



# AppleUser

A Database Publication

Vol. 8 No. 4 April 1988 £1.50

Managing without  
a hard drive

Desktop publishing:  
Learn yourself Scouse

Modifying the dates  
in AppleWorks

Plotter programming:  
Arcs, lines and boxes

## REVIEWS

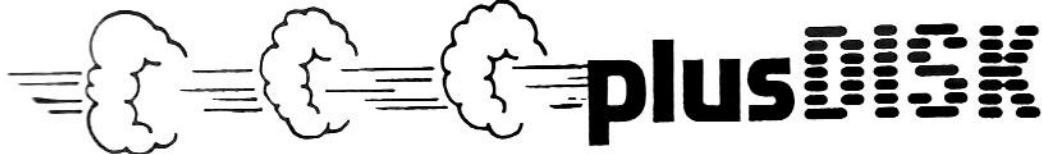
- dBase Mac
- Terpsichore
- PlusDISK
- MacLab
- Timeout Desktop
- Astra
- True Basic
- Create A Calendar  
+ all the latest  
games for the  
Apple II and Mac



**FOCAL POINT:**  
*Organise your  
desktop the  
HyperCard way*

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plusDISK is a *MAJOR breakthrough* in storage technology, combining the *lightning performance* of a RAMDisk with the *convenience* of a hard disk! **No other storage device can match the sheer speed of plusDISK (over 20,000 times faster than a hard disk).** It has no moving parts, makes no noise and plugs straight into any standard slot in a II+, //e or IIGS.

### CHECK OUT THE PERFORMANCE:

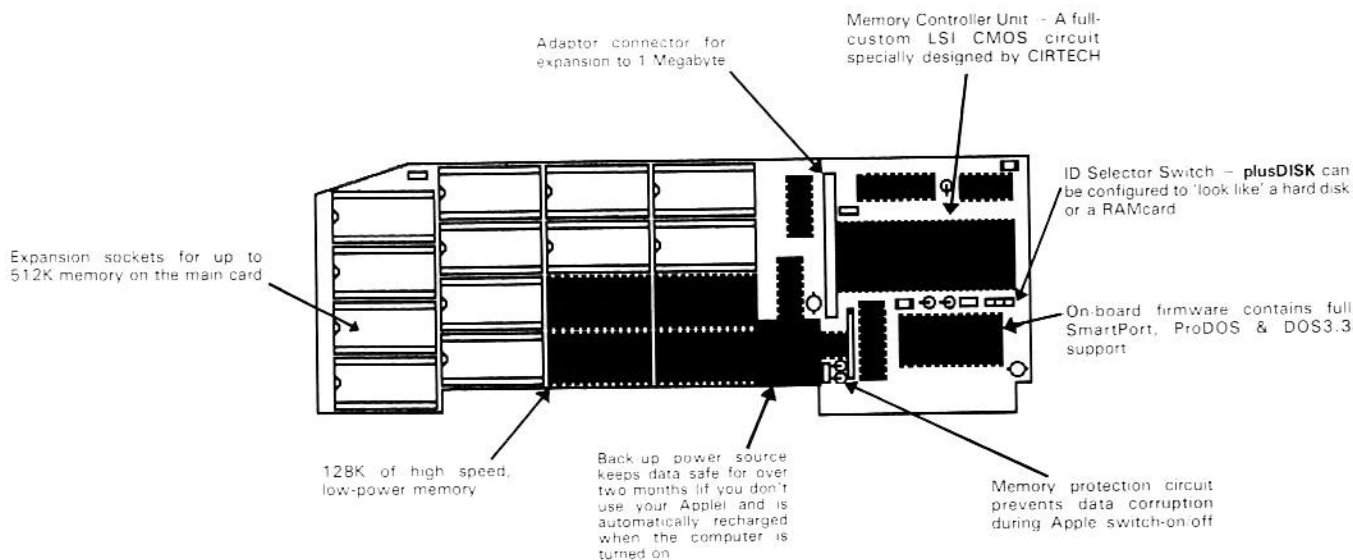
(times in mSecs)	Disk//	3.5 Disk	SCSI HardDisk	plusDISK
Maximum access time	1130	445	320	0.001
Average access time	490	270	90	0.001
Maximum data transfer rate (Kbytes/second)	62.5	31.25	530	1023

### SOME PRACTICAL EXAMPLES:

(times in Secs)	Disk//	3.5 Disk	SCSI HardDisk	plusDISK
Switch-on to AppleWorks	12.9	9.2	12.3	1.0
Load 147K AppleWorks File	73.0	55.0	31.6	24.8
Save 147K Appleworks File	79.0	58.0	26.5	17.2
Switch-on to MouseDesk	29.3	28.0	18.5	3.6
115K File Copy	111.0	93.0	32.7	11.0

(tested on //e using 192K plusDisk)

plusDISK comes fitted with 128K of superfast, low-power permanent storage memory and is easily expandable to 512K on the base card, and up to 1 Megabyte with an add-on Adaptor. It is 100% compatible with *all* standard Apple operating systems and programs (ProDOS, ProDOS16, Pascal, CP/M, DOS3.3, AppleWorks, etc.) and can even be used by AppleWorks for desktop expansion!



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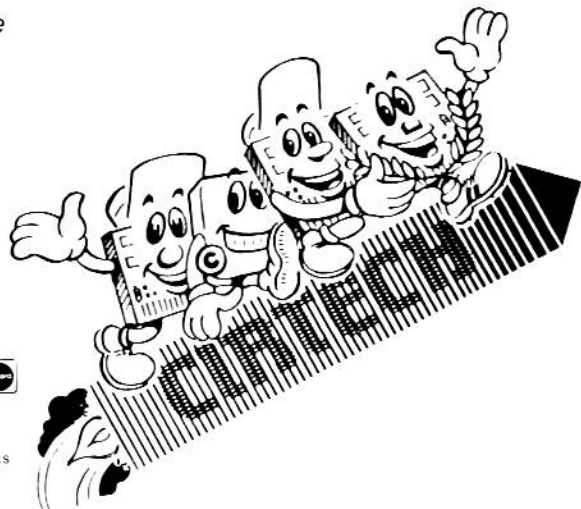
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plusDISK costs less than an ordinary disk drive!

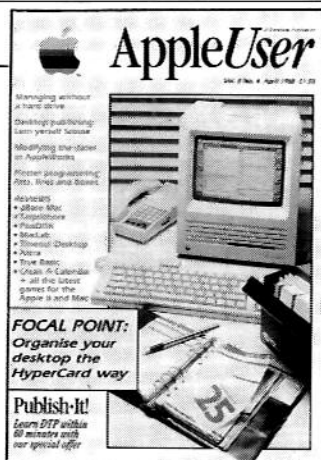
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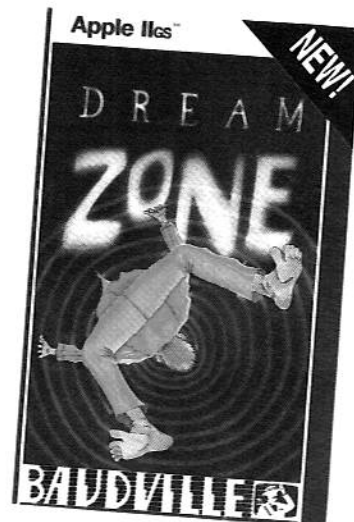
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Link your Apple II or Mac to the outside world with...

# MicroLink



**Electronic mail** – The cheapest and fastest form of communication possible. It costs the same to send a message to one mailbox as to 500!



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**Radiopaging** – If you also have a pocket radiopager you'll be alerted each time an urgent message arrives in your mailbox. So you're always in touch.



**Gateways** – Get through to New York in just five seconds – or key into the EEC computer in Luxembourg, which links you to 600 databases throughout Europe.

When you join MicroLink you've got the whole business world at your fingertips – 24 hours a day. You'll have immediate access to ALL the facilities offered by Telecom Gold ... and a great deal more besides.

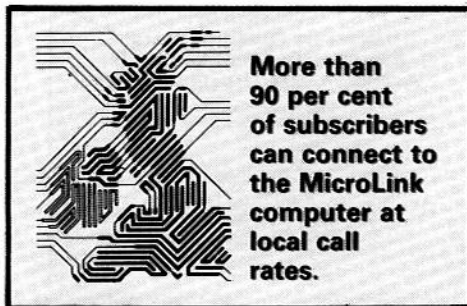


All you need – apart from your Apple – is a modem, which plugs into your telephone wall socket, plus suitable communications software.

We have provided a list of possible combinations below, ranging from the very cheapest to ones which can automatically dial the MicroLink telephone number and connect you to the service – all you have to do is type in your personal security password.

Whichever equipment you use, you will be able to call MicroLink, open your mailbox, save to disc any messages waiting for you, and disconnect in as little as two minutes.

POSSIBLE PACKAGES	
Apple II range	
A	<i>Pace: Nightingale + Serial/Parallel card + Data Highway software (£218.15)</i>
B	<i>Miracle: WS2000 + serial interface + Vicom software (£238.65)</i>
C	<i>Pace: Linnet + Serial/Parallel card + Data Highway software (£275)</i>
D	<i>Miracle: WS4000 + serial interface + Vicom software (£299.90)</i>
Apple Macintosh	
E	<i>Miracle: WS4000 + Vicom software (£339.95)</i>



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## Pirate software alert

**APPLE users are being warned to watch out for a new wave of pirate software from the Far East.**

**Catalogues offering business software at rock bottom prices have been mailed to UK computer owners from Singapore.**

**Nearly 1,000 of the world's top-selling packages for Apple and IBM PC machines are listed in the brochures as "second hand goods".**

**In reality they are pirate copies and the Federation Against Software Theft is watching the situation closely.**

**Spokesman Bob Hay said: "The man behind the operation is known to us as Lee Chong whose offices we raided some months ago.**

**"It now appears that he's opened up again around the corner".**

## Macs in Whitehall?

BOB Harris, chairman of the AppleCentre in West London, believes 1988 could be the year for a Macintosh breakthrough into Whitehall.

"Governments all over the world now realise that Macintosh computers are easy to learn and powerful to use", he said. "Orders have significantly increased in the UK as a result".

To maintain the momentum, Harris sponsored a seminar for government computer users and procurement officials at his AppleCentre.

Areas covered were desktop publishing, connectivity and personal productivity.

"We particularly asked representatives of small systems groups to attend", said Harris. "The event was an opportunity to find out how Apple can contribute to their efficiency with impressive results".

# Apple releases its compact disc rom

APPLE UK has announced the release of its first compact disc, read-only memory (CD-Rom) unit for the Apple IIe, IIgs and Macintosh computers. In addition to being a data retrieval system, the drive is also capable of playing standard audio compact discs.

To be known as the Apple CD-SC, it can store up to 550Mb of diverse types of data, including text, graphics, sound and video images, and is expected to meet the growing needs of customers in business, education and the service sector.

To date, publishers have used the tremendous storage capacity of CD-Roms for reference materi-

als such as encyclopedias and specialised databases. By making a drive readily available through its dealer network, and supporting third party developers, Apple says it expects to stimulate the publication of a much wider variety of CD-Rom products.

To facilitate the development of new titles the drive is compatible with the International Standards Organisation's file format - High Sierra.

The drive itself features a 64k memory buffer and a Small Computer Standard Interface (SCSI) that enables it to transfer data more quickly, and an audio chip set desk accessory software that

allows commercial audio compact discs to be played.

Connection to the Macintosh Plus and SE is via the SCSI: The Apple SCSI card is required for connection to the IIe and IIgs.

The company expects the drive to be widely used in education where databases, including text, images and sound offer a rich learning environment for students.

Larger companies could use the device for producing manuals, catalogues, and reference materials.

The Apple CD-SC is expected to be available from June. Price £895.

## Mix it with video

*A COLOUR video card for the Mac II, developed entirely in the UK, is now available from Computers Unlimited (01-200 8282).*

*Colourspace II enables live video signals from camera or VTR to be mixed with graphics and images on the Macintosh screen, then output as a broadcast quality signal which can be recorded on any video equipment.*

*Output from the card can be genlocked to any external RGB or composite video source,*

*ensuring its suitability for professional television and other broadcast applications.*

*Colourspace II is also a full 24 bit colour frame grabber/digitiser, capturing hi-res images in as little as 0.3 seconds. These can then be enhanced, edited and manipulated in any Mac II graphics program.*

*These images can be mixed with live signals, integrated in DTP systems, or incorporated in desktop presentations or other applications.*

## DTP system for education

IN response to the demand for a complete solution for school administration and teacher productivity, Apple is offering a complete DTP system to educational establishments.

The intention is to provide schools with an insight into the power of the Macintosh as a tool for both DTP and broad-based curriculum activities, such as preparing course-related materials and student records.

"Apple is the worldwide leader in desktop publishing, and the

recent introduction of our new range of LaserWriter II printers has increased this lead in price and performance terms", said Keith Phillips, managing director of Apple UK.

"These desktop publishing systems offer enormous benefits to schools in the production of high quality, low cost materials".

The system comprises a Mac Plus with 20Mb hard drive and a choice of Apple's LaserWriter IISC

## Unix on Mac II

A MARRIAGE of Unix power and Mac user-friendliness has been achieved with Apple's launch of A/UX, its implementation of the Unix operating system for the Macintosh II.

Unix is already popular with technical, computer-sophisticated users such as large corporations in the engineering environment, and A/UX will spread its benefits wider.

A/UX enhances the Macintosh II's role as a full-function workstation. Users now have access to more than 3,000 Macintosh applications, plus new A/UX applications for tasks such as relational database management - all from the same system.

"Apple's creation of A/UX has been driven by requests from our customers in government, higher education and other channels", said Keith Phillips, managing director of Apple UK.

"It illustrates our commitment to important standards, and to helping our customers get the most out of their multi-vendor environments."

A/UX requires a Macintosh II with 80Mb hard disc, an additional 4Mb of ram and a page memory management unit chip.

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## CUT PRICE UPGRADES

OWNERS of 128k and 512k Macs aren't being ignored by Apple – which has just launched a programme allowing upgrades to a Macintosh Plus at less than half the normal price.

"The upgrade programme is designed to allow users of our first Macintosh products to expand their systems and harness the latest developments", said Apple product marketing manager Chris Calvert.

For £450, Mac owners can get a full upgrade to the Mac Plus, together with HyperCard and the latest system software.

Owners of 512k/800 systems who already have the 800k drive will be able to buy the Macintosh Plus logic board for £305.

The kits will be available from all Apple dealers from April, and the programme will run until August – after which time the upgrade will be discontinued.

## Micro fun

THE famed Hospital for Sick Children, London, will benefit from a project by Digitus.

The firm is compiling a book of humorous stories about the computer industry and royalties from sales will go to the Great Ormond Street hospital.

Digitus (01-251 1010) is inviting Apple users to contribute their anecdotes to the book.

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or IINT.

And bundled with the hardware is a full suite of software – Ready Set Go! 4, Microsoft Works, SuperPaint and HyperCard.

Of special interest to schools, a cable and conversion software are also included to allow BBC-based text files to be imported to the Macintosh, automatically reformatted and ready for use.

Apple anticipates that HyperCard in particular will play a significant role in establishing the Macintosh as a teaching and learning tool in the classroom.

"Acceptance of the Macintosh's ease of use and graphics has been very strong in universities and polytechnics around the country over the past two years", said Keith Phillips.

"The time is now right to

## Comms sales up

**COMPUTER industry monitoring service Romtec reports that modems and communications software sales are on the increase.**

**Its latest survey shows an eight per cent rise in overall modem sales.**

**Value of all modems sold increased by 12 per cent.**

**Romtec says the average price of all modems sold rose by four per cent – the cost of external modems falling and that of internal modems rising.**

**Modems equipped for 1200 baud continue to dominate the market in terms of both value and unit sales.**

## New entertainments label for Apple

A MAJOR international publisher has joined forces with a new software house to launch an exclusive entertainments label for the Apple.

To be known as Mandarin, it will combine the marketing muscle of the Europress Group, parent company of Database Publications, in a series of joint ventures with the UK's top programming teams.

The first title to be released by Mandarin is adventure trilogy Time And Magik from Level 9.

"We believe that Level 9's programming skills, together with Mandarin's knowledge of the marketplace, abilities in printing,

and its understanding of the need to get products out on time, will be an unbeatable combination", says Pete Austin of Level 9.

Mandarin's involvement with the innovative games software house is the first of a series of joint ventures.

"We find ourselves in the position that, unlike many other publishers, we don't have to rush out titles to maintain cash flow", says Chris Payne, spokesman for the new venture.

"Mandarin couldn't be more sound financially – we have £1 million in the kitty – so we are in a superb position to be able to pick and choose not only our partners, but also just what products we decide to release.

"It is our aim that our label will become synonymous with quality, providing the Rolls Royce of software games for the Apple. And what better way to start than with Level 9?"

The first game to be released, Time And Magik, has up to 60,000 words of text, 700 locations, and a 10,000 word book containing detailed play guide and short story.

To help players who get bogged down with the intricacies of the game, Level 9 is to provide comprehensive clue sheets free of charge. Price £14.95 (Apple II), £19.95 (Macintosh).

## Software for the surveyor

A NEW suite of Macintosh software for professional quantity surveyors, estimators and construction companies has been developed by Team User Systems (0206 575124).

MacQS is claimed to be the first comprehensive application software for this area, taking full advantage of the Mac's user-friendliness and low training requirement.

The system consists of three linked packages – MacQS Professional, Estimator and Post Contract – and each is used at different stages in bill of quantity and plan and spec jobs.

The whole system is portable to enable the quantity surveyor to carry out valuations on site, with the screen acting as a notepad into which data can be entered in any form in the surveyor's usual shorthand.

Price: £2012.50 per module.

## Linking to a mini

A NEW product from Blyth Software – the Omnis SQL Connectivity Pack – is being promoted as a complete Macintosh-to-minicomputer relational database solution.

Claimed to provide true application level connectivity, it will also give Mac users access to the data processing power of most popular mini database management systems.

"With the Macintosh now being accepted as a serious business machine, it becomes critical for software companies to provide flexible access to the mass of data stored on mini and mainframe computers", said Paul Wright, managing director of Blyth Software (0728 3011).

The pack supports the leading Vax data management systems, as well as Vax "flat files" generated by Cobol and Fortran applications.

## Braille disc labels

*AN American manufacturer is producing braille disc labels for sight-impaired computer users. Brown Disc (0101 303 593 1015) also supplies a kit from which braille labels can be made.*

# Fresh fields

**Peter Gorry looks at a powerful implementation of dBase for the Mac**

dBASE Mac from Ashton-Tate was becoming the Flying Dutchman of the database world – shrouded in rumour and destined to appear at brief intervals only to disappear again. This time it's here to stay.

Considering that dBase II was the "industry standard" relational database on the Apple II and early CP/M machines, and dBase III has become the same for the IBM, it has taken Ashton-Tate a long time to produce something for the Macintosh and the competition in the "power user" league is fierce, with products such as Omnis III, Double Helix and Fourth Dimension already on the market.

dBase Mac comes on three 800k discs and one 400k (tutorial) disc. It also has five manuals although only two – Learning dBase Mac and Using dBase Mac – are of a significant size. The other manuals cover installation, exchanging files and a third comparing the techniques of dBase Mac and dBase III Plus. You also get a somewhat garish fold-out Quick-Reference wall chart, and an extensive online help facility is provided.

Overall the amount of documentation is refreshingly small for such a comprehensive package. Any one who has seen – or weighed – the dBase III Plus manuals will know what I mean. There is also an additional book and disc containing application templates which is sent when you return the registration card.

Installation of dBase Mac is simple but it

does require a hard disc and either a Mac Plus, Mac SE or Mac II. If you have a colour monitor dBase Mac can display fields, text, pictures, borders and backgrounds in six colours. In addition, on the Mac SE or Mac II it will support a 68881 maths coprocessor.

You also need System 4.1 and Finder 5.5 (or later) to run it. dBase Mac does not support multiple users using the same files at the same time, but can access files on Appleshare.

## Sensible protection

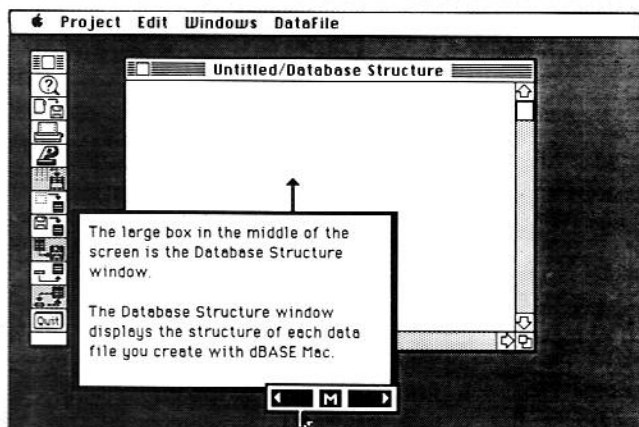
dBase Mac is not copy protected – but the first time it is run it asks for information to personally identify the copy. This information – user name, company name, and serial number – is added to the dBase Mac application and displayed each time dBase Mac is opened. This is a sensible approach to copy protection and vastly superior to

schemes which require insertion of master discs each time.

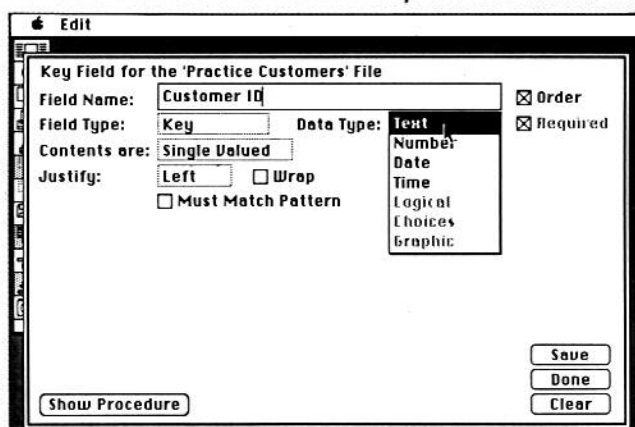
For those who have never seen a database before there is the interactive tutorial, which operates in much the same vein as the Guided Tour disc you get with the Macintosh. For some reason this will not run on a Mac II – perhaps if you can afford one of these you don't need a tutorial!

The tutorial introduces some basic concepts about databases in general and dBase Mac in particular, using a very simple pet-shop stock list. This demonstration can be gone through in just a few minutes if you have some familiarity with databases, and even complete novices will manage quite quickly.

The real learning starts with the Learning dBase Mac manual which contains seven sessions dealing with different aspects of the program. The manual is clearly written and nicely illustrated but in some ways it seems a little too slim to explore such a

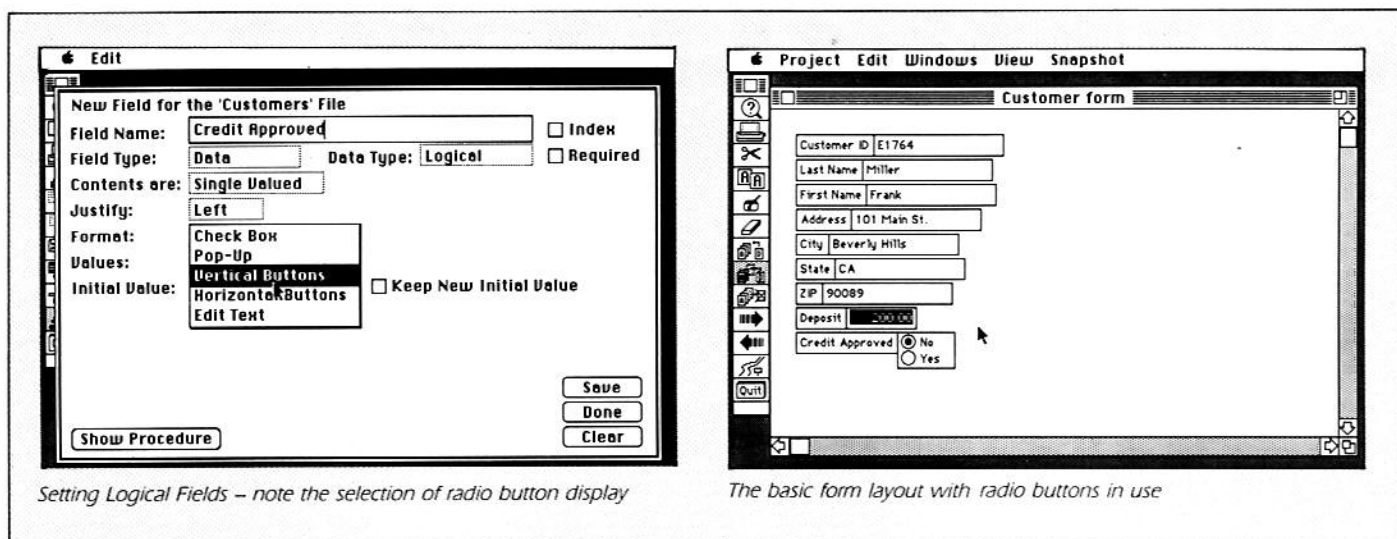


Using the on-disc tutorial



Selecting a field type – note the use of a pop-up menu





Setting Logical Fields – note the selection of radio button display

The basic form layout with radio buttons in use

powerful package, even at the initial learning stage. You get the feeling that there's a lot more going on than you are being shown, but perhaps this is just because I'm so used to much heavier documentation with other packages.

After a brief introduction to terms such as records, fields and files, it defines a few terms that are not universally used. When dBase Mac is started it opens a Database Structure Window. This shows all the files in the database, the fields they contain and any relations between the files.

By the side of this window is a palette containing icons to perform various options such as Open File, Add Field and so on. Generally this palette just gives alternative ways of issuing commands that exist in the menu bar. The palette contents change depending on what options are available for the particular task at hand. Entering, changing, displaying and moving files in the database requires use of Display Views or transfer views. You can have many "views" into the same database, and they can take many different forms.

## Organising projects

Finally a Project File contains the Database Structure window and the views you've created. The project does not contain the actual data files, but only a record of the files and views making up the database. Several projects can share all, or some, of the same datafiles so you can organise projects to cover different aspects of the problem at hand. Normally you would start up dBase Mac by double-clicking the desired project icon.

The sessions are centred round the construction and operation of a multiple-file database to handle a video rental business and you start off by creating a file of customer names, addresses and phone numbers. I know this is the most useful and obvious starting point, but I long one day to find a database package manual which starts off with something different.

A new file is created simply by selecting New under the DataFile menu from the

DataBase Structure Window. This allows the creation of a new dBase Mac file or a "foreign" file type, the latter being used for exchanging files with other programs.

dBase Mac files are first given a name and optional password and the program offers considerable protection facilities to prevent unauthorised access to part or all of the database. A field definition window appears successively for each field you want in the file.

## Field work

The first field you create is the Key field, which must uniquely define the record. Since names are not generally sufficient for this a Customer ID number is used instead. The field type must then be defined.

Here we meet one of the features I most liked about dBase Mac – the use of pop-up (or pop-down) menus. Clicking on the Data Type entry box drops a menu, associated with that entry, containing the various options such as text, numbers, logical and so on. Text fields are automatically of variable length (up to 255 characters) so you don't have to make difficult decisions about the length you need.

In addition fields can be multivalued, graphical or choice – although these aren't

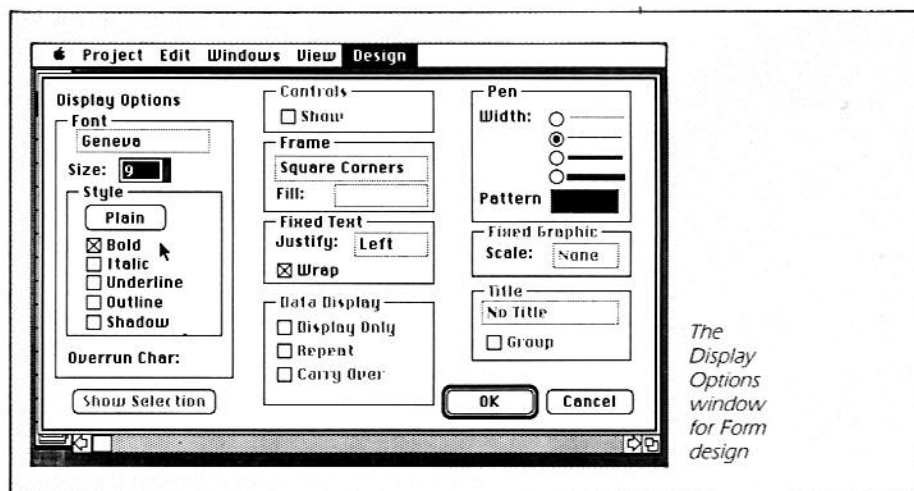
dealt with in the early stages. You can also set a number of parameters for the field, such as whether it should be indexed, whether it can be left empty or must be filled in, whether it has a default value – in fact there is an amazing amount that you can demand at data entry and I'll return to the more complex items later.

A particularly useful option is the ability to demand that the input conform to a set pattern. Letters are represented by a (alpha characters) and numbers by n. For instance an American zip code contains five numbers so you can set a pattern for a zip code field of 5n. Putting a ~ before a symbol means that the symbol is optional, for example ~(3n~) would set a pattern of three numbers, which could optionally be entered with parentheses.

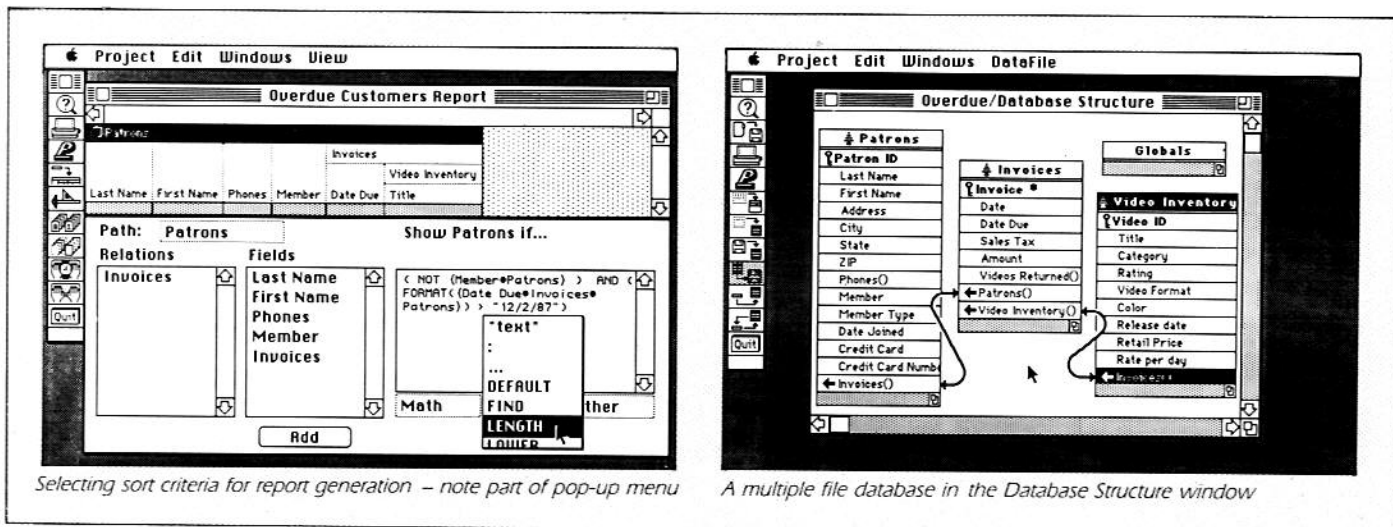
In fact the pattern options are quite extensive and you can set a number of different patterns to allow for variations, such as you would need for UK STD codes, and dBase Mac will search the pattern list for a match.

Another nice touch is with the display of Logical Fields. Since these can have only two values – YES/NO, TRUE/FALSE, +/- or whatever – dBase Mac lets you display these as check boxes or radio buttons next

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The Display Options window for Form design



Selecting sort criteria for report generation – note part of pop-up menu

A multiple file database in the Database Structure window

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to the field name. You can also customise what text appears by the buttons.

Upon completing the field definitions the new file structure is saved to disc. dBase Mac requests an estimate of the size (number of records) for the new database – a little superfluous since the file can grow bigger than this number without any problems.

Back in the Database Structure Window you can see the file structure displayed as a box containing the fields you have defined. The box can be dragged and resized like any Macdraw object and the field order can be changed simply by dragging the field name to a new position. You can also add, delete and change fields very simply using the palette or menu commands.

Entering data into a file requires the creation of a Display View. These can range from a basic list of the field names with entry boxes next to them, to very sophisticated, custom designed forms that can mimic actual documentation used by a business and contain a host of graphical, help, checking and security functions. Selecting New View under the Windows menu brings up the creation window: The Quick Create option is all that's needed for a basic form.

Once created, data entry simply involves typing in the appropriate box and Tabbing to the next field – or using the mouse. You can of course edit entries in the usual Mac fashion. The data for the current record is only entered into the database when you press Enter. If you go to the Next or Prior record without pressing Enter you lose what was just typed in – a little warning here might be nice!

One problem I experienced early on was with a field for which I had set a pattern. Unfortunately I had mistyped when setting the pattern initially and at the data entry stage dBase kept rejecting my input because it didn't match the pattern. There seemed no way of getting it to tell me what it was expecting: The only way round this was to quit and edit the field definition – inconvenient when you have just forgotten the pattern allowed.

The heart of a good database is its report generating facilities, since it is these that are used to display and collate information in a form useful to the user. The variety and complexity offered by dBase in this area can be quite overwhelming at first, but the session in Learning dBase Mac devoted to creating your first report provides a clear and precise introduction.

Reports are just views into the database so they are created by the New View option as before. Choosing the Columnar Layout in the creation window, and ignoring the Quick Create, allows the report hierarchy to be defined.

### Hierarchy definition

In its simplest form this is just the list of fields you want to appear in the report. The field names then appear as column headings in the report. You can also set which columns should be displayed with totals and sub-totals: With multiple-file databases the hierarchy definition becomes much more sophisticated.

Once the hierarchy is defined the exact layout of the report can be defined via the Layout View option. This is a very powerful form design facility that is very simple to use. It allows resizing and repositioning of columns with simple dragging actions. Reports can be larger than the screen and vertical and horizontal scrolling are

supported. In addition you can add fixed display items to the drawing area of the report.

These can include lines, boxes, text, pictures and special functions such as the date, time and page numbers. Again these can be moved, resized and edited much like Macdraw objects. You can also change fonts and styles of individual items using Display Options. This brings up an impressive window containing the options available and most of the boxes turn into pop-up menus when selected to produce a truly massive range of formatting/layout options.

These include borders, line widths, patterns and graphics as well as the usual font size/type choices. In fact the hierarchy/Layout View combination is not limited to reports but can be used to define the layout of any form.

Having settled on the report layout you select the Perform And Use View option to put it into operation, which produces a screen view of the report. Two things that should be mentioned here: It is very slow, and the totals and date/time values are NOT displayed on the screen – they only appear when the report is printed.

I can only assume that the latter "feature" is to save time on all the totalling calculation when the screen is scrolled although scrolling is slow enough on a Mac Plus to render it academic anyway. Even on the SE

## AppleUpdate

### More fonts for the Apple IIGs

A COLLECTION of 90 new font files in 40 different font families is now available for the IIGs from Styleware.

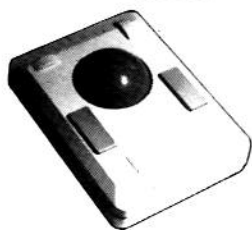
Font Library offers decorative, border and multi-colour fonts in addition to NLO type styles for business use.

The fonts are compatible with all standard IIGs-specific software, including MultiScribe, TopDraw, PaintWorks Plus and Deleuxe Paint II.

Product: Font Library  
Price: £19.95  
Requirements: Apple IIGs  
Supplier: StyleWare/MGA MicroSystems,  
Pear Tree, Appledore, Kent TN26 2AR.  
Tel: 0233 83571



# UPGRADE!



## ■ MAC TURBO TOUCH

Finally a mouse that's really quick. One that doesn't require a lot of room on your desk. One that's easy to use, even on a desk full of papers.

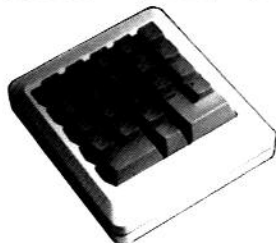
Turbo touch from Matrix North turns mouse technology upside down. It puts the mouse ball on the top rather than on the bottom like a standard mouse. You move only the mouse ball, not the whole mouse. That's why Turbo Touch is quicker, quieter and easier to use.

Turbo Touch doesn't get its speed only from its ease of use. It has an automatic acceleration feature that senses the speed at which you are working and moves the cursor further when you move the ball faster.

For Macintosh, Mac Plus, Apple IIe or IIc ask for model A2350.

For Macintosh SE, Mac II or Apple IIGS ask for model A2352.

**U.K. Price £84.00 +VAT**



## ■ NUMERIC EASE

Now you can cut your data input time in half! With a 22-key full scale, full function numeric keypad.

The Numeric Ease includes cursor keys and direct function keys, so that you no longer have to use the control or Shift key on the Macintosh keyboard for function entry.

The Numeric Ease also boasts an equals key not found on the Apple Keypad. The equals key is the answer to easy entering of formulas or working on accounting spread sheets.

**U.K. Price £41.00 + VAT**



## ■ NUMERIC TURBO

Upgrade your 512/128k keyboard to equal that of the Mac-Plus with the added convenience of a track-ball.

The Numeric Turbo combines the Turbo Touch and the Numeric Ease in the same housing to form a new high-speed input device.

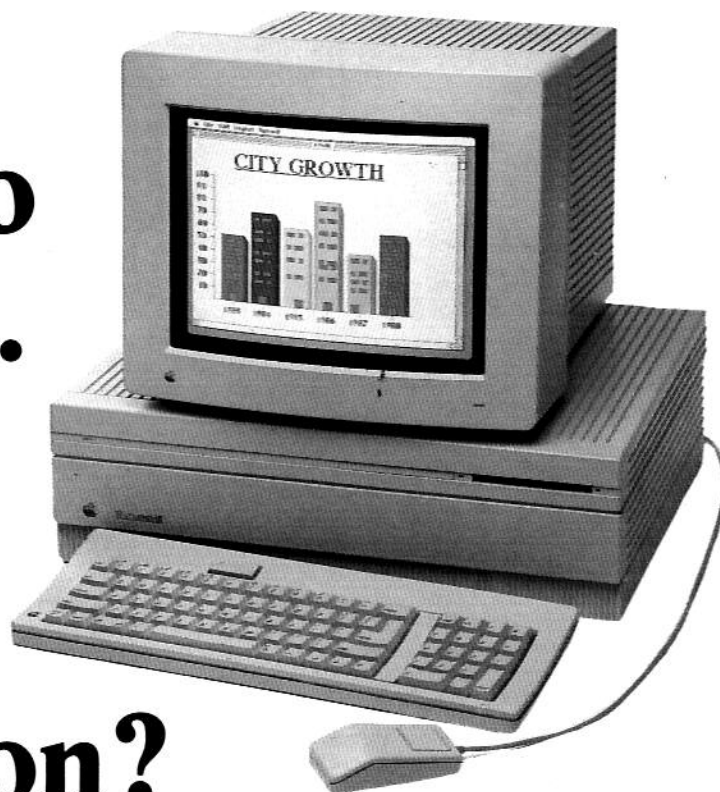
Your Numeric Turbo will increase data entry speed by up to 50% compared to a conventional mouse and Apple keypad.

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# Matrix North

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# Apple Mac Graphics into 35mm Slides.



# Fact or Fiction?



# NEWS...NI

## Busiest bulletin board

MICROLINK is celebrating another important milestone.

Its bulletin board – the UK's biggest and busiest – has just carried its 20,000th message.

And this comes only six months after passing the 10,000 mark within a year of the board starting up in 1986.

"The fact that our second 10,000 was achieved in half the time of the first is an indication of how Britain's computer communications enthusiasts have taken to it", said MicroLink's sales manager, Mike Hayes.

"And it's further proof that MicroLink now operates the brightest and busiest bulletin board in Britain!"

## THE BRIGHT MUG

IN response to demands from users, a MicroLink User Group has been formed.

Run by independent MicroLink subscribers, MUG hopes to provide a forum for users to share information and ideas.

It will also provide an ideal medium for subscribers to make their views and complaints about the service known to MicroLink itself.

As everyone in MUG has been a new user themselves at some point, comms for beginners will be a major area of help and advice.

# Modem move cuts the cost of comms

**MICROLINK is launching its own range of modems in a dramatic move to drastically reduce the cost of computer communications.**

Among the first of the price-busting packages will be two for Macintosh owners.

MicroLink aims to demystify the process of going online by including with each modem easy-to-use communication and word processing software specially tailored for the specific machine.

In the case of the Macintosh this means a comprehensive software package including text editing and macro key facilities, choice between auto-dial or re-dial, file transfer protocols and xmodem and Kermit protocols.

The MicroLink dual-speed modem offers two operating speeds – 12/75 and 300 baud. Together with lead and software it costs £99.

The top-of-the-range MicroLink multi-speed modem includes the faster 1200/1200 baud. It is fully Hayes-compatible and in addition offers many sophisticated functions such as auto-answer and auto-dial. Also with lead and software, it costs £169.

A unique feature of both packs is that purchasers will be entitled to one month's

unlimited use of Britain's most popular electronic mail service, Telecom Gold.

They will be given free registration on MicroLink/Telecom Gold, allocated their own Telecom Gold mailbox and allowed one month's free connect time to the service.

"This is not just a demo mailbox as on Prestel, which is restricted to demonstrating what is available, but a personal, password-protected mailbox which can be used for sending and receiving messages via electronic mail and directly accessing a host

of other services", said MicroLink head Derek Meakin.

"This is the first time free access has ever been offered to a public Email service. But we feel it is only right that newcomers to communications should be encouraged to freely explore this vast database at their leisure and find out all the exciting things it contains.

"The intention is that you have everything you need in one pack – it's all part of our aim to simplify communications for everyone".

## Email drive into Europe

*ONE of the next MicroLink developments will be to persuade our partners in the European Community to participate in the benefits of British Email – starting with France, Germany, Holland and Belgium.*

*Each country has one or more special nodes charged at low rates. It can be almost as cheap for people in these countries to access MicroLink as to use their own national networks.*

*This means that a MicroLink user visiting France, Germany, Holland or Belgium can be in touch with his*

*MicroLink mailbox without incurring the cost of an international call.*

*MicroLink is also investigating access to the various packet switching networks in the EEC, which will increase the range of locally-dialled European calls.*

*It shouldn't be too long before our neighbours across the channel are passing through the MicroLink computer in London to talk to friends in their own towns.*

## ◀ From Page 10

and Mac II scrolling through the report must be like running through treacle.

dBase Mac does, of course, support multiple linked files and sessions 3 and 4 introduce the concepts, nomenclature and techniques used to achieve this. I found the introduction a bit obscure and "jargony". The initial example chosen was also somewhat strained (keeping a record of the popularity of movie stars and linking them to the videos they star in). Have you ever asked your video shop for such a breakdown?

Even stranger was some of the data – in *Desperately Seeking Susan* we find that Rosanna Arquette has high popularity and Madonna (who?) has low!

In fact the way dBase Mac handles multiple files is very powerful and, providing you plan things carefully initially, the implementation is easy and painless. In the Database Structure Window the linked fields are joined by lines, just as with Reflex (reviewed in the February issue of *Apple User*) – in fact I preferred the introduction to multiple files contained in the Reflex manual.

However, it has to be said that dBase Mac does make a much more professional job of handling the linked files, especially at the data input stage. But it is important to understand what is meant by hierarchy, root file, and path, and know what sort of

relationship (one way or two) is required.

A database is no good without the ability to select records according to various criteria and dBase Mac provides a powerful environment for performing this. In most cases you apply the search criteria to an existing report so that only specific records are displayed.

### Setting criteria

The search criteria are set by using the Define Selection option under the View command. This brings up a window very similar to the hierarchy define window and I particularly liked this consistency of style for similar tasks. You can choose fields from the various files involved and link them by various criteria, available under three large pop-up menus. These cover a host of Mathematical, String and Other operators and functions. The resulting criteria are built up in the Show If ... box which can be edited, or typed into directly, if preferred.

It is important to understand the hierarchy concept at this stage or you might not find all the records you are searching for. In fact I found this a somewhat slippery concept at times and I would have preferred rather more examples. As noted previously, with report generation the process is very slow, indeed a progress indicator is provided to help while away the hours!

You can speed up the process by indexing fields that you sort by frequently, but this increases the size of the file considerably and takes some time if you do it to an existing file. Unfortunately the resulting speed increase is still not enough to make browsing a pleasant task.

dBase Mac offers the ability to transfer field values from one file to another, particularly useful for creating database files that are a summary of information contained in other files. This overview facility greatly simplifies the task of comprehending large quantities of data. However, careful planning with paper and pencil are necessary here if you are to carry out the setting up procedure properly.

This is especially the case if the destination fields represent accumulated totals from the source fields. Such a process utilises "View Fields" which are local to a particular view only – that is they don't exist in any file. Since you may be using multi-valued fields the scope for error is large and attention to detail is paramount.

● To be concluded next month, with an examination of dBase Mac's full, structured programming language.

Product: dBase Mac

Price: £395.00

Supplier: Aston-Tate, Oaklands, 1 Bath Road, Maidenhead, Berkshire SL6 4UH.

Tel: 0628 33123

# Fact.

High quality 35mm graphics slides from your Apple Macintosh — until now impossible, a dream.

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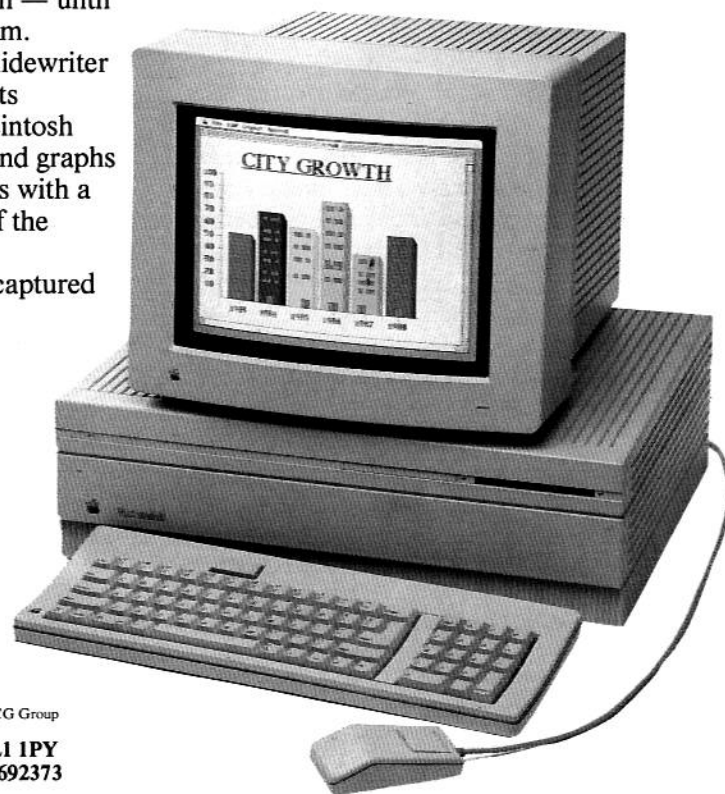
Get the real facts about slide production with Slidewriter from the experts.

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# DaynaFile™

IBM PC File Compatibility for the Macintosh

The DaynaFile™ disk drive allows the Apple Macintosh to read from and write to an MS-DOS formatted data disk using Macintosh applications.

The DaynaFile drive connects to the SCSI (small computer system interface) port on the Macintosh Plus, Macintosh SE and Macintosh II, as well as to the Macintosh 512E with SCSI port upgrade. DaynaFile can be daisy-chained to up to six other peripheral devices using Dayna's own or any other Apple-compatible SCSI cabling system.

DaynaFile fully supports the Macintosh Finder, allowing access to MS-DOS volumes through an HFS-compatible external file system. Thus the Mac is able to use the DaynaFile disk drives in the same way as it uses standard Mac disk drives. So when you use an MS-DOS data disk in the DaynaFile drive, an icon for the disk automatically appears on the Mac 'desktop' which can be selected, dragged, opened and manipulated the same as any other Mac disk icon!

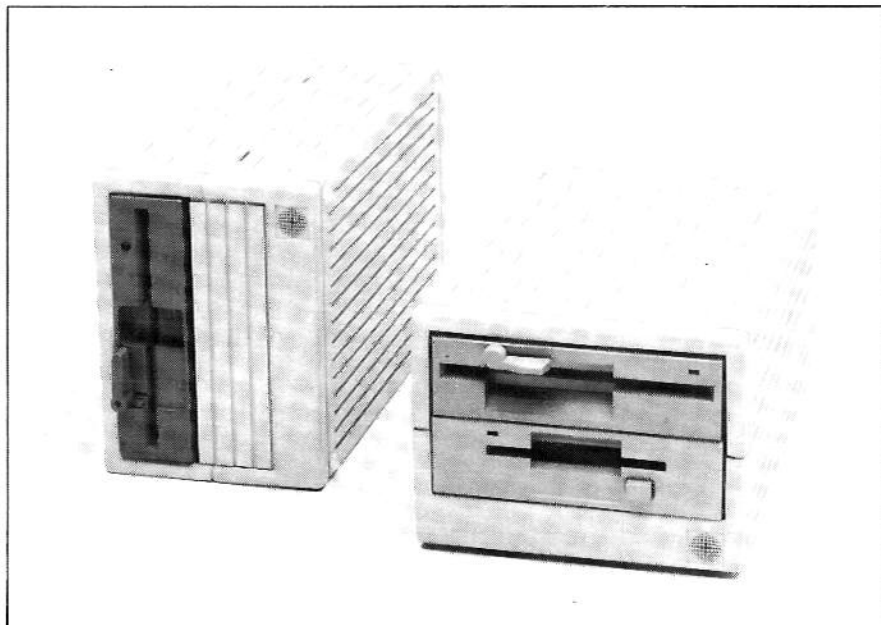
Sub-directories on the MS-DOS disk are shown as folders. Data files become documents which can be opened and edited by Macintosh applications. And you don't need to be a DOS wizard to edit IBM PC files with your Macintosh applications!

Some MS-DOS data files contain 'formatting codes' for tab settings, bold and underlined text, etc., which certain Mac applications are unable to understand (and vice versa, of course). Therefore, to keep these codes and attributes, Dayna offers optional Translation Software which converts the codes into a form which can be recognised and understood by applications on the other computer.

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The DaynaFile drive is available in single- or dual-drive units. The drives accept all disk formats used by the IBM PC family and compatible computers, and the IBM Personal System/2 disk formats:

5.25 inch 360kb and 1.2mb disks

3.5 inch 720kb and 1.4mb

Dayna Product Range	Retail - £
DaynaFile 5.25" 360kb drive	795.00
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Dayna Translation Software	100.00

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 Dayna  
Power Tools for the Mind.

# Concert party

COMPUTER music has come a long way in our house since the days we used to produce various beeps and clicks on an old Apple II Europlus. These days we seem to use the Mac a lot and, like many Mac owners, we've used a music package rather than do the peeking-and-poking familiar to many II-players.

Although we started with MusicWorks and the kids still use it extensively, we've increasingly turned to ConcertWare+, the enhanced version of the award-winning ConcertWare package. While MusicWorks goes for the all-in-one approach, ConcertWare+ divides the work between what are effectively three different application programs.

The Music Writer handles the composition side of things very well, with support

## Denise McKnight tries her hand at making music on the Mac

for slurs, repeats, beaming, chords of up to eight notes per voice and many other features. It's from here that printing is done, with support for both the ImageWriter and the LaserWriter.

The Instrument Maker lets you design your own sounds or modify any of those provided with the package. It's a great place for just experimenting with sounds, but if you want to understand what's happening there's a good section of the manual associated with it. You can save your new sounds and even create new

icons to go with them.

The Music Player combines the work of the other two modules to play the selected piece with the chosen instruments. Although the Mac speaker is not bad as little speakers go, you can get much better sound by connecting the Mac to your stereo system.

In fact, MusicWorks seems like what in my youth used to be called "music centres" – all the bits in one box – whereas ConcertWare+ is much more like the "real" stereo systems built by enthusiasts from the best modules. If you're feeling limited by MusicWorks then check out the latest version of ConcertWare+. If you're just considering buying a music package you might as well go for ConcertWare+ in the first place.

Complementing this package is Terpsichore – pronounced terp-SIC-or-ree as the manual points out – a collection of 181 Renaissance music files to be used with ConcertWare+, complete with 18 "Early Instrument" files. The title is taken from a book of dances by Michael Praetorius, and all but two of the pieces come from this book, which itself contains 312 dances.

The collection is a labour of love from Richard E. Rae and took him over a year to transcribe and arrange. As the manual points out, over 80 per cent of the collection has never been recorded, so if you're a devotee of such music this may be your first opportunity to hear many of the pieces.

The instruments form part of a larger set of 29 available on "Early Music", ConcertWare+ Music disc Volume 4. They include things like bombarde, rackett, krummhorn, rebec, sackbut, tabor, and many others with sounds to match the strangeness of their names.

Although I enjoy such music, I'm the first to admit that it has limited appeal. It might have been Hit Parade material 375 years ago, but times have changed. However, for those who are interested I can recommend it.

Terpsichore comes with a 24-page manual which explains the historical background, gives the musical ranges and has sketches of the instruments, and so forth – you'll need ConcertWare+ to play the pieces.

I'm sure both packages would be useful in a Music department. If I can have so much fun with them, imagine what a real musician could do.

Product: ConcertWare+

Price: \$69.95

Requirements: 512k (or greater) Mac

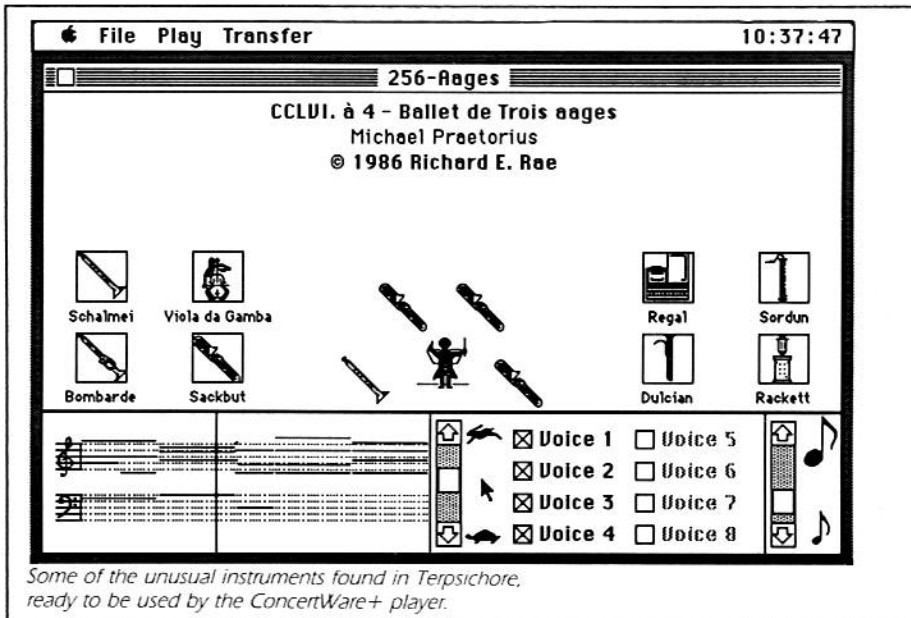
Product: Terpsichore

Price: \$49.95

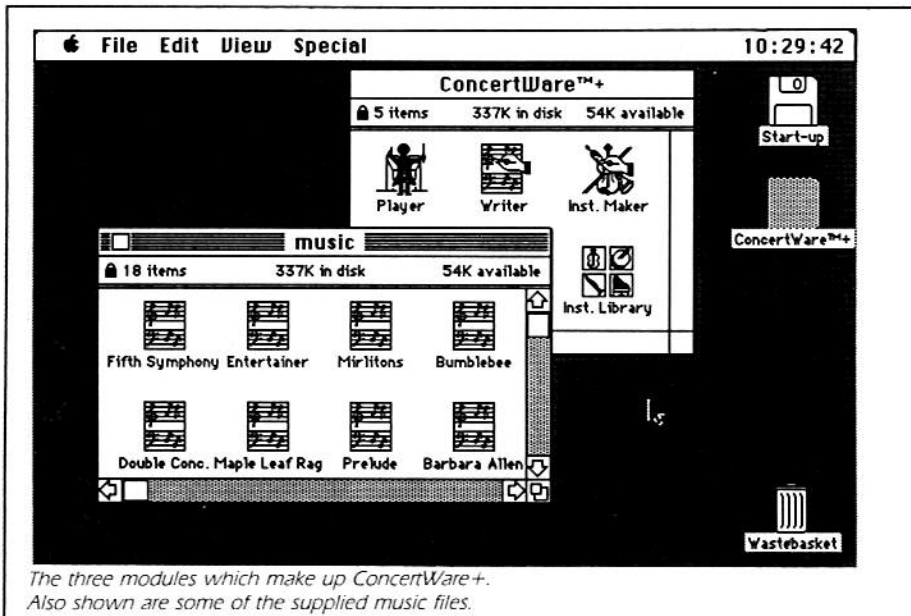
Requirements: ConcertWare+

Supplier: Great Wave Software, 5353 Scotts Valley Drive, Scotts Valley, CA 95066 USA.

Tel: 0101 408 438 1990



Some of the unusual instruments found in Terpsichore, ready to be used by the ConcertWare+ player.



The three modules which make up ConcertWare+. Also shown are some of the supplied music files.

# Getting your life into focus

**Chris Payne evaluates  
Focal Point, a personal  
organiser for Hypercard**



ONE of today's more fashionable accessories is the ubiquitous Filofax. With life getting more and more complicated, many of us feel we need a reliable system to ensure that we don't miss any of our business or social engagements.

Now you can use your Mac to get organised using Focal Point, the latest stackware from Danny Goodman – who also put together Business Class and wrote *The Complete HyperCard Handbook*.

The main principles behind Focal Point are to remember those things which people easily forget, to keep the typing to a minimum, and to avoid the need for typing the same information twice.

Focal Point comes on two unprotected discs together with a 147-page manual. It is recommended that you have a hard disc

system, and the installation procedure takes about five minutes.

Disc one contains six months of Daily Appointment cards, To Do lists, Expense Report cards, Time Sheets, and so on – starting from October 1, 1987. If you want more than six months of cards, there's a folder containing an additional 14 months on disc two and another that lets you create as many cards as you want – it all depends on how much disc space you can afford to have taken up. You can always add new cards later, so I was happy to stick with the 14 month period.

The Focal Point icon installs itself on your Home Card (see Figure 1), and when you click on it the title page appears before switching to the current day's Daily Appointments page (see Figure II). The but-

tons on either side of the Appointment Book represent 16 of the 18 interrelated stacks that make up Focal Point.

In the top lefthand corner is the Daily Appointments Book icon. This stack lets you schedule activities hour by hour throughout the day, and by clicking in the hour box you can add notes about a specific activity.

## Organising tasks

In the To Do List you itemise the tasks for the day and the people you have to call. Jobs can be sorted by adding a number in the left-hand column and clicking on the hash symbol. As each task is completed you click in the Check column to add a tick mark. Any jobs that aren't completed can be forwarded over to the next day by clicking on the Carry Over button. If you hold down the Option key as you click, unchecked jobs are carried forward to the following Monday.

You can see a month at a glance with the Monthly Calendar. The current date is outlined, and the Monthly Reminder field from the Daily Appointment book is displayed. I find this quite useful for reminding me of birthdays and things like dental appointments.

The Directory and Dialler resembles a card index file, storing name, address, telephone numbers and notes.

It's linked to other stacks so that, for example, if I have to ring a client I double click on his surname to select the whole word, then select the Directory. Up comes

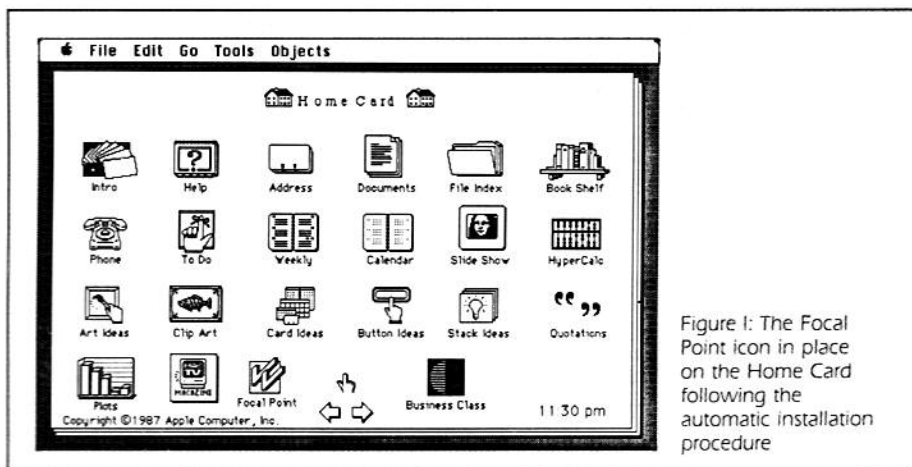


Figure 1: The Focal Point icon in place on the Home Card following the automatic installation procedure



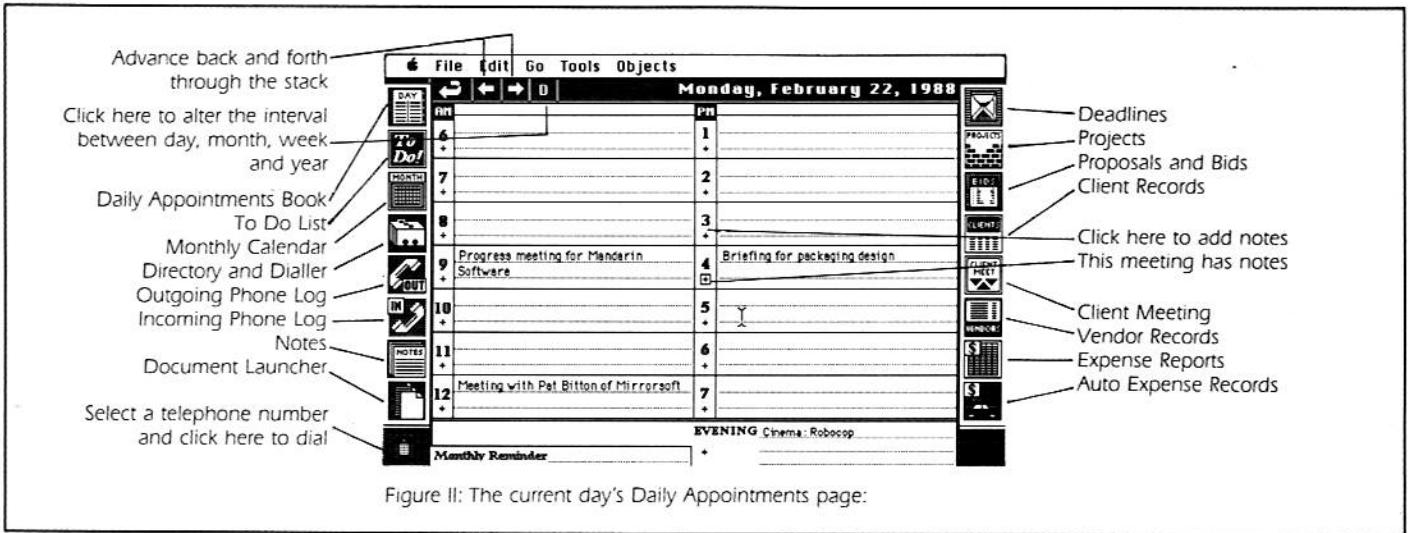


Figure II: The current day's Daily Appointments page:

the relevant card, I pick up the telephone receiver, dial nine for an outside line, hold the receiver close to the Mac's speaker, click on the telephone icon – and Focal Point tone dials the number for me. Alternatively you can set the system up to dial the number using your modem.

The Outgoing Phone Log records the call and lets me add notes about the conversation, check the length of the call as we're talking and charge the call to that client or a specific job.

The Incoming Phone Log works in a similar way, but I rarely use this as I am invariably working with another package when anyone calls, and it doesn't seem worth the effort to save, quit, boot HyperCard, select Focal Point, click on the relevant button and enter the information.

As you can probably tell I'm still confined to the limits of 1Mb of ram, and what I really need is a minimum of 2Mb so I can run the package under MultiFinder.

Progressing on through the stacks, Notes allows you to enter information of any kind. Each card has a large heading, and a scrolling text window which can hold up to 32,000 characters. I've typed in the train times from Manchester to Euston, personal correspondence I need to deal with, details

about my impending house purchase, and so on. You can search through your notes by key word using HyperCard's lightning-fast Find command.

The Document Launcher allows you to assign a button to a document you've created, so that, for example, you can edit your latest masterpiece in Write Now and you will be returned to Focal Point when you quit. Pressing Option as you quit returns you to the desktop – a fact that isn't

documented in the manual.

Moving over to the right hand column of buttons, Deadlines ties together all the due dates entered in the proposal and project records. Project Records keeps track of information about specifications, costs, tasks, invoices and payments. Proposals and Bids lets you build up a proposal summary, project specification, labour worksheet,

Turn to Page 18 ▶

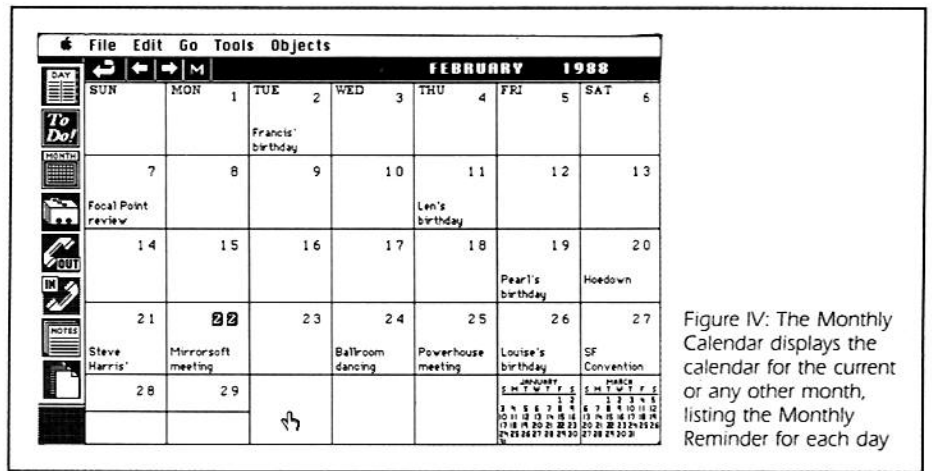


Figure IV: The Monthly Calendar displays the calendar for the current or any other month, listing the Monthly Reminder for each day

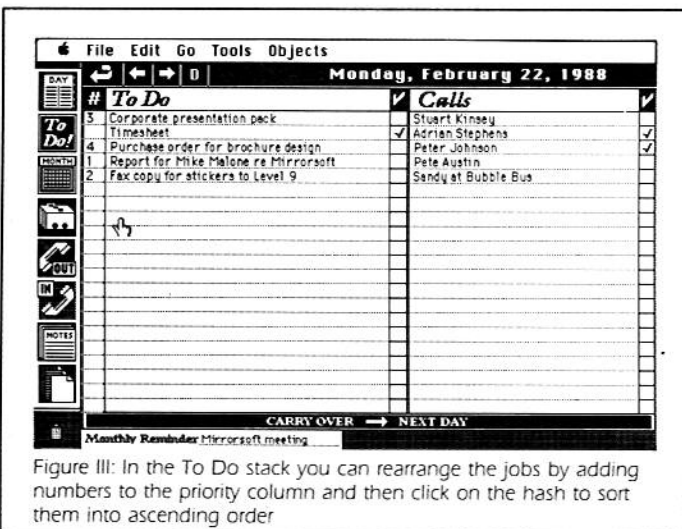


Figure III: In the To Do stack you can rearrange the jobs by adding numbers to the priority column and then click on the hash to sort them into ascending order

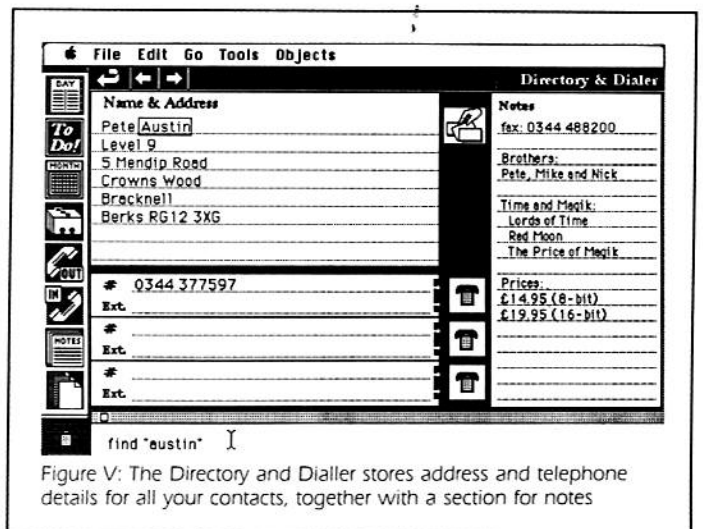


Figure V: The Directory and Dialler stores address and telephone details for all your contacts, together with a section for notes

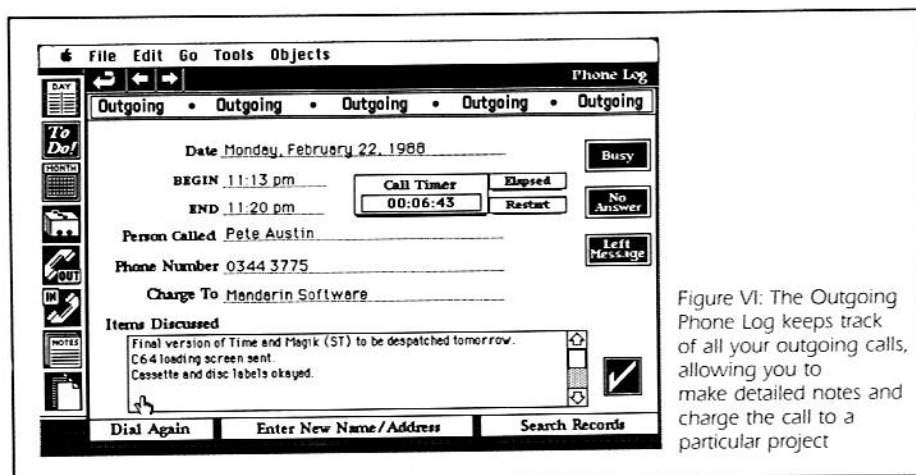


Figure VI: The Outgoing Phone Log keeps track of all your outgoing calls, allowing you to make detailed notes and charge the call to a particular project

task of copying 18 different stacks to and from the different machines every day if you intend to use Focal Point properly.

One problem I've had with Focal Point is that occasionally when I click on the Daily Appointments icon to go to the current day's card I get the card for October 1, 1987, and I have to click the button again to get the right card.

Also, clicking on the Directory icon from within the Directory should bring up a new card, but sometimes I get another filled card instead.

However these are only minor niggles and could be due to my misunderstanding some aspect of Focal Point or HyperCard. Certainly the manual is well-written, littered with examples to help you understand the various features and has a comprehensive index.

### Customising Point

The stack is not protected in any way, so competent HyperTalk programmers can customise the package to suit their requirements. There is no technical information in the manual, so you will have to search through the maze of scripts to understand how Focal Point is put together.

In summary, Focal Point is a powerful organising system which can keep track of all your activities. Unlike Business Class, where the novelty value soon wears off as you realise its serious limitations, Focal Point has retained my interest and I will continue to use it on a daily basis. It hasn't replaced my own fat Time Manager, but is an excellent complement to it.

To make the most of Focal Point, you really must have a hard disc, and, if possible, at least 2Mb of ram so that you can use it under MultiFinder. Only that way will you have have it permanently on tap.

*Product: Focal Point*

*Price: £75*

*Requirements: Mac Plus with a minimum of two 3.5in drives and HyperCard*

*Supplier: Activision, 23 Pond Street, Hampstead, London NW3 2PN.*

*Tel: 01-431 1401*

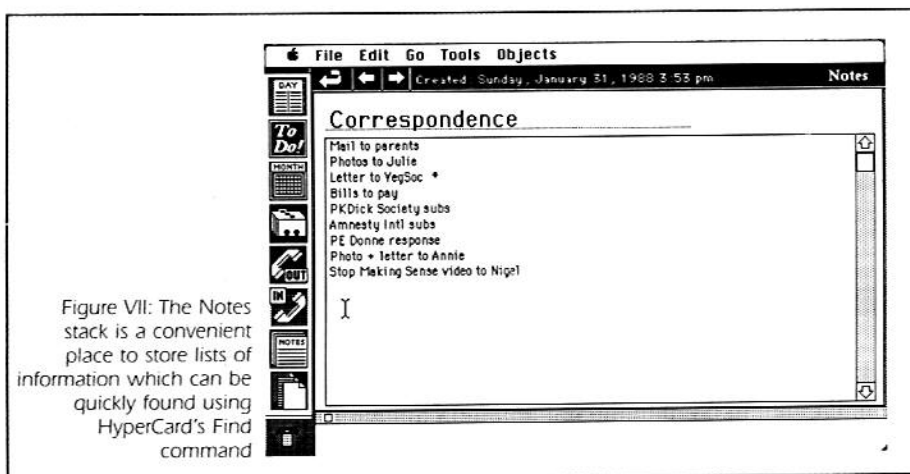


Figure VII: The Notes stack is a convenient place to store lists of information which can be quickly found using HyperCard's Find command

### ◀ From Page 17

materials worksheet and follow-ups.

Clients Records allows you to store detailed information about your clients, linking in with many of the other stacks automatically to avoid the need for retyping.

You can log the time you spend with clients with the Client Meeting Records and keep detailed information on your suppliers with Vendor Records.

Expense Reports and Automobile Expense Records help you to keep track of your expenses and, where necessary, charge them to a particular client or project.

Two further stacks are available by selecting Open Stack... from the File menu: Vendor Meeting Records, which is self explanatory, and Time Sheets, which allows you to track time to be charged to projects and clients. You can of course remove two buttons from the Daily Appointments stack and add these in their stead.

### Context help

There is a very useful Help stack which can be called up from the Go menu or by pressing Command+?. This is context sensitive, thereby giving you instant information on the particular stack you are working on (see

Figure VIII).

The only other computerised organiser I've used is Portex for the PC which prints out on special sprocketed paper with micro perforations and extra holes so you can insert them in the Filofax-type binder provided.

If you wanted to make use of this type of paper you will have to write a HyperTalk utility yourself as Focal Point's printing facilities aren't too sophisticated.

I lug my SE into work every morning, but for those of you who have a separate Mac for home and work you'll have the onerous

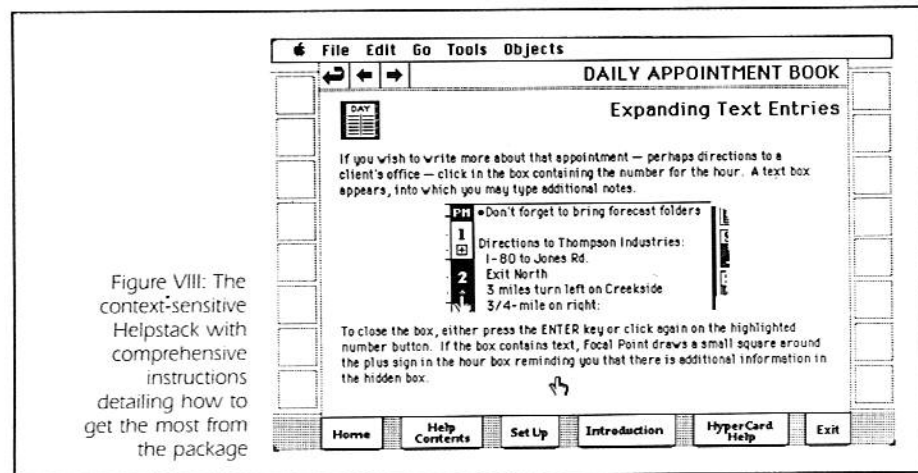
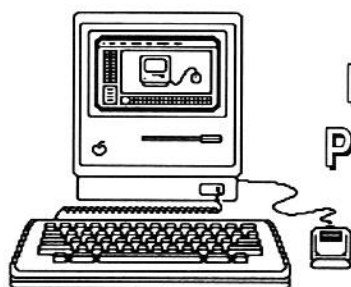


Figure VIII: The context-sensitive Helpstack with comprehensive instructions detailing how to get the most from the package

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# Creative tools for creative people

*CONCLUDING our glossary of the terms to help you understand creative artwork in the computing world.*

**Software:** For our purposes we need the most suitable combination of graphics and word processing software – and individual companies all seem to be taking different approaches.

The resulting lack of standards, especially for font formats, is not good for compatibility. Hopefully, the approach taken by some software, such as TimeOut's SuperFonts, of using Prodos 16 and Macintosh standard fonts, will right this. At the moment the software market in this field is being shaped by the forces of performance, functional power and ease of use.

**Tablets:** See **Input device**

**Thermal printer:** See **Dot matrix printer**

**Thermal transfer:** Used in thermal transfer dot matrix printers for printing with special ribbons, or without ribbons on thermally sensitive paper, or by the use of a thermal transfer sheet, which looks like carbon copy paper. Thermal transfer is often used to transfer images to cloth by ironing: It is easy – and fun – to create attractive designs or to personalise clothes.

If you want to use a symmetrical design without text, or you have a program capable of a mirrored text output, such as Print Shop, Print Master Plus or Spinnakers' special software T-shirt shop, it is cheaper to use a thermal transfer ribbon or a normal ribbon with a special, iron-on transfer paper.

But, if using a printer for which you cannot obtain such a ribbon, or you have software which will not reverse an image, then use a transfer sheet. You put it on the opposite side of the paper on which you print and the result is a normal image on the front and a mirror image on the reverse – for the transfer you use the mirror image.

Naturally, you can also use a transfer sheet for printing on the right side of the paper if you have a reversed image. It is better to carefully tape the transfer sheet to the paper and then feed it through the printer, because this type of sheet tends to slip around the platen otherwise.

Some software which is incapable of reversed text output is, however, able to reverse the characters in the font editor. In this case it is better to mirror the chosen

## Part 7 of Jaromir Smejck's series on imaginative computing

font, save it, and use it for texts printed with thermal transfer ribbon.

You can easily do that, for example, in the Multiscribe font editor – or in the Print Shop Companion in a very user-unfriendly way and only for a limited number of characters. A completely different kind of thermal transfer is described under **Colour foils printouts**.

**Transparency film (foil):** In order to copy your design on a photocopier you can use special xerographic transparency film. There are several types according to the type of copier (liquid or solid toner) and the purpose (clear, matt-surfaced, plain or pre-cut for self-adhesive transparent labels and so on).

Because the toner bonds tightly to the film, you get clean, sharp, black images with fine image definition which will not rub off. But correction or changes can be made simply by "erasing" the toner with tetrachloroethylene. And you can write on the transparency with colour pens or markers.

For use on dot matrix printers there are

also special transparent clear films available, with different kinds for laser, jet and impact dot matrix printers, so you do not need to go through the copy process to obtain a transparent image.

The final product on such a transparency film is usable, not only as a slide for overhead projectors, but also as a semi-final product.

We are mostly working with software of limited formatting power, but we can still use a design on transparency film for real overlays as a very efficient method of creating an impressive design – on paper or transparency.

An example of a design created by means of **Paste-up** and overlays is shown in Figure 1. A similar technique is used for creating animated films and so on. First the picture of the village, the wall and the sky with the sun and the storm cloud was drawn and printed.

Some airplanes were clipped from another printout and pasted on the printed picture to give the first semiproduct, then separately printed text was copied on to transparency film to give a second semiproduct. This was placed on the original printout and the whole copied to give the final result.

This simple, combined image can obviously be created without the use of trans-

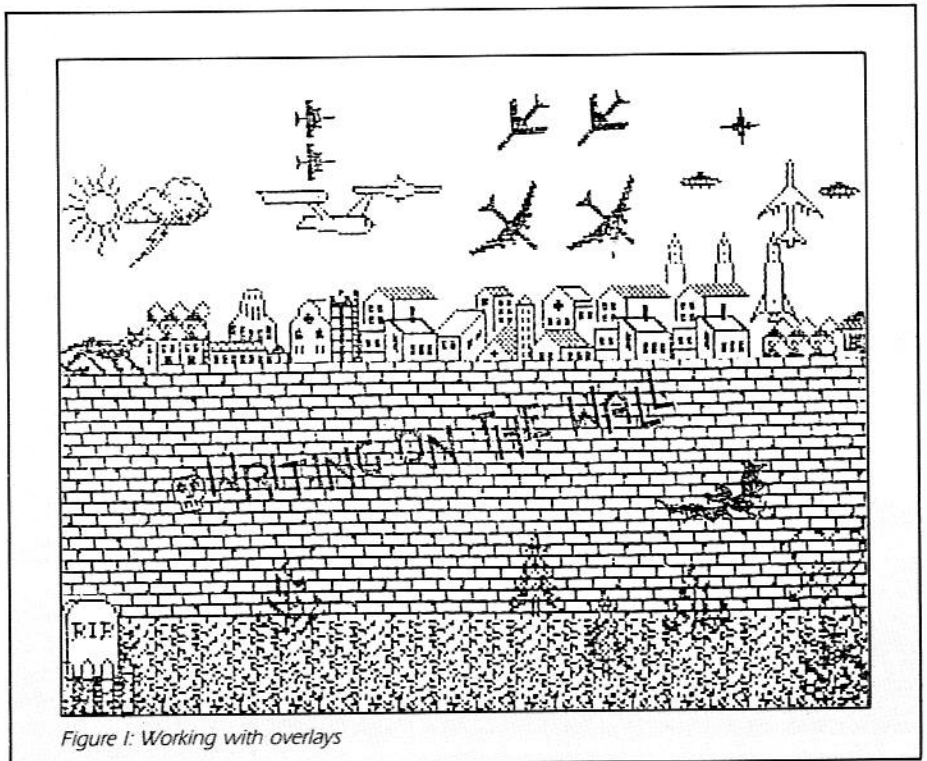


Figure 1: Working with overlays

parent film by simply printing text directly on to the picture with a second pass through the printer. However, this means test printings and it only works for a simple combined image. With transparent film you can create the final image with the exact layout you desire and can use several overlays.

**Typesetting device:** Many businesses demand high resolution print quality, beyond dot matrix or laser printer output. To achieve truly professional desktop publishing results you will need a professional service working with a special kind of laser device called a typesetting device such as Linotype's Linotronic 101 or 300 which have a resolution of 1270/2540 lines per inch.

Unlike laser printers they "print" not with toner on paper, but with a laser beam or special photographic film or paper, (up to 30 cm wide and 45m long with a maximum page size of 28 x 32 cm). This produces superb quality continuous images, but costs from £13,000 to £28,000.

The Linotronic can also print a negative image with the proper software. The newest product for it is a polyester plate called onyx, available from 3M, which can be exposed on the 101 and 300 models and used as a plate on duplicator presses to print up to 25,000 copies. The most expensive typesetting machines, with ultra high resolution up to 12,000 dpi or more, are used for very high quality work such as art books, detailed maps and so on.

If you really need typesetting quality you will use the DMP or laser printer for proof reading and send a copy of your disc to a professional service. They offer reasonably priced printouts of files, but note that reasonably priced is not the same as cheap. There is a time factor involved: The Linotronic 300 has to calculate and light 623,700,000 dots on an A4 page and this takes 52 minutes.

**Type size:** The height of the imaginary type block upon which the character sits is expressed in **Points**. This measurement is always smaller than the distance from the top of the ascender (the upper part of a t or a k for example) to the bottom of the descender (the lower part of a y or a g).

Most dot matrix printers use one pica (one pica equals 12 points and this is almost exactly 1/6 inch or 4.2 mm) font sizes with a maximum actual character height of 3.1 mm. The difference is due to traditional typographic terms; according to which the type is cast on a body large enough to accommodate both the descending and ascending lower case letters. Some of the letters are in Figure II and the lines before the letters show the true body size. See also **Scaling**.

**Typeface:** Refers to the general design of an alphabet, numeral and so on. Examples of typefaces are Times and Helvetica – note that the names often vary from one program to another. Categorically deciding on

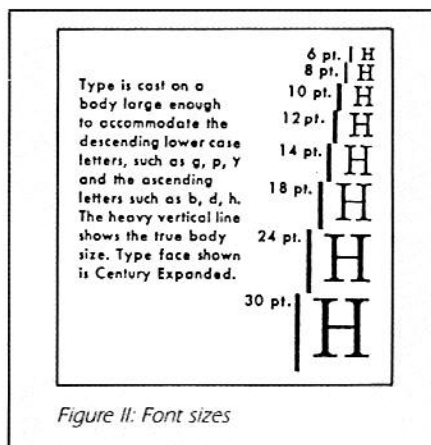


Figure II: Font sizes

a particular typeface for this or that purpose is risky because there are too many factors involved.

**Type style:** Refers to a stylisation uniformly applied to a typeface. Examples are bold and italic.

**Video digitiser:** Are hardware devices, internal or external to the computer, which, with the aid of the relevant software, digitise a picture and allow you to save the output from a video source – camera, videoplayer and so on – as computer graphics. Digitisation is the process of converting the analogue signal from the video source into digital information which the computer can understand and which determines the position and brightness of the computer's graphics pixels.

For the Apple II and IIe there are several products in the market place, for example Image Works, Diplomat, Micro Works, MicronEye, PhotoCaster and the latest, ComputerEyes/2.

Unfortunately, the Apple IIe is not ideal for video digitisation and I do not use any of these, but ComputerEyes/2 is claimed to have the best price/performance value and now works in the major video formats: PAL, SECAM and NTSC. The IIe version costs £129 with an extra £29 for the IIgs version. An optional, enhancement disc which allows ComputerEyes images to be converted into Print Shop or Newsroom formats

and also has other utilities costs £29.

All the packages mentioned above work in a slow scan mode – and slow is the operative word: Capturing an image can take as long as 20 seconds. Such digitisers are useless for capturing a video image of moving objects, for example your pet (unless you have a Pet-a-rock or PetSter, see **Suppliers**).

Real time digitisers (true frame grabbers) allow you to digitise moving images and are able to scan PAL and SECAM video which have 25 frames per second, or NTSC which has 30. But I don't know of any other digitiser for the Apple II family which comes up to requirements, except perhaps Digithurst's MicroSight II System which has a very good specification: 512 x 512 resolution with 255 levels of grey and a frame capture rate of 25 per second – but the price is more than £4,000. And the Apple II family is not especially mentioned in the data sheet, which only talks of "standard" computers, as being compatible.

Before deciding on which model to buy, check the resolution – the minimum is Apple standard hi-res, but double hi-res is better – and the number of grey levels: Less than 16 is not acceptable for serious work.

There is one product available especially for the IIgs – the AST Vision Plus which so far exists only in the NTSC video format. It works well with all type of IIgs hi-res screens in monochrome and you can work with up to 16 grey levels. In the colour mode the usable screen resolution is 320 x 200 with 16 different colours. The Vision Plus works in monochrome at 15 scans per second (300 x 200) or at 7.5 scans per second (640 x 200) and in colour at five scans per second (320 x 200). Not so bad for \$295.

**WYSIWYG:** An acronym for "What You See Is What You Get", which describes the way in which the displayed output on screen is as close as possible to what you will get on the paper printout.

● Next month's article will consider in more detail the programs mentioned throughout the articles so far.

## Desktop help

A NEW book catalogue and mail order service for desktop publishers is now available from Pagecraft Express.

"So many desktop publishers crave more practical help and advice than is contained in the typical manufacturers' guide, good as they may be", said Pagecraft's Malcolm Clague. "Our aim is to give these users an excellent mail order service in top quality reference books".

The first offering of interest to Mac users is the Macintosh Bible, 400 pages of tips and tricks aimed at making the most of the machine.

Sections cover System software and utilities, application programs, and hardware – mainly printing with the LaserWriter.

The Bible also features useful appendices and the initial purchase price includes two updates.

Product: The Macintosh Bible  
Price: £21

Supplier: Pagecraft Express, Headway House, Christy Estate, Ivy Road, Aldershot, Hants GU12 4TX.  
Tel: 0252 343604

## Duncan Langford gets animated about HyperCard stacks

Last month I began to look inside HyperCard, Apple's impressive new application for the Mac: This time I'll continue the description, moving on to show how a simple demonstration HyperCard stack can be built. Before I do, though, it would probably be a good idea to briefly recap the information from last time.

I was enthusiastic about HyperCard principally because it gives an opportunity to everyone to produce impressive "Mac-like" applications. It does indeed open up the Mac. Programs created with HyperCard, or HyperCard stacks, can be thought of as consisting of any number of individual Mac screens, or "cards"; which may contain any text or graphic a screen can contain. Cards

sonably enough, this language is called HyperTalk. Last month I showed how to set the access level of HyperCard to allow instructions to be written — "scripting"; in HyperCard jargon.

HyperCard looks for scripts, or instructions, in the various components which together make up a HyperCard stack. It automatically seeks first in the lowest level, and looks in turn higher and higher until a "match" is found (see Figure I).

Scripts may be written for all its components. In order of priority, these consist of fields and buttons, cards, backgrounds (shared between cards) and the new stack. Beyond these, HyperCard will look for instructions in its Home stack, and finally in the HyperCard application itself.

This layered attribute of HyperCard programming is a valuable one. It means, for example, that any built-in HyperCard instruction may be modified or replaced, by substituting another instruction of the same

of buttons. Our stack will also have hidden instructions, revealed by clicking on a special "help" button, and will use a text field — although, this time, not for text.

Although this stack will do no more than demonstrate possibilities, exactly the same techniques which will be used to create it can be used to produce any stack which allows any number of different cards to be linked, including selection from a "front" card. I'll detail various possibilities for these and other, more complex stacks, later on in the series.

When planning the construction of a new HyperCard stack, the best approach is to treat the task exactly as if you were writing a normal computer program. HyperCard is so easy to use that it's tempting to immediately jump into building your stack — but do resist. Time is well spent first working out on paper how everything will fit together, and making sure that your HyperCard "program" will be well constructed.

First, make sure that you detail exactly what you would like the stack to achieve. It's usually a good idea to write down a plan, and read it through carefully to make sure nothing has been left out.

In this case, I would just like the stack to display four squares which, when selected in turn, will appear to become joined together by a thick line — which will gradually disappear, when the squares are selected again. A special "query" button will display normally hidden instructions.

It may be helpful to draw on scrap paper the screen display and layout you desire. Figure II shows what must appear on each of the eight cards in this stack. By displaying the appropriate card when a square is clicked the impression will be given that a line has been drawn or removed. In actuality, of course, HyperCard will substitute a new card very quickly.

When the overall stack layout is clear, we begin construction of the new stack by running HyperCard and choosing New Stack from the File menu. The window shown in Figure III will then be displayed. Remember to uncheck the box Copy current background, or HyperCard will create

# Building on experience

within a stack can be linked, cards *outside* a stack can be linked — in fact, in HyperCard virtually anything can be linked to anything.

The way in which links are organised — and the "programming" of HyperCard — depends upon the simple programming language used by the application: Rea-

name at a lower level. We'll come back to this point later in the series.

This time I would like to show you how to build a HyperCard stack of eight cards which, when completed, will use a simple animation, to demonstrate how cards may be invisibly linked together through the use

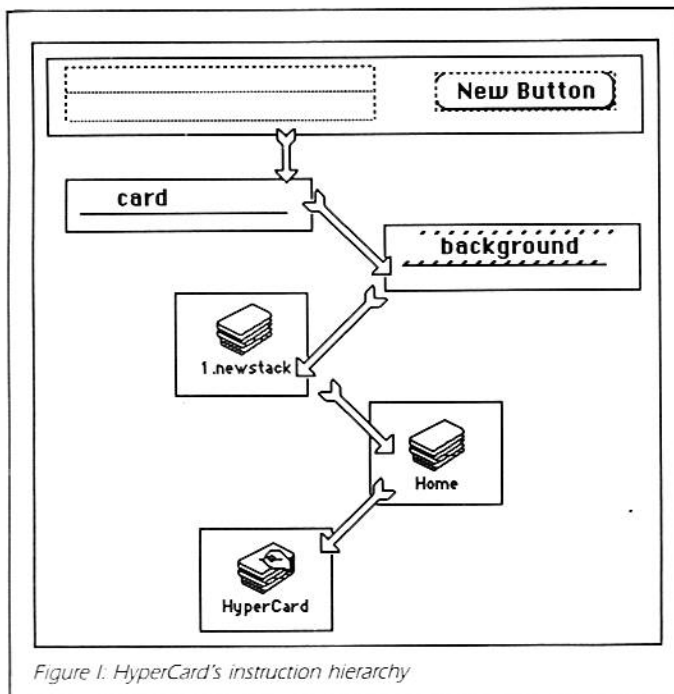


Figure I: HyperCard's instruction hierarchy

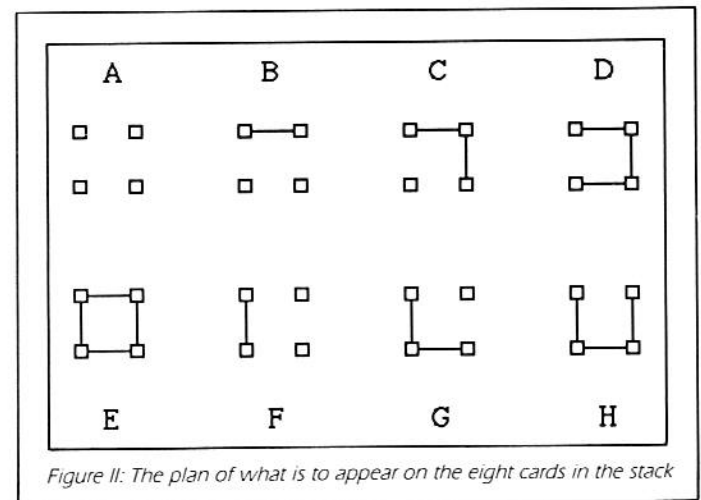


Figure II: The plan of what is to appear on the eight cards in the stack

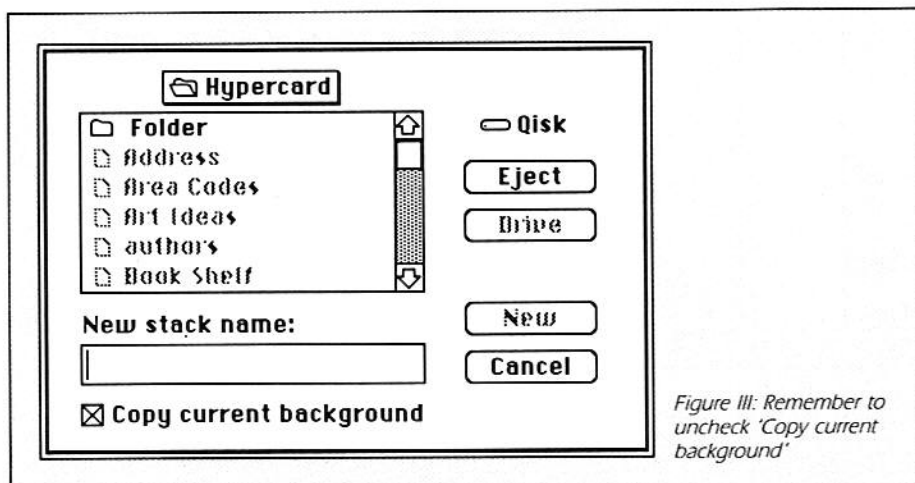


Figure III: Remember to uncheck 'Copy current background'

the new stack with a clone of whatever card was displayed when the command New Stack was selected.

I named my new stack 1.newstack, but you can of course call yours by any name which appeals to you.

After the "create" button in Figure III has been selected HyperCard will automatically form a stack, which will at first consist of only a single card. You should see a blank, white screen. If you don't, you have probably forgotten to uncheck the Copy current background box. (To delete it, first make sure that this *is* your new stack, by looking at Stack Info.. in HyperCard's Objects menu, and then select Delete Stack from the File menu.)

We will need to have eight cards in this stack, and each of them will have several items in common. We could create these common items eight times, once for each card, but it's much easier instead to create a common "background".

A background may be shared between any number of cards within the same stack, and a HyperCard stack may hold any number of backgrounds. In our demonstration stack only one background is required, but the same method of creation can be used to make any number of additional backgrounds. Any new card created while a particular background is visible will have that background built in, and will then automatically display it.

To move to Background mode, select

background from the Edit menu or use the keyboard short cut, Clover+B. You can always tell if you are in Background mode, by what I think of as a "stitched" effect along the menu bar.

### Creating squares

Each of the cards in our stack will need to have four squares drawn on it, but the effect will be identical if the squares are drawn only once, while in the background mode.

Squares are easily created from the Tools menu (see Figure IV) by selection of the box tool. While you're inside this menu it's probably a good idea to try other tools, too. Note that when a 'paint' tool is selected,

the menu bar lengthens to include three new items – Paint, Options and Patterns. Incidentally the Tools menu, unlike most familiar Mac menus, "tears off" the menu bar, and allows placement anywhere you like on screen. Just click on an item in the Tools menu, and then drag.

Make sure that the stitched effect is showing – confirming that you are in the background mode – and draw a screen similar to that in Figure V. We'll return to the background later, but for the moment toggle Clover+B until the stitched effect disappears.

We are now viewing the first – and only – card in our stack, which can be card A in Figure II. Select Card Info.. from the Objects

Turn to Page 24 ▶

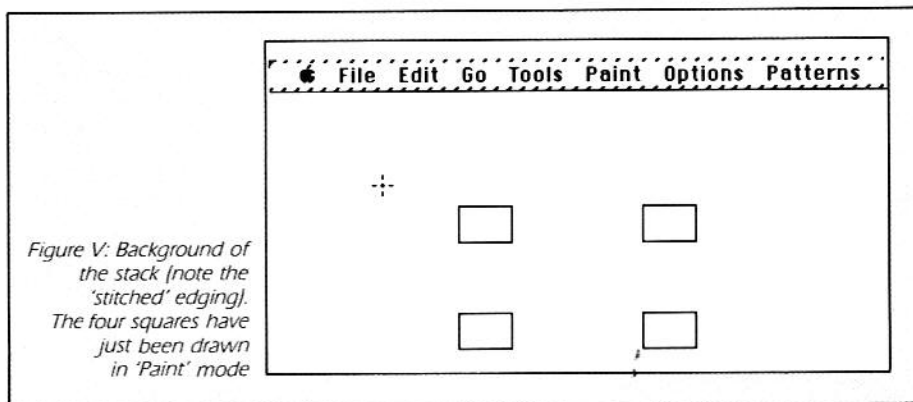


Figure V: Background of the stack (note the 'stitched' edging). The four squares have just been drawn in 'Paint' mode

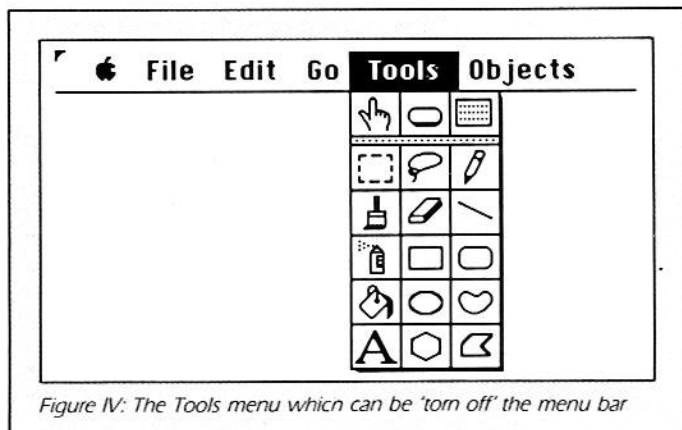


Figure IV: The Tools menu which can be 'torn off' the menu bar

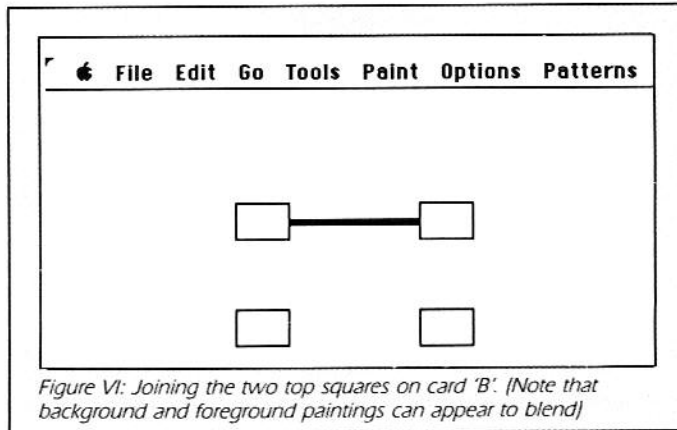


Figure VI: Joining the two top squares on card 'B'. (Note that background and foreground paintings can appear to blend)

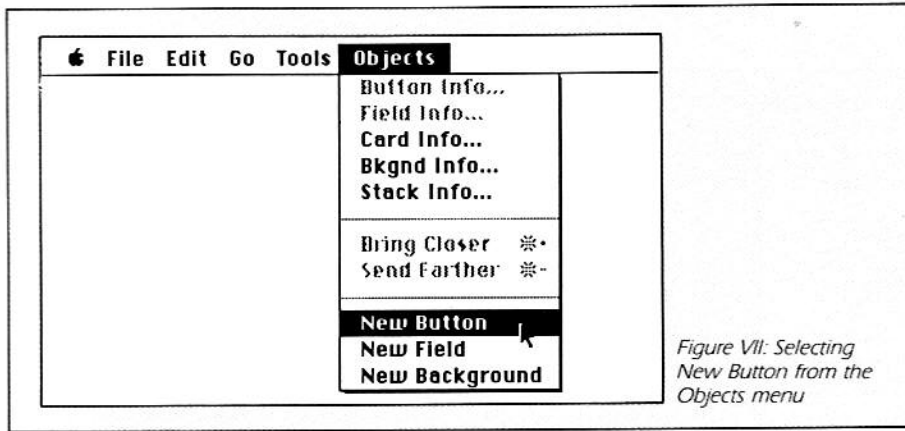


Figure VII: Selecting New Button from the Objects menu

#### ◀ From Page 23

menu, and name the card. You don't have to call it 'A' but you must make sure that each card has a unique name. If you'd prefer it, the unique id number automatically displayed in the Card Info.. window may be used instead of a name. In this case, do make sure that you have recorded it.

To produce card B, choose New Card from the File menu. Then, after selecting the line tool from Tools menu, draw a line connecting the two top boxes (see Figure VI). Again select Card Info. and name the card, or note its id number. Repeat this process until all the eight cards we need have been created.

It's possible to scroll through cards in a stack using Clover+3 (for forwards) and Clover+2 (for backwards). Try viewing all the new cards by doing this. It should give some idea of how the animation will work, as well.

We now have eight cards which, when viewed in the right order, will appear animated. But how do we arrange for them to be viewed in the right order? Or indeed in any order? It's time to introduce the



Figure VIII: The default New Button

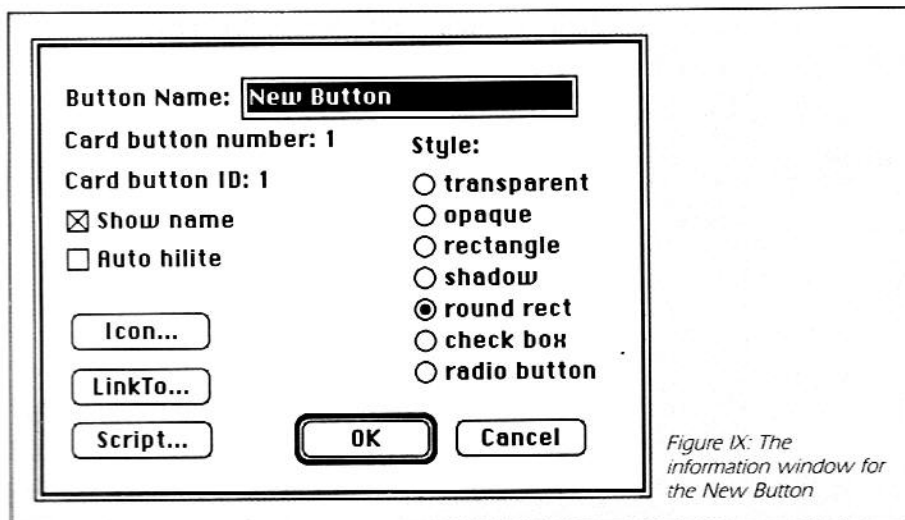


Figure IX: The information window for the New Button

amazing HyperCard button.

Select New Button from the Objects menu (see Figure VII). If the Objects menu isn't visible first select the Browse tool – the hand – from Tools. A new button, neatly labelled New Button, will appear on the card window (see Figure VIII). Double click on it and a window similar to Figure IX will be displayed.

### Clicking buttons

We need our drawing of a square to look as if it causes action – so our button must be invisible, and placed over the square. Check the transparent radio button and uncheck the show name box. The next stage is the most important – what will happen when the button is clicked? Well, what happens is that HyperCard looks inside the script of the button for any HyperTalk instructions that may be there, so we need to write some. Click the script button.

On MouseUp is HyperCard's way of saying, "when the mouse button is clicked, start doing what follows". End MouseUp is placed, reasonably enough, at the end of the instructions. In this case, assuming we're in card A, we need to place an instruction over the top right hand square, telling HyperCard to display card B. The effect should be to make the line on card B appear to have been drawn in response to the click.

In HyperTalk, the instruction looks like this:

```
On MouseUp
go to card "B"
End MouseUp
```

If you've decided not to name your cards, just substitute the id number of the correct card – the one with a line joining the top two boxes:

```
On MouseUp
go to card id 3794 – substitute the
correct id number!
End MouseUp
```

When you've typed the script click the OK box and return to the card. The new button will be displayed, looking as if it has been selected by the lasso. It can be stretched, reshaped and moved. Resize it, and place it exactly over the top left square. Select the Browse tool and the button seems to vanish – but it's still there! Try clicking on it. You should move instantly to card B.

To return to card A the top left hand square of B needs a similar invisible button – only this time, of course, the script will read:

```
On MouseUp
go to card "A"
End MouseUp
```

While card B is displayed, create a new button exactly as before and place it over the top left hand square. Try clicking the two new buttons and move from card A to B – and back. When you're happy with the process you can go on to create buttons to allow movement between other cards until all eight are linked together.

Think the connections through carefully – card A could also be linked with card F, for example, to allow a line connecting the squares to be drawn anti-clockwise. You might like to create more cards, to allow other combinations, as well.

When all the cards are linked it's time to finish things off by including some simple instructions. We want these to be visible from any card so it makes sense to place them in the background: Select it, as before, with Clover+B. Text is normally displayed in a HyperCard field, but this isn't essential – text can be typed directly on to a card, too.

While in Background mode, choose whatever text type and style you prefer through the Edit menu (see Figure X), select the text tool from Tools menu and, on the right of the screen, type instructions similar to those in Figure XI.

As they have been typed while Background mode was active the instructions would, of course, now normally be visible all the time. To cover them, select New Field from the Objects menu and, when the new field is created, position it over the text, to completely cover it (see Figure XII). A new field (or a field selected when the field tool is active) can be moved and resized in exactly the same way as a new button.

When the field is in place, double click



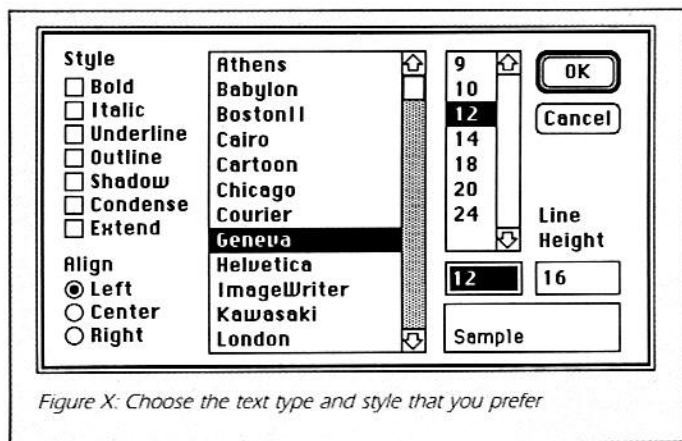


Figure X: Choose the text type and style that you prefer

on it. When the field's descriptive window is displayed select Opaque as the chosen style. Do name it, too – I called mine Information.

To make a suitable Information display button you may like to look within other stacks for one that appeals to you – that's where I found my question mark – or to make your own. To import a button, choose the button tool from the Tools menu, then select the button you like by clicking on it. Copy the button with either the keyboard shortcut `Command+C`, or Copy Button, from the Edit menu. Return to your new stack, select the button tool and paste.

### Making buttons

Making your own button can be done either by producing or importing a drawing and then placing an invisible button over it, or by using a standard 'Show Name' HyperCard button. Whichever button you decide to use, remember that it will need a new script. It's essential not to leave the original script in an imported button without checking to make certain the script will do what you want.

Here's a script for the information button:

```
On mouseUp
  get visible of background field
  "information" if it is true then
  hide background field "information"
  else show background field
  "information"
end mouseUp
```

A brief explanation. HyperCard uses a variable called *it* to store short term information: Visible will be true if the field is visible and false if it isn't. Our instruction therefore asks HyperCard to look at the background field called "information" and to put the result (true or false) into *it*.

Depending upon whether the field is showing or not HyperCard will then hide it or show it. As the text field is blank, hiding it will show what is normally concealed beneath it when the field is showing... and vice versa. Clicking the button will therefore toggle the typed display of instructions on and off.

For advanced HyperCard users a modifi-

cation to allow the instructions to be automatically concealed when a user clicks anywhere on screen would be to include this script in the script of the Background (viewed by selecting Bkgnd Info.. from the Objects menu – see Figure VII).

```
on mouseStillDown
  show background field "information"
end mouseStillDown
```

This script will check that the mouse button is pressed – as it will be, of course, as the user has just clicked it to move – and will then show our background field.

- One to be careful about: `Command+Clear` is an undocumented Delete Card command (the manual mentions `Command+Backspace`, but not `Command+Clear`, in Chapter 7). Hitting this combination by mistake could be tricky, especially if you meant to hit `Command+Shift+Clear` in order to activate Easy Access.

- HyperCard commands can often be shortened. Instead of typing "background" in your scripts, try "bkgnd". Button? Try "btn".

- This month I've mentioned that the Tools menu can be torn off, using the

mouse. As a power user, try using `Option+Tab`, which will do this automatically. Afterwards, if the menu has a paint tool selected, try hitting the Tab key. This automatically tears off the patterns window.

- To leave a message handler from anywhere inside it, use "exit <handlername>". An example might be, "exit MouseUp". To leave the handler with the current message sent on up the hierarchical path from the current position, use "pass <handlername>".

With thanks to Phil Wyman, the original Power User.

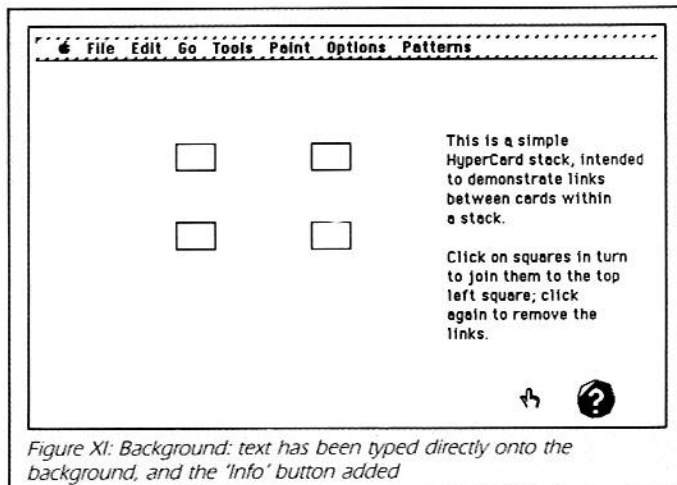


Figure XI: Background: text has been typed directly onto the background, and the 'Info' button added

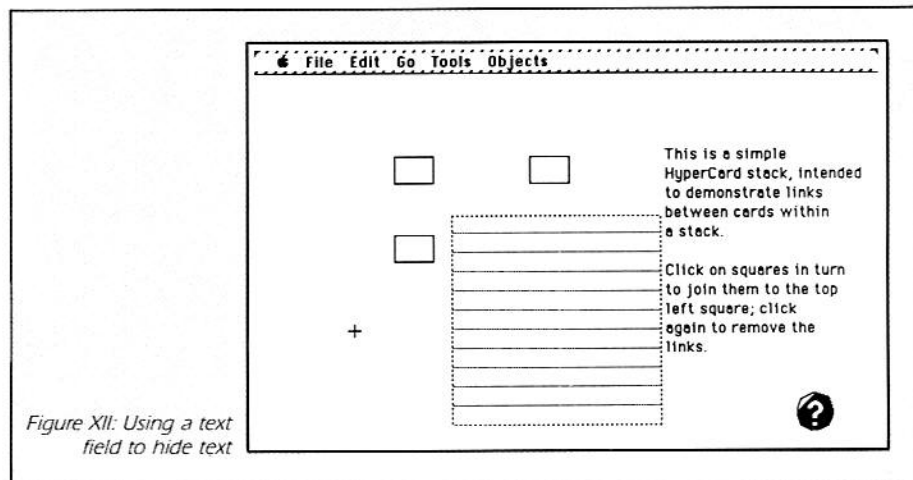


Figure XII: Using a text field to hide text

HyperCard automatically looks in the Background script every time a card which uses it is displayed. First, of course, it will have looked in the relevant button and field scripts, and then in the card script (see Figure I).

I hope that constructing this simple stack will give an insight into the operation of linking cards using buttons, and some feeling for the way HyperCard works.

- Next month I will move further on into the use of HyperCard, with a guide to constructing a very different sort of stack.

## Hypercard Tips

- One to be careful about: `Command+Clear` is an undocumented Delete Card command (the manual mentions `Command+Backspace`, but not `Command+Clear`, in Chapter 7). Hitting this combination by mistake could be tricky, especially if you meant to hit `Command+Shift+Clear` in order to activate Easy Access.
- HyperCard commands can often be shortened. Instead of typing "background" in your scripts, try "bkgnd". Button? Try "btn".
- This month I've mentioned that the Tools menu can be torn off, using the

mouse. As a power user, try using `Option+Tab`, which will do this automatically. Afterwards, if the menu has a paint tool selected, try hitting the Tab key. This automatically tears off the patterns window.

- To leave a message handler from anywhere inside it, use "exit <handlername>". An example might be, "exit MouseUp". To leave the handler with the current message sent on up the hierarchical path from the current position, use "pass <handlername>".

With thanks to Phil Wyman, the original Power User.

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The revolutionary program that enables you to access, customise and create information.

HyperCard is unique because it integrates all types of media, not only text and graphics but sound, animation, voice and video.


Using HyperCard is easy because it's based on the familiar idea of index cards.

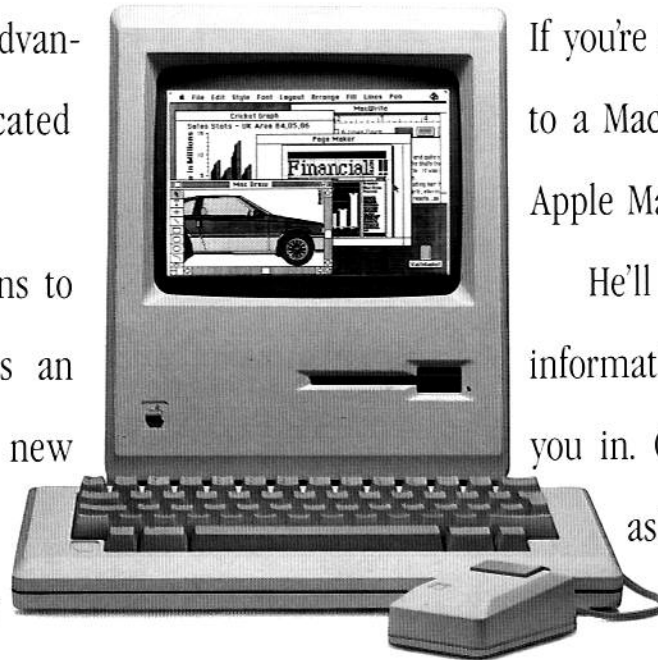
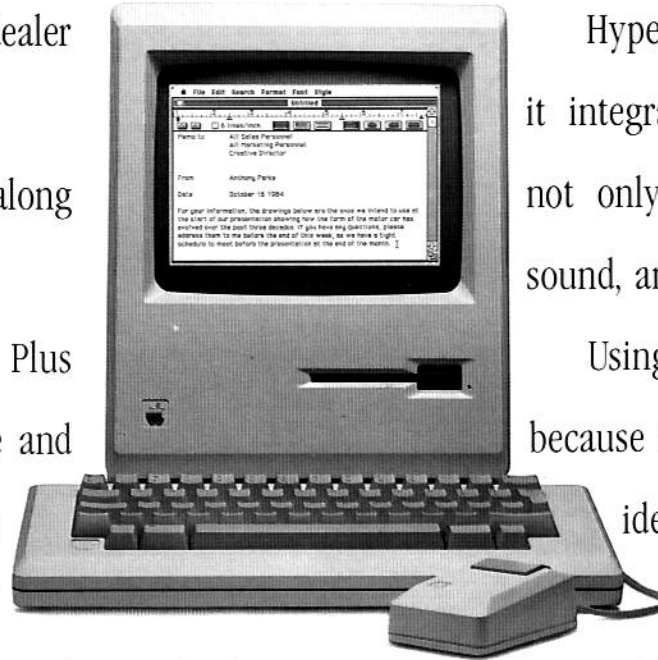
All will be explained to you in the manuals we provide with your kit.

If you're interested in progressing to a Macintosh Plus, contact your Apple Macintosh dealer.

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# Flying first class without a hard disc

THE first part of this discussion, in the March issue of *Apple User*, described the frustrations of trying to run the new generation maxi-sized applications on a single drive Macintosh Plus. A technique was described which is particularly applicable to those wishing to use their Plus as a dedicated unit – in other words, for one particular task – much of the time.

The technique involves creating a "ram disc" – a notional floppy disc in an imaginary external drive – and loading the system and the Application into it. This "disc" has no physical existence whatsoever, existing purely as a portion of "ram" which is set aside wholly and solely as a facsimile of a real disc and drive.

Although there are major benefits to be gained, notably speed of operation, there are also disadvantages relating primarily to system errors. These were explained in detail in part one, along with strategies to assist you to live with the drawbacks.

Word processing was the task chosen to illustrate the principles involved. Apart from the advantage of being so familiar as to be almost universal, this is a particularly suitable candidate for the technique, being relatively frugal in its use of ram memory.

In this article, a practical step-by-step case study shows how to set up a ram disc, using Microsoft's Word 3.01, MacMemory Inc.'s ram disc utility MaxRAM 2.5 and System 3.2 with Finder 5.3 – it is not worth updating to the series 4 systems if you're a single driver, as they are unnecessarily large.

The principles are applicable to other software, although there will of course be detail differences. The description is, however, specific enough to give you a realistic overview of what would be involved if you should decide to take the plunge. Beware though – the addition of ram disc speed can change your whole threshold of performance expectations and might spoil you for anything less!

## Creating the installation disc

Strip the system down to include only the fonts and DAs you need in this example. The resulting System folder is 266k and the allocations of ram disc size mentioned below are based on this. Word 3.01 is 350k, and it needs a further 320k of ram to remain unallocated to the ram disc, in order to open.

## Andrew Troup concludes his look at an affordable alternative to a hard drive

Load the system folder and Word 3 application (your day-to-day version including all styles, preferences and so on that you will require) on to a blank 800k floppy, name it Wd 3 RD Instal, then make that the startup disc. The quickest way is to open the System folder for that disc and double click on the Finder icon while holding down the Option and Command keys. Finally, copy the MaxRAM utility to that disc.

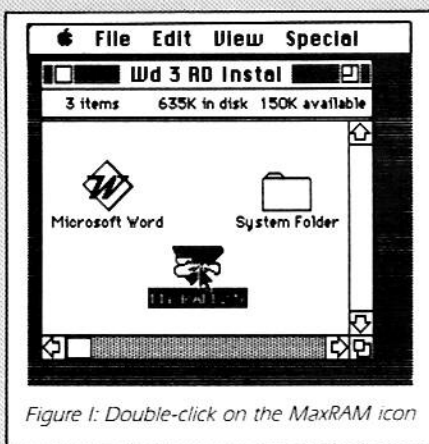


Figure I: Double-click on the MaxRAM icon

Double click on the MaxRAM icon (Figure I), and set the ram disc size to 640k. Note that this is more than the sum of the System Folder and Application sizes by some 24k. As with any disc, you can't use the entire memory, as a certain amount is taken up by housekeeping information which you don't get to see: Click Install (Figure II)

When the startup noises have died down and the dust cleared, you will see a new floppy disc icon below the Wd 3 RD Instal icon, called Ram Disk (Figure III). Double click it open.

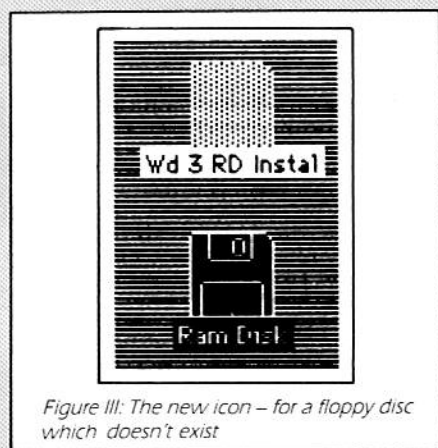


Figure III: The new icon – for a floppy disc which doesn't exist

Icon copy the System Folder and Word 3 application across to the ram disc window. At this stage you will find out whether you allocated too little – the usual message: "There isn't enough room..." will appear. If too much, there will be "...k available" at

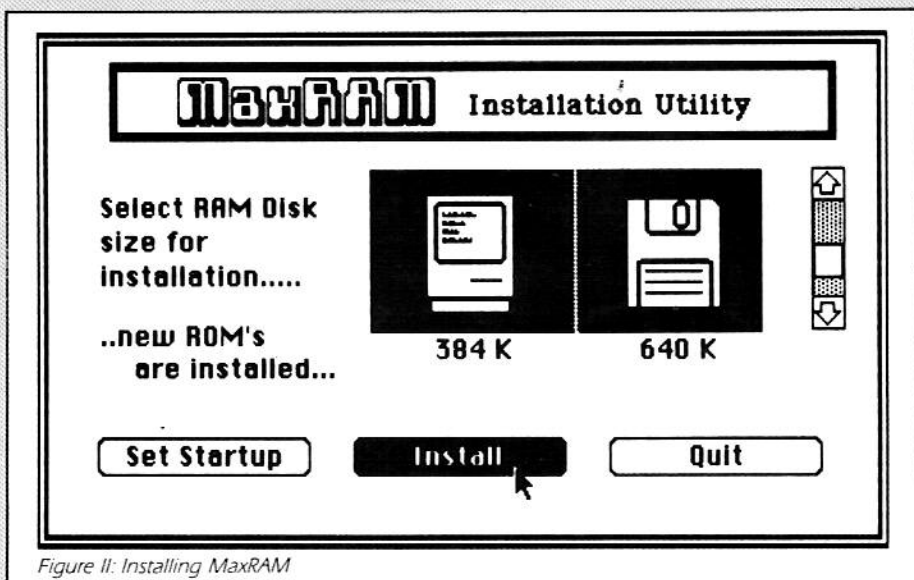


Figure II: Installing MaxRAM

the top right of the ram disc window showing you how much you can prune off the allocation.

In the example we are installing there is no need for any spare space, unless you are taking a gamble by using DAs which create System documents.

If necessary, go back to the first step above, remove the ram disc, refine the allocation, then reinstall the ram disc.

Once you are happy with the size of the ram disc, click the Set Startup button, then click OK (Figure IV), followed by Quit. That sends you back to the Finder, where a new icon will have appeared in the window for the disc, called MaxRAM Boot and shaped appropriately.

Create a new folder on the Instal disc – let's call it Ram Disc Contents – containing all the icons you will want on the ram disc, and the boot icon (Figure V).

From now on, whatever you startup, or boot, using Wd 3 RD Instal, a ram disc of the size which you requested will automatically be installed. What's more, this particular clever utility will load all the Ram Disc Contents on to that ram disc, make it the startup disc, and even remove the Instal disc from the desktop and hand it to you when it's finished. Isn't nature wonderful!

Now shut down the Mac and prepare to be blown away...

### Routine startup

Insert the Wd 3 RD Instal disc into your blank Mac. The screen will advise you as each file is automatically loaded on to the newly created ram disc. When the process is finished, some 45 seconds later, and with nothing required of you other than your rapt admiration, the disc will see the ram disc icon now in solitary splendour, in pole position at the top right hand corner of the desktop.

Open the ram disc and double click on the Word 3 icon. Don't blink. The application will open in roughly one-sixth of the time you are accustomed to!

Finally, choose Open, insert your Documentation disc and click Drive.

Breathe deeply. Suddenly you are sitting in front of the most powerful, useable word processor you have ever experienced.

### Uniformity gained

For those who do have an external drive, or an SE with two drives, consider a tri-partite approach with the System Folder on a ram disc, Application on a disc in one drive, and Document disc in the other. You will gain System uniformity (all the same fonts and DAs available at all times) due to having room for larger System Folders, and will also benefit from extra Application disc space.

Another major gain: Speed – especially when you move from one application to another, and the System and Finder would

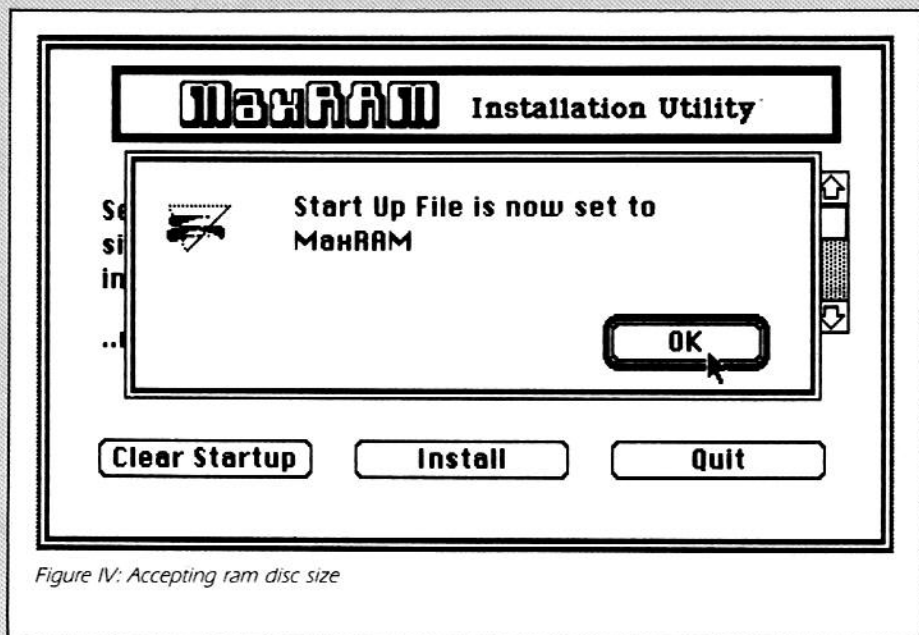


Figure IV: Accepting ram disc size

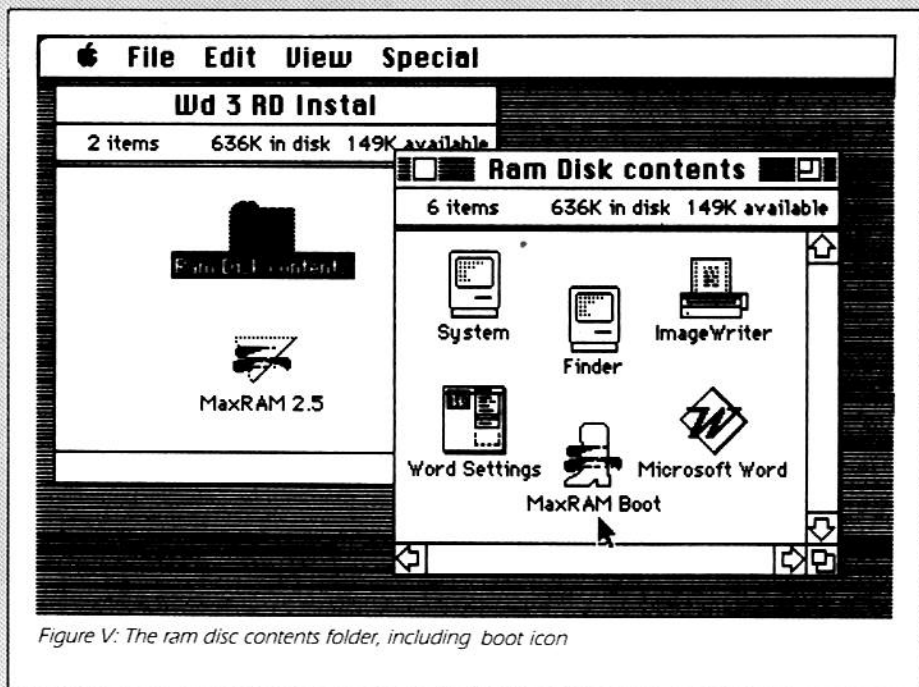


Figure V: The ram disc contents folder, including boot icon

normally have to change over to those on the new disc. Note, however, that unless you do delete the System folder on each application disc, the Macintosh will still change Systems when that application opens.

This tri-partite configuration would be the optimum – short of a hard disc – if you have several "big rig" applications in frequent use.

Finally, as with any configuration using a standardised system, whether on a ram or a hard disc, this means much easier System updates in future, as you won't have copies scattered everywhere – no small consideration these days when a "new" Macintosh System version lasts almost exactly as long as a politician's promise doesn't.

If you can't afford to fly first class, console yourself with the thought that the method

described in the article is still the fastest way to fly.

WORD 3 has an option – in Preferences – which allows you to specify that the application, and/or even the document, will automatically load into, and be kept in ram.

This theoretically gives you the speed of a ram disc with less fuss. In practice, however, you will still need to set up a ram disc to take the System.

Furthermore, like the ram cache built into the Macintosh system, this option is, in operation, nowhere near as rigorous as a ram disc, and frequently requires to re-read the floppy disc when it shouldn't!

# AppleUser SPECIAL OFFERS!

**The first Apple User Games Disc was one of the most popular packages we've ever offered our readers. Now comes Apple User Games Disc No. 2 – more great games that we thought were ideal but which were just too long to be printed in the magazine. And the price is still £5.95 for 7 games – that's just 85p a game!**

## AppleUser GAMES

### DISCS No. 2

**ALIEN ZAP** – Good, old-fashioned machine code arcade game by Peter Ibbotson. Clever Apple graphics, and plenty of action.

**SATELLITE CONTROL** – A game of skill on the hi-res screen by Edwin Long. You're challenged to change the shape of a shuttle's orbit.

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**CARD TRICK** – The computer is an excellent medium for performing feats of sleight of hand. Play tricks with cards with J. Taylor.

**NOUGHTS & CROSSES** – The graphics may not be sensational, but Frank Lewis shows how to play a fast game using only the lo-res screen.

**THE PERILS OF PRINCESS EMMELINE** – Denise McKnight invites you to face unknown foes as you immerse yourself in this adventure.

**MURDER** – Can you deduce who the murderer was? Roger the Lodger, maybe? And what weapon did he use – an exploding cigar?

**BOMBER** – Flatten the deserted city to provide a landing strip for your plane. If you're in a destructive mood you'll have a field day!

**PELMAN** – A two-player game of memory. Pit your wits against another human for a change – and let your Apple be the referee.

**DINGHY SAILOR** – We've all seen flight simulators. Now for something completely different. See how you can handle this sailing dinghy.

**NIM** – It may look like a straightforward game. In fact, nothing could be simpler. But YOU try beating this challenging program.

**MASTERMIND** – No, not the black leather chair version, but the much older, brain-bending code-breaker. It's just as compulsive!

**WORD SEARCH** – Hook up your printer and use this program to create your own word square puzzles to try out on your friends.

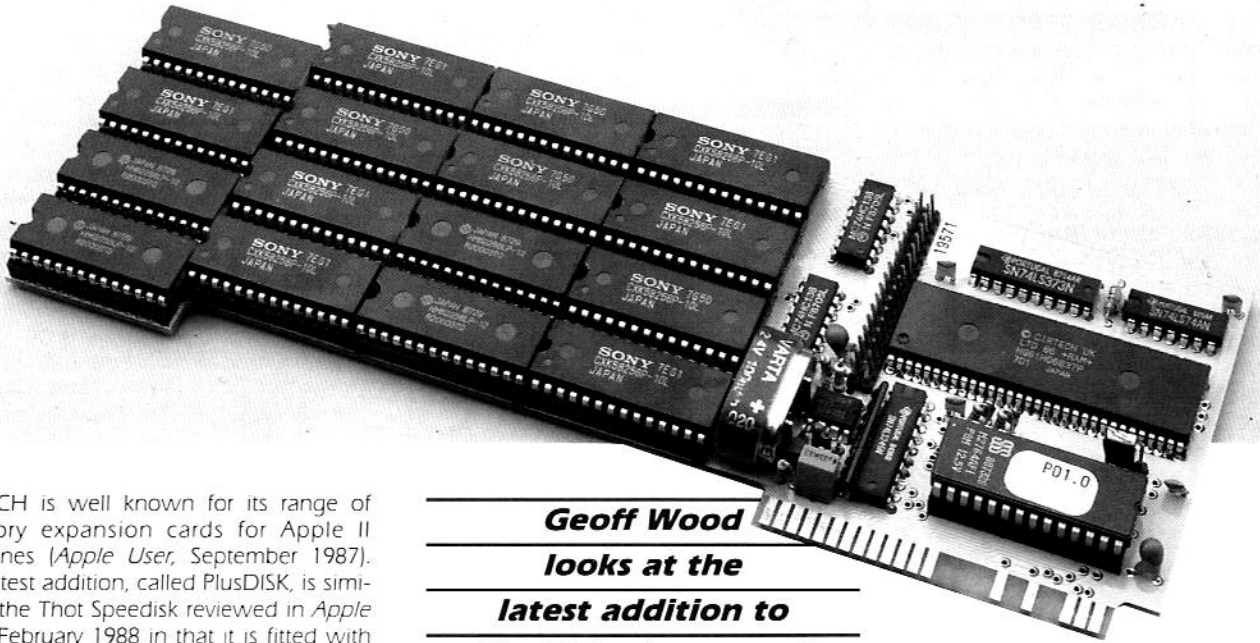
**3D ENERGY FIELD** – A superb three dimensional maze game. Can you escape from the labyrinth or will the energy field catch you?

## AppleUser GAMES

### DISCS No. 1

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**TO ORDER PLEASE USE THE FORM ON PAGE 73**




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**Geoff Wood  
looks at the  
latest addition to  
the Cirtech range of  
expansion cards**

---

CIRTECH is well known for its range of memory expansion cards for Apple II machines (*Apple User*, September 1987). The latest addition, called PlusDISK, is similar to the Thot Speedisk reviewed in *Apple User*, February 1988 in that it is fitted with CMOS chips and a rechargeable battery. However, there are significant differences between the two.

First, PlusDISK is available in a range of sizes from 128k to 512k in steps of 64k, then up to 1Mb with the PlusDISK Adaptor board – note that AppleWorks requires a minimum of 192k. Speedisk is available in only two sizes, 384k or 1Mb with a piggy-back board. And the card retains files stored on it even if the computer is not used for up to six months – Speedisk retains files for up to two months. Third, PlusDISK can be used not only as a ram disc, but also as a hard disc.

In addition, PlusDISK can be used not only with Prodos and Pascal, but also with Dos 3.3 and CP/M. And it comes with programs for enhancing AppleWorks (versions 1.3, 1.4 or 2.0) and for partitioning the card into areas for different operating systems. Last, but by no means least, PlusDISK costs less than Speedisk.

---

### Installing PlusDISK

Like Speedisk, PlusDISK will work in the Apple II+, IIe and IIgs. It can be used in any slot except slot 0 of the II+, or slot 3 of the IIe or IIgs if you want to use the 80 column display.

If you want to boot from the card, it must be in a higher slot than the disc drive – except in a IIgs, where you can set the startup slot from the control panel).

If you want to use the card with Pascal 1.3, it must be installed in slot 4, 5 or 6. With the card in one of these slots in a IIgs you lose the other function of the slot, that is mouse or small port.

You can have more than one PlusDISK in your computer up to a maximum of 4Mb of extra memory. However, a PlusDISK card fitted with a PlusDISK adaptor needs the

next slot to the right to be empty: This means that PlusDISK is limited to 512k in slot 7 of a IIgs already fitted with a memory expansion card.

The 26-page manual is in the usual Cirtech style, spiral bound A5 with rather small print, but it covers all you need to know. It starts with a vital warning that some of the components on the PlusDISK are sensitive to static electricity. CMOS chips are more sensitive than dynamic ram chips.

Before you handle the card you must touch an earthed surface – such as the metal case of the computer's power supply – to discharge any static, and you should hold the card only by its edges. Also, you must avoid short circuiting the rechargeable battery, and so on, by putting the card on a metal surface or allowing it to touch a card in an adjacent slot.

Before installing the card, you should set the ID Selector – this is a jumper on the card which can be set in one of two ways. As supplied, the ID Selector is set to make PlusDISK look like a ramcard. If you want it to look like a hard disc, you should change the jumper to the other setting.

If you have a II+ or unenhanced IIe and want the computer to boot from the card, it must be set as a hard disc. Enhanced IIe and IIgs computers will boot from the card set as either a hard disc or a ram disc. The other use for the hard disc setting is to prevent AppleWorks from using the memory on the card for the desktop – though the PlusRAM support disc has a program to adapt AppleWorks to prevent this, even when the card is set as a ramcard).

PlusDISK can be used with Prodos, Dos

3.3, Pascal 1.3 and Cirtech CP/M Plus and Microsoft CP/M 2.20B and 2.23. It can be used in exactly the same way as an ordinary disc drive but it operates many times faster – 20,000 times faster than a hard disc.

As with an ordinary disc, you must format PlusDISK before you use it and, if you want to boot from the card, it must be made into a startup disc with the appropriate operating system. For example, with Prodos it must hold a copy of the Prodos program and a SYSTEM file.

Unlike an ordinary ramcard, PlusDISK retains all the programs and files stored on it when you switch off your computer. However, you should observe the normal practice of always keeping a backup copy of your programs and files, preferably on floppy discs or a hard disc rather than another PlusDISK.

---

### Useful programs

The PlusDISK support disc, which is supplied in both 5.25in and 3.5in formats, holds several useful programs. When you boot up this disc, it displays a menu offering five choices, namely PlusDISK Partitioning, AppleWorks Desktop Limiter, AppleWorks Startup Enhancements, Filer and Basic.

If you choose the first option (after formatting PlusDISK with Prodos), you are asked to select an operating system – Dos 3.3, Pascal or CP/M – and to specify the size of the partition in blocks of 512 bytes. Each partition is just like a separate PlusDISK.

When an area is created, a special system file with the same filename as the operating system (DOS, PASCAL or CPM) is created in the Prodos catalog. To start up a

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### ◀ From Page 31

partitioned area, you just run the system file that was created for that area. There is a useful system file on the disc which, if copied on to PlusDISK as the first system file, allows you to choose the partition by pressing one key immediately after booting.

The first time you start up a partition, you must format it for the chosen operating system. There is a special program on the PlusDISK support disc for formatting a Dos 3.3 area. To leave a partition and return to ProDOS, simply start up from PlusDISK with Control+OpenApple+Reset.

If you set PlusDISK as a hard disc, AppleWorks does not use it as desktop memory: If you set it as a ramcard, AppleWorks uses the PlusDISK memory for the desktop, together with other ram in the computer. Note that AppleWorks 2.0 in the IIgs does not use the memory on a PlusDISK ramcard as desktop. The second option on the support disc menu modifies AppleWorks to limit the size of the desktop. You can then use PlusDISK to save your spreadsheets, word processor and database files.

The third option – AppleWorks Startup enhancements – modifies the AppleWorks SYSTEM file so that, when you start up the program, it does not ask you to press the spacebar before entering the date, nor does

it load the AppleWorks segment files into any other ramcard which may be present. This it saves time in booting up and leaves more memory available for large files. AppleWorks will operate just as fast from PlusDISK as from other memory expansion cards.

### PlusDISK support

If you use Dos 3.3 on PlusDISK you are limited to 800k (two 400k discs). On the PlusDISK support disc there is a special version of FID, modified to work with large discs. In the Cirtech version of Dos 3.3, the INIT command creates non-bootable discs so that there is no danger of creating discs which may not work on another computer.

PlusDISK is fully supported by Pascal 1.3 and can be formatted as a Pascal startup disc and used in the same way as an ordinary disc drive. With PlusDISK set as a hard disc, you could use HDMate (Apple User, February 1988) to partition the hard disc but there would not be much point as the support program can be used for the same purpose.

PlusDISK is also fully supported by CP/M Plus though, of course, you will need a suitable Z80 card. The 5.25in PlusDISK support disc contains special software to let you use Microsoft CP/M 2.20B (56k) and

2.23 (60k). Like Speedisk, PlusDISK is much faster than a hard disc and you can switch off your computer, move it if you wish, then switch on and instantly start work. Also, you can remove the card from one computer and plug it into another without losing the contents of memory.

If you don't normally move your computer, you could leave it switched on all the time and keep your programs in a lower-cost memory expansion card such as Plus-RAM – but then you would run the risk of losing your files in the event of a power cut or someone switching off or unplugging your computer. With PlusDISK, you are protected against power cuts and other accidents.

Someday, CMOS chips may be cheap enough to provide the silent 20Mb hard disc. Meanwhile, 1Mb of permanent ram is very useful for instant access to your favourite programs.

Product: PlusDISK  
 Price: £147.20 (128k) and £18.40 (64k expansion kit)  
 Product: PlusDISK Adaptor  
 Price: £107.20 (64k), £487.60 (Expanded to 1Mb)  
 Supplier: Cirtech (UK), Currie Road Industrial Estate, Galashiels, Selkirkshire TD1 2BP.  
 Tel: 0896 57790

# The truth about TELEX

## How much does it cost to go on Telex?

You could go the conventional way and buy a dedicated Telex machine. The cheapest will cost you £1,604 (the Whisper), the dearest £2,892 (the Cheetah). You will also need a separate telephone line, costing £101 to install, plus £404 a year rental. That's a total outlay over the first year of a minimum of £2,109. (All prices include VAT.)  
 Or you could do what more and more Apple users are doing – use your Apple II or Macintosh to double as a Telex machine. And just use your ordinary telephone!

## How do I turn my Apple II or Macintosh into a Telex machine?

All you need is a modem and appropriate communications software (see the advertisements in this issue), a telephone, and a subscription to MicroLink. Telex is just one of a growing number of services available to Apple users on MicroLink. With it you can also read the news as it happens, go telesshopping, create your own closed user group, send telemessages and electronic mail right round the world, download free telesoftware programs directly into your micro... and much

## But why use Telex?

Because it's a standard means of instant communication between businesses. Today there are 150,000 Telex machines in use in Britain – and more than 2 million worldwide. It's used to dramatically speed up business communications – just as quick as using the phone but far more efficient, because you have a hard copy of every "conversation" for your records.  
 But there's a big bonus you get when you use MicroLink for Telex that the conventional way doesn't offer.  
 With MicroLink you don't HAVE to be in your office to send or receive Telex messages. You can just as easily use your computer at home (or even a portable). So now you can check whether there are any Telex messages waiting for you – anywhere, anytime. How's that for your business efficiency?

How to join:  
See Page 4



# Back to Basics

THE Basic language started out at Dartmouth College in the almost prehistoric computing days of 1963. It was originally designed as a beginners' introductory language, but with the advent of micro it quickly became established as *the* language, but with the advent of micros it mentation and low memory requirements.

However, new implementations on various computers contained "extensions" to the original language to allow the special facilities of each machine to be utilised. Hence the language diversified like a hydra into many incompatible dialects.

The original authors of Basic, John Kemeny and Thomas Kurtz have now attempted to bring the language into the micro age in an implementation called True Basic. This introduces into the language many of the controls necessary to put together well structured programs, as well as the commands to control graphic dis-

## Mike Cook looks at a new implementation of an old favourite

plays in a hardware independent way.

True Basic is available to run on several different computers: For the Macintosh implementation the package comes on two single sided 400k discs along with two substantial manuals. One is a Users' Guide (310 pages) which includes a removable reference card, and the other is a reference manual (331 pages) complete with comprehensive index – a refreshing change in documentation. The Users' Guide is a tutorial introduction to the language and its facilities which has been specially written for the Macintosh. It is liberally sprinkled with example programs illustrating various

points. A handy feature is that all these examples are supplied on discs so there is no need to type anything in.

When the language is run there is a control box down the left hand side. At the top is a traffic lights icon allowing you to stop, pause or run your program. Three other icons allow you to open an output, command or help window.

With the command window you can type in any command you like, but most of the time you can issue these by icon clicking or menu selection. The output can be restricted to the resizable output window or take up the whole screen.

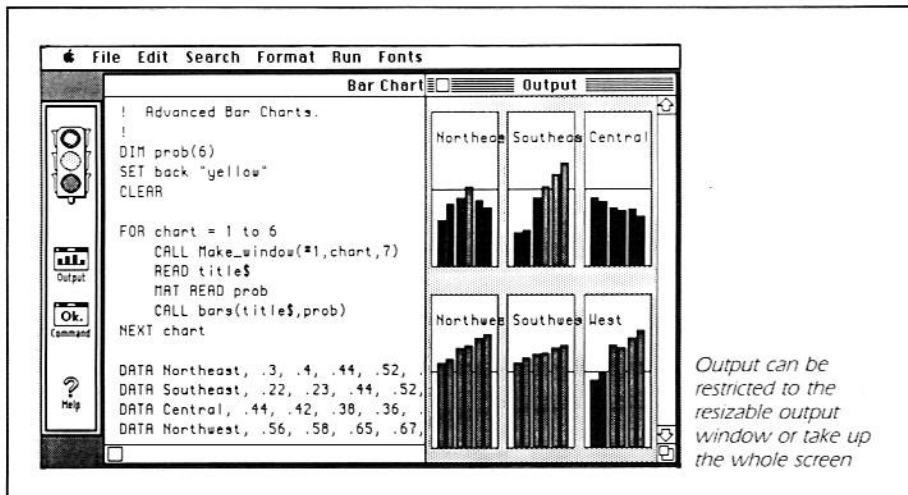
When you run a program it first compiles itself to an intermediate code, then interprets that. This produces a slight delay in starting after you have asked it to run, which can be eliminated by saving the compiled version of your program.

## Standard features

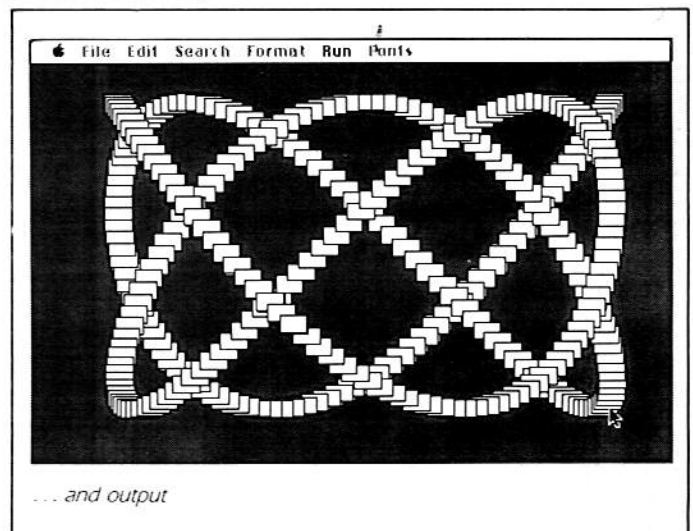
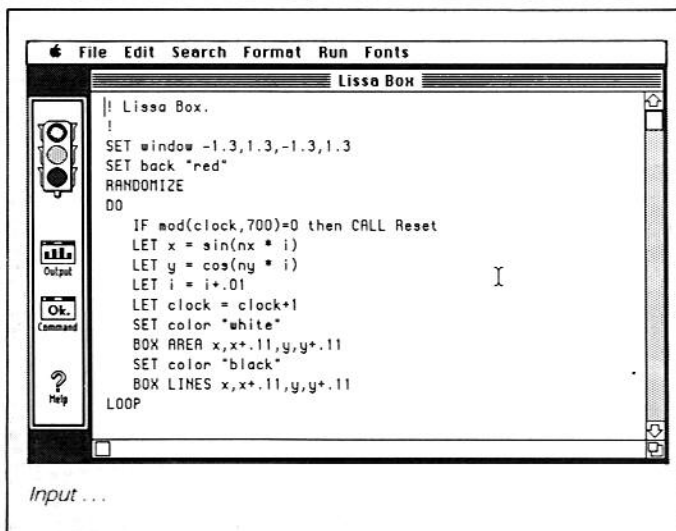
There is no speed advantage in using short variable names or multi-statement lines, so True Basic encourages you to write readable code. Line numbers are optional and good structured code can be written entirely without them.

All the features we have come to accept as standard in a good Basic are present along with many advanced ones. In addition to the FOR ... NEXT loop there is also the DO ... UNTIL loop and the WHILE ... LOOP control structures. The IF .. THEN .. ELSE is a block structured command allowing many lines of statements to be

Turn to Page 34 ►



Output can be restricted to the resizable output window or take up the whole screen



... and output

### ◀ From Page 33

executed conditionally. In addition the SELECT CASE statement allows multiple choice to be easily implemented. There is a comprehensive format option in the PRINT statement to allow you to make the screen output look exactly how you would like it to look. This includes control over the number of decimal places produced and the exact position of the decimal point.

One feature not found in many versions of Basic is the MAT statements, which allow you to manipulate whole arrays with a single command. Unlike most Basics, arrays here can be redimensioned while the program is running and some of the MAT commands automatically do this if the resulting matrix is bigger than that originally dimensioned.

Arrays may be multiplied by each other or by scalars, as well as being inverted and transposed. You can calculate the dot product of the arrays as well as adding and subtracting them. There are single statements to print, input and read arrays as well as built in array values such as null, identity and conjugate.

Finally there are commands to plot out data stored in arrays. All this makes handling large amounts of data or array manipu-

lation very easy.

True Basic has two methods of breaking up a program into smaller portions: Functions and subroutines. A function can take a number of values and return a single value, whereas a subroutine does not return any values. Each can be defined as internal or external.

Internal functions and subroutines are embedded in the program and share common variables with the program, whereas external functions and subroutines are written after the END statement and have totally independent variables. These are also fully recursive, making some types of programming particularly easy.

### Graphics handling

One very powerful feature is that these functions and subroutines may be stored externally in a LIBRARY file. You can get your program to search one or more files to find the function you want. This allows you to use a bank of common subroutines in many different programs – a feature that is used in languages like Pascal and C.

The graphics are handled in a device-independent way: You specify the range of coordinates you want in your display

window and this is automatically mapped to the available number of pixels. This means that you can run any program with any physical size of window, although the aspect ratio will not always be right.

True Basic can produce points, lines, ellipses and filled areas. An area is any space bounded by straight lines. There is a BOX statement that restricts drawing to a small portion of the screen and increases speed for animation.

Pictures are the graphic equivalent of subroutines and may be internal or external. They allow you to transform the graphics display by shifting, scaling, shearing or rotating. Colours can also be specified, but on the Macintosh these will map to shades of grey. When a version for the Mac II is available then you will see the true colours.

All the graphics routines mentioned so far are included in True Basic, but you can also use the Macintosh's inbuilt quickdraw routines as well as the window and menu options. However, the use of native tool box routines and True Basic's graphics routines are mutually exclusive.

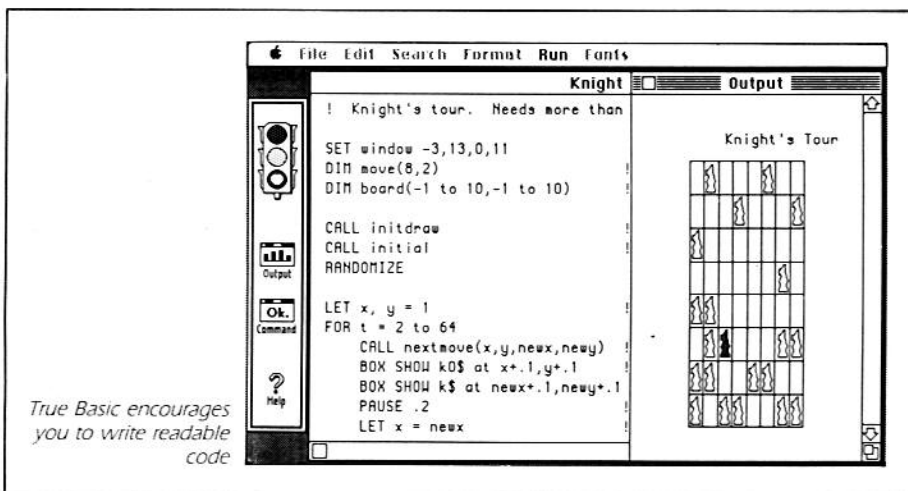
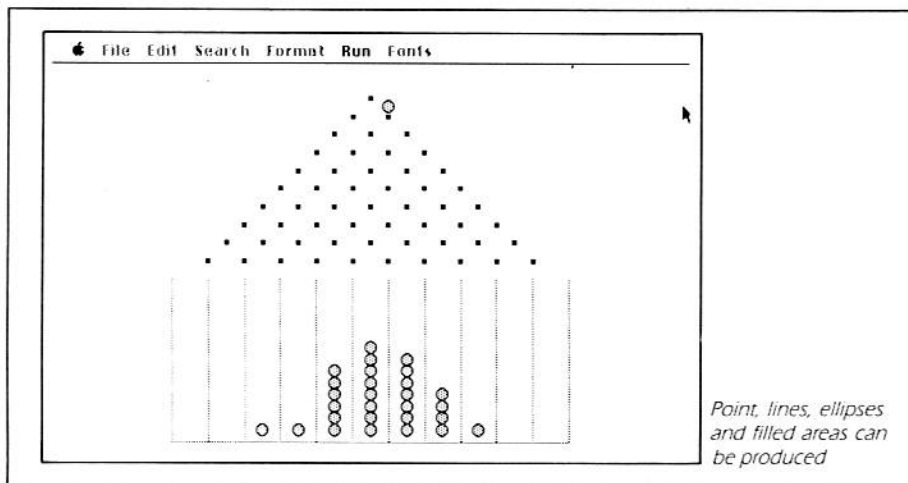
Also the program will not be easily transportable to another machine. On the PCW side, if you have the 68000 Development system you can incorporate machine code subroutines into your own programs.

There is also a comprehensive set of filing system commands allowing you to have text files, record files or byte files. True Basic also has facilities for handling errors at run time, as well as a system for producing sounds.

### Conclusion

I found True Basic quite easy to use and it ran at an adequate rather than blinding speed. With it you can produce programs that can run on a number of different machines with little or no modification. It will not produce standalone code, and while it can produce a full "Macintosh environment" program this is not easy (in any language) and is not really the strength of the language.

The strength of True Basic lies in it being a clean, powerful transportable language that is easy to use and well structured. It is an ideal teaching language and way of programming the Macintosh without having to understand "telephone directories" worth of internal subroutines. True Basic is a true joy to use and I can thoroughly recommend it.



Program: True Basic  
 Price: £69.95  
 Requirements: Any Macintosh (512k recommended)  
 Supplier: Precision, 6 Park Terrace, Worcester Park, Surrey KT4 7JZ.  
 Tel: 01-330 7166

# Time and magik

## The trilogy



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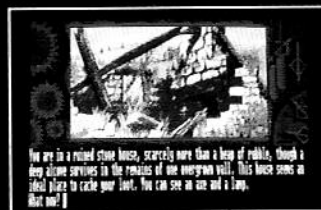
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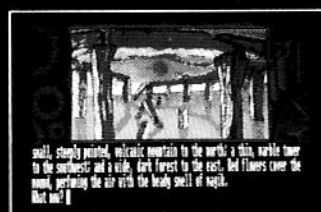
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Fortune smile upon you?  
His message complete, Father Time steps back into the picture.  
What now?



You are in a mixed stone house, scarcely more than a heap of rubble, though a few plumes survive in the remains of one evergreen wall. This house seems an ideal place to catch your foot. You can see an axe and a lamp.  
What now?



small, steeply pitched, volcanic mountain to the north; a thin, marble tower to the southwest; and a wide, dark forest to the east. Red flowers cover the ground, perfuming the air with the heady smell of magik.  
What now?

Screen shots from  
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MACLAB, a data acquisition system for all models of the Macintosh, has been designed with the research and/or teaching laboratory firmly in mind.

Rather than use the slots of the SE or the Mac II, it uses a standalone box which communicates with any Mac via its modem port: The Mac then provides control of the box and display of the results obtained. Presently two applications are available: Scope – which emulates a single channel, storage oscilloscope, and Chart, which emulates a four channel chart recorder.

### Software preview

This is not a review of the system, but rather a preview of the software which goes with the hardware box, as I have been working with a demonstration disc containing data already gathered but not with the hardware necessary to actually gather it.

According to the data sheets, the system provides sampling speeds between 25 microseconds and 0.5 seconds per sample via a 12 bit ADC which should therefore be capable of giving a "vertical" resolution of one part in 4096. There is input amplification via four independent differential amplifiers

giving  $\pm 1$  mV up to  $\pm 10$  V in 13 steps. The system is driven by a 65C02 at a clock rate of 2MHz and it communicates with the Mac at a baud rate of 19200 baud. There is 16k of onboard ram to store and buffer the data, and it is possible to program the 6502 as well – the Mac-based cross assembler required to do this has not yet come to market, however.

The ADC is fast enough to provide a claimed 40KHz sampling rate which in turn is fast enough to provide sufficient resolution for biological purposes and is probably fast enough for most physical, chemical, and engineering purposes.

In the chart recorder mode there are four channels available and when all four are being recorded the scrolling speed can be maintained at 100 ms per division which is said to be equivalent to a paper speed of about 10 cm per second. Naturally, slower speeds are also available.

The gain and configuration of each channel may be set independently with the data being stored in the Mac's ram, or, if the sampling speed is at 25 ms per sample or slower the data may be continuously saved to disc. Clearly, a hard disc is really required to make full use of this facility.

The display scrolls across the screen in four windows which are adjustable and

the screen may be split so that previously recorded data can be displayed along with current data. Any two of the channels may have their data displayed as X-Y rather than X-t data, which should suit electrochemists!

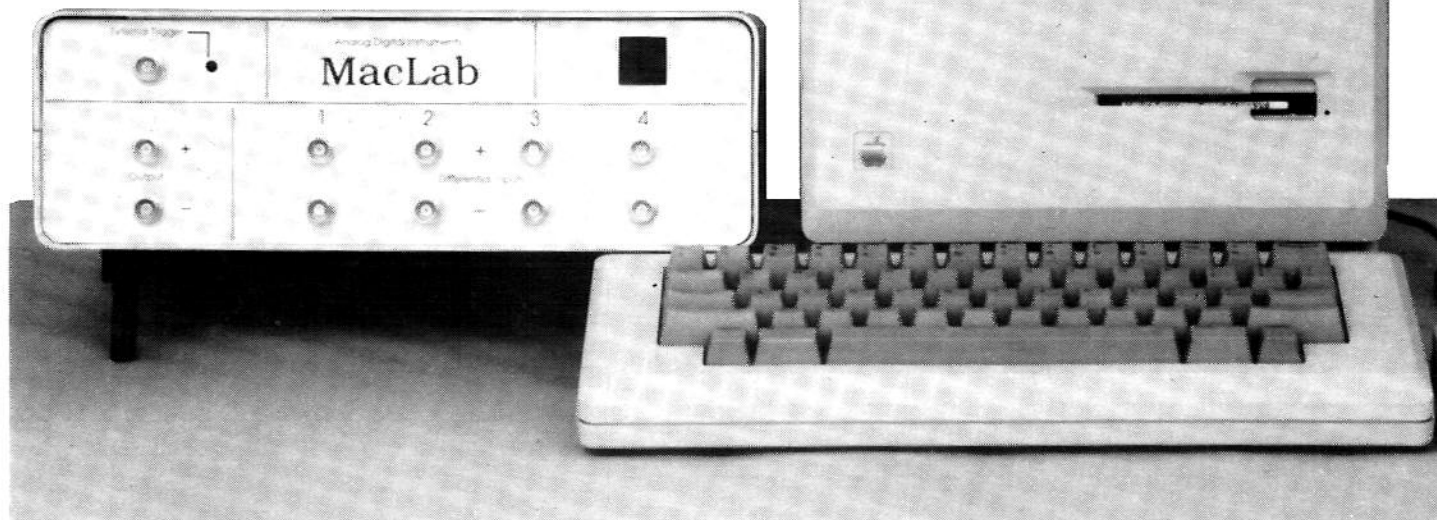
In the 'scope mode the system emulates a single channel, storage 'scope with sampling speeds ranging from 500 microseconds to 10 seconds per division and with gains from 200 microvolts to 2 volts per division. The input may be non-inverting, inverting or differential. Triggering options include 0 to 100% pre-trigger, post trigger and single or repetitive scans. It is also possible to use the system as a CAT (Computer Averaging of Transients) device.

### Signal generator

The system can also be used as a signal generator producing square waves of amplitude up to  $\pm 10$  V or a waveform may be drawn in a window and used to control output which can stimulate the sample while data is gathered. This option, combined with a simple potentiostat, could form a worthwhile electrochemical system if two channels could be sampled in the chart mode and displayed as an X-Y recorder.

# Ruling the waves

**Max Parrott previews a  
hardware/software  
system for the laboratory**



However, as I read the data sheets, this is not presently possible – maybe new programs will offer this kind of capability and I gather that software is actively being written for the system.

A single sweep of the sampled, analogue signal is made with 256 data points and a longer, continuous sampling period is made available by taking consecutive samples, up to a maximum of 7936. Once the sample is gathered a mouse-driven cursor may be used to examine it. The time and voltage at any point is continuously displayed in a window as the cursor is moved and a marker may be set by which to reference measurements.

The marker may also be used to measure the slope of the sampled waveform at any point, although the waveform cannot be displayed as the first derivative of the curve – which could be useful sometimes. The mouse may be used to highlight an area of the curve, then the area under the highlighted area can be displayed in another window. Again, the curve cannot be displayed in an integrated form. Up to 20 curves may be overlaid and displayed in different colours if you have the hardware.

Data can of course be saved to disc and the resulting curves may be printed or transferred to drawing programs for subsequent artwork. I'm not sure that this is necessarily a good thing, although it does make report and paper writing much easier.

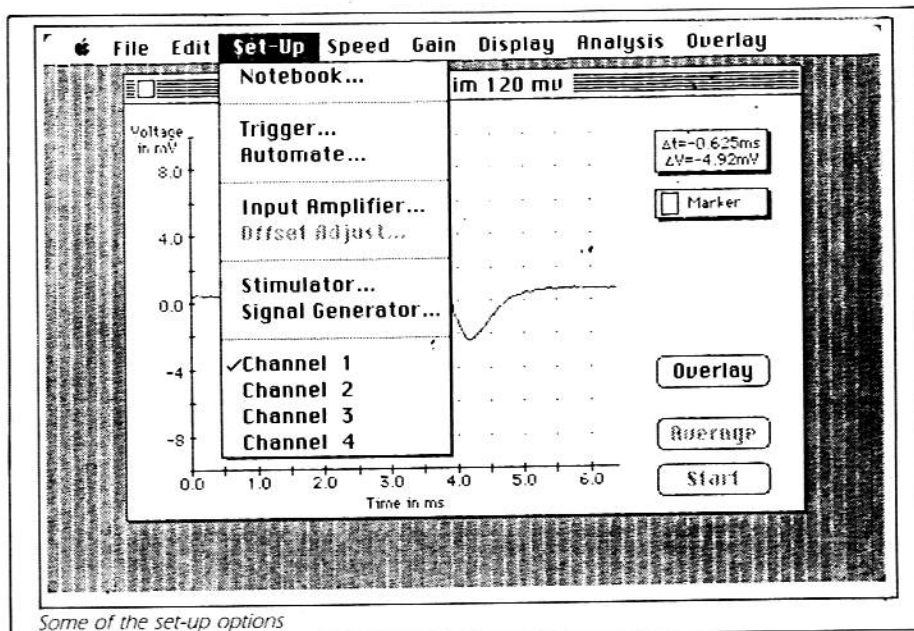
### Cheap alternative

Printing on the ImageWriter may be "normal" or sideways: Interestingly, when "sideways" is chosen the actual printed output appears upside down on the page as it is viewed and this doesn't make any difference to final result. Printing is accomplished via first saving files to disc so care needs to be taken over disc space – another reason for a hard disc system.

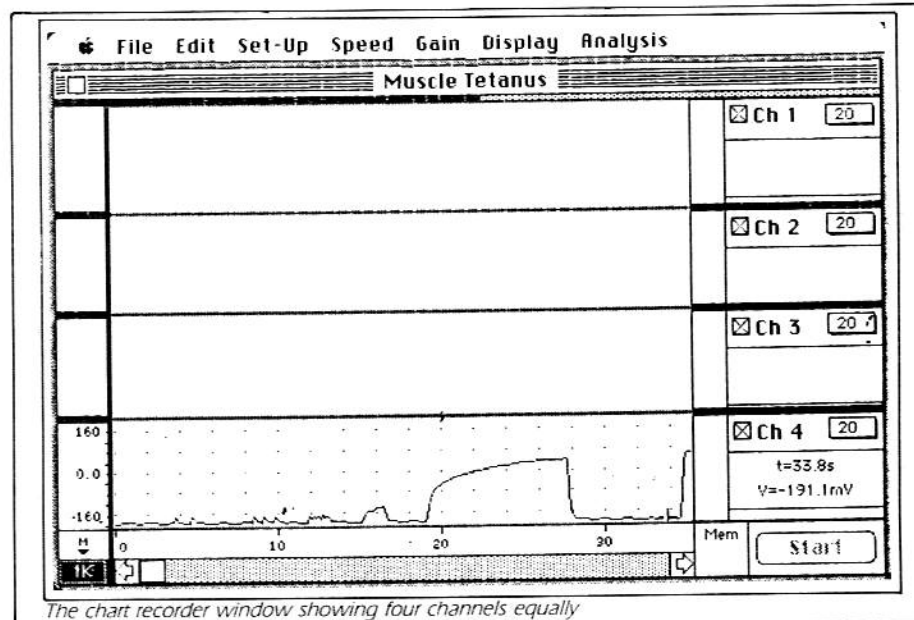
MacLab is a relatively cheap alternative to a storage scope and costs just a little more than a good, four channel, x-t recorder and so is a good buy – if you already have a Mac and a printer and do not take their cost into account. If you need to buy the lot then you will have to weigh up the advantages of computerising the system against a more conventional setup.

It may be that in the future, similar systems could come on an internal card for the Mac II which will work faster and which will be cheaper. However, it should be borne in mind that the rate limiting step will be the ADC's speed of sampling (and the resolution). A very fast converter, or an 18 bit one, will put the price up.

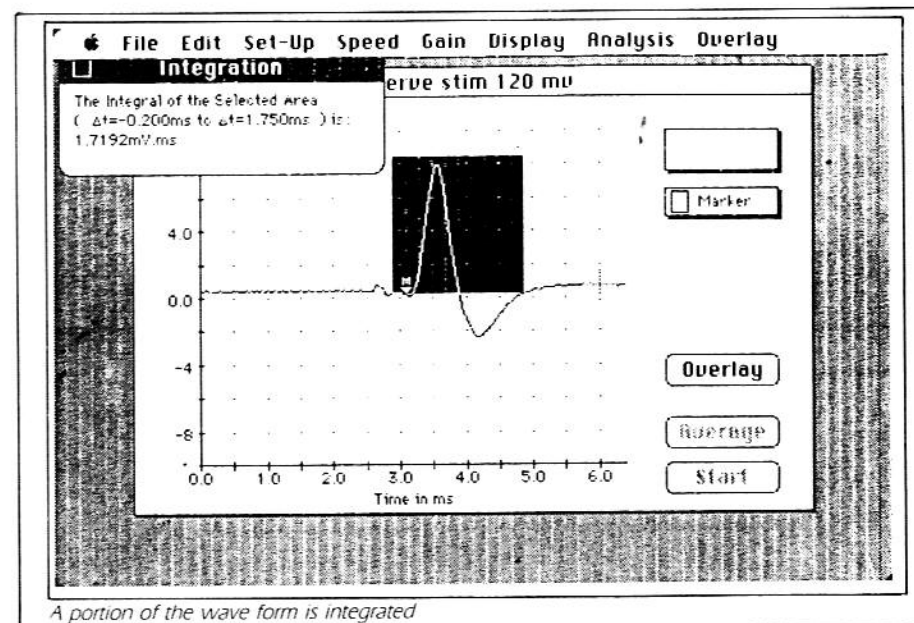
Product: MacLab Price: \$2925  
 Requires: Any Macintosh computer, ideally with printer and hard disc.  
 Manufacturer: World Precision Instruments,  
 15 Dudley Road, Hastings, East Sussex,  
 TN35 5JP.  
 Tel: 0424 721765.



Some of the set-up options



The chart recorder window showing four channels equally



A portion of the wave form is integrated

BEFORE going on to describe the listing promised in the last article, it's worth looking in more detail at the VS command, an aid to plotter program debugging and some notes on looking after plotters.

On most plotters the pen travels quickly, but when drawing on acetate film a slow speed may be called for. Slower speeds can sometimes also be useful when pens are approaching retirement age. Some plotters may be set to draw slowly via their control panels but the VS (Velocity Select) command will also do the job from Basic.

A single parameter thus: PRINT "VS 5;" specifies a speed below the maximum and VS with no parameter opens the throttle again. The range of parameter values will be given in the plotter manual and experiment will tell you the value you need.

### Avoiding the buffers

The Apple can send data instructions much faster than a plotter can carry them out, so many plotters have a built-in memory bank, or 'buffer', which first accepts the data before doling out the instructions to the stepper motors. When the buffer is full the computer drums its chips and waits for more space to become free, and towards the end of a plot the Apple gleefully signals that it has finished while the plotter rushes to catch up and put its pen away.

Extra memory can sometimes be added to plotters so that when complex drawings are being made the computer can be released for other tasks while plotting is being completed. Some plotters can be temporarily set to switch the buffer out of circuit so that the computer and plotter are forced to work together, one command at a time. This facility is useful when you are trying to find the exact point in a program where a bug bites.

### Cossetting a friend

A few points on the care of plotters are offered to help you get the most out of them. A plotter is one of the most engaging of robots and should be reliable and reasonably robust – as scientific instruments go. And as with all good tools it should be afforded normal care. Keeping it dry and away from hot sun is obvious advice.

If the plotter is powered from a separate power pack, switch this off after a session. There is a school of thought that contends that equipment is more reliable if left on continuously, but my information is that with modern equipment this is not good practice. Harm comes from "hot-switching" – turning warm equipment on again too soon after switching off, since hot rectifiers are less able to handle the power surge.

It should not be necessary to cut the power to recover from a hang-up, but if this is unavoidable allow at least a minute, and

# The plot thickens

## Geoffrey Jago goes into detail on arc, line and box plotting

longer if possible, for cooling off before switching on again. Avoid covering ventilation slots with loose papers and always keep the plotter and its supply leads away from sources of electrical interference.

Although some plotter arms may occasionally need to be pushed to the home position by hand when the machine is switched off, don't push the plotting arm manually when the power is on. When powered up it must only be moved by signals or by its control buttons.

Don't oil any bearings unless the instructions say so – oil will attract dirt and can eventually become gummy. Keep the machine free of dust, especially the tracks on which mechanism rolls or slides. An artist's soft dry paintbrush wielded carefully will get rid of airborne dirt. Keep the plotter well away from sticky tape and any office materials such as correcting fluids that could cause harm to critical parts.

For final plots the best paper to use is called art paper, which has a polished surface like glossy magazines and which suits most types of pen. I have found the cheaper cooking quality bond paper is satisfactory for most work, but beware if it has been through a photocopier. Many copiers leave a faint and invisible trace of silicone fuser oil – used to ensure the paper parts from heated rollers – and plotter inks may leave an uneven line on this surface.

Take care not to drop the pens, and keep

them capped when not in use. While on the subject of pens, those of a frugal nature similar to my own may be interested to know that common types of plotter pen using water-based ink via a fibre tip need not be discarded on initial signs of thirst.

Such pens usually give miles of service if treated well but, unless your plotter includes the luxury of automatic pen-capping, pens can easily be forgotten and allowed to dry out overnight. You can find out if a pen uses water-based inks because their prints run if the paper is wetted.

The non-business ends of many water-based fibre tip pens are not glued on and can be flipped off to reveal a cylinder of absorbent material which can be tapped out or persuaded with a winkle pin to exit in one piece. Care is necessary if you use anything sharp, and it is best to work over the draining board.

Add two or three drops of water to the nether end of the absorbent cylinder, then moisten the fibre tip slightly, put all back as it was and draw some lines until the pen has recovered its composure. Little time is lost if your pen is past redemption, but I have found that most find a new lease of life – and slightly blunt fibretips can be of advantage for some work, including shading.

Listing 1 is of a program which controls some of the commoner plotter commands via the keyboard. Those who missed the earlier articles should still be able to gain some insight into plotter control by looking at the listing. For the benefit of newcomers, the plotter commands all consist of two uppercase letters which may be followed by parameter values appropriate to the command with commas as separators and ending with a semicolon, all contained



**Borders can  
enhance the text.**

within PRINT statements.

REMmed to the eyebrows, the listing makes use of the commands that draw arcs (AA), rectangles (EA) and straight lines (PU and PD). In common with the other programs in this series it was written primarily for demonstration purposes and has been kept fairly concise, but it is hoped that readers may be able to adapt its routines for their own uses.

Some error traps have been included, but I have not sought to make the program completely bombproof. For those not familiar with the clever VAL statement in Basic (lines 280,290,1020,1030,1040,2010,2020), VAL looks at a print string, starting at the leftmost character, and converts it into a number, at least until baffled.

The procedure adopted in these lines may seem analogous to a Londoner travelling to Basingstoke by way of Barnsley, but inputting a number into the string variable PS provides a means whereby almost any key can be pressed without causing Basic to stop on an error.

The CI command to draw circles has not been included because circles can be drawn as 360-degree arcs. Lines 210 - 420 deal with arcs, lines 1000 - 1210 deal with box outlines and fillings and lines 2000 - 2130 deal with straight lines.

When arcs are selected you are first asked for the coordinates of the point from

which the arc should start. Input coordinates are absolute ones - that is, distances along the X and Y axes from 0,0 in the bottom left hand corner of the drawing area. You are next asked to give the centre of the circle of which the arc is part and then how many degrees the arc is to be drawn over. Options for a solid or dotted line and for the pen number are then provided.

### Curved lines

In order that a series of arcs can be drawn to form a continuous curved line, if desired, line 410 contains a small routine to feed the current pen position to the computer (courtesy of command OA) after the arc has been drawn. This data is set directly into variables X and Y which define the starting position for the next arc. It is then only necessary to return to line 240 for the remaining data to be sought.

The data read into the pen up/down variable PEN in line 410 is not used but PEN is included in the INPUT statement to obviate errors and to avoid a danger of the hardware relapsing into a dark study. Remember that OA only works if you have a Series interface.

The box routine from line 1000 et seq

uses the EA command to draw the rectangle's outline and then shading with RA in line 1180 is optional. Three types of shading - filled (solid colour), single hatching or cross hatching are selected via lines 1140 - 1160. Many other shading formats are possible by altering these lines.

The straight line routine in lines 200 onwards needs little explanation. The coordinates of the start are stored in X1,Y1 and the end in X2,Y2. Lines 2110 and 2120 allow a series of lines to be drawn to form shapes, zigzags or polygons. Line 2120 moves the old end coordinates into X1 and Y1 to become the new start position. Line 2130 returns the action to 2040 where the new end position is requested.

Until you are familiar with the program it is a good idea to employ a pencil to see the results of an instruction before drawing with a pen, especially in the final stages of a drawing. Pencil holders which fit the pen clips are available, but if these are difficult to obtain the handy person may be able to make one out of a dry pen.

Using a pencil, plotters will make a very faint line which is easily erased. When using pen holders be sure that the pen and holder together are no heavier than the maximum weight recommended by the manufacturer.

● The next article will describe how to draw graphs of mathematical formulae.

#### Listing 1

```

: PR# 0
: PRINT "DON'T FORGET TO
  RECAP THE PENS."
: END
: REM PEN HOME & GOTO BED
200 IF AS = "L" THEN 2000
: REM LINE SELECTED
210 HOME
: PRINT "ARC DRAWING ROUTINE"
: REM ARC SELECTED
220 PRINT "GIVE STARTING POSITION"
230 INPUT "X,Y IN MM. ";X,Y
: X = X * 40
: Y = Y * 40
: REM CONVERT COORDS TO 1/40 MM.
240 PRINT
: PRINT "GIVE POSITION OF CENTRE OF CIRCLE"
250 INPUT "X,Y IN MM. ";CX,CY
: CX = CX * 40
: CY = CY * 40
260 INPUT "HOW MANY DEGREES ? (NEG= ANTICLOCKWISE) ";DG
: DG = - DG
: REM CHANGE DG TO NEGATIVE FOR EASIER USE
270 PRINT
: PRINT "DOTTED OR SOLID LINE? (D/S) "
: GET BS
: IF BS < > "D" AND BS < > "S" THEN 270
: REM SET BS AS CONTROL VARIABLE
280 PRINT "PEN NUMBER? "
: GET PS
: IF VAL (PS) < 0 OR VAL (PS) > 8 THEN 280
: REM ERROR TRAP
P = VAL (PS)
: REM P SET TO PEN NUMBER
300 PRINT "PRESS A KEY TO DRAW ARC OR ESC TO EXIT"
: GET AS
: IF AS = CHR$ (27) THEN 160
PR# SL
: REM ENABLE PLOTTER
320 PRINT "IN;SP;P;"
: REM SELECTS PEN P
330 IF BS = "D" THEN PRINT "LT1,,3;"
: GOTO 350
: REM LINE TYPE 3 = DOTTED-JUMP OVER NEXT PROGRAM LINE
340 PRINT "LT;"
: REM SET LINE TYPE TO SOLID
: REM MOVE TO START
360 PRINT "PD"
: REM PEN DOWN
370 PRINT "AA"CX","CY","DG";"
: REM DRAW ARC FOR DG DEGREES CENTRED ON CX,CY
380 PRINT "PU"
: REM PEN UP
390 PR# 0
: REM DISABLE PLOTTER
400 PRINT "ANOTHER ARC FROM THIS POSITION? "
: GET AS
: IF AS < > "Y" AND AS < > "N" THEN 400
: REM AS CAN ONLY BE SET TO Y OR N
410 IF AS = "Y" THEN PR# SL
: IN# SL
: PRINT "OA;"
: INPUT X,Y,PEN
: PR# 0
: PRINT "START POSN.="X / 40,"Y / 40"
: GOTO 240
: REM OA READS PEN COORDS INTO X,Y & DISPLAYS VALUES ON VDU IN MM.
420 HOME
: GOTO 160
: REM BACK TO MENU (PROPER USE OF A GOTO)
1000 HOME
: PRINT "BOX PLOTTING ROUTINE."
: PRINT
1010 INPUT "GIVE LOWER LEFT COORDS IN MM. X,Y ";LX,LY
& :LX = LX * 40
:LY = LY * 40
1020 INPUT "GIVE UPPER RIGHT COORDS IN MM. X,Y ";RX,RY
:RX = RX * 40
:RY = RY * 40
: REM CONVERT COORDS TO 1/40 M.
1030 PRINT "PEN NUMBER? "
: GET PS

```

Turn to Page 40 ►

## ◀ From Page 39

```

: IF VAL (PS) < 0
OR VAL (PS) > 8
THEN 1030
1040 P = VAL (PS)
: REM P = PEN NO.
1050 PRINT "PRESS A KEY TO D
RAW BOX OR ESC TO EXIT"
: GET AS
: IF A(27)
THEN 160
: REM ALLOWS ROUTE BACK T
O MENU FOR THE FAINTHEA
RTED
1080 PR# SL
: REM ENABLE PLOTTER
1070 PRINT "IN;"
: PRINT "SP:P;"
: PRINT "PA:LX","LY;"
: PRINT "PD"
: REM INITIATE, PICK PEN
P, GO TO START
1080 PRINT "EA:RX","RY;"
: REM DRAW OUTLIE OF RECT
ANGLE WITH ABSOLUTE COO
RDS
1090 PRINT "SP0;"
: PR# 0
: REM HOME PEN & SWITCH O
FF
1100 PRINT "WOULD YOU LIKE T
HE BOX SHADED?"
: GET AS
: IF AS < > "Y" AND AS
< > "N" THEN 1100
1110 IF AS = "N" THEN 160
: REM NO SHADING? - BACK
TO MENU
1120 PRINT
: PRINT "(F)ILL, (H)ATCH,
(X)HATCH?"
: GET FS
: IF FS < > "F" AND FS
< > "H" AND FS <
> "X" THEN 1120
: REM SELECT FROM 3 TYPES
1130 PR# SL
: REM ENABLE PLOTTER
1140 IF FS = "F" THEN
PRINT "FT2;"
: REM 2= SOLID FILL
1150 IF FS = "H" THEN
PRINT "FT3,120,45;"
: REM 3=SINGLE HATCH, 120
=SPACING, 45= 45 DEGREE
ANGLE
1160 IF FS = "X" THEN
PRINT "FT4,120,45;"
: REM 4= CROSSHATCH
1170 PRINT "SP:P;"
: PRINT "PA:LX","LY;"
: PRINT "PD"
: REM MOVE TO LOWER LEFT
WITH PEN NO.P
1180 PRINT "RA:RX","RY;"
: REM SHADE RECTANGLE USI
NG ABS. COORDS
1190 PRINT "SP0;"
: REM PEN GO HOME
2000 PR# 0
: REM AND SWITCH OFF PLOT
TER
1210 HOME
: GOTO 160
: REM WAITER, THE MENU
2000 HOME
: PRINT "LINE DRAWING ROU
TINE"
2010 PRINT "PEN NUMBER?"
: GET PS
: IF VAL (PS) < 0
OR VAL (PS) > 8
THEN 2010
: REM ERROR TRAP
2020 P = VAL (PS)
: REM P= PEN NO
2030 INPUT "GIVE START OF LI
NE X,Y IN MM. ";X1,Y1
: X1 = X1 * 40
: Y1 = Y1 * 40
2040 INPUT "GIVE END OF LINE
X,Y IN MM. ";X2,Y2
: X2 = X2 * 40
: Y2 = Y2 * 40
: REM CONVERT TO 1/40THS
MM.
2050 PRINT "PRESS A KEY TO D
RAW LINE OR ESC TO EXIT"
: GET AS
: IF AS = CHR$(27)
THEN 160
: REM ESCAPE ROUTE TO ME
NU
2060 PR# SL
: REM ENABLE PLOTTER
2070 PRINT "SP:P;"
: REM PICK UP PEN NO.P
2080 PRINT "PU:X1","Y1;"
: REM MOVE TO START WITH
PEN UP
2090 PRINT "PD:X2","Y2";PU;"
: REM DRAW LINE
2100 PR# 0
: REM DISABLE PLOTTER
2110 PRINT "ANOTHER LINE FRO
M THIS POINT? (Y/N)"
: GET AS
: IF AS < > "Y" THEN
PR# SL
: PRINT "SP0;"
: PR# 0
: HOME
: GOTO 160
: REM IF NO, SEND PEN HOM
E & RETURN TO MENU
2120 X1 = X2
: Y1 = Y2
: REM ASSIGN COORDS OF EN
D OF LINE TO START OF N
EXT ONE
2130 GOTO 2040
: REM GO BACK & DRAW ANOT
HER LINE

```

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# Talking proper

IN the often droll world of Fritz Spiegl the word is merely written proof of man's constant desire to be misunderstood. Having discovered rather late in life – at the age of 12 to be precise – that the English have an uncertain way with words he began exploring the peaks and potholes of language, finding the uneven terrain liberally littered with gaffes which produced guffaws, clangers which rated as pure comedy.

His research led to several books and to the launching of his own highly successful publishing company. And still much of the terrain remained uncharted.

His journey of discovery has, however, accelerated with the help of an Apple Macintosh II which typsets his books ready for the three Rotaprint offset litho machines installed in the basement of his large Victorian home in Liverpool's Toxteth.

It is here that the total staff of Scouse Press – Fritz Spiegl and his wife Ingrid – write, print, publish, bind and distribute a variety of titles covering local history and local humour. Perhaps the most famous is *Lern Yerself Scouse*, subtitled *How To Talk Proper In Liverpool*, now in its third volume having sold more than half a million copies.

The newcomer to the Liverpool dialect will quickly discover the colloquial where a nudger is a long sandwich made from an elongated bread roll and de ozzy is the local hospital. But perhaps it is the unique juxtaposing of English, a sort of verbal counterpoint, which explains the book's huge success and pinpoints the very core of Liverpool humour.

Where else would a coloured person be described with affection as a smoked Irishman? Who but a true Scouser would refer to a cemetery as a bone orchard? When did Anfield, the shrine of Liverpool

---

## **Tony Jackson learns imself Scouse – courtesy of Fritz Spiegl and a Mac**

---

football, become known with such love and irreverence as *De Onion Patch*?

The Apple's built-in dictionary is, of course, more of a purist and neither Finnyaddy (Finnan haddock) nor Burr goo (porridge) is on the menu. Fritz Spiegl's appetite for the meanings of daily life devours more than such word contortion and distortion.

A former principal flute with the Royal Liverpool Philharmonic Orchestra, he is a columnist currently in demand by several national newspapers, broadcasts regularly on Radio Three as a music specialist and has written several books including *In-Words And Out-Words* and *The Joy Of Words*. He has also found time to run a publishing business. His Macintosh appears to be science's answer to the problem of keeping up with his prodigious energy and vast output.

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## **Workaholic**

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"Now I am looking for a portable Apple, which would be very useful on trains", says the man who regards his work as one long pleasure. His source of fun is certainly constant, the clock becoming obsolete long ago. "If nobody employs you and you like what you are doing you don't keep working hours," he says with understated simplicity.

The Mac with its attendant LaserWriter

seems slightly incongruous, too modern, in Fritz Spiegl's study – which is the size of a town house lounge and has the warmth and clutter of a Dickensian bookshop. Shelves packed like a library stretch to the high ceiling and separate workbenches take the spillage of his current projects.

The stereo plays Mozart or Haydn and the music-while-you-work is sometimes interrupted by one of two radios, simultaneously tuned to different channels in order to catch up on the news or some item which takes his interest.

There are no chairs. Fritz Spiegl works and thinks on his feet. It is almost a cliché picture of a scholar's den, except that this

*Producing a top selling record – the theme from the popular Z-Cars television series in the 1960s – is yet another by-product from the fertile imagination of Fritz Spiegl.*

*"We were doing a concert of Scouse music when the BBC were in Liverpool filming Z-Cars", he says. "They wanted some authentic music so I took a traditional theme and based it on the sound of a marching Orange band."*

*He played one of the two piccolos, added harmonium and drums and the soundtrack music became as popular as the police series itself.*

*"We got a call from a music publisher and eventually sold it for very little", he adds with a smile.*

particular scholar has embroidered the traditional furnishings with the latest trappings of technology.

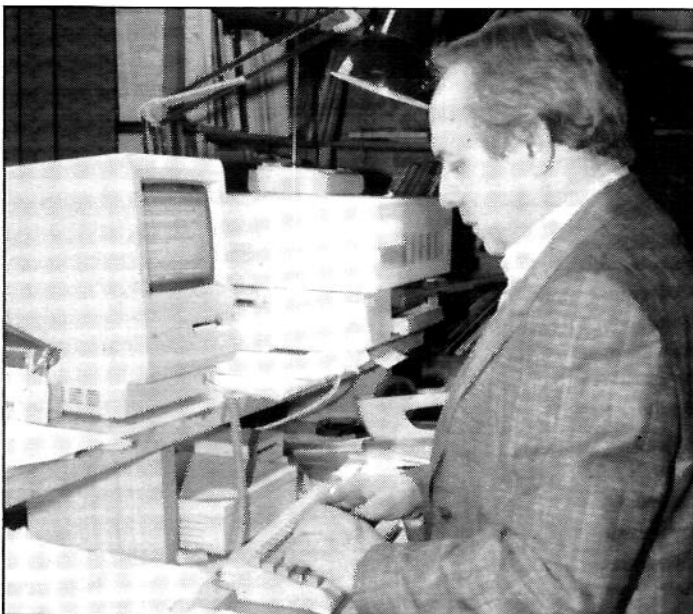
The Mac has just produced his script for his latest radio talk. This will delight his producer. "The reproduction is so clean they find it very easy to work with," he says.

Scouse Press was established in 1965. Some 26 years earlier, when Hitler was establishing a vocabulary of his own in Europe, Fritz Spiegl fled his native Vienna – arriving in England knowing only two words of English: "Please, water." Four months later he had written an essay for his school magazine and a year later achieved his first publishing success with an article in *The Aero Modeller*.

On leaving school he became a typographer and was employed as a trainee designer in a London publishing house. He was later accepted by the Royal Academy Of Music to study the flute. Eventually he toured Europe, North and South America with the Royal Philharmonic and the Hallé Orchestras where he played under the batons of Sir Malcolm Sargent and Sir John Barbirolli.

He moved to Liverpool in 1948 and

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*There are no chairs... Fritz Spiegl works and thinks on his feet.*

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played with the Liverpool Philharmonic for 15 years until "the sound of the brass began to affect my hearing." He married Ingrid 11 years ago and her training at the Liverpool College of Art was put to use in the business where she helps with design and illustrations and sometimes binds the books.

Fritz Spiegl discovered that in Liverpool the English were a nation of Kop-speakers and began tracing the city's origins through its street phrases. Having dissected and collated the local lexicon with the help of Frank Shaw, a Liverpool customs officer and writer, he produced the first Lern Yerself Scouse book.

He later helped to immortalise one of Liverpool's more famous adopted sons, the late Bill Shankly, by producing a Chairman Mao-inspired little red book containing the sayings of the former Liverpool FC manager. Sample: "Football is not a matter of life and death. It's more important than that."

Fritz has long had an interest in the value of computers but is not deeply knowledgeable on the technical side. "I started with an early IBM justified typewriter. I also had the first Apple in Liverpool, went on to an Apricot and finally to a Macintosh II after being

*So what is Scouse? It is, of course, a food rather than a dialect. The native dish of Liverpoolians, or Scousers, it is a simple stew made from the cheapest cuts of meat, usually mutton, boiled with potatoes and onions.*

*Its full title is Lobsouse and it was born out of grinding poverty. The meat is optional. Without it the stew becomes Blind Scouse and either dish is eaten with red cabbage pickled in vinegar.*

convinced by the Liverpool Apple Centre". His motivation? "It all saves time," he says, and for Fritz Spiegl making time is equated with making more books, dreaming new ideas.

Like, for instance, turning his fine eye to the more tired headlines of Fleet Street and the peculiar disease known as journalese. This he did with wit and style in the successful *What The Papers Didn't Mean To Say*, published by Scouse Press, and *Keep Taking The Tabloids* published by Pan Books in 1983.

Whether or not newspaper editors chuckled at this collection of their own shortcomings was irrelevant. The satire was self-inflicted and Fritz Spiegl enjoyed the joke. There was no malice in blunderland, just a gentle reminder from a softly spoken Liverpool gentleman that words, like music, require a precise sequence and always demand respect.

The pun was pummed. "White Christmas On The Cards" and "Tobacconists Fuming" were harmless but silly. Jargon was jumped on, imprecision ridiculed.

The absurdities of contemporary Newspeak became apparent when newspaper



Scouse Press is strong on local flavour

readers realised that ambulances seemed only to make "mercy dashes," hopes could only "rise," "fade" or be "dashed" and everyone from Cabinet ministers to housewives were still being "shell-shocked," usually about the price of cabbages or the latest Test score, 70 years after the First World War when the true meaning of the phrase was in use.

Fritz Spiegl's magical mystery tour of the English language is far from complete. Scousers themselves are continually inventing new words and so the Lern Yerself pocketbook will continue to be updated.

The Scouse Press series on local history, *Liverpool Packet*, has covered ballads and folksongs, maps and prints, transport and trade, shipping and Roman times; and that's only the tip of the Liver Building.

*Merseyside At War* and *Liverpool & Slavery* are two further examples from the basement presses at Toxteth and, of course, there is the local street directory.

Writing and typesetting via his Macintosh has given him the extra time to explore. Desktop publishing has allowed him to create more and that is the infinite luxury for the man who wants technology to keep up with him.

Fritz relies heavily on Microsoft Word 3.0 and has had no problems since ironing out a few teething troubles.

"I once got a whole section of gibberish,

mixtures of symbols, squares and the dreaded rabbit that lost me a whole chapter."

Now he's quite content, though he would like to see Word incorporating an audible warning for those occasions when he inadvertently types in massed ranks of capital letters.

Fritz uses the Mac very much as a tool for printing, and appreciates he's yet to realise its full potential. That might come when he can afford the training time.

However, he does depend heavily on the LaserWriter for clarity and quality control, and uses it extensively for his scripts and newspaper articles as well as for direct press printing.

After typesetting he makes his own negatives and plates and then starts the litho machines, finally cutting and binding. Another idea. Another project where "do-it-yourself" takes on a very real meaning because each publishing process from conception to birth is his alone.

Learning English was a necessity for Fritz Spiegl, examining its use became something of an absorbing hobby which "snowballed dramatically" at a "great rate of knots" before reaching today's "momentous milestone." That may well be a journalese description of Fritz Spiegl.

Or, in Scouse: "Ee come over on a razor boat." Translation: He is a sharp fellow.

## AppleUpdate

*A NEW product from Blyth Software – the Omnis SQL Connectivity Pack – is being promoted as a complete Macintosh-to-minicomputer relational database solution.*

*Claimed to provide true application-level connectivity, it will also give Mac users access to the data processing power of most popular mini database management systems.*

*"With the Macintosh now being accepted as a serious business machine, it becomes critical for software com-*

*panies to provide flexible access to the mass of data stored on mini and mainframe computers", said Paul Wright, managing director of Blythe Software (0728 3011).*

*The pack supports the leading VAX data management systems, as well as VAX "flat files" generated by Cobol and Fortran applications.*

*The network linking the Macintosh to the VAX can be direct or via dialup asynchronous link, an AppleTalk network or an Ethernet using DECnet protocols.*

**Dave Halliwell**  
reintroduces  
a capital game

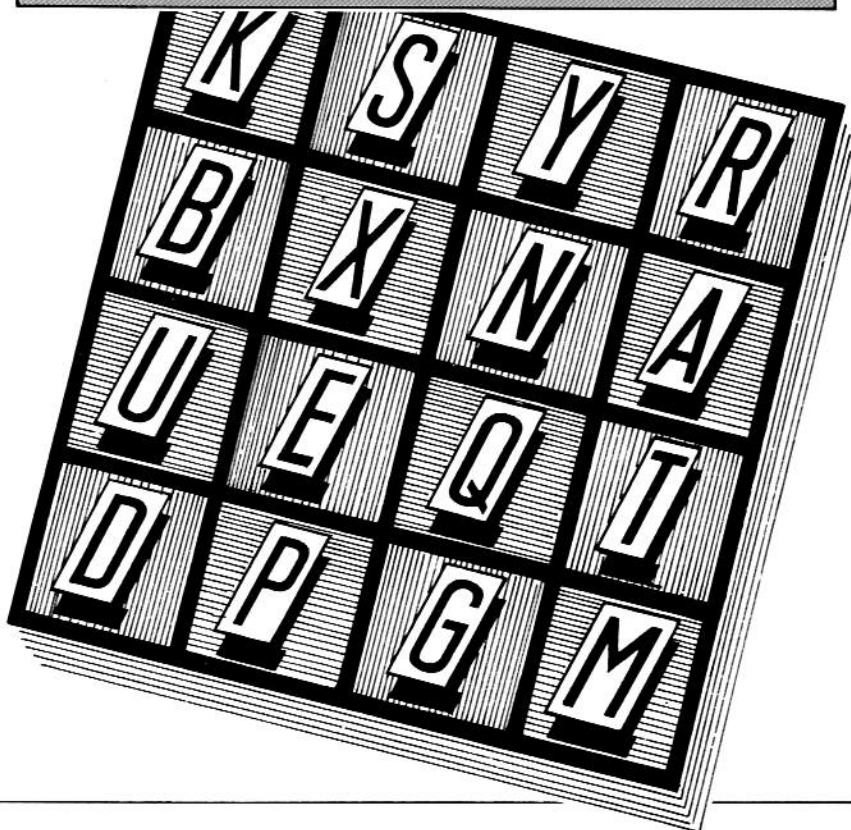
I HAVE known versions of this game since my early days in computing. Although this version has been in the public domain for some time, I have never seen it on an Apple system — it is very simple to play and yet you will always come back for more.

You start the game with 16 capital letters, laid out at random in a 4 x 4 array. By pressing any valid letter, four of the "letter tiles" will rotate by one position. That is, four presses can restore the board as it was. However, the object of the game is to put the letters into alphabetical order in as few moves as possible.

The computer will keep score as you play. To make things a little spicier, if you are terribly frustrated with your position you can — just once in a game — elect to swap any two adjacent letters in a row.

Full instructions are in the program, which should run on an Apple II computer in either 40 or 80 column mode. If you have an old Apple II or II+ without the capability of lowercase display you will have to switch the lower case strings to upper case as you type.

# Letter twist



```

1  TEXT                                1,2,3,5,6,7,9,10 and 11
5  DIM B(16),BS(16)                   .
10 HOME                                67 INPUT "Hit RETURN to co
: PRINT "GAME OF 'ROTATE'"             ntinue";XS
: PRINT                                  70 HOME
12 INPUT "Instructions (Y/              : PRINT "Consequently, if
N)";AS                                  the board looked like
: IF AS = "N" OR AS                    :
= "n" THEN 136                          75 FOR I = 1 TO 16
15 HOME                                :BS(I) = CHR$ (I
: PRINT "In this game the              + 64)
board is laid out"                       : NEXT I
25 FOR I = 1 TO 9                       80 BS(2) = "C"
:BS(I) = " " +                           :BS(3) = "G"
STR$ (I)                                  :BS(6) = "B"
: NEXT I                                  :BS(7) = "F"
27 FOR I = 10 TO 16                     : GOSUB 400
:BS(I) = STR$ (I)                        85 PRINT "and you rotated
: NEXT I                                  C,the board would be
30 GOSUB 400                              :
40 PRINT                                  90 FOR I = 2 TO 7
45 PRINT "Positions are fi              :BS(I) = CHR$ (I
lled randomly by the"                    + 64)
50 PRINT "Letters A to P.              : NEXT I
The object of the"                       : GOSUB 400
51 PRINT "game is to order              95 INPUT "Hit RETURN to co
the letters by rotatin                    ntinue";XS
g"                                         100 HOME
55 PRINT "any four letters              : PRINT "You also get one
clockwise one position"                  'special' move per"
57 PRINT "You specify the              103 PRINT "game which you m
upper left position"                      ay or may not need."
60 PRINT "of the four you              105 PRINT "The special move
wish to rotate, i.e."                      allows you to"
65 PRINT "valid moves are              107 PRINT "exchange any two
                                           adjacent letters in a"
110 PRINT "ROW. To make thi              : PRINT "HERE'S THE START
s move, press 'S'"                        ING BOARD..."
115 PRINT "as your move and              : GOSUB 400
you will be asked"                          195 VTAB 19
117 PRINT "for the position              : PRINT "Number of moves
s of the two letters"                      :
120 PRINT "to exchange. Rem              200 VTAB 18
ember -- ONLY ONE"                          : HTAB 1
125 PRINT "special move per              : PRINT "Letter to rotate
game!"                                       ;
: PRINT                                     : GET IS
130 PRINT "To give up at an              : T = ASC (IS)
y time, press R"                          201 IF T > 90 THEN T
131 PRINT "to restart or 'Q'              = T - 32
to quit"                                    202 VTAB 18
: PRINT                                     : HTAB 18
: PRINT                                     ? PRINT CHR$ (T);
132 PRINT "Good Luck!"                    203 IF T = 82 THEN GOTO 13
135 PRINT                                  6
: PRINT                                     204 IF T = 81 THEN GOTO 10
: INPUT "Hit RETURN to co                00
ntinue";XS                                  205 IF T = 83 THEN GOSUB 5
136 HOME                                    05
140 FOR I = 1 TO 16                       206 IF (T < 65) OR (T
:BS(I) = CHR$ (64                          > 80) THEN GOSUB 2000
+ I)                                         : GOTO 200
: NEXT I                                    207 FOR J = 1 TO 16
150 FOR I = 1 TO 16                       IF T = ASC (BS(J))
160 T = INT (16 *                          THEN I = J
RND (1) + 1)                                NEXT
165 TS = BS(I)                             210 IF I = 4 OR I = 8
:BS(I) = BS(T)                              OR I > 12 THEN GOSUB 2
:BS(T) = TS                                  000
180 NEXT                                    : GOTO 200
190 M = 0
: S = 0

```

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```

220 M = M + 1
:TS = BS(I)
225 VTAB 19
: HTAB 18
: PRINT M;
230 BS(I) = BS(I + 4)
:BS(I + 4) = BS(I
+ 5)
:BS(I + 5) = BS(I
+ 1)
:BS(I + 1) = TS
240 VTAB 12
: HTAB 1
: GOSUB 400
: REM Print the board
300 REM *** DO WE HAVE A
WINNER
305 FOR I = 1 TO 16
310 IF CHRS (I + 64)
< > BS(I) THEN I =
16: NEXT I : GOTO 200
315 NEXT I
320 PRINT
: PRINT "You ordered the
board in ";M;" moves."
:M1 = M1 + M
:G = G + 1
325 FOR I = 1 TO 15
: PRINT CHRS (7)
: NEXT I
330 PRINT
: INPUT "PLAY AGAIN (Y/N)
";AS
: IF (AS = "Y") OR (AS =
"y") THEN GOTO 140
340 PRINT
: PRINT "You played ";G;"
games and ordered the"
345 PRINT "board in an avera
age of ";M1 / G;" moves"
: PRINT
: GOTO 1000
390 REM *** PRINT BOARD S
UBROUTINE
400 PRINT
: FOR I = 1 TO 13 STEP 4
410 PRINT " ";BS(I);"
";BS(I + 1);" ";BS(I
+ 2);" ";BS(I
+ 3)
420 NEXT I
: PRINT
: RETURN
500 REM *** SPECIAL MOVE
SUBROUTINE
505 PRINT
:S = S + 1
: IF S = 1 THEN GOTO 510
506 VTAB 21
: HTAB 1
: PRINT "Only one special
move per game"
507 FOR I = 1 TO 2000
: NEXT I
: VTAB 21
: HTAB 1
: CALL - 958
: GOSUB 2000
: GOTO 200
510 VTAB 21
: HTAB 1
: PRINT "Exchange which t
wo letters ";
511 GET XS
:X = ASC (XS)
: IF X > 90 THEN XS
= CHRS (X - 32)
512 PRINT XS;
513 GET YS
:Y = ASC (YS)
: IF Y > 90 THEN YS
= CHRS (Y - 32)
514 PRINT YS;
515 X = 0
:Y = 0
516 FOR J = 1 TO 16
: IF XS = BS(J) THEN X
= J
517 NEXT
518 FOR J = 1 TO 16
: IF YS = BS(J) THEN Y
= J
519 NEXT
520 IF X < > Y + 1 AND X
< > Y - 1 THEN
GOSUB 2000
: GOTO 510
540 TS = BS(X)
:BS(X) = BS(Y)
:BS(Y) = TS
550 PRINT
: VTAB 21
: HTAB 1
: CALL - 958
: GOTO 240
1000 HOME
: END
2000 VTAB 21
: HTAB 1
: PRINT "Illegal Move"
2005 PRINT CHRS (7);
2010 FOR I = 1 TO 2000
: NEXT I
2020 VTAB 21
: HTAB 1
: CALL - 958
2030 RETURN
    
```

# MURDER

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# Pi in the sky

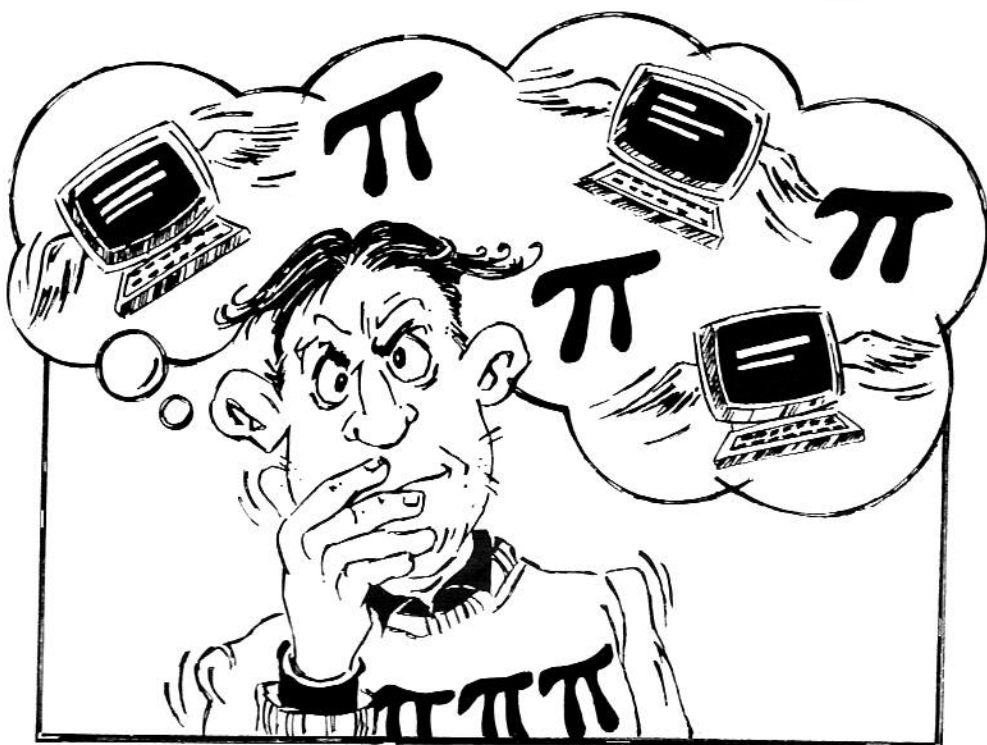
It's generally well known that pi is an irrational number. That is, put simply, no-one knows exactly its true value. What is not so well known is that pi varies with pressure.

In the pressure regime around atmospheric and down to pressures such as 1 torr, pi does not vary enough to make calculation of the variation generally worthwhile, but now that computers are becoming more widespread and pi has been calculated to many significant figures (at atmospheric pressure) I thought it time that a program suitable for microcomputers was made available.

The variation of pi with pressure in the micropascals to millipascals range (the range now typically used in many low pressure environments) has been determined empirically (see below) and so in essence the problem of computerising the tables is simple.

The problem is that small computers suffer from relatively large rounding errors and the accuracy of most small computer high level languages is just not sufficient for handling the small numbers required to adjust pi from its base level. I have overcome the problem by using Basic strings (which after all can contain 255 characters and are thus sufficiently long to hold the results) and binary coded decimal calculations.

Now Basic on the Apple II does not cater for BCD and so a small machine code language is necessary to handle the calculated adjustments and display the results in an



acceptably quick manner. This machine code subroutine is POKEd in by the Basic program and resides at \$300 and the data it uses is POKEd into memory starting at \$8000.

The program in the listing takes a base value for pi and calculates the differences required to give the pressure adjusted values of pi in the pressure range 1E-14 to 1E-9 torr. I have used torr rather than

pascals as the unit of pressure because most scientists still use it in general day to day use.

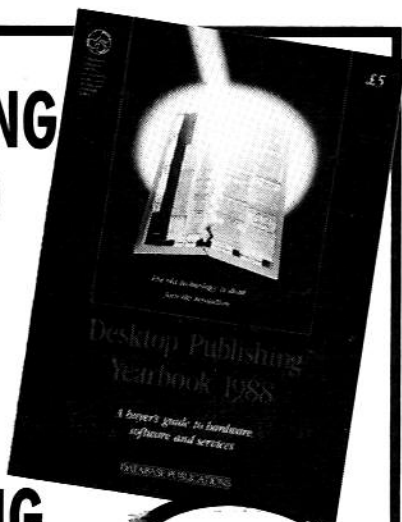
The calculations are based on those of I. Blunder and U. Dont who first showed the empirical relationship in J. Optimal-Kinematic Experimentation., 1, 4, 38. Because the program uses a number of DATA statements a crude check on these is given in subroutine 2000.

```

100 TEXT
: HOME
110 GOSUB 1000
120 GOSUB 2000
130 P0$ = "3.14159 26535 89
793"
135 D$ = "0.00012"
:ES = "0.0000531"
140 P1$ = " 23846 26"
145 A2 = 24.56
150 EX = - 14
160 FOR J = 1 TO 6
170 PRINT EX
180 FOR I = 1 TO 9
190 PRINT I;" ";P0$;P
1$
200 NEXT
210 IF (J = 2) OR (J
= 4) OR (J = 6)
THEN CALL 768
: RESTORE
: GOSUB 1000
220 EX = EX + 1
230 PRINT
: NEXT
240 END
1000 FOR I = 768 TO 825
1010 READ A
: POKE I,A
1020 NEXT
1030 FOR I = 32768 TO 32819
1040 READ A
: POKE I,A
1050 NEXT
1060 FOR I = 33024 TO 33066
1070 READ A
: POKE I,A
1080 NEXT
1090 RETURN
2000 RESTORE
:S = 0
2010 FOR I = 768 TO 825
2020 READ A
:S = S + A
2030 NEXT
2040 IF S < > 5431 THEN
PRINT "There's a Likely
error in lines 5000-50
50"
: END
2050 S = 0
: FOR I = 32768 TO 32819
2060 READ A
:S = S + A
2070 NEXT
2080 IF S < > 970 THEN
PRINT "There's a Likely
error in lines 5060-51
00"
: END
2090 S = 0
: FOR I = 33024 TO 33066
2100 READ A
:S = S + A
2110 NEXT
2120 IF S < > 798 THEN
PRINT "There's a Likely
error in lines 5110-51
50"
: END
2130 RETURN
5000 DATA 162,48,138,72,188,
0,128,189,1
5010 DATA 128,133,45,189,2,1
28,32,40
5020 DATA 248,104,170,202,20
2,202,16,233
5030 DATA 234,169,129,141,6,
3,141,9,3
5040 DATA 141,14,3,169,44,14
1,11,3,169,25
5050 DATA 141,16,3,169,96,1
41,25,3,162,39,76,2,3,0
5060 DATA 32,18,5,27,19,5,20
,18,6,13
5070 DATA 18,6,11,18,15,4,18
,15,33,40
5080 DATA 28,4,40,28,11,39,2
9,16,39
5090 DATA 29,21,39,29,26,39,
29,25,9,6
5100 DATA 18,9,6,5,13,7,10,1
3,7,24,18,13,0
5110 DATA 32,37,19,33,38,41,
21,24,5
5120 DATA 14,17,5,14,17,11,2
1,24,11
5130 DATA 4,8,27,5,7,33,22,2
5,41,22
5140 DATA 25,27,12,1

```

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# Dreaming to order isn't easy

DAYDREAMING is one of my virtues – I can do it anywhere. So armed with Baudville's Dream Zone program and data discs I booted the IIGS and prepared to dream.

As with Dorothy's of Oz fame real life pictures are monochrome (and digitised) and start in the old home – in my bedroom actually, and I cannot wander very far. Into the bathroom, brother's bedroom and the upstairs landing I wander around and begin to get frustrated. Where can I go? What can I do?

Right! Time to think! What's the name of the program? Okay, I'm willing to dream, but how to start? Ah! Got it. Just a few things to tidy up first, then I'll get started.

I finally start dreaming – in glorious colour (not digitised) – and find I can leave home. But, horrors of horrors, I can't get back: There's a great big demon blocking the way. Well, guess, I'll just have to go exploring.

Soon start to meet people and ask a few questions, pick up a few things, get to see around the old place. Stumble across the town hall and find rooms upon rooms which all seem the same. This is the most frustrating part of my dream.

I know I have to get some I.D. – well they wouldn't let me in the bar without and I just know I have to get in that bar. My God! I am getting frustrated, start to use a bit of bad language here and be kind to people there and finally find I can get what I want – just takes time to assemble everything. Right, back out on to the streets and let's explore some more.

Moving around and talking to people and getting things is quite easy, no need to type most of the time – just use the mouse. The music is getting me down by now. It's been playing ever since I started, just a quick look in the options pull down menu. Yeh, guessed right. I can switch the music off.

Can't find out what I can copy, cut and paste. Maybe there's a clipboard and the pictures will go into a drawing program? Must find out some day but just now I don't have the time, after all there's a lot of stuff to investigate out there. I've discovered a fortress in the air and a carnival but not how to get to them. There is an airship and I know there's much more stuff over to the west of town and how the hell am I going to get back home?

At the moment I've no idea how to do any of the things that obviously will need doing so I've just got to tell you about the program – maybe you'll do better than I did. Dream Zone certainly needs a colour screen and a mouse and at least 512k of memory: It will work with one 3.5 in disc drive or two. There's a program disc and

after a longish wait for the Prodos 16 loader to do its bit a rather impressive picture appears with some good music. This hands over to the data disc and you don't seem to need the program disc anymore.

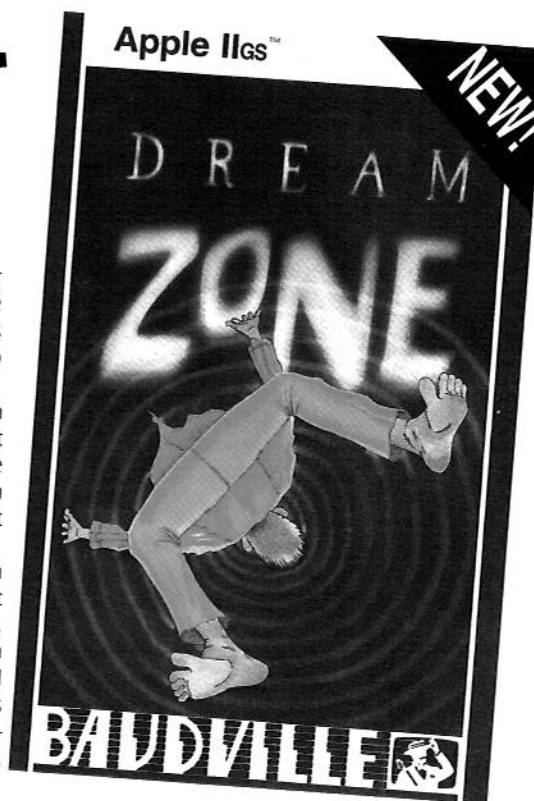
Most dialogue can be carried out with the mouse and the parser is quite good, but it doesn't seem able to see things in the pictures which I can. If it knows about them all well and good, but if it doesn't it just trots out the same old message.

Also, the parser is a bit of a stickler when it comes to the order of words, though it does tolerate poor spelling on the whole. Of course, if you use the mouse, which most of the time you can, there's no real problem except that the dialogue box tends to flash a lot as words get printed – twice – then disappear, then a sentence appears, and then an answer comes.

Still, mustn't grumble – I am enjoying the game and that's what's important!

Since after booting the game seems only to use the data disc I wonder if more data discs are to follow and so extend the game. In line with this idea I note that the program disc – unlike the data disc – is unprotected. If a copy is made the game apparently starts but later asks for the real, original data disc to be inserted.

David Vine



Product: Dream Zone

Price: approx £27.95. Registered owners can also buy a plan and hint guide for \$6.00 more.

Requirements: IIGS with at least 512k of ram and one 3.5in disc drive. Best with colour screen.

Supplier: Baudville/MGA MicroSystems, Pear Tree, Appledore, Kent TN26 2AR  
Tel: 0233 83571

## Take off for combat

**FLIGHT simulations continue to be popular, and Spectrum Holobyte has joined the fray with one based around the F-16A Fighting Falcon, "the most versatile jet fighter in the air today".**



**Falcon certainly tries hard to live up to its blurb, using the Mac's capabilities – and two 800k discs – to good effect.**

**Players are faced with four possible cockpit views and a multitude of controls while battling with acceptable scenery and good sound effects.**

**Both flying (milkrun) and combat modes are available, with the enemy having the capability to manoeuvre as well as you.**

**Claimed to have the flight characteristics and armament of the real F-16, Falcon can be handled at multiple skill levels, and the program's "black box" will even analyse your dogfighting skills.**

Product: Falcon

Price: £44.99

Requirements: Macintosh with 1Mb ram

Supplier: Spectrum Holobyte/Mirrorsoft, Athene House, 66-73 Shore Lane, London EC4P 4AB

Tel: 01-377 4645

## Entrapment awaits the adventurer

DEVOTEES of *The Bard's Tale* will probably be pleased to know that Electronic Arts has produced *The Bard's Tale II*, otherwise known as *The Destiny Knight*.

This game differs from the *Bard's Tale* in its complexity. A new variable, for example, is that the distance between opposing parties can influence the efficacy of weapons or spells. The method of operation remains virtually the same, otherwise.

If you are a complete newcomer, you will need to read the whole manual thoroughly, but heroes of the original *Bard's Tale* will probably manage with the Command Summary Card, keeping the manual at hand for reference.

As with *The Bard's Tale*, the boot disc is copy-protected with no back-up, a feature which might well be a deterrent to would-be buyers. The reverse side is the character disc while both sides of a second disc contain the dungeons. One disc drive is sufficient, but two are better.

As before, you can create your own characters, naming and equipping them yourself. If you wish, you can import your favourite *Bard's Tale* characters to *The Destiny Knight* or characters from *Ultima III* or *Wizardry I, II or III*.

It seems that every city in the realm is now under threat of extinction at the hands of an evil Archmage with the catchy name of Lagoth Zanta. This dastardly character has taken the *Destiny Wand* which, as you know, has kept the peace for the last 700 years.

Not content with this, the fiend has broken it into seven pieces and hidden each piece within a *Snares of Death* – a room from which you and your party will

not emerge alive if you fail to solve the puzzle.

Since you broke the hold of the evil Mage Mangar on the ancient town of Skara Brae, you have become a hero whose deeds are on the lips of every bard and your skills and courage are in demand once again.

Your task is quite simple – you just have to assemble a rugged band of heroes who will defeat Lagoth Zanta, repossess the seven fragments and re-assemble the *Destiny Wand*.

Thanks to the magic of the friendly wizard, Saradon, you have the means to accomplish the task – namely the instruction manual which gives full details of the game.

The display is split into three as before, the lower half listing the characters in your band and displaying various items of information. The upper left side displays a framed 3D scrolling city map and pictures of attackers and other characters.

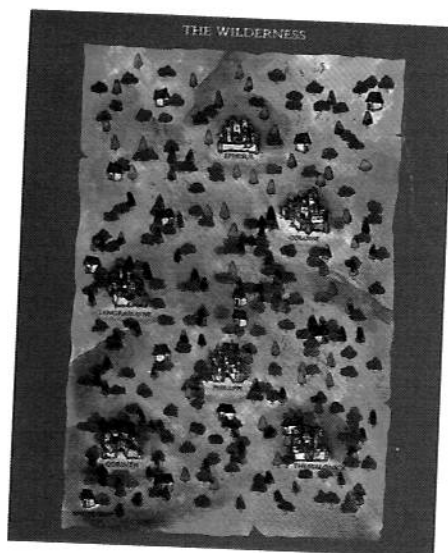
Textual information, indicating the course of a battle, your geographical location and other items, scrolls in a frame on the upper right. The similarity extends to the individual buildings, some of which will look very familiar to erstwhile frequenters of Skara Brae.

Time passes from day to night while you are on the streets of a city and, as before, you are far more likely to meet aggression at night. In the puzzle rooms, the *Snares of*

*Death*, the game reverts to real time. If the task is not completed in the time allowed, the whole party instantly perishes. Every dungeon except the starter dungeon contains a *Snares of Death*.

Only by fighting can you progress. If necessary, you can run away, but the program sometimes ignores your choice of this option, usually when you can least afford to stay and fight it out, of course.

Characters consist of various races and classes – Human, Gnome, Warrior, Wizard and so on – and each character has various attributes such as dexterity, strength, luck.



## Epyx on the ball

AN absorbing little program by Epyx called *Street Sports Basketball* has just come into my hands. Not being an ardent sports fan, I don't expect to find it particularly entertaining: My mistake – it's probably worth getting for the animation alone, which is not bad for an Apple II.

Dramatic music introduces the game which features, clear colourful graphics. Play is controlled by either a joystick or the keyboard: I expected the latter option to be difficult, and was surprised to find how quickly I learned to control my player.

Two teams of three players doesn't sound very exciting but seeing six figures running around your computer screen gives the impression of a lot of action.

You can play against the computer or against a human opponent, and you choose the location from a list of four: The school playground, a back alley, a street in the suburbs and a parking lot – each court offering different positive and negative characteristics.

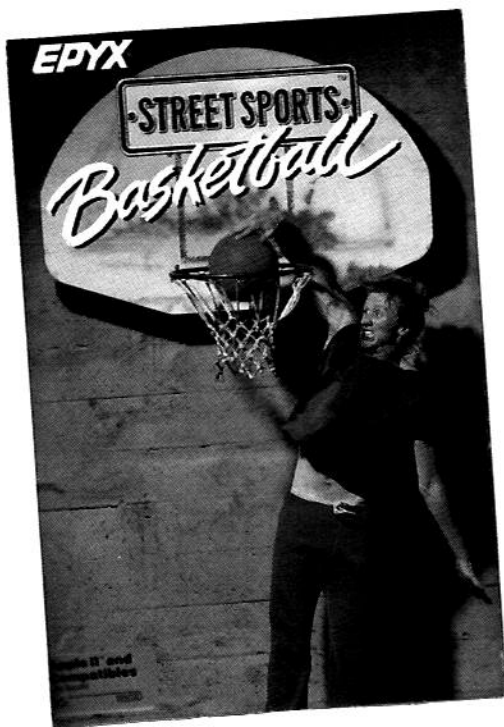
You can then create a team name and

spin a displayed coin to see who gets first pick of a team, selected from a group of characters on-screen. Each one's face is highlighted with a green frame and a larger picture appears top left, accompanied by a list of that player's skills. This list also appears in the 6-page easy-to-read manual which tells you all you need to know.

After picking your players, you turn the disc over to continue. Booting either side caused disturbing noises on my IIc and, typically, no back-up was supplied with the copy-protected disc. For me, at least, this does not tend to take the gilt off the gingerbread.

The uniform of the player under your control appears lighter than the other two. He (or she) can run, jump, block, pass, and dribble, and can steal the ball by meeting your opponent head on. In position to score, your player will judge the type of shot necessary.

Play continues until one team scores the number of points stipulated by you at the beginning, although this target can be





Virtually all information not on permanent display is accessible via the keyboard.

As characters gain experience of battle, they earn points and gold while magic users such as magicians and wizards increase their ability to learn new spells – for which they must pay.

Battling characters score hit points against each other. The number and potency of the hits are determined by many variables such as luck, strength, spells in use etc. The state of your characters' hit points is displayed on screen.

Unsurprisingly character is dead when all his hit points are used up, but wounds can be healed and dead men resurrected in temples – at a price.

The Bard has a repertoire of magical songs which can assist in the battle against evil, except that he more often than not loses his voice at the crucial moment.

Calling up the Ateam, a ready-made group of characters common to both *The Bard's Tale* and *The Destiny Knight*, saves beginners the time and effort which would otherwise be spent in creating their own characters. The Ateam will get you through the first dungeon, but is vulnerable at advanced levels.

The starter dungeon is easily located on the map of Tangramayne, but have plenty of paper ready as this is the only city mapped. Getting to the dungeon is easier said than done.

My intrepid band had no trouble locating a tavern, but information is not cheap and we had no money. So we left to seek battle and earn gold. Not a villain in sight when you really need one. Typical.

Eventually we are confronted by three

altered during a game if required. At the end of the game, the players gather in the centre of the court, where the losers walk aimlessly around while the jubilant winners do what looks like a little victory dance.

Contrary to expectations, I found this game quite fascinating to watch and play. Although not yet expert, I have learned enough to get involved with realistic chances of winning. The essential adrenalin factor is there.

Being able to choose from four distinct scenes and 10 players with different playing strengths enables you to create enough variation to maintain interest. I think this is the kind of game you can return to every so often and enjoy as much as the first time.

At about £20, it's not all that cheap, but it may well provide more entertainment than other more expensive games as your final fantastic slam dunk victory.

**John Hickman**

Product: *Street Sports Basketball*

Price: £19.99

Requirements: Apple II with 128k

Supplier: Epyx/US Gold, Units 2+3, Holford Way, Holford, Birmingham B6 7AX.

Tel: 021-356 3388.



archers who, as all enemies should be, are seen as hard currency. The animated image of Brian The Fist lovingly fingers the glistening blade of his sword. You can almost hear him snarl, "Make my day, punk."

The archers are easy meat. We emerge from the fray unscathed and richer. Be warned, though. Not all confrontations go so well. We eventually reach the right tavern when what we really need is a temple for our wounded.

No weekend wonder, this game, methinks. I vouchsafe it will keep the best of us occupied for many a long day.

Some potential buyers may feel it is too similar to the original *Bard's Tale*. The other side of the coin is that the puzzles are new

and there are far more of them. Also, you already know how to operate the game. All keen adventurers will be hooked, I suspect, once they start.

Pity about that back-up disc.

**Lew Norris**

Product: *Bard's Tale II*

Price: £50

Requirements: Apple II

Supplier: Electronic Arts/MGA MicroSystems,

Pear Tree, Appledore, Kent TN26 2AR

Tel: 0233 83571

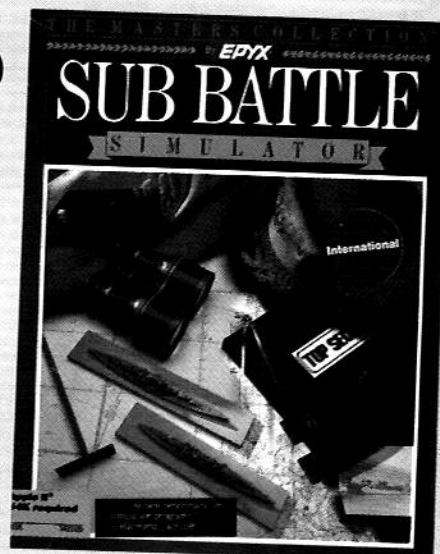
## Dive into action

***SUB Battle Simulator*, from Epyx, sets out to be more strategy than shoot-'em-up.**

***Whether it's "the most detailed, realistic, all encompassing war simulation ever created" is a matter of opinion, but the package does set out to be comprehensive.***

***As the Commander of either a U-Boat or an American sub you'll be set missions ranging from the historically accurate to the near impossible – survive the entire war.***

***All aspects of underwater war – navigation, repairs, combat and so on – are covered, and it's essential to get to know your vessel before venturing out on a mission.***



Product: *Sub Battle Simulator*

Price: £19.99

Requirements: Apple II with 64k

Supplier: Epyx/US Gold, Units 2+3, Holford Way, Holford, Birmingham B6 7AX.

Tel: 021-356 3388.

# Arresting entertainment

SO there you are, the newest employee of the Acme Detective Agency, wondering Where in the World is Carmen Sandiego?

You've read in the newspapers of Carmen Sandiego and her Villains' International League of Evil – VILE – and how the infamous gang have stolen many of the world's most valuable treasures over the last few years.

Then you get a phone call from the Boss – "Wake up kid, got an assignment for you. Carmen's gang's pulled another caper".

Pausing only to arm yourself with your double sided disc, user's manual, copy of the World Almanac and a notebook (not supplied) you set off on the case.

After a brief animated synopsis – accompanied by sound effects and music, as is all the game – flip the disc and there before you is your old friend the Crime Computer.

Once you've identified yourself, you're awarded the status of Rookie and the details of your mission are teletyped across the screen – though at this stage you know no more than what has been stolen and the gender of the thief.

You're also given a starting time – usually 9 am on a Monday morning – and a deadline: Catch the villain by 5 pm on Sunday.

The game proper now starts, and you find yourself in a city in any of 30 countries. The attendant graphic depicts a famous landmark, and there's also some information displayed giving more detail of the city, country or its inhabitants.

Menu options here let you view which other cities are accessible from your current location, and you can choose to fly direct to any of them.

More likely though, you'll want to investigate the three locations accessible in the city, which can conceal clues to aid you in tracking down the criminal.

These locations change case by case, so each game is unique. You may visit as many or as few as you wish, and the World Almanac will help you unravel the clues you dig up.

You can also visit the local branch of Interpol to access the Crime Computer again. Working from the clues you've unearthed, this will draw up a list of suspects or issue warrants for arrests – if you've provided enough information.

Be warned though: Every time you investigate a location, fly to another destination or visit Interpol, valuable hours slip away. And don't forget, that includes the hours you would spend sleeping.

Still, you have no option but to follow the pattern of getting clues by investigation and checking them against the Almanac.

To add to your problems, when you are on the right track you'll often cross swords

with VILE henchmen, and when you're on the wrong track everyone will be most unhelpful.

One word of warning: Always make sure you have a warrant for an arrest – if you stumble across a suspect without a warrant, you'll lose the case.

When you do catch up with a suspect, the police are quickly on the scene to put him behind bars – another bit of animated wizardry.

Having solved your first case you graduate from Rookie to Sleuth – and with promotion comes a harder case to crack. Clues become increasingly difficult to untangle and you're bounced around the world a few times in search of your suspect.

Still, more promotions follow – roughly every three cases – until you reach the giddy heights of Detective. At this stage you retire and your record is placed in the Detectives' Hall of Fame.

Where in the World is Carmen Diego is described by Broderbund as a mystery/exploration game. As such it's certainly entertaining, but it's structure also allows you to pick up trivia and information as you play.

You're not tied to the keyboard, as you're constantly having to make notes, or refer to

the user manual (which contains the essential Interpol map and Dossiers) or to the Almanac.

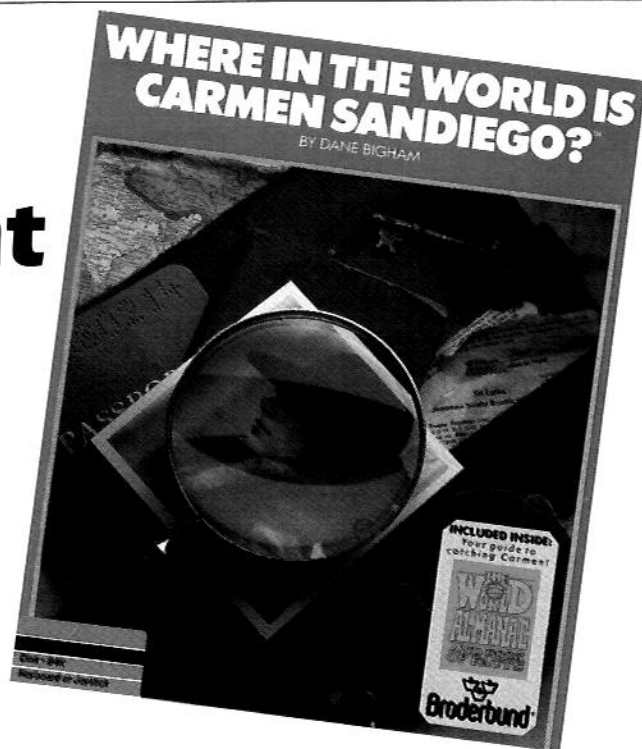
The Almanac – a bestseller in its own right, but not a Broderbund production – takes a bit of getting used to. It's not particularly well indexed, and is set in an extremely small print size – hardly ideal when you're burning the midnight oil.

On the plus side, the hi-res screen display features some very good graphics on both colour and mono monitors, while the play area is well laid out and easily viewable.

Carmen will probably appeal to a wide age range, though it's probably quicker and easier with two people playing, one taking the role of researcher.

Where in the World is Carmen Sandiego is not overpriced – but do be careful not to wear out its fun factor by playing too many games in a row.

**David ffitch**



Product: *Where in the World is Carmen Sandiego*  
 Price: £24.99  
 Requirements: Apple II+/IIe/IIc with 64k  
 Supplier: Broderbund/ US Gold, Units 2+3,  
 Holford Way, Holford, Birmingham B6 7AX.  
 Tel: 021-356 3388.

## Only for experts

**FOR dedicated – and experienced – adventurers only is Wizardry, the Fourth Scenario: The Return of Werdna.**

**Trebtor Sux and his band of do-gooders have stolen your magical amulet and left you, bereft of power, in the depths of a maze.**

**However, sheer hatred reanimates you. All you've got to do now is get past 500 Wizardry**

**dry veterans to reclaim your amulet.**

**Wizardry has been several years in development and includes new features which make it easier to use – but more complex and frustrating – than its predecessors.**

**Definitely not for beginners, Wizardry's three double-sided discs should keep adventurers busy for a long time.**



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# UpDATEing AppleWorks

THIS is a continuation of an article which describes how to modify AppleWorks to accept dates in the European/Australian format. The first part was published last month and dealt with the startup program: The modification made was such that the date has to be entered in the required format. Note that AppleWorks 2.0 will use the Prodos date: Hence if a clock is installed in the machine – as on the IIGs – there is no need to make the first change.

Making the next set of modifications to your own copy (and I do mean copy, not the original disc) requires that you have access to an on-disc byte-zapper program such as the sector editor in earlier versions of Copy II+ or Beagle Brothers' Pro-Byter or BLOCK.WARDEN from the ProSel suite of utilities.

If you do not have such a program you can use the updated version of ZAP, the

## David Grigg crosses the international date line

patches to which were published in *Apple User*, December 1987. The original program, by Graham Keeler, was published in *Apple User* in May 1986 and was preceded by a discussion of Prodos disc formats in the April 1986 issue.

My modifications were done to AppleWorks versions 1.2, 1.3 and 2.0. On the whole the changes are similar in each version but are not identical. Also, there is no guarantee that the bytes to be changed are going to appear in the same track and sectors on different copies of the program.

I have included a list of the bytes around each area of modification along with a

description of what I found, which should make it easier to find and analyse what needs doing at each point. I have included some theory to describe how and why I proceeded in the way I did – you can skip some of this if you merely want to patch your AppleWorks.

You should start by copying both the AppleWorks Program disc: I repeat, do not try these modifications on your originals.

### Displaying file dates as day/month/year

I found this by looking for the opposite function to the one described last month: I looked to see where AppleWorks is unpacking the date from the file information held on disc.

This patch has to be made to the program disc. I went looking for a bit of code where the opposite of those five ASLs of modification 1 was happening, that is, several LSRs bunched together. What I found is shown in Listing I.

The locations where changes need to be made are indicated by the symbol < in the third column of the listing.

It would be possible here just to change

```
$495x: 4 5 6 7 8 9 A B      $250x (v.2): 5 6 7 8 9 A B C
        3 / 0 5 / 8 7          3 / 0 5 / 8 7
```

Figure I: The output buffer for the date from modification 2.

```
OLD: 6A 4A 4A 4A 4A 20 0C 11 8E 05 25 8C 06 25 AD C4 21 29 1F 20 0C 11
NEW: .. .. .. .. .. .. .. .. 8A 09 30 8D 08 25 8C 09 25 AD C4 21 29 1F
```

```
OLD: 8A 09 30 8D 08 25 8C 09 25 A2 36 A4 83
NEW: 20 0C 11 8E 05 25 8C 06 25 .. .. .. .
```

Figure II: The sequence of bytes for version 2 for modification 2

```
OLD: 6A 4A 4A 4A 4A 20 18 10 8E 54 49 8C 55 49 AD C3 45 29 1F 20 18 10
NEW: .. .. .. .. .. .. .. .. 8A 09 30 8D 57 49 8C 58 49 AD C3 45 29 1F
```

```
OLD: 8A 09 30 8D 57 49 8C 58 49 A2 36 A4 83
NEW: 20 18 10 8E 54 49 8C 55 49 .. .. .. .
```

Figure III: The sequence of bytes for versions 1.2 and 1.3 for modification 2

```
JSR #1018 ;($110C in v.2)
TXA
ORA #30
STA $4957 ;put in middle of buffer
                ;($2508 in v.2)
STY $4958 ;($2509 in v.2)
LDA $45C3 ;$21C4 in v.2)
AND #1F ;mask off month data
JSR #1018 ;($110C in v.2)
STX $4954 ;($2505 in v.2)
STY $4955 ;($2506 in v.2)
```

Listing II: The new code for modification 2

```
LDA $45CA ;get MSB of date from the buffer
                ;($21CB in v.2)
LSR
LSR ;shift right to get year
JSR #1018 ;this routine (at $110C in v.2) is
                ;complicated but sets things
                ;up to get ASCII chars for the value
                ;X has high nibble
TXA
ORA #30 ;makes ASCII char
STA $495A ;put in output buffer ($250B in v.2)
STY $495B ;Y has ASCII of low nibble ($250C in v.2)
LDA $45C4 ;($21C5 in v.2)
ROR ;put low bit in carry
LDA $45C3 ;($21C4 in v.2)
ROR
LSR
LSR
LSR
JSR #1018 < ;set up for ASCII values as above
STX $4954 < ;store in output buffer ($2505 in v.2)
STY $4955 < ;($2506 in v.2)
LDA $45C3 < ;($21C4 in v.2)
AND #1F < ;mask off month data
JSR #1018 < ;set up for ASCII values as above
TXA < ;high nibble in A
ORA #30 <
STA $4957 < ;($2508 in v.2)
STY $4958 < ;($2509 in v.2)
```

Listing I: The original code for modification 2 – make AppleWorks display file dates as day/month/year

```

LDA $33DC      ;get month value from input buffer      JUMP1 STA $0DAB < ;put first char of day in output buffer
                ;($834E in v.2)                        ;($0D8A in v.2)
AND #$0F       ;strip of ASCII                        STX $0DAC < ;and second char
ASL                                                    ;($0D8B in v.2)
ASL                                                    LDA #$20 <
TAX                                                    STA $0DAA < ;($0D89 in v.2)
LDA #$03 < ;initial length of output string          ;doubles length of output from 3 to 6
STA $0DA6      ;where the output string length is stored
                ;($0D85 in v.2)                        ASL $0DA6
LDA $3549,X    ;gets first char of ASCII month        JUMP2 LDA $33DA < ;get first char of year
                ;($6B73,X in v.2)                      ;($834C in v.2)
STA $0DA7 < ;($0D86 in v.2)                          CMP #$30 < ;is it ASCII zero?
LDA $354A,X    ;get next char of month                BNE JUMP3 <
                ;($6B74,X in v.2)                      CMP $33DB < ;compares first with second character
ORA #$20       ;make it lower case                    BEQ JUMP4 < ;if zero then no year specified
STA $0DA8 < ;and store in output buffer                JUMP3 LDX $0DA6 < ;get current string length
                ;($0D87 in v.2)                        ;($0D85 in v.2)
LDA $354B,X    ;last char of month                    INX <
                ;($6B75,X in v.2)                      LDA #$20 <
ORA #$20       ;($0D88 in v.2)                        STA $0DA6,X < ;($0D85 in v.2)
STA $0DA9 < ;get first char of day                    INX <
LDA $33DD      ;($834F in v.2)                        LDA $33DA < ;first char of year
LDX $33DE      ;and second char                       STA $0DA6,X < ;($0D85 in v.2)
                ;($8350 in v.2)                        INX <
CMP #$20       ;is first a blank?                    LDA $33DB < ;second char of year
BNE JUMP1 < ;($834D in v.2)                          ;($834D in v.2)
CPX #$30       ;compare second with ASCII zero        STA $0DA6,X < ;($0D85 in v.2)
BEQ JUMP2      JUMP4 RTS

```

Listing III: Original code for modification 3 – Changing the presentation of dates in the database

the locations in the output buffer where AppleWorks is stuffing the day and the month. But the above code suppresses a leading zero for the month and puts in a blank instead, so doing this alone would give dates like 03/ 5/87, which is a little awkward. So we swap the code around so that it suppresses the leading zero of the day instead, to get dates like 3/05/87 – which is what we want.

The output buffer then looks like Figure I:

The new code to do this is shown in Listing II and the sequence of bytes to look for are for version 2.0 shown in Figure II.

On my disc these were in Track 1B, Sector 05, or using ZAP I found the bytes in the file SEG.M1 at block offset SAA from the start of file. That is if the file starts at SDD then the patches are made in block S187. With versions 1.2 and 1.3 I found the

necessary bytes in Track 1C, Sector 02 and the sequences to change are shown in Figure III.

Having made the changes with your disc zapping program, save the sector back to disc.

### Changing presentation of dates in the database

This is a lengthy one! Fortunately, this modification is pretty much a matter of

taste and you can skip it if you want.

To understand what follows you need to know the way in which the AppleWorks database stores dates. No, it doesn't do it in the same way as Prodos! The point is that the database has to be able to sort dates into the correct order.

The actual format of data storage is a five character Ascii string, preceded by the date identifying byte, \$C0. The string has the

Turn to Page 54 ►

```

$0DAx:  7 8 9 A B C D E F    and for v.2 $0D8x:  6 7 8 9 A B C D E
        19   Sep 8 6

```

Figure IV: The output buffer for modification 3

Listing IV: The new code for modification 3

```

LDA #$09      ;output fixed at 9 chars                SKIP1 STX $0DA8 ;put in second position
STA $0DA6     ;($0D85 in v.2)                        ;($0D87 in v.2)
LDA $3549,X   ;get first char of ASCII month name    LDA #$20
                ;($6B73,X in v.2)                      STA $0DA9 ;($0D88 in v.2)
STA $0DAA     ;store in middle of output buffer      STA $0DAD ;($0D8C in v.2)
                ;($0D89 in v.2)                        LDA $33DA ;get first char of year
LDA $354A,X   ;second char ($6B74 in v.2)            ;($834C in v.2)
ORA #$20      ;new location ($0D8A in v.2)          CMP #$30 ;is it ASCII zero
STA $0DAB     ;third char ($6B75 in v.2)            BNE SKIP2
LDA $354B,X   ;new location ($0D8B in v.2)          CMP $33DB ;are both zero ($834D in v.2)
ORA #$20      ;first char of ASCII day              BEQ SKIP3
STA $0DAC     ;and second                            SKIP2 STA $0DAE ;store first char of year
LDA $33DD     ;($834F & $8350 respectively in v.2) ;($0D8D in v.2)
LDX $33DE     ;regardless of value stuff it in       LDA $33DB ;get second char of year
STA $0DA7     ;($0D86 in v.2)                       ;($834D in v.2)
CMP #$20     ;is it blank?                          STA $0DAF ;and store ($0D8E in v.2)
BNE SKIP1    ;is second char ASCII zero?           RTS
CPX #$30     ;this is ASCII hyphen                  SKIP3 LDA #$20
BNE SKIP1    ;($0D8D in v.2)
LDX #$20     ;($0D8E in v.2)

```

◀ From Page 53

format yyMdd, for example 86B16 for 16th February 1986. The first two characters are obviously the Ascii year. The next letter is a code for the month with January = A, February = B, and so on. Then the next two characters are the Ascii day with a blank being used rather than a zero if the value is less than 10. If day has not been specified these last two bytes are 00.

A little thought will convince you that doing an alphabetic sort on dates in this format will result in a correct chronological ordering.

The following code was quite hard to find because it was hard to predict just what I was looking for. I did find an area on the disc with a table of Ascii representations of the months JAN, FEB, and so on, separated by 03s. But I couldn't figure out where it ended up in memory, so I couldn't look for references to this table.

I did prove, by altering the name of one of the months, that this table was definitely used both by the database date display routine and the database data input routine.

What I finally figured was that since the database presented months first character upper case, next two characters lower case (for example Sep) that there had to be code which did the lower case conversion. It took a while but I found it and it is shown in Listing III.

The locations where changes need to be made are indicated by the symbol < in the third column of the listing

Most of the latter half of this code is hassling about the length of the output string in case we get a day and not a year, or a year and not a day, because of the output form being Sep 19 86, or Sep 19 or Sep 86.

Now, I wanted to see dates in the form 19 Sep 86, so I didn't need to muck around working out how long the output string was going to be. I set it fixed at nine characters, and if there is no day just stuff

```

OLD: A9 03 8D 85 0D BD 73 6B 8D 86 0D BD 74 6B 09 20 8D 87 0D BD 75 6B
NEW: .. 09 .. .. .. .. .. 89 .. .. .. .. .. 8A .. .. .. ..

OLD: 09 20 8D 88 0D AD 4F 83 AE 50 83 C9 20 D0 04 E0 30 F0 0E 8D 8A 0D
NEW: .. .. .. 8B .. .. .. .. .. 8D 86 0D C9 20 D0 06 E0 30 D0 02

OLD: 8E 8B 0D A9 20 8D 89 0D 0E 85 0D AD 4C 83 C9 30 D0 05 CD 4D 83 F0
NEW: A2 2D 8E 87 0D A9 20 8D 88 0D 8D 8C 0D AD 4C 83 C9 30 D0 05 CD 4D

OLD: 1A AE 85 0D E8 A9 20 9D 85 0D E8 AD 4C 83 9D 85 0D E8 AD 4D 83 9D
NEW: 83 F0 0A 8D 8D 0D AD 4D 83 8D 8E 0D 60 A9 20 8D 8D 0D 8D 8E 0D 60

OLD: 85 0D 8E 85 0D 60
NEW: 00 00 00 00 00 00
    
```

Figure V:  
The byte sequence for modification 3 in version 2

```

OLD: A9 03 8D A6 0D BD 49 35 8D A7 0D BD 4A 35 09 20 8D A8 0D BD 4B 35
NEW: .. 09 .. .. .. .. .. AA .. .. .. .. .. AB .. .. .. ..

OLD: 09 20 8D A9 0D AD DD 33 AE DE 33 C9 20 D0 04 E0 30 F0 0E 8D AB 0D
NEW: .. .. .. AC .. .. .. .. .. 8D A7 0D C9 20 D0 06 E0 30 D0 02

OLD: 8E AC 0D A9 20 8D AA 0D 0E A6 0D AD DA 33 C9 30 D0 05 CD DB 33 F0
NEW: A2 2D 8E A8 0D A9 20 8D A9 0D 8D AD 0D AD DA 33 C9 30 D0 05 CD DB

OLD: 1A AE A6 0D E8 A9 20 9D A6 0D E8 AD DA 33 9D A6 0D E8 AD DB 33 9D
NEW: 83 F0 0A 8D AE 0D AD DB 33 8D AF 0D 60 A9 20 8D AE 0D 8D AF 0D 60

OLD: A6 0D 8E A6 0D 60
NEW: 00 00 00 00 00 00
    
```

Figure VI:  
The byte sequence for modification 3 in versions 1.2 and 1.3

the output string with a blank and a hyphen in positions 1 and 2. If there is no year, just stuff positions 8 and 9 with blanks. This works beautifully.

The code I used is shown in Listing IV and the output buffer will look like Figure IV. Changes to the original code are marked with < in the fourth column of Listing III.

The sequence of bytes to look for in version 2, I found on the program disc in track 00, sector 0F. Using ZAP this was found in file SEG.M0 at block offset 3 from the start

of the file, that is the first block was at SAF and the patch area was found in block SB1. The sequence is displayed in Figure V.

With versions 1.2 and 1.3 of AppleWorks I found the patch area at track 02, sector 0E of the program disc. The bytes to change are shown in Figure VI.

So make the changes and then save the sector back to disc.

● *The last modification, which allows day/month/year entry in the database, will be described next month.*

## Apple Bookshelf

### Specialist Dictionary for Computers and Data Processing

SCHNELLMANN Verlag publishes bilingual dictionaries concentrating on German, Italian, French, English, Spanish and Dutch combinations in various specialist subjects. A coding system is used which describes the two languages and the subject of a dictionary, hence the CD.0.3 of the title.

Its 119 pages are split into two: The first half lists the English-German pairs and the second the Deutsch-English pairs. The two are separated by a list of the common units of measurement of interest to scientists and technologists in both German and English together with their standard abbreviations.

The dictionary appears to have been compiled and printed on a computer system by a native German speaker. It is

very thorough, tending to go outside its brief rather than have narrow limits, but it does have leanings towards the mainframe and data processing department rather than the micro user.

Indeed, the word micro-computer does not appear in it and neither do those words which appertain only to micros (and never to mainframes) such as bug, hang, and boot. Printers are also rather poorly served: There is no mention of ribbon, roller, platen, or bail bar.

There are two other points I would criticise. First, it is rather poorly printed, being directly created from computer output (definitely not laser printer standard). Second, some of the English (but not as far as I can ascertain the German)

words are misspelt. Sometimes this means that they are out of alphabetical order such as in the case of *computer network* and sometimes they appear in the right place but are wrong, such as *address decoder*, *dual acces*, and *printe wheel*.

However, these problems aside, the dictionary is still worth buying if you are engaged in any form of translation where computers and data processing are involved.

*Dictionary/Wörterbuch No. CD.0.3, Computers and Data Processing by Schnellmann Verlag, ISBN 3-907971-63-9 at £16.50. The UK distributor for English speaking countries is Grant & Cutler, 55-57 Great Marlborough Street, London W1V 2AY.*

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# Taking TimeOut

**Max Parrott**  
**examines a collection**  
**of AppleWorks**  
**desktop utilities**

IN February's *Apple User*, Lew Norris introduced the first of the TimeOut series of AppleWorks pop-up programs/utilities from the Beagle Brothers — FileMaster, SuperFonts, and UltraMacros, which included Data Converter. This last is also included in the package reviewed here — TimeOut DeskTools — so I won't now describe it. Lew also outlined the general philosophy behind the TimeOut utilities/applications, so again it need not be repeated here.

This new package also includes the TimeOut install system and utilities, although if you have already installed TimeOut you need do nothing more than copy the new TO. files which you want to your startup disc, and perhaps configure them via the Utilities menu.

The pop-up programs in DeskTools include a clock, calculator, calendar, case converter, telephone dialler, envelope addresser, file encrypter, page previewer, word counter and a puzzle and the data converter.

Each of these tools is from a different author, but they have been skilfully blended together within the general AppleWorks philosophy of windows, cards, cursor keys and so on, so their use is very easy and little

reference to the manual is needed.

The Clock (Figure 1) opens a window in the middle of the screen and displays the date and time — if you have an installed clock that is. If you do not, then the data displayed will be the date you started AppleWorks with and the time will be 00.00.

## Calculator

The calculator displays a "standard" calculator keyboard on the right of the screen and a "tape" emanating from a printer on the left of the screen. The functions provided, other than the normal arithmetic ones, are square root and addition to and subtraction from a memory. It does not provide parentheses or any registers to play with, but does allow the single value displayed on the calculator's screen to be transferred to whatever AppleWorks desktop file you are currently in.

The calculator responds to the standard keyboard keys or the IIgs keypad and the mouse. I find that a calculator is always a useful tool to have around, so the idea of having one at your fingertips is appealing. This one displays up to 20 digits with the number of decimal places fixed by you. Scientific notation is not supported.

I expected to find rounding errors but was rather surprised to find how varied they could be. For example, Figure II shows a printout from the calculator's tape. Note that, essentially, I have multiplied the square root of 15 by itself with a two decimal place format and with a floating

format. The latter is quite acceptable but the former is too far out.

The error depends on the number of decimal places chosen, which is wrong. The calculation should be completed with the maximum possible accuracy and then rounded to the desired format.

There is another error in the calculator. It thinks that the square root of any negative number is zero. It really should flag this as an error, as it does with others such as division by zero and overflow. Underflow is not detected — the value is rounded to zero.

The calculator's printer output is remembered: That is if you leave the calculator and then re-enter it your old output is still there. This may be edited, but changing a value does not change the subsequent calculations. The output can be printed, but I'd find it more reasonable and useful to be able to transfer the printout of the calculator to an AppleWorks word processor file, but I could not figure out any way to do it.

## Calendar

The Calendar is an excellent tool. It requires that an AppleWorks database desktop file called CALENDAR.DATA is on the desktop, which in turn means that you have one less file available to you and that you need a decent amount of memory to make full use of it — but it is potentially very useful.

Two months at a time from any year from 1910 through to 1999 are displayed on

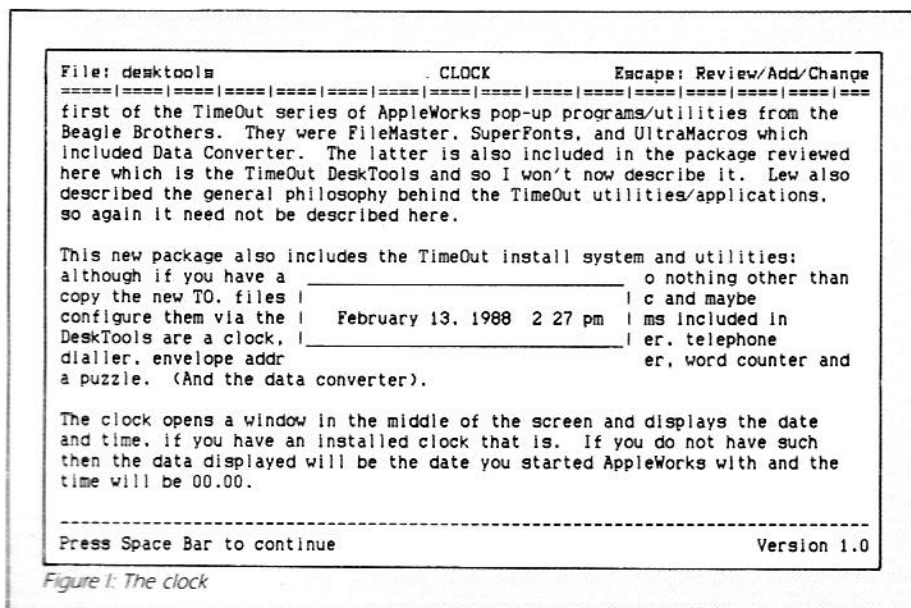


Figure 1: The clock

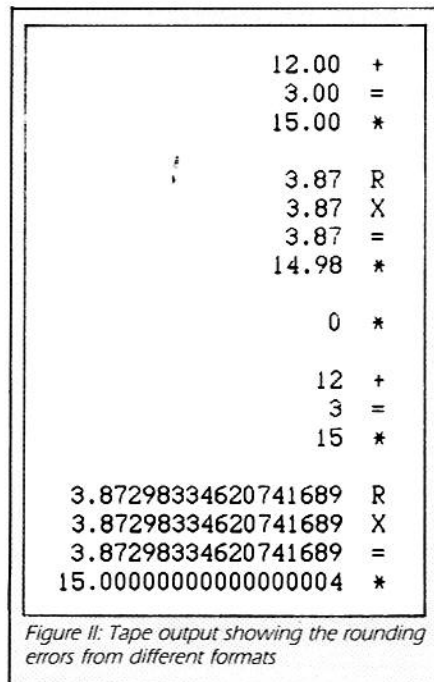


Figure II: Tape output showing the rounding errors from different formats



the left of the screen, an appointments schedule for the current day is in the middle and the right hand side has a list of priorities for that day. As you move through the days, months and years of the calendar on the left the appointments for the new day appear, as shown in Figure III.

The priorities may be sorted and flagged as you require, the appointments are automatically sorted chronologically and one thing in particular impressed me: As soon as an entry is obviously pm rather than am, the following entries for the day are assumed pm if they are at all ambiguous. All entries may be edited and copied from day to day using the expected AppleWorks keys. The page may be printed, and a summary of the week may also be displayed and printed.

The arrow keys allow fast changing from one area to another and from day to day within the calendar. Additionally you can move very rapidly from month to month and year to year – I could move from 1988 to 1944 in less than seven seconds.

There is one slight bug with the calendar. Its working data is kept in the desktop file mentioned earlier, but when the data is altered the file is not flagged as being changed. Hence when quitting AppleWorks there is a real danger that the file is not saved unless you are extra vigilant.

### Case Converter

The Case Converter did not appear, on the face of it, particularly useful. It allows the current word processor file to be all capitalised or all put in lower case or each word's initial letter to be capitalised or the first word in each sentence to be capitalised.

On reflection, however, it turns out quite useful to be able to do this now and again. Obviously, you don't generally want these throughout a file, but if you enter a title, for example, you can then quickly capitalise it as you want without too much effort. In fact, without Ultramacros or Case Converter this is quite difficult to do within AppleWorks.

### Dialler

The Dialler stores phone numbers – or allows keyboard entry of a number – and, if you have a suitable modem, will dial a number for you (tone or pulse dialling). This may seem the height of laziness to some, but it could save a lot of time – ICL's One per Desk sold well on this point alone. Unfortunately, I could not test this option as I only have a very old-fashioned and cheap modem.

The dialler has had some forethought put into it. For example, if a number has the same regional code as your own – set in the configuration menu – it will not dial that part of the number. In the same vein, if

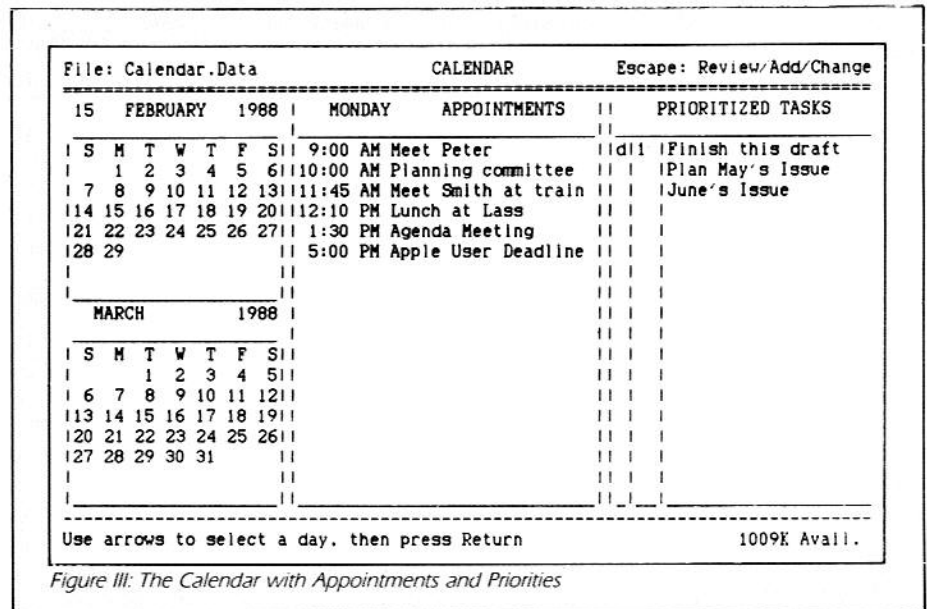


Figure III: The Calendar with Appointments and Priorities

your work's phone system requires a single pre-digit to phone out to Telecom this may be set up at configure time, with a suitable delay if necessary, so that you don't have to enter it each time.

The envelope Addresser is another very useful tool. Suppose you are in the word processor and you have written your letter. Make sure that the addressee's address is on screen and invoke this tool. The cursor will move to where it thinks that the address begins – you can adjust it – and when confirmed will move to where it thinks the address ends. Again, you can adjust it.

After confirmation, a facsimile of an A4 envelope appears on screen with the address in position. You can move this around using the cursor keys, insert or capitalise a line of the address, or even add a return address if that was also displayed on the original screen.

When you're happy with the result the envelope may be printed. The system is very fast to use and a real boon. The only real alternative to this tool is one of those envelopes with a built-in window.

### File Encrypter

The File Encrypter has two entries in its menu – encrypt and decrypt. You call the tool from within the desktop file you want encrypted and enter a keyword. This has to be entered twice and is checked to make sure the entries are consistent. As soon as the key is confirmed the file is encrypted. Only printable characters get changed, so the format of the document stays the same.

I don't know if it is encouraged, but the file may be successfully encrypted more than once, using the same keyword or a second one, which means that the encryption process is not just a simple XOR but is something more substantial. It is, of course, up to you to remember the keyword. Apparently Beagle Brothers will recover an

encrypted file's encryption key for a fee of \$10, but I suspect that is only if it has been encrypted just the once.

### Note Pad

The Note Pad opens up a window in the middle of the screen and loads an Ascii file from a pathway which may be set up from within the configure menu. The default filename is N.NOTES and it resides in the root directory. The note pad can contain up to 32 "pages", each of which has 10 lines of 40 characters, and you enter whatever text you want. The text may be put into a word processor file by opening one up and reading the text file via the normal AppleWorks method.

The note pad is only really useful in that it does not take up a valuable desktop file, but on the other hand it does need to be a memory resident tool for the sake of speed – actually I find this is true of all the desktop tools.

It is up to you to make sure that it is saved to disc. It uses a rather un-AppleWorks like convention when saving or loading from disc. Rather than use Open Apple+S to save, it uses Open Apple+N – I suppose that is the "naming" command – and you then have the opportunity of saving or loading a file.

Page Preview is another valuable tool, but one which I feel could be quite a lot better. If called from within a word processor document this tool will ask for the required printer – as if Open Apple+P had been used – and will give a graphical display of two or three pages of text with a dot substituting for each character. You may scroll through the pages with the cursor keys.

This is very useful and has the potential of saving much time and paper at print time. Anyone who has used the page

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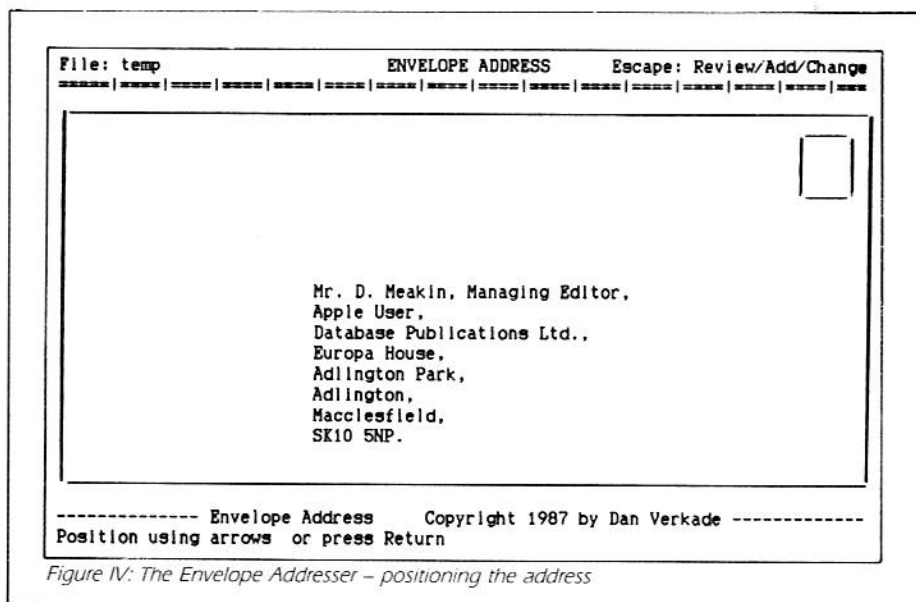


Figure IV: The Envelope Addresser – positioning the address

#### ◀ From Page 57

preview option of Microsoft's Word 3 on the Macintosh will know just how useful this can be.

Unfortunately, in this TimeOut version, centre and full justification seem to be ignored – varying the format makes no difference to the graphical display – although changing the margins does change the display, and assuming left justification is in operation it apparently gets it right, except that spaces at the start of a line are ignored.

However, there is no way of configuring the tool for different paper set-ups and no indication of the edges of the paper appear on screen. This means that some experience is needed to understand how the graphical display actually corresponds to the printed page. It is nevertheless, a useful tool if you are printing to a "standard" prin-

ter. If you are using TimeOut's SuperFonts then there really is little need for the page preview as SuperFonts has its own.

Word count will very rapidly open a window and display the number of words and characters in the current word processing document along with the average word length and the number of lines in the document. This article is counted in under a second.

The only thing which surprises me is that my average word length is measured to be four characters – it seems to be rounding down rather than up.

The last utility is a puzzle. This is the almost ubiquitous tile-type puzzle where you use the arrow keys to rest the cursor on one of 15 "tiles" arranged on a 4x4 grid and when Return is pressed it slides into the vacant gap. The object of the game is to get from a random tile setup to an ordered one.

What is the overall verdict? Well, like Lew Norris, I found the pop-up programs to be a somewhat mixed bag, varying from the extremely useful to the not so useful, and from the extremely well executed to the not so well executed. I think that the good outweigh the bad and they are well worth buying.

However, again like Lew, I think that you really need a large memory on a machine like the IIGs or a large ram card on a IIe or IIc to take full advantage of what is on offer. Also, if you intend to use all or most of the pop-up TimeOut utilities you will need, at the least, an 800k, 3.5in disc drive or even better a hard disc.

The only other alternative is a very large ram card on to which you will have to copy the TimeOut applications (and AppleWorks) from a series of discs before starting – an obvious heavy consumer of startup time.

#### TimeOut compatibility

TimeOut is currently compatible with the following AppleWorks enhancements:

- All versions of MacroWorks and Super-MacroWorks
- All versions of AutoWorks
- All versions of Pinpoint
- All versions of Applied Engineering's Desktop Expander
- Versions 5.0 and 5.1 of Checkmate's Desktop Expander

Product: DeskTools

Price: £47.95

Requirements: Apple II and Appleworks V-2  
Supplier: Beagle Brothers/MGA Micro-systems, Pear Tree, Appledore, Kent TN26 2AR.

Tel: 0233 83571

## AppleUpdate

# Presenting SlideWriter

WITH professional Macintosh users firmly in mind, Matrix Instruments has launched SlideWriter, which enables users to produce full colour, high resolution 35mm presentation slides.

SlideWriter can produce up to 45 slides in an hour, and makes the most of the Mac's capabilities. Users can merge computer graphics with pictures, match logos and create images from colour paint programs.

The package also supports 3D solids modelling and can incorporate text in any size or rotation.

SlideWriter – designed specifically for the Mac environment – is compatible with the PICT file format supported by MacDraw, MacPaint and many other graphics packages. It comes complete

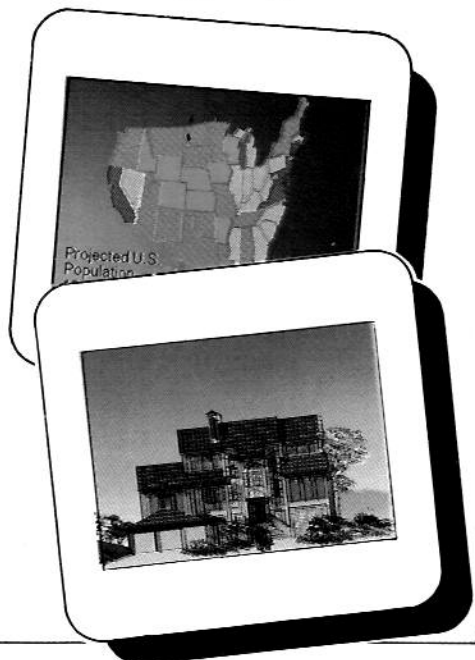
with image recorder – offering user-definable colour tables and a choice of 2048 or 4096 imaging on to 35mm slides – film back, SCSI interface and utility software.

The software, manipulated by familiar pull-down menus, enables the user to select how graphics will be placed on a slide, specify scaling, spool output and map monochrome patterns into colour images.

Product: SlideWriter

Price: £8,500

Requirements: Mac Plus, SE or II  
Supplier: Harvard Marketing, Summerhouse Lane, Harmondsworth, West Drayton, Middlesex UB7 0AW.  
Tel: 01-759 0005



# Balancing act

LAST month I had my ear bent, in the nicest possible sense, by numerous reports of a Mac-based accounting system – Astra – that seemed to be the best thing since sliced bread. The glowing reports came from professional users, however, so I reserved judgement until I could see for myself.

That said, I'm not an accountant: Never have been, never will be. In fact it's my lack of expertise in this particular field that has acted as a rein on my hankering to get into business for myself. With that in mind I sat down to get to grips with Astra – under guidance – to see if it was as user-friendly and powerful as its advertising claimed.

And that's the first point that needs stressing: Under guidance. In the broadest sense, Astra is an off-the-shelf product, but it's definitely not a "look at the manual in the last resort" package. It's powerful, multi-layered and complex, and you'd be well advised to take advantage of the on-site advice, training and back-up provided.

The dealer is there to assist with installation from start to finish. No expertise in either Mac or accounting is necessary – though it certainly helps – and the instruction takes the form of "prompting users to think". One day is usually devoted to setting up the system, a second to hands-on training.

In my new-found capacity as plumbing supplier, I took advantage of that advice to put together a system, one which could control the till, the accounts in the back office and the level of stock both in the shop and in the warehouse. After all, there's a limit to how many boilers and systems you can have decorating the showroom.

The minimum hardware configuration for Astra is a 2Mb Mac with hard disc. But as one of the package's real strengths is its multi-user facility, it's probable that the set-up you use will go beyond this.

Indeed, Astra can support up to 25 users or, in a purely retail environment, up to 25

## Ian Smith takes a second look at a comprehensive accounting package

point of sale units. All are linked via AppleTalk, which can also support up to seven ImageWriter or LaserWriter printers.

I settled for a Mac at point of sale, backed by a barcode reader to make life easier, cash drawer and tally roll printer. The back office also acquired a Mac, supported by two printers, one for invoices, statements and so on and the other for plain paper reports.

The warehouse was also fitted out with a Mac and printer, and I allowed myself the luxury of a managerial Mac, mainly for "sensitive" projects such as monitoring the business and improving my score on Apache Strike. The system can, however, be expanded at any time, so the decision was hardly final.

Considering that one of my aims was to cut down on the paperwork, I was a little surprised to have acquired so many printers, but I was to discover that they all came into their own. And having a "surplus" does remove the need for constant paper swapping.

The invoice-dedicated printer, for example, could handle NCR sets while the other office ImageWriter could handle all correspondence requirements, including envelopes or labels. The warehouse model served in my case to produce picking lists – considerably cutting down the time needed to track down items in bulk store and put together an order for a customer.

With the hardware installed, I was treated to a swift demonstration of what real time accounting means: Simply, all transactions, results and reports are shown and calculated as they happen. As invoices are created, as stock is received – or whatever – Astra is updated.

And this constant updating means that you can pull out the information that you need to see within seconds, whether it's the day's trading figures or an up-to-the-minute profit and loss report.

All well and good, but what about getting up and running?

Astra takes full advantage of the Mac, offering true sizeable/movable windows from all menu options. Experienced users will find no surprises, but the newcomer to the Mac will find it a pleasure to work with. Menus – and menus within menus – are sensibly laid out and sensibly named: Even I didn't have to work too hard to find my way around (Figure I).

## No distractions

For the initiated, Astra is fully compatible with MultiFinder and works with all mega-screens – a real bonus considering Astra's capability of multi-screening. But one of its advantages is that the Mac doesn't intrude: It's sole function is to make the software work efficiently, and there are none of the whistles and bells which often distract from the purpose in hand.

Even keyboard shortcuts have intentionally been kept to a minimum – there are not enough keys to support all the permutations for one thing. However, the spacebar or the Tab, Enter and Return keys can be utilised instead of the mouse in the majority of instances. An exception to the "no shortcuts" policy is provided with the Help menu (Figure II).

Naturally enough, the first task is to customise Astra to your own requirements, entering details of customers, suppliers, stock and so on. This can mean a lot of typing – as with any system – but for those users who have already invested considerable time and effort in other software, Astra supports easy and efficient file transfer, so rekeying is kept to a minimum.

I was a little wary of how Astra would

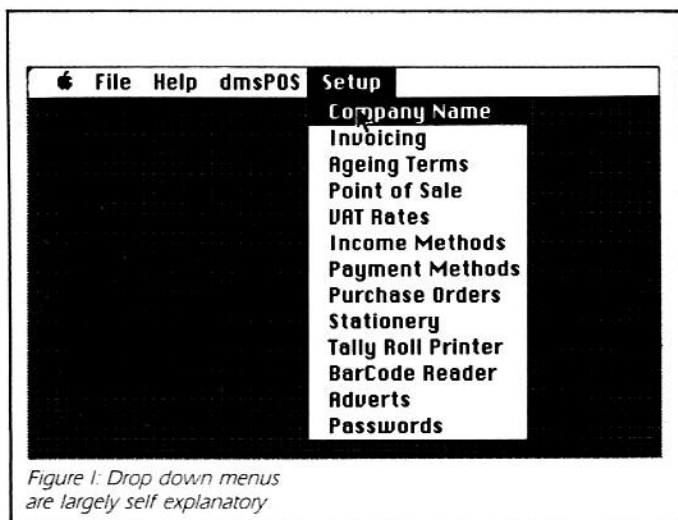


Figure I: Drop down menus are largely self explanatory

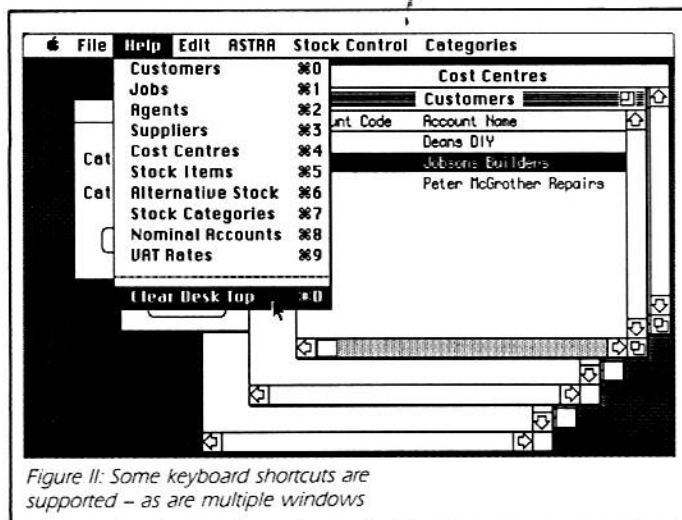


Figure II: Some keyboard shortcuts are supported – as are multiple windows

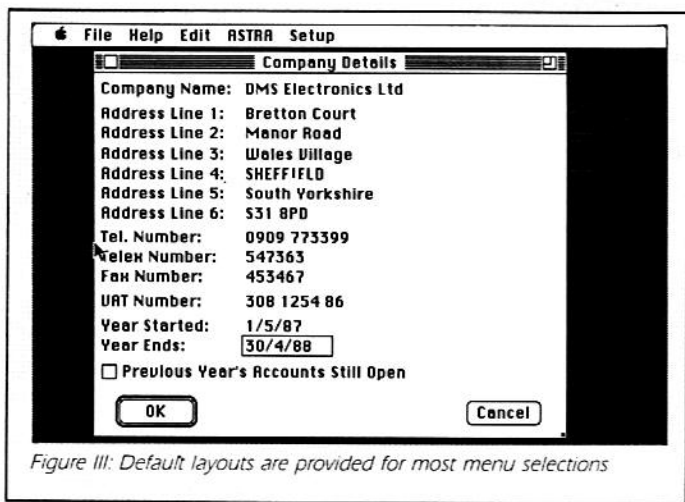


Figure III: Default layouts are provided for most menu selections

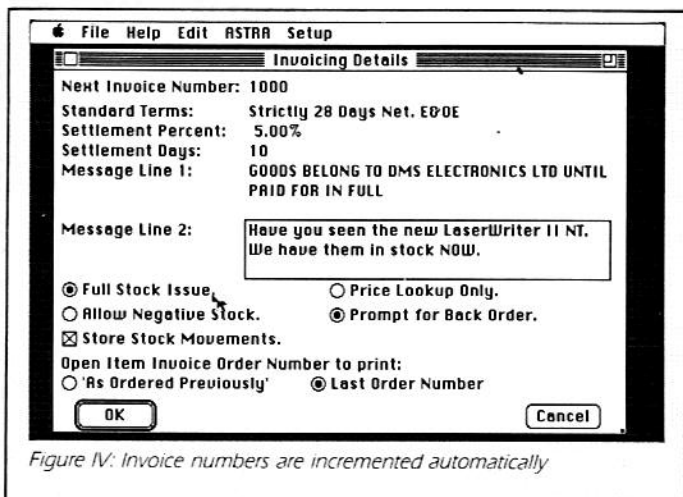


Figure IV: Invoice numbers are incremented automatically

cope with my range of stock – vast numbers of assorted washers, widgets and grommets, but need not have worried: Astra supports up to 32,000 stock lines and as many customers and suppliers – the maximum depends on available disc space.

Astra also supports up to 150 stock categories – designed for logical groupings rather than individual items – which should be more than enough for most companies: The average company will require perhaps 25 such entries.

And, should your company suddenly expand, Astra can expand with it – all data entered can easily be transferred to a larger disc.

### Menu options

This same philosophy underlies your allocation of space on the hard disc as you set up a file for the first time. Blocks can be set aside for stock movements, bank transac-

tions, customers and so on, but their size can always be expanded later.

With the framework established, it's time to set up your own company details and so forth. Working from the Setup menu you can quickly construct the parameters needed (Figure III).

Each item within the Setup menu presents a default design which can be selected to ensure consistency.

So far, so normal – even I could grasp the need to tap in company details. But Astra starts wearing its accountancy hat proper with the next selection, Invoicing (Figure IV).

Easy to customise to your requirements, it also features Astra's optional personalising touch – the facility to add messages to statements, or whatever else you happen to be printing.

More importantly, perhaps, it's flexible: If an item is out of stock it can be automatically placed on backorder and the fact reflected in the customer's invoice.

If you don't use stock control, you can use Astra's Stock file for Price Lookup only, so that stock levels are not adjusted.

In fact a wealth of invoicing options are open to you, including Open Item invoicing, where only one invoice is issued to cover purchases over a set period – ideal for the hotel environment or the business with customers who invariably ask for something to be "put on the account".

### Sensible approach

Next on the agenda is Ageing Terms – not, I discovered, an advert for a euthanasia clinic, but the mechanism whereby you politely remind customers that they owe you money, and remind yourself how long they've been owing it.

Again simple to use and set up (Figure V) it illustrates one of Astra's better features: You can't choose mutually exclusive options. In this case, that means that you can select terms by Calendar month or by days – not both. The non-selected option is greyed out to remind you that it's inaccessible.

Point of Sale is naturally a major function of Astra – this is where the money crosses

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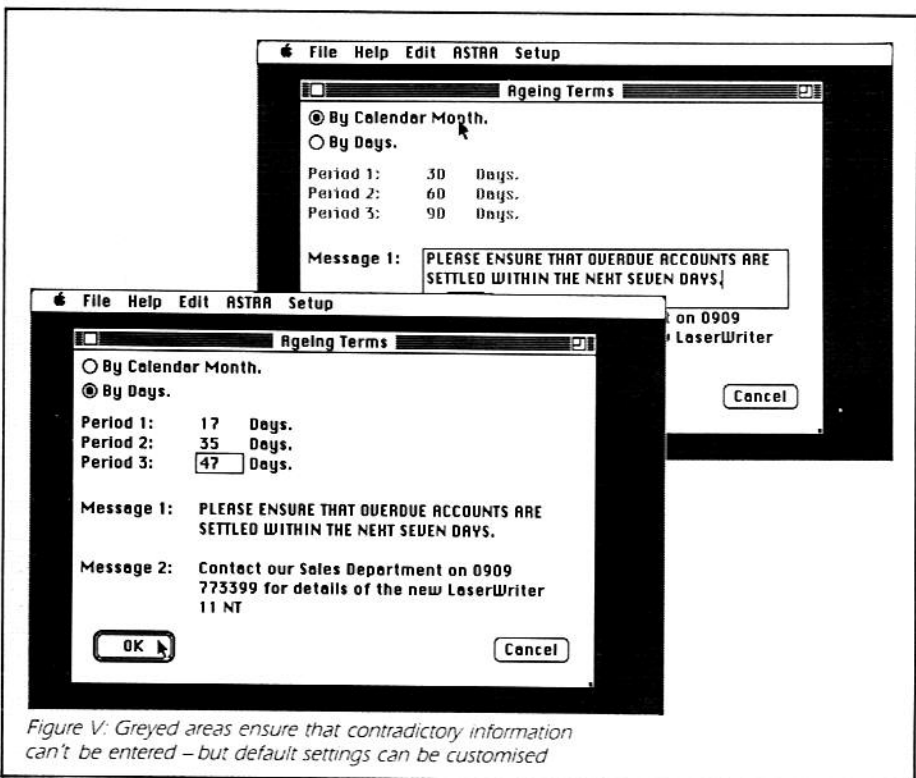


Figure V: Greyed areas ensure that contradictory information can't be entered – but default settings can be customised

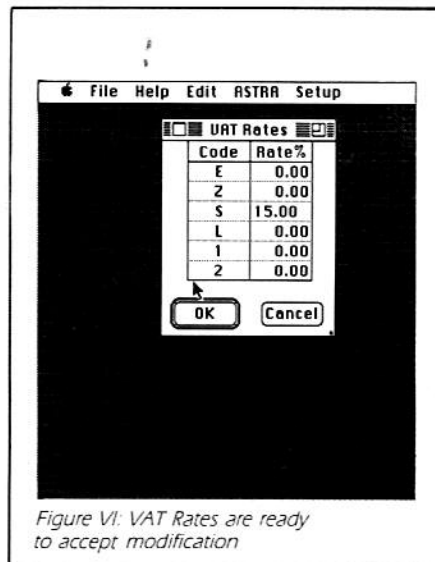


Figure VI: VAT Rates are ready to accept modification

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the counter, so I was particularly interested. It's possible to print short or detailed till receipts, and even a VAT analysis if required – by the cash and carry trade, for example.

Stock codes of goods (or a customer code, if applicable) can be entered manually or by the barcode reader for increased speed and accuracy. Customer accounts can also be tailored to reflect different prices for retail and wholesale buyers, for

example.

And especially useful is the Stock memo file – if a customer requests a non-stocked item the request can be flagged for subsequent ordering.

Point of sale movements and invoices can also be stored, useful for keeping track of high cost items – obviously impractical if you're shifting vast quantities of low cost products.

There's even a facility to include messages or advertising on the till roll, and this is

carried even further with the Adverts option.

This is one of Astra's more immediately obvious benefits – the point of sale unit can be turned into a sales aid while the Mac is idle: Advertisements can be scanned in, or created with SuperPaint – or any other drawing package – and up to 20 at a time can be displayed on-screen and set to roll, carousel fashion.

#### Planning ahead

The VAT Rates option is self explanatory, but here too DMS has looked ahead, building in options to accommodate future changes (Figure VI).

Uniquely, Astra can calculate VAT for second hand sales (there's a roaring trade in cast iron Victorian bathtubs these days) where VAT is payable only on the difference between cost and selling price. Discreetly, the VAT will not be shown separately on the invoice.

Income Methods sets out to cover all possible options for payment by customers and has built in provision to ensure that credit cards are properly handled. Thus, the telephone numbers for credit authorisation

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Card Name	Authorisation Telephone No.		Merchant Number	Floor Limit	A
	Manual	Automatic			
Cash					✓
Cheque				50.00	✓
Access	0432 757216		46222877	45.00	✓
Barclaycard				50.00	✓
AppleCard	0313 442424			300.00	✓
Barclay's Connect				50.00	✓
Diners Club				1000.00	✓
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Figure VII: At-a-glance guidelines ease cash, cheque and credit card handling



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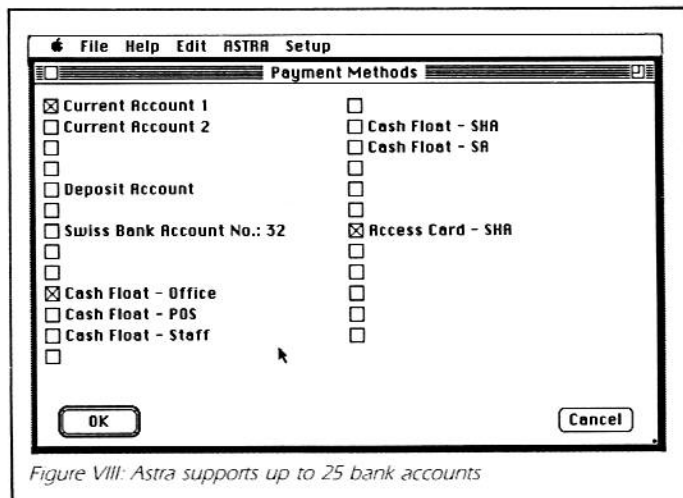


Figure VIII: Astra supports up to 25 bank accounts

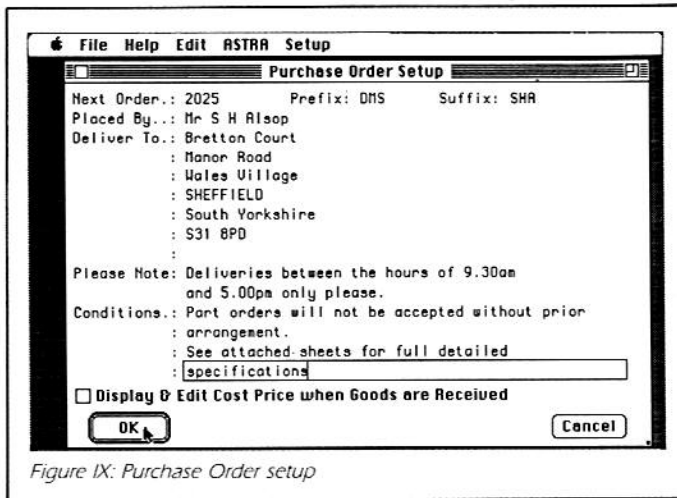


Figure IX: Purchase Order setup

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can be immediately available.

Payment Methods (Figure VII) and Purchase Orders (Figure IX) are similarly sensibly handled, allowing a considerable degree of customisation.

Stationery, as you might expect, covers printed output and again refuses to accept inappropriate input (Figure X). Options are available to cover all possible permutations.

The Tally Roll and Barcode selections allow considerable flexibility too – the options are there to suit any tally roll or bar code printer.

**Password protection**

Finally, on this menu, you have the facility to set Passwords to protect sensitive areas of data – your Swiss bank account for example.

Astra provides seven levels of password protection: Six of these restrict access to various parts of the program – to checkout facilities only, for example – while the seventh level protects the built-in utilities,

making them accessible only to the supplier.

That – very briefly – covers getting started with Astra, and does less than justice to a sophisticated product where pains have been taken to cover all contingencies.

I'll not go into the functions that Astra can perform on the information you feed in – even in précis form that would run to several pages. But Astra will cope with 99 per cent of all accounting functions, from printing receipts to preparing Year End accounts. The one per cent it can't handle has yet to be identified.

As a total novice to the world of accounting, I was impressed – even working from a solid foundation of ignorance I could still appreciate how easily and quickly information could be extracted.

The individual parts of Astra mesh smoothly to form an integrated whole, and the power of the system is well-complemented by the friendliness of the Macintosh front end.

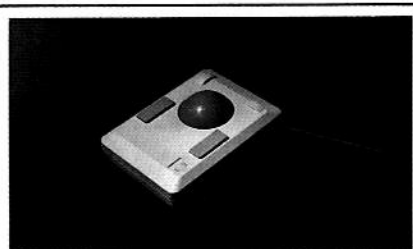
That in turn is complemented by a step-by-step, well illustrated manual still "under construction": It says much for the software's design that you don't have to dip

into it very often.

Astra will not turn the non-accountant into a financial wizard – but it doesn't claim that it can. What it will do is put a flexible and powerful tool at the disposal of companies of any size in any sphere of business.

There's only one omission, as far as I could detect: Astra was no help at all in finding me funding to set up in business on my own.

Product: Astra  
 Price: £1,840 (single user), £2,530 (multi-user)  
 Requirements: 2Mb Macintosh and hard disc  
 Supplier: DMS Electronics, Bretton Court, Manor Road, Wales Village, Sheffield S31 8PD.  
 Tel: 0909 773399



DESK not big enough to move your mouse around in comfort? Matrix North has come up with a solution in the shape of Turbo Touch.

The difference between Turbo Touch and conventional mice is that the ball lies on the top, so you move that only – not the whole mouse.

The result is increased speed of operation, which is further enhanced by an automatic acceleration feature – the faster you move the ball, the further the cursor moves.

Product: Turbo Touch  
 Price: £90.85  
 Requirements: Apple IIe, IIc, IIgs or any Macintosh.  
 Supplier: Matrix North, 4 Parkside South, Sunderland SD3 3BA.  
 Tel: 091 522 0724

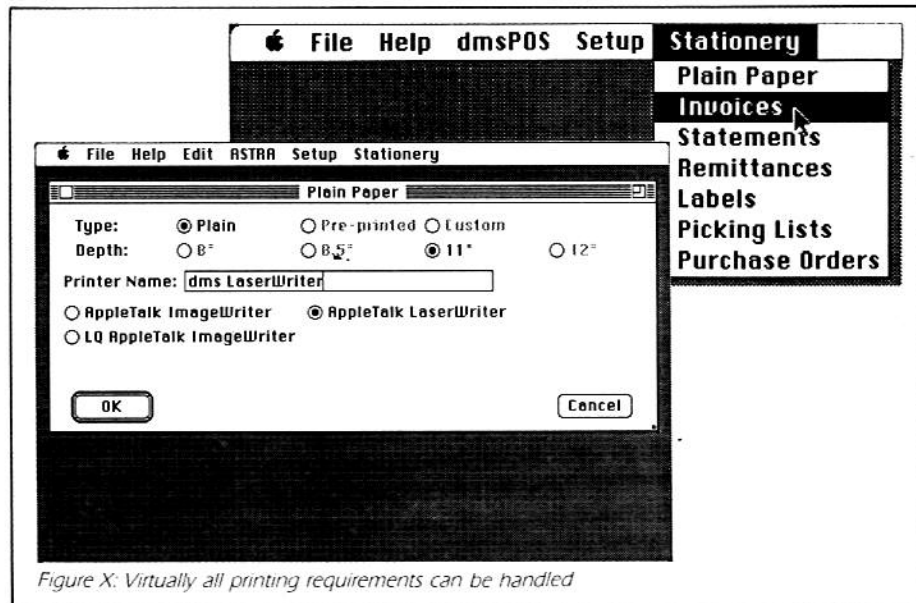


Figure X: Virtually all printing requirements can be handled





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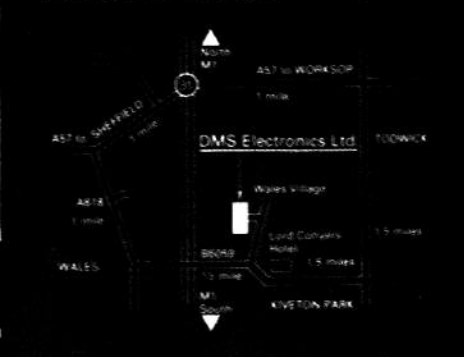


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**Point of Sale:** A computer together with an economical cash drawer, tally roll printer and optional dms Barcode reader becomes the Till or Checkout point. The tally roll printer prints descriptive customer receipts showing full details of purchases with complete VAT analysis when required and can include your own changeable sales messages. Payment received is either by cash, cheque or 10 credit cards - or the sale may be placed on account. The cash drawer opening is controlled by the computer. Stock codes of goods are usually entered using the barcode reader for speed and accuracy, or by using the keyboard. Up to 150 sales assistants sales are analysed to allow calculation of their performance or commission due. When a computer is not being used, up to 20 of your own created adverts will be automatically displayed on the screen for announcing special offers etc. This feature alone pays for **ASTRA**. Reports include stock movement through each Till (which are time stamped), full money and credit card reconciliation analysis for each or all Tills and daily or total period Transaction Journal etc.

**Sales Ledger:** Provides full customer details, turnover, last transaction date, balances, backorders, buyer, accounts and owner contacts with full real time reports and mailing label printouts. An account can be set to obtain a discount within any of 3 stock buying prices. Sales Transactions include Sales Order Processing, Invoice Preparation, Pro-Forms, Tele-Sales Invoicing (invoices are spooled & printed later to allow speedy tele-sales), Open Ended Invoicing (for hotels etc. where items are 'booked' to an account and automatically collated & printed later), Jobs (where items or time are issued to or received back from a job ready to be automatically invoiced in detail or en block once the Job is finished). Invoicing can be from stock, where levels are automatically adjusted, or free text. If an item is out of stock then the user is prompted to place it on back-order, where full back-order reports are created and items automatically picked up and invoiced when they come back into stock. If a customer asks for a specific item which is not normally stocked then the full details can be placed on Memo, which will save this unknown stock item, customer details, order number and the date and time that the enquiry or order was placed. These memos may be printed later to process the new item orders or to see which goods are in popular demand, thus enabling you to decide whether or not to stock them. This unique feature also applies to Point of Sale. **ASTRA** handles monies received, prepayments and cancelled receipts. Prompt payment discounts, when used, are automatically calculated and shown on invoices. Agents or sales people can be designated to an account and performance monitored by Summary or Detailed analysis. Targets can be set to produce figures for calculating commission. Reports include Ledgers, Aged Debtors, Statements (ageing can be monthly or by days), Sales back-orders, daily or total period Transaction Journal etc. Reports can be selective and printed in customer or agent order.

**Purchase Ledger:** Provides details of suppliers including turnover, current balance and last transaction date together with contact names. Transactions include the entry of Invoices, Credit Notes, Payments, Cheque and Remittance Advice Printing with the facility for Cancelled Payments. Individual disputed invoices may be selected to withhold payment. Purchase Orders can be created & printed. Cost Centres enable Job Costing - any expenditure may be allocated to a cost centre in addition to the normal nominal accounts. This produces reports on the buildup of costs within a particular project. Reports include Suppliers Ledgers, Aged Creditors, daily or total period Transaction Journal, goods outstanding on Purchase Backorder etc.

**Stock Control:** Provides a comprehensive means of managing stock and keeping track of Levels, Receipts, Issues, Level Adjustments, Sales and Purchase back-orders, costs, valuations and profitability. Stock items can also be grouped into Categories to produce company price books. A Stock Record allows 3 selling prices (automatically picked up by sales when an invoice or POS receipt is prepared), selling comments, receipts and issue turnovers, quantity on hand, on order from supplier and on sales backorder, details of the supplier & their own part code, appropriate stock category and nominal account, usual order quantity and minimum & danger levels. As you buy and sell stock the value bought and sold, gross and net profit, average unit cost and variation to cost are calculated in real time for total analysis of each product line. Stock codes are alpha-numeric (15 characters) and can be entered manually or via the barcode reader. A stock item may be set as a Manufactured item - if so, details and quantities of its constituent parts are also entered. When this stock item is 'manufactured' the stock levels of its constituent parts are reduced by the appropriate amounts. A Stock item may be classed as secondhand (such as occurs in the car trade) which then calculates the VAT on the difference between the cost and selling price only. Reports include stock Price Lists, full Detailed Lists showing individual and total valuations, profitability, movements, levels, Stock Memos, Sales and Purchase back-orders, Component Usage, Transaction Journal.

**Nominal Accounts:** Up to 999 are used and can be specified to enable the user to monitor sales, purchases, expenses, balance sheet and capital items. Monthly budgets can be set and monitored against actual results. Journal entries allow amounts to be transferred from one nominal account to another with full audit details being recorded. Reports include Bank List (showing a full analysis of every type of receipt - cash, cheques, credit cards, direct credits, refunds), Trial Balance, Profit and Loss (actual against budget plus variance, for any month and year to date), Balance Sheet, Nominal Ledger, daily or total period Transaction Journals.

**Period End:** Removes completed transactions and clears selected turnovers. The Year End will also zero the required nominal accounts and can transfer this year's actual to next year's budgeted amounts. Because **ASTRA** has 2 years nominal accounts on line, when a new year is started any previous year's purchase invoices will be automatically allocated to that previous year. This is a unique feature. The Sales and Purchase Ledger periods can be closed at different times for unsurpassed ease of use.

**VAT:** At each VAT period end the VAT return to HM Customs and Excise is automatically prepared and payments can be made or refunds received. The Sales Ledger, Point of Sale & Purchase Ledger VAT periods can be closed at different times and can be done independently of a period end for unsurpassed ease of use.

**Summary:** The dms **ASTRA** system is the 'most comprehensive and powerful integrated Accounting and Point of Sale system available today and is an asset to all businesses in either single or multi-user form. It is a must for those who want to keep absolute control of the financial management of their business and who require up to the minute real time reports with the minimum of fuss. The user can update from single to multiuser operation without any data re-entry.

**Hardware requirements:** **ASTRA** is run on the 2 MByte Apple Macintosh series computer together with a hard disk. A computer together with a dms barcode reader, tallyroll printer and cash drawer become a Till or Checkout point. Up to 25 computers and 7 AppleTalk ImageWriter or LaserWriter printers can be used on the AppleTalk network. The single-user can be converted to the multi-user version using AppleTalk network software such as AppleShare, EtherNet, MacServe etc. The full hardware, software and stationery is available from dms. Contact dms' sales department for full details.

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the program may not run. It isn't very clear in the text of the article, but it does rely on running under the Dos 3.3 operating system and will not run correctly under Prodos, although it would not be hard to convert it.

Also, a short correction was printed in *Apple User*, July 1986 because the original code will not handle PLAs correctly. The correction is:

```

253 INC S
254 LDX S
255 LDA P      *
256 PHA      *
257 PLP      *
258 LDA STACK,X
259 STA A
260 PHP      *
261 PLA      *
262 STA P      *
263 JMP RESULT

```

The lines with an asterisk should be inserted into the original code – another, powerful argument for using an assembler. –

**Max Parrott**

## Prodos dating

*I WONDER if you could help solve a problem with Prodos 1.1.1? Since 1988 began Prodos thinks that the year is 1982 even though my clock card shows 1988. Is this a bug in Prodos? – Mateen Greenway, Croydon.*

● If Prodos 1.1.1 finds a Thunderclock or compatible it reads the month and day of the week and calculates the year. The routine which does this goes wrong in 1987: clearly Apple never intended that the 1.x versions were the final ones.

If I were you I would change over to Prodos 8 which is now in version 1.4 (there have been a number of changes since v.1.1.1). Alternatively you could install a clock driver into v.1.1.1.

If you want to know how to go about this get ProDOS Inside and Out by Dennis Doms and Tom Weishaar from TAB Books Inc., ISBN 0-8306-2745-6.

## Sweet sixteen

*I HAVE recently discovered Integer Basic on my Apple II plus and am getting to grips with using it. What I do not understand is how to renumber programs. Does anyone have any ideas? – Jennifer Williams, Fulham.*

● Integer Basic was the original programming language provided in rom on Apple IIs and with it came the Programmer's Aid rom which had various utilities for sound and graphics and which contained a Renumber routine.

When Apple switched to AppleSoft in

**Turn to Page 70 ►**

## Apple to Mac

*REFERENCE the letter captioned "Apple to Mac" in Feedback, Apple User December 1987 from N.S.R. Duffin of Belfast.*

*I have recently purchased a DTP system from Gestetner comprising a Mac SE, Laser-Writer and so on with Microsoft Word, Aldus Pagemaker, Formation, MacDraw and Fullpaint software.*

*My previous system – an Apple IIe – was used for typesetting in AppleWriter II on to 5.25in discs which were taken to a typesetter and output through a Linotronic 202 typesetter.*

*I now have five years worth of typesetting in AppleWriter II on 5.25in floppy discs and require to transfer some of the files on to the Mac for amendment to avoid re-keying in the text files that I need to use.*

*Could you please tell me where I can obtain the Mac Transfer software mentioned in the article. – John T. Wilkins, Farnham, Surrey.*

● Mac transfer, though produced by an American company, should be available from dealers. If you are having trouble locally you could try Micro Computer Consultants on 0942 892818 for an alternative solution, or Leicester Computer Centre on 0533 556268.

Remember that you will need a serial card in your Apple II to effect the transfer and that you will need a suitable cable to connect the two computers.

## Tracer problems

*I AM writing to inquire about M.Agerbak's Tracer machine code program published in your March 1986 edition.*

*I typed in the program on an Apple IIe and the problem encountered was that when instructions 353, 355, and 459 were*

*entered the monitor did not recognise the assembly language instruction "ASC...".*

*Part two of the problem occurred when the program was CALLED because the majority of the program worked but when the G option was used and a suitable address entered the program crashed.*

*I have enclosed a listing of the program and unless I have made any typing errors, I would be grateful if you could assist me in finding a solution to my problems. – P.J. Messer, Aldermaston.*

● First, the IIe's monitor does not recognise any assembly language instructions, not just ASC. The monitor itself allows you to enter values into different addresses, and although this can be done – and by the way you have done it pretty accurately – it is not easy.

Using an assembler is much easier and even the mini-assembler helps a lot. For those of you who don't know, the mini-assembler used to come with the old Apple IIs in rom, but it disappeared in later versions. It has now reappeared in an improved form in the IIgs.

If you have Dos 3.3 then you have a file on your system master called INTBASIC and the mini-assembler is actually buried within this and can be used if you switch to Integer Basic. Alternatively, you can "dig it out" and use it directly.

I scanned your listing and almost immediately noticed a few areas where there was probably a typing error. These areas identified themselves pretty clearly through the ???s which appear in the disassembled part of the listing.

As they were on the whole in areas of code there had to be something wrong. (However, that's not true where there is data or Ascii strings). They were simple typing errors and should be quickly correctible.

I did find some other errors by quick inspection of the disassembled code – only experience tends to help here. Sometimes you just know that a piece of code cannot be correct!

However, even after making corrections

### ◀ From Page 69

rom rather than Integer, the INTBASIC file was put on to the Dos system master, so that if you have a 16k language card present the Integer basic is loaded into memory along with the Programmer's Aid.

If anyone else is interested in running Integer Basic the first thing to note is that you can only run it under Dos 3.3, not Prodos, which also uses the same area of memory.

To use the renumber routines you first must give the new starting line number which you want and the step between line numbers. Do this with the commands:

```
START=xxx
STEP=xxx
```

then renumber by issuing the CALL -10531. If you wish to renumber only part of a program then also issue the commands:

```
FROM=xxx
TO=xxx
```

and CALL -10521 instead.

Incidentally, if you wish to start looking at the code to see how renumbering works it starts at \$D400 but it appears rather unintelligible on the monitor. The reason for this is that the first command at \$D400, does a JSR \$F689 which switches in a 16 bit pseudo microprocessor known as Sweet 16.

Apparently Wozniak wrote this in 6502 language because it made so many other things easier to write. The code which follows from \$D403 onwards is Sweet 16 code.

## Graphics tablets

I HAVE been using an Apple II Europlus for just under a year now and am still at the learning stage. I wonder if you would be so kind as to give me a little information regarding an Apple Graphics tablet and control card.

I was recently given the aforementioned equipment, but unfortunately I don't have any instructions or access programs. I gather that the card fits into slot 4, but that is as far as I can go. I therefore wonder if you could provide me with any useful access programs, some ideas on any graphics software currently on the market, the capabilities of the equipment and just what it does – **D.R. Honour, Peterborough.**

● I'm sorry but we don't have much information on the Graphics Tablet. It is no longer sold and presumably is not supported by Apple. There never was a great deal of software for it and therefore I suspect that there is no current market software.

I'm sure that I have seen programs in

American magazines which use the tablet, but on looking back over past issues of *Apple User* I found nothing useful and I couldn't find anything in the old issues of other mags which I have.

## Address book

IN *Apple User* Vol. 7, No. 8/August 1987 in *Feedback* you published a letter by Sally Bowen from London who asks to pass on her address to other Apple users interested in adventure games. I would be much obliged if you sent me Sally Bowen's address. – **Ron Raz, 6, Hankin Street, Holon 58272, Israel.**

● I'm afraid that in the move to our new premises and the consequent new working arrangements, we've managed to lose Sally's address and the addresses of a few others who wrote in. Hopefully, they will contact you at your address above!

## Blythe spirit

I WOULD like to add a note to your recent review of *Omnis III*.

We acquired the program some two months ago in order to provide a comprehensive system for a new venture, mailing video cassettes. Previously we had used *Omnis II*, but the new operation demands greater storage, stock update, and more complex report facilities.

I am not a programmer and had only my limited experience with *Omnis II* to go by. That said, I took advantage of Blythe Software's update deal – send along *Omnis II* and you get *Omnis III* for £150.

The manual is not child's play, but much of the jargon is similar to *Omnis II* and I encountered few difficulties. The first thing to grasp is that *Omnis III* has an extra dimension, three rather than two – this was exciting to realise.

It is hard to gallop ahead with the first layouts – the flexibility is almost limitless: You can control every kind of field entry, and Calculate fields to your heart's content.

One particularly valuable control now prevents an order from being completed without either a cheque payment or a credit card. And the report facilities are tremendous – we use Mannesman Tally printers and simple control codes alter printing with very handsome results.

Having set up the system, you have the whole field of the Turnkey possibilities to explore. Any sequence – Edit, Insert, Find, Delete and so on – may be chained: Main files can be reset and reports and other functions can be chained and accessed from simple menus.

I had to get things up and running fast for our new contract, and there were some

results I was impatient to achieve. The manual is difficult and if I offer one criticism it is that the index could be improved – but I understand this is in hand.

The support people at Blythe are splendid: I must be the bane of their lives, but I would like them to know that I have had one of the most exciting experiences ever.

Your reviewer put her finger on it when she wrote of the conflict between an expert programmer's tool and something the layman might manage to use. But that's really the thrill, like hang gliding, like surfing – like learning to drive in a Porsche. – **Nicholas Thompson, Warminster.**

## CP/M comms


I READ your magazine with interest each month, but have yet not found an answer to my problem. I own a IIgs running Cirtec CP/M plus and a 1Mb Plusram in slot 4. I am a great fan of CP/M for many reasons and was most disappointed not to find a commercial comms program running under CP/M.

However, I did manage to scrounge two old CP/M comms programs called CCS740 and IMP244. These work quite well using a serial card, but I bought my IIgs with its built-in interface to use just that, not a serial card.

Can anyone help me construct the necessary software drivers to page the interface and thus bypass the serial card? Cirtech suggested that software drivers were what I required. I look forward to hearing, reading or whatever. Incidentally, this request has been placed on many, BBSs but with little effect. – **D. Finimore, Birmingham.**

● There are some commercial CP/M comms programs: BSTAM (from Byrom), Crosstalk (from Microstuf) and Z-Term the Professional, spring to mind. However, whether they recognise the IIgs serial port in their latest versions is another matter.

The problem with patching your programs may be that somebody who knows how to write the drivers doesn't have the programs and vice-versa.



Send your letters to:  
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Apple User,  
Europa House,  
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## Denise McKnight works through the year ahead

THERE is a corollary to the well-known Murphy's Law which states that software always arrives for review just *after* the optimum time. True to form, Create A Calendar arrived just in time to miss the end-of-year issues of *Apple User*. Fortunately the package can do more than simply produce the standard 12-month job.

As well as fitting the full year on an A4 page, you can produce a month on a page, a week on a page, a day on half a page (allowing for two days per page), and a year printed horizontally over six pages for a year-at-a-glance.

I thought I'd start with a simple month-per-page calendar. Being an idle sort, I opted to start from a Master Calendar which puts all the standard holidays in – funny, I never realised before that both Lincoln and Washington had their birthdays in February. Fortunately, it's easy to clear any particular day out or insert British holidays – like all those Bank holidays we seem to have.

You can also put in regular events using a Repeat This Date option – just the thing for user group meetings which happen on the third Thursday of the month. By specifying the range of the repeat – every Tuesday from January 12 to March 28, for example – you can even timetable the term of wine-making evening classes you signed up for.

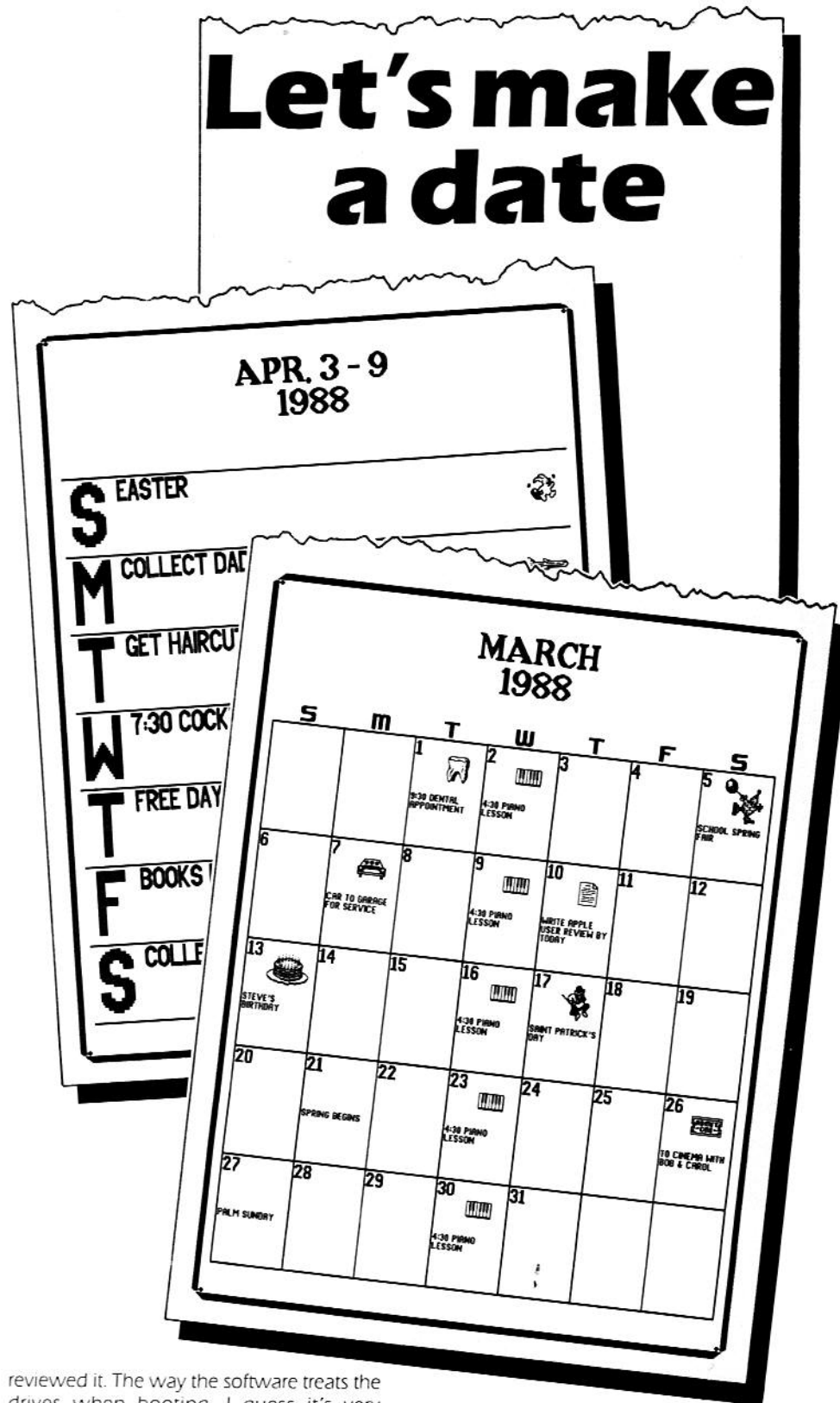
### Clip art graphics

There is a variety of clip art style graphics on the flip-side of the disc with which you can liven up your calendar. There are also several borders and five different typesets to choose from. If you've got Print Shop you can also use its graphics because Create A Calendar will read a Print Shop graphics disc.

When you decide to print your calendar you'll need to specify the printer and interface card you're using. The package supports a wide range of printers and cards, although it wouldn't print properly through my Fingerprint card to an ImageWriter, producing nothing but garbage. I've had trouble with this card before, so I'm inclined to suspect the card rather than the software. It printed perfectly from the IIc to the ImageWriter.

You can print up to 99 copies of a calendar – you could always send one out with your Christmas cards next year. You can also opt to print an Events List, which is a tabulated record of all the entries on your calendar.

The package is easy to use. Apart from entering text, practically everything is achieved using the arrow keys to select from a menu and Return to confirm the selection. I would have liked to let my kids loose on it, but I couldn't back it up and didn't want to risk the original before I'd



reviewed it. The way the software treats the drives when booting, I guess it's very heavily protected.

The calendars you produce are stored on a separate data disc, so you can go back and modify them when you drop out of the wine-making classes or sign up for that course in brain surgery that you've been meaning to take for years. The data discs can be backed up, and one of the program's utilities will do it for you.

At £29.95 Create A Calendar is reasonable value for money. It's one of those programs that you use a lot when you first get it, then turn to occasionally when the need

arises. It's the sort of package I've wished I had on a few occasions when I've been struggling to do something similar with a drawing package.

Now, where did I put that birthday list...?

Product: Create A Calendar

Price: £29.95

Requirements: Apple II with 64k

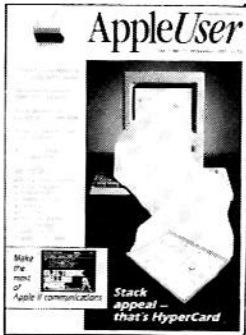
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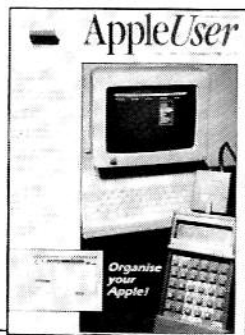
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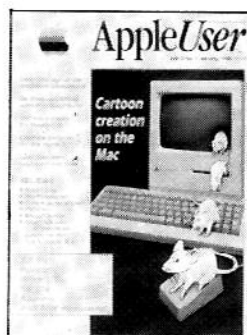
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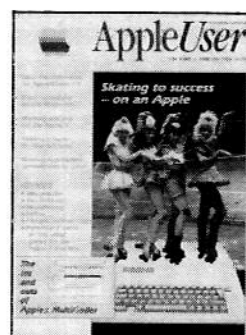
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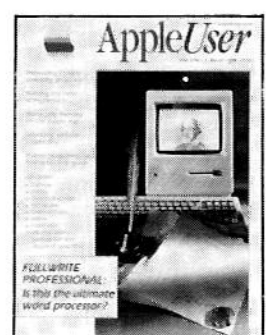
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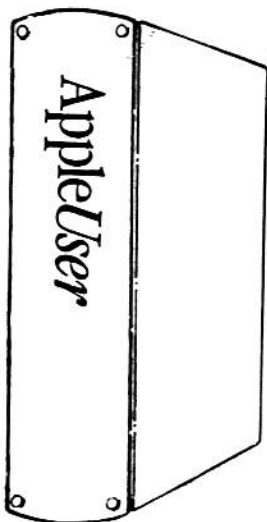
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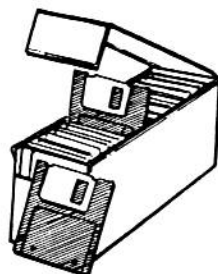
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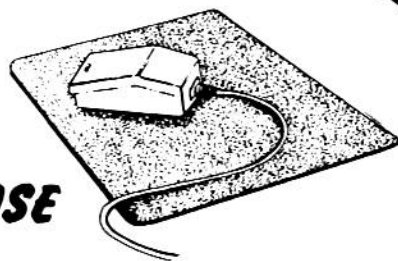
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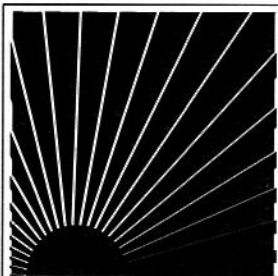
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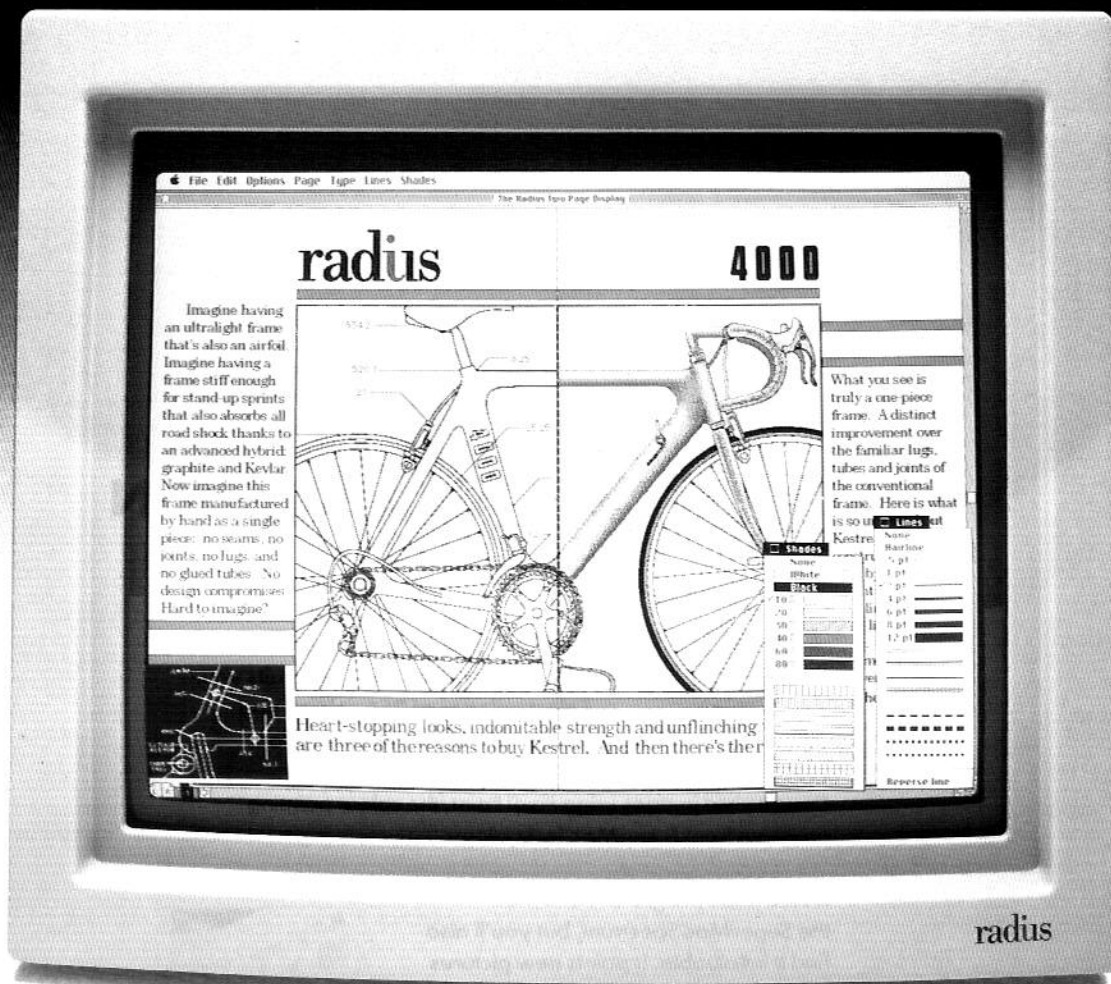
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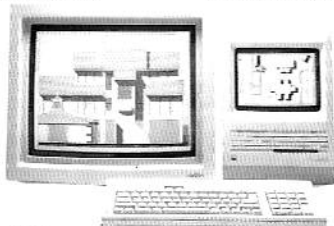
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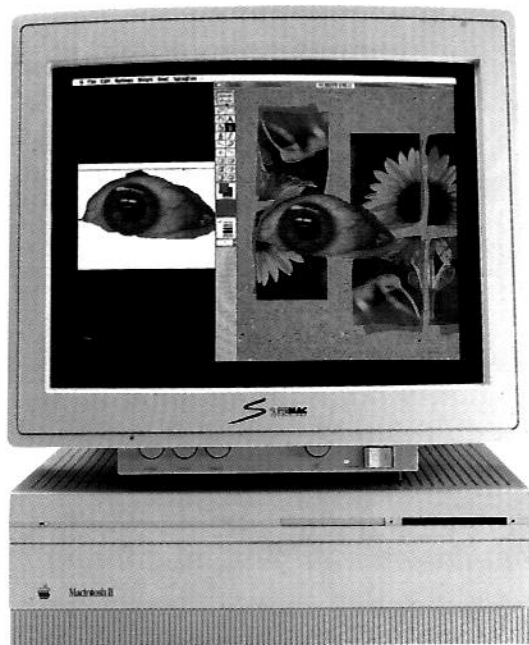
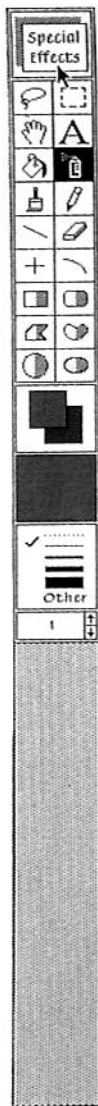
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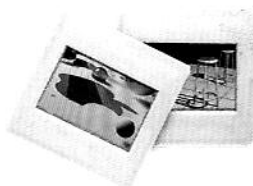


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