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July/August 1985

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# About MacUser...

8

## SPEED TRIALS

Given the choice of a second disk drive or an upgrade to 512K, which would you choose for your Macintosh?

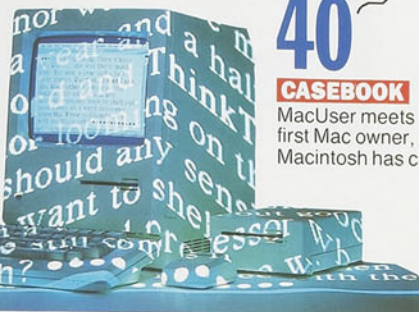


40

## CASEBOOK

MacUser meets Ian McKinnell, the UK's first Mac owner, and finds out how the Macintosh has changed his life.

32



## WORDPROCESSORS

Are you using a wordprocessor best suited to your needs? See inside for an in-depth comparison of *MacWrite*, *Word* and *ThinkTank*, plus the latest word on *MacAuthor*.

16

## LASERPRINTING

The first hands-on benchtest of Apple's LaserWriter — the device that's light years ahead of the Imagewriter.



44

## IMAGE DIGITISERS

Put your Macintosh in the picture with MacVision, Thunderscan or the Magic system.

50

## INTEGRATED SOFTWARE

'All in one' software packages for the Mac — fact or fiction? We take a look at *Ensemble* and *Quartet*.

65

## LANGUAGES

With over 20 programming languages on the market, the Macintosh looks set to break the language barrier.



## Core Material

### Apple Source 4

Inside information on the latest product from Apple UK.

### American Horizons 7

The original Macintosh design team talk candidly about the future of the Mac.

### Competition 11

Write to *MacUser*, and you could end up winning a 15-inch Imagewriter or the latest version of *MacDraw*.

### MacResource 12

All the hints and tips you could wish for... on *MacWrite*, *MacPaint* and the *Finder*.

### Business Simulations 31

High finance without the ulcers — *Millionaire* and *MacManager*.

### Playthings 42

A little light relief, with *Airborne*, *Lode Runner* and a host of other diversions.

### New Products 56

Our regular look at the latest developments in Macintosh hardware, software, books and accessories.

### MacClinic 62

If you've got a problem, you can be sure that we've got the answers. See inside...

### State Of The Art 80

A gallery of pixel paintings.

### The Apple UK Macintosh Software Selector 69



## Get Info...

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EDITORIAL ENQUIRIES

Roger Munford

01-631 1997

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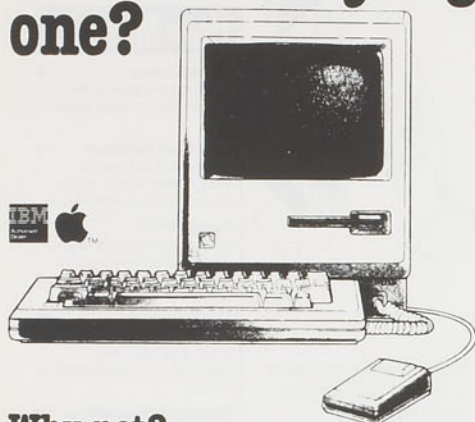
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About MacUser...

Speed Trials  
Casebook  
Wordprocessors  
Image Digitisers  
Laserprinting  
Integrated Software  
Languages  
Core Material

#### Writing For MacUser

Once you've read this issue, you'll have a pretty good idea of the style and level of material we're looking to publish. So, if you think you can do as well or better, why not have a go?

If you want to review a product, or write a general interest article, please write in to the Editor outlining your ideas and experiences before you put cursor to screen. Or better still, ring up the editorial offices on 01-631 1433. And, yes, we will certainly pay you for all your words of wisdom.

#### Bugged-up?

From the next issue of *MacUser*, we'll have a special section devoted to readers' reports of bugs they've discovered in any commercial software, be it specific applications, games or languages.

A £10 prize will be given for the best bug found each month, and if you manage to supply a fix for the bug then we'll sort out something very special for you and your Macintosh.

#### A Soft Touch?

As you can see from this first issue of *MacUser*, there's an enormous selection of software available for the Macintosh ... and it's our job to review as much of it as possible. So if you want a specific package to be reviewed, don't just wait – write in and tell us what we're missing out on.

The same could also apply to the many software houses out there trying frantically to get their product before the public eye. If you've got a new product that's the best thing since sliced bread, let us know about it. Better still, send us a review copy – all software will be returned on request.

It isn't physically possible to contact everyone in the business each and every week, and you probably get far too many phone calls as it is! Obviously, we can't guarantee to provide the space you feel your product deserves, but please keep sending the press releases or samples ... and give us a ring if it's really important!

#### MacThanks!

Thanks must go to the tireless staff of Apple UK who have had to put up with a near invasion of their company by a manic Art Director and an over-zealous Editor. To name but a few of the Apple UK team, our special thanks go to Mary Ainsworth, Phil Peters, Keith Phillips, Bob Kissack, Richard Strong, Daphne, Albert, and David Hancock.

Editor Roger Muntford, Launch Art Director Jimmy Egerton, Assistant Editor Nik Lumsden, Production Editor Chris Lennigan, Art Assistants Burch Studio, Contributors Colin Buckley, Sue Denham, Peter Jackson, Guy Kenney, Andy Martin, Ian McKinnell, Andrew Pennell, Jerry Sanders, Yvette Stachowiak, David Tebbutt, Mike Wessley, Geoff Whelan, Front Cover Artwork Ian McKinnell, Advertisement Manager Steve Cousins, Group Advertisement Director Chris Talbot, Group Art Director Terry Nevill, Publisher Stephen England. Published by Sportsman Publishers Ltd, 14 Rathbone Place, London W1P 1DE. Telephone 01-631 1433 (Editorial), 01-631 1862 (Advertising). Telex 0554 139 BurchG. Company registered in England. Typesetting Carlpoint, London. Reproduction Graphics Ideas Ltd, London. Printed by Chase Web Offset, St Austell, Cornwall. Distribution Seymour Press, 334 Brighton Road, London SW9. Telephone 01-733 4444. All material MacUser © 1985 Feilden Productions, and may not be reproduced in whole or in part without written consent of the publishers.



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# AppleSource

THE MACINTOSH HAS BEEN WITH US for over a year now, but it's only relatively recently that great things have begun to happen.

Gone are the days of having to 'make do' with *MacWrite*, *MacPaint* and *Multiplan*. Today's list of software applications for the Macintosh is nothing short of impressive.

Indeed, 'Mac evolution' — or should we say, 'Mac revolution' — is coming along at a fair old pace. And it's not going to stop there — in the words of an Apple spokesperson, "The Macintosh is going to be the cornerstone of the architecture that takes us [Apple] through this decade".

Probably the biggest news from Apple at the moment is the launch of the *LaserWriter*. As the flagship of the much-vaunted *MacOffice*, *LaserWriter* is the product Apple is hoping will transform the Mac into the personal computer that'll take the business community by storm. And that's just what it is doing ... but on the other side of the Atlantic! Although Apple UK has managed to ship a few *LaserWriters* into this country to fulfil its deadlines, no way will the quantity that'll filter through to the dealers meet anything like the customer demand until September at the earliest. To quote the pseudo-Californian jargon from Apple's Hemel Hempstead headquarters, "There's been a product shortage situation".

Right on!

It seems that Apple underestimated the market for the *LaserWriter* in America.

Sure, it would be useful for presentation work and sales reports required in the world of marketing and communications circles ... but no-one quite predicted the clamour to produce in-house magazines and newsletters, using the *LaserWriter* in conjunction with page make-up packages like *PageMaker*, *ReadySetGo* or *MacPublisher*. So, until the US market is sorted out, us Brits will just have to wait our turn — but if you want to set the tongue a drooling, have a look at the preview in this issue.

STILL WITH APPLE, SOMETHING that'll definitely be coming through via Cupertino is a Winchester hard disk for the Macintosh, upping the available memory by 20Mbytes. Good news indeed for all those who have been following the fated Lisa/Macintosh XL story. To explain, Apple introduced three different versions of the Lisa, only to drop all but the Lisa 2/10 — the one with the built-in hard disk — and re-named it the Macintosh XL. The hard disk for the Macintosh is now to be introduced by

According to sources inside Apple, the Macintosh is only the beginning...

Apple so that the Macintosh XL can be phased out of the product line.

Of course, Apple isn't exactly launching into virgin territory here. You've only got to take a look at our new products pages this issue to see that this particular bandwagon is fair fit to bursting with numerous products from third-party manufacturers. Hopefully, we'll be able to bring you a sneak preview of Apple's hard disk in the next issue ... but be there anyway, as we'll be checking out many of the hard disk units already available for the Macintosh.

THE LAST COUPLE OF WEEKS HAVE been very exciting as far as the Mac's software catalogue goes. There's been the long-awaited launch of *Jazz*, Lotus's integrated software package for the 512K Mac. Planned originally to be released in April, the Powers That Be at Lotus have at last designed to provide the product that everyone's been waiting for. And if first impressions are anything to go by, it was well worth the wait.

But just as everyone's been waiting for *Jazz*, some of us have been patiently awaiting a decent version of the *Switcher*. Written by Andy Hertzfeld, the *Switcher* allows the 512K Mac memory to be split up, each holding a specific application. You can then 'switch' between each application at will. In this


way, any user could build up his or her own integrated software, customised to individual needs. It'll be interesting when it happens, and we'll tell you about it just as soon as it does.

Rumours that the *Switcher* would be

provided as a 'free item' to Mac users now seems scotched ... but we do hear that Microsoft is planning to incorporate the *Switcher* as part of its 'super-spreadsheet' *Excel*, so that *Word* can sit alongside it.

STARTING UP A MAGAZINE IS always traumatic — and we've certainly had our fair share of nightmares putting together the pages you now hold. But this is a magazine for Mac users, and, as such, so it's up to you to make the most of *MacUser*.

Tell us what you use the Macintosh for and what software you'd recommend for that purpose. Of course, if you've got any tips that make life easier on a certain software package, don't keep them to yourself — share them with your fellow Mac users. And finally, although no-one likes to admit defeat and failure, don't bottle it up ... write and tell us your problems and we'll do our best to help.

Remember, no magazine is an island ... we want to hear from you! 

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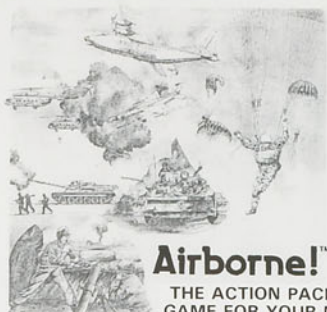
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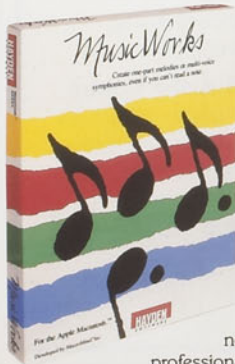
However there's still one slight hitch in Sydney's rise to stardom. He's been charged under the Trade Descriptions Act over the name of his latest album – "Sydney Saunders Entertains".

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A MUSING. ONE OF MY FAVOURITE compatriots from the world of computer retailing in New York has, like me, moved recently to sunny California. He now works for a Silicon Valley firm and, in that capacity, attended the massive computer show, Comdex, for the second time as an exhibitor.

After it was all over, he estimated there had been about 50,000 people in attendance. But he admitted, "There was no excitement!" He then added, with a distinct hint of melancholy, "I guess that's to be expected, though, as the industry matures."

Of course, he's right to a certain extent, but his close relationship with the IBM market has meant that he's missing out on something terribly important. All the excitement and enthusiasm for microcomputers is still there — you just have to know where to look for it. And in an era when everyone's jockeying for the position of 'most compatible workhorse', the place to look out for excitement and enthusiasm is around the Macintosh.

### Rocking The Festival

While Comdex was fulfilling the traditional computer market, I found more interesting material at the recent MacFest, set up by the Stanford Mac Users' Group (SMUG).

MacFest features displays by a large number of Mac hardware and software companies, including Microsoft (who demonstrated its new Excel), Hayden (showing off Quartet), Aldus, Haba Systems, and many others. The hits of the floor show, though, were the language packages ExpertLisp, Logo and Forth, and the digitising software from Koala Technologies.

The evening sessions of the MacFest, although held in locations that were extremely difficult to find on the Stanford campus, were events not to be missed. Here it was that Apple's 'big guns' were out to field any questions asked of them ... and one or two of the audience's queries certainly rocked the boat!

The panel of speakers featured most, if not all, of the original Mac development team in attendance. Even people like Jef Raskin, who conceived the Macintosh but no longer works for Apple, were invited and seemed delighted to be there. Mike Murray, recently booted up to corporate as Vice President of Business Development of Apple, acted as referee in what looked like an exciting meeting.

It was interesting to see that most of the participants in the panel were so far away from the original design in their current work that they had considerable difficulty answering the questions without giving away Apple secrets.

For instance, at one point, Chris Espinosa who was asked about the future of Macintosh development. He asked the audience to make up a 'wish-list' of future developments only to be engulfed in the expected response of colour Macs, larger memories, built-in hard disks and so on. Chris smiled

# West Coast Horizons

*Find out what's happening to the leading edge of Macintosh technology from Mike Wesley, our man in the sunshine.*

whimsically and said, "Most things that you believe are now possible could come true!" Nice one, Chris.

### Memory Matters

Staying with the topic of memory, a number of the audience were interested to know why the Mac's RAM was so restricted in the original design. Bruce Horn fielded the question by reminding everyone that RAM was very expensive at the time — as he put it, "The 68000 processor may be able to address 16Mbytes, but your wallet can't." The entire panel agreed that a low system price was one of their major considerations.

**THE 68000 processor may be able to address 16Mbytes, but your wallet can't.**

The fact that the Macintosh began life as something of a pirate project was brought up several times, and Mike Murray was asked whether it was possible for a \$2 billion company like Apple to continue to foster such projects in the future. Murray agreed that the Mac could not have been initiated at today's Apple, but that changes in corporate structure may help return Apple to the user-oriented place that allowed creativity to flourish with the Macintosh.

Apple's overblown bureaucracy seems to be of concern to some of the development team as well. MacPaint's designer, Bill Atkinson expressed annoyance several times over delays in the development of *Paint Mover*, a tool designed to allow users to work with images larger than screen size. Another man with a problem was Andy Hertzfeld who said that he had added


background processing to the Switcher, but that this would only work where software had been written to specifically take advantage of it.

Another of the panel, Jerry Manock, suggested that people who didn't like Apple's new trend for snow-white plastic Macintoshes should blame top management ... and not the machine's designers. Jerry explained, with just a trace of bitterness, that Apple ignored the suggestions of its designers, and chose instead to follow the recommendation of design expert Eslinger in Stuttgart. It seems Apple's top management wanted the company to pursue a world class design, and like the purity and marketability of the colour white. Needless to say, the audience sided unanimously with Jerry in their expressed distaste for the new colour.

Still with colour, one of the audience asked why it was that the Macintosh wasn't available in designer colours. Burrell Smith said that the speed and efficiency of the assembly line would be adversely affected by throwing in cases of a different colour. The point would have been suitably fielded if someone else from the panel had not added, "Yes, and that's why cars are always black!"

The software people became a bit defensive when queried about the advisability of letting free software upgrades out to users when they still contained a number of important bugs. 'Extensive testing' and Apple's 'niceness' in making the upgrades available to customers free were two of the 'likely tales' made. Hmm.

Finally, Andy Hertzfeld said that he believes GEM to be a sham. After extensive study, he felt that GEM had little or none of the depth found in the Macintosh system. "It has to be a joke," Andy concluded, "but I can't figure out who the joke is on." Rumour has it that at a recent GEM show, all the interesting talk revolved not around GEM, but instead around new developments on the Macintosh.

But the real congratulations are due to the Stanford Mac Users' Group for putting on such a terrific show, putting enthusiasm and excitement back into the world of computing. And it also shows that the users are proving themselves hard taskmasters for Apple to live up to. 

### Cast List

Mike Murray	Vice President of Business Development at Apple.
Chris Espinosa	Technical support at Apple. Chris also wrote huge chunks of the software developer's manual, <i>Inside Macintosh</i> .
Bruce Horn	Co-author of the Macintosh's <i>Finder</i> .
Bill Atkinson	Author of <i>MacPaint</i> and co-author (with Andy Hertzfeld) of the software for the MacVision image digitiser.
Andy Hertzfeld	Author of the Macintosh operating system, the <i>Switcher</i> , and various other software development tools.
Jerry Manock	Originally designer of the Macintosh. Jerry drew the layouts and saw the project through to final production drawings.
Burrell Smith	Designer of the Macintosh hardware.

# Driving Against The Clock

Given the choice of upgrading to 512K or strapping on an extra disk drive, which one would you plump for?

UNTIL A MATTER OF WEEKS AGO, you could have hugged your 128K Mac, safe in the knowledge that you'd got the best deal you could have hoped for. It now transpires that — following a couple of what Apple staff have privately described as "very good months" — 128K owners seem to be in the minority. Apple UK is now estimating current Mac owners to be split roughly 60:40 towards the 512K Mac.

And it's no surprise that, with that piece of knowledge tucked under their respective belts, software companies writing for the Macintosh have begun to take the 512K model as the standard, and even take it as read that you've got a spare disk drive lying around!

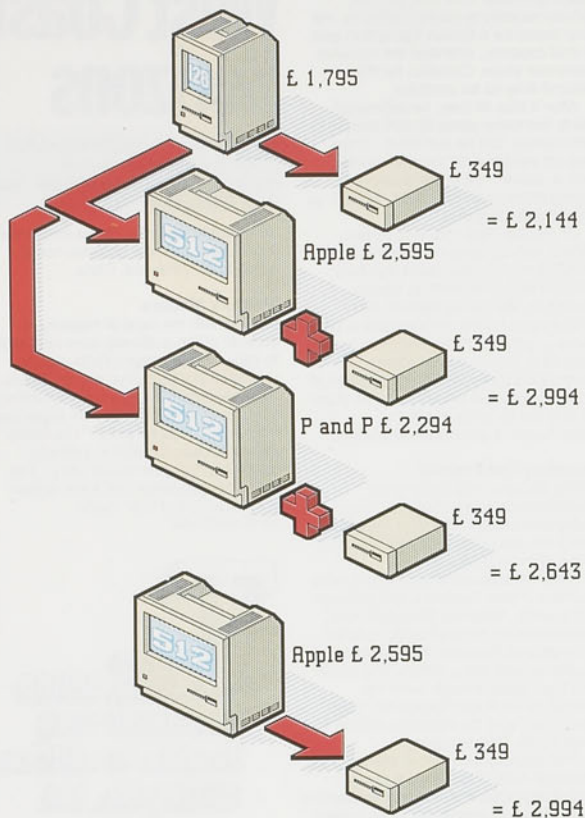
## Memory Matters

If you've got a 128K Mac, you've probably already had the nagging thought that an upgrade might be just the ticket — but if it's an 'either/or' situation, do you plump for the extra memory or the second disk drive first?

What we've done here is to invent a series of benchmarks to test out the various possible combinations of hardware — the 128K Mac alone and with a second disk drive, and the 512K Mac alone and with a second drive. Each benchmark is based on certain operations carried out by the *Finder*, and the time taken to achieve each operation and the number of disk swaps has been duly recorded.

These benchmarks are designed

## Money Matters



For the 128K owner, there are a number of routes you can travel if you want to upgrade your Macintosh. The second disk drive has a set price of £349 (+ VAT) so there's not much room for scope there... but you will notice the difference in price between the upgrade to 512K offered by Apple as opposed to the upgrade delivered by P & P Micro Distributors. Obviously, the advantage of having Apple carry out the upgrade to 512K is to ensure that the warranty on your machine remains valid. However, P & P is quick to state that its upgrade does indeed invalidate the Apple warranty, and so the company offers its own warranty to cover your Mac during the remainder of its 'official' warranty life.

For 512K Macintosh owners, Assimilation Process' MacMemory Disk is available from your local dealer at £34 (+ VAT).

Illustration: Ian McKinnell

## Studies In Time And Motion

	128K RAM				512K RAM			
	1 drive		2 drive		1 drive		2 drive	
	Time	Swaps	Time	Swaps	Time	Swaps	Time	Swaps
BM1	27		27		27		27	
BM2	53	5	27		53	5	27	
BM3	77	12*	21		72	12*	21	
BM4	47	5	25		35	3	22	
BM5	41	3	25		28	1	22	
BM6	51	5	45	4	37	3	34	2
BM7	—		28	1	—		26	1

\*The resulting disks from these operations are pretty much unusable as, once MacPaint has loaded, disk swaps are required each time you decide to carry out a specific task.

around *MacPaint* (Version 1.3) and the officially released version of the *Finder* (Version 1.1). The data file used in the benchmarks was a 'snapshot' of the *MacPaint* screen, which is obtained by pressing the Option key, the Shift key and the '3' key at the same time. Try this out on *MacPaint* and you'll find you create a data file called 'Screen 0' (or similar) on the desktop, taking up between 9K and 14K; the data file used in these benchmarks took up 10K.

## On The Bench

The benchmarks divide up into two sections — the first three involve 'double-



clicking a data file, thus running the program, while the last four comprise copying *MacPaint* between disks.

Here is a detailed look at the seven benchmarks used in this comparison of the hardware combinations:

1. A disk containing the System, *MacPaint* and the data file. The data file is then 'double-clicked' into action.
2. A disk containing the System and *MacPaint*, and another containing the data file. The data file is then 'double-clicked' to run the program. (When this benchmark is carried out on a one-drive combination, the disk containing the data file is already in the drive.)
3. A disk containing the System, and another containing *MacPaint* and the data file. The data file is then 'double-clicked' to run the program. (When running this benchmark on a one-drive combination, the disk containing the data file is already in the drive.)
4. A disk containing the System and *MacPaint*. *MacPaint* is then copied on to another disk.
5. A disk containing the System, and another containing *MacPaint*. *MacPaint* is then copied on to the disk containing the System.
6. A disk containing the System, a disk containing *MacPaint*, and an empty disk. *MacPaint* is then copied on to the empty disk. (For two-drive combinations, the disk containing the System stays in one drive, while the other two disks are swapped in the remaining drive.)
7. A disk containing the System, a disk containing *MacPaint*, and an empty disk. This benchmark is for two-drive combinations only, and involves the *MacPaint* disk remaining in one drive, and the empty disk that it's to be copied to starting off in the other.

(In all the copying benchmark tests, the disk on which the program is to go is the one in the drive when the copy is initiated by dragging the icon of *MacPaint* to its new destination.)

## Benchmark Analysis

In terms of loading an application, you can see that the 512K Mac performs the task as quickly as the 128K machine. However, the addition of a second disk drive gets rid of the annoying pastime of swapping disks. Take a look at the results of Benchmark 2 and you'll see that the one-drive combinations make no use of the extra 384K available, so disk swaps are still necessary even though there's plenty of RAM spare for this frustrating task.

Benchmark 3 indicates that, with one drive, you must always put the application on a disk containing the System — if you don't, the program is more or less unusable once it's loaded as it needs to check both disks before it can carry out any task. More interesting, though, is the strange quirk thrown up by Benchmark 3 on a two-drive combination. If you put your data file on the application disk and the System on the other, it actually loads faster than it would with them all on the same disk! We'll get back to you with the reasons for

## Go-faster with a MacMemory disk

If you've got a 512K Mac already, there's a utility that'll speed up your application programs by over 400 per cent. Jerry Sanders takes a hard look at the MacMemory Disk to see if it's all it's cracked up to be.

Ask experienced computer users what they thought of their first 'go' on a Mac, and more than likely you'll get the complaint that it's too slow. But that's a bit of a fallacy really. As they sit listening to the disks chugging away, they're forgetting that on other machines you're kept busy typing in commands at the operating system prompt. And you know how time crawls along when you're waiting for something to happen and you've got nothing to do with your hands!

But there's a solution — at least for 512K Mac users. Programmers Gary Croucher and Michael Urquhart have come up with *MacMemory Disk* — a utility to banish the wanton whirring of disks. As its name suggests, *MacMemory Disk* takes a slice of the 512K random access memory built into the computer and converts it into a disk icon visible on-screen. And this disk can then be used just like the real thing.

The *MacMemory Disk* can contain applications programs, the System and data files, and the *Finder* accesses it for storage and retrieval of data. The difference is that all accesses are silent and swift — and there are no moving parts! It's an eerie experience — the screen flickers and refreshes without a sound.

### In The Beginning

*MacMemory Disk* begins life as a non-protected application icon. To use it, copy it on to a disk containing an application and then open the *MacMemory Disk* icon. Choose whether you want a temporary *MacMemory Disk* or a permanent version on start-up for future sessions, and you're just left with the decision of how much RAM (up to 316K) you're going to

allocate for the applications. Finally, from the *Finder*, you select which files (applications, System or data) you want to copy on to the *MacMemory Disk*.

When the screen refreshes, you'll find a new icon on the desktop, labelled 'MacMemory Disk', which behaves just like a real disk icon — it can be opened and applications run from it. However, you'll still find the Mac accesses the start-up disk. To make the *MacMemory Disk* the start-up disk, you'll have to copy the System and Folder on to the *MacMemory Disk*.

Once you've established the *MacMemory Disk* as the start-up disk, ejected the original start-up disk and dispatched its icon to the Wastebasket, you can achieve noiseless computing. One thing to remember, though, is that RAM is lost on power-

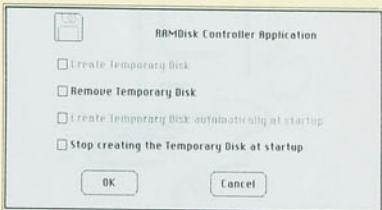
down, so it's a good idea to save your work regularly to the data disk. And, if you intend to print, make sure you've asked for an Imagewriter icon to be copied on to the *MacMemory Disk*.

On the negative side, note that if you ask for more files to be copied on to the *MacMemory Disk* than will fit, the automatic start-up will abort. There's no warning to prevent you doing this, so check your file sizes and make sure you allow enough space when you allocate *MacMemory Disk* memory during set-up.

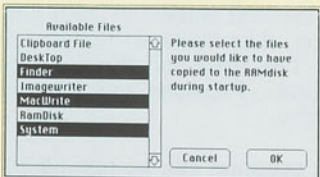
Similarly, the maximum 316K size of *MacMemory Disk* means that with System, *Finder* and *Imagewriter* all present, larger applications won't fit. A compromise is to leave out the System, but then the real beauty of fast, totally silent operation will be lost.

	Standard MacWrite*	MacMemory Disk*
Opening MacWrite*	22.6 seconds	5.4 seconds
Closing MacWrite*	21.2 seconds	3.8 seconds

As you can see, using the *MacMemory Disk* you can speed things up by over 400 per cent.



A dialog box offers you the choice of creating a temporary version or a permanent automatic start-up *MacMemory Disk*.



Another dialog box asks you to select which applications you require on the *MacMemory Disk*.

this in a future issue but, in the meantime, it's a very useful point to remember if you are hounded by the speed of loading up your programs.

Checking out Benchmarks 4 to 7, it seems that copying files with two disks on a one-drive combination, or three disks on a two-drive combination, is


much faster if you start with the destination disk (the one which will end up with the data file on it) physically in a drive. This is because the *Finder* looks to see if there's already a file on the disk with that name.

If you're copying files from the *Finder*, regardless of how much memory or

hardware you have, when the copy is completed the Mac will always insist on the System disk being inserted into the drive. Needless to say, this is a darn nuisance.

Benchmarks 6 and 7 indicate that, on a two-drive combination, if you want to copy an application from one disk to another (where neither contains the System), you're well advised not to keep the System disk in the drive permanently as the whole operation takes longer.

To conclude, if you're debating whether to plump for an upgrade from 128K to 512K or to get hold of a second disk drive, your best bet is to go for the drive. Of course, you'll have to weigh the decision against the software you require — as said earlier, many of the packages being released for the Mac will only run with a 512K. However, if disk-swapping is your pet frustration, upgrading to a 512K Mac is not going to be the answer.

Of course, once you've invested in a second disk drive, the next step is to go for the 512K upgrade. But even then, the most common Mac application — the *Finder* — isn't going to take too much notice of the extra memory, and it'll make no difference whatsoever to older programs such as *MacPaint*. But one thing that you'll soon begin to notice, if you haven't already, is that nothing remains the same for too long on the Mac, and there are developments with a new version of the *Finder* that will indeed make upgrading to 512K an investment you'll be pleased you made. 

## The Mac's new Finder

*You've probably heard the rumours of its existence... now find out how the Macintosh's new Finder (Version 4.1) is going to affect you.*

Apple is currently Beta-testing the new 'go-faster' Version 4.1 of the *Finder* — it's no larger than the existing version, but it sports an improved range of 'goodies'.

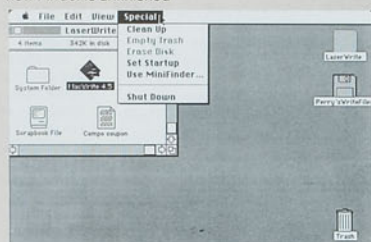
The File menu includes the extra items: 'Page Setup' and 'Print Catalog'. This means that disks can be dumped graphically to a printer in a much neater way than you can dump screens from the *Finder*. There's also a 'New Folder' option that replaces the slow process of duplicating the Empty Folder and re-naming it. Also, have you ever noticed how some of the windows in the *Finder*'s menus have shaded scroll bars when you know there's nothing to cause them? Well, don't worry too much as Version 4.1 puts all that to rights.

There's also the option of using the *Mini-Finder* — a smaller, faster

version, with most features removed except 'Open an application'. And for those of you in a real hurry, there's a 'Shut Down' option that ejects both disks (if you're using a two-drive combination) and resets the Mac; this option's frighteningly quick, especially when compared with ejecting both disks from the Edit menu and resetting the Mac manually.

As yet, though, the new *Finder* is unfinished

and, therefore, it would be an unfair comparison to give benchmarks for it at this stage. Preliminary tests show that, on a 128K Mac, it still requires the System disk to be present at the end of the copying process. It does, however, actually notice when you're using a 512K Mac and uses the extra memory to make copying data files that much quicker and much less of a hassle.



**The *Finder* (Version 4.1) contains all sorts of 'goodies' — such as options to use the *Mini-Finder* and 'Shut Down'.**



## Mac Sales Mac Purchase Mac Nominal

The integrated accounting software  
or the 512 k Macintosh

These are three simple to use programs that make full use of the Macintosh pull down menus and mouse, as well as keyboard commands. The *Invoice* integrates with a multi-line product file and the *Sales Ledger*. The *Nominal Ledger* will update from the *Sales* and *Purchase* date. The *Sales* and *Purchase* ledgers will handle a maximum of 32000 Accounts, Products and Transactions providing there is enough storage capacity.

Each program can be purchased separately from your dealer or for more information contact:



**Advanced Micro Products Ltd**  
200 COURT ROAD, ELTHAM, LONDON SE9 4EW  
Telephone 01-851 3311



# MACUSER/APPLE UK COMPETITION

14 Rathbone Place London W1P 1DE

Dear Readers,

## Re. Winning a 15-inch Imagewriter or a copy of MacDraw.

Take a peek in any Mac user's Scrapbook and you'll find at least one letterhead - and, more than likely, there'll be one for work and another for personal correspondence. But the good news is that either could win you a brand-spanking-new 15-inch Imagewriter.

## Addressed To Kill?

Over the past few weeks, we've received a fair number of letters from Mac users around the UK and, do you know, not one of them looked alike - each and every letter carried a customised heading that served to introduce the sender. And that's the simple basis for our competition...

All we want you to do is send us a copy of a letterhead of your own design... and our panel of judges will do the rest. Most letterheads we've seen all contain the same sort of information - name, address, and so on - but some do have a habit of standing out from the crowd. In this competition, we'll be looking for originality, good use of MacWrite and MacPaint, and the overall impression of the letterhead. And so that we can judge whether the letterhead creates the 'right' impression, it would be useful if you could tell us whether you use the letterhead for business or personal correspondence. Don't panic if you're not in the Michaelangelo class, the best idea for a letterhead is just as likely to win the competition as the one that's best executed.

## Heading Your Way?

The best letterhead will win its creator the grand prize of a 15-inch Imagewriter. But that's not all - there'll be ten runners-up prizes of the latest version of MacDraw.

To enter the competition, all you need is to fill in the coupon (or a photocopy of same) at the bottom of the page and send it, along with a copy of your personalised letterhead, to Apple UK Competition, MacUser, 14 Rathbone Place, London W1P 1DE.

Of course, if you're going to be writing to us anyway... why not fill up the white space underneath your letterhead and tell us what you think of the first issue of MacUser, what you use your Mac for, any problems or successes you've had with the machine, or anything else you think might be interesting. It seems a shame to waste all that paper!

## MacUser/Apple UK Competition

### Gonna Write A Little Letter...

To enter this competition and get in line to win a 15-inch Imagewriter, all you have to do is fill in this coupon (or a photocopy of same) and enclose a copy of your own personalised letterhead. All entries should be sent, by August 6, 1985, to Apple UK Competition, MacUser, 14 Rathbone Place, London W1P 1DE.

Here is a copy of my personalised letterhead that I use for business/ personal correspondence.

(\*Please delete as appropriate.)

Please send my prize to:

Name .....

Address .....

Postcode .....

Telephone .....

Please answer the following questions:

1. Where did you first hear about the Macintosh? .....

2. What do you use your Macintosh for? .....

3. What's the next piece of software you intend to buy? .....

4. What has been your worst problem using a Macintosh? .....

### Apple UK Rules OK!

- Entries for the Apple UK Competition must not be post-dated any later than 6 August 1985.
- Each entry must include a completed coupon (or a photocopy of same) and a copy of your own personalised letterhead.
- This competition is not open to anyone connected either with MacUser or Apple UK.
- The Editor's decision is final and no correspondence will be entered into regarding the results.


# Mac Resource


*The trouble with the Macintosh is that it's so clever, the manuals never seem to get around to all the little short-cuts that make life easy. But the tricks of the trade are no secret to Andrew Pennell... so join him as he takes a closer look at MacWrite, MacPaint and the Finder.*


## General

 Disks in either drive can be ejected at any time by pressing Command Shift 1 (internal drive) or Command Shift 2 (external drive). This should be done with care — I recommend that you close any document or desk accessory windows before ejecting disks from within an application — but you will find that it works immediately with most programs (except the *Finder*). It's not recommended officially, but after using it for the best part of a year now, I've yet to have a problem.

 You can take 'snapshots' of the Mac screen to printer or disk at any time. To dump the active window's contents to the printer, press Shift Command 4 — if you want to dump the entire screen contents to the printer, engage the Caps Lock key before you begin. To create a file containing the active window, press Shift Command 3 — this gives you a *MacPaint* document on the start-up disk. Again, if you want to save the entire screen as a *MacPaint* document, make sure you press the Caps Lock key first. You'll find that the printer options work well with the *Imagewriter*, though not at all with the *LaserWriter*.

 You'd be well advised to give all your disks meaningful and different names, and make sure you write the name on the disk label. That way you'll always be able to find the right disk when you get the 'Please insert the disk: xxx' alert box flashed on-screen.

 When certain programs are printing, there's a box on-screen displaying the message 'Stop printing by pressing Command Period(.)'. Ignore it. This doesn't work at all on UK keyboards. To stop printing, always press Command Comma(,) instead.

 If your desk gets as cluttered as mine does from time to time, you may be tempted to place your loose printouts on what appears to be the ideal empty space — on top of your Mac. Don't! Those vents

in the top are there for a very good reason, and blocking them is an excellent way to over-heat and eventually crash your Mac. Believe me, you're listening to the voice of experience in this department!

## ScrollBoarder

Set


softlist 2


The Tank


This

VicomComms

Yesterday's M...


 In most applications, when you select 'Open' from the File menu, you get a scrollable window containing all the filenames available. If you've got a lot of filenames, finding any particular one can be quite slow. But the solution is simple — just press the letter on the keyboard that your filename starts with, and the first name in the list starting with that letter will be highlighted. If it's not your file, the one you're looking for should at the very least be on-screen; you can then 'double-click' it. However, if the file you're looking for is highlighted, press the Return key and the file will open, eliminating the need to use the mouse completely.


 If you want to place certain accents on letters, you'll find that it doesn't exactly work as described in the *Macintosh* manual (on UK keyboards at least). To get a circumflex, you'll need to press Shift 6 followed by the character. To access a tilde (~), press the tilde key, and then the required accented character. If you want to print up either the tilde or circumflex on their own, you'll have to press their respective keys twice.

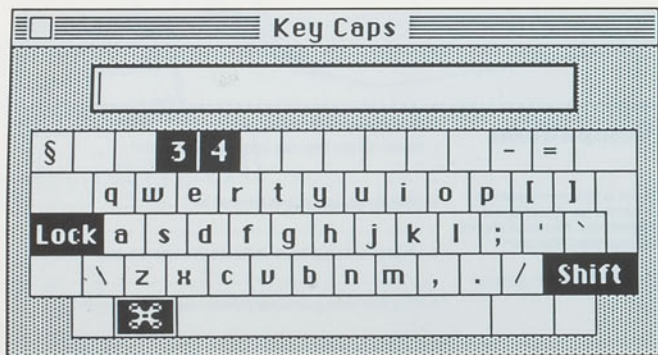
 There's one key combination that's not shown on the 'Key Caps' desk accessory, and that involves pressing Option Shift and the 'S' key. Depending on the point size and font selected, you can access any one of 14 different pre-defined shapes. The shapes themselves vary from being useful to downright silly but, if you're not of the artistic persuasion, they could come in handy one day.

## MacWrite

 Each document can have its own Page Setup configuration; when you open *MacWrite* without a file, the preset format is for a 'US Letter'. For this and other reasons, it's often useful to have a start-up file containing your own specific requirements, including page size, starting font, margins, spacing, and headers and footers. This file, once formatted the way you want to find it, could be saved with the name 'Standard'. Now, next time you need to access this format, don't 'double-click' on *MacWrite*, simply open your 'Standard' file instead. Then, before you start typing in your great prose, use the 'Save As...' option in the File menu to create a new file with a different name; this way, you won't corrupt your master format.

 The above idea could also be extended to include such things as personalised letters, containing your address (or letterhead constructed in *MacPaint*) with the cursor readily positioned to type in the date.

 There are often occasions when you don't want two words to be put on separate lines. To prevent this happen-



To dump the entire screen contents to the printer, press Shift Command 4 with the Caps Lock key engaged.

To create a *MacPaint* file of the active window on the start-up disk, press Shift Command 3.

The active window is dumped to the printer by pressing the key combination, Shift Command 4.

If you want the entire screen contents saved as a *MacPaint* document on the start-up disk, press Shift Command 3 with the Caps Lock key engaged.



# Lotus Jazz.

## Now the Mac's really in business.

Jazz is a stunning new 5-in-1 package, created by Lotus especially for the Macintosh.

Just imagine. All the power of Lotus software, with the accessibility of the Mac.

Adding up to one thing. Unbeatable computing power for every business.

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These pre-defined fonts, selected by pressing Option Shift 'S', may not seem very useful at first glance... but you never know when you might need a sheep on-screen!

ing, press the Option key and the Space bar in between the two words — this causes a 'non-breaking' space that will ensure the two words always remain on the same line.

How many times have you held down the Backspace key to delete a word or two, only to find that you've removed something you wanted? Well, everything you delete with the Backspace key is actually stored, and pressing Command Backspace will resurrect the last removed character back on-screen! In fact, the Mac stores the last 50 characters deleted, although it doesn't maintain any font or style changes. You could also use this facility as a fast 'cut and paste' method for moving small parts of text around. First, delete the offending text with the Backspace key, click the cursor into the new position, and then press Command Backspace to retrieve your words of wisdom.

The special icons in headers and footers (for the date, time and page number) don't obey the usual rules for font and style changes. If you require these extras to be in a particular font, click at the

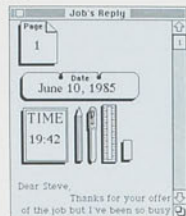
very beginning of the header or footer window, and then select the desired font and style. However, if you want the actual text in the header or footer to be a different font, type a space and then set the font style. You'll find that although different bits of text in a header or footer can be in different fonts, the text produced by the icons all share the same fonts and style.

When you're pasting pictures from MacPaint into MacWrite, some distortion may be noticeable, particularly with circles. To get around this, choose 'Page Setup' from the File menu, and click the 'Tall Adjusted' box in the 'Orientation' option — this stretches the picture horizontally, thus making its aspect ratio correct; you can also stretch text in this way, making the printout wider. (Choosing the 'Wide' box prints out everything sideways, but it does also remove the distortion problem.)

If you want your headings to stand out, you can simulate double underlines. First, press Command U and then Shift '-' (which gives an underlined underline). Now type up a line of double underlines, move the cursor back a few characters

and click the mouse — you're now ready to type in your heading.

Although you can't actually place text next to pictures, you can move the special icons in header and footer windows on top of any pasted images. Try, for example, putting the date and page number in flashy boxes.



The fastest way to select an individual word is by 'double-clicking' on it.

If you want to change your mind about a particular word in a document, the best way to change it is to select the word (by 'double-clicking' it) and typing its replacement. There's no need to press the Backspace key (or select the 'Cut' option from the Edit menu) as pressing any key at this point will remove the unwanted text. The disk drive may start whirring when you do this, but don't worry — the Mac will still record which keys you pressed in a buffer, and act on them when it's finished with the disk. And if you didn't like the change, a quick 'Undo' from the Edit menu

will put things back the way they were.

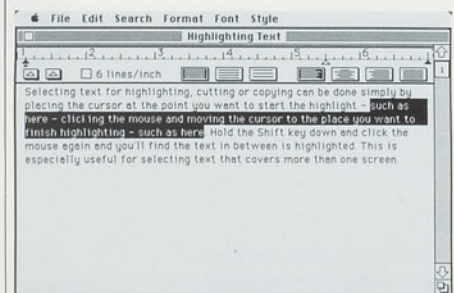
If you want to select a large part of your document to work on, don't spend time dragging the cursor across the text, use this short-cut instead. Click at the end of the text, use the scroll bar to get to the other end and, then, holding the Shift key down, click the mouse. All the text between the cursor clicks will now be highlighted ready for you to work on.

## Finder

Use folders wherever possible to organise your data files, especially if you've got too many files to display clearly in the normal disk window. This is particularly important for hard disk users, who could have well over a hundred files per drive!

For important applications or data files that you don't want to lose in the Wastebasket, click the 'Locked' check box in the 'Get Info' option in the File menu. Once locked, the application cannot be erased or changed in any way; of course, should you want to alter it at some later date, simply click the check box again and you're free to do with it what you like.

If you corrupt part of a disk — for example, by powering down without ejecting it — the Finder can display a 'Bomb' dialog box on-screen. You can sometimes get around this by holding the Command and Option keys down while the Mac



Cutting text is a lot easier than you may think. Just select it and start typing in its replacement — the Macintosh does the rest!



tries to boot up the offending disk. After the initial desktop is drawn, there'll be a short delay while the *Finder* attempts to repair the disk, and then the usual icon should appear. It's worth using this procedure only on problem disks, as there's a good chance you'll lose your folders and window sizes as soon as you try it.

If a disk becomes very badly corrupted, so that the above technique fails, you'll have to re-initialise it in a very sneaky way. First though, eject any disks in drives from the *Finder*. Now, peer into the right-hand side of the disk drive slot, and you should see a small, black lug next to a metal pin — carefully press this down and the Mac thinks that you've inserted a blank disk, and will ask you if you want to initialise it. Next, insert your badly-corrupted disk and click the 'Initialise' box — this, of course, destroys anything that used to be on the disk, but it will make it entirely suitable for the next job in hand.

## MacPaint

If you want to paste a picture into a specific area, organise the size and position you want on-screen using the selection rectangle, then paste in your image and it will be resized to fit into your rectangle.

If you have a particular pattern on the screen, perhaps 'borrowed' from another program, you can actually turn it into one of *MacPaint*'s patterns displayed in the

**You can plot one shape over another without necessarily blotting it out. How? Easy — just press the Command key while you select the paintbrush, spray can, paintbucket or 'shape drawing' tools.**

grid at the bottom. Simply choose 'Edit Pattern' from the Goodies menu and then, instead of designing it on the supplied grid, just click the mouse on the part of the screen showing your desired pattern. Your customised patterns will now be saved along with the picture.

When stretching selected rectangles, you won't lose uniformity in your patterns if you first select the 'Grid' option from the Goodies menu. Holding the Shift key down may also help; this is the Constrain command.

There are lots of short cuts that aren't detailed in the Macintosh manual. To see them, choose 'Short Cuts' from the Goodies menu.

The quickest way to get yourself into 'FatBits' is to select the pencil tool, hold down the Command key, point to the area you want highlighted and click the mouse. The area you select will then be displayed

pixel-by-pixel, with a smaller window in the top left-hand corner giving you the 'real' picture. To quit 'FatBits', simply position the pencil in the small window and click the mouse.

*MacPaint* discs require much more free memory than you would normally expect (except when running under 512K). As a complete picture can't be stored entirely in 128K, it ends up being stored in temporary files on disk, called Paint1 and Paint2, and these vary in size dramatically. You'd be well recommended to leave around 30K free to store the resulting image, but bear in mind that it might require over 100K for very large documents.

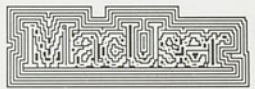
*MacPaint*, Version 1.3 and later, include a 'Fill' option within the Edit menu, and you may well be wondering what it's all about. First off, you've got to select a pattern (the grey ones look best) and lasso an image on-screen (the selection rectangle will not work). Now, choose 'Fill', and your image will be shaded according to the current pattern; this is particularly useful for producing shadows of objects.

To get very bold characters in *MacPaint* enter your text in 'Outline' from the Style menu, and then use 'FatBits' from the Goodies menu or the paint bucket to fill in the space inside the characters. (If you want shaded letters, you could also use the 'Fill' option... something you'll find in the Edit menu of the newer versions of *MacPaint*.)

For a slightly different version of the 'Trace Edges' feature in the Edit menu (Version 1.3 and later), hold

down Shift Command E and you end up with a more shadowy effect. (If you haven't got *MacPaint* Version 1.3 or later, simply select an image using the selection rectangle and press Command E.)

*MacPaint* Versions 1.3 and later (check the 'About *MacPaint*...' option on the Apple menu), supports 'transparent plotting', so that certain commands can give a transparent effect. This is done by holding down the Command key and selecting either the paintbrush, spray can, paintbucket or the 'shape drawing' tools. It does look best when a darker pattern is made transparent on top of a lighter pattern, but try it out for yourself and see.



**Get that '60s 'feel' to your lettering with Shift Command E.**

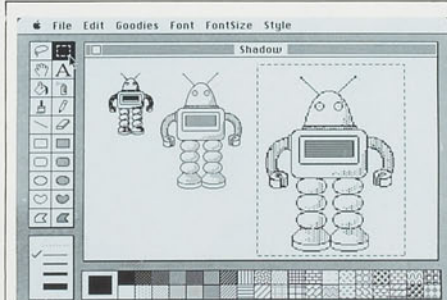
A good trick for non-artists who want to build up a disk of useful graphics is to 'borrow' pre-defined images here and there from other programs using the 'snapshot' facility. For example, you can use the keyboard image from 'Key Caps' on the Apple menu or from 'ShortCuts' in the Goodies menu of *MacPaint*, rulers from *MacWrite*, various typefaces from the 'Introduce a Colleague to Mac' demo disk, and the disk and Wastebasket icons from the *Finder*. You only have to look around and you'll see lots of images that will no doubt come in useful one day.

### About MacResource...

*MacResource* is a forum for readers to exchange helpful hands-on hints that'll make using Macintosh software just that bit easier.

So, don't keep those hard-earned dodges to yourself, send them to Andrew Pennell, *MacResource*, MacUser, 14 Rathbone Place, London W1P 1DE.

Let's see how resourceful you are...



**Once you've copied an image on-screen, it can be pasted back into any size area you highlight using the selection rectangle. Try it...**

# AT THE SPEED OF LIGHT

*If you had to re-define your ideas of what a computer could be like after you'd seen the Macintosh, prepare yourself for a revelation in the world of printers ... because here comes the LaserWriter!*

UNTIL THE 1960S, PRINTING WAS A slow and costly affair. If you wanted anything printed, from a book to a small leaflet, it inevitably finished up being processed via vast Linotype machines and presses. Ironically, it was the IBM Composer that took the underground press by the scruff of the neck and gave small publishers a brief renaissance ... a new cottage industry opened up, along with instant print shops and the whole field of photo-lithography.

By the mid-1970s, computerised photosetting had taken over as the quick way to (almost) instant print. But now, ten years on — although hot metal continues to surge through the gutters of a Fleet Street still suffocating under Caxton's skirts — the LaserWriter makes its debut.

## Front Page News

The LaserWriter weighs in at a mere 77lbs, and is about the size of the average microwave oven. Once the installation disk is booted, you can select a number of options, including which set of fonts you want supported and whether you want to use the Imagewriter at the same time. If you're working with a single-drive Mac combination, you can select the minimum font set and not have the Imagewriter on-line — but you'll still find you're caught up in a fair amount of disk-swapping. But once you've overcome the preliminaries, using the LaserWriter is as easy as falling off a ledger.

When you send a document to the LaserWriter, it stores an image of the page in its memory which is then transferred to a light-sensitive drum as a neutral charge. As the positively-charged drum rotates, the toner power only sticks to the neutral areas of the drum — where the black should be — and this adheres to the paper. The paper then passes between rollers heated to 200 degrees Celsius and the black dots are fused on to it at up to 300 dots per inch.

The quality of the resultant image is therefore very high and, although it can't compete with photoset text, is certainly more than adequate for producing in-house reports, presentations and even small magazines; these tasks are made all the more realistic when you consider the quality of printed output from MacDraw and MacPaint.


The only real limitations seem to be the restricted paper size (A4) and the relatively slow output rate of eight pages a minute. However, new technology moves fast and, on the evidence of what you see on these pages and the availability of page layout software packages (such as MacPublishing, ReadySetGo and Page Maker), it's a

safe assumption that the Macintosh's involvement with print is here to stay.

More important, though, is the role of the LaserWriter in the elevation of the Macintosh as a serious business machine. Given that the LaserWriter is capable of producing documents, including text and graphics, to a degree high enough to grace the tabletops of the most important board meetings, the Macintosh looks set to sweep the executive floor.

And all that's needed now is some co-operation from Apple itself. Initially, the

LaserWriter was scheduled to enter the UK market in July — it now seems that due to unexpected (?) sales on its release in the States, Apple cannot hope to make enough of the devices to launch in the UK until September. Watch this space for further developments.

The LaserWriter will be priced at around £6,995 (+ VAT) and will, according to Apple sources at the time of going to press, be available from your local Macintosh dealer in September. The toner cartridges are priced separately at around £100. 



**Apple Talk** The LaserWriter isn't a cheap item — at nearly £7,000, it's hardly an investment you'd make casually. However, one advantage of the LaserWriter is that it's connected to the Macintosh via the AppleTalk network — an 'electronic highway' that allows up to 32 devices (other Macs or printers) to be linked together. The only accessories you'll need to set up an AppleTalk network is a couple of AppleTalk connector sets — each comprising a cable that'll set you back around £50; each subsequent device you link into the network will require a further cable.



**LaserWriter Cartridges** The LaserWriter requires a toner cartridge before you can start printing. These will cost around £100 and should be suitable to see you through over 3,000 copies; of course, the type of copies you make is a factor here — the more dark areas you wish to print out, the quicker the toner cartridge will run out. The toner cartridge slips in under the LaserWriter's hood and there's a window in the side of the casing which colour codes the cartridge's progress: if the window shows green, the cartridge is well up to standard... once it starts showing red, you'll begin to notice a degradation of the printed matter.



## Bigger than the Mac?

The LaserWriter sets itself aside from other printers in many ways... but its main advantage is in the amount of random access memory it has at its beck and call. Based on the 68000 processor, the LaserWriter has access to 1.5Mbytes of RAM — which, in Apple's eyes anyway, makes it more powerful than the Mac itself.

But the real magic is to be found in amongst the 500K of ROM in the LaserWriter. Here is contained a library of fonts and *PostScript*, the programming language the LaserWriter uses to print out text and graphics of any size. This is done, not by storing a vast number of characters, but by noting the outlines of each character in the 13 font styles available. This

means that the LaserWriter can generate any font size, simply by generating the dot patterns from the outlines stored in ROM.

*PostScript* is used to speed up the whole process of printing out a page of information from the Macintosh to the LaserWriter. If the Mac were to transmit the 1Mbyte of data required by the LaserWriter to produce each printed page, it would take over 35 seconds via the Apple Talk network. Yet, by including the Print Manager software on the LaserWriter System disk, the Mac is able to convert the page data into *PostScript* and only then send it on to the LaserWriter. In this way, the transfer takes less than a second as the entire document takes up

no more than 8K.

Something else that'll come as a surprise to Mac users is that the LaserWriter no longer promises the 'What you see is what you get' syndrome. It's just not possible, given the resolution of the Macintosh's screen. Compared to a resolution of over 90,000 dots per square inch on the LaserWriter, you'll find that what seems very fuzzy on the Mac screen will come out in superb detail once printed out. Obviously, this won't affect users using 12-point script, but should the need ever arise to print out your work in 6-point or even 4-point, although you won't be able to read it on-screen, the LaserWriter will have no problem printing it all out so others can read it.

**The LaserWriter Print Engine** The LaserWriter shares common technology with its rivals, in that it uses the Canon 'Print Engine'. Print Engine forms the shapes to be printed out by firing a stream of light on to a rotating drum inside the LaserWriter. Where the light hits, the drum attracts toner powder — this is then transferred on to the paper via a process of intense heat and pressure. As we're talking about laser light here, the accuracy is so precise that the LaserWriter can boast a print resolution of 300 dots per inch. Compare this, if you will, to the more standard 80 dots per inch resolution you'll find on printers like the Imagewriter.



UNTIL THE 1960S, PRINTING WAS A slow and costly affair. If you wanted anything printed, from a book to a small leaflet, it inevitably finished up being processed via vast Linotype machines and presses. Ironically, it was the IBM Composer that took the underground press by the scruff of the neck and gave small publishers a brief renaissance. A new cottage industry opened up, along with instant print shops and the whole field of photo-lithography.

The text shown here has been set by professional phototypesetters, printed out on the Imagewriter and on the LaserWriter. Of course, the LaserWriter text does look a little poor compared to the photoset script, but then the photosetter is able to print out copy to a resolution of at least 2,000 dots per inch, as opposed to the LaserWriter's resolution of 300 dots per inch. However, comparing the Imagewriter's output to that of the LaserWriter is a bit like chalk and cheese. You'll notice how the LaserWriter automatically 'smooths out' any rough edges that you see on-screen or on the hard copy printed out by the Imagewriter.

**LaserWriter Diagnostics** Each time you switch the LaserWriter on, it performs an internal self-test and prints out a diagnostic sheet depicting the quality of performance, as well as a boxed-off window telling you how many copies have been made with the device so far. The charts in the upper part of the diagnostic sheet relate to the status of the port and communications switch settings.

**Paper Feeds** The LaserWriter can print up to eight pages per minute, although this is dependent on the type of document you want to print. Paper is fed automatically via an input cassette (which holds up to 100 sheets), or manually using single sheets. The type of paper recommended for use is limited to 16-20lb standard in American Letter or Legal, and in A4 and B5 sizes.

AI and Expert Systems programmers,  
may we have your attention please —

# PA MacPROLOG

is coming!



Logic Programming Associates Ltd.  
Studio 4, The Royal Victorial Patriotic Building,  
Trinity Road, London SW18 3SX, England.  
Tel: 01-874 0350 (24 hours).





Of the 56 million people  
in the United Kingdom, only a fraction  
can use a computer.



# Introducing Macintosh. For the rest of us.

In the olden days, before 1984,  
not very many people used computers.  
For a very good reason.



*Some particularly bright engineers.*

Not very many people knew how.  
And not very many people wanted  
to learn.

After all, in those days, it meant  
listening to your stomach growl through  
computer seminars. Falling asleep over  
computer manuals. And staying awake  
nights to memorize commands so  
complicated you'd have to be a computer

to understand them.

Then, on a particularly bright day  
in Cupertino, California, some par-  
ticularly bright engineers had  
a particularly bright idea: since  
computers are so smart,  
wouldn't it make more sense  
to teach computers about  
people, instead of teaching  
people about computers?

So it was that those very engineers  
worked long days and late nights and  
a few legal holidays, teaching tiny  
silicon chips all about people. How they  
make mistakes and change their minds.  
How they refer to file folders and save  
old phone numbers. How they labour for  
their livelihoods, and doodle in their  
spare time.

For the first time in recorded  
computer history, hardware engineers  
actually talked to software engineers  
in moderate tones of voice, and both  
were united by a common goal: to  
build the most powerful, most portable,  
most flexible, most versatile computer  
not-very-much-money could buy.

And when the engineers were  
finally finished, they introduced us to  
a personal computer so personable,  
it can practically shake hands.

And so easy to use, most people  
already know how.

They didn't call it the QZ190, or  
the Zipchip 5000.

They called it Macintosh™

And now we'd like to introduce it  
to you.











# If you can point, you can use a Macintosh.

You do it at football matches.  
At the counter in grocery stores.  
And every time you let your  
fingers do the walking.

By now, you should be pretty  
good at pointing.

And having mastered the oldest  
known method of making yourself  
understood, you've also mastered using  
the most sophisticated personal

computer yet developed.

Macintosh. Designed on the simple  
premise  
that a  
computer's  
a lot more  
useful if it's easy to use.

So, first of all, we made the screen  
layout resemble a desktop, displaying

pictures of objects you'll have no trouble  
recognizing. File folders. Clipboards.



Even a wastepaper basket.

Then, we developed a natural way  
for you to pick up, hold, and move  
these objects around.

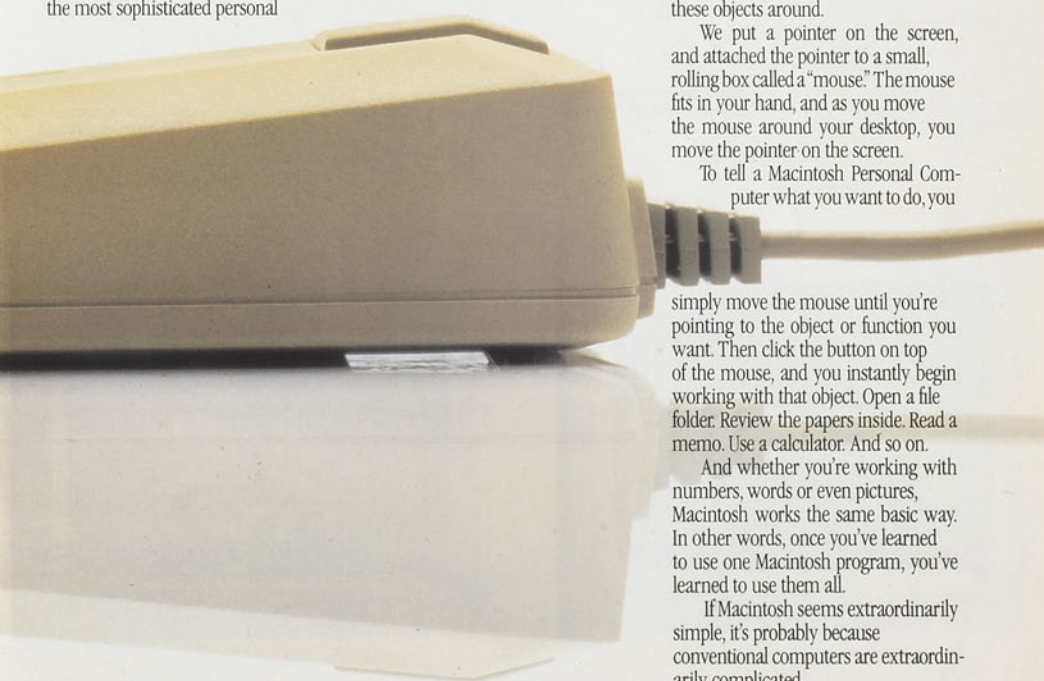
We put a pointer on the screen,  
and attached the pointer to a small,  
rolling box called a "mouse." The mouse  
fits in your hand, and as you move  
the mouse around your desktop, you  
move the pointer on the screen.

To tell a Macintosh Personal Com-  
puter what you want to do, you

simply move the mouse until you're  
pointing to the object or function you  
want. Then click the button on top  
of the mouse, and you instantly begin  
working with that object. Open a file  
folder. Review the papers inside. Read a  
memo. Use a calculator. And so on.

And whether you're working with  
numbers, words or even pictures,  
Macintosh works the same basic way.  
In other words, once you've learned  
to use one Macintosh program, you've  
learned to use them all.

If Macintosh seems extraordinarily  
simple, it's probably because  
conventional computers are extraordin-  
arily complicated.



# Point. Click.

To tell Macintosh what you want to do, all you have to do is point and click.

You move the pointer on the screen by moving the mouse on your desktop. When you get to the item you want to use - click once, and you've selected that item to work with.

In this case, the pointer appears as the pencil you've selected to put some finishing touches on an illustration you'd like to include in a letter - or an essay.

# Cut.

Once you've completed your illustration, you need to cut it out of the document you created it on, so that you can put it into the word processing program you used to write your memo.

To do this, you simply use the mouse to draw a box around the illustration, which tells Macintosh this is the area you want to cut.

Then you move the pointer to the top of the screen where it says "Edit." Hold the mouse button down and Edit will then show you a list, or "pull-down menu" of all the editorial commands available. Then pull the pointer down this menu and point to the command, "Cut," highlighted by a black bar.

Release the mouse button and, zap, it's done.

3 palettes display available tools, line widths, and patterns.

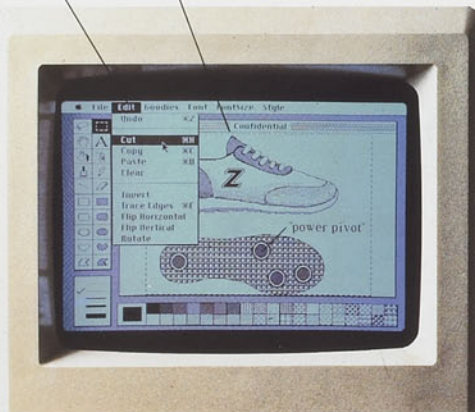
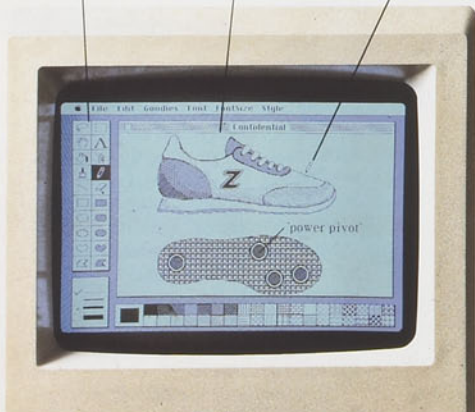
You're not limited to the work area you see here. You can scroll up and down, left and right.

The pointer becomes whatever tool you select to work with - in this case, a pencil.

"Pull-down menu" displays all your options.

To select whatever you want "cut" from the screen, just put a rectangle around it.

Macintosh stores the image you've "cut" out on a "clipboard" in its memory.





# Paste.

And now, to finish your letter, bring up MacWrite™, Macintosh's word processing program. Just pick a place for your illustration.

In the meantime, your illustration has been conveniently stored in another part of Macintosh's ample memory.

To paste the illustration into your memo, move the mouse pointer once again to the Edit menu at the top of the screen.

This time, you pull the mouse down until "Paste" is highlighted by a black bar. Release the mouse button and, once again, zap.

# And print.

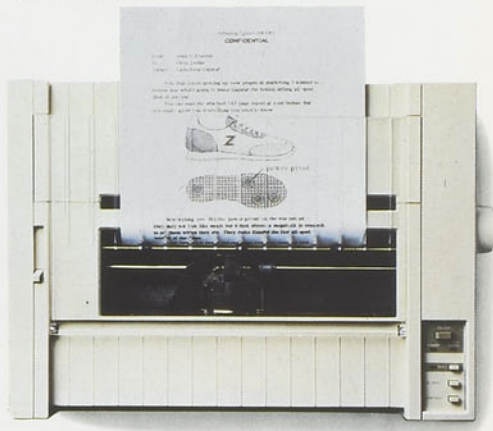
You tell a Macintosh Personal Computer to print the same way you tell it to do everything else - move the mouse pointer to "File" and pull it down until "Print" is highlighted in a black bar. And, provided you have a printer, you'll see your work in print.

Your work, all your work, and nothing but your work. Because with Macintosh's companion printer, ImageWriter, you can print out everything you can put on a Macintosh's screen.

*Macintosh automatically makes room for your illustration in the text.*



*With Macintosh, you can print out your own forms or stationery in addition to whatever you print on them.*



# And here's where ordinary personal computers draw a blank.

You've just seen some of the logic, the technology, the engineering genius and the software wizardry that separates Macintosh from conventional

computers. Because the mouse allows the human hand to create it.

MacPaint gives you total freedom to doodle. To cross-hatch. To spray paint.

able by enlarging MacPaint illustrations or making transparencies for overhead projection. Or clarify a memo or report by "cutting out" your illustration and "pasting" it into your text.

What MacPaint does for helping you visualize your wildest imaginings, MacProject does for helping you visualize the unforeseen.

You simply enter all the tasks and resources involved in a project—whether it's opening a new office or producing a brochure—and MacProject will chart the "critical path" to completion, calculating dates and deadlines. If there's a single change in any phase of the project, it will automatically recalculate every phase.

So with MacProject, you can generate business plans and status reports that reflect the realities of the job, not the limita-

tions of your computer.

But more important than the practical benefits of programs like MacPaint and MacProject, they represent the very tangible difference an attitude can make.

An attitude that the only thing limiting what a computer can do, is the imagination of the people creating it.

Not just the engineers who design it,



*MacPaint produces virtually any image the human hand can create.*

computers.

Now, we'd like to show you some of the magic.

First, there's MacPaint. A program that transforms Macintosh™ into a combination architect's drafting table, artist's easel and illustrator's sketch pad.

With MacPaint, for the first time, a personal computer can produce virtually any image the human hand

can create. To fill-in. To erase.

And even if you're not a terrific artist, MacPaint includes special tools for designing everything from office forms to technical illustrations. Plus type styles to create captions, labels and headlines.

So you can have custom-designed graphics without hiring a design studio. Make your presentations more present-



but software developers like Lotus® Development Corporation, currently developing a Lotus Macintosh product.

And Software Publishing Corp., with a new pfs:® filing program as easy to use as the Macintosh it was designed for.

And Microsoft, with Productivity-Tools, like Multiplan, Chart, File and Word.

If Macintosh has an extraordinary future ahead of it, it's because of the extraordinary people behind it.



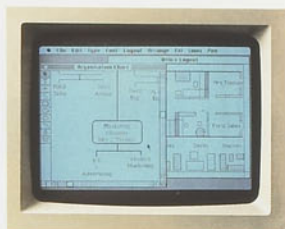
MacProject does for project management what VisiCalc® did for spreadsheets.



MacPaint can create both freehand sketches and precise technical illustrations.



Filevision from Telos lets you store any kind of information visually.



MacDraw gives you the tools to create everything from architect's drawings to organisational charts.

"To create a new standard and takes something that's not just a little bit different. It takes something that's really new and captures people's imaginations. Macintosh meets that standard." - Bill Gates, Chairman of the Board & CEO Microsoft Corporation.

"Macintosh is much more natural, intuitive and in line with how people think and work... this is going to change the way people think about personal computers. Macintosh

sets a whole new standard, and we want our products to take advantage of this." - Mitch Kapor, President & CEO, Lotus Development Corporation.

"If you were to put machine 'x' on the table and a Macintosh on the table beside it, and then put pfs software on both machines... like a taste test... we think Macintosh's benefits would be pretty obvious." - Fred Gibbons, President, Software Publishing Corporation.



Microsoft's Chart displays a more graphic approach to business graphics.



pfs: File and its companion pfs: Report combine database and report generation functions.



Calendar management, personal filing, phone directory and more are made easy with Habu from Habu Systems Inc.



# What makes Macintosh tick. And, someday, talk.

Macintosh has a lot in common with that most uncommon computer, the Lisa™ (now called the Macintosh XL).

*The garden variety 16-bit 8088 microprocessor*



*Macintosh's 32-bit MC68000 microprocessor*



Its brain is the same blindingly-fast 32-bit MC68000 microprocessor—far more powerful than the 16-bit 8088 found in current generation computers.

Its heart is the same technology of windows, icons, pull-down menus and mouse commands—all of which makes that 32-bit power far more useful by making Macintosh far easier to use than current generation computers.

And, thanks to its size, if you can't bring the problem to a Macintosh, you can always bring a Macintosh to



*Standard 5 1/4" floppy disk*



*Macintosh's 400K 3 1/2" disk*



the problem. (Macintosh actually weighs 9 pounds less than the most popular "portable.")

*Small footprint. Macintosh is 1/3 the size and volume of some ordinary computers.*



Another miracle of miniaturization is Macintosh's built-in 3 1/2" microfloppy drive. Its 3 1/2" disks store more than conventional 5 1/4" floppies—400K. So while they're big enough to hold a desk-full of work, they're small enough to fit in a shirt pocket.

And speaking of talking, Macintosh has a built-in polyphonic sound generator capable of producing high quality speech or music.

On the back of the machine, you'll find built-in RS232 and RS422 AppleBus serial communications ports. Which means you can connect printers,

modems and other peripherals without adding interface cards. It also means that Macintosh is ready to hook in to a local area network. (With AppleTalk, you can interconnect up to 16 different Apple™ computers and peripherals.)

Should you wish to double Macintosh's storage with an external disk drive, you can do so without paying extra for a disk controller card—that connector's built-in, too.

And, of course, there's a built-in connector for Macintosh's mouse.

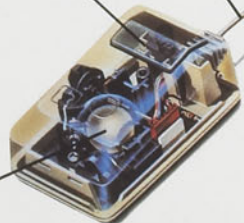
Of course, the real genius of Macintosh isn't its serial ports or its polyphonic sound generator.

The real genius is that you don't have to be a genius to use a Macintosh.

You just have to be smart enough to buy one.

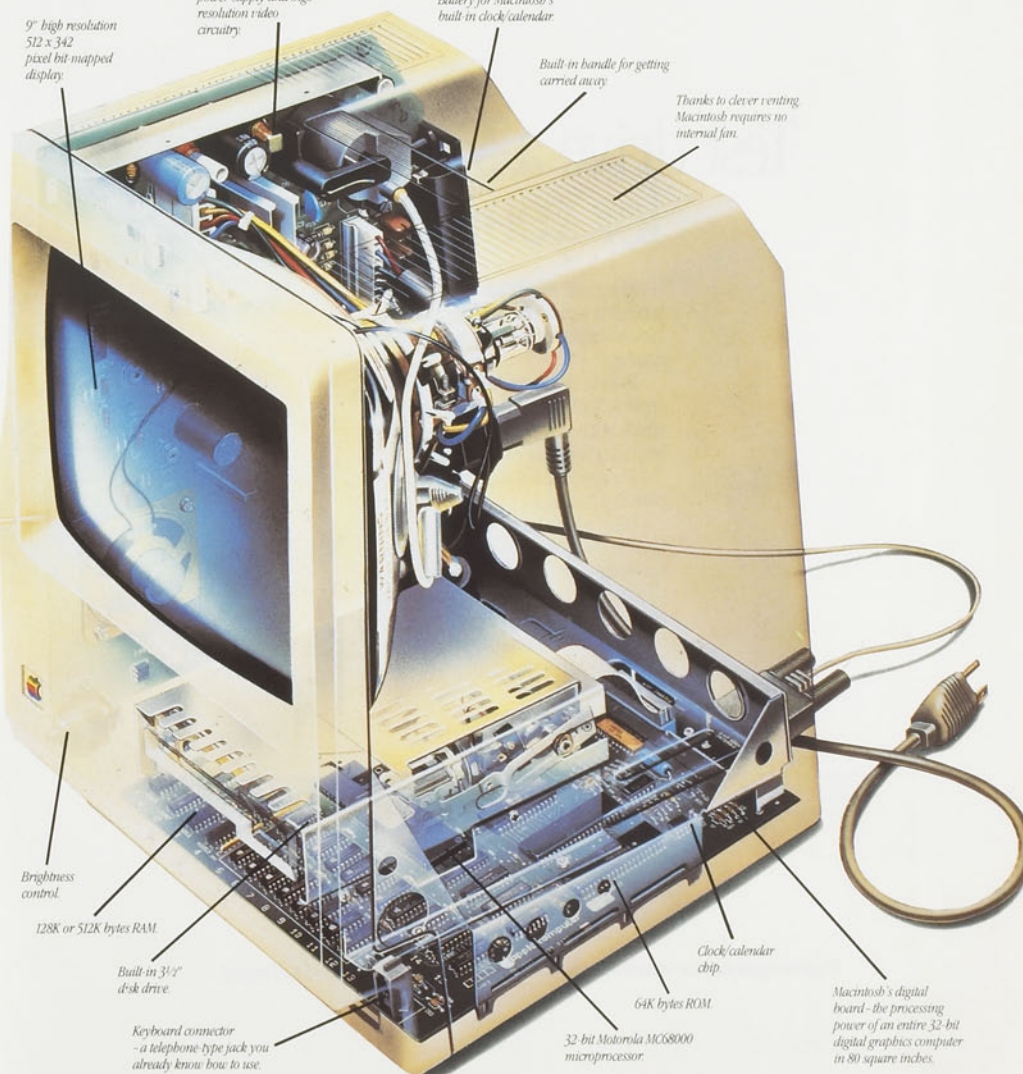
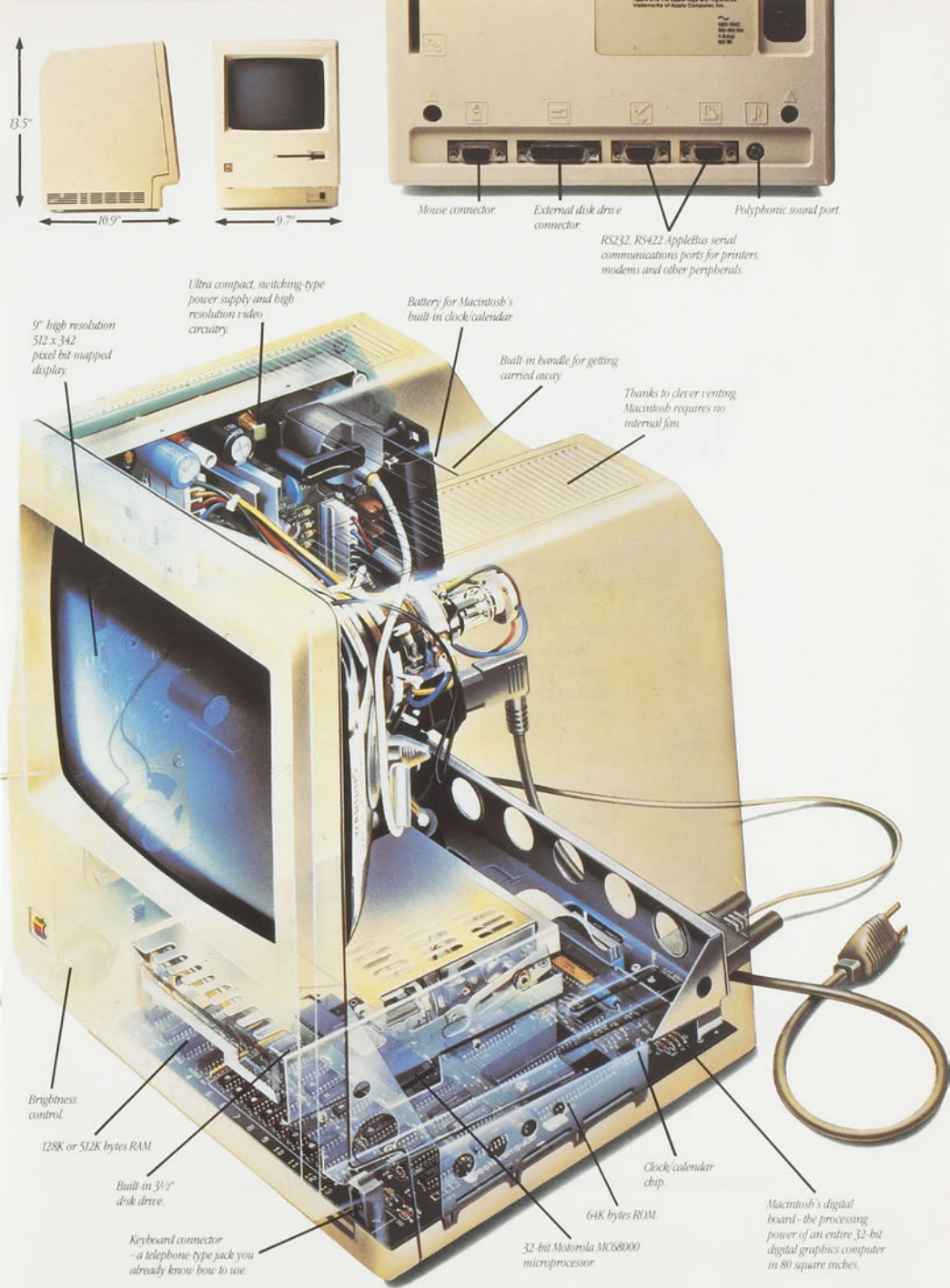
*The Mouse itself. Replaces typed-in computer commands with a form of communication you already understand—pointing.*

*Some mice have two buttons. Macintosh has one. So it's extremely difficult to push the wrong button.*



*The inside story—a rotating ball and optical sensors translate movements of the mouse to Macintosh's screen pointer with pin-point accuracy.*





# Test drive a Macintosh for yourself.

The Apple Macintosh is now more accessible to schools – or if you already have a Macintosh you may wish to own another.

To help you Apple have devised the Apple School Sponsorship Scheme which is a series of sponsored events to help you raise the money.

For every £2 you raise Apple will provide a further £1.

Once you've raised the £'s all you have to do is complete the order form, nominate your preferred local dealer (if you don't have one we will nominate one), send the form to:

Apple School Sponsorship Scheme  
1 Dyers Building  
LONDON EC1 2JA  
and we'll arrange the rest.

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FileVision is a registered trademark of Tdso Software Products.  
HabaDEX is a registered trademark of Haba Systems Inc.



*Freefone Apple for your nearest Macintosh dealer. © 1984 Apple Computer (UK) Limited.*



# Who wants to be a Millionaire?

Would-be business tycoon, Jerry Sanders, chases a fortune in stocks and shares in Blue Chip's Millionaire.

Playing the stock market is a tricky affair by all accounts. It's not so much the promise of becoming a wealthy captain of industry that puts you off... it's the chance that you'll pick the losing team and wind up on Skid Row. But this is where business games come in...

Think in terms of flight simulators, in which pilots can get the feel of an aircraft before they get behind a joystick, and you've got the idea. Just as bad flying kills passengers, bad business decisions can kill companies — so a training environment that guarantees zero casualties is a must.

The key to a good business game is the quality of its knowledge of the subject. If the algorithms are based on real-life data, the more accurately the game will reflect what would really happen. And Blue Chip Software's stock market simulation, *Millionaire*, is based on actual Wall Street trends and historical events, rather than just random numbers to simulate the fickle finger of fate.

The object of *Millionaire* is to become a dollar millionaire as soon as possible. Your route to fame and fortune is through the successful management of a portfolio of shares drawn from 15 stocks in five industry groups. Each week, you take the kind of decisions that in real life could lead your board of directors singing all the way to the bank, or sailing out of a skyscraper window.

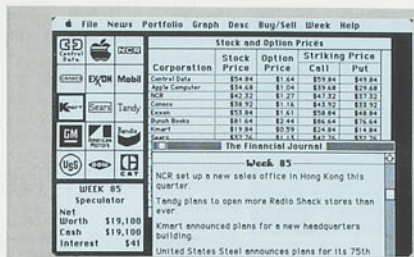
Absolute beginners start by straightforward buying and selling at market prices. More experienced players, however, have the opportunity to use more sophisticated techniques, such as exercising options (the right to buy or sell shares in a company at a price agreed in advance) and trading options far cheaper than trading in the stock itself. High flyers will enjoy borrowing against the current portfolio to buy far more than they can afford. And players in the Adnan Kashoggi league (he earns \$500 a minute, 24 hours a day!) will dabble in the daring art of selling short — that is, borrowing, from another investor, a highly-valued stock whose price you expect will shortly take a tumble, selling it quick, and then buying back enough stock to return to your original creditor once the stock has fallen. Nice work if you can get it!

To help in your money-making quest, *Millionaire* provides at-a-glance summaries of each week's activity in table and graph form and, of course, a weekly financial journal. But do you really believe everything you read in print?

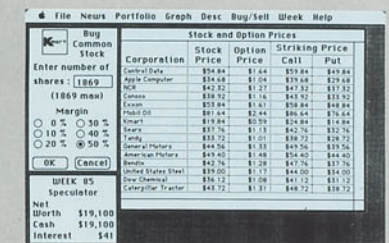
A good measure of a simulation is how much it teaches you, and on that count *Millionaire* scores highly (not that I've recently become a dollar millionaire, I hasten to add). The manual that

accompanies the game is thinner than average, but packs in clear explanations of how stock markets work, in language that neither becomes impenetrable or condescending. And, although this is an American product based on the inner workings of Wall Street, the rules of the game apply equally to London — or, for that matter, Tokyo and Tel Aviv!

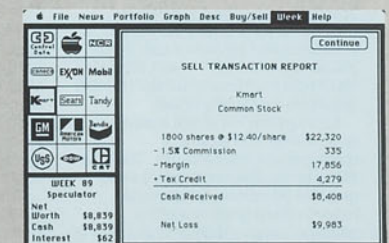
*Millionaire* is available from your local dealer or from Blue Chip Software, 6744 Eton Avenue, Canoga Park, Calif. 91303 (Tel. 818-346-0730). *Millionaire* is priced at £50.60 (+ VAT).



ANNOUNCEMENT OF KIMAT'S NEW HQ IN FINANCIAL JOURNAL... STRONG CITY CONFIDENCE IN KIMAT... WOULD SUGGEST HEAVY INVESTMENT



KIMAT WATCHERS PREDICT RECORD REVENUES... ARE YOU CERTAIN OF INVESTING ALL YOUR RESOURCES?



KIMAT STOCK HAS FALLEN 37.5 PERCENT IN LAST FOUR WEEKS... TOTAL LOSSES INCURRED \$9,983... BETTER LUCK NEXT TIME!

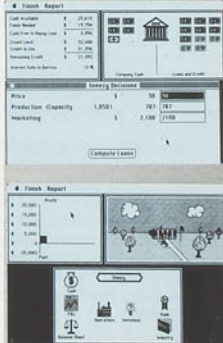
## Are You Managing Comfortably?

For the aspiring company manager, there's a sure-fire method of foretelling your success rate — try *MacManager*. Harvard Associates' *MacManager* simulates the various decision-making processes you'll go through if you're going to be successful at big business. Seated at the manager's desk, it's your task to check over all the aspects of the company — from the factory to the warehouse operation to the office lackeys.

Of course, being the boss you've got access to all the information you need about the company, as well as the chance to dip into *MacTimes*, the industry paper that tells you all about what your competitors are up to. But all the final decisions are up to you — and based on those decisions you can take the company to the dizzy heights of success, or down the toilet!

The package offers you two levels of play — the 'manager' level means that any decision you make will immediately be seen on-screen. However, for more advanced businesspeople, there's the 'strategist' level which means you're asked for short-term and long-term decisions and it's on these that the success of your company will be based.

Unusually for this type of simulation, *MacManager* makes good use of graphics, often drawing up a three-dimensional image of the business environment you're looking into. Up to nine players can be involved in any one game, or you can involve the Macintosh itself as some of your opponents.



*MacManager* is available from your local dealer or from Harvard Associates, 260 Beacon Street, Somerville, Mass. 02143 (Tel. 617-492-0660). *MacManager* is priced at £46.00 (+ VAT).

# A PLAY ON WORDS

One of the most important jobs expected of any computer today is that of wordprocessing.

Getting back to basics, wordprocessing transforms your Macintosh into a glorified typewriter. And its editing facilities — such as deleting, cutting, copying and moving text — are a boon to anyone allergic to correcting fluid.

Although the features of wordprocessors vary from product to product, most have text formatting (the ability to present text in a wide variety of layouts), and an efficient means of storing and retrieving that text. Some allow you to work on several different documents at one time, while others limit you to a single screen. Other possible features include different typefaces and sizes, spelling checkers, grammar checkers, word counts, 'search and replace' facilities and — best of all — compatibility with other Macintosh application programs.

But all is not that rosy. Typewriters don't usually eat text — computers often do. You may find yourself in the unfortunate position of watching your purple prose evaporate into the astral zone. And even when you've managed to resurrect text up on your screen and you want to print it out, you could still run into difficulties. Computers and printers share an uneasy relationship — and you may need more time to print out your work than you think.

Something else to watch out for is the accompanying documentation — if you spend too long learning and, subsequently, teaching the package to others, it might not end up being the cost-effective 'wonder package' that you'd hoped for.

The two established wordprocessors for the Mac are Apple's *MacWrite* and Microsoft's *Word*. The first had the distinct advantage of coming free with the machine, while the second faces the challenge of forcing you to justify the extra expense. What it boils down to is that if you get *MacWrite* free, why would you want to buy *Word* — or any other wordprocessor?

## Write On

As was said at the outset, *MacWrite* is free to anyone who's bought a Macintosh — and that gives it an immediate edge

over any other wordprocessor you might consider for the machine. The usual trade-off in any software purchase is price and performance — that is, the more you pay, the better the software performs. Unfortunately, *MacWrite* is no exception to this rule.

The program has severe limitations on power, speed and performance. Some of these limitations also apply to *Word* — although these largely relate to the difficulties placed on using the software with only one disk drive. It's not impossible to use the programs with one

drive, but you'll need more time and a lot of patience as you swap disks in and out of the internal disk drive.

Leaving the 'un-disk' problem aside for a moment, *MacWrite* is without doubt a good deal more powerful than wordprocessors on other business computers. Not only can you mix text and graphics in a document, but also display the type on-screen in a wide

variety of typefaces (different fonts, six point sizes and eight typestyles ranging from plain text, through bold and italic, to underline and shadow).

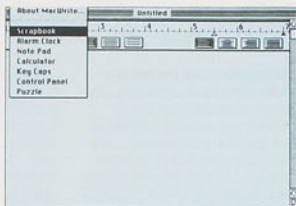
The way you give commands to *MacWrite* — either through 'Option key' combinations or the pull-down menus at the top of the screen — is also simple and easy to learn. It's also relatively 'goof-proof'. If, for example, you highlight the wrong paragraph when deleting text — and think you've lost it forever in the micro-electronic ether — you can instantly retrieve it using the 'Undo' command.

In essence, *MacWrite*'s strengths could be summed up simply by checking how easy it is to use. For computer neophytes, it's probably the easiest wordprocessor you'll ever use, and if you're new to micros... well, if the Mac could hold your hand while you're using *MacWrite*, it probably would!

But reaching this zenith in ease-of-use is not without some serious compromises and trade-offs. The Mac's ability to mix different typefaces and graphics on-screen, for example, requires that a great deal of the machine's basic (128K or 512K) memory is set aside for this task — and that means much less space for your writing.

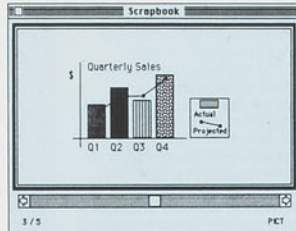
The upshot of this memory-hungry design is that although it looks and feels wonderful, there are severe limitations

## 1 MacWrite Selecting the Scrapbook



Information can be copied into *MacWrite* from the Scrapbook, be it text or graphics, and generated from either *MacPaint* or *MacWrite* documents.

## 2 MacWrite Copying from the Scrapbook



By scrolling horizontally through the *Scrapbook* (part of the Mac's built-in desktop) you can grab your chosen image, either by selecting the 'Copy' option from the Edit menu or pressing Option-C.

## 3 MacWrite Pasting an image



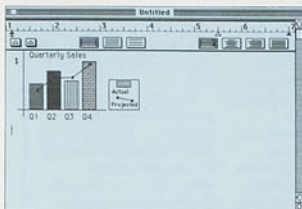
Once the item (in this case, a business graph) has been copied into the Mac's memory, it can be pasted into an untitled *MacWrite* document via the 'Paste' option in the Edit menu or the key combination Option-V.

on what you can do with *MacWrite*. On a basic 128K Mac, for instance, you can't have a document much longer than five or six pages (maximum). This is because *MacWrite* is a RAM-based program, and everything you type in goes straight into the machine's RAM and isn't banished to the disk drive until you send it there yourself by saving the text.

That may sound like a perfectly reasonable way to design a wordprocessor... until you realise that most business PC's wordprocessing software 'spools' the text off to a disk as it's written, so that the machine only uses RAM to store the text that's actually on-screen at any one time. The maximum

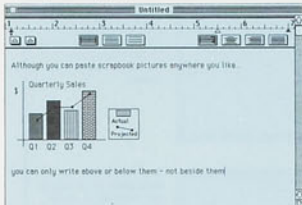


#### 4 MacWrite Ready to type ...



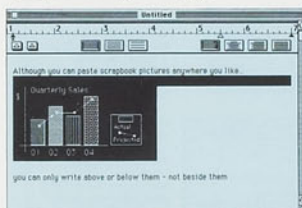
Once the graphic image has been pasted into the document, the cursor moves to a position just below it. This looks fine in theory, but in practice it can become problematic.

#### 5 MacWrite Lining up text



The problem becomes even more apparent when you try and line some text up alongside your graphic. MacWrite won't accept the text - it's defined a rectangular space across the entire page as a 'graphic area'.

#### 6 MacWrite Deleting an image



The odd thing about all this is that when you select and subsequently delete the graphic, it looks like it's only taking up a part of the area it actually set aside for itself.

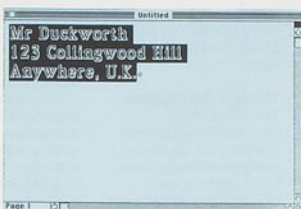
size of the document is thus limited by the space you've got on disk, rather than the amount of memory you have on board the Mac.

Although the initial price of the Macintosh is still quite high, MacWrite represents good value within that price. MacWrite is easy to use and well worth using - as long as you realise there are restrictions on its power and capabilities. For goodness' sake, don't start writing your own version of *War and Peace* with it!

#### Getting Your Word's Worth?

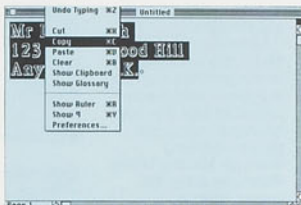
If MacWrite is the Volkswagen of Macintosh wordprocessors, then Word must be considered as the Rover estate

#### 1 Word Selecting text



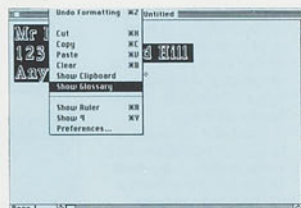
To put a letterhead into Word's Glossary, you first highlight the appropriate block of text with the mouse. Once it's selected, you then open up the Edit pull-down menu.

#### 2 Word Copying text



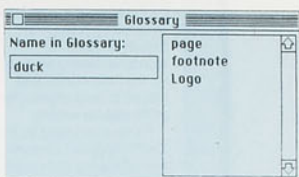
To copy the letterhead into the Mac's memory, you can either use the pull-down menu command or press the key combination Option-C.

#### 3 Word Showing the Glossary



With the letterhead firmly copied into memory, you now need to get out the Glossary so that the letterhead can be added to it. This is accomplished via the 'Show Glossary' command.

#### 4 Word Text storage in the Glossary



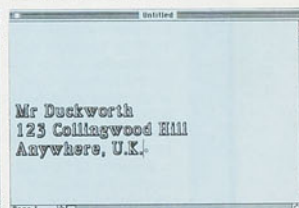
To use the Glossary to best effect, give the letterhead a short name (such as 'Duck'). Then press Option-V or use the 'Paste' option from the Edit menu.

#### 5 Word Text selection from the Glossary



To test out your stored letterhead, type the name of your new Glossary entry and press the Option key and the Backspace key simultaneously. If you've followed the instructions correctly, your letterhead should appear on-screen.

#### 6 Word The final effect...



You can now see the newly-inserted letterhead in place. In this case, the cursor is still the same height and font as the letterhead - although you can build a command into the Glossary to return it to normal after the image has been inserted.

car of the industry. It's large and roomy, very powerful and it's got a certain utilitarian flashiness. And, just like the Rover, it costs a good deal more.

You'll only want to consider Word if MacWrite doesn't meet your requirements - although you'll find that state of affairs can arise very quickly. If you want to do more than a few short letters to friends, or dash off the odd memo, you'll find that Word will have to figure in the cost of your Macintosh wordprocessing system.

Word was designed for bulk work. If you're used to MacWrite, Word is definitely a step up... and it can be a big step. Along with the program's increased

capability comes a greater complexity. But don't panic - most of the mistakes you might make in coming to terms with Word's complexity are usually reversible.

Matching all the features offered by MacWrite, Word also includes the ability to work on more than one document at once. You can move between four documents at once on-screen, sizing each document any way you like.

You can scroll the Word screen horizontally - this is particularly important if you're constructing tables or wide documents that don't fit on to the standard 80-character screen. There's also a simple back-up facility; when you name and save your file, you've got the



# WP Preview: MacAuthor

MacAuthor is the first British-written wordprocessing package for the Macintosh, and claims to be designed for professional writers.

It was conceived by Icon Technology of Leicester, and offers a great variety of formatting options. This is particularly useful in writing academic treatises, scientific documents and books — hence the name MacAuthor.

What you'll see here is not a review of MacAuthor, but an assessment of what the program promises to offer — based on a brief look at the latest Beta-test copy supplied by Icon's Mike Glover. More features may well be added to the program between the time this preview was written (May 1985) and the final release of the package later on this Summer.

MacAuthor looks and operates in much the same way as MacWrite and Word — although its ancestry is probably closer to the former.

## The Main Feature

Among its many unique features, MacAuthor offers a 'style definition' system that allows you to define styles for headings and paragraphs — up to 17 for each document — and whole documents. And, as each style is defined, it becomes an option listed on the Style menu.

Scientific authors will love the package as it allows an unlimited level of subscripts and superscripts, so that complex chemical formulae can easily be represented on-screen.

Perhaps its most exciting feature is its ability to carry out a multiple overstrike, allowing you to make up classical and scientific characters from combinations of existing letters and numbers in the character set. And, as a pleasant accident of fate, MacAuthor also supports a system of 'kerning' — which means you can take out the unwanted space between characters.

There's even the Case command that means you can select a particular block of text and specify

whether you want it to be in mixed, lower, or upper case.

## The Age-Old Dilemma

The idea behind MacAuthor is to provide flexibility but, as always, this means that some of the program's user-friendliness has had to be sacrificed. The dilemma experienced by all software houses is that they have to tread the thin line between producing an all-singing, all-dancing package without making it so complex to use that it puts off all but the most patient users.

Getting to grips with MacAuthor is a matter of understanding the concept of styles — the program's unique method of defining typefaces, point sizes, page position and character spacing. Unlike Word's Glossary, the various styles in MacAuthor can be selected directly from Option key combinations — which is a definite plus point. Put simply, MacAuthor seems to reverse the standard format of the wordprocessor — whereas in Word and MacWrite you work within pre-defined page formats until you decide to create your own, MacAuthor makes you define all possible formats before you begin.

There are, of course, a number of facilities lacking in MacAuthor — the most significant of which is the ability to integrate with other applications. You can, however, create 'text-only' files with MacAuthor and programs that accept text files can make use of these.

## Out For The Count?

Although MacAuthor is a couple of months away from the finished product, already it's looking like it'll be a very superior wordprocessor. And it's a product of experience — Icon Technology has included most, if not all, of the best features of Word and MacWrite... and then it's added a few of its own. For instance, MacAuthor has an on-screen word and line count, kerning, letter spacing, strike-outs,

add-in Options keys, and the ability to change selected characters to upper- and lower-case.

MacAuthor is very much a specialist tool for academics, professional writers and technical authors — although some of its features, especially 'kerning' and the like, may well excite many users contemplating using the Mac to publish newsletters and in-house magazines on the LaserWriter. MacAuthor isn't your

average general-purpose wordprocessor, it's more the kind of product that you almost have to wait to see what Mac owners will do with it before you weigh in with your definition of what it is and what it'll be used for.

You'll have to wait a few months for the final product... but don't think Icon Technology is sitting around waiting for MacAuthor to write itself. During the three weeks test period, no less than three different Beta-test versions of MacAuthor were made available — and each one was well worth waiting for.

MacAuthor's screen looks pretty much the same as Word and MacWrite at first glance, although the additional line and word counts may come in handy for professional writers.

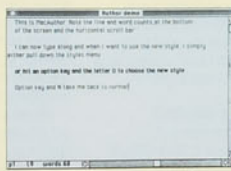
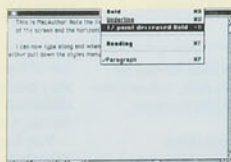
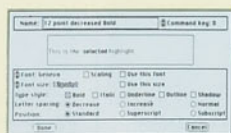
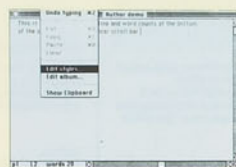
To get to the heart of MacAuthor, you'll need to start defining your own styles — this is done via the Edit menu and accessing the 'Edit Styles' option.

Once you try to 'Edit Styles', you're thrust into the Style Editor where you can either choose an existing name for a style or create your own. Having done this, you now select the 'Create' option.

Once in the Style Editor's main menu, you can begin to specify exactly the fonts, point sizes, positions and letter-spacing you're after. This done, you create a letter or number that will be used via the Option key to call up this particular style.

The new style is now added to the Styles menu — providing an instant guide to the Option key combination you'll need to use to access it. (It's worth giving your styles user-friendly names so that others will know what the style is for.) Obviously, you can create as many styles as will fit into the Styles menu — and that's 17!

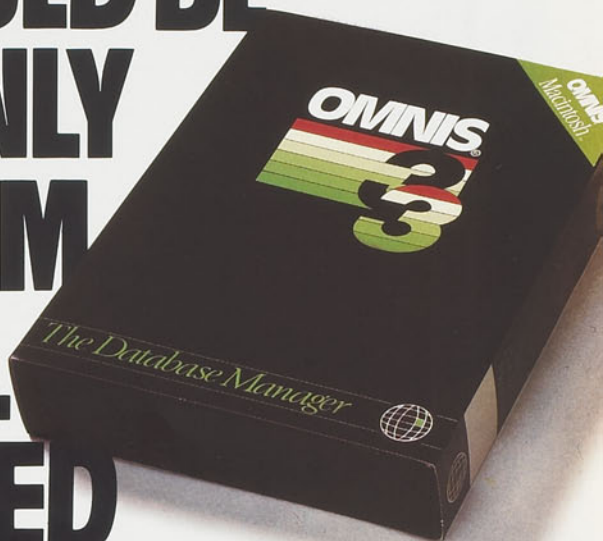
Making use of the style created here is as simple as pressing Option D. Once you've used this particular style to your satisfaction, you can move back to your original style by pressing Option N (to get back to 'Normal').





If you find the claims for some microcomputer software hard to believe, try this for size . . .

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option of making a back-up copy at the same time.

One of *Word's* special features is a Glossary for storing frequently-used text. Although both *MacWrite* and *Word* allow the use of the Scapbook — any text stored is changed to 12 point New York, plain text during storage. *Word's* Glossary stores a larger amount of information (the Glossary's size is dictated by disk capacity rather than

All these features (and the many others we haven't got around to yet) do come at a cost, however. *Word* is not as easy to use as *MacWrite* and you'd do well to study its manual before wading in. The complexity of the program is slightly alleviated by the excellent 'help' facility — but there's only so much information you can get from an on-screen pull-down menu. *Word* is also not entirely a 'WYSIWYG' ('What You See is What You

## Just A Thought...

Who needs a wordprocessor? Guy Kewney certainly doesn't!

Officially, of course, *ThinkTank* isn't a wordprocessor, but an 'ideas processor'. Cutting through the Californian jargon, what it really is, is a 'folding editor' — a concept developed inside various research centres some years back, allowing you to look at a document as a structure.

Because it's billed as an ideas processor, I started out comparing it to a thinking aid package called *Brainstorm* (as yet, not on the Macintosh) by Caxton Software. 'It's true that most thinking leads to writing,' said an irritated Dave Tebbut, when I taxed him on the subject of his *Brainstorm* program, 'but we have produced it as an aid to thinking, not an aid to writing, and we don't plan to build wordprocessing in.'

For me, though, *ThinkTank 512* is the ideal wordprocessor.

I don't, after all, have to impress editors with my clever control of boldface, italics, and other flash presentation details. Text typed out on bogroll would probably keep most editors happy — provided it arrives in time to go to press!

What I do have to do, however, is understand exactly what it is I'm meant to be writing. *ThinkTank* lets me set a title, and then sub headings. Having mapped out how the article seems to be going, I can open a section for notes and start writing — feeding

text into a section clearly marked 'notes' with end-less sub heads.

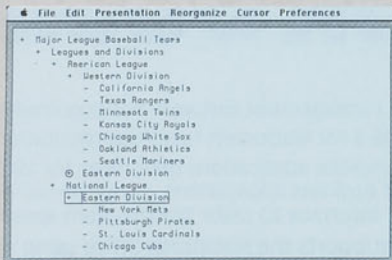
If, as the writing goes on (and this is true of most writers of anything longer than a letter to the bank manager) it turns out that I want to do things differently, I can take a whole section of text and move it to where it now needs to go. So, for example, if 'Corruption in Hackney' turns out to be a wild, malicious rumour, I can detach it from the 'Things against the Council' section, and move it (all 32K of text) to 'Important Points in the Council's Favour'.

As with *MacWrite*, I can insert *MacPaint* diagrams via the Scrapbook (if, that is, I understood the inner workings of the Scrapbook which, like most users, I don't...). And on printout, the ability to see the heading neatly listed, with an index to where it all is, a

neat page number at the top, and the date and time printed, makes the whole piece of paper much safer.

It also fulfils one vital need — readability. Most wordprocessors, however good or bad they may be at accepting typing or corrections, fall down when you try to use them to read a document. The pages flicker, cursors flash across the screen, things go blank, and you start to suffer from the sort of nausea caused by reading a small-print book on the bus.

*ThinkTank* only allows one font at a time, and on-screen handling is blindingly fast. You can jump from start to finish, search for text, cut and paste, and generally play around — all instantly, make reading simple. I almost find it as easy to read *ThinkTank* text on-screen as a printout!



Living Videotext's *ThinkTank* — the thinking person's alternative to the wordprocessor?

internal memory size) and it's stored in the format you type it in.

Something else you may want to consider is the host of Option key combinations offered by *Word*. This means that you don't constantly have to move the mouse all over the screen to access the pull-down menus. *Word* is also more mouse-independent than *MacWrite* in the file, editing and search functions.

Get') program — unlike *MacWrite*, you don't automatically see where the page will break when you print out your text. Nor is the program really designed to be used on a single disk system. If you've only got one disk drive, you'll find it much more frustrating to use than *MacWrite* — because the *Word* system disk is copy-protected. The trade-off goes like this — if you want to use *Word* with a single drive and avoid constant disk-swapping,

## In The Office...

When we first introduced the Mac into the Greenleaf Publishing office, both Yvette and I were a little worried it might not be up to all the jobs that we would be asking of it. Not only was it planned as a major aid to banking and filing processes, but we were also counting on it as a day-to-day wordprocessor for business letters and proposals — very different problems to the ones we'd overcome using the Mac for our individual work.

The system started off with the full complement of Mac bits and pieces (Mac with external drive and printer). Both *MacWrite*, and then *Word*, have both proved themselves invaluable assets in the office for designing memos, letterheads and invoices — although the output quality has always been limited by the abilities of the Imagewriter.

But the Mac couldn't answer all our problems. One job we often face — and it's common for anyone doing bulk wordprocessing of letters or documents — is repetitive typing. A good mail-merge program (a package that allows you to merge a list of names and addresses to a standard form letter) can eliminate much of that repetition, but, unfortunately, *MacWrite* didn't offer such a facility.

*MacWrite* includes the Scrapbook to store frequently-used text, but it's limited by the size of your Mac's memory and *MacWrite's* capabilities. It's not very practical to do a 100-letter mailshot from blocks of a form letter stored away in the Scrapbook. *Word*, however, features a Glossary — a storage system designed to leave the repetitive work to the computer... where it belongs. And, more importantly, we've found that *Word* can access files from Microsoft's *File* database program to easily construct mailshots.

*Word* can also be used with six different printers — as opposed to the more limited range offered with *MacWrite*. This hasn't been immediately useful, as most daisywheels and other alternative printers are parallel-driven and the Mac only has serial ports from printers. But Microsoft is offering an add-on, called *MacEnhancer*, which will allow us to use parallel devices — and that should solve the problem.

One reason we chose to use *Word* on the Mac was a consideration for other software we could eventually use with it. If we buy more business software packages, such as a database or financial program, it's important to consider whether any text from our wordprocessor will be compatible with our new acquisitions. And, unlike



MacWrite, Word does at least have the advantage of integrating with various other Microsoft programs, such as *File* and *Chart*.



**Greenleaf Publishing**  
The Greenleaf Publishing company was set up by Geoff Wheelright and Yvette Stachowiak in May 1984 to write and publish cookery and computing books. Greenleaf Publishing is planning to launch a series of books for the home computer market later on this year.

## Personal Views

# The Novel Approach?

I bought a Macintosh with an external disk drive and printer while writing my first cookery book. Microsoft's *Word* wasn't available at the time, so *MacWrite* was assigned the task of digesting my notes and finished chapters. I soon realised I was asking *MacWrite* to do something it wasn't really designed for — processing long documents. It seemed capable of handling only five or six pages with a minimum amount of fuss.

Each of my chapters, however, averaged between 15 and 20 double-spaced pages. This meant creating at least four separate files for each chapter, each of which had to be individually formatted. The Macintosh's functions leave a lot to be desired, though. It does provide the facility to set page breaks and page numbers, but I found I still had to go through the text, setting each one.

I also found that the process of inserting text required a great amount of patience and time — neither of which I had in great quantities as my book was to be completed, from start to finish, in just two months.

I did, however, make ample use of the three editing functions — cut, copy and paste. The Clipboard — which works in conjunction with *MacWrite*'s editing functions — was helpful, but it was limited by the fact that it only holds the block of text most recently cut or copied. And, of course, if you inadvertently cut something else, you automatically lose the Clipboard's previous contents.

To be quite honest, I didn't take too much advantage of one of *MacWrite*'s stronger features — that of the different fonts and styles. I tended to stick with the New York font at 12 point, with a smattering of bold and underlining here and there.

Following my experiences with *MacWrite*, I soon upgraded to 512K and began to look for a program more suited to my needs. And Microsoft's *Word* seemed to be just the ticket.

The difference between the two programs became apparent as soon as

I attempted to type in a large chapter. I didn't have to break it into smaller files. *Word* copies easily with longer documents.

*Word* also allows you to use more function keys with the Option key, especially in the file, edit and search menus. The mouse may be quick, but I've found the longer I use the Mac, the more apt I am to use Option key combinations.

Despite my problems with *MacWrite* (and subsequent success with *Word*), I could never conceive of using any other machine than the Mac for wordprocessing. I'd used a Mac-style program called *Framework* on the IBM PC, but it really doesn't compare to the real thing.



Yvette Stachowiak is the co-director of Greenleaf Publishing, and author of *Hot and Spicy*, a cookbook with an international flavour. She is also currently acting as games designer on an adventure game based on a popular BBC TV series.

## Personal Views

# No News Is Good News!

Things you get free with something else — like plastic bags with the groceries — are never rated as highly as they ought to be. I still find myself thinking of *MacWrite* as a 'part of the Macintosh' rather than something I might have gone into a shop and picked out as the one for me. Indeed, I seriously doubt that I would have bought *MacWrite* if there'd been the usual half-dozen alternatives. It's just too limited.

Of course, this may sound a little strange coming from a writer who uses nothing but *ThinkTank 512*, but then *ThinkTank*'s problem is simply one of formatting the finished document... *MacWrite* has limitations in every department.

*MacWrite* won't let you manage page headers the way you want them, for instance. Even worse, it can only have one footer per document — I like to have all the pages tagged with the traditional journalistic 'more follows...', with the last page tagged 'ends'. In *MacWrite*, it just can't be done — you have to take the last page, paste it into another document and give it a page number. Of course, this is hopeless in journalism where the whims of editors make it inevitable that an extra paragraph will be required... and then all the page-numbering's up the shoot.

Similarly, *MacWrite* can't cope with page breaks. If you want a new page at any point, you can tell the program to fill the rest of the page with a block of nothing. The next letters you type appear on the next page. But, once again, you can't adjust it; add a paragraph and the

block doesn't shrink to fill the remaining space — it stays there, putting the next page out of kilter.

*MacWrite*'s also limited (a paradox) in its handling of fonts. Most word-processors don't have a selection of fonts. This one does... so, why grumble? Well, because I get sent *MacWrite* documents written by Mac users and, obviously, no-one's ever told them that some fonts are very ugly. User fault, I know — but it's encouraged by the software!

Overall, though, it's a better word-processor than most you'll find on lesser micros... and, of course, enormously simple to understand. I never had that awful feeling, so common on rival set-ups, of 'Oh Heavens, what page of the manual had the instructions to set the margins?'. On *MacWrite*, all is obvious.

When I first caught a glimpse of *Word* being demonstrated, I was impressed mainly by its ability to open four windows on-screen at once. How many times has a writer not been struck, half-way through a paragraph, with the sudden realisation that what you're writing at the moment, clever though it is, is in fact a dimly-remembered version of something you reported in much greater detail and with fresher memory, a month before?

Of course, if you're using *WordStar*, you can read the other file on-screen, mark out the bits you want, edit out the bits you don't want, and put the file back where you got it. It's laborious and is dependent on your memory (now, what did I call that file? 'NEWS.TXT' wasn't it...).

Using Microsoft's *Word*, you just open a window with a file in, or another, or another, until you find what you're looking for. Your current document remains the same, with the cursor and margins exactly where you left them... wonderful, really. You can even split the screen, and work on the top and bottom of your document simultaneously.

But that's the only real advantage of *Word* over *MacWrite* for me. I reckon that any program that requires three separate pull-down menus, just to get the text of a running head typed, entered and positioned in the right part of a page is a program that doesn't understand the Macintosh, let alone the needs of the users. And that criticism applies right across the board.

Which brings me to my final point — if we're going to have keys to move the cursor, what's wrong with the *WordStar* 'standard' keys? Why invent a whole new range of nonsense controls? Stupid!




Guy Keyney is the micro-computer journalist of the world's superstar. Not only was he a pioneer of *Personal Computer World* and *Microscope* (and still remains a columnist in both magazines), he has more recently gained credit as a TV star in his role as host of Channel 4's *4 Computer Buffs* series.

you'll have to save your files on the *Word* disk (but there's not that much room to spare there in the first place). The alternative, if you're willing to disk-swap, is to allow yourself a lot of extra time to write whatever it is you're writing.

### No Competition!

There's no comparison between *MacWrite* and *Word* because, quite simply, they're in different leagues. A few users of *MacWrite* may not buy *Word* because they can get along without it —

but no-one's going to have to choose between buying the two programs because they don't actually compete with each other.

To explain, *MacWrite* is a good occasional wordprocessor and an excellent introduction to wordprocessing with the Mac. But if you plan to do any serious medium to high-volume wordprocessing with the Mac, then *Word* is a must. But don't bother getting it until you've got a second disk drive — the disk-swapping will drive you crazy. 

# The Final Word...

In terms of 'keeping track' of things, *Word* wins hands-down. Although it doesn't have word-count (like *MacAuthor*) *Word* does let you keep track of pages easily and re-calculates the page numbers and page-break falls when you use the 'Recalculate' command. *MacWrite*, of course, shows page breaks automatically on-screen (which is infinitely preferable to the more optional attitude of *Word*).

In the form-letter department, *Word* also takes the lead with its ability to accomplish 'mail-merging' (insert names and addresses into purpose-written form letters and printing them all out as a batch). Using *MacWrite* this all has to be done manually and could well turn into a nightmare.

Neither program has the ability to check spelling (although Microsoft's version of *Word* for the IBM does include a comprehensive spelling checker and it shouldn't be too difficult for this to be converted for the Mac). But goodness only knows what the real use of a spelling checker is anyway. Either you know how to spell or you don't — and most spelling-checkers don't include most of the proper nouns or names in most people's 'personal' vocabularies. And, of course, it does help if the spelling-checker happens to support the English rather than the American, language.

There's also the problem that neither program offers disk-handling facilities within the application itself — you can't format a disk, copy-disk or erase files from within *MacWrite* or *Word*. You need to exit either program to handle these jobs — a somewhat annoying task if you want to make some space for a long file on an almost-full disk.

Search facilities on both programs are good, with the ability to find whole words and part-words in a document.

Cursor movement is primarily carried out by 'mouse manoeuvres' in both *MacWrite* and *Word* — but *Word* also offers 'cursor key' movements using Option key combinations for those who don't want to be total 'mouseketeers'.

Multiple documents (and the 'splitting' of single documents) are catered for in *Word*, but not in *MacWrite*. However, neither program offers spooling (the process by which a printer can operate at the same time as you continue working on an on-screen document).

	MacWrite	Word
<b>Counting</b>		
Word count	No	Yes
Page count	No	Yes
Mail merge	No	Yes
Sorting	No	No
Spelling checker	No	No
<b>Disk Features</b>		
Formatting	No	No
Copy disk	No	No
Erase file	No	No
Merge files	Yes	Yes
Re-name file	Yes	Yes
<b>Edit Features</b>		
Search	Yes	Yes
Search again	Yes	Yes
Wild Cards	Yes	Yes
Search and replace	Yes	Yes
Multiple search and replace	Yes	Yes
Global search and replace	Yes	Yes
<b>Move/Edit By Keyboard Only</b>		
By character	No	Yes
By word	No	Yes
By sentence	No	Yes
By line	No	Yes
By page	No	Yes
By screen	No	Yes
Multiple documents	No	Yes
Spooling	No	No
Super/subscripts	Yes	Yes
Kerning	No	No
<b>Typefaces</b>		
Various typefaces	Yes	Yes
Various fonts	Yes	Yes
Various styles	Yes	Yes
<b>Printer Compatibility</b>		
Imagewriter	Yes	Yes
Brother	No	Yes
Appledaisy	Yes	Yes
NEC 7710	No	Yes
Diablo 630	No	Yes
Typewriter	No	Yes
LaserWriter	Yes	Yes

Although *Word* and *MacWrite* offer slightly different ranges of typefaces, it's impossible to say one is empirically more suitable than the other. *Word*'s typefaces (and printer drivers) seem slightly better organised for using daisy-wheel printers, while *MacWrite* has the edge with dot-matrix printers (particularly the Imagewriter).

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# MAC MAN

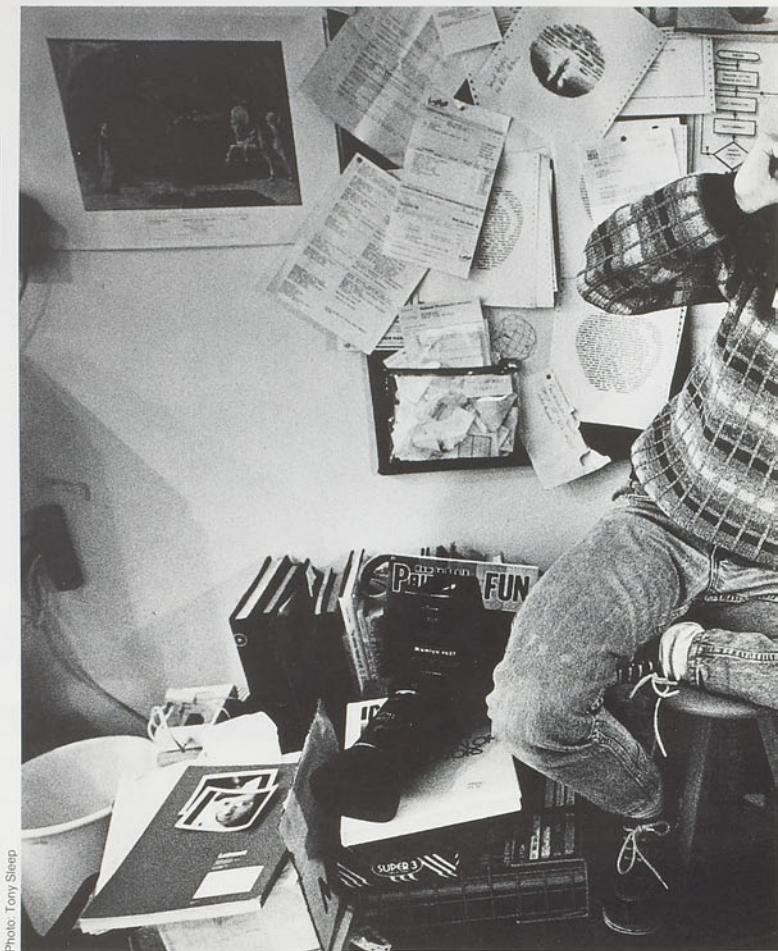


Photo: Tony Sleep

Ian McKinnell became, in April 1984, the first Mac owner in the UK. Up until then, he was a full-time photographer for various consumer magazines. Now, alongside his freelance photography, Ian has embarked upon a new career — that of illustrator and author on the Macintosh. His current exploits include conceiving a software package for the Mac, writing a book on how to make the most of *MacDraw* and *MacPaint*, and 'MacDrawing' the illustrations for Apple UK's national poster-advertising campaign.

**W**alking into Ian McKinnell's studio is a bit like visiting Santa's grotto — all around there's evidence that this is a place for professional photography as you guide yourself through a maze of camera tripods, umbrellas, light stands and the like. But there in a corner, oblivious to the chaos around him, sits Ian surrounded by a stack of disks and, in the middle of his desk, the object of his total attention — the Macintosh.

Getting Ian to talk about his time with the Macintosh is extraordinarily easy — because for the last 18 months, it's been utmost in his thoughts and instrumental in his career. But that's not how it all began.

"I've never been interested in computers — they're so incredibly boring. They seem very crude, and I couldn't see why anyone would want one, apart from being something to play games on. I'd done a lot of work with magazines like *Zoom*, *Interiors*, *Design*, *New Scientist*, *Which Bike?* and *Car* — but I suddenly got the chance to photograph micros for the computer press. And for a year I

photographed nothing else ... but all it did was reinforce my thoughts on how boring they were.

"Then, back in late 1983, I was photographing the Lisa for the front cover of the *Home Computer Course* magazine and it was amazing ... but more than that, I could actually use it. Of course, at £7,000 it was way too expensive to buy, but I thought so seriously about it then when I came to take the Macintosh's picture I knew this was the one for me. I managed to wangle the machine for a whole day so I could play with it.

"The next day, I visited every Apple dealer in London to place an order ... but I was told that it wasn't coming into the country until August '84. Luckily, though, an Apple dealer managed to intercept an American Mac on its way to another dealer for demonstration purposes and he sold it to me. To this day, I still use the American keyboard — it's just so much better designed than the UK one — it's got a decent-sized Shift key on the left for a start!

"Of course, having a Mac four months





always my first love. Without a manual, I spent a lot of sleepless nights trying to figure out just what you could do with *MacDraw* and gradually, instead of photographing micros for magazines, I'd spend most of my time constructing diagrammatic tables and illustrative charts for them instead.

"I also started playing with *MacPaint* to construct letterheads and came up with the idea of doing invoices on the Macintosh to show graphically what I was being paid for, using pre-defined icons for each job. It was a lot of fun to begin with but, seeing the favourable reaction to them, I decided to actually develop my own piece of software to create user-defined invoices. It took about two months to conceive, but then came the difficult task of trying to program it. I'd got hold of a book that taught Pascal, and got in touch with Andrew Pennell and, together, we hope the product will be out later this year.

"I'm also writing a book about painting and drawing on the Mac, and the whole book is not only written on the Mac but it'll be designed and eventually printed out on the *LaserWriter*. The Mac is a visual machine, and *MacPaint* and *MacDraw* are of such high quality that it seems a shame not to be able to use them just because you haven't got the technique. My book will show users how to deal with perspective and proportion and so on — you can't teach talent, but technical skills shouldn't stand in your way. I think the manual's quite good, so I'm not really that interested in paying out for a re-write. I think it's more important to write a book that sits beside the manual rather than replaces it.

"As a result of writing the book, I invited myself up to Apple UK to print out the first chapter on their famed *LaserWriter*. It was still a new machine to them at the time, so I had quite a crowd around, one of whom was the Creative Director. He ushered me into an office and asked me if I'd like to draw some of the illustrations for the company's up-coming advertising campaign. As a result, I spent the next two weeks crouched over my Mac using *MacDraw* and *MacPaint* to draw all seven illustrations for the posters that are all over London at the moment.

"I suppose I could now make a full-time living out of the Macintosh — writing, illustrating and conceiving packages for software houses. But it's nice because I now find that I can do what I want on the Mac, and do the kind of photography I like doing... and that means I'm not taking photos of other micros now! The Mac is like another media all to itself — like oil painting and so on — and now the *LaserWriter*'s here, it doesn't all have to look like computer-generated graphics. I do have a few packages I play around with, like *MusicWorks* and a few games, but I tend to stick with *MacDraw* and *MacPaint* — serious programs on the Mac seem more fun for me, I'm afraid.

"Having a lot of friends in the computer press wasn't as much of an advantage as I thought it might be — in fact, most of them tended to laugh at me for buying a Mac. At the time it wasn't regarded as much more than a toy. I think people in the UK were put off by its whimsical 'cutesy' personality and couldn't see that underneath all that 'user-friendliness' that they'd learnt to do without, it was a very powerful computer. It's funny, though, no-one laughs at me now."

Ian McKinnell	
1	£ 380.00
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4	£ 28.50
5	£ 28.50
6	£ 15.00
7	£ 15.50
8	£ 5.50
Sub. Total £ 122.00	
Plus V.A.T. (10%) £ 12.20	
TOTAL £ 134.20	

An example of one of Ian's 'user-defined' invoices. If you'd like to amaze your clients with 'iconised' accounting, a software package should be available later this year.

before anyone else did have its disadvantages — there really was no software other than *MacWrite* and *MacPaint*, and the versions available were very early ones.

"I did manage to get hold of one of the first copies of Microsoft's *Multiplan* — but it was so bug-ridden you could hardly use it. But around August '84 I had my first major breakthrough. I'd been bothering my local dealer for the umpteenth time one week, when this German guy came in with a case stuffed full of Macintosh disks, but, as you can imagine, all the software was in German! There was nothing for it but to sit there with a German dictionary and translate it all... but then if you'd spent all your working hours in front of *MacPaint* and *MacWrite* for six months, you'd do anything to get something new on-screen!

"What I got from him was a wealth of development software, that allowed you to change various things on other applications, and a very early version of *MacDraw*. And I suppose that was the turning point. At art college, I'd studied Fine Art and illustration was

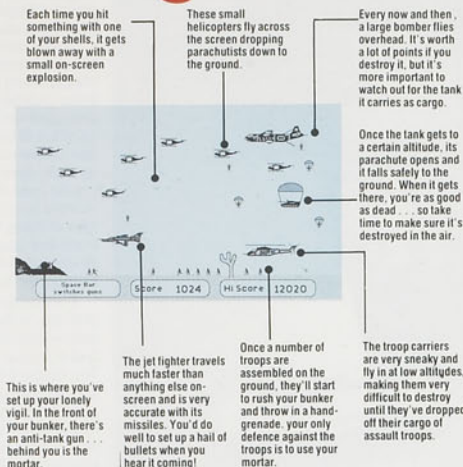


# In The Air Tonight?

*Airborne*, from Silicon Beach Software, is one of those games that remind you of those old John Wayne movies, in which there was just one trooper left to fight off a complete battalion of enemy soldiers. Of course, in the John Wayne movies, the lone trooper always won.

*Airborne*'s not quite like that, however, and even John Wayne would be hard-pressed to fight off helicopters, parachutists, tanks and jet fighters on his lonesome. From your little shelter, you control an anti-aircraft gun and a mortar, using the mouse to change the elevation of each.

Your task is twofold really — not only have you got to shoot down the helicopters before they start dropping the parachutists, but you also have to make sure that the parachutists that managed to pass through your deadly hail of lead don't sneak up on you and chuck a hand-grenade. Of course, while you're trying to pick off the guys on the ground with your mortar, there are more and more parachutists landing. And if that wasn't enough to cope with, every now and then a jet fighter comes screaming on-screen — flying about four times faster than anything else — and places a well-aimed missile



Each time you hit something with one of your shells, it gets blown away with a small on-screen explosion.

These small helicopters fly across the screen dropping parachutists down to the ground.

Every now and then, a large bomber flies overhead. It's worth a lot of points if you destroy it, but it's more important to watch out for the tank it carries as cargo.

Once the tank gets to a certain altitude, its parachute opens and it falls safely to the ground. When it gets there, you're as good as dead... so take time to make sure it's destroyed in the air.

directly on your bunker.

The game is entirely mouse-controlled apart from having to press the Space bar to change guns. And that's it... apart from the fact that you're treated to about 10 seconds of rousing 'War movie' music to get you into the mood... and it's superb! The music's obviously digitised, rather than written

especially for the game, but nevertheless it'll certainly impress any other micro owner.

Overall, it's an impressive game — certainly the best arcade yet seen on the Macintosh.

*Airborne* is available from your dealer or Silicon Beach Software, 112 Dalby Pl, Suite 201, San Diego, Calif. 92126 (Tel. 619-695-6956). The UK price for *Airborne* has not yet been fixed.

## It's All A Game!

● *Sargon III* is a chess game with nine skill levels. You can change the size of the board, ask for hints, take a move back, replay a sequence, or even take the other side. Also included are over 100 games from history, 45 classic chess puzzles, and a complete library of opening moves.

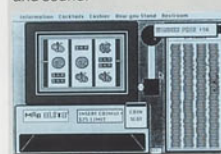


*Sargon III* is available from your dealer or from Hayden Software, 600 Suffolk Street, Lowell, Mass. 01854 (Tel. 617-937-0200). *Sargon III* is priced at £49.50 (+VAT).

● In the war theme, there's *MacAttack!* that has you stationed in a tank, way out in the frozen wastes of Alaska on the brink of World War 3. Your location is depicted in three-dimensional graphics, and you must control the speed and direction of your tank so that you can knock out the enemy tanks, heat-seeking missiles and aircraft... before they get you.

*MacAttack!* is available from your dealer or from Miles Computing, 7136 Haskell Avenue, Suite 212, Van Nuys, Calif. 91406 (Tel. 818-994-7901). *MacAttack!* is priced at £45.00 (+VAT).

● If you can't afford to visit Las Vegas, that's no excuse for not being able to play two of its most popular games — *Keno* and *Slot Machines*. *Mac-Slots* contains both games, each being totally mouse-controlled and making full use of the Macintosh's screen resolution and sound.



*Mac-Slots* is available from your dealer or from Soft-Life Corporation, PO Box 647, Paramount, Calif. 90763 (Tel. 213-774-3054). *Mac-Slots* is priced at £59.95 (+VAT).

● If you're looking for more than one game per package, look no further than the selection from Vindex. First up, is *Funkpak* — a collection of four games: *Sevens*, *Clandike*, *King Albert* and *Four-in-a-row*. Vindex also offer *MacCheckers* (incorporating *Reversi*), *MacGammon* (which also includes the game *Cribbage*) and *MacVegas* (which comprises six gambling games).

The Vindex collection of games are available from your dealer or from Vindex, 1105 Northeast Circle Blvd., Corvallis, Ore. 97330 (Tel. 503-758-0521). The Vindex collection of games is priced from £36 to £54 (+VAT).

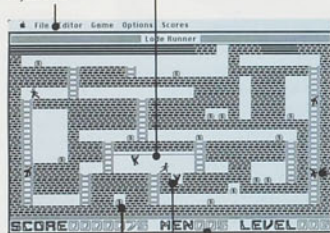
## The Game Now Waiting At Platform...

Broderbund's *Lode Runner* is an arcade game that involves you running around platforms, up and down ladders, and all in an attempt to recover stolen gold.

There's a complicated little story to go with the game, but if you don't really feel like an 'intergalactic commando', don't worry... it's still fun. *Lode Runner* is also not the kind of game you tire of in an afternoon — it sports 150 different levels of play, and when you get sick of that lot the game offers you the opportunity to create your own screens!

The idea is to keep out of the way of the death-dealing enemy guards, and run over all the sacks of stolen gold. Once you've recovered all the gold, a ladder to freedom will suddenly appear on-screen that'll take you along to the next level. The only weapon you do have is to be able to blast the ground so that a chasing guard will fall into it, leaving you free to carry on searching out the gold.

The Editor menu can be used to cut and paste various components from other levels — ladders, platforms, ropes and so on — to create new screens of your own.



Some of the gold can only be got at after you've blasted your way through the platform first.

If you blast a hole in the ground in front of an advancing guard, you'll find that they fall down, releasing any gold they may be holding for you to grab. Take care, though, unlike the death that awaits you if you fall into one of your own holes, the enemy guards always seem to escape your trap within a few seconds.

If you're a 'mouseketeer'... tough! This is a game where the only way you're going to get the manoeuvrability you need to win is via the keyboard. But that doesn't stop it being a good game. The screens make good

As well as the ladders, there are also a number of ropes strung between two platforms that can be used to escape the enemy guards.

These are the enemy guards — they follow you around the screen, homing in on you if you hang around too long.

The score so far, the number of 'intergalactic commandos' you have left in your command (you start off with five), and the level of play, are all shown in the grid at the bottom of the screen.

use of the Macintosh's screen resolution, and the sound's not bad either.

*Lode Runner* is available from your dealer or from Broderbund Software, 17 Paul Drive, San Rafael, Calif. 94903 (Tel. 415-479-1170). The UK price for *Lode Runner* has not yet been fixed.

# Got the time, Mac? (or the Rhythm?)

## TimeLink™

Looking for a good time? TimeLink is an innovative new product for the Apple Macintosh which allows you to do almost anything with information and data relating to time. It's a kind of Time Management System, or you might think of it as a powerful 'Temporal Database'.

Much more than an electronic desk diary (although it can be that if you wish, and a very able one too), TimeLink allows you to handle almost any time-related information in an incredibly flexible manner. It's a way for doctors or dentists or hairdressers to keep their appointments in order. It's a way to keep track of the hiring out of equipment. It's a way of enabling a whole office block full of busy executives to keep appointments. It's a way for people in the financial world to keep track of investments. It's a way for scientists to log time-sensitive experimental data and it's much more besides!

TimeLink is a whole new way of organising your time. You can see a day-at-a-glance, week-at-a-glance, month-at-a-glance, and year-at-a-glance. Or all four on the screen at the same time. You can select just one 'key' and see the entire development of a project mapped out before you, or the entire diary of one businessman. You can analyse how you used your time, keep a log of sales, expenses incurred, charges made, and so forth. And what's more, because you can cut and paste information from TimeLink to the desk-top calculator (or Rhythm, see below), you can manipulate that data, too.

You can calculate the time between dates (to the minute if you want), add time to a date, take it away, change the week numbering, or even change between American and English date formats. And there's no limit to the number of entries you can put in a single day, and your entries can be accurate to the minute.

Printing out information couldn't be easier, too. And TimeLink's unique data entry and dialogue modes allow you to type in words like 'Tomorrow' (or just 'Tom') or 'Now', and TimeLink will understand every word you say.

And yes, TimeLink fully integrates with many other Macintosh programs such as MacWrite. Quite simply unbeatable at £99.99 (128K or 512K Macintosh).

## Rhythm™

Rhythm is the perfect accompaniment for many of your Macintosh application programs. Rhythm is part spreadsheet, part powerful calculator – all available at the click of your mouse as a desk accessory!

Rhythm is like having several 'pocket computers' at your disposal, working in tandem with each of them being able to be given a label just as in the best of the new generation of spreadsheets. Call the first 'cost' and enter into it a complex equation for the cost of your new product; call the second one 'sales', and enter in your equation for nett sales; call another one profit and equate it to 'sales-cost'. With this unique combination of calculator and spreadsheet functions and facilities you can do what-if analysis (particularly useful when you haven't got large amounts of data to analyse), or simply use its powerful number-crunching ability without booting up that other more complex program or resorting to your trusty office calculator.

Rhythm too will integrate with all standard Macintosh application programs, allowing you to cut-and-paste results to and from it with ease. An exceptional product that is a must for every Mac owner, at just £49.99.



Softechnics can be reached on: 01-240 1422/7877. Call for information about your nearest stockist.

Softechnics, 12/13 Henrietta Street, Covent Garden, London WC2.

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# Candid Camera?

*Image-conscious Mac owners will be interested in getting hold of an image digitiser. Max Donalds sets his sights on the first three models available in the UK.*

With a machine as visually exciting as the Macintosh, it was only a matter of time before a number of image digitisers would become available to take full advantage of the Mac's pictorial possibilities. Take a look at three systems currently available in the UK — the ThunderScan, the Magic system and MacVision.

## Picture This...

So what is a digitiser? Well, I would have defined it as a system that translates video signals into data that the Macintosh can understand, display and manipulate. However, one of the systems, ThunderScan, makes rather a nonsense of this description as it doesn't use such signals — instead it uses a method similar to that used by compact disc players, in that it transmits a beam of light on to the image being scanned (in the Imagewriter) and the reflected light is analysed and translated into one of 38 possible values. Based on this information, the software then determines whether a particular area of the image should be represented by a black or a white pixel on the Macintosh's screen.

Essentially, MacVision and Magic enable you to translate any image, recorded either by a video camera or video tape (this includes television broadcasts) into a MacPaint image. The ThunderScan, on the other hand, translates any image that can be fed into an Imagewriter.

Digitisers themselves are nothing new — a few have been available for living fossils like the IBM PC for a number of years. But, of course, they work much better on the Macintosh, due to its higher resolution screen and a system designed to work with pictures from the outset.

## Drawing On Experience

As can be imagined, the possible applications of digitisers are endless. To begin with, they're not only an absolute godsend to Macintosh users who can't draw, but equally they're useful to skilled illustrators, providing access to a huge wealth of images to be incorporated into their drawings — television provides a fantastic 'random access' database. Almost any source material can be digitised — from rough sketches to photographs — and worked on in MacPaint. For example, the easiest way to draw a new font for the Macintosh would be to digitise the appropriate page of a type book and work from that, obtaining different point sizes by moving the camera to make the type bigger or smaller.

Using a digitiser it's possible for

salesmen to include images of their products in their letters, estate agents to show the house in question, to include family snapshots in a letter to your Mum, create MacWrite letterheads with your company logo on them, and so on. If you use a database that incorporates pictures — such as Microsoft's *File or Systematics* new *MacBusiness DataBase* — you can keep a visual inventory of your products, or even your personnel.

## The Price Is Right?

But of course there's a drawback, and that's the resolution of the Macintosh's screen — you can't expect photographic quality (although the quality of a print made at 25% reduction on the LaserWriter approaches it). Another, major problem is that all the systems are quite expensive (except ThunderScan, although its possibilities are a little limited) — and, if you don't already own a video camera, the expense doesn't end there!

To get the maximum out of these systems you need a video camera (current domestic video cameras all start

at around £400 and proceed to rocket sky-high — however, for digitising purposes a cheap black and white closed-circuit camera is perfectly adequate). The camera actually used in these tests was an 'antique' (made in 1978) Sony AVC-1420CE. The lenses supplied with these cameras are dire, but if you already own a 35mm (still) camera, an adaptor (C-mount) can be purchased for a few pounds so that your existing lenses can be fitted (the lens used for this test was a Nikon 55mm Micro-Nikkor (close focus) lens, the quality of which was way in excess of that needed). If you do plump for a close-circuit camera, you'll find it doesn't have its own viewfinder, so you'll need to use a monitor for focusing — if you already own a video recorder, then you can use your domestic TV in the normal way. If your TV already has a video input, you're in the clear — if not, video monitors start at around £300.

Of the three packages reviewed here, it's interesting to compare their similarities and differences. One factor that immediately stands out is that for two of them, ThunderScan and MacVision, the software was written by Andy Hertzfeld and Bill Atkinson

## Spitting image?

And here's the proof of the pudding — the same photographic image is portrayed by ThunderScan, MacVision and Magic, all reproduced to 85 per cent of their original size.

The most noticeable difference between the images is their relative proportions. MacVision and

MAGIC



Magic are both guilty of compressing the image horizontally, although Magic is by far the worst offender. (I am assured that the Magic system hardware can be adjusted to compensate for this compression ... maybe it'll be detailed properly in the new manual?)

respectively — both vital members of the team that originally designed the Macintosh. (Bill Atkinson wrote *MacPaint* and more importantly, *Quickdraw* — the graphics routines in the ROM, while Andy Hertzfeld designed much of the rest of the ROM and the system software, as well as the amazing *Switcher*.) Both of these guys know more about how the Macintosh works than *anybody*, so they began writing these programs with a head start and, believe me, it shows! One can only have sympathy with the Magic team trying to compete.

Overall, it would be impossible to think of a system that could be easier and simpler to use than MacVision, or more complicated and difficult than Magic. But it's the quality of the resultant images that speaks more than words...

## THUNDERSCAN

ThunderScan consists of a small 'camera' which simply clips into place instead of the Imagewriter's ribbon. This is then connected, via an adaptor box (which allows you to switch between print and scan mode), to the printer port of the Macintosh. The picture to be digitised is then fed into the Imagewriter, and the 'camera' scans back and forth, advancing the picture a pixel's width each time (in much the same way as a 'wire' machine in newspaper offices).

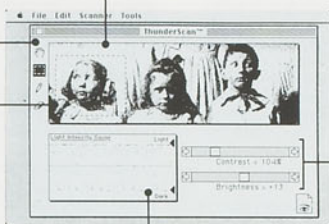
The 'camera' emits a tiny beam of red light on to the picture, and analyses the beam's reflection (in much the same way

## THUNDERSCAN: "High resolution at a low cost."

The image is moved around in this window using the 'grabber' tool. To see more of the image, select 'Show Image' from the File menu, bringing up another window which can be adjusted to fill the screen — all the 'MacPaint' tools can still be used in this window, but have to be selected from a menu. Unlike *MacPaint*, if you 'lick' the grabber and let it go, the image will continue moving — very impressive! It's possible to display and print both ThunderScan and *MacPaint* documents.

ThunderScan has a mini set of *MacPaint* tools — which do exactly what you experienced 'MacPainters' expect them to do. It even has *FatBits*!

This selection rectangle allows you to alter individual parts of the image.



Although this looks like an escapee window from *MusicWorks*, this plots the intensity of each line of the image for greater control of contrast and brightness adjustment.

These scroll bars allow a very wide range of adjustment and are extremely precise. High contrast images are easily obtained by selection from the scanner menu. Enlarge-ment and reduction, together with the area of the picture to be scanned, are chosen from another window that appears when Scanner is selected.

£249 (+VAT)

## THUNDERSCAN



ThunderScan has by far the highest resolution (look no further than the bags under our Leaderine's eyes) — indeed, by comparison, the other images seem 'soft' in texture. MacVision has the smoothest gradation of tone — there's no 'stepping' or obvious jumps in tone between black and white.

as a compact disc player). It can be quite a long process, taking over 20 minutes for an entire 10in by 8in image (though it can be left unattended). But, should you need to print out only a part of the picture, ThunderScan will allow you to

Magic, on the other hand, despite making use of 38 grey levels, still has the appearance of a fuzzy contour map.

However, you'll notice that all the digitised images suffer in comparison to the original... but then, the ultimate problem is the resolution of the Macintosh's screen. So, there's no need for Kodak to panic... yet!

## MACVISION





select a specific area, offering a choice of magnification or reduction of the original image.

As the picture is scanned, you can see it building up on the screen line-by-line, although it can be paused at any time. Unlike its rivals, the contrast and brightness of ThunderScan's images can be altered *after* they've been captured, very precisely, and over a very large tonal range (both with the entire image, or a specified section).

ThunderScan uses enormous amounts of memory to digitise the image — the largest image on a 128K Mac is 8in by 7.75in; the 512K Mac allows the full 10in by 8in picture. The images themselves, if stored as ThunderScan documents so that they can be altered later (the alternative is to store them as MacPaint documents), use *gigantic* amounts in disk space — a 10in by 8in image can take up over 250K!

## Working Flat-Out

ThunderScan itself is relatively easy to use (once you've worked out how to piece it all together) and I was very impressed by the quality of the images — certainly the best of the three digitisers reviewed here.

However, it has many limitations, simply because of the way it works. Obviously the most important of these is that it can only digitise flat artwork — thus, if you want a picture of a three-dimensional object, you'll have to get a photograph of it first. And not just any photograph. The ThunderScan works by reading reflected light, so it can only digitise pictures on flat, untextured paper — try to digitise the colour snaps you get back from the chemist (on a 'stipple' finish paper) and the results will be very bizarre!

Another drawback is that as the beam of light used is red, the resultant images are not 'panchromatic' — any reds on the original picture will come out very light in tone. Secondly there's the obvious physical limitation as to how big the pictures can be as they do have to fit into the Imagewriter — and it can be very difficult to get photographs printed on thick paper to wrap round the roller. And if you want to digitise images from books or magazines, remember that you're going to have to cut the page out first!

Given these limitations, however, and bearing in mind that ThunderScan works out cheaper than its alternatives, I've no hesitation in recommending it. It's a brilliant idea which, on the whole, is very well executed. The version of the software I was using (Version 1.3), however, did have a few bugs in it — occasionally the scanner would stop of its own accord in the middle of a picture for no apparent reason.

# MAGIC

Magic is probably one of the most complicated programs I've ever seen for the Macintosh, and certainly one of the most unfriendly.

The manual supplied with the system was poorly written, and confusing as it referred to a different version of the software than the one supplied. It also contained a number of strange comments — for example, it mentions that Apple wouldn't allow the manufacturers to put MacPaint on the distribution disk (why should that matter — every Macintosh owner has a copy), and also that Apple banned the use of MacPaint's printing routines — so why not use the standard, well documented, printer driver? Who knows? Anyway, I'm assured that an improved version of the manual is being drawn up even as I'm writing this, so look out for that.

## Spellbound?

Despite the manual, I still found that it took a number of hours to work how to use the system. Magic (Macintosh Graphics Input Controller) itself consists of a slim cream-coloured box the size of a large paperback book, together with a power supply box needed to plug Magic into the mains (both MacVision and ThunderScan take their power from the Macintosh). The back of the digitiser has two 'phono' sockets, allowing a camera and monitor to be attached.

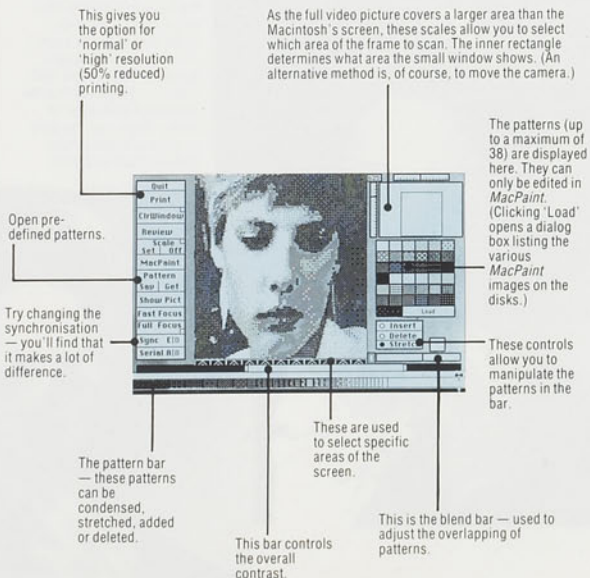
'Double-clicking' the camera icon on the software supplied reveals a crowded screenful of option boxes; the program doesn't use pull-down menus — all the

options are displayed on-screen. Using the 'Fast Focus' mode, the small window is scanned very rapidly (2.5 frames a second). This is fast enough to capture individual frames from television or video without a trace of movement — MacVision's scanning speed is too slow for this. However, this speed is only available in high contrast — introducing greys into the picture slows it down considerably.

The contrast is adjusted using the topmost of the two sliding bars at the bottom of the picture. Unlike the other two digitisers, it's possible to set a 'cut-off point' for the white — thus, you can produce a picture in outline, or reverse the colours to produce an image in negative. Clicking 'Full Focus' fills the whole screen with the image, again still scanning rapidly enough to capture still images from video in high contrast mode. It's just about possible to focus the camera in this mode — however, it would still be preferable to use a separate monitor. Getting back to the small window from full focus can be a noisy affair, with repeated clicks on the mouse producing 'bings' from the Macintosh until the program relents and reverts to the original screen.

To obtain greys, it's necessary to load a grey scale. This can be either one of the existing sets supplied, or you can edit the patterns to form your own grey scale.

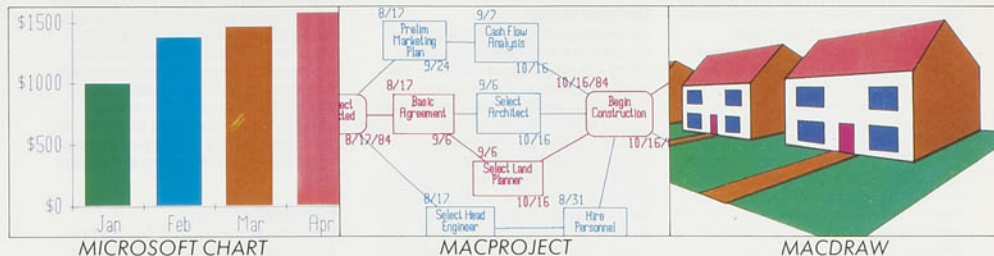
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This can only be changed via *MacPaint* so the maximum number that can be used is 38. These greys can all be loaded into the bottom-most of the two scales, and their relative areas stretched, shrunk or deleted. The program also has a 'blend bar' so that the transition between two different greys is smoother; personally, I found this made little difference to the final image.

To display the image in these patterns in the small window, it's necessary to click on the middle of the two bars. To see the entire full screen image, you need to click in the small window. Each scan of the image creates one particular grey from the grey scale — so, if you're using 38 greys, there need to be 38 scans of the picture; this takes about a minute to accomplish, making it a difficult system to use with a 'live' model. If you're unhappy with the result, you have to alter the grey scale and try again. As you can imagine, this can take a considerable amount of time.

Magic offers a number of other facilities, including changing the size of the area scanned, and many special effects, such as producing a 'solensed' image. The program will also load *MacPaint* images and print in draft or high resolution mode (50% reduced).

While the version of the software provided (Version 1.1) seemed generally reliable, there were a few problems — in particular, it consistently distorted the image, 'squashing' it in a horizontal axis.

### The Spice Of Life?

Regardless of any difficulty in use however, the ultimate question is were the results from Magic better or as good as from the other two digitisers? Well, if you're after special effects, Magic is very suitable, particularly in the variety of effects available. But for normal use, the results from the other two systems were superior; it's almost impossible to avoid Magic's images looking 'stepped' and unnatural in the transition of their tones.

It could be argued that Magic's facility for an endless variety of patterns, together with complete control over contrast and so on, is Magic's unique and most important feature. And it's true that it provides the possibility of an endless variety of special effects. But it must be said that all of Magic's complexity is a poor substitute for the sophisticated graduations of tone possible with the other two systems.

## MACVISION

Of the three image digitisers I looked at, *MacVision* was the simplest to use — by a quantum factor!

The system itself consists of a cream-coloured box, about the same size as the second disk drive, with a lead to connect it to either the printer port or the modem port (you select which from the *MacVision* menu). On top of the box are two dials to adjust brightness and contrast and, at the back, a 'phono' socket for the video signal. The software

is a desk accessory, easily and quickly installed into any system using the disk supplied. After installation the disk can then be removed and, being a desk accessory, it can be used in any program (except Magic, which doesn't use menus in the usual way).

### On Your Menu!

When selected, the word 'MacVision' appears in the menu bar. The menu offers a choice of two windows — the smaller of these is about the size of the Scrapbook, while the other completely fills the screen. The image builds up from left to right, line-by-line, taking about seven seconds to draw the smaller screen, and 20 seconds to complete the whole screen. Adjustments can be made for contrast and brightness at any time, and the effect seen immediately — but only on the current portion of the image being scanned; to adjust the brightness and so on of the whole screen, you'll have to wait for it all to be scanned again.

## MACVISION: "Simple to use, with many shades of grey."

MacVision is selected from the Apple menu, so it can be used in virtually every application program.



MacVision's relative lack of facilities may seem a drawback — in practice, though, you may find it a blessing.

The software has no facility for adjusting the image other than the size of the window to be scanned. The controls for contrast and brightness are part of the hardware — they're extremely easy to use and offer a wide range of adjustment.

MacVision scans from left to right — thus, anything moving during the scanning process will be compressed or stretched, depending which way it was moving.

UK price still to be set. Will probably sell for around £400.

Because of the relative slowness of the scanning process, focusing is almost impossible — it's necessary to use a separate video monitor (or a normal TV through a video recorder). This slowness also means that if you're using 'live' models they need to be patient!

Clicking the mouse once while the window's being scanned will stop the scan when it reaches the end of the screen (and bring back the menu bar if you're using the full screen). You then have the option to print the image directly, save it as a *MacPaint* document, or copy it to the Clipboard or the Scrapbook. Using this latter facility means that you can paste much bigger pictures into applications other than *MacPaint* such as *MacWrite* or *MacDraw*, for example; you may not be able to do this with a 128K Mac due to memory limitations. ThunderScan and Magic limit the size of the picture you can copy and paste in one go to the size of

*MacPaint*'s window. It's also worth noting that because *MacVision* is a desk accessory, there's no need to transfer between programs to paste these images.

*MacVision* doesn't have the range of facilities for manipulating the image that ThunderScan and Magic offer, but this is more than compensated for by being so incredibly simple to use. The quality of *MacVision*'s images is very good, and the gradual transition of tone from black to white through all the shades of grey was the best I've seen. The manual refers to the process used as 'dithering', and it does indeed 'create patterns and textures that are interesting in their own right'.

### Manual Dexterity

Of the three, this was the only digitiser with a complete manual, yet it was the only one which I didn't need to read until after I'd already been using it for a few hours, and then only because I wondered

what 'Adjust Screen' was supposed to do (the answer is 'very little'). As one would expect from Bill Atkinson, the program seems completely 'bulletproof' and gave no problems whatsoever. The only criticism I would make about the software is that when there's no video signal, instead of saying so the Macintosh resorts to making a rather unfriendly noise.

**PIXEL PIRACY** We should explain that if you do go in for visual piracy (and especially 'stealing' typefaces from a typewriter) or capturing images from pre-recorded video tapes you will be breaking the law. If they're just for personal use then it shouldn't be too much of a problem — but be very wary if they are to be published or distributed in any way. Copyright is a problem that won't go away, and although the laws relating to copyright of photographs and so on are a little vague, they're much more enforceable than the laws relating to software. You have been warned! Any comments in this article are entirely the views of the author and are not necessarily supported by *MacUser*.

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WHEN YOU SEE TWO PRODUCTS billed as 'integrated' packages, you'd be forgiven for thinking that they do the same thing. You would, of course, be quite wrong.

The fact is that, like us, these packages have different outlooks on life. Haba System's *Quartet* thinks it's a spreadsheet but is prepared to masquerade as a database, while Controle X's *Ensemble* clearly believes it's a database but, if pushed, will pretend to be a spreadsheet.

And, having set the scene, it only remains to point out that *Ensemble* comes from 'Gay Paree' (but speaks remarkably good English), while *Quartet* hails from 'Sunny California', where 'Gay' has an entirely different meaning.

### First Things First

If you're in the market for an integrated package, you ought to have a good idea of what you're after before you part with your hard-earned cash. Personally, if you want the blunt truth, I'd expect a jolly good database, spreadsheet, wordprocessor and business package all rolled into one. I would be especially pleased if it included a communications facility that'd let me talk to other micros and get on to external services like Telecom Gold. (I'd forgive the package if it didn't let me on to Prestel — in fact, that would almost count in its favour!)

Each element of the package should allow the transfer of any information from one part to another in its original form. In this way, text, numeric data and graphics can appear side by side in spreadsheets, wordprocessor documents, business graphic displays and databases.

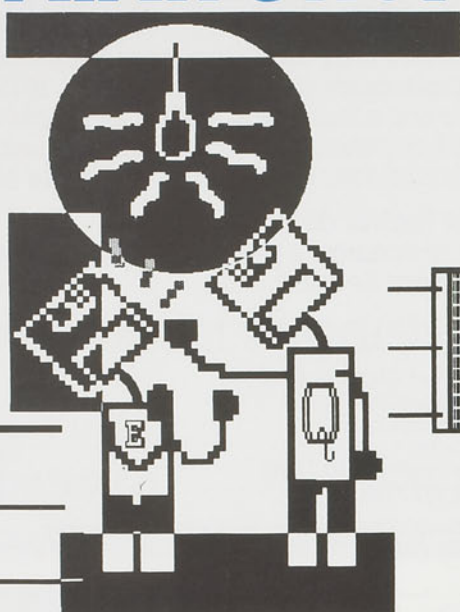
As with all software, it's best to define your 'wish-list' before you rush in and snap up the first product that looks reasonably up to scratch. As you'll see, neither *Quartet* nor *Ensemble* measure up to any sort of ideal — for a start, they both lack any communication ability. Beyond this, though, they do at least have a stab at the remaining requirements.

### In The Left Corner ...

Let's look at our two contenders and see how they make out in the application areas.

In its guise as a database, *Ensemble*, being designed for this purpose, can display or print the contents of up to three files at a time. The contents of a file can be a mixture of text, numeric and graphic information. *Quartet*, on the other hand,

# All In One?



## ENSEMBLE vs QUARTET

*Separate database, spreadsheet and business graphics programs could set you back a fortune ... but there's an alternative! Dave Tebbutt test-drives Ensemble and Quartet, two integrated software packages for the 128K Mac.*

is restricted to treating each row of its spreadsheets as a record and each cell in the row as files within the record. Clearly, graphic information cannot form part of *Quartet*'s database.

The *Ensemble* database resides on disk, so the file can be fairly large regardless of whether you're operating a 128K or 512K Mac. *Quartet*, however, is limited to the size of the current spreadsheet, which can be as low as 1,000 cells. This would be fine for lists of names and telephone numbers, but try constructing a full-blown personnel record system and you'll soon find yourself in trouble. Of course, if you've already invested in the 512K Mac, the picture is a little brighter because this can hold 15,000 to 20,000 cells.

*Quartet* sorts records in ascending or descending order, according to the contents of one or two fields. But again, *Ensemble* has the edge, allowing sorting on up to three fields.

On the whole, you can have a lot more fun with the design of records using

*Ensemble* because each screen normally presents information from a single record, rather than having several on display at once as you'll get with *Quartet*. *Ensemble* does, however, give you a 'LIST' option that lets you view appropriate fields from several records on-screen at once; you can, in fact, view up to 30 fields from up to three files. *Quartet* gives you just over twice that, at up to 62 fields per record.

Something very important to consider in a database is how well you can find the records you want for further processing. *Ensemble*, as you might expect, is excellent in this respect. It offers two approaches. The quick approach allows you to define up to three key fields so that you can access records by giving the exact spelling of field contents to the search command. A more relaxed approach lets you select records by seeking words embedded in a field, or by looking for the sequence of characters that starts or ends a field. Operands such as AND, OR and 'greater than or equal' are used to decide whether a record qualifies for inclusion in your selection. *Quartet* has no selection facilities, unless you count numeric table searching for a 'greater than or equal' to match.

*Ensemble* calls its reports either 'simple' or 'integrated'. The simple one is a 'quick and dirty' listing of one record per line. Sorting can take place on the first column and all numeric columns may be totalled. Sub-totalling is an optional extra, and takes place at each change of the sort field value.

And some of the table stuff is really neat too. You can easily create and access look-up tables, such as the one where *Quartet* looks down the first column until it reaches a value which matches or exceeds your argument, and then whips across your chosen number of columns and extracts the required cell value.

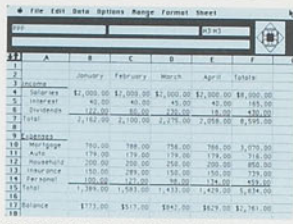
The only way to make *Ensemble* approach reasonable spreadsheet power is to create a record in spreadsheet format and then use its built-in mathematical and logical operators to build derived fields. The main manual completely ignores spreadsheeting as an application for *Ensemble*, but tucked away at the back of the examples booklet are some illustrations of this approach that are well worth checking out.

### Picture This

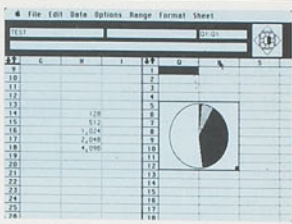
*Quartet* offers the option to display data graphically using up to four ranges at the

## QUARTET

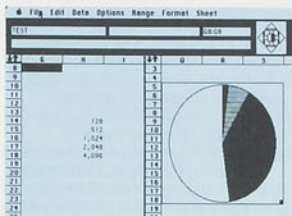
"The spreadsheet facilities are well-designed and the mouse makes it a joy to use, despite the dollar signs and weird back-to-front American dates."



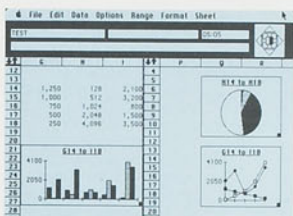
Although billed as an integrated package, the basic Quartet screen places you deep in the heart of spreadsheet country. You can move around the spreadsheet using the multi-arrow symbol in the top right-hand corner; single clicks on one of the arrowheads will move you one cell at a time, double clicks move the whole screen.



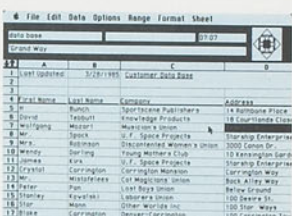
Here, the screen has been split into two — one side displaying the figures you're working on, and the other used for presentation purposes. (Note that the change in screen format is reflected in the status of the multi-arrow symbol.) On the right-hand side of the screen, you can open up a graph window and draw a simple pie chart based on the figures on the left.



For presentation purposes, you can increase the size of the pie chart graphic by dragging the 'handle' (the small black square in the bottom left-hand corner) of the defined area across the screen. As you can see, there's also an option to remove the grid on both halves of the screen.



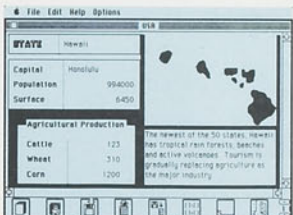
Still with the grid deleted, you can add more figures to the original spreadsheet series. All three of Quartet's basic styles of chart are allowed on-screen at the same time to illustrate the figures, but you will notice that only one series can be represented by the pie chart.



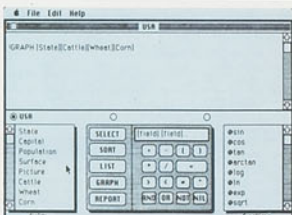
Quartet emulates a database by treating each row as a record. The package has limited abilities to arrange records by sorting each row (representing fields) — but this is hardly the kind of 'searching' process you'd expect of any database worth its salt.

## ENSEMBLE

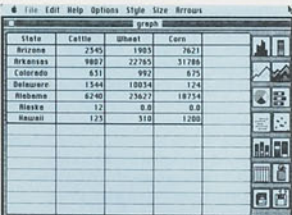
"Possesses a wide range of graphics display options, including Gantt charts, horizontal bars, scatter graphs and, where appropriate, a 3D option".



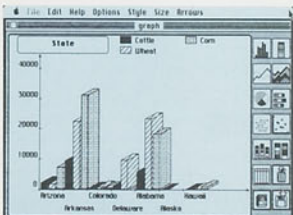
The basic records card in Ensemble can be made up from textual, numeric and pictorial components. Notice at the bottom of the screen, there's eight icons representing various functions you can carry out with the mouse. (There's a very strong 'icon ethic' pervading Ensemble.)



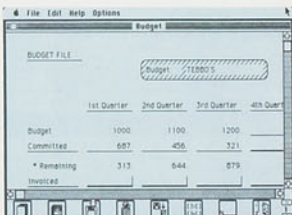
You can build up a graph table using the scrolling windows on the left and right of the screen in conjunction with the pseudo-calculator in the centre. By defining the relationships between the fields in the top part of the screen, you can set up a very simple spreadsheet.



Once you've defined the relationship between the figures, you can set up a very simple spreadsheet in the form of a graph table. (Most normal spreadsheet facilities are available, but only through tortuous means.) This done, you can access the icons down the right-hand side of the screen to illustrate your work graphically.



At first glance the 3D charts look very attractive... but you're not given the option to edit the patterns of adjacent areas to emphasise the boundaries, and that can sometimes render the charts almost useless. There are, however, ten different graphical formats in Ensemble, and text and arrows can be used to highlight features that don't appear obvious from the chart.



This record is almost a mini-spreadsheet, with a pre-defined formula producing the 'Remaining' line. Although not shown here, the design and decorate facilities allow enormous scope for presentation — as do the mailing and report options.



# Ensemble vs Quartet: winning on the roundabouts and losing on the swings...

	Quartet	Ensemble
<b>Spreadsheet</b>		
No. of columns	62	30
No. of rows	999	15
Max. no of cells (128K)	1,000-2,000	450
Max. no of cells (512K)	15,000-20,000	450
No. of functions	17	14
Replication	Yes	No
Look-up tables	Yes	No
Split display (windows)	Yes	No
<b>User-friendliness</b>		
Setting up	5/5	1/5
Manipulation	5/5	1/5
Labelling rows/columns	5/5	1/5
<b>Database</b>		
No. of fields	62	30
No. of records	999	N/A
No. of sort fields	2	3
Title	No	Yes
Static text (single line)	Yes	Yes
Static text (multiple lines)	No	Yes
No. of files open	1	3
Searching	Yes	Yes
Complex search criteria	No	Yes
Computed/derived fields	Yes	Yes
'Wild Card' searching	No	Yes
Multiple level searching	No	Yes
Pictures in record	No	Yes
<b>User-friendliness</b>		
Setting up	2/5	4/5
Complexity of form available	1/5	5/5
Sorting	2/5	4/5
Searching	2/5	4/5
Complexity of search commands	1/5	5/5
<b>Graphics</b>		
Max. no. of data points	999	15
Basic graph styles	3	10
No. of values	62	5
3D effect on graphs?	No	Yes
True 3D graphs?	No	No
Text on chart?	Yes	Yes
Variable text styles	No	Yes
Variable text size	No	Yes
Annotation arrows	No	Yes
Axis scaling adjustable	Yes	Yes
Shading	Fixed	Fixed
Legend insertion	Optional	Optional
Legend position	Variable	Fixed
<b>Reporting</b>		
List	Yes	Yes
Page style	No	Yes
Sub-totalling	No	Yes
Headers and footers	Yes	Yes
Title page	No	Yes
Summary page	No	Yes
<b>Mailing facilities</b>		
Labels	No	Yes
Form letters	No	Yes
Price	£185	£290

If these were the only integrated packages in the world you had to choose between, life would be very simple. If you need to use your Mac primarily for spreadsheet work then you'd probably lean towards *Quartet*.

*Quartet* is a straightforward spreadsheet, that will appeal to anyone whose needs are limited to that style of operation. Its graphic capabilities comprise three simple types of chart: pie, line and bar; if there's any likelihood of you wanting to play around with graphical presentation, you may find yourself frustrated by these limitations. *Quartet's* database facilities are restricted to treating each row of the spreadsheet as a record, which makes it more useful for personal or occasional work.

On the other hand, if your interests lie more with record storage and retrieval then you'll find *Ensemble* with all the trump cards. Frankly though, *Quartet* can be used as a database far more easily than *Ensemble* can be used as a spreadsheet. With the ability to store numeric, textual and graphical information, *Ensemble* is very good as a 'card-index' filing system. Up to three files can be handled at the same time and the contents presented on single or multiple page screen 'forms'. *Ensemble* also has a number of built-in functions, such as form letters and label printing, which make it very good for mailing work. Searching and sorting is powerful, but you can't save complex search sequences for later use which, if your work tends to be repetitive, could prove to be an irritating omission. The business graphics are much prettier than *Quartet's*, but they're limited in terms of the number of fields and records that can be handled.

Each package is very good at its prime function, but falls a long way behind on the others. In fact, I got a distinct feeling that the secondary functions were afterthoughts rather than integral specifications of the original designs.

Looking at the bottom line, I'd have to say that *Quartet*, at £185, must be voted the best value for money. The whole package is well designed and presented. *Ensemble* came across as a little more fiddly and I feel that the £295 price tag is a little excessive.

same time to plot either line, bar or pie charts. *Ensemble* possesses a wider range of graphics display options, including Gantt charts, horizontal bars, scatter graphs and, where appropriate, a 3D option. However, this is all rather let down by the fact that only five fields from up to 15 records can be used to create a graph. *Quartet*, on the other hand, is theoretically unlimited in the number of records you can display.

## Manual Labour?

You can complete the *Ensemble* tutorial in two hours, but you'll probably feel at times that the effort needed to achieve something is pretty excessive. At one point, the manual said, 'Congratulations, you have just completed your first *Ensemble* form' and, do you know, I really felt I'd earned those congratulations.

*Ensemble's* manual is well written, especially considering its French origins, but until you get used to the approach it does seem tedious to begin with. However, I certainly didn't have any trouble learning how to use and understand the product within two hours.

To be perfectly honest, it took around four hours to plough through the *Quartet* tutorial, but at the end of it I really felt that I'd got to know the package rather well.

*"Ensemble's manual is well-written, and I certainly didn't have any trouble learning how to use and understand the product within two hours".*

And it's worth investing the time because the package sports many interesting features and functions that you could easily miss first time around. Overall, *Quartet's* manual was a good read, and very easy to follow.

It would be impossible to make a value judgement on these products on the basis of their documentation. Both companies have clearly put in a lot of time and effort to produce good manuals.

The integrated report lets you put in the 'bells and whistles' — things like graphics, page layout, headers and footers, and title on the first page. But, then again, this is the sort of facility you'd expect from a database package. Add to this a label facility and the capability to merge file details with form letters and you have the basis of a powerful mailing system. (It's worth mentioning that the labels can be stacked across the page.)

*Quartet's* printing facilities are limited to printing out part or all of the current model in spreadsheet format.

## Spreading The Load

Moving on to spreadsheet and business graphics, let's see if *Quartet* can turn the tables on *Ensemble*.

I actually dislike most of the spreadsheets I've worked with — they've been tedious and fiddly to set up and, frankly, not a lot of fun. *Quartet* was my first attempt at 'spreadsheeting' on the Mac and I've got to confess that I enjoyed the experience.


*Quartet's* spreadsheet facilities are well-designed and the mouse makes it a joy to use, if you can put up with the dollar signs and weird back-to-front American dates that is. You can form a spreadsheet of up to 999 rows and 62 columns — as I mentioned earlier, the actual limits are between 1,000 and 200,000 cells, depending on the Mac's internal storage and the style of your spreadsheet.

You can fill your spreadsheet with a variety of data: numeric and data values, text, labels and graphics. Yes, the graphics can sit there right in the middle of your spreadsheet. By splitting the screen (horizontally or vertically, but not both together) you can display a graph or pie chart in one part of the screen while manipulating the figures in the other. A quick call to the graph-drawing routine re-displays the graph to reflect the new figures. Not quite the dramatic change I'd hoped for, but pretty impressive nevertheless.

Values in the spreadsheet can range

*"Time invested in the Quartet manual is worth it, as the package sports many interesting features and functions that you could easily miss first time around".*

between  $\pm 10^{37}$  and  $\pm 10^{-38}$ . Figures beyond seven decimal places on entry and 12 calculated internally are expressed in exponential form. If a number is too large for *Quartet* to display properly, the cell shows a string of asterisks; this usually happens if you give a cell the wrong format for the number you intend to store there.

There are all sorts of functions tucked away inside *Quartet*, such as the internal rate of return and the net present value — you can even obtain loan repayment amounts given the principal, rate and period. Better known functions are 'ABS' (which knocks off the sign from a value), 'SUM' (which will add the values in a range of cells) and 'IF' (which gives *Quartet* its reasoning power). Couple that little lot with the ability to iterate calculations and you've got yourself a very powerful evaluation tool. 

**About The Author...** David Tebbutt has been in the computer business over 19 years — travelling the traditional mill of programmer, systems designer, systems analyst, project manager and data processing manager. He relaunched *Personal Computer World* in 1979, and edited the magazine for over two years. He was a founder director of Caxton Software, and the inventor/co-author of the *Brainstorm* software package.

## What Is 'Integration'?

At the level of computer storage, spreadsheets and databases are very similar — each comprises multiple sets of related data whose relationship is fixed. Indeed, the fact that some spreadsheets, such as the forthcoming *Excel* from Microsoft, are also billed as databases demonstrates clearly that at machine level both tools deal with data sets. But, traditionally, spreadsheets and databases differ in the way they present information to the user.

A database displays information into discrete units called *records*; each record is then broken down into separate descriptions called *fields*. Thus, if you've got a record on Joe Bloggs, the individual fields might contain his address, phone number, date of birth and so on.

A spreadsheet, on the other hand, displays a large number

of records in the form of a grid of *cells*. Some of these cells will be filled in by the user, but others will be left free for the computer to fill in after it has performed a calculation based on the contents of two or more of the user's cells.

It's possible too to have some fields in a database completed by the computer, the contents of which will depend on entries in other fields of the base. But, if you've a number of fields awaiting input from other parts of the system, you'd be better to format the data on-screen as a spreadsheet. And that's where *integration*

packages come in ...

Using an integrated package, you can create a set of records — or even a whole database — and have it re-formatted so that it's displayed as a spreadsheet ... or vice versa.

So, you're probably saying to yourself, doesn't that mean that spreadsheets and databases are one application program masquerading as two? Well, the answer is yes — it's just our poor mental and visual organisation that's to blame for the extra expense we're put to in buying both products!



Multiplan



Mac Business

## All that Jazz...

Jerry Sanders shifts through the rumours of the upcoming integrated software packages for the Fat Mac.

Two companies have so far announced their intention to sell integrated software packages for serious business users. But they're not even attempting to pander to the 128K market — *Ensemble/Quartet's* main competition will be aimed at 512K Mac users exclusively.

Following its success with 1-2-3 and *Symphony*, Lotus has introduced *Jazz* — a true integrated package comprising database, spreadsheet, wordprocessing, graphics and communications. *Jazz* is innovative — its mail-merge facility works without macros (thus, when you set up a merge letter with one set of data, *Jazz* sets up the macro itself for the rest of the list). Graphics screens are linked to the corresponding set of database data so that graphics are updated in real-time as any changes are made; this idea, first used by Ashton Tate in its package, *Framework*, has become an important requirement of any integrated package worth its salt.

Lotus has chosen to base *Jazz* on the functionality of its previous product, *Symphony*. But

Microsoft has decided upon a different approach — it has based its own integrated software for the Mac on the original and most popular IBM spreadsheet, which ironically is Lotus' own 1-2-3.

Microsoft's *Excel* has been tailored towards those who require a number-cruncher; the communications and wordprocessing elements have been cut down substantially to this end. On the graphics side, however, *Excel* is more than a match for *Jazz*. And that's not all — Microsoft is planning to sell *Excel* with Apple's *Switcher* built into the distribution disk.

(*Switcher*, for those not yet 'in the know', is a utility that makes other applications available instantly from within the program you're working on currently.) *Excel*, although thought to be only just in the Beta stage of development, is being demonstrated to UK dealers at the moment, and is promised to end users from September.

### Three Up

Apart from Lotus and Microsoft, three more companies are rumoured to be showing a little more

than just a healthy interest in the idea of producing integrated software for the Mac.

Visicorp, the company who helped the Apple II get off the ground with *Visicalc*, has now re-named itself Paladin. But that hasn't killed off its interest in Apple's computers and the word from the States is that Paladin will be launching product before the end of 1985.

But that still leaves Paladin's product in the 'vapourware' category ... but then the same could be said for *Matrix*. This is also claimed to be an integrated package, written by a teenage whiz-kid rumoured to be more innovative than Bill Gates. Still, rumours are it's already been snapped up by Atari's Jack Tramiel, so there's every chance it'll turn up first on the Mac-alike machine Atari has been promising for so long.

Lastly, it's worth keeping your eye on Ashton Tate, the company that all but invented integrated software. Ashton Tate hasn't announced that it's writing software for the Mac, but then again it hasn't exactly gone out of its way to deny it either.



## MAC PRODUCTS TOP 20

1	TEL001	Filevision	£99.00
2	THU004	Thunderscan	£249.00
3	AMT003	Vicom ASCII/ Viewdata	£150.00
4	MST054	Multiplan	£190.00
5	MIL003	MacAttack	£45.00
6	HAY025	Hayden Speller	£73.00
7	MST061	Microsoft Chart	£145.00
8	SAM012	Upgrade 128K- 512K	£399.50
9	MIL002	MAC the Knife Vol. 2	£45.00
10	MIL001	MAC the Knife Vol. 1	£36.00
11	TMA006	ClickArt	£49.95
12	MST056	Microsoft Word	£190.00
13	ASS005	Mac Memory Disk	£34.00
14	HAY023	Music Works	£73.00
15	MST057	Microsoft FILE	£190.00
16	OBE001	Ominireader	£399.00
17	MST055	Microsoft BASIC	£145.00
18	ODE001	Helix	£361.00
19	MIC001	Microplanner	£450.00
20	TMA003	ClickArt Publications	£46.00

Dizzy Gillespie  
Dave Brubeck  
George Melly  
Ella Fitzgerald  
Buddy Rich  
Miles Davis  
P & P Micro Distributors Ltd.  
Duke Ellington  
Charlie Parker  
Sarah Vaughan

## Big names in Jazz

These are big names in Jazz alright. But, as always, one name stands out – P & P Micro Distributors Ltd.

The No. 1 distributor has teamed up with the No. 1 software publisher to bring you the No. 1 Macintosh product.

The first multifunctional business software designed especially for the Macintosh 512K has arrived. Jazz offers integration between the functions essential for decision making – worksheet, graphics, word processing, database and communications.

A computer like the Macintosh needs the best software to put its advanced features to the best use, with Jazz from Lotus, the World's leading business software company, it has.

# jazz

**Lotus**

Jazz could revolutionise the entire style of your work. No shuffling of disks, no leafing through manuals, no mystifying pauses while the computer plods through a long job without telling you what it is doing – Jazz takes care of everything. It's fast, simple, and above all it's a pleasure to use.

P & P Micro Distributors and Jazz – a winning combination. Essential business software for your Macintosh from Britain's most complete micro distributor. The high standards set by P & P Micro combined with the company's proven ability to provide and support a comprehensive range of quality products ensure that you get only the best.

The fast, friendly and reliable P & P service will be music to your ears. LOT 008 £495

# Mac users use the complete



## TRANSFER FILES BETWEEN YOUR MAC AND THE IBM PC

MacLink is an application package that allows you to set up communications between an Apple Macintosh and an IBM PC for the purpose of transferring files between the two machines.

The machines may be interconnected with a direct cable or with telephone modems and phone lines. Once the interconnecting equipment is in place, MacLink's features can be used to establish communications, view lists of files or documents and then transfer selected ones between the two machines.

MacLink provides a series of unique translators. These translators convert files into the format required by applications on the receiving machine. For example, if you want to move a Lotus file from the PC to the Mac, you can let the Lotus Multiplan translator provide you with a functional Multiplan spreadsheet for the Mac.

DVZ 001 £119

## Filevision



Filevision. The first software that combines a practical filing system with a simple-to-use, object-oriented drawing system. This lets you quickly visualize your data, instead of sorting through tedious line-by-line listings.

In the click of a mouse, you can retrieve the data stored behind each object in your picture. You can even select the objects in your pictures, based on the data in your files.

What's more, Filevision lets you link another picture to an object and lets you group objects together as a common type.

Guy Kawasaki, at Apple in California says, "Filevision is one of the most impressive uses of the Mac so far... it shows off the hardware to the hilt... almost as importantly, it sets a standard for other developers, and consumers will come to not accept anything less."

**Special Offer Only £99 + VAT.**

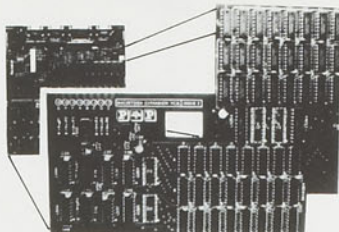
*The harder we try –  
the better you get.*

Todd Hall Road, Carrs Industrial Estate, Haslingden, Rossendale, Lancs BB4 5HU. Tel 0706 217744  
Telex: 635740 PETPAM G Fax Ext. 268

1 Gleneagle Rd., London SW16 6AY. Tel 01 677 7631 Telex: 919220 PPMICR G Fax Ext. 208

## MACINTOSH UPGRADE UPGRADE YOUR 128K MAC TO A 512K MAC

**PRICE  
SLASHED!**



**was £499.50 NOW ONLY £399.50**

P & P's own Mac Upgrade contains 384K which upgrades the 128K Mac to 512K RAM – and now is the time to buy. The price is down to an amazing £399.50.

Give us a ring on 0706 217744, we'll collect your 128K Mac, upgrade it, fully test it and return it to you at no extra cost. SAM 512

# e P&P Micro~ e distributor



### FACTFINDER

Read these comments from a review by Mike Lewis in Practical Computing (July 1985).

"Factfinder is a free-text filing system for the Macintosh. Its strongest feature is its simplicity. All the usual database paraphernalia of record structures, relationships and field types has been swept away, leaving a program that it is easy to use that it can be put to work almost as soon as you take it out of the box."

"Factfinder succeeds in its goal of being simple and easy to use. It is particularly useful if your data is best held as ordinary free-form text."

"Factfinder is an attractive filing and retrieval program, intended to be used with free-format text rather than structured records."

FOT 001 £149.95



Reproduced from an original pencil drawing measuring 4 1/2" x 3" by Rosendale artist Bill Ingham.

### THUNDERSCAN

ThunderScan allows you to turn any printed image into a detailed, high resolution Macintosh graphic by turning the Imagewriter printer into an image reader.

Digitise any printed image – forms, half tones, photos, mechanical drawings, maps, floorplans, logos, signatures and more – and turn it into a MacPaint document.

From black and white or colour originals, ThunderScan reproduces at over 200 dots per inch and in 32 shades of grey.

THU 004 £249



### FREEDOM OF SPEECH IN JUST 60 SECONDS

SmoothTalker, is the first software speech product to give your Macintosh the "Freedom Of Speech". Unlike most speech synthesis products, SmoothTalker is implemented entirely through software, no additional hardware is needed.

This flexible software program converts plain English text, from either the keyboard or a MacWrite text document, into high quality and natural sounding speech.

Standard Macintosh commands, enable you to store and update selections to be spoken.

Mouse driven commands allow you to quickly specify the speed, pitch, tone and volume of the voice.

For maximum flexibility, different speech settings can be mixed within a document.

FIR 001 £149



### MY OFFICE - THE OFFICE SYSTEM FOR THE MACINTOSH

"My Office" is a new software package which allows you to put your everyday office tools on Apple's Macintosh. "My Office" allows you to create any file you need and you do it your way. For example you could have files on your customers or on your own personnel or, in fact, on anything else you need.

The software lets you create office forms, stationery, letterheads, etc and lets you enter data on the forms, file them and/or print them out. "My Office" can sort and allow you to print labels.

Archive files are no problem – one mouse click will move older files to or from the Archives disk for virtually "infinite" storage.

DTP 003 £80



**MICRO DISTRIBUTORS LTD**



# New Products

All the latest developments in Macintosh hardware and software — from databases to desk managers, from music to mouse cleaning kits.

## THE PLOT THICKENS

MacPlot, working in conjunction with MacDraw, allows pictures or charts taken from the Clipboard to be plotted up to a maximum A3 paper size.

The default scale is one-to-one, but the picture can be scaled up or down accurately, either in inches or metric. Pen speeds can also be varied to allow plotting on to film.

MacPlot is priced at £99 (+VAT).

For more information contact your dealer or Microspot, 9 High Street, Lenham, Maidstone, Kent ME17 2OD, tel: 0622 858753.



Plot out your 'MacDrawings' in any colour and thickness using Microspot's MacPlot.

## ONLY CONNECT...

MacEnhancer from Microsoft provides four additional ports, allowing up to five peripherals to be connected. Supporting printers, such as the Epson range, IBM graphics and Toshiba, you'll find you can hook up to virtually any device using RS232 serial/

parallel and RS232 serial interfaces. MacEnhancer will also emulate VT52 and VT100 terminals.

MacEnhancer is priced at £250.

For more information contact your dealer or Microsoft Corporation, 10700 Northway Way, Box 97200, Bellevue, Washington, tel: 206-828 8080.



## THE SOFT OPTIONS

As the market in floppies has soared, the size of disks seems to have shrunk in inverse proportion. At one point, the 3in disk seemed the hottest contender from the Land of the Leaping Yen, but the 3.5in disk is now the latest *sine qua non* — which is just fine for Mac users.

Although at the outset not considered a serious rival, sales of the 3.5in floppy exceeded three million last year, and it's expected to take about eight per cent of this year's market. But the likely outcome will be that Mac users will have a far

greater range of brands to choose from and they'll be available in your local high street store.

MacUser made a brave attempt to elicit recommended retail prices from all major manufacturers and dealers, but the floodgates have opened and many were distinctly cagey about what their product is selling for over the local counters. At the moment, suffice it to say that you can expect to pay in the region of £3.95 to £5.95 for single-sided disks. As you'll soon be able to shop around, expect prices to fall as the competition hots up.

## THE TECHNICOLOR MAC

Micro Core's Pixel Graphics package allows anything produced on-screen to be transformed into colour.

Working within a 768 by 576 pixel framework, you're offered a palette of up to 16 million colours, 256 of which can be shown on-screen at any one time. Other features include a zoom facility, a two-speed scrolling, a large range of paintbrushes, shaded backgrounds and cut and paste facilities in colour. The final image can be output via a colour



printer, or in a format suitable for various photographic processes.

The basic system, comprising 14in Hi-res colour monitor, graphics controller unit and software, is priced at £5,950 (+VAT).

For more information contact your dealer or Micro Core, 5 Broomfield Road, Chelmsford, Essex, tel: 0245 264230.

## TOGETHER AT LAST

Visitors to Apple 85 were certainly made to feel at home by the skirl of bagpipes that greeted them on arrival. But they may have been somewhat fazed at the sight of that 'Lovable Little Tramp' who now appears to have deserted Easy Street for the more Kafkaesque portals of IBM.

The occasion was the marriage between Macintosh and IBM, and the official offspring receiving the kiss of life was Dayna Communications' MacCharlie. The hardware required to perform this magical co-processing is configured to run on both the 128K and 512K Macs, but you are required to switch to IBM's in-house mouse when using software designed for PC applications. The U-shaped MacCharlie keyboard and 5.25in drive slot neatly into the side of Mac.

The double disk version, with extended



MacSchizophrenia! MacCharlie transforms the Macintosh (128K or 512K) into an IBM-lookalike.

keyboard and 640K, is priced at £2,695 (+VAT); the 265K single disk version is priced at

## HOLD THE FRONT PAGE!

If it's page design you're after, that's the promise you'll get from ReadySetGo — a package originally put together in the States by Manhattan Graphics.

ReadySetGo lets 512K Mac users try their hand at 'page processing' — the interactive design and production of complete pages on-screen. Text and graphics can be constructed using other Mac software, and then ported in and pasted into pre-defined areas of the page. Using columns, frames and solid lines (of any thickness) you can create your artwork ready for printing out to the ImageWriter or the LaserWriter.

Its manufacturers reckon the main use will be in the production of letters, brochures, magazines and technical manuals — and that's not too hard to believe when it's claimed that users will be proficient with the package after only 15-30 minutes.

ReadySetGo will retail at £129 (+VAT).

For more information contact your dealer or Manhattan Graphics, 163 Varick Street, New York, NY 10013, tel: 212-924-3110.

£1,650 (+VAT).

For more information contact your dealer or Dayna Communications, 50 South Main Street, Suite 530, Salt Lake City, Utah, tel: 801-531-0600.

MacUser 57



## WINDOW SHOPPING

● Southern Commerce Computers has released BCS (Business Control System) for single- and multi-user applications. Priced at £1350 (+VAT), BCS includes a purchase ledger, sales ledger, nominal ledger, invoicing, purchase order processing, sales order processing, stock control and cash book, as well as the facility to customise your requirements.

For more information contact your dealer or Southern Commerce Computers, 219 Croydon Road, Caterham, Surrey CR3 5XJ, tel: 0883 48919.

● MegaDesk is a collection of desktop accessories, including Appointment Book, Transfer Routine (that allows users to jump between applications at one-fifth the usual time) and Card File (that acts as a phone directory, task file, scrapbook and simple data base all in one). Priced at around £125 (+VAT), MegaHaus' MegaDesk provides three utilities that should prove useful for transfer to any system disk.

For more information contact your dealer or MegaHaus Corporation, 203 Oberlin Drive, San Diego, California, tel: 619-450 1230.

● If spelling's a problem, a package that could sort out your P's and Q's is Assimilation Process' *Mac Spell Right*. Working alongside *MacWrite*, the package provides an instant Webster's dictionary at a click of the mouse. Its disadvantage? The dictionary is American ... and that means that it's going to be suggesting some very odd spellings at times. *Mac Spell Right* is priced at £80 (+VAT).

For more information contact your dealer or Assimilation Process, 485 Alberto Way, Los Gatos, California, tel: 408-356 6241.

● If you don't like the angle of the Mac's screen, you should adjust it — with the help of MacSwivel.

This Macintosh accessory, produced by Kensington Microware, is designed to fit beneath the computer allowing you to swivel it to the ideal viewing angle.

MacSwivel is priced at £31.

For more information, contact your dealer or Kensington Microware, 251 Park Avenue South, New York, NY 10010, tel: 212 475 5200.

## GETTING DOWN TO BUSINESS

Following the launch of its *ABC Ledger Suite*, Systematics International has released *DataBase* as an addition to its *Mac-Business* range.

The package offers a filing system, limited only by the capacity of your disk drive (internal or external), that allows you to store records rather like a card index system. Each 'record card' can hold up to 255 different pieces of information, be it textual, numerical, calculated data or graphics (via *MacPoint*).

Prospective applications of *DataBase* include customer files, stock control and work



**Systematics lead the revolution in databases with its new MacBusiness DataBase package.**

schedules — all complete with *MacPaint* diagrams. And Systematics estimate you can master the program within an hour of use.

*MacBusiness DataBase* is available from £250 (+VAT).

For more information contact your dealer or Systematics International, Cleves House, Hamlet Road, Havertill, Suffolk, tel: 0440 61121.

## BOXING WITH BERNOULLI

Players of *Trivia* may possibly be tuned in to the icy realms of 18th century mathematics and be aware of Daniel Bernoulli's contribution to aerodynamics in those far-off days. His name, however, is being used to adorn a 5Mbyte Iomega cartridge — a data storage device that's easily transportable.

The *Bernoulli Box* s large storage capacity

makes it ideal for down-loading programs using multi-floppy disks, or storing archive and back-up copies. The aerodynamically immaculate box itself gives an average access time of 50ms.

The price of the *Bernoulli Box* has yet to be confirmed.

For more information contact your dealer or Iomega Corporation, 1821 West 4000 South Roy, Utah, tel: 801-773 9452.

## CUTTING OUT THE SOFT SHUFFLE

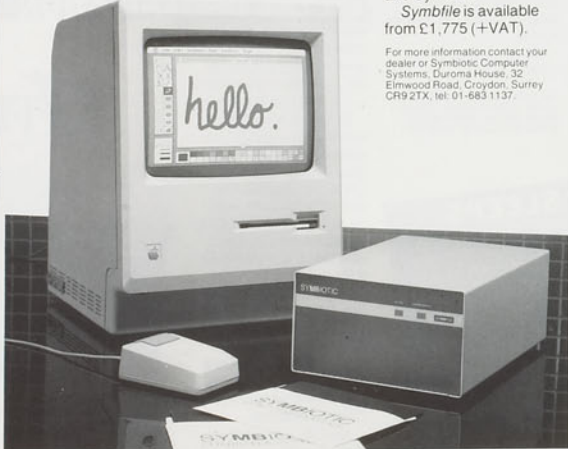
A Winchester hard disk server from Symbiotic will now give you high speed access to up to 42 Mbytes

of storage without the need to change floppy disks during data-hungry applications.

Macs can also be linked together by a *Symbnet* local area network and therefore, to all other Apple products supported by Symbfile and Symbnet.

*Symbfile* is available from £1,775 (+VAT).

For more information contact your dealer or Symbiotic Computer Systems, Duruma House, 32 Elmwood Road, Croydon, Surrey CR9 2TX, tel: 01-683 1137.



## KEEPING IT CLEAN

A dirty mouse will soon start behaving like a drunken mouse and send your cursor reeling all over the screen. But before you call in the man from Rentokill, you should start giving your mouse a 'regular' wash and brush-up — once a week is the recommended regimen.

In any event, you should avoid waxed desk surfaces and blotters at all times but, unless you're living in an oxygen tent, like any other well-

adjusted rodent the Mac's mouse will eat up any garbage left lying in its wake.

Kirkstall Computer Supplies produce a Mouse Cleaning Kit for cleaning all the mouse's intimate nooks and crannies. And that should keep your mouse on the straight and narrow!

The Mouse Cleaning Kits priced at £9.95 (+VAT).

For more information, contact your dealer or Kirkstall Computer Supplies.

## QUICK OFF THE MARK?

**QuickSet**  
FOR THE MACINTOSH



Enter Set's *Quick Set* is now available in the UK, offering an integrated desk management system for the Mac. Including a calendar, appointment book, note filer, note pad, business

calculator, desk directory, phone book, and an encryptor (for security). A UK price has not yet been set.

For more information contact your dealer or Enter Set, 410 Townsend Suite 408, San Francisco, California, tel: 415-543 7644.

## CLOSE TO THE EDGE

*The Management Edge, The Sales Edge, The Negotiation Edge and The Communications Edge* all take the form of a series of assessments both of yourself and the person you want to manage/sell to/negotiate with/converse with. Careful selection of just two options — 'Agree' and 'Disagree' — allows you to pick your way through an array of subtle questions designed to allow the Mac to deliver a five-to 10-page report analysing your own performance and the business tactics to use in future dealings.

*The Human Edge* series are priced at between £178-£270 each (+VAT).

For more information contact your dealer or Human Edge Software, 2445 Faber Place, Palo Alto, California, tel: 800-624 5227.

## MAC MAKES MUSIC



You don't have to be Beethoven to have fun with Hayden's *MusicWorks*... in fact, the manufacturers claim it doesn't matter if you can't read a note of music — you can still create one-part melodies and multi-voice symphonies! You can either

compose on a seven-and-a-half octave grid (that corresponds to piano keys), or you can place pre-defined 'notes' directly on to a staff using the mouse if you're *au fait* with musical notation. You can select any four of 10 instruments, and then

further vary the output with one of 12 sound effects.

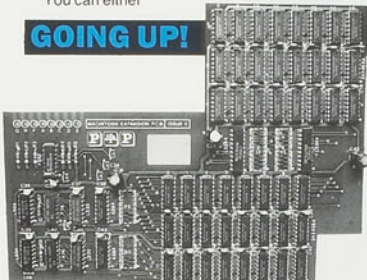
*MusicWorks* allows you to cut, copy and paste anything you've written, and if your tunes are turning out more like Stockhausen than Springsteen, you can always edit the lot and

start over. Of course, if you're a little short on inspiration, the package sports 45 selections for you to play with.

*MusicWorks* is priced at £73 (+VAT).

For more information, contact your dealer or Hayden Software, 600 Suffolk Street, Lowell, MA, tel: 800 343 1218

## GOING UP!



Good news for 128K Mac owners. Pete & Pam Micros can now upgrade your Mac to 512K and get it back to you within two or three days. As the surgery involved will invalidate your Apple warranty, P&P will honour it up to the original expiry date and also give you a

month's extra warranty free as long as you send a copy of the original invoice or warranty. P&P's RAM upgrade to 512K is priced at £499 (+VAT).

For more information contact your dealer or P&P Micros, Carrs Industrial Estate, Haslingden, Rossendale, Lancs BB4 5HU, tel: 0706 217744.

## COMMUNICATION BREAKDOWN?

"You'll never be alone with a modem," they'll tell you. But what they won't let you in on, though, is the ideal software to transform your Mac into a database terminal.

So, consider the product from AM Technology. The company has put together an integrated communications package called *Vicom* that'll put you in touch with both viewdata (Prestel, Micronet, Homelink and so on) and ASCII/Text databases, alongside the commercial ASCII/Text database, such as Easy Link and Telecom Gold, there are literally thousands of free public



access bulletin boards.

Compatible with both the 128K and 512K, the package makes extensive use of icon facilities (or keyboard controls if you prefer) and is claimed to operate on all standard UK modems.

*Vicom* is priced at £150 (+VAT).

For more information contact your dealer or AM Technology, 11 Cornwall Gardens, London SW7 4AL.

## ON YOUR DESK



The only software program that turns your Macintosh into a complete desk management system!



Based on a free-form filing system with Rolodex-like access, Warner Software's *Desk Organizer* provides users

with storage for ideas, letters and so on. There's also an appointment calendar with alarm clock facilities and a calculator,

and it's claimed to be fully compatible with other Mac applications. *Desk Organizer* is priced at £136 (+VAT).

For more information contact your dealer or Warner Software, 666 Fifth Avenue, New York, NY 10103, tel: 212-484 3070.

## A GOOD

### READ?

Getting text into your Mac means having to type it in by hand.

Wrong! Oberon International has introduced the *Omni-Reader*, enabling typewritten text to be 'read' into the Mac at the rate of 150 words a minute.

The *Omni-Reader* will currently 'recognise' four of the most commonly used office typefaces, but the manufacturers can supply extra fonts on disk.

The *Omni-Reader* is priced at £399 (+VAT).

For more information contact your dealer or Oberon International, Cleveland Road, Maylands Wood Estate, Hemel Hempstead, Herts HP2 4SE, tel: 0442 3803.

## WINDOW SHOPPING

● Providing mouse commands, pull-down menus, multiple windows and dialogue boxes, Microsoft's *Basic* (Version 2.0) also includes a range of sound effects and music, graphics and routines for font, text and cursor support. The package also allows you to cut and paste any part of a program, as well as search and replace program text. Structured program constructs are also supported. Microsoft's *Basic* (Version 2.0) is priced at £145.

For more information contact your dealer or Microsoft Corporation, 10700 Northup Way, Bellevue, Washington, tel: 206-828 8080.

● C Squared Software has released *Langham* — a software product that allows the Mac to emulate the standard terminal for Microdata Reality, Sovereign, Sequoia and Spirit (M6000/8000/9000) minicomputers. *Langham* also provides the transfer of files and records between the Mac and the Microdata machines and vice versa. *Langham* is available at from £500 (+VAT).

For more information contact your dealer or C Squared, 79-83 Great Portland Street, London W1N 9RA, tel: 01-636 8284.

● Deverell Business Systems has released *dbGeneral* (£150 + VAT) and *dbSales* (£195 + VAT) to complement its current range of business software — *dbSPay* (£195 + VAT) and *dbForm* (£150 + VAT). Look out for *dbPurchase* (£150 + VAT) over the next couple of months.

For more information contact your dealer or Deverell Business Systems, 26-32 Hill Street, Poole, Dorset BH15 1NR, tel: 0202 670852.

● Four Instant Art packages are now available, each containing hundreds of *MacPaint* images for use in leaflets, newsletters, memos and so on. At the time of writing, you can get hold of *Instant Gallery*, *Instant Symbols*, *Instant Advertising — Food and Drink*, and *Instant Advertising — Hands*. Watch out for future Instant Art releases if you're interested in business-oriented graphics. Instant Art discs are priced at £32.50.

For more information contact your dealer or Instant Art, Bridge House, Tonedale, Wellington, Somerset TA21 0AA, tel: 0862 34925.



# Introducing Jazz.<sup>™</sup>

Jazz

 Lotus



Lotus' success and reputation have been built on products like 1-2-3<sup>TM</sup> and Symphony<sup>TM</sup> – powerful, analytical tools that get the most out of hardware.

And now we've given the Mac the Lotus touch.

Jazz<sup>TM</sup> – the first multi-function business package written specifically for the Mac. We looked at the essential style of the hardware – friendly, accessible, powerful – and designed the software that would best use its talents.

Jazz could well be all the software you will ever need. It's a complete office system on one disk – word processing, spreadsheet, database, graphics and communications. Each function is more powerful than any other program currently available for the Mac, and the spreadsheet is completely compatible with 1-2-3, which set the industry standard.

All the functions can be used independently. But it's when you bring them together that Jazz really comes into its own. The word processing function has a unique Lotus feature called 'HotView', which enables you to integrate information from any of the other Jazz applications.

Say you're preparing a document or letter. You can illustrate a point by inserting a 'graph' from the graphics function and then personalise it with names selected from the database.

The Jazz tutorial disk will put you in charge of the program within a few hours, with one set of commands to learn for all 5 functions.

And, as with all Lotus products, our user commitment

# Now Macintosh<sup>TM</sup> is Lotus compatible.



extends to training and service back-up. We have a network of Authorised Training Centres throughout the country, staffed by personnel trained by Lotus to help you get the most from your software. And there's a telephone number you can call for further help or advice.

So if you're considering ways of getting more out of your business – welcome to the Jazz age.

You can pick up the beat by ringing 01 200 0200. We'll send you a brochure and tell you who to see about a demonstration.

**Lotus**<sup>TM</sup>  
SOFTWARE

Lotus Development (UK) Ltd., Consort House, Victoria Street, Windsor, Berks. SL4 1EX.





# MacClinic

Problem-solving on the Macintosh with Peter Jackson.

## PRINTING PROBLEMS?

Can the Imagewriter be used with any other computer than the Mac?

Yes, it can. The Imagewriter, made for Apple by TEC in Japan, is really just an ordinary dot-matrix printer and you'll find that any computer with a serial RS232 interface can drive it.

However, the Imagewriter has been designed to print high-quality and high-resolution graphics as well as characters, so that it can match the Mac's screen resolution. For this reason, you may find you need to change a few of the internal switches in the printer to suit the output speed of your other computer, and to set the appropriate character set. And if you want the Imagewriter to print out fancy graphics from another computer, the best advice is to go and talk to your dealer because you're going to need some special software.

## SEXING YOUR SOFTWARE

Why are there so many different versions of each program? The 'About MacWrite...' item on the Apple menu tells me I've got Version 2.2. Are there later versions of MacWrite and, if so, are they any better?

All programmers give their programs version numbers, simply to keep track of the order they were written in. If Version 0.0 is taken as the very first attempt to get the program working at all, then Version 0.1 might be the one that gets the screen output right, while Version 0.3 adds the pull-down menus, and so on.

There are no rules about which version number is given to which attempt, but it's normally accepted that the programmer keeps below Version 1.0 as that title is reserved for the version that the company wouldn't mind selling to somebody. (One exception to this general rule is MacDraw, where programmer Mark Cutter got so fed up trying to stay below 1.0 — he'd eventually reached Version 0.9998B — that the final program released in the States was Version 1.71.)

However, the appearance of a program in the shops with a Version 1.0 tag doesn't signify

that it's perfect — it just means that the software house is ready to ship it. Almost every program has the odd bug in it when it gets to market — and most of them get discovered by the early buyers who duly complain. The software house then has to work out fixes for the bugs, and the program is changed to make it work as it should. But to keep track of the changes, the de-bugged version has to be given a new version number. Enter Version 1.1.

This process continues until just about all the bugs are ironed out and any new 'go-faster' ideas are implanted, until you end up with the final version that everyone's happy with.

For old-style computers, like the IBM PC, the first version of a program to appear in the shops is pretty much the final one. In general, PC users don't need to concern themselves with the particular version of a program they're running.

But on the Mac, things are very different. Software for the Mac tends to be unusual and hard to write, and clever people are needed to write it. On top of this, the programs are required in the shops in a hurry to support the Mac, and are often improved drastically at a later stage by those clever people.

Version numbers count. For example, the first release of *Multiplan*, Version 1.0, contained so many bugs that Microsoft asked the dealers to return all copies and stop selling it. Version 1.02 emerged soon after with all the bugs fixed.

The same thing happened with *Microsoft Basic*. Version 1.0 came out early, but it was a disappointment since it didn't use the Mac's features and it didn't let Basic programmers use them either. Version 2.0 — note the big jump — came out later, fixed the bugs, and added a vast number of the Mac features that Version 1.0 lacked.

Getting back to *MacWrite* — this is a program that's gone through an incredible number of changes. Version 1.0 could only use RAM to edit documents, and was useless for anything over half-a-dozen pages long. The RAM version got up to Version 2.2 and then there was a big jump up to Version 3.0; the latter version used the disk to store parts of a document until needed in RAM. The various other versions (if you only have two, you've missed about five!) have experienced small changes to fix things or add a few detailed functions. Version 4.5 is the latest product seen in

the MacUser offices, and that's got all sorts of refinements.

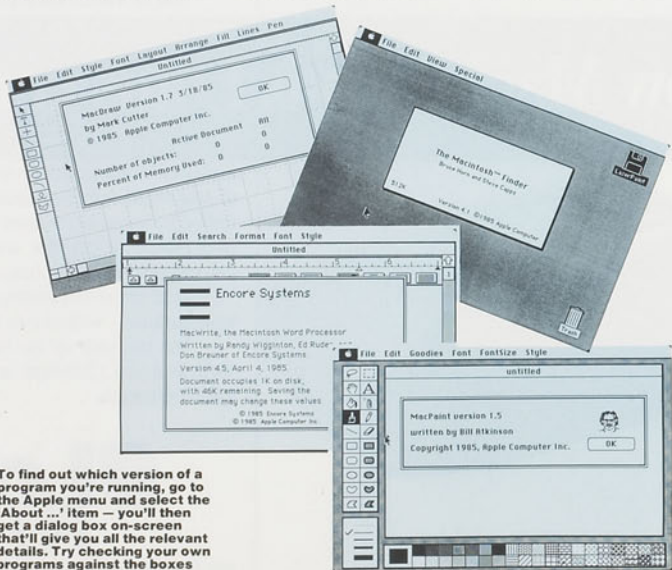
The 'About...' item appears on the Apple menu of each application — including the *Finder* — and gives the version number, the date of the version's release, and often the programmers' names and a copyright message from the publisher. A higher version number usually indicates that it's a better program with fewer bugs.

On a last note, if you buy a package, the software house will normally ship you upgraded and de-bugged versions if you send in a registration card. With *MacWrite*, *MacPaint* and the *Finder*, your friendly Mac dealer will probably give you the latest version if you ask nicely.

## JOIN THE DOTS

Is there any way of copying a full-page *MacPaint* drawing into another document? So far, I can only copy something the size of the active window...

And that's as far as you'll get. There's no way you can copy a full page from *MacPaint* into anything else, using the Clipboard, Scrapbook or any other means. The only possible way to do it is in parts — lassoing sections of the draw-



To find out which version of a program you're running, go to the Apple menu and select the 'About...' item — you'll then get a dialog box on-screen that'll give you all the relevant details. Try checking your own programs against the boxes shown here.

ing in *MacPaint*, copying each piece on to the Clipboard, and then pasting them individually into *MacWrite*, say.

A shame, isn't it? Perhaps the idea is that a full page *MacPaint* drawing should just be printed out as a whole page on its own.

## ON THE INSIDE TRACK...

Some programs, like the *Helix* database, recommend using a hard disk. How do hard disks work with the Mac? Do they plug into the external disk drive socket?

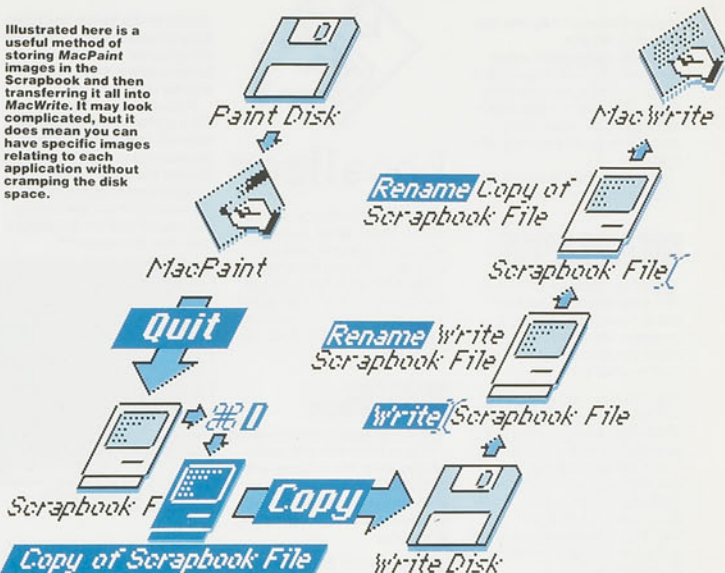
The simple answer to these two questions would be 'not very easily' and 'no'. Unlike other business machines, the Mac was launched with just one floppy drive and little hope of adding a hard disk drive inside the case. A socket was provided at the back for an external floppy drive but, in typical Apple style (at least where floppy drives are concerned) the interface is very non-standard and can't be used for standard Winchester hard disks.

So far, all but one of the Winchester units available for the Mac are designed to plug into one of the two serial interface sockets. However, since most people will keep the Imagewriter attached to the printer socket, the Winchester normally gets stuck in the modem socket; this is no bad thing as the modem socket is checked by the system more often than the printer socket, thus making for much more accurate high-speed data transfers.

Although the Mac's serial ports are fast, they're not quite as fast as normal hard disks' parallel interfaces. So, when you've got Winchester running on the Mac, although faster than the Mac's own floppy drives, they're not as dramatically fast as they would be on the IBM PC and other machines. Most of the manufacturers reckon that their hard disks are about three times faster to load and save than the Mac floppies.

The one exception to this trend is the General Computer Company's Hyperdrive — a hard disk that's built into the Mac case. What happens is that dealers take your Mac, upgrade the RAM to 512K if necessary, de-solder the 68000 processor

Illustrated here is a useful method of storing *MacPaint* images in the Scrapbook and then transferring it all into *MacWrite*. It may look complicated, but it does mean you can have specific images relating to each application without cramping the disk space.



chip, mount an extra disk controller board, and put the 68000 back connected via the new board to a 10Mbyte Winchester mounted behind the internal floppy. The advantages here are that the data transfers are parallel, and so faster, and that the Mac can boot up from the hard disk directly you turn the power on.

And if you pay any attention at all to the rumours about the Mac, one currently doing the rounds in the States is that Apple is talking to General Computer about marketing the Hyperdrive itself.

## THE CASE OF THE MISSING SCRAPBOOK

How can I use *MacPaint* images stored in the Scrapbook with *MacWrite* files? With a *MacWrite* file open, my pictures always seem to disappear from the Scrapbook...

Well, first off, the pictures haven't really disappeared, they're just somewhere else in the system. Unlike the Clipboard, the Scrapbook is used for permanent storage of words or pictures for future reference. Pasting to the Scrapbook just adds to the contents, and doesn't erase a thing.

Now, the Clipboard is

designed to carry data for transfer between programs, and to do it on single-drive Macs if necessary. So, if you cut or copy something into the Clipboard and then eject the disk, the Mac keeps track of the information and, when you insert a new disk, stores a copy of it on that disk as 'Clipboard File'.

The Scrapbook works differently. When you've got a *MacPaint* document open, and you want to paste something into the Scrapbook, the System looks around for a file called 'Scrapbook file' on the same disk as the *MacPaint* program. If there's no such file, then one is created and your new picture put into it. As a result, it's not always straightforward to transfer pictures from *MacPaint* to *MacWrite* via the Scrapbook.

However, let's look at a specific example. If you've got an external drive, one good method of organising your work is to have the *System* and *MacWrite* on one disk, and your work files and *MacPaint* on the other. This means that you end up with a Scrapbook file on each disk — one that appears when you're in *MacWrite* and another when you're in *MacPaint*.

The way to use this situation to your advantage is to paste your picture into the Scrapbook

from *MacPaint*, which creates a Scrapbook file on the *MacPaint* disk. Next, quit *MacPaint*, select the new Scrapbook file and rename it. Now, copy this to the *MacWrite* disk. Once you've done all that, you'll find two Scrapbooks available from *MacWrite* — but only the one called 'Scrapbook File' can be called up from the Apple menu. To get at the new Scrapbook with the picture from *MacPaint*, all you have to do is re-name the original Scrapbook to something else and the new one to 'Scrapbook File'.

This might sound a complicated operation, but it does mean that each application can have its own Scrapbook with special pictures and words, without having to build up an enormous one in the *System* folder with resultant cramping of disk space. It's only when you want to transfer Scrapbook contents between applications that it gets awkward.

## DOUBLE TROUBLE?

Can you use double-sided floppy disks in the Mac's disk drives?

Yes, but there'd be no advantage to it. The Mac floppy drives, both internal and external, are single-sided and



read and write on only one side of each 3.5in disk.

Double-sided disks are no more reliable than single-sided disks ... but they do cost more. Using them with the Macintosh just wastes an expensively-tested side of pristine magnetic material.

Has some dealer been trying to pull a fast one on you?

## POPPING DOWN THE LOCALIZER?

When I boot up with some program disks, my keyboard doesn't seem to work properly. The dealer says I need a new program called a 'Localizer' — what is it?

The Mac has two types of keyboard, one for the USA and one for the rest of the world (a keyboard for the rest of us?). The American keyboard has one key fewer — the left-hand Shift key is wider and the '/' key disappears; it's also got commands like Backspace, Tab and so on written in words on the appropriate keys.

The extra key on the bottom row of the international keyboard is the one that causes all the trouble. All the keyboard-reading routines for the Mac are in software — usually to be found lurking in the *System* folder. And, naturally enough, American application programs come with an American *System* file that expects an American keyboard. Seems reasonable. But if you boot up with one of these disks, the software interprets the International keyboard as the American one and you'll find all the keys on the bottom row seem to be one key out.

If most commercial programs weren't copy-protected to stop piracy, this wouldn't matter so much — all you'd need to do is set up a disk with your UK *System* folder on it, then drag the American application program's icon on to that disk. Unfortunately, most copy protection schemes make this impossible since the 'dragged' copy of the program won't run.

The *Localizer* (note the Americanese) is a free program that converts the keyboard, and any other appropriate *System* routines, to those needed for a wide selection of different countries. What you do is put the *Localizer* on the American disk and 'double-click' on the *Localizer* icon. If you then follow instructions, you'll end up with



the International keyboard routines installed in the *System* file and your keyboard will then work properly with the program.

Microsoft includes a copy of the *Localizer* on all its program disks, and every other software publisher in the USA should do the same.

## SPOT THE DIFFERENCE

Are programs like *Multipan* and *Word* different on the Macintosh to the versions written for other computers? I can work *Multipan* on the Apricot, but I'm not sure about switching to the Mac.

Versions of *Multipan* and *Word* on other machines are completely different to those on the Mac. Both programs make extensive use of the Mac's pull-down menus, icons, scroll bars and windows — and there wouldn't be much point if they didn't.

A more conventional computer like the Apricot requires commands to be typed in on the keyboard, rather than selecting options using the mouse. However, if you've used a particular program before, like *Multipan*, you must already have understood the philosophy of the program and the job it's supposed to do ... which is about 99 per cent of the task when you're working on the Macintosh!

Switching to the Macintosh is really no problem at all — as any Mac user will confirm.

## SWITCH ON TO MACINTOSH!

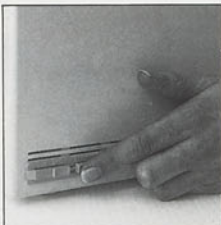
What is the little plastic 'whojamalip' that comes in the Mac's 'White Box'?

Apple calls this the 'programmers' switch', implying that ordinary mortals shouldn't need it. But, programmer or not, you'll find this a handy attachment for your Mac.

The switch snaps in between the air vent bars on the side of the Mac away from the internal floppy drive, so that the two

spines on the switch touch two buttons on the Mac's computer circuit board. One of these buttons resets the computer, and the other interrupts it.

If you press the front part of the programmers' switch, the Mac will reset itself — a tone sounds and screen displays the familiar floppy disk icon, complete with flashing question-mark; it's just like turning the Mac off and on, but without switching the power off.



Press the 'programmer's switch' to reset the Mac.

Pressing the rear part of the programmer's switch produces an interrupt; this just stops the current program running and puts up one of the dreaded 'Bomb' error messages. This facility is provided so that programmers can interrupt their own programs just as soon as a bug appears. However, any Mac owner may find this useful — if only to escape from any bugs you find in some commercial software!

You certainly can't harm the Mac by fitting the programmers' switch — indeed, it's never a good idea to turn the power off and on when you're dealing with such delicate electronics.

## ALL OR NOTHING?

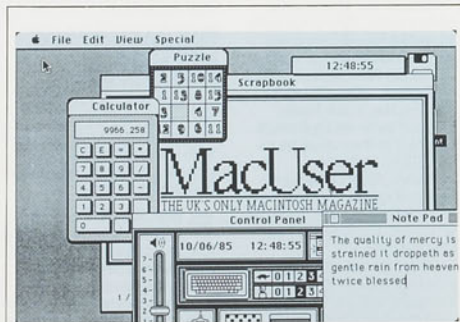
How many desk accessories can you use at once? I've had all of them on-screen at the same time...

The Mac's desk accessories, such as the Calculator, Scrapbook, Alarm Clock and Note Pad, can be selected from the Apple menu. As any user will know, you can only actually use one accessory at a time, although more can be shown on-screen even when a program like *MacWrite* is running.

Like any other window on the Mac screen, clicking the mouse on a desk accessory makes it 'live' and brings it to the top of the stack of windows displayed. And, like any other Mac window — at least on the *Finder*'s desktop — you can, in theory, have an unlimited number of accessories open at once. But in practice you can't — the number is limited by the amount of RAM space you have to spare. If there isn't enough RAM to run the accessory, the *System* flashes up the notorious 'Bomb' error message '02' and you'll have to reset the Mac.

**About MacClinic...** *MacClinic* is *MacUser's* 'Agony Auntie'. So, if you've got any problems with any software or hardware on the Macintosh, write in and tell us all about it. We may not be able to work miracles, but we'll certainly put you on the right track.

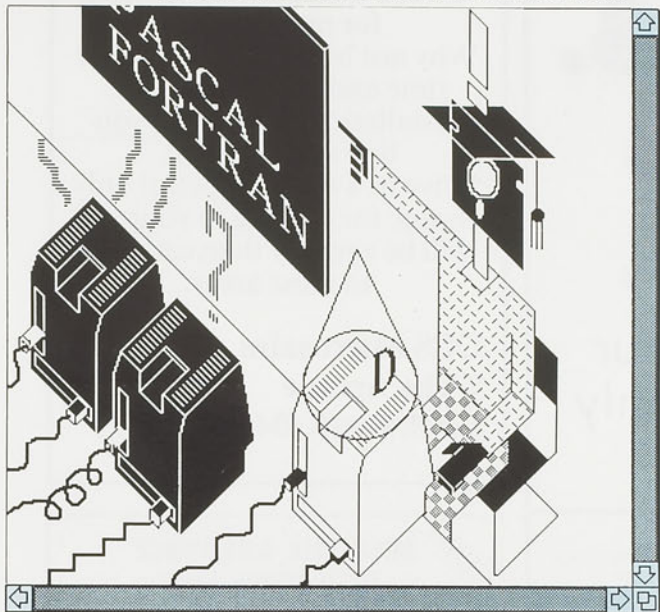
Write to *MacClinic*, *MacUser*, 14 Rathbone Place, London W1P 1DE.



Shown here are the Scrapbook, the Alarm Clock, the Note Pad, the Calculator, the Control Panel and the Puzzle — all on-screen at the same time!

# Speaking in tongues

The Macintosh is not widely regarded as a programmer's computer ... but you try telling that to its users. Nowadays, Mac owners have over 25 different language packages to choose from if they want to develop their own software — and that's a big choice! Peter Jackson has a few tips for those who are curious, but don't know their Pascal from their Fortran.



**RADICAL USER-FRIENDLINESS WAS** Apple's promise when the Mac arrived — no-one even as much as mentioned programming the beast. Indeed, for the first time anywhere in the micro industry, not a single programming language was available for the Macintosh at its launch. But now, 18 months later, there are almost 30! What Apple failed to deliver was quickly shipped by third parties ... and now, even a repentant Apple is starting to join in.

## A Slow Developer

The reason for shipping *MacPaint* and *MacWrite*, rather than a built-in Basic, say, was that the Mac was intended as a pure user's machine. The idea was that software houses were meant to develop all the software that anyone could want, and Mac users should dutifully go out and buy it. Users, particularly the kind Apple aimed at with the Mac, were not supposed to be interested in programming and similar technical fripperies. Spreadsheets and wordprocessors, yes. Pascal and Fortran, no.

To make things worse, Apple made it hard for the developers by failing to

provide a way of writing programs for the Mac on the Mac. Software developers had to register with Apple, at which point they were given the privilege of buying a Lisa with at least 5Mbytes of Winchester disk space, a vast number of utilities, compilers, debuggers — lots of debuggers! — to fill those megabytes, and a two-volume still-unfinished technical manual called *Inside Macintosh*. The manuals alone cost \$100, and that's where the expense starts!

Then, having splashed out on a Lisa, and set it running the *MacWorks* operating system to make it act like a Mac, programmers were limited to Pascal or machine code to produce their applications. That was all there was ... although most leading software houses had already switched to the C language for all their software development. Looking back, it's surprising that any Mac applications came out at all, but not surprising that most of them were late in shipping.

## Apple's Mistake

But while the software developers were crying out for powerful structured

languages like C, Mac users were screaming for any familiar programming language at all. Apple's mistake had been to underestimate the individuality of micro owners.

Those frustrated owners might not exactly be hackers; they might not actually want to spend all their waking hours under the Mac's bonnet with a spanner; they probably don't even have an inkling of an idea of what little programs they'll need to write for the Mac — but they sure as hell know deep down inside that they'll need to write one sooner or later. There are always irritating little software jobs that no commercial software developer could ever be bothered with, and Apple's attitude was patronising. Users were even advised to leave off the reset button, the 'programmer's switch', unless they were 'real experts'.

But then Microsoft had the forethought to release *MS-Basic* for the Mac just as soon as it could, and it sold in large numbers. And after that ... the deluge.

Among the various programming aids on the market now are six C compilers, two Fortrans, Modula 2, two Logos, Forth, Lisp, BCPL, various Basics and Pascals, and an 'object-oriented threaded language' called *Neon*. There's even someone selling the CP/M-68K operating system for the Mac — for those users, pining for the prehistoric days of A> and *WordStar*, who can't bear windows, icons and pull-down menus.

## Tools Of The Trade

Since we're talking about languages that are going to be running on the Mac, it's important they provide programmers with access to the Toolbox ROM routines hidden inside the machine. It's also necessary that they include some of the utilities Apple provided on its Lisa development system, such as the standard program text editor. Most of the language systems available either extend their definitions to include new instructions and commands that point to the Mac ROM software, or come with libraries of customised subroutines that the programmer can call on to get at the ROMs.

It is possible to write software for the Macintosh that doesn't use the ROM routines at all, but they're not really recognisable as Mac programs. The ROM software lets programmers into the secrets of creating and controlling pull-down menus, dialog and alert boxes, unlimited screen windows, and the famous *QuickDraw* graphics that gives Macintosh software its distinctive feel. And only access to the ROMs will let programmers produce stand-alone applications — that is, programs that appear in disk windows, with the familiar program icon that can be 'double-clicked' into action.

## Take Your Pick

Before picking a suitable language system to write in, some important questions need to be asked. And the most fundamental question is whether



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the language is compiled or interpreted.

To explain, if a language system is compiled, any program you write is 'double-clickable' and it can be used without the compiler program present. If it's interpreted, on the other hand, the interpreter program must be loaded alongside if it's to run.

As an example, *MacWrite* was written in Lisa Pascal and then compiled — that is, translated into simpler instructions that the Mac's microprocessor can understand. That translation is done once and for all — you'll never have to load a Pascal compiler to run *MacWrite*. Microsoft took a different course when developing its Basic — this language program (even the newer Basic, Version 2.0) is an interpreter. What this means is that if you write a program in that Basic, it's translated into machine language every time it's run — so the original Basic interpreter has to be loaded before your own program can be run. Oddly, Apple's own Macintosh Pascal, licensed from Think Technologies in the States, is also an interpreter ... and that certainly limits its potential as a software developer's tool.

There are further complications, though. Although the compilers produce 'double-clickable' applications, they vary in how they accomplish this minor miracle. Programs written with Absoft's *Fortran 77* compiler or Softech's *UCSD p-system*, for instance, need certain 'run-time libraries' of subroutines to be present when they're run. In practice, this means that home programmers can't sell programs written with these compilers unless they pay licence fees; these licences give programmers permission to copy the special libraries and ship them to customers along with their own program.

The level of access to the Mac ROMs also needs to be checked before buying, since some compilers — Hippopotamus Software's *Hippo-C*, for example — come in several versions, each giving access to a different set of ROM routines. Then again, the Canadian *Mac Logo* only provides access to the *QuickDraw* graphics routines in the ROM, so there's no chance at all of home programmers being able to create their own pull-down menus or windows.

### On The Fringe

While most programmers, developers or home hackers, will go for one of the familiar languages like Basic, Pascal or C — or perhaps one of the assemblers available for the Mac's 68000 microprocessor — a few will go for the more 'way-out' languages on the fringe.

Lisp, available as *ExpertLisp* from ExpertTelligence, is one of those languages that'll be familiar to anyone involved in artificial intelligence research. And one that everyone's heard of ... *MacForth*, based on the *Forth* language, is ideally suitable for real-time control applications and has a huge band of devoted supporters throughout the world.

Perhaps the oddest of all is Kriya

## Breaking the language barrier

### WHAT THEY ARE, WHO DID THEM, AND WHAT THEY COST

Language Title	Publisher	Hardware Required	Mode Of Operation	Access To ROM?	License Required?	Price*
MacASM	Mainstay	128K + drive	Compiler/Assembler	Full	Yes	(\$125)
MacAssembler	Apple	128K	Assembler	Full	No	N/A
Basic Compiler	Pterodactyl	512K	Compiler	Full	N/A	(\$250)
MacBasic	Apple	128K	Interpreter	Almost full	No	N/A
MSBasic	Microsoft	128K	Interpreter	Almost full	No	\$99
BCPL	Topexpress	128K	Compiler	Full	No	£145
Aztec C-68K	Manx Software Systems	128K + drive	Compiler	Full	No	(\$450)
Hippo C (Level 1)	Hippopotamus	128K	Compiler	400 routines	No	(\$150)
Hippo C (Level 2)	Hippopotamus	128K	Compiler	Full	No	(\$400)
Mac C	Consular	128K	Compiler	Full	No	(\$425)
Megamax C	Megamax	128K	Compiler	Full	No	(\$300)
Softworks C	Softworks	128K + drive	Compiler	Full	N/A	(\$395)
MacCobol	Micro Focus	512K	Compiler	Full	No	(\$1250)
CP/M	IQ Software	128K	N/A	Minimal	No	(\$395)
CP/M	Island Software	128K	N/A	Minimal	No	(\$125)
MacForth (Level 1)	Creative Solutions	128K + drive	Interpreter (-ish)	200 routines	N/A	(\$150)
MacForth (Level 2)	Creative Solutions	128K + drive	Interpreter (-ish)	240 routines	N/A	(\$250)
MacForth (Level 3)	Creative Solutions	128K + drive	Interpreter (-ish)	Full	No	(\$350)
Fortran 77	Softech Microsystems	128K	Compiler	All but tics/ menus	Yes	£295
MacFortran	Absoft	128K + drive	Compiler	Full	Yes	(\$295)
ExpertLisp	ExpertTelligence	512K	Compiler	Full	No	(\$150)
ExpertLogo	ExpertTelligence	128K	Interpreter	QuickDraw+ Maths	No	(\$150)
MacLogo	Logo Computer Systems	128K	Interpreter	QuickDraw only	N/A	(\$99)
MacModula 2	Modula	128K	Compiler	Full	No	(\$90)
Neon	Kriya Systems	128K	Compiler (-ish)	Full	N/A	(\$150)
MacAdvantage (UCSD Pascal)	Mainstay	128K	Compiler	Full	Yes	£295
MacPascal	Apple (Think Technologies)	128K	Interpreter	Full	No	(\$99)

\* At the time of going to press, no UK prices have been fixed. The American prices are given as a guideline.

If you want to talk to your Mac rather than 'point and click', the table above shows the wide range of languages already available.

Systems' *Neon*, partly something completely new and partly a throwback to the Mac's forerunners. This is the 'object-oriented threaded language' mentioned briefly earlier, but a more accessible description would be 'Smalltalk-like'. For those 'not in the know', *Smalltalk* is the 'language environment' developed in the mid-'70s by Alan Kay and colleagues at Xerox's Palo Alto Research center. *Smalltalk* was originally designed to drive a computer with a black-on-white bit-mapped screen, complete with mouse pointer and software producing overlapping screen windows and pull-down menus. And if all that sounds pretty familiar, you won't be too surprised to learn that Alan Kay is now an Apple Fellow, currently carrying out research for Apple at its headquarters in Cupertino.

In object-oriented languages, the familiar structures of traditional languages (like files, with alphabetic or numeric records) are replaced with things called 'objects'. Kriya claims that *Neon* comes with a set of pre-defined objects that relate directly to the Mac ROM structures, such as the windows, menu bars, and scroll bars in the

windows. Again, according to Kriya, since *Neon* was developed specifically for the Mac, using the philosophy that led to the Mac's invention in the first place, it makes programming the machine more intuitive than the other languages.

### Everybody's Doing It!

Whether or not you agree with Kriya, there's no doubt that the languages now available on Mac provide tools for programmers to build virtually any kind of application you can think up. Mike Lehman's *FastFinder*, now being published in the States by Tardis Software, was written in *Consular C*. *Overvue*, the lightning-fast database, was originally conceived in Pascal, and has only recently been re-written in machine language to make it even faster. And now, Apple are encouraging users to program on the Mac and will happily hand out the Pascal source code for a lot of the software it provided, to help programmers write more Pascal source code.

The Mac has made programming fun again, even if a lot of that fun comes from overcoming the difficulties inherent in the machine's way of doing things. It's well worth a try — in anyone's language.



# Will the True Macintosh Program stand up please

The MACBUSINESS DATABASE will truly stand up to your requirements for a database on Macintosh. There are features that use all of the unique abilities of Macintosh to:

## Create graphical record layouts Simplify database creation Even store pictures from 'Paint and 'Draw



Using the MacBusiness Database is simple due to the very close way in which it follows the interface standards of the Macintosh. For the expert, functions are also available as keyboard commands. Features within the database include the ability to calculate, file, search and report. Text, data and graphics are integrated in the Macintosh working systems, and likewise this database is capable of handling all these types of information together.

MacBusiness gives up to eight sub record formats which are subsets of main 'record card'. The MacBusiness Database offers the very latest facilities for the user to take fullest advantage of their machine, yet give simple operation emulating Apple's own Macintosh program interface thereby reducing learning time and providing ease of use. Uniquely offering the ability to file graphics and add graphics to general filing jobs to further ease use and add real power to applications for Database.

Examples of the unique uses of this newest technology software product as an office tool are: Macpaint/Macdraw Filing system. A stock control system with records of each stock item and photograph or diagram of each stock line. Property filing system for estate agents and managers showing each property on file with related map location and photograph if with record. Coupled with a video digitiser, with photographs of visitors for an electronic reception/security system. As can be seen, the

potential uses for such a flexible filing system with instant retrieval of information,

automatically sorted to order, are enormous.

The MacBusiness Database has a flexible record structure with each containing up to 255 variable fields. All fields can be either alphanumeric or graphic.

In addition title fields can be inserted into the record being either text or graphical. Of unique value is the ability to create the record layout in either Macpaint or Macdraw and then just paste the layout with its titles and graphical

data areas into the database, offering a tremendous saving in time for the normally laborious task, and giving a uniquely attractive record card on the screen. The program is dynamic and utilises available computer power, memory, screen size available and storage (Runs on Mac 128/512 and XL).

Numeric and cash fields are provided as well as calculated fields. Calculations are very powerful with greater than average abilities which include string functions and phonetics. The program has a window called the 'Datacalc' giving a sub window of fields in the database and another containing the operands available. 'Datacalc' offers further mini windows containing a calculator and a text area into which instructions are very quickly transferred between windows making the creation of even the most complex relationships quite simple to effect.

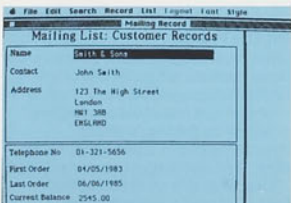
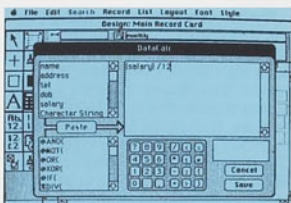
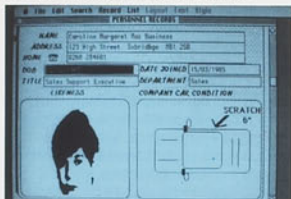
Date fields can automatically call on the current date, and calculations can even be made on dates, calculating days, months and years, including the number of days between.

Reporting by search and selection of records from a test or multiple test utilises 'Datacalc' to aid selection from very powerful criteria tests to user definable layouts which also include graphics and pre-defined calculations. At last this database does offer the facilities on Macintosh to produce labels and even mail merge for standard letters. By the use of Macdraw a letter can be created and pasted into the report where database fields can be overlaid to produce mailing output.

'Datacalc' actually compiles commands into the program for high speed operation of the computations which are performed instantly on screen. Calculations created by 'Datacalc' include arithmetic, comparison and the following operator list:

IF - NOT - AND - OR - XOR - RECNUM (record number) - SOUNDX (sounds like) - PAGNUM (page number) ITEM IN REPORT - ITEM IN PAGE - RSUM - RMIN - RMAX - PSUM - PMIN - PMAX - LASTPAGE - DAYS BETWEEN - YEAR - DAY - DATE - TODAY - POS - STR - COPY - INSERT - DELETE

**MacBusiness Database is one of a best selling range of programs offered for the Macintosh, including two Business Accounting Suites and Payroll, all now available.**



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# The Apple Macintosh Software Selector

No Macintosh users' magazine would be complete without a selection of some of the software currently available. The Macintosh Software Selector featured here is the first in a regular series of guides to a wide selection of Macintosh applications, produced by Apple Computer (UK) Ltd and designed to help you get the most from your Macintosh.

The guide contains references to the very latest and greatest in Macintosh software, together with the more familiar, established packages.

We think you'll be impressed at the range and quality of business software now available for the Macintosh, and we hope you'll take advantage of the guide, which is as up-to-date as we can make it, given the current momentum of Macintosh software development.

The guide is arranged according to application category and contains information on the recommended retail price (ex-VAT), publisher, minimum configuration required, and a brief description of the product's features.

It will be updated in future issues of *MacUser* to enable you to keep in touch with all the latest developments in the world of Macintosh software.

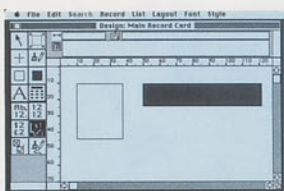
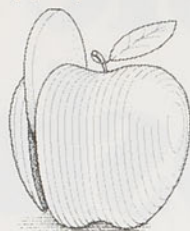
\*Apple Computer (UK) Limited cannot guarantee any products listed here other than Apple products, nor can it be held responsible for the accuracy of the information contained in this guide.

**This represents a sample of software available for the Macintosh. For full details contact your Macintosh dealer.**



# The Apple Macintosh Software Selector

Keep your files in  
apple-pie order.



## MacBusiness Data Base

— Systematics International

MacBusiness Data Base supports a number of data types, including graphics, money, date, text, number and logical 'yes/no'. It has extensive calculation facilities which appear within a structured database language.

TITLE	PRICE	MEM. REQ'D.	DATA
<b>DATABASES</b>			
<b>1st Base</b> (Desktop Software)	£178.00	128K	Relational database with multiple file capacity, allows up to 50 fields per record
<b>1st Base/1st Merge</b> (Desktop Software)	£216.43	128K	Database and mail merge — stand alone products.
<b>DB Master</b> (Stoneware)	£171.00	128K + printer	Database with MacPaint — like interface. Features include unlimited fields, field sizes, record sizes and unrestricted sort and selection specifications within the available disk space. Calculations are defined with a 'QuickCalc' feature and graphic capabilities are also available for form design.
<b>Factfinder</b> (Forethought)	£149.95	128K + ext disk drive	Information organiser allowing free entry rather than highly structured format.
<b>File</b> (Microsoft)	£190.00	128K	Files both graphics and text. Allows selection of specific information and/or rearrangement. On-screen help is available via pull-down menus. Integrated with Word, Multiplan and Chart.
<b>Filevision</b> (Telos)	£159.00	128K + ext disk drive	Pictorial database allowing user to draw pictures and attach files of data for reference. Combines pictures, numbers and words.
<b>Front Desk</b> (Layered Software)	£137.00	128K	Time and cost management program to track activities of team of professionals.
<b>Habadox</b> (Haba Systems)	£199.00	128K + ext disk drive	Desktop management system. Contains telephone directory, appointments diary, things to do list, database.
<b>Hayden Base</b> (Hayden)	£137.00	128K + ext disk drive	Information management tool — helps user create an organised database that can be included in reports, retrieved in alphabetic or numeric lists, or viewed in a variety of ways.
<b>Helix</b> (Odessa)	£337.50	512K + ext disk drive	Relational information management system designed to take special advantage of Macintosh windows, icons, pull-down menus and mouse. Allows flexible interaction for activities.
<b>I Know It's Here Somewhere</b> (Hayden)	£53.65	128K	Filing system/database for home or business use.
<b>Laser Desk Diary</b> (Laser Software)	£75.00	128K	Desktop diary and address book system.
<b>Laserbase</b> (Laser Software)	£130.00	512K	Information is stored in a factsheet window. Text can be entered and edited in free-form from the keyboard, cut and pasted from the Macintosh clipboard or loaded from external text file. Each factsheet is named when it is saved.
<b>MacBusiness Database</b> (Systematics International)	From £250.00	128K + ext disk drive	Can file MacDraw and MacPaint pictures within database. Powerful arithmetic and search functions. Database language also included.
<b>MacLion</b> (CSD)	£479.00	128K + ext disk drive	Relational database which uses its own development language, structured to create multiple relational applications.
<b>Main Street Filer</b> (Main St Software)	£99.00	128K	Information management and report generator for setting up electronic files for inventory control, accounts payable/receivable reminders.
<b>MegaFiler</b> (Megahaus)	£178.00	128K	Easy-to-use file management system. Allows user to create custom files or use file formats already stored in program.
<b>MegaForm</b> (Megahaus)	£295.00	512K	Forms/report generator — for creating full size forms and reports such as invoices, purchase orders, expense reports etc.
<b>Omnis 1</b> (Blyth Software)	£149.00	128K + ext disk drive	Works as electronic filing cabinet. Records can be sorted in three different orders. Reports printed to own design and mailing labels and standard letters produced automatically.
<b>Omnis 2</b> (Blyth Software)	£295.00	128K + ext disk drive	Similar to Omnis 1 except data storage capacity larger (dependent upon hardware). Up to 10 index fields per record. Logical and mathematical functions, 50 selection criteria.
<b>Omnis 3</b> (Blyth Software)	£445.00	512K + ext disk drive	All tools needed to create professional turnkey database system. Applications generator — construct own ledger systems, job costings, programs etc. Omnis 3 works on Macintosh network/multitask mode.
<b>Overvue</b> (Provue)	£270.00	128K + ext disk drive	Combines spreadsheet-like display with fast operation. Variable length data cells — any cell may contain up to 64 characters with up to 60 cells available per record.
<b>PFS: File</b> (Software Publishing)	£110.00	128K + ext disk drive	Free-form database program. Information is organised in 'forms' that user designs on the screen. Format can be redesigned and data deleted or added at any time.
<b>PFS: Report</b> (Software Publishing)	£110.00	128K + ext disk drive	Report organiser — user input from PFS: File. Organises information into concise, meaningful columnar reports, automatically sorted and subsorted alphabetically or numerically.
<b>COMMUNICATIONS</b>			
<b>1st Port</b> (Desktop Software)	£80.60	128K	Communications and data conversion package — emulates ASCII terminal.
<b>Langham Software-File Transfer</b> (Albion)	£1,750.00	512K	Enables Macintosh to talk to Microdata minicomputers. Price is for first copy and technical support, £250 thereafter.
<b>Langham Software-Terminal Emulation</b> (Albion)	£500.00	512K	Enables Macintosh to talk to Microdata minicomputers. Price is for first copy, £100 thereafter.
<b>Macterminal</b> (Apple)	£69.00	128K + modem	Allows Macintosh to emulate several common data terminals such as IBM 3278, DEC, VT100, VT52 and TTY.
<b>MacTransfer (Apple)</b> (Southwestern)	£45.00	128K + modem, cable and serial I/F	Data transfer package for moving files from Macintosh to an Apple or vice versa.

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for business.



# The Apple Macintosh Software Selector

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<b>MacTransfer (IBM)</b> (Southcater)	£59.95	128K + modem cable and serial i/f	Data transfer package for moving files from Macintosh to IBM and vice versa.
<b>PC To MAC &amp; Back!</b> (Dilithium)	£137.63	128K + modem	Enables transfer of files between Macintosh & IBM PC.
<b>Ultracom 3</b> (Ultracom)	Dependent upon h/w & s/w config.		Connection to ICL CO3 protocols.
<b>Vicom 3.1 ASCII/Viewdata</b> (AM technology)	£150.00	128K + modem	Enables access to both Viewdata (Prestel) and ASCII (Easylink, Telecom Gold, bulletin boards). Combined Viewdata and ASCII communications software.

## INTEGRATED SOFTWARE

<b>Ensemble</b> (Controle X)	£299.95	128K	Integrated multiple files – have 3 files open on desk – connect files. Details on database, business graphics, wordprocessing, mail-merge and calculations as follows:
	<b>Business graphics</b>		Bar, line, per cent graphs, pie and scatter charts, curves and time line graphics in two or three dimensions.
	<b>Calculations</b>		Scientific functions/logical functions/statistical functions.
	<b>Database</b>		Sorting, ascending/descending, alphabet, numerical, chronological.
	<b>Wordprocessing</b>		Reports, labels, letters, user-defined forms.
<b>Jazz</b>	£495.00	512K	Database, spreadsheet, wordprocessing, graphics, communications, external disk drive needed. Further details as follows:
	<b>Communications</b>		Asynch DEC V52 and V100 terminal emulation. Auto-dial/auto-answer, transfers 123 and Symphony files for conversion for use with Jazz.
	<b>Database</b>		Automatic database generation, fast sorting, multiple databases.
	<b>Graphics</b>		Six major graph types shaded and exploded – multiple display simultaneously.
	<b>Spreadsheet</b>		8,192 rows by 256 columns – removable grid – security features.
	<b>Wordprocessing</b>		Mail merge with database; intuitive, international and special characters. Automatic headers, footers, page numbering and date.
<b>Quartet</b> (Haba Systems)	£239.95	128K	Business graphics, wordprocessing, spreadsheet and database. In addition, spreadsheet, graphics and text can reside within the same screen areas. Further details as follows:
	<b>Business Graphics</b>		Wide selection of charts and graphics that effectively communicate business achievements as graphic illustrations.
	<b>Database</b>		Sorting capabilities.
	<b>Spreadsheet</b>		Contains analytical features.
	<b>Wordprocessing</b>		Annotator (text editor) – miniature word processor.

## LANGUAGES/DEVELOPMENT

<b>Advanced Development Kit</b> (Softech)	£150.00	128K	Development toolkit to extend UCSD Pascal Development System.
<b>Aztec C68K</b> (Manx)	£500.00	128K	Gives complete access to Macintosh toolbox.
<b>Basic 2.0</b> (Microsoft)	£145.00	128K	Interpreted BASIC giving access to Macintosh toolbox.
<b>Basic Upgrade from 1.0 to 2.0</b> (Microsoft)	£25.00		Upgrade Microsoft BASIC 1.0 to 2.0.
<b>BCPL</b> (Top Express)	£149	128K	Structured programming language; even allows the development of desk accessories.
<b>C Compiler</b> (Softworks)	£335.30	128K	Complete implementation of 'C' language.
<b>ExpertLisp</b> (Expertelligence)	£420.15	512K	Modern high-performance compiled version of Lisp.
<b>ExpertLogo</b> (Expertelligence)	£137.00	128K	Logo with interface to Quickdraw Graphics.
<b>Fortran 77 Development System</b> (Softech)	from £295.00	128K	P-System based Fortran.
<b>Hippo C Level 1</b> (Hippopotamus Software)	£145.00	128K	Entry-level 'C' – an ideal learning tool.
<b>Hippo C Level 2</b> (Hippopotamus Software)	£399.00	128K	Full access to Macintosh toolbox.
<b>Hippo C (upgrade from level 1 to 2)</b> (Hippopotamus Software)	£250.00	128K	Upgrade path available.
<b>MacAdvantage UCSD Pascal</b> (Softech)	£295.00	128K	Pascal compiler for Macintosh.
<b>Macasm</b> (Mainstay)	£85.40	128K	68000 assembly language programming for Macintosh on Macintosh.
<b>MacCobol</b> (Microfocus)	£1250.00	512K	Complete Cobol software development environment.

For more fruitful forecasting.



### Vicom – A.M. Technology

Vicom is a Viewdata/ASCII communications package. It can be used to access graphics-based databases such as Prestel, Micronet, Citiserve, Homelink and Farmlink. It can also be used to access service databases such as Telecom Gold, Easylink and One-To-One. In addition, Vicom allows communication with other computers, either with modems or by direct connection for file transfer.

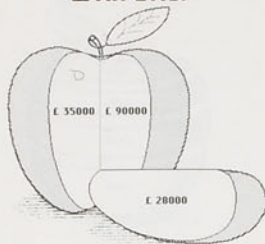
Trademarks Prestel is a trademark for B.T. Easylink is a trademark of Cable and Wireless One-To-One is a service name of Kensington International.

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## Financial analysis with bite.



```

NM-INSTR COMPACT PACT * TEST DRIVE *
NM-INSTR NM-PROBES

INCOME          EXPENSE
DISCOUNT INCLD 2584.33
SALES TRAVEL, HOUSE 10457.58
SALES M-TELEPHONE 14817.58
TOTAL INCOME    30000.57
EXPENSE/TIME
TELEPHONE       676.43
EXPENSE RESPONSE 4762.43
ADVERTISING 1201.00
GROSS 26940.00
R. L. CONTRACTING 4354.00
PHONE FINE 2000.00
DISCOUNT INCLD 1763.67
TOTAL EXPENSE/TIME 42462.87
PROFIT 17537.69

PRESS RETURN TO CONTINUE

```

[illegible]

**Ormbeta Compact Plus – Eurobeta**  
Ormbeta Compact Plus is an integrated sales, purchase and nominal ledger system. The program is an open item accounting system with numerous financial summaries. The layout of the summaries can be redesigned. Up to 9,999 records and transactions for sales and purchase ledgers, and 999 records and 9,999 transactions for nominal ledger.

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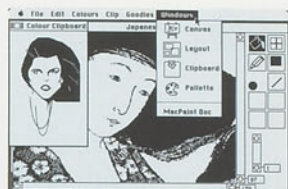


TITLE	PRICE	MEM. REQ'D.	DATA
<b>FINANCE/ACCOUNTING</b>			
<b>Database Accounting</b> (Vega)	£250.00	128K	Database accounting system for Macintosh – Omnis templates Sales ledger, purchase ledger, nominal ledger, etc. Price on application for more than four modules. Invoice and Stock Control also available
<b>DBSPay</b> (Devrell)	£125.00	128K + Ext Disk Drive	Personnel and payroll program for a few or up to several hundred employees. Supports all tax codes, weekly, monthly and other payment frequencies. Up to 16
<b>Money &amp; Sense</b> (Monogram)	£133.00	128K + Ext disk drive	Powerful, full-featured financial management program for both home and small accounting purposes.
<b>Home Accountant</b> (Arrays/Continental)	£77.80	128K	Detailed multifunction accounting system for managing home and personal finances.
<b>Homepak</b> (Creighton Developments)	£33.30	128K	Ten programs including financial calculator, home inventory, personal financial statement, stock records etc.
<b>MacBusiness Invoicer</b> (Systematics International)	from £250.00	512K + Ext disk drive	Invoicing integrated with stock control, sales ledger and general ledger. Gives user-definable formats.
<b>MacBusiness Ledger Suite</b> (Systematics International)	from £600.00	128K + Ext disk drive	Integrated open item account system – sales/purchase/general ledger.
<b>MacBusiness Payroll</b> (Systematics International)	from £250.00	128K + ext disk drive	Up to 999 employees – 1, 2, 4-weekly and monthly paid staff with analysis of up to 99 departments.
<b>MacBusiness Stock Control</b> (Systematics International)	from £250.00	128K + ext. disk drive	Includes multiple selling prices and locations. Can be used for multiple stock ledgers.
<b>MacSales (Integrated with invoicer)</b> (Advanced Micro Products)	£295.00	512K + ext disk drive + printer	Invoicer integrated with detailed product file and sales ledger – generates invoices. For use with <i>Microsoft Basic</i> .
<b>MacSales (Nominal Ledger)</b> (Advanced Micro Products)	£195.00	512K + ext disk drive + printer	True open item accounting with full analysis journal report.
<b>MacSales (Purchase Ledger)</b> (Advanced Micro Products)	£195.00	512K + ext disk drive + printer	Accurate keeping of information with user error check.
<b>Ormbete Compact Accounting</b> (Eurobeta)	£350.00	128K	Fully integrated accounts package – includes brought forward sales and purchase ledgers and nominal ledger with advanced reporting.
<b>Ormbete Compact Invoicer</b> (Eurobeta)	£100.00	128K + ext disk drive	Highly flexible invoicing system which, when integrated with compact accounting package, provides comprehensive business accounting system.
<b>Ormbete Compact Plus Accounting</b> (Eurobeta)	£650.00	128K + ext disk drive	Advanced version comprising sales/purchase and nominal ledgers – balance brought forward. Includes invoicer.
<b>S12 Suite (General Ledger)</b> (Systematics International)	from £250.00	512K + ext disk drive	Existing Systematics accounting package. Mouse menus optional.
<b>S12 Suite (Invoicer)</b> (Systematics International)	from £250.00	512K + ext disk drive	Existing Systematics accounting package – now available for use with Macintosh – mouse menus optional.
<b>S12 Suite – Payroll</b> (Systematics International)	from £250.00	512K + ext disk drive	Existing Systematics accounting package – now available for use with Macintosh. Mouse menus optional.
<b>S12 Suite – Purchase</b> (Systematics International)	from £250.00	512K + ext disk drive	Existing Systematics accounting package – now available for use with Macintosh. Mouse menus optional.
<b>S12 Suite – Sales</b> (Systematics International)	from £250.00	512K + ext disk drive	Existing Systematics accounting package – now available from Macintosh. Mouse menus optional.
<b>S12 Suite – Stock Control</b> (Systematics International)	from £250.00	512K + ext disk drive	Existing Systematics accounting package – now available for Macintosh. Mouse menus optional.
<b>Stock Portfolio System</b> (Smith Micro)	£192.10	128K	Stock asset management package
<b>OTHERS (BUSINESS)</b>			
<b>Desk Organiser</b> (Warner Software)	£136.00	128K	Free-form filing system with Rolodex-like access. Software replaces existing notepad with more extensive correspondence facility.
<b>Desktoppers</b> (Harvard Associates)	£46.00	128K	Set of desktop accessories including calendar, address book, music maker etc. Can be installed in any application with an Apple menu.
<b>Mac Calendar</b> (Vides)	£81.00	128K	Helps remind user of important dates, phone calls, meetings etc. Combines calendar display with notepad/appointment book.
<b>MacOffice</b> (Creighton Developments)	£36.00	128K	Integrates 10 separate and useful programs in one package.

# The Apple Macintosh Software Selector

TITLE	PRICE	MEM. REQD.	DATA
<b>MacProject</b> (Apple)	£99.00		Transforms normal time-consuming task of project management. Helps plan and track any size or type of project. Calculates start and finish dates for each task as well as entire project.
<b>Microplanner</b> (Micro Planning Software)	£375.00	128K	Utilises principles of critical path analysis to plan and co-ordinate projects. Features on screen network construction and number of easy-to-read reports. Also resource level. Up to 500 activities.
<b>Microsoft Business Pack</b> (Microsoft)	£595.00	128K	Comprises <i>Word</i> , <i>Multiplan</i> , <i>Chart</i> and <i>File</i> .
<b>Mighty Mac</b> (Advanced Logic Systems)	£85.90	128K	Enter events, reminders etc. Has update/search windows and search features.
<b>Mind Prober</b> (Human Edge)	£45.00	128K	Helps user to understand motives, feelings and wishes of others.
<b>My Office</b> (Datapak)	£80.00	128K	Complete office system with database and wordprocessing with low cost personal filing system.
<b>PFS:File/Report</b> (Software Publishing)	£166.60	128K disk drive	Comprises <i>PFS:File</i> and <i>PFS:Report</i> .
<b>Professional Composer</b> (Mark of the Unicorn)	£429.00	128K	Allows creation of performance-quality sheet music. Music can be entered into program and listened to via Macintosh's speaker or home stereo system.
<b>Slide Show Magician</b> (Magnum)	£59.95	128K	Creates computerised slide shows with special movie-like effects - for business meetings, sales presentations, classroom projects etc. Can run continuously or be controlled slide by slide.
<b>Smoothtalker</b> (First Byte)	£149.00	128K	Gives text-to-speech synthesis capabilities to Macintosh. Accepts text and synthesises into adult speaking voice.
<b>Time Base</b> (Soft Design)	£165.00	512K	Time manager which organizes day-to-day activities and keeps track of appointments and meetings.
<b>Chromac</b> (Drew Scientific)	£7,000.00	512K + data capture I/T	A multi-channel integrator, compatible with HPLC detectors. Provides a wide range of parameters to define peaks, and a choice of five methods for quantitative analysis.
<b>GRAPHICS</b>			
<b>Animation Toolkit</b> (Ann Arbor Software)	£48.20	128K	Designed for anyone who wants to create, edit or animate films.
<b>Art Portfolio</b> (Axlon)	£55.25	128K + printer	120 ready-to-use professionally created drawings - can be included in <i>MacWrite</i> or <i>MacPaint</i> documents.
<b>Card Shoppe</b> (Axlon)	£51.20	128K + printer	Compendium of drawings, ideas and materials created to produce greeting cards on Macintosh.
<b>Clickart Collection</b> (T/Maker)	£49.95	128K	Enhances newsletters and other publications - 100 professionally drawn images ranging from useful symbols to full page illustrations. Can be used in any <i>MacWrite</i> or <i>MacPaint</i> file.
<b>Clickart Effects</b> (T/Maker)	£42.40	128K	Allows user to rotate image or distort it. Used directly in <i>MacPaint</i> .
<b>Clickart Letters</b> (T/Maker)	£46.00	128K	Lettering program. 24 alphabets in 24, 36, 48 and 72 point type.
<b>Clickart Publications</b> (T/Maker)	£46.00	128K	Over 100 images ranging from useful symbols to full page illustrations. Graphic files for use in creating and designing newsletters, announcements, special brochures and flyers.
<b>Da Vinci: Building Blocks</b> (Hayden)	£73.00	128K	Can produce 3-dimensional rendering of home, office or other buildings in conjunction with <i>MacPaint</i> .
<b>Da Vinci: Buildings</b> (Hayden)	£45.00	128K	Several hundred images drawn to scale by architects & artists. Entire building projects can be planned from interior to exterior, in conjunction with <i>MacPaint</i> .
<b>Da Vinci: Commercial Interiors</b> (Hayden)	£179.00	128K	For commercial interior design to make effective use of available space. Used directly with <i>MacPaint</i> .
<b>Da Vinci: Interiors</b> (Hayden)	£45.00	128K	Several hundred images drawn to scale by architects and artists. For use with <i>MacPaint</i> .
<b>Da Vinci: Landscapes</b> (Hayden)	£45.00	128K	Several hundred images drawn to scale by architect and artists. For use with <i>MacPaint</i> .
<b>Graphics Magician</b> (Penguin)	£44.00	128K	Allows you to add fast animation and hundreds of pictures to your programs. Up to 52 independently controlled figures can be combined on a screen and rotated, scaled or drawn at varying speeds.
<b>Mac the Knife Clip Art</b> (Miles Computing)	£36.00	128K	Sampler containing over 500 ready-to-use illustrations in <i>MacPaint</i> files. Can be used for publications, presentations, ads, coupons, flyers, letters, etc. To be used with <i>MacPaint</i> .
<b>MacAccessories - Graphics Accents</b> (Kensington Microware)	£42.50	128K	250 professional illustrations from business topics to holiday themes. Can be used for reports, newsletters or greetings cards. For use with <i>MacPaint</i> .
<b>Macdraw</b> (Apple)	£99.00	128K	Structured graphics editor supporting multiple fonts and geometric shapes.
<b>MacWrite/MacPaint</b> (Apple)	included with every Macintosh	128K	Equivalent of artist's canvas in video. Enables creation of drawings. Screen tools include paintbrush, spray-paint, eraser, and many other unique features.
<b>McPic (Vol 1)</b> (Magnum)	£49.95	128K	Contains over 150 different ready-to-use professionally created drawings to be used in conjunction with <i>MacPaint</i> .
<b>McPic (Vol 2)</b> (Magnum)	£49.95	128K	150 new, unduplicated pictures for use with <i>MacPaint</i> .

Create juicier designs.



## Pixel Artist - Microcore

The Pixel Artist offers colour graphics for Macintosh, in up to 256 colours from 16.7 million. The software includes colour brushes, pencils and a paintpot as well as a zoom facility. The Pixel Artist requires a 512K Macintosh with external drive and can be used for production of slides or video images.

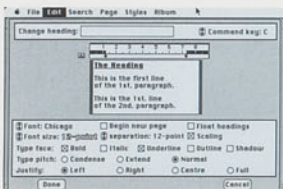
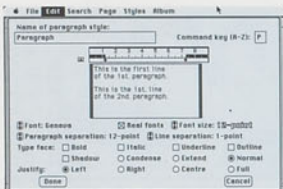
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# The Apple Macintosh Software Selector

For crisper reports.



**MacAuthor** – Icon Technology  
MacAuthor allows the definition of styles, including font and font size. The style can then be associated with any given paragraph or heading. Multiple-level superscripts and subscripts are possible as well as letter-spacing. Paragraph and line-spacing can be controlled down to the point size. Multiple strike-out and overstrike are also possible.

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TITLE	PRICE	MEM. REQD.	DATA
<b>WORDPROCESSORS</b>			
<b>1st Merge</b> (Desktop Software)	£80.60	128K	Data entry and mail utility program – can be used with MacWrite, MacPaint, Microsoft Chart, 1st Base. Stand-alone product.
<b>MacAuthor</b> (Icon Technology)	£169.95	128K	New word and graphics processor specially written to take advantage of the unique capabilities of Macintosh.
<b>MacPublisher</b> (Boston Telecommunications)	£109.00	512K + printer	Lays out group of articles etc into multi-column publication. Has capabilities of wordprocessor.
<b>MacWrite/MacPaint</b> (Apple)	Included with every Macintosh	128K	Wordprocessor with many unique features. Shows on screen exactly what will be printed – ie typesize, font and style, outlined or shadowed etc.
<b>Megamerge</b> (Megahaus)	£111.00	128K	Mail merge program for MacWrite.
<b>Ready Set Go</b> (Manhattan Graphics)	£129.00	512K + printer	Automates artistic page design and paste-up function – turns Macintosh environment into professional graphics art publishing system.
<b>Think Tank 128K</b> (Living Videotext)	£132.00	128K	Outline processor; idea organiser. Allows ideas to be listed and edited in random order allowing natural build-up of concepts and ideas.
<b>Think Tank 512K</b> (Living Videotext)	£224.00	512K	Enhanced version of Think Tank 128K.
<b>Word</b> (Microsoft)	£190.00	128K	Professional full-featured wordprocessing program. Fully integrated with Multiplan, Chart and Basic.
<b>Hayden Speller</b> (Hayden)	£75.00	128K	Checks documents against built-in dictionary, finds and corrects spelling errors and typing mistakes. You can create your own 'personal dictionary' of up to 50,000 words per disk, and Hayden Speller will check these words too.
<b>TOOLS/ACCESSORIES</b>			
<b>Copy II Mac</b> (Central Point)	£49.95	128K	MacTools integrates many of the standard disk functions on one disk as well as adding several new features. MacFiles lets you see all files on disk at once. Allows sector copy or bit copy of disks. Includes MacTools.
<b>Macintosh Dust Cover</b> (P&P Microdistributors)	£9.95		Dust cover for Macintosh.
<b>Epstart</b> (Softstyle)	£39.95	128K	Allows connection to range of Epson printers.
<b>Fluent Fonts</b> (Casady)	£49.95	128K	Over 25 font styles including graphic arts, text, foreign languages. Two-disk set of many fonts including Hebrew, Russian and Czech, complete with proper accents.
<b>Fonts</b> (Macbits)	£30.00	128K	Fonts for Macintosh – Greek 12-24 point, Cyrilllic 12-24 points.
<b>Mac Memory Disk</b> (Assimilation Process)	£51.00	512K	Adds additional storage capacity and increases overall speed. Takes around 320K memory from 512K Mac and transforms it into RAM disk which provides improvements in speed.
<b>Mac The Knife Vol 2</b> (Miles Computing)	£45.00	128K	2 dozen different fonts or typefaces. Installs easily with Apple's Font Mover utility and works in most Macintosh applications that have a pull-down menu.
<b>Mac Turbo Touch</b> (Assimilation Process)	£144.00	128K	High-speed direct input device (like turbo-charged mouse). Reduces editing time by 40%. Fits on to either side of keyboard.
<b>Mac-Daisywheel Connection</b> (Assimilation Process)	£114.00	128K + printer	Allows user to print with any popular daisywheel or letter quality printer.
<b>Mac-Epson Connection</b> (Assimilation Process)	£114.00	128K + printer	Provides print driver and all cable connections to drive Epson dot-matrix printers.
<b>MacAccessories Dust Cover</b> (Kensington Micro)	£12.10		Anti-static dust cover that protects Macintosh and keyboard.
<b>MacAccessories MacSwivel</b> (Kensington Micro)	£51.00		Slim swivel base that attaches underneath the Macintosh making it easier to reposition.
<b>MacAccessories Professional Type Fonts (Headlines)</b> (Kensington Micro)	£59.25	512K	Contains 16 fonts for advertisements, reports etc in 24 to 72 point sizes.
<b>MacAccessories Professional Type Fonts (Text)</b> (Kensington Micro)	£42.40	128K	Contains 16 fonts in 12 to 24 point sizes for producing own layouts for newsletters etc.
<b>MacPlot</b> (Microplot)	£99.00	128K + plotter	Takes picture created on Macintosh and plots it out in hard copy or on plotter. Designed to work in MacDraw but also accepts pictures from Microsoft Chart and MacProject.
<b>MacTilt</b> (Ergotron)	£99.95		Raises monitor, provides tilt and rotates 360 degrees. Designed to elevate Macintosh and allow screen adjustment to viewing angle.
<b>Mouse Around</b> (Frontrunner)	£54.95	128K	Drawing board – allows accurate tracing of logos, maps etc. Unit consists of drawing board, mouse holder and simple sliding mechanism designed to maintain perfect horizontal and vertical alignment of mouse. Compatible with the mouse and MousePaint packages.
<b>Paintmate Tracing Plate</b> (Hoglund)	£49.95		Accessory for Macintosh which fits onto the screen at an angle. Object is then placed on work surface in front of Macintosh and is reflected in Paintmate. User can then trace the object.
<b>Proprint</b> (Creighton Developments)	£67.00	128K + printer	Mouse-driven software enabling output of MacWrite files directly on serial and letter quality printers.

# The Apple Macintosh Software Selector

TITLE	PRICE	MEM. REQD.	DATA
<b>Propriet</b> (Cregon Development)	£90.00	128K + printer	Mouse-driven software enabling output of MacWrite files directly on serial and letter quality printers; includes cable.
<b>Universal Cable</b> (Cable)	£39.00		Hook into printer, modem or another computer without changing cables. Macintosh to Imagewriter or Scriber or modem or file etc.
<b>Videoworks</b> (Hayden)	£84.65		Animation program. Can be incorporated into your own software. Includes Art Grabber.

## SPREADSHEETS/BUSINESS GRAPHICS/STATISTICS

<b>Multiphan</b> (Microsoft)	£190.00	128K	Fully interactive with Word, chart and File. Allows the user to set up formulas using words instead of symbols. Size of spreadsheet is 63 columns by 255 rows.
<b>Multiphan</b> (1.02 upgrade) (Microsoft)	£25.00		Latest version of Multiphan
<b>Ultraphan</b> (Trinity)	£199.00	128K	Multiphan templates - comprehensive and easy budgeting with range of management aids specifically designed for use with Multiphan spreadsheet.
<b>Chart</b> (Microsoft)	£145.00	128K	Generates and annotates bar, line, pie and area charts in any combination. Also generates statistical analyses to plot own data.
<b>Statworks</b> (Hayden)	£140.00	128K	Statistical software package. Capabilities include full range of descriptive stats and non parametric tests, t-tests, normality tests and sample distribution comparison.
<b>TKSolver</b> (Software Arts)	£190.00	128K	Equation processor which can solve virtually any mathematical problem.
<b>TKSolverpack - Construction</b> (Software Arts)	£42.60	128K	Designed for use with TKSolver within the construction industry.
<b>TKSolverpack - Engineering</b> (Software Arts)	£42.60	128K	Designed for use with TKSolver within the engineering industry.
<b>TKSolverpack - Financial Management</b> (Software Arts)	£42.60	128K	Designed for use with TKSolver as an aid to Financial Management.
<b>TKSolverpack - Introducing Science</b> (Software Arts)	£42.60	128K	Designed for use with TKSolver.

## TRAINING/EDUCATION

<b>Communication Edge</b> (Human Edge)	£178.00	128K	Helps deal effectively with important meetings, conversations etc. Presents you with a series of questions to assess communication style, etc.
<b>MacCoach</b> (ATI)	£62.95	128K	Interactive tutorial for new users of the Macintosh. Within a short time students will have a basic understanding of Macintosh systems.
<b>MacEdge</b> (Think Educational)	£43.10	128K	Educational package designed to enhance children's mathematical and reading skills from primary level upwards.
<b>MacType</b> (Palantir)	£49.95	128K	Touch typing tutorial program - combines time-honoured teaching techniques including built-in metronome and actual practice typing words and phrases.
<b>Management Edge</b> (Human Edge)	£229.00	128K	Offers user specific advice tailored to match their personality. Produces a detailed 3 to 10 page analysis with recommendations and strategies.
<b>MasterType</b> (Scarborough Systems)	£42.15	128K	Instructional typing games including basic game for beginners and advanced games for more experienced typists. 18 separate levels of proficiency.
<b>MathFlash</b> (Palantir)	£49.95	128K	Mathematical flashcards - adjusted according to skill level. 3-dimensional pictures of stack of cards that flip up. Child keys in number, or points to number on screen.
<b>Mind Over Mac</b> (Think Educational)	£43.10	128K	Package of mind-challenging games for all ages - designed for creative people who like to explore new ideas.
<b>Negotiation Edge</b> (Human Edge)	£270.00	128K	Figures out how user can be in best possible position after negotiation. For people who would like to develop or improve negotiation skills.
<b>Sales Edge</b> (Human Edge)	£229.00	128K	Helps salespeople increase closing ratios and improve relationships - assists in developing and improving selling abilities.
<b>Typing Tutor</b> (Simon & Schuster)	£50.60	128K	Keyboard instruction - series of typing lessons and tests, designed to increase typing efficiency.
<b>Word Challenge</b> (Hayden Software)	£39.95	128K	

If you would like to modify or add to the information contained in the Apple Macintosh Software Selector, please fill out the coupon below and send it to: SOFTWARE BUSINESS UNIT, APPLE COMPUTER (UK) LIMITED, EASTMAN WAY, HEMEL HEMPSTEAD, HERTS HP2 7HQ.

NAME ..... COMPANY .....

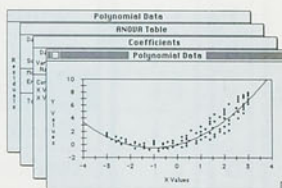
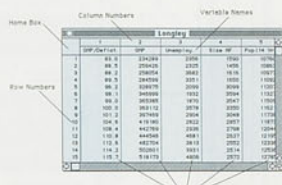
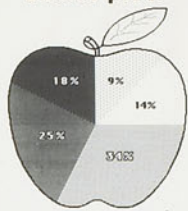
ADDRESS .....

..... TEL NO .....

PRODUCT NAME .....

DETAILS TO AMEND/ADD .....

Apples make better pies.



### Statworks - Hayden

Statworks includes a range of descriptive statistics and non-parametric tests. T-tests, normality tests and sample distribution comparisons. All calculations are made with 80-bit precision. Regression analysis can be performed on the program using simple multiple and polynomial regression. Statworks allows two- and three-dimensional histograms and scatter plots as well as box and whisker plots.

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# Macintosh TOP **20** CHART

## BUSINESS SOFTWARE

Position	Package	Application
<input type="checkbox"/> This Month <input type="checkbox"/> Last Month	Title Publisher	Program Description

1	1	<b>Multiplan</b> • Microsoft	Calculating
2	3	<b>MacTerminal</b> • Apple	Communicating
3	2	<b>Chart</b> • Microsoft	Charting
4	7	<b>Word</b> • Microsoft	Writing
5	8	<b>MacProject</b> • Apple	Scheduling
6	6	<b>MBASIC</b> • Microsoft	Programming
7	4	<b>Filevision</b> • Telos	Visual Filing
8	5	<b>Omnis</b> • Blyth Software	Filing
9	10	<b>MacPascal</b> • Apple	Programming
9	9	<b>PFS: File</b> • Software Publishing	Filing
11	11	<b>Ormbeta Compact</b> • Eurobeta	Accounting
12	12	<b>File</b> • Microsoft	Filing
13		<b>MacDraw</b> • Apple	Graphics Editing
14	15	<b>Helix</b> • Odesta	Relational Data Base
15	14	<b>PFS: Report</b> • Software Publishing	Reporting
16	19	<b>Microplanner</b> • Micro Planning Systems	Project Management
16	17	<b>DBSPay</b> • Deverill	Payroll
18	12	<b>TK! Solver</b> • Software Arts	Equation Processor
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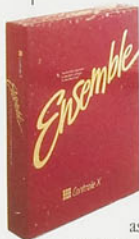


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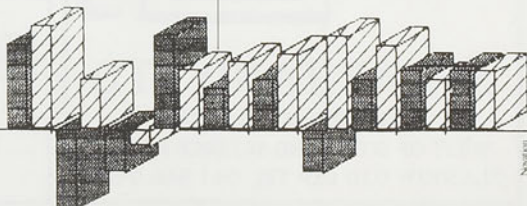
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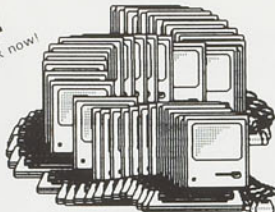
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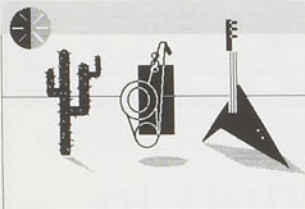
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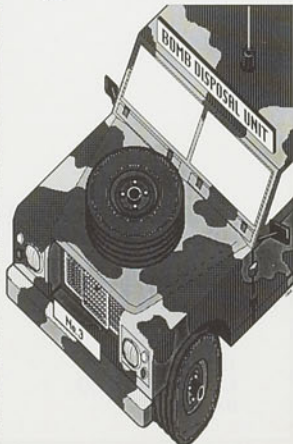
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**Andy Martin** Specialising in illustrative design for magazines, books and, more recently, furniture, Andy is a self-confessed Luddite as far as computers go... except for the Macintosh. Introduced to the Mac by French illustrator Frederic Voisin, the conversion was immediate. And, to the frustration of his pet dog McGill, Andy now finds the Macintosh 'Man's best friend'.



**Ian McKinnell** After five years of art college, specialising in Fine Art, Ian became a freelance photographer contributing to a wealth of consumer magazines. Ian became the first Mac owner in the UK by hijacking an American demo machine on the way to its dealer destination, and has since become a fanatical 'mouseketeer'. Ian is currently writing a book on the Macintosh's drawing capabilities and, with programming guru Andrew Pennell, working on a software package for the Mac.



**Colin Buckley** From technical college to industry, Colin was soon drawn by the calling of the paintbrush and spent over 12 years making his living from his paintings alone. Returning to industry on the sales side, Colin joined Micro Core as Sales Manager for the Macintosh Pixel Artist system. Colin now paints with a mouse in 16.7 million colours!



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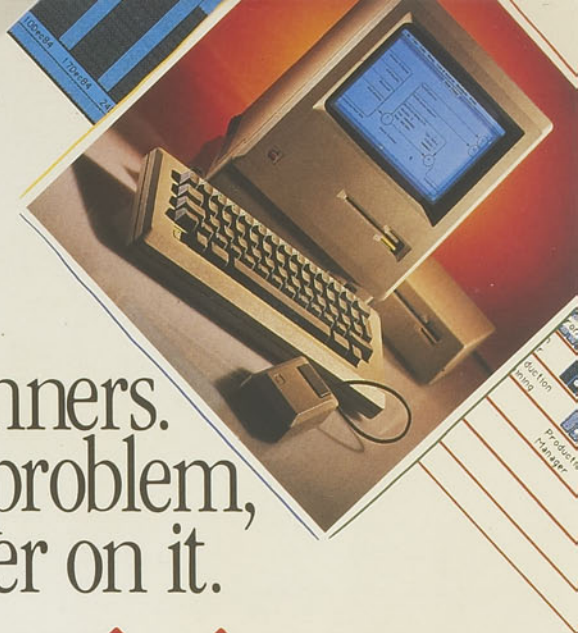
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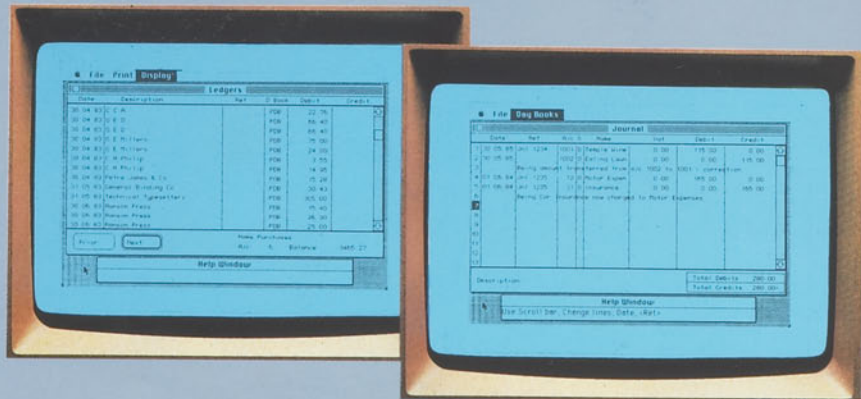
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