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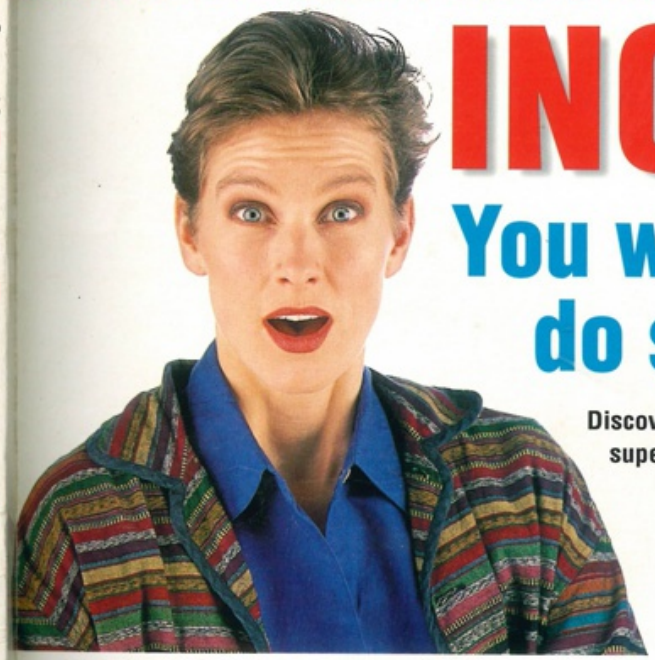
MACFORMAT

ISSUE 12 ■ MAY 1994 ■ £3.95 WITH HD DISK

MACFORMAT ISSUE 12 ■ MAY 1994 ■ END THE SPEND • STORAGE SOLUTIONS: HARD DRIVES, REMOVABLES, OPTICALS • USING COLOUR • PGA TOUR GOLF



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You find yourself in this mansion, moving from room to room in incredible real time 3D. Full motion video of live actors slowly untwines a horrifying plot within this virtual environment. Twenty-two devious puzzles to solve before you can uncover the mystery of the seventh guest. An astounding use of multimedia technology on two CD-ROMs.

Requires a minimum of an LCIII with an 040 machine recommended. Double side CD drive (i.e. CD300) also highly recommended.

CD ROM SRP £42.54

Deliverance. Finally a real no holds barred arcade action game for the Mac. Hack you're way through the lands of Llyn Cerrig to defeat Tnarom who is threatening to destroy it. Start in his palace to free the fairies and guide them safely through the pits of fire, enchanted forest and the winged warrior filled skies.

The game can be played on a small or large screen in either 16 or 256 colours.

The action is relentless and non-stop, including deadly end of level guardians.

SRP £34

SignPost/Route 66 is the automated route planner that will quickly and easily generate maps and instructions on how to get from A to B (via C, if necessary). It'll run on all Macs, including PowerBooks and PowerMacs (in native mode) and can be updated using add-on country modules. It'll let you create a company database, including contact details, and tie entries into a location on the Map. Navigation becomes much easier when you plan travel from a company to another. SignPost can generate detailed travel itineraries, road by road, including detailing the costs involved in travelling by car or bike. SignPost comes complete with the UK module.

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SignPost SRP £99
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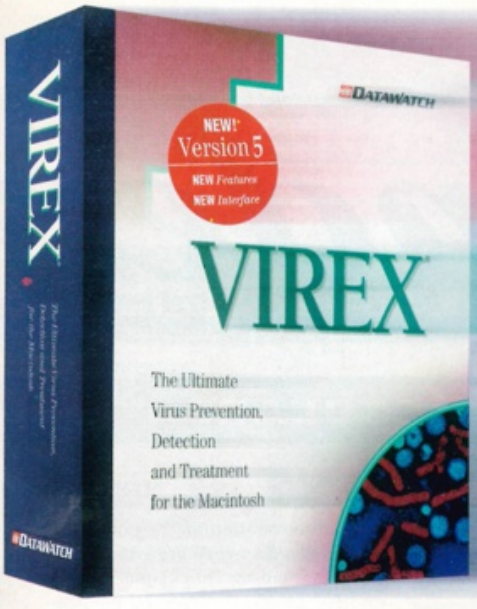

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Move over SAM,® Virex® is now 25*+ times faster!

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

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

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

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

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

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

Virex 5.0 SRP £69.99.

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

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

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The Finder

MACFORMAT

Welcome to another issue of the magazine dedicated to helping you get more out of your Macintosh. Whatever you use your Mac for, whether you're a novice or a veteran, you'll find helpful tips and techniques, news and reviews of interesting and affordable products – and we'll never forget that using your Mac is *fun*!

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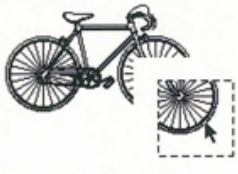
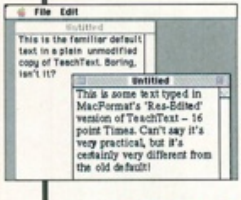
HOW TO DO IT

Editing: the words 50
Whatever publication you're producing with your Mac, here's some invaluable advice on how to structure your articles and write better

HyperCard commands 60
How you can use *HyperCard's* built-in HyperTalk commands – the friendliest Mac 'programming language' there is





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Using Excel as a database 98
No, your eyes aren't playing tricks on you! Microsoft *Excel*, the leading spreadsheet, is not designed to be a database, but it has functions you can use as if it were. Here's how!

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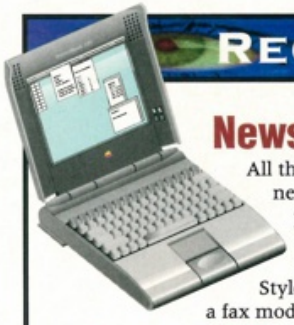

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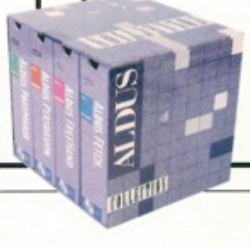

Win The Aldus Collection 106
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What's Andy been up to this month? He's found a way to avoid ever having to write another letter, for starters

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- Open Sesame!
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Can it be? A fully-featured DTP package, complete with a 'scripting' function to automate everything, all for £250?

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- Forever Growing Garden
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Music 80
No kidding – this DIY 'jam kit' has a Song-A-Lizer and a Bop-A-Rama. There's more, but after that, you won't believe me

Games reviews
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Advanced features that can just about automate your Mac – all you do is sit back and watch it do all the work!

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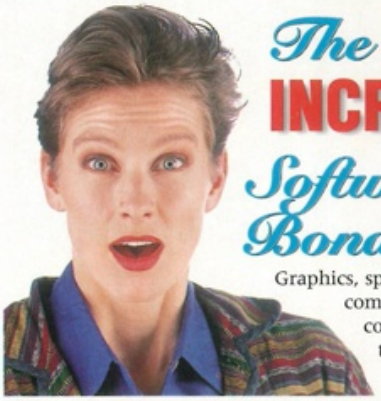

The INCREDIBLE Software Bonanza 27
Graphics, spreadsheets, utilities, comms – just about all you could want, for a tenth of the cost you'd expect!

Storage Solutions 36
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Colour up! 56
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Computer Generation 58
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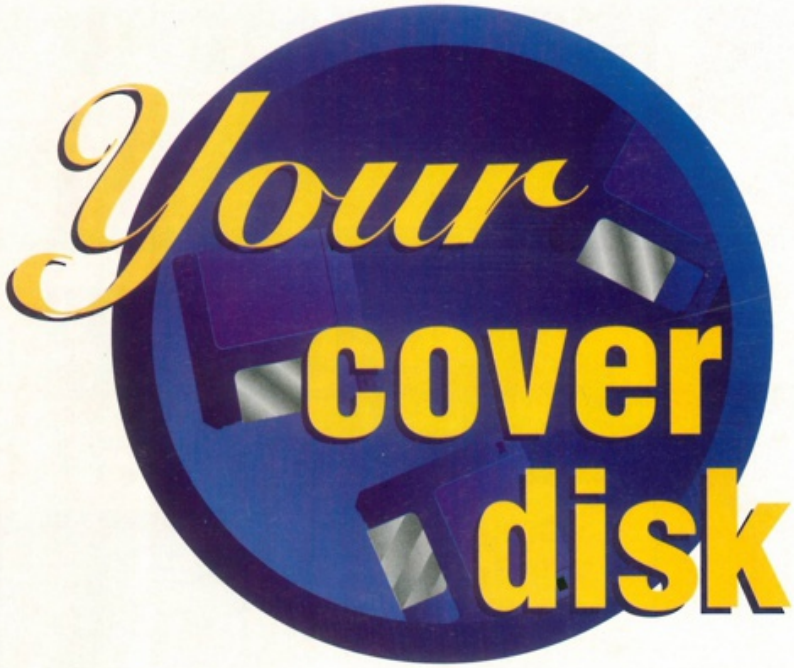
COVER DISK

Your Cover Disk 6
An exclusive playable level of the gorgeous *Prince of Persia 2*. A better Scrapbook. An Extensions manager. A pullover designer. All yours on this month's packed MACFORMAT cover disk! For details and installation instructions, just turn the page...



In our never-ending quest to find the best software in the known universe, MACFORMAT brings you a complete level of *Prince of Persia 2*, a better scrapbook than Scrapbook and a pullover-designing program.

COMPATIBILITY

We spend long, dedicated hours checking all the programs on the MACFORMAT cover disk with as many different machines as possible, but we can't check every combination and we can't guarantee that the programs will work with your system. The information on compatibility in these pages is intended as a guide only, and we cannot warrant the programs or be in any way responsible for any problems arising from their use or inability to use them. Check the 'Get Going' box for common-sense guidelines on installing any software.

This month's goodies

Yours on this month's MACFORMAT disk:

- ***Prince of Persia 2*** – a complete level of what some people are already calling the sequel to the most sumptuous Mac game ever.
- ***Scrapz*** – a better Scrapbook: store items, view them all simultaneously, export them as stand-alone files, open several scrapbooks at once, and more!

For more details, see Shareware, page 73.

- ***Symbionts*** – a sophisticated Extensions manager; even tells you how much memory each is taking up.

For more details, see Shareware, page 73.

- ***ColorKnit*** – a complete knitwear designer, with variable knitting gauges and stitch previews; as easy to use as a paint program.
- ***WorkOut*** – a *HyperCard* stack that combines a calculator, notebook and sketchpad, which can even interact with each other.

See also *HyperCard*, page 60.

START HERE

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

Packed with 3Mb of data

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

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

BACK IT UP

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

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

GET GOING

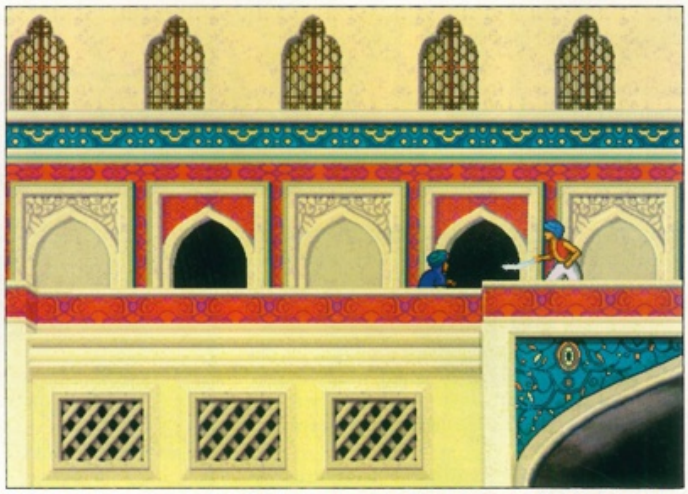
Before you install any new software on your Mac you should ensure that you have a full backup of your hard disk, in case anything goes wrong, and that applies equally to our cover disk. Once you have backed up your hard disk, make sure you have no applications running, only the Finder, and insert the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

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

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

Some programs may need further installation; check the Read Me files which come with the programs for details.

What a wonderful morning this is, lovely weather, not a baddie in sight, ooh and I found a tenner in my dressing gown pocket. Hmm, what's that noise?



Magnificent architecture in these parts, don't you think? Shame that every time I try to admire it, you know, take some snaps, some loon with a sword tries to kill me.

Prince of Persia 2 demo

Shareware fee: none
Compatibility
Mac: minimum 4Mb RAM
System: System 6.0.7 or better
Display: 256 colours

Jordan Mechner, the designer of *Prince of Persia*, won dozens of awards for the classic swashbuckling arcade adventure game. The game has been converted onto virtually every computer and game console format, and been a smash hit each time, thanks to its fiendish puzzles, superbly smooth and realistic animation and nonstop action.

Now Jordan has come up with the sequel, *Prince of Persia 2: the Shadow and the Flame* – and it's even better!

The graphics have been made even more sumptuous, there is a bigger variety of enemies and the action seems even faster and smoother. But you don't have to take our word for it – we've got all of the first level in our demo on this month's disk.

Getting *Prince of Persia 2* going is simple – having decompacted the disk (see page 6), simply double-click on the icon. However, the controls are not so simple, so it's worth going through them.

To move the hero use the keys as indicated in the diagram on the right. Holding the **[shift]** key makes the movements smaller and more careful. To take a running jump, run and with the running key still depressed, hit **[8]**.

To grab and hang on to ledges, press and hold the **[shift]** or **[control]** key. To let go, release the key.

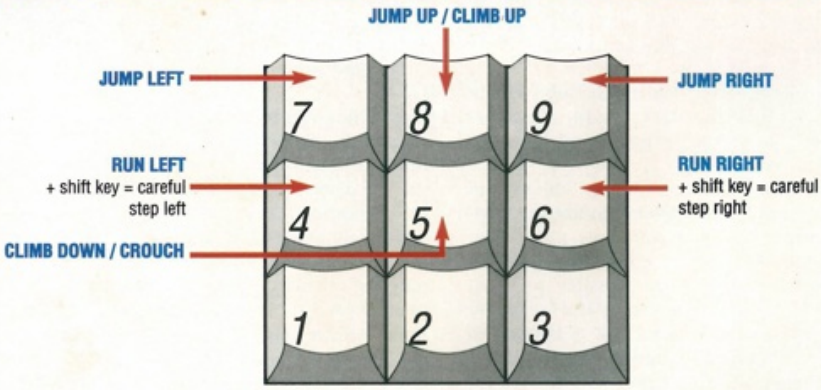
Sword fighting is an important skill in the game, as you spend a lot of time battling baddies. To draw the sword, use the **[control]** key. To advance or retreat, use **[4]** or **[6]**. To block an opponent's strike, use **[8]**. To turn around, use **[4]** or **[6]** while holding down the **[shift]** key. To put away the sword, press **[5]**.

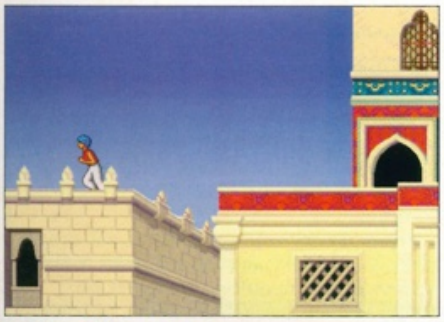
[Command] [A] restarts play from the beginning of the level, and **[command] [R]** takes you back to the opening screen. The **[escape]** key pauses the game.

It sounds complex, and it'll take a few minutes to get the hang of it, but it's worth the effort. Why oh why isn't there an affordable Mac joystick?

The complete version of *Prince of Persia 2* will be available "real soon now" from Electronic Arts – call for more details on 0753 549442.

MOVING THE HERO





I wonder what's over here?

Surprise, surprise, another guard. Take that, sir!

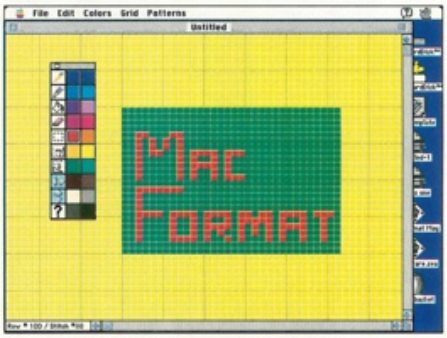
He flies through the air with the greatest of... oh dear.

ColorKnit 3.0

Shareware fee: $15
Compatibility
Mac: any
System: any
Display: 256 colours or B&W

Macs aren't just good at computery things like spreadsheets and databases, as this interesting piece of shareware shows. *ColorKnit*, as its name suggests, enables you to design pieces of knitwear and preview how they will look.

In operation it's like a paint program, except you won't find a paint program with variable knitting gauges and stitch previews! There are also tools to help create interesting patterns.



Become a knitwear designer with *ColorKnit 3.0*.

Symbionts

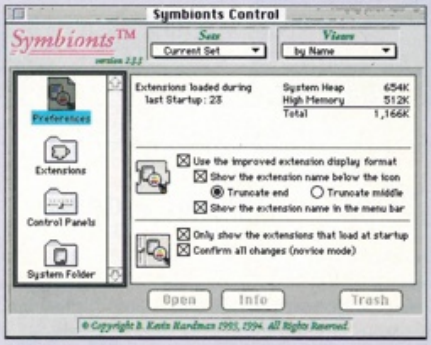
Shareware fee: $20
Compatibility
Mac: any
System: any
Display: any

Symbionts is a combination of an Extension and a Control Panel which enables you to keep control over the Extensions in your system and the amount of memory they use.

When you run the *Symbionts* Control Panel, it shows you a list of every Extension you have installed, and how much memory it's gobbling up. Just click on it to turn it off and reclaim the memory. The *Symbionts* Extension shows how much memory each Extension uses on startup.

If you hold the **[shift]** key down when you start your Mac, the Control Panel will appear, enabling you to change the configuration. You can save sets of Extensions so you can quickly alter setups.

Just click on an icon to turn the Extension off (a red cross marks disabled ones).



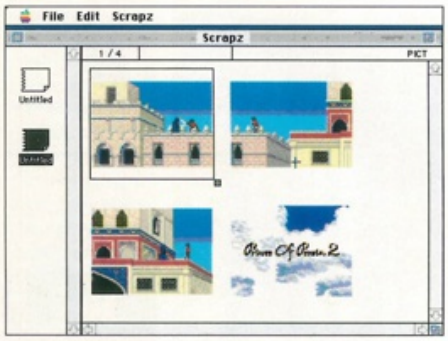
My 23 Extensions use over a megabyte of RAM – better trim them down.

Scrapz 1.3.2

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

Scrapz is a replacement for the Scrapbook that everyone has on their Macs. It adds a number of features that Apple really should have included in the original.

For one thing you can directly import and export files, rather than having to use the Clipboard. With *Scrapz*, you can have more than one scrapbook file open at a time, and you can resize the window. It's also possible to select just part of a scrapbook item, and a gallery view allows the whole scrapbook to be viewed at a glance. Once you've used *Scrapz*, you won't want to go back to using Apple's Scrapbook for love nor money!

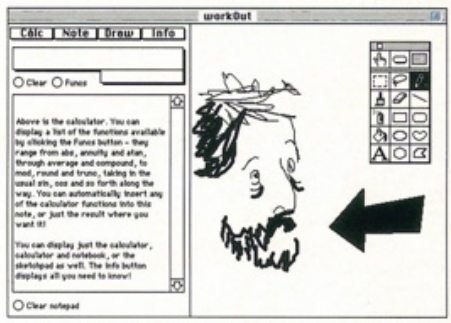


Scrapz is a real step up from Apple's Scrapbook.

workOut

Shareware fee: none
Compatibility
Mac: any
System: needs *HyperCard 2* or better
Display: any

This handy *HyperCard* stack is a combined calculator, notebook and sketchpad, with the full range of features you'd expect from all three – the calculator has more functions than I know the meaning of, and the sketchpad has a handy tear-off tool palette with the full range of drawing tools. To save screen space, you can show only the calculator, or calculator plus notebook, or all three, and the real beauty of it is that the functions are interactive – you can, for example, insert the result of a calculation directly into a notebook note. You need *HyperCard 2* or higher installed to use it. For more on *HyperCard*, turn to this month's tutorial on page 60.



Use *workOut* as a sketchpad, a notebook, or a calculator.

About Shareware

Some of the software on the MACFORMAT disk is shareware. If after a fair trial period you decide to carry on using it, you are obliged to pay the fee specified in the program's documentation files.

Faulty Disk?

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

If you think you have one such lemon, read through the installation procedure on page 6 just to double-check that you're not missing something.

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

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

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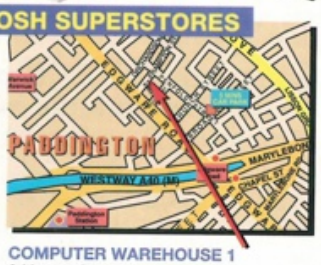

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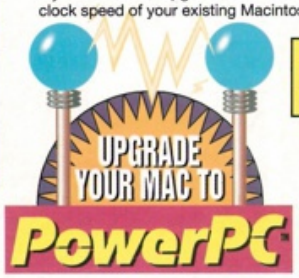

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Quadra 700				♦
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LC475	14" PP	St	4/80	040	25	21" Col	LCPDS	36MB	-	£799
LC475	14" PP	St	8/160	040	25	21" Col	LCPDS	36MB	-	£999
LC475CD	14" PP	St	8/160	040	25	21" Col	LCPDS	36MB	-	£1149

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

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

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

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

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

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

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

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

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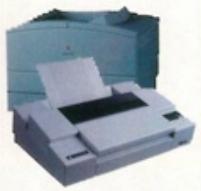
165	10" 16 g/s s-t	•	4/160	030	33	16" Col	Modem	14MB	-	£1199
180	10" 16 g/s a-m	•	4/120	030	33	16" Col	Modem	14MB	•	£1799
180M	10" 16 g/s a-m	•	4/120	030	33	16" Col	-	14MB	•	£2049
180c	8" 256c a-m	•	4/160	030	33	16" Col	Modem	14MB	•	£1949
180cM	8" 256c a-m	•	4/160	030	33	16" Col	-	14MB	•	£2199

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

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

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

Printers



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

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

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MACFORMAT makes a big splash

Over the six months July to December 1993, MACFORMAT sold an average of 26,172 copies every issue. The figure, announced by MACFORMAT's publisher, Future Publishing Ltd, is verified by the independent Audit Bureau of Circulations. MACFORMAT has also been short-listed for the prestigious award of International Magazine of the Year, in the company of long-established titles such as *New Scientist* and *Vogue*. What can we say but thanks to all our readers (all 26,000-plus of you!) for all your support – and keep your comments and suggestions coming, to help us make MACFORMAT the Mac magazine you want to read!

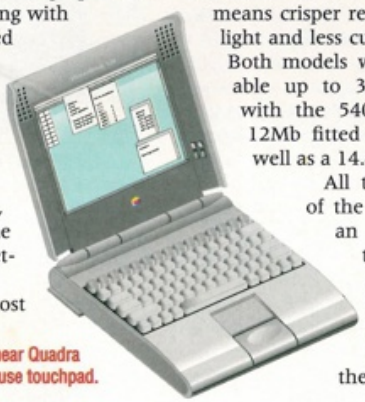
April's issue sold out in places. Thanks for helping make MACFORMAT such a success!

Quadras go mobile

In a little over two weeks' time, Apple will launch four new PowerBooks based on the 68LC040 processor, the chip at the heart of the LC475. The 500 series, codenamed Blackbird, will all feature redesigned casings which offer wristpads and a touchpad instead of a trackball, and two will offer 9.5-inch colour screens.

The four PowerBooks, the 520, 520c, 540 and 540c, also boast impressive AV facilities, providing 16-bit stereo input and output as well as a built-in microphone and 8-bit video Out for connecting up to 16-inch monitors. Along with new batteries based on nickel-metal-hydride technology, which Apple claims will give the machines a four-hour life between re-charges, they also come with Ethernet networking built-in.

Perhaps the most interesting innovation, though, is the use of a touchpad rather than a trackball to monitor a user's input. To move the cursor across the screen, this involves you doing nothing more than moving a finger across the touchpad surface – literally point and click!



The new PowerBooks: near Quadra power, with an easy-to-use touchpad.

While the 520s are based on a 25MHz version of the 040, the 540s will offer 33MHz power; otherwise the other main difference between the 520s and the 540s is that the latter will have active matrix screens rather than passive matrix ones – which basically means crisper resolution in low light and less cursor 'ghosting'. Both models will be expandable up to 36Mb of RAM, with the 540 coming with 12Mb fitted as standard as well as a 14.4 bps modem.

All this makes any of the new machines an attractive option for anyone who needs both computing power on the move and the built-in ability to keep in touch wherever they may be.

Also of note is the provision of a dual battery bay which acts as an optional PDS slot. This can be used for future upgrades, or – and this is another radical move – it can be employed as a dock for the same kind of PCMCIA expansion cards found in Newton MessagePads. These cards can be used to hold more RAM, hard disk space, fax modems and cellular technologies.

While UK pricing is yet to be set, prices are expected to start at $2,500 (about £1,725) for the 520 and $3,750 (£2,586) for the 540. Apple is further expected to announce PowerPC upgrades for the machines later this year based on its forthcoming low-cost PowerPC 603 chip.

MACFORMAT has also learned of two new Duos in the pipeline, set for release on April 25: the 280 and 280c. These will both sport 33MHz 030 processors, feature active matrix screens and weigh in at only four pounds. Again pricing details are not yet available.

■ For further information phone Apple on 0800 127753.

PowerMac programs

DUE FOR POWERMAC

Product	Developer
ArchiCAD	Graphisoft Inc
Claris Impact	Claris
ClarisWorks	Claris
DeltaGraph Pro	DeltaPoint
form•Z	autodessys Inc
FrameMaker	Frame Technology Corp
Infini-D	Specular Int Ltd
MacTools	Central Point Software
Mathematica	Wolfram Research
Minicad	Diehl Graphsoft
Painter	Fractal Design Corp
Painter X2	Fractal Design Corp
PhotoFlash	Apple
Presenter Pro.	Visual Info. Devel'mt
Profiles	Dayna Communications
QuickFLIX!	VideoFusion Inc
Ray Dream Designer	Ray Dream Inc
SoftWindows	Insignia Solutions
Studio Pro	Strata Inc
VideoFusion	VideoFusion Inc
Virtus VR	Virtus Corp
WordPerfect	WordPerfect

The success of Apple's impressive new PowerMac range (detailed in MACFORMAT last issue) depends largely on developers producing 'native' applications optimised to take advantage of the machines' improved performance. On the entry-level PowerMac 6100, native applications are expected to run some two to four times as fast as on a 33MHz Quadra; on the top-of-the-range 8100, the figure could be eight times the power of a Quadra 950. As we go to press, more native PowerPC applications are continually being announced. The box at left lists native applications very likely to appear in the next month or so.

This PowerMac isn't the Quadra it resembles; it's more, and the growing list of 'native' applications will prove just how much more...

MacGhettoBlaster

If even an AV Mac isn't enough for you, take a look at these new high-performance audio systems designed to get the best from your Mac and CDs. Each of the new 'Pro-Media' systems from Concept Peripherals of Middlesbrough incorporates a built-in 30 watt amplifier and 30 watt stereo speakers, to help you get more oomph from your CDs, music tracks and computer game effects. The Pro-Media CD includes a double-spin-speed multisession CD-ROM reader with 300K per second data transfer rate, double dust doors, auto lens cleaning and a sealed mechanism for long life, offering CD-digital audio for £527. The Pro-Media CD Plus is a triple spin speed CD-ROM reader with LCD display, 450Kps data transfer and full-function audio controls, so you can play music CDs without a Mac connected, all for £762. The Pro-Media SyQuest is an SQ5110C 88Mb SyQuest removable disk drive complete with the Pro-Media systems' audio functions at £645. Concept Peripherals is on 0642 240000.

QuickTime goes big-time

Apple's million-selling multimedia system extension, *QuickTime*, will be significantly overhauled this summer with the release of a new Mac version that offers full-screen playback, MPEG and MIDI support and built-in capability for future developments in interactive television, *writes Andy Storer.*

QuickTime 2.0 will improve full-motion playback approximately twofold without hardware acceleration, enabling low-cost Macs like the LC475 to play quarter-screen movies (320 x 240 pixels) at full-motion speed or full-screen 640 x 480 pixel movies at a credible 15 frames per second.

There will also be support for professional video editing with SMPTE timecode capability built-in (enabling video synchronisation) and a higher data throughput representing a 300 per cent increase in data transfers. With support for MPEG, *QuickTime 2.0* will also pave the way for interactive TV applications such as Video On Demand (VOD) and home shopping. Since MPEG encoding enables up to 74 minutes of full-screen, full-motion video and synchronised CD-quality audio to be squeezed on to a single CD-ROM, Mac owners can also expect a new world of games and entertainment software to be available before the end of the year.

Apple's developers have also opened up *QuickTime* to include support for MIDI so that Mac users will be able to use their machines to create, edit, play back and synchronise music with video. The company claims the new system architecture's improved compression techniques will allow digital audio to be stored as *QuickTime* tracks – enabling 300Mb files to fit on to a single 800K floppy disk! In addition, the built-in front end for this capability will allow users to emulate more than ten musical instruments including guitar, bass, drums and piano. You will also be able to import existing MIDI music scores into *QuickTime* movies.

QuickTime 2.0 will run on any colour Mac running System 6.07 or later with at least 2Mb of memory and is expected to be available as an upgrade, but no price has been fixed yet. Further details from Apple on 0800 127753.

A world of full-screen video, with MIDI music support, is promised in *QuickTime 2.0*.

Claris reaches the end of its Resolve

Claris has decided to discontinue its spreadsheet program *Resolve*, but it will continue to provide technical support for registered users until the end of March 1995. To cushion the blow, it is offering *Resolve* users *ClarisWorks 2.1* (normally £195) for just £23.50 until the end of September this year. In addition to a spreadsheet, the *Works* package includes word processing, database, paint, draw, outline, communications and presentation modules. (MACFORMAT rated it the best 'Works' package in issue 10, March.) Despite some clever features and good performance, *Resolve* had failed to win a large enough slice of the competitive Macintosh spreadsheet market.

Imagine... a John Lennon CD-ROM

You've got to admit, the Beatles certainly made their mark on the world. Now, almost 15 years after John Lennon's death, Compton's New Media has announced a CD-ROM title featuring his life and music, including his home videos and art, CD-quality audio of unreleased music, and text from his writings, both published and unpublished.

Compton's New Media is well known for CD-ROM titles such as *Compton's Interactive Encyclopedia* and *Jazz: A Multimedia History*. The Lennon CD-ROM is being produced in cooperation with the Lennon estate and Warner Bros, and takes the form of a 'virtual gallery' that enables you to explore aspects of his life and works as you like, from his 'unusual' childhood onwards.

"Lennon was truly a multimedia artist," Warner Bros says. "CD-ROM is an ideal medium to showcase his music, his art, his words, and his life."

In addition to being able to enjoy hundreds of photographs by prominent rock photographers including Leibowitz, Russell, Freeman and others, you'll be guided through the tour by John Lennon in person, "through historic and private clips in his usual candour and acerbic wit." For anyone who has even a passing interest in the man himself, it sounds like an interactive experience not to be missed.

The John Lennon tribute CD-ROM is due for release in the summer and will be available in two versions: a standard CD-ROM for US$69.95 and a limited edition collectors set for which no price has yet been announced. Compton's New Media is on 0101 619 2500.

Photoshop gets PowerMac'd-up

Adobe has announced a PowerMac version of its leading image-manipulation package, *Photoshop*. The upgrade is a straightforward plug-in for *Photoshop 2.5*, and it's free.

On an 'entry-level' PowerMac 6100, Adobe claims, the PowerPC 'native' plug-in runs at between 1.5 and 4 times the speed of a Quadra 700. The 'plug-in' architecture of *Photoshop* has meant that the PowerMac upgrade has been released much more quickly than if Adobe had had to write a 'native' version of the complex program from scratch.

The PowerPC plug-in for Adobe *Photoshop* will be available free through on-line services including CompuServe and CIX, so if you have a modem you can just download it for the price of a phone call. The plug-in is also available direct from Adobe (subject to a shipping charge). Adobe UK 081 813 7900.

APPLE BYTES

Coming attractions

Don't let anyone tell you there are no interesting games coming out for your machine. Here's just a sampling of the excitement scheduled for the next few months...

Due next month: *Aliens* (CD-ROM) from Dark Vision, based on the movie of the same name ■ *Dracula Unleashed* (CD-ROM) from Viacom, distributed by Mindscape: you travel through the streets of Victorian London, gathering information and objects; your five-day mission, to find and destroy Dracula before he destroys your valuable contacts. The game boasts a total of 96 minutes of colour motion video and 135 scenes with multiple endings, so how you fare depends on you! ■ *A-10 Attack*, from ParSoft, designed by Eric Parker, the man who designed the award-winning *Hellcats over the Pacific*. This flight sim is so advanced that it is reputedly used by real simulation pilots. ■ Also on the flight theme, *F117A Stealth Fighter* from Microprose, being converted to the Mac by the same team that brought you *Civilization*. ■ *Alone in the Dark* from MacPlay, a moody horror/action/adventure game (it says here), featuring 3D graphics that offer up to nine different camera angles. So it's obviously not an adaptation of that movie about a blind woman, then... ■ *CyberRace* (from Cyberdreams) is a revolutionary 3D combat and racing sim that uses ultra-fast voxel landscapes (whatever they are), ray-traced racing vehicles that you can customise, and cinematic 256-colour between-race sequences with digitised actors and dialogue. There's also an 'outstanding' musical score by an Emmy award winning composer, which should make a nice change, and "hundreds of plot variations" (in a racing sim? That should be interesting)... ■ *Spectre* fans, watch for *Spectre VR* on CD-ROM from Velocity, an upgrade that pits you against a new generation of enemies (what, they're all children?!) and also gives you new weapon systems and the ability to fly. This version will also include the new *VRchitect*, which enables you to customise *Spectre* matrices or create new ones yourself.

■ Us, we can't wait for *Virtual Valerie 2* on CD-ROM, or the intriguingly-titled *Return to Zork* (return? I'm sure I'd remember if I'd ever been to anywhere called Zork)....

APPLE BYTES

The big two merge

Two of the biggest names in Mac software, Adobe Systems and Aldus Corp, are merging. The move affects the operations of both companies, world-wide. Aldus produces the high-end graphics program *FreeHand* and the respected DTP package *PageMaker*. Adobe is best known for its graphics and design software such as *Illustrator*, *Dimensions* and *Photoshop*, and was the inventor of PostScript, the page description language that is the de facto industry standard for top-end laser printers. There is no news whether any products will be dropped, but we understand from unofficial sources that support for owners of existing (and recently-discontinued) software will continue without change for the foreseeable future.

A better desktop

PrairieSoft has just released a new version of its replacement desktop, *DiskTop*. *DiskTop v4.5* offers instant access to other folders, even if they are five folders deep on another drive; 'Get Info' comments that don't disappear when you rebuild the desktop; search by a range of criteria including creation date and size, so you could find, for example, every file created between 1 January and 1 April which is between 2K and 200K in size and has a name which contains the word 'fact'; plus customisable views, easy mounting and unmounting of other drives, and much more. The price for all this wonderfulness is US$99.95 from PrairieSoft, 0101 515 225 0134.

Hell of a type competition

Linotype-Hell has announced a typeface design competition open to students, type and graphic designers from all over the world. The winners will share £8,000 prize money and attend a design workshop with type guru Adrian Frutiger at Linotype-Hell's German HQ.

There are three categories: experimental headline font; text face family; and Pi font with 40–80 characters which can be internationally applied. Entries must be previously unpublished and can be submitted in either TrueType or PostScript format. The deadline is Wednesday 10 August 1994. Further details and competition guidelines are available from Sarah Reeder at Linotype-Hell on 0242 222333.

System 7 goes even more personal

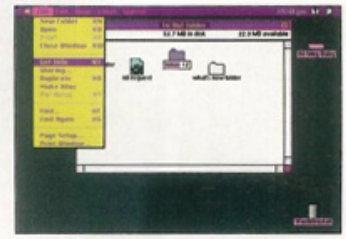
Apple is to introduce a major rewrite of System 7 this autumn which will include built-in intelligent assistants and a completely user configurable interface.

At a US press briefing held at the end of March, AppleSoft's general manager, David Nagel, outlined plans for Apple Guide, an intelligent, assisted help system. This will replace Apple Help, which will only just have been launched this spring with System 7.5. Perhaps the biggest changes will take place in the Finder, with pre-designed selections of new window, button and scroll-bar appearances, and co-ordinated sets of fonts, styles and colours known as 'schemes'. Icons will be variable in size, and a new file-management utility will greatly speed up file handling.

All cosmetic changes will be controlled by a new utility, *Appearance Manager*. Different people logging on to a machine will be able to see radically different views of its operating system and contents.

Users will be able to lock individual folders away from prying eyes, and spring-loaded folders will automatically open when icons are dragged over them. But Mac owners hoping for proper, pre-emptive, multitasking will have to wait until mid-1996 for the next generation of system software, thought to mark the debut of System 8. Currently, the multitasking OS is code-named 'Gershwin'.

The announcement follows confusion over the future of System 7 Pro and System 7.5. Both will now be shipped in one box in both PowerMac and native Macintosh versions with installation software automatically detecting which platform the software is to be copied to and loading resources as required.



Soon the ability to customise your Mac like this will be built-in. And some *useful* features.

3D for me, see

State-of-the-art 3D animation has come one step closer to everybody's desktop with the release of *StrataVision 3d* for under US$700 (about £400).

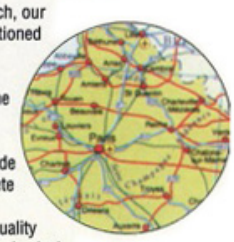
The new version of Strata Inc's award-winning 3D program boasts impressive features:

- Modelling: a new vertex-based 3D sculptor system enables you to work the surface of an object like 'virtual clay', with real-time smooth-shaded feedback. Or, if you prefer, you can reshape any outline or profile using a 2D tool instead.
- At the rendering stage, the program offers a module that simulates the appearance of traditional hand-rendering, with brush strokes that follow the surface of each object and finishes ranging from chalk to dry brush and watercolour.
- For that final animation, you can make use of *StrataVision 3d's* Event-based Animation System which enables objects and cameras to follow visible spline paths, which you can edit directly by dragging. There's even a hierarchical motion path structure which means that the propeller on your aircraft can spin convincingly while the plane flies along its own path.

StrataVision 3d is US$695 (reduced from $995) from Strata Inc in the US. Upgrades from earlier versions are $99, or $149 for a deluxe upgrade including the 'Power Extensions' skin/unskin and sweep modellers plus a CD-ROM disk "loaded with goodies". Strata Inc is on 0101 801 628 5218.

More solid than the hippos in *Fantasia*, and much easier to create than *Aladdin's* rug... with Strata's new, affordable 3D modelling, rendering and animation package.

Maps in Minutes



In MACFORMAT 10 in March, our 'clip media' feature mentioned the range of *Maps in Minutes* from RH Publications. These come as PostScript files with unlimited resolution for output to paper, film, slide or transparency, complete with all the detail you'd expect in professional-quality maps – everything from physical features and political boundaries to regional names, railway networks and major cities, major rivers and lakes, towns and airports, and so on. The maps are also fully editable.

The Aldus *FreeHand 3.0* version, for example, uses the full range of layers, colours and styles to enable you to customise the maps for your own needs, with different text layers for country names, town names, regional information and so on. You can use Styles and Colours to customise common objects like roads, coastlines or political boundaries to suit each particular use. You can add or edit details as required to create a map to suit. There are also versions of the maps specially designed for use in Adobe *Illustrator 3.0* or *Canvas 3.0*.

Maps in Minutes Set 1 includes maps of the UK and Eire, Europe and the World, and costs £199.75 including postage and packing. Set 2 at the same price includes North America, Europe and the World. Or you can buy single maps for £99. RH Publications is on 0840 212135.

Fax modem for under £100

US Robotics has slashed the price of its Sportster 2400 fax modem by £50 to just £99, making it, according to the company, the lowest-cost BABT-approved fax modem on the market.

The Sportster 2400 is not a top-of-the-range model, but is aimed at the home or small office user who doesn't need the fastest data transfer rates. It offers 9,600 bps (bits per second) when you send and receive a fax, with 2,400bps data throughput, plus V.42bis and MNP5 data compression and error correction to both V.42 and MNP4 specifications. If you don't understand 'commspeak', that means it's fairly fast and your message should get through intact even when there's a bad line.

The Sportster 2400 comes with a five year warranty and lifetime technical support. According to US Robotics, the price cut on this popular model is made possible by economies of scale.

US Robotics UK office is on 0753 811180.

The future never turns out the way you expected it to.

Welcome to the computer of the future. It's full of surprises.

This isn't just a new Apple™ Macintosh.™ It's a new architecture. A new chip. A new standard that exceeds all previous standards – yet works with MS-DOS,® Windows™ and Macintosh. It's a whole new kind of personal computer.

If you wanted speed, it will give you more than any personal computer has ever given you.[1]

If you wanted simplicity, it will give you everything that made Macintosh the world's most imitated personal computer.

If you wanted compatibility, it will give you the ability to run MS-DOS, Windows and Macintosh software.

And if you want to own the future, it's the only personal computer to have.

Nobody expected a Macintosh that would be more powerful than the most powerful PC.[1]

At the heart of Power Macintosh™ is the PowerPC™ 601 microprocessor: the first of a new family of ultra high-performance RISC chips developed in a unique 3-year collaboration between Apple, IBM and Motorola.

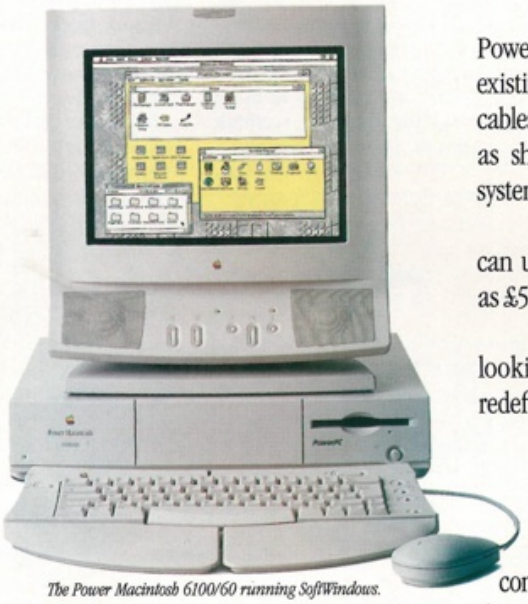
Whilst standard CISC technology reaches the limits of its capabilities, RISC chips like the PowerPC 601 are smaller, more efficient and vastly less expensive to manufacture – this radical combination of price and performance is set to revolutionise personal computing.

Software written to take advantage of unique Power Macintosh capabilities will, in fact, blow the doors off the same programs written for conventional PCs.

Nobody expected a computer that would be more human than a Macintosh.

Because Macintosh computers are easier to learn, you don't have to spend a fortune teaching people how to use them.

In fact, a recent study by Arthur D. Little confirms what Apple has been saying for years: people who use Macintosh computers tend to do more and do it faster than those people who use PCs.[2]



The Power Macintosh 6100/60 running SoftWindows.

In the study, Macintosh users completed tasks in 44% less time than those PC users running Windows to do the same tasks.

Power Macintosh not only continues this tradition of more productive, more human computing – it builds on it.

With the advent of Apple AV technologies, you can now work with video, sound and communications, just as easily as working with text and graphics. Power Macintosh has the power to change the way you work forever.

Nobody expected a computer that would be more compatible than both.

By using SoftWindows™ from Insignia Solutions, every Power Macintosh has the ability to run off-the-shelf MS-DOS, Windows and Macintosh software. You can even share information between environments with a simple "point and click."[3]

This makes Power Macintosh ideal if you've already invested in other PCs or need to use certain MS-DOS and Windows applications, but want the performance, ease-of-use and consistency of Power Macintosh.

Of course, if you already use Macintosh, Power Macintosh systems can work with existing Macintosh software, monitors, cards, cables, keyboards and peripherals – as well as share files and information with other systems on a network.

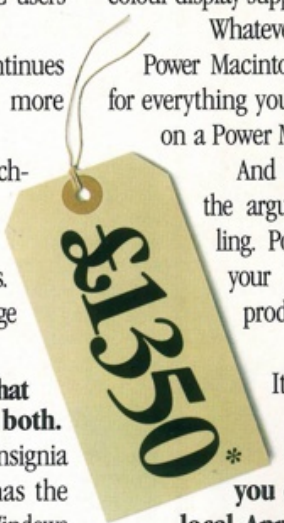
Moreover, millions of Macintosh users can upgrade to Power Macintosh for as little as £599 (excluding VAT).[4]

Whatever kind of compatibility you're looking for – Power Macintosh has just redefined it.

Nobody expected the future to be affordable today.

You can own a Power Macintosh for as little as £1,350 (excluding VAT),* complete with built-in Ethernet networking, file-sharing software, sound and up to 24-bit colour display support.

Whatever your need or ambitions, Power Macintosh gives you more power for everything you do. It just happens faster on a Power Macintosh.



And from an investment angle, the arguments are equally compelling. Power Macintosh will drive your costs down, while driving productivity up.

It does more. It costs less. It's that simple.

To discover why the future is better than you expected, contact your local Apple Authorised Reseller today or for further information call the Apple Information Centre free on 0800 127753.

Introducing Power Macintosh. It's the future. And it's better than you expected.

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StyleWriter gets colour as inkjet wars hot up

The high street battle for inkjet printer purchasers got tougher this month as Apple announced its new Colour StyleWriter Pro at well under £600.

Hewlett Packard had been taking a large share of the market with its DeskWriter 310, which has a cheap upgrade to colour capability and can be bought for under £300. The old StyleWriter offered black output only, but now Apple is fighting back with the new machine.

The Colour StyleWriter Pro features a printing resolution of 360 dots per inch – some 44% better than many other printers – and produces "sharp, vibrant colours," claims Apple's Bianca Walker. "Small offices, education and home users can now use colour to add impact to their documents without making a major dent in their bottom line," she enthused.

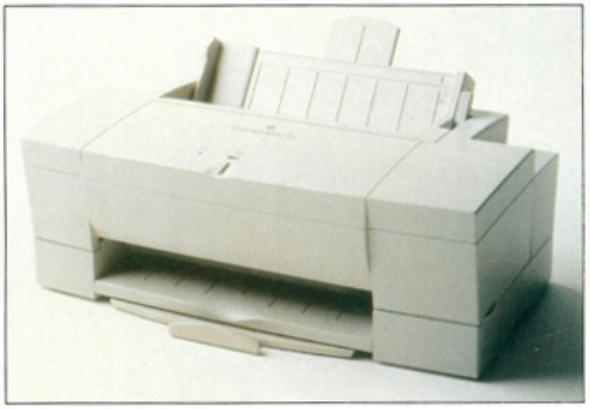
The new printer is fully compatible with Apple's colour matching technology ColorSync, which gives good matching of colours from screen to paper. The StyleWriter operates in three modes: photo quality, business graphics and spot colour.

There are individual cartridges for each ink colour, which differs from the three-in-one approach taken by some other manufacturers. In theory, this should be more efficient as only the colour which has run out needs to be replaced.

The StyleWriter Pro is not fast, with a claimed speed of two minutes per colour page – about average for inkjets. It features a 100-sheet paper tray, which can also take envelopes.

Street pricing is reckoned to be in the region of £550 by Apple, but you can expect some fierce price competition.

For more information on the Colour StyleWriter Pro call Apple free on 0800 127753.



Printing gets colourful with the new Colour StyleWriter Pro from Apple. It is not particularly fast, but its claimed 360dpi resolution is impressive and at somewhere just over the £500 mark on the street, the price is competitive.

FLIPPING HECK

You know the little animations you used to get on the edges of children's books – flip through the book rapidly and they appear to move? Well now you can create those on your Mac.

Taking a *QuickTime* move or PICS animation as a start point, *FlipBook* prints out the images onto special perforated paper to create the flip book.

FlipBook is available from S H Pierce & Co on 0101 617 338 2222 and the price is $89.

FlipBook – create the separate frames of a flip animation on your Mac. But what's it *for*?

Hellcats training course takes off

Hellcats is one of the most popular games on the Mac, but it's also one of the most difficult to learn. That's why Mac training company MacUniversity has decided to run the world's first *Hellcats* training course!

On May 28, MacUniversity will be hosting the course at Kings Cross in London in conjunction with Parsoft, the nice people behind the classic fighter-plane simulator. They've titled it 'Hellcats over Kings Cross', and plan, as the saying goes, a good time for all.

As well as picking up top *Hellcats* tips from the programmers themselves, you can compete in the first All England Hellcats Combat Trophy. And you'll get a chance to try out A10 – the next generation flight sim from the people who bought you *Hellcats*.

MACFORMAT is co-sponsoring the event, so you might have the chance to embarrass us on a Leyte Gulf mission.

The day costs £10, and you can get more details from MacUniversity on 071 582 3702.

Hone your flying skills before your next mission on a *Hellcats* training course!

APPLE BYTES

Deliverance from evil

Well, from Softline actually, but close. *Deliverance* is a "superb arcade adventure with astonishing graphics", not dissimilar in appearance to *Shadow of the Beast* on the Commodore Amiga.

It's a genre which has never really been attempted on the Mac and we certainly look forward to seeing it – more on availability when we have it. Softline: 081 401 1234.

Showing the Future

A warning for organised people who plan their lives months in advance: The Future Computing Show '94 will be held from October 26 to 30 at Earls Court 2 in London. It's a show for all home computer users, and we must declare an interest because we're running it! Expect to hear lots about the great Mac-related events at the show over the coming months. Future Events: 0225 442244.

New Norton

Norton Utilities has been upgraded to provide extra facilities for disk security and file recovery. More details next month, but in the meantime you can contact Symantec on 0628 776343.

Ad hoc add on

Users of *Pegasus Accounts* can now create ad hoc reports, complete with user definable fields with calculations and control over fonts and colours. All this is in an add-on module for £112. Access Accounting, 0206 322575.

DiskDoubler upgrade

The 'invisible' disk compression software *DiskDoubler*, which enables you to store more on your hard disk by processing the files on it, has been upgraded. More compression options are included, and the archiving features have been improved. *DiskDoubler version 4* is £69; upgrades are £29. Amtech: 0202 476977.

More Berthold fonts

The *Berthold Exclusive* collection of over 350 fonts has been added to the Linotype library. The collection includes classics such as Bodoni Old Face, Colossalis and Formata. The set costs a bargain £1,761 for the lot, but they are also available individually. Linotype-Hell: 0242 222333.

APPLE BYTES

Cheaper Peace of Mind

Peace of Mind 2.0 is a diagnostic utility to help you find faults in your hardware and run benchmarks on its speed. Remarkably, the new version costs less than the original at £100. Amtech: 0202 476977.

Multimedia extravaganza

CD-ROM freaks will enjoy Multimedia '94, to be held from June 6-9 at Earls Court in London. As well as CD, technologies such as video conferencing and the use of multimedia in education will be covered. Blenheim Online: 081 742 2828.

MacUniversity bookshop

Computer Generation and MacUniversity have got together to open a Mac bookshop at MacUniversity's premises at Southbank House, Black Prince Road, London SE1 (nearest Tube, Vauxhall or Westminster). Around 100 Mac titles will be stocked, with the emphasis on design and related subjects. MacUniversity: 071 582 3702.

Hyper authoring

Create a hypermedia spectacular with the new *HyperBook Tools* package. Based on *HyperCard*, the package enables you to work with text, simple maths formulae, pictures, animation, video clips and sound. *HyperBook Tools* comes on a CD-ROM with several sample hyperbooks and demos for a special introductory price of £116. Chartwell-Bratt Ltd: 081 467 1956.

Ritz Payroll

No, it's not that swish hotel's wages bill, it's a new payroll software package from Ritz Software, a company well known for its accounts packages. Ritz *Payroll* integrates with all current Ritz software, including Ritz *Starter*, and offers all you need to handle payroll during the year and produce year end returns. No special stationery is required and the program can cope with any number of employees, pay frequencies and methods of payment. There will be free updates to keep up with changes in the law. The price is just £125 for the first year's use. Ritz Software 0689 876542.

Slimmer, better Newton arrives

An updated Newton from Apple has addressed many of the problems which users had with the original MessagePad.

The MessagePad 110 has three times the memory of the original, and batteries are claimed to last up to three times as long. A flip-top lid (intended for the original MessagePad but dropped at the last minute) returns, and the pen is now telescopic. The most noticeable difference, however, is the slimmer, longer casing, which allows the new Newton to sit more easily in the hand.

The differences continue inside the case, as the software has been revamped. The Newton can now recognise handwriting some time after it was written – previously text became an inert graphic if not recognised immediately. This can speed up text entry enormously, making the Newton a much more viable proposition for taking notes. Single character recognition is now possible, which makes the addition of names to the word list much easier, as they can now be written instead of 'typed'.

Current Newton owners can upgrade their ROMs to benefit from these software changes. The original Newton continues to be available, now badged as the MessagePad 100.

Pricing for the new Newton is £551, with the MessagePad 100 now selling for £469. The upgrade costs £58 plus shipping to Apple. For more call Apple on 0800 127753.

■ Version two of the *Newton Connection Kit* is now shipping for £80. The kit allows you to exchange information in the Newton with data held on your desktop Mac, and directly supports programs such as *Dynodex, Now-Up-to-date, Excel, Lotus 1-2-3* and *WordPerfect*.

The kit will initially ship with demo versions of a number of Newton applications, including *Silicon Casino, GoFigure* and *Dell Crossword Puzzles*.

The new-look Newton: smarter recognition and longer battery life means a marked improvement on the original MessagePad.

Aldus presents Persuasion upgrade

Aldus' best-selling presentation package *Persuasion* is to get a major overhaul with version 3.0 to be available in the summer.

With the launch of a new competitor in *ClarisImpact*, *Persuasion* was due for a revamp. The most visible part of the upgrade is an entirely new user interface, featuring the now-ubiquitous floating palette approach.

The charting section of the program has been greatly improved, with 84 chart types and support for OLE (the technology which allows data from one application to be inserted 'live' into another – a sort of enhanced publish and subscribe.).

Aldus claims that colour support has been greatly improved, with new colour models, combined colour and greyscale elements and precision editing tools.

Sound can be synchronised with animated text and graphics, and transition effects are easier. Branching presentations are possible, with the presenter choosing the route on the fly.

Persuasion 3.0 will cost £411, with a free upgrade to anyone buying *Persuasion 2.1* between now and the release of version 3. Other *Persuasion* users can upgrade for £112.

For more information contact Aldus on 031 453 2211.

On-line Oxford dictionaries

The Oxford Language Shelf contains four interactive dictionaries for French, German, Spanish and Italian.

From the Oxford University Press, its software allows easy searches with wildcards, and a button-based interface allows rapid switching between languages and the use of keywords.

The same interface software has been added to *The Oxford Writer's Shelf*, which in its second incarnation replaces the *Oxford Minidictionary* with the *Pocket Oxford Dictionary* and adds the *Compact Encyclopaedia* to the package.

Both cost £88 from the Oxford University Press on 0865 56767.

Mountain High Map Frontiers is a CD-ROM containing EPS, *FreeHand* and TIFF maps featuring political boundaries, designed to link up with the company's relief maps series. The CD costs £141, or £56 if you already have the relief maps. Contact Digital Wisdom on 0223 566250.

CRUISING THE KEYS

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

■ In System 7.1, open the Memory Control Panel, switch on Virtual Memory, then click on the Select Hard Disk pull-down panel while holding down the [option] key. You get a list of the VM developers, with a short witty comment on each as a sub-menu. Very useful. Thanks to Sandy Janas, via CIX.

■ More System 7.1 Control Panel tips, this time from Bernard Lebelle in Croissy sur Seine in France, who wins a cosmopolitan MACFORMAT T-shirt. In the Monitors Control Panel, click on the version number in the top right hand corner of the window and hold the mouse button down. You get the names of the authors of this Control Panel along with a hilarious face. Do the same thing with the [option] key held down and the little face sticks its tongue out. (This also works in System 7.0.) Then try the Memory Control Panel: first, select the 'yes' option in the virtual memory choices, then hold down the [option] key while clicking on the list of possible volumes for virtual memory. You get all the names of the virtual memory gurus with a pop-up menu describing each character...

■ The *Key Caps* utility in your Apple menu shows you where to find some of those special characters lurking on the Mac keyboard, like ©, # and ¿, but what about characters that require *two* keystrokes, like é, ñ or ü? Hold down [option] and the keys for such accent marks have a grey border, indicating that you need to press another key for the letter you want the accent on.

If you've found any hidden secrets or keyboard tricks, send them in! There's a MACFORMAT T-shirt for the best, and a fiver for the rest, every month!

"Apple talk"

Controversy. Acrimony. Heated debate. But enough about the office. Write to 'Apple Talk', MACFORMAT, 30 Monmouth Street, Bath BA1 2BW.

Most competitions that invite you to 'use your skill and judgement' come down to luck in the end... but here's one that doesn't. Whenever you enter a competition in MACFORMAT or send us a tip or query, just use your taste and imagination to make sure you've selected an eyecatching postcard and, whether you win a prize in the competition or not, you could win a MACFORMAT T-shirt. This month's winners include **Sean Ferguson** from Liverpool, who tried valiantly to win our recent *AutoRoute* competition (but, sadly, didn't) with his postcard of a simian version of Atlas (appropriately customised). And for sheer kitsch value, it would be hard to beat this *Mission Impossible* card from **Rose Thompson** of London N5. What I want to know is, how did they get the colours looking *so* tacky?

Virtually free

"Don't use virtual memory," quoth MACFORMAT in December, "because it slows your Mac down." Well yes it does, but there's an important fact you're forgetting here. Virtual memory is *free*, and in any cost/benefit assessment that's important. My system manager will cringe to read this, but I routinely run 7Mb of virtual memory on my 5/40 SE 30 at work. This allows me to keep open most of the applications I routinely use over the course of a day (*Nisus, Address Book, QuickMail, 4-Link, XPress*) without having to fart around shutting things down and re-opening them. The saving in time and frustration that results from not twiddling my thumbs waiting for these big things to happen is worth the slight speed decrease in the Mac's normal operations, especially as I can have it by clicking a dialogue button instead of persuading an overworked system manager to install more memory or, if it was my own machine, shell out hard-earned dosh.

John Stevenson
Bath

Watch for a special feature on how you can get more disk space and more memory, even without buying any extra hardware, in MACFORMAT *next month. To make sure of your copy, ask your newsagent to reserve you one, or turn to page 66 for details of how to subscribe. Oh, and John, I can say with fair confidence that our – I mean* ***your****, your system manager isn't likely to cringe, 'cause he doesn't usually read these pages. So, no point in that ingratiating bit about him being overworked, really. Nice try, though.*

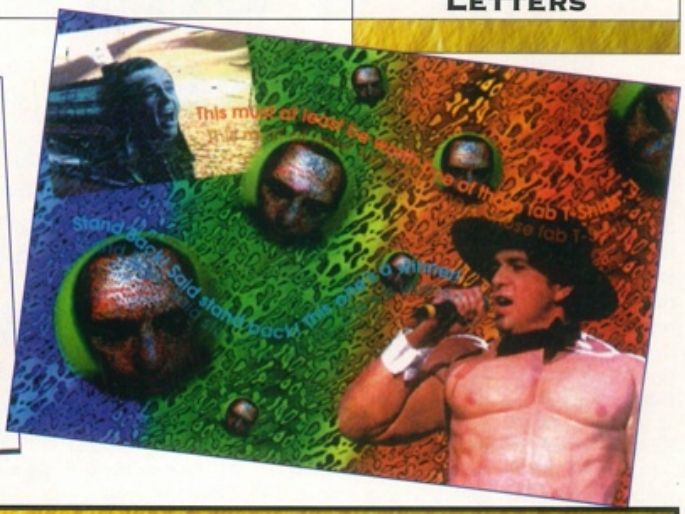
New for old

You walk into your local computer store and ask for *Screw-It-Up Lite 1.0.2*, which you want to use on your new, top-of-the-range Macintosh Octra XV. The helpful assistant's face falls: "I'm sorry, sir. The version we sell won't run on your machine. If you buy it, you'll have to write to the distributors and get them to send you an update. Or alternatively get a patch progam from some bulletin board until they eventually get around to releasing a new version."

A fairy story? Very probably. It's more likely that they'll take your money and let you go through the frustrating process of trying to install the software and wondering if your machine is at fault. You could accuse some retailers of 'knowingly' selling out-of-date software, except I suspect that would be flattering them. At least that's the impression you get from some sales assistants – so blankly uninformed that you wonder if they've ever used a Macintosh or opened a magazine.

Owners of machines with 040 chips will already be familiar with the time-lag problems between old software and new hardware. (I pity the first people to buy PowerMacs.) In a recent issue of MACFORMAT, you warned us that *MacTools v3* was the only one that worked with new System Enablers. This kind of information is very valuable and it would be nice to have more of it – a regular feature on software compatibility perhaps?

Here's a true story which does have a happy ending. I bought Now *Utilities 4.0* a year ago and a techie friend downloaded for me a patch to update it to the less buggy



More MACFORMAT T-shirt winners: **Nick Shaw** of Black Ash Design in Liversedge, West Yorks, sent in this remarkable picture titled 'Die fünfte Augenwaage' or 'Eyebalance number five', which doesn't make a lot of sense but you should see what the gold ink looks like. Then there's **Alan Morton** from Glasgow, who created his own Peter Gabriel postcard for our *Xplora 1* compo which, yes, *is* "worth one of those fab T-shirts...!"

version 4.0.1, but even this wouldn't work on an LC475. The UK distributors were unhelpful, but I finally wrote to Now Software in America. They expressed me a disk patch (the Americans do care about customer relations) and I'm now using v4.0.1p, which works fine. My friend now tells me that a v4.0.2 patch is available. Do you think the retailers know yet?

David Clough
London SE24

Old software may not take advantage of the speed or power of new hardware, but with Macs it's very unlikely not to work. Apple has always had a policy of making its new hardware as 'backwards-compatible' as possible – that is, making sure it can run older software – and this applies even to the radically-new PowerMacs. Some commentators believe that the Mac could have been "light-years ahead of where it is now" if not for this policy (at least, that's what Andy reckons...). But it has meant that upgrading to a better Mac won't instantly render your precious software collection useless.

The difficulty really is System software revisions, which more or less radically change the environment in which a program has to operate. The last 'watershed' revision was 6.0.7: just about all current software should work fine with that version or any version newer than that; some software will require it. The exceptions will be the diagnostic programs and utilities such as ***MacTools*** *and* ***Now Utilities****, which have to tackle new ground rules like the introduction of System Enablers with System 7.1.*

As for 'buggy' software: well, at the end of the day it's not down to either the retailers or the distributors, is it? American software houses may be helpful, but we at MACFORMAT *are finding that even major upgrades to professional-level desktop publishing packages can turn out to have... shall we say, certain quirks. If you've had any problems with software bugs and incompatibilities, do send us details and we'll see about publishing a dossier of common problems. Just don't ask me about the 'Vanishing Text bug', that's all.*

HD Emergency

I have some advice to offer regarding the problem you have mentioned with running Norton *Utilities 'HD Emergency Disk'* (not the 800K *Emergency Disk* which also comes with the package) on newer Macs whose System requires a System Enabler. I would strongly urge you to test that you can boot up successfully from the *HD Emergency Disk*. Just switch off, wait a few seconds, and then restart with the disk inserted. If you are presented with the familiar *Norton Utilities* interface, everything is fine: you can put the disk away again and hope you will never have to use it. Otherwise you will be presented with some sort of dialogue explaining why the disk will not work. Don't waste your time trying to fathom a solution, but instead get straight on to Symantec customer support at Symantec (UK) Ltd, Sygnus Court, Market Street, Maidenhead, Berks SL6 8AD, Tel: 0628 776343, remembering to quote your Product Serial Number and Registration Number, and mentioning which Mac model you have. You should be sent a new set of disks by return of post. The updated *HD Emergency Disk* should contain a ReadMe file addressing precisely this question, in case you're interested in the explanation. Do it now, and avoid the harrowing experience of finding yourself completely up the creek when your Mac trashes its hard disk and Apple's standard *Disk Tools* fails to cope.

Graeme Cook
Lonan, Isle of Man

Graeme wins a MACFORMAT *T-shirt for his helpful community spirit.*

PAYING FOR YOUR SHAREWARE

Glenn Robinson (MACFORMAT 9, February) asked about how to send payments for shareware to the US. Firstly, don't try to send a cheque. Many shareware authors will warn you against this in their registration documentation. US banks charge exorbitant fees for handling cheques drawn on UK accounts, and some will not even look at them. By far the most efficient way to send small sums to the States (or anywhere else for that matter, since shareware authors worldwide are happy to accept dollars) is plain, simple cash.

The risk involved is minimal, and for the sums in question (usually $5–$25) not worth worrying about if you take a few sensible precautions. Use a decent quality envelope, just large enough for the unfolded notes. Place the notes within a folded sheet of writing paper (so that even if the envelope is held up against a strong light the contents will not be visible). Finally, seal the envelope with sellotape if necessary.

The cash itself is readily obtainable in the high street (I find Thomas Cook's the most helpful). Because there is usually a minimum commission on foreign exchange transactions, I would recommend changing about £100 at a time if you expect to make regular shareware payments. Below that amount you will pay the same commission (normally around three quid), and above it the commission will increase as a percentage of the total. If you batch your shareware payments, you will find that you are paying out quite a lot in one go anyway, and any excess can be held in reserve for future payments.

When you're changing money, be sure to specify a range of denominations: it's not much use if you walk out of your bank with only $50 bills and you want to pay a $5 shareware fee. At the same time, a wad of $1 bills is going to look pretty conspicuous in an envelope.

For larger sums, Eurocheques (ask at your bank) are the cheapest and easiest way to pay in Europe. For the States or elsewhere, a bank draft (expensive) or credit card payment are probably the best bet.

Just a couple of final points: if the program is more than a year or two old (and especially if the fee is more than a few dollars) it does no harm to drop the author a card (or an e-mail message) first, asking them to verify their current address. Also, when sending payment remember to state the name of the program and the version number – it helps the author send you the right documentation, upgrade etc!

Graeme Cook
Lonan, Isle of Man

Just for the record, I have to say that we cannot recommend sending cash through the mail, especially to the US, where the postal service is notoriously unreliable. Ask at your own bank about international bank drafts, which are essentially bank cheques drawn on a US 'correspondent' bank and made out to a named payee. US banks will accept them just like US cheques and usually not charge for them; the charge you pay varies from bank to bank, but in my experience is usually only a few pounds. Anyone else have any favourite methods of doing the right thing and paying for shareware?

Communicative

If you can only be bothered to take calls from your readers for a few hours each week then I don't think I can be bothered to buy your magazine any more. Hopefully your competitors will be a little more communicative.

Brendan Beirne
(ex reader)
London SW10

Oh dear. Let me explain our position on this one. We produce a magazine. We just do not have the personnel to run a telephone technical support or advice service as well – we do that via our Mac Answers pages in the magazine (with the help of a whole team of outside experts whom even we sometimes have trouble reaching by phone). And much as we welcome your views on MACFORMAT *or anything Mac-related, we simply don't have the time for lengthy chats on the phone – these 'Apple Talk' pages are the place for that. (Aside on telephone manners: why do people always assume that just because they're not busy and feel like a chat, it's a convenient time for the person they've phoned?) However, if you really desperately need to talk to us, we'll make the time – but we try to limit reader calls to Wednesday afternoons, simply to minimise the disruption to our already impossibly tight production schedules. By the same token, we are not always in the office sitting by a telephone – there are meetings, photo-shoots, press briefings and so on which demand attention elsewhere – but we make a point of having someone available on Wednesday afternoons to take your calls.*

If you find this offensive... well, either you've got a truly disastrous Mac problem or, frankly, a truly disturbing attitude problem. I'm afraid the world doesn't revolve around you after all.

And speaking of attitude: if you do phone at any time, even if you're doing so to give us a piece of your mind, please remember that the friendly people who operate the switchboard are innocent parties. They are there to help you reach the people you want to talk to. They are not there to be abused or sworn at. If they do not immediately put you through to the right place, ask yourself whether you have made clear who you need: Future Publishing currently produces 32 magazines and has separate departments for editorial, advertising, subscriptions and mail orders for every one of them. You do not come through directly to MACFORMAT *editorial. If you are put through and get a recorded message saying there's no-one available to take your call, that means there's no-one available to take your call and we – not the switchboard – have left you a courteous message rather than just let the telephone ring unanswered. It does not mean the telephonist has deliberately mis-routed your call. It does not mean you should ring back and abuse her.*

Thank you for your attention. We'll now resume our normal letters page.

Finally, **Marlon Seton** from London SE10 with the confrontation of the year, 'Sav Sadness vs Godzilla'. Remember, *whenever* you write to MACFORMAT, you have an extra chance of winning a T-shirt, so be *creative!*

Two more MACFORMAT T-shirt winners for this month: **Chris Wyatt** of London W4 tickled our art staff's fancy with this little allusion... but then, you ought to see some of the stuff that gets stuck up on the walls of our office. Still, *de gustibus non disputandum*, that's my motto.

Roll on, System 8

Another reader's wish-list... Casper van der Bilt from Delft in the Netherlands wants to see three things: first, easier updating of the Desktop file without you losing any comments in the Get Info box; second, a 'normal' backup program where you can see all files and can restore them separately; and third, a good hard disk management program which can join fragmented files (that is, files that have not been saved to disk in one continuous block of data) and also restore recently-removed files. These, he says, are things everybody with a computer uses to keep a clean system. Well, everybody who's moderately techie, at any rate. If you've been too wary of sophisticated disk tools suites to try joining fragmented files before, it certainly would be nice to have a friendly System do it for you...

What would *you* like to see in System 8, when it appears?

Speech therapy

I am a speech therapy student in my fourth year at the University of Zagreb, Croatia. A few months ago I visited some friends in England and saw MACFORMAT. Since I have a Classic II, I bought it.

I've been looking for software for voice analysing and other software connected with speech therapy, and I haven't found any information so far. I even went to the Apple Centre in Zagreb, but with no success. Therefore I'm asking you to help me and send me any information about any software of this kind, and also advise me about hardware needed for that kind of work. Since I can't buy MACFORMAT in Croatia, please reply to me directly. Thank you!

Christian Nikolić
Antuna Štrbana 6
41000 Zagreb
Croatia

A bit specialised for us, this one. Hardware: a microphone, and maybe an AV Mac if your budget runs to one? Software: we're out of our depth here. If anyone writes to Christian, could you fill us in too? The address is on page 20.

Short but sweet

Got a point to make? A short note on a postcard stands more chance of getting printed.

Burning desire

I'm an ardent *Harpoon* fan (and wargamer in general). Do you know of any club or group that swaps scenarios? I appreciate that there may be ones on Internet, but do they have a snail-mail address? I and many other people do not have access to a modem. If you don't know of such a club then please print my address and consider me to be looking to start one. Thanks for your help.

Guy Sansom
Tanelorn,
8 Little Manor Gardens,
Cranleigh, Surrey GU6 8BF

I want it!

I have just got to have it! In December's MACFORMAT you mentioned the BMUG PD-ROM. I really like the idea of pumping up my Performa 600CD with all those memory-hungry little Extensions that just love to clash with each other. But where can I get the BMUG disc?

Alvin Leon
Leamington Spa

Have I got news for you! Just turn to page 63 of this very magazine...

No Mac experts

Like Michael Brooke in March's MACFORMAT, I have had trouble with *Patriot Command* freezing up. But no, Mr Mac Answers, you don't have to resort to the main power switch. If you are running System 7 or above, you just hold down [command] and [option] and then hit the [esc] key and confirm you want to 'force quit'. I'm no Mac expert. I found this incredibly useful piece of information in a magazine I subscribe to called MACFORMAT. Perhaps you should take out your own subscription and pass it round the office!

Stephen Dobbin
London E5

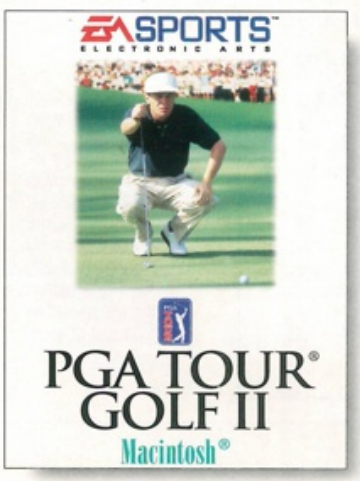
7 Courses and a choice of greens

PGA TOUR® Golf II, served up on the Macintosh with a feast of new features. In addition to Practice and Tournament modes, there's now a Skins Challenge on the menu, bringing you all the tension of high-stakes golf for cash. And that's just for starters!

The 7 main courses are the most challenging the American Tour has to offer, each one identical in every way to the real thing – even down to the wildlife. Select a club, compensate for the wind gusting up to 20mph, draw or fade your drive around obstacles. But miss the Accuracy Point, and landing in a Sahara-sized bunker could be your just desserts.

You'll eat up these greens. Every ridge and contour has been modelled after its PGA TOUR® counterpart. And when winning the championship, taking 4 Skins, or simply making the cut depends on a 16 foot putt, you can bet that the tension will reach boiling point.

PGA TOUR® Golf II – finish all these courses, and you'll *still* be gagging for second helpings.



PGA TOUR

if it's in the GAME, it's in the GAME™

EA DIRECT

PGA TOUR® Golf II is also available from EA Direct on 0753 549 442 or write to Electronic Arts, 90 Heron Drive, Langley, Slough, Berks SL3 8XP • PGA TOUR, TPC, Tournament Players Club and the Players Championship are registered trademarks of PGA TOUR, Inc, and are used by permission • Mac and Macintosh are registered trademarks of Apple Computers, Inc. • EA SPORTS, the EA SPORTS logo, 4 Way Play, the 4 Way Play logo and "IF IT'S IN THE GAME, IT'S IN THE GAME" are all trademarks of Electronic Arts

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ELECTRONIC ARTS

What's New?

A font of your own handwriting, a video post-production studio on your Mac and a loopy neural network: Andy Storer tells it like it is...

I'll kick off this month with a little self indulgence. See that handwriting in the screenshot – that's mine, converted into a font! Just to prove it here's some more: I'll write the word 'MACFORMAT' eight times so you can see it's so uniform I couldn't possibly have physically written it:

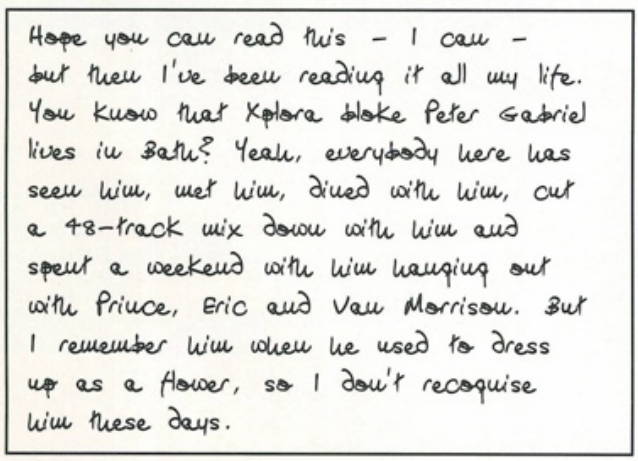
MacFormat MacFormat MacFormat MacFormat
MacFormat MacFormat MacFormat MacFormat

There – impressive, eh? Well it was to me when it came through the post, courtesy of FontWorks on 071 490 2002 for £116, with a cover note written in my handwriting. Real spooky, I can tell you, because I honestly couldn't notice any difference and I was reading something someone else had written in my handwriting! Fontworks had sent me through a template in which I had to write the alphabet in upper and lower case, plus half a dozen phrases, and all the usual jumble of other characters which go to make up a complete font. Oh and my signature just for good measure. So how's the conversion done? Well, it's here we enter muddy waters. On receiving my template, Fontworks air-freights it out to Moscow where some unnamed boffin scans my scrawl, works out the maths needed for scaling and produces a bitmap font. This TrueType font, known as AndHand in my case, is then copied to disk and flown back two weeks later. Hey presto, I whack AndHand straight into my System Folder and I'm typing away in my own handwriting. It behaves just like any other font – you can italicize it, embolden it, blow it up, shrink it down, whatever. Now, FontWorks is understandably reluctant to reveal its source in Moscow for fear competitors do the dirty on it, but here's my theory. This guy is a Muscovite in his thirties, trained by the KGB as a forger, who's now gone freelance in the post-Soviet turmoil. Simple. Who on earth else would be converting writing into fonts in the good old CCCP? With the amount of paperwork produced by that bureaucracy, is there any wonder there was a need for digitised signatures? Make of it what you will – I reckon my new font may come in handy for some reason or other, like convincing my parents I've actually taken the time to put pen to paper rather than sent them some perfectly formatted Quark document. But the best thing of all is that my handwriting is now available for ever. And I guess, as far as my wife is concerned, so is my signature.

This guy is a Muscovite in his thirties, trained by the KGB as a forger...

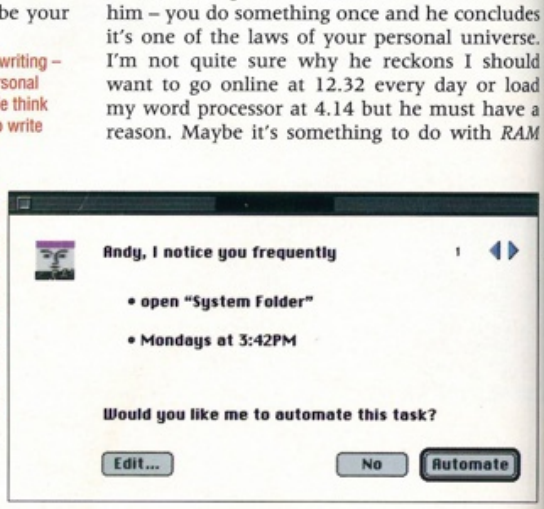
It did occur to me, though, that maybe your own handwriting font could be extremely useful if Apple and FontWorks put their collective minds together. Think about it: the Newton MessagePad could become almost completely accurate and much, much faster in a jiffy if your own font was burned into its ROM as an optional upgrade. Just a thought (and my monthly intellectual copyright royalty, please guys). If we really want digital assistants for 'intimate' rather than 'personal' computing then this might be a smart move.

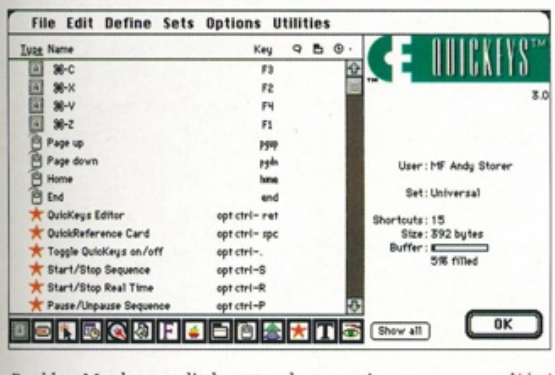
Another example of this move towards intimate computing comes in the form of new software like *Open Sesame!*, which I covered last month. I thought it was a smart move at the time but I'm having doubts now. 'Automate your Mac... automatically' is the sales line. It supposedly saves you time and trouble by learning all your common Mac operations and automating them. But it's not quite that simple. By all accounts, there's some kind of neural network lurking in its innards which learns how to be your friendly assistant – emptying the trash, placing aliases of commonly used items in your Apple menu, opening your favourite folders on startup and so on. And last issue I was fairly impressed by my little neural pal. But, as you can see from the screenshot below, he's growing up to be a bit of a nutter. This kind of problem occurs all the time with him – you do something once and he concludes it's one of the laws of your personal universe. I'm not quite sure why he reckons I should want to go online at 12.32 every day or load my word processor at 4.14 but he must have a reason. Maybe it's something to do with *RAM*



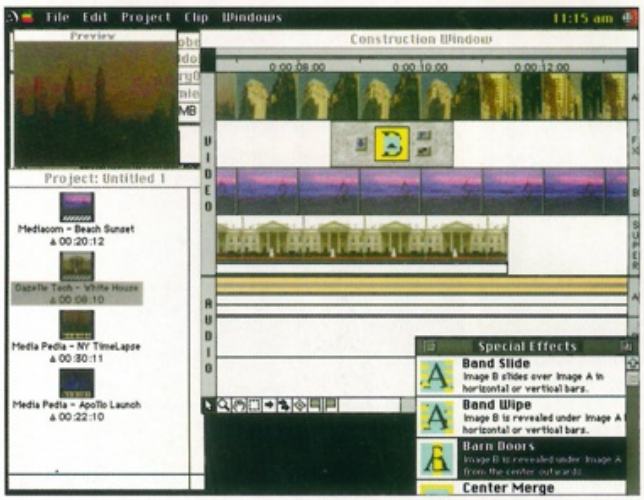
Yes this could be your handwriting – converted into your own personal font. Great for making people think you actually have the time to write them a letter...

Sometimes *Open Sesame!* tries a little too hard to be helpful. Since I'd only been using it for one Monday, how could it possibly have known this? The neural network driving it to make these observations clearly displays supernatural abilities and should be marketed as such.





Altogether more functional than *Open Sesame!*, though somewhat less manic, *QuicKeys 3* records sequences of key presses and stores them as macros. Then a simple key combination can trigger a whole series of complex operations. Dead useful for repetitive tasks...



At last, you too can have an entire non-linear video post production studio on your desktop with Adobe *Premiere 3.0* – only trouble is you need around ten grand or so for the extra kit to do it justice.

Doubler. Maybe my little neural matey is experiencing some dubious form of heightened Zen-like awareness. Just like HAL. Or maybe he's just plain bats. Or maybe it's me who's screwed and he's just copying me. Well, let's just say one of us needs debugging and it ain't going to be me. I'll let you know what happens when he starts going all Freudian on me next month.

So it's a good job *QuicKeys 3* rescued me from this leading edge neural madness with a few good old simple key presses. It's much more useful than *Open Sesame!* because all it offers is the capacity to memorise sets of key combinations, known as macros. Twelve sets come bundled to help you speed up things like zooming windows, toggling file sharing, viewing files and the like. But where it really scores is in its capability to record series of key presses and assign them to just one combination like **[option] [M]**. Such a simple macro can trigger a huge set of personalised shortcuts. So when I boot up each day I can just hit **[option] [M]** and this happens: my diary schedule loads and opens on the date while, in the background,

Let's just say one of us needs debugging and it ain't going to be me.

my comms package logs on to my conferencing system, files all my unread mail, archives it, downloads it and logs off. The macro then continues by loading up my dearchiver, saving the mail as a text file and auto-double-clicking it for display in *Word*. Of course, the only hassle to this automation is remembering what those key combinations are and what they trigger. So I reckon I'll give my little neural buddy the job of keeping track of them. One can only imagine the mayhem about to ensue.

But in amongst the chaos of *Open Sesame!* cutting in every half hour and asking me whether I want to make an alias of my wastebasket because I junk so many useless messages from *Open Sesame!*, came some real excitement. The best news this month, for me, just has to be the *QuickTime 2* story. And about time too because three years is an absolute eternity in computing. Yep, all this video-on-your-Mac malarkey began in '91, when I remember first seeing version 1 *QT* movies at Boston's MacWorld Expo running in *WordPerfect* of all things. And at that time all us Mac hacks were pretty ambivalent about this brave new *QuickTime* thingy – yeah it's fun, it's free and it may well be the future but who really wants to watch ropey little micro movies jerking about in windows the size of matchboxes?

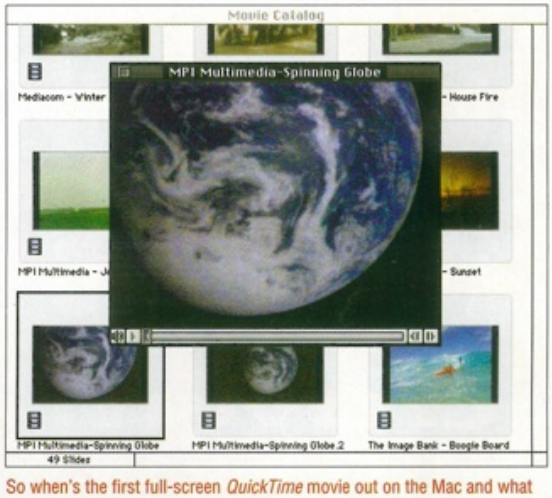
Well, it seemed a fair enough opinion at the time, and over the intervening period, despite a couple of upgrades, nothing's much changed. Sure, *QuickTime* runs bigger, it handles sound better, it's a whole lot faster and it's gained support from more than way-out word processing companies. It's all over the shop now – games, encyclopaedias, infotainment, edutainment, soft porn, hard porn, eduporn – even *QuarkXPress 3.3* is going to support it. But it's still limited. The reason being that in this area of multimedia, Mac hardware is way behind Mac software.

If you look at *QuickTime* editing software like Adobe's *Premiere 3* you'll see an entire non-linear video post-production studio in there. All it needs is ten grand or so and you can pull in broadcast-standard footage, mix it down with effects and CD-quality sound and put it back out to broadcast-spec VTRs. Only problem being the ten grand for the 2 gigabyte disk array, the *VideoVision* 24-bit realtime frame grabber, an optical for back-up, oh and a Quadra 800 or 840 with 20Mb of RAM or so. So *Premiere's* all ready to roll with high-end hardware but who's got that list on their desktop? Not me, that's for sure. Nevertheless it's preferable to the prohibitive costs of a traditional linear set-up using three VTRs, a mixing board and some natty Quantel software. Ten times better in fact; but it still ain't cheap. And it should be. Because you should be able to simply plug a camcorder into your Mac, transfer the tape to your hard disk, edit it together and print it to video. All at full screen, full motion, full colour. Even freeware *QuickTime* editors like *Popcorn* would let you do that if you had the right hardware to hand.

So Apple's continuing pursuit of a software solution to the problem of hardware lag has really come up trumps with *QuickTime 2*. It'll now run full motion video in quarter screen windows on all 040-based Macs without additional hardware assistance. So if you have an AV machine you're at least a quarter of the way to affordable mass multimedia already – you can pull in video and sound dead easily. But, as with so many developments making up the Mac's future at the moment, PowerPC is the key. The coupling of *QuickTime 2* with the performance edge of RISC processing suddenly becomes very exciting. The hardware's finally caught up. OK, so prices for these PowerMac beasties are maybe a bit on the high side for most people. But a £700 upgrade is perhaps not too much of a burden for the fourfold power increase over a top-end Quadra you'll get from native PowerPC applications. I reckon in another year, and with the real emergence of MPEG Macs, we'll have real video running, no problem at all.

Don't get me wrong – I'm not trying to hype *QuickTime* beyond belief; it's just that when a significant enhancement comes along we should greet it as such. It's this kind of advance that makes owning a Mac feel so good. And if you look at what's happening in this area *Windows*-wise you'll feel even better. I went up to the *Windows* show at Olympia last month and came away feeling pretty chuffed that Apple Macs still have the edge over the millions of *Windows* boxes out there.

Andy Storer



So when's the first full-screen *QuickTime* movie out on the Mac and what will it be? My money's on a Spielberg extravaganza even though the new *QuickTime 2* will have some way to go before it can cope with wide screen.

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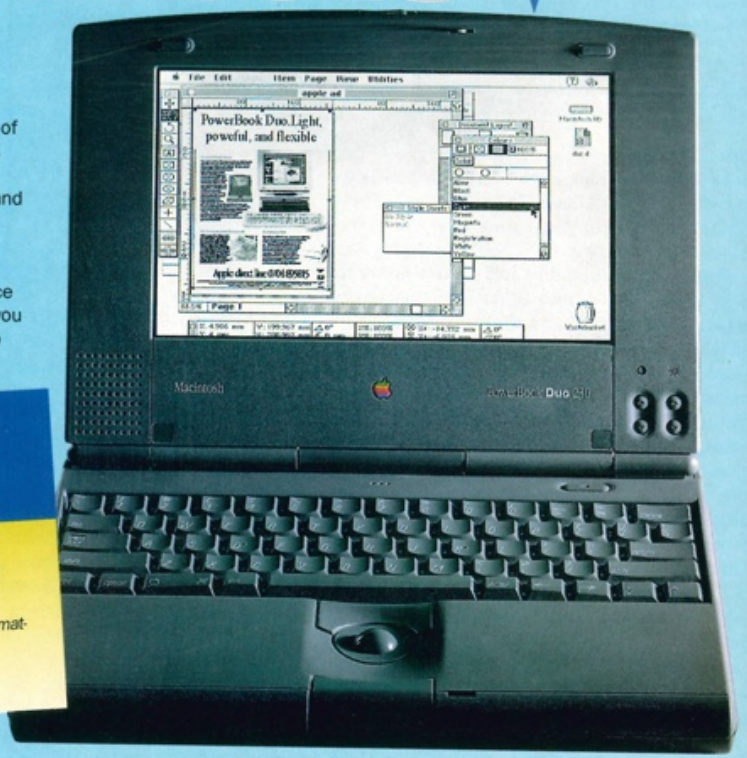

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SWITCH

The INCREDIBLE Software Bonanza

You want the best software, right? But do you have to spend hundreds of pounds when you can do just about as much for a tenth of the cost?

There's something very satisfying about buying Mac software. You invariably get a huge box, a manual the size of the Greater London Yellow Pages and some nifty stickers along with your five master disks. But ultimately, it's how the program performs, not how it's packaged, and even the most outrageously expensive program can fail to meet your needs.

Thank Jobs then for two things: shareware and competition. Competition is responsible for much of the best Mac software. Smaller companies seeking to get a piece of the action in the global software market will often release great programs at very cheap prices. Peculiarly, people will buy the well known program despite the fact that its budget counterpart is often as good as it, if not better. It's one of those peculiarly snobby things that we've all done at one time or another. Why not try our light-hearted quiz below to see if you're a software snob?

Shareware's that mysterious software written by mysterious programmers who ask only for a bit of recognition and enough money to carry on creating. Shareware software is specifically designed to meet your peculiar needs, however odd they might be. If you've ever had a problem with your Mac or its software then you can bet your Aunty Ratchet's top set that somebody somewhere's programmed a cure.

What is shareware?

No doubt you've seen the regular shareware column in MACFORMAT and tried out the programs on the cover disk. Most of these cover disk programs are shareware. This is software which can be freely distributed – the authors of the programs ask only that if you like their work and intend to keep using it, you send them a small fee (usually about £20). Their address is contained either in the program's start-up screen or in a *TeachText* document distributed with the program. After you've sent in your shareware fee or 'registered', you might receive a special code number which unlocks more of the program's features and entitles you to free updates too, or an upgraded version of the program, or documentation, or even some extras into the bargain.

Often these shareware programs are tiny entities which perform a tiny function, be it unmounting shared disks, explaining all those mysterious numbered System errors, making the screen cursor twice as big or sticking a spinning globe where your desktop apple used to be. Some of them do exotic things like creating virtual worlds that you can explore (see this issue's shareware reviews, page 73). However, just as many programs are fully-fledged packages, well-designed, functional and cheap. And most importantly, they enable you to tackle the tasks that other users have splashed out on hideously expensive high-end programs for, at a mere fraction of the cost. This, then, is the

Are you a software snob?

- Does all of your Mac software have the words Microsoft, Quark, Adobe or Aldus emblazoned on the box?
- Do you need to re-mortgage your house every time you want to buy a new program?
- Do you need a 250Mb hard drive just to store your word processor's help files, grammar checkers, macros, appointment tabulators, biorhythm charters and wedding planners on?
- Have you ever actually used the Flesch Reading Ease calculator on your word processor?
- Does your local software shop send you a crate of Bollinger at Christmas?
- Do you ever wonder why you can't afford to go on holiday anymore?
- Have you ever accused shareware users of being communist traitors to the capitalist system?

Answers: If you answered yes to any of these questions, then I'm afraid you're a bit of a software snob. However, don't panic, there's a cure – read the prescription contained within this feature and chant the following mantra at sunset each day: "Just because it's cheap, it doesn't mean it's bad." Next patient, please...

definitive MACFORMAT shareware and cheap software guide. Whatever you want to do on your Mac, check here first – you'll be amazed at how much you can do for very little outlay.

Graphics

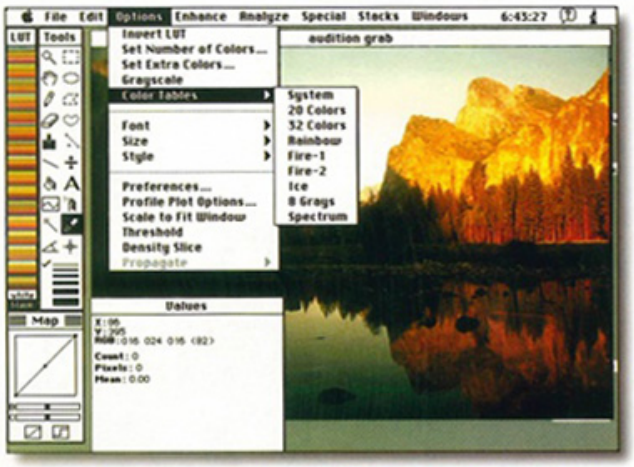
If you're a member of the Worshipful Guild of Professional Graphic Artists and Pixel Twiddlers (Cupertino Chapter) then you'll know that no other computer can come close to the Mac for picture design and manipulation. There's something about the world's hippest computer which means it's great for your more creative type as well as the sort of person who knows what a nested loop is. This aspect of the Mac's nature is reflected in the expanse of graphic oriented software cluttering up the shelves of Mac dealerships.

There are four different kinds of graphic software on tap for would-be Warhols: painting, drawing, CAD and utility. As there are more paint packages than anything else, both at the cheap end of the commercial market and as shareware, we'll start there.

Paint Packages: the leading shareware painting packages are *Lightning Paint*, *Colour Paint* and *Matt Paint*. The most popular of these is *Lightning Paint*, a program which includes variable brush sizes, fills, all the standard graphic shapes and a painless colour choice system. We tested it on a Mac IIci and found that it's quick, if somewhat lacking in more sophisticated features. To be honest, shareware programs like *Lightning Paint* are only going to be of use to you if you need an occasional picture created.

If you plan to create artwork on a more regular basis then you'll probably need to invest in a commercial package like Aldus *SuperPaint*, which costs £72, or Claris *MacPaint 2.0*, which costs £80. Of these the better is *SuperPaint*. It features integrated paint and draw layers (enabling you to transfer, trace or enhance images), along with configurable brushes, pens, charcoals, airbrush and smudge tools. You can also utilise the built-in colour palettes or create your own. My favourite feature is the ability to save pictures in Startup Screen format so that a picture appears when you first switch your Mac on – great for playing (ahem) tricks on people.

The principal difference between painting and drawing is that the former deals far more with brushes, while the latter deals with lines and objects. For instance, if you wanted to create an EPS heading for a feature then you'd use something like Aldus *FreeHand*. Unfortunately, there's nothing in the public domain which really emulates either *FreeHand* or *Illustrator*.



If you need some of the image-manipulation and enhancement features of a program like *Photoshop*, try *NIH Image* – it might have all you need, and it costs not a penny.

However we can recommend Aldus *Intellidraw*, which combines painting and drawing features and costs just £92. *Intellidraw* enables you to create object-based drawings (which stay correctly aligned when manipulated), link objects and create animations or slideshows.

CAD: Computer Aided Design programs are used by architects, product designers and anyone else who needs very accurate wire-frame or plan-view drawings. The principal heavyweights in this corner of the market are Claris *CAD*, which costs a humungous £565, *MiniCAD+*, which costs £499, and the mid-range *MacDraft* at £221.

However there's a superb shareware package which goes by the unassuming name of *CAD*. To be honest, when I first loaded this I thought I was looking at a commercial package – it's that full of features. You can create 3D objects (there are some excellent examples on the disk), manipulate them and view them from any angle, viewpoint or perspective. Even though this kind of program is (by necessity) tricky to use, I found myself at home with it after just a few hours of tinkering – the icons are largely self explanatory.

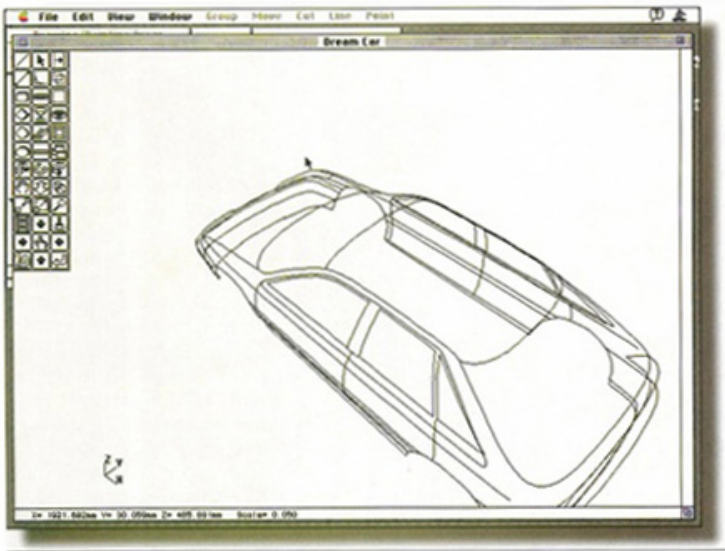
Utilities: now, you really are spoilt for choice when it comes to shareware graphics utilities. Whatever your demands, you'll find a very cheap program to do the job for you – be it graphic conversion, retouching, fractal generation or screen grabbing.

The program we recommend is *Image*, which was on MACFORMAT cover disk 8. This is a digital image processing and analysis program. It can load, display, enhance, print and analyse all the usual Mac file formats. In addition it has histogram equalisation, contrast enhancement, density profiling, smoothing, sharpening, edge detection, median filtering, a powerful macro programming language built in and loads more baffling features. What's more, this program's public domain freeware, so you don't have to pay a penny to use it. Highly recommended.

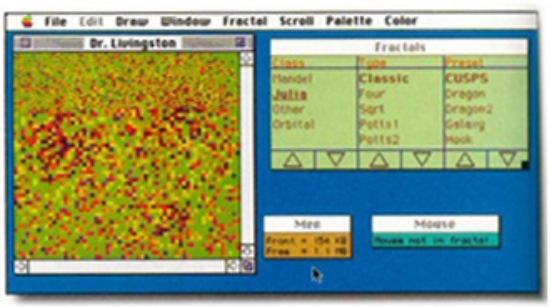
Should you require an analysis of your brain, then check out *NIH Image* (MACFORMAT cover disk 8). This superb graphic enhancer, which was originally designed to analyse medical images, does pretty much the same as *Image*, on TIFF and PICT files. If you need to boost a faint picture, smooth bits out or simply remove a few stray pixels from a scan, then this is perfect.

Alternatively: the young and the young at heart should turn their attention to *KidPix*. There are two versions of this program, one public domain and the other commercial; the former lacks a few of the latter's features. The program is a children's painting package, designed in a fun way and it's superb for introducing youngsters to the Mac, making it great for schools and clubs. Make sure you send the results off to the Tate Gallery as well, they may just buy the work from you for a few grand.

Also worth checking out are three fractal graphics generators. *Mandela* and *Mandlezot* create standard fractal pictures which can be



It should really cost lots of money, but *CAD's* author is a big hearted chap who'd like you all to get designing. Why not start with a milk carton that it's possible to open without showering yourself?



Mandala: explore the mysterious world of Chaos theory and create freaky patterns which look just like an infra-red satellite map of Lake Michigan.

zoomed in on and saved out as picture files. *Fractal* creates snazzy looking fractal landscapes.

Word processors

Funnily enough, there aren't actually that many word processors out on shareware. Sure, there are plenty of document and text editors, but there's nothing that really comes close to a solid program like *WriteNow* (currently v3.0)

This is claimed to be the easiest and fastest word processor currently available. It costs just £46 and takes up very little of your treasured hard disk space. Yet it comes complete with the standard 135,000 word dictionary, 1.4 million word thesaurus, mail merge facilities, style sheets, on-line help and graphic importing facilities. In operation *WriteNow* proves to be a very straightforward program, leading me to wonder why people bother with gargantuan efforts like *Word* or *WordPerfect*. It can import or export text in all of the popular file formats and behaved perfectly during the creation of this feature.

Alternatively: if you'd like to check out shareware alternatives, then the programs to keep an eye out for are *BBEdit Lite V2.6*, *MacSink*, *MiniWriter V1.71* (a fab little DA word processor) and (of course) *TeachText*. Of these, the best is *MacSink*, which can load absolutely any file for manipulation. It also enables you to change the file's originator, in much the same manner as *ResEdit* or *FileTyper*. However, perhaps its most useful feature is its ability to strip those annoying bogus characters (like those little squares) which miraculously appear when you port a file over from the PC. It can be run as either a desk accessory or a standalone application and takes up minimal amounts of RAM and hard drive space. The really cheap (ie free) alternative is *TeachText*, but as this has no formatting functions at all, it's best left for real emergency text transfer dilemmas.

Spreadsheets

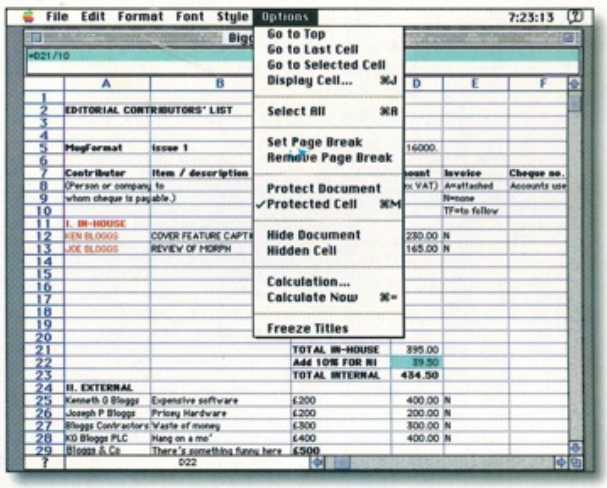
Alongside the word processor, the spreadsheet can lay equal claim to the rise and rise of the 'business' computer. Companies like Lotus and Microsoft revolutionised the way that firms carried out their day to day work. Of course they're also responsible for putting vast numbers of clerical staff out of work, but we won't dwell on that rather unsettling fact.

Needless to say you can get all the big name spreadsheets for your Mac (*Lotus 1-2-3*, *Excel* and the like), but what about the alternatives? The program that our frugal systems manager here at Future Publishing swears by is *Biplane* (MACFORMAT cover disk 3). All the editors here use this to compile monthly contributors sheets, detailing who's owed what.

The program has everything you need to perform calculations on data, such as what-if computations, or simply for the systematic storage of data. It includes all of those handy formulas like percentages, sums, divisions and the less handy (but no doubt useful to someone) mathematical equations such as sine, tangent and the like. It can cut and paste text and numbers in exactly the same way as you would text in a word processor, enabling you to shift blocks around. Version 2.0 comes complete with different formatting for numbers, currency and date, plus variable width columns.

If you'd like to interpret all of that numerical data into a graphical format then you simply highlight the appropriate figures and click on the chart function. I would say that it's well worth taking the trouble to register this program if you use it a lot, because it prints the words '*Biplane* Shareware' at the top of every sheet until you do so.

Alternatively: the only other real alternative is *Mariner* (which was on MACFORMAT cover disk 8). This is similar to *Biplane* but lacks its slick feel. It has a command bar, multiple undo levels, background recalculation, variable cell height, width and text font sizes and over 60 built-in functions. However, if you really can't get your head around any of this spreadsheet business then I can recommend the number juggler which my father swears by, namely the standard desktop calculator and a bit of paper – it's not quite as clever, admittedly, but it is certainly less involved.

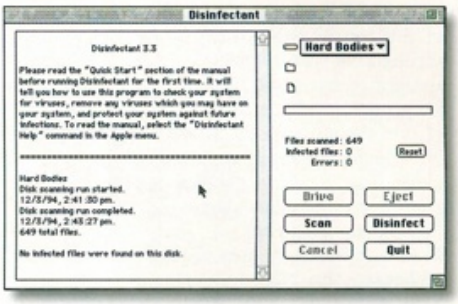


Rationalise your assets, justify your debts, work out just how much money the tax man will take off you this year. All thanks to *Biplane*. Anyone for a protected cell?

Essential system utilities

As good as the Mac is, there are still niggling features which get up users' noses – I know one particularly sour person who hated the 'smiley' Mac which greets you every time you switch the computer on. Fortunately, for every niggle, there's a cheap solution...

■ The clunkiest aspect of the Mac System just has to be the **Find** function. I mean, what could be less Mac-like than having to keep typing a command – and a *different* one at that – to find more instances of the same thing? A great alternative is *Find Stuff*, which can search not only by name but by date (of creation or of modification), label or even creator, so you can find all the Microsoft *Word* documents you created in the last month, and they're all listed so you can see where they are or go to one. It's fast, it works, and it was on MACFORMAT cover disk 11. What more can you ask?



Don't fall foul of a virulent virus. Install *Disinfectant* on your hard drive and watch it do battle with the pestilent little blighters. Updates appear regularly on the MACFORMAT disk.

■ Once upon a time you could wander down to the shops and leave your front door open, knowing that your worldly goods would be safe. Times have changed though and if you leave your front door open these days, then you're likely to find a crack factory in your kitchen by the time you get back from the out-of-town Tesco's hypermarket. Once upon a time, you could leave your Mac to its own devices, knowing that your worldly data would be safe. But, again, times have changed, and by the time you've transferred some data on to your Mac from an unchecked source you're likely to find a nasty virus breeding within your System Folder.

The answer to this problem is *Disinfectant* (currently version 3.3), which was on cover disk 10. This quite simply locks out all of those nasty viruses by interrogating every piece of software which you transfer onto your Mac. It has even been known to stop drug barons from setting up in your kitchen. If you haven't got *Disinfectant* installed on your Mac then you're either very silly or a virus programmer.

■ Ever get annoyed with having to call up the entire Control Panel folder every time you want to look at *Key Caps*? You need *BeHierarchic* (MACFORMAT cover disk 3). This adds handy

Find Stuff, which has got to win some sort of prize for the accuracy of its name. It finds stuff – more stuff than the desktop's standard **Find** command, and with more options...

With *BeHierarchic* you can build snazzy drop-down menus into the Apple menu bar. Put an end to endless wading through folders.

drop-down menus to the Apple menu bar. All of this means that instead of having to wade through the control panels folder you can go straight to the utility you want. It's also great for grouping serious software, games and aliases into their own folders. We also recommend the *Apollo* program launcher, which was on cover disk 10. This enables you to run programs and their associated files straight from the desktop menu bar.

■ As a PowerBook user I'd like to recommend *MyBattery*. This nifty desk accessory (shareware $10) will display a gas gauge style indicator of how much battery juice you've got left. It'll also work out how much battery time you've got left and (after registration) will calibrate itself to your particular PowerBook battery.

Any PowerBook user who's run out of battery juice at a crucial moment will immediately understand the value of this accurate battery indicator.

■ One of the Mac's most valuable qualities is that it can help even the most scatterbrained of people get a bit more organised. Programs such as *Address Book* (cover disk 4) help this process no end. This utility sits in your Apple menu items folder and enables you to store reams of contact details. These are stored in alphabetical order and can be either browsed through or searched for. Personally speaking, though, I prefer *QuickDex II*, which costs £35 and does the job about a million times quicker and will even dial the phone for you.

Comms

If you've fancied making a foray into the world of telecommunications but have worried about the cost, then step into my office. The price of modems has been dropping steadily over the last four years and it's now possible to get a Mac compatible 9600 baud modem (realistically speaking, that's as fast as you need) for under £300.

Don't bother buying one of the commercial communications packages for your Mac, though, because the best are shareware. My own personal favourite is the gloriously well designed *Telefinder*. This was actually designed to be used with specific bulletin boards, but it's so slick that I use it for all my comms work.

The program uses custom icons to access an address book, the file transfer section, the terminal portion and the mail section. It comes complete with Z- and X-modem file transfer protocols (Z-modem's much quicker, but not as widespread) and should you log on to a computer using the same system, file transfer's as simple as dragging an icon to your hard drive. It also includes a script facility which can completely automate the entire logging-on process.

Alternatively: while I personally favour *Telefinder*, thousands of Macintosh modem users swear by *Zterm*. This isn't a terribly elegant program, but it's open-ended and just as at home on bulletin boards (home grown systems) as on the large commercial networks like CompuServe or CIX. It supports X, Y and Z protocols as well as network specifics like CompuServe's format. It has a built-in address book and a very comprehensive set-up section which enables you to configure the program perfectly to your particular modem and system. It requires a fair bit of typing of commands, but it does support scripting. It's probably better suited to the more experienced comms user.

Discover the mysteries of the telecommunications world with the wonderfully designed *Telefinder*. User-friendly is an understatement.

Technical widgets

If your technical knowledge of the Mac extends as far as cleaning the mouse's roller ball once a year and you're happy that way, then skip to the next heading. If, however, you enjoy (erm) 'tinkering' with your Mac's inner workings then read on, Mr/Mrs Technohead.

Performance: if you want to know how efficient your Mac is, there's only one program: the aptly named *Speedometer*. This measures a bizarre number of system parameters, most of which are complete gobbledygook to me, but it's dead handy for impressing people with. If you've got a desperate desire to know how many Whetstones your computer's capable of, then buy today.

The much simpler alternative is *TattleTale*, which lists all your Mac's attributes on both the software and the hardware side.

Editors: *ResEdit*, which was on last month's cover disk, has remained just about the most popular technical utility available for the Mac. With this nifty program you can change all your system's icons, have a peek at all the hidden secrets of the desktop or pinch sampled sounds from within programs. It should come with a 'Handle with care' sticker on it.

■ Keep an eye out for *FileTyper* (MACFORMAT

Most of what it's on about is frankly a complete mystery to me, but the performance checking *Speedometer's* great for impressing friends with.

Poach sounds from other programs, fiddle about with icons, win friends and influence people. All with the mystical *ResEdit*. Or, of course, screw everything up *spectacularly*...

HYPERCARD

Apple's nifty database has been used for a bizarre number of applications over the years – it's flexible enough to be used as a simple database, as a learning tool or as the engine for a game. Over the years hundreds of different 'stacks' have been released into the public domain. Some of the more popular ones are:

■ *Shakespeare 1*: four of that writer chap's plays.

■ HG Wells' *The Time Machine and War of the Worlds*, by that other writer chap.

■ *Mozart Catalogue*: fully comprehensive stack of the complete works of that composer chap's music along with their appropriate Köchel numbers.

■ *JFK Assassination*: did the grassy knoll really do it? Find out within this stack about that president chap.

■ *Telescopes:* a very readable introduction to astronomy.

■ *Wedding Planner*. Oh dear.

■ *Story Boarder*: designed for use in the video, film and advertising industries to create storyboard frames, the comic-strip style outlines that set out the sequences to be filmed.

■ *Laura's Letters*: designed to teach children basic maths and their alphabet. Comes complete with an encouraging voice – which scared the willies out of my four year old cousin.

The easy-to-use *Disk Dup+* enables you to make back-ups of all your vitally-important master disks. Don't have the time for that sort of thing? If you've ever lost a 2,000 word feature then you'll understand why it exists. He grins painfully.

cover disk 7), which does pretty much the same thing as *ResEdit*, but not as elegantly.

■ *File Buddy* (cover disk 7) is a celebrated program which will track down all those redundant files which live in your System Folder plotting a revolution. Well worth getting hold of, if only for the sake your System Folder's sanity.

File Utilities: if you'd like to create a backup of your program masterdisks, then the one and only utility worth using is *Disk Dup+ v2.1*, which will happily copy practically any disk with considerable ease.

■ We've all run out of hard drive space before – and that's the reason that *Compact Pro* (on cover disk 3) is in everyone's utility folder. If you want to back-up your hard drive or simply squash some data down to a manageable size then it's the tool you should invest in. It's extremely efficient, very slick and more popular than Take That.

■ Ever spent a few hours trying to get your Mac to recognise an external hard drive? You need the rather oddly named *SCSI Probe*, a program which forces your Mac to mount any SCSI devices (hard drives, removable cartridges and the like) that you've got plugged in. Simple, small and more useful than a bulldozer in a full NCP car park.

Games

Phew, enough seriousness, it's time to have a bit of fun. There are hundreds of shareware and public domain games available, so I've decided to concentrate on two of the best: *Maelstrom* (MACFORMAT cover disk 8) and *Cyclone*.

Maelstrom is a superb shoot-'em-up based on the aged arcade game *Asteroids*. The idea of the game is to blow the hell out of the floating space debris, while picking up the bonuses and power-ups which drift by. The game is programmed with a superb inertia system which makes zipping around the screen both incredibly fun and massively infuriating. The power-ups always seem to lure you into the path of a Titan-sized hunk of rock. With its beautiful rendered graphics and addictive gameplay, this one comes highly recommended.

Cyclone is also based on an old arcade game, one called *Star Gate*. The idea is quite simple – simply blow up a laser cannon stationed in the middle of the screen. This cannon is protected by three power shields which you can shoot through – should you completely destroy one of the shields, a new one will appear, so it's best to zap a gap and shoot through that. Like all the best game ideas, this is a very simple concept which works so well that I lost a whole weekend to the dratted game. Play it at your own peril.

Cyclone is an addictive arcade game which – what? It doesn't look like much? That's because this is the Ed playing, and he is *hopeless*...

Frivolous fun utils

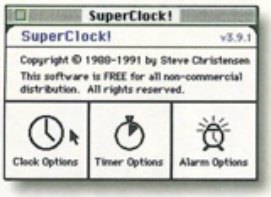
These are my favourite daft Mac utils:

■ *MacEyes*: a pair of eyes which follow the pointer around the screen as you use the mouse. Leave the Mac alone for a while and it'll start to nod off to sleep. Be warned though, it slows down the processor something rotten.

■ *The Grouch* (cover disk 6): gasp in amazement as Oscar from *Sesame Street* eats your trash from the desktop.

■ *Superclock*: Well, alright. It's not *very* frivolous to have a digital clock display in your menu bar which changes to a date display or a stopwatch when you click on it. But it's not exactly an indispensable productivity-enhancing essential, now is it? Give me a break.

■ *Reagan's Watching*: the stupidest American president ever (and that's saying something) captured forever to glare over you and mutter things like "I don't recall", "I don't remember" and "Oh dear, I cannot remember any such meeting." Fun for five minutes.



It's a timekeeper, it sits on the right-hand side of the menu bar and it wears its pants over the top of its trousers – it's *Superclock*.

Convinced yet?

As you can see, there's an enormous amount of high quality software, both serious and fun, at minimal cost. You could buy every one of the programs that I have recommended here and still have change from £250. For that you get fully kitted out with a graphics package and graphics enhancer, a word processor, a spreadsheet, essential utilities, a comms package, some great games and some fun Extensions – think how much you could do with all that! A similar suite of commercial programs would set you back ten times as much, and you wouldn't necessarily get anything more useful for your own particular needs. *Andy Hutchinson*

Where to get these programs

If these programs interest you, you can get some of them on the BMUG PD CD-ROM, which is available through the mail order pages of MACFORMAT (see page 63 this issue), by downloading them from a computer network or Bulletin Board Service (BBS), or through any of the shareware advertisers in this magazine. Here are a few addresses to check out:

■ Dinach Shareware, PO Box 1076, Glasgow, G3 6LD

■ Kingsway Computers, Mac Dept, 72 Glencoe Road, Sheffield, S2 2SR, Tel: 0742 750623

■ TomA Direct, 16 Connaught Street, Marble Arch, London, W2 2AF

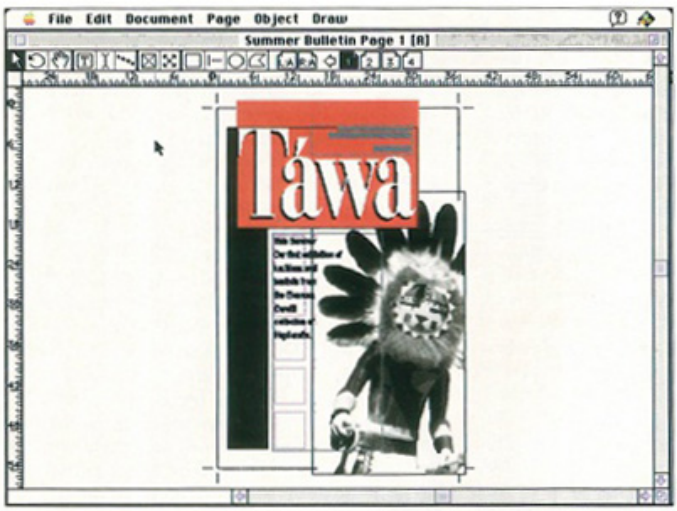
■ Premium PD, Dept F, PO Box 14, Ravenshead, Notts, NG15 9DR.

(Please note however that MACFORMAT does not endorse or recommend any particular shareware library. For some helpful advice about buying by mail, see page 100.)

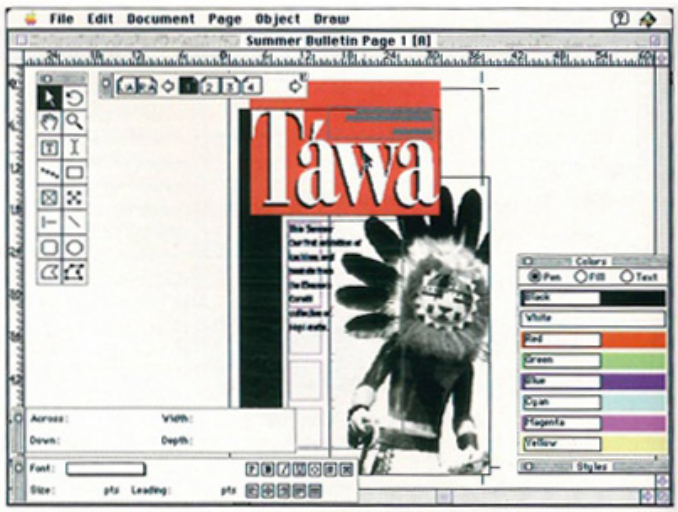
Remember that many of the programs mentioned have been featured on previous MACFORMAT cover disks. (To order back issues, see page 94.) Every month, we scour the electronic highways to find the best, most useful, most interesting new shareware and bring it to you lovingly wrapped in a fine magazine (or something like that) – from the indispensable (the latest version of *Disinfectant*) to the indescribable (*Kingyo*), from exclusive demos of the latest games to powerful utilities that can make using the Finder easier, improve your productivity or save your work from crashes. To make sure of your copy every month, place an order with your newsagent, or see page 66.

PAYING FOR IT

Unfortunately, the vast majority of shareware originates in the United States. Even worse, many of the programmers don't accept plastic. Therefore the best way to pay is by International Money Orders. You can get these at any high street bank and they can be cashed at any bank. Do make sure you have the cheque made out for the currency of the country you're sending it to. You'll find out how much the program costs either from a registration document in the program's folder, on the title screen or by selecting About... in the Apple menu. For more on sending shareware payments to the US, see page 20.



If you set *Ready, Set, Go's* general preferences to 'Use Classic interface', the basic tools and the page navigator appear in a bar between the menu bar and the horizontal ruler. The package's tutorial, of which the first page is on view, uses this interface.



Even in the middle of working on a document (here the tutorial again), you can turn off the Classic interface. This removes the tool bar, but makes a number of palettes available from within the **Document** menu – all of them are opened here.

Ready, Set, *Go!*

If you're after a DTP package that's packed with features and is reasonably priced, this could be the program you've been waiting for...

Does the name *Ready, Set, Go!* ring a bell? At the turn of the decade, it was the resident DTP package in the Letraset stable, but during 1990 it was rapidly overshadowed by the arrival of a bigger brother in the shape of *DesignStudio*. Now *RSG* seems to be getting its own back: according to Letraset, "*Ready, Set, Go! 6*... replaces versions of *DesignStudio* in the UK." If that sounds rather as if a product merger has taken place, it looks that way too.

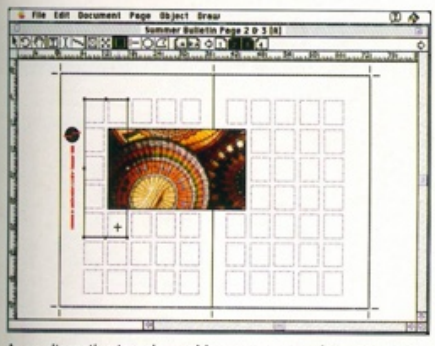
Fire the new package up and the first thing you see is a familiar user interface with a selection of tools arranged in a bar between the top ruler and the menus – this is what is called the 'Classic interface' in *Ready, Set, Go! 6*. As well as fixed items, the Classic interface toolbar has a pair of items at the right-hand end which offer drop-down menus of five graphics tools. As far as I can recall, this was originally implemented because you couldn't fit all of the tools across the width of a Mac Plus or SE's built-in screen. The icons showing in these two slots are of whichever tools you last selected.

Unusually, *Ready, Set, Go! 6* offers a choice of interfaces. Turn off the **Classic** option, and a floating palette of tools appears instead, while several other palettes also become available via the **Document** menu. Using a check box in **General Preferences**, you can toggle between these options even while working within one document. In fact, the floating tool palette offers one more tool than appears in the tool bar (a magnifying glass), although you would never know this from the manual, which is almost entirely based on the Classic interface.

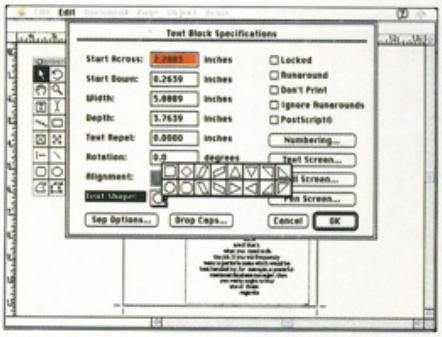
Equally unusual is the fact that the program offers a choice of layout aids. You can either drag in guidelines from the horizontal and vertical rulers – standard with most DTP packages these days – or instead opt to use a grid system where the page is split into a user-selected number of boxes with specified gutters between them. Because you can decide how many boxes high as well as wide you want the page to be, this has much more potential than simple column guides. Best of all, you can swap between these aids (though not use both at once) in the course of designing a page, which provides all the flexibility you could wish for if you wanted

Key features

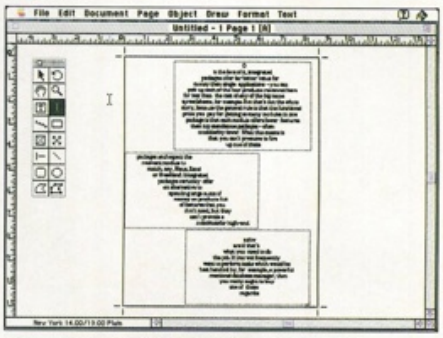
- 16 text and picture block shapes
- Automated split fractions
- Automated split prices
- Automated drop capitals
- Adjustable tracking/letter spacing
- Manual pair kerning controls
- Edit (or create) kerning tables
- Kern/track to 0.001 em
- Word spacing controls
- Type sizes 1 to 327 points in 0.01 point increments
- Leading in 0.01 point increments
- Horizontal scaling
- Justification and raggedness controls
- Hyphenation controls
- Scale text to fit block
- Scale block to fit text
- Scale graphic to fit block
- Scale block to fit graphic
- Fill patterns palette
- Pen patterns palette



As an alternative to using guides, you can work to a custom grid, as seen here. To draw the rectangle overlapping the photo, just drag a rough shape between the top left and row 5 column 2 rectangles, and it snaps to the grid.



A Shape button in the **Specifications** dialogue pops up this palette of 16 possible text box shapes including rhombus, rectangle, oval, diamond and circle. The same selection is also available for picture boxes.



Here's what happens when text is poured into three apparently rectangular text blocks which have been reshaped. They're all chained, by the way – you can flow text between blocks of any shape.

to work with any kind of complex gridding.

As you would hope, *Ready, Set, Go!* works with both TrueType and PostScript fonts, and type controls come close to meriting the description 'comprehensive'. Indeed, many of the controls boast adjustment increments which will have to remain in the realms of the theoretical for most of us – how can you adjust something by one 10,000th of an inch even on a 1,270dpi imagesetter, let alone a StyleWriter? One point worth noting is that tracking/letter spacing is specified in ems (which are relative) and not fixed units, so if you resize tracked text, the tracking adjusts proportionally. For more details on type controls, see the boxout about key features on page 32.

Unlike *Ready, Set, Go!* 5, version 6 supports XTND, and so can import text via any XTND translators already installed. To cover for some of the more common import requirements, it comes supplied with a single 'compiled' translator which handles ASCII, DCA-RFT, RTF, *Write Now, Excel* (Mac and *Windows*) and both *Word* and *WordPerfect* in Mac, DOS and *Windows* varieties. On import, text is automatically filtered for double spaces, smart quotes and double hyphens (which become em dashes).

Matters of input

As you would expect, text can also be input directly to *Ready, Set, Go!* using standard enter, cut, copy and paste procedures, and text which will be used repeatedly may be stored in text glossaries, keeping the clipboard free for on-the-hoof usage. (Graphics may also be stored in glossaries, so they're the equivalent to what some packages call libraries. They're attached to particular documents, but you can import items from another document's glossary).

Authoring tools include a spelling checker with user dictionary, a word and character counter, and a find and replace function which will search for anything up to 255 characters typed into the dialogue, or unlimited lengths pasted in from the clipboard. Searches can also be performed for format or even stylesheet.

Text boxes are implemented in an unusual manner which *DesignStudio* users will again find familiar. As well as normal rectangular boxes, you can choose from another 15 shapes from a specifications pop-up. These shape boxes appear, when empty, to be standard rectangular items, but when text is entered, it fills only a circular (or triangular, or parallelogram) shape within the frame. A similar shape feature also applies to picture boxes.

Graphics file formats now supported by *Ready, Set, Go!* are *MacPaint*, PICT, EPSF, RIFF (Letraset's own *ImageStudio* and *ColorStudio* format) and TIFF. Although colour images can only be edited for size and crop, the package does include basic greymap editing for fine tuning RIFFs and TIFFs at up to 128 shades of grey – you can edit the map curve directly, use brightness and contrast sliders, posterise, solarise and make negatives. *QuickTime* (Apple's standard for video playback) is also supported.

Picture blocks (in any of the 16 shapes) may

AUTOMATE YOUR DTP WITH READYSCRIPT

In the same way that Quark and Aldus use Xtensions and Additions respectively to bolt on additional functions to their packages, *Ready, Set, Go!* features an Annex Folder for the use of enhancement software.

One potentially very useful Annex (which is supplied) is called ReadyScript – a command language that enables users to automate the creation of *Ready, Set, Go!* documents, and suggested uses for it are database publishing, report generation and mail merge. Although the Annex is required for running a script, the scripts themselves are simply ASCII files which may be created in any word processor which will save as plain text, or else generated via suitable software such as *HyperCard* (though you'll have to write the script yourself).

Not all of the material which is to be included in the finished *Ready, Set, Go!* document needs to appear in the script file itself, as there are ReadyScript commands that will import and place text files (or ASCII-saved data from database or spreadsheet files) and graphics.

Scripts are written as a series of statements which consist of commands, arguments and argument values. Between them all, these cover many of the basic *Ready, Set, Go!* functions such as page setup, preferences, drawing and filling text and picture boxes, setting colours and fills, typography control and drawing lines and rectangles – other shapes are only available for text and picture blocks.

Take this example statement (it is entered all as one line):

{TEXTBLOCK=1, 2, 13, 5.2, 0, 0, :<FT1><BO><PS66><LS74><AC>MacFormat<RET>script test}

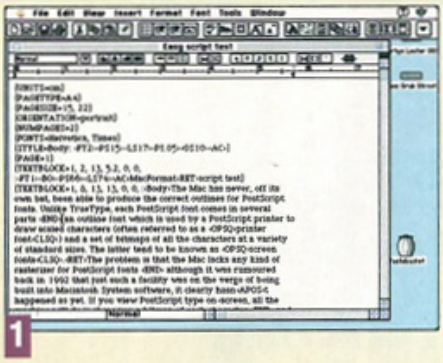
This creates a text box with its top left corner 1cm (if centimetres are the units we've specified) in from the left and 2cm down from the top of the page. The box is 13cm wide, 5.2cm deep, angled at zero degrees (ie is horizontal), and is rectangular. In this box appear the words 'MacFormat script test' split after the first word to make two decks. The type is in the first font specified in a list which has been typed in a previous statement (say Helvetica) in bold style, set at 66 on 74 points and centre aligned.

As well as those used in the example statement, there are typographical arguments available for controlling paragraph spacing, indents (paragraph, left and right), baseline shift, kerning, tracking, word and letter spacing, hyphenation and tabulation.

Does it work? Well, I've given it a shot, and I can certainly make basic designs turn out all right (see walkthrough on page 34), but as soon as I try the same thing with the body text running in two linked columns, it all falls over. I have now spent about four hours working at nothing but trying to get the text boxes to link, and I've been following the manual like tramlines – everything works right up to the point when I add the linking argument (which is simply the character 'a'), and then splat!

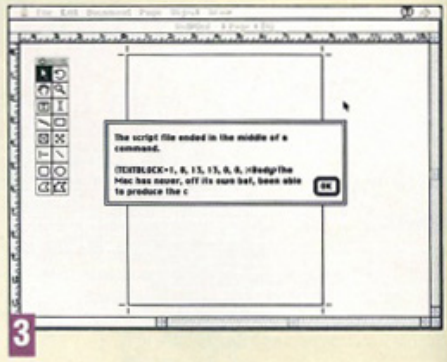
It's probably a fair assumption that I'm doing something wrong (I wouldn't normally even attempt to program a video recorder), but having found several proofing errors in the ReadyScript appendix (such as references to tables that aren't there), I'm finding it difficult to be confident in the documentation. Time for a call to Letraset technical support, I think...

WRITING A READYSCRIPT SCRIPT



1

2



3

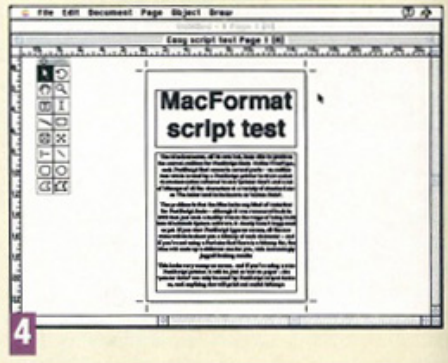
A ReadyScript script can be prepared in any word processor, but must be saved as an ASCII (plain text) file. The simple script example shown in screengrab 1 (this was done in Microsoft *Word* version 5) is designed to draw and fill two text boxes.

The first box is to carry a headline styled in accordance with one-off type specifications entered in the same statement – see the box on page 33 for an explanation of this statement – while the second block is to treat its text according to a sheet style ('Body') which has been specified in a statement earlier in the script.

The <END> that you can see at the current cursor point in the script is not what it might seem – it is specifying that an en-dash should be placed at this point in the text. Items in the body copy which appear between < and > signs represent special characters or punctuation marks such as the colon and curly brackets (: { and }) which have functions in ReadyScript itself.

Once a script has been saved, it can be activated at any time from within *Ready, Set, Go!* by selecting **Open Script** from the **Annexes** sub-menu (see screengrab 2). If the script is non-executable for any reason, *Ready, Set, Go!* will report with one of seven error messages. The one shown in screengrab 3 is very easy to cure – it just means that I have forgotten to put a } at the end of the body copy, and so the statement is incomplete – but messages such as 'There is an error in the arguments which follow a command' can be an awful lot harder to solve.

If you've got it all right, *Ready, Set, Go!* will open a new document and quickly build your design for you – screengrab 4 shows my completed script as implemented, and it's just what I intended!



4

be filled with linear or circular gradients rather than imported pictures. Although gradients may not be applied to other graphics boxes, such as those created with the circle or polygon tools, these can be filled from a palette of 40 patterns (plus solid and 'none') using any defined colour. A similar option also applies to lines, which goes a long way to answering one of my perennial bugbears: if DTP software can do everything I used to do with a scalpel, where are the patterned lines then?

The great leap forward

I suppose the big leap forward in this version of *Ready, Set, Go!* is its ability to handle process colours as well as spot. The package will now separate any of the graphics formats that can be imported into it, including EPSF, RGB and CMYK TIFF, 72dpi PICT2 and RGB RIFF. Knockouts, trapping (both choke and spread) and Pantone colours are all supported.

Ready, Set, Go! can output to printers from QuickDraw devices right through to imagesetters. Your main problem, if you want to output through a bureau's imagesetter rather than one of your own, is going to lie in finding a bureau that has a copy of *Ready, Set, Go!* – it's not one of the best supported programs on the market in this respect. As a standby, the package will allow you to save pages as EPSFs or to turn the document into a PostScript file – an Annex will strip font information from such a file if required. Neither of these routes is ideal (for one thing, you can't ask the bureau to make corrections to the document), but either will serve at a pinch.

This package has so many features that we couldn't hope to cover them all, but here are a few noteworthy ones:

- As well as being able to rotate any object in increments of 0.1 degrees, you can rotate one or more objects around a specified point on the page, or rotate two or more objects around their common centre.
- If you create several similar objects in succession (draw three columns for text, for example), they all remain selected so that you can apply the same specifications to all of them at once.
- It is possible to select text and then, instead of copying and pasting the text itself, to copy its type specifications and apply these to other selected text.
- Tabulation controls include a 'wrap' measure, whereby copy which is too long to fit on one line in the table turns and continues at the correct tab point, effectively making a short column of text, with the next string of tabulation resuming at the start of the next line following the end of the column.

Documentation is generally reasonable – the tutorial is particularly clear – but seems to lag behind the software. For example, some dialogue items have changed since the manual was written (corrections appear in the release notes), and the floating palette interface is never used in illustrations, which brings about the rather odd situation that the extra tool (the magnifying glass) isn't mentioned in the manual at all, and its use is only explained in a New Features file intended to bring version 5 users up to date.

There are also errors in the documentation, including some in what is effectively a programming section (see ReadyScript boxout on page 33), which is a very worrying place to find them. For what it's worth, Manhattan Graphics really ought to produce a revised edition of the manual (which is otherwise very well written) as a matter of priority.

Enough of the carping. The big question has to be the price – and at £249 it strikes me as very reasonable. *Ready, Set, Go!* now offers many (but not all) of the features found in the 'big two', plus a few that aren't, and at around half the price. Although it's only the current market that matters, it's historically interesting to note that *DesignStudio 1.0* came tagged at almost £600, and this package is certainly an upgrade on that one. Speaking of which, perhaps the most interesting figure for existing *Ready, Set, Go!* and *DesignStudio* users is that they can upgrade to *Ready, Set, Go!* 6 for just £89. Sounds good to me.

Martyn Lester

READY, SET, GO!

Ready, Set, Go! 6.0.2 costs £249 from Letraset on 071 928 3411. It requires System 6.0.7 or later.

Ease of use Quirky but effective interfaces.	85%
Documentation Well written, but needs updating.	75%
Features Many high-end capabilities.	90%
Value for money Very good price for these features.	95%
MACFORMAT RATING	85%

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Smart storage solutions

What are your options when you need more disk space? Andy Storer and Clive Parker test the hardware – external hard drives, removables and optical drives.

Sooner or later you're going to have to buy extra storage. The reason's straightforward enough: it's not just because you're continually amassing more and more documents on a day by day basis, it's also because the applications you're using to create them seem to grow in size, at an exponential rate, too. A professional package like Aldus *PageMaker 5* easily takes up 16Mb by itself, and that's before you start to deal with layout documents, which may contain several images each of a further couple of megabytes. Video and audio work is just as demanding – a mere second of full-motion *QuickTime* can easily take up 10Mb. And it's the same for any design work, whether it involves 3D modelling or laying out artwork for colour separation.

But it's not just high-end applications, handling 24-bit colour, CD-quality audio, 30 frames a second movie clips and CMYK files, which cause the hard disk equivalent of gridlock. Even if you're a small business or home user generating letters, accounts and databases, you'll soon come to the conclusion that 40 or 80Mb storage just doesn't suffice any longer. An immediate solution may be to use compression software like *Compact Pro* or *StuffIt* to archive old data, or double the size of your internal hard disk by purchasing *Stacker* – and indeed we'll examine these options next issue. But even these measures, relatively cheap as they are, only provide a temporary respite. What's really needed is a hardware solution.

There are three main storage technologies available to Mac owners – removable cartridge, optical and fixed hard drive devices – and prices vary accordingly. We haven't set out to provide a definitive guide to the best model in each category in the space of these few pages; instead we've looked at the advantages and disadvantages of choosing one or another and provided a couple of typical examples of each. With this information to hand, you should be in a position to decide which type of storage solution best suits your particular needs.

So what are the first steps in arriving at a decision? The first question to ask yourself is what you expect to gain from buying extra storage. Here, factors like the need for greater portability, capacity and performance will come to bear. And, as per usual, they'll all be modified by cost considerations – differences in their relative merits could lead to you paying anything from £200 to £10,000 for a solution that does what you need. But in broad terms, specifications and prices tend to break down into the bands outlined in the table below:

Capacity Range in Mb	
Removable drives	44 – 270
Optical drives	128 – 650
Fixed hard drives	40 – 2,000+

Price range	
Removable drives	£210 – £470
Optical drives	£780 – £3,200
Fixed hard drives	£170 – £3,000+

However critical the size of your budget, cost alone shouldn't determine the type of drive under consideration. For instance, if you're after a long-term storage solution, then your best bet will be to look at removable or optical drives, where you can buy extra cartridges or disks as your storage needs increase. And while the initial costs of an optical are significantly greater than a comparable removable, the price of the media is substantially less. Then again, removable drives are more widely used than opticals, so if you intend to send cartridges to print bureaux, you'll have a wider choice of outlets than if you copied your documents to optical disk. On the other side of the coin, both removables and opticals are significantly slower than fixed hard drives. So it all depends on your needs.

But your decision should also take into account your anticipated future needs. This may be another reason why you should choose to go for an upgradable storage system, but even then, depending on your current needs, it might be best to buy a fixed hard drive first and an optical or removable later. So while it would be impossible for us to recommend the perfect storage system for your exact profile, we can at least provide some signposts.

Removable drives

If your budget stretches to just a couple of hundred pounds, you might like to consider buying one of SyQuest's removable drives. You can get a 44Mb drive for only £229 and the cartridge to go with it for a further £57. You can always use *Stacker* on these to double their capacity. This is a software-only solution which we've been using on MACFORMAT for a good six months without any problems. 88Mb, 105Mb and 270Mb removable drives can also be purchased for varying prices, but SyQuest's 105Mb drive would seem to be a good option at £247, with cartridges for £52.

SyQuest has recently slashed prices on its removable drives quite dramatically, so we have taken the opportunity to look at two of the company's drives: the 88Mb SQ5110C and the 105Mb SQ3105S.

Both are internal SCSI drives, which means they leave your Mac's SCSI port free. Installation for both is identical. First of all, you need to check that the SCSI ID on the back of the unit is set to a number which your system isn't already using. In a nutshell, unless you are using another SCSI device like a CD-ROM drive, you should set it to any number other than 0, which is the number automatically assigned to your Mac's existing internal SCSI

HOW DO REMOVABLE DRIVES WORK?

The SyQuest SQ555, a removable 44Mb drive, has sold more than one million units and is the world standard for the desktop publishing industry. Over six million cartridges have been sold. While it's a simple job of just slotting these into the unit to get up and running, the technology remains transparent. So how on earth do they work? The drives reviewed here use exactly the same technology as that found in fixed hard disk drives (see page 39). The only difference is that since the cartridge is removable, it needs to be protected from contaminants in the air. Once the cartridge is inserted into the drive, a gasket within the drive surrounds the cart and creates a clean room environment within it. Then, prior to the read/write heads entering the cartridge, a purge cycle is initiated. This spins the disk at 3,600 rpm – that's an equivalent surface speed of 38 mph – and the resulting air flow is controlled to eliminate any dust particles. The read/write heads enter and are positioned a mere five millionths of an inch above the surface of the disk. Reading and writing of the cartridge then takes place in exactly the same way as in a fixed hard drive.

SYQUEST SQ5110C

This is a 'traditional' 88Mb SyQuest which uses the familiar 5.25-inch removable cartridges that have been around since the first SyQuest drives appeared.

It's an internal drive, so you'll need to know how to change the jumpers to set the drive ID; otherwise it may clash with your internal hard drive. It's not a difficult job to set the jumpers because the pins are clearly marked on the back of the drive. A very clear diagram in the manual leaves you in no doubt which pin is which.

If you are fortunate enough to have a drive bay free inside your Mac, then installing the drive is a relatively simple task. There's a spare SCSI connection on your existing hard drive cable that just plugs into the long 50-pin socket on the back of the drive. There's also a spare power connection in your Mac for adding extra drives. Remember to remove the terminator packs from the drive when installing it between your Mac's motherboard and hard drive.

Apart from a pair of SyQuest 88Mb cartridges and a small – but informative – user manual, the SyQuest drive comes with the bare minimum amount of kit to install it inside your Mac. You are left to rely on your own hard drive software when it comes to formatting a cartridge, as nothing is supplied with the drive itself.

As with all SyQuest drives, the SyQuest SQ511OC is so easy to use that you don't even realise you are availing yourself of removable technology. The drive itself is a little bit noisy when loading or ejecting a cartridge, but it's normally quiet and efficient at all other times.

SYQUEST SQ3105S

If you're familiar with standard SyQuest 5.25-inch removable cartridges then you'll probably be surprised to see the new 3.5-inch cartridges used by the latest generation of SyQuest drives.

The new SQ3105S drive is no bigger than the standard half height SuperDrives installed in your Mac – it really is that tiny.

The cartridge is built to the same compact scale, which works out to be about the same basic dimensions as a standard floppy disk but rather thicker. Just imagine four floppy disks stacked on top of each other and you'll get the general idea. On top of all this, the folks at SyQuest have increased the storage capacity of the cartridge while reducing the physical dimensions of the medium – the 3.5-inch removable cartridges have a storage capacity of 105Mb.

Installing the 3.5-inch SyQuest drive inside your Mac is as simple as fitting its larger 5.25-inch cousin. Just mount the drive in a spare bay and connect the power and data cables, not forgetting to remove the SCSI termination resistors if the drive is not at the end of the chain. Setting the SCSI ID isn't quite as simple as it is on the 5.25-inch drive – while the diagrams of the jumper connections in the manual are quite clear, the actual pins on the drive aren't marked. This means you have to take a guess at the orientation of the drive when you decide which pins to use for the jumpers.

Once you have formatted a cartridge you can use it in exactly the same way as a standard hard drive. The SQ3105S is not quite as fast as a fixed hard drive but it's quick enough not to be too noticeable in use.

SyQuest removable drives are probably the most economical way to add removable storage technology to your system; this 3.5-inch drive is a great asset to any Mac setup and should be seriously considered if you are thinking of using removable media.

drive. If you do have another SCSI device hooked up, you just need to check its ID and set the removable's number to a different one on powering up either of the units.

Price per Megabyte

Removable drives become more cost-effective the more cartridges you buy.

The start-up costs for the 88Mb SQ5110C are £264 for the drive and £85 for the cartridge. This represents an initial outlay of £3.97 per Megabyte. A second cartridge would bring this down to £2.47, while a third would cost the equivalent of £1.96 per Megabyte.

To get the SQ3105S up and running will cost you £247 plus £52 for the 105Mb cart. This works out at £2.84 per Megabyte. But when you buy another cart you're then looking at a running cost of only £1.67 per Meg; a third and it's £1.28.

With the 270Mb SQ3270 – due for release this April – your start up costs would be approximately £564 for the drive and under £100 for the cartridge.

Pros and Cons

Advantages

- Low outlay costs
- Infinite storage capacity
- System transportability
- Great for backups
- Low upgrade costs

Disadvantages

- Slower access times than fixed drives
- Slower data transfer rates

WHAT TO LOOK FOR

- Go for a 3.5-inch drive if possible – these are faster than the old 5.25-inch.
- Look for one which 'mounts' automatically (its icon appears on the desktop.)
- Aim to buy a set-up with supplied software which includes RAM caching utilities – these speed up access times.

Where to get it

The SyQuest SQ5110C (£264), the SQ3105S (£247) and the SQ3270 (due for release in April at about £564) are available from Eurobase on 0264 362266.

Optical drives

First, let's dispel the myth that optical drives are far too expensive for the home user. Rewritable optical drives incur relatively high start-up costs – you can count on spending a minimum of £800 for a decent 128Mb optical device – but in the long run they tend to work out cheaper than either removables or fixed hard drives because the 128Mb blank disks they use can be bought for around £40.

How does it work?

Most erasable optical drives are based on magneto-optical mechanisms in which a high-power diode laser heats up a spot on the disk platter. This laser can focus on a spot as small as one micron in size – that's one millionth of a metre. When the metal oxides in that spot are hot, their magnetic orientation can be altered – and a magnet can determine each spot's 0 or 1 orientation.

Once cooled, the data can't be altered until heated again. Other drive mechanisms use a slightly different technology which heats a spot to change its structure, making it either crystalline or amorphous. This difference in reflectivity can then be read as 0 or 1.

Price per Megabyte

Like removables, optical drives also become more cost-effective as you buy more cartridges. The devices we look at here – the PowerUser 3.5-inch, the ADP Strategy 2128SR and the Fujitsu M2511A cost £905, £1,522 and £1,052 respectively – but optical drives can be picked up for as little as £700. If we take a midway point as an average – say £900 as a typical price for a drive and £40 as a typical disk cost – the initial price per megabyte works out to be £7.35. But the purchase of a second disk brings

WHAT TO LOOK FOR

- Go for a 3.5-inch drive if possible – as with removables, these are faster.
- Look for a unit which 'mounts' automatically on the desktop.
- Try to buy a drive which allows you to turn off Write Verify – this'll speed up operations.
- Finally look for supplied software which includes RAM caching utilities.

POWERUSER PRO

If you want a small, tidy-looking box next to your Mac, then you could do worse than take a look at the PowerUser Pro. It's a compact unit that takes up an insignificant amount of space on your desk and blends in harmoniously with the rest of your kit. Everything you need to get up and running is supplied with the drive, including a SCSI terminator block, a SCSI cable, an unformatted 128Mb optical disk, power cable, installation software and the drive itself.

It's really easy to set up the drive following the detailed instructions in the manual. The SCSI cable simply connects to your Mac, you pop the 128Mb disk into the drive and start up your system. The drive isn't recognised until you install the driver software on your Mac – a simple job of dropping an Extension into your System Folder. If you load an unformatted optical disk into the drive, it's detected and the system asks if you want to format it – it's all very easy. The rest of the software package consists of a simple utility program which enables you to format, initialise, mount and eject disks from the optical drive. You can also eject the disk by dragging its icon to the Wastebasket in the same way as a floppy disk.

Spirit Utilities is a simple to use piece of kit which gives you complete control over the PowerUser Pro drive.

The PowerUser Pro optical is an excellent drive with the potential to improve your storage capabilities vastly. It's quiet, easy to use and reasonably fast.

ADP STRATEGY

The ADP Strategy 2128SR is mechanically identical to the Fujitsu M2511A (inset), except that it lies flat, not upright.

The other optical drives we we put through their paces are just as small and neat as the PowerUser drive and are almost as easy to use and set up. The main difference between the drives is the software.

The *Spot On* formatting software supplied with the ADP Strategy 2128SR and the Fujitsu M2511A is a little more complex, but this shouldn't be a major concern to anyone with a basic smattering of Mac knowledge. Just drag the *Spot On* Control Panel and *Spot Lock* files into your System Folder and run *Spot On* to format the drive. One small point is that the *Spot On* software takes about 15–20 minutes to format the optical disk; during this time you can't do anything else with your Mac except watch the countdown.

The usual accessories arrive with the drive: SCSI and power cables, terminator, 128Mb optical disk and installation software. Also included is a lens cleaning cartridge – a strange-looking device that has the appearance of an extended optical disk with a rotating brush on the end.

With improved access time to the optical drive, the *Spot On* Control Panel enables you to configure a variety of caching options.

Once you have the software installed and you've formatted your first disk, you couldn't ask for better drives. They're very quiet and work in the same way as a standard hard drive partition. The only niggle comes when you eject the disk: you have to drag the disk icon to the Wastebasket and press the eject button on the drive itself.

this start-up cost down to £3.80, and a third drive brings it to just £2.65.

Pros and Cons

Advantages
- Space saving and convenient
- Cheap backup medium
- Portable media
- Infinite storage capacity
- Cheapest form of storage

Disadvantages
- High initial outlay
- Very slow format – slowest of the three here
- Slow write capability

Where to get it

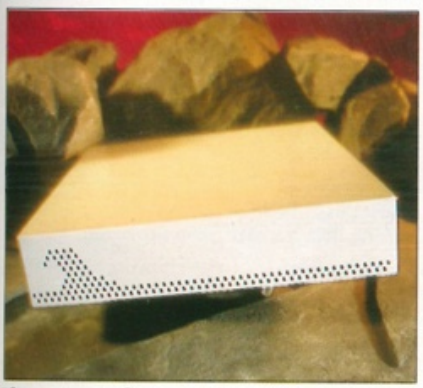
The ADP Strategy 2128SR is available from Mac Europe on 0603 742875 and costs £1,522. The Fujistu M2511A is also available from Mac Europe and costs £1,052.
The PowerUser 3.5-inch optical drive is £905 from MacWarehouse on 0800 181332.

Fixed hard drives

We can't really recommend buying a fixed hard drive for extra storage unless it's over 200Mb in size – buying anything smaller simply isn't worth it unless you're after the performance advantages which a fixed hard disk brings.

Even then, fixed units don't begin to become really cost-effective until you start look-

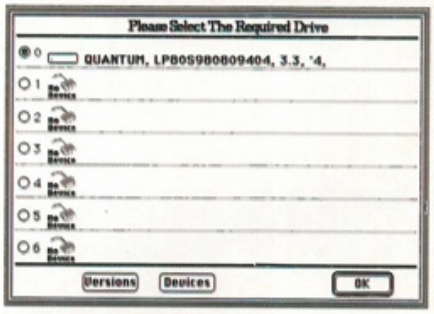
WAVE 1 GIGABYTE



If you want a large, workmanlike drive on your desk then the Wave 1 Gigabyte certainly fits the bill. The moment you start up the drive, you know you have a powerful beast on your hands. The fan sounds quite loud initially, but you soon become used to its reassuring background whir.

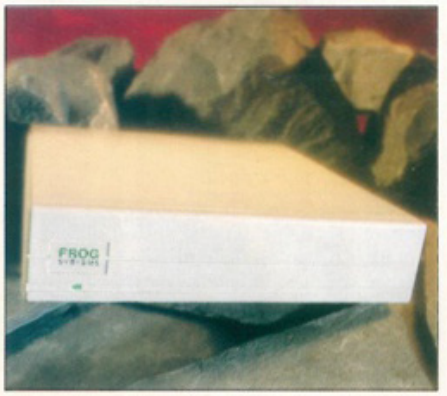
Setting up the drive couldn't have been easier. It's supplied pre-formatted so you can start using it as soon as you start up your Mac. The Wave installation disk is supplied with a formatting program so you can reconfigure the drive with as many partitions as you like. The formatting software looks remarkably similar to the *Spot On* software supplied with the optical drives. Other software includes a caching utility and a mounting/unmounting utility that you just drag to your System Folder.

Surprisingly for a drive costing almost £1,000, the Wave drive is only supplied with photocopied manuals. The instructions in the two slim manuals are adequate, but you should really get more than cheap photocopied manuals when you are paying out this kind of money. Nevertheless, it's a good, fast drive that greatly enhances your productivity potential, especially if you use applications that consume vast amounts of drive space, like *QuickTime* movies or graphics. You just can't beat a big drive...



The Wave software looks remarkably like the *Spot On* software supplied with the optical drives. In fact, it's a licensed version of the *Spot On* formatter.

FROG 520E



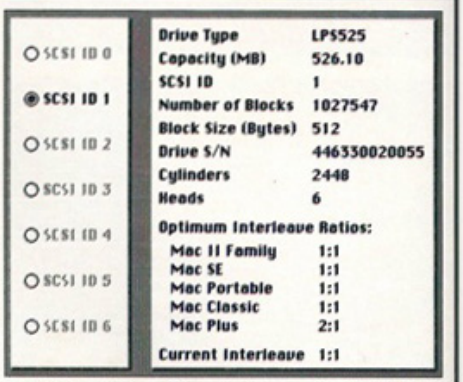
Another large capacity, large-cased drive is the Frog 520E, a half-gigabyte drive housed in a similar chunky case to that of the Wave drive. Although the unit is built to the same high quality as the Wave, the fan is significantly quieter in use.

Supplied ready-formatted with all cables and accessories, the Frog also comes with utilities to enable you to reconfigure the drive as you wish, so you can set up as many or as few partitions as you require, depending on your individual needs. If you decide to format any hard drive with more than one partition, each one appears on the Finder desktop as a separate logical drive.

The documentation supplied with the Frog drive is quite basic, but it's good enough to get you up and running with the minimum of fuss. The formatting software is clearly explained.

Half a gigabyte should sort out your main storage problems for a while, but if you are going to be creating enormous *QuickTime* movies or delving into direct to disk (D2D) recording then you'll be surprised how fast the space gets eaten away.

The Frog Systems 520E is an excellent fixed hard drive that performs swiftly and faultlessly. It's worthy of serious consideration if you really need a big drive to expand your Mac system.



The Frog formatting software isn't very pretty to look at, but it's functional and does the job well. You just select the ID of the drive you want to format and away you go.

ing at units in the 500Mb to one Gigabyte range. But you can pick up good 200Mb to 500Mb drives for under £400 if you're prepared to shop around.

How does it work?

A thin magnetic film coats the surface of a platter coated with carbon, providing a hardness approaching that of a diamond. Data is stored on this surface by magnetising tiny particles on the disk's surface as it spins at 3,600 rpm. A pair of read/write heads float just above the platter on a cushion of air created by the disk's rotation. The distance between the heads and the platter is one micron – one thousandth of a millimetre.

On the write cycle, the magnetic particles are realigned by the magnetic field generated in the drive heads to represent a binary 1 or a binary 0 – that's how all computer data is stored. On the read cycle, the magnetic field in the rotating platter induces a current in the drive head, again representing binary data. This is the same elementary physics that's used in motors, generators and other electromagnetic devices.

Price per Megabyte

The 520Mb Frog 520E and 1,000Mb Wave 1 Gigabyte cost £586 and £880 respectively. These prices represent fairly typical costs for a fixed drive of these capacities. As such the Frog gives you a megabyte for £1.12, while the Wave works out at 88p per megabyte. By and large, higher capacity drives will always provide more cost-effective rates of storage – and what's more, they'll usually be faster too.

Pros and Cons

Advantages

- Relatively fast and secure
- Very cheap data storage

Disadvantages

- No portability
- No upgradability

WHAT TO LOOK FOR

- Go for as big a drive as you can afford.
- You should concentrate on speed, capacity, price, reliability, case design, noise and warranty – in that order.

Where to get it

The Frog 520e is available from Frog Systems on 0738 441522 and costs £586.

The Wave 1 Gigabyte is available from Computer Capability on 0392 364253 and costs £880.

COMPARISON TESTS

Rather than use the standard seek time, average access and data throughput rating normally used in this kind of test, we have used a real test of comparative data transfer speeds between the different types of drive. We've done this by copying a 14Mb System Folder containing 349 files and folders from the hard drive in a Mac LC II to each of the drives in turn. The results of the tests are limited by the speed of the internal drive in our Mac.

Remember, we're not looking for the best technical benchmarks here, but the fastest way to move data in a real situation using the various kinds of drives. The most surprising aspect of this was the wide variation in times between the three optical drives, which we had assumed would be almost the same in all three cases.

In the table below, the *lower* the data transfer time, the better.

Drive	Type	Data transfer time (minutes/seconds)
SQ3105C	Removable	7:32
SQ5110C	Removable	7:50
PowerUser Pro	Optical	10:55
Fujitsu M2511A	Optical	12:03
ADP Strategy	Optical	10:55
Wave 1 Gbyte	Hard drive	7:12
Frog 520E	Hard drive	7:20

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Power Mac 6100/60 8/250 CD	250	8	72 pin	2Mb	60	1425
Power Mac 7100/66 8/250	250	8	72 pin	1Mb	66	1886
Power Mac 7100/66 8/250CD	250	8	72 pin	1Mb	66	1977
Power Mac 7100/66 8/250 AV CD	250	8	72 pin	1Mb	66	2606
Power Mac 8100/80 16/500/80 CD	500	16	72 pin	2Mb	80	3485
Power Mac 8100/80 16/1000/80 CD	1000	16	72 pin	2Mb	80	3977
Power Mac 8100/80 16/500/80 AV CD	500	16	72 pin	2Mb	80	3635

	HD	RAM	Mhz	£
Power Mac 6100/60 16/160 & Soft Windows	160	16	60	1567
Power Mac 6100/60 16/250 CD & Soft Windows	250	16	60	1796
Power Mac 7100/66 16/250 & Soft Windows	250	16	66	2257
Power Mac 7100/66 16/250CD & Soft Windows	250	16	66	2424
Power Mac 7100/66 16/250 AV CD & Soft Windows	250	16	66	2977
Power Mac 8100/80 16/500/80 CD & Soft Windows	500	16	80	3698
Power Mac 8100/80 16/1000/80 CD & Soft Windows	1000	16	80	4104
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LC 475 4/80 Bundle	80	4 with Performa 14", monitor, StyleWriter II, fonts & keyboard	963
LC 475 4/160 Bundle	160	4 with Performa 14" monitor, StyleWriter II, fonts & keyboard	1070
LC 475 4/80 Bundle	80	4 with Performa 14" monitor, Personal LW300, fonts & keyboard	1177
LC 475 4/160 Bundle	80	4 with Performa 14" monitor, Personal LW300, fonts & keyboard	1305

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APPLE MACINTOSH HARDWARE

	HD	RAM	Type	VRAM	CPU	CoPro	£
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LC 475 8/160	160	8	72 pin	512k	25MHz LC040	no	742
Quadra 610 4/160	160	4	72 pin	512k	25MHz 040	no	870
Quadra 610 4/160 CD	160	4	72 pin	512k	25MHz 040	yes	1054
Quadra 610 8/230	230	8	72 pin	512k	25MHz 040	yes	1305
Quadra 650 4/160	160	4	72 pin	512k	33MHz 040	yes	1160
Quadra 650 4/160 CD	160	4	72 pin	512k	33MHz 040	yes	1288
Quadra 650 8/230 CD	230	8	72 pin	512k	33MHz 040	yes	1522
Quadra 660AV 8/230 CD	230	8	72 pin	512k	33MHz 040	yes	1305
Quadra 660AV 8/500 CD	500	8	72 pin	512k	33MHz 040	yes	1411
Quadra 800 8/230	230	8	72 pin	512k	33MHz 040	yes	1799
Quadra 800 8/500 CD	500	8	72 pin	512k	33MHz 040	yes	2319
Quadra 840AV 8/500 CD	500	8	72 pin	1Mb	40MHz 040	yes	2695
Quadra 840AV 16/1Gb CD	1000	16	72 pin	1Mb	40MHz 040	yes	3219
Quadra 950 16/1Gb	1000	16	30 pin	1Mb	33MHz 040	yes	3150
Quadra 950 16/1Gb Multimedia	1000	16	30 pin	1Mb	33MHz 040	yes	3799
Powerbook 145B 4/80	80	4	Cards		25Mhz 030		768
Powerbook 145B 4/120	120	4	Cards		25Mhz 030		954
Powerbook 165 4/80	80	4	Cards		33Mhz 030		995
Powerbook 165 4/160	160	4	Cards		33Mhz 030		1155
Powerbook 165c 4/80	80	4	Cards		33Mhz 030		1209
Powerbook 165c 4/120	120	4	Cards		33Mhz 030		1287
Powerbook 180 4/120 mod	120	4	Cards		33Mhz 030		1689
Powerbook 180c 4/160	160	4	Cards		33Mhz 030		1775
Powerbook duo 230 4/80	80	4	Cards		33Mhz 030		736
Powerbook duo 230 4/120	120	4	Cards		33Mhz 030		842
Powerbook duo 250 4/200	200	4	Cards		33Mhz 030		1429
Powerbook duo 270c 4/240	240	4	Cards		33Mhz 030		1765
Powerbook duo 270c 12/240	240	12	Cards		33Mhz 030		2083
Newton Message Pad							359

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4Mb 72 pin SIMM (Quadra 800/840)	150
8Mb 72 pin SIMM (Centris, LCIII)	260
8Mb 72 pin SIMM (Quadra 800/840)	280
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Syquest drive 44Mb SCSI Ext 5.25"	250
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Syquest drive 105Mb SCSI Ext 3.5"	375
Syquest 44Mb cartridge 5.25"	42
Syquest 88Mb cartridge 5.25"	62
Syquest 105Mb cartridge 3.5"	45

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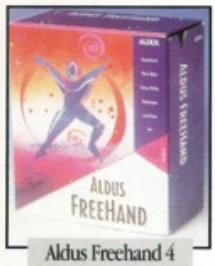

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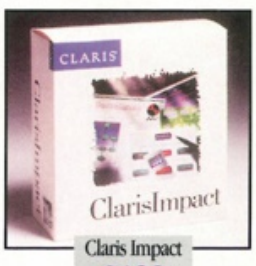

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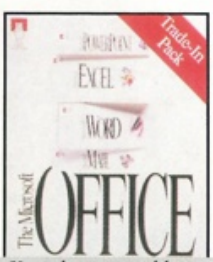

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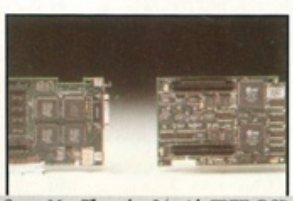

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Give it a whirl

This month's CD-ROM releases certainly got Andy Storer all in a spin. Again.

Each object in the suitcase takes you to a different aspect of the disc – quite neat.

XPLORA 1

If you're never quite sure just what the lyrics are, you'll find all you need to know – everything short of a bouncing ball...

Me, I remember a model 1973 Peter Gabriel dressed up as a flower with a two inch groove shaved down the middle of his head. He looked a right berk. At least he achieved the desired effect though – exposure. The same might be said for *Xplora*, his brand spanking new multimedia extravaganza, where His Cultured Weirdness has become The Incredible Tattooed Man.

So what's all the fuss about? Well, there's a polished interactive performance in there – taking in everything from Mr G's discography to his involvement with world music and Amnesty International. But, of course, the main thrust is his latest album and the ten *QuickTime* videos of its tracks. All this piled on to a ROM with lavish backgrounds, a laid back interface, plenty of hi-res pics and some neat music.

On the downside there's the pretentious little appearances of Peter dissolving through a menu bar of clouds to guide you through various sections and thank you for exploring his Secret World. And while rock stars may well think they're the world's greatest living actors,

> *Beautiful it may be, bold it's not – there's no random elements, no hidden objects...*

writers, photographers, film directors and TV presenters, perhaps they should just stick to being menu items. One word gone in a flash.

But of more concern is the fact that this CD won't run in any really usable way unless you have 8Mb of RAM and a fast 030 Mac or, better still, a Quadra. Sorry, but this is one disc where power really matters. If you don't have it, prepare to be disappointed, because there's over 100 minutes of video and accompanying audio here. For smooth frame updates you'll need a double-speed drive like the CD300 too.

Each of the album's tracks is showcased along with its commissioned video and sample lyric sheet, and it sounds good enough when hooked up to the hi-fi. In addition, there's a whole bunch of video and audio excerpts from various international artists and their instruments providing another dimension. Finally there's unabashed publicity material from Amnesty's archives to politicise proceedings. With each, the treatment is well-conceived and the execution flawless. So *Xplora 1* is a seamless enough excursion with its elegant shifts of foreground pro-video windows cut with colour clip backgrounds and full effect audio.

But it's all a little safe. While the interface is refreshing – it's not just a question of clicking on buttons to endlessly go forward and return from where you've just been taken – you never really get the impression there's anything remotely secret here to explore beyond what you're presented with. For although there's both **Explore** and **Watch** modes there's no real risks taken with either. Beautiful it may be, bold it's not – there's no random elements, no hidden objects and no design variation.

So here's the rub: if you own a CD300, a Quadra and one or two Peter Gabriel audio releases, then buy *Xplora 1*. Otherwise catch it at a show or a shop.

■ *Xplora 1* requires a minimum of a colour Mac with 3Mb RAM free. It's available from MACFORMAT'S mail order service for £39.95 – see page 63.

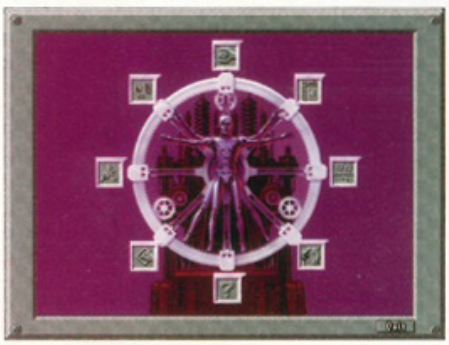
MACFORMAT RATING 88%

All the videos from the US album are included as *QuickTime* movies – fine so long as you have a powerful enough Mac!

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

As well as Peter's home movies, you're treated to some unabashed publicity material from Amnesty International...

ISAAC ASIMOV'S THE ULTIMATE ROBOT



Asimov's 23rd law of robotics,part 5, paragraph xi: when the left hand points to half-past QuickTime, it's tea break time...

Microsoft's latest sortie into multimedia content publishing takes the form of this comprehensive overview of robotics. But it's more than just dry factual history and brave future visions mixed with Asimov's back catalogue fiction. The emphasis here is firmly on interaction, so besides being able to build your own on-screen robots you can also animate them and save your creations as *QuickTime* movies. By way of a little inspiration there's also clips of the best known robo-films – from *Forbidden Planet* to *2001*, plus (as you might expect, given the title) all the pertinent extracts from stories and essays penned by the founding father of robotics and various video clips of him talking. Add to this illustrations from exotic science fiction and real robots in use, along with *After Dark* compatible screensaver images and animation collections, and you have just about every reference to robots ever. Shame then that Kraftwerk don't get a look in.

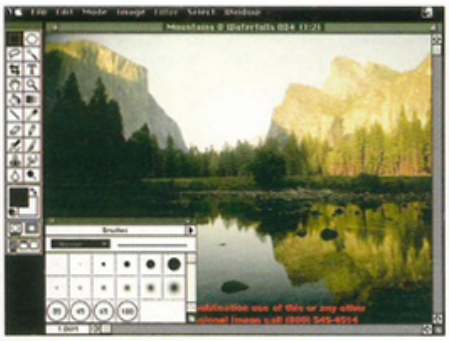
■ ***Ultimate Robot*** **requires a Mac II or better with 5Mb of RAM and colour monitor. According to Microsoft's PR, it costs "less than £50 from all regular retail outlets".**

MACFORMAT RATING **84%**

ADOBE AUDITION

Audition comprises cut-down versions of Adobe's image-processing software, *Photoshop*, and its video-editing suite, *Premiere*. Also thrown in for good measure is *Acrobat Exchange*, which enables documents to be viewed on both PCs and Macs irrespective of whether a document's host application is present or not. A disk only version of this package is available, but the CD is definitely the one to go for if you have a drive – besides the above programs it also contains over 700 24-bit clip photos and dozens of *QuickTime* movies. In addition there's a bunch of plug-in filters, special effects and interactive tips and techniques – in short all you need to enter the world of digital image editing.

Don't be put off by the fact that both *Photoshop 2.5* and *Premiere 2.1* are in cut-down form,



Buy this disc with cut-down versions of *Photoshop* and *Premiere*, and if you like them, upgrade at a bargain price!

though – each has a good set of features. The more notable omissions from *Photoshop* LE include support for CMYK, duotones, paths and channels; *Premiere* lacks motion control, title generation and import and export to *Photoshop* and *Illustrator*. But given the cost of the full versions of *Photoshop* and *Premiere*, £850 and £580 respectively, these cut-down editions should still appeal – particularly as you can upgrade to the full versions for £229. Now, there's a *bargain* here – buy *Audition* for £229, pay another £299 for the *Photoshop* upgrade and you have the full £850 version for only £458! Curious marketing, but who's complaining...

■ ***Audition*** **requires a 68020 or faster Mac with 4Mb of RAM and costs £229 from Adobe distributor Principal, 0706 832000.**

MACFORMAT RATING **84%**

BERLITZ FOR BUSINESS JAPANESE

It is impolite to refuse a drink. If you've had too much, just knock your glass over as you fall. Someone will pick you up.

Subtitled *'Survival Software for the Business Traveller'*, this multimedia disc is designed to teach you the fundamentals of Japanese language, customs and culture. At least there's an animated talking coach to make this gargantuan task somewhat easier. Let's face it – Japanese isn't that easy to learn, is it? So this interactive approach should help a whole lot more than a phrase book or tape – particularly if you take into account the wealth of details on etiquette, dining and entertaining included here. According to Berlitz, success in learning a language depends on role-playing; and here you get to play the part of a number of different characters in a variety of business and social dialogues. You get to make phone calls, arrange and conduct meetings and exercise correct business protocols – all the way from arriving at the airport to turning down that final saki with your hosts.

So does it work? I'm no linguist, I can assure you, but I reckon I could hack a trip to Japan having crammed with this. Of course, I would probably need a portable PowerCD to assist me in the thick of things, but all the fundamentals are here. Can I have my airfare now, Boss, to test it properly?

■ ***Berlitz for Business Japanese*** **should cost less than £100 and will be available from Sierra on 0734 303322. You'll need a colour Mac with at least 4Mb of RAM to run it.**

MACFORMAT RATING **87%**

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■ **You'll need gardening gloves, a trowel, a colour Mac and 4Mb of RAM to get *Forever Growing Garden* up and running. You'll also need £44.99 and a phone call to Gem on 0279 442842 to find out where to buy it.**

MACFORMAT RATING **89%**

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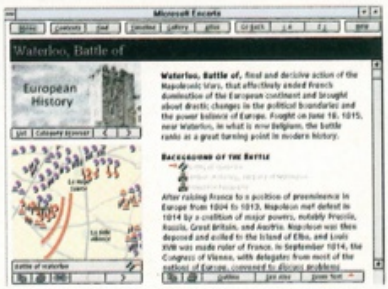

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	Quadra 650	040/33	4/160CD	136	✔	✔
	Quadra 650	040/33	8/230CD	136	✔	✔
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	7100/66	601/66	8/250CD	136	✔	✔
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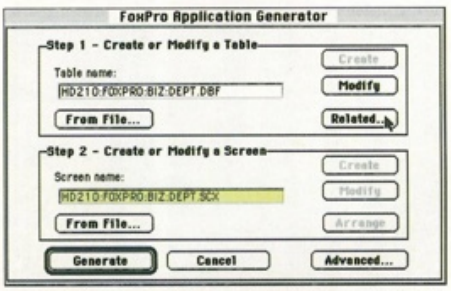
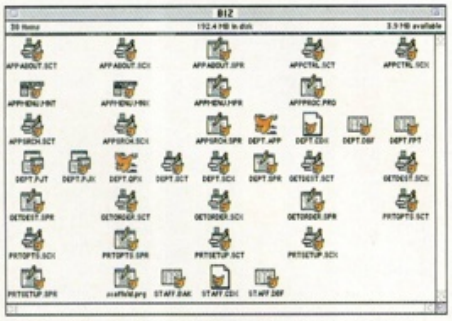
Foxing clever

A new contender has arrived on the database scene: *FoxPro* is powerful, fast and unique. Find out what sets it apart from the rest...



FoxApp is an application generator that can help you set up complete relational databases. Obviously your options will be limited, but even a total beginner should be able to get a working database together in a few minutes with this.

Behind the scenes *FoxPro* runs entirely on reams of XBase programming code. Tools like *FoxApp* will write this for you, but to make full use of the potential you'll need to get your hands dirty with programming.



Piles of files – this lot is what *FoxApp* generated for a tiny database consisting of two simple related tables. A typical small business database may involve 300-400 separate files. In true DOS tradition, they all have obscure suffixes.

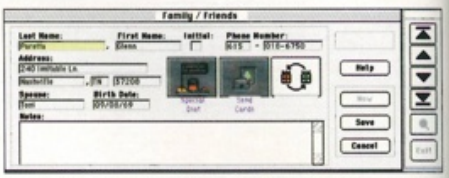
Recently (MACFORMAT issue 7, December 1993), I ran some basic speed tests on all the main Macintosh database applications. The winner by a mile was Microsoft's *FoxBASE+*, a strange program that delivers Ferrari performance with all the stylish flair of a second-hand Lada. At the time, though, *FoxBASE+* was already well on its way out, waiting to be replaced by the all-new *FoxPro* Mac. Now, *FoxPro* is here. It's slicker, neater, would you believe even faster in some areas, and still kinda weird. But it may be just what you're looking for.

Learn a language

The key to understanding *FoxPro* is to realise that this is not a database application in the same sense as, say, *FileMaker Pro*. *FoxPro* is a programming language, albeit one that's specially designed for creating databases. Everything that you do with *FoxPro* is geared towards writing sequences of commands. In fact, you could build a whole complex relational database just by typing in hundreds of lines of instructions. Normal people don't like that sort of thing though, so *FoxPro* provides a set of more or less Mac-like features to automate the whole process.

These include specific tools such as Screen Builder, Menu Builder and Quick Report; two modules called Wizards, which take you step by step through creating entry screens and report layouts; *FoxApp*, which can generate simple ready-to-use relational databases; and Project Manager for co-ordinating all the bits that you'll need to produce a completely customised double-clickable application. If you're prepared to accept a few compromises, these tools provide a point-and-click approach that will successfully get you started, but to go any further you'll definitely have to get to grips with the programming language. Be prepared for some time-consuming study.

Unlike *FileMaker*, or the integrated packages such as *ClarisWorks*, *FoxPro* is a relational application, which means that it will let you extract connected information from multiple data files, or tables as they're known in relational jargon. For instance, you might have one table of customers and another of orders. An ordinary flat-file program would only let you view those tables independently, whereas a relational program lets you pick any customer record and automatically get a list of their orders. This sort of thing is absolutely essential for serious business use, but it can also be handy even if you're doing nothing more than cataloguing your record collection.



Yes, you too can make your Macintosh look just like a real Windows PC... with *FoxPro*, brought to you by Microsoft's World Domination division.

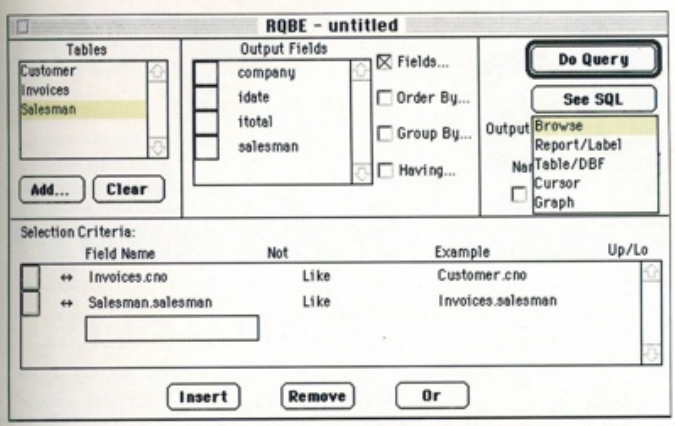
As relational programs go, *FoxPro* is pretty much industrial strength. It will do most things if you program it to, and can still do plenty without any programming. But it comes nowhere near the intuitive simplicity of *4th Dimension's* graphical way of relating files. In fact, don't expect *FoxPro* to be particularly intuitive in any area. Even allowing for the fact that its roots lie firmly in MS-DOS, this is not a program that has learnt much from a decade of Macintosh interface design.

Another thing you'll notice is the unbelievable number of files created by *FoxPro*. Whereas, say, *4th Dimension* can put a whole multi-table relational database into just two files – one for the data and one for the structure – *FoxPro* may need several hundred. This is not entirely *FoxPro*'s fault, but is inherent in the use of XBase. In principle, it shouldn't really matter, but it does put an additional strain on the Macintosh Finder and can lead to housekeeping confusion on the hard disk. Dedicated Mac people may find all this kerfuffle a bit clumsy, but mostly it just needs a period of readjustment on the part of the user.

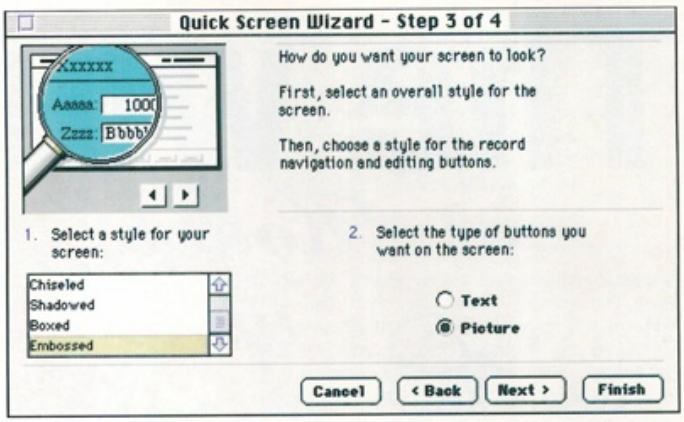
> *As relational programs go, FoxPro is pretty much industrial strength.*

Query this

One of *FoxPro*'s neatest tricks goes by the catchy name of Relational Query By Example, snappily abbreviated to RQBE, which provides an unusually flexible way of extracting information from one or more files. Using RQBE, you can search multiple data files, even if they haven't been previously related, so long as they share a common field which can supply the link. The result, which comes complete with sorting and other criteria, can be sent directly to a window, disk file, printed report or even to



Relational Query By Example provides a brilliantly easy and powerful way to extract information from multiple tables. Notice the pop-up on the right, which enables you to output the result to screen, disk or printout.



Wizards are simple tools that guide you through various options for screen and report layouts, then generate the appropriate XBase code to create the results you want. This approach helps you get around the fact that *FoxPro* is less a database than an XBase programming language.

Microsoft *Graph* (supplied with *FoxPro*), which will turn suitable data into a chart. If you have a lot of data and frequently need to look at it in an ad hoc way, this is a system that's pretty hard to beat.

FoxPro lets you create screens with all the familiar graphical doo-dads such as buttons, pop-ups and so on, but you won't get very far down this road without getting into programming. I should warn you now not to expect the sort of layout facilities you may be used to in *ClarisWorks* or *FileMaker* either – *FoxPro* is limited to just 16 unsubtle colours and a mere seven fill patterns. Aesthetically challenged is the phrase that springs instantly to mind. Although you can produce the kind of results that won't look out of place on a Mac, Microsoft has worked hard to ensure that *FoxPro* will be mistaken for a *Windows* program.

Speed was the biggest selling point in *FoxBASE+*. In comparison, *FoxPro* is slightly slower in some areas, but can be faster in what most would consider the important one of searching for data, especially when doing complex compound searches based on several fields. In commercial applications with very large files this counts for a lot. If you're an experienced programmer you'll also want to know that *FoxPro* supports Apple Events, AppleScripts, XCMDs and externals. If you're not, you won't.

> *Aesthetically challenged is the phrase that springs instantly to mind.*

FoxPro is extremely powerful and astonishingly fast. On the other hand, you access all this oomph through a convoluted screen interface and a programming language that's well past its bin-by date. In the right circumstances – for example if you need to access old files that rely on XBase, or you need to squeeze maximum performance out of large and complex databases – I'd recommend it without hesitation. It's also excellent at handling unpredictable ad hoc data retrieval. But, if your needs are modest and your experience of programming is non-existent, you may find that *4D* or *Helix Express* provides relational power more easily.

Jack Weber

FoxPro

FoxPro for Macintosh is published by Microsoft, 0734 270001. Expect to pay around £300.

Ease of use Needs programming skill for best results.	78%
Documentation Better than before, but not that helpful.	78%
Features There's not a lot it can't do.	95%
Value for money Lots of bang to the buck.	82%
MACFORMAT RATING	86%

MANUAL MANIA

The old *FoxBASE+* had the worst manuals of any Mac database bar none. These are better, a lot better, but not better enough – look up Wizards in the Master Index booklet and you'll be directed to page 133 of the User Guide, so you go there and it says, "For complete information on running Wizards, see the Installation and Macintosh Features Guide." OK... now, let's see... they're not in the index, or the contents, so you flip through and eventually find a brief reference to Wizards, which says, "For more information look up online Help." Uh huh. Well, you launch *FoxPro* and open Help, which naturally doesn't list Wizards in the contents, so you do a search to find the relevant entry, and this tells you that to find out about Wizards you need to run the Wizard and follow the on-screen instructions. Yeah, thanks a bunch. Now, am I just being picky or is this crap?

WHAT IS XBASE?

Way back, before Macintoshes had been invented, a database program called *dBase* set the standard for power. It was based on a programming language known as XBase, which was then picked up and used by numerous other database applications. By the time the Mac got going, XBase was already looking old, but there was so much of it about that the world is still finding it hard to relegate XBase to its rightful place in history.

Several XBase applications were produced for the Mac, including *dBase/Mac*, *McMax* and *FoxBASE*. Today, *FoxPro* is the only survivor, but it holds a unique position as the only Mac database application that is also available for both DOS and *Windows*. Combine that with the ability to run even an ancient *dBase* program with only some re-writing, and you can see exactly why XBase is still a force to be reckoned with – at least in business circles.

OVERLOAD

The never-rains-but-it-pours department has been hard at work. No sooner had *FoxPro* arrived, than *Helix Express 2.0* and *4D First* appeared. Also, Mainstay's new database, *Phyla*, is nearing completion and rumours of a Mac (or, more likely, PowerMac) version of Microsoft's wildly successful *Access* are getting ever stronger.

But what does it all mean? In a nutshell, this deluge of products is opening up the affordable end of the relational market in a big way – good news indeed. Until recently, if you needed a relational program but didn't fancy the obligatory second mortgage, the only option was *Helix Express*. Now you have a choice, and with *FileMaker* set to go relational next year, there's likely to be some serious price cutting and feature fighting going on. Full details of *Helix Express 2.0* and *4D First* are coming up in MACFORMAT, with news of the others as they appear.

The words

How to get your publication up and running: part six

"THE TONE OF VOICE, THE MANNER IN WHICH A PUBLICATION ADDRESSES YOU, DIFFERS WIDELY BETWEEN THE SUN AND THE GUARDIAN, SAY."

Reader loyalty is gained by clever use of words as much as by pretty pages. Here's how to use the English language to optimum effect in your small publication.

Computers used to be operated by a laborious technique which involved keying in commands. The Mac has changed that, with its graphical interface. Now the introduction of moving pictures and high-quality sound into documents has moved us further in the visual direction. We may, as people say, be becoming a post-literate civilisation. And yet, for most people and most purposes, words are still the most important communication tool of all, whether you want to persuade, to inform, to educate or to amuse. That much, at least, hasn't changed.

Unfortunately, there is an increasing tendency for people to use language defensively, less to communicate than to conceal. It is also common when particular groups or professions are talking to themselves. Academic language, for instance, has become increasingly impenetrable to people from outside that particular world.

At its best, journalistic language should be able to cut through impenetrable jargon. The aim is to use simple, straightforward words to describe events and ideas, however complex. Above all, publications for the general reader need to be written in the language people speak every day. Now obviously, not all publications have to sound the same: the tone of voice, the manner

How to write better

There are always arguments about whether people can be taught to write or not. And it may well be that no-one, no matter how many correspondence courses they sign up for, can be made into a great writer. But writing for publication in newspapers, magazines, house journals and all the rest is a skill that can be learned, worked on and improved. Simplicity and economy are the key ideas. Here are a few thoughts about improving your writing.

1 Sentence structure.

In English, sentences tend to run like this: subject, active verb, object. The cat sat on the mat. Jack and Jill went up the hill to fetch a pail of water. Turning things round, making the verb passive rather than active, has the effect of momentarily impeding the progress of the thought from your brain into the reader's brain. For instance: The mat was sat on by the cat. See what I mean? A moment of hesitation intrudes into the communication. It is almost a reversal of the natural order of mental events.

Or consider this version, in which the active verb has become a passive one and the sequence of events is reversed. "Fetching a pail of water was the purpose for which the hill was ascended by Jack and Jill." Terrible. But you will not have to look very far to find worse examples.

2 Sentence and paragraph length.

One very simple way of keeping your writing in order is to count the number of words in your sentences. Limit yourself to about 25 or 30 words. If you are going on longer than that you are likely to have lost your way. It may be that you are trying to cram too many thoughts into one sentence. Better to break it into two parts, or more. For our purposes a sentence need not contain more than one thought.

Paragraphs also need to be kept short. You will notice that in newspapers they are sometimes only one sentence long, or at most two, whereas in your school essays you were always taught that they should represent a complete thought, or a step in your argument. In newspapers they are used as a kind of punctuation, almost a super full-stop; they provide a break for the eye, enabling the reader to lose his or her place and find it again; and they facilitate the cutting and fitting that goes on between the story being written and its appearance on the page.

3 Jargon.

All trades and social groups have their own words, almost their own dialects. If you are producing a pub-

in which a publication addresses you, differs widely between *The Sun* and *The Guardian*, say. But both are a version of speech.

Here's a useful rule to bear in mind: while difficulty is acceptable in books, and almost obligatory in poetry, in periodical writing everything must be understandable in the time it takes to read it. You cannot expect people to stop at the end of every sentence to work out what it means. Achieving that is a matter of selecting straightforward words and assembling them in clear ways.

News writing

There are specific techniques for writing news stories, whether in newspapers or just in the news sections of other publications. Like news design, these have evolved for functional reasons. The object is to grab people's attention early on, give them the information as quickly as possible and then to tail off in such a way that any cuts can be made quickly from the bottom without losing anything of importance.

The main art of news writing is in getting the intro right; then everything will flow from there. The problem is always the same: you have to get the gist of the story into the very first paragraph. But if it is a complex story, you are in danger of running out of of words before you have said anything at all. Various techniques have been devised for achieving the necessary compression.

The Inverted Triangle

Journalism textbooks, particularly American ones, make much play of the Inverted Triangle. What they mean is that you put all the important stuff at the top and then work your way down to the really trivial stuff at the bottom. That's all there is to it.

Five Ws and an H

The five Ws are *Who? What? Where? When?* And *Why?* The H always seems like a bit of an afterthought. It's *How?* These are the questions that any news story needs to answer if it is to be complete. Sometimes you hear it said that they all need to be answered in the intro, but that would make it horribly clogged. For instance: "Several hundred angry French farmers released herds of sheep into the streets of Boulogne this morning in protest at the importing of British lamb," would do it, but most stories don't really lend themselves to that simple an encapsulation.

A more useful way of looking at the the five Ws is that they offer you five ways to angle your intro. Who? "Angry French farmers...". What? "Herds of cows were released..." Where? "The centre of Boulogne came to a standstill..." When (and now we're beginning to struggle)? "At first light this morning an angry crowd of ..." Or Why? "Imports of English lamb drove French farmers to..." Now you can see that some of those are more practical than others, but they are all options.

"YOU WILL REMEMBER THAT WE SAID THAT ONE OF THE CHARACTERISTICS OF A GOOD STORY WAS THE ELEMENT OF SURPRISE."

The telegram

Harold Evans, in his excellent book on journalistic style, *Newsman's English*, has a good suggestion to help cut through the complications in many stories and to get to the key points for writing your intro. He says try writing it as a kind of telegram. Then flesh that out to make it into something literate. So our French farmers story could be reduced to "French Farmers Block Port With Sheep To Protest Against Imports". Fill in the missing words and you are back to something approaching an intro.

The key word

Another useful device suggested by Evans is the idea of using a key word or phrase as the core of the intro. Let the story percolate in your mind for a bit and then ask yourself whether there's one word in particular that sums it up. If it is about an old lady who has been afraid to leave her council flat because a bunch of nasty local youths have been giving her a hard time, you might think that word was 'prisoner'. Hence: "A Smalltown woman has been made a prisoner in her own home by the activities of ..." and so on.

Not all intros fit this pattern of giving everything away at the beginning of the story. You will remember that we said that one of the characteristics of a good story was the element of surprise. You might, on occasions, like to give that element of surprise a bit of assistance by doing what is called a 'drop' intro, in which the point is held back for as long as you dare. Now that might only mean until the second

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lication for people solely within that group it may be acceptable to use that language, but if anyone else is going to read it then it is to be avoided. Particularly bad in this respect are bureaucrats. People who work at the town hall say things like, "We have actioned this" but that doesn't mean that you have to. Do your readers a favour and translate.

4 Clichés.
Clichés are easily spotted, and mercilessly lampooned (do any footballers still complain of being "sick as a parrot"?), and yet they continue to be used. But you can get away with things in speech that will look terrible on the page. My local paper is full of 'big-hearted readers' raising money for 'sick tots', not to mention a goodly number of 'battling grannies' and 'hero policemen'. If you come across an expression like that in your own writing, ask yourself if there isn't a better, fresher way of saying it. Often clichés are used to turn people into stereotypes, which is to be avoided. Treating people as individuals makes for better stories and better writing.

Another class of clichés comes from old fashioned 'journalese', in which every dispute is a 'major row' and every time anyone goes to hospital in an ambulance it's a 'mercy dash'. These are useful words in headlines, because they don't take up much space. But they sound all wrong in the actual stories.

5 Use concrete rather than abstract words.
Aim to fill your writing with things people can visualise. It's always better to say a shortage of houses rather than a shortfall in the supply of residential accommodation. It's always better to talk about people getting the sack rather than the rationalisation of production manpower. Recreational facilities tend to be parks. A public amenity site is a tip. Remember, simplicity and economy.

6 Is that word essential?
If a word isn't doing a job it should be removed. Adjectives tend to get a bad press in this respect, because there are writers who are afraid to let any noun go naked: "A pale sun shone on the empty streets of war-torn Bosnia last night as..." Worse are those who insist on accompanying every adjective with a modifying adverb: "Arguably the best film Scorsese has made" or "Possibly the best lager in the world." In some cases modifying the adjective is simply wrong. A thing can't, for instance, be "almost unique": it's like being partly pregnant or largely a virgin.

half of the sentence: "Pensioner Vic Williams got more than he bargained for when he entered a competition on the side of a Mars bar – he's been selected as Britain's next astronaut." Or, if you are very brave, you can hold the point of the intro back for several paragraphs, but these days that kind of thing is usually reserved for features.

Avoid those intros that tell us how you got to the interviewee's home...

Once you have your intro, the rest of the story should follow on from there. You will need normally to state exactly what happened, in approximate chronological order. Then there comes any useful background, perhaps relating this incident to other similar events. Throughout, you should use quotes if you have them. Obviously, genuine eye-witness material is invaluable. Otherwise quotes should be used if they are vivid, or controversial, or if you want to make sure that people know that you have spoken to the right people. Remember, too, that you are normally under a general obligation to get all sides of the story. If someone is mentioned, they ought to be asked to give their side.

Feature writing

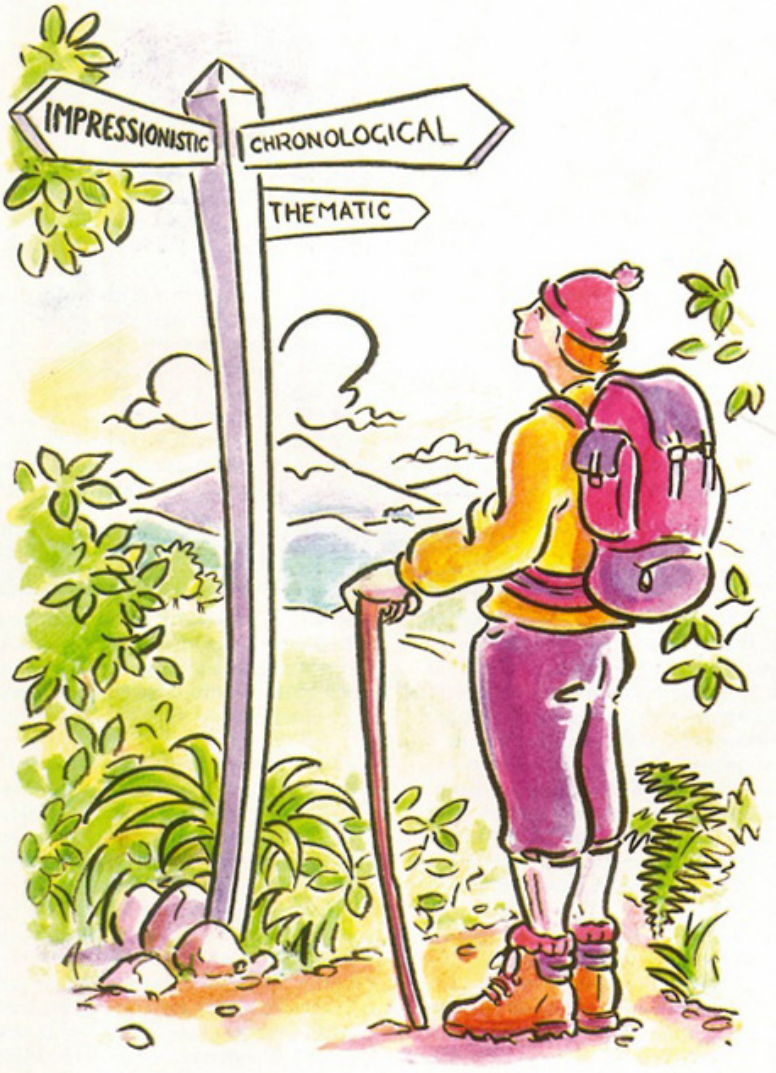
Feature writing is much freer. There is room here to be a little more stylish. You can use the word 'I', which is never seen in news stories, although I would advise against overdoing it. But the essential thing is to start well and to have a clear path through the material: to know where you are going.

Avoid those intros that tell us how you got to the interviewee's home, or the difficulty you had setting up the conversation. Better to start in the thick of things, with some amusing incident from the middle of your research. People often like to start with their best quote: the thing that's most shocking or surprising. But that is a little like using all your ammunition before the battle has begun; in any case, whoever designs or edits the page will probably want to pull that quote out in big letters to draw people in. If it's right at the beginning they can't do that.

As far as structure goes, there is really no substitute for making some kind of essay plan and following it. Now this might sound like a dreadful chore when what you really want is to get on with it. But it is helpful if you are doing something small and simple and absolutely essential if you are doing something complicated. I recently wrote a feature based on long interviews with about five people plus lots of printed documents. First I had to transcribe and print out the interviews (roll on voice recognition) and highlight (with one of those fluorescent felt pens) the quotes that were central. Then I had to highlight the bits of the printed material I wanted to use. Then I had to create a structure, with an essay plan. Then I wrote it; and then I had to cut it all down to fit the space. Feature writing can be extremely tough going: it is very easy to get carried away by the material. Your plan will keep you on track, telling you what are the important points and indicating how much space you ought to spend on them.

But beyond that, there isn't much more to say about writing features. At the end of the day you can only learn by doing them and by reading other people's efforts at the same kind of thing. That's how everybody else learnt, if it's any consolation.

John Morrish



"... THE ESSENTIAL THING IS TO START WELL AND TO HAVE A CLEAR PATH THROUGH THE MATERIAL: TO KNOW WHERE YOU ARE GOING."

THE 13 COMMANDMENTS

Here is some famous grammatical advice, quoted by Harold Evans in *Newsman's English*.

1. Don't use no double negatives.
2. Make each pronoun agree with their antecedent.
3. Join clauses good, like a conjunction should.
4. About them sentence fragments.
5. When dangling, watch your participles.
6. Verbs has to agree with their subjects.
7. Just between you and I, case is important too.
8. Don't write run-on sentences they are hard to read.
9. Don't use commas, which aren't necessary.
10. Try to not ever split infinitives.
11. It's important to use your apostrophe's correctly.
12. Read your writing to see if you any words out.
13. Correct spelling is esential.

If you can't see what's wrong with any of those, I recommend HW Fowler, *Modern English Usage*, or Sir Ernest Gowers, *The Complete Plain Words*. Not light reading, either of them, but helpful guides through the thickets of English grammar.

A little bit extra

Two great new ways to add versatility to your paint package: *Painter X2* and *Paint Alchemy*.

Undoubtedly two of the greatest Macintosh graphics programs have to be Adobe *Photoshop* and Fractal Design's *Painter 2*. Not only are they the professional's choice, but when it comes to naturalistic painting and image processing, they are increasingly becoming programs which Mac graphics enthusiasts and semi-professional artists alike are plumping for.

One of the reasons for this popularity is the fact that these programs, besides offering immense power and a long list of useful features, enable you to add to their capabilities by way of plug-ins and extensions.

Program extensions and effects plug-ins enhance the program and therefore broaden your range of tools and effects. *Photoshop* has many such plug-ins available from third-party developers. You may have come across the very popular set of plug-ins called *Kai's Power Tools*. This set of 33 different effects ranges from some neat textures and gradients to some quite extraordinary fractal fun and games. Many other programs also support these plug-ins, including *Painter 2*, which can be greatly enhanced by these extra features.

Let's look in detail at how two plug-ins enhance the image-processing capabilities of these already-impressive packages. You can add image-processing features to *Painter* or brush capabilities to *Photoshop*, so whichever you've got, you can add a little of the other...

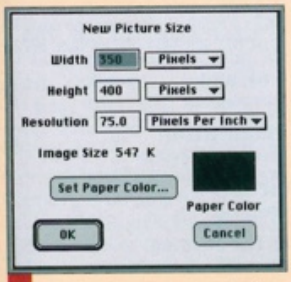
Painter X2

Fractal Design itself has produced an expert extension for use with *Painter 2*, called *Painter X2*. In its basic form it offers more power and flexibility in two specific areas of the original program: it makes photo montage work much simpler and adds a new range of tools for working with colour.

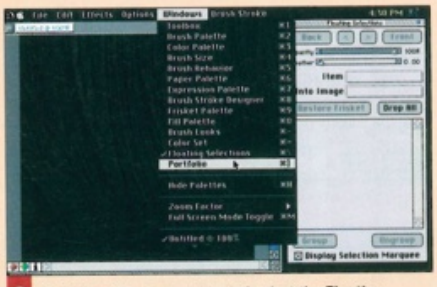
Photo montage work can be tricky. Once you have cut out all the elements you need and created a background or selected a picture backdrop, placing the selections into the correct spot can be time-consuming and frustrating when elements need to be adjusted. *Painter X2* has got around this problem by giving you multiple floating selections, so you can select individual elements of the image and move them around to suit, even when they have previously been de-selected. You can store selections by dragging and saving them into the Portfolio window, and you can then access them in any *Painter X2* document. You have full control over the 'live' floating elements – they can be layered; sent to the back, to the front, moved forward or backward layer by layer. You can also group or ungroup them.

When your element is selected you can vary its transparency by using slider controls in the floating selections window. The same window has control over how much you would like your image to be 'feathered'. You can also use *Painter X2's* masking brushes to interlace the floating selections with the background, making it appear that the selected elements are behind the background layer; it is simple to make images look as if they are appearing 'ghostlike' from the background. You can also make changes to the background layer without

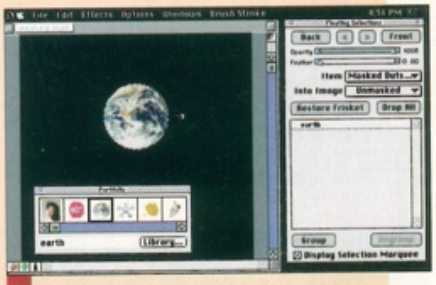
GETTING STARTED WITH FLOATING SELECTIONS IN PAINTER X2



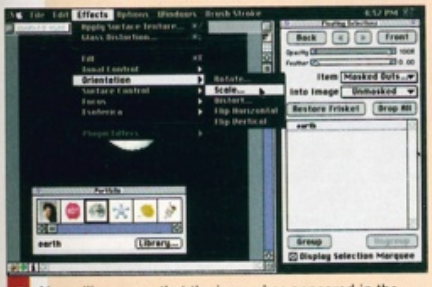
1 Open your document by selecting **New** from *Painter's* **File** menu and setting your paper colour.



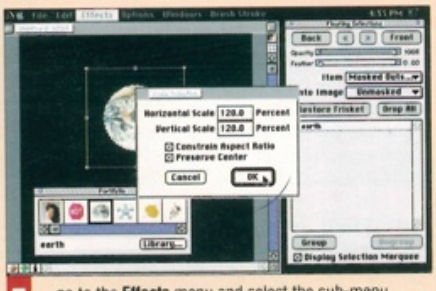
2 Go to the **Windows** menu and select the **Floating Selections** window and the **Portfolio** window. The latter displays thumbnails of your previously-stored images.



3 Now click on the image you wish to use in your illustration, in this case the earth image. Next, drag the image to your work area...



4 You will now see that the image has appeared in the Floating Selections window as a new item. If you then wish to scale your selection....



5 ...go to the **Effects** menu and select the sub-menu **Scale** to alter your image horizontally or vertically by percentage. You can also preserve the aspect ratio.

6 Now you can get started with some of the neat effects in *Painter X2*. This is the Opacity slider in action... giving a cloud-like effect to the two images.

GETTING STARTED WITH FLOATING SELECTIONS IN PAINTER X2 CONTINUED

7 If you select the **Masked Inside** option from the **Item** pop-up menu, you can generate this type of effect – where the astronaut is half-hidden behind the earth.

8 By clicking on the title of the image in the Floating Selection window, you can activate the **Item Attributes** dialogue box...

9 You can now select from the choice of compositing methods. I have selected a new element and merged it with the original earth image, using **Magic Combine**.

affecting the floating selections, which should make life easier for artists with fussy clients.

Painter 2 has a good range of file formats to save out to, including the RIFF format, which is the only file format which supports floating selection. If you do not save in the RIFF format the floating selection will automatically be dropped into the background image.

Each floating selection has its own set of special effects. To use these, you just select your floating element and then double-click on the name in the selections palette. The **Item Attributes** dialogue box then appears and you can use the **Compositing Method** pop-up menu to select from **Gel**, **Colorize**, **Reverse-out**, **Shadow Map** and **Magic Combine**.

The Gel mode works in very much the same way as coloured gels in photography – if you place a coloured gel in front of a light it alters the colour cast on your subject; in this case if your floating selection is red, then it will give the underlying image a red cast. The Colorize mode affects the hue and saturation of the floating selection, so if your floating image is coloured and your underlying image is monochrome, then it will convert colour to mono and vice versa.

The Reverse-out mode and the Shadow Map mode are self-explanatory: the Shadow Map is an excellent fast route to creating shadows in your illustrations without having to change your image. Magic Combine lets you combine the floating selection with the underlying image, this time based on its luminance. This way the lighter parts of the floating image will appear within the underlying images. It is possible to do a trick which is an old favourite with graphic designers – filling type with a picture element by using the picture as a floating selection and the black type as the underlying image.

Customisable colour

The other major feature of *Painter X2* is its customisable Colour Sets. This feature is designed to ensure colour consistency for cartoonists, design companies and others who need to keep tabs on the correct appearance of colours throughout a number of related works or projects. It will be useful to art departments as diverse as those involved in fashion, packaging or corporate identity.

Colour Sets and Annotation in *Painter X2* comprise an 'intelligent' colour palette, which works by giving a name to a particular colour as you are placing it into the picture. The allocated name travels invisibly with the colour. The Annotation mode then detects this and accesses the name and lists it next to the colour being used. There is a Pantone Matching System Colour set included in the package which will save some designers a lot of 'marking up' time, as anything can be annotated, including floating selections.

If you are a cartoonist, there is a neat little feature in *Painter X2* which limits the extent of fill areas. This reduces the chances of filling the entire image with a colour by mistake. Another feature useful to cartoonists and illustrators alike is the Lock-Out Colour mode which helps you fill the small, tricky-to-select areas when you are using the paint bucket. This operates by locking out all the adjacent colours and is helpful when colouring in line work, as the black of your line art can be locked out.

If you are already a *Painter 2* convert, you won't take much persuading on this one; *Painter X2* is a very powerful and useful extension. Cartoonists, illustrators and graphic designers will all find some element of *Painter X2* that will benefit them. And to anyone who is looking at replacing their old paint program, I can highly recommend the *Painter 2* and *Painter X2* combination, as the two combine to make probably the best naturalistic painting and photo montage set-up on the Macintosh.

JARGON BUSTERS

Brightness: brightness means the intensity of the light reflected from or transmitted through an image, irrespective of its hue and saturation.

Feathering: this blurs the edges of an image by creating a transition between the selection and the surrounding pixels, which gradually blends the edges of the selection.

Hue: hue is the main attribute of a colour that distinguishes it from other colours.

Luminosity: this measures the brightness of a colour. When you are modifying the luminosity only the lightness component of the pixels changes. The colour values are not affected.

Randomise: *Paint Alchemy* uses random numbers to generate quite a number of its calculations. The randomise control lets you set the initial value that is used to generate these numbers. By changing this number you can subtly change an effect in your image.

Saturation: saturation is the amount of grey in a colour. More grey in a colour means it will have lower saturation; less grey in it means your colour will have higher saturation.

PAINTER X2

Painter X2 is a *Painter 2* extension and costs £99 from Letraset, tel: 071 928 3411. *Painter* itself is £288.

Ease of use Easy-to-use controls.	90%
Documentation Natty little manual supplied.	90%
Features Fairly broad range.	75%
Value for money Good if you've already got *Painter*.	90%
MACFORMAT RATING	90%

Paint Alchemy

Paint Alchemy is designed as an Adobe *Photoshop* plug-in, so it can be used with any application which supports this format. It offers a range of painterly and naturalistic brush styles, which are similar to the brush controls found in programs like *Painter 2* and *Monet*.

With the exception of *Kai's Power Tools*, most plug-ins are limited to a single filter or effect, but *Paint Alchemy* offers more than 30 brush effects. These vary from impressionist brush strokes to some quite bizarre treatments that

even a young Jackson Pollock would have printed out and put on his refrigerator door!

Getting started with *Paint Alchemy* is really simple. If you are using it with, say, *Photoshop 2.5*, then you just have one 3.5-inch disk which contains *Paint Alchemy*. Drag this to the *Photoshop* plug-ins folder, restart and that's about it... well, except for the fact that you will need plenty of RAM in your machine if you are planning to work with high-resolution images.

Brush on the colour

When you have opened up your image in *Photoshop*, you'll find that *Paint Alchemy* has its own sub-menu under the **Filters** menu. Once selected, it will open up on screen looking like a box of five index cards. At the top of each card is a title – Brush, Colour, Size, Angle and Transparency.

You also have two other displays, the **Style** menu and **Preview** menu, which has a button which allows you to set the amount of memory used in creating your previews. Also on the Preview display you can check the effect you are generating through a white-outlined square in the display of your original image. This is great, as you can move it around on your original to see how it is affecting all the areas of your selection, plus you have the before and after displays below it. All this adds up to a good working environment, as it is clear what is happening all the time.

First you choose a style from the pop-up menu below the index-cards, then a brush from the first of the cards. You have plenty of control over your brushes for layering, randomising and positioning.

The Colour card lets you select colours from your image or from a solid colour, plus you can then vary the hue, saturation and brightness with slider controls. The Size card has two slider controls which control the variation and size of your brushes, and from a pop-up menu you can vary the following: radial distance, vertical or horizontal position, hue, saturation or brightness. The Angle card works in much the same way. The last of the cards is a Transparency card which lets you choose the amount of opacity of your brush effect. With all this control at your fingertips, you can create some fantastic natural painting effects.

Paint Alchemy will give you some of *Painter 2's* naturalistic effects from within programs like *Photoshop*. It does not quite have the degree of sophistication that *Painter 2* offers, but for a plug-in it's excellent, and at only £93, anybody who is serious about graphics and illustration on the Mac should take a look. *Gordon Druce*

PAINT ALCHEMY

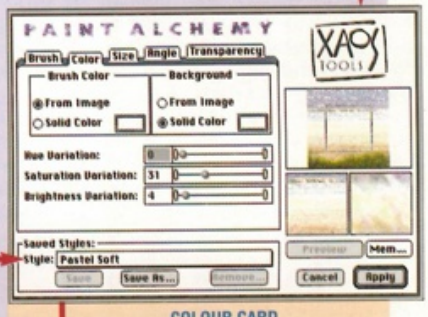
Paint Alchemy costs £93. To find your local dealer call Principal Distribution on 0706 831831.

Ease of use Intuitive and straightforward.	90%
Documentation Good, but isn't really needed.	80%
Features Enough here to do varied effects.	90%
Value for money Superb for illustrators.	95%
MACFORMAT RATING	92%

GETTING STARTED WITH PAINT ALCHEMY

Open up your image in *Photoshop*. *Paint Alchemy* has its own sub-menu under the **Filters** menu.

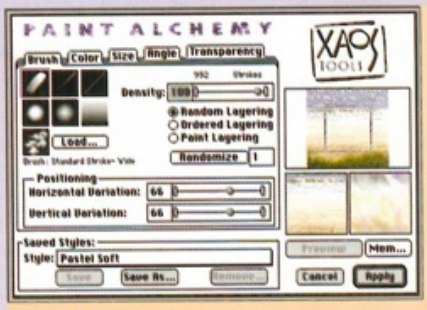
These are just some of the styles, which vary from subtle pastels to tree texture effects.



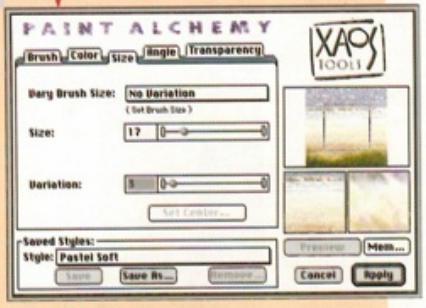
COLOUR CARD

Start by selecting one of the styles from the pop-up menu. Then you can go to the 'cards' to apply your effects. The small window gives you a useful preview of the result.

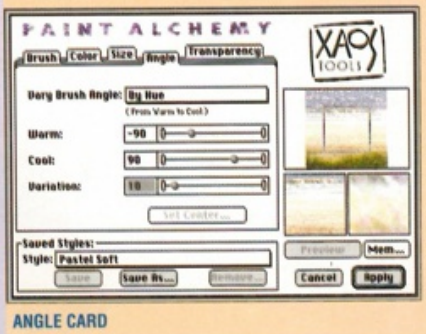
COLOUR CARD



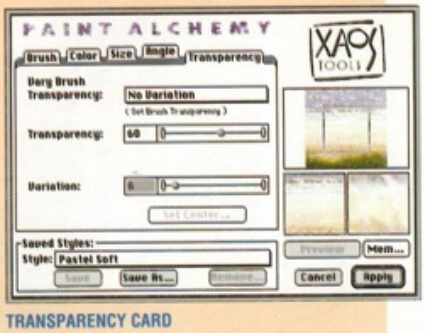
BRUSH CARD



SIZE CARD



ANGLE CARD



TRANSPARENCY CARD

It is best to work out your ideas in a small area of the image, as *Paint Alchemy* is a memory-hungry program. Once you are happy with the effect you can then treat the whole image.

Colour up!

Got a colour Mac or Performa? Here are some tips for using a spot of colour in your documents.

The Macintosh has played a major role in the shift from traditional design methods to digital ones. An important change has also taken place in the cost of colour production and printing: in the last five years high costs have become a thing of the past, and output devices like imagesetters and desktop colour printers are now cheaper and therefore more widely available.

At the high-end, colour printing of newspapers and magazines has become common, and at the low-end even your local print shop will probably be offering enlargements of your favourite photographs, output on a full-colour Canon laser system.

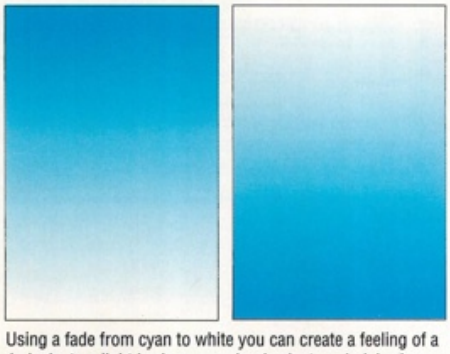
Common colour

Colour has become commonplace; what was a luxury a few years ago has now become the norm, so it's no great shock to find that designers and DTP enthusiasts alike have grabbed this new freedom with the kind of zest that you would see in a small child if you gave him a new box of multi-coloured crayons or a box of poster paints to play with. The net result is the kind of 'acid' artwork which camouflages the message and usually renders the information unreadable... colourful, but unreadable!

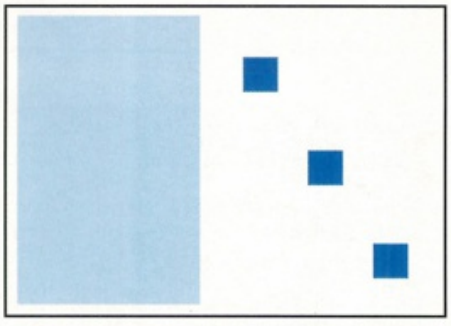
Colour gives order

When it's used wisely, colour can be a valuable tool in helping the reader to understand your message, so it's best not to underestimate its usefulness. Colour should be used to bring visual order to your information and so add value to your product.

The first idea to get clear when working with colour on your documents is that colour selections have nothing to do with choosing blue because you personally like it or choosing bright yellow for its artistic merit. Using colour on your stationery, booklets or posters has to be a deliberate act; the colours you select should aim to focus and explain your message more clearly. In short, using a colour palette constructively is about communication, not decoration. The following selection of tips aims to help you next time you come to add colour to your documents.



Using a fade from cyan to white you can create a feeling of a dark sky to a light horizon or a cloudy sky to a dark horizon.



Don't swamp the information by using a colour which is too heavy; use dark colours in small areas of your layout.

Graduated backgrounds

Many DTP and drawing programs for the Mac let you create graduated backgrounds. Just a few years ago this would have been a costly airbrushing job for an illustrator, but now Macintosh software has automated the task into a couple of commands. Now it is simple to add graduated tints to your boxes and backgrounds – some might say too simple.

By observing a few rules you can make these graduated tints work well for you. The example shown bottom left demonstrates how, by using a fade from cyan to white, you can create a feeling of a dark sky to a light horizon or a cloudy sky to a dark horizon. As people generally start to scan from the top of a page downward, this simple effect of a graded tint helps the visual interest and makes the experience more enjoyable. The same effect works when your eyes are led from the left to the right by the use of hot and cold colours – that is, from eye-catching 'hot' reds and oranges to 'cool' blues and violets.

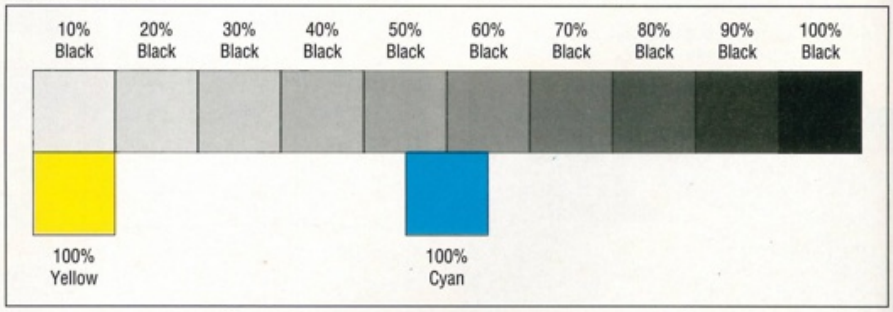
As a rule of thumb, large areas need lighter, paler, quieter colour schemes. It is all too easy to swamp the information by using a colour which is too heavy for the material. If you are working on a newsletter page, it is better to choose a paler wash of colour if you wish to cover the full area of your page. Rather than a solid or heavier tint, remember it's your message which matters, not the colours. Use your brighter, stronger colours for small areas – to highlight instructions or emphasise warnings.

Two plus black

Two colours and black – you will not go too far wrong if you remember this rule when you're next putting colour to work on your page. Keep to this colour code; it will be easier on the reader's eyes and is more likely to be remembered as 'the document with the black and light blue logo' or 'the book with the red and blue jacket'. Using this rule is much more effective than using a jamboree of clashing colours which will appear messy, confused and noteworthy for all the wrong reasons. Products and services which take only a few seconds to identify usually have a simple colour scheme. Take

Type and backgrounds

The areas of colour which surround the type will alter the legibility of your text, so make sure you have at least a 30% difference in the tonal value of the type and its background colour. Special care must be taken when you are placing white text out of your background colour; compare the colour you have chosen with its greyscale equivalent. Don't just rely on how bright the colour looks on screen.



The chart above shows why type in yellow disappears on the page: it has about the same value as the 10% black. You would not choose the palest grey for your type. On the other hand cyan has a greyscale equivalent value of about 65%. That is why it is possible to run type in process blue and be sure it will be legible. But I still prefer black, don't you?

This type sample demonstrates the relationship of type printed in colour on a coloured background

Text: 90M, 75Y. Background: 90C, 5M, 100Y. Surveys show that this is the least popular combination. It also happens to be hard to read (but you *did* notice it).

This type sample demonstrates the relationship of type printed in colour on a coloured background

Text: 90C, 5M, 100Y. Background: 90M, 75Y. A combination of green text on red background can be as bad as red on green – even worse, if the mixtures are just right.

This type sample demonstrates the relationship of type printed in colour on a coloured background

Text: 80Y, 100C. Background: 80C, 10Y.

This type sample demonstrates the relationship of type printed in colour on a coloured background

Text: 100M, 100Y. Background: 80C, 10Y. These two combinations are also not recommended for ease of legibility. If you want people to read text, play it safe and avoid text run in any bright colour if it is longer than a paragraph or two. After a while any vibrant colours begin to hurt the eyes.

for example the red, white and blue of the Esso company logo or the red, gold and black of a Mars bar wrapper. These simple combinations of two colours plus black or white are the safest and most effective route for a novice designer to get the message over clearly.

Aim to steer clear of using bright colours for your text, as they tire the reader's eyes, and aim also to avoid using too much coloured body text. Try reading coloured text for yourself; I guarantee you will find it a strain after the first few sentences.

On the other hand, coloured type is useful for highlighting, emphasising and adding to the reader's understanding. When using coloured type, set your text much larger and bolder than usual, because it does not matter how brightly coloured your text is, it will have less contrast on white paper than plain black type does.

Pictures

If you are planning to run your black and white pictures in colour, make sure you run them in strong dark blues, browns or greens, as it is all too easy to end up with washed-out pictures in your newsletter or sales document if you do not have enough ink on the page to give the image contrast. Also, try not to run flat tones of colour behind your black and white photos, as this will fill in your highlights and make the pictures look dull and lifeless.

Avoid using complementary colours of equal tone. Combinations like orange/blue or red/green all look fairly ugly, so don't use them unless one of the colours in the pair is a lot darker than the other, otherwise they will 'vibrate' on the page and that will be the end of helpful communication.

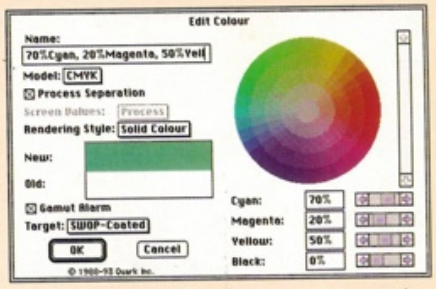
Gordon Bruce

THE DIFFERENCES BETWEEN FOUR-COLOUR AND TWO-COLOUR

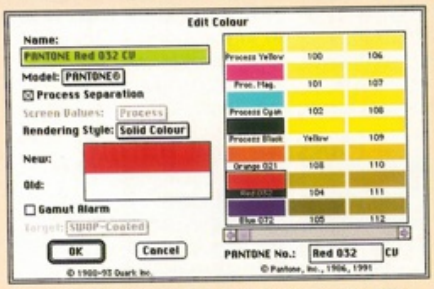
It's important to understand something of the technical differences between four-colour and two-colour printing.

In four-colour printing black, process yellow, process blue (cyan) and process red (magenta) are used to simulate many colours. Using varying amounts of the four inks, it is possible to build up all the colours, by printing them separately or on top of one another.

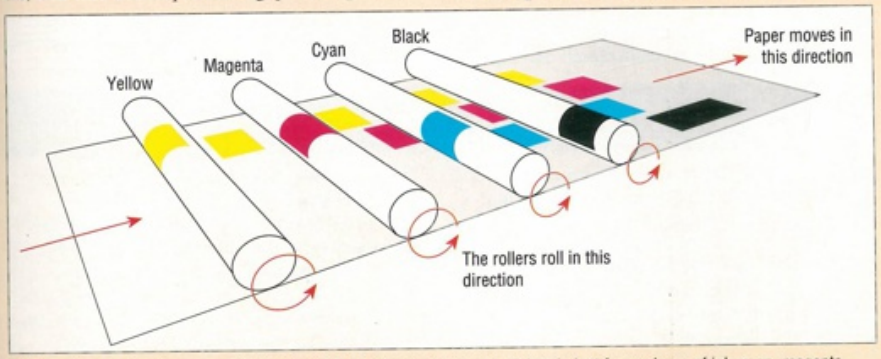
The four colours are commonly known as C,M,Y,K – 'K' stands for 'key', which is a printers' name for the black printing plate or black film separation. On their own the four colours are pretty crude. The magenta is a brash and vile pink, the yellow is invisible on white paper, except maybe in large panels, but this usually looks ugly. The cyan is the only one which is fine on its own, but it gets used so regularly, it ends up looking a bit cheap and tacky. It's hard to believe that these colours added together really do make the beautiful tones which are possible with the four-colour process. If you are adding colour to panels you can mix colour to superimpose various percentages of combinations from the four process colours to simulate any colour you wish. A good tip when mixing your colours is not to use a combined percentage exceeding 240% as this produces muddy, flat colours when printed.



When mixing colours for the four-colour process, remember that the final values should be no more than 240%.



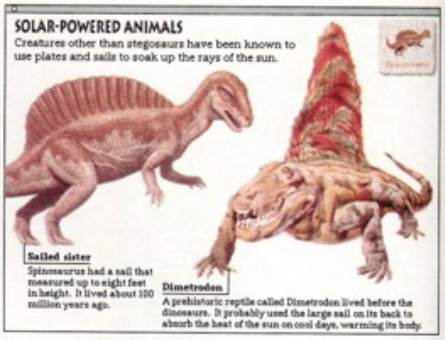
Selecting a Pantone colour in *QuarkXpress* from the **Edit colour** menu for the two-colour print process.



All the colours under the sun can be simulated by overlapping patterns of dots in just four colours of ink: cyan, magenta, yellow and black (otherwise known as CMYK). In fact, this very magazine is put together with the four-colour method.

Two-colour printing is different from four colour in that it uses ready-made inks. These 'off-the-shelf' inks, like those made by Pantone, are a set colour and not a simulation built from a combinations of other inks as in four colour. Two-colour printing lets you select a colour from, say, the Pantone matching system or your printers' ink collection and use it in a solid or as a percentage on your boxes or type.

Computer generation



Go on a multimedia outing that spans 150 million years through time, with *Dinosaurs*.

A new government-funded project aims to get schoolkids in touch with state-of-the-art CD-ROM technology within the next few weeks. What's on offer for your child?

How would you spend £4.5 million? Easy, you might think. But forget round-the-world trips, a new house and a life of leisure: you have to spend the money on putting CD-ROMs into primary schools in England and Wales. Still seems an easy task? Well, the money (from you via the Department for Education) was placed in the hands of the National Council for Educational Technology, who were told that they had just twelve weeks to design the scheme and spend the money. This ridiculously short time-scale makes the funding seem something like the baton in a relay race: it has to get from start to finish in the quickest time possible, passing from one set of hands to another, but there are several points along the way where it can be fumbled.

Passing the baton

Considering the time pressures imposed on them, NCET's solution is probably as good as you will get. They created the Primary CD-ROM Project, which, according to the press handout, is the largest of its type in Europe. They passed the baton on by asking local education authorities and the Grant Maintained Schools Centre (GMSC) to come up with their own proposals for deploying CD-ROMs in some of their schools.

The thinking behind this was that local advisers would be able to tailor the schemes to specific needs and local plans – they would also be able to make an informed choice about which schools should be involved, probably amounting to between 10% and 20% of the total in any one authority, about 2,300 schools in all.

The problem with this, of course, was that local advisers had about two weeks to come up with their proposals, leaving them little time to consult individual schools or to make decisions about how the initiative would fit within existing plans.

Not surprisingly (the packages will be free, after all!) education authorities and the GMSC made their submissions. Starting in May, suppliers will be delivering the packages to the selected schools, setting the CD-ROMs up and providing a two-hour training session for teachers. Whether the training will be 'how it works' or 'how CD-ROM can support Key Stage 1 and 2 children' is a moot point: both are required, but two hours is scarcely sufficient for the purpose.

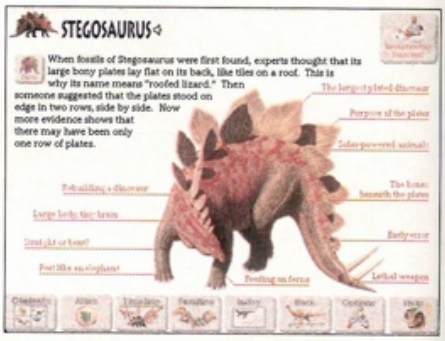
And so the baton-passing ends with the key runners in this race: the teachers who will use the CD-ROMs. It will be up to them to work out how best they can be used for the benefit of the children.

In total, education authorities and the GMSC have requested 1,127 Acorn systems, 938 Research Machines/PC systems and 232 Apple systems, roughly reflecting the current provision of the various computers in primary schools in England and Wales. The software package accompanying each of them will include 7 titles for Acorns, 10 for PCs and 12 for Apple. Of those titles destined for Mac systems, half will also be included in the Research Machines/PC compatible bundles. In short, over 300,000 children will have access to CD-ROMs provided by the project.

In *Musical Instruments*, you can play and hear more than 1,500 sound samples from 200 instruments.

Can I become involved?

Parents and other adults can do more than just shout encouragement from the stands. One way of becoming involved is suggested by Fred Daley, a director of NCET, who said, "NCET is encouraging parents to consider purchasing software for the home. Buying packages which children are already enjoying in school can build on the enthusiasm already generated in the classroom." If you have children in the primary sector and an Apple CD-ROM drive at home, this would appear to be a good idea. But it is possible to help your child even if he/she isn't one of the 300,000, or if you haven't got a



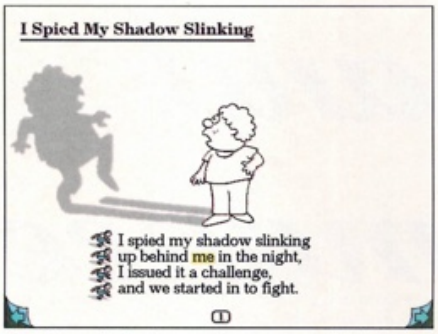
Dinosaurs is packed with 200 fact-filled articles about these fascinating prehistoric creatures.

CD-ROM: THE FUTURE ARRIVES

Compact Disc Read Only Memory (CD-ROM) has been the future of educational computing for as long as anyone can remember. One of the first systems to use the technology was the BBC Micro, which used a Laserdisc player (which works on much the same principle as a CD-ROM) to create the Domesday project – a disk containing information collated from hundreds of schools around the country. Another pioneering disk, *Ecodisc*, has since been re-issued on Macintosh CD-ROM.

Until very recently however, CD-ROM drives cost over £500 and were beyond the reach of most schools (as indeed were Macs). With recent price cuts bringing CD-ROM technology below the £200 mark, we can expect to see a similar boom in CD-ROM educational programs as they have seen in the USA in recent years.

Pack your swimmers and spend a fun-filled day with Grandma at the seaside in *Just Grandma and Me.*



New Kid on the Block is a set of poems ranging in humour from the silly to the downright strange.

The Tortoise and the Hare is an interactive, animated story book to keep the under eights enthralled.

CD-ROM drive at home.

The first thing to do is to contact your child's school and ask if it is to be included in the project. If it's not, some education authorities will be making plans for spreading the scheme to all schools at a later stage – ask the school to find out for you.

If you have a CD-ROM drive, ask whether it would be a good idea if you purchased one or more of the titles on the list: if the offer comes from a number of parents, it may be helpful for the school to identify which parent has which disc. Alternatively, it may be that the school wants you to get a title not on the list, so that your child has the opportunity to look at other discs and perhaps make recommendations for further purchases.

Next, ask how the children will be using the discs and how you can help. Teachers will no doubt be in the planning stages and may be happy to discuss this in detail, or they may prefer to leave it until the planning has been completed. In any case, most teachers would be pleased that you are interested and will try to find ways for you to become involved.

The types of activity which teachers will be developing and planning are likely to include:

- using factual and reference discs alongside paper-based materials in work which has a research element, helping children to understand the strengths and weaknesses of the different media;
- enabling children to incorporate words, sounds and images from the discs in their work, confirming that they understand the information they're dealing with;
- looking at multimedia forms of telling a story and the ways that the elements of the story are linked together, in order to extend their understandings of the many different ways in which stories can be told;
- using the discs to stimulate discussion and writing both around and away from the computer;
- developing children's abilities to read complex multimedia texts and relating those abilities to the skills and strategies for reading texts in other media;
- using the discs as models for the texts which children themselves make and, in doing so, begin to understand more about how the discs are created and how they work.

Teachers will be attempting to integrate the use of CD-ROMs into existing activities, not running lessons which centre on the CD-ROMs themselves. The reason for this is the part of the National Curriculum in England and Wales which is called 'IT Capability': it deals with the knowledge, skills and understanding that children should develop in relation to their use of IT and it is quite clear in stating that children's IT Capability should be developed through the use of IT in all subjects in the curriculum, not taught as a separate lesson.

Another aspect of schools' use of CD-ROMs which is worth noting is that teachers will not be relying on the discs themselves to teach children. Very few children are ever taught anything meaningful by the computer on its own: if this were the case, we would have no need for teachers! Instead, teachers will be looking to provide activities which entail children using computers as one resource among others, so increasing their understanding about what IT can do and developing their ability to make informed choices about when it is appropriate to use IT for particular tasks and when it is not.

Over the next few issues, MACFORMAT will be reviewing some of the CD-ROM titles in the project bundle and telling you about some of the ways in which children are using Macs in the classroom.

Phil Moore

THE APPLE CD-ROM BUNDLE

Title	Publisher	Cost	Supplied in the PC bundle?
Art Gallery	Microsoft	£53	Yes
Creepy Crawlies	Media Design Interactive	£47	Yes
Dinosaurs*	Microsoft	£53	Yes
Information Finder Encyclopedia	World Books	TBA	Yes
Just Grandma and Me	Broderbund	£39	Yes
Mammals Multimedia Encyclopedia	National Geographic Society	£62	Yes
Musical Instruments*	Microsoft	£59	Yes
New Kid on the Block*	Broderbund	£40	No
Planetary Taxi	Interactive Technologies	£29	No
Silly Noisy House	Voyager	£51	No
Sitting on the Farm	Voyager	£53	No
Tortoise and the Hare*	Broderbund	£40	No
World of Vikings	York Archaeological Trust	£59	No

Prices for all CD-ROMs are from Macademic (Tel: 071-630-6844) and do not include delivery. Telephone for latest prices.

* *Dinosaurs* and *Musical Instruments* were reviewed in MACFORMAT issue 11; *The Tortoise and the Hare* and *New Kid on the Block* were reviewed in issue 8. If you missed them, turn to page 94.

JARGON BUSTERS

DfE: The Department for Education, who can be contacted at Sanctuary Buildings, Great Smith Street, London SW1P 3BT 071-925-5000

IT: Information Technology. In the National Curriculum in England and Wales, IT is taken to refer to computers, faxes, photocopiers, telephones, videos and so on: anything that uses electronic means to store, process or transmit information or to control the operation of machines.

Key Stage 1 and 2: the new-ish names for the years of statutory primary education in England and Wales. KS1 is Years 1 to 2 (5-7 year olds) and KS2 is Years 3 – 6 (7 – 11 year olds).

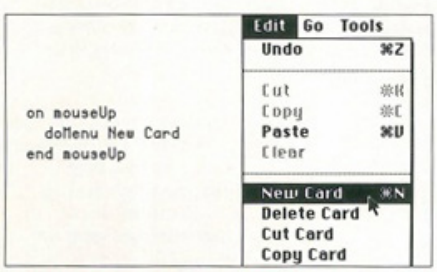
NCET: the National Council for Education Technology, a government organisation with a remit to promote the use of IT in teaching and learning. They can be contacted at Milburn Hill Road, Science Park, Coventry CV4 7JJ 0203 416994.

Command performance

HyperCard is not just a fancy database – it can do much, much more than the menus suggest. HyperTalk incorporates commands which provide the power of a fully-fledged programming language...

We've seen how *HyperCard* can be 'programmed' by intercepting messages sent routinely through the system when *HyperCard* 'events' take place. We've also seen where these messages start, and the route they take, and we've looked at the various points you can 'intercept' them. (For details, see MACFORMAT issues 10 and 11. If you missed those, see page 94.) What we haven't covered in any great detail yet is what you can do with them once you've intercepted them.

A couple of issues ago we introduced the doMenu command. Initially, at least, this is probably the single most useful HyperTalk command. You simply follow it with the name of a menu item (written precisely as it appears on the menus) to activate that menu item from within a script.



doMenu – the most versatile *HyperCard* command there is? It lets you write lines in a handler (left) that carry out any menu command (right).

But doMenu is only one of around 70 HyperTalk commands. Some of them simply mirror options available via the standard *HyperCard* menus, so we'll leave these out. Many more require a more specialised knowledge of HyperTalk than we've covered so far, so to keep things simple we'll leave these for now.

But we will look at a couple of dozen highly useful commands which you'll be able to start using straight away.

Add, Divide, Multiply, Subtract

This set of commands lets you turn *HyperCard* into an accounting package! You can use them to modify the contents of a field (which must already contain a number). For example:

```
multiply card field 1 by 4
```

Or you could add one field to another:

```
add card field 1 to card field 2
```

You can do the same thing with variables as opposed to fields, but we'll discuss variables in a future instalment.

Using these four commands you can generate whole sequences of instructions using a number of fields – it takes about as long as designing an equivalent spreadsheet.

Beep

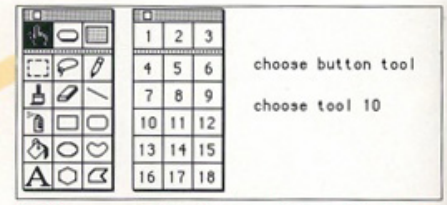
This command, not surprisingly, simply sounds the Mac's standard warning beep. Here's an example, which is also a good opportunity to demonstrate HyperTalk's if... else structure:

```
if card field 1 is empty
then
  beep
else
  add card field 1 to card field 2
end if
```

This example assumes that both fields contain numbers. It's designed to add the contents of field 1 to those of field 2, unless field 1 is empty, in which case it emits a warning beep.

Choose

You will be used to choosing the button, field, browse and painting tools from the Tools palette, but you can also select them from within a HyperTalk handler. For example, if you write a handler to create a new field, when the handler finishes, that new field will be selected and the field tool will be in use. If you want the browse tool back, your handler needs another line:



The **Choose** command enables you select any of the tools on the tools palette, either by name or number (two sample HyperTalk commands are shown to the right).

```
domenu new field
choose browse tool
```

The names of the tools are as follows (reading left to right, top row first): browse, button, field, select, lasso, pencil, brush, eraser, line, spray can, rectangle, round rectangle, bucket, oval, curve, text, regular polygon, polygon.

Delete

The **Delete** command works on the contents of fields, but not on fields themselves, or buttons, for that matter. To delete field contents, you need to specify which part. Here are a couple of examples:

```
delete line 1 of card field 3
delete word 4 to 7 background field "house"
```

Note that you can refer to fields (and buttons) by both their number and their name – both are stated in the **Field (Button) Info** dialogue.

Dial

A neat command for people who have (a) an extensive phone list, (b) lazy fingers and (c) a tone-dialling telephone. The command translates a number into a series of tones played through the Mac's internal speaker. Hold the receiver to the speaker to make your call. Here's an example in action:

```
dial background field "number"
```

Do

You're not likely to find a use for this com-

```
flash
doMenu New Card
doMenu New Field
select card field 1
```

You can execute the contents of any field (or variable, for that matter) as a series of HyperTalk commands using the Do command and specifying the field/variable.

mand too often, but it can be handy nonetheless. The easiest way to demonstrate it is to show you an example:

```
do card field "instructions"
```

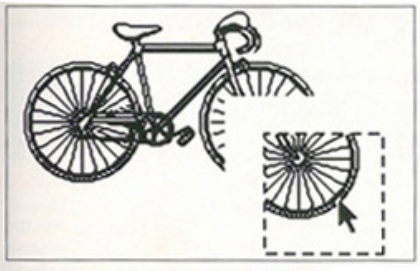
Card field "instructions" contains a series of HyperTalk commands. Instead of being incorporated into the script, they've been put into an external container.

Drag

This command, much as its name suggests, can move anything around the screen while you watch – buttons, fields or areas of a picture. Picture areas are that little bit harder to move, needing a handler which can select the appropriate area first, but something like this will do the trick:

```
choose selection tool
drag from 100,100 to 200,200
drag from 150,150 to 250,250
choose browse tool
```

This handler first selects an area of a picture, then drags it to a new location. All locations are defined in terms of the standard screen coordinate system: '100,100' is a point 100 pixels (or screen dots) across and 100 pixels down from the origin point 0,0, which is the top left corner of the screen.



You can select and move areas of a paint image automatically from within a handler by using the **Drag** command.

Find

This command works in the same way as the menu option, but allows you to specify other conditions. For example:

```
find "name" in field "contacts"
```

This will only check the background field "contents" for the specified text, rather than all the fields on all the cards in the stack.

The **Find** command can also use other specifiers, but there's no space to go into them here. Any decent book on *HyperCard* and HyperTalk will have the details – see the panel on page 62 for recommended reading.

Get

This command is a handy introduction to *HyperCard* variables – in particular, 'it'. It can contain numbers or text and it can be put into a field, or another variable. For example:

```
get field "data"
put it into field "information"
```

The **Get** command automatically puts the 'got' data into the variable it. The above handler then puts it into a new field.

Go

This command can be used to take you to another card or background. For example:

```
go card "accounts"

go card id 4132
```

Lock screen, Unlock screen

A very useful command for speeding up your handlers. Any screen updating carried out while your handler is executing slows it down. This command locks the screen until the handler has finished. The screen is automatically unlocked once it's done so. The **Unlock Screen** command is seldom necessary.

Open

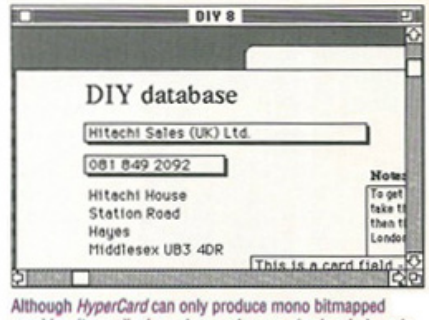
You can open other applications from within *HyperCard* using this command. If you don't get the filename exactly right, or you don't know the application's directory path, *HyperCard* will help you find it. Once you've found it once, *HyperCard* remembers the 'route'.

Open file, Close file, Read, Write

These commands let you manipulate text files and, indeed, many other file types too. The 'open file' command was used for last month's cover disk stack. These commands are quite powerful, and to be used properly – and safely – need more space to describe than we have here. Take a look at one of the books recommended this month for more information.

Palette, Picture

These two commands are a little outside our scope right now, but they let you display, respectively, custom-made floating palettes and colour or mono PICTs. These are displayed in a separate window and cannot be edited directly.



Although *HyperCard* can only produce mono bitmapped graphics, it can display colour and mono pics in windows in a separate layer. Using the picture command will bring up a file requester.

Play

You can get your Mac to produce more than a simple 'beep'. It has other sounds built in including 'boing', 'flute' and 'harpsichord'. The command is as follows:

```
play boing
```

You can specify other parameters which change the sound heard – tempo, note and octave. For example:

```
play harpsichord tempo 200 c4 d5 e6
```

Push card, pop card

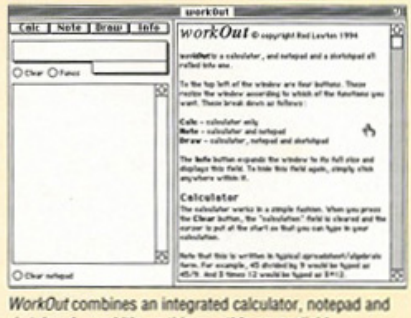
If you want to quickly visit another card but to remember your place so that you can go back again, this is how. The push command will store the current card's identity in memory,

ON THE COVER DISK...

You can only take so much theory – there comes a time when you want to see it put into practice. That's why we're putting a small demo stack on the MACFORMAT cover disk to demonstrate just what *HyperCard* and HyperTalk can do.

This month's *HyperCard* offering from yours truly is a versatile little stack called *WorkOut*. It's a combined calculator, notepad and sketchpad with a couple of useful little features. For a start, by clicking on the appropriate button you can reduce the size of the stack window when you only want to use some of its features. And the calculator, which has loads of functions, interacts rather usefully with the notepad, as well as allowing 'editable' calculations.

Just like last time, there's a pop-up 'info' field to tell you everything you need to know. Meanwhile, all the scripts are there to be examined, so you can work out for yourselves how it's done and – more importantly – see how similar techniques can be used in your own stacks.



WorkOut combines an integrated calculator, notepad and sketchpad – and it's on this month's cover disk!

while the pop command takes you back to the last card 'pushed'. Many cards can be 'pushed' at any one time, and they are 'popped' on the 'last in, first out' principle.

Put

This command 'puts' numbers or text into the named object. For example:

```
put "august" into field "month"
```

Select

This command is a quick way of selecting a *HyperCard* object from within a handler. For example:

```
select background button "home"
```

This automatically chooses the button tool and then selects a button called "home".

Set

The set command is a handy point at which to introduce the notion of 'properties'. Buttons and fields – in fact, all *HyperCard* objects – have 'properties' or attributes which can be set within HyperTalk scripts. These customisable properties are one of the keys to *HyperCard's* great programmability, and we'll be covering them in detail next time. For now, as an example, you could set the default font of a field with the following:

```
set the textFont of background field "notes" to chicago
```

Show, Hide

Very useful indeed. The easiest way to demonstrate these commands is with a pair of buttons to display and hide a field called 'notes'. The 'display' button should have the line:

```
show field "notes"
```

and the 'hide' button the line:

```
hide field "notes"
```

Interestingly, you can do this much more efficiently with a single button and the **Set** command, using a property called 'visible':

```
set the visible of field "notes" to not the visible of field "notes"
```

This line looks a bit nonsensical, but it's a neat and concise way of 'switching a field on and off'. Use it in a button script to make that button act as the switch.

Sort

The sort command can work in a variety of ways, but its most immediately useful form is the default one. This line:

```
sort field "list"
```

re-orders alphabetically all the lines in a field called "list".

tuna (tinned) birthday card potatoes eggs peas (frozen)	birthday card eggs peas (frozen) potatoes tuna (tinned)

HyperTalk can sort the contents of fields alphabetically and numerically, in ascending and descending order and more.

Wait

Useful if you're putting together a sequence designed to be watched passively rather than used interactively. The following example shows how it's used:

```
wait 60
```

The default unit for 'waiting' is the 'tick' (one 60th of a second). Alternatively, you could specify seconds:

```
wait 5 seconds
```

Parameters

'Parameters' is a horrible word. Until now we've managed to steer clear of programming jargon, mainly because HyperTalk is just about the easiest and friendliest programming language there is.

But it is also quite powerful. This is because it uses principles and techniques used in all professional programming languages. So until now we've just been lucky, but look out, it gets stickier here.

'Parameters' follow a command name. There may be only one, or there may be several, separated by commas. Some commands require parameters, some don't. A parameter is best thought of as a 'specifier'. Some commands are entirely self-contained. You could tell someone to 'go', for example. Others need a specifier. The command 'fetch', for example, is nonsense on its own – you have to tell a person what to fetch, as in 'fetch the bucket'. In this instance, 'bucket' is the specifier or, in programming terms, the 'parameter'.

We've seen a HyperTalk example already, in the doMenu command. On its own it's nonsense, which is why you have to follow it with the name of the menu item you want to 'do'. This name is the command's parameter.

Many HyperTalk commands need parameters to make sense. Many more can accept parameters, but have built-in defaults so that you don't usually need to specify them.

HyperTalk is… the easiest and friendliest programming language there is.

Parameters, it's worth noting, are not the same as 'properties' – the first are associated with commands, the second with objects. We've touched on 'properties' this month. Next month we explain this key area in detail, taking a look at the range of properties associated with *HyperCard* objects – cards, backgrounds, stacks, fields and buttons.

Rod Lawton

WRONG!

Two issues ago, in MACFORMAT 10, we printed a diagram showing the path messages take through *HyperCard*. The accompanying caption contained a mistake. It said that messages sent to background fields and buttons went straight to the background script and did not go through the card script.

Wrong! Messages sent to background objects *do* go through the card script.

Sorry about that. Rest assured that the person responsible has been given a severe flogging by the Ed. (I haven't been able to sit down for a week.)

FURTHER READING

There are quite a few HyperTalk commands that have been omitted from the above list, either because they're seldom used or because they are for advanced HyperTalk programmers only.

The best HyperTalk reference work is the manual provided with the program itself, but you can find out more about HyperTalk commands by buying one of the many books on *HyperCard*/HyperTalk. Here are two recent books worth looking out for:

HyperProgramming
This is by Colouris & Thimbleby and published by Addison Wesley, tel: 0734 794000, price £25. ISBN 0-201-56886-1.

HyperTalk and Hypertext
This one's by Stanley and published by Butterworth and Heinemann, tel: 0865 310366, price £25. ISBN 0-7506-0500-6.

HELP!

Are you having trouble getting a HyperTalk routine working? Yes? Well, fret no longer, send it in to: *HyperCard* problems, MACFORMAT, Future Publishing, 30 Monmouth Street, Bath BA1 2BW. Keep them less than 20 lines long, though, because space is limited.

Or maybe there's something you want to do with a HyperTalk handler but can't figure out how? Again, write in to the above address.

Finally, you may be a HyperTalk wizard who's just written a handler, which you think we should know about. Does that sound like you? Well, come on, you know the address by now…

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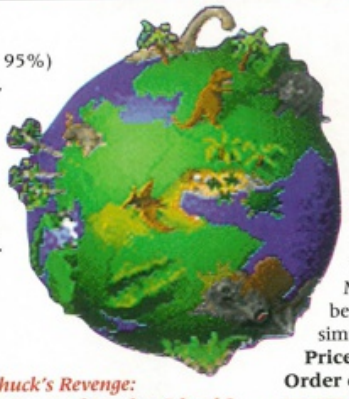
Order code: MFCIV



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Our Mac Answers section is frequently asked about problems with external SCSI devices, like scanners or external hard disks. Nine times out of ten the query can be traced to a problem with termination – the last device must either be terminated internally (the manual will tell you if it can be), or you must fit an external terminator. They can be little blighters to get hold of, so MACFORMAT has got some for you.

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Baskerville semi-bold italic
Bell
Bell italic
Bell bold
Bembo
Bembo italic
Bembo semi-bold
Bembo semi-bold italic
Bembo bold
Bembo bold italic
Centaur
Centaur italic
Centaur bold
Centaur bold italic
Colonna
Ellington
Ellington italic
Ellington bold
Ellington bold italic
Engravers Old English

ENGRAVERS
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Footlight light italic
Footlight bold
Footlight bold italic
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Garamond italic
Garamond bold
Gill Sans light
Gill Sans light italic
Gill Sans
Gill Sans italic
Gill Sans bold
Gill Sans bold italic
Gill Sans extra bold
Gill Sans ultra bold
Gill Sans condensed
Gill Sans bold condensed
Gill Sans bold extra condensed
Goudy Old Style
Goudy Old Style bold
Goudy Old Style catalogue
Goudy Old Style catalogue ital
Joanna
Joanna italic
Kino
Lydian
Lydian cursive
MATURA
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News Gothic italic
News Gothic bold
News Gothic condensed
News Gothic bold condensed

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PERPETUA TITLING BOLD
Photina
Photina italic
Photina bold
Photina bold italic
Placard condensed
Plantin light
Plantin light italic
Plantin
Plantin italic
Plantin semi-bold
Plantin semi-bold italic
Plantin bold
Plantin bold italic
Plantin bold condensed
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Rockwell light italic
Rockwell
Rockwell italic
Rockwell bold
Rockwell bold italic
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fi ffi ¼ ½ ⅛ ⅜ (Plantin Expert bold)
fi ffi ¼ ½ ⅛ ⅜ (Plantin Expert bold italic

Get networked!

Networking two Macs means you can move files without using floppies, run applications on the other Mac, and share printers. You'll need one kit per Mac (includes about 2m of cable) and an extension cable if your Macs are further than 2m apart. System 7 is required (not inc.).

AppleTalk connector kit
Price: £29.95
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10m extension cable
Price: £19.95
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THIS MONTH'S MACFORMAT SPECIAL

The first CD-ROM to be produced by a world-recognised 'creative' rather than a bunch of programmers, *Xplora 1* takes you inside ex-Genesis member Peter Gabriel's Real World studios (in the village of Box near Bath), and lets you see his videos, play with and remix his music and discover the musicians on his Real World record label. Plus you can investigate a WOMAD concert and try out obscure ethnic instruments. One of the most entertaining CD-ROMs to date.

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Back in October we offered you the chance to buy the US Robotics Mac & Fax modem at a very special price, and the response was overwhelming. So we've decided to give those of you who missed it a second chance!

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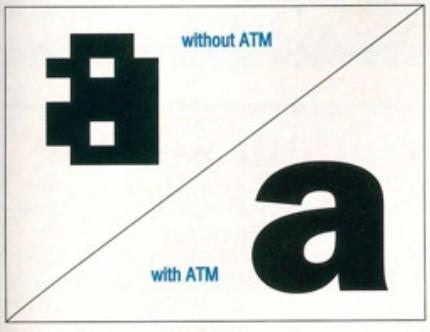

Adobe Type Manager is, quite simply, essential. It enables you to use PostScript fonts on any printer, including a StyleWriter or HP DeskWriter. It also makes PostScript fonts look superb on-screen, especially at large sizes. Jaggies disappear and what you see is actually what you get. Plus you get Adobe's wacky Wild Type font collection free!

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MACANSWERS

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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.

Do-it-yourself problem solving

One of the main causes of a program not working properly is something called an INIT clash – this ominous-sounding term means your program isn't happy with one of the system-level Extensions (INITs in System 6) that are running.

Fortunately, it's easy to check if this is the case. First of all, restart your Mac without any System Extensions (INITs). If you're running System 7.0 or above, that means restarting the Mac and holding down the [shift] key – a message telling you 'Extensions off' will appear. For any System version below 7.0, move all the Control Panels and INITs out of your System folder and restart the Mac.

If your program now works, it must have been unhappy with one or more of the INITs. The only way to work out which one is the culprit is to move them all out of the System folder, then put them back in one at a time – not forgetting to restart your Mac after each one – and test the program again after each one has been replaced.

DIY Mac applications

PROGRAMMING

Q Could you recommend a full programming language for the Mac? I want to write stand-alone programs. I've never programmed the Mac before, but I'm experienced in BBC Basic.

Evan Brown
Inverness

A This is a common question, and it's worth taking a little time to examine the options open to anyone who wants to create their own Macintosh applications.

The first possibility is *HyperCard*. This is a much-maligned piece of software – many people accuse it of not being powerful enough to write 'real' programs in, but in fact several commercial applications are based on *HyperCard*, and with the addition of XCMDs (separate utilities which enhance the functionality of the basic product by adding extra commands) you can do just about anything that you want to. If your Mac is more than about 18 months old, you will have received a copy of *HyperCard* with it; otherwise you'll have to buy the developer's kit.

After *HyperCard* come the 'real' programming languages. One which can be highly recommended is Prograph, which takes a novel approach to the subject. Prograph is totally graphically-oriented. Writing a Prograph program is a little like drawing a flowchart – data flow and program operation are defined by diagrams. Don't let this put you off, though – Prograph is most definitely a serious programming environment, and a very powerful one at that. It can produce stand-alone Mac applications, and the beauty of the development environment is that things like windows and menus are automatically handled for you – you don't need to spend your days leafing through *Inside Macintosh* and other hideously technical publications.

Most commercial applications these days are written in either Pascal, C or C++. All three languages are available from Symantec (*Think Pascal*, *Think C* and *Symantec C++*). However, be warned that programming the Mac using C or Pascal is no easy task. You'll have to buy at least three or four volumes of *Inside Macintosh*, Apple's technical reference (published by Addison-Wesley and available from good computer bookshops everywhere), and be prepared to spend a great deal of time getting the hang of the way the Mac does things – coding for the Mac is rather different from coding for, say, a DOS computer.

Whatever language you decide to go for, good luck – and if you write any shareware or freeware, do send us a copy to review! *SH*

Printing – the number's up

GENERAL/SYSTEM

Q 1. When using PageMaker 3.01 *with MultiFinder I find that printing in Best Quality prints a series of two-digit numbers.*

*2. After reading your Mac Answers in the February issue about startup screens, I looked in my paint program (*SuperPaint*) to see if it had the ability to save in this format. Surprisingly it did! The only problem is the screen always appears off centre. Why?*

J Pearson
Cleveland

A 1. We spoke to three people who had seen this happen, but they all said it would have been at least four years ago and none of them could remember the details! This suggests that the problem was easy to solve, as what these old-timers did manage to remember was that *PageMaker* will actually print in Best successfully under normal circumstances.

There are a few reasons why this problem might come about. When you print from an application to an ImageWriter, the bitmap on-screen must be converted to a language that the printer understands, so it accepts these instructions and reproduces the bitmap on paper. These two-digit codes will be printer control codes (telling it exactly where to put the dots by moving the print head in conjunction with the line feed) which haven't been converted successfully. Best Quality involves the head going over the paper once and then coming back in reverse, thus inking the paper twice for extra density. It looks like these more complicated instructions weren't transmitted fully, so the problem could be a faulty printer cable, or perhaps badly set DIP switches. It's possible that the printer is set up as AppleTalk but connected via the serial port, though this would surely cause other problems.

You mention running under MultiFinder. If your setup prints OK using the regular Finder, then that could be your answer. Also, you say that your system is 6.0.2. I would recommend that you upgrade this to 6.07 – it's possible that your problems are caused by this. Other possibilities are a bad ImageWriter driver (try replacing it with a fresh copy), lack of disk space (try deleting something you don't need any more), or perhaps faulty hardware – try the other port (printer/modem), or as a last resort even try printing from another Mac.

2. The reason for your Startup Screen problem is rooted in the mists of Mac history. The original version of *MacPaint*, which is of course the 'standard' paint program on the Mac, actually worked on a page the size of the Mac 128 (or Mac Plus) 9-inch screen. When you make up your Startup Screen in *SuperPaint* you will most likely be working in A4 size. So what you will

get when you save is a truncated document, which is the size of the Plus screen. You could set up your new (Startup Screen) document to be the same size as the screen on your SE to stop it being off-centre. *LMcR*

Welsh language worries

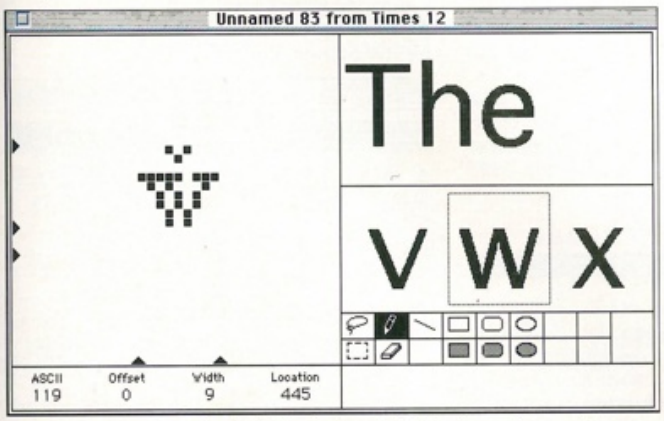
DTP

Q *Like hundreds of other Mac users in Wales, I work entirely in the Welsh language. Despite being a wholly separate language, Welsh uses the same letters and diacritical marks as English, with two exceptions: a circumflex (^) is used on the letters 'w' and 'y' (which count as vowels). However, when I use the marks provided on standard fonts for other vowels (***[option] [I]***, then the required letter), this happens: ^w, ^y. My only choice is to buy expensive fonts from MEU Cymru, or software which includes this anomaly in its multilingual option, such as* WordPerfect. *Is there any way I can adapt my favourite word processor,* ClarisWorks, *to put a circumflex on 'w' and 'y'? Why can't Macintosh provide them as standard anyway, considering the vast number of people who use the Welsh language in work and education?*

Diolch yn fawr,
Emyr Davies
Caerfyrddin, Dyfed

A There are a few ways in which you might achieve this. See the DTP column in MACFORMAT 10, March, for information on kerning, which will bring the two characters on top of each other. If you're running a program that doesn't support this (unfortunately *ClarisWorks* is one such program), you might need to create yourself a font. You can do this through *Fontographer* or *FontStudio* to get a good quality PostScript font.

If you don't have this then you could always edit the screen font you use most often, using *ResEdit* (which was yours free with MACFORMAT last issue!). The best approach would be to set up a character you never use (there are a few you will find represented as boxes (‡ s) and accessed by key sequences such as **[shift] [option] [7]**. The results won't look as pretty as they would with a *Fontographer*-generated PostScript font, but in fact the low quality will be less obvious on a low-end printer such as an ImageWriter. However, you will be able to add diacritical characters which are obviously Welsh. *LMcR*



You can edit screen fonts using *ResEdit* (on last month's disk) – the results may not be pretty, but you can create custom characters like Welsh letters.

Processor speed

BEGINNERS

Q *1. What's the difference between an 030 processor and an 040 processor? Is it speed or baud rate?*
2. How does SuperATM *work? Do you need printer fonts in your fonts folder to display type at odd sizes? Do you need printer fonts at all if you're not connected to a printer? Does* ATM *interpolate by drawing curves around bitmap screen fonts or does it use the Adobe sans and serif fonts to emulate the fonts? Please explain in simple terms.*

Christopher Cooper
High Wycombe, Bucks

A 1. The Motorola 68030 is the chip at the heart of a whole range of Macs from the SE/30 to the LCIII, including most PowerBooks. The 68040 is used in the LC475 and Quadras, so clearly the faster Macs have an 040 in them. Of course, speed is usually an important difference between different versions of any processor family, but that's not all there is to it. It's actually a little like an upgrade to your word processor or graphics program – it may operate faster, but there will be new features too. A processor has an instruction set, which contains the various machine code operations which can be used by the programs to perform the various tasks required of them. The 040 set added new instructions and indeed these will contribute to the overall speed increase. But the main difference was the introduction of a 'copyback cache', which is a small area of high-speed memory which will store frequently-used instructions so that the processor chip can access them more quickly. This contributes greatly to the speed of the processor, though some software has problems with this cache, hence the Cache Switch Control Panel. If you have to turn this off for compatibility reasons, you will see the difference, as a Quadra slips to roughly the speed of the IIci without the cache being on.

The other figure you will often see quoted is the clock speed. This refers to how fast the processor can perform one instruction – obviously the higher the figure, the faster the chip.

Speed is a fairly arbitrary concept in that you could be referring to screen redraw, file copy, or mathematical calculation, but generally an 040 processor should outperform an 030 regardless of the clock speeds, unless of course one of the machines is fitted with an accelerator card or co-processor. A graphics accelerator does exactly what its name suggests, but a co-processor is an extra chip (the 68882 is most likely) specially designed to speed up calculations. It's not just things which are obviously calculations – *Excel* spreadsheet work, for example – that will benefit from this, effects in *Photoshop* also need a lot of computational power and the co-processor will help in this area greatly.

The term 'baud rate' is actually a measurement of how fast data is being transferred between computers, usually via a modem link; it does not refer to the speed of the computer's own processor.

2. *ATM* (the non-Super version, though it's still pretty good) works by taking the information in any PostScript printer fonts you have installed (in much the same way as the printer would) and drawing the fonts on screen. Note that it needs at least one size of the screen font loaded, as a starting point – apart from anything else, the font wouldn't show up in the Font menu otherwise. So it doesn't actually draw around the bitmap as such.

If you want to display fonts at 'odd' sizes – anything which you don't have a screen font for in other words – then, yes, you will need *ATM* to do this. If the screen font for the size you want isn't there, the system simply scales a screen font it does have, hence the 'jagged' appearance that you will be familiar with. However, the system will use the screen font if it's there and will actually work a little bit faster in redrawing, so it's worth having a couple of the screen font sizes you'd use (9, 10, 12 point, perhaps) anyway.

You don't need printer fonts if you don't have a printer, unless of course you care about the on-screen appearance of your fonts, for example if you are doing a presentation on-screen in a presentation program like *Persuasion*.

SuperATM takes this one stage further in that it doesn't need either the PostScript or screen fonts to be present. How does it manage this? It uses the Adobe sans and serif fonts to simulate the missing font. Note that it doesn't give an exact replica of the font, but merely gives it the correct size, leading, etc so that the layout of the text on the page is preserved. It will also print nicely, although it may be obvious that it is not the correct font. However, it will certain-

JARGON BUSTERS

DIP switches – a row of eight or so on/off pins set under the cover of a printer, which determine settings that generally override software instructions.

RISC – Reduced Instruction Set Chip. A microprocessor which is optimised for top speed by stripping out more complex features.

Unix – an operating system used in mainframe computers. Famous for being hard to use.

AIX – Apple's version of Unix for the Mac.

PowerMac – the next generation of Macs designed to use the PowerPC RISC microprocessor chip.

ly look acceptable and it'll be more than adequate for proofing purposes.

Now, all this applies to bitmap or PostScript fonts. TrueType fonts are another option which come with any new System for the 'standard' Apple fonts such as Times, Helvetica, Courier, Palatino etc. These actually combine all the best features of PostScript fonts and *ATM*, giving smooth display and printout on non-PostScript printers, and if you are always going to use the Apple fonts for screen or print then you don't really need *ATM*. This only becomes necessary when you get bored with the 12 or so TrueType fonts that come with the system and want to start using PostScript ones again. *LMcK*

Virtual memory matters

GENERAL/SYSTEM

Q 1. My friend has got an LCIII, and his System Folder takes up almost twice as much room as mine (I have an LC) even though we seem to have the same things in our System Folders. Also, his System software takes up a lot more RAM than mine, even if I have more Extensions running,. Why is this?
2. I have just read a review on the new RAM Doubler *program. Does this slow down your Mac like Virtual Memory does?*
Mark Ainsworth
Nuneaton, Warwickshire

A 1. If you really have the same items in your System Folders (and there isn't a large colour TIFF file inexplicably tucked away in the Preferences folder – it's amazing what you can find) then the differences must come down to sizes of your individual files. You could get a list or a print-out of your directories and compare them – go to the **View** menu, select **by Name** and open all the folder arrows. Also, if you go to the **Views** Control Panel you can turn on **Calculate folder sizes**. This will slow down the redraw but will be useful as a temporary measure to check this out.

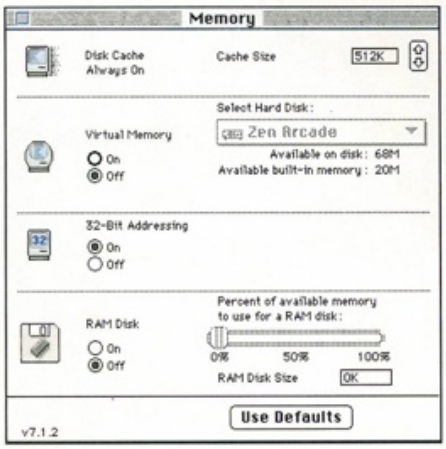
I don't know exactly what files you will have on your system. One I find can take up a lot of space is the *Microsoft Mail* data file. Your messages are stored here and of course it will vary from machine to machine.

Also, you don't say which System software version you are running. Up until version 7.1, bitmap fonts were stored in your System file (they should now be in the Fonts folder), which isn't something that you would always think of opening. Under system 7.x you can double-click and inspect its contents just like a folder. You might also find sounds in here, which could be space-hungry.

I also notice you mention Virtual Memory in your question. Could it be that your friend has VM turned on whereas your LC does not? This will take up disk space, while the other settings in the Memory Control Panel, such as RAM Disk or the Disk Cache, will use up RAM.

2. *RAM Doubler* – the really big problem with Virtual Memory is that since the hard disk is used as the virtual area, disk accesses need to be made frequently. The mechanism of accessing a hard disk is much slower than simply accessing RAM, which has no moving parts.

Really VM is most useful for when you need the extra memory space to get another program



Use the Memory control panel to add virtual memory – and slow your Mac to a crawl.

open or a file loaded. It will never speed things up, unlike extra conventional RAM chips which, by allowing a program to sit in memory, cuts down on time-consuming disk accesses.

RAM Doubler doesn't actually use the hard disk for storage, and while the process of compressing and decompressing data will take more time than it would if you actually had the extra RAM installed in your Mac, it will be much faster than Virtual Memory. *LMcK*

Missing Megabytes

HARDWARE

Q I have just purchased a 120Mb hard drive, but after putting 53Mb-worth of stuff on it, I notice that the 'amount used' plus the 'amount available' only adds up to 112Mb. Where has the other 8Mb gone?
Stanley Mail
Woolton, Liverpool

A Some of the space is used up by the invisible Desktop files which keep track of things like what applications you have on your disk and what icon each file should use. On a large hard drive the two Desktop files can easily take up a megabyte or more of space. However, as regards the rest of the 'missing' space, I'd say that when your hard drive was formatted, the formatter didn't take advantage of all the space available. This frequently happens – especially if the drive was formatted using Apple's *HD SC Setup* utility – and the only solution is to re-format the drive, which will destroy all the data that you have stored on it. Try to use a third-party formatting utility, since this will squeeze as much space out of the drive as possible. *JW*

Apple File Exchange

GENERAL/SYSTEM

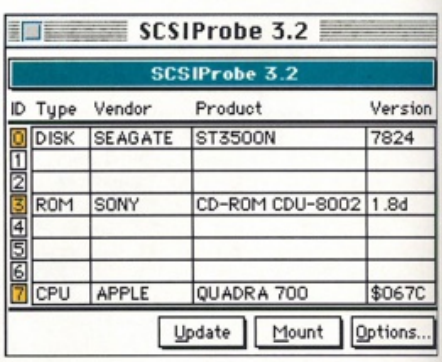
Q Apple File Exchange, *which came with my Mac when new, fails to run and I get the message "The application has unexpectedly quit because an error of type 1 occurred." I know how to rebuild the Desktop by holding down* **[option]** *and* **[command]** *when restarting, and I can start with no Extensions by holding down the* **[shift]** *key, but this does not help. I have also tried increasing the program's memory allocation from 256K to 512K but to no avail. I am baffled! (When it runs at all, it always does so without problems.)*
Andrew Humphries
Milton Keynes

A This is a rather vague problem, unfortunately. There are many factors that can cause a crash, often in weird and unexpected combinations. You have actually carried out good standard troubleshooting already: running without Extensions and a Desktop rebuild are always worth a try. You say the problem is random – but just how random? Observe closely whether the problem occurs when you try a particular procedure. Perhaps it's always during a translation; if that's the case then it could point to the filter file. If it's during disk insertion (OK, that's rather less random) this could suggest a problem with the drive or floppy disk. If *AFE* is just sitting there minding its own business, or it crashes on launch then maybe there's another factor apart from the program. Is another application running at the same time? Try with *AFE* on its own. Finally, it's possible that the program itself is damaged. It's a painless task to get your master disk and copy all the relevant files back on to your hard disk, or indeed you might want to check if there's a newer version than the one you already have. Watch for a detailed feature on trouble-shooting in MACFORMAT soon. *LMcK*

What is PCMCIA?

HARDWARE

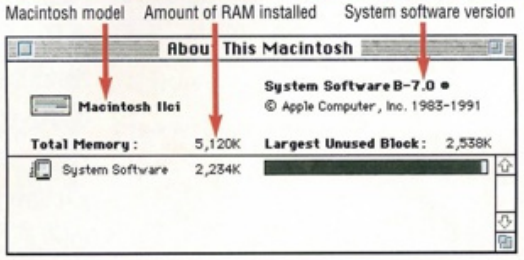
Q 1. I have an old Taxan (KAGA) RGB monitor left over from the Apple IIc (does that date me?) and I would like to buy an LCII or III (or even a 475) processor. Is it possible to use my monitor with those machines until I can afford to buy a decent monitor (eg a 13-inch high def.)? If not, would it work with a Mac Classic or PowerBook to provide at least an indication of colour?
2. What is a PCMCIA slot and does it exist on my LC?
3. Does the power supply on my LC have enough power to drive a second internal drive or is it better to have an external with its own power supply? I notice that my machine seems to take a while starting up in the morning, with the drive sounding as if it's starting and stopping! I also get an eerie whistling and then falling, when starting up.
Brian Winter
Monte Santos, Portugal



SCSI Probe is essential if you have any external peripheral attached to your SCSI port.

HOW MUCH RAM HAVE YOU GOT?

Obvious but true: even the same models of Mac can have different amounts of memory or run different System software. To solve your problem, we need to know all about your setup, and this is where you can find out. Make sure you are in the Finder, point to the **Apple** menu and go to the first item **About This Macintosh**, then release the mouse button.



A 1. Simply, it's very unlikely that you could use this monitor on your Mac. I don't know this model, but generally a Mac can't use a PC monitor, full stop. Until recently, that is – more recent Macs like the LC475 or Quadra 650 can use Multisync monitors, provided that they have the correct adaptor. They're just PC-type VGA monitors but they're called Multisync as they can work at different scanning frequencies, thus being able to cope with input from Macs as well as PCs. Conversely, Apple's Basic Colour (14-inch) monitor can be used with some PCs too.

2. To plug an add-on into your Mac, both need to have the same sort of connection – not just the plug itself, but the wiring involved as well. The Personal Computer Memory Card International Association (PCMCIA for short, not surprisingly) is an organisation comprising major hardware manufacturers who have set a new standard which is mainly aimed at hand-held or mobile computers. The specification is expanding: version 1 deals only with memory cards, but version 2 encompasses fax modems, SCSI cards and even radio pagers. The Newton is one example of a device supporting PCMCIA. Apple's support of this standard means that a greater variety of add-ons should be available as they will be compatible with other similar devices.

PCMCIA at present is only to be found on the Newton. Apple's new slot standard for the current Macs is the PDS (Processor Direct Slot). This will take a variety of types of card. The PDS tends to be used for system functions, like accelerators or the new DOS board for the Quadra 610 (a plug-in that enables the machine to run PC software). Apple's other card standard, NuBus, is more commonly used for graphics, network or the interfacing of other external devices.

3. Strangely, the hard disk in my SE/30 started to make a whistling noise just before I got to this paragraph. It does it occasionally, without ever giving any other problems, touch wood. The problem is that it could mean something else – there could be a problem with the fan for instance, which could be an expensive repair if it packs in. But some of the earlier Mac fans and indeed third-party hard disk are notoriously noisy. I had a 30Mb disk which would start and stop during startup. One day it stopped. And that was that.

I suppose the rule is – if it's always done it, it may not be a problem, but if it's a new phenomenon, you might want to consider getting it checked out. *S McK*

MACANSWERS

If you send in a question for the MACFORMAT experts to solve, please fill in and include this form (or a copy of it). And please make sure that you include all the relevant details – version numbers of software and so on – so that we have the best chance of helping you. Send your form and question to: **Mac Answers, MACFORMAT, 30 Monmouth Street, Bath BA1 2BW, or fax it to us on 0225 446019.**

Name .....

Address .....

.....

.....

Your Mac
(For example, Performa 200, IIfx, PowerBook 145):

.....

Approximate age of machine: .....

System version
(see About this Macintosh screenshot above):

.....

Amount of RAM
(Total Memory figure from the About This Macintosh dialogue box):

.....

Are you using virtual memory? .....**YES/NO**
(This is accessed from the Memory control panel under System 7)

Do you have 32-bit addressing turned on? .....**YES/NO**
(This is accessed from the Memory control panel under System 7)

If your Mac has an external monitor, list the make and model; if you are using a video card, give details:

.....

.....

Details of any SCSI devices connected
(eg CD-ROM drive, hard drive, scanner):

.....

.....

Details of any other relevant hardware which could help us to answer your question:

.....

.....

.....

Now, use this space to describe your problem or question. Include as much relevant information as possible. Please continue on a separate sheet if necessary.

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Action Brush
Aggie
Ajax
Alyssa Bold
Alyssa Italic
Alyssa
American Caslon Italic Swash
American Text
Bass Script
Benson Oldstyle Medium
Benson Oldstyle Medium Italic
Bernhard Bold Cursive
Bevis Bold
Bevis Extra Bold
Blizzard Casual
Brandenburg
Campanile
CAMP CAPS
Candid Ballpoint
Carolina Brush
Cather
Cather Italic
Champion Script
Cooke Sans
Cooke Sans Italic
Cooke Sans Bold Italic
Cooper Five Black
Corvinus Skyline
Dom Diagonal
Furst
Furst Bold
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WHERE'S IT FROM?

People often ask us, just where do you find all this great new shareware? The place to go for the most up-to-date stuff is (of course) the Internet, the international comms network. I keep an eye on the Usenet news group comp.sys.mac.digest, where every week or so a list of new shareware is posted by the administrators of the Macintosh anonymous ftp site mac.archive.umich.edu. It's there that I find all the software that you see here.

If none of the above made sense to you, then stick to the other sources of shareware listed in the 'where to get it' box on page 77. (Or, of course, read our Comms pages until you start understanding terms like 'anonymous ftp'.) But if you've access to the Internet, or can use anonymous ftp in any form, then check out the umich archive (or its UK mirror, which is at src.doc.ic.ac.uk). It's the best source of up-to-the-minute shareware I've found.

PD AND SHAREWARE – WHAT EXACTLY ARE THEY?

PD is short for 'public domain'; it's software that may be freely shared around among users – there is no fee to pay. It can be obtained from PD houses (companies which specialise in collecting together and distributing this sort of software, usually for a fee), user groups and bulletin boards.

Actually, most free software isn't PD – it's what's known as 'freeware'. This is because putting a piece of software into the public domain deprives the author of any rights to, or control over, that software. So someone else can modify it, claim ownership of it and even sell it as a commercial package. Most programmers are not at all happy at that sort of thing, so the concept of 'freeware' was created. This is software which you can use for no charge, but which the author still retains rights over. For example, many freeware authors specify that their programs must not be altered, and may only be distributed if they are accompanied by the documentation files. For simplicity, though, most people still refer to this type of software as 'PD'.

Shareware is a form of 'try before you buy' software selling. You can obtain the programs from the same sources as PD and freeware, but if you like the software, you send the author a contribution – normally somewhere between $5 and $40 (most shareware authors live in the States). In return for this 'registration fee', you often get upgrades or documentation, so it's well worth paying up.

Shareware and PD

Stuart Anderton scours the digital superhighway for this month's selection of low-cost and no-cost software...

Dragonmaze

DUNGEONS AND DRAGONS GAME

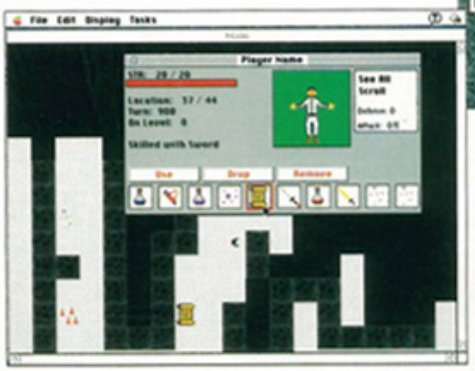
Shareware $19.95

Dragonmaze is an extremely unpretentious *Dungeons and Dragons* style game. Most such adventures involve immensely convoluted setting up and an in-depth understanding of eight-sided dice throws, but *Dragonmaze* makes it all nicely simple.

You wander through a labyrinth, controlled by the mouse. Walking over an object picks it up and walking into an enemy attacks it. Naturally there are potions and magic scrolls aplenty, as well as a few strategically placed swords to make life easier. The graphics are scarcely state of the art, but they are functional enough – in colour only.

Dragonmaze is entertaining enough for a few minutes' casual play, but you won't find hours of puzzles and fiendish traps. However it's so simple to get into that you'll find yourself comng back to it frequently.

Registering gets you a version which runs in black and white too, and has more monsters and mazes.



Magic made simple with *Dragonmaze*, the D&D game for the impatient. Must go, I've got enemies to walk into...

FontClerk 5.0

FONT MANAGEMENT PROGRAM

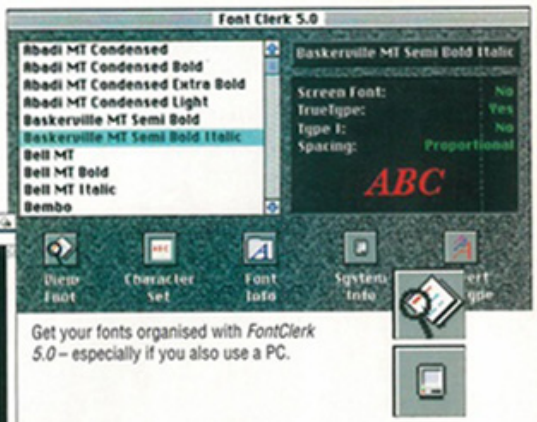
Shareware $20

Version 5.0 of *FontClerk* is a handy utility for anyone who tends to be a bit of a font hoarder.

The program gives you complete information about the fonts installed in your system. You can instantly see if they are TrueType or PostScript, you can view the complete font, and you can discover which key combinations to use to get the more unusual characters.

Users of Windows PCs (there are those...) can use *FontClerk* to convert between Windows and Macintosh TrueType fonts, so you can more easily swap documents between the machines. Otherwise you may find that Times Roman under Windows is slightly different from Times Roman on the Macintosh and all your documents reflow.

FontClerk will also print out a catalogue of the fonts installed in your Mac, so you can take a first step towards diagnosing any font problems you might have.



Get your fonts organised with *FontClerk 5.0* – especially if you also use a PC.

sAVe the Disk

AV MAC ENHANCER

Freeware

Not being super-rich I don't have access to an AV Mac, so I couldn't try this extension out, but it's supposed to speed up these already pacey machines still further.

The documentation goes into the technical ins and outs of how it works – all to do with disk caches, resource management and sound channels, apparently – but all you need to know is that you drop this Extension in your System folder and your AV Mac runs faster. Sounds good to me! Well worth getting if you're one of the lucky ones with an AV Mac.

Glidel

DRAG-AND-DROP FILE OPENER

Shareware 200FFr

Glidel is a small Extension which adds to System 7's drag and drop function. Drag and drop enables you to select a document file and drag it on top of a program's icon – the program should then open it, even if it is not the original creator of the program (a *MacWrite* file, say, can be dropped on *Microsoft Word*). This is a very useful feature which removes the need to open your application first, then use the **Open** dialogue to get to the file you want to open. However, the program icon must be visible to do the drag and dropping.

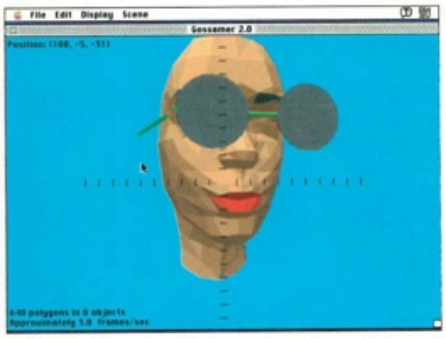
Glidel adds the ability to drag and drop on to an Apple menu item, so it is always available no matter what is cluttering the screen. It even works with hierarchical menu utilities such as *BeHierarchic*. It certainly reduces desktop alias clutter dramatically.

Glidel extends System 7's drag and drop feature to the Apple menu, leaving your desktop free of icons.

Gossamer 2.0

VIRTUAL REALITY 3D RENDERING SYSTEM

Freeware



With *Gossamer* you can create 3D rendered images and explore entire virtual worlds for free!

If you've fancied having a crack at *Lawnmower Man* style three-dimensional rendered graphics, but have been put off by the price of programs like *MacRenderman*, you might want to check out *Gossamer 2.0*.

It enables you to build three-dimensional worlds, place 3D objects in them, change their surfaces, add lighting, and view the resulting virtual space from any angle. And it's free.

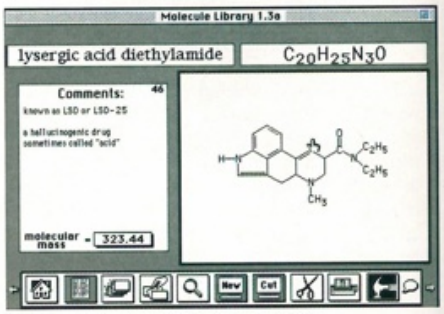
It's easy enough to use if you're just browsing through the selection of worlds provided, but creating your own is more tricky. *Gossamer* is however compatible with the similar shareware PC program *Rend386*, so plenty of worlds exist to play with.

Gossamer isn't 100% stable, but it is free and it's a good way of having a go at what is otherwise a very expensive game.

Molecule Library 1.3

CHEMISTRY DATABASE

Freeware



Here's one of my favourite organic molecules...

If you're a student or teacher of chemistry, you'll know what a pain it is drawing complex molecules. This *HyperCard* stack contains diagrams of several hundred common organics, which can be searched for my name or formula

HYPERCARD SHAREWARE STACKS UP

Grimoire

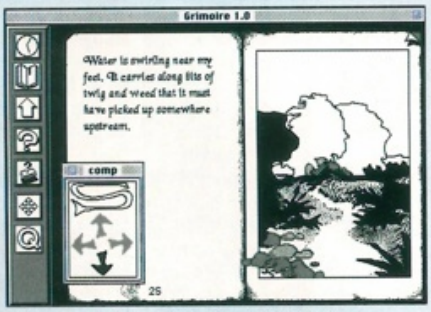
HYPERCARD ADVENTURE GAME

Freeware

HyperCard could have been designed for writing simple adventure games, and this one is a pretty good example.

The idea is that the book (the grimoire) tells the story, and you choose which direction to go when you turn the page. Nothing too original there, but it makes *HyperCard's* black and white interface more bearable.

This is a Scottish game, which makes a change from all the American adventures, but you have to be a real adventure fan to enjoy these things properly.



Which way now? Lost in the adventure of *Grimoire*.

Henry V

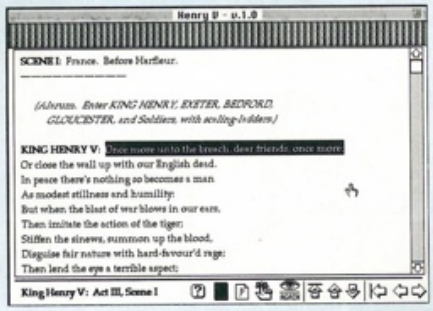
HYPERCARD SHAKESPEARE

Freeware

Henry V is the latest in Mark Zimmermann's series of *HyperCard* Shakespeares. You can search for text, make notes and go directly to any passage you like, and the interface is clear and simple.

Great for schools, the series now includes: *A Midsummer Night's Dream, Romeo and Juliet, Richard III, Sonnets, As You Like It, Macbeth, Henry IV Part I, Venus and Adonis, The Merry Wives of Windsor, King Lear, Henry IV Part II, The Rape of Lucrece, The Tempest, Titus Andronicus, King John, Twelfth Night, Othello, Richard II, A Lover's Complaint* (& other poems), *Much Ado About Nothing* and *Julius Caesar*. By my count, that leaves only 20 and a half plays to go...

Mark is still working on the rest of the Shakespeare canon, as well as starting on other authors.



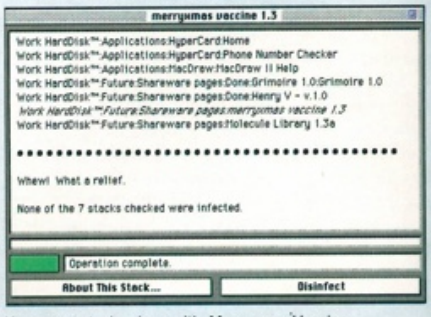
Takes me back to fourth year English lessons, does this.

Merryxmas Vaccine

HYPERCARD VIRUS KILLER

Freeware

Some sad individuals have found that it's possible to write a *HyperCard* virus. This stack is a virus checker which removes the very unmerry 'merryxmas' HyperCard virus which was doing the rounds last year.

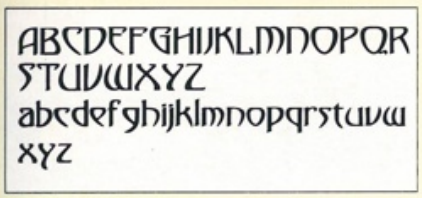


Keep your stacks clean with *Merryxmas Vaccine*.

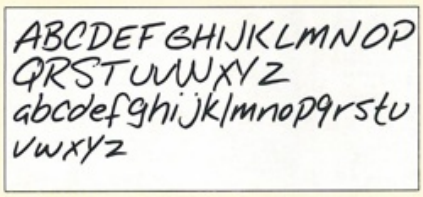
Gismonda, NotePad, ZedFont

FONTS

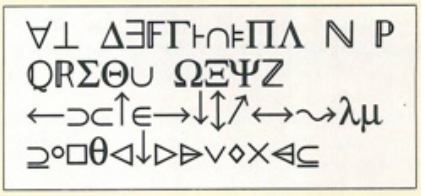
Every month sees dozens of new freeware and shareware fonts appear. They vary hugely in quality and usefulness. But if you're looking for something new and different, you may well find something to suit your needs more or less adequately. For instance, Gismonda is an ornate, art deco font, NotePad is a hand-written font for notes, and ZedFont font contains a selection of mathematical symbols.



Gismonda: an art deco font.



NotePad: a casual handwriting font.



ZedFont: a mathematical symbol font.

and then copied to the clipboard for pasting into a word processor or DTP document.

Molecule Library should save hours for anyone involved in organic chemistry.

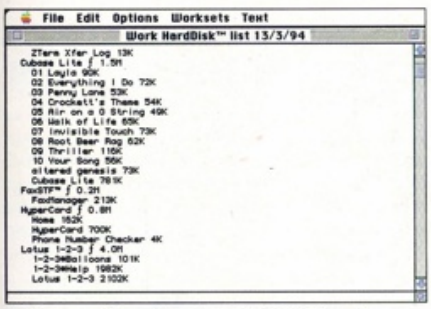
List Files

DISK MANAGEMENT UTILITY

Shareware $5

If you've got tonnes of stuff on your hard disk, you might find *List Files* handy. It creates a text list of every file on your disk. You can decide what information about the files you want included in the list, and set up filters so only certain types or sizes of files are listed.

If you have an orderly type of mind you may find this program useful.



List the complete contents of your hard disk down to every last file. Ideal for trainspotters.

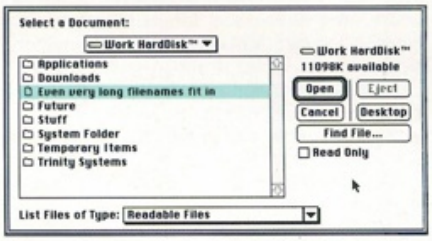
Open Wide

ENHANCES USER INTERFACE

Postcardware

One of the great advantages the Mac has over PCs is that ability to have long filenames up to 31 characters in length. Unfortunately most **Open** dialogue boxes don't allow you to see the full name – irritating if the are files called "My report on our finances, part 1" etc, and the number cannot be seen!

OpenWide fixes this by widening the dialogue boxes so everything is visible. It's incompatible with some applications, but can selectively not attempt to widen dialogues in those programs. A handy add-on, particularly useful in a networked environment when you're accessing unfamiliar files on another Mac.

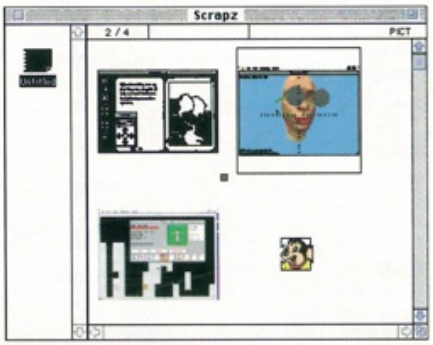


If you need to use all 31 characters of a file name, you can see the whole thing with *OpenWide*.

Scrapz

SCRAPBOOK REPLACEMENT

Freeware



With *Scrapz*, the scrapbook becomes a much more powerful tool. And it's on this month's MACFORMAT cover disk!

The Scrapbook is a great idea – a semi-permanent repository of information that is constantly available, an enhanced Clipboard that can store dozens of items – but it is limited.

Scrapz is a Swedish program which replaces the Scrapbook with an altogether more flexible utility. With *Scrapz* you can select just part of a scrapbook item if you wish. You can import files and, most usefully, export scrapbook items as standalone files. You can view all of the items in a scrapbook simultaneously, and you can have more than one scrapbook file open at a time.

Scrapz is one of those enhancements that you can't help thinking Apple should have done a long time ago; perhaps they'll put something like it in System 8!

If you want to try *Scrapz* for yourself, look no further than this month's cover disk, where you'll find it safely ensconsed with the other programs – see page 6 for details.

Sound Machine 2.02

BACKGROUND SOUND PLAYER

Freeware

Sound Machine is a drag-and-drop application which enables you to play any sound file in the background. It works with sounds in µ-law, A-law, FSSD and AIFF formats (but please don't ask what all these are, I might start to whimper).

It's intended as a background player, so you can have sound playing while you do other things. There may be a point to this that I can't quite divine...

More practically, perhaps, you can also use it to record sounds in a variety of formats and compressions, and save them to disk.

Sound formats are rather obscure things, and if you don't understand sampling frequencies and the like, *Sound Machine* still lets you get at sounds buried in files without worrying you with the technical details.

With *Sound Machine* you can find sounds in any file, and play them no matter what format they are recorded in.

Sparkle 1.71

MPEG MOVIE PLAYER

Freeware

MPEG is the currently "hot" topic in the video world. It's similar to *QuickTime*, in that it's a standard for compressed digital video, but is likely to be much more widely supported.

CD video players with MPEG support are already on the market, and they will allow ordinary CD disks to contain up to an hour or so of TV-quality video.

Sparkle is a freeware program that enables you to play MPEG files on the Mac – although without sound unfortunately! It also lets you convert an MPEG file to a *QuickTime* movie. Although *Sparkle* is very limited, it won't be the last MPEG program we see on the Mac!

You can run MPEG video on your Mac and convert it to *QuickTime* with *Sparkle*. All it lacks is sound. Pity, that.

Stapler

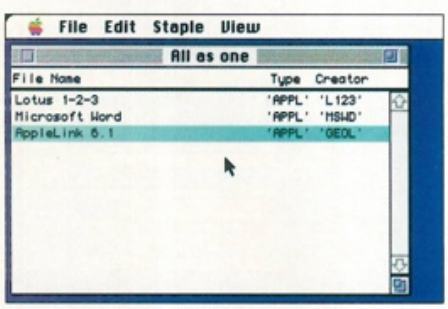
MULTI-ALIAS UTILITY

Shareware $10

Do you ever find yourself opening a set of documents together? If you do then *Stapler* could make life more convenient for you.

Using *Stapler* you can create a file which acts as a 'multi-alias'. Clicking on it opens a whole set of files that you specify. These files can be anywhere on your disk, or on the network, and can be created by any number of programs.

One use of *Stapler* would be to create an alternative to start-up sequences. For instance, my Startup Items folder usually contains aliases for *QuickDEX*, *QuickMail* and *Do It All!* These could all be made into a single *Stapler* document which resides on the Desktop, ready to be called up when needed. Neat and simple.

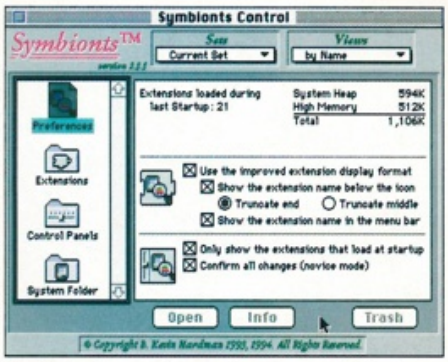


Create a kind of 'multi-alias' that enables you to open several files simultaneously with one click using *Stapler*.

Symbionts 2.3.3

EXTENSIONS MANAGEMER

Shareware $20



Symbionts shows you how much memory your Extensions use up, and lets you turn them off.

Symbionts is a more sophisticated version of a utility like *Extensions Manager*. It lets you choose which Extensions and Control Panels are active, and define sets for particular circumstances, to save time when altering configurations. But *Symbionts* is also useful for the ex-MS-DOSser who is used to trying to claw back every last K of memory, as it shows you just how much memory (in the System Heap, for the technically minded), each Extension uses.

This information may allow you to decide that some Extensions aren't worth the amount of memory they use up, so optimising your system. (For a more sophisticated – but more costly – commercial alternative, see page 96...)

Translation Package

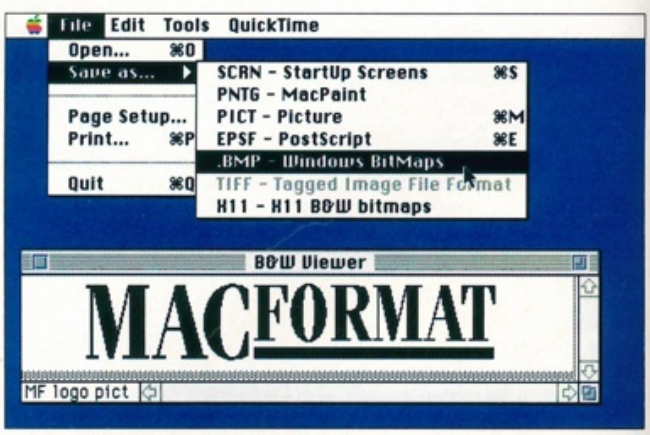
PC TO MAC TRANSLATION UTILITIES

Shareware various fees

This rather higgledy-piggledy set of file translation utilities could be an absolute godsend for anyone faced with the task of swapping graphics files between IBM-compatible PCs and Macs.

The translators here work variously as *Apple File Exchange* translators, *Claris XTend* add-ons or stand-alone applications. They can convert most common types of files, including TIFF, PCX, BMP and PICT. But the single most useful one is a translator to take an IBM PC EPS (Encapsulated PostScript) file and convert it to a Macintosh one – with the preview intact!

Often, when you use an EPS file from a PC it appears just as a grey box when you import it into a Mac DTP program because the on-screen preview has been lost. This utility keeps it and so could be extremely useful.



Translate graphics from PCs to Macs and back again with the suite of utilities in *Translation Package*.

Waker

ALARM CLOCK

Freeware

This is an alarm clock with a difference – when the alarm goes off, it keeps on bleeping until it's cancelled. The author wrote it to help keep himself awake at his desk, so if you have dozing at your Mac trouble, it might help!

Don't drift off at your keyboard: keep alert with *Waker*.

WinStacker

DESKTOP TIDIER

Freeware

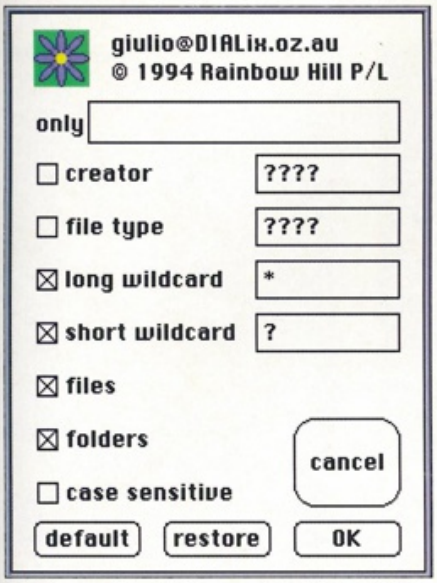
Neat windows all automatically arranged on your desktop, thanks to *WinStacker*. Remember: tidy desktop, tidy life.

WinStacker arranges your Finder windows neatly so you can always see the title bar of the previous windows you've opened, letting you quickly select any window. You can define the exact arrangement you want and how much offset there should be one to another, and *WinStacker* does the rest. And that's it! For the obsessively tidy of mind but cluttered of desktop, it could be useful, I suppose.

Wild

APPLE SCRIPT EXTENSION

Freeware



Wild lets you add the ability to use wildcards to AppleScript scripts – soon we'll all be using AppleScript.

Now that AppleScript – the system for automating actions on the Mac – has been out a few months, add-ons like this are beginning to appear. This particular one enables you to use wildcards in AppleScript scripts. With luck, we'll soon see a decent amount of shareware support for AppleScript and the clever tricks it can do.

AllDay 4.0

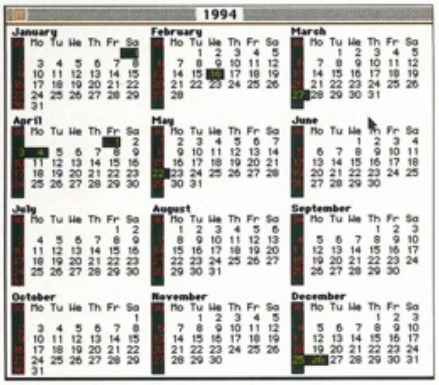
CALENDAR

Freeware

We gave you *AllDay* version 3 on last month's MACFORMAT cover disk, but Sod's Special Law for Cover Disks states that there shall be a major upgrade as soon as the disk is sent to the duplicators, and so it is with *AllDay*.

AllDay is a pop-up calendar which lives in the Apple menu, and that's pretty much all you have to know. The new version has increased flexibility on holidays and allows user events to be added and highlighted. The presentation is also sharpened up a little, but it's still a very simple little calendar desk accessory.

AllDay remains one of the most genuinely useful ways to expend less than 50K of disk space. It's really quite surprising just how often you'll refer to it.

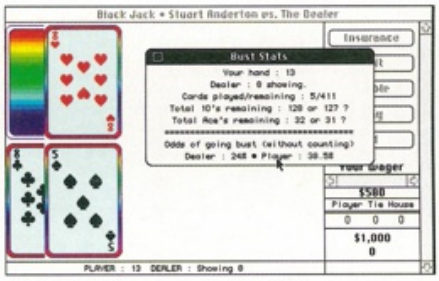


AllDay puts all of time at your fingertips. Or something.

BlackJack Deluxe 1.4

CARD GAME

Shareware $25



Blackjack is a boring game, I reckon, but there's money in them there cards if you know how to play.

I've never been able to work out the attraction of playing gambling games against the computer. There are even one-armed bandits you can get Mac simulations of, complete with digitised sounds of non-existent money paying out. It's beyond me.

Thus *BlackJack Deluxe* lacks a certain *je ne sais quoi* in the entertainment department, but it does, unlike most of these games, have a more serious point.

You see, *BlackJack Deluxe* isn't just a card game, it's a card tutor. With the appropriate options selected, *BlackJack Deluxe* will comment on your play, tell you the odds at any given moment, suggest betting strategies and even teach you various ways of card counting to move the odds in your favour.

Having recently been wiped out in a casino, I would have appreciated *BlackJack Deluxe's* advice then. Perhaps I should have another go – anyone lend be a couple of hundred?

Inside Macintosh Games

DISK MAGAZINE

Shareware subscription $38

Inside Macintosh Games is a monthly magazine on disk produced in the USA. Now, I'm not a great fan of disk-based magazines. I don't think they are as practical as good old paper – I can't imagine taking my PowerBook to the bathroom for a good long read (I don't fancy being electrocuted). However, *Inside Mac Games* has much to recommend it.

It's written by a bunch of enthusiasts, and sometimes they get a bit over exuberant (especially in the coming releases section, which contains a high fraction of fiction). But nevertheless it's interesting stuff, and contains plenty of hints and tips, as well as reviews of games which haven't been released over here yet – and some that probably never will be.

Mac games are a slowly growing area, but it's picking up (1% of all full-price games were Macintosh last month), and sources like this help to get people in the habit of thinking about gaming on the Mac.

It's one of the best sources of gaming information (after MACFORMAT, of course), and if you've got an easy-going system manager and an Internet address you can have all 1.5Mb of it mailed to you each month for $18! Otherwise a disk costs $38.

Inside Mac Games: enthusing about electronic entertainment, on disk. If you can't get enough about Mac games, try it!

WHERE TO GET IT

You can get hold of PD and shareware from a number of different sources. First, there are what's known as commercial PD houses (check the adverts in this issue MACFORMAT for their contact addresses). These are companies which collect shareware and PD software, package it on to disks and then sell it on to you for a moderate charge.

Next come bulletin boards. To access one of these you'll need a modem, of course, but once you're connected you will find that there's a wealth of software available.

If you use the CIX bulletin board (modem phone 081 390 1244, any speed from 1,200baud upwards, log on as 'new'), check out the 'files2' and '93.files' topics in the 'mac' conference – and, of course, our own 'macformat' area. If you use CompuServe (voice phone 0800 289378 for an information pack) there is a multitude of different Mac areas; check the manual and the monthly magazine for details.

Finally, many Mac user groups (see page 100) have a range of PD and shareware available; and, of course, you can swap it with your friends – it's not software piracy; all of these programs are freely distributable.

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WordPerfect 3.0 (hot new version of famous PC WP) £119.00
Write Now 3.0 (fast, straightforward WP, a doddle to use) £44.00
Concise Oxford Dictionary (the concise thing on floppy disks) £45.00
Oxford Thesaurus (the whole thing on floppy disks) £45.00
Thunder 7 (single spellcheck & thesaurus for all apps) £59.00

DATABASES

4D First (low cost relational database) £99.00
Helix Express (no procedural language, for non programmers) £220.00
FileMaker Pro 2.0 (best flat file DB ever - everyone needs it) .. £225.00
FoxPro (fast DB with great interface, reads dBase) £55.00
ACT! (excellent contact management) £175.00
DayMaker (best time/calendar manager for busy schedules) £89.00
DynoDex (best tool for managing/printing contacts) £45.00
QuickDex II (phenomenal rolodex card type database) £32.00
SuperQuickDex (includes powerful print capability) £62.00
TouchBase Pro (networkable contact database) £45.00

BUSINESS

TIME/OFFICE MANAGEMENT

AutoRoute Express (UK route and distance planner) £125.00
DateBook Pro (UK version, appointment calendar) £45.00
In Control (best to-do list manager has outliner, columns) £89.00
Smart Alarms multi user (fuss free net diary/reminders) from £125.00
Now Contact (information management) £65.00
Now Up-To-Date (simple, quick calendar and reminder system) £65.00
SignPost (UK & Europe route planner) ..... from £79.00

SPREADSHEETS

BiPlane (excellent, low cost, full featured spreadsheet) £75.00
Lotus 1-2-3 (works with all PC & Unix versions) £275.00
Microsoft Excel 4.0 (leading spreadsheet, many great features) £225.00

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ClarisWorks 2.0 (market leader of the integrated world) £155.00
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Ritz Median (the baby brother) £169.00
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PRESENTATION

Astound (full featured, reads PowerPoint & Persuasion) ..... call
Persuasion 2.1 (high end presentations with outliner) £255.00
PowerPoint 3.0 (powerful, intuitive, easy inteface) £225.00

GRAPHICS

Freehand 4.0 (Professional PostScript drawing & text) £335.00
Illustrator 5.0 (Professional PostScript drawing, text & layout) £365.00
Streamline (superb PostScript auto-tracing tool) £125.00
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ENTERTAINMENT

ARCADE

➣**Another World** (great animation and sound) £19.00

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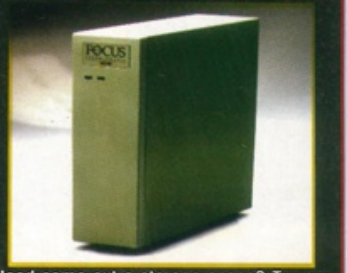

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KEY ✔ works on most Macs. ➣ Colour Macs only
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DELIVERANCE

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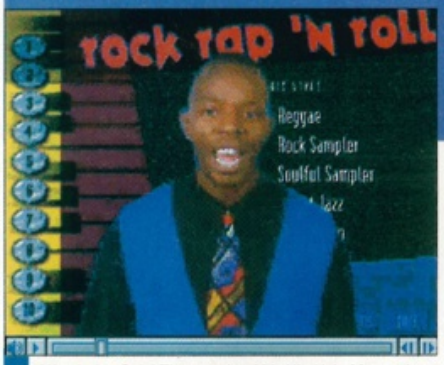
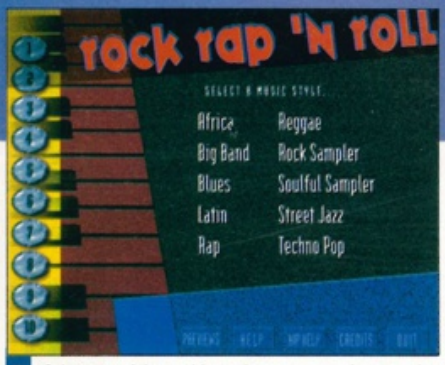


1 Watch the *QuickTime* movie of Mr Hip Help Man as he raps his way through a demo jam session.



2 Select one of the ten hip-to-the-groove, up-front music styles from the main menu.

3 Select back beats from the left of the screen and drag them into the Song-A-Lizer.

Rock your socks off

Get jammin' with a program that's got rhythm and catch up on the latest Mac music news.

We've two ver-r-r-y interesting music programs this month. *Rock, Rap 'N Roll* is a DIY jam kit. Absolutely no musical experience is necessary but what you do need is a CD-ROM drive, a Mac LC or higher, 4Mb of RAM and a colour monitor.

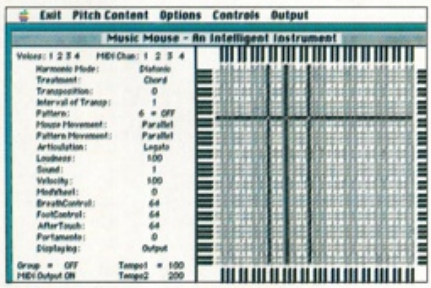
Operation is dead easy. There are ten music styles – African, Big Band, Blues, Latin, Rap, Reggae, Rock, Soul, Street Jazz and Techno Pop – and each style contains ten rhythm patterns or grooves as we say in music land. These are full backing track type grooves between two and eight bars long. You drag the grooves into the Song-A-Lizer – or what any other program would call a play list – and the program plays them consecutively in quite a clever way so no matter which order you arrange them, the backing still sounds great. While the machine is struttin' its stuff you can add some Vibes & Bops by clicking on two Mouse Kicker buttons aptly named Vibe-A-Tron and Bop-O-Rama (is it getting to you yet?). These offer a range of instrument sounds and effects which you can 'play' by clicking on the button and dragging the mouse around. The Voc-A-Lizer contains

MAC AND MOUSE

Music Mouse is one of the Dr T programs we mentioned in the news last month. It's been around for a while – it was last updated in 1988 – but the good Doctor's new pricing policy makes it worth another look.

It's another program which lets you make a lot of music for little effort, that effort being little more than wiggling the mouse. However, there's a bit more to it than that.

It will work with the Mac's internal sound or transmit data via MIDI on up to four channels. There's only one screen, a grid, and when you move the mouse a set of lines moves around inside the grid giving an indication of the notes you are producing.



Music Mouse has one main screen which shows the pitch of the notes you generate as you wiggle the mouse around.

The output generally consists of a three-note chord plus a melody note. The program keeps all the notes within a certain tonal framework so the result is always harmonic.

There are six harmony types – chromatic, octatonic, Middle Eastern, diatonic, pentatonic and fourths – and you can select a number of ways in which the notes play. For example, the notes in the chords can play all together in a block or as an arpeggio.

You can adjust tempo, volume, velocity, aftertouch and portamento. Many functions are triggers from the QWERTY keyboard and there's a pull-out card showing which functions the keys perform. In fact, the name may be *Music Mouse*, but a large part of the program is keyboard controlled.

The manual is pretty dry and lacks an index. However, it has several pages of hints and tips which will help you get into the program fairly quickly.

There are two things *Music Mouse* cannot do. One is to store a sequence of mouse movements and key presses – a performance or recording, in other words – so you can play it back at a later date. The manual mentions a Desk Accessory called *Tempo* which will record mouse movements and keystrokes as macros.

The second thing it can't manage to do is save the music it generates as a MIDI file. The program doesn't seem to interface with Apple's *MIDI Manager*, so you can't divert its output to a sequencer. Shame, that. Of course, if you have another sequencer independent of your Mac, you can record the output on that. If anyone knows of a program which can grab MIDI data, please drop us a line and let us know!

Music Mouse is not as up-front as *Rock Rap 'N Roll* but if you enjoy textures and you're interested in the experimental side of music it's worth checking out.

MUSIC MOUSE

Music Mouse costs £30, and is available from Key Audio Systems Ltd, tel: 0245 344001.

MACFORMAT RATING **72%**

4 Make your choice of instruments for the Vibe-A-Tron, Bop-A-Rama and Pitch 'Em sections.

5 Click on the Key Map to see which sounds and riffs are assigned to the QWERTY keys.

6 Click on the buttons and drag the mouse across them to play riffs and trigger vocal lines.

eight vocal riffs which you play by clicking on a set of squares, and you can trigger yet more sounds, riffs, effects and vocals from the QWERTY keyboard.

The good thing for non-musicians is that everything plays in tune. No matter where you click or what keys you press, the whole thing is note perfect! After a few rehearsals, you can record a performance and save it to disk. If you feel adventurous you can record your own voice and make it part of the music, too.

The sounds and accompaniments are absolutely terrific. And so they should be as they were arranged and recorded by professional musicians. The vocal lines are particularly impressive. The preset styles mean you can't produce anything totally original – the performances are simply data files which tell the program what to play. In other words, you can't save a performance as a sound file to use in another program. Shame, that. However, if you have a Mac with a mic and some recording software you can start the program playing and record it from the Mac's speaker.

I let a couple of kids – er, young teens, loose with it and had to prise them away under threat of playing a Jason Donovan record (not that I have any, of course).

Me? I love it!

Ian Waugh

ROCK, RAP 'N ROLL

Rock, Rap 'N and Roll costs £82 from Computer Manuals, 50 James Road, Tyseley, Birmingham, B11 2BA. Tel: 021 706 6000. Fax: 021 706 3301.

MACFORMAT RATING 80%

MAC MUSIC NEWS

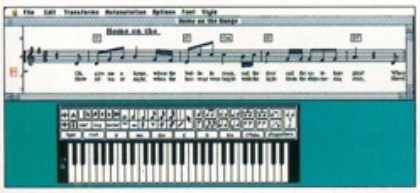
■ Steinberg has launched a new program called *ReCycle* which helps musicians working with sampled loops and grooves. It automates the tedious process of making a sampled groove fit the tempo of your song. More information from Harman Audio on 081 207 5050.

■ Emagic is to launch a new *Notator Logic* package which will include a tutorial video produced by Labyrinth. You will also get a setup disk containing the music played on the video. More from Sound Technology on 0462 480000 or Labyrinth Video manuals on 0254 662096.

BOOK OF THE MONTH

A few months ago I looked at a book called *Cool Mac Sounds* which, as you might guess, was about using the Mac's internal sounds. *The Incredible Sound Machine* is another book with a similar aim but one that's rather more substantial. It covers all aspects of the Mac's sound system in considerable detail – everything from 'what is sound?' right through to MIDI. There are sections on music basics – rudiments as they say in academia; sharps, flats and that sort of thing – plus a gentle smattering of technical info to keep the wire heads happy.

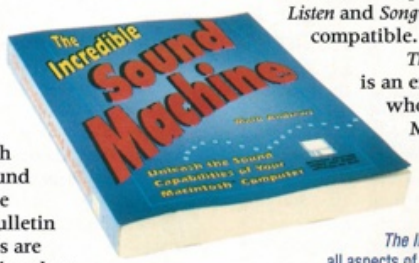
There's a disk tucked into the back which includes *Sound App*, which was originally written by Apple to show developers how to write sound software. Unless you want to dissect it, it basically plays sounds. *SoundWave* is bit more interesting and is quite a reasonable little sound recorder and wave editor with cut and paste facilities.



The *Songworks* program, supplied with this book, supports notation and lyrics and can play over MIDI.

Sound-Trecker plays four-track music. It actually reads files in the .MOD format which were developed for sound tracker programs on the Commodore Amiga. Bulletin boards and PD libraries are full of .MOD files. *Trecker* plays them and converts them to its own format. It can play in the background, too, so you can carry on using your word processor or spreadsheet while listening to the funky tunes. *HyperCorder* is a recorder for *HyperCard* – of course! – while *HyperLab* reads text with the help of *MacinTalk*, which is supplied.

There's a demo of a program called *Songworks* which we have not had the pleasure of in the UK. It's a notation program with lots of interesting features such as harmonising a melody line and melodising a harmony and it can generate music ideas. *Listen* is another demo program which will test your aural ability. Both *Listen* and *Songworks* are MIDI-compatible.



The Incredible Sound Machine covers all aspects of the Mac's sound system.

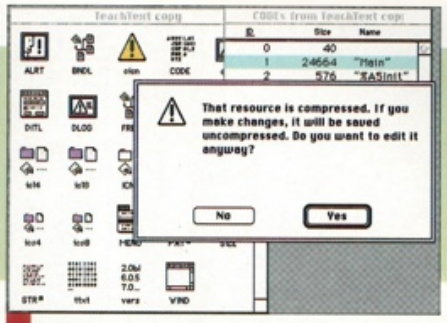
The Incredible Sound Machine is an excellent book for anyone who wants to explore their Mac's sound capabilities to the full without necessarily getting involved with MIDI.

THE INCREDIBLE SOUND MACHINE

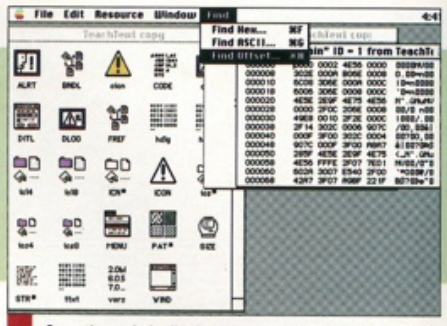
The Incredible Sound Machine costs £28 and is available from Computer Manuals, 50 James Road, Tyseley, Birmingham, B11 2BA. Tel: 021 706 6000. Fax: 021 706 3301.

MACFORMAT RATING 84%

1 To change the default font in *TeachText* your first step is to open your *duplicate copy* of the program using *ResEdit*. This displays the component parts of the program.



2 Double-click on 'CODE' to open it, then on Code ID 1. Ignore the warning – you *do* want to edit it anyway.



3 Once the code is displayed, use **Find Offset** in the **Find** menu to go to offset 4A88, which sets the font.

Deploying resources

Achieve the impossible with *ResEdit* and swap the default font in *TeachText* for one you like...

Back in February, in MACFORMAT 9, a reader asked if there was any way of changing the default font in *TeachText*, Apple's 'bare bones' text editor. It certainly isn't as easy as in more advanced word processing programs, with 'Font' menus from which you can select any installed font, but it can be done using *ResEdit*. Now that you have a copy of *ResEdit* from last month's MACFORMAT cover disk, here's how some adventurous MACFORMAT readers did it themselves...

1. Make a copy of *TeachText* using **Duplicate** in the **File** menu or **[command] [D]**. Make sure you work only on the copy, not the original, just in case of accidents. You'll need to know the program's version number later, so check it now: highlight the icon and select 'Get Info' in the **File** menu (or hit **[command] [I]**).

Launch *ResEdit* by double-clicking on it, then click the mouse button to get into the program. A standard dialogue box appears; use this to find your copy of *TeachText* and open it.

2. In the *ResEdit* window, you'll see all the 'resources' that make up the program. Double-click on the CODE resource to open it. This will display the component parts of the code. You want the biggest one, the one with resource ID 1 (entitled 'Main'). Double-click on this to view it. Under System 7.x, as screenshot 2 shows, you'll get an alert warning that the code will have to be decompressed and any changes will be saved uncompressed, but this is no problem (the file will only increase from 36K to something like 42K).

3. Click on OK and the code will open in a little box of its own. Now, this is where you need to know the version of *TeachText* you're working on. In pre-System-7 versions of *TeachText* (v1.2 for System 6.0.7.1), you want to modify offset (or line) 29E8. If you have *TeachText* v7.x (for System 7.x), you want offset 4A88. You can use **Find Offset** in the **Find** menu to go to the line you need, as shown in screenshot 3.

4. In this line, since you ask, A887 is a request for TextFont(), which controls the deafult font. The ØØØ1 is the font ID for Geneva. (Note that you must use zeros, not the letter O.) To change the font, all you need to do is change this ID to the ID for the new font you want.

This may not be quite as easy as it sounds, and the result may not be quite what you expect, because font ID numbers are not completely fixed. They should be, but with so many font publishers over the years, and with Apple losing the plot a bit in the middle, it sometimes happens that you may install two fonts with the same ID number. The Mac System is intelligent enough to be helpful here: if you install a new font with an ID number that's already used by another font, the System simply changes the new font's ID number. Not usually a problem, because most applications now access fonts by name, but something to watch for if you have to use font IDs, as here.

To demonstrate, we've used the font IDs below and changed the font to Times in screenshot 4. Note that changing to a monospaced font such as Monaco or Courier could be useful for displaying text you've downloaded from a

WARNING!

ResEdit is an extremely powerful program which can fatally damage files very easily. You use it at your own risk. If you use *ResEdit*, follow these simple precautions:

1. *Always* make a backup copy of the file you want to alter. Work *only* on the copy.
2. Don't delete the original until you're *certain* the modified files work perfectly.
3. Even then, keep a backup of the unmodified original just in case problems become evident later on.

We make no warranty as to the safety or usefulness of any techniques described. MACFORMAT cannot be held responsible for any damage caused by your use of *ResEdit*, nor can we answer queries on it.

Font ID numbers

For the record, these should be the standard font IDs for your common fonts (the one you need to enter is the 'Hex' – hexadecimal – version):

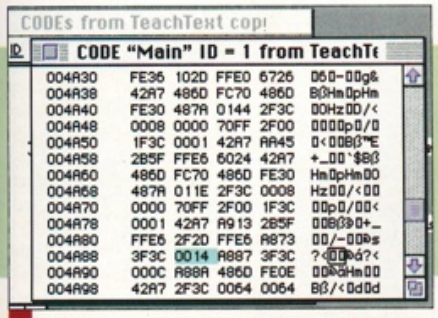
ID Number	Hex	Font name
0	ØØØØ	the system font (usually Chicago)
1	ØØØ1	the application font (usually Geneva)
2	ØØØ2	New York
3	ØØØ3	Geneva
4	ØØØ4	Monaco
5	ØØØ5	Venice
6	ØØØ6	London
7	ØØØ7	Athens
8	ØØØ8	San Francisco
9	ØØØ9	Toronto
10	ØØØA	(Geneva)
11	ØØØB	Cairo
12	ØØØC	Los Angeles
13	ØØØD	(Zapf Dingbats)
14	ØØØE	(Bookman)
15	ØØØF	(N Helvetica Narrow)
16	ØØ1Ø	(Palatino)
17	ØØ11	(Geneva)
18	ØØ12	(Zapf Chancery)
19	ØØ13	(Geneva)
20	ØØ14	Times
21	ØØ15	Helvetica
22	ØØ16	Courier
23	ØØ17	Symbol
24	ØØ18	Mobile

The fonts in parentheses may be different on your System; the other ID numbers are 'hard-coded' and will not change. Yes, there are a lot of fonts named after cities, for reasons much too complex to go into here (in other words, I'm not quite sure...). Yes, Geneva does seem to crop up a lot – don't ask me why. And yes, you can type in any number here, but make sure you have the right font installed in your System folder or *TeachText* may go all temperamental on you. (Then again, it may just revert to Geneva and leave you none the wiser.)

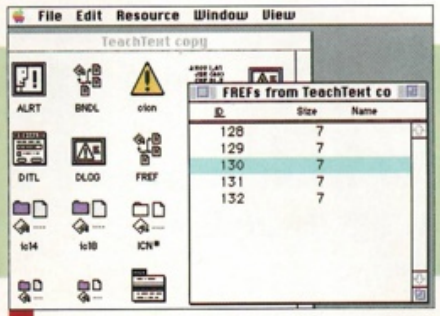
So what's so great about *ResEdit*?

Two things, really. *ResEdit* is Apple's own utility for editing 'resources', the building blocks of all Mac applications. Resources determine the appearance of icons, menus, pointers and all other elements on-screen; they set the font used in alert boxes, the colour in a menu bar, and much more. Editing resources therefore means you can customise just about any aspect of your Mac – and of course screw things up just as easily.

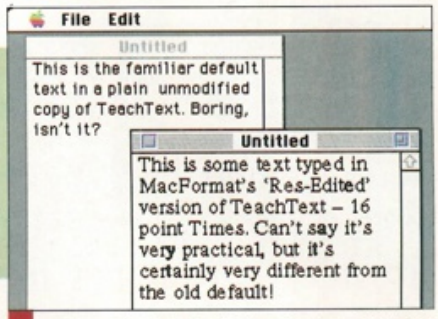
The other great thing about *ResEdit* is that it was yours, complete, on the MACFORMAT cover disk last month, along with a free book explaining everything you need to know to get started with the program. If you missed that, better turn to page 94 fast...



4 Here we've changed the font to Times. The next offset, 4A90, controls the size – change that too if you like.



5 To avoid problems with *TeachText's* ability to open graphics, you can delete this line from the FREFs.



6 The result in all its glory. To learn how to select the font and size you prefer, see the tables on these pages.

Bulletin Board without affecting its alignment.

The next offset, 4A9Ø in System 7.x (or 29AØ pre-System 7), controls the size. A88A is the request for TextSize(), and the ØØØC is the hexadecimal code for 12 point. To make the change obvious, we've selected 16 point.

5. Now save your changes and close the Code window. Be aware that changing the font and size can adversely affect the way that *TeachText* displays embedded pictures – the sort you get in ReadMe files which have that little 'newspaper' icon, like the MACFORMAT cover disk intro screen. You might not have any problems, but to be on the safe side you can simply set *TeachText* not to open this kind of document. To do this, double-click on the FREF resource back at the main *ResEdit* window, then delete resource 130, the one highlighted in screenshot 5. Then you can just save and quit *ResEdit*.

The result of all this should be a beautifully customised *TeachText*, as shown in screenshot 6! Thanks to all the MACFORMAT readers who sent in their advice, especially Sam Vaughan of Toorak in Australia, who gets an exclusive MACFORMAT T-shirt for his very detailed fax, and Magnus Höglund of Linköping, Sweden, Frederic Thomas of Geneva, and someone who signs himself just Daimon from London E1. International team of experts or what!

Have you got any favourite *ResEdit* fixes? Or is there something you'd like to do with it but don't know how? Write to *'ResEdit capers'*, MACFORMAT, 30 Monmouth Street, Bath BA1 2BW, and share it with MACFORMAT readers around the world!

Alex Summersby

Text size codes

These are the hexadecimal codes for the text size:

9 point	ØØØ9	10 point	ØØØA
11 point	ØØØB	12 point	ØØØC
13 point	ØØØD	14 point	ØØØE
15 point	ØØØF	16 point	ØØ1Ø
17 point	ØØ11	18 point	ØØ12

and so on... Base 16 is easy once you get the hang of it!

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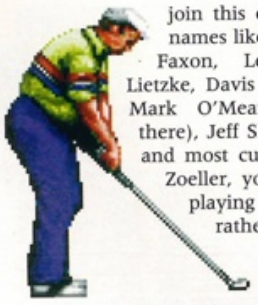
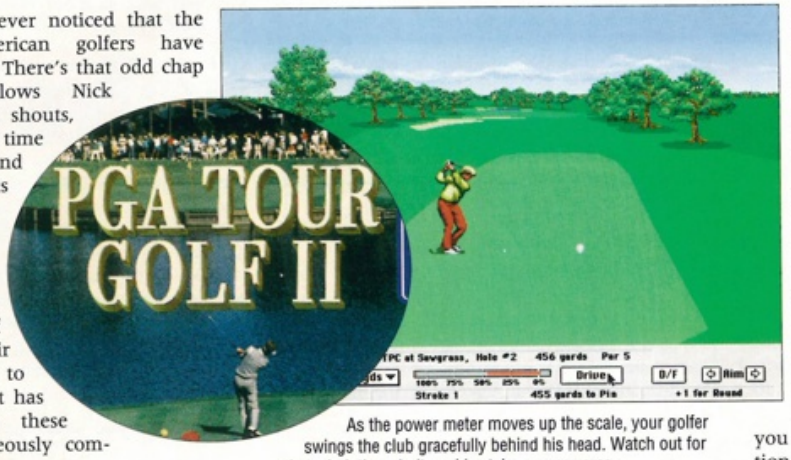
PGA Tour Golf II

Golf – a good walk spoiled, an insult to lawns or a skilled game of precision, tenacity and odd trousers? The choice is yours...



Have you ever noticed that the top American golfers have groupies? There's that odd chap that follows Nick Faldo around and shouts, "In the hole!" every time he strikes the ball and then Jack Nicklaus has got the gentleman who yells, "You're the man!" every time he manages to hit the ball off the tee. If the object of their adulation manages to get a hole in one it has been known for these people to spontaneously combust. Odd indeed.



As the power meter moves up the scale, your golfer swings the club gracefully behind his head. Watch out for that wind, though, it could catch you unawares.

Electronic Arts has tried to capture some of the excitement which American-style golf generates. Its revised PGA licence features 'real' PGA golfers, 'real' crowds and even 'real' ball dynamics. However, it's extremely difficult to create anything even close to realism on a computer, unless you use half a million quid's worth of specialist graphics processor. So the question is – how close does *PGA Golf II* get?

For starters, seven different golf courses are simulated, all of which are American. Six of these are TPC (Tournament Players Club) courses. These are different from ordinary golf clubs because they are designed specifically to be used in the PGA golf championship. What this essentially means is that they include some devilish traps and obstacles designed to test the golf professional.

The use of these TPC courses also means that you get a very varied selection of venues. The Scottsdale golf club is heavily based around sand bunkers and narrow fairways, while Avenel utilises elevated trees, tiered greens and more water hazards than you'd find in your average canoeing competition.

You can tackle these courses against a friend or attempt to beat the 60 PGA golfers. Unfortunately, you can only play against the ten best professionals in a practice round or in one of the competition options. It would appear that you've got to have a singularly bizarre name to join this exclusive club. With names like Fred Couples, Brad Faxon, Lee Janzen, Bruce Lietzke, Davis Love III, Tom Kite, Mark O'Meara (almost normal there), Jeff Sluman, Craig Stadler and most curiously of all, Fuzzy Zoeller, you'd think you were playing against circus acts rather than golfers.

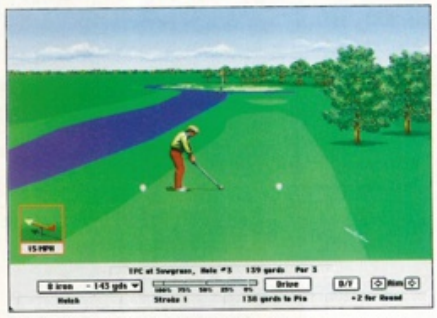
It has to be said that these guys play a very good game. You might well be hacking around in the forest, dealing with bad lies and stubborn trees, but the professionals can be counted on to drive straight down the fairway, on to the green and in under par. If you can cope with failure then you'll love this game. Incidentally, one of the more bizarre choices available to you is to watch two computer-controlled players battling it out with no input from you whatsoever. Maybe EA should have called this the trainspotter's option.

If you fancy hacking around one of the courses on your own you can elect to play a practice round. This has the advantage of enabling you to use amateur tees (which are considerably easier to play off). If, however, you want to be humiliated by the computer and its synthesized crowd you can play a tournament or Skins competition. The tournament option enables you to play four full rounds (72 holes) against 60 pro players and up to four of your friends. The Skins competition is when two to four players compete for cash on every single hole. If the players get the same score on a hole then the purse is carried over to the next hole.

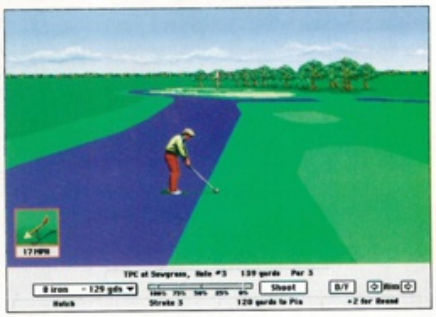
Right, so you've chosen your course, you've decided which of the professionals is going to make you look stupid and you've made your way to the green. You'd have thought it was time to play some golf, but you'd be wrong because first you've got to set all the options.

There's a huge selection of preferences (well alright, 19) to check or uncheck. These include the auto-view options (announcer, instant replay), the sound options (do you want birds

How to blast your way out of a sand bunker



You're on the tee of the third hole at the Sawgrass course. It's a par 3 hole of 139 yards. Those bunkers and trees aren't going to make it easy though, so it would probably be best to aim the ball over to the left. This shouldn't be too hard as the wind is gusting from right to left at 15mph.

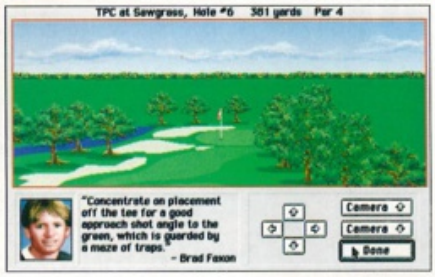


After a suitably appalling tee and second shot you've still only managed to make it 19 yards down the fairway. Perhaps hitting the ball a bit harder might be an idea. Also, watch out for that wind, it's now blowing at 17mph right in your face. Time for a 100% power shot.

What a fine recovery, you've hoofed the ball to within just eight yards of the pin. Unfortunately, you've also managed to land yourself in the sand bunker. Now might be a good idea to try out that Blast shot which you've been practising on all the other holes.

AND NOW, IN MONO

And for those of you viewing in black and white, as you can see, the game looks slick in mono as well. Unfortunately, it's not greyscale though, so the graphics can look a bit on the pixellated side.



When you absolutely, positively have to get a shot right, you can use the hole browser option. This enables you to view each hole from a wide variety of angles and perspectives.

Nope, not a Seventh Day Adventist church, but the squat club house. I remember the days when the clubhouse was made completely of wood and painted a very dark green...

and frogs to be tweeting and croaking away in the background?), replay options, hole preview options and animation options. Once that little lot's all set up, you can actually play.

The game is viewed (in time-honoured tradition) from immediately behind the golfer. Once you've had a look at an overhead view of the hole you're playing you can choose your club (this is done automatically for you if you've got the caddy option on) and line up your shot. Once you're happy you know where the ball's going to point you can take your shot.

There are a lot of different variables which affect where your ball will end up once you've hit it. The wind, the ball's lie (I spent a lot of time in heavy rough) and which particular surface you're playing off (lots of sand if you're a beginner) all determine its flight and position.

Then you've got to worry about how you hit the ball. You determine the strength of your shot from a power meter. You click once to start the backswing, again on the appropriate power setting and again on the accuracy line. Of these, the most important is the accuracy line – click the mouse button to the left of this and you'll hook the ball (sending it to the left), hit it on the other side and you'll slice it (sending it off to the right). It might sound easy, but is actually quite tricky to master.

So you've finally hit the ball. It will fly exactly where you don't want it to and you get to see a humbling white line drawn on the overhead hole view which represents your ball's movement. Should you perform a particularly good shot, the crowd will cheer. Just miss the hole and they'll go, "Aaaaah". Play the kind of golf that I normally do and they'll stay quiet.

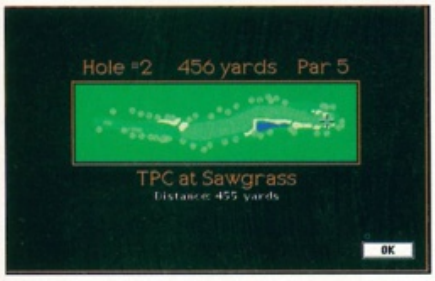
I must say that I terrifically enjoyed *PGA Tour II*. This is one of those games which has a never-ending life span – no two rounds of golf are the same and with all those courses and options you'll be loading the game up for a quick 18 holes during every coffee break.

On the graphics front, the game can't be faulted for detail. Each of the courses has lots of trees, bushes, bunkers and water hazards to keep you interested and these move with considerable speed even on the slower Macs. In mono the game looks great too – although admittedly you lose something in the translation.

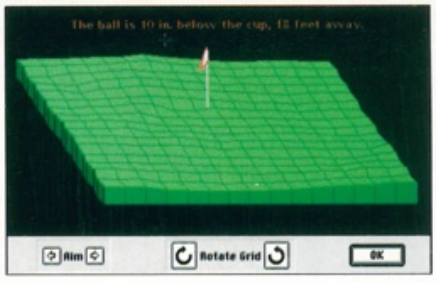
Gameplay is as slick and polished as we've come to expect of EA. Practically everything can be configured the way you want and it's possible either to zip around the course, hoofing the ball around without much thought, or to spend ages weighing up your options and tossing digital grass in the air before making a considered shot. Either way it's as infuriating as the real thing only without those snazzy battery powered golf carts. But then EA will probably put those in the CD version.

Do I recommend *PGA Tour Golf II*? You bet. It has oodles of charisma, gameplay in abundance and ridiculously-named Americans. If you prefer your computing to be a social, rather than a solitary activity then this will be right up your fairway – only expect lots of arguments. Definitely one for the collection. Now, where did Fuzzy leave my blessed two iron? It's just not cricket, you know.

Andy Hutchinson

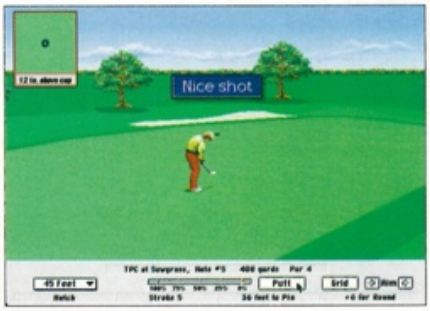


It's always a very good idea to check out the overhead view of the hole before you even consider which club or iron to use. Not at all like real life, this bit.



The putting green grid shows you exactly what the undulations are like, to almost ridiculous precision. You can actually set up the aim of your putt from this screen.

It's your first semi-decent shot of the game. You've got yourself out of the bunker and landed the ball 36 feet from the hole. If you'd given it a bit more power you might have had an easy putt, but as you've got such a long way to go, you'd better check out the lie of the green.



Well, whaddya know? After all that mediocrity you've pulled off a great shot. You weighed up all the pros and cons and sunk a 36 footer. At last you've got something to brag to the other players about at the 19th hole. *PGA Tour Golf* has the distinct advantage of being even better than real life.

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Graphics Looks good to me.	86%
Sound Lots of lovely oohs and aaahs.	82%
Gameplay You'll keep coming back for more.	87%
MACFORMAT RATING	87%

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Lunicus

Once again the Earth is under threat from hordes of hostile aliens, and you are its only chance of salvation. Oh dear.

You're in trouble when you've lost your shield – kill him quick or you'll be heading for the funeral parlour.

In this futuristic adventure game a perfectly preserved dinosaur skeleton is found deep underground, but whatever can it mean?

Lunicus seems to have missed the *Jurassic Park* bandwagon, but perhaps it'll catch some left-over hype when *JP* is released on video.

Molotov is the base commander, and as such is typecast as a gruff, rather miserable SOB.

From the near-miss in HG Wells' *War of the Worlds* to the interstellar highway that destroys Earth at the start of the *Hitch-Hiker's Guide to the Galaxy*, the human race is in for a hard time. And guess what? *Lunicus* gives us another variation on the rather tired mankind-in-peril theme.

The game's an ambitious blend of adventure-style gameplay and 3D action. It tries to create a believable, explorable world beyond the excitement of the 3D shooting. In most shoot-'em-ups, the story is just a lame excuse to throw you up against hordes of invading aliens, but thanks to the adventure elements, in *Lunicus* it becomes an integral part of the game.

Before jetting off to blast the aliens, you have to explore your base and talk to your commanders, compatriots and fellow soldiers. The briefing room is an essential port of call, where base commander Molotov gives you the run down on what you're going to be up against, but it's just as interesting to have a quiet word with your girlfriend and fellow soldier Sasha, or the mad scientist who's convinced he's found a way to destroy the aliens and save the Earth once and for all. Then it's off into the battle zone to do mighty battle, and when you've blasted your way through the first batch of enemies, you return to the space station, drop off your pulse jet in the repair shop and retire to your quarters for a well-deserved kip.

The idea is excellent and gives the game a much more substantial feel than if the missions had simply been flung at you one after the other, but there are a couple of problems with it. Neither the adventure elements nor the shoot-'em-up part is good enough in its own right. The adventuring isn't quite meaty enough to hold your attention and there's a danger that at best you'll find it only mildly interesting – at worst, it might serve as an irritating distraction from the shoot outs.

By the same token the 3D action is OK as far as it goes, but it's still very limited. You have to explore some areas on foot and some in vehicles, but either way the gameplay is the same. You trundle around the corridors or streets, dispatching enemies with bullets, grenades or missiles, and try to avoid getting shot. The graphics are sharp throughout, and there's some pretty groovy enemy hardware to attack, though you're treated to the same explosion no matter which enemy vehicle you've just destroyed.

Lunicus is an entertaining futuristic romp, but it promises much more than it delivers. The speech and rendered graphics in the introduction set the scene for a thrilling sci-fi story, and make you eager to get stuck into the serious business of saving the Earth. It's highly enjoyable at first, but your interest soon wanes when you realise the gameplay isn't quite as exciting as you first thought – especially for the absurdly high price tag.

Richard Longhurst

Sasha, on the other hand, is all sweetness and light, but then she would be – she's your girlfriend.

LUNICUS

Lunicus costs £76 and is available from Computer Manuals on 021 706 6000. It requires a colour Mac with 4Mb of RAM, running System 6.07 or higher and a CD-ROM drive.

Graphics Moves fast and looks good.	78%
Sound Annoying theme tune soon irritates.	60%
Gameplay Great idea, but shooting is repetitive.	77%
MACFORMAT RATING	75%

Trundling around in the tank and you come across another foe. You know you've got to kill it, but which of your three weapons are you going to use – rifle, rockets or grenades?

Here it is then, that gratifyingly spectacular explosion you've been hearing so much about. Surely with the huge capacity of a CD, it would have been possible to have more than one?

Watch the scanner in the top right-hand corner to make sure you don't get taken by surprise by speedy enemies. Lob a couple of grenades and this guy's history.

It's no good, I can't fly this thing without some digital displays and a couple of computer terminals. Get these crusty old dials out of my face.

These are torpedoes. Nothing more, nothing less. They're not here for any particular reason, I just thought you might like to see them in their natural habitat.

Loose lips don't sink ships, torpedoes do and this tatty little box programs the gyro-thingies in the torpedoes just to make sure. It all looks a bit primitive but this is 1940, remember.

U-Boat

It might go against the grain to begin with but you'll soon be sinking Allies' ships with the best of them in this World War II game.

This is a fabulous, if simple, little game. I was enthralled, educated and generally extremely taken with it. It was the early summer of 1940. I was Kapitan-leutnant VonTimmy. And it was my sworn duty to defend the Reich by sinking all that naughty Allied shipping.

You guide your Unterseeboot about the North Atlantic and Mediterranean by issuing commands to various members of your crew. When the occasion demands you take on the roles of captain, navigator and torpedo aiming chap as you stalk your prey. The navigator has a nice big chart upon which he plots the bearing of any ships you spot, while the torpedo-aiming-chap (sorry, I don't know what he was called) has a complicated-looking torpedo-aiming-device (I do know what that was called, but you're probably not interested) with which to aim his torpedoes.

For all that I was engrossed by *U-Boat*, though, it's not faultless. In fact, if I were being thoroughly candid, it's riddled with faults and, more seriously, a couple of bugs. But I enjoyed it so much that I tried my best to work around them. Other players might not be so patient...

Time in the game passes at a variable rate. Very useful. A U-boat can only travel at 16 knots flat out and it takes quite a while to get anywhere. So if you're just cruising about the place, looking for a fight, then you don't want to have to watch the hands on the clock dawdling past when you could be launching eels (hip U-boat slang for torpedoes) at the bad guys. Then again, you don't want time to be flying by when you're in the heat of battle – you'd never have time to do anything.

The problem is that once you're within a certain distance of another ship, the clock slows down automatically and you can't change it. This means that when you're stalking something (which can mean staying submerged for several hours of game time) you actually have to spend quite a few minutes of real time just watching the clock. It's not very interesting.

Then there are the crashes. It's something that the average Mac user may be used to – a certain desktop publishing program will crash several times an hour if the work's urgent enough. But you don't expect games to crash. This one does. Usually when you dive just before an attack.

Usefully, there's a 'save game' feature. But it only saves one game position. It only saves it when you quit. And it hides the file. If you should chance to die (or, as is more usual, the game crashes), it erases your saved game and you must begin again from the start of your last patrol, which could mean another couple of hours of play to get back to the same point.

The graphics are a tad on the functional side (in other words, mostly grey) but that did at least mean that it would run on my PowerBook 165. So hurrah for that. But there's not that much to look at in a submarine, anyway. The sounds (which are best enjoyed on the supplied headphones) provide most of the atmosphere and are excellent.

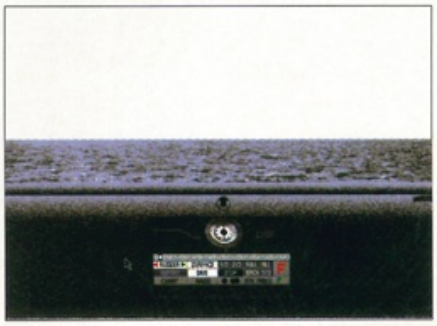
All in all and all that, it's a superb game and one that I'd recommend to anyone who fancies living in the 1940s for a bit. But you'd probably be better off waiting until a bug-free version (mine is version 1.2) is released. *Tim Norris*

U-BOAT

U-Boat requires 4Mb RAM and a 640x480 monitor. It costs £44 from Deadly Games, tel 0101 516 482 4000 or from MacGold, tel 0723 582100.

Graphics Grey but atmospheric.	72%
Sound Thousands of superbly atmospheric samples.	94%
Gameplay Occasionally dull and irritating, with an annoying tendency to crash.	79%
MACFORMAT RATING	72%

Here we are on an intercept course with some grotty tanker or other. If we can catch it, we can sink it. Probably.



If you feel that you're not getting out enough, you can always pop up to the bridge for a bit of fresh air.

They might not look like much to you, but it took me days of play to get these medals. Sorry they're not in colour...

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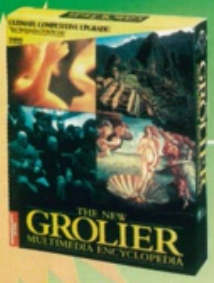

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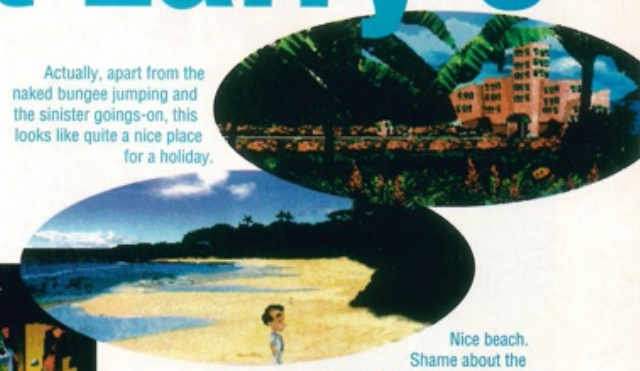
SWITCH

Leisure Suit Larry 6

Leisure suits, medallions, bimbos and evidence aplenty of silicon implants – yes, Larry is back for the, wait-for-it, sixth time. Make of it what you will...



Actually, apart from the naked bungee jumping and the sinister goings-on, this looks like quite a nice place for a holiday.

Nice beach. Shame about the sad little twit in the foreground.

Phwoarrr, eh? This is the beginning of the game. It sets the tone quite nicely for what is to follow and believe me it doesn't get any more subtle as it goes on.

If you hang around in your room long enough, a naked woman bungee jumps past the window. Most amusing.

Maybe it's just me, but isn't this joke wearing a little thin now? I mean, a first sequel is practically obligatory these days, and a second is acceptable. Just. But if your original idea was no more than a running gag about a sexually unsuccessful man who wears man-made fibres and a medallion, then by the time you get to '6' people are just going to think you're milking it.

But I'm getting ahead of myself (which is quite a trick if you can do it). *Leisure Suit Larry 6 (Shape Up Or Slip Out)* is a point-and-click adventure where you are Larry Laffer (he of the leisure suits) and there are plenty of puzzles to be solved before tea time.

You might not have encountered the desperately amusing Larry Laffer and his hilarious antics before, but you haven't missed much. Mr Laffer is small, weedy and looks and behaves as if he's just stepped out of a '70s disco. This is where the 'humor' comes in. You see, it's the '90s now (no, really, it is) and his attitude to women is amusingly anachronistic, most especially since they all tell him to bog off and leave them alone. Oh, how I laughed.

The plot revolves around a hotel/health resort where all is not quite as it should be. Mr Laffer has won a stay there as a prize for taking part in a TV game show called *Stallions* (you begin to get the feel of the 'humor'). Chatting to the receptionist – who is, of course, extremely busty and wears, of course, a very low-cut top (the style of the 'humor' is becoming more obvious) – he finds that the special cellulite-draining machine no longer works and that he could earn her undying gratitude (oo-er missus) if only he could fix it. Splendid, a nice non-hazardous quest. But when he meets the security chap, he finds that he can't leave until he's paid his bill and that the TV show probably won't be doing that for him. Oh no, the whole thing seems to have taken a turn for the worse.

As an adventure, it's certainly of the highest standard. The puzzles are taxing, yet soluble, the controls are easy to use, the graphics are good (if a tad unattractive), and the sound effects are helpful and occasionally amusing. What might annoy some players, though, is the general subject matter.

It's all very silly (usually a Good Thing), but there seems to be something a little sinister lurking beneath its gormless exterior. There are, for instance, a few too many scantily clad 'babes' about for me to be comfortable about its intentions. Larry never succeeds with his chat-up attempts, but their sliminess is sometimes too real to be funny. Is it making fun of Leisure Suit Larry, or is it celebrating him? Is it a scathing lampoon of an undesirable element of our society, or a sad, out of date, sexist load of old tosh? Am I taking it all a bit too seriously?

If, as the game's creator, Al Lowe, claims, the whole point of the game has been to have a bit of a laugh at this poor sap's expense, make a few slightly risqué jokes and generally not take adventure gaming too seriously, then he's succeeded. Too many adventures take themselves far too seriously and anything which deflates them a little has to be a Good Thing.

But something about Larry and his amusingly sexist antics niggled me a little. The blah on the box delights in the quality and quantity of the 'babes' and tries desperately hard to make sure you think you're going to be titillated by the gaming experience. (You won't be.) *Leisure Suit Larry* might have been an amusing idea, but now that we've reached *Leisure Suit Larry 6* the joke has worn pretty thin.

Tim Norris

LEISURE SUIT LARRY

Leisure Suit Larry 6 costs £40 and is available from Sierra On-Line on 0734 303171. It requires 256 colours, 4Mb RAM and System 7.0 or later.

Graphics Colourful (almost gaudy) but sexist.	78%
Sound Dreadful (optional) music with good, yet sexist, spot effects.	76%
Gameplay Easy-going and amusing, if a little sexist.	80%
MACFORMAT RATING	69%

The bathroom is probably the cleanest part you'll come across in the whole game.

Surely no one really steals things from the chamber maids' carts in hotels?

Knocking on the hotel doors invariably brings this sort of hilarious answer.

Firefall arcade

Some nasty, wriggly things are about to snuff out the human race, unless you can stop them...

Look at the incredible 3D graphics! Feel the speed! Actually, this is the title screen. But it's nice to pretend.

There's something slightly decadent about playing *Centipede* on a Mac. All those millions of man-hours of research and development, all those processors and co-processors, all those Mb and MHz and MIPS, all being harnessed just to move a few little coloured blobs around the screen for your whimsical amusement. But what's *Centipede*? What's it got to do with *Firefall Arcade*? And those are very 'blobby' blobs, aren't they?

Centipede, first of all. *Centipede* was one of the very first computer games ever – one of the, let's say, ten key games that shaped the face of video gaming. You'd include *Centipede* in the same reverential breath as things like *Space Invaders*, or *Asteroids*, or *Donkey Kong*, and could find at least a whole chapter on it in any encyclopaedia of video games. But while *Space Invaders* went on to spawn generations of shoot-em-ups, and *Donkey Kong* can claim to be the inspiration behind the thousands of platform games we play today, *Centipede* kind of fizzled out in the early 1980s and has been – conveniently, perhaps – long forgotten.

As with all early computer games, the principle behind *Centipede* is simple almost to the point of banality. Little centipedes, made up from strings of coloured blobs, squiggle down the screen towards you. When you shoot them, they split in half and the two halves squiggle off

Gamebusters

Tippety top tips: that's what we want, so get 'em in – you could win a T-shirt for your trouble.

Armour Alley

■ Click anywhere on the radar display and you will instantly be zoomed to that spot. It's handy for getting back to base without running out of fuel.

■ Pressing '1' while playing gives you almost infinite ammo, refills the fuel tanks and fills the helicopter with paratroopers. Press it repeatedly and drop the paras to form an army.

■ Select 'Direct – Modem Port' on the **Network** menu to play some network games, even if you're not connected. Just start a new game, and you'll get a list of scenarios to choose from. 'Balloon Fun' is good, you can even change sides and fly the enemy chopper.

Mike Whooley, Skibbereen, Ireland

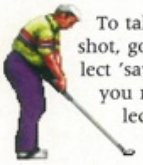
Might and Magic

■ You will find towns at C2 10-10 (Sorpigal), B3 3-3 (Portsmith), B1 13-1 (Erlequin), D4 7-7 (Algery), and E1 9-11 (Dusk).

■ There is a merchant's pass, which you can use to enter the castles, in one of the deserted wagons in area C1.

Magnus Hulterstrom, Uppsala, Sweden.

PGA Tour Golf



To take a mulligan on a tournament shot, go to the PGA Tour Tent and select 'save game'. Take the shot, and if you miss, return to the tent and select 'restore game'. You can then return to your shot, and go on to win the tournament, by repeating this procedure.

Alan Bradshaw, Raheny, Dublin

Prince of Persia

To finish the first level of *Prince of Persia* without wasting time getting the sword, drop down through the ceiling and go right into the room with the guard. Wait at the edge of the room until he's about to strike, then go to the left until you reach the wall. Wait until the guard passes the spot where you dropped down and climb up. Go left, jump up and go through the portcullis on the right. Drop through the hole and run right. When you get to the exit, go through to start level two with a sword and a few more minutes than usual.

Martin Cocks, Bushey, Hertfordshire

Red Baron

To improve your performance on this rat-a-tat flight sim, take note of the following tips:

■ When attacking a balloon approach it from a high altitude and dive down at it with guns blazing. Then climb steeply to avoid anti aircraft fire.

■ When in a dogfight, change the default level to 'most basic'. You will be able to turn more quickly and escape if necessary.

■ To win a dogfight, aim at the enemy pilot's head rather than trying to damage his plane.

■ To get to a particular sector without using the option which tells you what sector you are in, use landmarks on the ground like towns, airfields or stations. You can also follow the course of a river or railway line.

■ To shoot down a zeppelin, fly level behind it, shooting with incendiary ammunition.

Daniel Maloney, Eastbourne, East Sussex

"Naughty, naughty, Red Baron." (© Captions for Kids plc.)

their separate ways. Shoot them again and they split into even smaller centipedes and – that's right – so on, until nothing is left. And then another centipede appears. Except! Each time you hit a centipede, the blob that stops the bullet turns into a barrier. Gradually the screen fills up with barriers, making the progress of centipedes down the screen very unpredictable. You can clear away these barriers, but they take quite a few shots. And, of course, if a centipede manages to get all the way down to the bottom of the screen, to where your spaceship is, and touches it, you die.

The connection of all this with *Firefall Arcade*? *Firefall Arcade is Centipede*, basically. It's been spruced up a bit to bring it into, if not the 1990s, then at least about 1984. Now there are bonus rounds after every few centipedes – rather dull ones, mind, where you just shoot some things. The graphics are ever so slightly more exciting, and change from level to level. (There are nine levels altogether, fact fans.) Things appear from the bottom of the screen that you've got to watch out for (equivalent to the spiders in the original game). There's a range of rather unimaginative power-ups that do things to your spaceship. A selection of pretty good sound effects and tunes pump away in the background. There's quite a nice menu at the beginning, with lots of sparks coming out of the pointer. There's a plot, of course – something about minerals and the survival of the human race. And, er, that's probably about it.

Hmm, you're probably thinking. And they want us to pay money for this? You'd have a point. We've come a long way since *Centipede* first squirmed onto our screens. Games have got bigger, more complicated and nicer to look at. They take hours to learn how to play, and weeks to get bored with. *Firefall Arcade* is entertaining enough in short bursts, and for a while its simplicity makes it impossible to resist trying to rack up higher and higher scores. But the fact that you're just doing the same thing over and over again means you'll be utterly bored with it after an hour or two and your Mac will probably be feeling rather embarrassed about the whole thing.

There's nothing at all wrong with simple games, but in the case of *Firefall Arcade* (bizarre name, incidentally, eh?) you'd be much better off searching the public domain for a free equivalent.

Jonathan Davies

It looks a bit like a fireworks display, doesn't it? Or a Christmas tree. Or some confetti at a wedding.

FIREFALL ARCADE

Price: $50 (£33). From: Inline Software on 0101 203 435 4995. Controls: keyboard, mouse or joystick.

Graphics Erm, there are some.	37%
Sound Not bad at all, especially the music.	85%
Gameplay Fun but rudimentary.	50%
MACFORMAT RATING	49%

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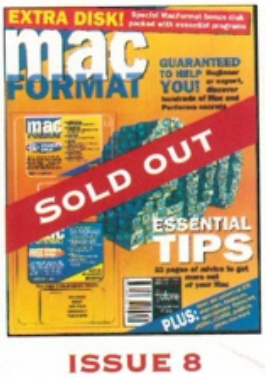

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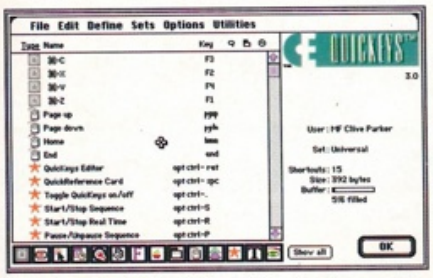


This is the main *QuicKeys* Editor window. From here you can define your *QuicKeys* keystroke shortcuts for use universally, within specific applications or within the Finder.

Your guide to *an easy life*

Wouldn't it be great if you could automate all the repetitive tasks you perform on your Mac? Well, you can – with *QuicKeys 3.0* and *INITPicker 3.0*...

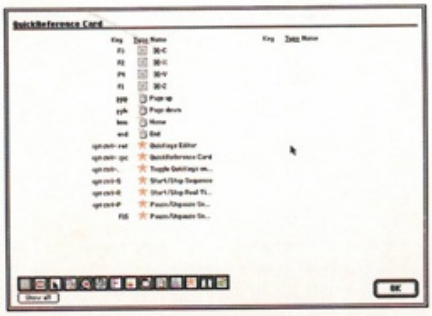
Your Mac makes life easier, no doubt about that, but there are still bound to be boring and repetitive daily routines you've got to plough through. As we saw in MACFORMAT 7 in December, *QuicKeys* promises to automate much of this routine with a series of 'shortcuts' using customised super-macros. We looked at the basics of the package then and promised to cover some of the more advanced features later. So let's see just how useful *QuicKeys* 3.0 can be...

There are shareware macro-makers available for as little as US$30, such as *TypeIt4Me*, which can enter a text string like your name and address automatically when you type a pre-set abbreviation. *QuicKeys* costs a fair deal more, but it can do much more than just enter text for you. In a nutshell, any task, or series of tasks, can be assigned to any of several kinds of shortcuts. This applies no matter how complex the task may be, including not just typing and key-presses but also menu commands, button selections, mouse movements and clicks.

For example, you can save a document from your word processor, close the application, open a DTP program and import the text, format it, alter its fonts and print it out – all from a single simple command. You can define keyboard commands for actions without a keyboard equivalent, such as zooming a window, page up, etc, or for any mouse function, including selecting any button or checkbox. You can also set up an application-specific shortcut to ensure that when you **Save** in Microsoft *Word*, for example, the document is saved to a particular folder, but if you **Save** in *ClarisWorks* the document is saved somewhere else.

If you're saving a series of documents or converting several graphics files, for instance, the program needs to know when you've reached the end of your list. You can direct your *QuicKeys* shortcut to stop after a certain number of operations have been completed. Alternatively, you can even set up 'branching' or conditional sequences, which can work in two ways. First, they can 'jump' forward or backward at a defined signal – whether a given window is open, for instance, or whether there's another item listed in an 'Open' dialogue – so you can in effect 'loop' until a condition occurs. Or second, branching sequences can test for a particular condition and then continue in any of several ways depending on the outcome of that test.

There is even drag-and-drop printing, which Apple had promised for System 7 but didn't manage to implement – you drag the document you want to print, whatever format it is, over the icon for the printer you want to output it on. Brilliant. More impressive still, you can evoke an Apple Events script from within an application that doesn't normally support it, so you can (for example) open *Dynodex* (which supports Apple Events) from within *MacWrite* (which doesn't). This scripting facility enables you to integrate with any application that complies with Apple's Open Scripting Architecture. The possibilities are limitless: *QuicKeys* can dial the phone for you, mount a file server, play a *QuickTime* movie or a sound, or anything...

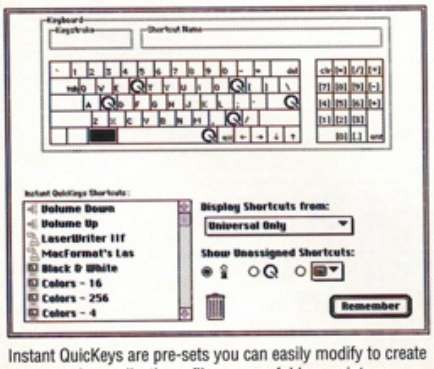


If you forget which shortcut does what, then call the Quick Reference Card from the *QuicKeys* command in the Apple menu. It displays every shortcut you've defined on-screen, along with a full description.

Finger on the trigger

QuicKeys enables you to trigger your shortcuts in seven different ways, so you can choose the most useful for each particular situation – a single shortcut can even have multiple triggers of different kinds. The more obvious triggers are keystrokes and icons; other, less obvious, methods include the built-in SoftKeys palette, the *QuicKeys* menu, the Quick Reference card, timers – for automated functions like auto-saving of documents – and even speech (on Macs equipped with the Apple PlainTalk speech recognition system).

Of course, if you've automated everything with *QuicKeys*, the problem is going to be remembering what keystroke shortcuts you've defined. The QuickReference Card is the an-



Instant QuicKeys are pre-sets you can easily modify to create shortcuts for applications, file servers, folders, printers, control panels, colours and many more system functions.

OTHER QUICKEYS TOOLS

There's more to *QuicKeys* than the *QuicKeys* editor, there's also a suite of integrated tools and utilities to make life easier for you. When you install *QuicKeys 3.0* – or upgrade from a previous version – you can install as many or as few of the separate components of the package as you wish. If you have enough hard disk space and RAM then it's best to install everything.

Instant QuicKeys: A set of predefined shortcuts ready for you to use as soon as *QuicKeys* is installed (and edit if you like).

SoftKey Palettes: Enables you to assign collections of shortcuts to the numeral keys across the top of your keyboard.

Extensions: Not to be confused with your Mac's System Extensions, these are a series of *QuicKeys* tools dealing with files, the system, networks and devices, text, sequences, scripts and third party utilities.

swer here: simply select this option from the *QuicKeys* command in the Apple menu and you can display all shortcuts on-screen. There's even a Template Printer for producing a printout of a keyboard with all the shortcuts superimposed on the keys.

With all this power on tap, you might be surprised at how easy it is to set up and modify your shortcuts. All you have to do is use the VCR-style controls to 'record' your sequence of actions as you execute them, and then, if necessary, edit them afterwards. You can add or modify steps in the sequence, assign it to a 'set' of shortcuts (you can have several for different purposes), and configure it to run in real time if you wish, for those occasions when timing is important. The *QuicKeys* package even comes complete with a set of ready-defined shortcuts for standard operations, which you can use as is or edit to suit your own needs.

QuicKeys is a simple to use system that can potentially increase your productivity on your Mac by automating just about everything you do repeatedly. A handy manual gives you an overview of the uses you can put the package to. It's quick, it's reliable, it's easy and it fast becomes indispensable on your Mac, whatever you use it for. *Clive Parker & Alex Summersby*

QUICKEYS 3.0

Available from Frontline Distribution (0256 463344), recommended price £159 (but shop around). Requires System 7.0 or later, 4Mb minimum RAM and hard drive

Ease of use 88%
Easy to get to grips with, becomes automatic in use.

Documentation 91%
Well presented, excellent productivity guide.

Features 94%
Makes using your Mac even easier than it already is.

Value for money 83%
An investment, but you do get what you pay for, and then some. Well worth considering.

MACFORMAT RATING 89%

INITPicker 3.0

One of the greatest things about the Mac is the ability to add little extras in the form of System Extensions, so you can print, share files, add custom sounds, and much more. Unfortunately, this can also be one of the worst things about the Mac. Extensions – called INITs before System 7 – are little programs that load into memory at startup and sit there in the background, ready to run, till you shut down. Most Extensions are well-written and get along fine with each other, but in some cases problems develop: more than one Extension might try to use the same area of memory or otherwise interfere with the running of other Extensions or programs, resulting in your Mac crashing or just freezing at startup.

Luckily the solution is simple – in theory anyway. All you need to do is prevent the offending Extension from loading. But how do you do find which Extension, or combination of Extensions, is causing the problem? Normally, to disable an Extension you just move it out of the Extensions folder (or under System 6, out of the System folder completely) – surely there must be a more elegant, Mac-like method? And if your Mac freezes at startup, how do you get to that stage anyway?

Well, you can get around the freeze by holding down the **[shift]** key when you start up, preventing all Extensions from loading at all. After that, there are utilities for switching combinations of Extensions on and off. Some are in fact free, like *Extensions Manager*. So why should you want to pay for a program like *INITPicker* when you can get another that seems to do the same thing for free?

You can call the *INITPicker* Control Panel from the Apple menu or by pressing the **[command]** key on startup, switch Extensions on and off by clicking, or choose from your customised sets of Extensions at startup.

INITPicker 3 gives you a display of all the Extensions in your system and enables you to switch them on or off, one by one. You can pre-define several sets of Extensions to use for different jobs – anything from a 'bare bones' set for when you need all the memory you can get, to special combinations for particular tasks – and select the set you want to use at startup. You can switch sets by simply calling up the *INITPicker* Control Panel. You can disable a particular Extension for a single work session or permanently at any time.

So far, *Extensions Manager* would do the same job. However, *INITPicker* goes further. It gives you a simple drag-and-drop method of changing the order in which Extensions load, which can often be all it takes to resolve a conflict. You can define a simple key command to invoke one of your pre-defined sets of Extensions at startup, ready for your work session. The program will keep a log of Extensions for you, which can help you track down conflicts, and it can list how much memory each one is using, to help you decide whether they're worth the RAM they consume – the more they use, the less is available for you to run applications in. If you're a network supervisor, you can even use *INITPicker* to control which Extensions are loaded on networked Macs – great for avoiding time-consuming crashes and version incompatibilities across the network, and you need to install a new version of an Extension only once.

Most usefully of all, *INITPicker* has a built-in incompatibility detector called BombGuard, which you can turn on if you're having crashes at startup. Just restart holding down the **[command]** key instead of **[shift]**, and only *INITPicker* loads. BombGuard can then monitor the loading of your Extensions until the problem rears its head, whereupon it will restart your Mac without the troublemaking Extension. The process continues until all selected Extensions have been run and you reach the desktop, at which point BombGuard will give you a report on what was causing the problem. This automates and simplifies the otherwise tedious process of tracking down an Extensions conflict, and this alone is worth the modest price of the *INITPicker* package.

INITPicker 3 offers quite a bit more than the public domain or shareware alternatives. If you have a lot of Extensions or always needed more help, you won't be disappointed with *INITPicker*. *Clive Parker & Alex Summersby*

Selecting the Add... command enables you to create a customised set of Extensions you can pick at startup, and you can give it a relevant name to help you remember what particular use you've created it for.

INITPICKER 3.0

INITPicker 3.0 is available direct from Iona Software, Dublin (010 353 1 366328) for £49.95 (ex VAT). It needs a Mac Plus or better with at least System 6.0.5.

Ease of use 89%
Quick and easy to use.

Documentation 82%
Small but informative manual.

Features 90%
Generally good; excellent BombGuard function.

Value for money 85%
Well worth buying to prevent problems.

MACFORMAT RATING 87%

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A database *in a spreadsheet's clothing*

Your spreadsheet may well double up as a database, with a few deft mouse clicks. Here's how to use *Excel* to its full potential.

Roughly 90 per cent of all spreadsheets are probably small databases in disguise. This is not surprising, considering that most database applications provide tables to put data into and a spreadsheet is nothing more than a large table. Microsoft has recognised this and included facilities in *Excel* specifically to support the management of data in spreadsheets. *Excel* will never be a replacement for a 'real' database application, but it does provide a basic set of functions that can help you manage data in your spreadsheets. Let's look at a small example which is probably too much trouble to put into a real database if you have one. Using the limited database facilities of *Excel*, however, you can easily extract data and manipulate it.

Database worksheets

A database is a sort of electronic filing cabinet which, unlike its metallic cousin, has a built-in search facility. However, like its cousin it needs to be organised properly and therefore the first thing to do is to gather the data into a sensible form. The database format in *Excel* is fairly flexible and is created within a worksheet. It is a rectangular range of a worksheet with labels in the top cell of each column. These labels identify part of the record in the database, such as a name or an address. Having created the labels, you can enter data values, but it must be explicitly turned into a database. To do this, select the labels and the data with an extra blank row after the last data row and choose **Set Database** from the **Data** menu. The database is now set up and all further database actions on this worksheet will refer to this area.

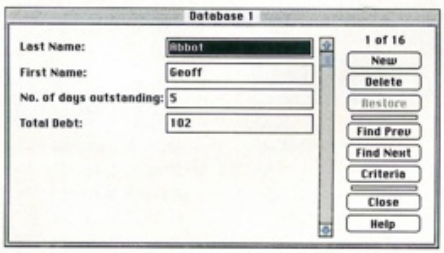
Database 1

	A	B	C	D
1	Last Name	First Name	No. of days outstanding	Total Debt
2	Abbot	Geoff	5	£102.00
3	Bartle	Davina	34	£25.00
4	Bradford	Mark	45	£85.00
5	Clifford	Pauline	27	£47.00
6	Cross	Tim	45	£687.00
7	Dean	Arnold	12	£52.00
8	Francis	Peter	133	£3.00
9	Green	Philip	64	£64.00
10	Johnson	Charles	22	£81.00
11	Morgan	Jack	56	£22.00
12	Nelson	Edward	28	£23.00
13	Petersen	Carol	37	£87.00
14	Rodgers	Anne	2	£257.00
15	Stevenson	Elizabeth	6	£156.00
16	Tully	Emily	35	£55.00
17	Vincent	Roger	21	£71.00
18				

Here is a database set up with the labels at the top of the columns, some data and a blank line at the end.

It is important that the range selected for the database is not near any other data. This is because when records are added, the database expands down the worksheet and this would therefore overwrite any data below the original database range.

One of the reasons for creating a database is so that new data can be entered easily. In an ordinary worksheet it is very easy to modify the wrong cell, especially when there is a lot of similar data nearby. The safest way to enter data into a database is to use the **Form** facility provided by *Excel*. To access the data entry form choose **Form** from the **Data** menu. A dialogue box appears that has all the labels of your database entered automatically. This form allows a complete record to be seen at a time. The current records can be examined or new records added. This is where the extra blank line becomes important. When a new record is added the data is inserted into this last blank row. A new blank row is then automatically added to the database and the database area is then updated to ensure that all the database functions work properly.



This is a record from the database in the standard data form provided by *Excel*. Don't worry if it's not quite what you want, though, because it's easy enough to customise it.

If data needs to be modified there are two ways. The most risky is to simply move to the database area and edit the appropriate record. This can easily get out of hand and simple errors can be very hard to find. The second method is to use the form facility we have just mentioned. The form allows a specific record to be found and fields can be changed easily.

Of the many ways to delete records, the easiest is to use the form facility in a similar way to the modification above. Select the doomed record and press the **[delete]** key. After the record has been deleted it cannot be recovered.

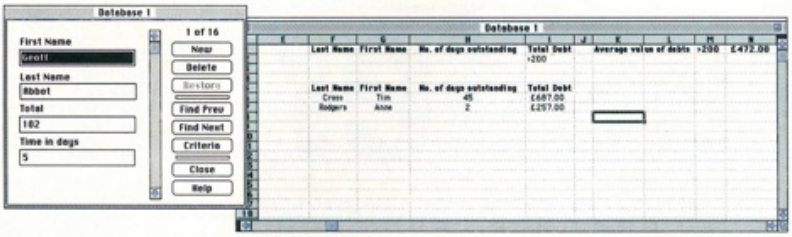
Often when you're working with a database, the default form does not allow all the data to be accessed. So it's useful to design a form yourself, and to do this a separate application is provided with *Excel* called the Dialogue Editor.

Using the Dialogue Editor a custom form can be set up where fields can be moved as required. The editor is very simple but adequate for the job.

When such a special form dialogue is required it is created in the dialogue editor then pasted into the spreadsheet and appears as a table of numbers. It can then be used as the

DOING IT IN OTHER APPLICATIONS

If you are not using *Excel* there are other ways of managing data with your spreadsheets. Last month (MACFORMAT issue 11, April 1994) we saw that in an integrated *Works* package, the database part can be used to manage the data. It is then very easy to take information from the database module and into the spreadsheet module, where it can be manipulated. This is one of the places where the integrated *Works* packages really come into their own. (If you missed that issue, turn to the MACFORMAT back issues service on page 94.) The other major spreadsheet application, *Lotus 1-2-3*, provides a database facility in an almost identical manner to *Excel*.



Once you've created your very own custom data form, using the Dialogue Editor, here it is in all its glory.

The DAVERAGE function allows the average to be calculated on what is present in the criteria range. All the database functions can work on the results of the criteria as well as the whole database.

standard form when the form menu item is chosen. Such a specialist form as this can make data entry a great deal simpler.

Extracting results

Once you've put items in a database the most important thing – in fact the whole point of doing it in the first place – is to get them out again. This is called querying and the query will extract multiple records according to a set of criteria. *Excel* achieves this in a two-part process. Firstly, a set of criteria is set up by which records are selected. Then, *Excel* must be told to use those criteria in a certain way.

To set up criteria two vital operations must be performed. First, some or all of the labels from the original database should be copied to a new part of the worksheet. Then below these labels, expressions need to be entered on the worksheet which will control whether a particular record in the database is selected. The area including the labels and the expressions is then selected and the **Set Criteria** menu item chosen from the **Data** menu.

This in itself does not cause the database to be searched. Instead the **Find** command must be used. After you've set the criteria, selecting **Find** from the **Data** menu will move to the first record in the database that matches the criteria. Subsequent records can be viewed by pressing the next button. The **Exit** button in the dialogue will take you back to ordinary spreadsheet usage. The form can be used to find records but is limited to searching based on criteria entered into one field.

A database is a sort of electronic filing cabinet which, unlike its metallic cousin, has a built-in search facility.

To extract the selected data, another set of labels is used called the 'extract range'. A set of labels is set up in a similar way to those for the criteria range but without the expressions underneath. Then **Set Extract** is selected from the **Data** menu. Then when **Extract** is selected from the **Data** menu the records are copied below this set of labels. This extraction does not affect the original data.

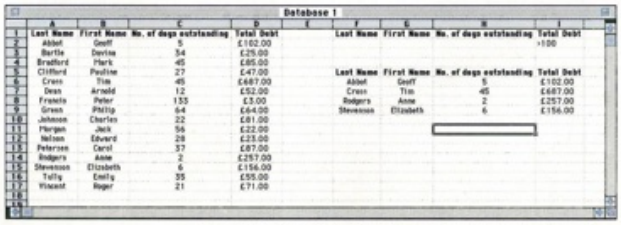
When the database is queried, the area below the extract range is blanked to ensure that there is space for all the database records returned. This means that the extract range should be in a separate part of the worksheet or beneath important data. The extract range is often placed below the criteria range.

Criteria can also be used to delete a selection of records. Once they are extracted, the **Delete** menu item is chosen. There is a dialogue to verify the request – handy, seeing that records cannot be retrieved after they are deleted.

If the **Delete** option in the **Data** menu is selected then this dialogue appears checking whether you want to delete all the records in the extract range.

Dealing with the results

Obviously, once data is extracted from a database, the normal worksheet functions can be used on it. *Excel* also provides a number of functions that work specifically with its databases – they're like worksheet functions, except that they all start with the letter 'D' and take three arguments: the database range; the fields we are interested in; and a criterion. When they are used, *Excel* applies the criterion to the named fields in the database to select some records, and then performs the function on those records. There are various functions which calculate averages, count records and find maximums. So, for example, the ordinary SUM function adds up the values in a worksheet range. The database equivalent is DSUM and that adds up the values in a set of fields selected by some criterion.



Here we are going to search for all the records in which the amount owed is greater than £100. The criteria range is above the extract range since the area below the extract range is erased by *Excel* before each search.

Analysing the contents of a database can be difficult. The cross tabular report can be very useful for this. The cross tab produces a report which will analyse the database in a number of different ways. This is easy to set up using the chart wizard.

The database can have a further use in macros. Since the database area is automatically updated when records are added or deleted, the name 'Database' can be used in macros without having to be updated each time the database is changed. This allows macros to be far more general and not have special code to work out how many records are in the database before executing. The names Database, Criteria and Extract are automatically set and are useful for manipulating in macros.

Not a database but...

Although *Excel* is not designed to be a database it does have some facilities which can be very handy when working with data in a spreadsheet. Also, the extra protection the database provides is useful. However, if you find you are spending more time on the database part of *Excel* rather than on the spreadsheet part, it is probably time to get a proper database application.

Simon Cox and Greg Morrison

JARGON BUSTERS

1-2-3: a spreadsheet published by Lotus, similar in many respects to *Excel*.
Column: a vertical line of data in a worksheet.
Criteria: the choices for the database search.
Data form: the on-screen dialogue used to access a database.
Database: a program specifically designed to handle large amounts of data processing. Many spreadsheets also include substantial numbers of database features: data entered into cells can be treated as if it were part of a database.
Dialogue Editor: the application that comes with *Excel* to create custom data forms.
Excel: A very popular spreadsheet published by Microsoft. Many other spreadsheets have similar features.
Extract: the area set aside for the results of a database search.
Macro: a set of commands to automate an operation on a worksheet.
Range: a rectangular area of a worksheet.
Row: a horizontal line of data in a worksheet.
Spreadsheet: a program principally designed to manipulate numbers, but it often can also handle other data.
Wizard: a feature in *Excel* which leads you through a procedure step by step by asking questions.

EXCEL 4.0

Excel 4.0 costs £225 and is available from Microsoft-approved dealers. For your nearest dealer call Microsoft on 0734 270000.

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■ Mac IIcx 8Mb/230, 14-in monitor, keyboard plus StyleWriter printer and some original software including *Photoshop*. £1,200 ono. Tel: 0322 438996 evenings and weekends.

■ Apple Performa plus colour 14-in monitor. Never used, bought in a package deal: £125 ono. Call Karl on 0782 619265.

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■ PowerBook 170 4/40 integral PSI fax/modem. As new with executive case and MS *Works*: £795. Tel: 0527 584934 (Midlands).

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■ Mac LC 6/40, 12-in monitor (colour), mouse, keyboard, manuals, boxed with Apple CD300, cables, software, System 7, *HyperCard*: £650 ono. Tel: 071 385 3377 (work), 071 373 7478 (home).

■ LC III 14-inProforma colour monitor, StyleWriter II – £1,750 ono. Comes complete with Microsoft *Word 5.0*, *ClarisWorks 2.0*, Bitfolio Artwork and over 50 different fonts together with various games including *Sim City 2000*, *Lemmings*, *Kings Quest 6* and loads of other extras too. Bought November 1993, home use only. I'm emigrating and need to sell asap. Tel: 0602 503563 (Nottingham).

■ Mac IIci 8/80, 16-in Apple colour monitor, System 7.1, keyboard, mouse, excellent condition. Reluctant sale, £1,000 ono. Tel: 0256 24489.

■ Mac LC II motherboard with 512K VRAM, £500 ono. Lapis full page display video card for LC range, £300 ono. Phone Andy on 0223 870486.

■ Mac SE 4/40 FDHD, System 6 and 7.1, all manuals and disks, as new, light home use only, £350 ono. Tel: 0749 813506

Software

■ Adobe *Premiere* version 2, still sealed in box, £70. May consider swap. Call Paul on 081 447 8187.

■ Aldus *PageMaker 5.0*. First reasonable offer. (Going cheap!). Tel: 0253 348810.

■ *Monkey Island 2*: £15, *Prince of Persia*: £10, *Oh No! More Lemmings*: £10, *Christmas Lemmings*: £10, shareware disk (*Solarian II*): £2, originals with manuals. Tel: 041 8806639.

■ *MacWrite Pro* £50, Claris *Resolve* £30, *MacPaint* £10, all with original disks and manuals. Tel: Paul, 0252 722143. Offers or exchanges considered.

■ *Dark Seed* adventure game. Just completed hence sale, £30. Tel: Nigel, 0753 817446 after 6pm.

■ Brand new (unopened) *Super ATM* and *Pyro 4.1*. Both for £70. Tel: Nathan, 0425 473125 after 6pm.

■ Adobe *Illustrator 3.2*, boxed disks and all manuals £180 or best offer. Tel: 0206 241921 (eves and weekends).

■ Software: £10: Starflight, *Mutant Beach*, *Mission Thunderbolt*, *Talking Moose*. £20: *Vette!*, *Prince of Persia*, *SimEarth*, MS *Flight Simulator*. Tel: Richard, 0775 760356 (evenings).

■ *Stratavision ED* 2.6.2 rendering software £350. *Journeyman* CD-ROM £15, *Iron Helix* CD-ROM £20, *Myst* £20. Tel: Eric, 071 278 9280 (eves).

■ Microsoft *Excel* version 4. Unwanted prize: £120. Tel: 0737 362175.

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■ *Public Utilities*, £35. *ATM*, £15. System 7.0.1 plus updates, £10. The lot for £50. Contact Wilf on 0707 262193. I'll also include some shareware disks.

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■ *Omnipage* version 3.0, unopened, unregistered, System 7 savvy, includes *Omnispell* and *Omnidraft*. Cost £300 plus VAT. To you – £250 and no VAT! Call Paul on 0742 693247 (24hr answerphone).

■ *Stacker* still in sealed box, £40 unwanted. Aldus Intellidraw with manuals and video, £80 v 1.0. Tel: 0272 761604 evenings.

■ *PageMaker 4.2*, boxed with manuals, £200. FWB CD-ROM toolkit, shrink-wrapped, £40. Phone Richard on 081 654 7772 daytime.

■ Adobe *Premiere 1.0*, complete, original, unregistered. Ripe for cheap upgrading! Any offers? Contact Adam on 0532 759715 any time.

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■ Wacom tablet 12 X 12 manuals, software, £450. Mint boxed LCII 10/40 CPU, 8 months old, £470 ono. Tel: 071 267 9014 anytime.

■ Spectrum 8 series III graphics card for Mac II, boxed £250. Tel: 0628 532999.

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■ Berkshire Mac User Group meets monthly (on the second Friday) in the Reading/Newbury/Basingstoke area. Bias towards design/DTP and general interest in solving Mac problems. Ring 0734 813669. (MF 16)

■ Hampton Court (Riverside) Users Group has a new phone number: 081 224 1187. Small newish group welcomes new enthusiastic members. (MF 16)

■ London Macintosh User Group. Facilities include: telephone support for full members, shareware at reduced prices, monthly mag, monthly meetings in London presented by leading hardware and software manufacturers. Full details: 43 Villiers St, London WC2N 6NE. Tel: 071 930 3757. (MF 16)

■ Informal group of users with a regular newsletter via ICR computing service. Workshops for training, software and hardware support in a PC-dominated environment. Contact Raymond Henry, Haddow Labs, ICR, Sutton SM2 5NG. (MF 16)

■ Mac user group. Send large SAE for free newsletter. All levels. Non commercial. Ref MF, 9 Burrill Drive, Wiggington, York YO3 3ST. (MF 16)

■ Macintosh Association of Users in EEC, 4 Chiou, Athens, 15231, Greece. Tel 6725485. Meetings Wednesdays 8–10pm, Saturdays and Sundays 12–2pm. We are a non-profit organisation. Please help us by donating books (misprinted, used; by surface mail), disks, programs, CD-ROMs etc for our library and program for the handicapped. (MF 16)

■ Mactivity International – the biggest user group in Europe. Divisions in Scandinavia, Estonia, Germany, Benelux. The only number we have at the moment is Belgium Tel. 32 80 64 77 13. (MF 16)

■ National postal user group. Monthly newsletter on disk. Includes competitions, special offers, reviews, cover disk, etc. Send a self addressed envelope for info to: Mac Shareware User Group (MSUG), 21 Milldown Avenue, Goring-on-Thames, Reading RG8 0AS. (MF 16)

■ Stavanger Macintosh User Group was established in 1986 and has over 50 members. It normally has eight meetings a year on various topics. Contact Jan Frick, Chairman, Rogaland University Centre, PO Box 2557, Vllandhaug, N-4004 Stavanger, Norway. (MF 16)

■ The Computer Textile Design Group. We are trying to build up a panel of advisors who can help inexperienced computer users with their problems. Contact Maggie Dunn, Wynnstay Cottage, Lamin Gap Lane, The Fosse, Cotgrave, Notts NG12 3HG, enclosing an SAE for a membership form. (MF 16)

■ The Southwest Macintosh Users Association. Membership is £17 pa but the first 100 applications will be given founder member status. Contact the Club Secretary, SMUA, Firs, Rackstile, Wadeford, Chard, Somerset TA20 3AP. (MF 16)

Your user group will be listed here free of charge for six issues, then deleted to help weed out defunct groups. The number at the end of each entry is the last issue in which that entry will be included. If you want your group's entry renewed (or corrected), just send in the coupon on page 100 a couple of issues in advance. If you run a group not listed here, send us your details!

Note: this list is provided as a free service for amateur, non-profit-making user groups. MACFORMAT does not endorse or recommend any particular group and cannot be held responsible for any losses or problems you might suffer.

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■ 2 x 1Mb SIMMs for LC (80ns), £40. *Monkey Island 1*, boxed with manuals, £15, *Kings Quest V/Red Baron/Rise of the Dragon*, boxed with manuals, £20. Tel: 0222 465087.

■ Apple font pack for Macintosh, all manuals, fully boxed, £35. At Ease for Macintosh, all manuals, fully boxed, £20. Tel: 0506 847619.

WANTED

■ Mac LC III or 475 with 14-in or greater hi-resolution monitor, keyboard, mouse and preferably, warranty. Tel: 0203 325801

■ Broken, faulty Macs wanted for spares and projects for college. Cash waiting, apply to Mr J Clark, 20/5 Hyvot Avenue, Edinburgh EH17 8NY. All replies answered.

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■ Final year student needs 4D with manuals. Must be cheap. Contact Majid on 0296 28267. Answer machine.

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CONTACTS

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■ Shareware fan seeks swap partners from all over the world. Chris Asschenfeldt, B2, 16 D-68159, Mannheim, Germany.

■ Mac contacts wanted to swap shareware etc by post. 100% fast reply. Send disks/lists to Martin, 35 Hengistbury Rd, Southbourne, Bournemouth BH6 4DQ.

Buying advice

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Always be absolutely clear about what is included in the price – postage and packing? Any necessary cables etc? VAT? (By law, an advert must say *explicitly* if VAT is not included; if it doesn't, VAT *is* included. But this could be in the small print – so read it all!) If you're buying in person, check that everything is there and it all works properly before you leave the shop. If you're buying by mail, ring the supplier first to confirm the price and availability, and ask what your options will be if there should be any problem. Find out when you can realistically expect delivery. Always keep all receipts and make records of all correspondence, whether it's by mail or by phone.

How to protect yourself

If you are buying goods of more than £100 in total value, always try to use a credit card. That way, in the unlikely event of anything going wrong, you will be legally entitled to claim against the credit card company as well as the seller, even if the seller has gone bust. You may also get extra insurance – check with your credit card company.

If you're not paying by credit card, pay by cheque. Never send cash through the mail – it is impossible to trace if it gets lost, you can't stop payment if you need to, and even if you have proof of posting you can't prove how much you sent.

Keep records. If you are paying by credit card keep a note of the exact time of the order and ask for an order number. If you are paying by cheque make sure you fill in the details of date, amount and payee's exact name in the stub – and keep it!

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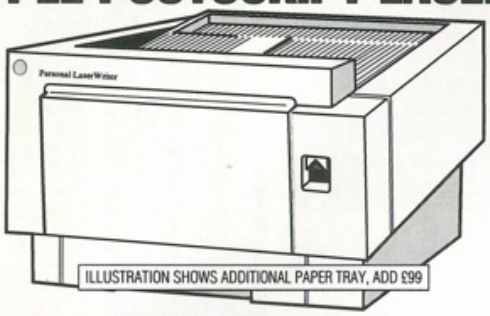

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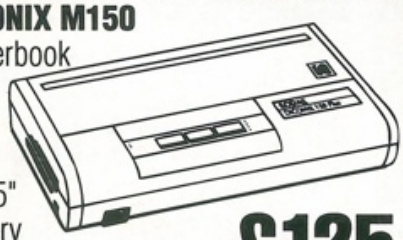

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It's not a black hole, it's... the Tiny Zone!

Hello and welcome again to the Tiny Zone, the section of MACFORMAT that gives a whole new meaning to the term 'antisocial'. I mean, for all the talk about how a personal computer brings the world into your study (or bedroom, or sitting room), at the end of the day all you're doing is sitting in front of a keyboard and staring at a cathode ray tube. It just struck me at 3 o'clock this morning, as I sat here reading my electronic correspondence, that actually what I was doing was exactly the same as during the working day. (And I don't mean forcing myself to stay awake. And don't ask why I was still here.) The only sound you hear most of the time in the sunny MACFORMAT office – and sunny it is; I have to give it that – is the quietly desperate sound of fingers pounding on keyboards. Oh, there's the occasional witty banter, the intermittent cry for help or demand for information... but more often the only interaction we have is with our Macs. Are we so unusual? I wonder. We seem to need to talk less and less. Electronic mail systems seem to be taking the place of personal meetings, or even telephone calls, even internally (at least in Future Publishing) – they're a more reliable way of making sure you get the message through even if the target is elusive, and there's always something in writing to confirm the details later on. A shame, that, because I'd always fancied the idea of leisurely business lunches in some sunny little courtyard café like the one outside our building. Where it's sunny. OK, I admit it. That's the whole problem, really. My Mac and I are the best of friends, and I really find e-mail very useful, and I am old enough to remember how much more difficult magazine production was in the days before Macs and *QuarkXPress* and *Photoshop* and all the rest. But, dammit, Andy's gone on holiday to Cyprus – Cyprus, the swine! – and the sun is shining, and I've been stuck in here for what seems like weeks on end. So, as we used to say back in the old days, favourite things to do this month: trying not to stare out the window at the sunny streets and take long lunch breaks just to wander about. Sigh. Hey, did I ever tell you about those long, lazy summers in Australia...?

Next month

Woah, you say. *Wait a moment,* you cry. *Yes, I need more data storage space – and more memory too, come to that – but, well, isn't there an alternative to all the hardware options MACFORMAT has so dazzlingly laid before me this issue?* Do you know, the same thought occurred to us. In fact, there is a whole range of clever software alternatives that promise to increase your disk space or your memory, from compression utilities that automatically squash whatever you save, and thus make it take up less of your valuable space, to magical pieces of arcane wonderment like *RAM Doubler*. Next issue we'll be looking at them all, seeing how they work – and indeed, testing *whether* they work. More memory could be as close as installing a tiny program.

■ We'll also be taking a close look at some remarkable applications software, including a budget *Photoshop*-alike from France, a great value-for-money relational database, and a 'personal music coach' package. Plus there's "a multimedia planetarium on your desktop" in the shape of *RedShift* – a CD-ROM title that includes views of the solar system, photographs and even simulations of astronomical events over the last 15,000 years...

■ PLUS Wondering how we could possibly follow up this issue's exclusive fully-playable demo of *Prince of Persia 2*? Well, how about another exclusive demo, this time of *Syndicate,* the eagerly-awaited new game from Bullfrog, the people who brought you *Populous* and *PowerMonger*? It's all yours on next month's MACFORMAT cover disk.

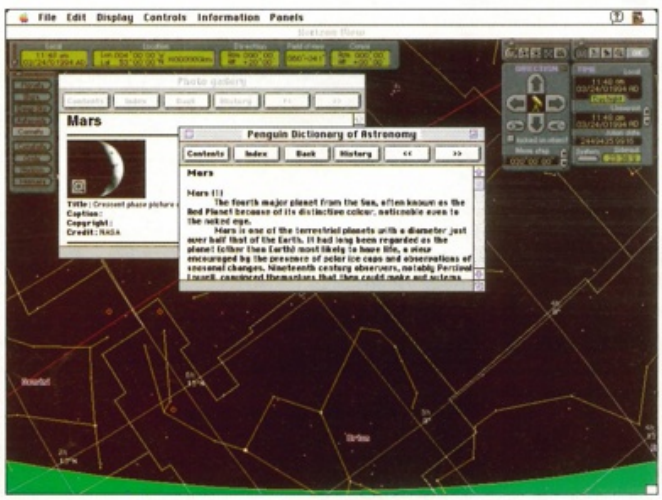
We'll also be reviewing the hottest new games for the Mac, including *Caesar Deluxe* (I still think it sounds like an Italian football team), and the dazzling pinball game *Crystal Caliburn*.

■ PLUS The latest news from around the world; an impressive dye-sublimation printer that brings truly affordable dye-sub-quality colour output to your desktop; your Mac problems solved in MacAnswers; and MACFORMAT's regular comprehensive coverage of just about everything you can do with a Mac!

The new uniform for Old Bailey judges? No, *Cosmology of Kyoto,* reviewed next issue...

"So I said to 'im, 'Caesar,' I said, 'and bless me but 'e did. She was surprised, I can tell you.' It's the way I tell 'em."

Remember the thrill of the flipper under your thumb? Well, *Crystal Caliburn* may not actually have flippers, but it's certainly got the feel and colour of real pinball. Find out next issue how well it plays!



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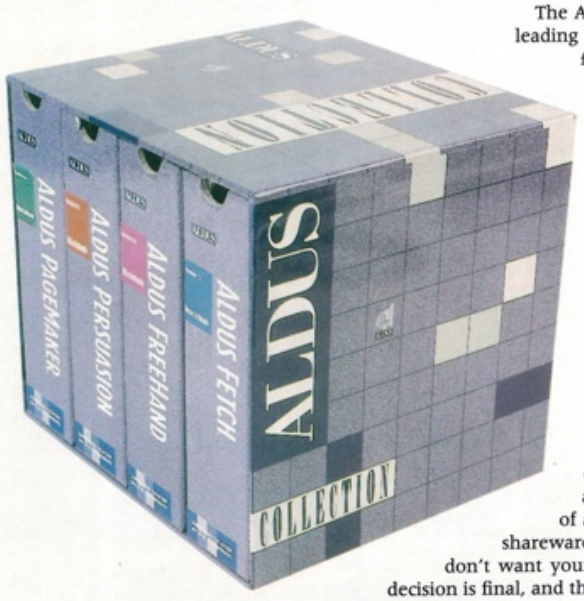
You know that your Mac is the machine the professionals choose for desktop publishing, graphics and illustration work. You also know from this issue's cover feature that there's a vast range of software you can get hold of for very little cost. But if you want to leap the gap from entry-level to pro-level in one bold step, you can't do much better than the Aldus Collection.



The Aldus Collection is a bundle of four industry-leading creative programs which sells for almost £1,200. There's *PageMaker 5.0*, the top-end DTP program from the people who invented DTP. It has all you need to create any publication up to a full-colour magazine, from comprehensive text controls to colour separation. There's *FreeHand 3.1*, the complete illustration program. There's *Persuasion 2.1*, for creating full-colour slides, charts, transparencies and even on-screen interactive presentations. And there's *Fetch 1.2*, the on-line library for sorting, previewing and accessing all your Mac images.

All you have to do is answer the three simple questions below and send us your answers on a postcard or the back of a stuck-down envelope. Employees of Future Publishing, Aldus, and their families, are not eligible to enter. No multiple entries are allowed, unless they are written on the label of a disk containing your favourite freeware or shareware program. (Bribes? *Us*?) Please state if you don't want your name added to a mailing list. The editor's decision is final, and the closing date is Friday 20 May.

THE QUESTIONS

1. *PageMaker* is the leading DTP package from Aldus. What does 'DTP' stand for?
(a) Desktop publishing
(b) Differential Trigonometric Precision
(c) Don't even Try to Predict

2. Which of the following types of software is *not* included in the Aldus Collection?
(a) Presentation
(b) Illustration
(c) Sports simulator with ray-traced vector graphics

3. Which major company has Aldus just announced it is merging with?
(a) Claris
(b) BMW
(c) Adobe

Simple, right? Just send your entries to: 'That's some box of tricks', MACFORMAT, Future Publishing, 30 Monmouth Street, Bath BA1 2BW.

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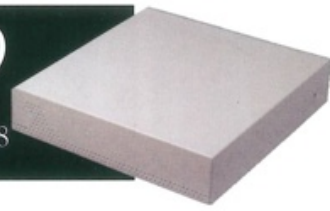

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