your original drive. If RAM gets full, you just quit one or more of the applications that you have running to free up some memory.

You shouldn't worry too much about filling up your hard drive – your letter says that you've a 160Mb disk, and that will more than adequately cope with a few applications!
3. Some shareware is just as good – or better – than commercial applications, while some is fairly ropey. To make sure that you pick the best, keep reading **MacFormat**'s PD column. Certainly, though, it's not a false economy to try out shareware – often you'll find that it does all you need, so you don't have to go out and buy a commercial application instead.
4. There are, indeed, many different graphics file formats, all of which have advantages and disadvantages. Just about all graphics programs

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will cope with PICT images, and most can deal with TIFFs. The whole area of file formats will be covered in much greater detail in a forthcoming article, but until then you can be fairly sure that any decent art package will generate and cope with most of the important formats.

5. As for buying a printer, the only real restriction is that you need a PostScript printer to output EPS graphics – the name stands for Encapsulated PostScript. Other than that, it doesn't matter whether you get a laser or an inkjet device.

Q *My daddy has a spare Connor 20Mb CP202S hard drive from his PowerBook. This has a 48-pin bus. Can I wire it to my Mac Plus as an internal hard drive without buying a £99 case? If so, please print a wiring diagram! There are no warranty issues involved.*

Tom Boles (aged 4)
London SW6

A

Sorry, Tom, but there's not a lot that you can do here. The Mac Plus was never designed to have an internal hard drive fitted, so the connections just don't exist inside the casing. All you can do is connect it as an external drive – and to do that, your dad's going to have to find the £99 for a case, I'm afraid.

Q *What is the best way to pay the shareware fees for any of the programs which I've gleaned off your free disks? The prices tend to be in dollars, and there's always an overseas address – Belgium, the United States or wherever – given as the address to which registrations should be sent. How can I be sure that the author still lives/works at the address supplied with the documentation?*

Diane Phillips
London N16

A

This has always been a thorny problem, and I'm afraid that there's no easy, general solution – given that most shareware programmers are doing it for fun, and aren't set up to accept credit card payments. I confess that when I'm sending registration fees, I tend to send cash – spare dollars that I have left over from holidays. This isn't the best way by any means, but it does have the advantage that the author doesn't have any hassle before they can actually spend the money. For European countries, you could try an International Money Order or a Eurocheque; also, why not ask your bank whether it's possible to have a US Dollar cheque drawn on your account? (Most banks have US subsidiaries, so they should be able to do this, although it may cost you a fair bit; in some cases, you may end up paying more for the Dollar cheque than you're forking out for the shareware fee!)

In recognition of the fact that registration can be difficult, the international bulletin board CompuServe has set up a shareware registration fee to which some Mac shareware authors subscribe. Users can log on and pay their fees by credit card – CompuServe passes the fee on to the software author. This scheme looks like it's becoming more and more popular, so hopefully the amount of software covered will rise.

As for whether someone still actually lives at the address given: well, if the software is relatively recent, the chances are that the address is still current. But if it's a program from a few years ago, you might want to write the author a letter first, to make sure that they're still there. If you promise to pay the registration fee on receipt of a reply, most programmers will expend the few cents required!

Q *I have an LCII, which came with a microphone, so I was especially interested in the 'Sound Bytes Back' article in your November issue. However, you mention an adapter supplied by Apple that lets you connect a tape recorder to your Mac. I went to my local AppleCentre, and after a wait of about half an hour (I didn't mind – I was surrounded by Newtons, Quadras and PowerCDs) they concluded that the adapter was no longer supplied.*

I then discovered that my LCII Getting Started guide tells me what I want: "An attenuation of 500:1 is recommended when inputting line level signals. Appropriate attenuation cables and adapters are available from electronics stores." I asked in five such electronics stores, including Tandy, but not one sold any attenuation adapters or cables for audio signals. Help!

Matthew McKeown
Preston, Lancashire

A

It may be that the shops sell exactly what you want, but that the manual's techno-babble managed to confuse the shop assistants. What you want, quite simply, is a 'line input to mic input converter'. This takes the signal produced by the tape recorder (or whatever) and alters it so that it's compatible with the signal expected by a microphone input. Certainly, any musical instrument shop that sells mixing desks and the like should be able to supply you with such a device.

Q *Why does* BeHierarchic *indicate the presence of sub-menus on only some Apple menu items? For instance, I have a* 'CanOpener' *folder which the program displays with a small arrow indicating the presence of some three enclosed items, but my Control Panels folder, even though it contains 18 items, doesn't display the sub-menu arrow. I've tried re-installing the program, but this only helps temporarily.*

On a different subject, what is the difference between modems with and without BABT approval? What are the laws concerning the sale, purchase and use of unauthorised devices?

Bruce Hoag
Papworth Everard
Cambridgeshire

A

Occasionally people do find problems with *BeHierarchic*; it may be clashing slightly with one of the other Extensions you've installed, in which case you'll have to try removing them one at a time to see if the conflict continues. However, before you do that, check that the program is set to update automatically every time the Apple menu is selected. It's possible that you have the option set where the program will only check a folder's contents when you hold down a specific key (often **[command]** or **[option]**) when you click on the menu.

As for BABT-approved and non-approved modems, the situation is this: it's not illegal to sell a non-BABT approved modem, nor is it illegal to buy one. However, it is illegal to connect it to the phone system – whether or not you go via a private exchange such as a company switchboard.

The reason for this approval process is so that there is no chance of the apparatus damaging the phone line or becoming hazardous to the user or to Telecom engineers if it should become faulty. However, the approval process can take several months, and costs the modem manufacturer several thousands of pounds – which is why

BeHierarchic gives you sub-menus for all the folders in your Apple menu. However, make sure that it's set up to update automatically – otherwise it won't take any notice of new items that you put in the folders.

some of the most popular modems in the country aren't approved.

The situation will hopefully be rather more sensible in a year or two, because part of the great European Community ideal is that such things will be centralised and all under the auspices of one body, rather than the state at present, where each European country has a different organisation. However, until then it's still illegal to use a modem which hasn't been approved by the BABT – and if you're caught by BT then you could face a fine or having your phone service discontinued for a year or more.

Q *I have a Dacom Systems autodialling modem for a BBC Master computer, with no documentation. Can I connect this to my Mac, and if so, how do I go about it?*

Stephen O'Connell
Ayr

A

If your modem is Hayes compatible, then you'll have no problem at all in using it – just buy a Mac-to-modem cable and you should be able to use any comms package (try *ZTerm*, the shareware program). To find out whether the modem is Hayes compatible, see if your BBC Master comms program sends commands to it using the 'AT' string at the beginning of each line. If it does, the modem is Hayes compatible – so you're sorted. If not, you may have more problems. A manual modem can be used almost as easily as a Hayes-compatible one, since you just launch the comms program, dial the phone number using your normal phone and then hit the 'data' switch on the modem when the remote computer answers. (The only problem is that you have to listen to a horrible screech for a second or two.) However, if your modem is automatic but non Hayes compatible, you may struggle to force it into communication mode. The only thing to do, I'm afraid, is experiment!

Q *Now that System 7.1 includes QuickTime as standard, is there a way that I could record screen events to replay as a movie to aid others? For many years I have been creating help and example movies by taking screen snapshots, chopping them up into elements and producing animated movies in MacroMind* Director *under System 6, but simply recording my actions on the screen would be far better – and would make creating them much lot easier.*

Jerry Witterick
Chelmsford, Essex

A

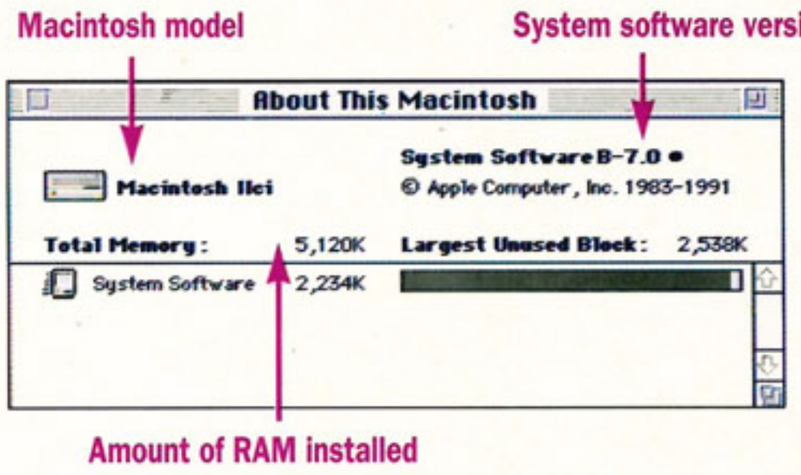
Fortuitously there is, indeed, such a package, designed to do exactly what you want – create movies of screen actions, for later playback and entertainment purposes. The application in question is called *Spectator*, and it retails for £117.50. It's distributed in the UK by Softline Distribution, who can be reached on 081 401 1234.

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't enter into personal correspondence and we can't answer technical queries by phone either.

How much RAM have you got?



To find this dialogue box, make sure you are in the Finder, **point to the menu and scroll down to the first item:** About This Macintosh, **then release the mouse button**

mac ANSWERS

If you send in a question for the **MacFormat** experts to solve, please fill in and include this form (or a copy of it). And please make sure that you include all the relevant details – version numbers of software and so on – so that we have the best chance of helping you. Send your form and question to: **Mac Answers, MacFormat, 30 Monmouth Street, Bath BA1 2BW, or fax it to us on 0225 446019**.

Name .....

Address .....

.....

.....

.....

Your Mac (For example, Performa 200, IIfx, PowerBook 145): .....

Approximate age of machine: .....

System version (see **About this Macintosh** screenshot above): .....

Amount of RAM (the **Total Memory** figure from the **About This Macintosh** dialogue box): .....

Are you using virtual memory?

(This is accessed from the **Memory** control panel under System 7) YES/NO

Do you have 32-bit addressing turned on?

(This is accessed from the **Memory** control panel under System 7) YES/NO

If your Mac has an external monitor, list the make and model; if you are using a video card, give details: .....

.....

Details of any SCSI devices connected (eg CD-ROM drive, hard drive, scanner):

.....

.....

Details of any other relevant hardware which could help us to answer your question:

.....

.....

Now, use this space to describe your problem or question. Include as much relevant information as possible. Please continue on a separate sheet if necessary.

.....

.....

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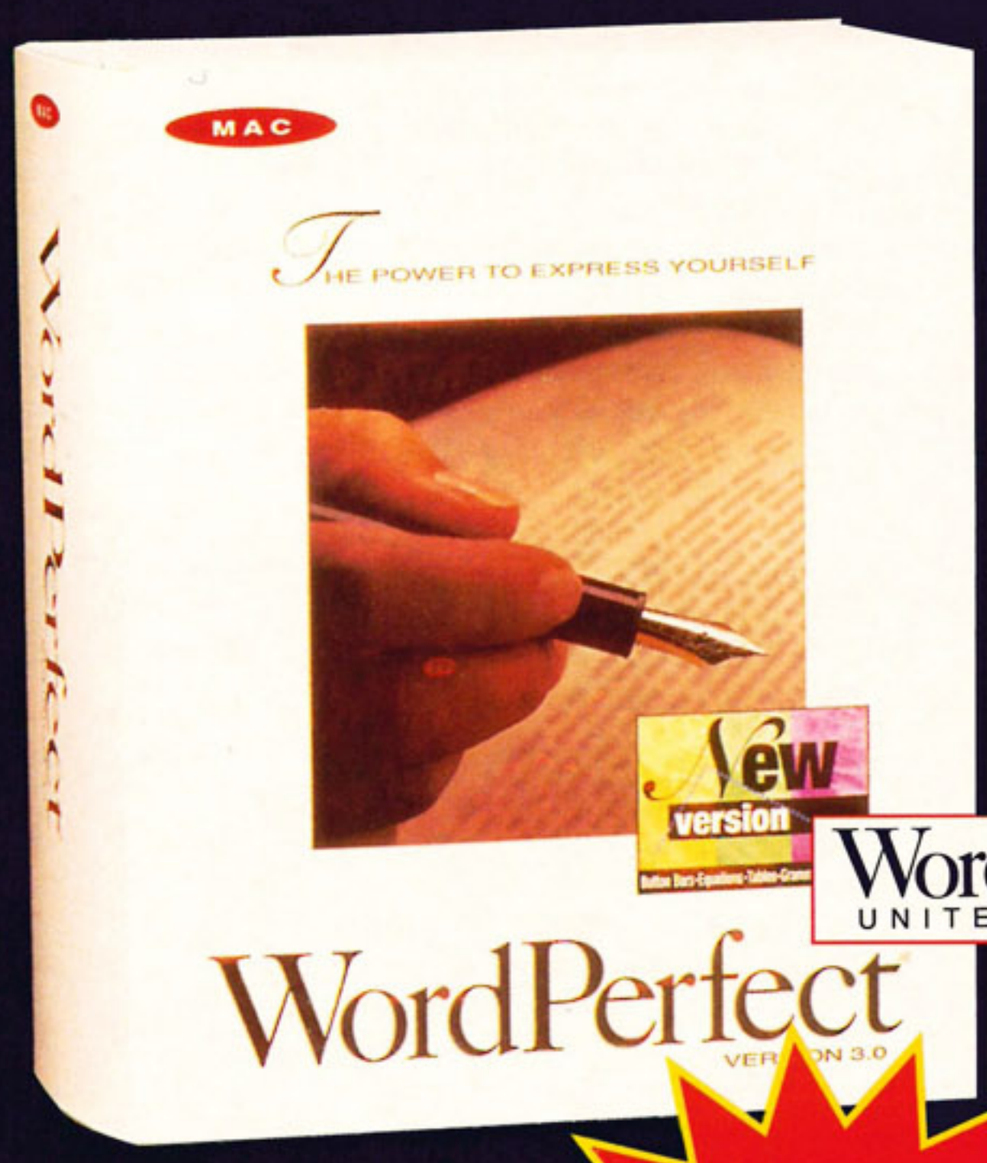
MacFormat has got together with WordPerfect UK to offer five copies of *WordPerfect 3.0* to our readers, and all you have to do is answer three simple questions.

WordPerfect 3.0 is a major upgrade to this multi-talented word processor. It's now more powerful and easier to use than ever, thanks to a new interface using buttons and a ruler bar. If you use PCs then file transfers are even easier, and you'll find the new table and equation editors make technical work a cinch.

WordPerfect 3.0 works with all the latest system enhancements including AOCE, AppleEvents, WorldScript and QuickTime. Users of *Grammatik 5* can access it directly from within the program.

If you want to find out more about *WordPerfect*, either read our review on page 22, or give the company a call on 0932 850505, or just win yourself a copy and see for yourself what it can do.

To enter the competition just answer the three questions below and put your answer on the back of a postcard with your name and address. Send it to: Me! Me! I want to Win!, MacFormat, 30 Monmouth Street, Bath BA1 2BW. Entries must be in by January 2.



£2,000 worth of prizes!

Questions:

1 What does the acronym 'AOCE' stand for?

- a Apple Organisational Communication Events
- b Apple Open Collaboration Environment
- c Apple Ordinary Commercial Environment

2 The latest Mac version of *WordPerfect* is version 3. What is the latest Windows version?

- a 3.0
- b 6.0
- c 9.0

3 In which issue of MacFormat is *WordPerfect 3.0* reviewed?

- a December 1993
- b January 1994
- c February 1994

Business plan power

Simon Cox and Greg Morrison show you how to get financial backing for your project or idea by drawing up a business plan

This is where we provide help in one of the trickiest areas of business, raising money. The business plan is not simply for the first-time entrepreneur but for anybody looking to gain support for an idea or project. The business plan should give the reader a clear insight into the proposed project and all the information they need to come to the correct decision – to give you the money. After the first impression of your presentation has worn off, the business plan is what they are left with.

An important part of the business plan is the figures which show what you believe is the financial future. We shall look at the financial aspects of the business plan and pay particular attention to the role a spreadsheet can play. The aim here is to construct a picture that others can believe in.

Assembling the pieces

The first step is to assemble the pieces of information you will need for the business plan. These will not include only the financial details but also the market research, sales plans, marketing strategy, biographies of the principals, organisational structure etc. What the backer is looking for is a clear indication that you have thought about all the major issues in making your project a success. You will have to supply all the information to support your claims, such as proving previous experience in the field. There are no hard and fast rules about what should or should not go into the business plan. The right business plan is the one that gets the support you are after. The information you include depends on the type of project and the intended audience.

Playing the numbers game

One of the major backbones to the business plan has to be the finances. This is especially true if the figures are being presented to a financial institution. From the point of view of putting a spreadsheet to work for you the most useful document is the budget.

The budget should reflect all your understanding of how the business will perform on a month by month basis. This may seem like a lot of work but it will repay the efforts and help turn your good idea into a reality.

We will need to set up a scenario to use as an example. The fictitious company Reeves and Mortimer Computer Services is a start up company intending to sell a range of accessories for computer owners.

The first stage in a budget is to project the level of sales. For simplicity the company only has two products A and B. We will also include the percentage of sales these two products will

1

Business Plan Spreadsheet

	A	B	C	D	E	F	G	H	I	J	K	L
1	**Budget for Reeves and Mortimer Computer Services**											
2												
3	**Sales**											
4		**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**
5	Product A	£12,550	£12,759	£13,100	£13,353	£13,628	£14,200	£14,574	£14,998	£15,421	£15,845	£14,640
6	% of Total Sales	90%	88%	86%	84%	82%	79%	78%	76%	74%	72%	63%
8	Product B	£1,375	£1,763	£2,151	£2,539	£2,927	£3,700	£4,216	£4,797	£5,479	£6,161	£8,751
9	% of Total Sales	10%	12%	14%	16%	18%	21%	22%	24%	26%	28%	37%
10												
11	**Total Sales**	£13,925	£14,522	£15,251	£15,892	£16,555	£17,900	£18,790	£19,794	£20,900	£22,006	£23,391
12												

2

Business Plan Spreadsheet

	A	B	C	D	E	F	G	H	I	J	K	L
14	**Cost of Goods Sold**											
15		**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**
16	Raw Materials	£1,393	£1,452	£1,525	£1,589	£1,656	£1,790	£1,879	£1,979	£2,090	£2,201	£2,339
17	% of Total Sales	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
18												
19	Labour	£3,064	£3,195	£3,203	£3,337	£3,477	£3,759	£3,758	£3,959	£4,180	£4,181	£4,444
20	% of Total Sales	22%	22%	21%	21%	21%	21%	20%	20%	20%	19%	19%
21												
22	Overheads	£1,671	£1,743	£1,830	£1,907	£1,987	£2,148	£2,255	£2,375	£2,508	£2,641	£2,807
23	% of Total Sales	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%
24												
25	**Cost of Goods Sold**	£4,456	£4,647	£4,728	£4,927	£5,132	£5,549	£5,637	£5,938	£6,270	£6,382	£6,783
26												
27	**Gross Profit**	£9,469	£9,875	£10,523	£10,965	£11,423	£12,351	£13,153	£13,856	£14,630	£15,624	£16,608
28	**Gross Margin**	68%	68%	69%	69%	69%	69%	70%	70%	70%	71%	71%

3

Business Plan Spreadsheet

	A	B	C	D	E	F	G	H	I	J	K	L
30	**Operating Expenses**											
31												
32	**Sales & Marketing**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**
33	Advertising	£500	£550	£600	£650	£700	£750	£800	£850	£900	£950	£1,000
34	Promotion	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50
35	Literature	£500	£750	£0	£0	£0	£500	£0	£0	£750	£0	£0
36	Salaries	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500
37	Travel	£200	£200	£200	£200	£200	£200	£200	£200	£200	£200	£200
38	Hospitality	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100
39												
40	**Sales & Marketing Cost**	£2,850	£3,150	£2,450	£2,500	£2,550	£3,100	£2,650	£2,700	£3,500	£2,800	£2,850
41	% of Total Sales	20%	22%	16%	16%	15%	17%	14%	14%	17%	13%	12%
42												

represent. This gives a clear idea of which product is being relied on for the income. For the purpose of the budget we have ignored VAT though this will, of course, be an issue in a real business plan.

1 We now have figures for the total sales of the products. This may seem great but this is where we start adding up the expenses the business has. First there is the cost of actually making the product. This is the cost of materials plus the labour costs plus the overheads. The overheads are the costs associated with making the product that do not actually go into the product such as replacement parts for the equipment making the product.

2 This provides the gross profit and gross margin. The gross profit is the cost of goods sold subtracted from the total sales. The expenses do not stop there. The operating costs which arise from actually running the business must be considered. These are often broken down into three sections: Sales and marketing: This covers advertising, promotion, salaries and all related costs including hospitality. We will add these to the spreadsheet. (We have not considered whether any of these can be claimed back against tax as would be the case in a real company).

3 The next costs to consider are those for research and development (R&D). Since the company only has two products it may need to look for new products to expand its range when sales of the two main products start to slow. R&D costs are those for materials, salaries, equipment and any consultancy that is purchased to investigate new products.

4 The final area where costs are incurred is in the area of general and administration costs. These cover a wide range of categories including salaries, bad debts allocation, depreciation, lease costs on equipment, insurance, legal fees, office expenses, office rental, telephone, power, heating and any other expenses that are general to doing business. This will include any business tax which is not income tax such as the Standard Business Rate.

5 From this projection of the coming year you can see if the business is going to make a profit based on our projections. One final area that must be considered is paying the bank back. The loan repayments can go as general and administration payments but that does not allow the interest accrued on the cash in the account to be taken into consideration. So often the banking details are placed outside the operating costs as separate income and expenditure items.

6 This is only one perspective on a business idea but it does provide a large amount of basic information for the potential investor.

To make the spreadsheet work, we have to make some basic assumptions about the interest rate returned on cash on deposit, the rate of taxes, statutory pay awards and inflationary costs such as materials.

This worksheet was implemented in Microsoft *Excel* but could have easily been done in any basic spreadsheet such as *ClarisWorks*. The usefulness of the worksheet can be exported directly into the business plan. Publish and Subscribe in System 7 allow parts of the spreadsheet to be published directly into the business plan document in a word processor, say *Word*. In *Works* packages this is easier since the linking is inside the one application.

Conclusion

A business plan is much more than we have described but the basic worksheets should help you focus your thinking when presenting the idea. All the figures in the worksheet will need to be supported by solid information; it is not simply enough to say, "I think I can sell 45 units a week.". What is required is some market research to identify the potential customers, explain how you will sell to them and what differentiates your product from your competitors. The public library is an invaluable source of free information on marketing, sales and related areas often having whole areas set aside for information on new ventures. The trade directories here will help to identify the market and competitors.

Before submitting the finished business plan, try and get an experienced business professional to look at it. Each business idea has its good and bad points and the business plan should show that you have looked at all the important aspects of the idea both good and bad. Another important point is not to underestimate the amount of money required to start up the business and pay yourself a reasonable salary. Banks have often seen business plans that say they only need a small amount of money. Banks will lend money more readily if they believe that the risk involved for them is low rather than the amount is small but not well thought out. **mf**

Business Plan Spreadsheet

	A	B	C	D	E	F	G	H	I	J	K	L
42												
43	**Research & Developmer**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**
44	Consulting	£200	£200	£200	£200	£200	£200	£200	£200	£200	£200	£200
45	Equipment	£100	£1,000	£1,000	£100	£100	£100	£100	£1,000	£100	£100	£100
46	Materials	£200	£200	£200	£200	£200	£200	£200	£200	£200	£200	£200
47	Salaries	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500
48												
49	**Total R&D Costs**	£2,000	£2,900	£2,900	£2,000	£2,000	£2,000	£2,000	£2,900	£2,000	£2,000	£2,000
50	% of Total Sales	14%	20%	19%	13%	12%	11%	11%	15%	10%	9%	9%
51												

Business Plan Spreadsheet

	A	B	C	D	E	F	G	H	I	J	K	L
52	**General & Admin.**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**
53	Accountants	£200	£0	£0	£0	£0	£400	£0	£0	£0	£0	£0
54	Admin Salaries	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500	£1,500
55	Bad Debts	£30	£30	£30	£30	£30	£30	£30	£30	£30	£30	£30
56	Depreciation	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50
57	Insurance	£20	£20	£20	£20	£20	£20	£20	£20	£20	£20	£20
58	Office Expenses	£10	£10	£10	£10	£10	£10	£10	£10	£10	£10	£10
59	Taxes	£60	£60	£60	£60	£60	£60	£60	£60	£60	£60	£60
60	Telephone	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50
61	Electricity	£30	£30	£30	£30	£30	£30	£30	£30	£30	£30	£30
62												
63	**Total G & A Costs**	£1,950	£1,750	£1,750	£1,750	£1,750	£2,150	£1,750	£1,750	£1,750	£1,750	£1,750
64	% of Total Sales	14%	12%	11%	11%	11%	12%	9%	9%	8%	8%	7%
65												

Business Plan Spreadsheet

	A	B	C	D	E	F	G	H	I	J	K	L
65												
66	**Operating Expenses**	£6,800	£7,800	£7,100	£6,250	£6,300	£7,250	£6,400	£7,350	£7,250	£6,550	£6,600
67	**% of Total Sales**	49%	54%	47%	39%	38%	41%	34%	37%	35%	30%	28%
68												
69	**Income from Operatio**	£2,669	£2,075	£3,423	£4,715	£5,123	£5,101	£6,753	£6,506	£7,380	£9,074	£10,008
70	**% of Total Sales**	19%	14%	22%	30%	31%	28%	36%	33%	35%	41%	43%
71												
72	**Interest Income**	£0	£0	£0	£100	£110	£120	£130	£140	£150	£160	£170
73	**Interest Expenditure**	£1,250	£800	£300	£0	£0	£0	£0	£0	£0	£0	£0
74												
75	**Net Income**	£1,419	£1,275	£3,123	£4,815	£5,233	£5,221	£6,883	£6,646	£7,530	£9,234	£10,178
76	**% of Total Sales**	10%	9%	20%	30%	32%	29%	37%	34%	36%	42%	44%
77												

Jargon Busters

G&A: General and Administration Net: This is an amount after all deductions have been subtracted.

Publish & Subscribe: usually information from one application is transferred via the Clipboard. Some applications can publish parts of documents that can then be subscribed to by documents in other applications. You can see changes to the original published document in the subscribing documents.

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PowerBook 180 4/120 (With STD Modem)	£ CALL
PowerBook 180C 4/160	£ CALL
PowerBook 180C 4/160 (With STD Modem)	£ CALL
PowerBook Duo 230 4/120	£ CALL
PowerBook Duo 250 4/200	£ CALL
PowerBook Duo 270C 12/240	£ CALL
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LC 475 8/160	£ CALL
LCIII 4/80	£ CALL
High Performance Macs	
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Quadra 610 4/160 With CD	£ CALL
Quadra 650 4/160	£ CALL
Quadra 650 4/160 With CD	£ CALL
Quadra 650 8/230 With CD	£ CALL
Quadra 800 8/230	£ CALL
Quadra 800 8/500 With CD	£ CALL
Quadra 840AV 8/500 With CD	£ CALL
Quadra 840AV 16/1000 With CD	£ CALL
Quadra 950 16/FD	£ CALL
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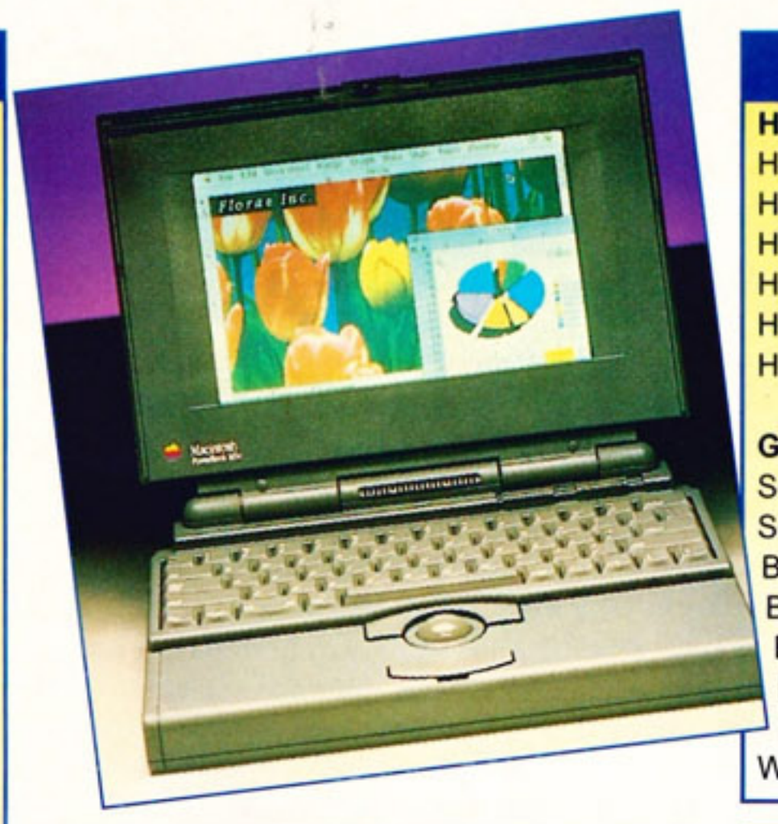

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Weird and

Jack Weber looks at an unconventional database program called *PSI*, which costs just $20 – but does it actually work?

Let's talk money. If you want a top database, the sort that runs whole companies and sticks its tongue out at mainframes, you're looking at close to £1,000 walking out the door. And that's even before you pull off the shrink-wrap. On the other hand, the law of diminishing returns means you can also do some pretty nifty stuff for as little £250. Which is very comforting. Unless you don't have £250.

The normal recourse for the skint and the stingy is the wonderful world of shareware. This is simply bursting with cheap, and even free, stuff. Unfortunately almost none of it has anything to do with databases. And yet there are some exceptions. One of the more interesting ones is a general-purpose database program called *PSI* which is yours for a fee of just $20.

Unique and interesting

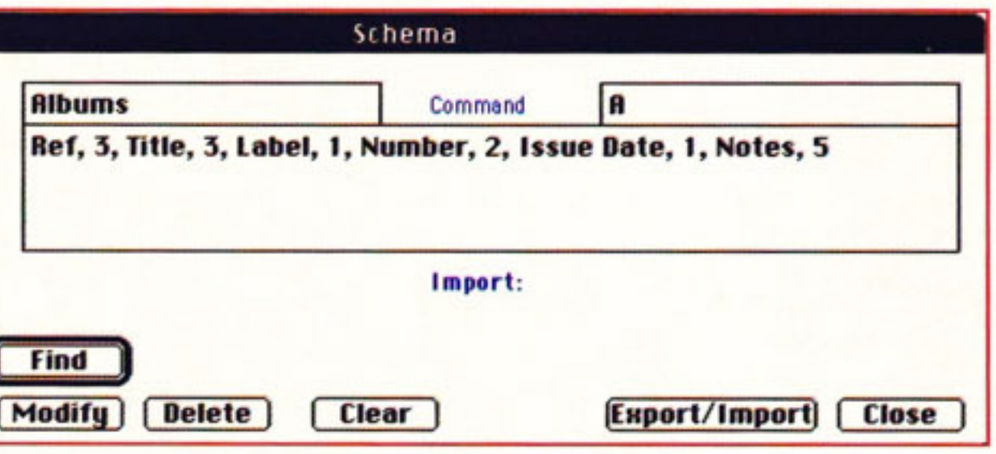
PSI is unconventional to the point of weirdness, but actually works well and has many unique and interesting features. Even the vocabulary is unusual, a data file is called a schema and is classified by descriptors. Although it doesn't really fit into any conventional category, *PSI* does have some elements of a relational program in that you can set up links between separate files.

An example is probably the best way to see what's involved. Suppose you want to catalogue and annotate your CD and tape collection: you might set up a database with two schemata, one for albums and one for artists. You could then create links between them so that each record in the album schema will automatically display details of the corresponding artist.

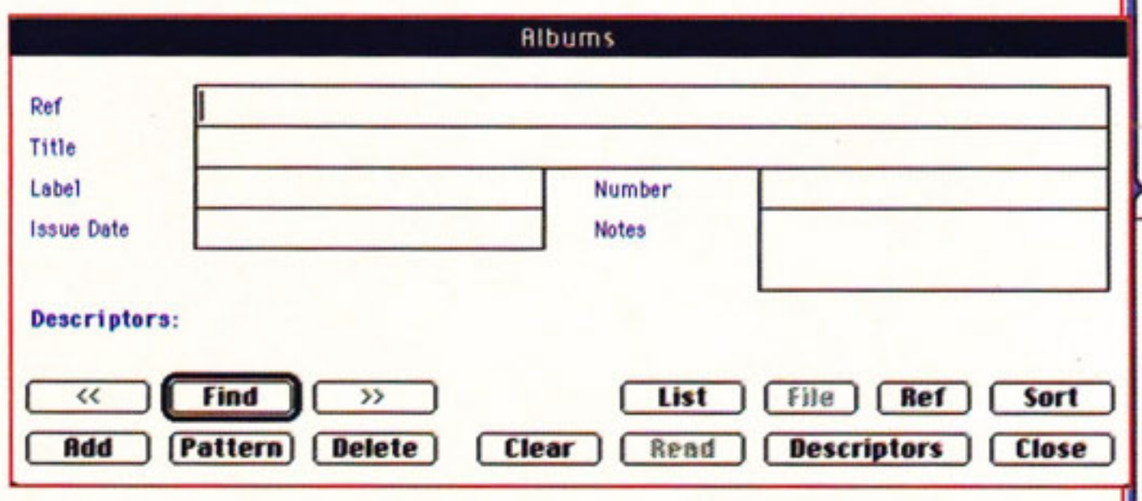
PSI doesn't provide sophisticated layout tools – basically, you can place fields on the left, on the right, or across the width of the record. With a bit of arithmetic you can use its layout codes to create multi-line fields. Like everything else in the program, it's different, but it's not difficult.

Once the layout is done, you can enter data, flip through the cards or use the Find command to search for specific entries. One of *PSI's* neatest features is its ability to search for similar, but not necessarily identical, entries – essential if you know lots of people called Smith, Smyth, Smithies and so on. You can even set the level of similarity as a percentage that you want to match.

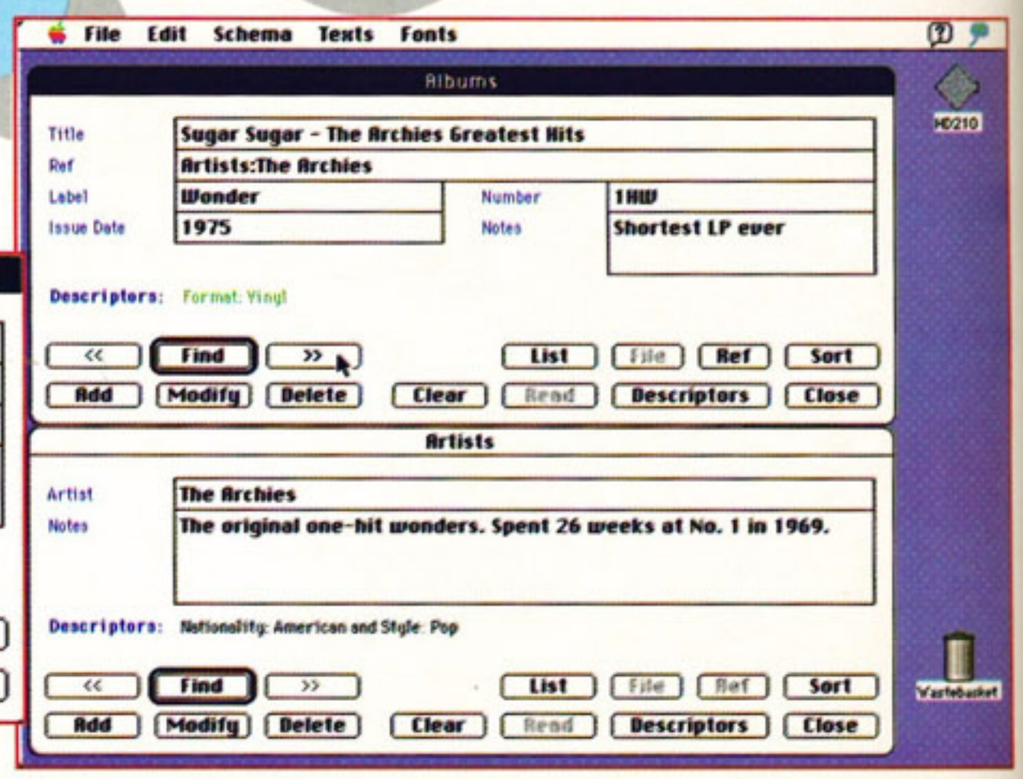
In addition to fields, which can hold any data you enter, a schema can also contain descriptors which act like keywords for classifying records. For example, the Artists schema could use one set of descriptors to describe the style of music and another to identify nationality. Of course, you could just as easily use fields, but descriptors are useful if you're likely to be entering the same thing many times or if you want to restrict entries



You begin creating a schema by defining and laying out the fields. Just list the field names in order followed by 1 for left, 2 for right and 3 for full-width position. To make multi-line fields, add three for each additional line – so 4,5,6 are two-line fields and so on. Here **[command] [A]** has been chosen as a key combination to bring this layout to the front.



And this is the resulting schema window. You cannot alter the height of these forms, they simply adjust to fit the fields, which may be a problem if you design on one screen then move to another that's smaller. Notice that one field is called Ref – this will contain the artist's name and will link to a card in the Artists schema.



Any field called Ref (there can be more than one) links to another schema. Here, a record in the Albums schema finds the matching record in the Artists schema. As you move through a schema, all the linked records change automatically.

wonderful

to a list of choices. They also act as an index, so retrieving records by descriptor is faster than if you used an ordinary field.

Now, what about relating files together? Once again, *PSI* goes for an unconventional approach. You can link only from a field called Ref to whatever is the first field in another specified schema. For instance, if in the Albums schema you entered 'Artists:Phil Collins' into the Ref field, that card would automatically link to all cards in the Artists schema which had 'Phil Collins' in their first field.

If you have space to display both schemata on screen simultaneously, you'll see the linked cards update automatically as you flip through. What makes this even more powerful is that you can have any number of Ref fields per schema. It's also possible to build up whole cascades of links and even to loop back to the original schema. All this demands a bit of re-adjustment, especially if you're used to working with more conventional database software, but it does let you build up some very complex hierarchical structures with a lot less effort (and cash) than you'd need anywhere else.

There's plenty more, including sophisticated import/export facilities which also double as *PSI's* reporting commands. Let's not get carried away though, *PSI* is not a full-featured commercial program and as a business application would be pretty hopeless. Where it really scores is in cataloguing rather haphazard information – research notes, bibliographic information and the like: anything where complex, but not necessarily predictable, links need to be set up between records. The fact that there's nothing else quite like it is a strong point in its favour.

The biggest shortcoming is that *PSI* is not yet 32-bit clean, so users of more recent Macs must switch to 24-bit addressing. That's not likely to be much of a problem though and is due to be fixed when the next version comes out. *PSI* comes with a thorough, if slightly formal, manual, built-in Help and a few sample files to help bridge the familiarity gap. For $20 that's not a bad deal. **mf**

Jargon Busters

Descriptor: a special type of *PSI* field which contains entries chosen from a list that you define. Descriptors are also used to index the records.

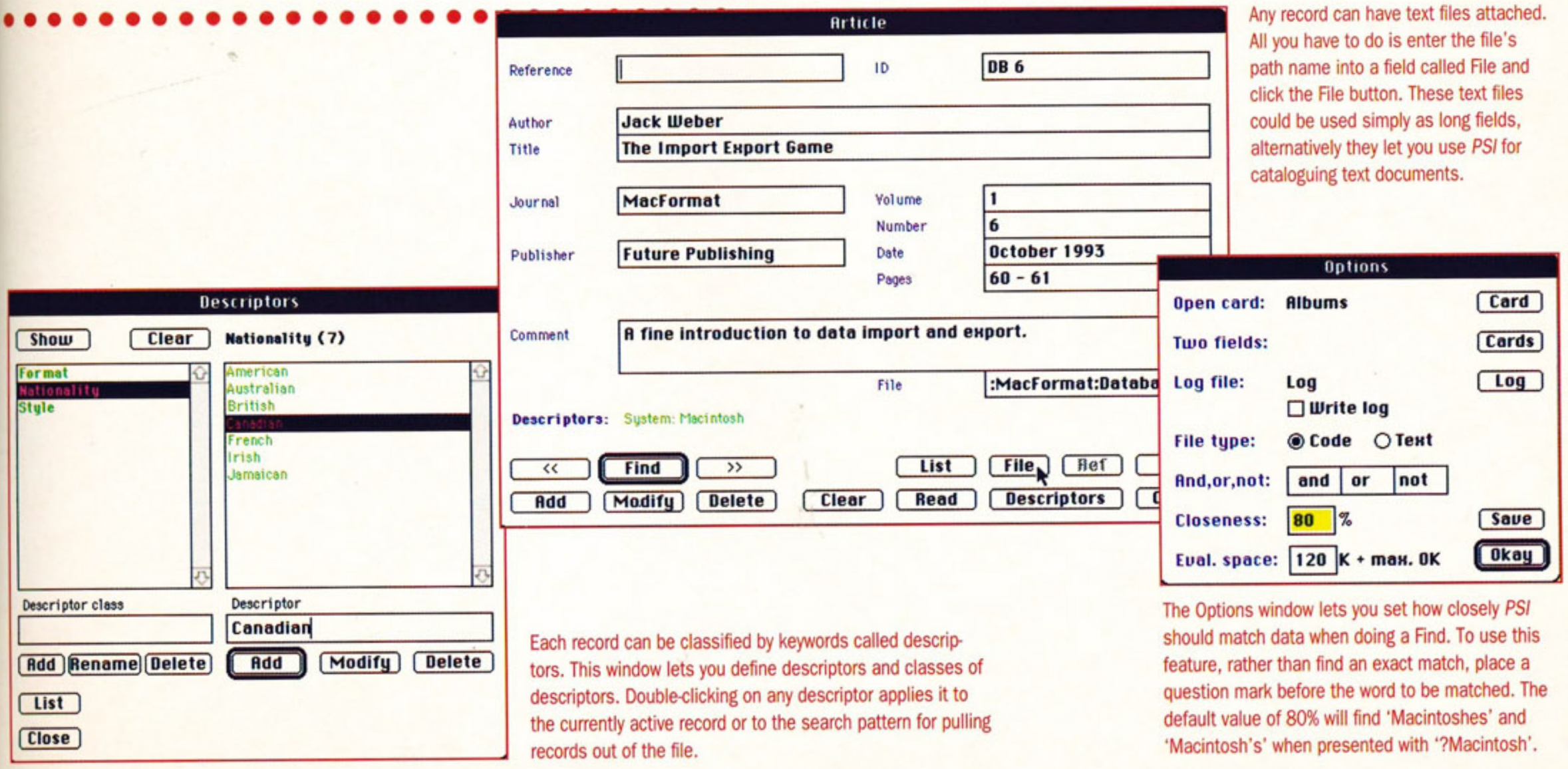
Schema: *PSI* data file. A schema is made up of records. As in any relational program, the complete database may be composed of several linked data files (schemata).

Things to *PSI* for

- Address lists
- Bibliographic references
- Research notes
- Music and video catalogues
- Extracts and quotations
- Lecture notes

Where to get it

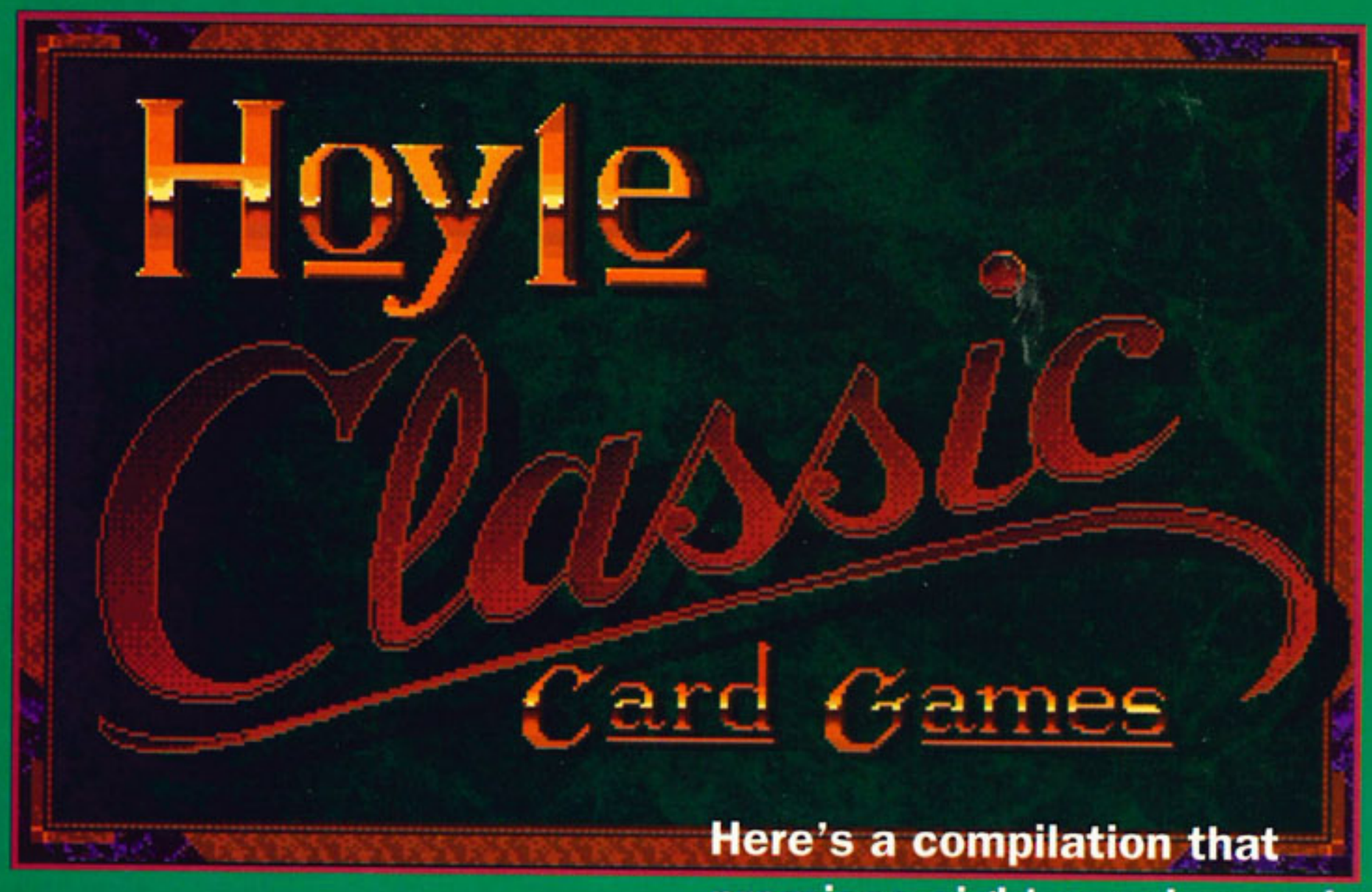
PSI version 2.3 is available in the Macintosh Applications forum on Compuserve (GO MACAP) and various Mac bulletin boards. This version is restricted to 30 records. To get the full thing you need to register by sending $20 to Markus Fromherz, 255 S. Rengstorff Av. #180, Mountain View, CA 94040, USA. Supply a disk and return postage. Alternatively, tell him your e-mail address to receive it via the internet. *PSI* will run on any Mac under System 6 or System 7; a minimum of 2Mb RAM is recommended.



Any record can have text files attached. All you have to do is enter the file's path name into a field called File and click the File button. These text files could be used simply as long fields, alternatively they let you use *PSI* for cataloguing text documents.

Each record can be classified by keywords called descriptors. This window lets you define descriptors and classes of descriptors. Double-clicking on any descriptor applies it to the currently active record or to the search pattern for pulling records out of the file.

The Options window lets you set how closely *PSI* should match data when doing a Find. To use this feature, rather than find an exact match, place a question mark before the word to be matched. The default value of 80% will find 'Macintoshes' and 'Macintosh's' when presented with '?Macintosh'.



Roll up, roll up, for all manner of deck-shuffling suit-following antics. Well, these are the eight games that you get to pick from, anyway.

These familiar faces appear in the 'Sierra Characters' range of opponents – each plucked from another Sierra On-line game.

Here's a compilation that promises eight popular card games, loads of options, and 18 different computerised opponents. Dave Green says "Big deal."

There's an exciting new trend in modern marketing – giving products titles that carry a built-in element of disbelief. 'I Can't Believe It's Not Butter', for instance, or 'Wow! This Stuff Really Hurts My Fillings'. Now, if I was asked to suggest something along these lines for *Hoyle Classic Card Games*, Sierra's beautifully-presented collection of table-top tournaments, I'm afraid I'd have to go for 'I'm Genuinely Astonished That This Isn't Nearly As Entertaining As It Looks'.

At first, I thought I must be doing something wrong. *Hoyle Classics* seems to have all the ingredients for a massively fun time on your Macintosh – eight tried-and-tested card games (Crazy Eights, Old Maid, Hearts, Gin Rummy, Cribbage, Klondike, Bridge, and Euchre), a gorgeously-produced manual, and a choice of 18 zany opponents (nine of which – *Leisure Suit Larry*, for instance – you'll recognise from other Sierra titles), each with their own 'personalities', skill levels and in-game speech. Oh, and then there's the huge range of options – whether you're trying your hand at Bridge or Klondike patience, you can adjust everything from the particular rules that you're using to the rather decorative graphics on the backs of the cards.

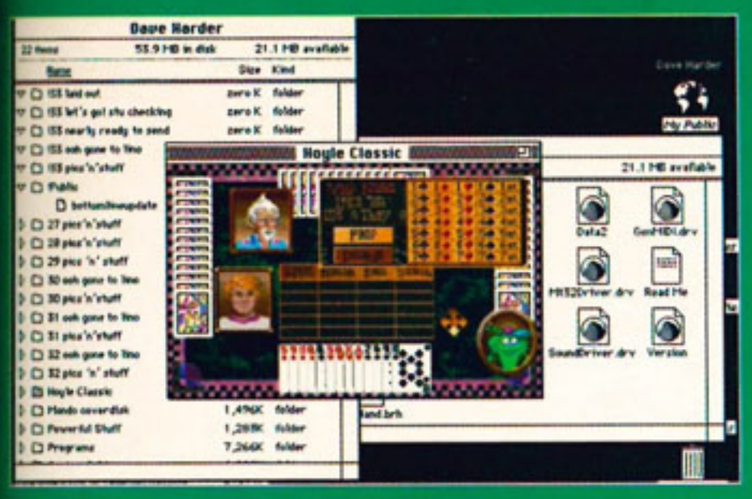
Well, almost. Imagine that you sit down for a swift match of Crazy Eights. You select your three opponents (no more, no less), and you're battling away against them. A friend comes in, sees what a good time you're having, and asks if he can join in. "Oh, no," you have to say, "there's no option to have more than one human player in any of the games. Sorry."

Okay, another example. Perhaps you fancy a quick round of Cribbage – a fairly simple game (with a mildly complicated scoring system) that you recall playing a few years ago, but can't remember all the rules for. You're getting quite into the game, but can't quite figure out how the points that you're scoring relate to the cards in your hand. The on-line help just reiterates the rules, as outlined in the manual, beginning with the somewhat unhelpful summary: 'The object of Cribbage is to move your pegs around the track to reach the finish line'. But that's OK, there's a tutorial mode... which just shows you what all the on-screen icons do.

By this point, I can only imagine that you, too, have begun to share my incredulity at a card-game compilation (of all things) not being as good as it should be. "But look at the screenshots," I hear you cry, " – they're lovely!". To which I reply – "Yes, look at the screenshots." They're nice and colourful, sure, but under closer examination, they're not as attractive as they first appear. In the

There's only one patience game (with various variations) – that old public domain favourite, Klondike. It's hosted by a friendly harpoon-wielding Eskimo, but sadly he doesn't actually appear on-screen in the game. You know, I kind of miss those cheery smiling faces.

Let's face it, there isn't a lot of skill involved in Old Maid. So how come Dr Brain (owner of the eponymous Castle) is rated 'Average'? Is he somehow better at recognising and removing pairs from his hand? Or what?



Hoyle Classic Card Games looks pretty neat when it's running in the smallest window possible. Unfortunately, it just zooms up on the same graphics set when you choose a larger scale.

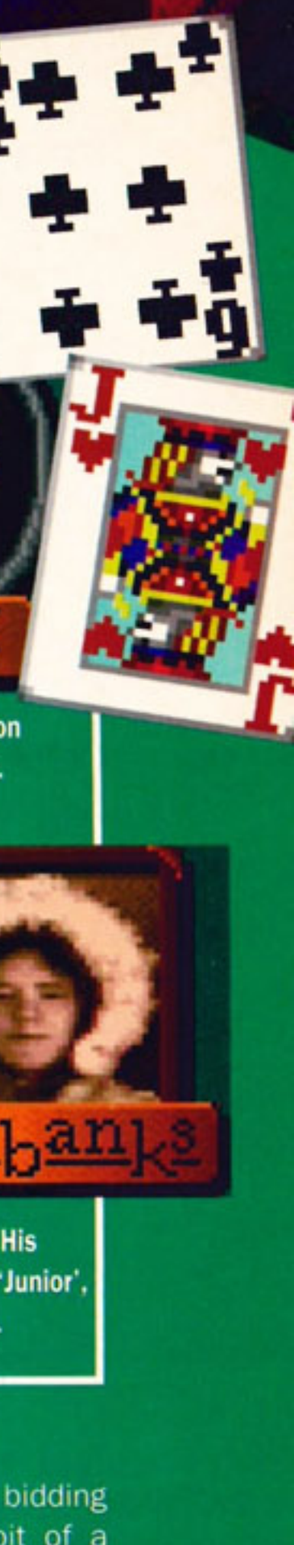
Putting your cards on the table, it's...

Inventor of the once-popular small metal car.

From out of 'To Kill A Mockingbird'. Possibly.

Jack the Ripper? Or Jack Nicholson? You decide.

Takes too many fashion tips from Marj Proops.



Napoleon's legendary paramour. "Not tonight," etc.

(McAllister) – jumped off the Tallahatche Bridge.

The only new character not to have his own game.

Your host for Cribbage, and a keen sailor.

An Eskimo. His surname is 'Junior', incidentally.

very smallest playing window (shown above) everything looks great, but when you enlarge it to a full screen, both the backs and fronts of the cards develop a distinctly blocky appearance, which you just can't seem to fix by fiddling with the 'detail' control. This bizarre low-res design ethic makes it surprisingly hard (certainly at first) to distinguish between spades and clubs. And that's the last thing you want on your mind when you're locked in all-out mental combat with Dr Brain and Willy Beamish.

Once you've got past these various little 'quirks', the games themselves are great. However, they too seem to be strangely inflexible, given the number of options – why only eight-card Cribbage, for instance? Or only one bidding system for Bridge? In short, if you're a bit of a fanatic desperate for decent opponents at cards, and if you don't mind playing in the particular way that the software wants you to, then *Hoyle Classics* will definitely fit the bill. But, otherwise, you'll probably find it is a bit of a disappointment. **mf**

✔ Aces high
Good games, fun characters, wacky sound, and plenty of options...

✘ Deuces low
...for odd features. The graphics look promising, and then fail to deliver.

Price: £40
From: Sierra On-Line, 0734 303171
Requires: 8-bit (ie 256) colour or 16-level greyscale screen, 11Mb of hard disk space, 4Mb of RAM, System 7.0 or later. Also supports Roland sound cards and General MIDI.
Controls: mouse, joystick or keyboard

Graphics	60%
Sound	87%
Gameplay	70%
MacFormat rating	**63%**

Each of your opponents talks in character (sometimes in sound, sometimes on screen). You need a firm background in mathematics to fully appreciate Quarky's little Cribbage joke here.

Pepper (from out of Pepper's Adventures In Time) is triumphant at beating me (and two of her pals) at Crazy Eights on a nice wooden background. We'll get her next time.

DARKSEED

Ever since seeing the *Twilight Zone* movie, Richard Longhurst has wanted to see something really scary – he might have just found it.

Hands up all those who have been frightened while playing a computer game. Not the 'Oh no! I'm playing *Tetris* and the boss as just walked in,' kind of fear, but the nervous terror you get from watching films like *Hellraiser* or *Candyman*. It's a pretty safe bet that nobody has ever been scared by a game, but why? After all, if books and films can scare you witless, then why can't computer games?

For a start, most games are based around pathetically fanciful sword-and-sorcery stories. Until now, games haven't had the nerve to present a truly horrific storyline and then follow it through. *Dark Seed's* intro sequence gives you a none-too-subtle clue about what you're letting yourself in for. The hero, Mike Dawson, is first seen with suction pads gripping his head while two mechanical claws rip his forehead open. An alien embryo is forced into his head, he screams, he wakes up. Obviously he's relieved to find it was all a nightmare, but that doesn't explain his almost unbearable headache...

Without wanting to give away too much of the plot, Mike Dawson is in a race against time. He's been chosen by an alien race to be the breeding ground for their invasion of the earth, and his house is the doorway from their world to ours. He's got three days before the embryo hatches inside his skull, three days in which to stop the alien invasion, three days in which to prevent the entire human race being turned into alien food. There, is that sinister and scary enough for you?

Another problem facing the would-be horror merchant is that computer graphics, especially animations, can't match film or video for detail. Static, full-screen 256-colour backdrops are fine, but when was the last time you saw an impressive video or animation sequence that wasn't squeezed into a postage-stamp-sized box? Once again, *Dark Seed* has an answer, and it comes in the form of artist HR Giger. You may not have heard the name, but you've probably seen some of his distinctive work in the films *Alien*, *Alien III* and *Poltergeist II*. He's famous for featuring bio-mechanical creatures, made out of a macabre marriage of metal and flesh. His contribution to *Dark Seed* was to provide all the artwork for the scenes in the alien world, and when you've seen these creations up close, you begin to realise that computer games really can be scary.

The alien world is suitably unnerving, but the Cyberdreams graphic artists haven't skimped on the real world locations. The graphics are realistic enough to make you feel that you're living in a proper town, and because the game keeps track of time, the shops and the library are open during the day and close in the evening. They're only small factors, but they all contribute to the realism of the real world, which makes the ominous parallels in the alien world all the more frightening.

Ahh, isn't that sweet? Someone's sent you a doll. Kootchy, kootchy, kooo. And so on.

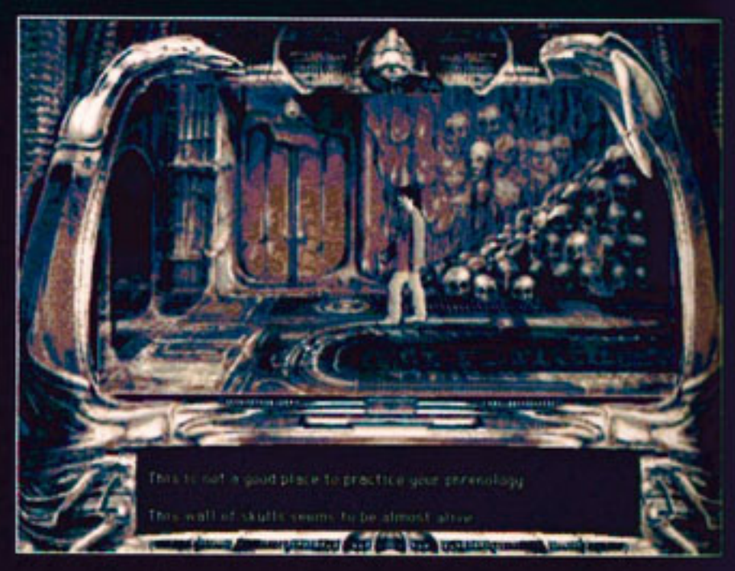
Ahh, isn't that sweet? The doll's turned into a bio-mechanical mutant. Not sure I like the look of this.

The scene of most of the traumatic happenings in *Dark Seed* is Mike Dawson's imposing house.

Tee hee. Isn't it good to see that those funsters at Cyberdreams have got a sense of humour. This is one of the (very) few jokes in *Dark Seed*.

A DESIRABLE

Keep an ear out for the doorbell because you never know who's going to drop in next. The postman makes regular deliveries, so make sure you're around when he turns up.



Go through into the parallel world (work it out for yourself, we're not going to tell you) and the staircase becomes a pile of tortured skulls.

You know the routine, you go in, sit down, he says, "What'll it be today, sir?" You say, "a few inches off round the back, please," and he says, "What's wrong with this room?" (Oh dear)

But horrific storyline and great graphics do not a scary game make. The next problem in trying to create a frightening adventure is that the game designer, the equivalent of a film director, doesn't have precise control over the dramatic tension because it's you, not him, who's in charge of the main character, and as a result the story's pace. When you can do pretty much whatever you want within the boundaries of the game, it's hard for exciting or horrifying moments to be set up. *Dark Seed* neatly combats this problem by making time a critical part of the three-day adventure. Scary events happen at certain times of day, so you have to ensure you're around to experience and interact with them. On the one hand this limits your freedom to explore and experiment at your leisure, and it also gives the game a slightly linear feel, but you certainly feel the benefit in the form of atmosphere-intensifying moments.

Even though it's not as complicated as *Monkey Island 2*, *Dark Seed* is still an excellent game. There are enough puzzles to tax the most hardened adventurer, though it's a tad too easy to be stuck for something to do – you think you've done all that is necessary, but the game refuses to move on. It can also be criticised for being a touch on the small side. In *Monkey Island 2*, you've nearly always got another puzzle to solve or a new location to go to, but in *Dark Seed* you sometimes struggle to find what to do next, and you often have to re-visit the same locations.

Dark Seed doesn't go in for the schlock-horror blood and guts that many horror movies resort to; it's far more subtle. During the first part of the game, the impending horrors are only hinted at, with bits of paper giving vague clues and Dawson having some unsettling experiences. In the alien world, the dark graphics give the game an almost over-powering presence, so at times, you feel fascinated and revolted in equal measure. You don't know whether to be shocked or intrigued, but either way you always want to carry on playing. **mf**

Here's a look at the man himself...

HR Giger, (seen on the left of this picture with his team) was born in Chur, Switzerland, in 1940, and was largely inspired by the imagery of HP Lovecraft and Jean Cocteau. His popular art book Necronomicon (which in occult mythology is the name of The Book of Dead, bound in human leather) brought Giger to the attention of Ridley Scott when he was looking for a designer for *Alien*.

✔ Scared to death

Horrific graphics and a shocking storyline make this one of the most atmospheric games ever.

✘ Slightly nervous

It's sometimes hard to progress when you miss a vital clue and spend hours wandering aimlessly around.

Price: £45
From: Softline 081 401 1234
Requires: 4Mb RAM (2.5Mb free), System 6.0.7 or higher, 256 colours, 12Mb hard disk space.
Controls: mouse and keyboard together

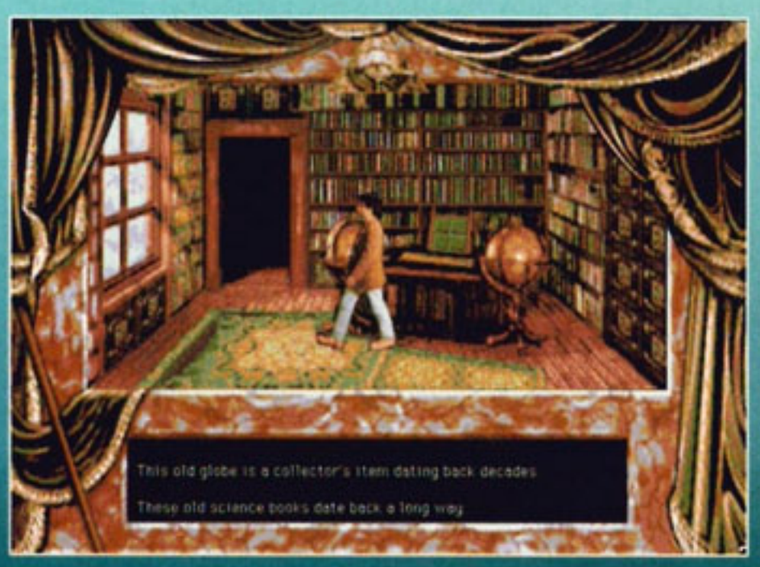
Graphics	90%
Sound	85%
Gameplay	80%
MacFormat rating	**85%**

RESIDENCE?

Mike Dawson thought he had made a good deal when he bought his secluded Californian residence. The owner was keen to sell, the agent was eager to complete the formalities – it was almost too good to be true. But little did Dawson know that he had bought two for the price of one...

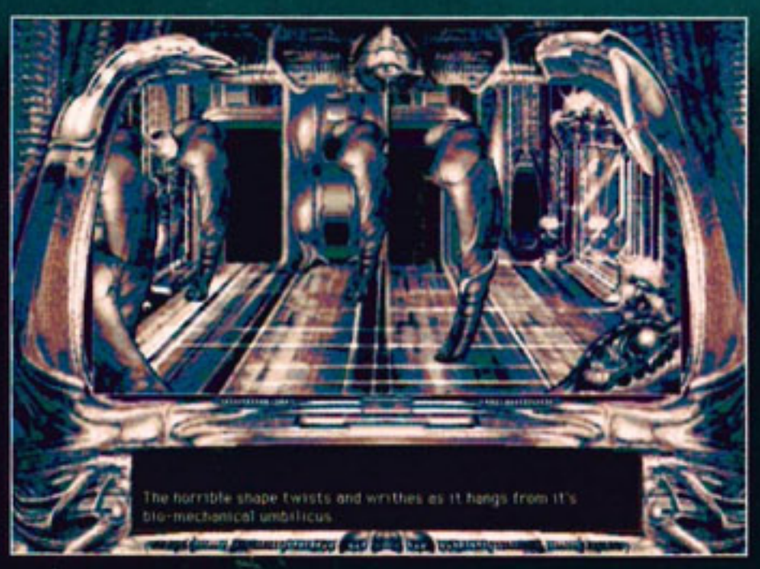
No point searching for anything to eat, the kitchen's too dirty and the cupboards are empty anyway. Time to get down to the supermarket.

A comfortable, if strangely decorated, lounge – not sure those Giger pictures go with the tasteful Victorian chaise longue. That mirror looks bit out of place too.

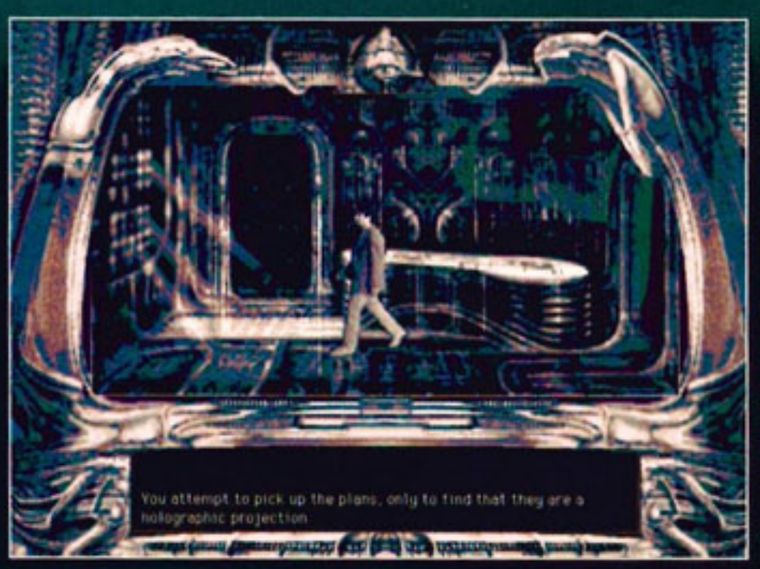


The study has a useful secret – the blueprints hold a clue to what it is. One thing's for sure, he certainly doesn't come here to work.

In the alien world, the kitchen is even more unsavoury – unless your idea of haute cuisine happens to be lightly done incubated embryo – with a nice glass of chianti, perhaps.



That Victorian sofa is beginning to look rather comfortable compared to all the mutations round here. Back to the real world for a lie down.



Blueprints of a different kind are on the desk in the alien world, but dare you look at them? You might find that ignorance is bliss.

Reader Services

There's all sorts of great stuff up for grabs this month. As usual there are Macs galore and stacks of software, as well as a few quirky bits and bobs. Go on, have a look – you know you want to...

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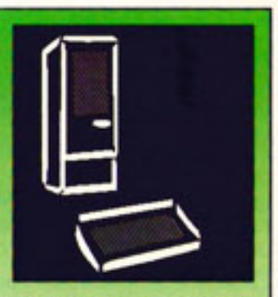

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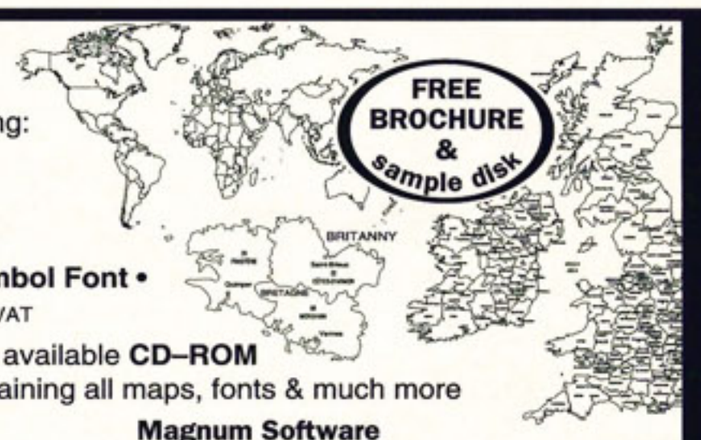

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Best Buy MacUser

DAT's the way!

2-8Gb DAT £999

inc Retrospect Remote 2.0, installation kit

150Mb tape £429

Since our DAT was a 5-mouser best buy in February, we've doubled the buffer size for even smoother backup, doubled the warranty to 2 years, cut the price by £100, and added a double speed version at the original price. Coming soon - double speed *and* double capacity.

tape	int/ext	media
150Mb	£339/429	£16
2Gb DAT	£799/899	£10
2-8G DAT	£899/999	£10
2-8G Turbo	£999/1099	£10
4-16 Turbo	1099/1199	£16

MacUser

1Gb disk £799

520Mb £529;210Mb £269;
120 Mb £199 UK installation kit £18

3 year warranty
hard disks over 300 Mbytes optional on other drives

hard	disks	seek	int/ext
120		15	£139/199
210		12	£199/269
240		15	£229/319
425		9.5	£419/499
520		9.5	£449/529
1000		9.5	£719/799
1200		8.5	£879/959
1600		9.5	1219/1299
2000		9.5	1519/1599
2000		12	1099/1249
4000		11	2399/2549

seek times are average, "effective" seek times are all faster.

Our 1000Mb drive outperformed every other 1Gb drive in MacUser's 1993 gigabyte drive test. Real world performance of all the other 1 Gb drives tested was up to 130% slower. Yet none had a lower cost per megabyte. And our bargain120 Mb drive is between two and six times as fast as typical 20-120Mbyte drives. Why not upgrade?

128Mb Optical £649

UK installation kit £18; disks £26

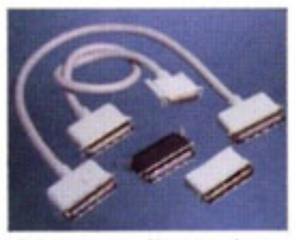
128Mb MO disks from £19

£19 each for 50 disks (£26 singly); 600 MO from £59 (20 disks) (£64 singly).
compatible with Sony, Ricoh, Panasonic, IBM, Fujitsu, Epson, Olympus

	drive	media
21Mb flopty	£249	£14
44Mb Syquest	£239	£44
88/44Mb Syq	£339	£69
105Mb Syquest	£449	£59
128Mb Optical	£649	£26
600/650 MO	1399	£64
1.2/1.3 G MO	1999	£99

Syquest 44 & 44/88

Syquest 105



Cables, installation kits...

HD from £7 for 10

All external drives (except 21Mb flopty, 105 Syquest) have 90-270V power, twin 50 way SCSI, pushbutton ID switch, platinum grey "zero footprint" aluminium housing. Installation kit comprises UK mains cable, SCSI system cable, terminator.
Warranty: 1, 2 or 3 years. **Delivery**: £8 next day. **Prices exclude VAT.**
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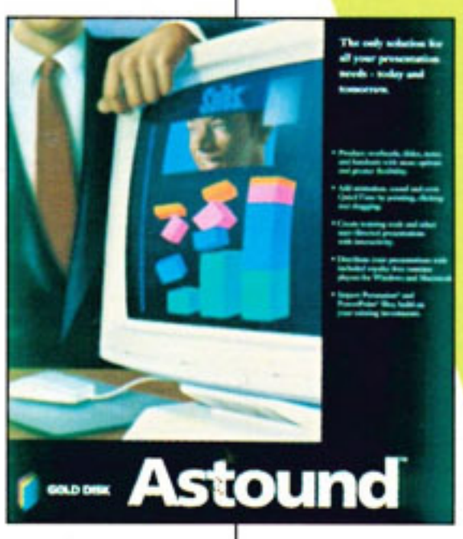

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