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AppleUser

Vol. 8 No. 1 January 1988 £1.50

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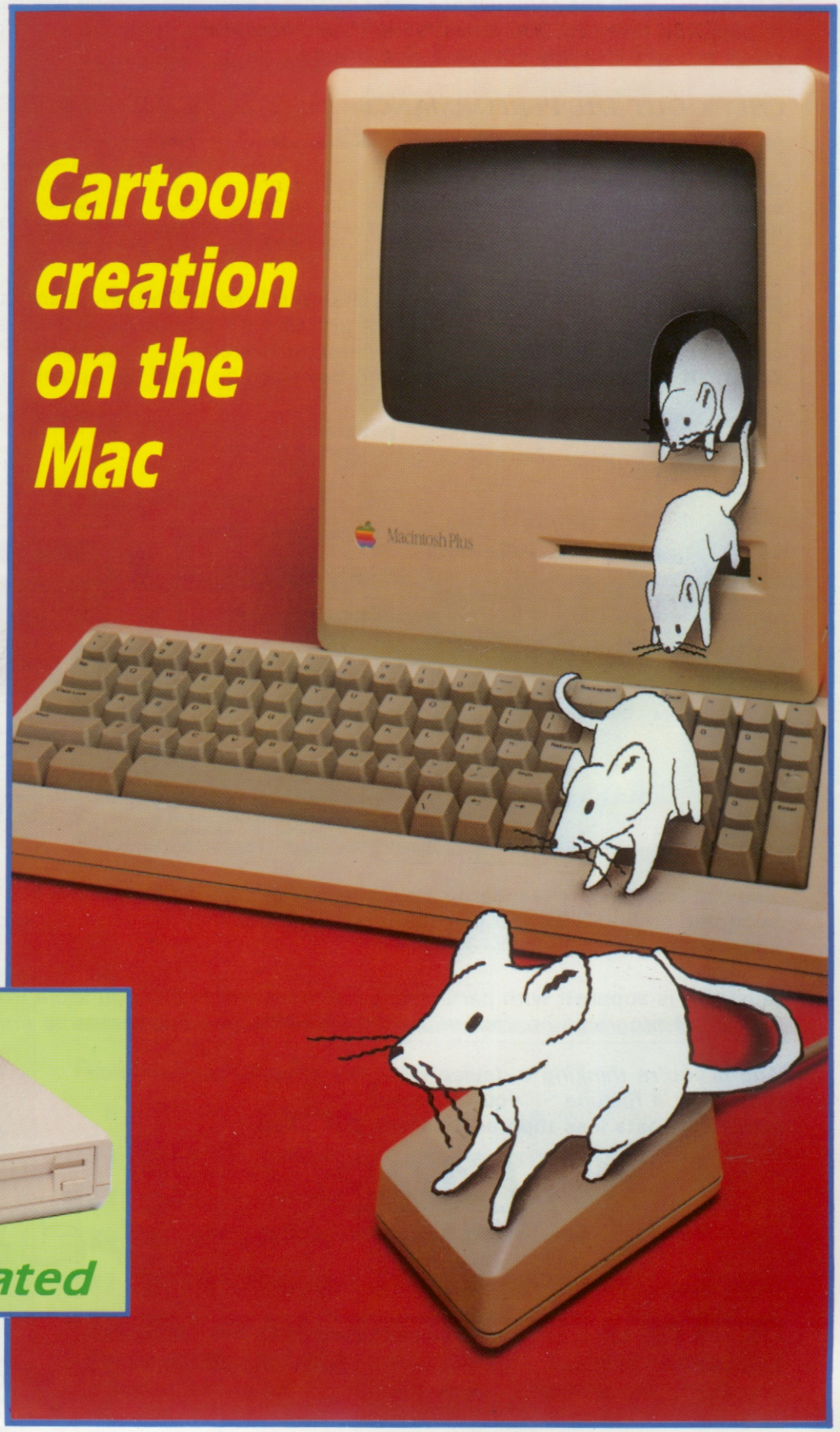
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REVIEWS

- *MacProlog*
- *4th Dimension*
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- *Palatino*
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+ all the latest games for the Apple II and Mac

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THE WORLD'S FASTEST DISK DRIVE

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.

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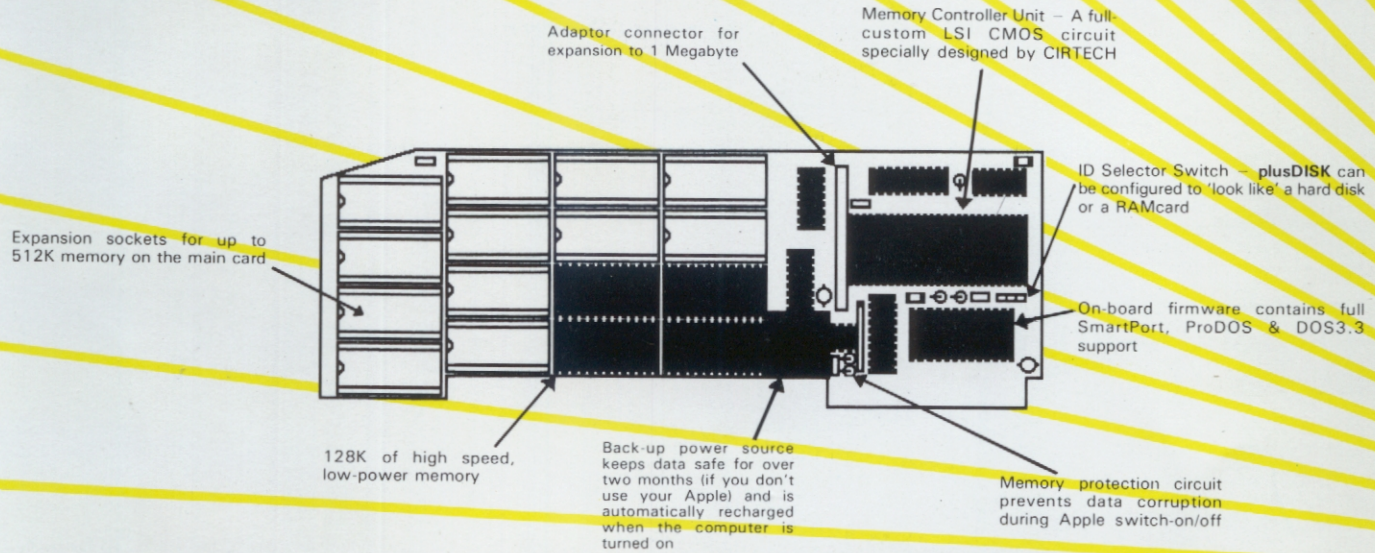
(times in mSecs)	Disk//	3.5 Disk	SCS I HardDisk	plusDISK
Maximum access time	1130	445	320	**0.001**
Average access time	490	270	90	**0.001**
Maximum data transfer rate (Kbytes/second)	62.5	31.25	530	**1023**

SOME PRACTICAL EXAMPLES:

(times in Secs)	Disk//	3.5 Disk	SCS I 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)

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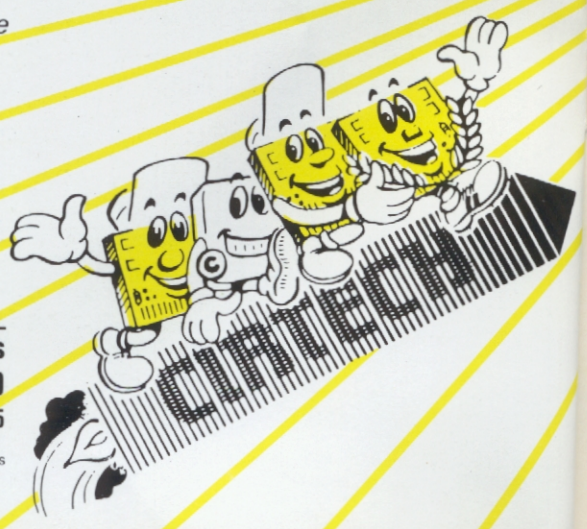
plusDISK is supplied with partitioning software which lets you store ProDOS, Pascal 1.3, DOS 3.3 and CP/M programs on your expanded **plusDISK** – *all at the same time!*

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AppleUser SPECIAL OFFERS!

Two top adventure trilogies for you to play

Award-winning software house Level 9 has extensively re-written some of their best-selling adventures, and released them in two trilogies: Jewels of Darkness and Silicon Dreams.

In the Jewels of Darkness trilogy you start with Colossal Adventure, containing all the treasures, creatures, rooms and puzzles of the mainframe original.

In Adventure Quest you must discover the Old Roads to the Dark Tower, Fortress of the Demon Lord. Only there can you defeat him. There's magic in the air in Dungeon Adventure. Can you discover the treasure while facing the perils of skeletons, carniverous jellies and orcs?





The first adventure in the Silicon Dreams trilogy is Snowball. You awake from suspended animation to find your spaceship on a collision course with Eden. In Return to Eden you must prevent the defence robots from destroying your ship. You have lost your memory in the Worm of Paradise, and you may have to join the governing party to regain it.

Each features:
Over 600 illustrations
New language interpreter
Huge 1,000 word vocabulary
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You save £5 when you buy one of these packs or £12 if you buy both

TO ORDER PLEASE USE THE FORM ON PAGE 65

New Unix system due soon

RELEASE of Apple's A/UX Unix operating system is imminent – despite reports in some computer trade publications of severe delays.

Industry observers have suggested Apple is having difficulties porting some of the Unix features on to the Macintosh and that a delay of up to six months could be expected.

This has been strongly denied by Apple spokesman Frank O'Mahony who foresees A/UX being released "more or less on time – at the end of January, early February.

"When transporting a system such as Unix to the Macintosh you are bound to encounter a few minor problems. These have now been overcome and the project is back on schedule", he said.

Relational database

A MANAGEMENT tool for the Macintosh – McMax from Nantucket – is now available from P & P Micro Distributors.

The package, which is fully compatible with dBase III and dBase III Plus, is a programmable relational database that permits both simple and complex data relations to be established and quickly processed.

Existing dBase applications can be run up to ten times faster on the Macintosh with little or no change. In most cases files can be transfered from any PC via a serial port to the Macintosh's modem port.

The program supports data files with up to 16 million records, up to 32k and 2,000 fields per record, and numeric accuracy of up to 63 places. It also supports popular Macintosh file formats like Microsoft used by Word, Excel and file for easy importing and exporting of data between programs.

Standard editing commands such as cut, copy and paste are also included. Both Apple LaserWriter and ImageWriter printers are supported.

APPLE II RANGE SUPPORT STAYS

APPLE has reacted to widespread talk in the industry that it intends to withdraw support from the Apple II range.

Recent trade press reports have fuelled rumours that the Apple II is being abandoned in favour of the Macintosh.

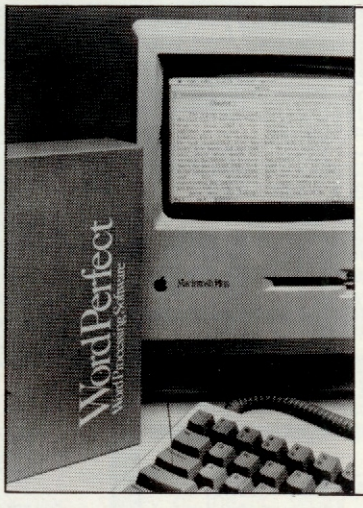
Price cuts across the Macintosh range were described in one report as reflecting "a growing commitment to the Macintosh at the expense of the Apple II".

But a company spokesman told *Apple User*: "We remain committed to the Apple II product range 10 years after the first Apple II was produced. The launch of the Apple IIgs in September 1986 was the most recent revision of this very successful product.

"Both the IIe and the IIgs are being produced in quantity at our factory in Cork, Ireland, and are selling steadily.

"It was thought at one time that the IIgs would mean an end to the other machines in the range, but only the IIc has gone.

"We shall continue to manufacture the IIe as long as there is a large enough demand for it – and at the moment there is no sign that its popularity is on the wane".



Mac's WordPerfect

POWERFUL word processing package WordPerfect is making a bid for a larger share of the market with its latest release for the Macintosh.

Wordperfect version 1.0 makes full use of the Macintosh's windowing ability, mouse interface and pull-down menus. The package fully supports all postscript printers, including the Apple laserwriter.

Some of the features of the program include a 115,000 word spell checker, word count, expandable dictionary, mail-merge and sort, automatic text formatting and an extensive thesaurus.

Other features include columns, footnotes, endnotes, table of contents, document indices and outlines, macros, and print preview which allows users to check two pages of a document simultaneously before printing.

COMPETITION WINNERS

THE September issue of *Apple User* offered readers the chance to win three top Microsoft packages worth £670 donated by P & P Micro Distributors.

Despite the huge response to this competition, there could only be three lucky winners whose all-correct entries were the first to be drawn out of the sack.

Terry Cymbalisty from Edgeley won the first prize of the powerful desktop publishing package Ragtime. Second prize of Microsoft Works went to Byron Simmonds of Surlingham, and Flight Simulator was won by Robin Lane from New Romney.

More for the Macintosh

TWO new products for the Macintosh called PowerPoint and InterMail have been announced by Microsoft.

Powerpoint is aimed at the desktop presentation market and is capable of advanced presentation text and graphics.

InterMail is an electronic mail application that allows users to send messages across an AppleTalk or AppleShare network.

Every Macintosh user on the network can send and receive memos, phone messages and entire files. Intermail can be loaded in the background and alerts the user when new information is received.

Release dates and prices for PowerPoint and InterMail have yet to be announced.

Easier merging

USERS of the Macintosh MacWrite program could be in for an easier time with a new package called MergeWrite.

One of the problems with MacWrite was the lack of any mail merge functions which has often restricted its use as a mainstream word processor. With MergeWrite the user can now produce multi documents with variable information.

Further customisation is possible through the use of an If-Then-Else facility. This allows for the printing of text options as well as variables.

Records can be sorted by post code or name and printed in a number of sort orders. MergeWrite supports both ImageWriter and LaserWriter printers.

Demons, dragons and daggers

THE Eternal Dagger reintroduces Middle World, first presented in Wizard's Crown, which has now been invaded by hordes of monsters from the Demon World, via a magic portal. It is your task to defend the Middle World by finding the Demon Portal and recovering the dagger of the title.

Before you plunge headlong into the hunt though, be warned: Thorough reading of the manuals which come with the game is essential. There are two, well laid out and clearly written. One is the obligatory "how to" manual, the other "a compendium of strategy, tactics, tips, and sly manoeuvres" which repays careful study.

Certainly, when you're up against cheerful souls like Magoomba "The Tree Who Walks Like A Man and in Search – of Human – Blood', you need all the help you can get.

Still in getting started mode, you'll have to create playing and dungeon discs before going adventuring. However, this does save wear and tear on the original, and keeps disc swapping to a minimum.

Meanwhile, back at the plot...

You are not alone in your quest – you can take along a group of eight adventurers to assist. These can either be pre-designed characters, ones of your own creation or even imports from your successful adventures in Wizard's Crown.

Should you opt to create your own characters, they can be of various types – priest, fighter, ranger or whatever – or combination models: A kleptomaniac sorcerer is one appealing possibility.

After this character building exercise, arm yourself, choose a picture to represent your noble self in combat and head for the main screen. This is a map of the island you are on, and four lines of text at the bottom of the screen keep you informed of the time of day and what moves can be made.

Movement is made, oddly, via the numerical keys, which means you have to divide your attention between keyboard and screen, sometimes with disastrous results until you get used to it.

It's also a little frustrating that every four or five moves night descends and the group of adventurers has to stop for a night's rest.

Even though you can speed up message response time, this can interrupt the flow of what otherwise is a relatively fast-moving game.

Back to adventuring. The game begins with a "keep our island tidy" section, which involves despatching a variety of Undeads and a very nasty-looking Red Dragon.

The dragon is armed – redundantly, I would have thought – with a weapon called the Holy Morning Star, which you'll need later in your quest.

You'll certainly need assistance, so it's worth finding a wandering group of people who are toting a Dragon Slayer sword around with them. Sad to relate, the only item I managed to recover was the dragon's false teeth.

You'll meet some friendly – and some not so friendly – locals in your travels. When they appear you'll have the choice to Talk, Run, Surrender or Fight.

If you're directly attacked, or decide to fight, you can opt for Tactical or Quick combat. Quick combat precludes the use of magic and you'll only 'see" the outcome of the battle in text.

But with Tactical combat you get an enlarged view of the map with your characters in place. Place your men, point them in the right direction (the computer will decide which attacks first) and move in for the kill.

You'll soon discover that some weapons are more powerful than others, and that blows can be blocked by an opponent's shield or armour. Sorcerers can also join in, casting a variety of spells.

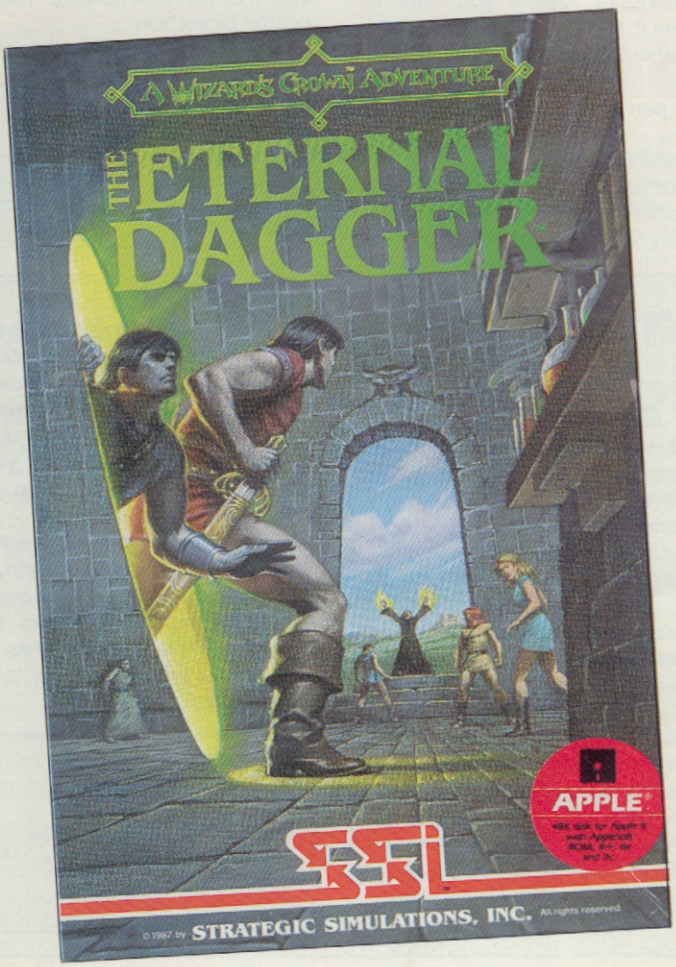
A tactical battle can last anything up to half an hour and you could find yourself with a few less adventurers at the end of it. Still, if your priest survived, you might be able to resurrect a few of the dead, and you'll have chance anyway to rest up and lick your wounds.

If you win a battle you'll acquire a variety of loot: If you lose – which means that all your characters are dead – you'll have no option but to reset the system. However, once reloaded you can go back to wherever you last saved the game.

The Eternal Dagger is undoubtedly the best Dungeons and Dragons simulation I've played, especially since it allows for up to eight participants, all taking a different character.

It does have the odd shortcoming, but it's a compulsory purchase for anyone who enjoyed Wizard's Crown, and for the uninitiated, I can't think of a better introduction to the world of adventuring.

Mark Meredith



Product: The Eternal Dagger
Price: £19.99
Requirements: Apple II
Supplier: SSI/US Gold, Units 2 & 3 Holford Way, Holford, Birmingham B6 7AX.
Tel: 021-356 3388

Going to town



DUNGEONS and Dragons fans will surely be spellbound by this offering from Electronic Arts: Volume 1 of Tales of The Unknown, entitled The Bard's Tale.

Two discs and extensive documentation are packaged in a card folder which displays a map of Skara Brae, a medieval-looking town you will get to know only too well. Also, you will need a blank disc to make a Character disc which enables the computer to keep track of play.

With this in mind, the instructions tell you to use your Dos 3.3 disc copy function to duplicate the reverse side of the boot disc.

If, like me, you have an Apple IIc, you probably won't be able to do this. I used my IIc Utilities disc instead. It didn't work. I finally resorted to a program called Disk Muncher.

At the same time I made a copy of the boot disc in order to preserve the original. I saw no warnings about protection but when I booted my copy, a few blotches on screen and an offensive, hysterical beeping were all I got.

If your disc crashes, you might be waiting a while for a replacement – no back-ups are included. For this and other reasons, more and more people nowadays refuse to buy copy-protected software.

A Dungeon disc which creates the various labyrinths is also supplied. Two drives can save you some disc swapping.

The small but quite detailed town map had me squinting at times. Not noticing at first that I could use Escape to freeze the game, I frequently wasted time trying to figure out which way to turn and, pondering the while, got assaulted by all manner of vindictive riff-raff.

An evil mage called Mangar holds sway over Skara Brae and your task is to wrest the city from his malevolent grip using your group of up to six adventurers who always start from the Adventurers' Guild, a sort of hang-out for people like you who crave romance, excitement, adventure and loot.

You can create your own characters and name and equip them yourself. For convenience, I took the off-the-peg group which, under my direction, usually got shredded well wide of the first dungeon.

On the streets time passes regardless, and at nightfall your chances of being attacked increase. Only by fighting can you progress and earn, among other things, gold. This can be used to to pay for weaponry or healing by the temple priests whose medical expertise is exceeded only by their lust for gold. You may have to go out and get a second beating to earn enough to meet the cost of the first.

When too weak to fight, you can always run away. Sadly, this option is not always permitted. Still, looking on the bright side, you are then poised to earn more gold. After all, one or two of you should survive.

The screen is split into three. The lower half lists the characters in your band and displays various items of information, including the health status of your well-mauled group.

The upper left side displays a framed 3D scrolling city map, and also 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.

Allegedly amounting to an impressive 400k of assembly language, The Bard's Tale works on a 64k Apple or automatically takes advantage of 128k if you have it. What difference this makes is not clear – possibly it's the "animation" of figures in the picture frame. This usually consists of one moving part such as a waving arm or waggling jaw.

A nice touch for avid fantasy fans is the facility for conscripting your Wizardry and Ultima characters into this new adventure.

Characters consist of various races and classes (for example Human, Hobbit, Warrior and Sorcerer) and each character has various attributes (dexterity, strength, luck and so on).

As battle experience is gained, characters earn points and gold while magicians and their like also graduate to higher spell levels, increasing the number and power of spells at their disposal.

The easy-to-follow manual and the leaflet summarising the main commands and their uses comprise about 27 pages. This gives some idea of the depth and variety of this game.

I found The Bard's Tale so entertaining, in fact, that I am prepared to forgive its user-hostile protection ...

Almost.

Lew Norris

Product: The Bard's Tale
Price: £43 (Apple II)
£47.95 (Apple IIgs)
Supplier: Electronic Arts Inc/MGA Microsystems, Pear Tree, Appledore, Kent TN26 2AR.
Tel: 0233-83-571

Head for heights

FRUSTRATED armchair pilots can relax – ThunderChopper is set to take you where no helicopter has gone before, courtesy of the terrain map display with full zoom control, of course.

Combining the functions of scout, rescue and attack helicopter, your Hughes 530MG Defender will put all your flying skills to the test.

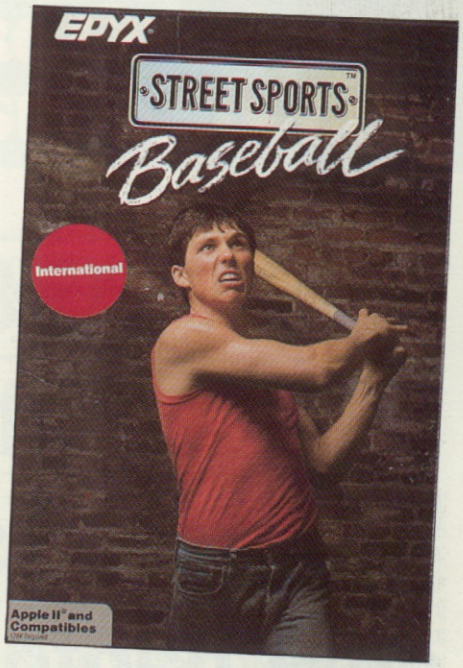
High-speed 3D graphics and pilot performance feedback make this a more realistic simulation than most, and you have the options of escort, rescue (land and sea) and combat missions.

With TOW and Stinger missiles, a Hughes Chain Gun and Zuni rockets on board you're not likely to be outgunned – but with a 750hp jet turbine providing the power you can always show the opposition a clean pair of heels.

ThunderChopper's "advanced instrumentation" is apparently "patterned after the equipment now being tested in the US Army's LHX 'Helicopter of the future' programme": They should be so lucky.

Product: Thunderchopper
Price: £29.95
Requirements: Apple II
Supplier: ActionSoft, 201 West Springfield Avenue, Suite 711, Champaign, IL61820 USA.
Tel: 0101 217 398 8388

Streetwise baseball



SPORTS simulations come and go – generally the latter – and all too few of them seem to transfer well to the screen. Baseball is a case in point: There's only so much you can do with a green diamond, two pretty evenly matched teams and a rigid set of rules.

Undeterred, Epyx set out to bring baseball to the Apple. And, perhaps learning from other peoples' mistakes, has opted for a fresh approach. The result is Street Sports Baseball, about as far removed from the real thing as you can get and not offend under the trades description act.

For a start, you choose where you play. That doesn't mean which stadium – it means opting for a car park or a vacant lot.

You'll also have to choose your players with care. There's no professionals here, just 16 kids from 52nd Street's Hall of Fame. Build a team from scratch, use a previous winning combination or leave it to the computer – it's up to you.

Sounds easy? Perhaps. But how do you weigh the rival merits of Butch ("throws like a sissy") and David ("fielding is second rate")? And why pick Bojo (with the "suspect glove") when Julie ("gets excited at bat and tends to strike out") is there for the taking?

Next your skills as coach and manager are put to the test. Picking field positions and batting order can be left to the computer, but its more fun to make the decisions yourself.

That done, on with the game. You get a split screen to contend with: A bird's eye view of the whole field and a close up of the plays. At the top of the screen, a scoreboard shows team scores, batter, innings, balls, strikes and outs.

Don't worry if you're not too sure of the rules, they're easy enough to pick up and the manual's quite helpful.

Batting, pitching and fielding are all controlled by the joystick – practice makes perfect.

The overhead view makes life a little easier for the batter, but not that easy – the pitcher can control the ball all the way to the plate, making it twist or change speed en route.

What takes a little more getting used to is the pitch itself.

The dustbin lid in the infield is the home plate, and bases range from an old tyre to a discarded jacket. Fielders have more to contend with than their professional counterparts too – you don't get too many tree stumps and bird baths at Yankee stadium.

Still, all you've got to do is guide the fielder on to the ball, dodging the obstacles and throw it to the base of your choice. If you don't fall flat in a puddle first.

The game lasts a full nine innings: If the result is a tie at the end of the ninth, then play continues until there is a winner at the end of an innings.

All in all a fun game, and one that will take a long time to pall. Epyx has definitely hit a home run with this one.

Steve Mellor

Product: Street Sports Baseball
Price: £24.99
Requirements: Apple II
Supplier: Epyx/US Gold, Units 2 & 3 Holford Way, Holford, Birmingham B6 7AX.
Tel: 021-356 3388

Gnome on the range

Nice to see Level 9 back in action with Gnome Ranger, an adventure that makes full use of the company's new Kaos system – command handling in particular is a pleasure to use. The Apple version lacks graphics, but there's more than enough text to compensate, even if it does occasionally scroll before you want it to.

The plot revolves around a bossy but well-meaning young gnome called Ingrid Bottomlow (gnome joke number one) who leaves her dull farming community to learn more about the modern world by studying Gnome Economics (gnome joke number two) at college.

On her return, she is afire with missionary zeal and raring to put her new-fangled ideas into operation, much to the (justified) trepidation of her family and neighbours.

They eventually reward Ingrid with a small token of their appreciation – a "faulty" magic scroll which transports her far away as soon as she reads it.

All this preamble – and more – can be gleaned from the gnome-sized diary which accompanies the pack. The adventure itself starts with Ingrid out in the wilderness, undaunted and determined to set off for home again, putting the world to rights on the way.

Unusually, the game is written in the past tense, but the idea works well enough. The adventure is in three parts, each of which has to be completed before you can start the next, and each of which has a theme – animal, vegetable and mineral.

Gnome Ranger is a light hearted romp, peppered with gnome jokes. For instance, the letter N tends to get preceded by a G – hence "What shall I do gnow?", "gnecklace" and even "gnorth, gnorthwest and gnortheast." And so on, ad infinitum: Or ad nauseam.

The text is generally literate though, and a lot of attention has been paid to detail.

For example, in an emporium run by a character who's half man, half horse (a shopping centaur?) Ingrid finds, among other things: "an impressive piece of armour, a capacious backpack, a curious brass lamp, a magisterial black rod and a suspicious-looking bunch of keys".

Many other adventures would not have bothered with the adjectives, but Level 9 does not believe in skimping – and the result is a much richer product.

There are plenty of examples of witty word play and alliteration used to good comic effect, and other touches keep the atmosphere lighthearted: "It was a full rainbow of brilliant hue, an ethereal arc of vivid sparkling colour, a heavenly vault of pellucid polychromatic splendour, and quite pretty too".

The puzzles range in difficulty from the fairly easy to the mind-damaging. Some solutions require the involvement of other people – most characters in the game can be recruited and given complex commands to carry out while you let Ingrid get on with something else. You'll also find many of them amenable to bribery and corruption.

The game contains such excellent features as save and restore, Undo your last move, and high-level commands such as run to a place, follow someone, find something and wait for someone. And you can speed things up slightly by entering BRIEF, which shortens descriptions.

Although Gnome Ranger has a different flavour from the company's previous adventures, I am convinced it is Level 9's best ever. It is funny, well plotted, teasing and very friendly – but powerful, literate and big.

There's gnot a shadow of a doubt in my mind – this is an adventure you simply must gnot miss. Go out and buy Gnome Ranger – and pronto!

Brillig

Product: Gnome Ranger
Price: £9.95 (Apple) £14.95 (Mac)
Supplier: Level 9, PO Box 39, Weston-Super-Mare, Avon BS24 9UR.
Tel: 0934 814450

After the holocaust ...

WORLD War III is over. As post-holocaust Europe struggles to survive, news comes in that a European city has just been razed by a dirty nuclear device. The terrorists responsible have planted five more A-bombs, and the U.N. General Council needs someone to sort out this little mess. Clearly – as usual – there is only one person for the job.

Equipped with your double-sided Roadwar Europa disc and manual from Strategic Simulations, you prepare to save Europe. Although no back-up is supplied, the good news is that you are allowed to make one. The bad news is that this may be difficult as the program is copy-protected. However, a mere $10 plus postage brings your very own back-up from Uncle Sam.

The manual puts you into the picture with the story of how you got into this mess. Your objective, as leader of a chosen band of men in specially prepared vehicles, is to disarm all the bombs, find the terrorist HQ and engage the terrorist leaders in a final decisive battle.

You create your own band, design your own vehicles and allocate supplies by keying in numerous parameters. This can take quite some time.

It's quicker, though still irritatingly time-consuming for the eager starter, to design a pair of combat buses and allocate supplies following specific instructions in the 20-page manual and use the sample gang supplied. Battle-hardened veterans may import their Roadwar 2000 gang.

The manual's centre spread shows a map of Europe's cities and features such as highways, mountains, oilfields, farmland and so on. Geographical features can easily be confused if you don't have colour. Your icon travels on a display representing a detailed portion of the map while three lines of text scroll below, sometimes too fast to follow.

You may take one move in any of eight directions of the compass or search for loot, people or vehicles. You will frequently find useful loot which you can take, cache or leave – it can take the form of food, tyres, medical supplies, vehicles, ammunition or weaponry.

People may be, among other things, Soldiers, Civilians or Cannibals. Contact means you may recruit extra men or be forced into battle and lose some. Useful people to meet are Healers and Agents of the Anti-Terrorist underground.

The search for vehicles may lead to clashes with terrorist road gangs or mobile cannibals and combat can be quite involved.

In Tactical Combat you allocate your crew individually to combat vehicles, deploy your vehicles on the Tactical Map and, in addition to firing volleys, have the option of boarding, capturing or ramming enemy vehicles. This is a major operation and though time-consuming, all part of the fun for the incurable enthusiast.

The alternative Quick Combat is less than instantaneous as you still have to make some decisions, but it's much more convenient. The battle description appears full-screen and you can control on a scale from 1 to 9 how long information is displayed. This doesn't seem to affect scrolling, which can sometimes happen disconcertingly quickly.

I found the battle description pretty tedious. TIRE HIT TIRE HIT TIRE HIT doesn't make for exciting fighting – especially as there are no graphics or sound effects.

Your game can be saved on to disc, each save erasing the previous one. By accidentally inserting the Save disc at the wrong time, I hung the program.

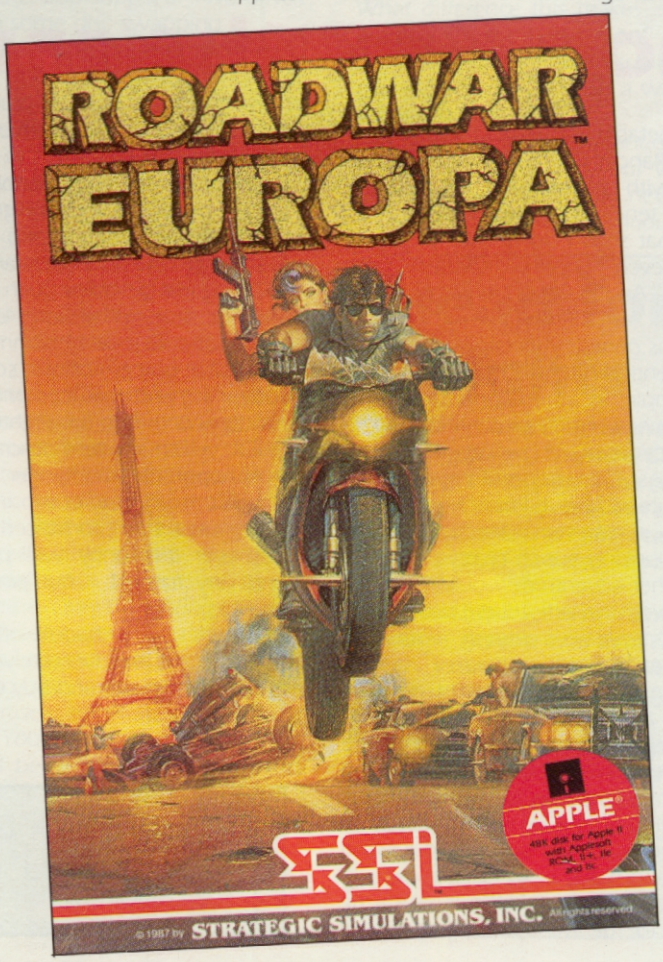
Despite finding a large amount of fuel which I elected to take, I could not subsequently move as I was still out of gas. I came across several such discrepancies.

Before starting this game, you should read the well-compiled manual and keep it by for frequent reference. The seemingly infinite variations and options are impressive.

For me, the program did not fulfil the promise of the manual. The upper case text throughout and fast scrolling did nothing to decrease the boredom. Although my men soon located and disarmed a nuclear bomb, I couldn't get very excited about it. Somehow the game lacked the essential adrenalin factor.

Netherless, if you're a totally dedicated warmonger, you may well enjoy the minutes of building teams and battle wagons and deploying your forces. Around £20 is perhaps not too much to risk.

Peter Walls



Product: Roadwar Europa
Price: £19.95
Requirements: Apple II
Supplier: SSI/US Gold, Units 2&3 Holford Way, Holford, Birmingham B6 7AX.
Tel: 021-356 3388



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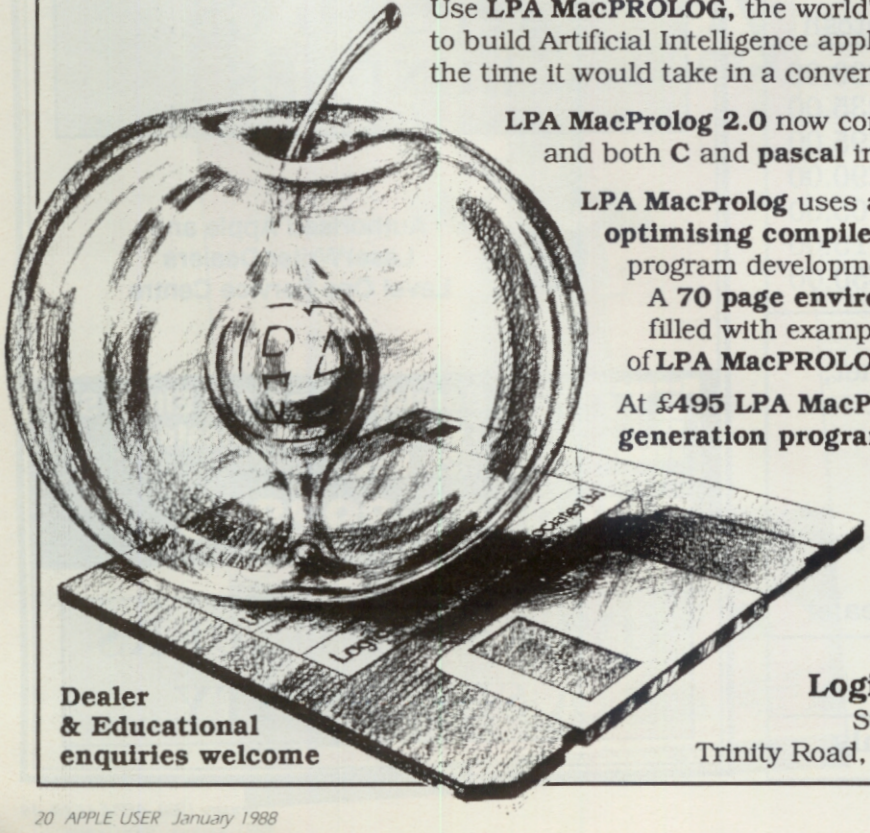
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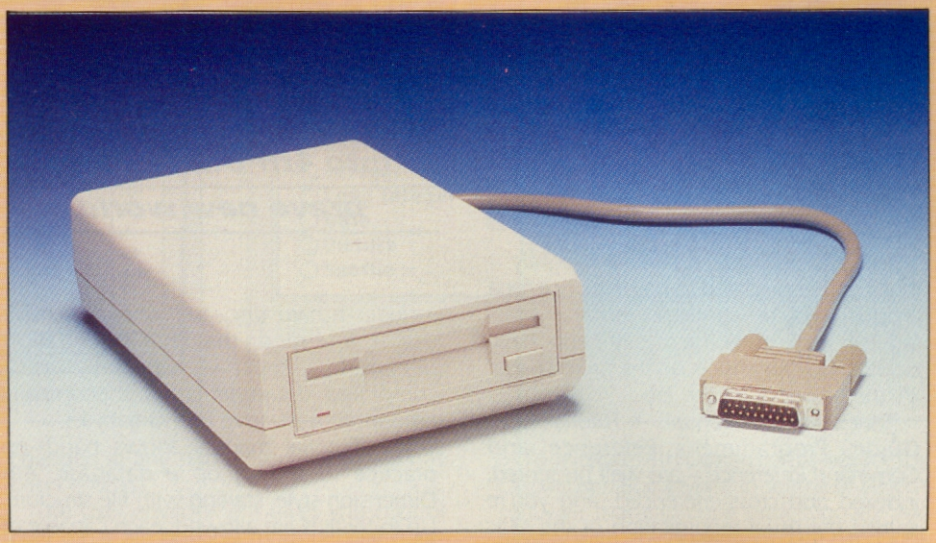
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Driving lesson

Geoff Wood tests Chinon's alternative drive for the Mac and Apple II

DESPITE the fact that the prices of hard disc drives have fallen to the point where you can buy a 20Mb drive for a Macintosh for less than £500, the list price for an Apple 3.5in disc drive is still £295.

But now you can buy a Chinon 3.5in drive for two thirds of that price: And it is claimed to be functionally identical to the Apple drive and it works with the Mac SE, the Mac Plus and also with the enhanced Mac 512 (with the new roms).

The drive is the same height and depth as the Apple drive, but slightly wider. The plastic box is the platinum grey of the Mac SE but, oddly, the cable and connector are the same colour as the older Macs.

The Chinon drive has an "in use" light and an eject button – which you should not use on a Macintosh because the operating system does not like manual removal of a disc. I ejected a disc with the button and inserted a different disc. The normally friendly Macintosh trashed the directory. Fortunately, I had a back-up copy.

In operation, the Chinon drive makes different noises from the Apple disc drive. When it writes to the disc, the buzz is deeper; when it formats a disc the sound is quieter. I tested the speed by loading and saving some large files and found no difference between the drives.

The drive is distributed by Central Point Software, a company perhaps better known for its Copy II Plus and Copy Mac programs. It comes with a 90 day warranty whereas the Apple drive is warranted for a year.

However, in my experience, if a drive works all right in the first three months of its life, it will probably continue to do so for several years.

Unlike the Apple 3.5in disc drive, the Chinon won't work on the smart port on the back of the Apple IIgs. Nor does it have a connector to chain another disc drive to it.

Apple requirements

If you want to use the Chinon drive with an Apple II, you need the Universal Disk Controller (UDC) card supplied by Central Point Software.

The UDC card is slightly larger than an Apple II disc drive controller card. It is fitted with two flat cables about 9in long, each with a terminal for the 19-pin connector of the disc drive. The terminals fit the holes covered by push-outs in the back panel of the Apple IIgs or IIe.

The UDC card accepts the Chinon drive or others such as Apple 3.5in, Unidisk 3.5in and 5.25in, or Apple IIc external drives. Older Apple II 5.25in disc drives have the wrong type of connector, but you can buy or make up an adaptor to fit.

If you already have an Apple 3.5in drive for your IIgs, a Chinon drive and UDC card cost slightly less than another Apple drive. But if you use the card in slot 5, you cannot use the smart port which allows you to chain up to four external disc drives in any mix, such as two 3.5in and two 5.25in drives. You would need two UDC cards to simulate this effect.

Moreover, the UDC card does not completely emulate the IIgs disc controller: Some copy protections won't work.

The Chinon drive and UDC card come into their own on the enhanced Apple IIe because you can have a 3.5in and a 5.25in drive on the UDC card in slot 6 and boot off whichever is regarded as drive 1. Then you can easily copy files from one size of disc to another.

With the UDC card in slot 7 and the Apple disc drive controller card in slot 6, the machine tries to boot off slot 7. If it finds no bootable disc in these drives, it tries the drives in slot 6.

With the Apple II+ and the unenhanced Apple IIe, the computer will not automatically boot off a UDC card in slot 6 when you switch on. You can boot up by typing PR#6 and pressing Return, or you can leave the Apple disc drive controller card in slot 6 for booting up and put the UDC card in another slot.

If you have never used 3.5in inch discs before you will be pleasantly surprised after the limitations of floppy discs. You have 800k of disc space instead of only 140k, so you can save much bigger files or more files.

Prodos allows only 51 files in a directory, so you may find it necessary to use subdirectories to make full use of the 800k.

Dos 3.3 cannot normally use the full 800k but there is a program called UniDOS Plus which provides two 400k volumes on one 800k disc with up to 434 catalog names per disc. My view is that, unless you are using copy-protected Dos 3.3 programs, you would benefit by changing over to Prodos.

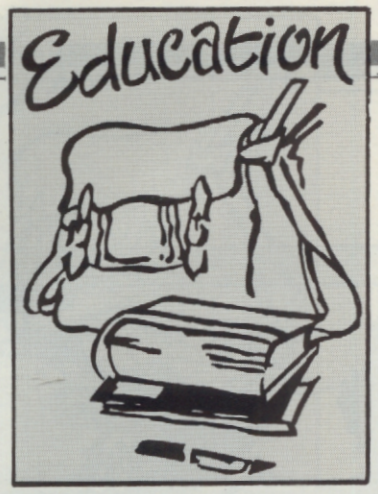
Another program, called UniMate, allows you to use Dos 3.3, CP/M 2.20b and 2.23, and Pascal 1.1 and 1.2 with 800k discs. Pascal 1.3 is designed to use 800k discs, but there is no mention of Dos 3.3, Pascal and CP/M in the brief instructions that come with the Chinon drive and the UDC card.

The Chinon drive is a good buy for Macintosh owners who want an external disc drive. With the UDC card, it is also a good buy for IIe and II Plus owners who want to use 800k discs. If you have a IIgs without disc drives, the UDC card with two Chinon drives is much cheaper than two Apple 3.5in drives but has some limitations.

Alternatively, whatever your computer, you could put the money towards a hard disc drive – unless, like me, you find the noise irritating. □

Product: Chinon 800k disc drive
Price: £195
Product: Universal Disc Controller card
Price: £95 (includes Copy II+); UDC and Chinon, £275; UDC and wt Chinon drives, £449.
Supplier: Bidmuthin Technologies, Brent House, 214 Kenton Road, Harrow, Middlesex HA3 8BT.
Tel: 01-907 8516

Product: UniDOS Plus, UniMate
Price: £32.20 each
Supplier: MGA MicroSystems, Pear Tree, Appledore, Kent TN26 2AR
Tel: 0233 83571



Speaking in tongues

Lew Norris ventures into the field of language learning

TO quote: "There is no such thing as a poor memory, only a trained and untrained one" – wise words from a book I read quite some time ago called How To Develop A Super Power Memory. It was written by stage performer of prodigious memory feats, Harry Lorayne, and was first published in 1958.

An interesting chapter entitled It Pays To Remember Foreign Languages And Abstract Information and shows how to apply a system of so-called peg words and link words to the learning of vocabulary.

The core of Mr Lorayne's system is to use the imagination to create vivid visual displays in the mind which are not easily forgotten. The more ridiculous and absurd the image, the more easily it is remembered. Silly as it sounds, it can really work.

The sequence came to mind because I have just been examining two language courses (Russian and German) for the Apple II and was most interested to find the same method applied in a computer program.

Entitled Linkword and produced by Artworx, the courses are designed and written by Dr. M. Gruneberg, who, according to the instruction booklet, is a university lecturer and an acknowledged expert in practical and theoretical aspects of memory.

I was particularly curious about the Russian course because I couldn't wait to see how you input Russian characters with a IIc keyboard. Disappointingly, you don't. All the Russian characters are transliterated – which means that the English alphabet is substituted for the Russian.

Reasonable claims?

If the blurb is to be believed, this course will enable you to "learn a foreign language in just ten hours!" (Not the Russian alphabet, though).

More precisely, you will learn around 400 items of vocabulary, and some basic grammar and pronunciation – supplied on cassette. That much, at least, is not an unreasonable claim if the course is used intelligently.

As you progress, you should be able to translate sentences like "The goose is interesting" or "He has a small nose and she has an ear and a heart" into the target language. I suspect that little sweat has gone into creating meaningful sentences. (Come back across the Rubicon, Caesar; all is forgiven)

Vocabulary is presented an item at a time accompanied by an instruction for committing it to memory. For example, the Russian word *koshka* means cat. The instruction runs: Imagine you cosh cats.

I can visualise a Disneyesque scene in which I am attempting to cudgel a desperate Sylvester-type cat spitting and spluttering amid a great cloud of dust in his panic to escape a wrathful me. Bright red lumps on his head show where I got lucky. This image works. It sticks in the mind.

Unfortunately, creating visual after unforgettable visual becomes increasingly difficult as some of the examples below demonstrate. Also, you are more likely to remember your own creation than someone else's.

For *faryayl* (trout), the instruction is: Imagine a trout singing, "For ye'll take the high road and I'll take the low road and I'll be in Scotland before you".

While I find it very easy to visualise a jolly tartan trout, will I remember his words six months from now? Many instructions want you to imagine yourself or some character saying, thinking or singing something:

Imagine yourself saying, "Don't force him to eat eight bars of chocolate" is the instruction for the Russian *vosyem* (eight).

"As a wasp, I would be no good" hardly makes for a vivid action picture of *asa* (wasp). How do you visualise "no good"?

Imagine a German saying, "This pig is a real swine, ya!" With this you might remember that *sveenya* is the Russian for "pig".

These lacklustre examples might work initially, but what happens when you have dozens and then hundreds of these all-singing-and -dancing menageries jostling for space inside your migraine?

After a selection has been presented, you are tested by translation from and into Russian. Grammar is presented as a simple set of rules to be learned. As you progress, whole phrases and sentences have to be translated. It is quite possible to work through the drills simply by holding down Return – there is no feedback other than the correct answer.

The German course is near-identical in concept and operation except that there is an annoying beep every time you press Return. It doesn't have the transliteration problem since modern German script is like ours, with the exception of a couple of vowels and a consonant which you cannot key in.

You are cautioned to listen to the appropriate section on your cassette only after completely covering that section on the computer. Presumably the native pronunciation is further removed from your English link word than the computer suggests. Your natural memory would probably compensate for this.

The tapes are clear and the speakers

ARGUABLY the best educational tool yet devised, the computer is still relegated to the back of the class by many educators. It's hard to believe that teachers would turn their backs on such a useful device. I can only assume they have been disillusioned by the software rather than the hardware.

As a teacher of English to foreign adolescents and adults, I had access to a considerable amount of educational software for the Apple II family. Most of it was of U.S. origin with an American cultural bias, naturally.

Software needs to be geared to the students it is intended for since a cultural bias can easily become a major problem. Material featuring dating, drinking, eating bacon, smoking cannabis and so on suddenly becomes political or religious dynamite – and these are all problems that can arise before any consideration of the actual educational value of the product. .

Cultural inappropriateness aside, in my experience, much, if not most educational software is frankly not worthy of the name and will probably feature any combination of the following

- An upward scrolling display that ultimately disappears altogether if you repeatedly key in a wrong response.
- A negative prompt (for example "Wrong!") repeated ad infinitum in response to incorrect input.
- Corny sound effects (imagine a dozen or more micros beeping and burping all at the same time).
- Whole screens of 80-column text more likely to confuse than assist.



competent, although the German tape had a very annoying faint echo in the pauses inserted to give you time to copy the speaker.

In the German course grammatical gender is represented by a boxer (masculine), a little girl (feminine) and fire (neuter). If your mental picture of *Tisch* (table) always has Joe Bugner spread-eagled across it, lying under it or tripping over it, you won't forget that it's masculine.

I fear that most modern language teachers would object to the mother-tongue interference this system fosters. Nevertheless, I feel that it could work.

A lively, colourful program with clever graphics might be just the thing to stimulate a young person's interest – but I found Linkword tedious in presentation and dreary in spirit, even though the plastic video-type case and brightly-coloured jacket suggest otherwise.

In all fairness, I think that the courses are logically structured and the chosen vocabulary topics (family, restaurant, furniture and so on) sensible.

But users of Linkword would be well advised to form their own visuals in preference to some of those offered. If your memory fails, it's always because you did not make the picture absurd or ridiculous enough. Try again.

If the concept works for you, exploit it. It could be the quick foundation for serious study. All you really need is a good book and a recording. Then maybe you could afford a day or two in Hamburg or Moscow. □

Product: Linkword language series
Price: £29 (basic course)
Requirements: Apple II
Supplier: Perspective, 100 Baker Street, London W1M 1LA
Tel: 01-483 6837
Available languages: German, Russian, French, Spanish, Dutch, Italian, Portuguese, Hebrew, Greek, Welsh.
Second level courses available in French at £39.

Coping with culture shock

John Hickman puts the case for home-grown software

- No hints or help for the slower pupil.
- The total rejection of your correct answer because it lacks some superfluous character the program expects to find.
- Crude and gimmicky graphics which merely intrude or add little.
- Expert programming alongside poor educational material.

It follows that good software avoids or rectifies these problems.

After some initial experimentation, I mostly used software by Houghton Mifflin, Regents A.L.A. and Hartley, three U.S. companies that produce extensive packages in the educational field.

Their programs covered most aspects of English grammar and usage. Balanced and graded drills to guide home the point were followed by sections to test the student's grasp of the material. Some programs would automatically reduce or increase the number of practice items in a drill even as the student flew or stumbled through it.

I preferred the Houghton Mifflin system which enabled the student to boot the disc and start work at once. Those systems which require the input of code words, numbers and so on can become more trouble than they are worth with certain kinds of students.

On the other hand, if you have to register that students have covered specific material or you need to record individual grades, then some sort of storage and scoring system which also recognises its legitimate user while rejecting others becomes necessary.

Regents A.L.A supplied start-up discs, enabling this kind of approach. However, it means you buy a lot more discs and if your start-up discs crash, you can't use the lesson disc.

Class management

You may find yourself leaping about with an ever-decreasing number of start-up discs trying to keep all students in business, especially those who exit the program accidentally. Making extra copies of start-up discs may be illegal, impossible or both.

Early on I used with some degree of success a program known as The Learning System. Its main use was as a tool to create column matching excercises, or multiple choice tests, where the student had simply to select the correct answer from the four or five displayed.

The advantage of this program was that a teacher with a modicum of interest but no knowledge of programming could produce material tailored specifically to his very own class.

The disadvantage was that it imposed severe restrictions in format and the number of words to a question. Detractors said it was no better than a multiple choice test on paper – even though no piece of paper can tell the student he is wrong, give him hints and encouragement and, should he still fail, pose the question again later. I lean towards software which enables the teacher to tailor his material.

Some teachers felt that they had found the near-perfect solution in Apple SuperPilot, an authoring language simple enough to learn quite quickly but sophisticated enough to produce tailored programs that were more professional in every way than much of the commercially produced material.

Unfortunately, it was too time-consuming for someone with a teaching load – the world is doubtless brimming with unfinished SuperPilot programs. Yet worse, I hear that Apple has discontinuing this excellent product.

Go and sit at the back of the class, Apple. □

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Apple User GAMES DISCS No. 2

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

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LIFE – This ubiquitous game has seen many forms. This latest, by Gerrard Manning, uses the hi-res screen to create new challenges.

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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!

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Apple User GAMES DISCS No. 1 STILL AVAILABLE

TO ORDER PLEASE USE THE FORM ON PAGE 65

Chore handler

Max Parrott tests Rosco's Eprom Programmer

READING, verifying and programming eproms can be quite a chore with some eprom programmers, so it is nice to be able to report that the Rosco eprom (27 series) programmer card for Apple II computers is very easy to use.

Rosco's eprom programmers actually come in several configurations. The basic model (tested here) has a ZIF – one of those good quality zero insertion force sockets with a convenient lever for holding and releasing the chip – socket on the board in order to hold the eprom. But more expensive models have an extension cable so that the eprom is plugged in outside the Apple's case. There are also 4 gang and 10 gang programmers available.

Slot selection

The card can go in any of the Apple's slots, but you have to have access to the ZIF socket which is at the keyboard end, so I put it into slot 4 of an Apple IIe in order to avoid clashing with the 80-column card in the auxiliary slot when inserting and removing eproms.

All the necessary software for the card is contained on it in eprom and is initiated by accessing the first address of the card's rom space. Thus a PR#4, or from the monitor a C400G command, cleared the screen and presented the first of two menus. This one is used to select the eprom type from a choice of five: 2716, 2732, 2764, 27128, and 27256.

After making the appropriate selection a second menu appears which displays the selected eprom type at the top and which offers the choice of Programming, Reading, Verifying, Checking and Monitor.

Monitor returns the user to the Apple's monitor so that data may be manipulated, loaded or saved. From here a return to the programmer's software is easy – just use Cn00G, where n is the slot in which the card resides.

Check very quickly makes sure that all the eprom's memory has been erased to $FFs and gives one of two succinct messages, either ROM CHECK ERROR! or ROM CHECK OK!

Programming options

The other options of programming, reading, or verifying all first prompt you to enter a start address in hexadecimal at which the software will find the data for the eprom. After entering this the programmer quickly performs the selected task. If programming, the eprom is first checked, then programmed, then verified against the data in RAM. If the task is successful an OK! message is put on the screen followed by:

```
CONTINUE WITH SAME EPROM TYPE (Y/N) ?
```

A Y returns to the second menu, an N returns to the first. The only way to quit the programmer's software is to return to the monitor via the second menu and thence to Basic or wherever you want to go.

It is your responsibility to check that the eprom is correctly mounted in the ZIF socket and to save data which has been read from an eprom. Likewise it is again your responsibility to check that data to be programmed into an eprom has first been loaded correctly into ram, that the correct start address is given and that no attempt is made to remove the eprom when it is actually being programmed – a red LED on top of the card lights up when this is the case.

Manual control

Clearly, you have to know the Apple disc operating system with regard to binary files and maybe the monitor commands if any changes or inspections of data are to be made. The Rosco manual gives some brief information on file saving and loading and monitor use – though without reference to the way in which Dos 3.3 can interfere with Control+P commands – but it is no substitute for the Apple manuals.

I used the card with a small selection of different sized eproms for both reading and writing. It is easy and quick to use and gave no problems. I deliberately selected the wrong size from the first menu for some of the eproms and tried to read (which apparently happened but gave obvious nonsense) and program (which caused a Check error).

No obvious damage occurred to the eproms but just in case, I would not recommend that anyone makes a habit of it. The only problem was that Dos 3.3 was sometimes unhooked and I had to issue a 3D0G command from the keyboard in order to be able to BSAVE the data read from an eprom. I did not attempt to misinsert an eprom – I am sure that would lead to instant eprom death.

Sound barrier

I did try the programmer in an Apple IIgs – and got a loud hissing noise. Whereas it was silent in operation in a IIe. I could apparently read eproms without problems, but programming them would not happen – they consistently refused to check. Since the noise was somewhat unsettling I decided not to investigate too far.

Product: Rosco EP-256 Eprom Programmer
Price: Basic model as described, £89, with extension cable, £139, 4 gang, £199, and 10 gang, £299.
Requirements: An Apple II series computer with slots (but not a IIgs) and at least one disc drive.
Supplier: Rosco, 289, Birchfield Road, Birmingham, B20 3DD.
Tel: 021-356-7402.

AppleUpdate

Double dealing

NOT content with pushing out PageMaker v3.0, almost before users have had time to fully appreciate the enhancements offered in v2.0, Aldus has aquired another Mac product, also for release in early 1988 – FreeHand.

FreeHand, a comprehensive drawing program, incorporates colour and the advanced capabilities of PostScript language drawing tools – while remaining "approachable".

As for PageMaker 3.0, some 35 enhancements are planned – many implemented as a result of feedback from users.

Features include expanded support for long documents, automatic text flow around irregular objects, and support for colour: Extensions to the user interface include 20 professionally designed templates.

Product: Freehand
Price: TBA
Supplier: Aldus UK, Craigcrook Castle, Craigcook Road, Edinburgh EH4 3UH
Tel: 031-336 1727

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Not another calendar program!



Marshall P. Brown with a program to see you through the next 2,000 years

HOW long until . . .?" is a question we all begin to ask at an early age, usually followed by "Christmas", or "my next birthday". This may explain why, at a more advanced age, we maintain our interest in dates and calendars.

The program listed here is evidence of my own continuing interest which dates back, post childhood, to 1977. The June 1977 issue of Interface Age contained a program by Jim Huffman called Day of the Week written in 8k basic for the old SWTP-6800.

He presented the first example of a calendar algorithm I had seen. Later that year Texas Instruments published another example as part of the software for the TI-59. It wasn't until 1981, however, that I finally saw a name assigned to the algorithm, Zeller's Congruence, in LRN – the TI PPC Notes Newsletter.

The only unanswered question now is "who was Zeller?".

As is usually the case the core of the program is short and simple and may be found in lines 330-580 for the inverse number of days routine and 770-810 for Zeller's congruence.

The rest of the program is involved in getting the input in and the output out. A sanity check is performed in lines 690-760 with line 730 checking for leap years. This is based on Mike Street's 'Low Down on Leap Years' article which was in *Apple User*, October 1986.

Note that this program accepts input back to the inception of the Gregorian calendar, 1582, even though the English speaking world did not accept it until September 14, 1752.

For those of you making long range plans please note that you can only look into the future as far as the start of the year 4000 when the approximation used by Zeller fails.

```
10  REM COPYRIGHT 1986
    MARSHALL P.BROWN
20  REM THIS PROGRAM MAKES
    USE OF ZELLER'S
    CONGRUENCE TO CALCULATE
    CALENDAR FACTS
30  DIM MT$(12)
   :MT$(1) = "JANUARY "
   :MT$(2) = "FEBRUARY "
   :MT$(3) = "MARCH "
   :MT$(4) = "APRIL "
   :MT$(5) = "MAY "
   :MT$(6) = "JUNE "
   :MT$(7) = "JULY "
   :MT$(8) = "AUGUST "
   :MT$(9) = "SEPTEMBER "
   :MT$(10) = "OCTOBER "
   :MT$(11) = "NOVEMBER "
   :MT$(12) = "DECEMBER "
40  DIM D$(7)
   :D$(0) = "SATURDAY "
   :D$(1) = "SUNDAY "
   :D$(2) = "MONDAY "
   :D$(3) = "TUESDAY "
   :D$(4) = "WEDNESDAY "
   :D$(5) = "THURSDAY "
   :D$(6) = "FRIDAY "
50  REM MM***MENU ROUTINE**
    *M
60  TEXT
   : HOME
   : PRINT
   : PRINT "PLEASE ENTER TOD
    AY'S DATE IN THIS FORMA
    T"
70  PRINT  SPC( 5)"DD/MM/YY
    YY - INCLUDE '/' MARKS"
80  GOSUB 590
   : GOSUB 760
   : GOSUB 800
   :DF = FMOD7
90  VTAB (1)
   :PH$ = "TODAY IS "
    + D$(DF) + MT$(MNTH)
    +  STR$ (DAY) + ", "
    +  STR$ (YEAR)
   : PRINT  TAB( 1 +
    INT ((40 -  LEN (PH$))
    / 2));PH$
   : PRINT  SPC( 40)
   : POKE 34,4
   : HOME
100 POKE 34,4
   : HOME
   : INVERSE
   : PRINT
   : PRINT  SPC( 16)"OPTIONS
    " SPC( 17)
   : NORMAL
   : POKE 34,6
110 PRINT
   : PRINT "1) CALCULATE NO.
     OF DAYS BETWEEN DATES"
120 PRINT
   : PRINT "2) DAY OF THE WE
    EK FOR A GIVEN DATE"
130 PRINT
   : PRINT "3) DATE FOR A GI
    VEN NUMBER OF DAYS"
140 PRINT
   : PRINT "4) END THE PROGR
    AM"
150 PRINT
   : PRINT
   : PRINT "ENTER YOUR SELEC
    TION "
   : GET IN$
   : IF IN$ <  CHR$ (49)
    OR IN$ >  CHR$ (52)
    THEN  GOTO 100
160 POKE 34,4
   : POKE 35,24
   : HOME
   : ON  VAL (IN$) GOSUB 190
    ,260,320,180
170 GOTO 100
180 TEXT
   : HOME
   : END
190 REM MMDAYS BETWEEN DATE
    SMM
200 GOSUB 260
210 F1 = FACT
   :VT = VT + 1
220 GOSUB 290
230 F2 = FACT
   :VT = VT + 1
240 HTAB 15
   : VTAB VT
   : PRINT  ABS (F1 - F2)" D
    AYS"
250 RETURN
260 REM MMDAY OF WEEK ROUTI
    NEMM
270 POKE 34,5
   : HOME
   :VT = 20
280 PRINT "  ENTER THE DAT
    E IN THE ABOVE FORMAT"
290 PRINT
   : GOSUB 590
   : GOSUB 760
   : GOSUB 800
   :DF = FMOD7
300 RE$ = MT$(MNTH) +
    STR$ (DAY) + ", "
    +  STR$ (YEAR) + " IS A
     " + D$(DF)
   : VTAB VT
   : PRINT  TAB( 1 +
    INT ((40 -  LEN (RE$))
    / 2));RE$
   : POKE 35,19
310 RETURN
320 REM MMINVERSE DATE ROUT
    INEMM
330 POKE 34,5
   : HOME
   :VT = 20
340 PRINT "ENTER THE KNOWN
    DATE IN THE ABOVE FORMA
    T"
350 GOSUB 290
360 POKE 34,5
   : HOME
   : PRINT "      ENTER THE
    NUMBER OF DAYS"
370 PRINT "('-' FOR DAYS PR
    IOR TO ENTERED DATE)"
380 INPUT "";DT$
390 FOR I = 1 TO  LEN (DT$)
   : IF  MID$ (DT$,I,1)
     <  CHR$ (45) OR
```

```
      MID$ (DT$,I,1)
      > CHR$ (57) OR
      MID$ (DT$,I,1)
      = CHR$ (46) OR
      MID$ (DT$,I,1)
      = CHR$ (47) THEN BAD
      = 1
400   IF BAD = 1 THEN BAD
      = 0
    :I = LEN (DT$)
      + 1
    : NEXT
  : GOTO 360
410 NEXT
 :DT = VAL (DT$)
420F3 = FACT + DT
430YEAR = INT (F3 / 365.24)
 :MNTH = 1
 :DAY = 1
440 IF YEAR < 1582 OR YEAR
  > 4000 THEN VTAB VT
  + 1
 : HTAB 10
 : FLASH
 : PRINT "OUT OF RANGE ERROR
  !"
 : NORMAL
 : FOR I = 1 TO 1000
  : NEXT
 : RETURN
450 GOSUB 760
460 IF FACT = F3 THEN
  GOTO 560
470 IF FACT > F3 THEN YEAR
  = YEAR - 1
 : GOTO 440
480MNTH = INT ((F3 - FACT)
  / 29) + 1
 : IF MNTH > 12 THEN MNTH
  = MNTH - 1
490 GOSUB 760
500 IF FACT = F3 THEN
  GOTO 560
510 IF FACT > F3 THEN MNTH
  = MNTH - 1
 : GOTO 490
520DAY = F3 - FACT + 1
530 GOSUB 760
540 IF FACT = F3 THEN
  GOTO 560
550 IF FACT > F3 THEN DAY
  = DAY - 1
 : GOTO 530
560 GOSUB 800
570VT = VT + 1
 :DF = FMOD7
 : GOSUB 300
580 RETURN
590 REM MMINPUT ROUTINEMM
600 POKE 34,7
 : HOME
 : PRINT
 : INPUT "";DT$
610 FOR I = 1 TO LEN (DT$)
620 IF MID$ (DT$,I,1)
    < CHR$ (47) OR
    MID$ (DT$,I,1) >
    CHR$ (57) THEN GOTO 59
    0
630 NEXT
640YEAR ID$ (DT$,7
  ,4))
 :CENT = VAL ( MID$ (DT$,7
  ,2))
 :DEC = YEAR - CENT * 100
 : IF YEAR < 1582 OR YEAR
  > 4000 THEN GOTO 590
650MNTH = VAL ( MID$ (DT$,4
  ,2))
 :DAY = VAL ( MID$ (DT$,1,
  2))
660 GOSUB 690
 : IF ERR = 1 THEN POP
 : GOTO 590
670 RETURN
680 REM MMSANITY CHECK OF INP
  UT DATEMM
690ERR = 0
 :LPYR = ((CENT - ( INT (CE
  NT / 4)) * 4) = 0)
  OR ((DEC - ( INT (DEC
  / 4)) * 4) = 0)
700 IF MNTH < 1 OR MNTH
  > 12 THEN ERR = 1
 : RETURN
710 IF YEAR < 1582 OR YEAR
  > 4000 THEN ERR = 1
 : RETURN
720 IF MNTH = 2 AND LPYR
  THEN MAX = 29
730 IF LPYR = 0 THEN MAX
  = 28 * (MNTH = 2) + 30
  * ((MNTH = 4) OR (MNTH
  = 6) OR (MNTH = 9)
  OR (MNTH = 11)) + 31
  * ((MNTH = 1) OR (MNTH
  = 3) OR (MNTH = 5)
  OR (MNTH = 7) OR (MNTH
  = 8) OR (MNTH = 10)
  OR (MNTH = 12))
740 IF DAY < 1 OR DAY > MAX
  THEN ERR = 1
750 RETURN
760 REM MMZELLER'S CONGRUENCE
  ; T.I. VERSIONMM
770 IF MNTH = 1 OR MNTH
  = 2 THEN FACT = 365
  * YEAR + DAY + 31 * (MNTH
  - 1) + INT ((YEAR
  - 1) / 4) - INT (.75
  * ( INT (((YEAR - 1)
  / 100) + 1)))
780 IF MNTH > 2 THEN FACT
  = 365 * YEAR + DAY
  + 31 * (MNTH - 1) -
  INT (.4 * MNTH + 2.3)
  + INT (YEAR / 4) -
  INT (.75 * ( INT (YEAR
  / 100) + 1))
790 RETURN
800FMOD7 = FACT - 7 *
  INT (FACT / 7)
810 RETURN
```


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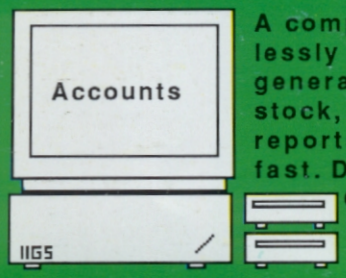
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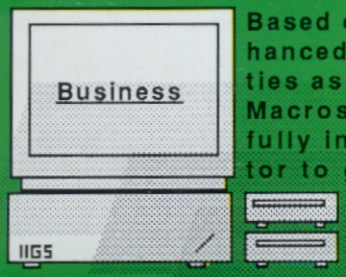
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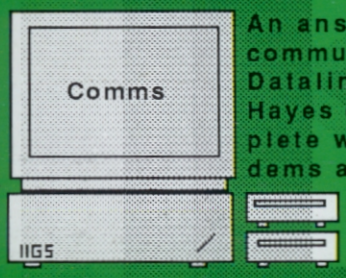
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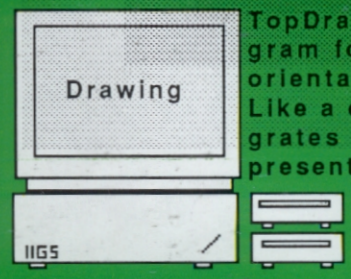
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Shortcut features on the Macintosh

Memory add-ons for the Apple II

Finding a home for Mac leftovers

Moving AppleWorks spreadsheets to Excel

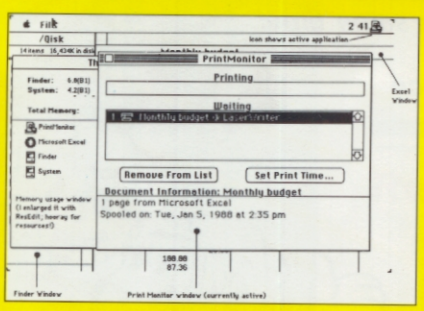
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The ins and outs of Apple's MultiFinder



Getting started

David Stevens works out with Micro-Prolog on the Apple II

PROLOG, the language, has been on mainframe computers since around 1970 and exists in a number of rather different implementations. In the early 1980s Logic Programming Associates produced Micro-Prolog running under CP/M and this has since migrated to 6502 based micros such as the Apple II, as well as other microprocessor systems such as 8086/8088 MSDos machines and the 68000 based Macintosh.

On the Apple II, Micro-Prolog runs under Prodos 8 and will run equally on a II+, a IIe, IIc or IIgs. It is loaded by running the SYS file PROLOG, following which you are greeted by the Prolog sign – on message shown in Figure I.

Microprolog needs BASIC.SYSTEM to be active, so you cannot simply make a turnkey Prolog disc by renaming the Prolog SYS file as PROLOG.SYSTEM. The obvious thing to do is to create a Basic STARTUP program which runs Prolog. This works perfectly and I cannot quite understand why it is not already on the disc.

Micro-Prolog expects upper case input and so on most Apples you must remember to keep the Caps lock key down. However, Micro-Prolog is characterised by an apparent lack of faith by the authors in their own product and so there are not one, not two, but three front-ends to the system, each of which expects lower case input. This can cause confusion to someone not used to the system. For example in one of the front-ends, the two commands list all and LIST ALL will list the program but in two entirely different formats.

Actually, I am being very unfair suggesting that the authors have no faith in Micro-Prolog. A more likely reason for so many front-ends is a desire to make it more user-friendly, coupled with a wish to program something useful in Prolog.

Each of the front-ends, which go under the names of MICRO, SIMPLE, and MITSI, acts as a translator and consequently slows the compilation and running of Prolog programs considerably. However, they do make writing, reading and understanding Prolog much easier. Compare listings I, II, and III which show the same program in standard Micro-Prolog with the MICRO front-end, in SIMPLE, and in MITSI.

Chris Colbourn, when looking at Micro-Prolog v 2.0 in January's *Apple User*, noted that many users' problems with Micro-Prolog were related to rather impoverished programming environments on other machines. Well, I'm sorry to say it, but the Apple II version 1.3 comes in this category.

The only real help with programming is that when Return is pressed and you have not entered enough right hand brackets – the system prompts you with the number outstanding. This is actually very useful since Micro-Prolog is heavily dependent on brackets. Anybody who is used to standard, (Edinburgh or DEC type) Prolog will have noticed from the first listing that Micro-Prolog is quite different. There is basically only one kind of term in Micro-Prolog – the list – and lists are enclosed in round brackets with list elements being separated by spaces.

Editing technique

The & prompt of Figure I indicates that the supervising system is ready to accept a command or a clause. The dot following the & prompt is the keyboard read prompt. Editing is accomplished by loading an editor module, then issuing the EDIT command followed by the clause which

```
((dict is-solution))
((dict legalise))
((dict transforms))
((dict opposite))
((dict is-peaceful))
((dict safe-for-goat))
((dict safe-for-cabbage))
((safe-for-cabbage (X Y Z X)))
((safe-for-cabbage (X Y Z x))
  (opposite Z x)
  (NOT EQ X x))
((safe-for-goat (X Y X Z)))
((safe-for-goat (X Y Z x))
  (opposite Y Z)
  (NOT EQ X Z))
((opposite N S))
((opposite S N))
((is-peaceful X)
  (safe-for-goat X)
  (safe-for-cabbage X))
((transforms (farmer rows himself) ((X Y Z x) to (y Y Z x)))
  (opposite X y))
((transforms (farmer rows wolf) ((X X Y Z) to (x x Y Z)))
  (opposite X x))
((transforms (farmer rows goat) ((X Y X Z) to (x Y x Z)))
  (opposite X x))
((transforms (farmer rows cabbage) ((X Y Z X) to (x Y Z x)))
  (opposite X x))
((legalise () (S S S S)))
((legalise (XY) Z)
  (legalise Y x)
  (transforms X (x to Z))
  (is-peaceful Z))
((is-solution X)
  (legalise X (N N N N))
  (PP))
```

Listing I: The Farmer Problem in Micro Prolog and in Micro

```
Apple micro PROLOG 3.1
(C) 1985 LPA Ltd

26922 bytes free
```

Figure I: The MicroProlog sign-on message

```
X is-solution if
     X legalise (N N N N) and
     PP
() legalise (S S S S)
(XY) legalise Z if
     Y legalise x and
     X transforms (x to Z) and
     Z is-peaceful
(farmer rows himself) transforms ((X Y Z x) to (y Y Z x)) if
     X opposite y
(farmer rows wolf) transforms ((X X Y Z) to (x x Y Z)) if
     X opposite x
(farmer rows goat) transforms ((X Y X Z) to (x Y x Z)) if
     X opposite x
(farmer rows cabbage) transforms ((X Y Z X) to (x Y Z x)) if
     X opposite x
N opposite S
S opposite N
X is-peaceful if
     X safe-for-goat and
     X safe-for-cabbage
(X Y X Z) safe-for-goat
(X Y Z x) safe-for-goat if
     Y opposite Z and
     not X EQ Z
(X Y Z X) safe-for-cabbage
(X Y Z x) safe-for-cabbage if
     Z opposite x and
     not X EQ x
```

Listing II: The Farmer Problem in Simple

needs attention. You then have the standard Apple screen editing via the Escape key sequences and the arrow keys, which is not very exciting to say the least. After editing it is advisable to remove the editor from memory to increase program work space.

On the positive side, programs are stored as standard text files so you can create them with a word processor, but then, on the negative side, running and testing then becomes a real chore with so many changes of system.

The program mentioned above, solves (with multiple, correct answers) one of those logic problems which always appear in kid's comics. This one is where a farmer has a goat, a wolf and a cabbage on one bank of a river and he can either row himself, or at most himself and just one possession, across the river in a single passage and yet he wishes to get himself and all three possessions across.

Unfortunately he dare not leave the goat with the cabbage nor the wolf with the goat. How does he do it?

Well, I could never solve that type of problem without a lot of pencil and paper. Yet this program, which is based on one described by Tom Conlon in Learning Micro Prolog (Addison-Wesley Publishing) can do it quickly. It is worth noting that this book which is considered by many to be a very good introduction to Prolog is written entirely around SIMPLE, and this Apple Micro-Prolog implementation of it complements the book very well as a teaching tool.

The other two front-ends are not so well known, although there is a book called Micro-PROLOG Rules! which concentrates on MITSI. Indeed, if you want to know about MITSI you more or less have to buy the book because the manual which comes with Micro-Prolog tells you very little. The manual is, by the way, very concise and quite difficult to understand if you don't already know Prolog.

The drawback with using the syntax simplifying front-ends is that after loading, for example SIMPLE, there is only about 12k of memory left in which to put a program and so the tracing/debugging utilities which are provided on disc are almost impossible to actually use. This is a pity because Prolog is memory hungry in operation and a very small programming slip can easily cause programming execution to cease for that reason without any easy way of finding out where or why.

Pros and cons?

Without the front-ends in operation there is about 26k of program space available, which is very much better for debugging and tracing – but of course you have lost the simplicity of their programming syntax. Fortunately, a program created under a front-end will still load and run under Micro-Prolog itself, but the syntax is very different in appearance and as such is rather confusing to a beginner.

Micro-Prolog has a number of built-in programs. These cover functional areas which comprise arithmetic and string operations, input and output to disc and serial ports and printers (if you have them), data base operations and the handling of logical operators. There are in-built primitives for cursor handling, lo-res graphics, and control of the Apple soft-switches and joysticks.

To people versed in the ways of imperative programming – that is using "normal" sequential languages such as Basic, Pascal or Fortran – the arithmetic of Prolog may seem limited in some senses, but very powerful in others.

I do not want to get into a description of Prolog but you can, for example, not only ask what is the sum of two numbers (as in other languages), but also ask what number has to added to a particular number to give a particular sum. This may not be greatly useful – you can with a minimum of thought do the same in Basic – but look again at the listings and the problem as posed. Can you program Basic to handle that? Of course you can, but it will take quite some time.

To me this is the nub of the problem of programming in Prolog. The farmer problem posed above is interesting to solve, but you can do it with pencil and paper, and having done it you do not need to do it again. A computer program is only worth writing if it can be used over and over again to save time in the long run or to give pleasure for a long time as with a game.

Hence, word processors are very useful programs, spreadsheets are very useful, data bases are useful and graphing programs are very useful. (Little Brick Out is also useful!). The farmer problem, as a program, is not useful – except as a teaching tool.

Prolog can of course be used to write useful programs. These consist of databases of facts and rules about those facts which may be interrogated to provide answers which may not have been immediately obvious to the user because of the sheer quantity of data available. It must be clear that such a program is never going to run on Micro-Prolog because of the memory constraints of the system.

Micro-Prolog, then, is not going to be useful for writing useful programs. It is, however, very useful for teaching the concepts of programming in Prolog and, perhaps more importantly, for teaching concepts of logic.

If you are interested in learning about Prolog and the questions it can raise in your mind then LPA's Micro-Prolog is well worth considering. On the Apple II it is very similar to Micro-Prolog on other computers, which could be important if you need to use machines in different places. It is even similar to the basic system on the Macintosh – but not, alas, the full blown MacProlog described last month.

```
is-solution :

legalise :
1  () legalise (S S S S)
transforms :
1  (farmer rows himself) transforms ((X Y Z x) to (y Y Z x))
if
     if
     opposite if

2  (farmer rows wolf) transforms ((X X Y Z) to (x x Y Z)) if
     if
     opposite if

3  (farmer rows goat) transforms ((X Y X Z) to (x Y x Z)) if
     if
     opposite if

4  (farmer rows cabbage) transforms ((X Y Z X) to (x Y Z x))
if
     if
     opposite if


opposite :
1  N opposite S
2  S opposite N

is-peaceful :

safe-for-goat :

safe-for-cabbage :
```

Listing III: The Farmer Problem in MITSI

Product: Micro-Prolog from Logic Programming Associates with SIMPLE and MITSI as front ends.
Price: £65
Requirements: An Apple II series computer with at least one disc drive and preferably an 80 column card or built-in equivalent. A II+ should be fitted with a 16k language card to run Prodos.
Supplier: Logic Programming Associates, Studio 4, Royal Victoria Patriotic Building, Trinity Road, London SW18 3SH.
Tel: 01-871 2016

Aide memoire for your Apple

Faster access and more memory – Geoff Wood looks at some recent add-ons for the Apple II

WOULD you like to be able to switch on your Apple II and have your favourite programs ready to run within two seconds?

On a 512k Apple IIgs, AppleWorks 2.0, which automatically loads most of the program into the extra memory, takes 45 seconds to start up from floppy discs or 28 seconds from a 3.5in disc. But with Cirtech's PROMDisk Adaptor, you can have the AppleWorks main menu on screen within two seconds of switching on.

The PROMDisk Adaptor is a piggy-back board for Cirtech's PlusRAM-gs2 or gs8 cards which fit into the memory expansion slot of the Apple IIgs. (Reviewed in *Apple User*, September 1987). The PROMDisk Adaptor comes with at least 64k of low-power high-speed CMOS static ram which can be expanded up to 256k.

The board also has a small rechargeable nickel-cadmium battery which acts as a built-in power supply to the CMOS chips when the machine is switched off. While the machine is switched on, it automatically recharges the battery and supplies the power to the CMOS chips. Once fully charged, it can supply the full 256k with power for about two months.

Installation

Fitting the board is easy, though the manual has the usual warnings about discharging static electricity from your body before handling the board and, of course, switching the machine off before installing the card.

There are two ways of using the memory on the PROMDisk Adaptor: As a rom disc – which acts in much the same way as a ram disc – or as addressable memory, ranging from address $F0/0000 to $F3/FFFF. Few current programs make use of this range. For example, AppleWorks 2.0 does not use it as desktop memory.

To use the memory on the PROMDisk Adaptor as a rom disc, you must install the PROMDisk Driver. You need do this only once, unless the PROMDisk is erased by disconnecting the battery.

The PROMDisk Driver is a program on the disc that comes with the PlusRAM-gs card. All you have to do is to boot up the disc, press P followed by 1 and then cold start the machine. You must then format the rom disc with Prodos or another suitable operating system.

You can then copy programs and files to the rom disc, up to the limit of the memory available. With AppleWorks 2.0 in the 256k of memory, there is still 70k available for other programs or files.

You can write-protect and write-enable the contents of the rom disc by using a toggle in the PROMDisk Driver program – some programs such as AppleWorks do not work if the disc is write protected.

Alternatively, you can enter the monitor from AppleSoft Basic with Call-151, then type F0/000C:01 to write-protect or F0/000C:00 to write-enable the rom disc. Write protection is limited to write-attempts through the smart port. If the program crashes, it may corrupt the contents of the rom disc.

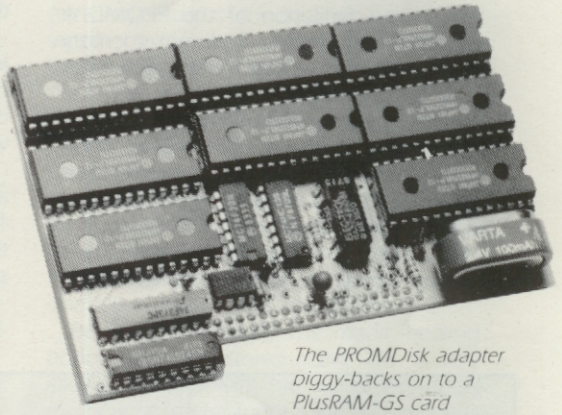
When you install the PROMDisk Driver, all the memory on the PROMDisk Adaptor is automatically assigned to the rom disc. This is used by Prodos, Pascal 1.3 and Cirtech's CP/M Plus as an ordinary disc drive. You can use the same commands with the rom disc as you would with a disc drive or a ram disc.

The control panel program of the Apple IIgs normally assigns slot 5 as the smart port which acts as an interface for storage devices such as the Apple 3.5in and 5.25in drives, and the ram and the discs. You can use the Control Panel Program to choose which smart port device to start up from.

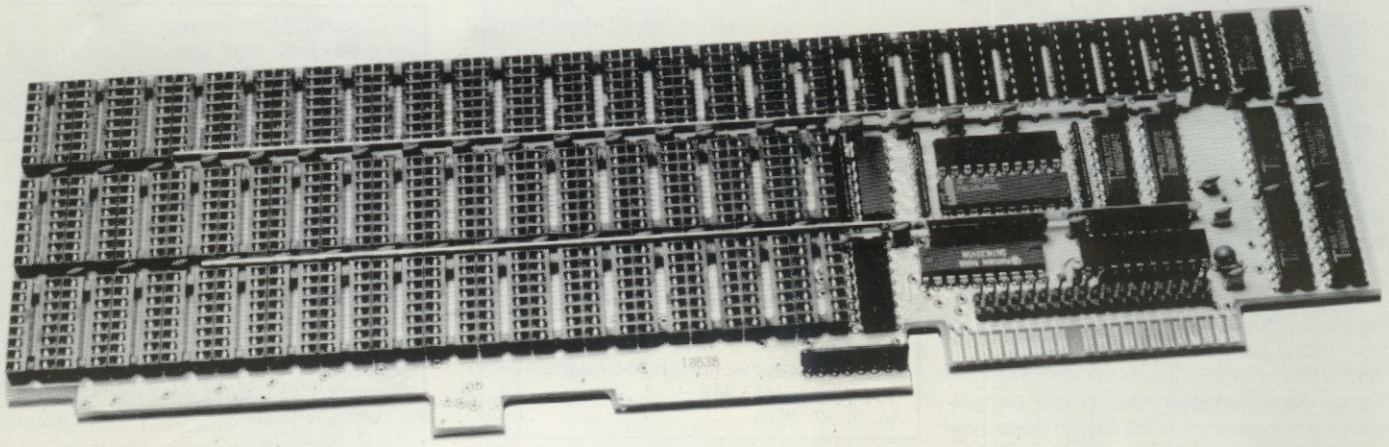
Depending on the configuration of your IIgs, the smart port assigns certain unit numbers to the devices connected to it. For example, if the rom disc is the start-up device, it will be unit 1. If you have also set a ram disc, this will be unit 2. The first 3.5in drive will be unit 3: Any other drives will be units 4 to 6.

If the ram disc is the start-up device, it will be unit 1 and the rom disc will be unit 2. If the 3.5in drive is the start-up device, it will be unit 1, the ram disc will be unit 2 and the rom disc will be unit 3.

Translating the unit numbers into slot ▷



The PROMDisk adapter piggy-backs on to a PlusRAM-GS card



◁ and drive numbers can be tricky until you learn the rules. Unit 1 appears as slot 5 drive 1, unit 2 as slot 5 drive 2, units 3 and 4 as slot 2 drives 1 and 2.

If you have 5.25in drives chained to the 3.5in ones, these will appear as slot 6 drives 1 and 2 – even if you have only one 5.25in drive, drive 2 will be listed. In addition, the Apple Filer program will show /RAM in slot 3 drive 2.

Pascal 1.3 and Prodos 1 were designed for two disc drives so they only use smart port units 1 and 2. Prodos 8 and 16 can use the first four smart port units and any 5.25in drives chained to the 3.5in drives. Cirtech's CP/M Plus lets you use up to 8 units connected to the smart port. To use Dos 3.3 or Pascal 1.2 with the smart port, you need Cirtech's UniMate program.

At a price of £88, the 64k PROMDisk Adaptor is a useful device, but you need at least 185k to store Prodos and AppleWorks. Extra CMOS static ram costs £24 per 64k so the 256k PROMDisk Adaptor costs £160. If you wanted to store only Prodos and AppleWorks, a 192k PROMDisk Adaptor would be required.

The board sits on the left front of the PlusRAM-gs card so it prevents you from using a long card such as the Cirtech PlusRAM card in slot 7 of your IIgs. In practice, though, you are unlikely to need both types of memory card, especially if you have a PlusRAM-gs8 card. There is sufficient room to insert a smaller card such as the Cirtech Z80 for CP/M Plus.

The main limitation of the PROMDisk adaptor, apart from the maximum memory size of 256k, is that you can't use it in an Apple IIe or II Plus.

A card which can be used in the IIe and II Plus, as well as the IIgs, is Applied Engineering's RamFactor ram card (*Apple User*, January 1987) for which an independent power supply is available.

However, the RamFactor card uses dynamic ram chips, not low-power CMOS chips, so the power supply is in a box outside the computer and it must be left switched on when the computer is off.

In the event of a power failure, a rechargeable battery in the power supply retains the memory in the ram chips for up to five hours.

The RamFactor power supply is intended mainly as a precaution against power cuts – which occur quite frequently in some parts of the U.S.A. – and is hardly vital in most parts of Britain

French card

Apple computers are very popular in France. So much so that a company called Thot Informatique has produced a memory card called the Speedisk. It is fitted with either 384k or 1Mb of CMOS chips and a small rechargeable battery. The cards can be used in an Apple II Plus, IIe or IIgs. I tested the 1Mb version and was very impressed

Unlike the Cirtech PROMDisk Adaptor, which can behave as a rom disc, the Speedisk behaves as extra memory which can be used as a ram disc. After fitting the card in the computer, you should format it with Prodos and copy your programs and files on to the card.

If you fit the card in slot 7 of your Apple IIe or II Plus, the computer will start up from the ram disc. In an Apple IIgs, you must use the control panel to set the start-up slot.

There was no mention of Pascal in the leaflet that came with the card, but I tried out Pascal 1.3 and had no problems. There is a patch available to permit use of Dos 3.3 with UniDos.

The 384k card is about the same size as an Apple Memory Expansion card but the 1Mb version has a piggy-back board almost the same size. This means that, in some slots, the piggy back card may be almost touching a card in the slot to its right.

For example, in slot 7 of an Apple IIgs the piggy back card seemed dangerously close to the Apple IIgs Memory Expansion card. And if you fit it in any other slot, you may lose some other function such as the mouse.

I loaded Prodos, AppleWorks, Apple Writer, Sensible Speller and SuperCalc 3a into the card, leaving 274k for further programs. Using Allan Bird's version of Prodos 8 though, which, when you quit a program, displays a list of the system files on the disc – I could switch from one program to another in a few seconds.

And with the Sensible Speller dictionaries in the ram disc, it was easy to check all my word processing whereas, with the program on discs, I tend to use it only for important files.

The Speedisk card is ideal for large programs that seem to take ages to boot. For example, Paintworks Plus needs over 400k of disc space and it takes more than a minute and a half from the time you switch on the machine to the time you can start to draw or load a picture. With the program and Prodos 16 in the Speedisk, it took less than 30 seconds.

Always on call

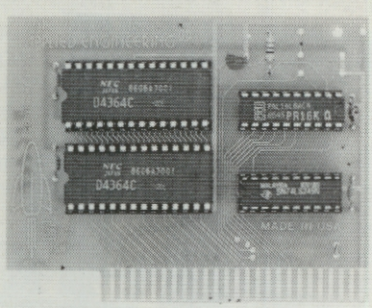
If you want instant programs for your Apple IIe, II+, or IIgs, this is the card for you. It's much faster than any hard disc and it means that you can switch off your computer, move it to another site, switch on and instantly resume work where you left off. Also, you can remove the card from your computer and plug it into another without losing the contents of the memory.

Of course, if you don't move your computer about and if you have very few power cuts, you could leave your machine switched on permanently. The extra cost of electricity would be much less than the cost of battery backed rom or ram, but you would not have the other advantages of these devices.

Product: PROMDisk Adaptor
Price: £88 (64k); £160 (256k)
Supplier: Cirtech (UK), Currie Road Industrial Estate, Galashiels, Selkirkshire TD1 2BP
Tel: 0896 57790

Product: RamFactor Card (1Mb)
Price: £319
Product: Thot Speedisk
Price: £339 (384k), £499 (1Mb)
Product: Ramfactor Power Supply
Price: £179
Supplier: Bidmuthin Technologies, Brent House, 214 Kenton Road, Harrow, Middlesex, HA3 8BT
Tel: 01-907 8516

AppleUpdate



THE new battery back-up for Ram Factor, RamCharger enables one or two Ram Factor cards to retain their memory contents even when the computer has been switched off. The user can then directly "cold-boot" from the RamFactor so as to be up and running in two seconds from power on.

From the same supplier comes Pocket-Rockets, a 16k language card with four chips for the Apple II+.

Product: RamCharger, Pocket Rocket
Price: £ , £79
Supplier: Bidmuthin, PO Box 264, Harrow, Middlesex HA3 9AY.
Tel: 01-907 8516

Gore galore in the Netherworld

Product: Gemstone Healer
Price: £19.99
Requirements: Apple II with Applesoft rom, II+, IIe, IIc
Supplier: SSI/ US Gold, Unit 2 + 3, Holford Way, Holford, Birmingham B6 7AY.
Tel: 021-350 3388

EVERY Apple owner must by now have trodden the slippery slope of adventures at least once, whether a straight text effort full of tortuous puzzles or a sword and sorcery offering of epic proportions. Certainly there are enough around to choose from – the problem is finding one that's worth the effort.

SSI is stepping into the arena for a second time with Gemstone Healer, the sequel to Gemstone Warrior: I can't really believe that disc-bound heroes can attract a cult following, but presumably the company decided that something about the mix was right.

Packaging, as ever with SSI, is glossy and sturdy, and the product is uncluttered with gimmicks: Disc, manual and that's your lot. Still, what else do you need? In fact the manual is a skeletal 15 pages, and once you've subtracted the instructions for non-Apple owners, a not particularly well drawn map and the obligatory scene-setting in curly lettering, there isn't a great deal left to go at.

Speaking of setting the scene, your aim in life is get hold of the healing tool which will restore the Gemstone of the title to working status – yes, I know you repaired it in Gemstone Warrior, but sticking the bits together wasn't enough.

Needless to say, the tool is not available from all leading suppliers, but is located in "the nightmare that is the Netherworld", guarded by assorted demons, ghoulies and things that go bump in the night. Also needless to say, you don't get the chance to turn the assignment down – it's Brave Healer's turn in the barrel again.

Snide comments and the irrelevancies of plot aside, the essence of any adventure is playability, and Gemstone Healer scores highly here. The Netherworld is not the most straightforward of places, but it can be approached on three levels – Beginner's, Normal and Kamikaze. The three modes are similar, but the more advanced ones provide faster, hungrier monsters and less reliable spells.

As if that weren't enough, the configuration of the Netherworld keeps changing. The maze which comprises the playing area is randomly generated at the start of a session, although you have the option of calling up an "old" pattern.

Whichever level you choose, mapping is essential. That said, I hope you fare better than I did – I'm not exactly in the Prince Henry the Navigator class. However conscientiously I drew my squares and charted my graph paper, I still managed to get lost all too frequently, and generally managed to charge off on a course that took me off the edge of the paper. To add to my problems, the maze contains hidden doors which can only be found by the suck-it-and-see method.

But negotiating the maze successfully is only one of parts to Healer. You've also got a constant procession of monsters to dispose of or avoid, a succession of cryptic messages to decipher and the eventual healing to accomplish. This, incidentally, is why you keep finding hammers and chisels dotted around the landscape.

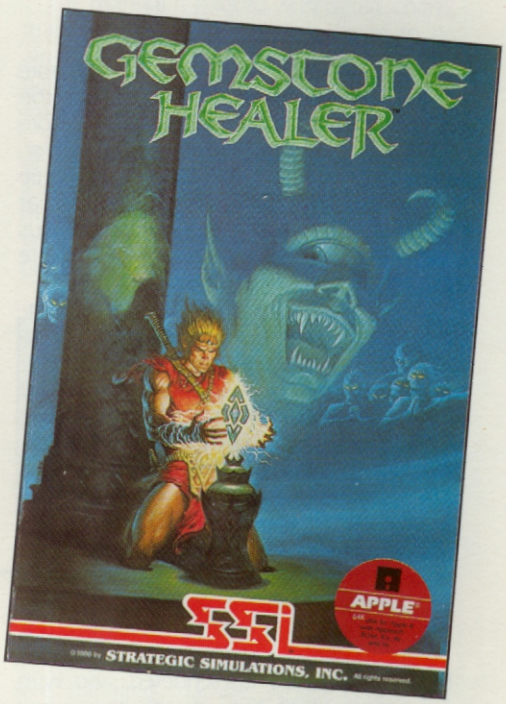
Control is by joystick or keyboard: I opted for the latter for more precise steering, but I did lose quite a few lives getting used to the spread of keys – a fumble or a moment of hesitation can be fatal. I also opted for the keyboard because my joystick seemed only to function half the time – either that or I'd misread the instructions.

To give a flavour of the play, you'll start in an empty room, having created the maze of your choice. This will give you chance to get used to handling the keys, and time spent here is not wasted. Once you're confident of your skills, and resigned to the fact that you're wearing moonboots and a visor and carrying a crossbow, head for the exit.

The odds are that the nasties will immediately home in – bloodsucking terrors, ghosts, skeletons or whatever. Most can be despatched by your trusty crossbow, eventually, though it does seem an odd choice of weapon for the task in hand. You do get a chance to swing a sword occasionally, but as only running attacks work you'll probably be wiped as you charge in. I was. Frequently.

Long range destruction is the order of the day, as all the baddies will sap your life force in close order combat and one, the contagious shambler, leaves you with a socially undesirable disease which will eventually be the death of you. Or as the manual cheerfully phrases it "if you do not have the cure, you may find yourself in trouble": Has aids finally made it to adventure land?

Survive this onslaught and you'll find treasure, weapons, spells and other desirables lying around in chests and coffins (though beware – coffins tend to have occupants). You'll also find that dead monsters leave the same goodies in their wake, so it's always worthwhile to inspect a corpse – though how a giant amoeba manages to hide a hammer and a couple of quivers of crossbow bolts about its person beats me.



You won't be able to carry everything you find, so learn to be selective. Extra lives (to a maximum of the traditional three) are worth having, but cluttering yourself up with magic wands that freeze your opponents isn't exactly essential.

In addition to your physical weapons – always displayed to the right of the screen (the scrolling map occupies most of the remainder) – you have access to a variety of spells and potions. So, anyone with an urge to disguise himself as a skeleton, turn invisible or obliterate all his opponents in one fell swoop is well catered for.

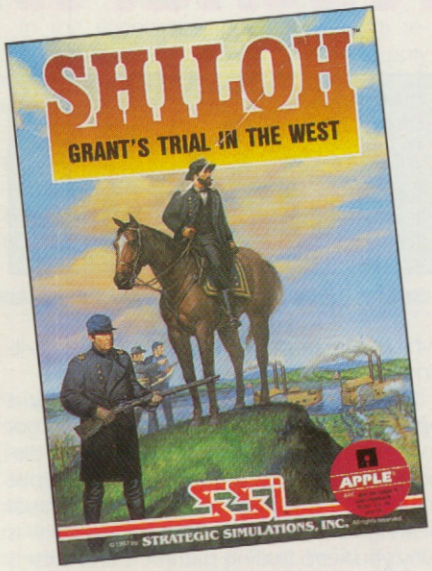
Be warned though: The magic healing potion, which restores active life, is very easily confused with the vial of poison in the heat of the moment. One nice touch is the symbol used for "an ancient illusion" – a floppy disc: I always thought there had to be something else you could do with them.

As you'd expect, the game supports the usual functions of save and resume, and pause. Sound is very limited, but useful and not annoying- though it can be turned off – and the graphics are more than adequate. My only complaint is that the manual could have been a little more helpful, but trial and error resolves most queries.

In several (real time) days of play I amassed a great deal of treasure, explored acres of maze and annihilated baddies in their droves – and got no nearer to a solution. Gemstone Healer is simple, appealing – and totally addictive.

John Hickman ▷

Listen to the rebel yell . . .



◁ ULYSSES S. Grant was one of the more memorable generals thrown up by the American Civil War, and one of the more competent. This competence, however, wasn't particularly in evidence at the Battle of Shiloh, a bloody two-day affair that claimed 25,000 lives and had the dubious distinction of being the greatest battle fought on the American continent.

SSI has chosen Shiloh as a complementary title to Gettysburg, and has used the same elaborate – but very workable – play system. All units that took part in the action are represented, down to brigade level, either by icon or figure, and the scrolling map which fills the bulk of the screen is clearly drawn and sensibly shaded, although a colour monitor certainly helps.

A major drawback with many simulations is that battles can only go one way if the players are halfway competent: There's not really too much fun playing the American role in a recreation of the Alamo, however faithfully it's rendered, and with the benefit of 20-20 hindsight, how many gamers would launch the Light Brigade down the proverbial valley?

Shiloh (here subtitled Grant's Trial in the West) escapes this criticism. The battle is a natural choice for a wargame, being a self-contained affair – more or less a campaign in itself – and one which can go either way. And the geography of the area involved allows the battle to be confined to reasonable limits. About the only thing it can't cater for is human irrationality – one unit in the battle proper continued the attack after taking 70 per cent casualties.

To set the scene, Grant, with an army of 45,000 supported by two gunboats, is moving down the Tenessee valley with the intention of securing the state. Ranged against him is Johnston, one of the South's best generals, with considerably less men and recent Confederate defeats fresh in his mind. As Grant has another 25,000 men moving to join him, Johnston attacks before the odds are too overwhelming.

Historically, Johnston almost got away with it, catching Grant unawares and almost pushing him into the river. Grant, however, held on: Johnston was killed, Federal reinforcements arrived in time and both sides retired to lick their wounds. Technically a draw, Shiloh proved to be the turning point in the battle for control of the west.

In the game – against the computer or a human opponent – things can go very differently. Three levels of varying complexity are offered, and main menu options allow a considerable number of permutations on these – varying ammunition supply, for example, and arrival of Federal reinforcements.

Control can be either from keyboard or joystick, and there are options to fine-tune the latter for maximum responsiveness. However, given that this is not in any sense a shoot-'em-up type game, speed is not of the essence. With an estimated minimum playing time of 10 hours, it's hardly necessary to hurl units around.

Graphics are competent, movement smooth and sound thankfully optional: There's a limit to the number of times you want to hear a shell "whistle" past or a volley of rifle fire rattle out. The "wait" messages between turns and some phases are spartan, but that's scarcely a major criticism, and at least disc swapping is kept to a minimum.

At the beginner's level – and you'd be well advised to get some practice in here, at least – you start with all units in the locations they held on the morning of the battle. The battlefield is displayed on-screen, but SSI has also thoughtfully provided the same map on paper as a quick

Punster always has a word for it

CURIOUS title and even curiouser game. Although Nord and Bert is from Infocom, you could hardly call it an adventure. Infocom quite rightly describes it as "interactive short stories" as opposed to the usual "interactive fiction".

The game is pure text right enough, but instead of one complete adventure, what we have here is eight vignettes. The link between them is that the stories are all set in the strange town of Punster and each tale centres around a particular usage of the English language.

The citizens of Punster have recently been victimised by a series of odd happenings which have ground business to a halt and played havoc with everyday life. The plague, if such it can be called, seems to be focussed around an area of the English language.

The effects are widespread and bizarre. For instance, objects and even citizens have been transformed overnight into weird mutations of their former selves. In other cases, what were once simple actions to perform now require the use of old time-worn phrases to accomplish them.

Your task is to unravel each tale and get the town of Punster back to some semblance of normality. With one exception, you can play the stories in any order, the exception being the one called Meet The Mayor – you will only be allowed to play this when you have completed all the others. The program tests your knowledge of the other stories before it will let you into this final tale.

One unusual feature of this game is that it has built-in help. Typing HINT brings up a list of topics for that tale and by moving a pointer to the desired topic, you can gain access to one or more hints on that subject.

Typing HINTS OFF at the beginning of the game helps avoid temptation since the program will not then allow you to access the hints for the rest of that session.

Another aspect unusual to Infocom games is that no mapping is required. Each tale is self contained and includes only a handful of locations, all of which are stated at the top of the screen. Typing the name of the location takes you straight there.

Each tale is really nothing more than a connected series of puzzles, all solved by a particular use of English. Points are scored for each solution – the number of points possible varies from tale to tale.

Now to the tales themselves. In Shopping Bizarre, you first find yourself in a dessert aisle (note the spelling). Your way is blocked by a broad-shouldered, dark brown, adult moose chewing brown cud.

Type in the word MOUSSE and "There's a sudden belching poof of smoke and the odour of burnt chocolate". What you now see before you is a chocolate mousse and you have scored one point.

Elsewhere in the same tale, you'll come

reference guide. To make life easier still, it's possible to toggle between overview and close up at any time.

Victory is achieved by gaining and holding certain key positions, and by inflicting casualties. Simple menus allow you to move units, and have them fire, attack or both. Decisions made and orders given, the computer resolves the action, calculates casualties, and implements subsequent retreats and advances.

This all takes time, with some 20 units per side to agonise over, but the effort is worth it: Factors such as morale, ammunition supply, casualties suffered and so on are all taken into account, and actions are not determined by a simple throw of the dice.

SSI has done an excellent job of making the simulation as realistic as possible, and you very soon appreciate that careless orders cost lives. Shiloh is not a game for the gung-ho merchants used to space invaders – pressing on regardless of casualties is suicidal, resulting in enforced retreats at best and uncontrolled routs at worst. And the fact that many enemy units can be concealed until you bump into them can make life a little too interesting.

The battle is fought over 15 turns – each consisting of artillery fire, rifle fire, movement, melee and more movement – and at the beginning of each a status screen displays victory points gained and casualties lost. The victory conditions are weighted to favour the aggressive, organised player, and sound tactics will usually win the day.

At the intermediate and advanced levels the game is considerably more sophisticated, taking leadership and command control into account and refining the detail of the sequence of play. For the truly dedicated, numerous tables in the manual supply facts, figures and probabilities and these repay careful study.

Shiloh is not a game to fill an idle half hour: It is a very well crafted wargame simulation that will quite possibly spread over several evenings, and I suspect many wargamers will use the game as a basis for tabletop battling.

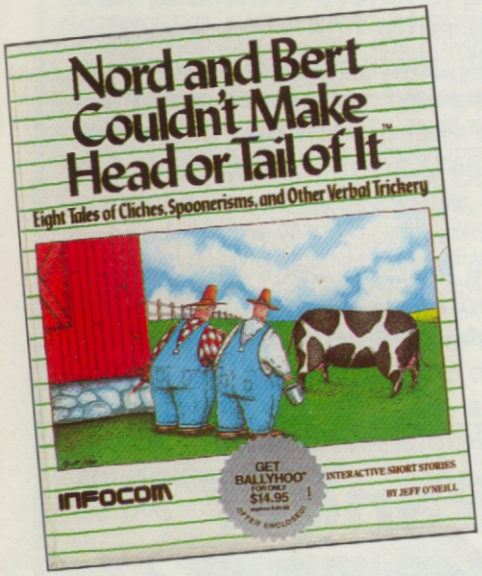
And as such it will probably have a very limited appeal. The pack blurbs that you'll enjoy Shiloh "regardless of wargaming experience", but the manual is less than helpful to the beginner – a demo game, explained step-by-step in writing, would be invaluable.

The manual is packed with detail, charts, maps and tips – but it does seem to be aimed more at the wargamer than the game player: It's not patronising, but it does assume rather too much.

As historical simulations go, Shiloh is one of the best on the market, and the mechanics of play are superb. Wargamers should make a beeline for it: Non-wargamers should think very seriously about broadening their experience.

Peter Walls

Product: Shiloh
Price: £19.99
Requirements: Apple II with Applesoft rom, II+, IIe, IIc
Supplier: SSI/ US Gold, Unit 2 + 3, Holford Way, Holford, Birmingham B6 7AY.
Tel: 021-350 3388



across such such sights as a large block of stationary (be careful, that's the way it's deliberately spelt in Nord and Bert) and a bear clause in the stationery section. Nearby is a man in a dark tuxedo taking huge bites out of packets of cereals. Strange is the right word for this game.

In Buy The Farm, you'll wander around a barn, barnyard, road, stable, loft, field and market trying to come to grips with the many puzzles there. For instance, a tired old dog sits in the road. You'll need to get him to liven up a bit – well, you know what they say about teaching ancient canines. Clichés are the key to all the problems in this little number.

Play Jacks sets you down in a one-room house confronted by a really mystifying contraption. This thing is sort of square, sort of longish, with a fluffy ball at one end. Its surface is made of thick cloth and it has a movable strip of metal. A hand crank, a water faucet and an electrical switch are on different sides. Completing the ensemble is a pair of sleeves.

What is it? Easy – a jack of all traits. Think of all the words beginning with JAC that you can and you'll be on your way to solving Play Jacks.

Eat Your Words finds you in the Teapot Cafe where the waitress is doing her level best to look busy. This vignette revolves around plays on words connected with food.

Looking at the food the unhelpful waitress brings you reveals that it is "Just desserts". Giving these to the waitress causes her to perk up, thinking she is about to get a big tip. When she sees what your offer really is she frowns and brings you a pie (humble pie, of course). Eat it and there's another point scored.

My favourite is Act The Part. This tale places you as one of the stars of a fifties sitcom. It's full of such dreadfully corny stuff like knock, knock humour, pratfalls and inane practical jokes. There's even a studio audience who giggle in anticipation and go into hysterics at each development.

Shake A Tower is all about spoonerisms. You know, the sort of transposition of letters made famous by the good Dr Spooner – "You have tasted a worm's work", "Leave on the town drain", and "We will now sing Kinkering Kongs".

Manor of Speaking is a guest house whose attic is below the first floor and whose rooms are possessed by the warped personalities of former occupants. One of the rooms is called The Doldrums, a massive, still-aired chamber whose centre is a vast wasteland blending into a grassy plain that spills over a chasm.

Above the cliff hangs a shapeless cloud through which a line of sheep are jumping in slow motion. Repeat a word or command in this room and the chasm yawns. As you can see, not much is happening in the Doldrums, but you can always count sheep or watch the grass growing.

Nord and Bert comes with a book of delightful and original Kevin Pope colour cartoons which illustrate the various types of wordplay used in the stories. Jeff O'Neill, author of Ballyhoo, wrote the game.

Nord and Bert is a unique game and Infocom is to be congratulated for taking this innovative step. The game offers intelligent stimulation and the beauty of it is that each tale can be completed in one sitting, making it ideal for an evening's play with family or friends.

Many adventurers will enjoy Nord and Bert for the puzzles even though the game lacks the atmosphere and escapism normally craved by such players.

And because of its zaniness, originality, mental stimulation and built-in optional assistance, Nord and Bert should appeal to a wider audience than that catered for by Infocom's usual games.

Brillig

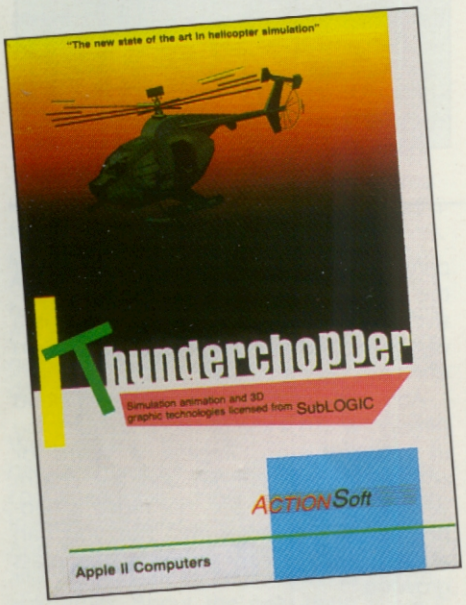
Program: Nord and Bert Couldn't Make Head or Tail of It
Price: £29.99
Supplier: Infocom/Activision, 23 Pond Street, Hampstead, London NW3 2PN.
Tel: 01-431 1101

Flying high . . . it's good, clean, lethal fun

IF you thought Sublogic's graphics in Flight Simulator were great, you'll love them in Thunderchopper. If not, you'll at least know what visuals to expect from this package, a helicopter simulation from ActionSoft.

Though not as complicated as Flight Simulator, Thunderchopper demands practice to acquire the necessary skills in what is probably as close as an Apple II gets to the real thing.

Using a joystick, I spent considerable time on the practice circuit. Flying wasn't so bad – it was just that I needed a new



helicopter every time I landed.

Suspecting a faulty joystick, I reluctantly resorted to the keyboard. I improved my performance within minutes and was soon able to complete the course, earning promotion from Pilot to Instructor and later to Commander. However, a crash on my first combat mission landed me back in school.

The program offers five different games – or missions – in addition to a demo mode showing Thunderchopper on various combat sorties under different conditions. The lamentable lack of a landing demonstration surely contributed to my collection of severely bent helicopters.

The most important mission is Flight Training. You sit Skyfox-style in a transparent bubble in front of an initially confusing instrument panel and attempt to fly following a black line over green terrain. You are expected to avoid contact with mountains and to land on the helipads appearing at spaced intervals. Your performance is evaluated and, if you were good enough – you don't have to be perfect – you may be promoted.

Your onboard computer periodically

Product: Thunderchopper
Price: $29.95
Requirements: Apple II with 64k
Supplier: ActionSoft, 201 West Springfield Avenue, Suite 711, Champaign, IL 61820 USA.
Tel: 0101 217 398-8388

feeds you information, but don't take it too literally. When told to decrease altitude, I dutifully obeyed expecting the instruction to change as I descended: It didn't. The result was another buckled helicopter.

The next mission is Rescue Alert, with you searching for downed pilots, assisted by your onboard computer, radar and said pilots lobbing flares in your direction. Landing near the site of a crash is charitably deemed a rescue and the grateful pilot climbs aboard. Thunderchopper must be deceptively roomy, as I had several pilots aboard when I carelessly crashed at high speed.

In Combat Alert, the third mission (not to be tackled until you're confident at the controls) the craft is armed with a spiteful array of weaponry which will allow you to take out anything up to and including a tank – sundry rockets, missiles and a machine gun. All of which can come in handy as you are quite likely to get shot at from the ground and in the air.

Your computer tells you when damage has occurred, and pressing the ? key reveals its extent: More to the point, you have the chance to return to base for repairs if necessary – an improvement on the usual "three lives and you're dead" routine.

Combat mode is not for the trigger-happy – choppers don't carry unlimited ammunition, television epics notwithstanding. As you'll score points according to how efficiently you use your firepower as well as how many targets you destroy, it's worth bearing in mind the manual's tactful warning that machine guns don't do a lot of damage to bridges.

A fourth mission, Armed Escort, is a variation on the theme with you shepherding troops and light vehicles home through a guerilla-infested valley.

And if you've still got the energy, you can try your hand at Rescue at Sea, retrieving water-logged survivors from an ongoing naval battle. A combination of the earlier Rescue and Combat modes, this particular set piece will test all your skills. Incidentally, I learned the hard way that helicopters generally come off second best when pitted against battleships.

Thunderchopper is supplied on both 5.25in and 3.5in disc, and the neat 64-page handbook is informative and interesting, giving full game instructions but also explaining the principles of real helicopter flight and control. It is a mite heavyhanded at times – "If a pilot is on the far side of a mountain he won't be able to see you" – but generally it's clear and helpful.

Hours of entertainment here for everybody – just fly around honing your skills or get a kick out of using them to save lives. For us armchair warriors, there's plenty of shooting and blowing things up – all good, clean, lethal fun. □

Lew Norris

Gnome Ranger heads for the Mac

GNOME Ranger is still with us, or rather with us again. The Apple II version was reviewed in last month's issue of Apple User, and now the game has been released for the Mac.

The heroine of the piece is Ingrid the gnome, an essentially well-meaning young lady whose friends, relations and neighbours have dumped her a long way from home.

Your mission, should you decide to accept it, is to steer Ingrid back to the reluctant bosom of her family, guiding her past a variety of dangers, puzzles and so on.

The Mac version includes the graphics sadly missing on the Apple II conversion, and if you can tolerate the game's trademark – all words beginning with N are spelled with GN, as in go gnorth young man – they're well worth a look.

Product: Gnome Ranger
Price: £14.94(Mac), £9.95(Apple II)
Supplier: Level 9, PO Box 39, Weston-Super-Mare, Avon BS24 9UR.
Tel: 0934 814450

Taking TimeOut

Lew Norris tests a new generation of AppleWorks add-ons

THE move to interrupt-driven hardware has prompted the production of pop-up programs in almost every microcomputer system in common use. They cover spelling checkers, thesauruses, calculators, programming aids, clocks and calendars. In fact if you can think of a use for one, I'm willing to bet you can go and buy a version right now.

On the Macintosh and under Prodos 16 on the IIgs they usually take the form of Desk Accessories, but life is not necessarily interrupt-driven under Prodos 8 and pop-ups only appear within certain applications.

In fact, pop-ups really only appear within AppleWorks, which probably says something about the tremendous popularity of that program. It also perhaps suggests that there is a need for adding to or improving certain aspects of it.

To date we have been offered AutoWorks, MegaWorks, MacroWorks, various desktop expanders and the Pinpoint series of accessories.

Compatibility

Now, from the Beagle Brothers, comes an integrated set of pop-ups, under the collective title of TimeOut. The set is promised to be compatible with earlier pop-ups but this is almost impossible to check, given the tremendous number of combinations.

So I have, deliberately, only installed TimeOut on an otherwise unadorned copy of AppleWorks version 2. By the way, TimeOut only works with version 2 and it has to be the USA version – fortunately or unfortunately, depending on how you look at it, we in the UK have the USA version and I guess that other English speaking countries do too.

There is a whole range of TimeOut pop-ups. To use them you do a once-and-for-all installation of TimeOut on a copy of the AppleWorks startup disc (you can re-install if you want) and copy to it – or to another, named disc – the pop-ups you require.

Then, at any time within AppleWorks, the key combination Open Apple+Escape will bring up the master menu shown in Figure I in much the same way as Open Apple+Q brings up a menu of the desktop files.

Menu selections are made exactly as in AppleWorks and once made the pop-up will load from disc and run. Or it will have been loaded from disc at startup and have stayed memory resident – if so configured – and therefore is more quickly accessed although startup time is longer.

The pop-up utilities presently available cover file-handling, macros, data conversion, multiple font printing, graphing, spelling and sideways printing of spreadsheets. They integrate nicely at the software, tutorial and manual level, but there are one or two niggles.

I decided to first install the FileMaster (version 1.0), believing that with it I could move the other files around from within AppleWorks. And indeed, I could, but – it has to be said – not safely.

Frankly, the FileMaster is a good idea, but it could be better implemented and it is not safe. It will lose the ends of files under certain circumstances and several of the files on the TimeOut discs will not copy correctly. A good example is the Beagle Brothers' picture from the SuperFonts disc which changes from 9k to 5k in the process.

Inconsistent exits

The lesser niggles I have about FileMaster are first its exit mode to AppleWorks which is inconsistent with the AppleWorks and the other pop-ups. After all, anyone familiar with AppleWorks would expect to press Escape – here, you have to exit via the menu.

Second, there is no way of changing a data disc from within FileMaster. I found myself frequently having to move back to the Other Utilities option of AppleWorks in order to do so and then having to re-enter FileMaster. This may be due to my inability to remember the exact pathways to files, but I'm sure that I'm not alone in this.

It would be better to dispense with the ability of listing files on the current disc (after all, this is in AppleWorks) and instead make it possible to change discs in a sensible way. Curiously, when copying files, source and destination selection is much better. Why not make it a general option?

I cannot recommend FileMaster – perhaps in version 2 the bugs and niggles will have been ironed out. FileMaster nearly put me off TimeOut altogether because it gave me such trouble in understanding why the other pop-ups weren't working. As it turned out, this would have been a pity because they are generally much better. Luckily I turned to Copy II plus, spotted what was wrong and started out again.

Next I tried SuperFonts (version 1.0), which allows you to print from the word processor, in a variety of fonts, sizes and styles, to a range of printers. The fonts are those from the Mac and Prodos 16 and the discs with the package contain Courier, Helvetica, Times, Geneva, New York and Symbol in sizes from 9 to 24, with others such as Los Angeles, Chicago, Monaco, London, San Francisco, and Mobile in a more restricted range.

There may be a slight problem here. All

```
File: timeout                    REVIEW/ADD/CHANGE                Escape: Main Menu
The move to interrupt driven hardware has prompted the production of pop-up
programs in almost every micro-computer system in common use.  They cover
spelling checkers, thesau                                      ming aids, clocks and
calendars.  In fact if yo                                      one I'm willing to bet you
can go and buy a version                    TimeOut Menu       d under ProDOS 16 on the
IIgs they usually take th                                      s but life is not
necessarily interrupt dri                                      p-ups only appear within
certain applications.  In                1.  Data Converter    y appear within AppleWorks
which probably says some                 2.  FileMaster        popularity of that
program.  It also perhaps                3.  Macro Compiler    need for adding to or
improving certain aspects                4.  Macro Options
                                         5.  SuperFonts
To date we users have bee                6.  Utilities         Works, MacroWorks, various
desktop expanders and thi                                      sories.

Now, from the Beagle Brothers, comes an integrated set of pop-ups under the
collective title of TimeOut.  The set is promised to be compatible with
earlier pop-ups but this is almost impossible to check, given the tremendous
number of combinations.

--------------------------------------------------------------------------------
Type number, or use arrows, then press Return                        971K Avail.
```

Figure I: The master menu

the TimeOut packages contain two unprotected discs. One is a single or double sided 5.25in and the other is a 3.5in duplicate. However, in this case there are more fonts on the 3.5in than on the 5.25in. So if you only have 5.25in drives you will have to find someone (your dealer?) who will copy the extra fonts to your format.

SuperFonts supports Apple, C-Itoh, Epson, Integral Data Systems, Mannesmann Tally, NEC, Okidata, Panasonic and Star printers among others and Apple Interface cards and ports along with CCS, Dumpling, Epson, Fingerprint, Grappler, Microtek, Mountain Computer, Pkaso, SSM, Versacard and Videx interface cards.

SuperFonts will also print hi-res and double hi-res pictures, or parts thereof, within the text, although you cannot wrap text around the picture. The system is quite easy to understand and is well illustrated in the examples given on disc.

At the start of the text you indicate which fonts (held on disc) and which hi-res pictures (also held on disc) are to be used. These are then loaded into memory and the text is printed. SuperFonts understands AppleWorks print formatting commands and adds some of its own. These are included in angular brackets. The examples in Figure II and III show a couple of the fonts available.

A preview of the pages to be printed is available on screen although on a colour monitor it is diabolically difficult to read.

You can elect to print in draft, standard or high resolution mode or in a 50 per cent reduction mode. SuperFonts uses the Macintosh trick, when in high resolution mode, of using a font of twice the asked for size to do the actual printing.

According to the manual, if the required, double-sized font is not available the normal size will be used. In fact a high resolution print at half the required size is obtained, properly formatted – compare Figure IV with Figure III. This SuperFonts "bug" should be left as a "feature" as it is very useful for footnotes and picture captions.

Good variety

Some of the fonts contain extra characters (Figure V) and some maths symbols and Greek are available from the Symbol font. All fonts may be printed in italic, outline, shadow or inverse and of course AppleWorks' super and subscript, underline, bold and line-spacing commands all work. In fact the only AppleWorks Open Apple+O commands which do not function are CI, P1, P2, LI, GB, GE, PH and EK.

I recommend SuperFonts. It is easy to use and totally accessible from within AppleWorks. There is no need to write the file to disc, exit and run another program and then return to AppleWorks. It will also print from a given page to another, something that AppleWorks will not do.

The quality of output is excellent and with an ImageWriter is equal to that from a Mac. I do wonder how long it will be before a LaserWriter version comes out! The only problem is that the manual does not describe the variety of characters and symbols available. You have to set up and print a file to find out. You can of course add more fonts if you have access to Prodos 16/IIgs fonts.

The next TimeOut application I tried was UltraMacros (version 1.3). This differs from the others in that another install program as well as TimeOut has to be run. This puts the required macros into memory for immediate use. In case you don't know, macros are just two or three-key combinations which can accomplish a wide variety of tasks: A simple AppleWorks example is Control+L which switches underlining on and off.

There are a number of default macros and plenty of examples in the manual and on the disc. In my opinion the most useful default macro is Solid Apple+Delete which deletes the character under the cursor.

Others allow the case of the character under the cursor to be changed, and the date or time to be entered. The date comes from Prodos (it's the one you enter at startup) and the time comes from a clock – if you have one: If not you get 12.00.

Two of the default macros move the cursor left or right through text to the next space. This could be incredibly useful when highlighting blocks of text for deleting or moving, but unfortunately they do not work in the highlighting mode. This should be remedied – perhaps I will have to write my own.

Mice welcome

As well as macros there other goodies. Owners of a mouse card or a IIgs can use the mouse to move through text, cells, records or menus just like using the arrow keys and the mouse button may be used to select from menus or to quickly scroll through a file. I found this very convenient.

Another good idea is the Screen Preserver. If the keyboard or mouse have not been touched for a while the screen will blank. At a touch most keys restore it without inserting anything.

The Data Converter allows data to be quickly transferred between the spreadsheet and the data base. Incidentally there is a very good demonstration on disc of macros, data conversion and TimeOut graphing.

Your own menus may be created within AppleWorks or you can use precompiled macros called Task Files which are saved as system files on the startup disc and which ▷

Figure II: Chicago

The move to interrupt driven hardware ha
pop-up programs in every micro-compute
across. They cover spelling checkers, the
programming aids, clocks and calendars.
use for one I'm willing to bet you can go a
On the Mac and under ProDOS 16 on the II

Figure III: Courier

The move to interrupt driven hardware has
pop-up programs in every micro-computer s
across. They cover spelling checkers, thesau
aids, clocks and calendars. In fact if you can
willing to bet you can go and buy a version r
under ProDOS 16 on the IIgs they usually tal
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In fact, pop-ups really only appear within AppleWorks which probably says something about the tremendous popularity of AppleWorks. It also suggests that in some people's eyes there is a need for adding to or improving certain aspects of the program. So far we users have been offered AutoWorks, MegaWorks, MacroWorks, various desktop expanders and the Pinpoint series of accessories.

Figure IV: High-resolution half-size output

◁ may therefore be used from outside (as well as inside) AppleWorks to accomplish specific, repetitive tasks.

Of course I have not yet fully described the most powerful aspect of UltraMacros, the macros themselves, and so it is difficult to comprehend how powerful this system can be.

There are two pop-ups associated with UltraMacros: Macro Compiler and Macro Options. The latter allows configuration of the macro system and the launching of Task files. The former compiles macros from an AppleWorks text file into memory and these may be saved to disc and used as the default set from startup. It is also possible to "record" macros directly from the keyboard.

A macro can use all possible keystroke combinations but there is much more to it than this. There are number and string variables available, together with commands (called tokens in the manual) to perform a variety of "programming tasks".

There are too many options to describe here, but to give a flavour of what is available, you can input strings from the keyboard, and wait for keypresses. There is a repeat structure and an if-then-else structure. Macros can be defined to work anywhere within AppleWorks or be restricted to a certain area.

Cursor commands

Any one macro can of course call others and there are commands to move the cursor around the screen. Macros can be very useful in conjunction with other TimeOut utilities: A good example on the disc makes the setting up of SuperFonts even easier.

One simple example of my own may make things more obvious. I keep my word processor files on an 800k startup disc in a subdirectory, the path to which is /APPLEWORKS/FILES/. Now every time I look at another directory, which is often, the data disc pathway is destroyed and commands such as Open Apple+S will not work properly and could even be dangerous if I have multiple copies in different locations.

To avoid disaster and make life easier I have always wanted a command to restore my default pathway. Now I have it and it may be invoked from anywhere by pressing just Solid Apple+D.

The precompiled macro to do this is:

D:<all><oa-q esc>5<rtn rtn>5<rtn oa-y>/appleworks/files/<rtn esc esc><oa-q><rtn>!

I produced it by recording my keystrokes and saving it to disc so that it always loads. Step by step the commands break down like this. The D: governs the character to use while <all> describes it as valid in all areas of the program, and <oa-q esc> is a quick and nifty way of ensuring that you reach the main menu.

I select option 5 (Other Activities) then option 1 (Change current drive or Prodos Prefix) with the two rtns. I select option 5 from this menu and issue oa-y to delete the prefix which AppleWorks displays. I then type my prefix and issue a <rtn>, press esc twice to reach the main menu and use oa-q to return to where I last was within the last file used.

As I said, this is just a simple example, but it saves me a lot of time and wasted keystrokes.

Another thing that annoys me about AppleWorks is the rigmarole of having to press Return twice to start up, even though the program automatically puts in the correct date from the on-board clock. By adding one more macro and creating a task file called START.SYSTEM I can, not only start the whole system without any keypresses, but also set up my default prefix. The new macro is this:

]:<all : rtn : rtn : sa-D>!

Note that the last command of this first macro calls my macro described above.

The only problem with macros is that they can be too powerful! There is a file called Macros.startup intended as an example of creating menus and task files. After compiling this the Solid Apple+up and down arrows are deadly and all too easy to use by mistake, especially on a IIgs.

The cursor will move erratically around the document, highlighting odd parts. AppleWorks menus will then flash before you and all your desktop documents will be emptied. They still exist but in name only – you have been warned!

Whether others on disc are as dangerous I do not know – there are so many combinations possible. Even after losing half an hour's typing I still like UltraMacros – I'm just not going to use other people's macros from now on, not even those from the author, Randy Brandt, unless I thoroughly test them first.

Interestingly, there is one more option available on the UltraMacros disc at install time. This is intended as an advert for a set of AppleWorks patches which may be bought from the same author. What it does is patch AppleWorks so that Control+@ may be entered from the keyboard.

You may remember that there has been discussion in *Apple User* about this problem, especially with reference to printer interface control. Well, this patch works, but only on a non-patched AppleWorks. In other words use it first before installing TimeOut and UltraMacros. Incidentally, it comes back on my machine as if it has failed and displays an apparent AppleWorks error message, but it does in fact work!

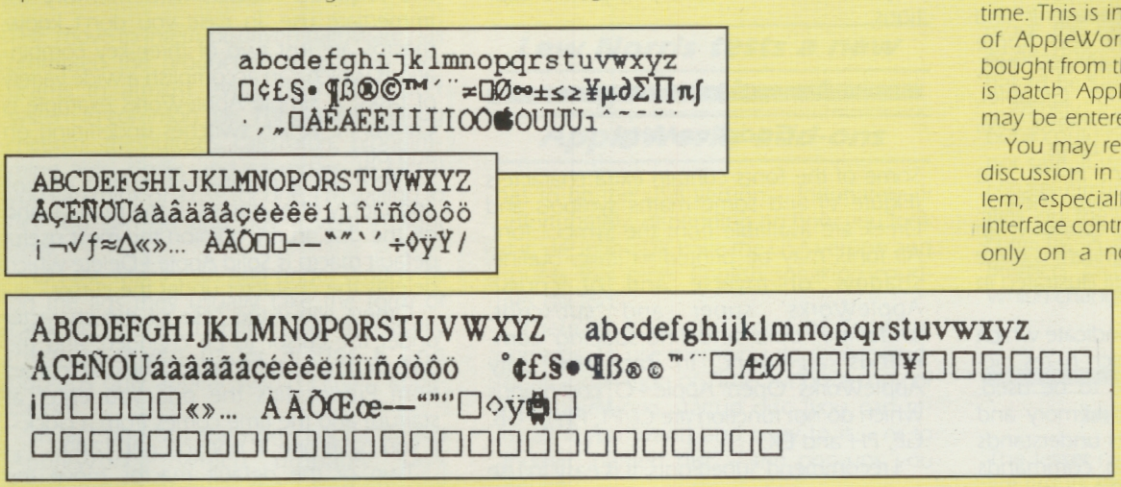


Figure V: Some fonts contain extra characters

Consistency

I will cover the other TimeOut utilities next month: For the moment I will say that in general, and omitting FileMaster, the utilities are good and consistent with themselves and with AppleWorks. The only real problem is that to be used at their best they should be in memory and they can consume quite a bit (pun from a Christmas cracker).

With the system described here (Figure I) with each pop-up in memory I lose 137k from the desktop. Then SuperFonts needs more memory for each font and picture at print time and UltraMacros can use more if I compile and use more macros.

Ideally you need an Apple Memory card or Applied Engineering's expanded desktop system (I have not been able to test Cirtech's system). I think that the TimeOut system is built around a IIgs rather than a IIe and the IIc could well be left behind, even with a 394k desktop courtesy of Applied Engineering's Z-Ram. □

Products: TimeOut v1.0 – FileMaster v1.0, SuperFonts v1.0 and UltraMacros v1.3
Supplier: Beagle Brothers
Price: £29.51, £47.77, £35.60
Requirements: Apple IIe, IIc or IIgs running USA AppleWorks version 2.0, preferably with an expanded desktop.

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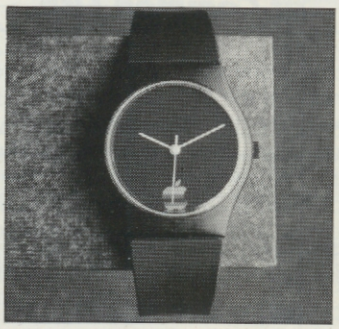
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STARLIGHT EXPRESS

David ffitch gets Apples in on the act



IF I asked you what do six video cameras, an array of theatre lights, a pair of roller skates, a stage manager and an Apple IIe have in common what would your answer be? The unlikely answer is "Starlight Express".

Andrew Lloyd Webber's musical, set among a model train set, was undoubtedly a technical masterpiece of theatre when the show opened back in March 1984.

During the show the trains (actors on roller skates) race on the different tracks which run around the auditorium and the front of the circle. The different levels on which the "Races" take place are linked together using platforms, and a six ton metal bridge, all using hydraulics which would look more at home as a press in a car factory.

In the middle of all the various tracks and moving pieces (like roller skaters) sit the audience. Here a problem arises: The people sitting upstairs in the circle, can't see the skaters beneath them on the stalls track, and there's the same problem when the skaters are on the circle track for all those sitting in the stalls.

Fortunately, this problem is solved by the use of the aforementioned video cameras, situated all around the auditorium. The pictures are vision mixed at the video control desk situated at the rear of the auditorium,



** David ffitch is video deputy stage manager for Starlight Express*

the output finally being projected by three large screen video projectors, two screens for the stalls and a larger one for the circle.

With the cameras so remote from the video desk, and the cost of six camera operators far too great, a method of remote control was needed so at the centre of this operation you will find an Apple sitting right next to my vision mixer.

The system for moving the cameras was actually a spin off from the lighting system used in Starlight Express. A London firm called Lightworks was commissioned to design and build movable lights with the facility to move up and down, side to side, and change the colour of the light beam using a colour roller system.

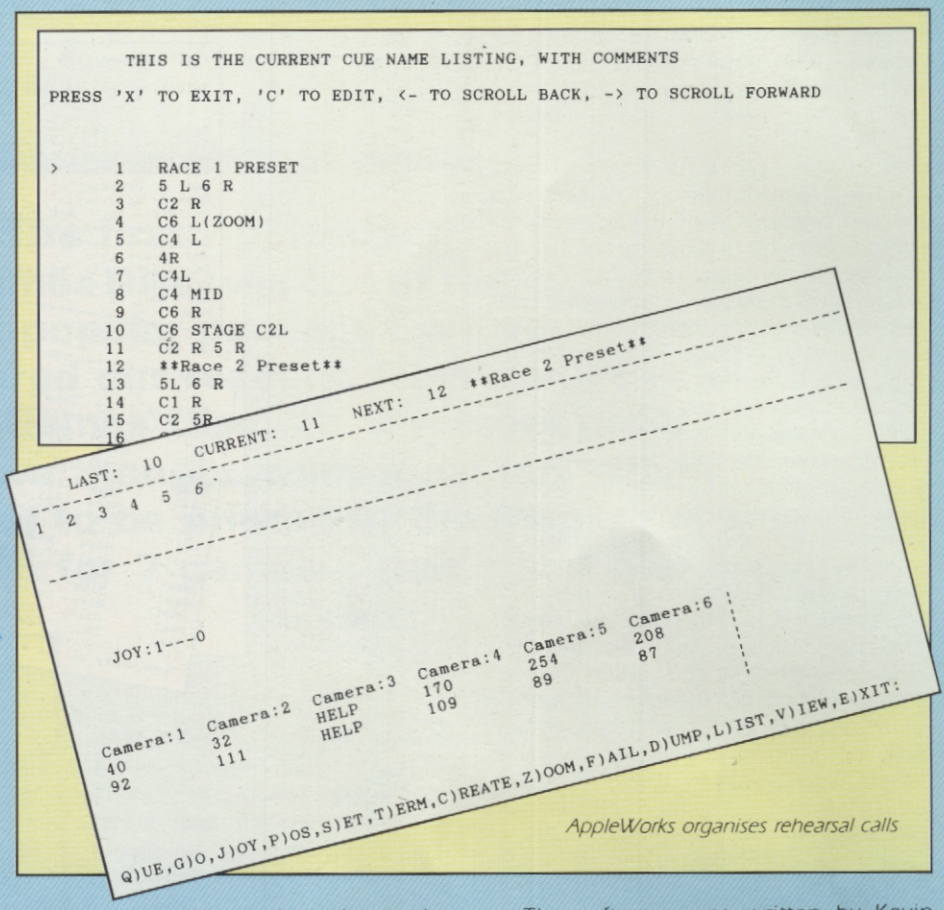
Preset cues

This system named MRL, or as we more affectionately call them Ayatollahs, went from design to construction in less than three months. The whole system was designed around the Apple IIe using a single disc drive, 80 column card and a serial communications card for its connection to the outside world.

The Ayatollah units themselves carry onboard microprocessors, basically holding the preset cue positions in its own memory. The Apple is used both to program the unit and, when in an operating mode, send to the unit the next cue number and its "GO" command.

The Apple then monitors the unit's progress while executing a cue, refreshing the coordinates on screen, and basically makes sure that in my case the camera is pointing in the right position. These positions are read as Pan and Tilt (X and Y) simply, by using potentiometers attached to the respective axles. For the lighting version, another sensor is used to detect the number of times the roller has turned, this corresponding to a current colour position.

As I have mentioned, both lighting and camera units are situated quite a way from their controlling Apples, therefore a "buffer box" is employed. This has the effect of a bi-directional amplifier for the information both sent to, and received from, the Ayatollah units.



AppleWorks organises rehearsal calls

The software was written by Kevin Neville of Lightworks. Understandably, given the short development time, it is not that user-friendly, but it serves its purpose. Apart from the Go command, other commands allow you to dump the onboard Ayatollah memory to disc, reload the memory from disc – very handy on those occasions when the unit has ditched its memory – set and store positions for the preset camera/light positions and a small text editor for the comment section, which appears next to the current cue.



Picture mixing

I have made a few changes to the original software, basically on the screen appearance, and cutting down on disc accessing, every time a Go command was given, a comment was read from disc before the relevant information was sent to the remote unit. This was easily solved by changing from dos 3.3 to Prodos, and setting up /RAM to hold the 'COMMS' (comments) file. The change of disc operating system produced a few teething problems, but with these soon debugged the system ran a lot faster.

During races, the video uses two operators. I mix the different pictures from the six cameras all around the track, and my assistant, operating the Apple, provides me with the correct shots for that particular race.

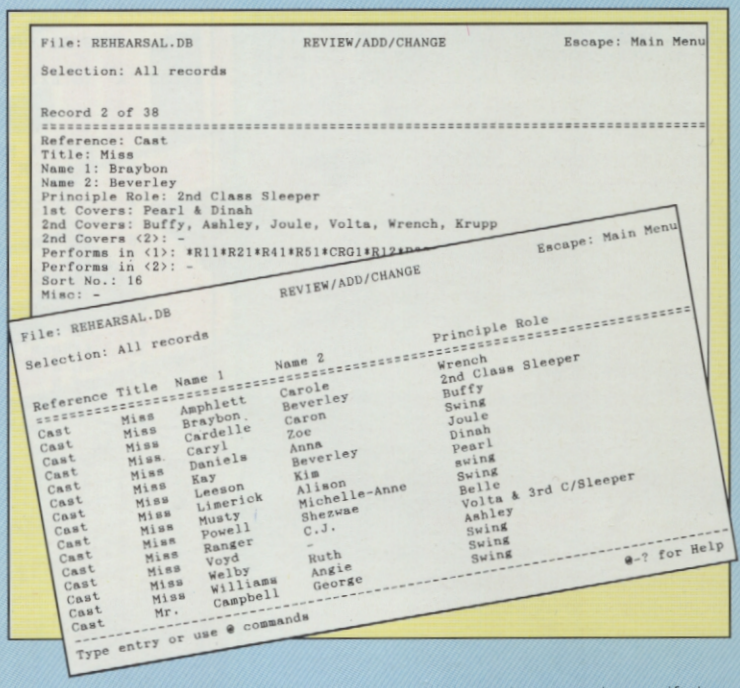
Pressing a button to move video cameras to a preset position sounds easy, but this job is very artistic – starting the cue at the ▷

correct time can mean the difference between an excellent panning shot of the skaters racing around the track, or wonderful shots of the walls with not a person in sight!

All in all the system, originally designed as a new form of moving light, seems to function better for us on the video side at Starlight, probably because we only use the pan and tilt functions: The colour rollers always seem to throw up problems for the electricians working here. In the words from one song in the show, "Wasn't in the right place, at the right time..."

So, we've covered the array of lamps, six video cameras and in general the roller skaters – enter the stage manager. Simon Garrett fills that role at Starlight Express, being responsible for the technical aspect of the show for the last two and a half years of its run basically making sure that everything is "all right on the night".

He also has a tremendous amount of paperwork to cope with this includes scheduling rehearsal calls, which involves picking the correct members of the 42 strong cast to be at their various understudy calls, organising stage schedules – whether the stage is available for technical work or for rehearsals, keeping contact lists, ordering skate parts – the list is endless.



Custom-written software makes sure the camera is pointing in the right direction

Rehearsal calls

All of this was done until recently by using a big stock of typewriter ribbons, and a vast amount of biros. That was until the day that Simon caught me using AppleWorks out on the 'Video desk', where I should have been replotting camera positions.

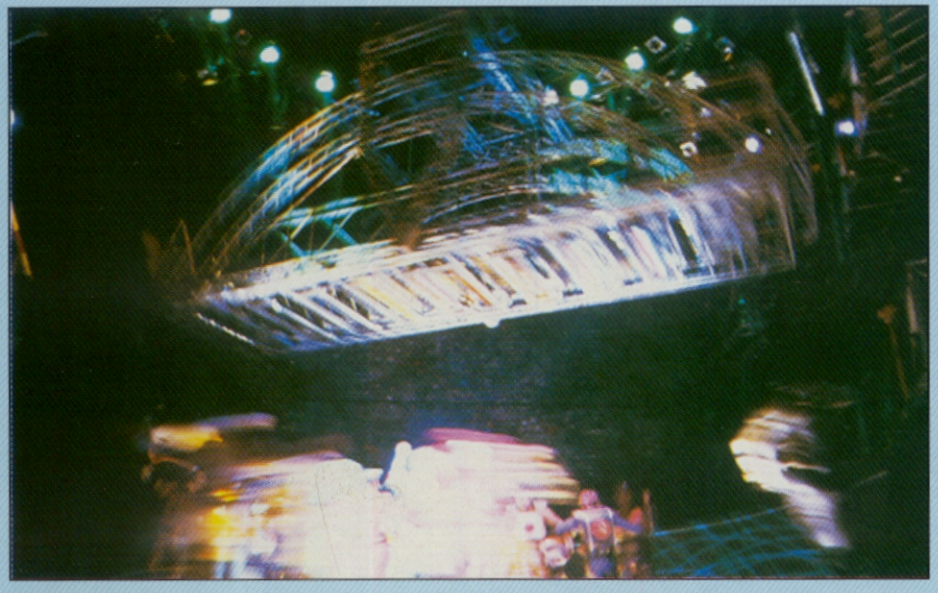
After giving him a quick trip around AppleWorks, showing him the word processor and a couple of my database files, Simon could already see the possibilities of its use toward easing his own manual workload. The merits of the word processor were obvious, but the database seemed an excellent candidate for the address book, and could revolutionise rehearsal calls.

Having sought permission from our general manager to purchase an Apple for our office, the system was quickly bought, and in operation. We acquired a IIe, 64k 80-column card and two disc drives. Epson UK kindly supplied us with an LQ-800 printer and interface so we were ready to start our own big bang.

I can say that the first couple of weeks were very painful for me, changing from the old manual to the new computer system. Being the only person at that time conversant with AppleWorks, having to set up, and input all the various databases, two spreadsheets and teach Simon how to use these different functions, I found myself spending every moment glued to the keyboard.

I also had the problem of the cast huddled around the new acquisition at the end of the room, each of them asking if they could type their name in, or if they could play space invaders! Then there were the sceptics, even in our own department I'm afraid to say – probably because the printer encroached slightly on the typewriter space – referring to the Apple as "That thing over there". However, with the typewriter moved out of the way, I am glad to report no cases of sabotage, as yet.

The office Apple has helped Simon immensely to deal with the backlog of paperwork, and to speed up scheduling so that the old hours spent sorting through pieces of paper are now down to a minimum, leaving more time to deal with important matters.



A six ton metal bridge links the tracks across the stage

What next?

I have only found one problem: My copy of Print Shop seems to go missing quite often. Simon has learnt very quickly how to use AppleWorks and other programs, which is due to hands on experience, I would say, although sometimes I have to lock my disc box to keep hands off !

Where do we go from here? We are hoping to expand our office system with a hard drive, extended memory and hopefully a Flipper card. All the different areas in which AppleWorks is used tends to spread over several floppies and could be managed better on a hard drive. The Flipper card would be wonderful for using enhancement products like Sensible Speller/Grammar and such like.

One main aim for the future is the possibility of putting live graphics into the video coverage of the races, similar to those seen in American football. These would be projected with the pictures from the cameras on to the video screens during the show.

With the wonderful graphics capabilities of the IIgs or the Mac, why shouldn't we do that with an Apple? □

◁set up a database in a different application. If so, all is not necessarily lost. As long as the application will save the database in Ascii format, MergeWrite may be able to read this version of it.

In order to test this, I saved a Microsoft Works database of mine using the Export File option. MergeWrite seemed to cope with this perfectly well. In fact Works has its own form letter facility so somebody with this package wouldn't need MergeWrite. Having said that, MergeWrite is simplicity itself to use.

Although it's not a database package, it will allow sorting of the records for printing (see Figure IV). For example, you could use the sort facility to print out the letters in alphabetical order of country in the address. This could well be useful when it comes to mailing the letters. You can even sort on more than one field – say, by last name within country.

Printing out

Once you've got the form letter and database document sorted out, printing is equally simple. You can either set the program to churn through non-stop, or you can be prompted before printing each copy. In this case, the program shows you the data about to be used and asks you to either confirm printing or skip this data. In this way, you can weed out any oddities, although at the cost of having to stay there during the print run.

MergeWrite isn't the most powerful package I've ever used, but it works well and does everything it claims to do. The 22-page manual is concise but shows signs of having been rushed – for example, page 7 ends mid-sentence but page 8 starts with a new topic.

However, if you're trying to run a small business on a shoe-string or struggling to keep up with college administration while facing yet another cut-back in funds, a package like MergeWrite could well make your job easier without requiring you to spend a long time learning to use it. □

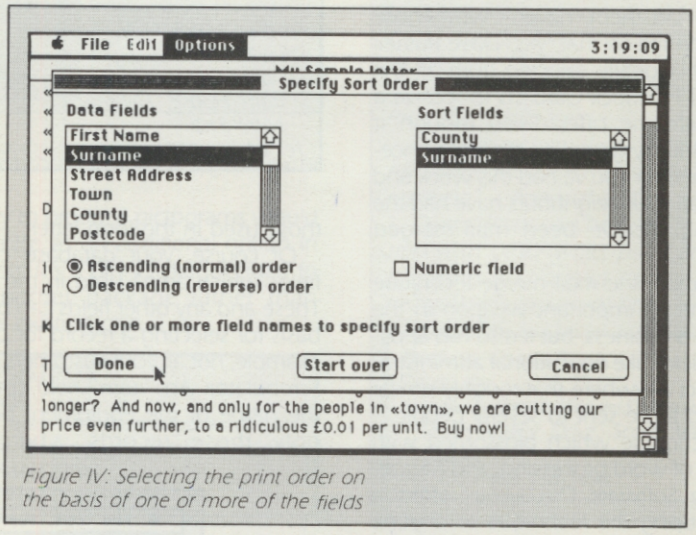


Figure IV: Selecting the print order on the basis of one or more of the fields

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AppleUser
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Appletip

This subroutine reads the keyboard and converts lower case text to upper case. To remove the temptation to press CR, no cursor is displayed on-screen.

It was used for multiple choice menus, where minimum operator input was required, and characters could be entered as upper or lower case. It returns with a character string, K$, and a number, KD.

```
499 REM Subr to read Kbd
500 POKE 49168,0 : REM Clr Stb
505 KD = PEEK (49152) : IF KD < 128
    THEN 505 : REM Wait for key
510 POKE 49168,0
515 KD = KD - 128 : IF KD > 96 THEN
    KD = KD - 32: REM If L/C make U/C
520 K$ = CHR$ (KD) : KD = VAL (K$)
525 RETURN
```


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Transfer fees

Geoff Wood converts AppleWorks spreadsheets to Excel

THE review of ProLink (*Apple User*, October 1987) confirmed my experience that it is easy to transfer AppleWorks word processing files to MicroSoft Word or Works. But as N.S.R. Duffin found (Feedback, December 1987), it is not easy to transfer AppleWorks spreadsheet files to Excel or Works.

ProLink will not read AppleWorks spreadsheets files directly; it will only read text, Ascii, DIF and SYLK files. A client of mine had many AppleWorks spreadsheet files to transfer, so I needed to find a way.

First, I saved an AppleWorks spreadsheet as a DIF file. Excel and Works cannot read DIF files, but I transferred it to Dos 3.3, loaded it into VisiCalc, then read the VisiCalc file into Multiplan (on an Apple II), saved the Multiplan file as a SYLK file, transferred it to Prodos and used ProLink to transfer it to the Mac where it could be read directly by Works or Excel.

But DIF files do not save the formulae so these had to be re-entered at some stage, either within VisiCalc, or in Multiplan before creating the SYLK file, or in Excel or Works. Moreover, some of the AppleWorks files were created on an Apple II with extra memory, so they were too large to read into Multiplan which offers only 35k in an Apple II.

Next I tried transferring an AppleWorks spreadsheet via the clipboard into an AppleWorks word processor file. However, when I transferred this file with ProLink and loaded it into Excel, the contents of the columns of each row of the original worksheet did not appear in separate columns – they were all in the first column with text spilling over into others.

Like Mr Duffin, I realised that this problem could be solved by using a word processor to insert tab characters, but I felt that this method was too tedious.

Asci files?

In an attempt to find alternative methods, I tried printing an AppleWorks spreadsheet to the disc as an Ascii text file. When I tranferred this file by ProLink and read it into Excel, the contents of each cell across Row 1 of the orginal worksheet appeared in successive cells down Column A, followed by the content of Row 2, and so on.

In the process of printing to disc, the formulae were converted into answers. In Excel, I used the Transpose command to transfer the data out of Column A into the correct rows, then I used the Copy and Paste Special (Values Only) commands to fix the data into the cells.

Although this method was tedious, it was quicker than retyping the data and probably less prone to error. I tried to transfer the formulae by using the Open-Apple+Z command in AppleWorks to display the formulae, then printing the file to disc, transferring it to the Mac and reading it into Excel. But this file proved to be exactly the same as the previous Ascii file: The formulae were converted into values.

By now, the problem had become a challenge. Out of curiosity, I went back to the AppleWorks word processor file and tried importing it into the spreadsheet program of Microsoft Works as a text file. Lo and behold, it came up with most of the labels and values in the right cells.

Like the DIF method, this process did not transfer the formulae, only the values. But whereas the DIF method converted the answers to the formulae with several decimal places, this process converted with the values as displayed.

Fortunately, many of the formulae simply added up the columns and rows so it was easy to reconstruct them by entering a formula at the bottom of one column or the end of one row and copying them across into the other columns or down into the other rows.

Problems arose where there were empty cells or centred labels in the original worksheet, but these could be overcome by modifying the original. Also, I found it best to delete narrow columns which contained only demarcation symbols. The Works file could be transferred to Excel as a SYLK file.

This method was fine for small files (though you may need to set the platen width to 13.2in and the characters per inch to 17) but it would not work with large files because the AppleWorks clipboard is limited to 250 lines. I found that I could transfer large files in sections, but it was a tricky process. Recent versions of Applied Engineering's modified version of AppleWorks allow up to 2000 lines on the clipboard, but you need a RamWorks or UltraRam card.

Try anything!

Then I remembered that Works and Excel can read files created by Lotus 1-2-3 with the suffix .WKS, so I used VIP Professional (*Apple User*, July 1987) to convert an AppleWorks spreadsheet to a .WKS file. Unfortunately, ProLink would not transfer the .WKS files to the Mac.

I tried using Access II and the communications program in Works with the Apple II and Mac connected by cable. The .WKS file transferred all right, but Excel would not read it.

In a "try anything" mood, I printed the VIP Professional file to disc as a file bearing the suffix .PRN. This file transferred all right with ProLink, and when I imported it into ▷

```
File: SUMMARY                    REVIEW/ADD/CHANGE              Escape: Main Menu
=========A==========B==========C==========D==========E=========F========G====
  1|SUMMARY            Jan         Feb         Mar      Totals
  2|
  3|Dept A      1100         1000         1200         +B3+C3+D3
  4|Dept B      800          700          900          +B4+C4+D4
  5|Dept C      1400         1300         1500         +B5+C5+D5
  6|
  7|Totals      +B3+B4+B5    +C3+C4+C5    +D3+D4+D5    +E3+E4+E5
  8|
  9|
 10|
 11|
 12|
 13|
 14|
 15|
 16|
 17|
 18|
--------------------------------------------------------------------------------
A1: (Label) SUMMARY

Type entry or use @ commands                                    @-? for Help
```

The original AppleWorks spreadsheet, dumped, warts and all, with OpenApple+H

Works as a text file, most of the data came up in the right cells. However, as with the AppleWorks word processor method, the formulae were lost in the process.

Finally, I found an answer to transferring the formulae. An option within VIP Professional allowed me to print a file to disc with the formulae. When I transferred this file with ProLink and read it into Excel, the contents of each cell appeared down Column A – *with the formulae*. The contents of each cell were preceded by the coordinates of the cell and a colon.

Summary

	A	B	C	D	E
1	SUMMARY	Jan	Feb	Mar	Totals
2					
3	Dept A	1100	1000	1200	=B3+C3+D3
4	Dept B	800	700	900	=B4+C4+D4
5	Dept C	1400	1300	1500	=B5+C5+D5
6					
7	Totals	=B3+B4+B5	=C3+C4+C5	=D3+D4+D5	=E3+E4+E5

The finished spreadsheet transferred to Excel, with formulae displayed

Final touches

I tried again, but before reading the file to Excel via Works, I used Word 3 to strip out the coordinates and colons. I used the Transpose, Copy and Paste Special commands and found that this technique put the formulae into the right cells, but as labels.

It was then necessary to edit the formula by inserting = signs and replacing .. with : in SUM formulae. I went back to Word and edited the formulae, but found that after using Paste Special in Excel, formulae were converted to answers. I reverted to the method that gave formulae as labels.

I wrote a macro to perform the Transpose, Copy and Paste Special commands but I still had to edit the formulae by hand.

To perform these methods of transferring files from AppleWorks to Excel you need VIP Professional and Microsoft Works as well as ProLink and a 3.5in drive on your Apple II. If you have many worksheets to transfer, it may be worth buying the programs. Alternatively, you could find someone with the programs and the right hardware and pay them to convert your files.

I felt that there must be an easier way, and eventually found a dealer who said that a program called File Exchange (to be released with the new system folder for the Mac) would transfer all types of Prodos files to the Mac. I was told that AppleWorks spreadsheets could be transferred and read by Works.

I can't wait to get my hands on this program to see if this is the easy answer. □

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Apple Writer made easier

Geoff Wood offers more of his tested tips for Apple Writer users

Tab and print format files

You can set up special tab and print format files and save them on a disc by using the Control+Q menu. If you want to use these files immediately after starting up, you don't need to use the Control+Q menu: Start up Apple Writer, but when the copyright screen appears, remove the program disc and insert the disc with your special versions of the tab and print format files which must have the names SYS.TAB and SYS.PRT. With the Prodos version of Apple Writer, this disc must have the same volume name as the program disc, for example, AW2MASTER.

Using your printer as a typewriter

The Apple IIe and Prodos versions of Apple Writer have an option in the Control+Q menu to connect the keyboard directly to the printer. Some printers print out as you type, others print when you press the Return key. This can be useful for adding a postcript to a letter you have already printed.

Transferring text between computers

The Prodos version of Apple Writer has an option in the Control+O menu to set a printer/modem interface. You can then use the option in the Control+Q menu to transfer text files from one computer to another, for example, to or from a Macintosh or an IBM PC for which you will need a suitable communications program.

Addressing on an envelope

If you use Apple Writer for correspondence, type the address and print it out before you type the letter. You can embed a suitable left margin, say .LM20, before the address and perhaps also .LI1 for double spacing. Don't forget to reset the margin and spacing before printing the letter; the safest way is to embed the commands .LM0 and .LI0 after the address before you print it out.

Printing page numbers and footnotes

Apple Writer does not print out the page number and footnotes at the end of the last page unless you embed the .FF code at the end of the document. Do not press the Return key after the .FF, otherwise it may print another page bearing only a page number.

Using the top margin

If you set the top margin to zero, you may find that the first two printed lines are too close together, especially with hand fed paper. If so, leave the top margin set at one line, even though it makes it more difficult to locate the exact position of the first printed line on letterheads or forms.

Counting the words

The Apple Writer disc has a WPL program for counting the number of words in a file. On some versions it is called COUNT, on other versions COUNTER. To operate it, press Control P, type DO COUNT (or DO COUNTER), press the Return key and enter the name of the file. It loads in the file and, after a time, displays the number of words in the file.

How does it work? It converts all the carriage returns to spaces, converts all the multiple space gaps to single spaces, then counts the total number of spaces.

A faster but less accurate method is to take the number of characters in the file, as displayed on the data line, and divide it by six.

Locking files for protection

When you save a file with a name that is already on the disc, the Prodos version of Apple Writer asks if you want to replace the original file but Dos3.3 versions do not – Nor does the Prodos version if you use the = sign with Control+S.) To prevent accidental loss of important files, use Control+O and C to lock the files. It is easy to unlock a file if you wish to amend it.

Saving disc space with shortened files

If you load in a Dos3.3 file, shorten it and resave it, the file still uses the same amount of disc space as the original file. You can save disc space by deleting the file from the disc before resaving it. Prodos automatically uses fewer blocks, provided you have deleted sufficient text.

Rearranging files on a disc

If you have several files on a disc and you load in and expand some of the earlier files and save them, the extra text is saved on tracks which are not adjacent to the first version. Eventually, you may have problems because the read/write head in the disc drive has to jump tracks as it loads in the file.

To avoid this problem, load in each file in turn and save it on a new disc. Alternatively, you can use the Apple Filer program or similar utility to copy the files from one disc to another. Don't just copy the disc: This makes an exact copy of the original disc, so you may have the same problem.

Using the Word Processing Language

Newcomers to computing may find the Word Processing Language (WPL) formidable but it's easier than Basic because it has fewer commands. If you follow the manual, you should soon be able to write some very useful programs. For example, you can get it to number or renumber the paragraphs in a document.

Printing lines starting with full stops

A full stop after a carriage return tells Apple Writer not to print that line but to interpret any embedded code that follows the full stop. To print a line of full stops, or a line that starts with a full stop, the manual tells you to leave a space at the beginning of the line. However, this space is apparent on the printout.

To eliminate this space, set the left margin for all the text to at least 1, then embed margin settings .LM1 and .LM+1 before and after the line that starts with a full stop.

Alternatively, you can use space characters instead of a carriage return before the line that starts with a full stop. If the margins for printing do not correspond with the screen display, you can adjust the number of spaces so that it prints the full stop at the beginning of the line. Test it by printing the text to the screen.

Printing 1.5 spacing

Apple Writer can print with double spacing (.LI1), giving three lines per inch with most printers. Some printers can be set to give eight lines per inch, which, with double spacing, prints four lines per inch, equivalent to 1.5 line spacing.

On some printers, the line spacing can be set by sending Escape codes which can be embedded in Apple Writer by using Control V.

Using the glossary

If you use certain words or phrases frequently, put them into a Glossary file which you can load in off a disc. Although these are limited to 2048 characters, you can have as many Glossary files as you wish, and each could include a command, say, gControl Qe, to load in another Glossary file. □

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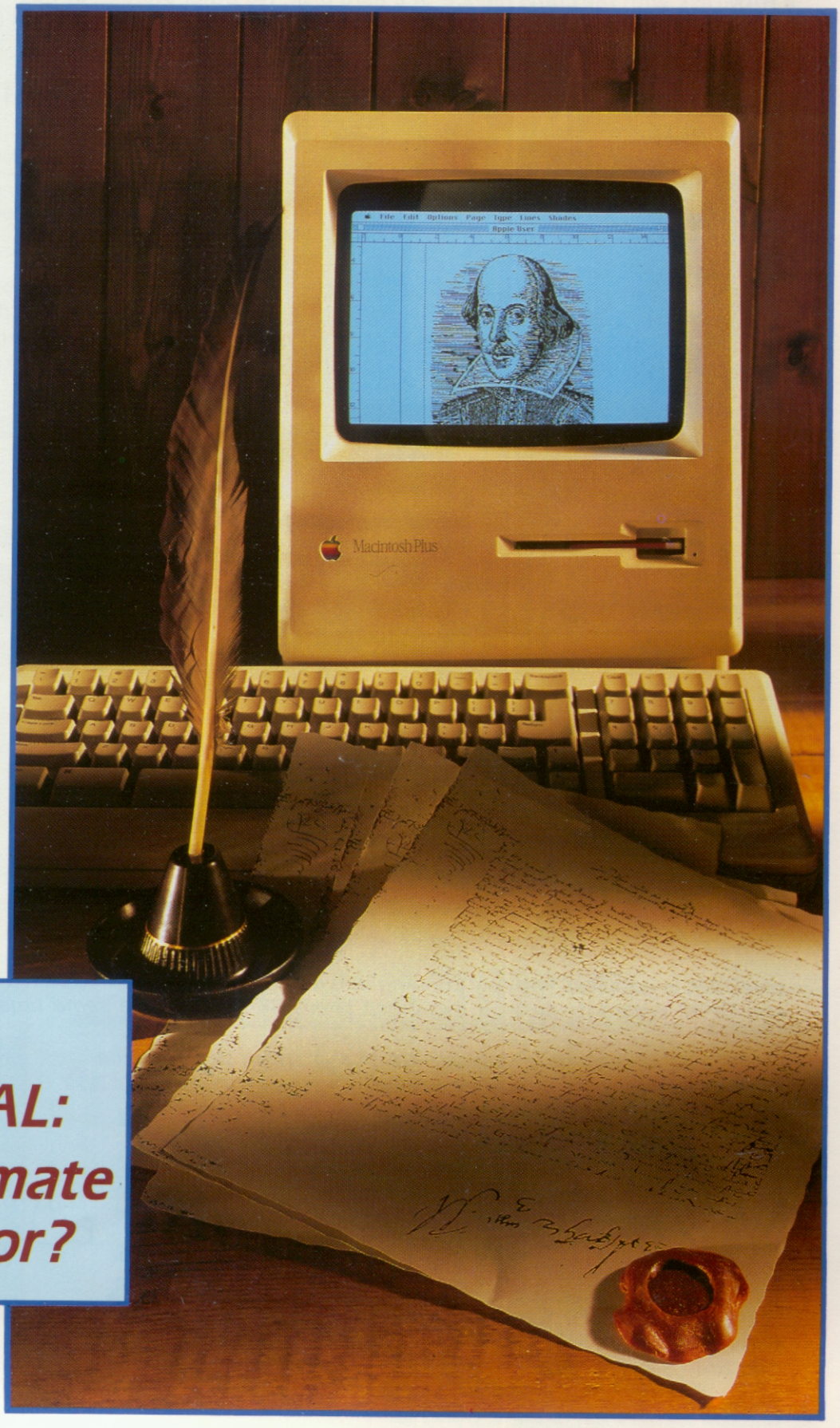
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FULLWRITE PROFESSIONAL: Is this the ultimate word processor?



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Adobe wins top award

IN the face of stiff opposition from WordPerfect 4.2 and Davrelle, Adobe Illustrator was voted Software Product of the year in the 1988 RITA Awards.

Illustrator's combination of detailed hand drawing facilities and Macintosh speed and precision clinched the title, much to the delight of Jerry Byrna, managing director of Adobe Systems Europe.

"The RITA awards are a recognition of excellence in the field of information technology so I am delighted that we have won this prestigious award", he said.

"Adobe Systems is committed to providing high quality software and we will be making several product development announcements during 1988 designed to keep our products at the forefront of the market".

This is the second award for the package, which was last year voted Business Software of the Year in the British Microcomputing Awards.

Survey winners

THE reader opinion survey in the October issue of *Apple User* generated a phenomenal response.

Your helpful comments have been collated and noted by *Apple User*, and many suggestions and ideas will be incorporated in future issues.

Bidmuthin aided us in compiling the questionnaire and donated £1,000 in prizes.

From the huge numbers of entrants in the prize draw there could only be 10 winners:

Hans Lund, Denmark; J R Comley, Stanningon; Y Kawahara, Belgium; K Kishimoto, Withington; L Daly, Castleblayney; P Owen, Bristol; J Zakaria, Owlthorpe; A McGrady, Baldoyle; F S Roberton, Kelso; and J D F Howard, Chalford.

Each will receive one of the following: MultiScribe/Top Draw Bundle, Pinpoint GS Starter Pack, Point-to-Point/Pinpoint Bundle, Visualiser-GS; MultiScribe GS, Document Checker, Point-to-Point Communications, Quark Catalyst, AutoWorks, FontWorks.

Enter the wysiwyg spreadsheet...

WHAT is claimed to be the first wysiwyg spreadsheet for the Macintosh – Wingz – has been announced by Innovative Software (01 890 8641).

The program offers an array of features that includes a 32,768 row by 32,768 column matrix, user-definable functions, sparse matrix memory management, minimal, natural or background recalculations, and relational spreadsheets.

Wingz will run on either the Macintosh operating system or under the A/UX implementation of the Unix operating environment, taking full advantage of the Apple MultiFinder and the A/UX multi-user/tasking capabilities.

"The program represents a leap forward in business application technology and reflects the advances in new generation hardware", said Michael J Brown, president of Innovative software

In addition to the range of spreadsheet features, Wingz offers a number of desktop presentation capabilities, including graphics toolbox, import of scanned images, paint and draw files.

Up to 256 stylesheets are also included, allowing users to define formatting, justification, fonts and a choice of 16 million colours.

...and the small screen comic book

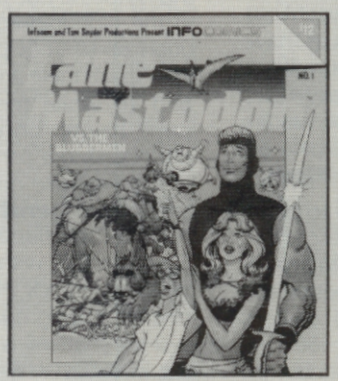
PIONEER in the field of interactive storytelling, Infocom has announced a totally new concept in Apple II entertainment software.

Infocomics brings the comic book alive on the Apple – with animated illustrations, sound effects and cinematic techniques.

The blend of comic books and technology is the result of a partnership between Zork creator Infocom and near neighbours in Cambridge, Massachusetts. technical innovators Tom Synder Productions.

Tom Snyder says Infocomics "are not computer games – there are no puzzles to solve, arcade sequences to master or goals to achieve.

"I wanted to create a product that even my mother would love – something simple to use, escapist like a movie and rooted in pop culture".



Each Infocomics program will contain an intricate intertwining storyline which allows the user to follow the separate paths of each character.

"Different paths reveal different thoughts, flashbacks, dreams and perspectives, enabling the plot to unfold in a manner totally unique to this new storytelling medium", says Snyder.

Only four keys are needed to view the story and the pages turn automatically. By pressing the keys users can fast forward, stop, or rewind as simply as with a VCR. Switching to a different path in the story is achieved with Return/Enter.

Infocom (0101-617-492-6000) has announced three initial Infocomics titles for release in March – Lane Masterdon, Gamma Force and Zorkquest – each priced at $12

YET another record tumbled when Apple announced its most recent sales and earnings figures.

With net sales of $1.042 billion (£588.7 million) in the three months ending in January of this year, Apple logged its first billion dollar quarter.

After tax, that meant a rise in net income of 108 per cent to $121.4 million when compared with the same period last year.

"We are very pleased with this record performance", said John Sculley, chairman and chief executive officer. "Apple's 1987 calendar year revenues passed $3 billion (£1.7 billion) which we feel is a significant milestone".

Hosts will get a warmer welcome

TWO new development tools from Apple – Mac APPC and MacWorkStation – are intended to enhance communication between Macintosh computers and host systems.

MacAPPC, a software implementation of IBM's Logical Unit 6.2 and Physical Unit 2.1 protocols, allows the development of Macintosh applications which take advantage of the best capabilities of both the Macintosh and host systems.

Potential applications include distributed databases, transaction processing and other cooperative processing applications.

MacAPPC supports the Macintosh II, SE and Plus, which can share information with the IBM host either by direct connection or over the AppleTalk network system with a Macintosh II serving as a shared SNA gateway.

Included in the package is HyperCard APPC, a stack development tool that lets programmers create applications that can include graphics and sound as well as well as text, and navigate through large amounts of information.

MacWorkStation is a development tool that brings the benefits of Macintosh technology to host environments, allowing users to take advantage of the Mac interface, filing and printing features.

New roms for old

Gordon Danby discusses the 11e's enhanced roms which can produce some unexpected results

I WAS recently asked to look at an Applesoft/Dos 3.3 disc filing program which had started to misbehave. A little detective work revealed that in fact the program worked correctly on an old Apple II+, but incorrectly on a IIe fitted with the enhanced roms.

Further investigation showed that the fault lay within the disc file itself. Using Copy II+ it was clear that when the file was created by the IIe with the enhanced roms, 16 extra spaces were inserted after strings had been PRINTed to disc. This problem was traced to the lines of Basic which PRINTed the strings to disc.

Space problem

In the program several strings were PRINTed in one line, the strings being separated with commas. The program in Listing I illustrates the point: It will work as expected on a II+ and on an unenhanced IIe, but will not work on an enhanced IIe nor on a IIgs. I have been unable to test it on a IIc.

The problem is that 16 extra spaces are inserted in the disc file after the two strings FI$ and SE$ and this causes the READing part of the program to go haywire. You might expect this, given that the file is expected to have a very definite structure.

Further investigation shows that the program will also misbehave with sequential as well as random access files, and that the same problems occur with Prodos 8 and Prodos 1.1.1 – and it does not matter whether 40 or 80 column screens are active at the time.

It's not difficult to see that the problem arises from the comma tabbing of the PRINT statement: Clearly, the enhanced roms have had the PRINTing routines changed to accommodate 80 column cards. I was interested to see if anyone else had found the same problem, and if so, what steps they had taken to circumvent it. I searched through old copies of *Apple User* and various American magazines and questioned several dealers and Apple UK, but to no avail.

It's not totally surprising that no one has reported the old/new roms' discrepancy before – it is, after all, unusual to use comma tabbing when PRINTing to a disc file. Normally a string separator such as a carriage return would be written to the file simply by using line:

```
160 PRINT FI$ : PRINT SE$ : PRINT TH$
```

rather than the comma-tabbed line 160 of Listing I. Another quite common approach would be to separate the strings with another character such as a comma which would be deliberately written to the file.

For example:

```
160 PRINT FI$;",";SE$;",";TH$
```

Possibly this is what the original programmer was intending.

Comma tabbing

Out of interest I looked at the code in the old and new roms to see how they differed where comma tabbing is involved. In both the routine which PRINTs to any destination is at $DACF – this is at $FF/DACF in the IIgs. The comma of a comma tabbed print statement is found by the routine at $DAE2 and a branch is taken to $DB03.

Here the two roms differ. In the old rom the value at $24 which holds the horizontal cursor position for a 40-column screen is checked to see if it is less than decimal 24 and if so is increased to the next column tab position by the code

```
LDA $24
:
:
ADC #$10
AND #$F0
STA $24
```

If the output is to the screen, the monitor routines which do the printing then use the value in location $24. However, if the output is to disc, location $24 is not used and as a result spaces never appear in the file.

In the new rom extra code has been inserted via a JSR $D8DD so that the softswitch status location at $C01F is read to see if the 80-column card is active. If it is, the horizontal cursor position is read into the accumulator from location $57B rather than from $24 and the value in the accumulator is increased to the next tabbing position as before and then a JSR to code at $F7CB occurs.

Here, however, the new values are not stored back into $24 or $57B. Instead, the

Turn to Page 14 ►

```
10  TEXT
   : HOME
   : CLEAR
20  INPUT "ENTER FIRST STRI
    NG
   :";FI$
30  INPUT "ENTER SECOND STR
    ING
   :";SE$
40  INPUT "ENTER THIRD STRI
    NG
   :";TH$
50  A = LEN (FI$)
   :B = LEN (SE$)
   :C = LEN (TH$)
60  PRINT
70  INVERSE
   : REM   SET INVERSE TO E
    XPOSE ANY ADDITIONAL SP
    ACES. DOING THIS HAS N
    O EFFECT ON THE PROBLEM
80  VTAB 5
   : PRINT "STRINGS AS ENTER
    ED"
   : PRINT
90  PRINT "FIRST STRING IS"
   ;FI$
   : PRINT
100 PRINT "SECOND STRING IS"
   ;SE$
   : PRINT
110 PRINT "THIRD STRING IS"
   ;TH$
   : PRINT
120 NORMAL
130 D$ = CHR$ (4)
140 PRINT D$;"OPEN TEST.FIL
    E,L80"
150 PRINT D$;"WRITE TEST.FI
    LE,R0"
160 PRINT FI$,SE$,TH$
170 PRINT D$;"CLOSE"
200 PRINT D$;"OPEN TEST.FIL
    E,L80"
210 PRINT D$;"READ TEST.FIL
    E,R0"
220 INPUT TEMP$
230 PRINT D$;"CLOSE"
240 F$ = LEFT$ (TEMP$,A)
   :S$ = MID$ (TEMP$,A
    + 1,B)
   :T$ = MID$ (TEMP$,A
    + B + 1,C)
250 INVERSE
   : VTAB 15
   : PRINT "STRINGS AS RECOV
    ERED"
   : PRINT
260 PRINT F$
   : PRINT
270 PRINT S$
   : PRINT
280 PRINT T$
   : PRINT
290 NORMAL
```

Listing I

◀ From Page 13

number of spaces required to move to the new position is calculated by subtracting the value already in $24 or $57B from the value held in the accumulator and further code then outputs spaces as required.

Obviously, in the new roms the spaces are output no matter what the destination is and so 16 spaces are added to a disc file since neither $24 nor $57B is being updated by the filing system.

What then is the solution to the problem? The best answer is to avoid commas in PRINT statements when writing to disc files. Instead, PRINT each string separately. However, if you have a program which has been in use a long time and which has generated many data files, it could be very time-consuming to rewrite the code and the data files with the new structure required.

```
1    TEXT
   : HOME
   : VTAB 10
   : PRINT "Please Wait, App
     lesoft Loading"
2    X =  PEEK (49281)
   :X =  PEEK (49281)
3    PRINT  CHR$ (4)"BLOAD F
     PBASIC"
4    X =  PEEK (49283)
   :X =  PEEK (49283)
```

Listing II

Fortunately there is a way round this problem if you are using Dos 3.3 and change to an enhanced IIe. The solution is to add the file FPBASIC from your Dos system master to your work disc and to add the lines from listing 2 to the beginning of your startup program.

This has the effect of loading a version of the old roms into the language card area and running Basic from there rather than from the new roms. On finishing with the program it might be worthwhile switching back to the new roms via a Reset.

AppleUpdate



Spring cleaning

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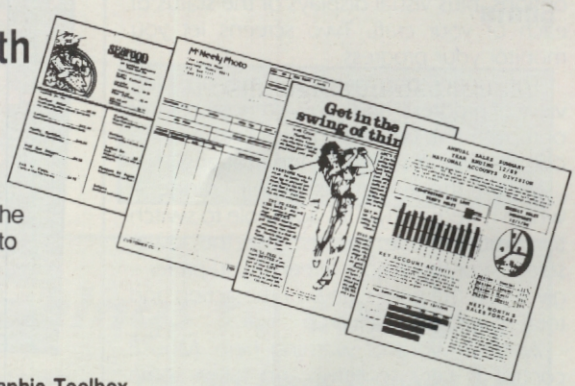
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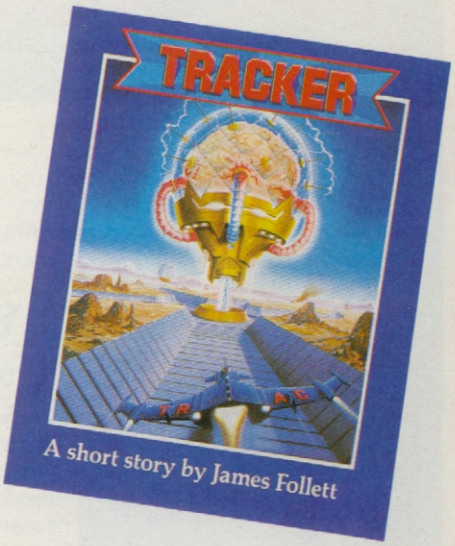
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Something for everyone



TRACKER, the latest Mac release from Rainbird refuses to slot neatly into any category – it's best described as being part shoot-'em-up, part flight simulator and part strategy game.

Packaging is up to Rainbird's usual high standard, and includes a novella which also serves as a copy protection device.

The method's probably familiar by now – on loading the program you're asked to input a word from a given line and paragraph. Be warned: Watch your typing.

The game, for want of a better word, is set in the future in a sprawling communications complex called Centrepoint. The complex consists of hundreds of nodes, linked by pathways, which shape up onscreen as six hexagons surrounding a central area.

Your aim, as pilot of a skimmer craft, is to knock out the communications node at the centre of each hexagon, then the command centre in the main area.

At the start you in fact have control of six skimmers – two more become available if you live long enough – which can be moved independently under manual or "automatic" control.

In the latter case, you select a destination node with the crosshairs – which can be scrolled across a map of the whole complex – and your skimmer will head for it regardless until ordered otherwise.

Long distance movement is not to be recommended, however, as Centrepoint is guarded by scouts and defender craft which rapidly home in on and attack intruders.

The screen supplies the usual game options, plus visual displays of the status of each of your craft. Two screens let you monitor your progress.

The upper one gives a close up plan view of progress, and allows mouse control of movement, while the lower presents the overall view in several magnifications.

When the enemy is within range – which is frequently – it's advisable to switch to combat mode. In this case the lower screen – or the whole screen if you prefer – gives you the pilot's view of the action and total mouse control.

Another word of warning here: Mouse control is very sensitive and takes some getting used to.

And with the passageways you're flying through being narrow and twisted, it's as well to get some practice in before trying maximum speed – especially as you lose vital energy each time you bounce off the walls.

As if contending with navigation wasn't enough, you'll also have to down the opposition – which flies at full tilt – with your mouse operated (and fortunately inexhaustible) phaser.

Good shooting will allow you to collect a quark bomb, which you'll need to destroy the communications nodes. Success there will arm you with a neutron bomb, the only weapon powerful enough to destroy Centrepoint's command centre.

So far then, you need to be an expert pilot and marksman who doesn't get distracted by the warning beeps and messages the Mac throws at you.

So much for tactics: But the real fun in Tracker comes in planning your overall strategy.

There's no point heading straight for your target, guns blazing and hoping for the best. Every enemy unit around will move in for the kill, herd you into a corner and take advantage of their speed and fire power to wipe you out.

But with cautious movement, frequent switching between skimmers to distract the opposition and careful planning you can

Sauce for all sexes



"CHESTNUT hair, tousled by the wind, frames the tanned oval of his face. Lips curving, his eyes rake over your inadequately dressed body, the damp chemise clinging to your legs and heaving bosom, your gleaming hair."

In case you think you've somehow picked up a copy of Intimate Confessions instead of your favourite computer magazine, let me explain. That extract was taken not from Barbara Cartland's most recent pulse-throbber, but lifted from the opening of Infocom's latest text adventure, Plundered Hearts.

It also happens to be Infocom's first attempt at putting the female of the species firmly and squarely in the driving seat. In other words, the hero of this adventure is a heroine. I trust I make myself clear.

Could an adventure so unashamedly pitched at the fairer sex still appeal to the male population? Should I dare be seen playing it? Would I be able to stomach what were likely to be some pretty yukky passages?

Well, it does, I did and I was. Much to my male chauvinist porker surprise, I found that after one or two initial shocks to the system – viz being dressed in a frock and feminine underwear for one and almost being ravished by a smelly sailor for another – I soon settled in and began having a thoroughly enjoyable time.

Amy Briggs, the author of Plundered Hearts, is reported as having read romance novels by the barrowload in her researches – and it shows. She certainly seems to have captured the style and passion of such torrid works – at least, so far as my limited reading of such literature goes.

The story is set in the 17th century "Where the seas are as wild as the

prolong your active life almost indefinitely.

The degree of control which the Mac allows over the various maps, particularly the zoom in features, make Tracker a real pleasure to handle, and no two games are ever the same.

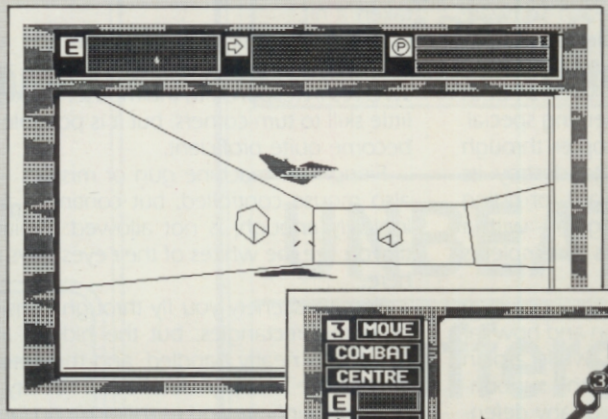
A final warning: The game starts slowly, so try for a while if you try before you buy. After a while you'll be wishing things would slow down.

There's enough action to satisfy the shoot-'em-up addict, enough flying for any armchair pilot – and enough mental stimu lation to convince you that you shouldn't really be using the Mac for something more serious.

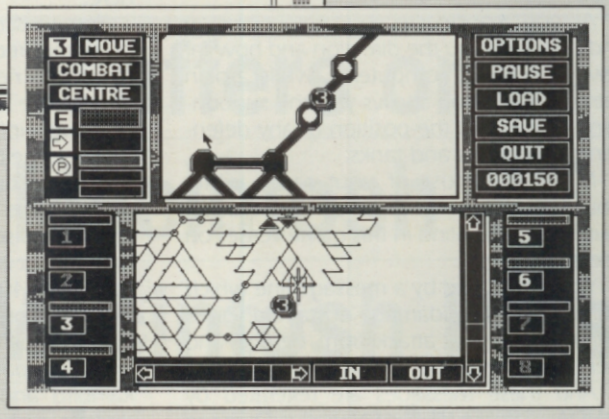
Recommended.

Hugh Michaels

Product: Tracker
Price: £19.95
Requirements: Macintosh
Supplier: Rainbird Software, Wellington House, Upper St. Martins Lane, London WC2H 9DL.
Tel: 01-240 8838



Combat mode allows a full-screen view of the action



The upper screen shows the progress of the selected skimmer, the lower the overall picture

untamed heart of a young woman". You are aboard the schooner Lafond Deux on your way to the West Indies to minister there to your ailing papa.

The adventure wastes no time but plunges you right into the action and doesn't let go.

Before you can say "Pass me the sal volatile", the schooner is attacked and boarded by pirates. The air is filled with the sound of fighting as you take cover in Captain Davis' cabin while he goes aloft to lend a hand.

Then in bursts a brutish looking individual by the name of Crulley who strips you with his eyes, drools and then advances menacingly.

But before he can compromise your honour, in charges the pirates' leader, Captain Nick Jamison, alias The Falcon. As all square-jawed heroes do, he soon sorts out friend Crulley. But that's not the last you'll be hearing from Crulley – like all bad pennies, he'll turn up again.

As you'd expect from Infocom, the prose is literate and rich in detail, and interacting with the program could not be more pleasant.

On a minor point, although the command parser is extremely powerful and the vocabulary much more than satisfactory, there is the occasional hiccup. At one point, I picked up a hat and tried to look inside it – the program responded "You can't look inside a hat!". Since when?

Elsewhere, I tried to search a pile of clothes and was asked, "Which clothes dost thou mean, the pile of clothes, the linen chemise or the cloth frock?". When I indicated the pile of clothes I was told "You can't search a pile of clothes". Yet it let me acquire them. Odd. Makes you wonder if Infocom is subjecting the games to as much testing as it used to.

Neat touches abound. For instance, when saving a game, the program responded with "Aye-aye". On trying to read a book in the library, the reply was "You pick one at random. You always preferred horses to reading so you put it back". And for a bit of fun, see what happens when you try to strip off in front of the crew – I couldn't resist that, MCP that I am.

The pace and atmosphere of Plundered Hearts is what carries it along. Clearly the writer has done her homework and, while the puzzles may not prove too troublesome for hardened adventurers, there is no doubt that this is a very entertaining product.

For an adventure purportedly aimed at females, Plundered Hearts is likely to be enjoyed just as much by even the most macho of male adventurers. Well done, Infocom and well done, Amy Briggs.

Brillig

Program: Plundered Hearts
Price: £29.99
Supplier: Infocom/Activision, 23 Pond Street, Hampstead, London NW3 2PN.
Tel: 01-431 1101

Shape of things to come

NEW games destined for release in the next few months will please a lot of people.

Apple II users will have Wizardry IV to contend with – a three disc epic adventure, well supported by graphics and certainly not for novices.

For the less seasoned traveller there's Bard's Tale II. This is not an inexpensive second instalment but one which will be welcomed by addicts to Bard's Tale. With new and even more puzzles to baffle you, it is bound to be a winner.

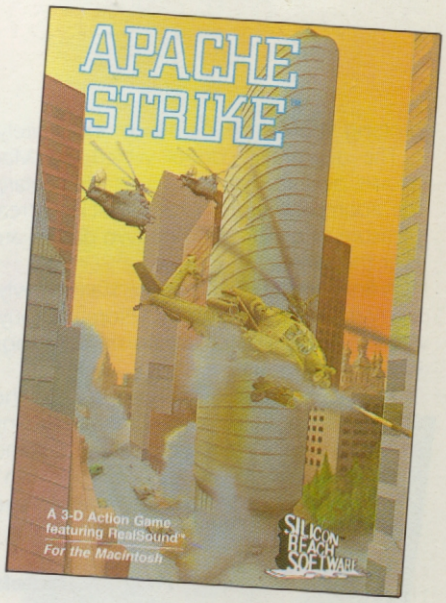
For Mac users, Rainbird has three new products due for release shortly.

The first is Jinxter, from the Magnetic Scrolls/Pawn/Guild of Thieves stable and set in the fabled land of Aquitania.

Also look out for UMS – Universal Military Simulator – a must for the military strategist.

Or for naval types there's Carrier Command. Though primarily a shoot-'em-up, it's a game that calls for forethought and planning.

No pause for thought



PEDIGREE can matter in games and Apache Strike from Silicon Beach Software has a good one. The use of digitised sound in Airborne broke new ground in games, and when that's combined with smooth graphics you can expect something special.

You have to pilot a helicopter through the tower blocks of a city to destroy its defence computer. Your reward for doing this is that you get to do it again – with a more heavily guarded city: It's as simple as that.

As you manoeuvre your helocopter an indicator tells you the direction and how far away the target computer is, while a plan view "radar" map shows you the surrounding blocks and the position of any defending helicopters and tanks.

Make the most of your radar while you've got it – enemy action can knock it out, and flying blind in this game verges on the suicidal.

You are helped by a message line which tells you of any damage sustained, gives early warning of attack from behind and generally tries to be informative.

And these messages are reiterated by LINDA – Lifelike Inboard Narrative Damage Assessment – your talking computer. As Linda is the name of the owner of the reassuring digitised American voice, the acronym is hardly coincidental.

You also get a display of your score, the total of enemies remaining, a fuel gauge – and a cracked radar screen if you've already taken a hit.

The main view is from above and just behind your helicopter, which jinks and swerves in response to the mouse. It takes a little skill to turn corners, but it is possible to become quite proficient.

Firing – of machine gun or missiles – is also mouse controlled, but continous fire, logically enough, is not allowed: Waiting till you see the whites of their eyes pays off here.

The 3D scenery you fly through consists of simple rectangles, but the hidden line removal is neatly handled, and the enemy targets are sharply detailed. The city is seemingly infinite and as there are no landmarks to help you navigate, you must rely on your instruments.

The game comes on a single, unprotected 800k disc and is easy to transfer to a hard disc. It is also possible to copy the files on to two 400k single-sided discs and play the game on older machines.

If you don't have access to an 800k drive, don't despair – just return the disc to Rainbird and you'll get two single-sided discs in exchange.

The game will also run on a machine with only 512k of memory – but you lose the dulcet tones of LINDA and the satisfaction of watching the blades on your helicopter rotate.

Apache Strike is in the fine tradition of shoot-'em-up games, with lots of action but not much plot – not that that matters. It's a fine alternative from frustrating puzzles, and you can really let off steam and have a good time.

Mike Cook

Product: Apache Strike
Price: £44.95
Requirements: Ideally, 1Mb Macintosh with 800K drive
Supplier: Silicon Beach/MacSerious, 17 Park Circus Place, Glasgow G3 6AH.
Tel: 041-332 5622

Sophistication pays off

KNIGHT Orc is large – so large that it is split into three separate parts. And because it is so big, there is no room left for graphics on the Apple II version. That said, even the text-only version is different enough to be entertaining.

As in most adventures, you take the role of the hero. Or rather, you take the role of Grindleguts (or Gringleguts, depending on where you start reading the manual). As Grindleguts you certainly have the main part – but in this case the star is an ill-smelling, cowardly orc.



Orcs, as seasoned gamers and Tolkien addicts will be aware, have been persecuted by adventurers for generations – is it possible that you now have a chance to get your own back?

The game starts in splendid style, with you being challenged to a fight by a human knight. The only trouble is that someone has tied you to your horse and you can't run away, much as you'd like to.

Apparently your erstwhile orc chums did this to you while you were intoxicated, volunteering you as their champion while you snored on.

Because you're a yellow-streaked, somewhat repellent lump of orcanity, you'll be spending much of your time running away from potential duffings-up – at times it seems as if the entire population has got a personal grudge against you.

And that's one of the drawbacks of the game. Although a generous helping of characters is to be desired in any adventure, there are so many in Knight Orc (more than 70), all making random appearances, that at times you become a little bewildered by all the to-ing and fro-ing.

On the plus side, no mapping is required: You simply state where you want to go – major locations are mentioned in the text – and the program will take you step by step along the appropriate route.

Go, Run and Find are the main commands for movement, and you can also use them to locate objects which you have previously seen or mislaid.

Characters can be talked to, followed and even ambushed – the powerful parser allows you to carry out such interesting (if antisocial) actions as "Wait for the innkeeper and attack him".

Simultaneous action is also possibe. For example, you can instruct a character to go off and find something while you carry on with your own business.

UpDATEing AppleWorks

David Grigg makes sure you've got the right time on your hands

ONE of the milder but more annoying examples of American cultural imperialism is the way that so many software packages require that you enter the date in the American format of month/day/year. For example, 8/29/87 for 29 August 1987.

Now this annoys me. It annoys me because I find the format we use in Australia and Europe to be logical and consistent: Day/month/year. For example, the above date is 29/8/87. And to be forced to adopt a non-logical format because the software I am using is American makes me grit my teeth.

Software developers should be aware that their packages are used in countries outside their own and they should provide optional date formats, much in the way that Apple has done with the IIgs and its internal clock.

Changing format

It's amazing how irritating these seemingly minor things can be. After the umpteenth time that I booted up AppleWorks and had to remember to type the date in American format, I'd had enough. Particularly after several occasions when I entered the date "wrongly" and then had to reboot to get it "right".

Many long hours later, after several midnight sessions at the computer and bleary-eyed breakfasts spent poring over printouts, I had the answers. I have now modified my copy of AppleWorks so that:

- The date you enter on boot-up is accepted – and required! – in Australian/British format: Day/month/year.
- Dates shown for files on disc – when using "Add new files to desktop" or "List all files on disk" – are shown in day/month/year format.
- In the special DATE categories of the database, dates are now displayed with the day first, for example 19 Sep 87 rather than Sep 19 87. This avoids ambiguous entries when the day or year is absent such as Dec 30, which could be either 30 Dec (no year) or Dec 1930 (no day). Entries with no day are shown with a hyphen, for example, – Dec 30.
- Date may be entered in the DATE categories of the database as day/month/year or day-month-year. Other forms of date entry such as Oct 20 87 or 20 October 1987 are still accepted.

I first made these modifications available as short notes through the American newsletter Open Apple but they are here expanded with more information. They are listed in the order in which I managed to implement them, with exponentially increasing difficulty. Modification 4 was particularly tough because of the very sophisticated way in which AppleWorks interprets varied date formats entered into the database.

Each of these modifications is independent of the others and you can choose whichever suits your taste. But in total they mean that all date entry and display in AppleWorks is in Australian/British format, day/month/year.

Naturally, having achieved this gives me intense satisfaction. But, given that Apple had access to the source code and the software author, why couldn't they make these simple modifications to the copies of AppleWorks not distributed in America?

Making the 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.

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

Version by version

My modifications were done to AppleWorks version 1.2, 1.3 and 2.0. On the whole the changes are similar in each version, but 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.

Therefore, to make the job easier, I have printed a list of the bytes around each area of modification along with a description of what I found. This 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

Turn to Page 22 ►

```
LDX #$01 <    ;X will point to position in input buffer (month)
JSR  $2414    ;this routine is at $268A in version 2.0, it returns
              ;hex value of 2 chars in input.
BEQ ERROR     ;if zero there is an error
CMP #$0D      ;error if greater than or equal to #0D
BCS ERROR
ASL
ASL
ASL           ;shift the month value
ASL
ASL
STA  $BF90    ;put shifted value into LSB of date
LDA #$00      ;clear the high bits
ROL           ;putting carry into the lowest bit
STA  $BF91    ;store highest bit of month

LDX  #$04 <   ;point to position of day in input buffer
JSR  $2414    ;$268A in version 2.0
BEQ ERROR
CMP #$20      ;greater than or equal to 32 is error for day
BCS  ERROR
ORA  $BF90    ;add day to existing data on the month
STA  $BF90
LDX  #$07     ;point to position of year in input buffer
JSR  $2414    ;again this is $268A in version 2.0
CMP #$53      ;compare against (19)83 – if less there is an error
BCC  ERROR
ASL
ORA  $BF91    ;store the data for year into the byte
STA  $BF91
```

Table I: The locations where Prodos stores its system's date

◀ *From Page 21*

merely want to patch your AppleWorks.

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

The first modification is on your copy of the startup disc: All the others are on the copy of the program disc. In the lists of the patches to be made I have put the original bytes and underneath them the new values. A couple of dots (..) implies that the byte is left unchanged.

Startup modification

I found this patch to the boot disc by looking for references to locations $BF90 and $BF91, which are the locations where Prodos stores its system date. It does this in a particular format, which made tracking down the code a bit easier. Prodos combines the two bytes and packs the year, month and day into them like this:

	BF91	BF90	
bit	7 6 5 4 3 2 1 0	7 6 5 4 3 2 1 0	
	year	month	day

So, working from this, the highest bit of the month is in $BF91.

The code I found is as shown in Table I. Of course, to fix this code to accept day/month/year, it is only necessary to change the LDXs so that the code looks for its figures in different locations in the input string. For example:

1 2 3 4 5 6 7 8
0 8 / 2 9 / 8 7

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

We change the first LDX #$01 to be LDX #$04 and the second LDX #$04 to be LDX #$01. Simple, Now AppleWorks looks for the day where we want to put it. The sequence of bytes to look for then are for version 2.0

OLD: A2 01 20 8A 26
NEW: .. 04 .. .. ..

and a little further on, find:

OLD: A2 04 20 8A 26
NEW: .. 01 .. .. ..

On my disc these were in Track 0B, Sector 02, or if you are using ZAP the bytes occur in the file APLWORKS.SYSTEM in the offset block $0B. That is, if the file starts at block $28 (as it does on my disc) then the patches occur in block $33.

With versions 1.2 and 1.3 I found the necessary bytes in Track 07, Sector 0C and the sequences to change are:

OLD: A2 01 20 14 24
NEW: .. 04 .. .. ..

and a little later on:

OLD: A2 04 20 14 24
NEW: .. 01 .. .. ..

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

On the same disc, you might find it worth finding the text which gives the example date ("in the form: 3/20/83") and changing it to a European/Australian standard example. This occurs in the same file in the offset block 8. That is, I found it in block $30 on my disc.

● *More patches will be printed next month . . .*

Apple *Bookshelf*

Advanced AppleWorks

David Stevens sees whether this new book lives up to its title

ADVANCED AppleWorks takes you very carefully through each step of each area of AppleWorks and very clearly sets out, in words and figures, what to do and what you will then see on the screen.

It covers all versions of AppleWorks, but does not include mail merging from version 2, nor does it cover any of the welter of popular add-ons and pop-ups now available.

The book starts with a rather short chapter, which doesn't promise much, on setting up AppleWorks on your computer and assumes a IIe or IIc with 5.25in drives.

Very little is said about the use of extra ram cards and the size of desktop, and no mention is made of the patches available to make AppleWorks recognise such cards or to run on the II+. And no help is given with setting up printers which do not appear in AppleWork's list – the book merely refers you back to the manual's appendix.

But it is a different story when the author is describing AppleWorks in use. The book is by way of being a substitute for the manual and is possibly easier to follow because of the step-by-step, detailed approach. This is spelt out in words and is lavishly illustrated with screen dumps and diagrammatic help.

I find the organisation of AppleWork's manual a little annoying when searching for something which I know exists but cannot quite remember, whereas in Advanced AppleWorks I can always rapidly track down information – although admittedly not by using the index, which is certainly lacking in some respects.

There are five parts to the book – getting started, word processing, the spreadsheet, the database and a miscellany of clipboard, data transfer and database alterations. There are also appendices on commands, printer options and memory management, although little more is said here than I have indicated above.

The quick way of finding anything is to go via the contents pages, then scan through the figures. I find I can very quickly spot what I am looking for as there are many more pictures than in the manual.

The only real disappointment with this book is that the title – Advanced AppleWorks – seems to promise more than there is. I was hoping for a chapter at the end filled with tidbits which would increase my productivity and my enjoyment.

I feel there should be room for tips to help in moving around the screens quickly, in embedding the more arcane printer commands into the system and maybe to get graphics out of dot matrix printers.

Any new edition should also cover the more popular AppleWorks enhancements, their advantages and disadvantages and tell the reader more of what he can expect to achieve with their aid.

Title: Advanced AppleWorks
Price: £16.95
Author: David C-H. Bolocan
Supplier: TAB Books Inc., Blue Ridge Summit, PA 17214.
ISBN 0-8306-0148-1 (pbk)

◀ *From Page 23*

and use similar mouse techniques. The options include picture-picture and picture-word matching, block jigsaws, use of a matrix, and a memory/pelmanism game. Further games can be made, but only with a MatchMaker program exclusively available to registered owners.

Story Writer is one of the best child's word processors I've seen. Not only can you use all the Storybook font pictures in your writing, but you also have software-generated speech to read all or part of your epic to you. For those with only basic keyboard skills, the screen includes a KeyCaps-type display and mouse control can be used instead of key presses if preferred.

Hit for writers

All the children (and some not-so-young children) we let loose on Story Writer enjoyed it tremendously. It's a reasonable word processor and while there are problems with Macintalk ("bread" came out as "breed") the novelty value was worth it. The program is very encouraging to beginners and reluctant writers and a definite hit.

KidsNotes is the fifth game in the package and an obvious one from the publishers of Concertware. This is the section for budding Mozarts where they can play, record and listen to tunes. I found this a very acceptable mix between not being too hard to use and not being too basic.

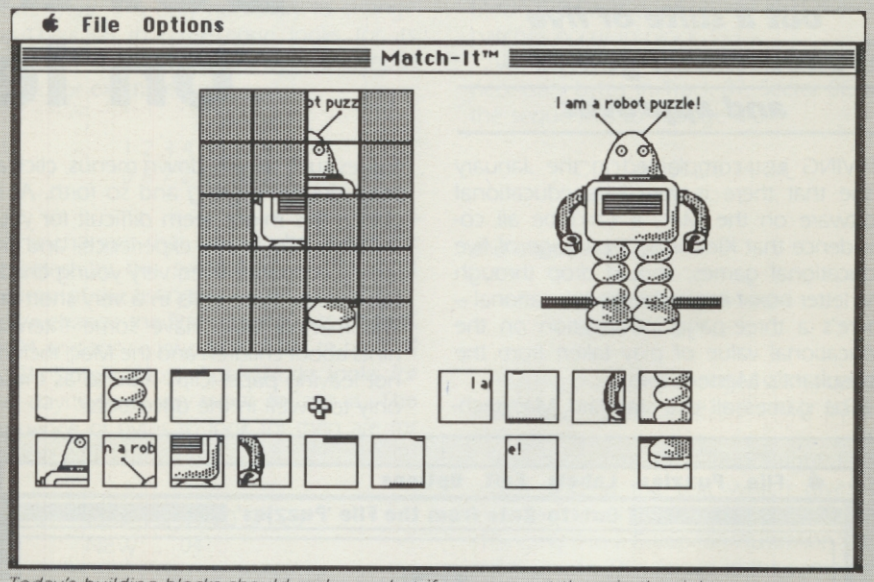
There's a section in the manual dealing with some basics of musical theory for the "musically unsure", but no prior musical ability is required. The tunes included on the disc are well-known and pleasant to listen to.

A for gems

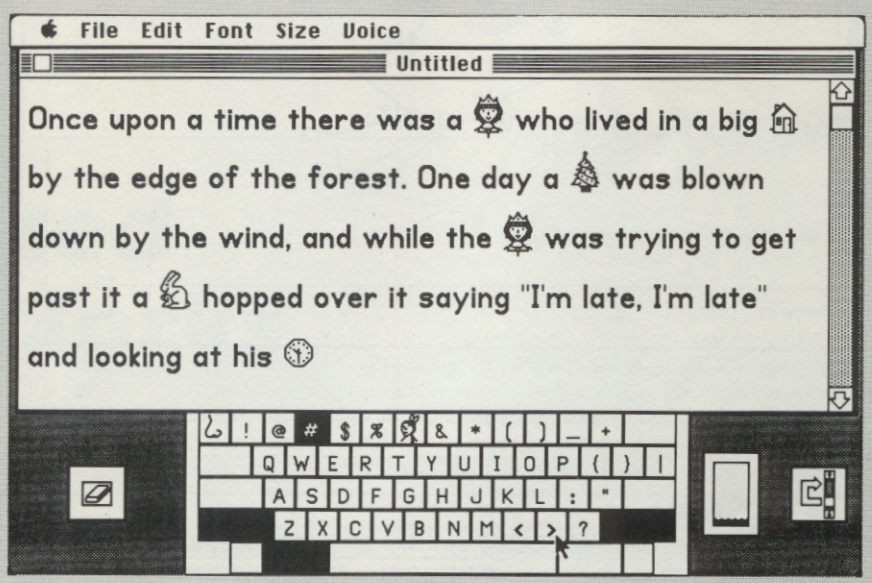
Great Wave has produced a well thought out mix of games. Most important, it's not been forgotten that they are aimed at children and the manual covers a lot of dos and don'ts for computer sense. The disc is double protected by the physical lock and a software file. Great Wave recommends copying the disc before use and deprotecting the copy (full instructions in the manual) so that stories, tunes and so forth can be saved.

It's a relief to see decent children's software appearing on the market. There are problems with KidsTime, but the overall package is good with a few gems. Don't buy it if you aren't prepared to lose your Mac until bedtime.

Product: KidsTime
Supplier: Great Wave Software, 5353 Scotts Valley Drive, Scotts Valley, CA 95066 USA.
Price: £35.65
Tel: 0101 408 438 1990



Today's building blocks should make a robot if you can get them in the right position. Devotes of earlier Scrapbook files should recognise him in pieces.



The story may not be Booker Prize material, but at least the keyboard will remind you how to do a screen dump – the black keys give the game away.

AppleUpdate

More for the print shop

IIGS owners of Broderbund's Print Shop can now add to their graphics library with The Sampler Edition.

The Sampler includes 10 fonts, 75 multi-colour graphics and 10 full letterhead panels.

Also included are 15 full page graphics, and a welter of new background patterns and borders.

Themes include food, travel, school, business and sports, and many of the graphic elements can be incorporated in designs for birthdays and other special occasions.

Product: Print Shop Graphics Library: Sampler Edition.
Price: £34.95
Requirements: Apple IIgs
Supplier: MGA MicroSystems, Pear Tree, Appledore, Kent TN26 2AR.
Tel: 0233 83571

DIVIDE AND CONQUER

Geoff Wood puts Cirtech's HD-Mate through its paces

ANYONE who has a Cirtech ram card (*Apple User*, September 1987) will be aware of Cirtech's programs which allow you to partition a ram disc into separate areas for Prodos, Dos3.3, Pascal and CP/M. However, these programs do not work with Pascal 1.3 – only 1.1 and 1.2 – nor do they work with hard discs.

Now Cirtech has developed a program called HD-Mate which partitions a hard disc into two separate areas for Prodos and Pascal 1.3. Without this program, Pascal 1.3 hogs the whole of the hard disc. You can partition a Profile hard disc for Prodos and Pascal 1.2 with the Pascal Profile Manager but, if so, Pascal 1.2 recognises only 64k of a 128k Apple IIe.

Requirements

To use HD-Mate you need either a 128k Apple IIe or an Apple IIgs with a Prodos compatible hard disc in slot 4, 5 or 6. Before using the HD-Mate program the hard disc should be formatted with Prodos. If you also want to use CP/M with your hard disc, you must install a CP/M Plus area before using HD-Mate – and Cirtech's CP/M Plus is the only implementation of the language that supports these separate hard disc areas.

The HD-Mate program is supplied on a 3.5in and 5.25in disc which are copy protected, but the program disc is needed only for setting up the hard disc so there is little likelihood of failure through frequent use. The brief but adequate instructions are printed on a small card.

When you boot up the HD-Mate disc, a menu offers you four choices, namely, install a Pascal area on a hard disc, modify a Pascal 1.3 startup disc, reformat the Pascal area and exit to Basic. When you choose the first option you are asked to specify which slot your hard disc is in.

The program looks for a non-removable Prodos disc in the slot: If it cannot find such a device, it displays a message to that effect. Thus HD-Mate will not work on ram discs, nor on 800k disc drives. It works all right on the Apple Profile and HD20SC hard discs, but some other hard discs may appear to HD-Mate as removable devices so it will not work with them. If you are not sure about your own hard disc, check with Cirtech before you buy HD-Mate.

Volume control

If the program recognises your disc drive, you can use the left and right arrow keys to increase or decrease the size of the Pascal area in steps of 128k, then press Return and Y. The Pascal area is split into two equal-sized empty volumes called HDMATE1 and HDMATE2 – if you wish, you can change the names of the two Pascal volumes to any legitimate Pascal volume names. Also, the catalog in the Prodos area has a new file called PASCAL3 which is used for switching from Prodos to Pascal.

The next step is to modify a Pascal 1.3 startup disc – working, of course, with a copy rather than your original. You can then start up Pascal from this and use the Pascal areas on the hard disc.

If you wish to reformat the Pascal area on the hard disc, you must not use the normal Pascal 1.3 Formatter because it will destroy the Prodos area. Instead, you must use the third option on the HD-Mate disc. This does not allow you to change the size of the Pascal area – if you wish to do that, you must reformat the hard disc with Prodos and install a new Pascal area.

If you want to start up Pascal from the hard disc, you should copy all the relevant files from your modified startup disc to the volume HDMATE1. You can then start up Prodos from your hard disc and run the PASCAL3 program. From Basic, type PASCAL3 and press Return, or use Alan Bird's Prodos selector which lists all the system files on the BYE command.

To revert to Prodos from Pascal, you can use the Quit command from Pascal or re-start the computer from the hard disc or from a Prodos startup disc.

When you catalog the Prodos area, you will find that the area occupied by the Pascal area is invisible. The only way to access it is to use the PASCAL3 program, which is a Prodos system file. Similarly, when you are using the Pascal area, the Prodos area is invisible.

I had no problems in using a Profile hard disc with HD-Mate. All the Prodos and Pascal commands work in exactly the same way as with ordinary disc drives. Once more, Cirtech has come up with a simple solution to a difficult problem.

Product: HD-Mate
Price: £43.70
Supplier: Cirtech, Currie Road Industrial Estate, Galashiels, Selkirkshire, Scotland, TD1 2BP
Tel: 0896 57790

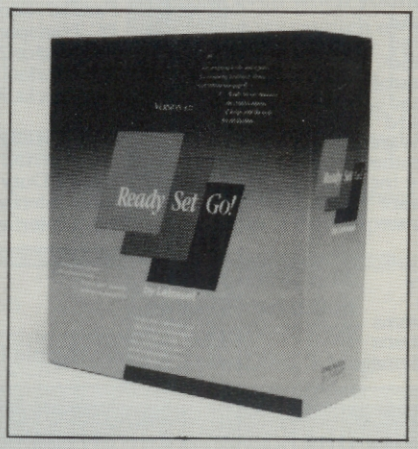
AppleUpdate

PUBLISHER Letraset has built on the success of its Ready Set Go desktop publishing package to release version 4.

Enhancements include a Style Editor, which allows new styles to be set up from scratch, stored, then used when required, and a 100,000 word expandable phonetic dictionary.

High resolution graphics have also been added, as have interactive pages and type specification sheets which aid precise placement of text and graphics – and the positioning and flowing of text round graphics.

Compatibility with other applications has been extended, and RSG4 will import text from MacWrite, Word and Write Now as well as Ascii files. It can also handle PICT, MacPaint, TIFF and EPSF graphic file formats.



Page sizes up to 99in by 99in are now supported, and oversized documents can be tiled for A4 laser printers.

As a result of the enhancements, Letraset claims that RSG4 offers the "ultimate balance between interactive design functionality and batch processing productivity"

The package includes a cassette-based introduction to using RSG4, and a 70-page book covering all aspects of page layout.

Product: Ready Set Go 4
Price: £570 (upgrades available from £50)
Requirements: Macintosh
Supplier: Letraset, 195-203 Waterloo Road, London SE1 8XJ.
Tel: 01-928 7551

For All Your Apple II Products It's Got To Be...

ACCOUNTS

Description	Publisher	Price
Macputer 5.25	Lorne Computers	£195.00
Macputer Profile 800K	Lorne Computers	350.00
Systematics Ledgers	Sapphire Systematics	89.00
Systematics Payroll	Sapphire Systematics	89.00

BUSINESS

Description	Publisher	Price
Pinpoint	Pinpoint Publishing	£49.00
Pinpoint IIe Upgrade Kit	Pinpoint Publishing	20.00
Pinpoint RAM Enhancement Kit	Pinpoint Publishing	20.00
Pinpoint Starter Pack IIGS	Pinpoint Publishing	79.00
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COMMUNICATIONS

Description	Publisher	Price
Point to Point	Pinpoint Publishing	£69.00
Vicom	AM Technology	75.00

DATABASE

Description	Publisher	Price
Notes and Files IIGS	Datapak	£69.00
Omnis 3	Blythe Software	249.00

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Description	Publisher	Price
Algebra 1 or 2	Eduware	£10.00
Algebra 3,4,5 or 6	Eduware	20.00
Arithmetic Skills	Eduware	10.00
Counting Bee	Eduware	10.00
Decimals	Eduware	10.00
Fractions	Eduware	10.00
Reader Rabbit IIGS	Learning Company	30.00
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Typing Tutor IV	Simon & Schuster	29.00

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Empire II Interstellar Sharks	Interactive Fantasies	10.00
Flight Simulator II	Sublogic	29.00
Gato IIGS	Spectrum Holobyte	20.00
Hacker II	Activision	25.00
Mean 18 Golf IIGS	Accolade	25.00
Perception 3.0	Eduware	10.00
Rendezvous Space Shuttle Simulation	Eduware	10.00
Scrabble	Electronic Arts	25.00
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Winter Games IIGS	Electronic Arts	25.00
Zork Trilogy	Infocom	39.00

GRAPHICS

Description	Publisher	Price
816 Paint	Baudville	£49.00
Dazzle Draw	Broderbund	35.00
DeLuxe Paint II IIGS	Electronic Arts	69.00
Draw Plus IIGS	Activision	49.00
Fantavision	Broderbund	39.00
GraphicWriter IIGS	Datapak	89.00
Multiscribe Picture Manager	StyleWare Inc	20.00
NewsMaker IIGS	Broderbund	59.00
Newsroom	Springboard Software Inc	29.00
PaintWorks Clip Art Gallery	Activision	20.00
PaintWorks Plus IIGS	Activision	39.00
Print Shop Companion	Broderbund	25.00
Print Shop Enhanced	Broderbund	29.00
Print Shop Graphics Holiday	Broderbund	15.00
Print Shop Graphics I,II,III	Broderbund	15.00
Print Shop IIGS	Broderbund	39.00
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Thunderscan	ThunderWare	179.00
TimeOut Graph	Beagle Brothers	55.00
TopDraw IIGS	StyleWare Inc	59.00
Visualiser IIe	PBI Software	59.00
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LANGUAGE

Description	Publisher	Price
Hands On Basic Programming	Eduware	£10.00
TML Pascal IIGS	TML Systems	79.00
TML Source Code Library	TML Systems	35.00
TML Speech Toolkit	TML Systems	45.00

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Description	Publisher	Price
Music Construction Set	Electronic Arts	£25.00
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Music Studio IIGS	Activision	39.00

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Description	Publisher	Price
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Copy II Plus V7.4	Central Point Software	20.00
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Multiscribe IIGS	StyleWare Inc	59.00
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Aristocard Parallel Interface	69.00
Cirtech Champion	42.00
Cirtech CP/M Prog Pack IIc	89.00
Cirtech CP/M+ System IIc	195.00
Cirtech PlusDisk 128K	119.00
Cirtech PlusDisk 512K	209.00
Cirtech PlusDisk 1Mb	399.00
Cirtech PlusDisk additional 64K	16.00
Cirtech PlusRAM 256K	89.00
Cirtech PlusRAM Extra	179.00
Cirtech PlusRAM extra memory 256K	25.00
Cirtech PlusRAM GS8	235.00
Cirtech PlusRAM GS8 1Mb Upgrade	125.00
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Apple Drive 5.25	175.00	145.00
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Apple Hard Disk 40SC	1195.00	995.00
Apple Mono Monitor	90.00	80.00
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Apple SCSI Interface Card	65.00	52.00
Apple SCSI Peripheral Cable	35.00	26.25
Apple Peripheral Adaptor Cable	20.00	15.00
Apple Exp Card 256K	95.00	75.00
Apple Extra memory per 256K bank	25.00	25.00
Apple Exp Card 1Megabyte	139.00	139.00
Apple Fan Kit	50.00	40.00
Apple Joystick	39.00	36.00
Apple IIGS Carrying Case	70.00	55.00

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Apple Drive 5.25	175.00	145.00
Apple Drive 5.25 Controller	50.00	41.25
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Apple Hand Controller	25.00	19.50
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Cooling Fan IIe	49.00	40.00
Heavy Duty Power Supply IIe	69.00	69.00

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Apple IIGS , Monochrome Monitor, Apple Drive 3.5 and Mouse	£ 850.00	£795.00
Apple IIGS Monochrome System 1Mb		
As above but with 1Mb	950.00	895.00
Apple IIGS Colour System 512K		
Apple IIGS , RGB Colour Monitor, Apple Drive 3.5, Memory Expansion Card with 256K and Mouse	1150.00	995.00
Apple IIGS Hard Disk System		
Apple IIGS, Monochrome Monitor, Apple Drive 3.5, Memory Expansion Card with 256K, Apple Hard Disk 20SC and SCSI Interface Card	1850.00	1695.00
Apple IIGS Hard Disk Colour System		
As above but with RGB Colour Monitor	2100.00	1895.00

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Apple Instant Pascal	90.00	74.25
Apple Pascal V1.3	180.00	146.25
AppleWriter II ProDOS	89.00	81.75
AppleWorks V2.0	140.00	131.25

APPLE IIGS PUBLICATIONS

Apple IIGS Firmware Manual	£22.95
AppleIIGS Hardware Reference	22.95
Apple IIGS Tech Ref Manual	17.95
Apple IIGS Technical Introduction	9.95
Apple IIGS Toolbox Revealed	20.95
Apple IIGS ProDOS 16 Ref Manual	26.95
Inside the Apple IIGS	19.95

PRINTERS

	Holdens Price	Educational Price
LaserWriter IISC	£1795.00	£1495.00
LaserWriter IINT	2995.00	2395.00
LaserWriter IINTX	3995.00	3295.00
LaserWriter SC to NT upgrade	1495.00	1095.00
LaserWriter SC to NTX upgrade	2795.00	2095.00
LaserWriter NT to NTX upgrade	1495.00	1095.00
ImageWriter LQ	895.00	695.00
ImageWriter LQ Cut Sheet Feeder	175.00	145.00
ImageWriter LQ Expansion Bin	125.00	100.00
ImageWriter LQ Envelope Attachment	45.00	33.00
ImageWriter I 15"	425.00	390.00
ImageWriter II	349.00	319.00
ImageWriter II Cut Sheet feeder	175.00	145.00
ImageWriter AppleTalk Card	159.00	125.00
ImageWriter II Memory option 32K	75.00	60.00
ImageWriter I Acc kits	31.00	28.50
ImageWriter II Case	49.00	44.25
Peripheral-8 cables	25.00	18.75
AppleTalk Connectors	50.00	37.50
Brother HR20 Daisywheel	445.00	445.00

Cirtech plusDisk

This must be the hottest product for the Apple II range of computers for a long time. This is not just another RAM card but a very versatile, battery backed up, storage device. Treat plusDisk as a RAM disk or exactly like a hard disk drive, the choice is yours. Copy AppleWorks onto plusDisk and it stays on even when your computer is powered down - now every time you switch on your Apple, AppleWorks appears in just under a second! And if that's not enough, plusDisk can be partitioned to allow switching between different operating systems (ProDOS, Pascal, DOS3.3 and CP/M). plusDisk is even secure enough to hold your Data without the risk of losing it.
Send for a fact sheet today for what must be the most exciting Apple II development since AppleWorks!

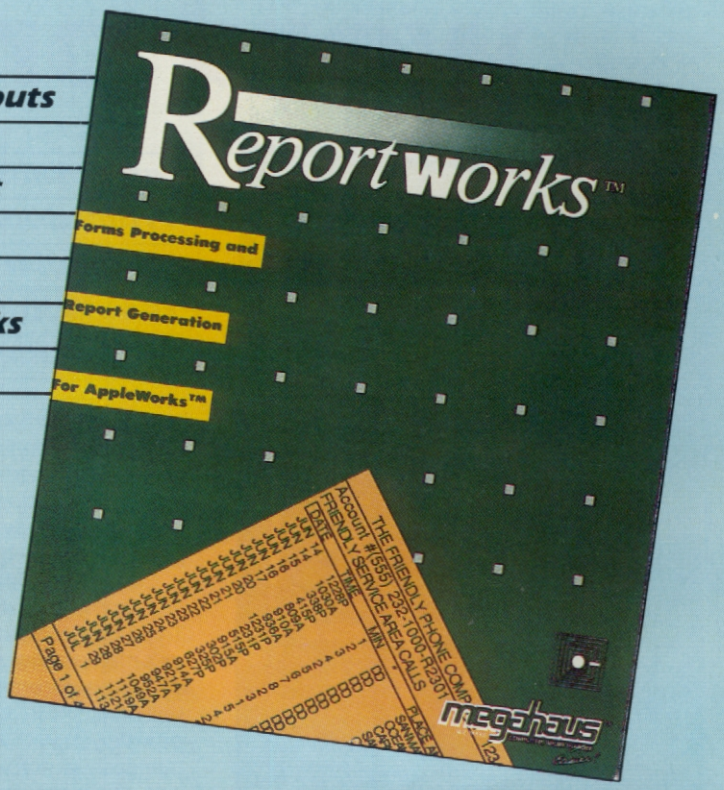
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Tel: (0772) 561321 or 52686

Complete Apple Support

Breaking bounds

Lew Norris puts himself on report with a new AppleWorks add-on



ANY program which enhances AppleWorks is worthy of investigation, and just such a program is ReportWorks from Megahouse.

Unsurprisingly, ReportWorks enables you to write reports. Since it is one of the functions of AppleWorks to produce reports by the clever way it imports information from databases and spreadsheets into the word processor, you may wonder why anyone would need ReportWorks.

But AppleWorks, good as it is, does have its limitations. One serious drawback, for example, is the loss of the ability to manipulate material with database or spreadsheet commands once it has been entered into the word processor.

While ReportWorks is *not* a word processor, you can save a ReportWorks file additionally as an Ascii file which can then be converted to an AppleWorks word processor file, if required.

With ReportWorks you can import information from up to eight existing AppleWorks database and spreadsheet files into virtually any kind of report whose features will then include powerful mathematical, arranging, sorting and formatting capabilities. In short, ReportWorks bursts the bounds of AppleWorks.

Getting started

The program consists of a boot disc called /EXAMPLES and the program proper on a second disc. One drive will suffice as you are prompted when to switch discs, but obviously two drives are better.

You can allegedly use ReportWorks with any device compatible with AppleWorks such as a hard disc, a Unidisk 3.5in and memory expansion cards. I followed the simple instructions to configure the program to automatically load into Applied Engineering's RamWorks card, and was pleasantly surprised to find the program loading into the Z-Ram in my IIc without a hitch. You can then work faster, naturally, than when various parts of the program have to be accessed from a mechanical drive.

To find that my IIc System Clock actually worked even when the program was resident in a Ramdisc only added to my joy. Simply install your clock program on to the boot disc and you're in business. ReportWorks will display time and date on screen and can be printed out in reports, too, of course.

On booting, the program presents a menu so familiar in appearance that at first glance you might think you've booted AppleWorks by mistake.

The various screens are purposely made to resemble AppleWorks as far as possible and many of the commands used are deliberately similar to what an AppleWorks user is used to. For instance, Open Apple+E toggles between the overwrite and insert cursor, the Tab key moves the cursor from one field to another and pressing Open Apple+Tab moves the cursor back again, just as in the AppleWorks database.

The report is designed on a screen bounded at the top by the title page and page header and at the bottom by the page footer and summary page. The large central space left is known as the entry work area. Naturally, any section of the report can become the entry work area and its size can be varied.

Importing information

The arrow keys move the cursor in the desired direction and highlight the functions you want to bring into operation. The option to change discs means that you can import information from several AppleWorks files on different discs.

However, it's as well to have hard copy of the AppleWorks files you wish to use, as ReportWorks enables you to see on screen only the categories you want to import, not the file itself.

A field can be opened and named at any point on the page. Its size is controllable from one character upwards and the number of characters appears at the bottom right-hand corner of the screen. A field made too small will truncate information too large for it although you can, of course, modify your report at will. Placing the cursor on a field and using the arrow keys enables you to drag it to any new location in your work area.

As far as I could see, the dollar sign cannot be replaced by the pound sign. If so, this may be a serious drawback for potential business users.

The package includes a manual of more than 100 pages, approximately A5 size. Pretty well-written and easy to follow, it contains clear print and diagrams.

This is obviously a sophisticated program – Open Apple+? produces 26 screens of help – and while it is quite easy to get started, it would clearly take a new user some time to acquire the skill necessary to make use of all the program's capabilities. This is true of virtually any serious applications software, of course.

If you are quite happy with what you can already do with AppleWorks, you have no need of this program. If, however, you periodically need to produce impressive and sophisticated reports, this may well be what you are looking for. By Apple standards, £50 does not seem too high a price to pay for this capability.

Product: ReportWorks
Price: £49.95
Supplier: Megahaus/MGA MicroSystems, Pear Tree, Appledore, Kent TN26 2AR
Tel: 0233 83571

Speed the search

Phil King improves on the directory structure of Prodos

I'VE always found the Prodos directory structure far superior for organising discs than Dos 3.3. Unfortunately it has the disadvantage that finding a file that may be several subdirectories deep can be a real pain.

The following program overcomes this problem by providing in one simple operation a complete listing of all the directories and files on a disc in an easy-to-follow format. It also provides a catalog cover that can be placed inside the sleeve of each disc for immediate reference.

To enter Prodos Menu Master, key in the Applesoft program shown in Listing I and then save it with the command:

```
SAVE MENU.MASTER
```

For demonstration purposes of I shall be using the Apple Mousepaint Disc, but any disc which has a subdirectory structure will do to see the capabilities of the program.

So let's begin. After typing in the program, boot up your system under Prodos then place the disc with the Prodos Menu Master program in drive 1. Type:

```
RUN MENU.MASTER
```

and wait for the Main Menu to appear on your screen. (Figure I).

If required, change the default drive and slot parameters by selecting option 8, then following the prompts which will ask you for your new drive and slot details. Place the disc to read into drive 1 (Mousepaint in my case) and select option 7, which will read the catalog details.

To list details to the screen, first ensure that the printer selection (item 5) is off and that the width selection (item 6) is 80Col. Both these items can be toggled simply by selecting that menu item. Try this now to see how it works.

Now select option item 1 – List Directories – and if you are using Mousepaint a listing similar to that in Figure II should appear on your screen, which shows a listing of all the directory pathnames on the disc. When you have finished looking at this listing, press any key to return to the Main menu.

Similarly on selecting option 2 – List Files – you will be presented with a listing of all the files on the disc (Figure III) irrespective of which directory they belong to, (remember Dos 3.3?) Again, press any key to continue when you have finished viewing the listing.

By selecting option 3 – List Directories and Files – the DIRectory structure and files will be shown as one continuous listing. The example (Figure IV) shows that the root DIRectory pathname, Mousepaint, contains the DIRectories INTRO and MP as well as several files. After the root path details the sub DIRectory details are displayed in descending order. Note that the usual <Control+S will stop the screen from scrolling. Press a key when you are ready to continue.

By toggling the printer to on (menu item 5) the listings will be sent to your printer when selected. Also if you toggle the output width to 40Col (menu item 6) a listing of the first 40 characters will be produced as in Figure V.

The idea behind this is to have a listing which has enough room at the side to make personal notes about the files/disc. You will have to toggle the printer back on after each printout. This is to prevent me from wasting too much paper – I'm very forgetful.

Now the bit I particularly like, menu item 4/ List as Cover – Figure VI. This item can only be sent to your printer and must be in condensed format as the listing is 86 characters wide. It is designed to fit inside a disc cover when cut out, so enabling each of your discs to have a printed catalog with them for ease of reference.

Well believe it or not, that's it. For comparison Figure VII is a listing of the three DIRectories on the Mousepaint that you would normally see – one at a time of course – if you CATALOGed them by hand. Figure VIII is a rundown of the outputs available from the program for quick reference.

```
Main Menu                PROdos Menu Master                by Phil King

Printer / Screen output      1/ List Directories
                             2/ List Files
                             3/ List Directories and Files

Printer output only          4/ List as Cover

General utilities            5/ Toggle Printer      (Off)
                             6/ Toggle Width        (80Col)

Disk Drive Utilities         7/ Read Disk Drive     (Read)
                             8/ Change logged Drive (1) Slot (6)

                             0/ Exit to BASIC
```

Figure I: The main menu

```
List of Directories

/MOUSEPAINT
/MOUSEPAINT/INTRO
/MOUSEPAINT/MP

BLOCKS FREE:  34     BLOCKS USED:  246
```

Figure II: Listing all directory pathnames on the disc

```
List of Files

File.Name        Type  Blocks  Modified          Created           Endfile  Subtype

PRODOS           SYS     31    16-JAN-84  0:00   16-JAN-84  0:00   15360
BASIC            SYS     21    16-JAN-84  0:00   16-JAN-84  0:00   10240
STARTUP          BAS      1    16-JAN-84  0:00   16-JAN-84  0:00      86
START.INTRO      BAS      1    16-JAN-84  0:00   16-JAN-84  0:00      64
START.MP         BAS      1    16-JAN-84  0:00   16-JAN-84  0:00      61
MP.SWITCH        BIN      1    16-JAN-84  0:00   16-JAN-84  0:00     201 A=$1000
MP.SYSTEM        SYS      1    16-JAN-84  0:00   16-JAN-84  0:00     105
STARTUP          BAS      6    16-JAN-84  0:00   16-JAN-84  0:00    2182
MOUSE.INTRO      BAS     26    16-JAN-84  0:00   16-JAN-84  0:00   12527
MOUSEPAINT       BAS      1    16-JAN-84  0:00   16-JAN-84  0:00      59
INTROTEXT        TXT      7    16-JAN-84  0:00   16-JAN-84  0:00    2940 R=    0
MENUBAR          TXT     10    16-JAN-84  0:00   16-JAN-84  0:00    4232 R=    0
SYSTEM.CHARSET   BIN      3    16-JAN-84  0:00   16-JAN-84  0:00    1024 A=$0800
ICON.STUFF.0     BIN      3    16-JAN-84  0:00   16-JAN-84  0:00     660 A=$0F00
HIRES.TEXT.0     BIN      3    16-JAN-84  0:00   16-JAN-84  0:00     668 A=$0C00
UPCASE.0         BIN      1    16-JAN-84  0:00   16-JAN-84  0:00     166 A=$2000
MARK.STUFF.0     BIN      1    16-JAN-84  0:00   16-JAN-84  0:00      47 A=$1280
MOUSE.STUFF.0    BIN      1    16-JAN-84  0:00   16-JAN-84  0:00     114 A=$1200
TABLE.FILE       BIN      8    16-JAN-84  0:00   16-JAN-84  0:00
STARTUP          BAS      1    16-JAN-84  0:00   16-JAN-84  0:00
MP.STARTUP       BAS
```

Figure III: Selecting the List Files option lists all the files on disc, regardless of directory

```
Directories & Files

File.Name      Type  Blocks  Modified          Created           Endfile  Subtype

----- /MOUSEPAINT----------------------------------------------------------
/MOUSEPAINT/INTRO
/MOUSEPAINT/MP
PRODOS         SYS     31  16-JAN-84  0:00  16-JAN-84  0:00     15360
BASIC          SYS     21  16-JAN-84  0:00  16-JAN-84  0:00     10240
STARTUP        BAS      1  16-JAN-84  0:00  16-JAN-84  0:00        86
START.INTRO    BAS      1  16-JAN-84  0:00  16-JAN-84  0:00        64
START.MP       BAS      1  16-JAN-84  0:00  16-JAN-84  0:00        61
MP.SWITCH      BIN      1  16-JAN-84  0:00  16-JAN-84  0:00       201 A=$1000
MP.SYSTEM      SYS      1  16-JAN-84  0:00  16-JAN-84  0:00       105

----- /MOUSEPAINT/INTRO----------------------------------------------------
STARTUP                                                    AN-84  0:00  16-JAN-
```

Figure IV: Menu option 3 will show the DIRectory structure and files as one continuous listing

```
MOUSEPAINT      BAS     1  16-JAN-84    INTROTEXT        TXT      7  16-JAN-84

MENUBAR         TXT    10  16-JAN-84    SYSTEM.CHARSET   BIN      3  LSI.9584
ICON.STUFF.0    BIN     3  16-JAN-84    HIRES.TEXT.0     BIN      3  16-JAN-84

UPCASE.0        BIN     1  16-JAN-84    MARK.STUFF.0     BIN      1  16-JAN-84

MOUSE.STUFF.0   BIN     1  16-JAN-84    TABLE.FILE       BIN      8  16-JAN-84

----- /MOUSEPAINT/MP------------------------------------------------------
```

Figure VI Disc cover demonstration

```
Directories & Files

File.Name      Type  Blocks  Modified

----- /MOUSEPAINT----------
/MOUSEPAINT/INTRO
/MOUSEPAINT/MP
PRODOS         SYS     31  16-JAN-84
BASIC          SYS     21  16-JAN-84
STARTUP        BAS      1  16-JAN-84
START.INTRO    BAS      1  16-JAN-84
START.MP       BAS      1  16-JAN-84
MP.SWITCH      BIN      1  16-JAN-84
MP.SYSTEM      SYS      1  16-JAN-84

----- /MOUSEPAINT/INTRO----------
STARTUP                          6  16-JAN-84
```

Figure V: Leaving room for notes

```
/MOUSEPAINT                                    CREATED          ENDFILE SUBTYPE
 NAME           TYPE  BLOCKS  MODIFIED

 PRODOS         SYS     31  16-JAN-84  0:00  16-JAN-84  0:00     15360
 BASIC          SYS     21  16-JAN-84  0:00  16-JAN-84  0:00     10240
 STARTUP        BAS      1  16-JAN-84  0:00  16-JAN-84  0:00        86
 START.INTRO    BAS      1  16-JAN-84  0:00  16-JAN-84  0:00        64
 START.MP       DIR      2  16-JAN-84  0:00  16-JAN-84  0:00        61
 INTRO          DIR      2  16-JAN-84  0:00  16-JAN-84  0:00      1024
 MP             BIN      1  16-JAN-84  0:00  16-JAN-84  0:00      1024
 MP.SWITCH      SYS      1  16-JAN-84  0:00  16-JAN-84  0:00       201 A=$1000
 MP.SYSTEM                                                         105

BLOCKS FREE:  34    BLOCKS USED:  246    TOTAL BLOCKS:  280

INTRO
 NAME           TYPE

 STARTUP
```

Figure VIII: Possible program outputs

```
Figure Title                                  132 80 40 S  P
------+-------------------------------------+--+--+--+--+--+
  2   List of directories                     *        *  *
  3   List of files                              *  *  *  *
  4   List Directories and files                 *  *  *  *
  5   List as Cover                           *           *

132/80/40 = Column width.  S = Screen.  P = Printer
```

Figure VII: The three Mousepaint you would see if you CATALOGed them by hand

Listing I

```
100  REM ------------------
     -------
110  REM -   PRODOS MENU MAS
     TER   -
120  REM -          BY
          -
130  REM -       PHIL  KING
          -
140  REM -   MARCH, CAMBS, J
     UN87  -
150  REM ------------------
     -------
160  REM  PROGRAMME REQUIRES
     ;-
170  REM
180  REM  PRINTER (OPTIONAL)
      IN SLOT 1
190  REM  80COL CARD IN SLOT
      3
200  REM  PRODOS
210  REM  DISK DRIVE
220  REM
230  REM  D$         > CHR$(4
     ) = CNTL D = DOS
240  REM  PR$        > PREFIX
      GENERAL USAGE
250  REM  DFL$(50    > DIRECT
     ORY PREFIX'S
260  REM  CFL$(50    > CATALO
     G FILES
270  REM  DTL        > TOTAL
     NUMBER OF DIRECTORIES
280  REM  FTL        > TOTAL
     NUMBER OF FILES
290  REM  DLST(N,0) > DIR ST
     ART   DLST(N,1) > DIR F
     INISH
300  REM  FLST(N,0) > FILE S
     TART  FLST(N,1) > FILE
     FINISH
310  REM  DRV        > DISK D
     RIVE NUMBER
320  REM  DSLT       > DISK D
     RIVE SLOT
330  REM  PSLT       > PRINTE
     R SLOT
340  REM  OUTPUT     > 0 = TO
      SCREEN, 1 = TO PRINTER
350  REM  COL80      > 0 = 40
     COL, 1 = 80COL
360  REM  RED        > DISK H
     AS BEEN READ YES/NO 0/1
370  REM  A          > GENERA
     L VARIABLE
380  REM  CNTR,J,K   > GENERA
     L COUNTERS
390  REM  A$         > GENERA
     L STRING
400  REM  TITL$      > TITLES
410  REM  A0$ A1$    > SCREEN
     /PRINTER LAYOUT
420  REM  A2$ A3$    > SCREEN
     /PRINTER LAYOUT
430  REM  AN$        > PASS S
     TRING
440  REM  AN         > PASS V
     ARIABLE
450  REM  ERR        > PASS E
     RR ROUTINE POINTER
460  REM  P          > POINTE
     R TO CHOSEN ROUTINE
470  REM  CHR$(4)    > DOS CO
     MMAND
480  REM  CHR$(7)    > BELL
490  REM  CHR$(25)   > MOVE C
     URSOR TO UPPER LEFT COR
     NER OF WINDOW WITHOUT
495  REM              CLEARI
     NG THE SCREEN
500  REM  CHR$(26)   > CLEAR
     LINE CURSOR IS ON
510  REM  CHR$(29)   > CLEAR
     FROM CURSOR TO END OF L
     INE
520  REM  CHR$(9)    > PRINTE
     R CONTROL
530  REM  CHR$(15)   > PRINTE
     R CONTROL (CONDENSED)
540  REM  CHR$(18)   > PRINTE
     R CONTROL (NORMAL)
550  REM  CALL-3288 > ONERR
     ERR CALL. SEE APPLESOFT
      PROG. MANUAL
560  REM
1000 REM  INITIALISE
1010 REM
1020 D$ =  CHR$ (4)
     : PRINT D$"PR#3"
     : PRINT
     : HOME
1030 DIM DFL$(99),CFL$(99),D
     LST(50,1),FLST(50,1)
1040 TITL$ = " File.Name
       Type  Blocks  Modifie
     d        Created    En
     dfile  Subtype    "
1050 A0$ = "

     "
     : REM  40 SPACES
1060 A1$ = ""
     : FOR K = 1 TO 39
      :A1$ = A1$ + "--"
     : NEXT
     :A1$ = A1$ + "-"
1070 A2$ = "  " + A0$
      + A0$ + "  "
1080 A3$ = "+---" + A1$
      + "---+"
1090 OUTPUT = 0
     :DRV = 1
     :DSLT = 6
     :PSLT = 1
1100 CNTR = 0
     :DTL = 1
     :FTL = 1
     :AN = 80
     :COL80 = 1
     :RED = 0
1110 REM
1120 REM  MAIN SETUP
1130 REM
1140
     : GOSUB 2370
     : REM  MAIN SCREEN SETUP
1150
     : GOSUB 2420
     : REM  MAIN SCREEN DISPLA
     Y
1160 REM
1170 REM  INPUT/DOIT ROUTINE
1180 REM
1190
     : PRINT  CHR$ (25);
     : VTAB 23
     : PRINT "Please make your
       choice ";
     : GET A$
     : PRINT  CHR$ (26);
       CHR$ (25);
     : IF A$ = "0" GOTO 1250
1200 P =  VAL (A$)
     : IF P < 1 OR P > 8
     THEN 1190
1210 IF P < 5 THEN  IF
     NOT RED THEN A$ = "I ha
     ve not read the disk de
     taiPress a ke
     y to continue "
     : GOSUB 1830
     : GOTO 1190
1220 ON P GOSUB 1290,1370,14
     50,1570,1870,1910,2020,
     1950
1230 IF P < 5 THEN  IF OUTPU
     T THEN OUTPUT = 0
     : GOTO 1140
1240 GOTO 1150
```

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```
1250 TEXT
   : HOME
   : VTAB 10
   : PRINT "Thank you for ca
     lling.  Bye."
   : END
1260 REM
1270 REM  LIST DIRECTORIES T
     O SCREEN OR PRINTER
1280 REM
1290
   :AN$ = "List of Director
     ies"
   : VTAB 1
   : PRINT AN$; SPC( 4);
   : HOME
1300 IF OUTPUT THEN  GOSUB 2
     630
   : IF A$ = "Q" THEN
     RETURN
1310 PRINT
   : FOR K = 0 TO DTL
     : PRINT DFL$(K)
     : NEXT
   : PRINT
   : PRINT  LEFT$ (CFL$(0),4
     0)
1320 IF OUTPUT THEN  PRINT A
     1$
   : GOSUB 2740
   : RETURN
1330 GOSUB 1810
   : HOME
   : RETURN
1340 REM
1350 REM  LIST FILES TO SCRE
     EN OR PRINTER
1360 REM
1370
   :AN$ = "List of Files"
   : VTAB 1
   : PRINT AN$; SPC( 7);
   : HOME
1380 IF OUTPUT THEN  GOSUB 2
     630
   : IF A$ = "Q" THEN
     RETURN
1390 GOSUB 1760
   : FOR K = 1 TO FTL
     : PRINT  LEFT$ (CFL$(K)
       ,AN)
     : NEXT
   : PRINT
   : PRINT  LEFT$ (CFL$(0),A
     N)
1400 IF OUTPUT THEN  PRINT A
     1$
   : GOSUB 2740
   : RETURN
1410 GOSUB 1810
   : POKE 34, PEEK (34)
     - 2
   : HOME
   : RETURN
1420 REM
1430 REM  LIST EVERTHING TO
     SCREEN OR PRINTER
1440 REM
1450
   :AN$ = "Directories & Fi
     les "
   : VTAB 1
   : PRINT AN$;
   : HOME
1460 IF OUTPUT THEN  GOSUB 2
     630
   : IF A$ = "Q" THEN
     RETURN
1470 GOSUB 1760
   : FOR K = 0 TO DTL
     :A$ =  LEFT$ ("----- "
       + DFL$(K) + A1$,AN)
     : PRINT
     : PRINT A$
1480   IF DLST(K,0) = 0
       THEN 1500
1490   FOR J = DLST(K,0)
         TO DLST(K,1)
       : PRINT  LEFT$ (DFL$(
         J),AN)
       : NEXT
1500
     : IF FLST(K,0) = 0
       THEN 1520
1510   FOR J = FLST(K,0)
         TO FLST(K,1)
       : PRINT  LEFT$ (CFL$(
         J),AN)
       : NEXT
1520
     : NEXT
   : PRINT
   : PRINT  LEFT$ (CFL$(0),A
     N)
   : IF OUTPUT THEN  PRINT A
     1$
   : GOSUB 2740
   : RETURN
1530 GOSUB 1810
   : POKE 34, PEEK (34)
     - 2
   : HOME
   : RETURN
1540 REM
1550 REM  PRINT COVER - PRIN
     TER ONLY
1560 REM
1570
   :AN$ = "Print Diskette L
     abel"
   : VTAB 1
   : PRINT AN$; SPC( 3);
   : HOME
1580 GOSUB 2690
   :AN = 86
   :OUTPUT = 1
   : IF A$ = "Q" THEN
     RETURN
1590 PRINT A3$
1600 PRINT " "; LEFT$ (TITL
     $,40);" "; LEFT$ (TITL
     $,40);" "
1610 PRINT A3$
1620 FOR K = 0 TO DTL
1630   A$ =  LEFT$ (" -----
       " + DFL$(K) + A1$,AN
       - 2) + " "
     : PRINT A2$
     : PRINT A$
1640   IF DLST(K,0) = 0
       THEN 1660
     : REM  NO 'DIR' ENTRIES
1650   FOR J = DLST(K,0)
         TO DLST(K,1)
       : PRINT  LEFT$ ("
         " + DFL$(J)
         + A0$ + A0$,AN
         - 2);" "
       : NEXT
1660
     : IF FLST(K,0) = 0
       THEN 1720
     : REM  NO FILES
1670   FOR J = FLST(K,0)
         TO FLST(K,1)
1680     PRINT " "; LEFT$ (
         CFL$(J),40);
1690     J = J + 1
       : IF J > FLST(K,1)
         THEN  PRINT A0$;"
         "
       : GOTO 1710
1700     PRINT "  "; LEFT$ (
         CFL$(J),40);" "
1710
       : NEXT
1720
     : NEXT
   : PRINT A2$
   : PRINT "" SPC( 5);CFL$(
     0)""
   : PRINT A3$
   : GOSUB 2740
   : RETURN
1730 REM
1740 REM  PRINT TITLES
1750 REM
1760
   :AN = 40
   : IF COL80 THEN AN
     = 79
1770 PRINT  LEFT$ (TITL$,AN)

   : PRINT  LEFT$ (A1$,AN)
   : POKE 34, PEEK (34)
     + 2ME
   : RETURN
1780 REM
1790 REM  PRESS A KEY
1800 REM
1810
   :A$ = "Press a key to co
     ntinue "
   : GOTO 1830
1820
   :A$ = "Press a key to co
     ntinue 'Q' to quit "
   : GOTO 1830
1830
   : PRINT  CHR$ (25);
   : VTAB 23
   : PRINT A$;
   : GET A$
   : PRINT  CHR$ (26);
     CHR$ (25);
   : RETURN
1840 REM
1850 REM  TOGGLE PRINTER
1860 REM
1870
   :OUTPUT = (OUTPUT
     = 0) * 1
   : RETURN
1880 REM
1890 REM  TOGGLE WIDTH
1900 REM
1910
   :COL80 = (COL80 = 0)
     * 1
   : RETURN
1920 REM
1930 REM  CHANGE DRIVE/SLOT
1940 REM
1950
   : PRINT  CHR$ (25);
   : VTAB 23
   : PRINT "Enter Drive (1-2
     ) ";
   : GET A$
   :A =  VAL (A$)
   : IF A < 1 OR A > 2
     THEN  PRINT  CHR$ (7);
   : GOTO 1950
1960 DRV = A
   : PRINT A;
1970 HTAB 30
   : PRINT "Enter Slot (1-6)
     ";
   : GET A$
   :A =  VAL (A$)
   : IF A < 1 OR A > 6
     THEN  PRINT  CHR$ (7);
   : GOTO 1970
1980 DSLT = A
   : PRINT  CHR$ (26);
     CHR$ (25);
   : RETURN
1990 REM
2000 REM  READ DISK DETAILS
2010 REM
2020
   : HOME
   :ERR = 0
   :RED = 0
   :CNTR = 0
   :FTL = 1
   :DTL = 1
2030 VTAB 6
   : PRINT "One moment pleas
     e - reading disk detail
     s"
   : GOSUB 2140
   : IF ERR THEN  RETURN
   : REM  READ VOLUME NAME
2040
   :PR$ = DFL$(CNTR)
2050 DLST(CNTR,0) = DTL
   :FLST(CNTR,0) = FTL
   : REM  NOTE START OF DIR
     AND FILES ARRAY
2060 GOSUB 2200
   : IF ERR THEN  RETURN
   : REM  OPEN/READ DIRECTOR
     Y FILES
2070 DLST(CNTR,1) = DTL
     - 1
   : IF DLST(CNTR,0) > DLST(
     CNTR,1) THEN DLST(CNTR,
     0) = 0
   :DLST(CNTR,1) = 0
   : REM  NOTE FINISH OF DIR
      ARRAY
2080 FLST(CNTR,1) = FTL
     - 1
   : IF FLST(CNTR,0) > FLST(
     CNTR,1) THEN FLST(CNTR,
     0) = 0
   :FLST(CNTR,1) = 0
   : REM  NOTE FINISH OF FIL
     ES ARRAY
2090 CNTR = CNTR + 1
   : IF CNTR < DTL GOTO 2040
2100 DTL = DTL - 1
   :FTL = FTL - 1
   :RED = 1
   : HOME
   : RETURN
2110 REM
2120 REM  READ VOLUME NAME D
     FL$(0)
2130 REM
2140
   : VTAB 8
   : PRINT "Reading Volume N
     ame"
   : ONERR  GOTO 2330
2150 PRINT D$"PREFIX,D"DRV",
     S"DSLT
   : PRINT D$"PREFIX"
   : INPUT A$
   : POKE 216,0
2160 A$ =  LEFT$ (A$,
     LEN (A$) - 1)
   :DFL$(0) = A$
   : RETURN
2170 REM
2180 REM  OPEN/READ DIRECTOR
     Y FILES
2190 REM
2200
   : VTAB 10
   : PRINT "Reading Director
     y ";PR$; CHR$ (29)
   : ONERR  GOTO 2330
2210 PRINT D$"OPEN "PR$",TDI
     R"
```

```
    : PRINT D$"READ "PR$
 2220 INPUT A$
    : INPUT A$
    : INPUT A$
    : REM  ROOT/TITLE LINE/BL
      ANK LINE
 2230
    : INPUT A$
    : IF A$ = "" GOTO 2280
 2240 IF  MID$ (A$,18,3)
      < > "DIR" THEN CFL$(FT
      L) = A$
    :FTL = FTL + 1
    : GOTO 2230
 2250 A$ =  MID$ (A$,2,14)
 2260
    : IF  RIGHT$ (A$,1)
      = " " THEN A$ =
      LEFT$ (A$, LEN (A$)
      - 1)
    : GOTO 2260
 2270 DFL$(DTL) = PR$ + "/"
      + A$
    :DTL = DTL + 1
    : GOTO 2230
 2280
    : INPUT CFL$(0)
    : REM  BLOCK USAGE
 2290 PRINT D$"CLOSE"
    : POKE 216,0
    : RETURN
 2300 REM
 2310 REM  ERROR ROUTINE
 2320 REM
 2330
    : POKE 216,0
    : CALL  - 3288
    :ERR = 1
    :A$ = "There is a disk e
      rror - Please check the
       drives.  Press a key w
      hen ready " +  CHR$ (7)

    : GOSUB 1830
    : RETURN
 2340 REM
 2350 REM  MAIN SCREEN SETUP
 2360 REM
 2370
    : TEXT
    : HOME
    : PRINT "Main Menu"
      SPC( 22)"PROdos Menu Ma
      ster"; SPC( 18);"by Phi
      l King"
 2380 PRINT A1$
    : VTAB 22
    : PRINT A1$
    : POKE 34,2
    : POKE 35,21
    : PRINT  CHR$ (25);
    : RETURN
 2390 REMEM  MAIN SCREEN DISPLA
      Y
 2410 REM
 2420
    :AN$ = "Main Menu"
    : VTAB 1
    : PRINT AN$; SPC( 11);
      CHR$ (25);
    : VTAB 6
 2430 PRINT  SPC( 05)"Printer
       / Screen output";
 2440 PRINT  SPC( 07)"1/  Lis
      t Directories"
 2450 PRINT  SPC( 35)"2/  Lis
      t Files"
 2460 PRINT  SPC( 35)"3/  Lis
      t Directories and Files
      "
    : PRINT
 2470 PRINT  SPC( 05)"Printer
       output only";
 2480 PRINT  SPC( 11)"4/  Lis
      t as Cover"
    : PRINT
 2490 PRINT  SPC( 05)"General
       utilities";
 2500 A$ = "(Off)"
    : IF OUTPUT THEN A$
      = "(On) "
 2510 PRINT  SPC( 13)"5/  Tog
      gle Printer"; SPC( 6);A
      $
 2520 A$ = "(40Col)"
    : IF COL80 THEN A$
      = "(80Col)"
 2530 PRINT  SPC( 35)"6/  Tog
      gle width"; SPC( 8);A$
    : PRINT
 2540 PRINT  SPC( 05)"Disk Dr
      ive Utilities";
 2550 A$ = "(Clear)"
    : IF RED THEN A$ = "(Read
      )"
 2560 PRINT  SPC( 10)"7/  Rea
      d Disk Drive"; SPC( 5);
      A$
 2570 PRINT  SPC( 35)"8/  Cha
      nge logged Drive ("DRV"
      ) Slot ("DSLT")"
    : PRINT
 2580 PRINT  SPC( 35)"0/  Exi
      t to BASIC"
 2590 PRINT  CHR$ (25);
    : RETURN
 2600 REM
 2610 REM  PRINTER ON - NORMA
      L
 2620 REM
 2630
    : VTAB 10
    : PRINT "Output going to
      printer"
    : GOSUB 1820
    : IF A$ = "q" OR A$
      = "Q" THEN A$ = "Q"
    : RETURN
 2640 VTAB 12
    : PRINT
    : PRINT "Printing"
    : PRINT D$"PR#"PSLT
    : PRINT  CHR$ (9)"80N";
      CHR$ (18)
 2650 PRINT A1$
    : PRINT AN$
    : PRINT A1$
    : RETURN
 2660 REM
 2670 REM  PRINTER ON - CONDE
      NSED
 2680 REM
 2690
    : VTAB 10
    : PRINT "Output going to
      printer"
    : GOSUB 1820
    : IF A$ = "q" OR A$
      = "Q" THEN A$ = "Q"
    : RETURN
 2700 VTAB 12
    : PRINT
    : PRINT "Printing"
    : PRINT D$"PR#"PSLT
    : PRINT  CHR$ (9)"130N";
      CHR$ (15)
    : RETURN
 2710 REM
 2720 REM  PRINTER OFF
 2730 REM
 2740
    : PRINT D$"PR#3"
    : PRINT
    : RETURN
```


Astra is the unique and powerful accounting system specially developed for the Apple Macintosh by DMS. Every business - and especially those in retailing and wholesaling - wanting to improve its financial control, its day-to-day book-keeping, its stock control, and its profitability can benefit from Astra. Check out this very special Macintosh package. A demonstration is your next step. Call Diss Computers - Astra Dealers for the South East - on (0379) 51008 now

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Winning combinations

Prabh Salpekar looks at Apple IIgs memory management with AppleWorks

WHILE the Apple IIgs can be expanded to have a substantial on-board memory by using various memory expansion cards, these can cause problems in their own right, especially with regard to management of the resulting vast amount of memory.

This article is based on my own experience with several cards – and with AppleWorks as the major application – to show that the problems which can arise are not insuperable.

AppleWorks is probably the most popular application program on the IIgs, and has been expanded by many utilities and add-ons from different stables – notably Pinpoint and Beagle Brothers – and they do make the use of AppleWorks easier and more interesting.

To use these utilities and accessories you have to configure AppleWorks version 2.0 and state their location. If they are located on 5.25in discs then disc access can become frequent, time-consuming and irritating. Therefore it is better to put them on a 3.5in Unidisk or a hard disc if you have one. The resulting increase in access speed is almost satisfactory, but it is even better if a memory card is used.

In passing, I should mention that it is also possible to speed up 3.5in Unidisk access times by using a caching technique such as that provided by Diversi-Cache or ProSel. The drawback is that you lose 400k or 800k from your desktop depending on the configuration you select. In this article, however, I'll concentrate on memory cards.

I decided to use Applied Engineering's RamFactor and Apple's Memory Expansion Cards (IIe) in the first instance and later to add Cirtech's plusDisk. Up to the 1Mb size I could equally well use the Apple IIgs Memory card, Cirtech's plusRAM or Applied Engineering's gsRam cards.

These last can of course be expanded up to 8Mb and AppleWorks will automatically load most of itself on to such cards at boot up time to give a considerable increase in speed of operation. With the others the whole of a 3.5in Unidisk can be dumped on to one, which will also give the desired operational speed up.

With a RamFactor or equivalent card the IIgs control panel slots should be configured as in Figure I and the ram disc allocation should remain with a minimum of 0 and a maximum of 1024k. Although it would be an advantage to disable the mouse card in favour of an extra memory card I'd advise against it – otherwise you will be asked to look for "Smiling" Cats by Beagle Brothers' TimeOut utilities, and many other programs which use the mouse will hang – or at least complain if it is not on.

Slot 1 = Printer Port
Slot 2 = Modem Port
Slot 3 = Built-in Text Display
Slot 4 = Mouse Port
Slot 5 = Smart Port
Slot 6 = Disk Card
Slot 7 = RamFactor
Ram disc maximum 1024k.

Figure I: A typical control panel configuration with a RamFactor card

Maximum memory

If this configuration is followed it is possible to get a maximum desktop memory of 1133k with AppleWorks version 2.0 as booted from a disc drive, though utilities such as TimeOut and Pinpoint may decrease this figure.

For example, if configured to use memory, TimeOut will drop it further, typically to 936k. If AppleWorks is transferred to either of the cards the program will run faster, but the desktop may become smaller. I prefer to use Copy II plus version 7.x which will recognise the memory slots and format them to give 2040 Prodos blocks (1020k) and can be used to copy AppleWorks on to a card.

Alternatively, ProSel makes file management under Prodos relatively easy, but its Desktop Copy Utility lowers the AppleWorks desktop by a large margin to 661k. The program creates a SYSTEM.DESKTOP file on the RamFactor card in Slot 7 and will use up to 1013k – leaving just 3k on the card. On the other hand, it gives 23000 lines in the word processor and puts a clock time display in the bottom right hand corner, which can be useful.

Using a gs card, the RamFactor and the Apple Memory card there are several possible machine and AppleWorks configurations giving up to 3Mb of memory with different desktop sizes, but with various time delays and disc accessing frequencies. Figure II summarises some of the combinations.

The plusDisk from Cirtech is the latest of the company's many peripheral cards for Apple II computers. The card is intelligently designed and serves two functions – as a ram card and as a pseudo hard disc using an onboard battery to keep the ram active. It can be purchased in a variety of combinations from 128k to 1Mb in size.

The product comes with two utility discs, one 3.5in and one 5.25in, both with the same programs on. The card is designed to use the memory segmented for different operating systems if so desired, and various combinations of Dos 3.3, Prodos 8 and 16, Pascal (versions 1.1 to 1.3, but only in slot 7) and CP/M may be set up on the pseudo hard disc.

Its main advantage as a ram card is that it provides extra memory onboard, so increasing the size of the AppleWorks desktop. It is thus possible to dedicate the desktop for different AppleWorks files, that is, for the word processor, database and spreadsheet.

And, if the plusDisk is used in the IIgs in combination with other ram cards it has a distinct advantage. It can be used as a startup hard disc for your favourite program – and it can be transported, with care, to other Apples.

In this way I have configured a 1Mb plusDisk to take the whole of the AppleWorks program with the TimeOut

	Booted from	Desktop memory	Disc access	Result
AppleWorks + TimeOut	Unidisk	1133k	often	delays
	RAM7	1106k	none	good
	RAM5	376k	none	poor
AppleWorks + Timeout adapted for RamFactor (with ProSel System)	Unidisk	1011k	often	delays
	RAM5	1011k	none	best
	RAM7	661k	none	poor

Figure II: Some possible machine configurations using RamFactor

utilities and still have 200k spare memory. I have found the plusDisk to be the mainstay of my work, along with a 1Mb gs memory card and the 1Mb RamFactor. This vast amount of memory allows me to process much larger documents with considerable ease and the speed of operation is unbelievably fast.

The plusDisk is compatible with the new B series of monitor rom for the IIgs, except that on startup the SCAN mode looks for a self-start, battery-backed device in slot 7. If one is not found it will scan down the slots, but will not go past slot 5, even if the control panel has been set for a memory card in slot 2 for example.

Therefore my combination is to use the plusDisk in slot 7, the Ramfactor in slot 2 and the gs memory card in its rightful place. Nevertheless there is a physical disadvantage with this combination in that the plusDisk battery jams up against the gs memory card. If the piggyback card for the plusDisk is also used, then the gs memory card tends to bend because of the increased size of the plusDisk.

However, there is no such problem with the A series of monitor rom in the IIgs because the plusDisk can be used in slot 2 as a startup device. The plusDisk can safely be expanded to 1Mb with the piggyback board and the RamFactor sits neatly in slot 7 next to the gs memory card. When the computer is switched on AppleWorks runs right from the plusDisk in slot 2 without any delay.

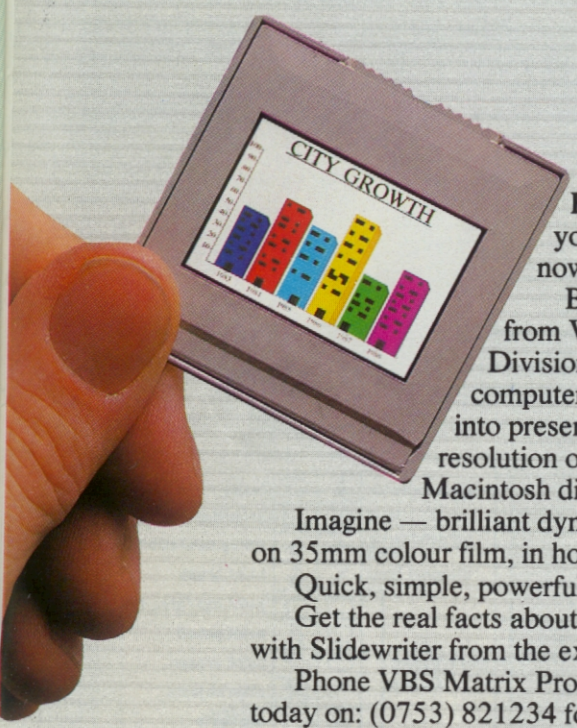
However, if it is desired to use other disc drives on startup I suggest that SELECT.SYSTEM from the ProSel suite of programs is put in the root directory as the first system file. This then gives quick access to the other drives and it remains in memory without any problem for other computer operations and is virtually invisible on the plusDisk card.

I have used it under Prodos 1.3 (January 1987 version) and under Prodos 1.4 (June 1987 version) but find that the latter is not as versatile for quick operations. However both are much quicker than using the Mouse Desk or Apple's new Desktop Finder system. I also have copied the UTIL.SYSTEM file from Copy II plus v.7.4 to the root directory of the plusDisk card. This has made life far easier when transferring data and files between disc drives.

Product: RamFactor
Price: £239(256k), £269(512k), £319(1mb)
Product: gsRam
Price: £169(256k), £209(512k), £269(1Mb)
Supplier: Applied Engineering/Bidmuthin, PO Box 264, Harrow, Middlesex, HA3 9AY
Tel: 01-907 8516

Product: plusDisk
Price: £128
Product: plusRam
Price: £99
Product: plusRam Extra (1Mb)
Price: £199
Supplier: Cirtech (UK), Currie Road Industrial Estate, Galashiels, Selkirkshire, TD1 2BP
Tel: 0896 57790

Product: Apple Memory Card, gs memory card
Price: £95
Product: additional 256k expansion kits
Price: £55
Supplier: Apple UK, Eastman Way, Hemel Hempstead, Hertfordshire, HP2 7HQ.
Tel: 0442 60244



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Live accounting

Ian Smith discovers whether Astra lives up to its advertising

ANY package that confidently advertises itself as being "The most professional and comprehensive accounting system ever designed and one which gives total ease of use" has got a lot to live up to.

With that in mind, and given the size and complexity – and cost – of Astra from DMS Electronics, I decided to take two bites at this particular cherry.

This month will serve as an introduction to the package, seen from the professional user's point of view, while next month I'll be looking at just how user-friendly Astra is by unleashing a non-accountant – myself – on the keyboard.

It should be borne in mind, however, that Astra is intended for serious users. That is reflected in DMS's distribution policy – the package will only be available from a limited number of selected dealers who are themselves convinced of its merits and are utilising it themselves.

Certainly Astra is comprehensive, covering all the standard business requirements of point of sale, invoicing, sales ledger, order processing, backorders, job costing, purchase ledger, stock control and management accounts – which means it's aimed at everyone in business, not just those in the retail or wholesale environment.

More to the point, Astra is specifically designed for the multi-user environment, supporting up to 25 Macintoshes and seven printers – either ImageWriter or LaserWriter – via an AppleTalk network. That said, a single user version is available, which can be upgraded at any time for multi-user use.

Astra has been six years in development, and DMS is still refining the software in response to feedback from users.

Tony Glover, from Leicester Computer Software, followed his usual "test to destruction" policy and many of his suggestions have been implemented – DMS regularly supplies its customers with updated software.

Tony had Astra up and running relatively quickly – without a manual – and is particularly pleased that it's possible to "personalise" the package. LCC has Astra running on a single Macintosh with a 60Mb hard disc – with tape stream back up – and finds the configuration more than adequate.

From the user's point of view, LCC's Carole Wall has the job of running Astra on a day-to-day basis – and despite having to make the transition from Apple Europlus to Macintosh, was handling it confidently within a week.

While not using the package to its full capacity – the Centre is not taking advantage of Astra's point of sale capabilities yet – Carole is using it to handle stock control, invoicing and other applications, and finds it does make life easier.

AppleCentre Glasgow, however, didn't have such a happy introduction, finding the lack of a user manual a handicap after a relatively trouble free installation, a lack aggravated by some difficulties in correcting inputted data.

However, the problems were in part due to non-accountants using the package and not realising that some data can't be corrected legally. For example, it's not accounting practice to change a tax point date.

The Centre chose Astra as the replacement for an existing manual system of accounting, and it took some months to get the system running satisfactorily. Despite these reservations, however, AppleCentre Glasgow is still using Astra for its own accounting purposes

Versatility

Richard Mayes, from AppleCentre West One is more enthusiastic, having seen Astra installed and running effectively in less than a fortnight. And the installation was achieved without recourse to DMS's support hotline, despite the fact that the process involved integration from the existing control system – Astra, among its features, supports direct file transfer.

"It's brilliant for any kind of retail outlet", said Richard, "but the product can be used by service industries as well. And it's not expensive, considering what it does".

Paul Allen, West One's internal financial manager, is already feeling the benefits: "It's already saved me a considerable amount of time – and the reports generated are clear and concise

It's this versatility which is proving a strong selling point, and Astra's flexibility means that it can be adapted to the demands of almost any business.

Depending on disc storage available,

Turn to Page 54 ▶

AppleUpdate

Claris makes its debut

A NEW Apple-dedicated software house has made its debut in the UK – Apple's third largest market outside the States.

Claris, headed up by Bill Campbell, is aiming at the business, educational and science/engineering markets, and will confine its activities to software development. "We're never going to do the plumbing", he said.

Keith Phillips, managing director of Apple UK, is enthusiastic about the launch. "The timing is absolutely right for another force to come into the marketplace", he said.

It is intended that Claris will be that force, meeting the need for an independent company to eliminate any bones of contention between Apple and third party developers – and serving as a vehicle to bring innovative software to the Macintosh and Apple II.

Claris software will be aimed at general purpose and advanced users – and the company is not interested in "fashionable" short term products.

That policy is reflected in the company's introductory range: Four revamped Macintosh standards and two new products – SmartForm Designer and SmartForm Manager – intended to ease the automation of paper work.

And despite the company's emphasis on the Macintosh, the Apple II range has not been neglected – AppleWorks now carries the Claris label.

Three of the new products – MacWrite, MacPaint and MacProject – are already available, and others will be available shortly.

MacWrite 5.0 features a built-in anglicised spell checker, command key shortcuts and large screen support, while MacPaint now supports multiple/resizeable windows, auto scroling and multiple zoom levels. Price £95 each.

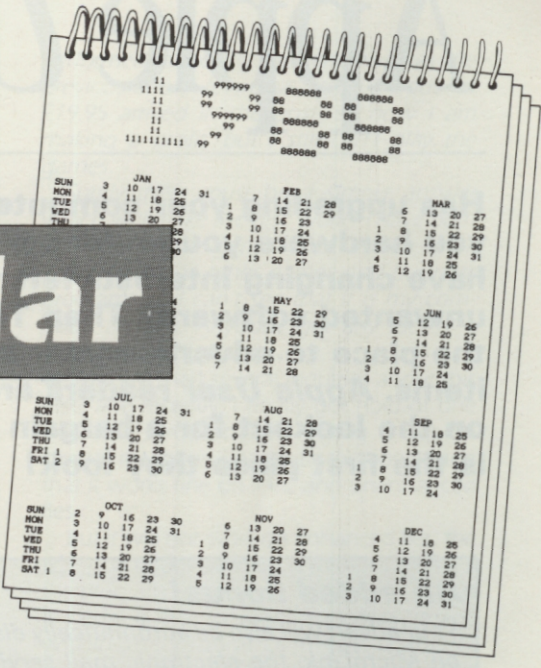
MacProject II now offers more facilities to aid in the managing of intricate projects, including the ability to handle an unlimited number of tasks per project. Price £395.

MacDraw, due for release shortly, will offer more features and fewer menus, and will be fast and flexible enough for people interested in low-end desktop publishing. Price £325.

SmartForm Designer and SmartForm Manager are Claris's first acquisitions under its own label. The two complementary packages enable the creation and management of high-quality forms of all types. Prices: £325 and £125 respectively.

Upgrade costs for users of relabelled products will be available shortly.

A perpetual calendar



Max Parrott
gilds the lily

ADAPTING slightly Zeller's algorithm described by Marshall Brown in last month's *Apple User*, we can easily produce a program to print any valid year's calendar.

This one is adorned by a large printout of the year on top of the actual calendar as in the illustration alongside.

The shapes and structure of the large figures are controlled by the DATA statements at the end of the program.

Note that line 70 sets the two strings E$ and N$ equal to the command codes for enhanced and normal printing on the Epson range of printers. This can be substituted or left out, whichever suits your tastes and printer.

```
10   DIM D(2,3),P(2,5,6),A$(
     6),M$(2,3),N$(9,4,6)
20   HOME
   : INPUT "PLEASE ENTER THE
     YEAR REQUIRED ";Y2
30   IF Y2 < 1900 THEN Y2
     = Y2 + 1900
40   FOR J = 0 TO 3
     : FOR I = 0 TO 2
       : READ D(I,J),M$(I,J)

       : NEXT
     : NEXT
50   FOR I = 0 TO 6
     : READ A$(I)
     : NEXT
60   D$ =  CHR$ (4)
   :M2 = 1
   :M = 1
70   E$ =  CHR$ (27) +
     CHR$ (69)
   :N$ =  CHR$ (27) +
     CHR$ (70)
   : REM   ENHANCED & NORMAL
     MODES
200  D(1,0) = D(1,0) + (Y2
     / 4 =  INT (Y2 / 4))
   :Y1 = 1981
   :M1 = 1
   :D1 = 1
   :D2 = 1
210  A =  INT (365.25
     * (Y1 - (M1 < 3)))
     +  INT (30.6 * (M1
     + 1 + (M1 < 3) * 12))
     + D1
220  B =  INT (365.25
     * (Y2 - (M2 < 3)))
     +  INT (30.6 * (M2
     + 1 + (M2 < 3) * 12))
     + D2
230  D =  ABS (B - A)
   :D = D - 7 *  INT (D
     / 7)
231  IF Y2 >  = 1981 THEN D
     = D - 3
   : IF D < 0 THEN D = D
     + 7
232  IF Y2 < 1981 THEN D
     = 4 - D
   : IF D < 0 THEN D = D
     + 7
235  HOME
240  PRINT "START DATE IS ";
     A$(D);", ";M$(0,0);", "
     ;" ";Y2
250  PRINT
   : PRINT
   : PRINT "CHECK THAT PRINT
     ER IS ON"
260  PRINT "WHEN READY PRESS
      THE SPACE BAR"
270  GET T$
280  FOR I = 0 TO 9
     : FOR J = 0 TO 4
       : FOR K = 0 TO 6
290        READ N
         :N$(I,J,K) =
           CHR$ (N)
         : NEXT
       : NEXT
     : NEXT
300  PRINT
   : PRINT D$"PR#1"
310  Y$ =  STR$ (Y2)
   : PRINT
   : PRINT
   : PRINT
   : FOR L = 1 TO 4
320    N(L) =  VAL ( MID$ (Y
     $,L,1))
     : NEXT
325  PRINT E$
330  FOR I = 0 TO 6
     : PRINT  TAB( 12);
     : FOR L = 1 TO 4
       : FOR J = 0 TO 4
340        PRINT N$(N(L),J,I
           );N$(N(L),J,I);
         : NEXT
         PRINT "  ";
       : NEXT
     : PRINT " "
360    NEXT
380  FOR I = 1 TO 4
     : PRINT
     : NEXT
1410 FOR L = 0 TO 3
     : GOSUB 3000
1412   PRINT E$
1415   PRINT  SPC( 13);
     : FOR I = 0 TO 2
       : PRINT M$(I,L);
         SPC( 22);
       : NEXT I
1417   PRINT N$
1420   FOR I = 0 TO 2
       :N = 1
       : FOR J = 0 TO 5
         : FOR K = 0 TO 6
1430       IF K <  > D
           THEN  NEXT K
1440     D = D + 1
         : IF D = 7 THEN D
           = 0
1450       IF N > D(I,L)
           THEN D = K
         : GOTO 1480
1460       P(I,J,K) = N
         :N = N + 1
1470       NEXT K
       : NEXT J
     :D = D + 1
1480   NEXT I
1500 FOR K = 0 TO 6
     : PRINT E$;A$(K);N$;" "
       ;
     : FOR I = 0 TO 2
       : FOR J = 0 TO 5
1510       IF P(I,J,K)
           < 1 THEN  PRINT "
             ";
         : GOTO 1530
1520       PRINT P(I,J,K);
           SPC( 2 + (P(I,J,K
           ) < 10));
1530       NEXT J
       : PRINT " ";
1540     NEXT I
     : PRINT
1550   NEXT K
   : PRINT
   : PRINT
1560 NEXT L
1990 PRINT
 : PRINT D$"PR#0"
2000 END
3000 FOR I = 0 TO 2
   : FOR J = 0 TO 5
     : FOR K = 0 TO 6
3010     P(I,J,K) = 0
       : NEXT
     : NEXT
   : NEXT
 : RETURN
5000 DATA 31,JAN,28,FEB,31,MAR
   ,30,APR,31,MAY,30,JUN,31,
   JUL,31
5005 DATA AUG,30,S EP,31,OCT,3
     0,NOV,31,DEC
5010 DATA SUN,MON,TUE,WED,THU,
     FRI,SAT
5020 DATA  32,48,48,48,48,48,3
     2,48,32,32,32,32,32,48,48
     ,32,32,32,32,32
5025 DATA  48,48,32,32,32,32,3
     2,48,32,48,48,48,48,48,32
5030 DATA  32,32,32,32,32,32,4
     9,32,49,32,32,32,32,49,49
     ,49,49,49,49,49
5035 DATA  49,32,32,32,32,32,3
     2,49,32,32,32,32,32,32,49
5040 DATA  32,50,32,32,32,32,5
     0,50,32,32,32,32,50,50,50
     ,32,32,32,50,32
5045 DATA  50,50,32,32,50,32,3
     2,50,32,50,50,32,32,32,50
5050 DATA  51,32,32,32,32,51,3
     2,51,32,32,51,32,32,51,51
     ,32,51,51,32,32
5055 DATA  51,51,51,32,51,32,3
     2,51,51,32,32,32,51,51,32
5060 DATA  32,32,32,52,52,32,3
     2,32,32,52,32,52,32,32,32
     ,52,32,32,52,32
5065 DATA  32,52,52,52,52,52,5
     2,52,32,32,32,32,52,32,32
5070 DATA  53,53,53,32,32,53,3
     2,53,32,53,32,32,32,53,53
     ,32,53,32,32,32
5075 DATA  53,53,32,53,32,32,3
     2,53,53,32,32,53,53,53,32
5080 DATA  32,32,32,54,54,54,3
     2,32,32,54,54,32,32,54,32
     ,54,32,54,32,32
5085 DATA  54,54,32,32,54,32,3
     2,54,32,32,32,32,54,54,32
5090 DATA  55,32,32,32,32,32,5
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5095 DATA  32,55,32,32,55,32,3
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5100 DATA  32,56,56,32,56,56,3
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     ,32,32,56,32,32
5105 DATA  56,56,32,32,56,32,3
     2,56,32,56,56,32,56,56,32
5110 DATA  32,57,57,32,32,32,5
     7,57,32,32,57,32,57,32,57
     ,32,32,57,57,32
5115 DATA  32,57,32,32,57,32,3
     2,32,32,57,57,32,32,32,32
```

database, science fiction stories, monthly skytrek and a satellite section.

Also available is astrosoftware, club news, comms board, downloadable software and much more. All callers are welcome to logon and browse around. – **B. Spencer, Prometheus, viewdata 01-300 7177.**

Pre-school software

PLEASE could you put me in touch with anyone writing or selling software for children under five years of age?

I am particularly interested in educational programs aimed at teaching reading writing and arithmetic on Apple computers, but so far have had little success for this age group. Has the software yet to be written? – **C.A. Michie, Oxford.**

● Most of the educational material we have seen is for age 10 and upwards, often being of O and A level standard.

However, a lot of material – of varying quality – is available in the States, notably from Springboard.

Nearer to home you could try Data Quest, 92 Bishopswater, Wexford, Ireland, which offers 120 volumes of educational material, or MGA MicroSystems, Pear Tree, Appledore, Kent TN26 2AR.

Dating service

AS I am engaged in family history research, I was interested to see the calendar program (Apple User, January) which Marshall P.Brown says accepts input back to 1582.

It is quite true that the validation does permit input as far back as that, but unfortunately the output is suspect for dates before 14 September, 1752 – at least so far as Great Britain and the American Colonies are concerned.

One reason for this is that in 1752, September 14 followed immediately after September 2 without disturbing the sequence of the days of the week, which the program does not recognise.

As a matter of interest, the omission of those days is the reason for the start of the fiscal year being April 6 – the tax authorities could not contemplate a short year! Until 1752 it had matched the calendar year.

The other problem with dates before 1752 concerns New Years Day. Up to and including 1751 it was March 25, and March was the first month of the year. With so-called old-style dates, March was almost a year after March 25, not one day before. (Scotland adopted January 1 in 1600.)

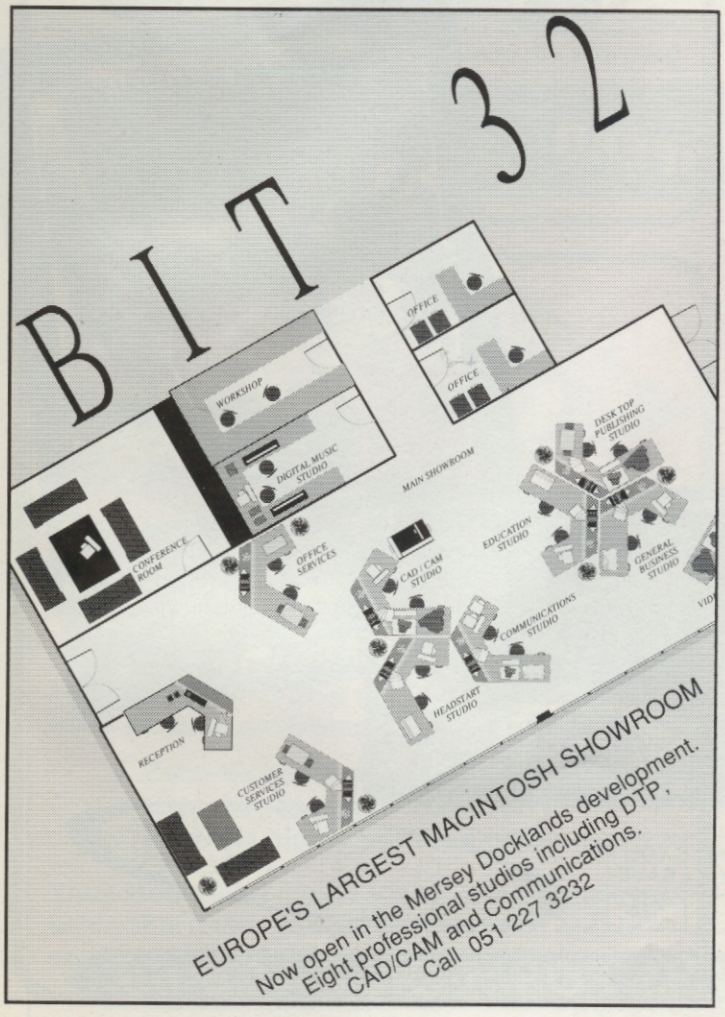
However, this problem can be overcome by putting dates into the program in the new-style form with the month numbers as we now use them, but care is needed over the year number in the months of January, February and March. This is a matter of user instructions.

No doubt most readers who typed the program in will have spotted the omission in line 640 which (no doubt) should start:

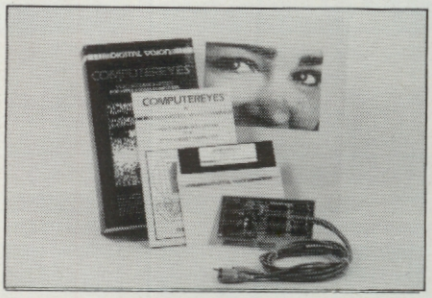
```
YEAR = VAL (MID$ (DT$,7,4))
```

I am not enough of a Basic programmer to have realised why line 390 produced syntax errors until split into five separate lines. – **Howard M. Knight.**





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Running a business the Macintosh way

Modifying the dates in AppleWorks

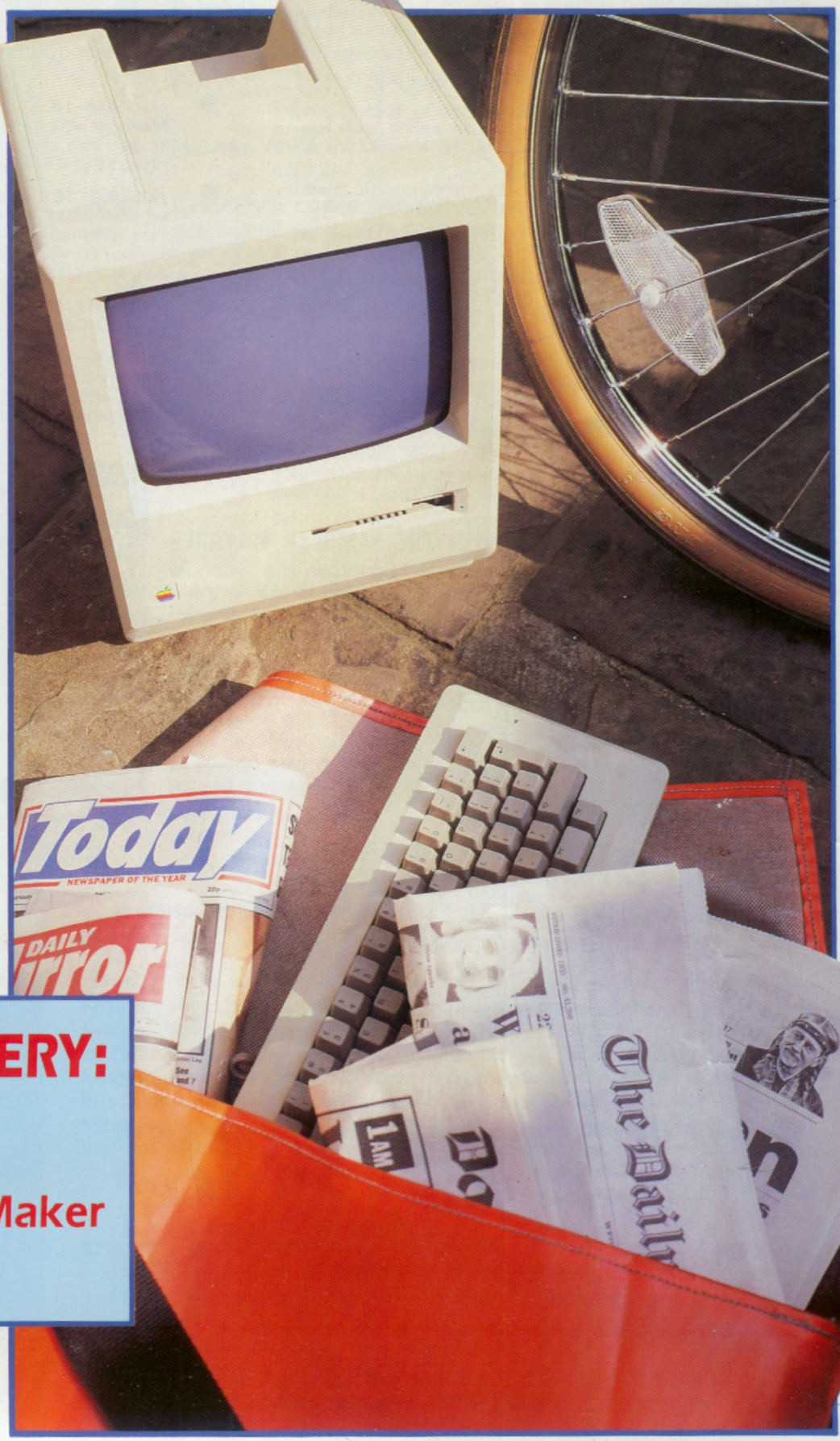
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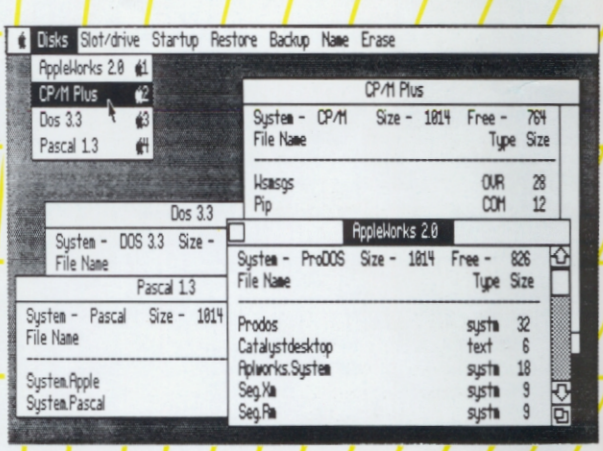
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The plusRAM-16 in this example has been set up using the RAMDesk Manager to have four different RAMDisks — Appleworks, DOS, Pascal and CP/M Plus.

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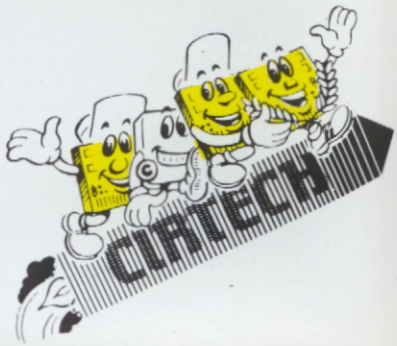
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R&D for Apple's Paris HQ

CONFIRMING its commitment to international markets, Apple has announced the formation of a new Research and Development centre at the company's European headquarters in Paris.

The group will be headed up by Edward E Colby, who has been with Apple in Cupertino for the past five years, most recently as director of product management.

The centre – Apple's first R&D organisation outside California – will develop products and technologies to serve Apple's European and worldwide customer base.

The group will first build its expertise in data communications technologies and is intending to work closely with significant research and development centres throughout Europe, including major university centres.

And the Apple R&D group will also work closely with key European software developers to help them bring to market key products for Apple's personal computer systems.

"We hope to take advantage of the considerable technical expertise in Europe to staff the centre", said Michael Spindler, senior vice president, research and development.

"Our goal is to lever Apple's global resources to harness European innovation".

On the move

APPLE's new marketing director, John Leftwich, is a direct import from Apricot, where he was group product and marketing director.

Formerly managing director of Apricot's desktop publishing division, he has more recently been involved in the R&D and marketing fields.

Commenting on the appointment, Apple managing director Keith Phillips said: "John's deep knowledge of the UK market and the creativity with which he approaches it matched very strongly our own vision of where we want to be over the coming years".

Windows could close for HP and Microsoft

"FOR years Microsoft has been telling us Windows was safe. It's like waking up and finding out that your partner has Aids".

That was the immediate reaction from Borland president Philippe Kahn on hearing that Apple has filed a lawsuit in the USA against Hewlett Packard and Microsoft, alleging copyright infringement of its icon and mouse-driven environment.

For Borland has spent nearly $1 million developing an information-retrieval system based on Windows.

And Apple is now claiming that displays generated by Hewlett Packard's New Wave packages and Microsoft's Windows 2.03 constitute a breach of copyright.

However, in 1985 Apple's supremo, John Sculley, signed an agreement that gave Microsoft a "None-exclusive, worldwide, royalty-free, perpetual, none-transferable licence" to use parts of the Macintosh display in an earlier version of Windows.

Apple claims that the latest generation of the program is too similar to the Macintosh screen display and as such violates the earlier contract.

The case, if successful, would affect future developments of all user interfaces for personal computers, including IBM's new PS/2 package, Presentation Manager.

This is claimed to be virtually identical to Microsoft's Windows 2.03 and as such any legal ruling will undoubtedly apply to IBM.

And if the claim is substantiated then future computer software, other than for the Macintosh, could become less user-friendly unless produced – or licensed – by Apple.

Microsoft was quick to file a counter claim which states: "Apple has violated contracts with Microsoft and has acted in bad faith and seriously damaged our relations with other companies".

Ironically, in his recent book – Oddysey – John Sculley, referring to Microsoft, states: "If we sued our most important software supplier, our business customers would think we'd lost our minds".



Apple plants new roots

APPLE Computer UK is on the move to new purpose built premises at Stockley Park, near Heathrow.

At the ground turning ceremony Apple UK managing director, Keith Phillips said: "The new building will be a symbol of the continued growth of our business in the UK.

"We intend the new facility to reflect the innovation and technical excellence of our range of products".

Confidence in the future development of the company is further demonstrated by the fact that Apple has taken an option for enough adjacent land for another building of up to 60,000 square feet.

Adobe/Scitex join forces

A JOINT venture by Adobe Systems and Scitex will mean that electronic publishing will have direct access to commercial quality colour pre-press – and allow commercial printers the benefits of DTP.

The two companies plan to develop compatability between Scitex response systems and the device-independent PostScript page description language.

The result will be enhanced productivity and commercial colour quality to users of virtually any host computer.

PostScript language output codes will now be communicated directly into Scitex systems, allowing direct access to full colour imaging at resolutions and quality levels previously unattainable.

"Scitex-Adobe compatability will provide publishing professionals – designers, editors, typographers, as well as the business community – with the most efficient, cost-effective means of generating high quality documents with colour graphics and true font wysiwyg functionality" said Adobe president Dr John Warnock.

Apple unveils OASIS for the information age

APPLE is gearing up for the 1990s – and the Macintosh is set to take the leading role.

That was the clear message to emerge from a recent Apple-hosted conference in London – Information Systems and Technology.

In front of an audience of more than 300 chief executives and senior partners of major European financial institutions, systems houses and management consultancies, Apple chairman John Sculley outlined the company's stance.

"The world's corporations have invested over $150 billion in mainframes and host application software", he said.

"The most successful companies in the information age will be those who are able to maximise that investment and give users the power to integrate, manipulate and create information".

To this end Apple has made a "statement of direction" – OASIS: Open Architecture Systems Integration Strategy.

Starting with today's Mac architecture, OASIS is intended to provide a development route for users, developers, system integrators and information systems managers.

But Apple does not envisage radical changes, preferring to maintain the Mac's reputation for user-friendliness.

"We will try to provide our customers with a growth path so they can preserve their expertise and investment in Macintosh applications and data", said Jean Louis Gassee, Apple's senior vice president for research and development.

OASIS reflects the five Macintosh technology layers. The top two – visible to users – are the 2,000 or more existing software applications and the Finder.

Beneath this are the toolbox and the operating system – the programmatic interface for applications developers – and the foundation is the growing range of Macintosh hardware.

Apple's intention is that the OASIS statement of direction shows how the benefits of Macintosh technology will be extended as two major trends develop for the 1990s.

These – the growth of multi-vendor networked systems and the associated need for connectivity – will require new levels of integration.

And Apple's intention is that the directness and power of the Macintosh will not be sacrificed in catering for these trends.

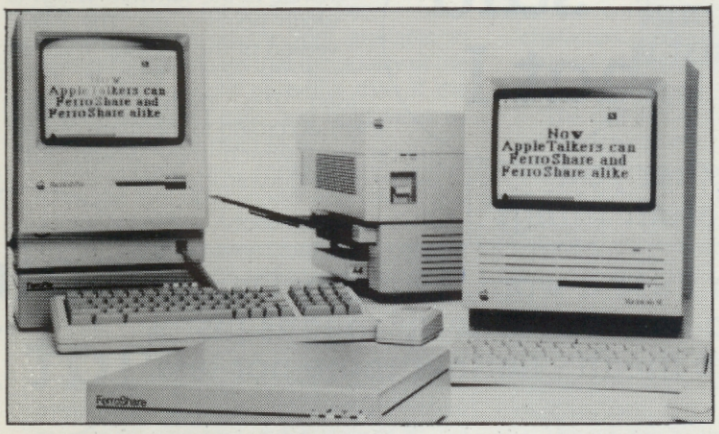
Now experts go on line

MICROLINK, the UK's most innovative computer communications system, has joined forces with the University College of Swansea in a unique instant electronic information service for businesses.

With the new service – called ExpertLink – subscribers can get free advice from experts in various fields, and discuss business problems with others who may have experienced similar difficulties.

The team at Swansea University that will be answering queries includes three professors, several PhDs and experts in a large number of fields including management science, overseas trade, ergonomics, electrical and mechanical engineering, foreign languages, psychology and sociology.

The wide range of business sectors covered includes legal matters, exporting, industrial relations, management skills, market research, personnel and training, statistical and systems analysis.



Shareware for the Macintosh

TWO new products for the Macintosh – FerroShare and FerroNet – have been released by Ferroglen Research (01-680 7722).

FerroShare is claimed to be the only standalone AppleShare file server on the market.

The unit enables an entire network to access and contribute to the same files, memos and applications while maintaining control of individual terminals. Price £1585.

FerroShare is also available as part of the FerroNet network system. The compact unit contains a FerroFile hard disc drive with up to 480Mb of storage, a FerroStream tape back-up, and an optional print spooler – FerroSpool.

FerroNet is claimed to be faster than AppleShare and to release a network from the delays that would normally be caused by administration tying up the system. Price from £5495.

PC Transporter brings MSdos to the Apple II

AN Apple II expansion board that lets the user run MSdos programs has finally arrived, courtesy of Applied Engineering.

Available through Bidmuthin Technologies (01-907 8516) PC Transporter runs MSdos programs on an Apple II+, IIe or IIgs as they do on an IBM PC – and is claimed to run most of them three times faster.

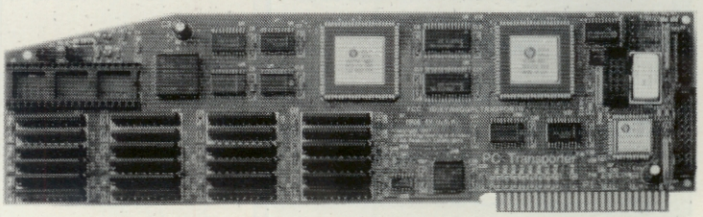
An IBM-style keyboard is required for the II+, but otherwise PC Transporter works with existing Apple hardware – MSdos programs recognise it as IBM hardware.

The package supports 3.5in and 5.25in MSdos and Prodos formatted discs. An Apple 3.5in drive will support either format but Applied Technology's 360k drive system is required to run IBM applications from 5.25in floppies. Up to five drives can be supported, in a number of combinations.

Even when not running MDdos programs, PC Transporter enhances the Apple – Apple software can use the card as a ram disc.

The card is easily installed and the installation kit comes complete with a video cassette to guide users through the process.

Price £343.85 (256k) and £458.85 (640k). The installation kit for the II+ or IIe costs £44.85, for the IIgs £56.35.



Spell binding

THE latest in the Wizardry series of fantasy games is going to bring tears of frustration to a few eyes.

Both the inner and outer packaging sport a warning: The fourth Wizardry scenario, The Return Of Werdna, is for expert adventurers only. It is recommended that players unfamiliar with Wizardry first play Proving Grounds Of The Mad Overlord or at least purchase the accompanying manual available from Sir-Tech software – naturally.

It's easy to dismiss this as a sales gimmick – until you come to play The Return Of Werdna. I think that potential purchasers should take the warning seriously.

As produced for the Apple II, the game consists of three double-sided "master diskettes" of which copies should be made as the game cannot be played on the discs supplied. The manual advises against using a copy program – the first disc includes a routine for making copies of the game.

Confusingly, the on-screen instructions do suggest the alternative of using a copy program. It is probably safer, if slower, to use the game disc. Full marks in any case to Sir-Tech for enabling buyers to preserve their precious originals with the minimum of fuss and expense.

The game is programmed to take advantage of your Apple's extra memory if it is available. I was able to load sides A to E (side F wasn't asked for) into my IIc and I assume it was merely taking advantage of the IIc's normal 128k ram rather than my 512k Z-Ram card. All the same, I was asked to insert discs from time to time during the course of the game.

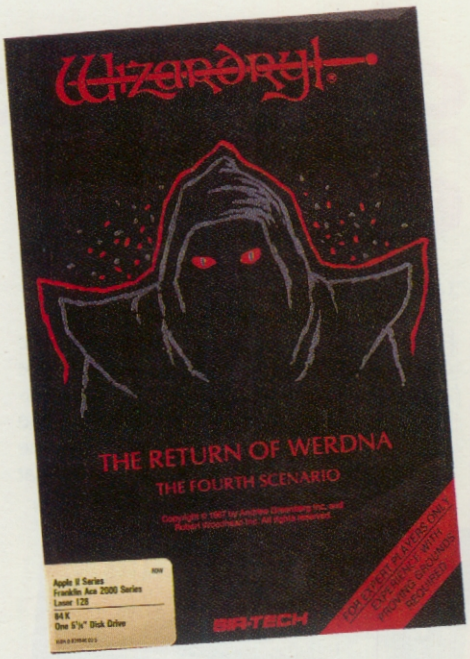
The game operates in a similar fashion to previous Wizardry offerings with some new features – such as the ability to save a game while still in the dungeon – to make the game easier to use.

An extremely useful and necessary feature in a game of this complexity is the ability to make eight different saves to disc. If required, an extra disc accepting eight further saves can be made.

The 13-page manual gives scant instructions and is clearly intended for the initiated. Half of it is taken up with the story of how Werdna got into his present predicament – compulsory reading for anyone seriously contemplating winning.

There are allegedly several possible successful endings to the game and if you find the special ending, you become a Grand Master Adventurer and may use the card supplied to claim your certificate from Sir-Tech – who don't seem to be expecting to hear from many of you.

There is the usual telephone hotline for players who have become bogged down. British buyers are always at a disadvantage here. However, one free sealed clue is



included with the game for those who get bogged down early. This should at least shed enough light to get you going.

Rather than being the more popular and conventional hero with gleaming teeth, you assume the role of Werdna the wizard, a nasty piece of work that some do-gooder adventurers have managed to entomb. Now you are screaming for vengeance but you first have to regain your lost powers in order to escape.

Time clearly passes and things happen even as the player sits and ponders. I managed to polish off a couple of attackers and then left the game to attend briefly to some other business. When I returned, Werdna was back in his tomb and the game had to be started a new.

The usual motley collection of monsters is featured: Orcs, kobolds, zombies and the like. When an encounter takes place, you are given the usual options of fighting or running. Other options are to Use an item, Parry or cast a Spell. A quick reference chart of spells is included in the package.

Although I found the pentacle and managed to summon various monster allies to my aid such as skeletons and gas clouds, and managed to defeat several attackers in the course of my wanderings, I have to confess that I didn't make a lot of progress in pursuit of the all-important amulet. I invariably ended up entombed again. I later learned from the free clue that I was being less than skillful in my choice of assistants.

Sir-Tech claims to have spent several years making this game a fiendish test for expert adventurers. It is aimed squarely at fans who are steeped in the ways of Wizardry and at those adventurers who regard themselves as invincible in the field of fantasy games. Presumably players of this calibre will not have reached this exalted status without contact with previous Wizardry scenarios. Whatever your claim to fame, you will need more than the usual quota of time and tenacity. I've got a feeling a lot of folks could grow old cracking this one.

John Hickman

Product: Wizadry
Price: £57.95
Requirments: Apple II
Supplier: Sir Tech/MGA Microsystems, Pear Tree, Appledore, Kent, TN26 2AR.
Tel:0233 83571

River of death



ARMCHAIR warriors on the Apple II have yet another chance to refight the American Civil War with Blue Powder, Grey Smoke.

Action, as ever, takes place over an invisibly gridded map, but the view will zoom in to tactical level, showing buildings, trees and so on. Units are displayed as either symbols or representative figures.

Graphics are colourful, if not particularly exciting and there are a limited number of sound effects.

Plenty of command options are available, however, to give a realistic implementation of play, and you can opt for a hypothetical battle, or slug out the battle of Chickamauga – the river of death.

Product: Blue Powder, Grey Smoke
Price: $35
Requirements: Apple IIe, IIc or IIgs: 128k recommended
Supplier: Gard, 8 Bishop Lane, Madison, Connecticut, 06443 USA.
Tel: 0101-203-245-9089

Sinking to new depths

A NEW package from Epyx called Sub Battle puts you in command of a submarine. More than that, you can choose from a list of genuine World War II vessels, either American or German. You then have a choice of dates and scenarios according to the nationality you chose.

Just to get you used to controlling a submarine, you can choose the Target Practice mode which gives you an idea of how to handle things. When you feel confident, you can graduate to a Single Mission which assigns you a single task.

Later, when you feel you have the necessary experience, you can opt for a Wartime Command which keeps you busy throughout the Second World War.

As if that isn't enough, there are four levels of difficulty for each assignment. Since you also have the choice of different German or U.S. submarines, the permutations give you a great number of different games.

A feature I liked was time compression. With this you can play the events of five seconds in one – or if you prefer, 30 seconds in one. When you want to quicken things up to produce fast results, time compression is the thing.

Another helpful device at levels 1 and 2 is the Navigator. This too, will get you where you need to go in super fast time. You simply key in the mission's coordinates so that you can get to the arena straight away.

Alternatively, if you need time to ponder or peruse the instructions, then normal time will probably be enough. If not, the game can be paused indefinitely.

This degree of flexibility at the learning stage is appealing. "You'll have a lot to learn before you submerge" states the blurb on the packaging. Too true. Nevertheless, you can hunt through the 36-page instruction manual without too much panic when you know that time can be slowed down or frozen while you do so.

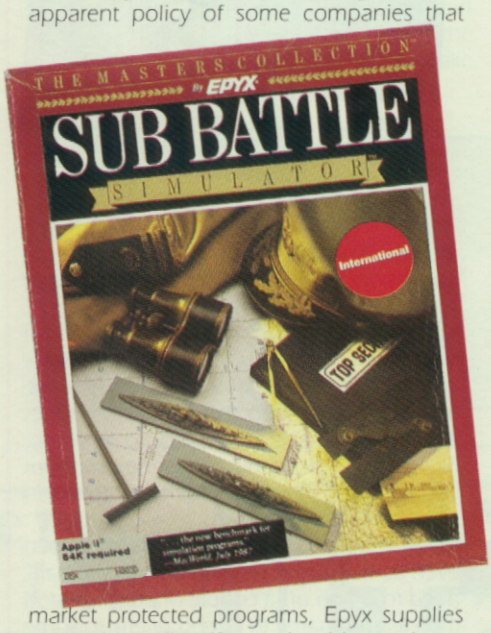
Having had difficulty in the early stages in finding precisely the control I wanted at precisely the time I wanted it, I found the freeze-game option a godsend.

The manual is clear and thorough, giving not only detailed instructions for the game but also a historical and technical perspective of the vessels involved.

The game is controlled exclusively from the keyboard although a joystick can be brought into play. It will, however, only change the direction of your view.

The display of a simulated official letter of condolence to parents of a deceased submariner from the Department of War seems a bit sick, especially when the dead son referred to in my case had only been on target practice and had been really surprised to find the targets fighting back.

I was unhappy with the booting of the disc as it occasionally requires two or three attempts to the accompaniment of disconcerting noises. This is presumably due to its copy protection. In keeping with the apparent policy of some companies that



market protected programs, Epyx supplies no back-up disc. If you should experience difficulties with your particular disc, getting a replacement could be somewhat less than instantaneous.

The game is billed as a realistic simulation and, within the bounds of the Apple II's capabilities, I suppose this is a reasonable claim. The graphics are good with various views and displays including a zooming map, radar and sonar. They naturally look better in colour although I tended to play on my IIc's green screen as the gauges were not very easy to read on my TV.

Realism, however, can lead to periods of boredom even using the compressed time mode. No doubt submarines went through long periods without contact with potential targets, but this hardly makes for excitement on the computer. I managed to sail completely through my patrol zone on one mission, making contact with nothing but the sea floor as I ultimately ran my boat aground in true novice fashion.

The different levels of difficulty introduce new factors, of course. In the last two levels the sea can be rough and toss your boat about accordingly. The number of dud torpedoes increases, and the Navigator is no longer available so you have to consult the manual for a more conventional means of plotting your course.

Some might dismiss this as just another shoot-'em-up game, but it requires practised skills and intelligent strategy to play it successfully. It can create a degree of tension when, for example, your sub is sitting on the bottom with depth charges exploding all around it. It is a bit like sweating it out with the crew.

The ultimate accolade might be to emulate the feat of the home micro submarine simulation which got itself banned in Germany for being too realistic. Sub Battle might be in with a chance.

Lew Norris

Product: Sub Battle Simulator
Price: £19.99
Requirements: Apple II with 64k
Supplier: Epyx/US Gold, Units 2+3, Holford Way, Birmingham, B6 7AX.
Tel: 021-356 3388

Not a review

THERE's been a new topic of conversation on the American bulletin boards lately – it's called CrippleWare. Not a very nice name, but one which captures the sense of software which has had its legs broken.

You may well have seen examples of the genre – demo versions of programs with some of the vital features missing. For example, the Word3 demo which MicroSoft circulated wouldn't let you save a file, merely load existing ones.

Several companies have shown that it's possible to produce fully functional demonstration versions of programs without resorting to software knee-capping. Some recent examples have been the WriteNow demo which announced its demo status on everything you printed, the Webster's Revenge demo which always played the same game, and the Omnis 3+ demo disc given away by Blyth.

In the case of this last, the only restriction imposed was that the database could only hold 50 records. Even if you decided you didn't like Omnis, you'd gained a free disc!

If producing crippleware is unnecessary, sending such software for review is even more so. It's an insult to the magazine and its reviewers, an implied distrust of the magazine staff.

I tell you all this in order to explain why I'm *not* reviewing Ringwarp. It's an incredibly complex space battle strategy game from an Australian company called Play By Mail Games and will cost you £14 if you decide to buy it.

As you might have guessed, though, they sent a demo version for review – Jeez, Bruce, waddya take us Poms for?

When I say "complex", we're talking major time commitments here. In the setup phase, you choose the game parameters,

Do-it-yourself design

FITTING into the fun rather than games category of Fun and Games is T-Shirt Shop from Spinnaker.

Quite simply, it lets you put the unique and personal touch to those otherwise boringly plain T-shirts – your own words, your own picture, your own design.

The cost is minimal, and the package includes a T-shirt and a limited supply of transfer sheets to get you started. Be warned, however – you might find difficulties in finding someone the shirt will actually fit. Do they actually make people that shape?

Seven iron-on transfers are provided – they and the T-shirt take up most of the space in the packaging in fact – and more are easily available. You can fit more than one design on a sheet, but it calls for spot-on alignment at the printing stage.

More essential requirements, however, are an Apple II with at least 128k and a printer – the package supports a wide range of printers and interface cards. In an ideal world, you'll also have a colour monitor and printer, though these are not vital.

The program is easily set up and uses sensible menus, and the whole can be controlled from keyboard, joystick or mouse. All options are equally simple, and a number of hot keys have thoughtfully been provided to make life easier still.

The on-screen menus are largely self-explanatory, but they're backed up by a 16-page manual. It says something for the program that you could get it up and running quite happily just by reading the



blurb on the back of the packaging.

T-Shirt Shop is there to make designing T-shirts easy, and offers a library of designs – zodiac symbols, assorted animals and so on – and four fonts to choose from. Alternatively, you can create your own graphics from scratch, using the Workshop option, or edit existing ones.



There are two main parts to the program. The first, Quickshop, is undoubtedly faster to work with. Boot up and a frame will appear, showing graphics available: Select one and, after it's automatically loaded, position it within your frame: Add the caption of your choice and it's time to print – or to colour in your design.

The Color option (it is an American program) offers you solid colour or patterns. Colours available are purple, blue green and orange in addition to black and white, while there are also six patterns – lines, dots and crosshatch.

Within these parameters, however, there's plenty of scope for mixing colours and filling specific areas.

For more sophisticated work you can create your designs within the Workshop. Edit mode here allows you Draw, Spray, Zoom and Fill Modes as well as control Line thickness, Brush and an Eraser. The real power lies in the Frame commands though, which let you grab, copy and even flip your designs.

Printing is the only time that you need to be particularly careful – no-one's found an Undo command for hard copy yet. The manual strongly advises you to print your design on paper first – you'll get a true wysiwyg representation – and given the cost of the transfer sheets that advice should not be taken lightly.

To create the iron-on transfer you'll print a mirror image on to the special transfer sheets provided. It's essential to position the sheet accurately in the printer, and equally important to follow the instructions (not that there are many of them) exactly. If in doubt, check.

That said, T-Shirt Shop couldn't be easier to use. It's sensibly put together, does what it claims and produces very acceptable results at a very acceptable price.

Only a couple of reservations: The package advertises itself as being for "ages 7 to adult" – would you let a 7-year-old loose with an iron? – so don't ignore the recommendation for parental supervision. And a hastily added sticker suggests that "for best results use light colored T-shirts" – black on black doesn't come out too well.

And before I get swamped with letters from irate parents, leave the T-shirt a while before you wash it. I didn't, and I'm still suffering earache. And wearing off-white shirts.

Steve Mellor

Product: T-Shirt Shop
Price: £49.95
Requirements: Apple IIe or IIc with 128k – and compliant parents
Supplier: Spinmaker/MGA MicroSystems, Pear Tree, Appledore, Kent TN26 2AR.
Tel: 0233 83571

# of Ringwarp

design three ship specifications and build four ships.

I spent close on an hour reading instructions and going through the process, only to be faced with the prospect of playing a game consisting of just two turns. As the information screen will tell you, two is the minimum number of turns and "20+ is most convenient", the maximum being 99.

In addition, the information screens also say, a considerable number of significant routines are not present, including the entire Computer/Alien Strategy file, and the Options are not implemented.

Well, Mr Spock, we'd like you to defeat this enemy fleet – but we've disabled the warp drive, your shields are stuck down, we've run out of photon torpedoes and you've only got two minutes to do it in. Oh yes, and you'll have to pretend to be human too.

When I get a moment I'll upload the Ringwarp demo files to the MacTel bulletin board. Someone in your user group is bound to download them so you should get to see it eventually. That way you can at least see what a two-turn game looks like, although to be honest I didn't feel I'd got a good impression of the game from this exposure, particularly knowing that there were large bits missing.

Play By Mail Games describes the demo version as "shareware". I think the currently fashionable American term is a lot closer to the truth.

Cliff McKnight

Product: Ringwarp
Price: Shareware/£14
Requirements: Macintosh Plus
Supplier: Play By Mail Games, PO Box 83, Mt Eliza 3930, Australia.

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Taking TimeOut

Max Parrott takes a sideways look at an AppleWorks utility

THE TimeOut SideSpread package is sold as a separate application from the others in the series: It contains the install programs – not necessary if you have installed other TimeOut pop-ups – the Clipboard (for Data Conversion) and the spreadsheet printer.

This last will be very useful to anyone involved with large spreads. There have been other "sideways" printers for AppleWorks spreadsheets, but they have all involved writing the data to disc, exiting AppleWorks, running the utility, then – usually – returning to AppleWorks. The TimeOut SideSpread is different in that you do not have to exit AppleWorks and you do not have to save your work to disc in order to print it.

It is amazing how much more convenient that is. In fact all spreadsheet manufacturers should from now on ensure that there is some mechanism for doing this – whether they or a third party provides it does not matter, as long as it works.

SideSpread may be configured with the TimeOut Utility to use either of two fonts – Monaco and Courier – each of which comes in various sizes (Table I). There is no mechanism for introducing other fonts,

Monaco: 6, 9, 10, 12, 14, 18, 20, 24
Courier: 9, 10, 12, 14, 18, 20, 24, 28

Table I: Available type sizes, in points

which is slightly surprising given that one of the TimeOut applications is SuperFonts.

Sidespread will print spreads of virtually, unlimited width and of a depth which depends on the font, size and printing mechanism selected. The printing mechanisms are draft, standard and high qualities and with some printers you can also print in a Tall Adjusted or a 50 per cent reduced mode, (see Table II for more information and compare Figures I and II).

The 50 per cent reduction is a trick borrowed from the Macintosh and SuperFonts whereby a better quality printout is obtained by selecting a font which is twice the size of what you want then printing it at half the size: Figure II was printed in this way. For comparison Figures III and IV show the smallest available size (6 point Monaco) and the largest (24 point Monaco).

Printing is very similar to the normal Open Apple+P printing of spreadsheets except that you enter via Open Apple+ Escape, then make a menu selection from those TimeOut utilities you have selected for your system.

The first screen, after selecting the area of

Apple DMP	* Legend 1385
Apple Imagewriter I/II	Mannesmann Tally 160/180
Apple Scribe	* Mannesmann Tally Spirit-80
* C.Itoh Prowriter I/II	* NEC PC-8023/8025
Epson AP-80	*†Okidata 82/83
* Epson FX-80	† Okidata 84/92/93
* Epson LQ-800/1000/1500	* Panasonic KX-P1091/1092
* Epson LX-80	* Star Delta 10/15
*†Epson MX-70	* Star Gemini 10/15
* Epson MX-80/100	* Star Radix 10/15
* Epson RX-80	* Star SD 10/15
* IBM Compatibles	* Star SG 10/15
*†IDS Micro Prism 480/80/132	* Star SR 10/15
*†IDS Paper Tiger 460/560	*†Transtar 315

* = doesn't have Tall Adjusted capability
† = doesn't have Standard, High Quality or Reduce 50 per cent capability

Table II: Compatible printers

Apple IIc Serial port
Apple IIgs Serial port
Apple Communications
Apple Serial
Apricorn Serial
CCS 7720 Parallel
Dispatcher
Dumpling 64
Epson APL
Fingerprint Plus Parallel
Grafstar
Grappler
Grappler Serial
Microtek RV-611C
Mountain Computer Parallel
MPC AP-80
MPC AP-SIO
Pkaso/Pkaso U
Printer Pro
Printermate
Quadram APIC
SSM-AIO Parallel
SSM-APIO
SSM-ASIO
Tymac
Versacard Serial
Videx PSIO Serial
Wizard IPI
Apple IIc Serial to Parallel
Apple Centronics Parallel
Apple Parallel
Apple Super Serial
CCS 7710a Serial
CCS 7728 Parallel
Dual-Comm Plus
Dumpling GX
Fingerprint
Firmware
Graphicard
Grappler +
Microbuffer II
Microtek SV-622C
Mountain Computer Serial
MPC AP-Graph
Omnigraph
Pretty Print
Printerface
Printmax
Spies Niceprint/Super-MX
SSM-AIO Serial
SSM-APPIC
Texprint-Print-It
Versacard Parallel
Videx PSIO Parallel
Videx Uniprint

Table III: Interface cards supported

To help you allocate disc space to the various TimeOut utilities to best advantage, here are the approximate sizes – in k – of each one reviewed so far.

The Utility	6
Filemaster	20
Superfonts	49 plus 3-8k per font
Ultra System (for macros) and options 5	13 plus 7 for the compiler
SideSpread	70
Data converter (clipboard)	3
Desktools	
Dialler	4
Case Converter	2
Calculator	5
Notepad	4 plus the notes
Encrypter	3
Word Count	1
Puzzle	3
Calendar	15 plus the database, 1k upwards
Clock	1
Envelope Addresser	5
Page Preview	2

The installation and general philosophy of TimeOut packages was described by Lew Norris in February's Apple User, *which also covered Filemaster, SuperFonts and Ultramacros: DeskTools was reviewed in the April issue. TimeOut's remaining offerings – Graph and QuickSpell – will be reviewed next month.*

Cost of Goods Sold			
Purchases	538,551	407,451	185,351	219,641
Merchant Card	8,199	6,479	6,769	98,301
Royalties	87,112	53,422	29,632	86,452
	633,852	467,352	221,752	404,394

Figure III: 6 point Monaco – the smallest available size

Overhead		
Wages	8,919	28,001
Salaries	96,192	89,313
Interest	9,521	2,424
	114,632	119,738

Figure II: 10 point Courier, Normal, on an ImageWriter II

Advertising	24,261	40,361
Promotion	88,424	69,034
Postage	2,106	2,226
Office Expenses	4,407	4,717
Insurance	4,203	3,603
	123,401	119,941

Figure I: 10 point Courier, Tall Adjusted, on an ImageWriter II

Purchases	538,551
Merchant Card	8,189
Royalties	87,112

Figure IV: 24 point Monaco – the largest size supported

the spreadsheet to print, offers you Page Setup – Tall Adjusted or 50 per cent reduction – and draft, standard or high Print Quality. The next screen offers the opportunity of entering the report date and gives you information on the number of lines you have chosen to print and the number of lines it is possible to print with the font size you have configured SideSpread for.

This actually gets it wrong if you have chosen Tall Adjusted, as there are really less lines available than the program suggests. All other combinations seem to get it right.

If you select to print an area which is too large to fit on the paper depthwise as far as the spreadsheet is concerned, the bottom of the sheet is printed – but it peters out at the top.

The next question is How many copies? – with a default of one – and then printing begins. It is not as fast as normal printing because everything is done graphically, and I only tested the ImageWriter II on the standard IIgs serial port, but it is not unacceptably slow. Printing may be abandoned or paused as with Open Apple+P printing.

The only real problem with SideSpread is its size – 70k – a real consideration if you have a limited system. As pointed out here and in the January issue of *Apple User*, AppleWorks with the TimeOut pop-ups is beginning to need a large memory system – it is very much a IIgs orientated tool.

Product: TimeOut SideSpread
Price: £33.95
Requirements: Any Apple II system capable of running AppleWorks v.2, preferably with large memory or ram cards.
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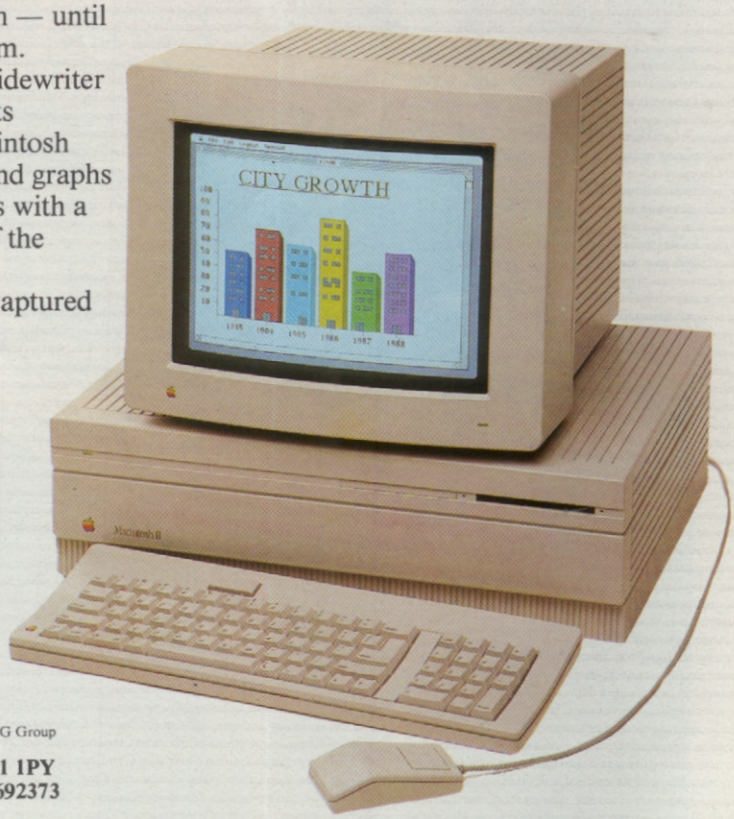
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House Call

P&P – past & present

Tony Leah visits Britain's largest independent micro distributor

BACK to the Future, the title of a recent hit movie, seems to have struck a chord with management at P&P Micro Distributors. For the phrase aptly sums up the company's new policy toward the Apple sector of its massive computer supplies business.

The firm that started in a suitcase eight years ago has ballooned into a £70 million plus a year operation. Not surprisingly, much of the old intimacy between company and clients has been lost along the way. Now all that is set to change.

Very shortly a separate trading division of P&P will be set up specifically to deal with Apple products.

It will have its own Apple-dedicated staff and take a very high profile in terms of being a value added distributor – developing new markets for Apple technology and stocking the products to support these initiatives.

Kevin Hawkins, technical director of P&P, explained: "The P&P that people knew and loved undoubtedly got dwarfed when we became involved with IBM products.

"Previously everybody knew everybody and everything there was to know about the products available. We had 300 dealers and when one of them telephoned I could tell from the voice exactly who it was at the other end of the line.

"I can't do that any more – we do business with around 3,000 dealers today on an active basis.

Complex market

"As a fan of Apple technology, this dwarfing of the Apple end of things has been an increasing concern to me over the past couple of years – so I've been looking to convince P&P that a separate Apple division is the only way to actually grow the Apple market in the UK.

"The Apple market is very complex and it needs an awful lot of development in terms of reaching any sort of maturity like the IBM market.

"But Apple has now produced a range of products which are technically viable in the corporate market up to a level where it can achieve what it wants.

"However, it has a dealer base that is inadequate to meet all the needs and get where Apple wants to go. So both the market and the dealers need considerable development".

Hawkins sees P&P's role as working in conjunction with Apple to develop the dealer base "to a level of competence where they can sell all those solutions – and we're very well placed to do that", he added.

"We have the knowledge of how corporate markets work and what products the dealer is going to need to sell into those markets. And we have the relationship with Apple dealers that will allow us to go into corporations with them and back them up with our knowledge and experience.

"And that, together with what Apple itself is doing with its AppleCentres and dealer training, will develop the market in the UK up to a level similar to that in the United States".

A key factor in P&P's reappraisal of the situation was Apple's decision to open up the architecture of the Macintosh to third party peripheral products.

"Once we're no longer dependent on purely software sales for the Macintosh we can get round what's been a problem in the UK market – the low level of software sales per Macintosh", said Hawkins.

"Recent Macintosh developments have given us a real opportunity to sell, and we believe we have a vital role to play in the development of both the dealer base and the direction that Apple's market will take in the UK, by offering the right third party products.

Product range

"And to do that we need a separately focussed Apple division with its own resources in terms of sales, sales and technical support, marketing, product management which has its own financial controls.

"The product range that we'll take on will exactly complement the markets that Apple wants to go into – areas like communications, desktop presentation and so forth – and I'm talking mainly about corporate markets.

"We're already seeing large increases in the rate of sales of items like databases and spreadsheets – an unusual trend indicating that Apple is moving into these markets – and in the use of high end peripherals like mass storage devices and fast networks.

"There's perhaps a movement away from the AppleTalk networks to bigger standards like Ethernet, and in areas like large screen monitors and high end usage systems – which is great because it's the higher value items that create stability for a company.

"We'll be working very closely with Apple UK in order to ensure that our strategic directions match absolutely and we can develop the markets in concert.



P&P's headquarters in Rossendale – set for further expansion

"Significant new distribution contracts will be announced – we've taken on Ready Set Go 4, Image Studio, Suitcase from Software Supplies and we have exclusive distribution of the Microsoft product range. We'll also be taking on loads of communications solutions, including acting as a distributor for Tops and Tops solutions in the DEC environment, and in other environments as well.

"We'll be selling key products that help dealers sell solutions, and our people will be working with Apple's training and marketing departments to create high levels of end user awareness of the solutions available.

"I'm talking total solutions, like for instance communications where we'll offer everything right through from modems to servers and things like that – and meet all the software needs as well.

"We also look to really help the lower end Apple dealers, make them continue to feel supported as Apple moves upwards, and to build the expertise of the other dealers, and work in tandem with them so we can go into their customers and actually help them to sell solutions".



Kevin Hawkins: "Interest in the Apple II is still very active – P&P carry large stocks to cater for the demand

Mac euphoria

Hawkins is concerned to assure Apple II users that they won't be forgotten in the Macintosh euphoria, though he warns: "It's difficult to see an increase in the market for any Apple II products in the UK. However, we'll continue to sell Apple II software packages and peripheral cards – we're probably one of the few companies that still does this in the UK.

"Most users obtain their requirement within a few months of buying their machine, so as Apple's levels of sales diminish then our sales diminish too.

"Most Apple II users now have all their slots crammed full of cards and it's unlikely that you'll see revolutionary new software appearing on the Apple II that will open up huge new markets. But if there are any significant products that sell in volume supportable by distributors through the Apple II dealer base, then P&P will be there with those products".

Hawkins speaks of the UK Apple marketplace with the voice of considerable experience. He was working for one of the earliest Apple dealers in London when he first met Pete and Pam Fisher.

"They used to turn up in their Volkswagen van, park it on double yellow lines as often as not, and come in with a great cardboard box stuffed with products they'd bought on their latest trip to America", he recalls.

At that time social workers Pete and Pam were buying Apple software from Silicon Valley during visits to American-born Pam's parents in California. The proceeds from sales to UK dealers paid for their holiday trips.

They became distributors for Microsoft merely by walking in one day and buying 50 soft cards on their credit card, later selling them back here at a profit and gradually building up volume trade.

Why Apple? At that time – 1980 – there was only Apple. The market had started to a certain extent with kit computers, but Apple was the first productivity consumer-based machine to go on sale in the UK.

Hawkins remembers the Fishers used to "buy anything and everything that could sell in the UK, from music software and databases right through to fancy little bits of video digitisers and things".

As business increased, Pete and Pam started to get requests from UK dealers to buy specific items on their visits to America. Their transatlantic trips became more frequent and they eventually started to hold stocks of products in the backroom of their home in Streatham.

"Even in those early days their turnover was more than we were doing at the shop", Hawkins recalls with admiration. "Everybody seemed to know their address and hordes of dealers and end-users would turn up at the house on Saturday morning to find out what new items they had to offer".

Eventually the Fishers had to move to bigger premises – still "living over the shop", but with some warehousing space. By this time they had given up their jobs

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Apple II's have a role to play in the day-to-day running of the business



Heavy investment has been made in computer technology to provide up-to-the-minute information for customers

◀ From Page 35

and been joined by Chris Gillard who brought marketing and technical expertise to the operation.

The move to Pete's homeground of Rossendale in the Lancashire valleys soon followed, with Gillard remaining in charge of the London branch, both outlets becoming authorised Apple service centres.

Pete & Pam Computers had also become official distributors for Epson and Ashton-Tate and by 1982 turnover was £4.5 million and net profits £600,000. At the end of that year P&P Micro Distributors came into being.

Space for growth

The following year saw the company become one of the first official PC dealerships to be apppointed by IBM and there were further moves to larger premises in London and Rossendale. Turnover in 1983 rose to £8.65 million, with net profits of £1 million.

Pete & Pam Computing passed into history in 1984, the year which also saw a branch opened in the West Midlands at Bilston and yet more impressive premises acquired in Rossendale.

"When we first moved north it was to a house Pete owned at Haslingden and we stored our stock in the garage", recalls Kevin Hawkins who had joined the firm as a technical sales person by that time. "When a delivery arrived we had to put the phones on hold and rush out to unload the lorry.

"From starting on the ground floor, we gradually took over the entire house – eventually utilising even the clothes cupboards. The lack of space – plus understandable complaints from our neighbours over the volume of traffic – led to us taking over an old mill down the road which sufficed until we built our present premises on Carrs Industrial Estate".

By that time turnover had rocketed to £16.2 million with net profits of £1.3 million, and an independent survey by market research company Romtec named P&P Micro as Britain's largest independent distributor.

Success brings recognition. The company was recently the subject of a special report in the Financial Times which outlined its history and lauded its successful response to massive growth. And man-in-the-news professor Roland Smith, boss of British Aerospace, is chairman – a prize catch indeed for the new board.

Turnover currently exceeds £70 million and is doubling every year. At any one time there is £10 million worth of stock in P&P's five warehouses comprising 35,000 square feet in Rossendale, London and Bilston. The firm employs 230 staff "and would employ more if we could get people with the required technical skills", says Hawkins.

Old image plus

In the meantime, much of his time is taken up with planning to recapture some of the lost atmosphere of the folksy Pete 'n' Pam days.

"I'm trying to form a division within the company that recreates what Pete & Pam was four years ago", he admits, "with the same sort of image and prowess, but with the professionalism back on top of it.

"We intend the new division to be the best possible distribution channel that there is for Apple products in the UK, offering the highest level of support and experience and knowledge – and at the same time being the nicest people to deal with.

"We want essentially to do it right, and we want to mould in all of the ingredients that made Pete & Pam so successful in the past – the really friendly bit, along with total professionalism and the knowhow to enter the new markets that Apple dealers need".

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David Vine takes a mouse alternative for a spin

The best of both worlds



IT'S funny how, even today, computer mice are not universally liked. I still meet people who cannot stand to use them. Now, I know that they can be obtrusive – as with word processors where you have to take your fingers from the keyboard to carry out some simple function such as flagging a superscript. Hooray for packages like Word 3 where you have the choice of mouse or keystrokes.

But I believe that word processors also offer a good illustration of why a mouse can be useful. To my mind it is very natural to highlight, and maybe move, a block using mouse movements and buttons.

The only other tool which comes close in terms of versatility is the tracker ball. And of course in many ways it is just an upside down mouse and so is very similar in use.

Smooth action

I have used tracker balls on quite a number of computer systems – mainly in games – and I have always preferred the mouse on my Macintosh, probably because the Mac Mouse is so well made. It functions smoothly, the scale of movement is just suits me, my desk and the screen, and the use of just one button to click, double click or hold is so fantastically simple I find it hard to believe that such systems were not invented before keyboards.

I was keen then to look at the Turbo Touch because its action seemed smooth, it's well made and it is designed to replace or emulate the mouse. Could it be better? I asked myself.

Ambidextrous

Certainly, it doesn't take up too much space, measuring about 5.5 x 4 ins with a ball of about 2 in diameter. Below the ball – which is mounted just above centre – are two buttons measuring 0.5 x 1.5 in. This is well thought out, as it means that left and right handed people can use the unit equally well.

The box is angled so that the top front is about 1 in, and the top rear is about 2 in, above the desk – an arrangement I found to be comfortable in everyday use.

The cable is about 3ft long and terminates in a mini, circular, 4-pin plug which replaces the mouse plug on the back of your Mac or on the keyboard of your IIgs. If you wish you can also have the mouse in communication with the computer by plugging it into a 4-pin socket on the back of the tracker ball unit.

I have used the tracker ball in this way on both my Mac and on my IIgs. It is light to the touch and smooth in operation – yet heavy enough to be stable: I never once inadvertently disturbed its position on the desk.

Leaving the control panels alone so that I got a direct comparison with the mouse I found that about "half a hand" is sufficient to move from top to bottom of the screen, but more than a "hand's width" is required to move from side to side. This is not particularly disconcerting because it's not natural to use a tracker ball in this way. Rather, you rest the hand on the base of the unit and spin the ball with your fingers.

The ball in the Turbo Touch is quite hefty, but dampened in its movement so that any momentum is small. Spinning the ball and letting go only results in a sideways movement of about 10 per cent of the screen's width.

More convenient

When involved in operations like scrolling through text the tracker ball is more convenient than a mouse because the latter has to be lifted and moved back to the start, especially so if you use a mouse pad on your desk. This does not happen with the tracker ball – you just go on spinning the ball.

However, holding down a button and dragging objects is marginally easier with a mouse. Here, of course, you don't want to go outside the screen or pad area and so there is no need to lift the mouse – not with decent software that is – and with the tracker ball you can press a button with a thumb and roll the ball with the fingers. This I find slightly harder than using the forefinger on the button of the mouse and moving my whole hand.

Double standards

Is the tracker ball better than the mouse? Well, in my opinion no – but it's not worse, it's just slightly different. It does, however, complement the mouse. Having the two together on the desk is incredibly convenient. I find that my hand strays automatically to the right tool for the job.

If you want the best of all worlds then consider getting a Turbo Touch.

Product: Turbo Touch Tracker Ball
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Creative tools for creative people

Jaromir Smejc considers the software available for effectively combining text and graphics on the Apple II

IF you are mainly interested in printing without too much text – for example, creating greeting cards or invitations – then Print Shop would be a good choice. However, it has a limited memory and can only use fonts with a maximum of 57 characters. Thus you cannot have – nor create – fonts with all the upper and lower case characters together with the numerals and punctuation.

With one exception, the fonts which come with the program (and with the complementary package, Print Shop Companion – essential if you wish to use a font editor) only have upper case characters. Because of these limitations, and because you can only use one font in a document, Print Shop is of no real use in languages with more characters.

And unfortunately you cannot overlay one character on another to create, for example, accented letters. In the same vein you cannot combine graphics in one document. Nor can you change the character, line spacing or page size, and the print format and density are fixed.

Graphics galore

The best attributes of the Print Shop and Companion are the simplicity of using graphics in three sizes and text in two. They offer a multitude of borders and graphics and support many popular printers and interface cards. The main reason for their phenomenal success must be that they manage just the right combination of simplicity and sophistication.

However, when you rush out to buy Print Shop, make sure that you get the most recent version. The 1986 version has several features which were badly needed in the 1984 release, such as reverse output (for thermal transfer printing) preview and complete design save, and faster and colour printing.

There are a number of add-on programs which support and enhance Print Shop. The Companion, mentioned earlier, has font and border editors, a better graphics editor and a number of other goodies including a tile pattern creator, a calendar and a "creature" maker. It also allows you to capture hi-res screens from disc.

No character mirroring

The font editor has the biggest matrix size of all the programs considered here, together with some unique features – and some drawbacks. Because of Print Shop's limitations you cannot increase the number of characters above 57 and hence there is no possibility of character mirroring: You have to delete characters if you particularly want to add some.

I find working with the editor tedious. You cannot transfer characters between fonts and I have found some peculiarities with it. For example, when creating a mirrored Ohio upper case font I could only print 10 characters on a line instead of the 12 available with the normal Ohio font.

The Companion's graphics editor is

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Previous articles in this series have provided a full glossary of all the terms associated with creative work on computers and mentioned numerous software packages. Buying all of them would be very expensive and not very practical, so the remainder of the series will be devoted to an assessment of relative strengths and weaknesses. The technical information pertinent to the various packages discussed was summarised in Apple User, October 1987.

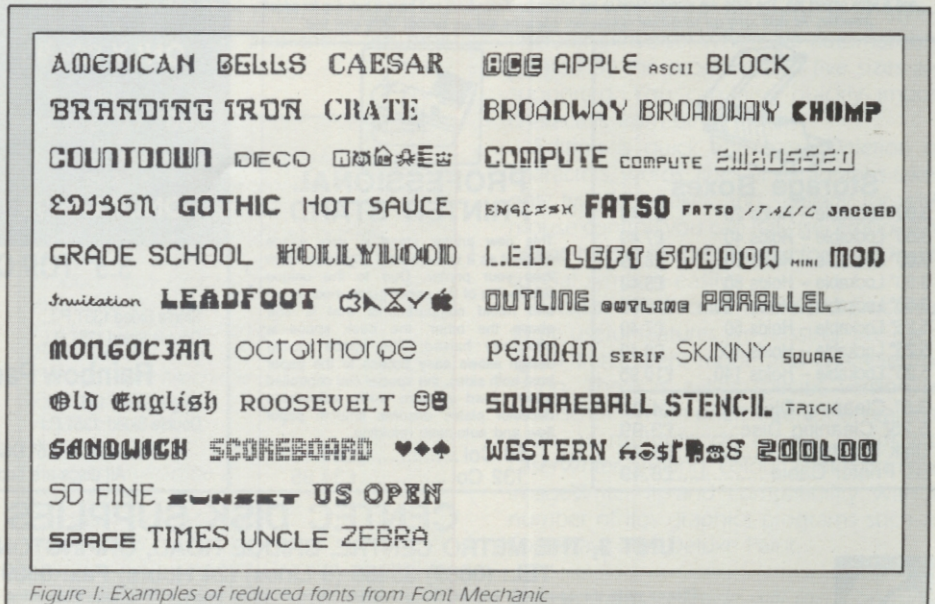


Figure I: Examples of reduced fonts from Font Mechanic

◀ *From Page 41*

good. It has a matrix of 87 x 51 with 17 fill patterns, horizontal and vertical flip, mirror imaging in four modes, lines, rays, boxes, ovals, text into graphics and hi-res and double hi-res graphics capture.

There are also two undocumented bonuses. The first is a car race game which looks deceptively simple. You get to it by booting side B of the Companion disc, ignoring the message "Side B does not boot" and instead of pressing Return as requested, pressing Escape and Control^ (Control+Shift+6 on most keyboards).

The second bonus is a total screen vertical flip. See it by waiting for the main menu, typing STEVEN and pressing Escape.

Independent sources

Other useful Print Shop add-ons are the four Print Shop Graphics Libraries, a special Holiday edition, Print Shop Graphics Viewer, Graphics Maker, and Lover's Utility Set. Also available are ClipCapture, Graphics Manager, Minipix, Graphics Expander, Christian and Judaic symbols and scenes.

And to top it all, it's possible to obtain discs from independent vendors and user groups with a multitude of Print Shop compatible graphics. A comparison of these add-ons was made in part two of the series (*Apple User*, November 1987).

Print Master from Unison World is a clone of Print Shop with three main advantages. You can use upper and lower case together, combine fonts in one design, preview a design before printing – and you can save it. But, you cannot backstep and edit as you can with Print Shop itself.

New Print Master contains 111 graphics, 11 tile patterns, 11 borders and nine fonts with upper and lower case. On banners and posters you can mix two different graphics in one design. You cannot use Print Shop graphics in Print Master or vice versa, but there are graphics transfer programs available.

If you want quick and effective work in a small space such as on a 35mm slide or an invitation card, where one hi-res screen output is sufficient, the most suitable product is probably Beagle Brothers' Shape Mechanic in tandem with Font Mechanic. You need both these programs in order to get the font converter and font scaler utitilies together with the font editor and text typer.

Font scaler is a utility for changing the height and width of almost any shape font while viewing it on the screen. With both discs you have 60 fonts available. Some are very impressive and some of these are shown – reduced – in Figure I. Text may be rotated in steps of 90 degrees, a feature which is unique among the programs described here and yet which is particularly useful for graphs and slides. A change of back and foreground colours is also possible.

Saved to disc

Shape Mechanic can create shapes with a matrix up to 48 x 63 dots or up to a maximum of 8192 separate vectors. Up to 255 of these may be saved to disc as a shape table. Almost any part of a hi-res picture may be captured as a shape table, but you cannot load a hi-res picture with this package.

The shape editor is a rather simple one without many of the features of Print Shop – no flips, floods, mirrors and so on. There is a facility to "trace" a design in order to create a new one which is similar. These features add up to a package which has a good balance of ease of use and capabilities against price and is sufficient for creating logos, graphics and detailed characters.

More fonts with a larger matrix are found in Fontrix, which together with the 15 additional Fontpaks gives 150 different fonts. You can also create documents larger than an A4 page – up to 16 times the area of a hi-res screen in fact.

Its ability to use three different modes of typesetting (overlay, replace and transparent) together with its drawing and painting features (with 32 colours created from different dot patterns) allows unique special effects in image layering.

With some printers you cannot print with a true 1:1 aspect ratio. The font editor matrix is 32 x 32 dots which is large enough for quite elaborate fonts and there are time saving features such as copy and overlay which make constructing similar characters a snip.

The main shortcomings of Fontrix are the lack of a rotation feature and the very annoying fact that you cannot simply back up and type over an error. As a result of this peculiarity you will very often be forced to erase a whole screen and start all over again. Despite this deficiency Fontrix is a very good and usable program. The ability to print pictures 99 times magnified is unique to Fontrix and is good for creating posters and large signs.

Fontrix version 1.5 has an add-on (UtilityPak 1) which offers a vector line drawing function, decorative frames, automatic polygons and pie chart generation.

A word processing program which can create text in several fonts and combine graphics is provided by AppleWorks with TimeOut's SuperFonts (see *Apple User*, February 1988). However, for creating outputs with text and more versatile pictures the word processor program Multiscribe 2.0 (*Apple User*, May 1987) together with Picture Manager is probably the better choice, especially if you need a first class result quickly. It may be installed into a number of ram cards.

There are 10 fonts with Multiscribe itself and further fonts available in five different FontPaks. You can copy up to 15 parts of hi-res pictures into one document and these may be modified and combined with text giving you a creative edge not even available with the MacWrite/MacPaint combination.

High grade editor

The Multiscribe font editor is the best I have seen. It has eight different type styles (including inverse) which are automatically created by the program and five sizes are supported. You can also quickly import characters from other fonts.

Editing is quick and easy. Deletion of characters, words, lines or paragraphs takes only two keystrokes and similarly (or with mouse control) you can italicise, embolden, define blocks of text, change font and insert special symbols easily.

Because Multiscribe is a word processor some useful features are missing, like overlay or transparent mode and character rotation. There is a IIgs specific version of Multiscribe which offers additional features such as multiple document windows, LaserWriter printing, colour printing on the ImageWriter II, and compatibility with a number of IIgs graphics programs such as Top Draw and Deluxe Paint.

● *Next month's article will focus on more software aids available for creative work with text and graphics.*

Product: Print Shop
Price: £47.95 (Apple II) £57.95 (Apple IIGS)
Product: Print Shop Companion
Price: £37.95
Product: Print Shop Graphics Libraries
Price: £22.95 each
Product: New Print Master
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Product: Shape Mechanic
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Publish and be . . .

Max Parrott tries his hand at desktop publishing on the Apple II

EIGHT years ago I did not have an inkling of what was to come. I have always been fascinated by word processors and have used them ever since I had the opportunity. But I never, even in my wildest dreams, imagined that something like Publish It! would appear on an Apple II computer.

Publish It! is not a word processor. It belongs rather to that family of software which logically follows on from word processing known as – since Aldus appeared on the Mac scene – pagemakers or page layout or desktop publishing programs.

It can be used as a word processor and in fact it makes a good one – albeit somewhat slow – something in the style of Multiscribe. But its real function is to take text and graphics and let you move them around and adjust them on the page.

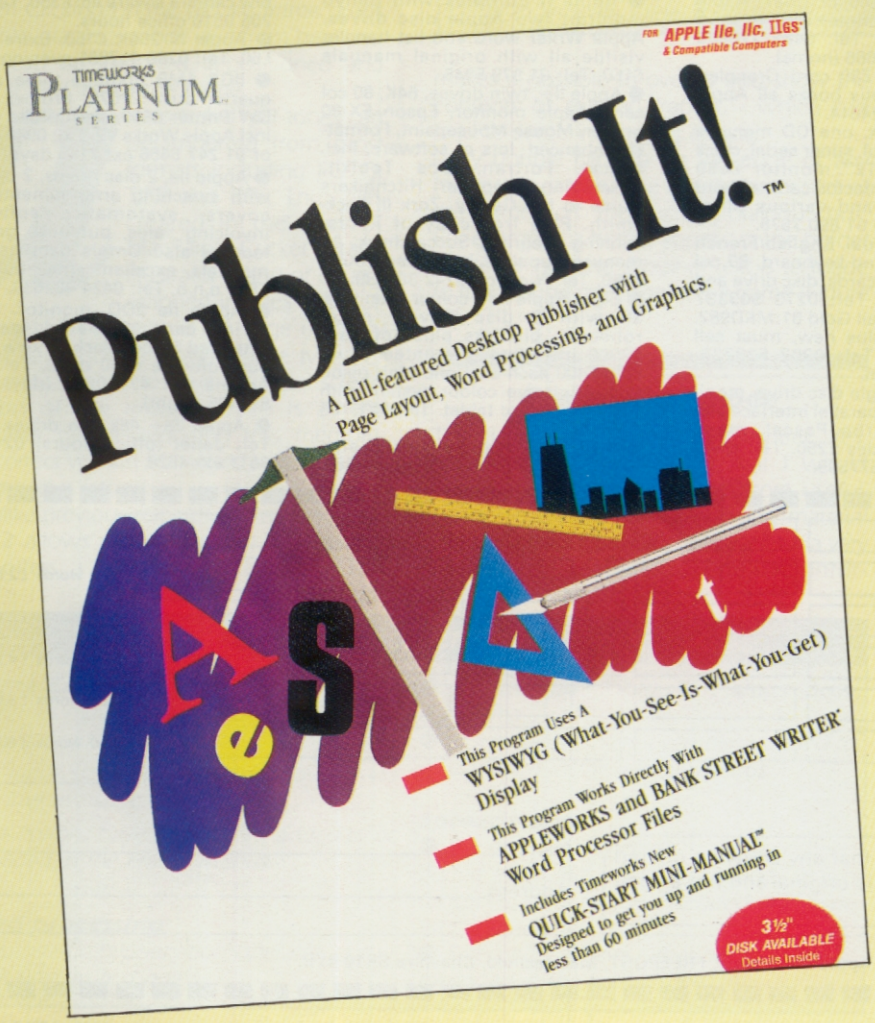
To use it properly you need a 128k enhanced Apple IIe, or a IIc or IIgs, two 5.25in drives (or 3.5in or ram drives) and a mouse or tracker ball as a pointing tool. You ideally need a monochrome monitor rather than a colour one, although an RGB monitor on the IIgs gives good results if monochrome is selected from the control panels display option.

Publish It! arrives on eight sides of four, non-protected, Prodos format 5.25in discs together with a well produced, professionally presented manual. One side is bootable and has the program and its overlays, two have printer fonts, four have artwork and the last has sample text and layouts for tutorial practice.

Once executed, the program work screen shows the form which is now common to many drawing, word processing and pagemaking programs, both on the Mac and on Apple IIs.

The work area is bordered at all four sides. The top line displays the pull-down menus – Help, Special, Objects, Page, Format, Edit, File and the Apple symbol – while the right hand side has a scrolling slider and buttons for moving vertically through the text. The bottom has a slider and buttons for sideways movement.

To the left are icons to represent the available tools. These are for page numbering, drawing circles, boxes with rounded corners, boxes with sharp corners, horizontal and vertical lines. Others cater for creating or linking text columns, creating graphics objects, handling text and general moving and resizing of objects.



Screen display

Publish It! works with one wysiwyg page on screen at a time. This may be shown in various formats ranging from a miniature view of the whole page, through half-size, to full size and on to a double-size representation. In these latter formats the screen is a window on the printed page and you move the screen around using the scroll sliders and buttons at the right and bottom edges.

Printer interface cards supported

Apple IIgs serial port
Apple IIc serial port
Apple Super Serial Card
Apple Parallel Card
Grappler
Grappler plus
PKASO
Texprint Print-it!
Videx Uniprint
Laser 128

Whenever changes are made to the screen – as for example when changing the graphics or text columns and sometimes when scrolling through the page – the whole screen is updated. This tends to slow the program down, but not overmuch, as the document is held entirely in memory, not on disc.

Editing text can have the effect of temporarily removing or overlaying graphics objects with white space, but as soon as you make a cursor move the screen is refreshed and shown correctly. Moving forwards or back a page at a time is accomplished by clicking with the mouse on two symbols at the left of the screen, and again

PLPLOT

Provisional Manual. Beta Test Version 0.9 (Created by Timeworks Publish It! v.1.02)

PLPLOT - Photoluminescence Spectroscopy

Requirements

The software is designed to work on an Amstrad PC1512 fitted with colour monitor and mouse, running under the MSDOS (v.3.2) operating system. It probably will work with an IBM clone if it has a good colour graphics adaptor cloned card and a Microsoft Mouse or an analogue. A compatible will also need a serial card, a parallel card and an on-board real time clock which gives both time and date. At least 512 and preferably 640K of memory should be fitted. The program will work with one floppy disk drive attached but preferably there should be a hard disk drive to save spectra.

The program displays its results on an Hitachi X-Y Plotter but any plotter which understands the Hewlett Packard Graphics Language will be suitable.

Overview

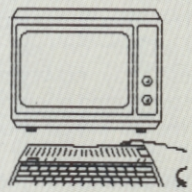
The software is written in Turbo Pascal but includes a large number of procedures and functions which have been written in native 8086 code. These will be more fully described in another manual.

The program uses the concepts of windows and mouse control developed by Xerox and made popular by the Apple Lisa and Macintosh computer systems. Within this program there are essentially two kinds of windows. The main or primary windows are opened and closed simply by moving the mouse. Secondary windows are opened and closed by choosing options available within the current window.

As with any program the easiest way to learn about this one is to use it and this slim manual is designed only to get you started. When fully developed the program will have help available on-line. At present, however, this is not implemented.

The program receives data from a Stanford Research Systems Lock-in amplifier (model SR510) and displays it graphically on the screen. The screen shows 600 data points but actually 1200 data points are received for any one spectrum and the full 1200 points are capable of being put to the plotter.

Data is transmitted from the Lock-in amplifier at 9600 baud with a word length of 8 data bits and two stop bits with no parity. The data has the form of Ascii characters and the Lock-in amplifier similarly receives Ascii commands from the computer. None of this need be understood by the user of PLPLOT.



Program Use

After switching on the PL system, the Lock-in amplifier and the computer, the program and its associated data files will be automatically loaded and run. The program is simple enough to operate that a spectrum can be obtained and displayed on the plotter using only mouse movements and button presses. However, the program is sophisticated enough to produce a spectrum on the plotter, fully labelled and titled with only partial display and with different scales, with only minimal operator control.

The spectra may be saved to disk and reloaded from disk to be redrawn. The files may also be copied from disk to disk and from directory to directory from within the

Figure I: First attempt at a two column layout

the screen is refreshed. Moving the cursor or typing will also cause horizontal or vertical scrolling as appropriate.

Before text can be entered into a page, page size has to be selected and text columns placed. Once this is done – and the text tool has been selected and clicked on a column – text may be typed in or imported from an Ascii, AppleWorks or Bank Street Writer file. If the text is longer than one column you have to connect the first column to the second, and the second to a third and so on, using the linking tool. Text then flows through the columns in order.

As would be expected, text may be reformatted or resized and its font or style may be changed. There are six fonts provided in a variety of sizes, ranging from 9 to 72 point, but not all fonts come in all sizes. However, there is the option of adding more fonts from extra packs. The available styles are plain, bold, italic, underlined, outlined, shadow, superscript and subscript.

Importing graphics

Graphics areas may be inserted into or across columns as required and once they are in place and selected you can draw in them with the tools provided. Alternatively you can import pictures from standard Apple hi-res and double hi-res graphics held on disc or from Dazzle Draw (Broderbund) or MousePaint (Apple) graphics.

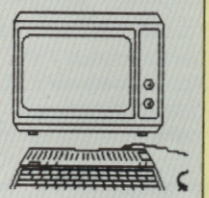
Text will flow around a graphics area either to the left or right, depending on where it is situated with respect to the edge of a text column. Horizontal and vertical lines of any suitable length and width may be added to breakup or enhance text.

Getting started

I first spent 30 minutes or so with the tutorial part of the manual, loading some of the given samples and following the instructions, to create a newsletter front page. It was all so easy that I decided to create my own two column manual from an AppleWorks file which I had on disc and

actually 1200 data points are received for any one spectrum and the full 1200 points are capable of being put to the plotter.

Data is transmitted from the Lock-in amplifier at 9600 baud with a word length of 8 data bits and two stop bits with no parity. The data has the form of Ascii characters and the Lock-in amplifier similarly receives Ascii commands from the computer. None of this need be understood by the user of PLPLOT.



Program Use

Figure II: Kerning and soft hyphenation allow more characters to be packed in

from some of the artwork provided with Publish It! My first attempt is shown here at half the printed size (Figure I).

I elected to use full justification of text and in doing so I found that several words really needed breaking at the ends of lines. This is very easy to do in Publish It! since "soft" hyphens may be entered into words and if the line can be made by breaking the word at that point it will happen.

Word breaking

Subsequent formatting may change the need for such word breaking or reintroduce it, but no problem – Publish It! got it right every time. "Sticky" spaces may also be introduced between words, which can be invaluable when formatting with certain phrases or names. Both these features are almost indispensable and yet are missing from many word processing programs.

And Publish It! can go a lot further, where text formatting is concerned. You can change the "standard" spacing between letters, words, lines and paragraphs and kerning is also possible – this is the ability to reduce the space between a pair of letters to improve legibility or the text format.

Compare my original page with the

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second version (Figure II) where text has flowed around the graphics area and you will see that kerning and soft hyphenation has allowed me to pack more characters on some of the lines to give a more "solid" feel to that block of text.

As this kind of reformatting goes on the text moves backwards and forwards between the linked columns, but the graphics areas and graphic objects such as the horizontal dividing lines do not. These may be independently moved and resized, but I found it easier to make sure that my text was correct first. Then I worked down each column in turn from the beginning of the document, making the changes I wanted and adding graphics as I went.

Text manipulation

I used the word processing part of the package not only to edit the original AppleWorks file in its new form but also to create text. It has everything you could want in the way of formatting abilities – MacWrite or Word 3.0.

Printers supported

Apple ImageWriter
Epson FX, RX, MX
Epson MX-100
Epson lookalikes
Gemini 10X, 15X
Okidata 192
and laser printers with an optional, extra package – see the text.

Find, and Search and Replace – but even on the IIgs it is a little too slow for fast, comfortable typing.

Generally, I found I could fit about three pages of text into the memory of the machine, but the exact amount depends on the fonts used, the column sizes and the number and size of graphics areas.

You cannot directly put text on to a graphic, but you can create a "box" for the text, type in it, and then move this object on to the graphic. Similarly, objects may be laid one on top of another and moved from front to back and vice versa. However, objects are not "transparent": There is only one layer visible in the final, printed result.

Text and objects may only be used horizontally – you cannot rotate them. One thing that did impress me is the circle drawing tool. Although the result did not appear very circular on screen (I have never set up the monitor's aspect ratio to be 1.0) the printed result was a perfect circle.

Within a minimum of time I found I could produce a very acceptable printed output. Publish It! only drives dot matrix printers and thus prints in their graphics modes, but it did so reasonably quickly. On the ImageWriter II, driven by a IIgs, Publish It! was faster than other graphics-printing software. In fact it took less time to print a page than the Mac does when running

This is Desplaines at 12 point, it also comes in 9, 10, 18, and

This is Wilmette at 12 point, it also comes in 9, 10, 18, 3

This is Deerfield at 12 point, it also comes in 9, 10 and 24 point.

Westwood at 18, also comes in 36 point.

Madison at 24, also in 48

Ravinia at 18, also in 36 point.

Figure III: Fonts available

The manual mentions that an extra package to print on laser printers is available. It doesn't say, however, which laser printers are supported nor whether it uses PostScript or the bit image mode to print. I suspect that at the moment it does not use Postscript because of memory and time constraints, but I think it likely that a future, IIgs specific version, could do so and would be well received.

There are two more features which I would like to see incorporated into a future version. First, it would be convenient if the text column set-up for a page could be copied at a mouse or key stroke on to a new page. Second, once the set-up has been made it should be possible to reversibly "lock" it so that columns cannot be inadvertantly moved.

Formatting problems

In using Publish It! I only once had a problem. As I mentioned above I found it best to create text in AppleWorks and import it into Publish It! but some AppleWorks text formatting commands cause Publish It! to go into underline and shadow modes at large font sizes. It is no real problem to reformat, but it is easier to remove such commands from the AppleWorks file before importing.

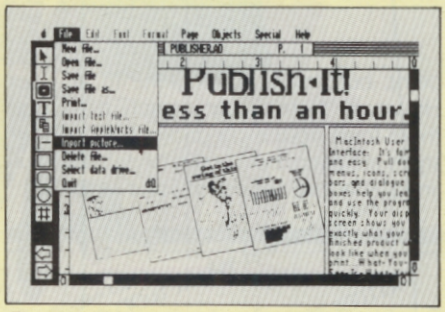


Figure IV: Mac-style drop-down menus make life easier

At any time you can ask for the status of the memory and be told how much you have used, how much is left, and how many more objects you can fit on the page.

To test the software I tried to import more text than could fit into memory. The program coped with it, gave me a warning and allowed me to look at and edit pages 1 and 2 but no more. It warned that moving on could lose text and made the suggestion that saving and reloading data might improve the situation. It did.

Ideal arrangement

The manual suggests that you can use Publish It! with one disc drive: In fact I don't think you can unless you also have a reasonable size ram drive. With one drive and data held in a Prodos subdirectory the program could not find the data. Also there is little room for data on one drive when together with the program, its overlays and its fonts (which need to be in an on-line disc when printing).

The program is really good with two drives. One disc can hold the program and overlays and the other the data and fonts. However, the best arrangement is to load the program, overlays and fonts on to a ram drive and to have data on a floppy disc. This speeds program operation up considerably because each time you move to a new tool an overlay is loaded from disc.

Conclusions? We think that Publish It! is good. So good that while we haven't bought the company we will sell you the package – see the special offer on page xx.

Product: Publish It!
Requirements: An enhanced Apple IIe with 128k, a IIc or IIgs together with a mouse (preferably) or joystick (not tested) and either two 5.25in or 3.5in drives (or a combination of the two) or one drive and a large ram drive.
Supplier: Turning Point Software and Timeworks, 444 Cook Road, Deerfield, Illinois 60015, USA.
Available from Apple User on special offer at £84.

Going for a spin

Geoff Wood test drives a low-cost hard disc for the Apple II and Mac

WHEN the Apple Profile 5Mb hard disc for the Apple III came on the market in 1981, it was priced at £2,265. Apple is still asking £795 for its 20SC model, but there are several other 20Mb hard discs available at lower prices.

There's the CMS range of hard discs from the US for example. These drives range from 20Mb to 960Mb, the most popular sizes being 20Mb, 40Mb and 80Mb. They can be connected directly to the SCSI port on a Macintosh Plus, SE or II, but can also be used with an Apple IIe or IIgs with a SCSI card. CMS also supplies 40Mb and 80Mb internal drives for the Macintosh II or SE.

The CMS SD20 external drive I tested was housed in a platinum-coloured metal case 3.5in high, 10in wide and 10.5in deep. Being the same width as the base of a Macintosh Plus and only slightly deeper, it sits neatly beneath the computer. The plastic front of the drive cabinet slopes forward from top to bottom and features a black plastic grille with a small red panel behind which is the "in use" light.

On the back panel of the case are a mains lead socket, an on/off switch and a grille for the small fan. Unlike the Apple SC20, which has two Centronics type 50-pin connectors, the CMS drive has two 25-pin connectors identical to the SCSI outlet on the back of the Macintosh. One advantage of the CMS drives is that they do not need a cable terminator on the last drive in the chain.

Decibel level

The stout cable supplied with the drive is six feet long which means that you can put the drive on the floor or on a shelf if you wish, though the noise level is no greater than that of the Apple SC20 or other hard discs I have come across.

The manual consists of 22 pages of laser-printed A4, stapled together at the top left corner. Although is is more crudely presented than those that come with the Apple SC20, it gives all the information you need and, in some respects, more than the Apple manuals do.

The Macintosh version of the drive comes with a 3.5in disc with some programs for setting up the drive. The manual states that the drive is shipped factory formatted and that the Macintosh will boot from the disc, but the drive I tested would not do so: I formatted it with the program on the CMS disc.

Getting started

After formatting, which took several minutes, new drivers had to be installed: Then the drive had to be initialised, which took another minute or so. These operations were very easy to perform with the utility program on the disc. There are different drivers for the Macintosh Plus, SE and II and you can choose one of several icons to represent the hard disc on the desktop.

I then copied the system folder on to the hard disc and found that the Macintosh would boot from that. About 15 seconds after the drive is started, there is a perceptible "bleep" after which you can switch on the computer.

The system folder on the disc contained the latest version of the Finder (6.0) and System File (4.2) but the desktop displayed a trashcan rather than the anglicised wastebasket. You can use a British version if you prefer, provided that it supports HFS rather than MFS – with a hard disc connected and switched on, you should never boot from a disc with the MFS System/Finder as it could corrupt the contents of the hard disc.

Parking heads

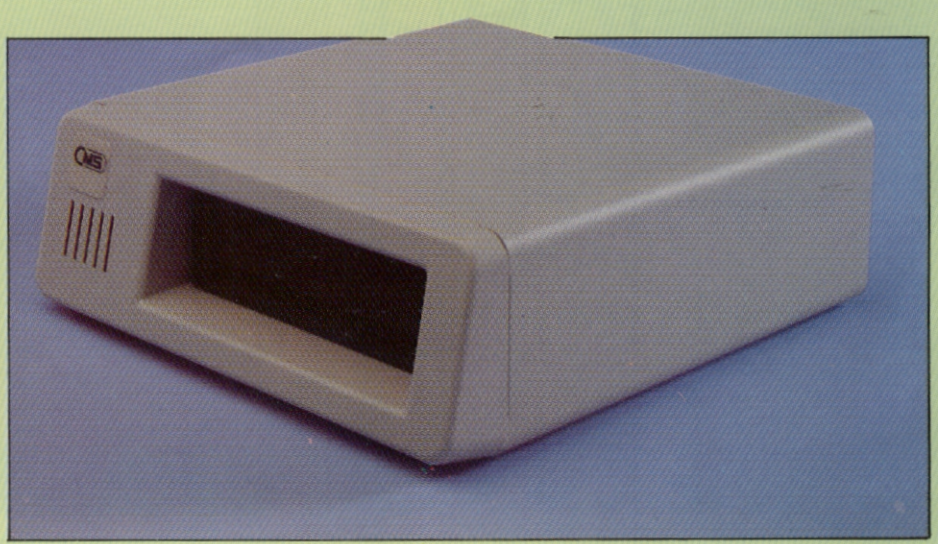
The disc drive came with a SCSI identification number of 6 which you can change if you wish by altering three jumpers on the back panel. This is a more difficult operation than pushing a pin into the hole on the back of an Apple SC20, but you should rarely need to change the number.

The utility program for setting up the hard disc includes an option for parking the heads. This is advisable if you intend to move the drive, though in the model I tested, the SeaGate 225N hard disc was mounted on rubber bellows to absorb the shock of small movements. Some of the larger versions of the CMS drives feature auto-parking heads.

The CMS drives for the Apple IIe or IIgs are identical to those supplied for the Macintosh, but they come with a different manual and software, including a program for parking the heads. You will need a CMS SCSI card which is different from the Apple SCSI card and costs slightly more.

Installation is not as simple as on the Macintosh because the SCSI card can be used for up to two drives on one computer, or one drive can be connected to several Apple II computers (with an SCSI card in each). The SCSI system is designed to allow

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up to eight devices to be on the bus at the same time. The ID number of a Macintosh is set at 7, so only one Macintosh can be used, whereas SCSI cards can be set to give different ID numbers to several computers.

The first step is to check and, if necessary, reset the jumper blocks on the SCSI card. There are eight jumper blocks, but with one drive and one computer you need to set only four of them. One block sets the ID number of the drive (normally 6) and also determines whether the computer can read and write or just read-only. Another is used to set the ID of the host computer, normally 7 for only one computer.

A third jumper block is set to match the size of the drive in megabytes and a similar block is used if you have a second drive.

Two more blocks are used to determine the starting point of each drive. For example, on a 20Mb drive, one computer could read-write the first 10Mb and read-only the last 10Mb, whereas another computer could read-write the last 10Mb and read-only the first 10Mb.

One of the remaining two jumper blocks determines whether the card is set for single or double drive use while the other block is reserved for future use.

The card has a 26-pin header to accept a connector on a short ribbon cable which has two DB-25 connectors. One or both of these can be attached to nearest knock-out(s) on the rear of your Apple IIe or IIgs – two connectors are needed for attaching two drives to one card. A cable, similar to that used for the Macintosh version of the drive, is supplied to link the drive to the connecter on the back of the computer.

The SCSI card can be used in any slot of a IIe or IIgs except slot 3, unless you don't need 80 columns on the screen. In practice you may be limited to slot 7 or slot 4 if the other slots or smartports are already in use. With the card in slot 7 of a IIe, the computer will boot off the hard disc rather than the drives in slot 6. In a IIgs you can use the control panel to set the startup slot.

Software transfer

When all is connected up, you can switch on the drive(s), wait a few seconds and then switch on your computer(s). The drive is said to come with Prodos and DeskTop II already installed, but the one I tested had to be formatted. The software is supplied on a 5.25in disc, so if you have a IIgs you will need either the appropriate drive or a friendly dealer to transfer the software to a 3.5in disc.

I copied Prodos 8 and BASIC.SYSTEM on to the hard disc, then installed various programs including AppleWorks, Apple Writer, MultiScribe, Sensible Speller, FlashCalc, SuperCalc 3a, VIP Professional and the utilities from Copy II Plus (rather than the Apple File program).

It was easy to switch between the programs with Alan Bird's version of Prodos and all loaded much faster than from floppy or 3.5in. The programs that needed disc access, such as Sensible Speller for the dictionaries and SuperCalc 3a for graphs, worked much faster.

Directory management

With a hard disc, you must use Prodos subdirectories because you cannot have more than 51 files in a directory. If you save a file in the wrong subdirectory, you may have difficulty in finding it again. As far as I know, there is no Prodos equivalent of the Macintosh Find File disc accessory.

Prodos 8 and Prodos 16 can reside on the hard disc at the same time by placing Prodos 16 in a subdirectory along with another called System to hold all the System files needed to run the Program Launcher.

I tried out the 20Mb drive with two computers. At first, I could not get it to work, but eventually discovered an error in the manual – jumper 4 on the host ID block needed to be off, not on, for two drives – and all was well. One computer could read-write the first 15Mb and read-only the last 5Mb, and vice versa for the other computer. I also set up the drive as two volumes (Slot 7, Drives 1 and 2) with one computer and it worked perfectly.

The CMS disc that comes with the drive has a special version of Apple's Backup II program. If you make a habit of saving every file on a floppy disc as well as a hard disc, you do not need to use it, though it is easier to rebuild the hard disc from floppies created by Backup II, which can perform incremental backup – only files modified since the last backup – as well as full-volume or sub-volume backups. Full instructions for operating Backup II are given in the CMS manual.

When you fill up a hard disc with Prodos files that are frequently updated, the loading times will be slower than for files that are not updated. This is because the updated files are saved in sections on different tracks of the disc.

Eventually, it may pay you to copy all the files on to another hard disc or a series of floppies, then reformat your hard disc and re-save the files one at a time so that they are on adjacent tracks. This advice applies not just to the CMS drives, but also to other hard discs used for Prodos.

Product: CMS SD20 hard disc drive
Price: £575
Product: CMS SCSI Disc Controller card
Price: £97.75
Supplier: Bidmuthin Technologies, Brent House, 214 Kenton Road, Harrow, Middlesex HA3 8BT.
Tel: 01-907 58516

AppleUpdate

Behind the scenes

TWO new books provide a fascinating insight into life behind the scenes at Apple.

Odyssey: Pepsi to Apple, a joint effort from John Sculley and John A. Byrne, fills in the background on "the most dramatic marketing adventure in business history".

And, according to the blurb, it answers the question "What tempted this man to give up a nine billion dollar company?"

Odyssey, however, is perhaps better read after Jeffrey Young's offering – Steve Jobs: The Journey is the Reward.

This traces the story of Apple's early years, taking Jobs' success story as far as his departure from Apple and his setting up of NeXT.

One reader called it "the most interesting account yet of Apple's humble origins and operations. Hard to put down – leaves you with a rare feeling of special access to the environs of computer creators, at home with friends as well as at work".

And Steve Wozniak ought to know what he's talking about.

Title: Odyssey: Pepsi to Apple
Price: £15
ISBN: 000 217994 6
Publisher: Collins Publishers, 8 Grafton Street, London W1X 3LA.
Tel: 01-493 7070

Title: Steve Jobs: The Journey is the Reward
Price: £10.95
ISBN: 0 673 18864 7
Publisher: Scott Foresman Publishing, 66 Wood Lane End, Hemel Hempstead, Herts HP2 4RG.
Tel: 0442 231555

When it comes to the crunch...

Trevor Hobson offers two utilities to help with dBase-II applications

I WORK extensively with dBase-II, and to help with the task of creating, debugging and documenting applications, I've put together two utilities which I hope will be of general interest.

The first – DBCRUNCH, described this month – crunches a dBase-II command file by removing all comments and the vast majority of unnecessary spaces. With this utility I am able to create command files with plenty of comments and generous use of indentation within loops and so on. to improve the legibility of the code. This version of my command flle I then use as my master copy.

I use DBCRUNCH to produce a crunched version of the command file which I use in the "live" application. The benefit of this is that I have master command files which are very readable, but the command files in the "live" application take up less disc space (typically 20 to 30 per cent less) and run more quickly, especially where there are large program loops.

The second utility – DBXREF, described next month – helps in the debugging and documentation of command files by producing a listing of all the data and index files used, all the other command files called, all the memory variables modified and all the memory variables released.

It is surprising how often such a listing can identify problems in the code. For example, memory variables modified but not released, memory variables misspelt and so on.

In addition the listing is invaluable later when making changes to applications. A quick look through the listings before making the changes will show other files which may need to be changed and which variable names will need to be avoided.

Both these utilities can operate either in single input mode – with the names of the relevant command files being entered individually from the keyboard – or can be set to run in batch mode with the relevant filenames being read from a file. Both utilities also have the option to direct output messages only to the screen or to both screen and printer.

The utilities are written in Microsoft Basic and DBCRUNCH is shown in Listing 1.

DBCRUNCH

This program reads the specified dBase-II command file one line at a time. It removes all blank lines, all comments, all leading and trailing spaces, all multiple spaces which are not in a literal string, and all spaces either side of any of the characters +-/,<>= provided that they are not in a literal string.

That is, if – signifies a blank, ——IF——(A—=—B)—— will become IF–(A=B) but 'This——is——a—Title' will remain unchanged.

The result of running this utility is a new command file containing the crunched code: The original file is left unchanged.

When the program is run a menu is displayed for which the valid input is:

I or i This toggles the input mode between single file and batch operation.

O or o This toggles the output mode between screen only and printer and screen. The output provided is the names of the source and destination files, the number of lines and characters input from the source file and the number output to the destination file. A sample of the output from DBCRUNCH is shown in Figure I.

```
      Source File:  D:CONTROL.GET
 Destination File:  B:CONTROL.GET
 Lines in  353     Characters in  969
6
 Lines out 345     Characters out 675
```

Figure I: Sample output from DBCRUNCH

F or F This option is only available for batch input mode: When selected it enables the name of the batch input file to be changed. The default is FILE.NMS.

[ESC] This exits the program and returns to the CP/M prompt.

[RETURN] This causes the program to run with the options currently set.

When the program is run in single input mode it will ask for the names of the source file and the destination file to be input. These files should be input on a single line separated by a comma, the source filename first. The source file is that containing the code to be crunched: The destination file will be created and will hold the crunched code.

When run in batch input mode the program will read the names of the source and destination files from the specified batch input file. This should contain one line for each pair of source and destination files. The source filename should be first, followed by the destination filename and a comma should separate the two: All input should be in uppercase. I use Wordstar (Option N) to create this file. A typical example of a batch input file is shown in Listing II.

There are several relevant points regarding this program:

- The variables *UONS, UOFFS* and *SK6S*, initialised at lines 340 and 350, contain the codes to set the printer to turn underlining on or off and to skip over six lines at the end of each page and so miss the perforation.

  The codes shown are those required by the Epson range of printers, in particular the MX80, Type III. If your printer requires different codes, set the correct values in lines 340 and 350. If you do not wish to use underlining or the skip over facility just set these variables to the null value with ="".

- The variable *CLINES*, initialised in line 360, contains the code to clear the video display from the cursor to the end of the line. The code shown is that required by the Videx Videoterm 80 column card. If your display requires a different one, set the correct value in line 360.

- There is almost no error checking of input to this program. It is up to you to ensure the source file exists in the specified drive and that all drives specified have discs in them.

- *Next month's article will concentrate on DBXREF – the debugging and documentation utility.*

Listing I

```
10 REM program dbcrunch.bas
20 REM program to crunch dBase comman
d files by removing:-
30 REM (a) all leading and trailing s
paces from each line
40 REM (b) all comment lines and blan
k lines
50 REM (c) all comments after ENDIF,
ENDDO & ENDCASE
60 REM (d) all multiple spaces which
are not in string
70 REM (e) any space either side of t
he following +-/,<>= but
80 REM     not in a string
90 REM in batch mode this program req
uires a file (default d:file.nms)
100 REM this file should contain the
names of all source and destination
     files
110 REM in the following format:-  so
urcefilename, destinationfilename
120 REM note that the file names in f
ile.nms must all be in upper case.
160 REM initialise variables
170 NAMESFILE$="D:FILE.NMS"
200 DQUOTE$=CHR$(34)
210 SQUOTE$=CHR$(39)
240 REM set characters which do not r
equire a space on either side
250 NOSPC$="+-/,<>="
330 REM set printer and display codes

340 UON$=CHR$(27)+"-"+CHR$(1):UOFF$=C
HR$(27)+"-"+CHR$(0)
350 SK6$=CHR$(27)+"N"+CHR$(6)
360 CLINE$=CHR$(29):REM chr$(29) clea
rs line from cursor
380 REM main menu
390 A$=" ":INMODE$="S":OUTMODE$="S"
400 HOME
410 WHILE A$<>CHR$(27)
420 VTAB 3:HTAB 31:PRINT"dBASE-II CRU
NCHER"
```

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```
430 VTAB 4:HTAB 31:PRINT"------------
-----"
440 VTAB 10:HTAB 4:PRINT"I   Input Mo
de:";
450 IF INMODE$="B" THEN INVERSE
460 HTAB 58:PRINT" BATCH ";:NORMAL
470 IF INMODE$="S" THEN INVERSE
480 PRINT" SINGLE ";:NORMAL
485 VTAB 13
490 IF INMODE$="S" THEN PRINT CLINE$:
GOTO 510:REM cline$ clears line
495 HTAB 4:PRINT"F   File Containing
Batch Input Filenames:";CLINE$;
500 HTAB 59:PRINT NAMESFILE$
510 VTAB 16:HTAB 4:PRINT"O   Output m
essages to:";
520 IF OUTMODE$="S" THEN INVERSE
530 HTAB 50:PRINT" Screen only ";:NOR
MAL540 IF OUTMODE$="S&P" THEN INVERSE

550 PRINT" Screen & Printer ":NORMAL

560 VTAB 19:HTAB 32:PRINT"[RET] to Ex
ecute"
570 VTAB 20:HTAB 32:PRINT"[ESC] to Ex
it"580 GET A$
590 IF A$="I" OR A$="i" THEN IF INMOD
E$="B" THEN INMODE$="S" ELSE INMODE$=
"B"
600 IF A$="O" OR A$="o" THEN IF OUTMO
DE$="S" THEN OUTMODE$="S&P" ELSE
    OUTMODE$="S"
610 IF (A$="F" OR A$="f") AND INMODE$
="B" THEN GOSUB 5000
620 IF A$<>CHR$(13) THEN GOTO 650
630 IF INMODE$="B" THEN GOSUB 6000
640 IF INMODE$="S" THEN GOSUB 7000
650 WEND
660 HOME
670 CLOSE
680 SYSTEM
5000 REM procedure to change batch in
put file name
5020 VTAB 13:HTAB 59:PRINT CLINE$:VTA
B 13:HTAB 57:INPUT NEWNAME$
5030 IF LEN(NEWNAME$)<>0 THEN NAMESFI
LE$=LEFT$(NEWNAME$,13)
5040 RETURN
6000 REM batch input
6020 HOME
6030 REM open names file
6040 OPEN "I",#1,NAMESFILE$
6050 WHILE NOT EOF(1)
6060 INPUT #1,SOURCEFILE$,DESTFILE$
6070 GOSUB 10000
6080 WEND
6090 CLOSE #1
6100 PRINT:PRINT:PRINT:PRINT:PRINT
6110 VTAB 20:HTAB 27:PRINT"Press any
key to continue ";
6120 GET DUMMY$
6130 HOME
6140 RETURN
7000 REM keyboard input of file names

7020 HOME
7030 VTAB 10:INPUT"Enter Source Filen
ame,Destination Filename: ",
    SOURCEFILE$,DESTFILE$
7040 HOME
7050 GOSUB 10000
7060 PRINT:PRINT:PRINT:PRINT:PRINT
7070 VTAB 20:HTAB 27:PRINT"Press any
key to continue ";
7080 GET DUMMY$
7090 HOME
7100 RETURN
10000 REM crunch dBASE-II command fil
e
10020 INLINE%=0:OUTLINE%=0:INCHAR%=0:
OUTCHAR%=0
10030 PRINT"     Source File  ";SOURC
EFILE$
10040 IF OUTMODE$="S&P" THEN LPRINT S
K6$;UON$;"     Source File:  ";
    UOFF$;SOURCEFILE$
10050 OPEN "I",#2,SOURCEFILE$
10060 PRINT"Destination File:  ";DEST
FILE$
10070 IF OUTMODE$="S&P" THEN LPRINT U
ON$;"Destination File:  ";
    UOFF$;DESTFILE$
10080 OPEN "O",#3,DESTFILE$:CLOSE #3:
KILL DESTFILE$
10090 OPEN "O",#3,DESTFILE$
10110 REM process file
10130 WHILE NOT EOF(2)
10140 LINE INPUT #2,INLINE$
10150 GOSUB 11000:REM process a line
10160 WEND
10190 CLOSE #2,#3
10200 PRINT"Lines in   ";INLINE%;"  C
haracters in  ";INCHAR%
10210 PRINT"Lines out  ";OUTLINE%;"
Characters out ";OUTCHAR%
10220 PRINT:PRINT
10230 IF OUTMODE$<>"S&P" GOTO 10270
10240 LPRINT "Lines in  ";INLINE%;"
Characters in  ";INCHAR%
10250 LPRINT "Lines out ";OUTLINE%;"
 Characters out ";OUTCHAR%
10260 LPRINT:LPRINT
10270 RETURN
11000 REM process a line
11020 INLINE%=INLINE%+1
11030 INCHAR%=INCHAR%+LEN(INLINE$)+2
11040 REM the +2 includes CR & LF at
end of each line
11060 REM ignore leading spaces
11070 X%=1:GOSUB 20000:FIRST%=X%
11090 REM ignore blank and * comment
lines
11100 IF X%>LEN(INLINE$) THEN RETURN
11110 IF MID$(INLINE$,FIRST%,1)="*" T
HEN RETURN
11130 REM set first 7 characters to u
pper case
11140 FIRST7$=""
11150 FOR I%=FIRST% TO FIRST%+6
11160 IF I%>LEN(INLINE$) THEN FIRST7$
=FIRST7$+" ":GOTO 11190
11170 CH$=MID$(INLINE$,I%,1)
11180 IF ASC(CH$)<=122 AND ASC(CH$)>=
97 THEN
FIRST7$=FIRST7$+CHR$(ASC(CH$)-32) ELS
E FIRST7$=FIRST7$+CH$
11190 NEXT I%
11200 FIRST5$=LEFT$(FIRST7$,5)
11210 REM
11220 REM ignore remaining comments
11230 IF FIRST5$="NOTE " THEN RETURN
11240 IF FIRST5$="ENDIF" THEN OUTLINE
$=FIRST5$:GOTO 11600
11250 IF FIRST5$="ENDDO" THEN OUTLINE
$=FIRST5$:GOTO 11600
11260 IF FIRST7$="ENDCASE" THEN OUTLI
NE$=FIRST7$:GOTO 11600
11280 REM ignore trailing blanks
11290 X%=LEN(INLINE$):GOSUB 20100:LAS
T%=X%
11310 REM process INLINE$ between FIR
ST% and LAST% inclusive
11320 OUTLINE$="":SPNREQ%=0:SPPREV%=0
11330 LPTR%=FIRST%:RPTR%=FIRST%:REM s
et left and right pointers
11340 WHILE RPTR%<=LAST% AND RPTR%>=L
PTR%
11350 CH$=MID$(INLINE$,RPTR%,1):REM g
et a character
11360 REM skip literal strings
11370 IF CH$=DQUOTE$ THEN
RPTR%=INSTR(RPTR%+1,INLINE$,DQUOTE$)+
1:SPNREQ%=0:SPPREV%=0:GOTO11570
11380 IF CH$= SQUOTE$ THEN
    RPTR%=INSTR(RPTR%+1,INLINE$,SQUO
TE$)+1:SPNREQ%=0:SPPREV%=0:GOTO11570
11390 REM process a space
11400 IF CH$<>" " THEN GOTO 11470
11410 IF SPNREQ%+SPPREV%<.5 THEN SPPR
EV%=1:RPTR%=RPTR%+1:GOTO 11570
11420 IF RPTR% > LPTR%+SPPREV% THEN
    OUTLINE$=OUTLINE$+MID$(INLINE$,L
PTR%,RPTR%-LPTR%-SPPREV%)
11430 X%=RPTR%:GOSUB 20000:RPTR%=X%
11440 IF SPNREQ% > .5 THEN LPTR%=RPTR
%:SPPREV%=0 ELSE LPTR%=RPTR%-1:SPPREV
%=1
11450 GOTO 11570
11470 REM if not a string or a space
11480 IF INSTR(NOSPC$,CH$) < .5 THEN
GOTO 11550
11490 SPNREQ%=1
11500 IF SPPREV% < .5 THEN RPTR%=RPTR
%+1:GOTO 11570
11510 IF RPTR%>LPTR%+1 THEN OUTLINE$=
OUTLINE$ +
    MID$(INLINE$,LPTR%,RPTR%-LPTR%-1
)
11520 LPTR%=RPTR%:RPTR%=RPTR%+1:SPPRE
V%=0
11530 GOTO 11570
11550 REM if not a string or a space
or in NOSPC$
11560 SPNREQ%=0:SPPREV%=0:RPTR%=RPTR%
+1
11570 WEND
11580 IF RPTR%>=LPTR% THEN
    OUTLINE$=OUTLINE$+MID$(INLINE$,L
PTR%,LAST%-LPTR%+1) ELSE
    OUTLINE$=INLINE$
11600 REM write output line
11610 PRINT #3,OUTLINE$
11620 OUTLINE%=OUTLINE%+1:OUTCHAR%=OU
TCHAR%+LEN(OUTLINE$)+2
11630 REM the +2 is to include CR and
 LF at end of each line
11640 RETURN
20000 REM ignore space in inline$, le
ft to right
20010 WHILE MID$(INLINE$,X%,1)=" "
20020 X%=X%+1
20030 WEND
20040 RETURN
20100 REM ignore spaces in inline$, r
ight to left
20110 WHILE MID$(INLINE$,X%,1)=" "
20120 X%=X%-1
20130 WEND
20140 RETURN
```

Listing II

Sample of FILE.NMS

```
D:ACCOUNTS.CMD,B:ACCOUNTS.CMD
D:ARCHIVE.CMD,B:ARCHIVE.CMD
D:ARCHIVE.FYL,B:ARCHIVE.FYL
D:CONTROL.ADD,B:CONTROL.ADD
D:CONTROL.BAL,B:CONTROL.BAL
D:CONTROL.GET,B:CONTROL.GET
D:CONTROL.MNT,B:CONTROL.MNT
D:CONTROL.RPT,B:CONTROL.RPT
D:CONTROL.SLC,B:CONTROL.SLC
      :            :
      :            :
          etc.
```

Note format: SOURCEFILE,DESTINATIONF
ILE in upper case.

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