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# 8000 PLUS

THE MAGAZINE FOR THE

# AMSTRAD

PCW 8256 • 8512

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**YOUR CONTACTS**

EDITOR • SIMON WILLIAMS  
TECHNICAL EDITOR • BEN TAYLOR  
ADVERTISING • TONY NOWELL  
AD PRODUCTION • DIANE TAVENER  
DESIGN • DEAN WILSON  
SUBSCRIPTIONS • CARRIE - ANNE  
PORTER  
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# OPENING MENU

## OPENING MENU

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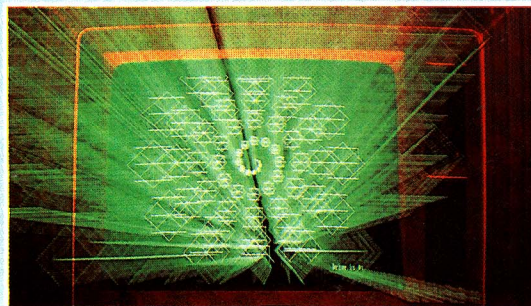
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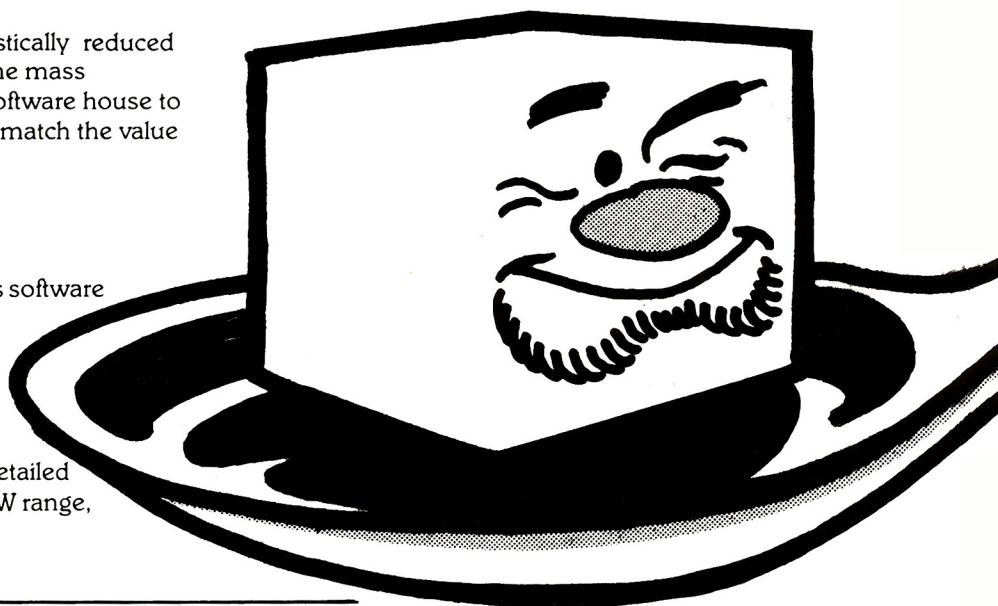
Letters to the ed from the footloose, the famous, and the frustrated.

# As sweet as Sugar!

It's not only Alan Sugar of Amstrad who has drastically reduced the cost of real computing power. Using the same mass marketing techniques, CAMSOFT was the first software house to offer full feature business programs at a price to match the value for money Amstrad computers.

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77. MANUAL, Narrative & Discount Lines anywhere
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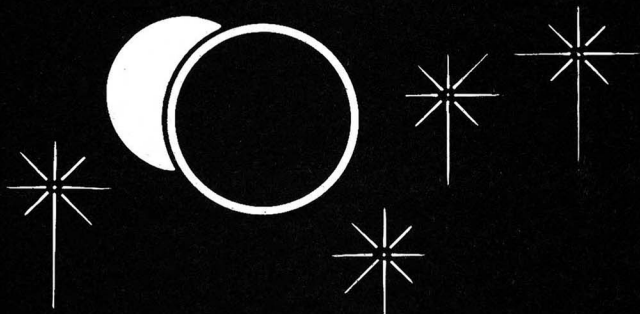
# DARK SIDE OF THE MOON

The lunar eclipse predictor we published in issue 3 has caused a stream of correspondence and a long and sordid tail has slowly emerged.

Keen-eyed readers, drawn into the shadowy world of rival magazines, noticed the very same program published in the May issue of Computing with the Amstrad. Worse than that, it seems to have originated several years before, in an unnamed book of 'useful BASIC listings'.

Worse still, M.R. Hanlon of East London, a reader with an

Astromical turn of mind, checked the dates it produced, only to declare the whole lot 'Bunk!'. He compared entries in *The Amateur Astronomer* and *The Cambridge Encyclopaedia of Astronomy*, which agreed with each other but not with our program. If anyone would like to supply the correct dates, we'll update the program. In the meantime, slapped wrists to Howard Roughly, who obviously didn't note our proviso that all listings must be unpublished and the original work of the contributor.



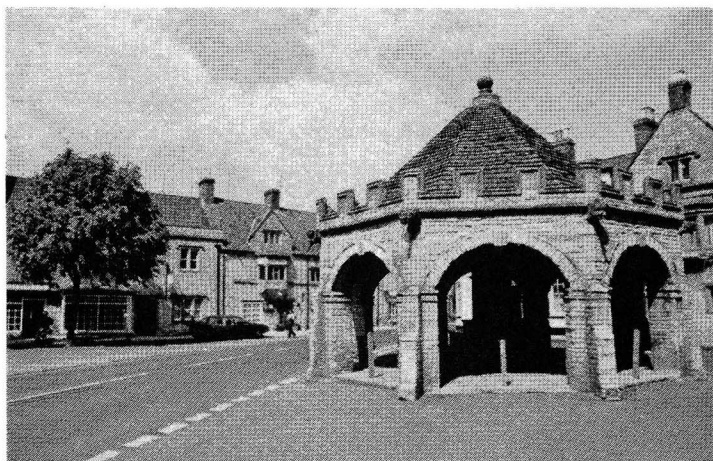
## 8000 Plus I

The continuing success of 8000 Plus means we are keen to expand our editorial team to provide still better coverage of the PCW scene. We are particularly looking for PCW owners with knowledge of communications and accounting, and with proven writing skills, although these need not have been in the computing sphere.

We can't offer packed commuter trains for your trip to work, a dense, polluted traffic-

ridden environment or Capital radio, but if you'd enjoy the steaming turmoil of a quiet Somerset market town and the sickening puns of your fellow editorial staff, you may be just the person we're looking for.

If you're interested, please send a CV and sample of your writing to: *Staff Writer, 8000 Plus, The Old Barn, Somerton, Somerset TA11 5AH*



When Alan Sugar launched the PCW he aimed it fairly and squarely as a 'typewriter replacement'. His sales pitch was and is 'More than a word processor, for less than a typewriter'. By more, he meant the inclusion of a printer and RAM disc, but what 8000 Plus is trying to prove is that the PCW is a fully-fledged personal computer.

Although LocoScript is a good word processor (and LocoScript 2 promises to be still better), there are many other uses for the 8000s that it would be a great pity to ignore. The most obvious of these are the CP/M business programs that the micro can run, and these range from databases, to spreadsheets, to accounts, to statistics. With each new package used, that bit more is learnt about computing. Eventually, curiosity grows about how they all work.

All business packages have to be programmed. They are written in one of several languages designed for getting the most out of a computer and making it a bit more human to deal with. When you start to look at these languages you begin to appreciate the skill of the programmer, and perhaps grow a little more tolerant of the obscure bugs which occasionally crop up in complex programs.

*Simon Williams*



"IT'S THE NEW COMPUTER LANGUAGE CALLED EASTENDESE"

**Calling Mr A.J. Withers**

In issue 1 of 8000 Plus, we ran a prize draw for £25 software vouchers. Unfortunately, in the general melee at the Old Barn, the addresses of the three winners were mislaid. Two of the three have since written to ask what happened and have been sent their prizes. We still don't have the address of Mr Withers, though. So, if you see A.J., tell him...

The FEBRUARY issue of 8000 Plus is due in the shops on THURSDAY, JANUARY 15th 1987. Happy Christmas!

# All play and no work ...

The massed forces of the software houses are mounting a concerted attack on the Christmas games market for the PCW. It is strange to think that only a few months ago the extent of your choice was a few Infocom text adventures or space invaders.

Recently Tomahawk and Batman have proved the PCW can handle sophisticated arcade-type graphics. If you've still an idle few pounds lying around after Christmas, here's the pick of the crop – go on, spoil yourself!

Domark (01-947 5622) have released a computer version of **Trivial Pursuit**, with the tempting question 'What could be better after a busy working day than a game of Trivial Pursuit?' Answers on a postcard please ...

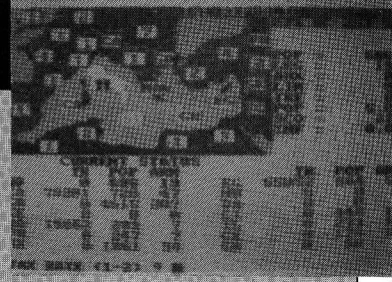
The game costs £19.95, and is said to have around 3000 questions. 1400 of these are taken from the Genus edition of the board game, 1000 more are totally new, and 500 questions are music and graphics based – this means that the computer plays you part of a tune, for example, and asks a question to go with it. The screen itself is like the

board game's, with an animated question master doing the honours. Before a musical question is asked, the question master walks over to a tape recorder and turns it on; when a graphics question arises, the lights go out and a screen drops from the roof ready for a projector. Domark's Mark Strachan added that wringing sound out of the PCW was an uphill struggle, but they succeeded in the end.

Next, two flight simulators join the already established Tomahawk, vying for the attention of would-be pilots. Mirrorsoft's **Strike Force Harrier** (£19.95, 01-377 4645) is, as the name suggests, a Hawker Harrier simulator. It does all the expected things like going up, down, forwards and around, and can viff or zap bandits at 3 o'clock high with a goodly arsenal.

Due for release shortly, **Starglider** from Rainbird (01-240 8838) has a different and appealing approach. While it promises to be 'an all action air-to-air and air-to-ground flight simulation', part of the skill comes not from having finely tuned reflexes born of a misspent youth, but being able to read (shock!)

At an all in price of £19.95, the program comes with a 64-page novella written by James Follett, who bravely admits to having written the film 'Who Dares Wins'



Annals of Rome's information screen, again on a CPC

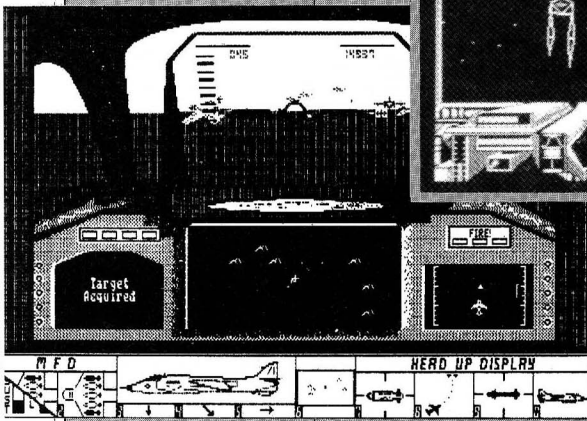
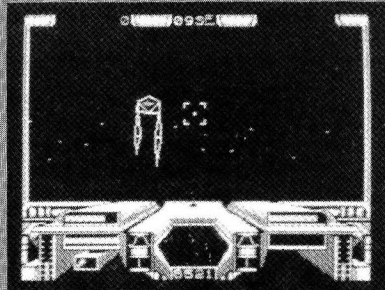
(unfortunately no relation to the excellent TV series). This book, through its plot, tells the story of the game; how the evil baddies invade the country and the hero shoots 'em all down etc. In the book are the vital strategy clues you need to finish the game successfully.

Starglider is supposed to have had rave reviews in its implementations on other computers, so watch this space for our word ...

From PSS (0203 667556) comes 'Annals of Rome'. This is a strategy program for wargaming fans, ranging over 11 centuries. As the player, you are in the Roman Senate in charge of deploying the might of the legions against the barbarian hordes.

Annals of Rome sells for £17.95, and claims to have fully detailed and historically accurate maps, statistics etc. 'History rarely gives second chances – the only skill level in this game is all or nothing', trumpets PSS, ungrammatically.

A screen from Starglider, taken from an Amstrad CPC computer



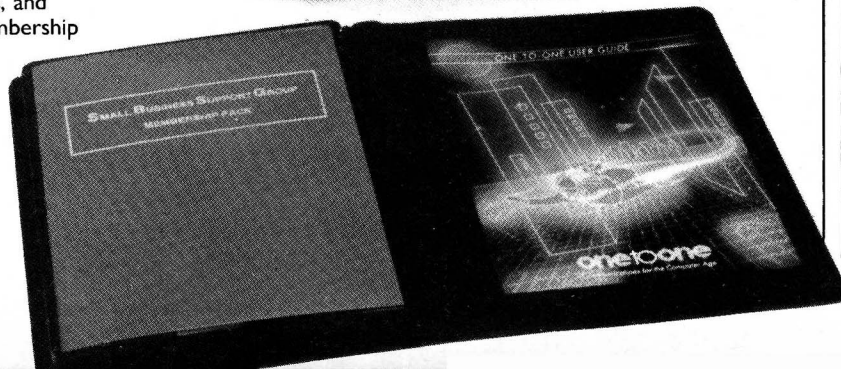
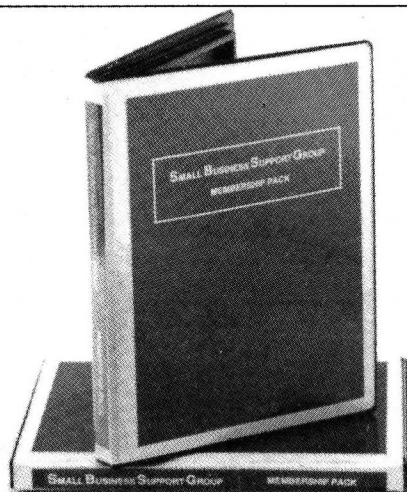
Strike Force Harrier running on the PCW

## Mind your own business

The Small Business Support Group has introduced a new membership scheme to make it easier to get the micros in your business going.

The SBSG is a support and enquiry service – £40.00 buys you a hotline telephone number, registration for the One-to-One electronic mail service and a newsletter. At an extra cost, courses on using PCW's, word processors and other software are run from the Group's HQ in Worcestershire.

The news is that you can now join over the counter at dealers and large computer stores, and walk away with a new membership pack to get you started. Alternatively, ring 0386 852641 and get it from the horse's mouth.



The SBSG membership pack

6 8000 PLUS



Gemini Marketing, distributors of products such as DataGem, FontGem and InterGem, went into receivership in early November. But even as you read this, a new company called Digita Group rises from the ashes of Gemini and looks set to continue to support and extend Gemini's range.

Gemini had been in trouble for some time, and it was after a long and troubled illness that the Sunday Times finally administered the last rites in the shape of a winding up order. Gemini had invested around £13,000 in a two page colour advertisement in a Sunday Times colour supplement, which was a

## This little pig went to market

A new on-line database service aims to provide vital marketing data about the UK's top companies.

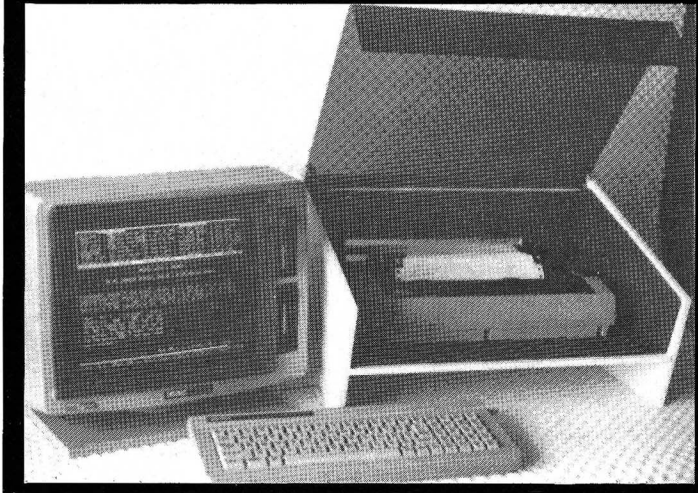
The database, called 'DMI online', claims to offer details of ownerships, business interests, key staff and sales figures for 200,000 of the most active trading companies. This information will be of particular interest to companies planning sales campaigns and trying to select the most effective targets for their mail-shots.

Being 'on-line' means that you have to use communications kit to phone up the database, and the charges you pay depend on what information you request and how long you spend on the phone. DMI On-line is run by Dun and Bradstreet, and complements their other on-line databases, 'Who Owns Whom' and 'Key British Enterprises'. Phone Melissa Gordon for more information, on 01-377 4390.

## A hood of its time

Mayfair Acoustics (0745 32484) have just modified their PCW printer hoods to be smaller, quieter and, as they humbly say, "all

round better". If you're interested in rattle-free printing, it will cost you £69.95+p&p.



# A twin for Gemini

make-or-break shot. It didn't make them.

Digita is the brainchild of Jeremy Rihll, ex-Sales and Marketing director of Gemini who left a month or so before the final denouement. Customers of Gemini will be pleased to hear that Digita has acquired the exclusive rights to both FontGem and DataGem, and will be marketing them under the new names of SuperType and DataStore respectively, at the same time continuing to provide support for DataGem and FontGem users. Prices will be unchanged, at £39.95 for DataStore and £19.95 for

SuperType. Digita are also to continue selling the Classic Invaders arcade game at £19.95.

One product of Gemini's that does seem to have died is their InterGem 5<sup>1/4</sup>" second disc interface for PCW 8256's. Digita do not have the hardware facilities to support InterGem.

Looking to the future, Rihll says coyly "We will shortly be launching four exciting new business and leisure titles for the Amstrad PCW. They'll be available early in the new year". In the meantime, information on Digita or Gemini (RIP) can be found on 03954 5059.

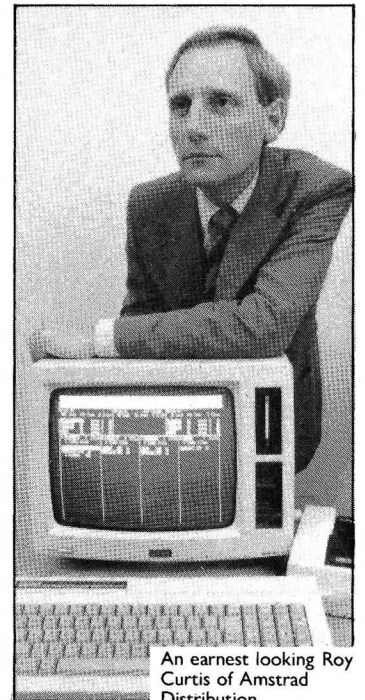
## PCW Training Courses

Although there are many excellent tutorial books on the market for bewildered PCW owners, some people feel that they need a human touch in order to learn to use the machines.

A division of Amstrad themselves, Amstrad Distribution Ltd., have launched a one-day course which they say is 'designed to provide a comprehensive guide to the capabilities of the Amstrad hardware and software'.

The course takes place in Newcastle-under-Lyme, and costs £79 including coffee, lunch and VAT. Initially there will be one course a week, but since Amstrad are making a point of limiting numbers to no more than six per group, the course frequency may well go up.

Amstrad Distribution say they are planning an 'Advanced Amstrad User Course' for 1987. For details on the current offering, or news on the advanced course, contact Amstrad Distribution on 0782 610011.



An earnest looking Roy Curtis of Amstrad Distribution.

## Laying the table

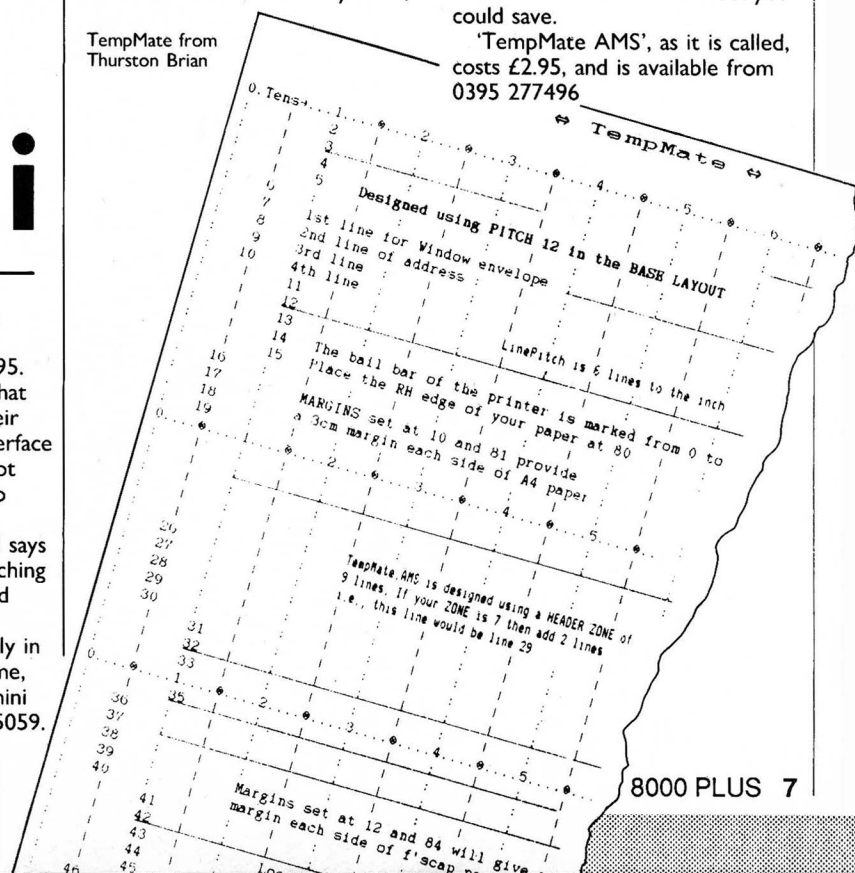
If you are trying to use LocoScript to create complex tables and columns of figures for reports and so on, you probably have trouble working out what should go where on the page. A large pile of scrap paper builds up by your desk with abortive printouts, as you fine tune the Layouts to be just right.

Brian Thurston, a training consultant with Minerva Systems,

has produced a clear acetate sheet marked with a grid of all the columns for A4 paper. It also shows where to put the address on letters to fit standard window envelopes. You can lay the sheet over a blank page and work out exactly (in theory, anyway) where the tab stops should go to get those columns in the right place first time. Think of all the trees you could save.

'TempMate AMS', as it is called, costs £2.95, and is available from 0395 277496

TempMate from Thurston Brian



# SON OF A NABITCHI

One of the most persistent complaints from LocoScript users is that the quality of the PCW printer is not good enough for serious applications. Locomotive software are working on a new version of LocoScript to relieve the problem, but this is unlikely to see the light of day before February.

But there is a quicker solution. Nabitchi Computing have developed a printer driver program for LocoScript which will allow you to directly print documents to, say, a daisy wheel printer, in exactly the same way as you do normally. Apparently you just press 'P' from the Disc Management Screen, and off you go - no need to mess with CP/M conversion programs.

Your printer plugs into the standard PCW printer socket, so you don't need to have a serial/parallel interface. For the asking price of £49.95, you get the printer controller software and a special lead to connect a standard printer plug into the Amstrad socket

type. Assuming your printer obeys Epson codes, you will be able to use LocoScript's range of special functions like underlining, emboldening and so on just as you do normally. Of course, the features you can get depend on your printer - you can't usually alter font on a daisy wheel printer for example. We'll be looking at a choice of different PCW compatible printers in the next issue of 8000 Plus, so stay tuned.

Nabitchi, from Liverpool, are steadily carving a reputation for themselves as suppliers of clever, good value add-ons for PCW users. Other recent products from them are PTRBASIC (£19.95), a twin to ExBasic which allows you to do plotter-style output onto your PCW standard printer, and Statman (£19.95), a program to display statistical data in elaborate 3D plots.

Contact Nabitchi on 051-708 0123/8775 for the true facts.

## Of mice and menus

The mouse boom continues apace with the release of more details from AMS on their Mouse and Desktop package for the PCW.

AMS already sell a variety of mice for other micros, and their PCW model is coming in two versions. First, at £79.95 comes the Desktop software, as shown in the photo. This is designed to look like the famous Apple Macintosh. The mouse controls an arrow on the screen with which you point to a picture (an 'icon' to the cognoscenti) of a program or operation to be done. Pressing one of the mouse buttons then starts things working.

Just consider: at present, when you want to run BASIC from CP/M, you are faced with the

ubiquitous 'A>' prompt, and have to type BASIC [RETURN]. With Desktop, you simply point to an icon labelled 'BASIC', click the mouse button, and BASIC loads automatically.

Also included in the Desktop are a variety of other utilities, which provide your PCW with a desk diary, memo pad, telephone address book, alarm clock and calculator.

Desktop is being released on December 8th. As a follow up AMS are planning a full 'pagemaker' system called 'Stop Press' which will bring desktop publishing to PCWs. This seems to be a month or two away, though. AMS are on 0925 413501/2/3.



AMS's Desktop software running, with their mouse nosing around the foreground

Does anyone else read your copy of *Putting Your Amstrad To Work*? (72)

Amstrad To Work (35)

Yes/No (36)

If Yes, can you say how many others read your copy? (37)

Which other computer magazines do you read regularly, say half or more of the issues published? Or occasionally - fewer than half the issues published? (38)

Regularly Occasionallly (39)

How much have you spent on in the last 12 months? (40)

How much do you intend to spend next 12 months? (41)

How many hours a week do you spend on your computer? (42)

Which other computer magazines do you read regularly, say half or more of the issues published? Or occasionally - fewer than half the issues published? (43)

Computing with the Amstrad (74)

Amstrad Professional (75)

Computing 8000 Plus (76)

Personal Computer World (77)

Popular Computing Weekly (78)

Practical Computing (79)

Computing (80)

What national newspaper do you buy? (81)

Telegraph (82)

Independent (83)

Mail (84)

Express (85)

Mirror (86)

What changes would you like to see in *Putting Your Amstrad To Work* to make it more interesting reading? (87)

none, please state NONE (88)

What is your occupation? (89)

What is your age? (90)

Under 16 (91)

16-25 (92)

26-35 (93)

36-50 (94)

51-65 (95)

Over 65 (96)

## Competitors? Don't even ignore them.

Here at 8000 Plus, we are always scrupulously fair to our rival publications in the Amstrad PCW market. However, it seems that not all magazines share our altruistic philosophy of life.

A copy of the December issue of *Putting Your Amstrad To Work* appeared in the 8000 Plus offices recently, with its reader survey questionnaire, each question carefully numbered for processing purposes. Of course they asked readers which magazines they read ... guess which is the *only* question on the survey not to have a code number by it?

Obviously they know 8000 Plus readers wouldn't ever buy PYATW anyway, so they decided to save on ink costs. Sensible lads.

## A database for the lazy

Databases can be cumbersome beasts to use. Usually before you can type your hard-won data into such programs you have to spend hours defining 'record formats' and so on, which often appear to be more for the convenience of the database program than for the user.

Encyclosoft, a Crewe-based company, have announced their new database, mysteriously called 'FT=DB' at £24.95. This is designed to be a 'free text database', which can take existing files from word processors and

store them as a database. Using your word processor in a similar way to Chiasma's Chibase package, you mark the words or phrases you will want to look up, and FT=DB can then retrieve whole paragraphs and chunks of text.

This kind of database should be particularly useful if you already have reams of notes stored on disc in word-processed documents, and you want to convert them with a minimum of fuss into a database. Contact Encyclosoft at 4 Hayfields Grove, Audlem, Crewe CW3 0LB.

# FUN AND GAMES, MUSIC AND TIME PERIPHERALS FOR THE AMSTRAD 8256/8512

## PROGRAMMABLE JOYSTICK CONTROLLER

This is the most advanced joystick interface for the PCW yet. It is fully programmable and will emulate any of the keys on the PCW keyboard, within basic and CP/M.

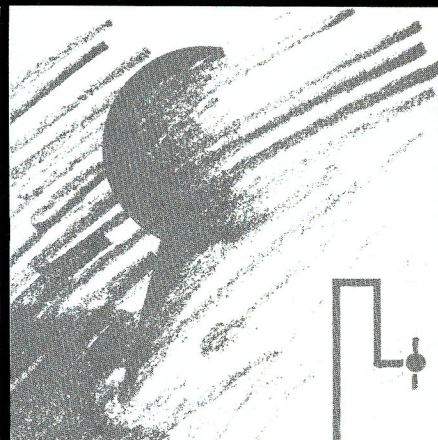
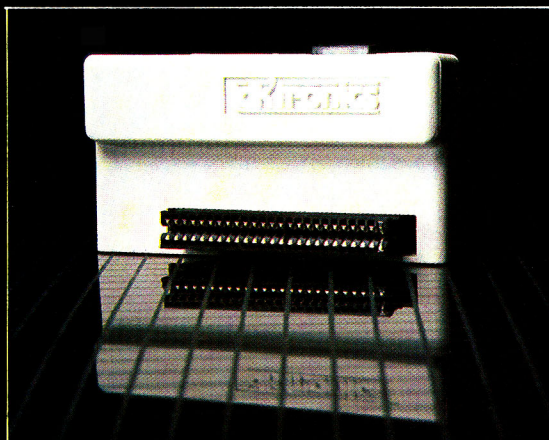
It is supplied with disc based redefining software which programs the interface to emulate any combination of 5 keys. This makes it compatible with all games software which require up to 5 keys of input i.e. up, down, left, right and fire.

The interface can also be used with some business software and could be programmed for moving up, down and selecting from menus etc.

The joystick port can also be simply read directly from basic or CP/M without using the supplied software.

It has a through connector for other interfaces to be plugged on and will work with both normal and rapid fire type joysticks.

**£24.95** including VAT



## PROGRAMMABLE JOYSTICK AND SOUND CONTROLLER

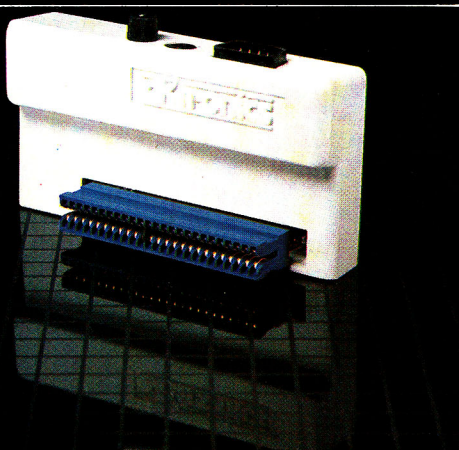
The joystick and sound synthesiser has all the features of the joystick controller above, plus the added features of a 3 channel sound synthesiser and a 5 bit input/output port.

The 3 channel sound synthesiser adds a totally new dimension to your PCW, allowing you to program/create music with harmonies over a full 8 octaves and an infinite range of other sounds.

The unit, if fitted with the popular AY-3-8912 sound chip, as fitted to the Amstrad CPC range of computers, allows you to create music and realistic sounds. To achieve this, complete control of tone, noise, volume, envelope period/shape is available on all 3 channels.

The input/output port can be programmed to control external equipment. To accommodate this, 5 control lines, ground and +5 volt references are made available via the 9 way 'D' joystick connector.

**£39.95** including VAT



## REAL TIME CLOCK MODULE

This amazing module has the following features:-

- The time of day with seconds, minutes and a 12-24 hour format.

- A calendar with days of the week, date, month and year and there is automatic end of the month recognition and automatic leap year compensation.

- An alarm facility from once per second to once per day.

- The module can be used for automatic stamping of discs and any applications which require periodic real time control.

- There are 50 bytes of battery backed RAM and all data is retained when power is removed from the computer.

**£34.95** including VAT



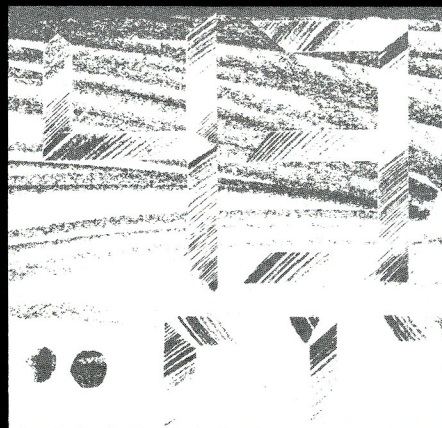
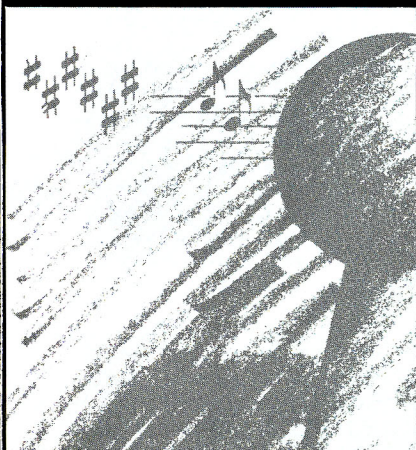
## HOW TO ORDER

DKTronics products are available in all good computer stores, or may be obtained direct by telephone quoting your Barclaycard/Access number.

# dktronics

POWER BEHIND YOUR AMSTRAD

DKTronics Limited  
Gorleston, Great Yarmouth, Norfolk NR31 6BE.  
Phone 0493 602926 (24 Hours), Telex 975408.



# CAREWARE LAID BARE

How to protect your eyes, your neck and your PCW, and probably damage your shoulder.

Once you've forked out your hard earned cash on a PCW and hundreds of 3" discs, it's easy to forget that the poor thing could benefit from a number of goodies which can't be plugged in or inserted into either drive. We survey the bits and bobs which can make you and your 8000 happier.

## CASES

**£39.95 ● Crown ● 0984 33377**

Otherwise described as an over-shoulder micro holder, Crown's padded case for PCW's is a robust and smart piece of luggage.

Covered in black vinyl with 5mm of internal padding on each surface. The carrying straps use strong nylon webbing and the shoulder strap has a 'spread-the-load' pad (very necessary) and two toggle clips so you can remove it.

The keyboard and printer are stored in two separate pouches made of the same material as the case, with Velcro strips to seal them. I was initially sceptical that fitting the pouched keyboard and printer loose inside the case (they lie on top of the monitor) would prevent them from 'slopping around' in transit. Having tried it out, though, they seem very secure. Crown also tell the tale of moving their own PCW's up to an exhibition in them without mishap. Since they sent everything by carrier (the ultimate test), the case seems to have proved its worth.

The only remaining worry is the increased workload on the NHS due to PCW owners dislocating their shoulders while trying to carry their beloved micros slung over them.

The Crown carry case set



10 8000 PLUS

## COVERS

Dust covers don't get the press they deserve. As well as making your PCW look pretty (I know it's beautiful anyway!) they do help to (you guessed) keep the dust off. The main advantage of this is keeping the screen clear. Although the PCW is not particularly static-prone, the screen does attract more than its fair share of dust. Covering the monitor when you're not using your micro will obviously help reduce this.

In an office environment, where there's likely to be more dust than in the home, it's also important to cover the printer and keyboard. Both pieces of equipment are reasonably tolerant of dust, but for a few pounds you can reduce any potential problems by at least half.

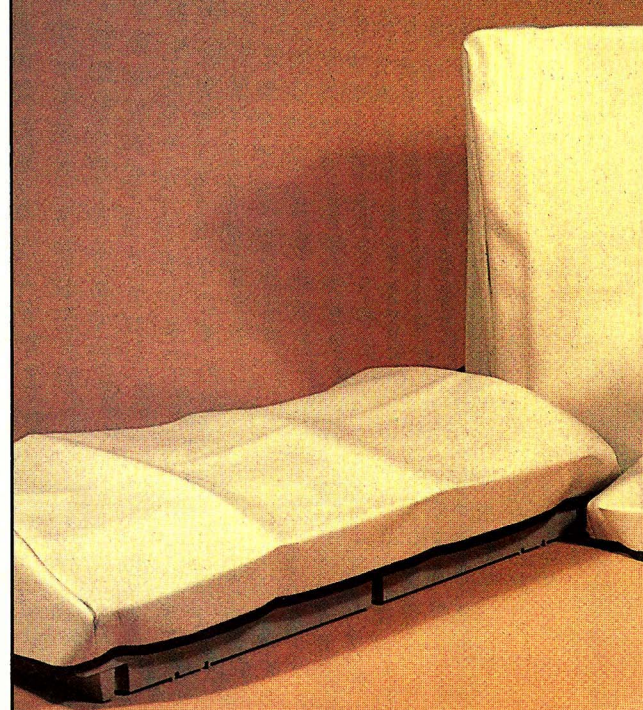
**£11.95 ● BBD ● 0257 422968**

The three-piece covers from BBD are made from grey nylon, and the monitor and printer covers have green piping along their seams. The words 'AMSTRAD PCW' are printed on the keyboard cover. The complete set makes the PCW look very smart and the covers are quite thin, which makes them easy to store.

The Crown PVC cover



The robust vinyl set of covers from Lightwave



The covers are not waterproofed, so your PCW won't be protected from coffee or tea spilt over it while covered.

**£9.50 ● Crown ● 0984 33377**

Crown can supply two separate sets of covers, one made from clear PVC and the other in navy blue waterproof nylon. Both are available at the same price.

Both sets of covers are two-piece, one for the printer and the other for the monitor with the keyboard directly in front of it. This makes them a little simpler to fit than the three-piece sets. All seams are edged in white.

**£19.95 ● Lightwave ● 051 639 5050**

These three-piece covers are made from thick cream vinyl edged with brown cotton. They are waterproof and should offer an amount of physical protection from knocks and scratches.

Although almost twice the price of the BBD or Crown covers, The Lightwave sets appear more robust. This thickness of the material does mean you'll need more room to store them in, however.

BBD's 'personalised' covers



**FILTERS**

**£19.95 ● Lightwave ● 051 639 5050**

High quality computer monitors exhibit three features which are particularly kind on the eyes. The first is sufficiently high resolution to produce pin sharp characters. The second is a very black screen which produces good contrast between foreground and background. The third is matt surface to the screen which cuts out reflections from windows or other light sources.

While it's not possible to increase the resolution of the PCW screen, it's quite feasible to improve the contrast and cut the glare. All you need do is fit a screen filter.

Filters are usually made from some form of glass, usually etched to provide a matt finish and often incorporating a polarising filter. Lightwave's offering is rather different, however.

The Lightwave filter consists of a rectangular frame which hangs from two L shaped brackets which you fix to the top of the monitor case with Velcro strips (amazingly useful stuff, Velcro). The filter itself is made from a very fine nylon mesh (at a guess, about 20 denier) stretched taut across the frame.

The effect of the filter is to darken the background of the screen without darkening the foreground text. You may have to increase the brightness slightly, but to all intents and purposes you increase the quality of the screen display at a stroke. Reflections are not removed but greatly reduced and there is a slight patterning (technically called a Moire pattern) when viewed in certain light. None of this counteracts the dramatic improvement in screen quality which this filter produces. If you use your PCW for a fair proportion of each day, you'd be well advised to fit a Lightwave filter.



Spot the difference: how the Lightwave filter increases screen contrast

**THINGIES**

**£9.19 ● Overbase ● 051 639 5050**

Overbase are picking up all kinds of awards for their innovative Thingi. If you haven't seen it at an Amstrad exhibition or in the computer press you can't have been looking very hard. It's one of those 'why didn't someone think of that before?' ideas which is very simple while fulfilling an obvious need.

A Thingi is a strip of thick plastic with a piece of Velcro at one end (do you remember when it was only to fasten bibs at the dentist?), and a colourful plastic bulldog clip at the other. You fix the Velcro end onto the top of your PCW and hang pieces of paper from the other. This makes them a lot easier to read and speeds copy typing. Just the thingi for holding a copy of 8000 Plus while typing in our listings.

EXIT

**Static build-up**

The screen of a micro (or a TV for that matter) is being constantly bombarded by minute electrically charged particles (electrons). These electrons excite the phosphorous coating of the screen wherever they hit it, making it glow. This is how characters appear on your PCW monitor.

The build up of electrons causes the screen itself to become charged and this in turn attracts any dust particles floating close to the screen. This is why the front of a TV or your PCW monitor gets more dusty than other pieces of furniture in a room.

# DOING THE BOOKS

David Adams assesses a book-keeping system for simple businesses

**£99.95 ● Micro-Simplex ● 0625 615375**

For the smaller business with a minimum of paperwork and, in particular, for a retail business which has mainly cash takings it is not always necessary or desirable to attempt to run a full blown accounting system.

Keeping elementary records in a logical and tidy manner, rather than just operating the 'heap' system where everything is filed in a large box, can result in considerable savings on accountant's fees (ouch!) and can, more importantly, provide simple management information.

At this scale of operation it's important to choose a system which doesn't involve too much struggling with accounts rather than actually earning money in your business! In some instances records can be kept quite adequately on paper or using a spreadsheet program combined with a good filing system. This should be carefully considered before rushing out to buy an accounting package.

It's also a good idea to get your accountant's views on your ideal requirements as he will be the one to have to sort out any muddles later, and it's sometimes easier to sort out paper muddles than computerised ones. When you've reached a decision, do please remember that you must notify the local VAT office if you're registered for VAT. One other thing to remember is that, whether you decide to computerise or not, the results will only be as good as the quality of the information you put in.

The main requirements of any system, however simple, are to record your receipts and expenditure and to keep track of how much money you have in cash and in the bank. Expenditure needs to be itemised and split between the various costs, such as purchase of stock, expenses (travel, telephone and rates etc), capital expenditure and personal withdrawals.

A lot of businesses do not operate ledgers to keep track of money owed to suppliers. This is an area where a simple system can help by providing a totalled list of unpaid bills at any time.

## The Simplex Solution

One program introduced recently by Micro-Simplex is 'Small business accounts & V.A.T. made simple' and this is really a computerised version of the Simplex small business accounting books which have been available for a number of years. It doesn't pretend to be a comprehensive accounting package, but is certainly designed to cover the basic requirements of the small retail business.

The 8512 version of the package is supplied on a single disc which is used in the B: drive and contains both the programs and the data files. To start work it is first necessary to load CP/M, and the programs are then automatically 'PIPPed' across to the M drive before being run. Although the package is also available for the single drive 8256, Micro-Simplex recommend twin drives. On an unexpanded twin-drive 8256, the smaller M drive forces some differences in operation.

The program uses Simplex's own system of trading weeks and quarters and these dates have to be set before use. There is a rather cunning use of passwords, without which you can't progress beyond entering the first week's data. The password can be obtained over the phone, but only after Simplex have received your registration card. If, in the future, you wish to change your business name, you have to get a new password at a cost of £10 plus VAT.

There is free 'hotline' support for four weeks after purchase and this may be extended by joining the user club, which also provides free program updates and a regular newsletter at a cost of £50 plus VAT per year.

The manual is excellent and also contains basic accounting advice. Before installing the system there is a fair amount of work to be done setting up the analysis codes, but you can choose how much detail you wish to include. This is the stage at which your accountant should be fully involved as mistakes here could turn out to be very expensive.

## Special schemes

The package copes with all the special retailer VAT schemes including that for pharmacists. If you operate credit accounts, the package will cope with splitting your takings between cash and credit sales if required. You enter your daily takings under the various categories and record payments to the bank. There is no provision for keeping track of amounts owed to you by credit customers, but if this is a major requirement you should be looking at more involved packages, anyway. There is a procedure to record goods taken for your own use.

Having entered all weekly receipts, bankings (and expenditure), you can display reports of your cash in hand and at the bank. Any till discrepancies are noted and recorded for the year on a weekly basis. Expenditure can be analysed over stock purchases and other expenses, and it is also possible to enter unpaid supplier bills and subsequently establish what is owed where. When these bills are paid they are marked accordingly and the bank account is updated automatically.

It is important to set the system dates to coincide with your VAT quarters and for this reason you must start your computerisation on the first day of a VAT quarter. At the end of the quarter Micro Simplex will work out your VAT according to the entries you have made and will produce all the written reports necessary to satisfy the VAT inspectors as well as a summary of the return.

## Verdict

An excellent package for a small shop which deals mainly in cash transactions and which does not need a full accounting system.

### PLUSES

- Use of M drive speeds operation
- Comprehensive, easy to follow documentation
- Handles special retailer VAT schemes
- Easy to use menus
- Very good audit trails
- Facility to provide simple profit & loss figures

### MINUSES

- Use of accounting weeks and preset analysis codes makes it rather rigid
- Only suitable for simple cash trades

RANGE OF FEATURES   
EASE OF USE

OVERALL SPEED   
DOCUMENTATION

8000 PLUS VALUE VERDICT

# WHY DO WE STILL SUPPORT THE PCW8256/512?

## 1 IN STOCK NOW!

NOT WAITING TO BE SHIPPED TO UKI

## 2 SERVICE AND BACK UP!

SPARES AND PARTS ARE AVAILABLE OFF THE SHELF.

## 3 PERSONAL COMPUTING!

YES YOU CAN! AS WELL AS A WORD PROCESSOR

## 4 WE USE THEM!

EVERY DAY, FROM ACCOUNTS TO OUR SOFTWARE

## 5

**SOFTWARE IS CHEAP!**  
THIS IS DUE TO 1/2 MILLION USERS.

## 6

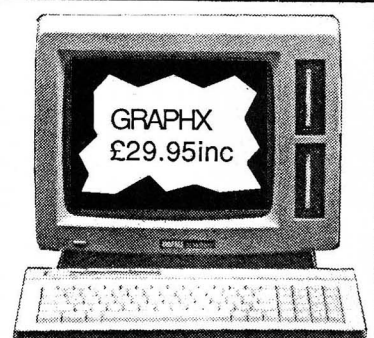
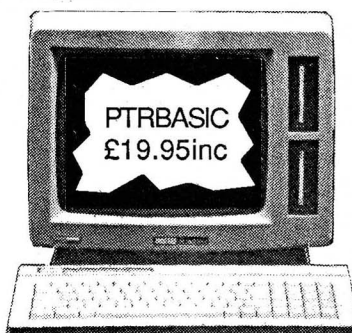
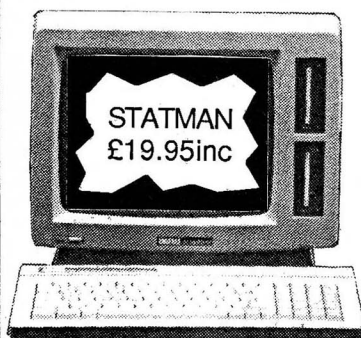
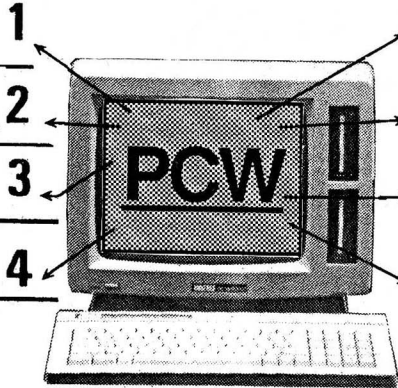
**PRINTER IS FREE!**  
AND THE WORD PROCESSOR TOO.

## 7

**NOT ANOTHER CLONE!**  
THE PCW HAS STYLE AND POWER, BUT BETTER STILL HAS A LOW PRICE.

## 8

**EXPANDABLE!**  
WE STOCK EVERY ITEM TO BE PLUGGED IN, AT LOW PRICES.



Converts your statistical data into Pye Charts, Bar Charts, 3D plots. Inter relates everyday problems into easy, understandable analysis. Ideal for the educational user.

Vastly becoming the best known graphics utility program for Mallard Basic "Graphics without the pain" A.P.C. September 1986.

New, as promised, this utility turns your PCW's printer into a plotter plus lots more powerful printer functions from Mallard Basic. Compatible with Exbasic.

All the power of Exbasic Graphics and Ptrbasic, printing abilities, but will run with CBasic, Pascal, Cobol, CP/M assemblers and others

## We read your letters so here they are !

### Software;

AUDIO TUTORIAL TAPES.....	7.95
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DR DRAW.....	42.95
DR GRAPH.....	42.95
DR PASCAL.....	42.95
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HANDS ON DBASE 11.....	22.95
HANDS ON SUPERCALC 11.....	22.95
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ALL SOFTWARE PRICES ARE INCLUSIVE OF VAT

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CPC 6128 COLOUR.....	330.00
CPC 6128 GREEN.....	244.00
PCW 8256 MEMORY UPGRADE.....	22.00
FD2 - 2ND PCW 8256 DRIVE.....	120.00
FD1 - CPC 6128.....	84.00
PCW RS232/CENT. INTERFACE.....	53.00
CPC RS232/CENT. INTERFACE.....	39.00
ELECTRIC STUDIO LIGHT PEN.....	64.30
ELECTRIC STUDIO MOUSE.....	109.52
CF2 3" DISKS.....	3.15
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(MINIMUM ORDER TWO)	
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CPC 6128 DUST COVER.....	6.50
3" SINGLE DISK STORAGE BOX.....	9.25
3" DOUBLE DISK STORAGE BOX.....	12.75

PRICES ARE EXCLUSIVE OF VAT.

ALL ITEMS ARE DELIVERED FREE OF CHARGE WITHIN UK MAINLAND. WITH THE EXCEPTION OF PCW AND CPC COMPUTERS - PLEASE ADD £8.00 TO TOTAL.

EXPORT ENQUIRIES WELCOME

STUDENT/EDUCATIONAL DISCOUNT AVAILABLE

Works directly from Locoscript to any Centronics/RS 232 Printer. Requires CPC 8256 interface. A must for the real business user.



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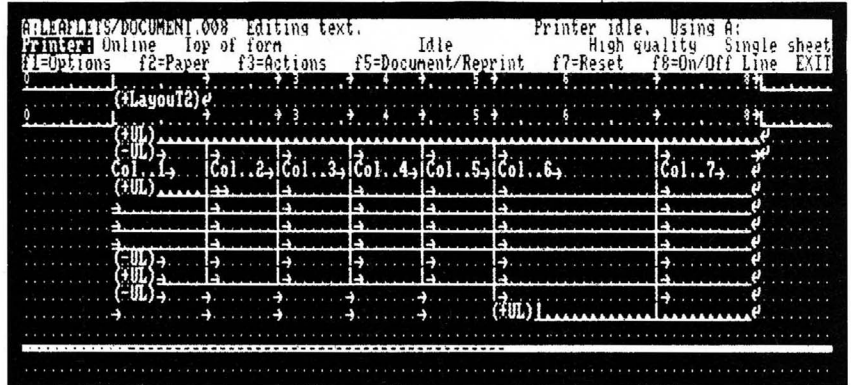
ALL PRICES ARE CORRECT AT TIME OF GOING TO PRESS.



## Getting the wrong end of the stick

However, there are pitfalls for the newcomer, and some of these are illustrated below. It is a screen printout of what appears at first sight to be a beautifully proportioned table. Smugly pressing the 'Save and Print' option after [EXIT] however produces the rather ragged table shown. Why?

When you examine the screen, you can see that on the line immediately below the (Layout2), the (UL) option has been correctly chosen, but the space bar rather than the TAB key has been used to carry the underlining to the end of the line, followed by a [RETURN]. A similar mistake has been made on the fourth line, resulting in the misplacement of the first



Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7

vertical column mark in that line.

Also, on the final line, where the first vertical bar appears to be displaced, it in fact prints correctly, since LocoScript instructions do not appear on the printed output. However, because the user has mistakenly lined up the second vertical on the line with the line above, that one does appear misplaced on the printout even though it is OK on the screen!

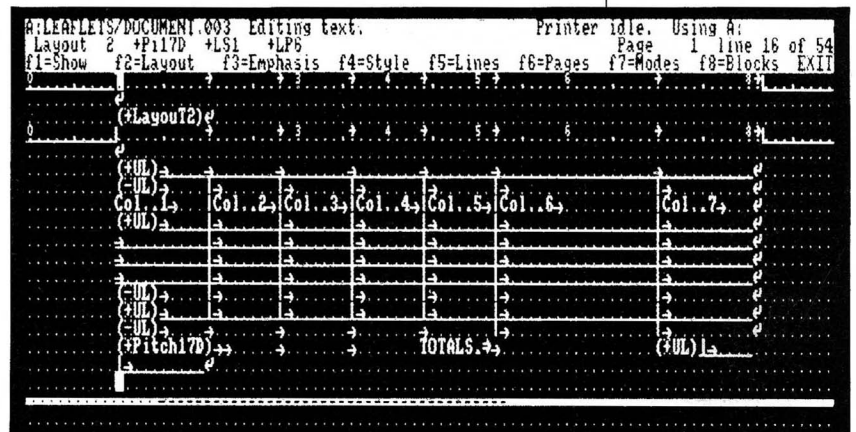
The 'tame' version is shown in the next screen print. Here the underlining has been carried forward on each line using the tab settings alone and, presto, it works! This produces the table we wanted in the first place. Incidentally, the smart arrow in the TOTALS line is produced with [ALT] +>.

How then can you save this table for use in future documents? LocoScript can save chunks of text as 'blocks' or 'phrases' for future use in other documents. The current example is too large to be stored as a phrase, so the best thing to do is to save the table as a LocoScript document in its own right, via the COPY key and 'f8 = Blocks' menu.

To do this, type the table into your LocoScript document, place the cursor at the first line of it and press [COPY]. Now move the cursor to the end of the table – you will see the text it covers being highlighted – and press [COPY] again. You have to specify a block number for LocoScript to remember the text by, so choose a number from 0 to 9 and type it in. The highlighted text will revert to normal.

Now save this block as a document. Pick the 'f8 = Blocks' menu, enter the number of the block that you chose in the 'Save Block ?' option, and press [ENTER]. You will now be faced with the Disc Management screen, and at the top of the screen is the ever inquisitive header prompting you to 'pick a destination group'. Use the cursor keys to get the cursor bar into the group you want, press [ENTER], and provide a name for the file as you are asked.

The block is then ready for use at any time in the future, by pressing [f7], 'Insert text' and picking the right file, providing the destination group you have chosen is not in drive M! Remember; if you do not save the block to a file in this way, it will be lost and gone for ever once you finish editing your current document.



## Getting your layouts straight

Sadly, your highly-prized block has not been able to carry its layout round with it in its back pocket. Inserting it into a new document using 'Insert Text' as just described will cause it to blithely adopt whatever layout happens to be hanging around at the time. This may be quite different from the one which was used when the table was defined, with tabs in quite the wrong places.

So how do you get round it? The best way is to make sure you save a layout identifier (using 'f2 = Layout' menu and its 'Insert Layout' options) with the table text. When you define layouts, they are stored with that document for future use. If the document you define them in is TEMPLATE.STD, then those layouts will be available in all documents created with that template.

If you only use a few different layouts, you can store them all in the TEMPLATE.STD that you usually use. Then, when the LocoScript command to use a particular layout is read in, the correct layout will be used automatically. However, this only works if you are working in the same group and with the same TEMPLATE.STD file as was used when the table was created. It is a simple matter to slip your block in using f7 = Modes, Insert Text, and Bob has become your uncle once again.

▲ An incorrect screen layout for table printing

◀ And the printout that it produces

▼ The corrected screen layout for what was required

```

B:group1/SIMTAB. Editing base layout. Printer idle. Using B:M.
Pitch 12 Line Pitch 6 Line Space 1 Italic Justify
f1=Left Margin f2=Right Margin f3=Tab f4=Right tab f5=Centre tab f6=Decimal tab EXIT
    
```

▲ Altering the layout to give half-spaced lines

```

B:group1/SIMTAB. Editing text. Printer idle. Using B:
Layout 2 +Pi12 +LS: +LP6 Page 1 line 12 of 54
f1=Show f2=Layout f3=Emphasis f4=Style f5=Lines f6=Pages f7=Modes f8=Blocks EXIT
(+Layout2)e
(+UL)→
(+UL)→
(+UL)→
(+UL)→
(+UL)→
    
```

▲ The screen for a simple table with unbroken vertical lines

And its results ▼


```

B:group1/XL151.BRO Editing text. Printer idle. Using B:
Layout 1 -Pi12 +LS: +LP6 Page 1 line 14 of 54
f1=Show f2=Layout f3=Emphasis f4=Style f5=Lines f6=Pages f7=Modes f8=Blocks EXIT
(+Layout1)e
(+UL)→
(+Pitch12)(+Bold) 8000 PLUS CHRISTMAS DIN-DINS(-Bold)(-Pitch)→
(+UL)→
(+UL)→ Starter→ Main Course→ Sweet→ Wine→
(+UL)→ Melon→ Juice→ Boar→ Rndeer→ Pud.→ Booze→ White→ Red→
(+UL)→ Chris→ X→ X→ X→ X→
(+UL)→ Simon→ X→ X→ X→ X→
(+UL)→ Deano→ X→ X→ X→ X→
(+UL)→ Ben→ X→ X→ X→ Lots→
(+UL)→ Tony→ X→ X→ X→
    
```

## Unbroken vertical lines

The process just described produces quite acceptable results, but it is possible with a little trickery to produce tables which have unbroken vertical lines and are also filled with text. To do this, you have to get to grips with altering the printer's 'line spacing'.

As before, the first step on the road to happiness is to set up a new layout which has tab stops in the correct places for aligning the column rules. Work out on a piece of paper where you want the columns to go, and then set up the layout with tabs in the right places.

The table is set up much as in the previous examples. Horizontal lines are produced with the underline code and by TABbing across to the next column, and the vertical lines are placed by [EXTRA]+fullstop.

Now for the clever part. If you change the line spacing to 1/2, then when the page is printed the top of one line crashes into the bottom of the line above it. This isn't very useful for normal text, but if you force the vertical line characters to overlap then you achieve the semblance of true unbroken lines.

To change the line spacing you will need to alter the layout you are currently using. You can do this at the same time as you place the Tab stops in the layout, or afterwards by positioning the cursor somewhere in the table text and using the 'f2=Layout' menu and its 'edit current layout' option.

Once in the editing layout mode, use the cursor keys to highlight the 'Line Space' item, and then the  key to set the spacing to 1/2. [EXIT] as normal to finish the layout editing.

Finally, for the *piece de resistance* you can try and type some text into the tables. Just type it in by eye on the screen, making sure that the column lines are still lined up. Remember you are printing out lines half-spaced, so to run text on adjacent lines on the printed page you will need to put a blank line between them on the screen, or the printed version will be garbled.

Don't forget to use tabs not spaces to line things up, or you could find mysterious things happening when you print out, especially if you use proportionally spaced text. To end with, a grand example: EXIT

◀ This ...  
... produces this. ▼

8000 PLUS CHRISTMAS DIN-DINS						
	Starter		Main Course		Wine	
	Melon	Juice	Boar	Rndeer	Pud.	Booze
Chris	X			X		
Simon	X					X
Deano	X		X			
Ben			X	X		
Tony			X			Lots



# THE PLOT THICKENS

GSX isn't the only way you can draw patterns and print meanies on the screen. Here's a much handier solution.

## ALL YOU EVER WANTED TO KNOW ABOUT GRAPHICS, THE UNIVERSE AND EVERYTHING ON THE PCW 8256/8512...BUT WERE AFRAID TO ASK

£19.95 ● cp software ● Stonefield, The Hill, Burford, Oxon

Before we start we're going to have to agree on an abbreviation for the name of this product. 'Graphics' seems a good shortening, as the major part of the package is concerned with dots and lines and cheery little sprites. Graphics is a library of machine-code routines which you can use easily from Mallard BASIC or assembler programs.

### Getting started

To use the Graphics library you first load CP/M, insert a copy of the cp software disc and type SCODE to load the 10K file of graphic routines. Graphics can be used from BASIC, Assembler and other languages – but first you need to make sure you reserve enough space for Graphics to fit in. Using the PCW's Mallard BASIC, after loading it in the normal way you type MEMORY &HBFFF to shrink BASIC's workspace and stop it overwriting Graphics' code.

Each of the 52 routines in the library is accessed in much the same way. You first load the address of the start of the routine into a variable (A for instance), and then use the BASIC command CALL to execute the routine. Some routines require extra values to work on (the x and y co-ordinates in a plot command, for example), and these have to be POKEd into memory before making the appropriate CALL.

A simple example is:

```
A=53902: CALL A
```

which turns on the PCW's beeper continuously (and

drives you completely gaga in a remarkably short time). Fortunately, A=53907: CALL A turns it off again. A more complex example is:

```
X1=50: Y1=100: X2=100: Y2=200
POKE 56186,1: POKE 56187,0
POKE 56188,0: POKE 56189,0
POKE 56190,0: POKE 56191,0
POKE 56192,X1: POKE 56193,0
POKE 56194,Y1: POKE 56195,0
POKE 56196,X2: POKE 56197,0
POKE 56198,Y2: POKE 56199,0
A=49152
CALL A
```

This draws a line from position 50,100 to position 100,200, as you can see, its a bit more long-winded than the more usual 'PLOT X1,Y1,X2,Y2' of many versions of BASIC, although it works in much the same way. To use the Graphics routines properly, it's best to develop a set of BASIC sub-routines for yourself. You can then just call the sub-routines and forget about their 'innards'.

### A variety show

The routines themselves are wide-ranging and cover control of the disc drive motor, delay loops, the system clock and access to the Cascade 'Joycestick' (horrid name!). The vast majority of routines, though, are concerned with screen control. As well as turning the screen on and off, clearing it and controlling the cursor you can create user defined characters and 'sprites', and send them to the screen or printer. You can print text quickly in double height or double width, and flood-fill areas of the screen.

One of the best routines in the library is the screen scroller which will scroll text up or down the screen extremely smoothly. This is used to good effect in the demonstration program supplied with Graphics.

The manual is in booklet form, with printing of very high quality courtesy of a laser printer, and contains both tutorial and reference sections. Although the material it covers is quite dense, the style is light with some nice touches of humour. It can't really be said that it covers everything you wanted to know about the PCWs, but the graphics side is certainly very well described.

### Verdict

Graphics is an excellent package. It's well-described, fast and offers a wide range of useful facilities. It's perhaps a little cumbersome to use from BASIC, but this shouldn't present too much of a problem for anybody capable of writing a set of sub-routines for themselves. The fact that you can access the routines from machine-code (and possibly from other CP/M languages, too) makes it very versatile.

### Spritley features

Most people have at some time seen good ol' shoot-em-up games running on home micros like the Spectrum. A distinctive feature of such games is the little aliens or whatever, which are the size of a few characters of text and zip around the screen at amazing speeds. These things are actually produced by special commands in the programming language, and are known as 'sprites'. So using cp software's package means you can now program sprites in Mallard Basic too.

<b>PLUSES</b>	<b>MINUSES</b>
<input checked="" type="checkbox"/> Wide range of useful functions	<input type="checkbox"/> A bit long-winded to use from BASIC
<input checked="" type="checkbox"/> Can be used from BASIC or machine-code	<input type="checkbox"/> No way of loading just the routines you want
<input checked="" type="checkbox"/> The Assembler source code is supplied	
<input checked="" type="checkbox"/> Inexpensive	
<input checked="" type="checkbox"/> Good manual	
<b>RANGE OF FEATURES</b> ■■■■	<b>OVERALL SPEED</b> ■■■■
<b>EASE OF USE</b> ■■■■	<b>DOCUMENTATION</b> ■■■■
<b>8000 PLUS VALUE VERDICT</b> ■■■■	

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# IT'S HERE AT LAST!

Ben Taylor looks on as an all-new version of the AtLast database hits the streets

**DATABASE MANAGER (AT LAST)**  
**£29.95 ● Rational Solutions/Advance**  
**Software Promotions ● 0279 412441**

Long, long ago, in the mists of time, a company called Rational Solutions sold a database called AtLast for £49.95. Now, with a crash of drums and a blinding burst of light, AtLast has been improved and relaunched at £29.95. It is true that you can pay less money and get a better program? Surely life isn't like that? Read on and find out ...

If you own a PCW, the chances are you run a small business, or organise a local club, or just like to lead an organised life. If so, you are probably interested in applying your new-found computing power to sorting out your records once and for all. This is the territory of the database. Traditionally, powerful databases have been hideously complicated to use, and simple databases have been hideously lacking in any useful features – now AtLast aims to bridge the gap between ease of use and power of operation. Is it the panacea it claims to be?

### AtLast at first

The biggest change which has happened to AtLast since its previous incarnation is the addition of a manual. It now boasts around 70 pages of properly typeset, printed text, with examples helpfully sprinkled about and a full index. It begins with the statement 'AtLast is a sophisticated program. It requires effort to master, but that effort is well worth while', and on the whole the text does its best to nurse newcomers over the shock of coping with a new program.

The delivery disc also contains two sample databases, one for managing the membership records of a club, and another for doing some simple accounts record-keeping. The opening pages of the manual encourage you to play around with these files to discover how the system works.

AtLast is operated from a series of menus and questions on the screen. This contrasts with something like *dBase II* where you are expected to read a manual and just know what to type when asked to give a command. As with all databases, before you can do any actual data entry you have to define a layout to use for the data.

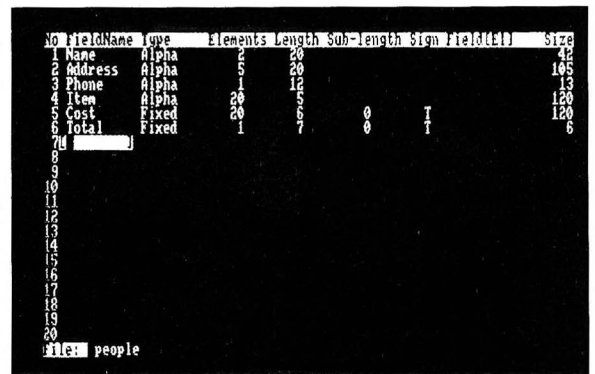
### AtLast an example

Take a typical example to see how AtLast tackles things. Suppose you are running a small business from home, perhaps mail order. What you need to know is (a) your customers' names and addresses, (b) What products they have bought from you in the past, and (c) how much they owe you.

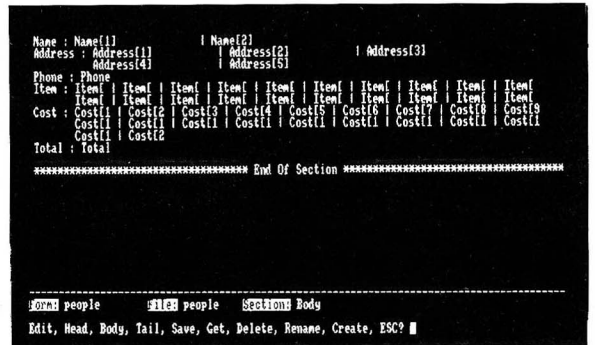
As ever, you have to first work out how much space each item you want to record will require, and then arrange them on the screen accordingly. Suppose for each

customer you want a forename and surname of 20 letters each, five lines of 20 letters for the address and a phone number 12 digits long. For the product records, allow for storing the last 20 items someone bought, and the price for each – you could identify products by a 5 character code like 'wm-10' for a 10 pound watermelon. Finally, you might want a 'total' field indicating the amount outstanding on the customer account.

1 Run DBDEF to define the database format. Define a new 'file' within the database called, say, CUSTOMRS, with the fields set up to match the requirements stated previously. If you change your mind over an entry you can go back and alter it with the cursor keys.



2 Now you can define which field AtLast should use to index (ie. sort) on. Then, pressing [EXIT], back at DBDEF's main menu choose option 3 to 'Autogenerate' a form. This takes the file definition and produces a standard form with all the fields you defined labelled and arranged like this:



3 Now use the screen editing keys to alter the 'card format' to what you like. Any field may go anywhere, and any text may be inserted at any place to make the screen prettier or more informative.

```
Name : Name[1]      Name[2]
Address : Address[1]
          Address[2]
          Address[3]
          Address[4]
          Address[5]

Phone : Phone

Item : Item[1] | Item[2] | Item[3] | Item[4] | Item[5] | Item[6] | Item[7] | Item[8] | Item[9] | Item[10]
Cost : Cost[1] | Cost[2] | Cost[3] | Cost[4] | Cost[5] | Cost[6] | Cost[7] | Cost[8] | Cost[9] | Cost[10]
      Cost[1] | Cost[2]

Total owed to us: Total
***** End Of Section *****
```

```
FORM people  F123 people  SECTION Body
Saved
Edit, Head, Body, Tail, Save, Get, Delete, Rename, Create, ESC? █
```

specify a value for a numeric field, it will become zero by default. One annoying niggle is that to get to any field you have to visit all the fields before it. For example, to get to the COST field, you have to go through all 20 of the ITEM fields, even though you don't want to fill the last 19 of them yet.

6 Once you've entered all the records, you probably want to get some kind of printed list to browse through. After all, it's fun highlighting bad debtors with a big red pen. To do this, leave DBUSE and run DBDEF to define a new format suitable for printing a list – of course you only have to do this once. Define a form that only contains the fields you want to see, all on one line. Suppose we want the full name of the customer, the first line of the address and the amount owed:

4 After this, the database is more or less set up, and you can start entering your data. [EXIT] back to CP/M and run DBUSE (to use the database). Once you've specified the name of the database to be used, you get this simple menu:

```
AtLast: Database Access Menu
-----
Database: B:CUSTOMRS
1 ... Add Records
2 ... Scan/Edit Records
3 ... List Records

5 ... Repair Database
ESC to Quit

Enter Selection █ █
```

```
Name[1]      Name[2]      Address[1]      Amount
***** End Of Section *****

FORM list  F123 people  SECTION Body
Edit, Head, Body, Tail, Save, Get, Delete, Rename, Create, ESC? █
ee,
```

7 With this form designed, (which you might call LIST), you can produce a listing from within DBUSE. Choose menu option 3 from DBUSE's main menu, answer the questions about indexing, selection and page size, and the result whistles out on the printer. See how the entries are sorted by surname, and that at the end it has given the total number of records and the total amount owed.

Customers of Honest Ben's Supplies -- 24/10/79

```
-----
```

Emily	Aardvark	"Anthill"	£20
Gordon	Bennett	34 High Street	£57
Bertie	Berlinger	c/o All England Club	£1960
Muriel	Milkbottle	The Old Dairy	£524
Clive	Rogers	41 The Oaks	£20
Rupert	Stoat-Gobbler	15a Ferret Street	£205

```
-----
6 customers owe a total of £1941
```

5 Adding records is now a simple process. Just move the cursor to the field you want and fill it in. If you don't

```
Name : Muriel      Milkbottle
Address : The Old Dairy
          Butterchurn Road
          Milton Regmes
          MK3 6TV
Phone : MK 45674
Item : rt-67 | ty-67 | 995
Cost : 46 | 20 | 568 | 0 | 0 | 0 | 0 | 0
      0 | 0 | 0 | 0 | 0 | 0 | 0 | 0

Total owed to us : 634

FORM people  F123 people  SECTION 6 SURNAME 6 SECTB NAMEWHO
Form, Key, Search, Back, Next, Print, Edit, Delete, ESC? █
```

So much for the whistlestop tour. Most of the regular features which you would want to use are there, but there are several other powerful ways to use AtLast. First, of course, you can select which records to print out on the report. These might be all customers who owe more than £50, all customers who have bought more than three products, all customers after 'S' in the alphabet, or any combination of these.

Another feature AtLast boasts is some form of 'relational' database capacity. This is a phrase much misused in adverts, and essentially has come to mean 'can do some of the things dBase II can do'. A relational database in this sense is one which allows you to look up an item in one set of information, and look up where that fact occurs in another information set at the same time. ►

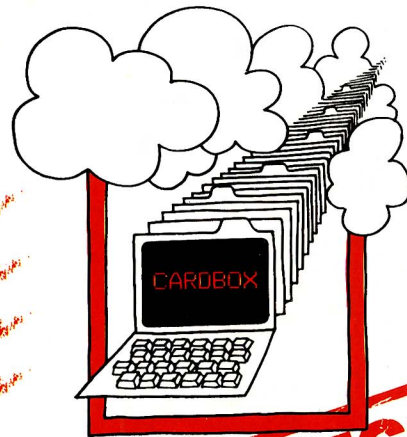
**Fields, records & indexes**  
 A brief summary for those not into database-speak. A 'record' is what a screenful of information is called – it corresponds to one card in a traditional card index box. Following the analogy, each item written in the card, the surname or a line of the address, is a 'field'. An 'index' is the particular field used to sort the cards into order – often a surname. If you search a file which isn't indexed, the database has to look at each record on the offchance that it's the one you want, like sorting through a pile of cards dumped in a random heap on the floor.

# InfoWorld

## Software Report Card

### Cardbox

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**STOP PRESS**

Now available for  
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series at a new  
low price.

## Why settle for less?

OK – so you've never heard of InfoWorld. That's hardly surprising because it's published in America. It does however happen to be one of the most widely-read software magazines in the world.

When we launched Cardbox several years ago, we sent a copy to the editor. Because the Americans have software products coming out of their ears, it was an honour when he decided to publish a review for us. Even more of an honour when we discovered what he thought of it! Over the past five years you could probably count on your fingers the number of products that have achieved this sort of acclaim.

Cardbox is simply an electronic card-indexing system – a replacement for the cards on your desk.

It's famous for the speed, and flexibility with which it can find cards for you. Unlike the cards on your desk, you can have any number of keywords on the card, anywhere in the entire file. Personal Computer World said "...from my initial tests, the fastest of any package I've evaluated so far..."

But it's not only fast. You can design the layout of the cards completely to your own requirements and find cards easier than by any other method. In fact, Computing Today proclaimed "This product is totally idiot-proof!"

You wouldn't use Cardbox to design an invoicing system, or produce calculated reports – it wasn't designed for that. But you would use it for keeping track of your enquiries, customers, suppliers, product details, membership

records, library details – or just about any other type of information you need to find quickly and easily. And because Cardbox links with CP/M word-processors like WordStar and New Word, if you require an easy to use, but superior mailing list facility, there's nothing better.

Furthermore, because Cardbox is so easy to use, we are able to offer you FREE and UNLIMITED telephone support. Should you need help just call us. Your call will be welcomed and your query will be answered in a pleasant, helpful and efficient manner – because that's the sort of people we are.

Cardbox is ~~£99.99~~ (inc VAT).

Available for Amstrad 6128, 8256/8512,  
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For example, once you discovered that Miss Aardvark has bought item RT-67 from you, a relational database could access a parts list and tell you what part RT-67 actually was.

AtLast can nearly do this, although you have to open and close the databases manually. This is really cheating, and it's a bit naughty to bandy the word 'relational' around. Still, at the price, it would be very surprising if it could do more.

### AtLast the manual

AtLast's manual will be a major selling point, since it is rare for a 'budget' package to have such a large and well produced one as this; normally you get a few sheets of photocopied A4 printout.

It is written in quite a wordy style, which makes it good for the beginner but a little difficult to use as a reference manual once you get more experienced. One excellent section is entitled 'How to ...', which goes through several common operations in detail.

The manual does occasionally lapse into computerese, though. The phrase "logically distinct databases" crops up now and again, which will mean nothing to non-computer scientists. Also, it uses a confusing way to describe the keys to use for special operations. For example, there is a key you have to press to change from insert to overwrite mode in the screen editor, which gets referred to throughout as '<InsertMode>' key.

In reality, this is [f1] on the PCW, but you don't discover this until an obscure appendix late in the manual. The reason it's done this way is to allow the manual to be used with the PC1512 and CPC6128 versions of AtLast, but it really would have been better to pick one of the machines and use its keys rather than aim for generality with silly generic names.

### AtLast the end

At £29.95, AtLast is superb value for money and hard to pick holes in. It can do all of the operations you need for general use, and will only let you down if you need calculated fields in your records, or to cross-correlate unusually complex sets of data.

It does take a few hours of careful manual-reading to get the best from AtLast, and if you are completely terrified of databases then you might have problems. Then again, the same applies to any powerful database, so there's no escape.

### Choosing the right database

Picking which database is the right one for your application is very difficult. The main thing is not to be seduced by the word 'powerful' in a product's description, because this usually means 'impossible to use unless you are Professor of Computing at Cambridge'. Decide what you will use your database for and stick to those features.

Beyond being 'easy to use', which all databases are if you believe the adverts, here are some features you might need: to sort the data into alphabetical order; to be able to write the database contents out to an ASCII file for programs like mailmergers to read; to be able to print out only selected fields from a database, in any layout you choose; to be able to specify that one field of a record is to be worked out from the other fields. Also check the maximum number of fields per record that you may have.

Here are two database packages which are aimed at vastly different types of user:

#### dBase II

£119.00 ● First Software ● 07357 5244

This famous name database can do almost anything. It is

## WHAT A DATABASE IS

Think of an address book: you have all your family and friends written down alphabetically and you can instantly find Fred Snodgrass's phone number despite the fact that the 'S' section is almost at the end of the book. This is because you can go straight to 'S' by the indexed page labels, skipping 'A' to 'R' entirely.

A database does just the same search operation as you do on an address book - it's like an electronic index book. So what do you gain by taking the trouble to type the entire contents of your filing system into your PCW? If all you want to do is look up the phone numbers of your 50 friends, the answer is 'not much'. What databases are really good at is searching quickly through the

information stored, sorting it into order and producing printed lists and summaries of it. For example, suppose you run a small mail order business and need to hold records of your customers and the products they have bought from you.

With the order records stored on a database, you could trace all customers who had bought Magic Widgets, or run through all your customers and tot up the total amount owed to you in unpaid bills. Then when your bank manager presses you for details on just how you intend to pay off your six-figure overdraft, you can thrust a piece of paper under his nose proving that your customers owe you at least £20,000,000. Computer printouts never lie!

really a programming language to allow you to build your own database, and needs some programming skills to get the best out of it. If you are unsure of BASIC programming, avoid dBase like the plague, but if you are a competent programmer you will find it extremely flexible and powerful. The only real flaw is that it can only deal with 32 fields per record.

#### First Base

£29.95 ● Minerva Systems ● 0392 37756

Aimed at the first time user, First Base is one of the simplest databases to get to grips with. If all you want to do is hold club membership records, or simple customer details, it could do very well for you. It provides simple data entry, editing and sorting, and is good value for money. However, it is a little finicky if you want to produce anything more than very simple printed output (although it can do it).

EXIT

#### Calculated fields

A 'calculated field' is one where the database works out the contents for itself. For instance, if you have a slot in your record for 'total excl. VAT', you might want to define another slot for the VAT inclusive figure, which is automatically calculated from the exclusive figure multiplied by 1.15.

## AT LAST THE FACTS

For those who know what the figures mean, here is what AtLast can offer to your filing system:

- ▶ Menu operation - usually a single keystroke for a single function
- ▶ A record may contain up to 20 fields, BUT each field may have up to 99 elements. For example, you could store a 5 line address in a single field with 5 elements.
- ▶ A field (or element) may be up to one line long (79 characters)
- ▶ You can have multiple indexes to a database - e.g. you can sort it by both surname and date of birth.
- ▶ You can select records or groups of records by quite complex conditions,

e.g. 'All people who owe more than £100 and live in Reading'.

- ▶ The format of screen layouts and printed output is fully definable. You can print labels, lists, simple mailshots in almost any form you like.
- ▶ Records can be read or written to ASCII files.
- ▶ You can make some changes to the record format even after the data has been entered
- ▶ For numeric fields, you can print their total at the end of a listing (although there is no general arithmetic allowed in fields)
- ▶ You get 60 days free support thrown in.

#### PLUSES

- ☐ The basic form layouts are generated automatically
- ☐ The data can be indexed on more than one item
- ☐ Good screen editing facilities
- ☐ Printed reports can include totals
- ☐ Generally clear 70-page manual
- ☐ Subsets of records can be selected using sophisticated 'rules'

#### MINUSES

- ☐ Manual sometimes lapses into computerese
- ☐ Page dimensions have to be specified every time you want to list things, even to the screen
- ☐ Can't do general arithmetic within fields

RANGE OF FEATURES ■■■■□  
EASE OF USE ■■■■□

OVERALL SPEED ■■■■□  
DOCUMENTATION ■■■■□

8000 PLUS VALUE VERDICT ■■■■■

# INFORMATION EXPLOSION?

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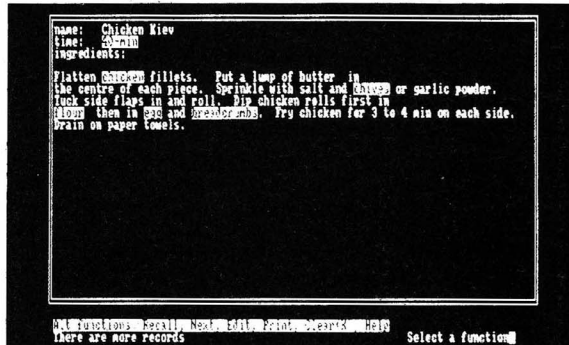
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**Plus: standing orders - entries optionally sorted into date order - item search facility. Comprehensive manual and full set of practice data included.**  
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# LEARN TO BE AN EDITOR

The PCW's text editor RPED laid bare under the scalpel of skilled surgeon Ben Taylor

If you use CP/M and programs that run from CP/M, you will have discovered a regular need to produce what are called 'ASCII files'. Don't be put off by the name – 'ASCII file' is just a confusing way of saying a plain text file. One of the most common occasions when you need to create an ASCII file is if you are trying to program. Since this issue of 8000 Plus is covering programming languages in some detail, it seems appropriate to discover the easy way to create the kind of files they need to work with.

Unfortunately LocoScript is singularly bad with ASCII files. It wasn't until a few months after its first release that it could even produce the things, and even now the time spent swapping between LocoScript and CP/M is so tedious that it is impractical to edit files that way. The answer lies in one of the free programs hidden on the PCW master discs – the RPED text editor.

## Starting from scratch

To run RPED you will need to have a disc with the files BASIC.COM and RPED.BAS on it. You will find these on Side 2 of the original PCW master discs, but you should of course have copied them onto a work disc by now. Starting it going is simple: you just put that disc in the current drive and type BASIC RPED [RETURN]

BASIC starts up with its introductory burble, and after a short pause you are faced with RPED's master menu screen. Since we are creating a new file, press the [F3] key, for 'To edit new screen'. You will see a new prompt appear on the screen asking for the name of the file which will be used to hold your new text.

As it stands, the space for the filename is preceded by 'a:', meaning your file must go onto the A drive. If you want to store the file on B or M rather than A, you can change this; use the cursor left key (not the delete key) to get the cursor over the 'a', and just type 'b', 'm' or whatever you want. Now use the cursor right key to get back to the spaces for the name of the file and type it. Press [RETURN] or [ENTER] to confirm the filename, and the screen clears, leaving only a few cryptic prompts on the top line.

This blank screen is for editing, and the prompts at the top tell you how to use it (well, sort of). It's really very easy; just use the cursor keys to move the cursor to wherever you want to put some text, and start typing. Press [RETURN] when you have filled a line, and, as you'd expect, you're moved to the left hand end of the line below as you would expect. The two delete keys work as normal, and if you put the cursor in the middle of some text and start typing, the new text is inserted, shifting the remainder of the line to the right.

RPED is only a simple editor, and isn't designed for massive files. You can't create files longer than 200 lines –

This screen editor is for small files (up to 200 lines) and uses normal cursor and delete keys on both text and filenames. Other features include:

[I] toggles insert/overstrike mode, [ESC] aborts the edit, [END] ends the edit

[F5] To edit last screen

[F3] To edit new screen

[F4] To edit existing file

[ESC] To quit

▲ The main menu screen of RPED

This screen editor is for small files (up to 200 lines) and uses normal cursor and delete keys on both text and filenames. Other features include:

[I] toggles insert/overstrike mode, [ESC] aborts the edit, [END] ends the edit

Insert Destination Disc and type name of new file

b:bensprog.bas

▲ Entering the name of the file to edit

## USEFUL KEYS IN RPED

[I] switches you between insert and overstrike mode. As explained above, if you type new text in the middle of old text, the new stuff is inserted and the old shifted along. If you press [I], new text overwrites the old characters that used to be in those positions. [I] again changes back to insert mode. [ALT] ↓ inserts a blank line above the current line you are on, so you can type in new text.

[CUT] deletes the current line you are on and closes up the gap. [EOL] takes you to the end of the current line, and [LINE] (press [SHIFT]+[EOL] for that) takes you to the start of the current line. [RETURN] takes you to the start of the next line. [EXIT] saves the current file and returns you to the main menu screen. [STOP] aborts the edit altogether, and returns you to the main menu screen.



# PRINTING AND PROGRAMMING FROM



## GRAPHICS OPERATING SYSTEM

GOS is a complete set of graphics programmer's tools which provides a range of graphic routines not normally available for the Amstrad PCW.

It was designed to provide graphics for and to run in conjunction with Mirrorsoft's Fleet Street Editor Plus for the PCW, but it is by no means limited to a page make-up environment.

GOS gives you the tools to:-

- Manipulate graphics with expansion, contraction, rotation and reflection
- Create menus that save and replace screen data
- Use fill routines which can empty themselves
- Save graphics to disk and reload them
- Add text to graphics using a range of fonts, styles and sizes

GOS can be used with any programming language which allows you to:-

- Call machine code routines
- POKE and PEEK into memory
- Restrict the language to the area of memory below &C000

Example routines are provided on the disk in BASIC, Pascal and Z80 machine code.

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## AMSTRAD PCW

Configured for use with keyboard, mouse, and Electric Studio Light Pen, this version offers:-

- Over 300K of ready-to-use library graphics
- Full-feature studio package for graphic creation and manipulation
- 5 fonts, each in 5 point sizes and 5 styles
- Full-function word processor for text entry
- Text-editor for on-screen editing in page make-up
- Comprehensive page make-up with variable line-leading, columns and margins, page sizing, orientation and dummies, graphic scaling and basic graphics editing tools, hyphenation, justification and proportional spacing, text block movements, rules and snap to guides.
- Full left and right hand pagination with automatic page numbering and insertion/deletion
- File management structure
- Enhanced resolution printout to dot matrix printers

### Hardware requirements

- Amstrad PCW 8256/8512
- PCW printer or Epson compatible with Centronics interface

### Optional extras

- Extra fonts and font editor
- Graphics libraries
- Special printer drivers

8000+

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# SuperCalc2™ versus The Cracker2

## *Questions to ask yourself about Spreadsheets.....*

1. Which one is a **current edition**, written entirely in machine code and supported by its author?
2. Which one uses sparse matrix storage techniques to maximize workspace, and extensive context-sensitive help messages?
3. Which one is available with immediate quotes for site and corporate licenses and can transfer datafiles to and from it's PC counterpart via an optional serial transfer program?
4. Which has *built-in* self verification and powerful macros?
5. Which has *built-in* date, timer and I/O commands?
6. Which has DIF and dBase™ file compatibility *built-in*?
7. Which one even has a mailing label print option?
8. Which one has built-in high resolution screen and printer graphics?
9. Which one is written by a British author, costs £49inc, & represents the better all round value?
10. Which one are you going to buy?

***(The answer is  
Cracker2!)***

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Last month, we learned how to load the BASIC computer language into the computer from the CP/M Plus Disc, as well as how to use the PRINT command to carry out simple calculations and put the answer on the screen and to output simple messages.

The simple programs which we wrote last time had all the calculations which we wanted to perform specified inside them. If, for example, we had wanted Line 10 of our program to multiply 12 by 52, we would have written something like:

```
10 PRINT 12*52.
```

Although this does work, it has the disadvantage that every time we want to carry out a different calculation, we have to change the program.

Obviously, it would make more sense to keep the program unaltered, and simply enter the numbers which we want the computer to work on. Indeed, if you have been running any commercial programs which manipulate numbers, you will realise that this is precisely the way in which they always work.

### Open the box

This is done by using Variables rather than fixed numbers. Variables can be thought of as 'boxes' used by BASIC to hold values which may change from time to time, either while a program is running or from one run of a program to another.

In BASIC, Variables are given simple names, precisely like the 'X' and 'Y' names used in algebra. There are rules about what names you can give, and these are unfortunately not the same in all versions of BASIC, but single letter names like 'A' or 'X' are always acceptable, as are letter-and-number combinations where the letter comes first, like 'A1' or 'X4'. Variable names must never start with a number so, for example, '6X' isn't a valid variable name.

To see how variables work in practice, here is a simple example you can enter using the same calculator mode that we began with last month – that is, without using line numbers or needing to type RUN. Enter the following lines exactly as they are printed here (though you can use small letters instead of capitals if you prefer). Remember to press [RETURN] or [ENTER] after each line.

```
A=12
B=52
PRINT A*B
```

As each of the first two lines is entered, BASIC will respond with 'OK' to show that it is ready for your next command. When you press [RETURN] after entering the last line, you should see the answer '624' displayed on the next line.

### LET It = Be

To understand what has happened, you need to know that the first two statements are called 'Assignment statements'. In effect, they evaluate the expression on the right of the '=' sign and put the result in the variable whose name appears to the left of it. Some people find it easier to understand these Assignment statements when they are written in the expanded form LET A=12 and this is perfectly acceptable if you prefer it, though most experienced programmers find it rather clumsy.

When the first two statements have assigned values to the variables A and B, the third statement PRINTs on the screen the result of multiplying the two variables together. What is more, the values of the two variables will not be forgotten when the program ends. If you type in PRINT A the computer will respond at once with the answer '12'.

# GIVE ME A NUMBER

John Hughes continues to bombard the bewildering bastions of BASIC

### R.S.V.P.

It is often very convenient to be able to ask the user to type in a particular number from the keyboard while a program is running, and then to carry out some arithmetical operation on that number. The BASIC statement which does this is

```
INPUT
```

followed by one or more variable names.

For example, the program line 10 INPUT X expects you to type in a number and then to press [RETURN] when you have finished. It then assigns that number to the variable X:

Similarly, 10 INPUT X, Y expects you to type in two numbers on the same line, separated by a comma, and to press [RETURN] when you have finished; the value of the first number would be assigned to X and the value of the second number to Y.

If you only type in one number and then press [RETURN], you will receive the error message 'Redo from start' to warn you that what you have typed in does not match what BASIC was expecting. It doesn't mean there is anything wrong with your program, so if you get this message at any time, just re-enter all the values for which the program is asking.

To see what effect the INPUT command has on the screen, type in the following short program, which will input a value, assign that value to the variable X and then print the value of X on the screen

```
10 INPUT X
20 PRINT X
30 END
```

Type RUN and press [RETURN].

Take careful note of what the INPUT statement actually does: it puts a question mark on the screen with the cursor next to it to mark the place where you should type in a number. Type in any reasonable number and press [RETURN], and the program will display the same number on the screen again and then stop.

You can run the program as often as you like, typing in a new number each time in response to the question mark prompt.

### Prompt me

As soon as a program becomes a little more complicated than this very simple example, you will find that the question mark prompt isn't really enough. It's far better to have a little sentence on the screen to remind you of exactly what to do.

In the same way, instead of having the final number displayed on its own, you could have a short explanation of just what it stands for. Both of these improvements can be carried out by using the PRINT command with a suitable message enclosed in inverted commas.

Let's make the first prompt appear immediately before ►

line 10, and the second between lines 10 and 20, so we shall give the first new line the number 5 and the second the number 15 - any number smaller than 10 would have been suitable for the first new line, and any number between 10 and 20 for the second. The new lines will look something like this, depending on the exact message you want to display:

```
5 PRINT "Type in any number"
15 PRINT "The number you entered was"
```

When you have entered these lines, you can prove to yourself that they are really in the right places by typing LIST, and the expanded program will be shown on the screen. The next time you type RUN, the simple instructions you have included in the program will appear on the screen.

An expression you may encounter sooner or later is 'Print list'. This simply means all the items which occur after the command PRINT, and which are output by it.

doesn't work first time; if you get a 'Syntax error', go back and correct the faulty line and then try again. You have our word for it that the program really does work correctly!

## Saving your work

To save your program onto a disc so you can use it again, insert your formatted disc into Drive A and type

```
SAVE "TEMP.BAS"
```

or whatever name you prefer, and press [RETURN]. The rules about acceptable file-names are the same as for LocoScript and other files; almost any name made up of letters and numbers, up to eight characters in length and not including spaces, is acceptable.

The three-letter file-extension .BAS is traditionally used to identify BASIC programs, and if you leave it off Mallard BASIC will automatically add it to the filename. You can choose a different extension of your own if you prefer, but there isn't much point.

## Reloading your program

Before you can reload and run any BASIC program which has been saved to disc, you must first load BASIC into your PCW. Load it from the CP/M Plus disc in the usual way.

Place the disc with the program on it into Drive A: and type:

```
LOAD "TEMP.BAS"
```

and RUN the program in the usual way, or type

```
LOAD "TEMP.BAS", R
```

or just

```
RUN "TEMP.BAS"
```

The last two commands have the same effect; that is, they will automatically LOAD the program first and then immediately RUN it.

To make things even easier, with all three of the above commands you can leave the file extension 'BAS' off, just as you could leave it off the SAVE command; the program will still be found in the usual way. However, if you have chosen some other extension for your program, you will have to include it in whichever command you use.

## Different types

BASIC recognises three different types of variable: real numbers (those which can have a decimal point and a fractional part after them); integers (whole numbers); and strings (sets of characters, punctuation marks, letters, etc., which cannot be operated on mathematically).

The difference between real numbers and integers is not really an important just yet. The programs in these articles work with whole numbers or real ones.

However, if you want to insist that a particular variable will always be an integer, add the symbol '%' to its name. Thus 'A' is a 'real' variable, while 'A%' is an 'integer' variable. If both 'A' and 'A%' occur in the same program, BASIC treats them as different variables.

String variables are marked with a dollar sign, '\$', after the variable name; thus 'A\$' would always represent a string variable.

String variables are used where a program needs to hold names, addresses and other non-numeric data. String variables can be used in INPUT and PRINT in exactly the same way as integer and string variables, but their use will be covered later on.

## Homework?

When you have your Fahrenheit to Centigrade program working properly, see if you can write another one to make the conversion in the opposite direction. When you have written it, try it with some data for which you know the right answers and see if it is working properly. **EXIT**

## Name dropping

The rules about acceptable variable names are not the same for all versions of BASIC. The rules for Mallard BASIC can be summarised as follows:

- Variable names must begin with an alphabetical character; any following characters may be either letters or numbers or a dot.

- Variable names can be up to 40 characters in length.

- Both variable names and BASIC commands must always be separated from other items by a space, a mathematical operator (such as '+' or

'-') or punctuation. If you type in the examples from this series exactly as they are printed, you should have no problems.

- Variable names can never be BASIC command words, like PRINT or INPUT.

- Variable names can be written in either capitals or small letters, or in any combination of the two. No distinction is made between a name in capitals and a similar one in lower case - that is, the variable 'FRED' is the same as 'fred', 'Fred' or 'fReD'.

## A real program

So far, we have really only been entering simple practice programs; the time has now come for us to try a real, useful one.

The purpose of the program is to convert a number representing a temperature in degrees Fahrenheit into the equivalent temperature in Centigrade.

There are a couple of things to notice about the program. First, there is a prompt telling a user what input is required, and a further line of explanation about the output.

Second, notice the special use of two PRINT statements on their own, without any associated print list. When the program is run, these will place blank lines on the screen, making the output tidier.

We shall be using this program next month as well, so it would be sensible to save it when it is working. You'll need a formatted disc to put it on. Type in the program as carefully as possible, making sure that each line is correct before you press [RETURN]. If you do make a mistake, either use the EDIT command as described last time - EDIT 10, for example, to correct Line 10 - or just re-enter the whole line again, making the correction as you go.

When you are sure that everything is correct, try running the program. Don't be surprised if you find it

```
10 PRINT "Type in a temperature in Fahrenheit,"
20 PRINT "then press Return or Enter"
30 INPUT X
40 Y=(X-32)*5/9
50 PRINT
60 PRINT
70 PRINT "The temperature in Centigrade is"
80 PRINT Y
90 END
```

# CLERICAL HELP



**The Reverend Brian Blandford climbs into the pulpit to deliver a lesson on the ecclesiastical uses of his PCW.**

It sounds like a scandal fit to send a *Sun* reporter scorching his typewriter to cinders. A Baptist minister (and married at that) invites a pretty young thing called Joyce to move in with him. He actually keeps her in the bedroom – and his wife lets him!

But it's OK. Joyce, of course, is THE Joyce; she of the clackety teeth and the winking red eye. Ever since she fluttered her cursor at me at the 1985 PCW show I've been hooked. Now we've come up to our first anniversary together. Time for celebration and reflection.

The original reason for getting tangled with Joyce was a book I had to write. Having just lost my typist, getting a presentable manuscript together by the deadline was asking a bit much of my limited keyboard skills. Joyce seemed the answer to a parson's prayers, so down to Dixon's it was, and back I came with that big overgrown cornflake box.

## Learning LocoScript

Putting the machine together was no problem. Getting started was. Copying the system discs gave me the first inkling that *maybe* the instruction manual wasn't quite as clear as it ought to be. It was an impression confirmed only too firmly when the inner jungle of tangled commands was penetrated. However, my three years at theological college helped me unravel the tortuous logic, and after a bit of experimenting and some lucky key-strikes I got it right and we were away.

Actually, from that point on things began to go quite well. The main hiccups were in making intelligible sense of the print commands and in setting up layouts and headers. Also, being one of the first buyers, I encountered that infamous business of not being able to number the pages. You later purchasers have no idea of what it was like for us pioneers, shaking the manual at that dumb screen and screaming "Paginate, you hussy!"

Anyway, those nice kind people at Brentwood sorted it out for me when I wrote, sent me a new disc and also told me how to load Logo, which I'd found wouldn't obey the submit command as per the manual. The only trouble is, their instructions leave me with a CP/M boot disc which takes an age to load as a bundle of files are pipped across to M:

At last I felt competent enough to get cracking on my book. Being an innocent abroad in word processor land, I didn't know that the experts considered LocoScript unsuitable for long documents, and I endured the wretchedly tedious business of 40 Kilobytes-worth of purple passages (*what kind of a book was this? – Ed*) scrolling past me at a speed that turned snails into Formula 1 racers, and all because I'd 'Saved and Continued' while I went for coffee (periodic 'Save & Continue' was something I learnt to do early on. I once went to answer the doorbell and came back to find the screen like screwed-up knitting and a whole afternoon's work lost).

I forgave Joyce her sedate pace, however, when I found that she could correct a multi-repeated spelling slip in a long chapter simply by telling her to exchange it for the right one while I went for yet another cup of coffee. Marvellous. It was almost worth making the mistake just to see it happen.

The book was finished, and the end result must have been reasonably clear to the publishers as I have the advance copy in its bright shiny cover. Joyce has earned her keep on that alone. But what I hadn't bargained for was the way she seems to be absolutely ideal for all the general tasks of the ministry. Of course, if your image of church life is musty old pews and sermons thick with begats and verily's, then you'll have a job to see just how computers and word processors fit in. Here beginneth the lesson...

Take correspondence. Joyce slots in my church letters into our strangely shaped letter-heading; she also sends out 'Welcome' letters to new attenders via the template facility. I just give her the name, a few personal comments, and away she goes. I've thought of extending the templated standard letters to cover other events, though I have a nightmare fear of calling up a bereavement sympathy note in error and sending it to my latest newly-weds.

## Structured sermons

Heard any good sermons lately? As much as they're the object of jokes (and sometimes deservedly), I do take them seriously as a way of Divine communication, and I honestly believe Joyce has helped me to preach better. My sermons usually start with some thought or other that can come at any time, and may be jotted down on an

envelope. Then other thoughts get added to it during the week. Come Saturday, and I have to try and get everything into some sort of order. The result used to be that bits got missed out, the scrap of paper went missing, or else I couldn't remember for the life of me what I meant by my cryptic notes.

What I do now is give everything to Joyce as soon as I can, adding bits as they come during the week, then 'cut and paste' and all the textual manipulation magic sorts things out beautifully. Any last minute changes (and boy, are some last minute!) can be worked in with no problem.

A famous preacher once said that a sermon without illustration is like a house without windows, but recalling something appropriate at the right moment is not easy, or remembering your source so you can check your facts defeats you. I now use Joyce to store my illustrations and quotes in short files, which she kindly keeps in alphabetical order for me. The only problem I haven't solved is the limitation on the number of files on a disc. It looks as though I will simply have to use more discs. I might, though, take a look at *Chibase*, which seems ideal for this kind of application.

Joyce has lightened the chore of our monthly business meetings. I build up the Agendas piecemeal in the same way as the sermon material. That way items are not missed and carrying matters through from month to month (not always having a miracle to solve problems instantly) is made easy by the copy facility, as is producing copies of relevant parts for fellow committee members. It generally makes for a much more efficient use of our time.

Things like our weekly 'Newsheet' with its mixture of standard announcements (kept on the template) and special notices are a doddle. The varied type faces and emphasis capability give it a smart appearance too, though I'm still trying to puzzle out the difference between 'Bold' and 'Double'. Seems to be something esoteric for connoisseurs of print styles. We have also succeeded in producing a very presentable 'neighbourhood' leaflet by judicious use of copyright-free clip-art.

Pleased though I am with Joyce's present publishing ability, I'm just waiting to see the reviews of the new PCW versions of *Pagemaker* and *Fleet Street Publisher*. They seem to be almost tailor-made for this kind of job. I also want to investigate the possibility of typesetting by post (or, even better, by modem).

## The Saxon invasion

Money being what it is, though (i.e. scarce), these flights into esoteric technology will have to wait a bit. The first piece of additional software had to be a database. It seemed to me it would revolutionise church record-keeping. So it has proved - after a while.

It took me a long time to decide which product, being almost totally confused by talk of 'sequential' and 'relational' and trying to understand what all the boasts in the ads really meant. After all, if I was going to arrange a marriage for Joyce, I had to be sure I had found the right partner. I wanted a good, all-round handyman of a database, because there were a number of jobs I needed doing. In the end I settled for Microfile/Microword, allured by the promise of a free word processor that would permit merge-printing and do labels.

Joyce seemed to get on reasonably well with her new boy-friend at first, but they did have one or two quarrels. For example, they couldn't decide whether McCormac came before Metcalf or after. It was the small 'c' that threw them. In the end they decided to print it in both places.

That somewhat unsatisfactory compromise broke

down when a record-by-record browse got into an endless loop as Joyce read Microfile's 'Mc' records over and over again (perhaps I should have selected her mate from a Scottish software house). Then they ganged up on me and threw up a screenful of rude words when I tried to delete the record. The only way I could solve the problem was to create a new database and copy across the data, less all the 'M's. I then typed all the 'M's in again with a no-nonsense capital C i the MC's. Now we seem to have settled down to a nice steady relationship where all three of us understand each other most of the time - I think.

There's precious little thanks to the manual, though. If the Amstrad manual confused by sheer weight, this one seemed determined to tantalise with too little - except where it doesn't matter. For example, the highly complex procedure of converting data files into labels is airily trotted out in an unintelligible, single-page Appendix designed for teasing members of MENSAs. And then a precious quarter of a page is spent detailing why you might want to interrupt a print run:

1. You want to go for coffee...(not again!)
2. You are on the phone...
3. The paper has jammed...

It wouldn't be so bad if interrupting a print run actually worked! At the risk of hurting her feelings, I have to say that appears to be Joyce's fault rather than the software. She concentrates so hard on what she's saying to the printer she won't listen to what I'm telling her on the keyboard.

To be fair to Saxon Computing, they have been first class in their support. They solved my problem with generating labels in a lengthy three-paged letter, and they answered other difficulties with phone calls or prompt replies. If only the information had been in the manual... though I guess we parsons also assume too much knowledge in the people we're trying to teach.

Now Microfile is up and running, I find it does all my chores of record-keeping admirably, plus the bonus of making up for LocoScript's woeful lack of mail-merge facility (LocoMail does this - Ed). Things like mail-outs, the listings of groups (e.g. young people between 13 and 18, and instant changes of details, are all handled beautifully. Hopefully Joyce will never need a divorce from her database mate.

## The multi-purpose micro

Another area where Joyce has really proved her worth is in the organisation of a tour to Israel. Again, the template facility has been an absolute boon, enabling me to store the itinerary, send out answers to enquiries, confirmations of bookings and so on. Microfile has done his bit in keeping records of the bookings, deposits and so forth, but addresses are better stored in a LocoScript group, giving the advantage of being able to see them at a glance and being able to print a single one quickly.

Joyce has stirred quite a bit of interest amongst fellow ministers (I wonder if I should approach Amstrad for some commission on the machines sold after my demonstrations). There is a Church Computer User Group and there seems no doubt that applications in church life are set to grow even more. The sheer variety of tasks in our job makes multi-functioning small computers such a God-send (literally!). There are other possibilities too. I have not yet explored the teaching potential: most software in religious education seems designed for the Spectrum or BBC.

The one thing Joyce hasn't been able to do for me so far is to persuade the tax-man that she is an allowable expense, but she's writing him some awfully nice NLQ letters about it!

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# A LOOK AT LOGO

Don't ignore side 4 of your master discs

One of the least well documented, and therefore least used, programs in the PCW 'package' is the programming language Logo. When Logo is mentioned in computing circles the most common comment is "Oh Yes, the children's language". While it's certainly true that Logo can be very helpful in teaching children mathematics and logic, it's also an ideal language for anyone wanting to dabble in programming. You can produce attractive patterns and drawings on the screen of your PCW with the minimum of learning.

To use Logo first prepare a work disc. Start your PCW with this disc in the top drive and away you go.

only provokes the response:

```
I don't know how to
csfd200rt90fd200rt90fd200rt90fd200rt90
```

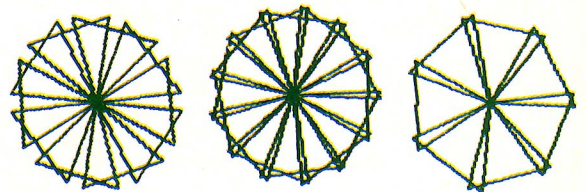
All Logo's error messages are full and helpful like this. Gone are the 'Syntax error' of BASIC or the 'OPEN FILE INVALID DISK SELECT' of CP/M.

## Endless variations

Not only can you define your own commands, which Logo automatically adds to its vocabulary, but you can attach numbers to them in the same way as with `fd`, `bk`, `lt` and `rt`. Logo handles this by using a *variable* within the user-defined command. It easiest to explain the mechanism with another example.

Suppose you want to draw a star with any number of points. You can do this by rewriting the `star` command to expect the number of points as a number directly following the command name. The new command would look like this:

```
to anystar points
cs repeat points [repeat 3 [fd 80 rt 120] rt
360/points]
end
```



▲ A selection of stars produced by the ANYSTAR command

Logo now takes the number after the `anystar` command and puts it in the variable `points`. It then uses this value in the `repeat` loop and to determine the angle through which the turtle must turn between drawing each triangle in the star.

There's an awful lot more you can do with Logo, and to whet your appetite here's a working Logo clock, courtesy of Glentop's excellent Logo Pocketbook by Martin Sims. You run the program by typing `start`, and you may need to 'adjust' its timekeeping by altering the number of repeats of the `pu pd` operations in the `delay` command. You can look up any of the Logo commands you don't understand in your PCW manual.

## Repeat after me

It's really quite boring to type in these nine commands just to draw a square, especially since eight of them are just the sequence `fd 200 rt 90` repeated four times. Logo has a convenient shorthand for this kind of repetition, and the square routine can be rewritten in the form:

```
cs repeat 4 [fd 200 rt 90]
```

As you can probably guess, the `repeat` construction repeats whatever is inside the square brackets. The number of repeats is determined by the figure preceding the opening bracket.

## Loading Logo

Preparing a Logo work disc is no mean feat, so here is an invaluable 8000 Plus crib box with the instructions to achieve just that.

First load CP/M from a copy of the master disc, load DISCKIT and make a complete copy of side 4 of your master disc onto a fresh one. Leave DISCKIT, insert the disc with the copy you've just made and type:

```
ERA HELP.* [RETURN]
```

This will delete the help files you won't need and make room for the extra files you will. Remove the disc and insert a copy of the CP/M master. Now type:

```
PIP [RETURN]
```

```
M:=A:*.EMS [RETURN]
```

```
M:=A:SUBMIT.COM [RETURN]
```

```
M:=A:SETKEYS.COM [RETURN]
```

Swap discs again and type:

```
A:=M:*.EMS [RETURN]
```

```
A:=M:SUBMIT.COM [RETURN]
```

```
A:=M:SETKEYS.COM [RETURN]
```

```
[RETURN]
```

Finally, type

```
REN PROFILE.SUB=LOGO.SUB
```

and there you have it. When you want to use Logo simply insert your newly created disc and reset your PCW.

## Turning turtle

The easiest way to approach Logo is on a turtle. Not one of the Galapagos island varieties but an imaginary reptile symbolised by a small dart-shape on the screen. The screen turtle is at your command and you can move it around the screen with simple commands like `fd` and `bk` for forwards and backwards, and `lt` and `rt` to turn left and right.

The Logo turtle is an extremely literate one, and carries a pen with it on its travels. The `pd` command puts the pen down so the turtle leaves a trail wherever it goes. It's this trail which forms the drawings and patterns that Logo can make on the screen. The `pu` command lifts the pen up again. Two other useful commands are `home` which puts the turtle back in the centre of the screen, `pointing upwards`, and `cs` which clears the screen as well. The movement commands are followed by a number which tells the turtle how far to travel or by how many degrees to turn. You can put several commands on one line or press RETURN after each. You must separate each command from its associated number and from other commands by a space, however, or Logo will get confused. For example:

```
cs fd 200 rt 90 fd 200 rt 90 fd 200 rt 90 fd 200 rt 90
```

will draw a square on the screen, but:

```
csfd200rt90fd200rt90fd200rt90fd200rt90
```

You can draw an interesting pattern with no more than these few commands. Try:

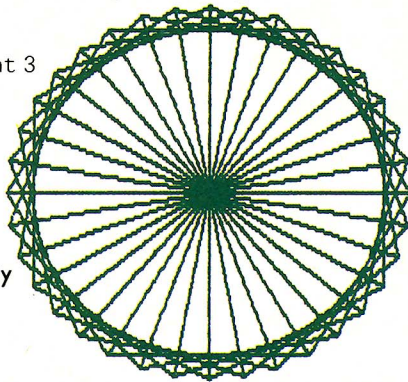
```
cs repeat 36 [repeat 3 [fd 150 rt 120] rt 10]
```

This produces a 36 pointed star. The trouble is that you still have to type this sequence of commands every time you want to draw the star. Well, no, actually you don't. In the same way you can use the *primitive* commands like *fd* and *cs*, you can also use ones which you've defined yourself!

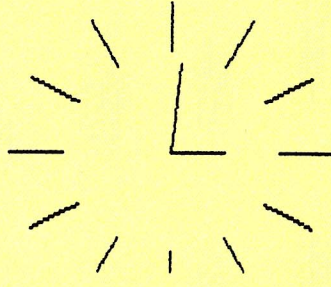
To define a command of your own, you must first give it a name. A command to draw the 36 pointed star might be called *star* and to define it you would type:

```
to star
fs cs ht
repeat 36 [repeat 3
[fd 150 rt 120]
rt 10]
END
```

Logo now knows how to 'star' and you can draw one on the screen simply by typing *star*.



The 36 pointed star ► produced by the STAR command



Enter minute hand heading  
then hit RETURN  
Now the hour hand heading  
36  
■

◀ The clock face produced by the FACE program

```

to clock
seth :mh pe fd 70
pu home
make "mh :mh + 6
pd seth :mh fd 70
pu home
seth :hh pe fd 40
pu home
make (hh :hh + 0.5
pd seth :hh fd 40
pu home
delay 3600
end

to start
pu home pd
face
hands
repeat 720 [clock]
end

to face
cs repeat 12 [line]
end

to line
pu fd 80 pd
fd 40 pu bk 120
rt 30
end

to hands
pr [enter minute hand heading]
pr [then hit RETURN]
make "mh item 1 r1
pr [now the hour hand heading]
make "hh item 1 r1
end

to delay :tick
repeat :tick [pu pd]
end
    
```

Us PCW owners are lucky on the language front as the machine is supplied with languages 'free of charge'. Those that have been tempted to tinker with either or both of them will have noticed how different they are. Although both are designed to improve communication between a person and a micro, they approach the problem in very different ways.

These are only two approaches, though. There are many more languages, each designed to be particularly good at some aspect of programming. Programmers usually pick the language which allows them to write a particular program as easily and efficiently as possible. A mechanic trying to undo a nut might use a spanner, a socket, a pair of pliers or a mole wrench! Each approach would probably achieve the end result, but there are definite advantages to the spanner or socket.

The same applies to languages and three of the most popular alternatives are reviewed here.

## Pascal

Pascal is perhaps the easiest language for BASIC buffs to progress to (although real BASIC enthusiasts often don't see it as a progression!). It uses much of the same grammar and construction as the big 'B', but offers many extra structures and insists that you organise your program into a series of *procedures* and *functions*, each designed to perform a specific task within the program.

Pascal is a good general purpose language, although in its original form it is not particularly good at handling files on discs. Most modern versions of the language have in-built extensions to rectify this short-coming.

## Forth

This is a fairly specialist language built around the concept of a word. Each word performs a specific task and you modify the language itself by adding new words to its vocabulary. Forth is very fast but uses a peculiar form of arithmetic which makes it quite tricky to understand.

The language is particularly suited to writing programs which allow a computer to control other pieces of equipment and has been used for everything from controlling an astronomical telescope to writing arcade games.

# MIND YOUR LANGUAGE

BASIC and Logo are not the only fish in the programming sea (or is that C?). Here are some alternatives.

### Better the Devil you know?

A cry often heard is "It's taken me months to master BASIC. Why should I now learn another language?" The main reason is speed. Although Mallard BASIC is a fast version, it can't compare with any of the three languages covered here. To understand why, you have to appreciate the difference between an *interpreted* and a *compiled* language.

No micro can understand the commands in a computer language directly. PRINT and LET mean nothing to them. Instead, part of the computer language converts the commands into a form the computer can understand -

known as machine-code.

An interpreter, such as Mallard BASIC, looks at each line of program as the program is running and converts it into machine-code. If the same line is executed more than once (in a loop, for instance), then it has to be translated each time.

A compiler, however, takes the whole program and translates it into machine-code once and for all. You run the machine-code version of the program, which involves no further translation, and therefore runs much faster than its interpreted equivalent.

## C

C is one of the most used languages for programming application packages like word processors, databases and spreadsheets. It runs very quickly and is very versatile, while still being easy to write.

Programs written in C are also easy to move from one micro to another (often called *porting*). This is because, unlike BASIC, for which there are a number of different versions (or *dialects*), the C language is very similar on all micros.

## Modula 2

Niklaus Wirth, the inventor of Pascal, had a second go at writing a well-structured language which could be used for 'proper' commercial programming.

The result was Modula 2, which improved on Pascal in several respects. In particular, it allows separate 'modules' of a program to be written and compiled independently, and offers improved file-handling.

## BASIC

It may seem odd to include BASIC in a survey of alternative languages, but there are versions of the language that are so different from the likes of Mallard and Microsoft that they are virtually different languages.

The great virtue of BASIC is that it's easy to learn. Its main disadvantage is that most versions are interpreted (slow), rather than compiled (fast). If you can get hold of a BASIC compiler, though, there's no reason why you shouldn't have the best of both worlds.

**Pascal 80 • £39.95 • HiSoft • 0525 718181**

HiSoft has had versions of Pascal for Amstrad computers since the launch of the CPC 464. The latest version is a customised CP/M compiler intended to challenge the current market leader, Turbo Pascal.

The compiler is supplied as a loose leaf folder containing a single 3" disc and a 50 page manual. The compiler comes complete with a full-screen editor. This is very easy to use as, if you hit a programming error while compiling a program (or should that be *when*), Pascal 80 re-enters the editor and positions the cursor at the offending character.

The compiler itself handles most of the 'standard' features of Pascal, and supports its more esoteric

features such as records which have 'variant' parts (different formats which depend on the value of a 'tag' variable). These are particularly useful if your writing data-handling programs.

Pascal 80 compiles very fast, which is useful if you are the kind of programmer who likes to alter a few lines and check them through before going on. It also claims to run faster than Turbo Pascal, and certainly takes up less memory than its rival. Even though the PCW is well endowed with memory, it's still important to be economical with it, as the finished program and its data must reside in 64K.

The compiler is supplied with a library of pre-defined functions which you can build into your own programs, and includes low-level procedures and functions which allow access to CP/M from within Pascal. This is useful for switching drives, displaying directories and the like, from your programs.

RANGE OF FEATURES	■■■■□	OVERALL SPEED	■■■■□
EASE OF USE	■■■■□	DOCUMENTATION	■■■■□

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**FORTH £19.95 • HiSoft • 0525 718181**

Up until now there have been very few versions of Forth for CP/M computers. HiSoft have dived into the breach to rescue all Forth Junkies with an inexpensive version of the language with a few interesting extras.

Forth is an unusual language somewhere between machine-code and C. The HiSoft version executes very quickly and is suitable for many applications, including games, if you consider them worthwhile on the PCW.

The Forth editor, supplied with the compiler, is a purpose written program which suits the economical Forth environment to a [ALT] T. This command takes the editing cursor to the top of the screen. All the editor controls use ALT sequences in this way, although the manual does try to ease the learning process by choosing mnemonics for each of them.

As Forth is closer to machine-code than most high-level languages, it's fairly easy to combine it with machine-code sub-routines, and HiSoft Forth encourages this with a structured assembler built into the language. The necessary routines are held in a separate library

**HISOFT  
FORTH**

which can be combined with your Forth program when needed.

The other library supplied with the package interfaces directly with Digital Research's GSX graphics system (supplied with every PCW). This means you can use Forth to write graphics-based programs, although the GSX routines themselves have never won any prizes for speed.

The manual is well presented and covers the system in some detail. Like most HiSoft manuals, though, it makes no attempt to teach you the language it describes. As an extra bonus, a couple of handy utilities written in Forth are supplied on the disc.

RANGE OF FEATURES	■■■■■	OVERALL SPEED	■■■■■
EASE OF USE	■■■■□	DOCUMENTATION	■■■■□

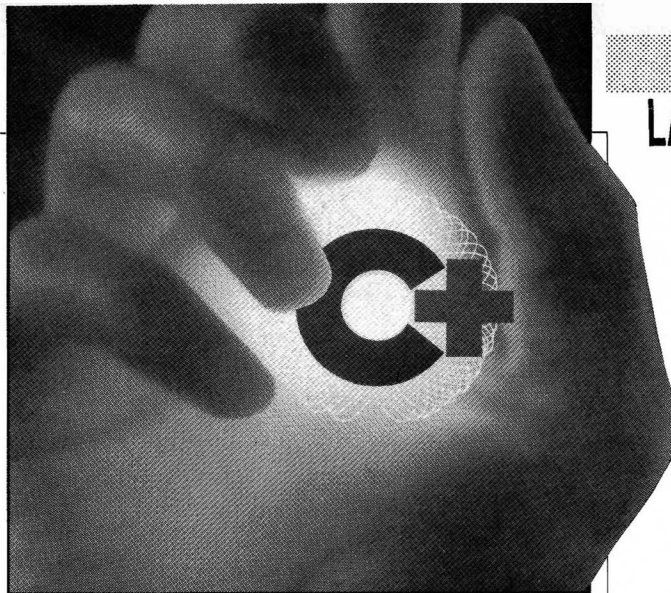
**8000 PLUS VALUE VERDICT** ■■■■□

**MIX C • £45.95 (£55.15 with editor) • Analytical Engines (US manu. MIX) • PO Box 35, Eastleigh, Hants**

The great thing about C is that it's so popular among the programming intelligentsia. C relies heavily on libraries of pre-defined routines which can be incorporated into any program, and whatever your application you can be sure

some C programmer has written routines to help you program it.

Mix C, written by Mix Software of Richardson, Texas, is certainly not lacking in library functions. It sports the



full set of 'Unix' functions (Unix is a 'real man's' operating system closely linked to the creation of the C language), as well as over forty extra functions and a set to handle CP/M directly.

With these functions at your disposal, it's almost possible to write a C program by simply putting them together.

Mix C, like most other versions of the language, is very flexible. It allows you to do almost anything, but at the expense of structure. The devil-may-care attitude of C means it's all too easy to make mistakes in hidden corners of your program, only to discover them when something odd happens later on.

The manual is a thick A4 tome with both tutorial and reference sections. It is reproduced from a daisywheel printout, but this does mean that all the example listings, of which there are many, are accurately printed. It is not for the inexperienced.

The split screen editor, which can be supplied with the package, is good but is very much a programmer's editor. Also available are an integrated assembler and a set of example programs, though each of these cost extra.

RANGE OF FEATURES	■■■■□	OVERALL SPEED	■■■■□
EASE OF USE	■■■■□	DOCUMENTATION	■■■■□
<b>8000 PLUS VALUE VERDICT</b> ■■■■□			

**Modula 2 • £45.00 • Grey Matter (US manu. FTL) • 0364 53499**

Modula 2's predecessor, Pascal, was designed primarily as a teaching language. Although it has since been used for all kinds of other applications. One of its main disadvantages is that each time you adapt your program you have to recompile the whole thing. With a long program, this can take quite a while.

One of the reasons behind the development of Modula was the solution to this problem, and the concept of the 'module' (which gives the language its name) is fundamental to the way it works. Put simply, each independent part of the program can be written and compiled separately, and linked to other modules to make up the complete program. This way, once a module is complete and working properly, it need never be compiled again.

FTL Modula 2 is a full version of the language with some useful extensions and several libraries of pre-defined modules. These libraries include filing, sorting (very handy for databases and the like), CP/M and other low-level calls, maths and string functions.

The editor supplied with the package use WordStar

compatible codes, but includes extra features such as a split screen, which allows you to work on two parts of the same module at one time. You can also define 'macros' which allow you to execute a long sequence of commands with one keystroke. The editor can be recalled with a single keystroke when an error is found during compilation. An assembler is also supplied, in case you need to write machine-code routines for extra speed.

Compilation is divided into two sections, as the modules have to be compiled and linked together. This technique is not one for the novice programmer, although once mastered it produces quick and efficient programs.

RANGE OF FEATURES	■■■■■	OVERALL SPEED	■■■■■
EASE OF USE	■■■■■	DOCUMENTATION	■■■■■
<b>8000 PLUS VALUE VERDICT</b> ■■■■■			

**ZBASIC • £75.00 • Grey Matter (US manu. Zedcor) • 0364 53499**

The most unusual thing about ZBASIC is the manual. It runs to over 400 pages with detailed tutorial and reference sections and makes even the Mallard BASIC manual look like a Ladybird book. It's not heavy going either, unless you're a complete beginner.

Although the language is compatible with Microsoft BASIC (and hence with parts of Mallard), it has a number of extensions which allow you to program in a structured way. Constructions like WHILE...WEND, REPEAT...UNTIL and long IFs (an IF statement which can run to more than one line) are supported, and you can use label names instead of line numbers for sub-routine calls (e.g. GOSUB *subroutine to calculate a result*, rather than GOSUB 1045).

All this structure is not built in at the expense of speed, though, as ZBASIC is a fully compiled dialect. When you type RUN the BASIC program is automatically compiled, although any syntax errors cause the compilation to stop and the offending line is displayed with a marker showing the faulty word.

There is no direct access to CP/M from ZBASIC and there are a few anomalies, such as the refusal of the compiler to allow complex statements. It won't accept `A$=RIGHT$(A$,LEN(A$)-2)` for instance, but insists on `A=LEN(A$):A$=RIGHT$(A$,A)` which can be particularly annoying in conditional statements like IF, WHILE and UNTIL.

Overall, though, ZBASIC is highly recommended as a very fast and efficient upgrade path from Mallard BASIC.

RANGE OF FEATURES	■■■■■	OVERALL SPEED	■■■■■
EASE OF USE	■■■■■	DOCUMENTATION	■■■■■
<b>8000 PLUS VALUE VERDICT</b> ■■■■■			

### BULLSEYE

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# A NIGHT ON THE TILES

A wonderful way of using up esoteric short words

## SCRABBLE

Virgin Leisure ● £19.95 ● 01-727 8070

Do you know what a quagga is? What would you do with jojoba? How would you react if I tickled your pollix? These and many other questions have nothing to do with Leisure Genius's new version of computer Scrabble for the PCW. The words themselves, however, are just the job for racking up high scores in this best known of word games.

Leisure Genius have specialised in computerised versions of board games (mainly from Waddingtons and Spears) for several years now, but this is their first attempt at anything on the PCW. Scrabble is marketed by Virgin games which should ensure it a wide distribution. The PCW version of computer Scrabble makes very good use of the machine and a lot of attention has gone into the board and letter graphics. Although, of course, restricted to the green screen of the 8000s, each of the special score squares is high lighted in a distinctive way and the letter tiles appear realistically three dimensional.

The game itself can be played by up to four people, with the computer taking none, some or all of the parts. Each computer player can be set to play at a different level; the higher the level, the greater the number of words the player 'knows'. The computer players can refer to a dictionary of over 20000 entries, but this is biased towards the rather eccentric words winkled out of dark corners of the O.E.D. by inveterate Scrabble players.

The dictionary level of your computer opponent affects the amount of thinking time it takes to arrive at a 'best choice' word. This varies from almost instantaneous at level 1 to a minute or more at the higher levels. You can choose to watch your PCW considering different words, and this is helpful in picking out likely spots to add your own (sneaky, huh?).

In play, computer Scrabble normally sticks to fairly well-known words at the lower levels, only venturing into obscurity between levels 3 and 8. Having said that, I have my doubts over the validity of 'Quag' (see the accompanying screen dump).

It's not possible to challenge a word the computer comes up with. However, any word you place which isn't in the computer's dictionary prompts a remark such as 'I CHALLENGE JOVE. ARE YOU SURE?'. You can't really complain, though, as the computer accepts 'Yes' without further argument. How many human players can you say the same for?

In play, you can sit and watch the PCW considering its words and where to play them as it moves a square cursor around the board from one likely site to another. When it reaches a decision, though, it moves like ►



Answers to the questions at the start of this review:

A cross between a donkey and a zebra. Probably wash your hair with you'd giggle.

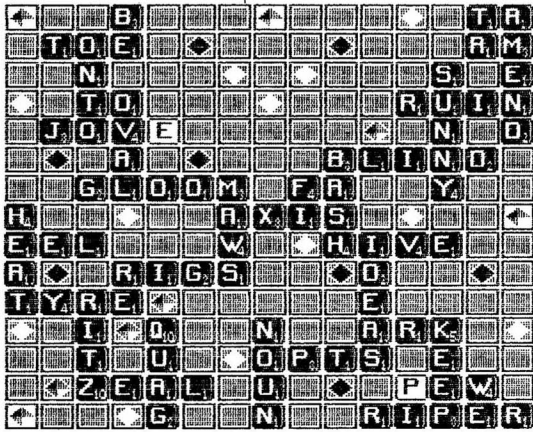
## Scrabbling around

For those who have never played Scrabble, and there can be few left in the world, here is a potted version of the rules. Players draw seven random letters from a separate 'pool', and for each turn have to make a legitimate word out of them. The word is then placed on the board, and must use at least one letter from a word already on the board - ending up with something looking like a crossword. Each letter in a successfully placed word is then scored according to the value printed on its tile.

Certain squares on the Scrabble board double or treble the letter or word score. It's therefore very advantageous to position a new word so that it includes one or more of these squares. Each player has seven letters in his or her rack at any stage of the game and replaces any used to make words with an equal number from the pool.

The winner is the player whose score is highest when all the letters from the central pool have been used up.

# ONTEST GAMES



PLAYER: SIMON SCORE: 257  
LEVEL: 1  
**A E I U O I**

PLAYER: PCW SCORE: 200  
LEVEL: 2  
**C O F O C**

1. QUIT/SAVE
2. PASS/FORCE
3. PREMIUMS
4. VALUES
5. TILES
6. CHANGE
7. JUGGLE
8. HINT

▲ Computer Scrabble being trounced, with the help of a few dubious words.

lightening, and it's difficult to tell at a glance where its moved and how much it's scored, as it's all over so quickly. Although a cumulative score is displayed for each player, it would be nice to be able to see the last score as well.

When it's your turn to play you first type in your word. You then move the cursor with the cursor keys and place the word by pressing 'A' to run it across the board, or 'D' to run it down. Once placed, the score is displayed, but you're not bound to accept your first attempt. Instead, you can repeat the process at a new position and compare the scores. Once you're satisfied play turns to the next player.

As well as the initial playing options, there are three alternate screen displays to show the values of the special squares on the board, the number of each letter tile in the 'pool', and the scores for every letter. You can juggle your letters in the rack to suggest different words or ask for a hint (though usually not a very good one!).

A game can be saved at any stage and resumed later, abandoned in disgust (at level 8 this is almost inevitable), or dumped to the printer to show how you finally beat the machine with a score of 72 for 'quark'.

Computer Scrabble has to be one of the best implementations of a board game on a micro, and is so far the only one on the PCW. If you are a Scrabble devotee, or even just an occasional dabbler, then computer Scrabble will prove an awfully good way of wasting countless hours at the keyboard.

EXIT

### PLUSES

- ▣ Detailed graphics of board and letter tiles
- ▣ 8 levels of play from obvious to obscure
- ▣ Numerous playing options
- ▣ Extensive dictionary

### MINUSES

- ▣ Board cursor a bit hard to follow
- ▣ Computer sometimes places letters too quickly

GRAPHICS  
ADDICTIVENESS



LASTING APPEAL  
VALUE VERDICT



## Tony Flanagan meets his Nemesis in Ambridge

### THE ARCHERS

Mosaic/WHS Distributors ● 0533 551196

If you're not a fan of the radio series, don't be put off – this game is very enjoyable.

Little has changed in the transition from programme to program. The Grundys and Gabriels are all there – and clearly recognisable – as they go about



their lives in Ambridge. What has changed, however, is your control over what happens to them.

You play the part of a trainee scriptwriter taking responsibility for plot development. The aim of the game is to boost audience figures, which can only be achieved by maintaining interest, realism and standards. Should the ratings fall to an unacceptable level then you are fired and urged to go through the whole simulation again.

The game is played in four parts, which can all be done separately and which feature four major characters respectively: Jack Woolley, Elizabeth Archer, Eddy Grundy and Nelson Gabriel. Once you've completed one part, however, you can proceed automatically to the next and there's also a save facility should you want to return to the game later without losing your position.

After reading each 'episode' of text, you develop the action by choosing between three alternatives. This means that the only input required of the player is to press keys 1, 2 or 3, which can get a bit monotonous.

Intermittently, the Controller of Radio 4 sends you a short missive. This may be because complaints have been flooding in from pressure groups, attacking you for being racist, immoral or politically biased (very topical!). As well as stating current audience figures, ratings are also given on the realism, interest and standards of the series since you took control.

The text is presented in self-contained units, which follow a different order each time you play. Consequently, you don't go through the same chunks of text in exactly the same order each time. On the whole, this works very well. Occasionally, however, the player is forced to make rather a long imaginative leap. In part 4, for example, one minute Nelson Gabriel is stranded on the M5 with a group of recalcitrant over-sixties, the next he's on a train only half a mile from Paddington.


The text of this game is very well written. This is not surprising considering the Level 9 programming team enlisted the help of the radio series' scriptwriters. But not only is the prose crisply written, it is also very funny. It seems that the scriptwriters have taken a welcome break from the Radio 4's restrictions on plot and character, and let themselves go.

Archers' fans, however, should not feel affronted. The game is irreverent without being disrespectful. The main drawback, at least for the seasoned game player, is that the game is too easy to complete. And although the graphics are both humorous and neat, they are not essential to the game. Consequently, one tends to concentrate on the text and ignore the graphics altogether.

Nevertheless, The Archers is very playable and should attract many newcomers to the computer games' market.

Elizabeth Archer has just put a chaser in Walter's and Tom's drinks with disastrous results! ▶

<b>PLUSES</b>	<b>MINUSES</b>
<input checked="" type="checkbox"/> Excellent characterisation <input checked="" type="checkbox"/> Crisp, well-written text <input checked="" type="checkbox"/> Neat graphics <input checked="" type="checkbox"/> Humour sustained throughout	<input type="checkbox"/> The input from the player is minimal <input type="checkbox"/> Too easy to complete <input type="checkbox"/> Lacks challenge <input type="checkbox"/> Repetitious in the long-term
<b>GRAPHICS</b> ■■■□	<b>LASTING APPEAL</b> ■■■□□
<b>ADDICTIVENESS</b> ■■■□□	<b>VALUE VERDICT</b> ■■■■



```

1) start immediately;
2) ask for higher wages;
3) tell Dad.
1) start immediately. Sid puts me in the Snug where it is quiet, I watch Uncles Walter and Tom playing dominoes, serve them two pints each and am bored rigid.
Pick one of:
1) demand to be put in the Ploughwans;
2) give up the job;
3) put a chaser in their drinks.
    
```

**NEMESIS**

**£15.95 ● Advantage Software ●  
33 Malyns Close, Chinnor,  
Oxon OX94EW**

I'm afraid I didn't enjoy this package very much at all, which is sad considering there are four games on offer.

In The Trial of Arnold Blackwood the eponymous hero wakes up to find himself nursing a rather large lump on his head. He looks around him and realises he's in the grounds of Lord Erebus' estate. Despite his amnesia, he has some vague notion that Lord E wants him for some special mission but what exactly, he isn't sure. The object of the game, it seems, is to find Lord E's inner sanctum.

Lord Erebus is an eccentric miser who hates dogs and keeps himself to himself. With your help Arnold has to overcome various obstacles as he explores the grounds and later the mansion of Lord E. These include a rabid dog and a carnivorous triffid which just happens to be hanging around the greenhouse. To help you on the way are a whole gamut of helpful items, and an oracle who offers such nuggets of wisdom as "don't eat the kippers."

The object of the second game, Arnold Goes Somewhere Else, is much clearer. You have to help Arnold find Lord E's ear trumpet, his tablets and last but not least, Lady E who has been led astray by an Essex occultist. The scenarios are distinctly other worldly – for instance, a dragon with a bad case of halitosis whose services you need to cross Stygian shores.

Unfortunately, the game content suffers from a hotch-potch of such pseudo-mythical gobbledegook. As for the humour, the less said the better. Location descriptions such as 'The Second Hell on Earth: A Queue in a Post Office' or 'The Third Hell on Earth: A Max Bygraves Concert' are about as funny as Bob Monkhouse on a good night. Perhaps he wrote the text?

The Wise and Fool of Arnold Blackwood begins with what seems like an attempt at Pythonesque spontaneity as a number of football scores are printed on the screen (such feeble whimsy sent me rushing to the bathroom).

In this game you find yourself in Rochdale (a town which, for some reason, the programmers find particularly funny) in search of Lord E. Apparently, he's ensconced inside a Wimpy Bar and it's your job to help Arnold find him. As you make your way through Rochdale's dim-lit streets and its underground system,

you experience a number of bizarre encounters including, would you believe it, one with Rommel.

In the last game on this disk, Brawn Free, you accompany Johnny Backwater, nephew of Lord E, through the Wild West and such classic locations as the Black Hills of Dakota and the OK Corral. Your mission is to get a potion for Granny Blackwater who has gone down with the lergy. Unfortunately, you don't have any money and you don't know the way.

All these games have the customary save facility, as well as lots of detailed playing hints. The games' vocabulary and range of commands are fully listed. These are very useful as there's no doubt that these games represent a good challenge. Unfortunately, the content leaves a lot to be desired. **EXIT**

```

DIRECTIONS: N.

WHAT NOW TONY ? jump ditch
YES. I'VE DONE THAT !
A WOODEN ARCHWAY SIGNIFIES ENTRANCE TO THE O.K CORRAL. BULLET HOLES HAVE RIDDLED THE FENCES LIKE OVERACTIVE WOODWORM.
HE WANT'S A TICKET TO ADMIT ME !
VISIBLE:
A DOLLAR BILL
A WIDE DITCH
A TICKET INSPECTOR !
DIRECTIONS: NONE.
WHAT NOW TONY ? get bill
YES. I'VE DONE THAT !
VISIBLE:
A WIDE DITCH
A TICKET INSPECTOR !
DIRECTIONS: NONE.
    
```

A triffid bites the dust after being zapped by a blowlamp. Just one of the more bizarre encounters in The Trial of Arnold Blackwood. ▶

▶ You can't get into the OK Corral without a ticket. That's the trouble these days – everything's so commercialised.

```

WHAT NOW TONY ? e
OK
LOCATION: A GREENHOUSE
ALONGSIDE THE EAST WALL
VISIBLE:
A RAMBLING THREATENING TRIFFID
DIRECTIONS: N.
WHAT NOW TONY ? kill triffid
NOW CLEVER... I BURN! THE TRIFFID TO A CINDER-SAVING US FROM A FATE WORSE THAN WORK!!
VISIBLE:
THE CHARRED REMAINS OF A TRIFFID
DIRECTIONS: N. S. W.
WHAT NOW TONY ? w
OK
LOCATION: DENSE SHRUBBERY.....
VISIBLE:
THERE'S NOTHING HERE
DIRECTIONS: N. S. E.
WHAT NOW TONY ?
DRINKLET: ON Line | Top of Form | LF | FF | Draft quality | PO defeat:On | Hex:Off | RESET
    
```

<b>PLUSES</b>	<b>MINUSES</b>
<input checked="" type="checkbox"/> A good challenge <input checked="" type="checkbox"/> Lots of hints <input checked="" type="checkbox"/> Good range of responses	<input type="checkbox"/> The humour falls very flat <input type="checkbox"/> Has irritating high-pitched bleeps <input type="checkbox"/> The scenarios are pretty bald
<b>ATMOSPHERE</b> ■■■□□	<b>CHALLENGE</b> ■■■■
<b>INTERACTION</b> ■■■□	<b>VALUE VERDICT</b> ■■

# PCW DISCS: THE GUIDE AT YOUR SIDE

Ever wondered what all those obscurely named files on your CP/M master discs are for? Well now all is revealed – a list of every file to be found, and what it does. There isn't space for a full tutorial on each, but there is enough to whet your appetite so you know what to look up in books for more details.

## How to use this guide

All the files which end in .COM are command files – they can be directly run from the A> prompt by typing their names. For example, to run the file SHOW.COM, type SHOW [RETURN]. Some commands (eg. PIP and DIR) have 'options' listed for them which do special things.

To use an option, type its name in square brackets at the end of the command line. If there is more than one option, type them all inside the square brackets separated by spaces. For example, to get a directory listing using DIR, with the options of showing size and sorting into order,

type DIR [SIZE SORT] and press RETURN. Files that do not end in .COM have special uses. They are usually needed to make a .COM file do its job properly – see individual entries for details.

Some books that may provide further enlightenment are: **CP/M The Software Bus** by A. Clarke, J.M. Eaton & D. Powys-Lybbe (Sigma/John Wiley, Freephone 3477) or **The Amstrad CP/M Plus** by A. Clarke & D. Powys-Lybbe (MML Systems, 01 247 069). Be warned, that both of these spend a lot of time on their 'Hackers only' sections!

## FOR NORMAL PEOPLE

Files you might use every day

### J14CPM3.EMS 40k (Side 2)

Contains the guts of CP/M. You will need to copy it onto any disc with which you want to use to start CP/M.

### DIR.COM 15k (Side 2)

Extends the power of the ordinary DIR command to display directories of your discs. You need to have DIR.COM on your current disc if you want to use DIR with any of the options below. [DATE] Lists files with their creation date & time, if you have used INITDIR to set up special directory entries.

[DRIVE = ALL] Lists files for all disc drives at once – A, B and M (if fitted).

[EXCLUDE] Lists all files except the ones mentioned in the DIR command. eg. DIR \*.COM [EXCLUDE] will display all files except COM files.

[FULL] Gives extra information about each file. [SIZE] Gives the size of each file as it lists them. [SORT] Displays the directory in alphabetical order.

[SYS] Only displays files previously defined as 'system' files with the SET command. [USFR = ALL] Lists files for all 16 user areas

### KEYS.WP 1k (Side 2)

A data file for use with SETKEYS.COM, which sets the keyboard up so the cursor keys work correctly with programs that use WordStar's key conventions – type SETKEYS KEYS.WP [RETURN].

### KEYS.DRL 1k (Side 4)

A data file for use with DR Logo. It's all done automatically by LOGO.SUB, anyway.

### LOGO.SUB 1k (Side 4)

To run DR Logo, make sure that your work disc contains the files SUBMIT.COM, SETKEYS.COM, KEYS.DRL and LOGO.COM. Now just type SUBMIT LOGO [RETURN] and watch it all happen.

### LOGO.COM 50k (Side 4)

Contains DR Logo. See LOGO.SUB for details on how to run it.

### HELP.COM 7k (Side 4)

A little known facility which tells you about CP/M as you go. Type HELP [RETURN], and you are given a list of topics that HELP knows about; choose one, and a screenful or two of info comes up. However, some of the explanations are in heavy jargon, so it is really a reference guide for the cognoscenti.

### HELP.HLP 75k (Side 4)

Contains the text used by HELP.COM – you'll never need to access this file directly.

## GETTING HARDER

Files you might use once in a blue moon

### SETDEF.COM 4k (Side 2)

Allows you to define the order in which CP/M looks for a file on its various disc drives. For instance, if you store your most used files like PIP.COM on the M drive, and then type SETDEF M:\*, it will find PIP automatically even when you are working on the A drive with a different

### PUT.COM 7k (Side 3)

Puts any text which would normally appear on the screen or the printer on a disc file instead (or as well!).

### ASSIGN.SYS 1k (Side 4)

A file which you will need if you are running programs like DR Draw or DR Graph. It tells the GSX graphics system which input and output devices you have on your system, and which files contain the information on how to use them.

### GSX.SYS 2k (Side 4)

The file that holds the guts of the GSX graphics system. This file is automatically used by GENGRAF.COM, and you'll never need to use it directly.

### GENGRAF.COM 2k (Side 4)

For programs that need to use GSX, like DR Draw and DR Graph, you have to 'install' them for your system. Typing GENGRAF program [RETURN] adds GSX into the named program, so it can run properly.

### DDHP7470.PRL 11k (Side 3)

A file to be used with ASSIGN.SYS if you want to use an HP7470 plotter with your PCW.

### DDFX-HR8.PRL 15k (Side 4)

A file to be used with ASSIGN.SYS to make the PCW printer behave differently for the benefit of certain programs.

### DDFXLR8.PRL 12k (Side 4)

Another file for ASSIGN.SYS, which is also used in other circumstances to describe the PCW printer to GSX.

### DDSCREEN.PRL 4k (Side 4)

A file for ASSIGN.SYS to use to allow GSX to write to the PCW screen correctly.

## HACKERS ONLY

Strictly for machine code freaks

### DUMP.COM 1k (Side 3)

The command DUMP filename prints out a hexadecimal dump of the named file on the

**ERASE.COM 4k (Side 2)**  
Extends the power of the ordinary ERA command when erasing files from a disc. You need ERASE.COM on your current disc if you use ERA with its 'confirm' option - typing ERA filename [C] forces CP/M to ask for confirmation before erasing any file.

**RENAME.COM 3k (Side 2)**  
Extends the power of the ordinary REN command when renaming files. You need RENAME.COM on your current disc if you use REN in either of its two special forms: first, using wildcards (\* or ?) in filenames, and second if you just type REN [RETURN] - this prompts you to enter the old and new filenames.

**TYPE.COM 3k (Side 2)**  
Extends the power of the ordinary TYPE command when displaying a text file. You need TYPE.COM on your current disc if you use TYPE with the NO PAGE option. TYPE filename [NO PAGE] prevents TYPE pausing between pages and displaying 'Press [RETURN] to continue'. You should use this option if you are echoing text to the printer with [ALT]+P.

**MAIL232.COM 4k (Side 1)**  
Allows you to send files to printers or other computers, if you own a serial interface for your PCW. It's used in a similar way to LocoScript, by selecting from menus with the function keys.

**RPED.BAS 7k (Side 2)**  
A simple text editor written in BASIC. You can create and modify ASCII files up to a couple of hundred lines long. To run it, type RPED.SUB and follow the on-screen instructions.

**RPED.SUB 1k (Side 2)**  
Runs the RPED editor for you. Make sure you have the files SUBMIT.COM, BASIC.COM and RPED.BAS on the same disc, then type SUBMIT RPED [RETURN] to start RPED.

**PROFILE.ENG 1k (Side 2)**  
Contains the necessary instructions to make the PCW automatically copy useful files like PIP.COM and DIR.COM from your startup disc to the M drive. These utilities are then always available even if you have an 8256 and have changed your work disc. To make use of PROFILE.ENG, you must rename it to PROFILE.SUB on your CP/M startup disc.

**BASIC.COM 28k (Side 2)**  
Contains Locomotive's Mallard BASIC. To run it type BASIC [RETURN] and the prompt will change from 'A>' to 'Ok'. Unfortunately the BASIC manual is no longer supplied with PCWs, so you must either read the programming articles in 8000 Plus, or write to Locomotive Software for the manual (£9.95).

**[E]** Prints the file on the screen as it transfers it  
**[Gn]** (where 'n' is a number from 0 to 15) tells PIP to look in user area number n for the file.  
**[L]** Converts all upper-case characters to lower-case during the transfer.

**[N]** Adds a line number to each line in the new file.  
**[O]** Should be used when copying non-ASCII files, to stop PIP getting confused.

**[R]** Tells PIP that the original file (the 'source' file) might be a system file  
**[U]** Converts all lower-case characters to upper-case during the transfer.  
**[V]** Verifies that the copy is identical to the original.

**LANGUAGE.COM 1k (Side 2)**  
Alters the way certain characters appear on the screen to fit with certain European languages. For example, LANGUAGE 1 [RETURN] adds some French characters to the set - the @ key comes out as 'a' with an acute accent. However, printed characters seem to be unaffected.

**PALETTE.COM 1k (Side 2)**  
Converts the screen to reverse video and back. PALETTE 1 0 changes the screen to black text on a green background, and PALETTE 0 1 reverts to normal.

**PAPER.COM 2k (Side 2)**  
Specifies the paper size and shape to the printer. The options are fully listed in the Amstrad manual, but the most useful versions are: PAPER A4, D sets for A4 single sheet paper, and PAPER 11, D sets for 'ordinary 11" continuous stationery. The 'D' in the commands makes the setting the default, so if you reset the printer after a paper jam the settings aren't lost.

**SET24X80.COM 1k (Side 2)**  
Reduces the PCW screen to 24 rows of 80 columns (compared to the normal 32 rows of 90 columns). This is necessary for certain programs that haven't been adapted to the larger Amstrad screen size, such as Infocom adventure games. Type SET24X80 to shrink the screen, and SET24X80 OFF to return it to normal.

**SHOW.COM 9k (Side 2)**  
Shows you the free space on each drive, amongst other things. SHOW [RETURN] lists the space left on all the drives, and SHOW M: etc lists only the space for the M drive.

**SUBMIT.COM 6k (Side 2)**  
Tells CP/M to read a sequence of commands from a stored text file rather than from the keyboard, as normal. You'll need to create a short text file called 'something.SUB' which contains each command on a separate line. You can call the file anything you like, but it must have .SUB as its filetype. Then when you type SUBMIT something [RETURN], the commands in the file are executed automatically.

**SET.COM 11k (Side 2)**  
Allows you to set a file to have certain esoteric properties. The only really useful one is SET filename [RO], which defines the specified file(s) to be 'read only' - this means they can't be deleted or modified. You can reset the file with SET filename [RW] when you want to delete it. You can also use SET to specify passwords to protect files.

**SETKEYS.COM 2k (Side 2)**  
Customises the keyboard so that any key can produce any character, or even a string of characters. Files like KEYS.WP work this way - just type SETKEYS KEYS.WP. The trick is knowing how to write a file like KEYS.WP to give to SETKEYS. See the Amstrad manual for details.

**SETLST.COM 2k (Side 2)**  
Controls the printer. If you understand how to send 'Escape Codes' to printers, you can look up the relevant code in the manual to make the printer produce italics, for example, and then set the printer up with SETLST. Some printer functions like the page length can be set with the PAPER command, and others like using High Quality text are done using the [PTR] key, so you may never need to use SETLST.

**SETSIO.COM 2k (Side 2)**  
Sets up the serial interface, if you have one, so that the speed, parity etc. match those needed by your intended receiver.

**DATE.COM 3k (Side 3)**  
Sets the clock on the PCW to register the date and time that you specify. For example, DATE 05/17/86 10:30:00 [RETURN] sets the clock to be 10.30 on the 17th of May 1986. Subsequently, typing DATE [RETURN] gives the current time and date.

**DEVICE.COM 8k (Side 3)**  
Allows you to kid the PCW that the serial interface port is actually the display screen, and other useful things.

**GET.COM 7k (Side 3)**  
This tells CP/M that all the keyboard input required by a program is to be read from a specified file instead of the keyboard. Useful if you are running programs from SUBMIT files.

**INITDIR.COM 32k (Side 3)**  
Sets up the disc in the current drive so that the files can have their date and time of creation stored with them. These times will then appear on DIR listings. You should not use this on any discs on which you intend to store LocoScript files.

**ED.COM 10k (Side 2)**  
A text editor for ASCII files. It can cope with very long files, but is horrible to use. Not recommended - if RPED isn't good enough, you ought to buy a programmer's text editor, instead.

**GENCOM.COM 15k (Side 3)**  
Attaches or removes a given Resident System Extension (RSX) to the specified file, so that it is automatically available whenever the program is run.

**HEXCOM.COM 2k (Side 3)**  
Converts a hexadecimal dump of a file, as you might transmit over a comms link, into a kosher CP/M .COM file.

**HIST.UTL 2k (Side 3)**  
A debugging aid for use with RMAC

**LIB.COM 7k (Side 3)**  
Used to combine several assembly language modules produced by RMAC into a library, for ease of use later on.

**LINK.COM 16k (Side 3)**  
Used to convert a program assembled with RMAC into a .COM file that can be run directly from CP/M.

**MAC.COM 12k (Side 3)**  
A machine-code assembler which produces absolute object code.

**PATCH.COM 3k (Side 3)**  
An obscure program intended to allow Digital Research to distribute software updates to CP/M.

**RMAC.COM 14k (Side 3)**  
A souped-up version of MAC which converts Z80 assembler text files into a special form, 'REL' files. These .REL files can then be used with LIB, LINK etc to produce .COM files.

**SID.COM 8k (Side 3)**  
The 'Symbolic Instruction Debugger'. Allows you to inspect .COM files, and other types too, and alter them. You can use it to set breakpoints and otherwise debug machine-code programs.

**TRACE.UTL 2k (Side 3)**  
Used to trace the execution of a machine-code file.

**XREF.COM 16k (Side 3)**  
Produces a cross reference listing of variables used in an assembler file, for ease of debugging and documentation.

**SAVE.COM 2k (Side 3)**  
Allows you to save a snapshot of the PCW's memory after a program has finished running.

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# DINOSAURS AND DASTARDS

History has a terrible grip on computer users: these little plastic boxes may be the latest in electronic swiftness, but we're still stuck with the inefficient QWERTY keyboard, designed to slow people down and avoid stripping the cogs of creaky Victorian typing engines.

There are several word-processing equivalents of QWERTY, the most notorious being the dreaded WordStar. When computer buffs sneer at LocoScript, they generally drop a smug word about 'real word processors like WordStar'. It's a lumbering ten-ton crane of a program, haphazardly designed, and hailing from the days before 'arrow' keys: the WordStar fanatic has a deep-seated belief that Alt-E, Alt-S, Alt-D and Alt-X are good memorable key combinations for (respectively) Up, Left, Right and Down.

## Quick Change Department

That editorial mob thought they were being jolly clever to pick on a typo in my column when reviewing LocoSpell last issue... but they fell into their own trap! A close look at the bottom screen photo on page 41 shows that the headings of these little inset boxes were the right way round in my original document, though not in 8000 Plus... (It's a fair cop, guy - Ed.)

Want to stop editing in WordStar? All you have to do is remember that the 'save' and 'exit' functions are memorably located on the Block Moves menu, which is memorably reached by typing Alt-K. I don't know whether K stands for Save, Exit or Block, but it sure is memorable....

Arthur Naiman, who wrote the best book about this program (Introduction to WordStar, Sybex) but made sure his contract with the publisher specified that he needn't use WordStar to write it, said this: "WordStar is one of the most poorly designed word processing programs ever written - a huge, elaborate farrago of kludgy patches, sort of like a Rube Goldberg machine gone berserk. All kinds of basic functions require disk access, thereby making the program fantastically slow...."

"Rube Goldberg" is American for "Heath Robinson".

I've tried to use WordStar; I agree.

# LANGFORD'S PRINTOUT

A page foolishly handed over to SF author DAVID LANGFORD who just happens to own an AMSTRAD



Yet it lingers, because it's a 'classic', available everywhere, and millions of people have learned its weird ways (new word processors are occasionally slagged by computer-press hacks for failing to support the 'universally accepted' cursor controls Alt-E, Alt-S...). Just like QWERTY.

With 'industry standard' opposition like this, don't be ashamed of LocoScript... even if tempted to take the Locomotive Software boys aside and persuade them with a rubber hose to answer the Ultimate Question of Life, the Amstrad and Everything. Which is: 'The advantage of a self-loading program which doesn't run under CP/M is that by use of direct firmware access it can theoretically run with blinding, mindboggling speed. So why...?'

LocoScript could itself become a QWERTY-style dinosaur, because everyone traditionally swears by their first word processor. I have a dark suspicion that PC1512 versions of LocoScript are being bolted together for those who plan to swap machines and would prefer a familiar program to a more powerful one.

My own first 'real' processor (not counting cassette Scripsit on a Tandy which wouldn't display lower-case, and EasyScript on a CBM64 with the famously naff 40-column screen) was SuperWriter. This is an efficient though slightly outdated program; out of nostalgic fondness I investigated the PCW version released by Sorcim.

Something of my disappointment came across in an article for Another (Official) Magazine... but not a lot, since the rudest bits were ruthlessly subjected to the CUT key. 'Consummate stupidity'... 'naffness'... 'clowns'... 'wally practices'... these were among the tactful reproofs which didn't make it into print.

This SuperWriter (since withdrawn from sale) is a classic example of an OK program made almost useless by lousy configuration for the PCW. Instead of adjusting it

## EI SID

Lurking on Side 3 of your master disks you should find SID.COM, or, to use brutally forthright language, the Symbolic Instruction Debugger. Elaborately undocumented, SID is supposed to be a tool for crazed assembly-language programmers, but is quite handy for prying - for instance, into LocoScript files. Copy SID.COM and a LocoScript document to the same disk, load CP/M, and type SID LOCOFILE.DOC (substitute your own filename for LOCOFILE.DOC. SID doesn't like filenames with nothing after the dot, so LOCOFILE wouldn't be accepted). SID then loads your document and can reveal its sordid inmost workings. Every time you press D followed by Return, SID displays 192 bytes of your file, hexadecimal numbers to the left, actual characters (where displayable) to the right. This is the document as it 'really is': it starts with 'JOY', followed by the 'Identify text' if any, followed by masses of enigmatic stuff until the 256th byte of the file. This bumb includes the base layout, the first and last page numbers (can you spot them?) and more... Further down, you meet recognizable words of headers and footers (if any), and then at last the text itself. Boggle at the voluminous code sequences used by LocoScript for simple things like tabs and line endings! The Plain People of Computing: What's the use of all this then? Me: Doesn't it stimulate your intellectual curiosity? The Plain People of Computing: No.

to the 32x90 screen size, the makers require you to find and run the SET24X80 program before SuperWriter. The 'status line' is supposed to be distinguished by reverse video display, but isn't. Likewise the print controls: instead of (+UL) and (-UL), SuperWriter uses a lower-case 'u', distinguished from a normal 'u' by special highlighting... which is omitted in the PCW version! You literally can't tell print controls from real letters, unless able to 'patch' SuperWriter and substitute distinctive symbols (that's what I did).

SuperWriter appears to have been 'adapted' for the PCW8256/512 by doing just two things: copying a generic CP/M version to 3 disk, and sticking a matrix-printed label on the front of the standard IBM manual to explain that this is the Amstrad version.

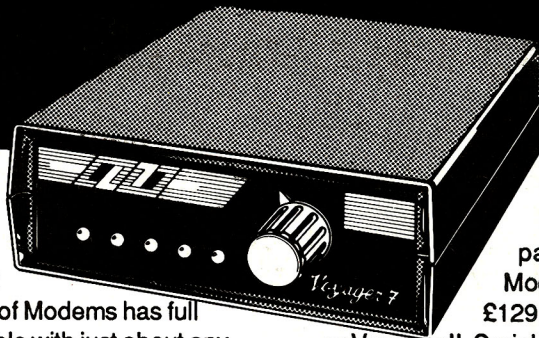
It's a pity: I still like SuperWriter. Unfortunately the above soul-chilling tale is nothing special in the sleazy world of computer software. Magazine letter columns are full of wailing about programs which require the 24x80 screen but don't actually bother to send the two characters (ESC x) which would set up this format, or manuals larded with references to vital-sounding appendices which have been ripped out because 'they don't apply to the Amstrad'....

Next issue I hope to report on the terrors of communications software. As a writer I'm deeply uninterested in bulletin boards, but I am concerned with the possibility of having to move text between different disk formats. Will the Apricot's ASYNC program talk to MAIL232? How easy is it to shift LocoScript ASCII files to a PCW1512 or vice-versa? Will the cable, plugs and soldering iron arrive in time from Maplin Electronics? Will Langford achieve brilliant success or second-degree burns? Find out in a month's time.

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# BACKGROUND ACTION

## COMPANION

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If you're a normal, healthy, well-balanced PCW user, you will have discovered that by the end of a day's tapping at the keyboard your desk has mysteriously become covered with an undergrowth of slips of paper reading 'don't forget to put the cat out' and '30 miles x 25p per mile = vast expense claim'.

Now **Companion** aims to banish all those scraps to the celestial doodling pad. It is a suite of programs which sit in the background as you run whatever programs you want, and then at the press of a key up pops a calculator, an electronic jotting pad and other facilities. The main point is that *Companion* runs at the same time as other programs – you don't have to swap discs and load new programs.

### What are companions for?

*Companion* offers a wide variety of features, some more useful than others. A calculator gives you simple four-function arithmetic with a memory and percentages. You can set up a clock, and do simple disc maintenance operations like listing the directory, browsing through text files and showing the disc space left.

On a slightly more sophisticated level, there are a variety of notepads. First, a simple jotter allows you to commit your scribbles to disc as the urge takes you. Second, you have a phone book for recording numbers – this is essentially a notepad sorted by the first letter of each line. Finally, a diary/calendar means you can organise your notes and appointments by their dates.

### Swinging into action

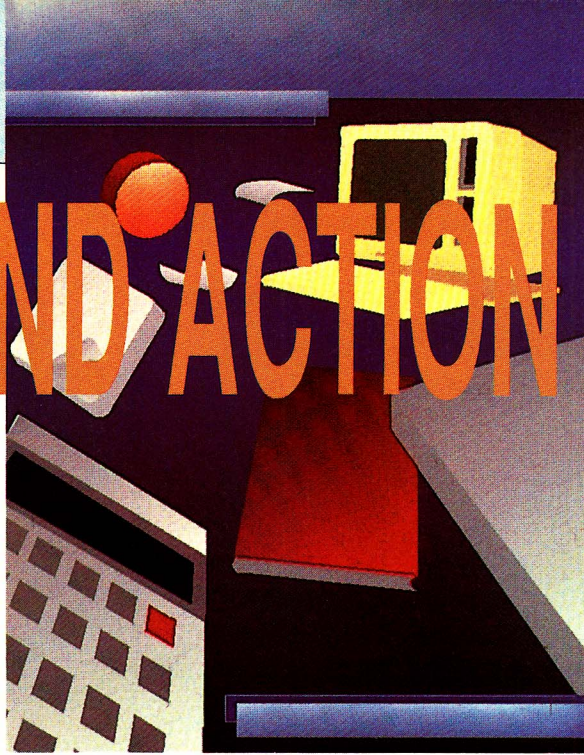
In order to use *Companion*, you first have to run a program called **INSTALL** to reserve the workspace it needs. After this, you use the PCW normally, running whatever program you want until the urge to take a memo becomes irresistible.

At this point, you press [EXTRA]+P. In the top left of the screen a menu drops down offering a range of options. You use this much like the familiar *LocoScript* menus, by using the cursor-down key to highlight the option and [ENTER] to select the action.

The topmost three selections are the simplest to use. They are 'resident' functions, meaning they stay in the computer's memory at all times, so they run fast. The calculator has a pleasant graphic display, and uses the PCW's numeric keypad for input. The clock can be set to any time, and from then on displays as a digital clock in the status line.

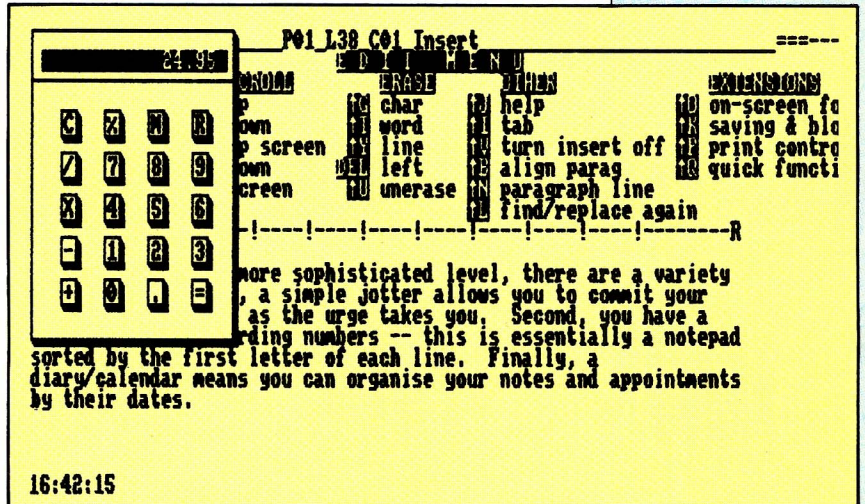
By contrast, the three notepad-type functions are read in from disc when you run them, which means (a) they take a annoyingly long time to get going, and (b) you have to have the *Companion* disc in the A drive to use them, which may cause some inconvenience to owners of 8256's.

The notepads are 12 rows by 32 columns in a window at the top left of the screen, which is pokey but useable. You can store a good number of notes and phone numbers, since they are saved as disc files. Unfortunately,



### The Right One?

*Companion* is a direct challenger to Hisoft's *Write Hand Man*, offering much the same facilities. *Companion* costs £10 less than *WHM*, which is a pretty big advantage for starters. Also, it offers a clock, which *WHM* doesn't. Although the notepad features on both *WHM* and *Companion* are rather unfriendly, *Companion* has a larger size of text area and a larger limit on the total amount of text to store. Neither program will work with *LocoScript*.



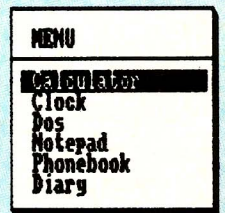
as a consequence, the notepad data files fill up almost all of both sides of the A disc.

### Companionable results?

Like the curate's egg, the *Companion* is good in parts. This kind of 'utility' program can be more trouble than it's worth to use, but if you like this kind of thing then this is the kind of thing you will like. Being able to have a clock permanently showing is handy, and the calculator and disc utilities are simple and worthwhile.

However, the three notepad functions (jotter, phone book and calendar) are white elephants. They are too bulky, slow and awkward to offer a real alternative to a paper notepad – pity they couldn't be dropped and the price halved. Definitely a Christmas present sort of program.

▲ The calculator in action – note the clock at the bottom of the screen



▲ Companion's main menu

PLUSES	MINUSES
<ul style="list-style-type: none"> <li>Can be called while any CP/M program is running</li> <li>The calculator, clock and disc manager are simple and easy to use</li> <li>Permanent clock display keeps good time</li> <li>Good, clear manual</li> </ul>	<ul style="list-style-type: none"> <li>Notepad, phonebook and diary are too slow to be useable</li> <li>Notepad functions need to use the A drive – awkward for 8256 owners</li> <li>Takes up over 3k of CP/M's workspace – might inconvenience some programs</li> <li>Doesn't work with <i>LocoScript</i></li> </ul>
RANGE OF FEATURES ■■■■□	OVERALL SPEED ■■■□□
EASE OF USE ■■■□□	DOCUMENTATION ■■■■□
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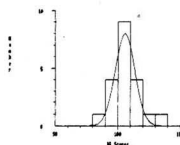
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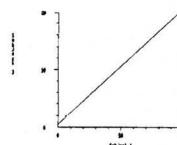
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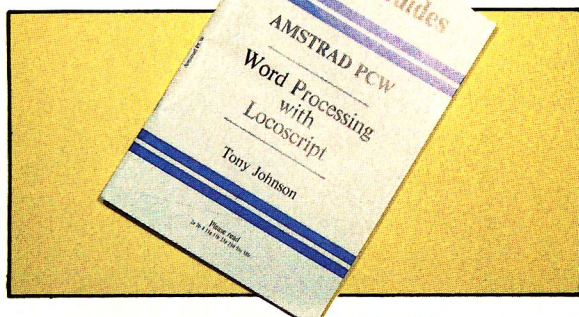
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# BEDTIME READING

Jeremy Spencer casts a provocative eye over this month's new books

At a time when sophisticated machines and complex software are being made available to so many relatively untrained users, by virtue of the low prices, it is a great shame that the price of books seems to be rising. I'm used to worthy, professional reference manuals costing their weight in gold, but for review this month we have three books, aimed squarely at the probing amateur: the majority at a price too high for my liking.



**WORD PROCESSING WITH LOCOSCRIPT** by Tony Johnson  
**£6.95 ● Clarity Guides (P) ●**  
**Broadwood, Lifton, Devon PL16 0ER**

This book is a rather scruffy 60 page pamphlet, the sort of thing you might obtain if you spent a pound on a guide book in the shop at Cardiff Castle. On the back of the dust cover, if I might be so bold to describe it as such, the book declares itself as being '... the best selling Clarity Guide to Word Processing on the Amstrad PCW' – a reasonable claim since this is the *only* Clarity Guide to word processing on the Amstrad PCW.

What exactly is a Clarity Guide? Well it's a very well indexed, rather terse text. It works like this; every aspect of Locoscript seems to be described and explained in short paragraphs. The more complex the subject the more words it gets. 'Letters and Short Files' gets about 70 lines, but that's quite an involved topic you see. The first forty lines or so cover the use of templates and phrases – the paragraph is marked with an 'a'. The second paragraph explains the order in which files are listed on the main screen. That paragraph is marked 'b'. Now if you look at the index for 'letters' you will find just one entry, '56a', telling you the page number and the paragraph reference. Every paragraph in the book has a reference.

The indexing and cross referencing in the work is extensive; look up 'Header Zone' and you will be directed to 38a where a 12 line description explains the use. Partway into the description you are told to see 40a for information on writing text, which in turn routes you to 33e for instructions on pagination. You could spend a great deal of time just turning the pages.

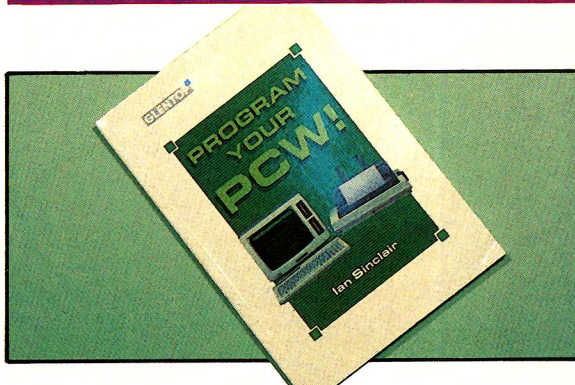
But there is more to the guide than just being a manual – it claims to lay down a strategy for using Locoscript – and indeed it does offer some sound advice on organising

discs, setting out headers and so on.

I don't doubt that the book adequately describes the functions of Locoscript. There is a great deal of information within its flimsy covers, but I cannot for one moment go along with the claim that '... the beginner can easily read through it'. Nonsense; it is just too terse, fragmented and the temptation to follow the references could drive you potty. As a reading book it fails – but as a source of hints and tips, laid out for easy reference it's a winner.

I hate Locoscript (*I'm sure the feeling is mutual – Ed*) and but for the nature of my work I would never go near the thing, with the result that when I must dirty my hands I struggle to perform the simplest of operations. With this guide at my side the program becomes much easier to use, not because it explains the principles of the software, but simply because I can quickly discover which buttons I need to press – and in which order. I still think it's too expensive though, especially compared to the excellent Step by Step guide produced by Amsoft. More on that another month.

**Word Processing with Locoscript**  
 ISBN 1 870075 00 5  
 8000 PLUS VALUE VERDICT 2 ■■■□□□



**PROGRAM YOUR PCW** by Ian Sinclair  
**£6.95 ● Glentop ● 01 441 4130**

Of course the Amstrad PCW being a CP/M beast can run any number of versions of Basic, but this book is aimed at the complete novice who wants to learn the indigenous kind, Mallard.

The book begins by explaining how best to set your computer up. Next we get a short general history of computer languages and of Basic in particular, followed by an explanation of compilers and interpreters. All good beginners stuff – seen it a thousand times.

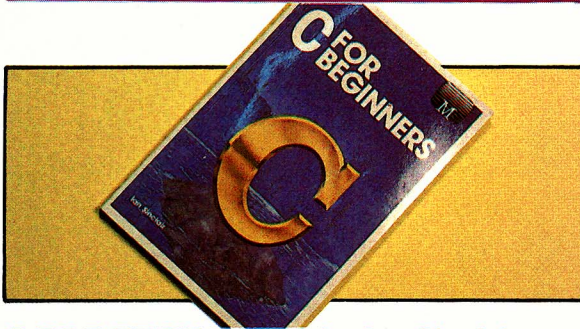
Once you get past the Principles of Programming and instructions on how to fire Mallard up, you get a chance to actually type stuff at the keyboard. To begin with, Sinclair makes extensive use of the PRINT command in his example programs. I dare say this is a good idea since producing characters, either on the printer or on screen is reasonable evidence that something is actually going on inside that white box.

Mallard Basic has a number of unique features which make it different to other Basics, 'Jetsam' being one of the most important. If you can learn Jetsam you will gain a great deal. The explanation of random access filing and Jetsam was a bit simplistic, but I emerged a little more knowledgeable than when I started.

There must be other books on Mallard, but none spring to mind so I have little hesitation in recommending this book for those who want to learn Mallard and explore the power of Jetsam. There are a number of good

example programs which help the reader understand the concepts, so long as you have the strength of character to study them. A useful text which is certainly great value for money, but I think Glentop deserve a bit of a reprimand for letting so many typos through – the book isn't that cheap.

Program your PCW  
 ISBN 1 85181 091 1  
 8000 PLUS VALUE VERDICT 5 ■■■■■



**C FOR BEGINNERS** by Ian Sinclair  
 £10.95 ● Melbourne House ● 01 943 3911

Ian Sinclair must be one of the most bankable authors in the computer publishing world. So prolific is this man I'm beginning to think that he isn't an author at all but a publisher.

There's a great deal of snobbery in the computer world. Take 'C' for example – it's considered to be the computer language for the boffin. Real programmers don't use Basic, so you've got to learn C and become a techno-snob too. Many experts will tell you that if you want to learn C the only book to get is by Kernighan and

Ritchie. Their book, the complete definition of the language, not only costs an arm and a leg, it's about as much fun to read as having them chewed off. Now perhaps you should consider a book by Ian Sinclair? In despair, up go the hands of the snobs. "Sinclair," they sneer; it isn't only Clive they say awful things about.

Ian Sinclair certainly isn't fashionable with the know-alls, but I have read this book and found that it has helped my growing desire to join the C'ites. Sinclair manages to convey quite complex concepts without killing the reader off – well, he's had a lot of practice. This book attacks C with a confidence which I found rubbed off on me.

As with most computer books a lot of space is spent explaining the language, the difference between interpreters and compilers and program structure. Once you get going you are encouraged to start with very simple programs before the real meat of the language is discussed. Frequently reference is made to Hisoft's C, the compiler most likely to be used on Amstrads.

While this book is a good place for learners of C to begin it certainly isn't for the complete computer novice. To begin with, Sinclair makes many comparisons with Basic when explaining C so it helps to have a working knowledge of that. I even found the odd analogy with assembly language – a bit heavy for me.

C isn't an easy language to learn, and I am not convinced that you could study this book and walk away a competent C programmer, but Sinclair's book will give you the best chance of finding out whether it's worth your time trying. Just one thing – if you make it up the techno-slope, I hope you will still talk to we humble Basic beings.

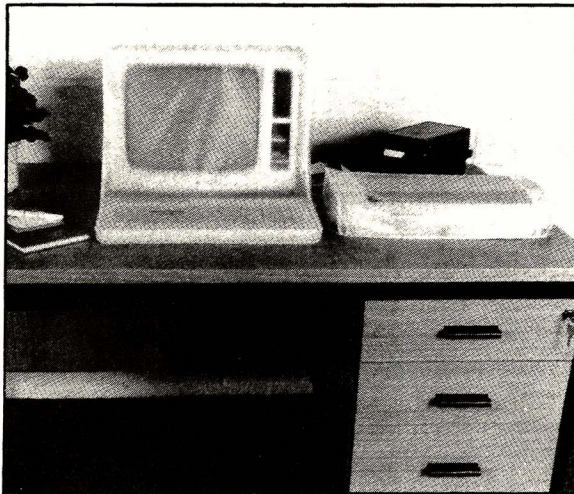
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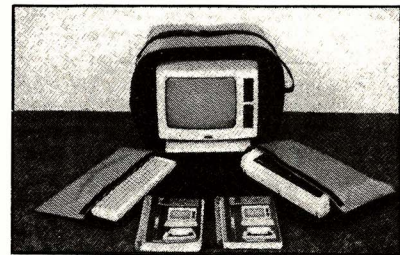
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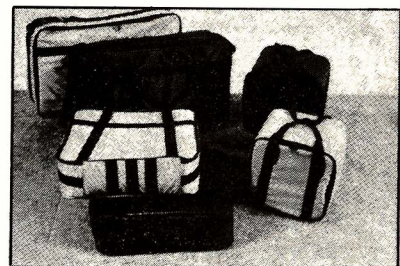
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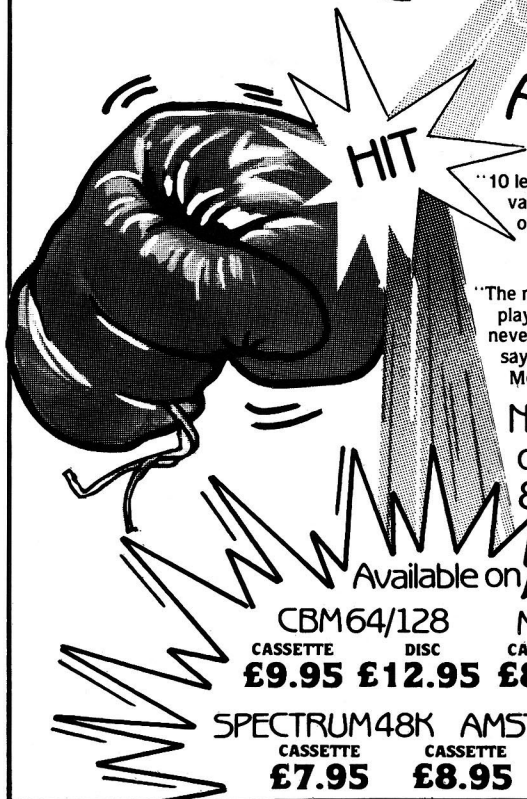


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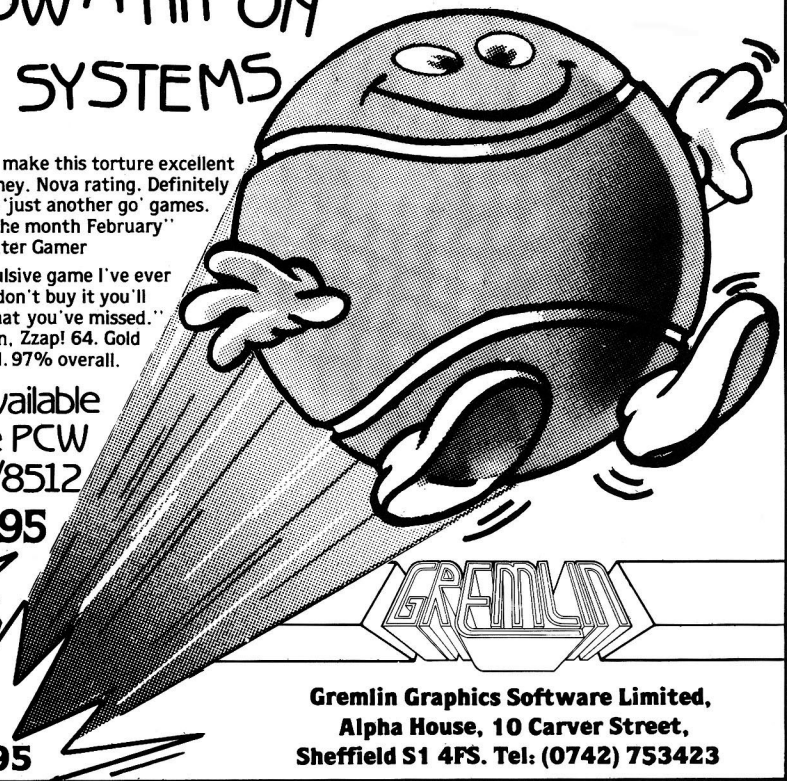
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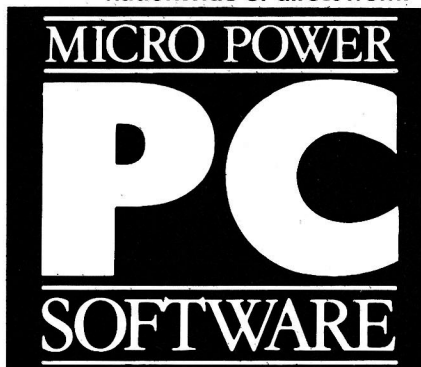
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**Amstat1 and Amstat2**

These two packages provide varying specialised statistics functions, useful for processing experimental results and the like.

Having entered a first set of data, I tried to produce a histogram of my results, to find the only response I could obtain was '0 DZ'. Does this mean we have no eggs? Back to the manual – to discover a page at the back giving complex instructions on the attachment of the dreaded 'GSX' graphics software. This is explained clearly enough once you realise you need to do it, but it's awkward for beginners.

Apart from a few niggles, such as cumbersome editing facilities, once the mechanics were mastered it was very easy to run the normal statistical tests from Amstat 1. These include T-tests, analysis of variance, correlation and regression. Amstat 2 goes into far more complicated routines including Fisher, Chisquare, Kolmogorov-Smirnov, Spearman and Kendall.

Amstats 1 and 2 used in conjunction with the text books quoted in the manual would be an excellent way to conquer statistics, and I would recommend them to any student.

**Amstat3**

This program is designed as a business tool for industrial and environmental analyses and could well fulfil an important role in the right place – although it does require business planning or statistics expertise.

Amstat3 is the most fun and possibly the most useful of the four Amstat packages. It contains four routines which help you make forecasts by linear regression, polynomial regression, multiple regression or adaptive techniques. The manual for this section includes a tutorial in the principles of the subject. Although heavy going, it explains things well and uses good examples.

After the usual hassle with installing the GSX graphics add-ons, I was soon able to produce graphs and use the calculation routines. Editing data files, however, was extremely long-winded especially with Multiple Regression, which displayed each variable in turn and asked if you wanted to change it. With the example provided, it took 180 presses of the ENTER key to change one data character! Amstat 3 asks B for maximum and minimum data values for plotting its co-ordinates – surely the program should estimate these itself and then ask if you want different limits (as Amstat 1 did).

On the whole, complex calculations were very accurately and quickly executed. The graph shows the current passenger use of an airline in quarterly periods. Despite the large seasonal fluctuation the 'trend' was successfully calculated and used to predict the next five years' usage.

**Amstat4**

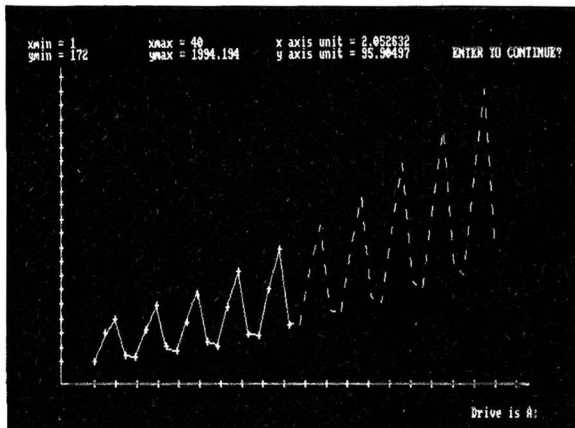
By now I was used to the menus and entry patterns so it was just a matter of mastering the finer points of Linear Programming as applied to Resource Management. These were excellently described in the manual by clearly

# BUSINESS PROBABILITIES

Kevin Gould looks at ways to get the truth from your business

worked examples with accompanying graphs, although I had to keep flipping from text, to graph, to problem, to answer.

Once I'd grasped the meaning of 'optimum points', 'slack' and 'shadow price', the package could be made to give very meaningful information and guidance on how to make the best possible use of resources. In the factory example, multiple products can be juggled to produce the optimum production quantities of each, although a little more explanation of the results would be helpful.



◀ Airline load forecasting – see how the dotted forecast line takes account of the seasonal fluctuations

The specialised 'TRAN' and 'ASSIGN' routines deal specifically with transportation and allocation problems. They could be invaluable to any business wishing to minimise cost by the efficient use of vehicles, plant or personnel – or even to help time-tabling at colleges.

**Verdict**

On the whole I found this to be a well presented set of programs, although a little more checking of data input is required to prevent the programs 'bombing out' when too high a value is accidentally entered.

Amstat's main buyers will be schools and colleges, who could use it to help with Business Studies, Economics and Human Geography as well as Mathematics and Statistics. Computer Studies students will find some useful programming hints in the manuals. Businessmen could benefit greatly if they can be made confident of the right applications for the system.

The main drawback is that the packages require specialist knowledge to get the best from them – if you can use them properly and understand the results, they seem very good.

**Lies, damned lies and statistics**

One word of warning to potential users – it's possible for the very knowledgeable or shaky statistician to produce misleading results. Using different methods, I calculated my salary for the start of the new century as £26,000 in one case, or £149,000 in another. I trust it will be somewhere between the two. Perhaps with more thought I could have brought in more variables such as predicted inflation, expected promotions and company profit figures.

<p><b>PLUSES</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Good range of statistical functions</li> <li><input checked="" type="checkbox"/> Accurate and fast processing</li> <li><input checked="" type="checkbox"/> Good manual with plenty of examples and instruction</li> <li><input checked="" type="checkbox"/> Can produce fair quality graphical results.</li> </ul>	<p><b>MINUSES</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Some editing procedures are very long-winded</li> <li><input type="checkbox"/> Needs some expertise to use properly</li> <li><input type="checkbox"/> Weak on checking that input data is reasonable</li> </ul>
<p><b>RANGE OF FEATURES</b> ■■■■</p> <p><b>EASE OF USE</b> ■■■■</p>	<p><b>OVERALL SPEED</b> ■■■■</p> <p><b>DOCUMENTATION</b> ■■■■</p>
<p><b>8000 PLUS VALUE VERDICT</b> ■■■■□</p>	

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# BASIC CONSTRUCTION KIT

A set of very useful routines from David Waterson, which you can graft into your own programs.

These routines answer a lot of requests we've had for useful utilities in Mallard BASIC: simple things like clearing the screen, which are built into most versions of the language.

David's routines go somewhat further than this, offering cursor positioning and box drawing, which is good for high-lighting program inputs and the like.

You may already know that BASIC communicates with the screen of your PCW via a 'terminal emulator'. This is in effect a piece of software which responds to certain codes and translates them into cursor movements or special effects such as inverse video (black on green) or underlining. Each code is called an 'Escape sequence' and begins with the ASCII character 27. In BASIC this is written 'CHR\$(27)'.  
David's routines make use of these codes by first defining a string variable, 'esc\$', as CHR\$(27) and then adding the appropriate character to produce a given effect.

For instance, the code to start underlining on screen is Escape followed by 'r'. In line 90 of the listing a string variable 'rev\$' is assigned this sequence, and you can then use the command 'PRINT rev\$' anywhere in the main part of the program (from lines 500 onwards) to turn on this effect. The other assignments in lines 60 to 130 work in the same way.

The single line function at line 190 lets you position the cursor at any point on the screen before printing. 'x' should be replaced by the column you require and 'y' by the row.

The final routine, which is a sub-routine running from line 230 to line 350 draws a box on the screen, once values are set up in the variables 'x', 'y', 'w' and 'h'. These give the position on the screen where you want the box to start and the width and height of the box itself.

The main program, which starts at line 500, is simply a demonstration of the utilities. You can put your own program in its place and make use of any of the routines as just described.

```

10 ' *****
20 ' *** screen set up commands *****
30 ' *** by DAVID WATERSON *****
40 ' *****
50 esc$=CHR$(27)
60 cls$=esc$+"E"+esc$+"H"
70 rev$=esc$+"p":'
80 nor$=esc$+"q":'
90 ulo$=esc$+"r":'
100 ulf$=esc$+"u":'
110 cof$=esc$+"f":'
120 cuo$=esc$+"e":'
130 bel$=CHR$(7) : '
140 '
150 ' CURSOR POSITIONING FUNCTION
160 ' cursor will be positioned
170 ' at x,y by the code { print fnp$(x,y);"ANY STRING" }
180 '
190 DEF FNp$(x,y)=esc$+"Y"+CHR$(x+31)+CHR$(y+31)
200 '
210 GOTO 500 : ' MAIN PROGRAM
220 '
230 ' START OF BOX ROUTINE
240 ' inputs x,y,w,h {x-coord,y-coord,width,height}
250 '
260 l1$=CHR$(150)+STRING$(w,CHR$(154))+CHR$(156)
270 l2$=CHR$(149)+STRING$(w,"")+CHR$(149)
280 l3$=CHR$(147)+STRING$(w,CHR$(154))+CHR$(153)
290 PRINT FNp$(x,y);l1$
300 FOR k=1 TO h
310   r=x+k
320   PRINT FNp$(r,y);l2$
330 NEXT k
340 PRINT FNp$(r+1,y);l3$
350 RETURN
360 '
500 PRINT cls$
505 PRINT cof$
510 x=1:y=1:w=30:h=13:GOSUB 230 : ' DRAW A BOX
520 PRINT FNp$(3,3);rev$;" You can have reverse video ";nor$
530 PRINT FNp$(12,4);ulo$;"Or you can underline text";ulf$
540 x=6:y=5:w=20:h=4:GOSUB 230 : ' DRAW A BOX
550 PRINT FNp$(7,6);"The inside of a"
560 PRINT FNp$(8,6);"box can be cleared"
570 PRINT FNp$(9,6);"by redrawing the box"
580 PRINT FNp$(10,6);rev$;" PRESS ANY KEY
590 a$=INKEY$:IF a$="" THEN GOTO 590
600 x=6:y=5:w=20:h=4:GOSUB 230 : ' DRAW A BOX
610 PRINT FNp$(7,6);"HAPPY PROGRAMMING"
620 PRINT FNp$(10,6);"BYE-BYE!!!"
630 PRINT FNp$(20,1);cuo$
640 END

```

## Mortgage Checker

by Patricia Knowles

Convinced your building society is frisking you? Need to know how much you'll be repaying on Spot's new accomodation at the end of the patio? Your worries are over, courtesy of the nifty little listing.

Once you've entered the amount you're borrowing,

the interest rate and the period of the loan, it will instantly come up with your monthly repayment. If it doesn't agree with the building society's figure, contact them, not us.

```

10 PRINT CHR$(27)"E"+CHR$(27)"H"
20 PRINT "***** MORTGAGE REPAYMENTS *****":PRINT
30 INPUT "What is the amount of your loan (0 to finish) ";p
40 IF p=0 THEN GOTO 110
50 INPUT "What is the annual rate of interest ";r
60 INPUT "Over how many years ";n
70 result=p*r/100*(1+r/100)^n/((1+r/100)^n-1)
80 repayment=result/12
90 PRINT "Your monthly repayment is ",repayment:PRINT
100 GOTO 30
110 PRINT CHR$(27)"E"+CHR$(27)"H"

```

### Naughty Jumps

As you probably know, BASIC actually translates your commands into machine-code while it's executing your program. When it comes to a loop (either FOR...NEXT or WHILE...WEND) or a sub-routine, it records the start position of the FOR, WHILE or GOSUB command on a structure called the 'stack'. This way it knows where to return to when it comes across a NEXT, WEND or RETURN statement.

If you jump out of a loop or a sub-routine, the interpreter won't come to the right NEXT, WEND or RETURN statement and the marker will never be removed from the stack. This may 'crash' your program. While most versions of BASIC can handle bad programming like this, it is much safer not to risk it. The moral is: 'Never jump out of a loop or sub-routine'. ►

## Auto-Menu

by Michael Stanley

This is a handy little utility which automatically lists out up to 24 BASIC programs on a disc, presents them on a menu and allows you to run any of them by pressing the corresponding number. It also collects a description from a REM statement in the first line of a BASIC program and

prints that next to the program's name in the menu.

The program is a little rough and ready and involves a jump out of a FOR...NEXT loop in line 50, which could potentially cause problems. It does work, though, and is useful, so we thought you'd like to see it.

```

10 REM Automatic menu of BASIC programs
20 DIM prog$(26), desc$(26)
30 FOR a%=1 TO 24
40 prog$(a%+2)=LEFT$(FIND$( "*.bas", a%), 8)
50 IF LEN(prog$(a%+2))=0 GOTO 140
60 OPEN "R", 1, prog$(a%+2)+".bas"
70 GET 1, 1: FIELD 1, 128 AS f1$
80 f%=INSTR(1, f1$, CHR$(185)): IF f%=0 GOTO 120
90 f1%=INSTR(f%+1, f1$, CHR$(0))
100 IF f1%-f%>70 THEN f1%=f%+70
110 desc$(a%+2)=UPPER$(MID$(f1$, f%+1, f1%-f%-1))
120 CLOSE 1
130 NEXT a%
140 a%=a%-1
150 desc$(1)=" Exit to BASIC "
160 desc$(2)=" Exit to CP/M "
170 PRINT CHR$(27); "E"; CHR$(27); "H"; SPACE$(29); "Menu of BASIC programs"
180 FOR b%=1 TO 13-(a%/2): PRINT: NEXT b%
190 FOR b%=1 TO a%+2
200 PRINT TAB(2); b%; TAB(6); prog$(b%); TAB(15); " : "; desc$(b%)
210 NEXT b%
220 PRINT CHR$(27); "Y"; CHR$(61); CHR$(62);
230 PRINT "Which option (1 - "; a%+2; ")";
240 INPUT wh%
250 IF wh%<1 OR wh%>a%+2 THEN PRINT CHR$(27); "A"; : GOTO 220
260 IF wh%>2 THEN CHAIN prog$(wh%)
270 IF wh%=1 THEN NEW ELSE SYSTEM
280 END

```

## Multi-Copy

by Natalie Kehr

One of the continual frustrations of the current version of LocoScript is its inability to easily produce more than one copy of a document. This simple listing allows you to print out any number of copies of an ASCII file.

It does mean you have to save a copy of your document in ASCII form (via the modes menu of the disc management screen) and load BASIC to run the multi-

copy program, but this is still a lot quicker than having to cut and paste lots of copies of the same document from within the word processor in many cases.

Note that it uses similar Escape sequences to David Waterson's program to clear the screen (ASCII character 12 forces the printer to perform a form feed).

```

10 REM printasc
20 REM Natalie Kehr, April 1986
30 REM Prints an ASCII file a given number of times
40 esc$=CHR$(27)
50 ff$=CHR$(12)
60 c$=esc$+"E"+esc$+"H"
70 PRINT c$
80 INPUT "Name of file to be printed";name$
90 INPUT "How many times do you want it printed"; num%
100 FOR i=1 TO num%
110 OPEN "I",1,name$
120 x$=INPUT$(1,1)
130 WHILE NOT EOF(1)
140 LPRINT x$;
150 x$=INPUT$(1,1)
160 WEND
170 CLOSE 1
180 LPRINT ff$;
190 NEXT i
200 PRINT "End of printing"

```

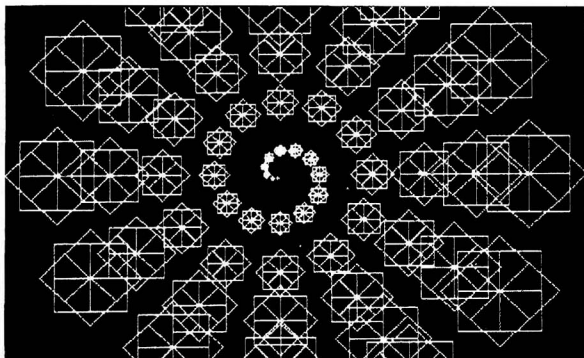
## Logo Spiral

by Ben Taylor

Just to prove we're interested in languages other than BASIC, here's the Logo pattern your ever-loving Technical Editor knocked up in an idle moment to go on this month's front cover. For details of how to type in Logo programs, read this month's languages feature on pages 34-35. As with most Logo programs, it built up from a set of procedures, each given a specific task.

Square draws a square of side 'n' units. These squares are built into an eight-pointed star by the 'star' procedure. Nextone determines the start position of each star by calculating the next point on the spiral. Finally, at the top of the tree of procedures, 'spiral' determines how many stars should be drawn to make up the complete pattern.

Once you've typed in the complete listing, type `spiral` to start the pattern off.



```

to spiral
  fs
  cs
  ht
  make "theta 0
  make "rad 0
  repeat 60 [nextone]
end

to nextone
  make "theta (:theta + 30)
  make "rad (:rad + 5)
  make "x :rad * (sin :theta)
  make "y :rad * (cos :theta)
  pu
  setpos (se :x :y)
  pd
  star :rad / 6
end

to star :side
  repeat 8 [square :side rt 45]
end

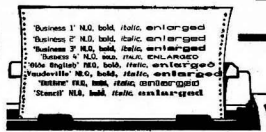
to square :n
  repeat 4 [fd :n rt 90]
end

```

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# Supertype

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Perhaps the only reasonable criticism of the Amstrad PCW might be the standard of the NLQ of the printer.

It is possible to purchase alternative word processing software offering a choice of types, but they are restricted for use solely within the confines of the software package.

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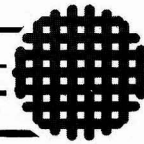
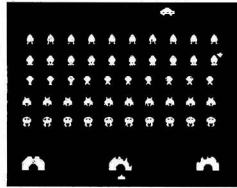
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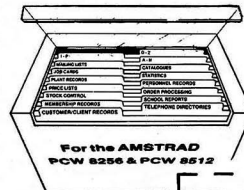


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# TIP-OFFS

How to ... Where to ... Why to ... it's all revealed in this month's selection of PCW-beating tips

As ever, we need *your* tips to enlighten our readers next month. Since you all subscribe to 8000 Plus by now (you don't? Shame on you!), we know there are thousands of you out there with copies of Shell, Scrivener, Cracker and Spool from our free software disc, so get those tips coming in.

Batman and Hitch-hikers' Guide are two games for the PCW which have sold very well. We're regularly getting plaintive letters from readers asking "how do you get past the ...?" - if you know, tell us how to tell them.

Failing any of these, if you've got a particular problem which you can't solve, tell us and we'll set our tipsters' brains running. Maybe you'll find the solution to all your ills in the next issue. Burden our postman at *TipOffs, 8000 Plus, The Old Barn, Somerton, Somerset TA11 5AH.*

Finally, don't forget we pay £20 for the best tips each month. This month, it's Charles Williams from Stanmore, Middlesex, whose Swiss bank account is in for a surprise.

## INPUTs without question marks

The INPUT statement in BASIC is pretty useful as a way of asking questions and getting replies from the user as a program is running. For instance, to get someone's name you might use the program line  
`10 INPUT "Name"; name$`  
 This then prints 'Name?' (note the question mark is added on automatically) on the screen, waits for the user to type their name and press [RETURN], and stores the result in the variable 'name\$'. However, there are some useful variations to this method.

1) To avoid having a question mark automatically stuck on the end of the question, use a comma instead of a semicolon after the prompt text. So  
`INPUT "Press [RETURN]", zzz`  
 puts up on the screen an instruction to the user 'Press [RETURN]', and waits until the user does so. As a side effect, the variable zzz gets set to zero, but you can ignore that.

2) To avoid the business of pressing [RETURN] at all, you can resort to a different technique. If you wanted to tell the user to 'press any key to continue', you can use these lines:

```
zzz$=""
PRINT "Press any key to continue"
WHILE
zzz$="" : zzz$=INKEY$: WEND
```

## Spool and NewWord

Another useful program on the 8000 Plus offer disc is Spool, which allows you to print files while you are running other CP/M programs.

Normally, you have to wait for a file to finish printing before you can do anything else.

Although Spool works fine with

the vast majority of programs, including word processors like WordStar, as it stands it will not work with NewWord, the popular word processing package from NewStar. This is a 'feature' of NewWord, which is easily remedied:

► Before going any further, make very sure that you have copied your NewWord master disc onto a backup as described in the manual. You are about to alter the NewWord program files, and if things go wrong you will need to revert to your backup copy.

► Take your NewWord working disc with the file NW.COM on it, and copy that file to the M drive (with the command `PIP M: NW.COM [RETURN]`).

► Take your NewWord disc which has the file NWINSTALL.COM on it and type `NWINSTALL [RETURN]`.

► You are now being asked for the name of the file to install: type `M: WC [RETURN]`.

► Press [RETURN] again, which means that the modified version will be stored straight back to WC.COM rather than any other file.

► Now you are at the main menu screen. Press H.

► This takes you to 'Patch Menu #1'. Press 3.

► At Patch Menu 3, press U. Then press X twice to finish the modifications.

► You are faced with a final question asking you whether you want to change the current options - answer N to this, and press [RETURN]. Now the amended version of WC.COM is saved, and you are ready to go.

All changes have been made.

Newword is now installed for...

AMSTRAD PCW8256  
Epson MX80/100

Do you want to change this? Y/N N

►

► And the final exit message once you've finished

Copy this version of WC.COM back onto your NewWord program disc. You should find that NewWord now lives in perfect harmony with Spooler. Of course, once you've gone through the process just described the changes are permanent, and you don't have to do it again.

If things haven't gone to plan, you might have made a mistake in the installation. Go back to your old copy of WC.COM, copy it and try the changes again. Only be sure to keep a backup of the original WC.COM at all times.

### MAIN MENU

- |                          |                          |
|--------------------------|--------------------------|
| A Terminals              | E Document related items |
| B Printers               | F File related items     |
| C Computer related items | G Fresh user area        |
| D Newword related items  | H Special patches        |
| J Help with this menu    | X End of installation    |

What is your choice? █

▲ NWINSTALL's main menu screen

### PATCH MENU #3

- |                                     |                                       |
|-------------------------------------|---------------------------------------|
| A PRNID - Printer signon text       | M ULINI - Printer initialize string   |
| B PRNDLY - Printer timeout          | N Control BQ Custom Print String      |
| C Standard character width          | O Control BM Custom Print String      |
| D Standard line height              | P Control PE Custom Print String      |
| E Width for normal pitch            | Q Control PR Custom Print String      |
| F Width for alternate pitch         | R Control PI Custom Print String      |
| G LCHARMX - Max chars before ETX    | S Control PJ Custom Print String      |
| H Bidirectional Print ON/OFF        | T Strike out character                |
| I Microjustify printing ON/OFF      | U Ignore printer ready status         |
| K LSTDEV - CP/M list device         | V Test printer ready status           |
| L ULINI - Printer initialize string | W DATSEP - Merge print data separator |
|                                     | Y Continuous underlining ON/OFF       |

- |                       |                       |
|-----------------------|-----------------------|
| 1 Go to Patch Menu #1 | 4 Go to Patch Menu #4 |
| 2 Go to Patch Menu #2 | X Return to Main Menu |
| J Help with this menu |                       |

What is your choice? █

▲ Patch menu #3, where you choose option U

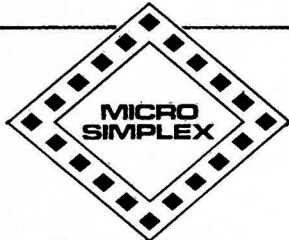
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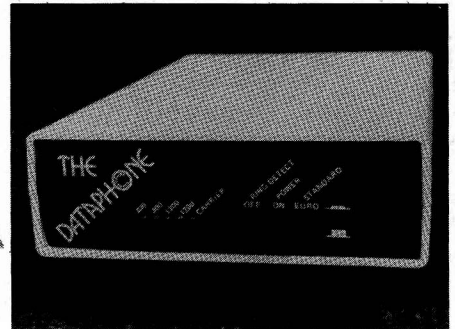
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### Multicolumn printout from LocoScript

If you produce newsletters or other circulars, you probably want to print out text in two columns as is customary. LocoScript doesn't (at the moment) have a command to do this, but with a bit of guile you can do it in a roundabout way.

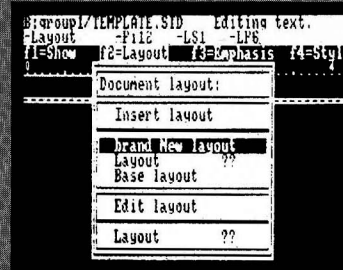
Suppose you are using standard A4 paper with proportionally spaced text. If you were doing a normal letter, with text in one column across the paper, you would use margins of roughly 10 and 89, giving 80-wide text with 2cm margins free either side.

Since 80-wide text takes up the page normally, to fit two columns and a gap between them into the same space the columns ought to be about 38 wide, leaving a gap of 4 spaces between them. So, the first thing you have to do is set up two LocoScript 'Layout's: one must have a left margin at 10 and a right margin at 47, and the other is to have a left margin at 52 and right margin at 89. Columns 48 to 51 are therefore the gap in the middle.

It is best to reserve a special Group on your LocoScript disc for documents to be in multicolumn format. Go to that group and start editing the TEMPLATE.STD document. To set up the Layouts, press the f2=Layout key and then [ENTER], which picks the 'Brand New Layout' option. You are now dropped into the 'Editing Layout' screen - look at the top to see which layout you are editing; probably it will be number 1.

Press the cursor down key to get

to the ruler line, then the cursor left and right keys to put the cursor at 10. Set the left margin by pressing [f1]. Similarly, set the right margin at 47 by moving the cursor there and pressing [f2]. Now press [EXIT] to store this layout.



▲ About to set up one of the Layout's

From the editing screen, repeat the whole process to get a second layout with a left margin at 52 and right at 89. Again, make a note of the number which LocoScript assigns the new layout - probably '2'.

Now you are set to go. At the start of the document to be multicolumned, make sure you are using your first Layout (with the margins at 10 and 37). Type in the whole document normally. Then, once you've finished all the fine editing and are about to print it out, go to the head of the second page and insert the second Layout (with the margins at 52 and 89). At the head of page three, revert to layout 1, and so on... each odd page having the first layout and each even page having the second layout at its top.

Now you are set to print. Save the document normally and print it. It is best to use single sheet paper for this: put the first sheet of paper in the printer, and when it is finished and ready to print page 2, put the same piece of paper in again. The second page, because of its special margins, is printed in a separate column to the right of the first one. Now do pages 3 and 4 together on a fresh sheet, and so on.

This is a very workable method. The only snag is that you have to be accurate about positioning sheets of paper in the printer exactly the same each time, or you will find the column gap varies a lot, or that the text lines on the two columns are not properly aligned. Practice makes perfect.

Charles Williams, Stanmore



▲ LocoScript's editing with a document for two-column printing  
▼ And the results of printing it out

But the fact remains, that no matter how much you pay, there is as yet no solution to the fundamental problem of getting hold of enough stoats in the first place.

#### JOB VACANCY Staff Writer

Owing to the death of most of its staff from myxomatosis, Stoat Gobblers' monthly has a vacancy for keen writers of all backgrounds. Competitive rates paid, plus Luncheon Vouchers and a company stoat.

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#### SOMERSET STOATS

Lancashire has long been a favourite haunt for stoat gobblers of all ages, but gobblers in the know are weighing anchors and setting off for Somerset's rival attractions. This isn't so much to do with the range or quality of the minor mammalian fauna to be found there, but more because of the ready availability of large quantities of cheap cider. After all, when it comes down to it, stoat gobbling is a pretty disgusting hobby and it helps to have put away a few pints before you get going seriously. Indeed, in tests, 8 out of 10 stoats who expressed a preference said that they preferred scum to nail-varnish remover. Fancy that!



▲ The first layout you need just prior to saving it

### Using SHELL

One of the programs on an 8000 Plus subscriber offer disc is Shell, a utility which allows you to run CP/M programs fairly painlessly form LocoScript-style menus.

To start Shell going, you type Shell and a menu of all your files appears on the screen. When you run a program, the PCW leaves Shell, runs the program chosen, and when it has finished runs Shell again from scratch. This has one potential drawback, which is that you must have the file SHELL.COM on every disc you use, otherwise Shell cannot restart on a program's completion.

- ▶ There is a way around this though, which is to use the M drive. Assuming you are at the A> prompt, here is what to do:
- ▶ Find your CP/M working disc with PIP.COM on it, put it in the drive and type PIP [RETURN]. After some whirring, you see an asterisk prompt appear.
- ▶ Put your disc in the top disc drive,

the side containing SHELL.COM facing the screen. Type M:=SHELL.COM [RETURN].

▶ Press [RETURN], which gets you back to the A> prompt.

Now to run Shell, type M: SHELL (and, as ever, press [RETURN]). Even if you swap discs in drive A to one which does not have SHELL.COM on it, the program will carry on running and re-running happily.

For experts, you can go further and make Shell part of your startup routine. Copy the file SHELL.COM to your CP/M start of day disc. If you haven't already, also copy to this disc the file PROFILE.ENG, and then edit it using RPED. As you will see, it contains a SETDEF command and a series of PIP commands which copy commonly used utilities into the M drive.

Insert a line in the PIP section (the block of lines beginning "<" which instructs it to copy SHELL.COM too. This command is <M:=SHELL.COM[0] Finally, add a final line to the end of

the file which is M: SHELL, save the file and be sure to rename it as PROFILE.SUB (use the REN command).

Now every time you start CP/M with this disc is will automatically go into Shell's user friendly menu. Liam Greenslade, Manchester

### Automatic WRDCOUNT

It is possible to prepare a disc which, when you start CP/M up, automatically runs a BASIC program of your choice. If you have typed in the WRDCOUNT program listing published in issue 1, this can make swapping between LocoScript and BASIC much easier.

Take a blank disc and copy onto it from your master CP/M disc J14CPM3.EMS, BASIC.COM and SUBMIT.COM. In case you are still frightened of CP/M, just start CP/M up and have your copy of the master

disc in drive A. Then type: PIP [RETURN] (you see an asterisk appear ...) M:=J14CPM3.EMS M:=SUBMIT.COM M:=BASIC.COM (Put your disc with WRDCOUNT.BAS into drive A ...) M:=WRDCOUNT.BAS Change discs so that your work-disc-to-be is in drive A instead. Type: A:=M:.\* [RETURN]

Now you are back at the 'A>' prompt. Next, using the RPED text editor (see this month's pages 25-6) prepare a file called PROFILE.SUB containing the following line: BASIC WRDCOUNT If you are going to run a program other than WRDCOUNT, just substitute its name in place of WRDCOUNT in PROFILE.SUB. Now if you reset the machine by pressing [SHIFT]+[EXTRA]+[EXIT] and insert this disc, your Basic program runs automatically. James Willis, Alton

## LocoScript's Character Set

The LocoScript manual has a set of keyboard diagrams at the start showing weird and wonderful characters which can be got at with various combinations of [ALT] and [EXTRA], but it can be hard to find the exact symbol you want at any time. Here is a more organised list showing the characters available to LocoScript users:

### Maths Symbols

<	less than or equal	[ALT] <
≈	approximately equal	[ALT] =
≡	equivalent	[SHIFT]+[ALT] =
≠	not equal	[EXTRA] =
>	greater than or equal	[ALT] >
±	plus or minus	[ALT] ±
	modulus bar	[EXTRA] fullstop
÷	division	[ALT] /
×	multiplication	[SHIFT]+[ALT] /
\	backslash	[EXTRA] %
↑	'to the power of'	[ALT] U
∴	therefore	[ALT] ;
⇒	is implied from	[SHIFT]+[ALT] <
⇒	implies	[SHIFT]+[ALT] >
⇔	double implies	[EXTRA] 9
∞	infinity	[ALT] %
°	degrees	[EXTRA] 5
⅓	1/3 fraction	[ALT] 1
¼	1/4 fraction	[ALT] 2
⅔	3/8 fraction	[ALT] 3
½	1/2 fraction	(key by itself)
⅝	5/8 fraction	[ALT] 5
¾	3/4 fraction	[ALT] 6
⅞	7/8 fraction	[ALT] 7

### French Characters

ç	c-cedilla	[ALT] comma
ç	capital c-cedilla	[SHIFT]+[ALT] comma
«	open quotes	[EXTRA] <
»	close quotes	[EXTRA] >

### Greek Characters

α	alpha	[ALT] A
β	beta	[ALT] B
γ	gamma	[ALT] G
Γ	capital gamma	[SHIFT]+[ALT] G
δ	delta	[ALT] D
Δ	capital delta	[SHIFT]+[ALT] D
ε	epsilon	[ALT] E
θ	theta	[ALT] Q
λ	lambda	[ALT] L
μ	mu	[ALT] M
π	pi	[ALT] P
Π	capital pi	[SHIFT]+[ALT] P
ρ	rho	[ALT] R
σ	sigma	[ALT] S
Σ	capital sigma	[SHIFT]+[ALT] S
τ	tau	[ALT] T
φ	phi	[ALT] F
χ	chi	[ALT] X
ψ	psi	[ALT] Y
ω	omega	[ALT] O
Ω	capital omega	[SHIFT]+[ALT] O

### German characters

ß	double S	[EXTRA] S
---	----------	-----------

### Accents

(type the accent *first*, then the character to go under it. So to get e-acute, press [EXTRA]+6 and then type e)

´	acute accent	[EXTRA] 6
˘	circumflex accent	[EXTRA] 7
ˆ	grave accent	[EXTRA] 8
¨	umlaut accent	[EXTRA] 2
˜	tilde	[EXTRA] -

### Spanish Characters

¡	open exclamation	[EXTRA] !
¿	open interrogative	[EXTRA] ?

### Scandinavian Characters

å	a-ring	[ALT] 8
Å	capital a-ring	[SHIFT]+[ALT] 8
æ	ae diphthong	[ALT] 9
Æ	capital ae diphthong	[SHIFT]+[ALT] 9
ø	o-slash	[ALT] zero
Ø	capital o-slash	[SHIFT]+[ALT] zero

### Punctuation Symbols

¶	paragraph	[EXTRA] P
†	dagger	[EXTRA] D
•	bullet	[SHIFT]+[ALT] fullstop

### Monetary Symbols

R	pesetas	[EXTRA] £
¢	cents	[EXTRA] \$
¥	yen	[EXTRA] Y
f	florins	[EXTRA] F

### Other Symbols

↑	up arrow	[ALT] U
↓	down arrow	[ALT] N
←	left arrow	[ALT] H
→	right arrow	[ALT] K
⇄	double ended arrows	[ALT] J
↪	arrow into paper	[ALT] I
↩	arrow out of paper	[SHIFT]+[ALT] I
©	'copyright' symbol	[EXTRA] C
®	'registered' symbol	[EXTRA] R
™	'trade mark' symbol	[EXTRA] T

Remember that these special key combinations work by holding down [ALT], [EXTRA] or [SHIFT] while the second key is pressed, in much the same way as you use [SHIFT] to get upper case normal characters.

Richard A Cook, Poole

## Cutting a dash

In David Langford's 'Dash it!' insert (November issue) he recommends two or three consecutive hard hyphens saved as a phrase, as an approximation to a dash. A different way of doing it is to save a single 10 pitch double width hyphen (+Pitch10D)-(-Pitch) as a phrase. This way, you get a single, long, continuous dash. Jonathan Baylis, London SE13

## True random numbers

The snag with Basic's RND function to generate random numbers is that the resulting numbers are not truly random. However, Geoffrey Childs' tip in issue 2 on how to set and read the PCW clock can be adapted to generate more or less true random numbers from BASIC. Since the clock can be made to count in seconds, it can be used to generate a 3600 different numbers which only depend on the time that you read the number.

Every time you need a really random number, type RANDOMIZE PEEK(64504!) in the program. After this, the function RND will return a decent random number. For example, X=RND sets the variable X up to contain a random number.

Terry Dwyer, Loughborough

## Problems with pitches

One of the nice things about LocoScript is the way you can change the character pitch (the size of the printed characters) anywhere in a document. In a tip in issue two, some margin settings were suggested to get 2 cm margins on A4 paper for all the different pitch sizes you can use.

These settings do indeed work, BUT only if they are set up in the 'Base Layout'. If you mix the margin settings within one document, they do not work. For example, create a document and set the Base Layout to 12 pitch, with left and right margins at 09 and 89 as suggested. Then type in several lines. Next, insert a new Layout and set the pitch to 15, with the new left and right margins at 11 and 110. Now type in some text and the text will scroll right off the screen and continue beyond the right

margin.

A similar thing happens for pitch 17, with its margins of 13 and 127 - when you print it out, only part of the text for 15 and 17 pitch appears.

What has happened is that the line lengths are being based on the margins defined in the base layout. The original right margin was 89, therefore the new margin of 110 will be extended 21 characters to the right of this, ie. off the right hand edge of the page. For 17 pitch, the right margin of 127 will be 38 characters too long, nearly half a page extra!

To sum up; beware of changing the margins and altering the pitch size at the same time. Unless you are using the same character pitch as defined in the Base Layout, you could get some funny effects.

Charles Hassell, London SW12

If you want to change pitches in mid document, the best way is to leave the Layout settings well alone, and just use the 'F4=Style' menu to alter the pitch. This way, the right hand margin will be properly aligned on the printed page, although it may not seem so on the screen.

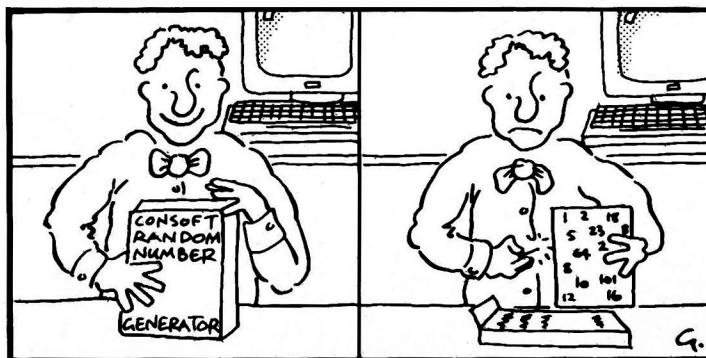
## Cheap screen filters

Does anyone manage without a screen filter over their PCW? The minimum brightness is often very bright, and the glare and reflections off the bare glass in daylight can be horrendous. Trouble is, screen filters are expensive.

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This magic stuff is filter no. 210 from Lee Filters of Andover (0264 66245). £1.50 buys you a sheet about 20" square - all you need is four little bits of sellotape, and no more headaches. If you know anyone involved in amateur dramatics, get them to pinch some bits of gel in other colours (eg. deep orange) to give you a complete change from LocoGreen!

Jonathan Baylis, London SE13



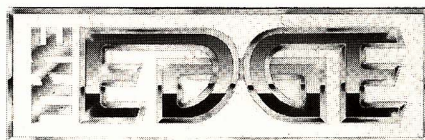
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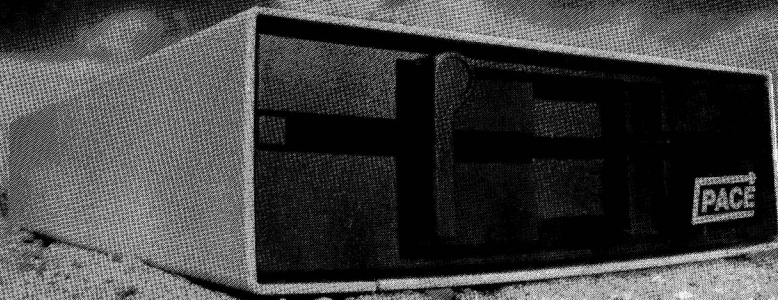
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# THE GOOD SOFTWARE FILE

These pages provide a comprehensive guide to the Amstrad PCW software. Published in three monthly parts, this time it's the turn of Spreadsheets, Utility Programs and Educational Software to face the ultimate test. We've set out to cover every piece of software we could lay our hands on, and to give you enough information to decide whether they are suitable for you.

As well as a brief summary of what they do, the main Plus and Minus points for each program are listed. Those we think are particularly noteworthy have an elliptical flash on them ... have fun window shopping!



## SPREADSHEETS

If a database replaces an address book, then a spreadsheet replaces the back of an old envelope. It is really an electronic piece of paper which allows you to jot down numbers, juggle them around and analyse the cost benefits of a situation. Vital for businesses, spreadsheets can be useful to home users too: if you want a bank loan you will find that showing your bank manager a spreadsheet printout of your living expenses answers a lot of questions!

A typical spreadsheet has a grid of rows and columns. This grid forms a screenful of *cells* identified by their column and row numbers, e.g. A3, K36 etc. Each cell can contain a simple number, some text to make the page easier to read, or a *formula* telling the spreadsheet to work out a number using values from elsewhere. The power of spreadsheets is in this last category, formulae. You can make a cell's value depend on the value of cells above it, or to the left of it, and this value is then automatically updated if you make any changes to the other cells.

So how do you choose between the various spreadsheets? One difference is sheet size, i.e. the number of cells you are allowed to work with. You'll need a few hundred for home use, and 1000 or more for business use. Another area is the range of formulae that you can use – all spreadsheets allow simple column and row totalling, but with some you can get complex statistical analyses too. As with all software, think very carefully what you will need before choosing.

### Pocket CalcStar

£39.95 • Davis Rubin Associates • 0386 841181

GOOD VALUE!

A fairly traditional spreadsheet but with a few surprising features. It's not particularly large or fast, but is attractively priced and has all the basic functions. Can form part of an integrated system with the other Pocket products. A safe buy for the first-time user, and the documentation is up to the usual high MicroPro standards.

#### PLUSES • MINUSES

- Good range of mathematical calculation functions.
- Good documentation – sections for beginners and reference.
- You can preset a course of cells to visit, for form filling.
- Can be integrated with other Pocket products, eg ReportStar

- Screen size is very small – at most 15 spreadsheet rows, and normally only 10.
- No auto-recalculate facility
- It's not very fast
- You can't type heading text etc. over adjacent columns

### SuperCalc 2

£49.95 • Amsoft/Sorcim • 0277 230222

GOOD VALUE!

*SuperCalc 2 is broadly similar to ScratchPad Plus, and at least as effective, but it has a smaller workspace and is less flexible about the allowed spreadsheet dimensions. The manual is sensibly separated into a beginners guide, a tutorial and a reference section. One big bonus is that you can store sequences of commands in files for repetitive calculations.*

#### PLUSES • MINUSES

- Excellent manual + specific sections for beginners and experts.
- Sequences of commands can be stored and later run from files
- "Data Interchanger" allows you to transfer spreadsheet data to other applications
- Comprehensive range of calculation functions available
- Screen can be split into 2 windows
- Spreadsheet is limited by memory size
- On-screen prompts not as helpful as they might be.

### Multiplan

£69.99 • MicroSoft/NewStar • 0277 220573

*A well established package with all the features you would expect of a reasonable spreadsheet – it just lacks that something extra that recommends some of the newer ones. No support for command reading from files, or for "virtual memory". Adequate, but there are better for the money. And the manual can kill at twenty paces!*

#### PLUSES • MINUSES

- Functions easily entered by menu selection
- Full range of features and functions
- On-screen help text is available as you go
- Sheets can be interlinked and data transferred between them
- You need a computer science degree to understand the manual
- No support for automatic execution
- Workspace is limited by CP/M memory space
- Printer output a bit cumbersome

# A PROCESS OF WORD PROCESSING:

**Are you 100% delighted with your Word Processor?  
Have you got any choice?**

Well until now, perhaps not, but read on because we have some interesting facts for you. We have tested some of the more popular word processors for the Amstrad PCW machines and we have presented a fairly comprehensive listing of our findings. Use this information freely, before you decide on your next Word Processor.

## A Comparison of Amstrad Word Processors

### Benchmark timings

All tests were carried out on a standard 1817 word document. Tests 7 to 10 were carried out on a standard 262 word paragraph. All times are in seconds.

	Protect	Loco-script	Tasword 8000	Newword	Pocket Wordstar Deluxe
Version:	2.00	1.20	1.00	2.17	3.05
Computer:	PCW8256	PCW8256	PCW8256	PCW8256	PCW8256
1. Load document	6	12	8	18	10
2. Save document	7	84	19	13	19
3. Merge document to middle of itself	5	269	11	21	11
4. Move cursor from start to end	0.5	34	6	3	4
5. Move cursor from end to start	0.1	15	3	4	3
6. Replace 'the' with 'THE' 205 times	5	128	297	73	208
7. Format paragraph	1	10	12	6	6
8. Move paragraph to start	0.2	42	13	9	9
9. Move paragraph to end	1	80	13	9	4
10. Delete paragraph	0.3	19	3	5	4

**"I am stunned by the speed at which Protect performs the text operation, there is nothing like it on the Amstrad" . . . AMTIX MAGAZINE**

**"Protect can thrash any 8 bit Word Processor for speed and can even cross swords with some 16 bit programs for power" . . . POPULAR COMPUTING WEEKLY.**

## PROTEXT WORD PROCESSOR

**Q: So why is Protect so much faster than the competition?**

**A:** Protect is the "state of the art" on the Amstrad computers. After two years of development, it is now widely recognised as the "new standard" by which other programs will be judged. Protect is not "just another conversion" from other computers but is a complete word processing system designed and written specifically for the Amstrad range. Protect makes full use of the available features on your machine, taking it further than ever before in many respects, by increasing the speed, power and performance, which until now, has not been thought possible. Protect is a fully integrated package complete with extensive mail-merge routines, spelling checker and disc utility programs.

**But speed is not everything, so to be fair we should also show a summary of the main features. . . .**

# ELIMINATION

## THE FACTS EXPOSED

### Feature comparison

FEATURES	Protex	Loco-script	Tasword 8000	Newword	Pocket Wordstar Deluxe
What you see is what you get	y	y	y	y	y
Works with any printer	y	-	y	y	y
Unlimited file size	y	y	-	y	y
Two file editing	y	-	-	-	-
Auto re-format	y	y	y	-	-
Layout commands stored in text	y	y	-	y	y
Spelling checker	y	-	-	y	y
Spell check from within WP	y	-	-	-	y
Find/anagram options	y	-	-	y	-
Background printing	y	y	-	-	y
Insert or overtyp	y	-	y	y	y
Delete line command	y	-	y	y	y
On screen help	y	y	y	y	y
Dynamic screen update	y	y	-	-	-
Headers and footers	y	y	y	y	y
- different even and odd	y	y	-	y	y
Soft hyphens	y	y	-	y	y
Soft spaces/returns	y	y	-	y	y
Non break space	y	y	-	y	y
Decimal tabs	y	y	y	y	y
Format whole document	y	-	-	-	-
Page break indication	y	y	y	y	y
Page/line number display	y	y	y	y	y
Column manipulation	y	-	-	y	y
Column replace mode	y	-	-	y	-
Multiple block buffers	-	y	-	-	-
Undelete block	y	-	-	y	-
Undelete line	y	-	y	y	-
Save block	y	y	-	y	y
Calculator	y	-	-	-	-
Print multiple copies	y	-	y	y	y
Print selected pages	y	y	-	y	y
Print block	y	-	y	-	-
Print to screen	y	-	-	y	y
Typewriter mode	y	y	-	-	-
Change printer at any time	y	-	-	y	y
Embedded printer codes	y	y	y	y	y
Print translated characters	y	-	y	-	-
Turn off printer code display	y	y	-	y	y
Display returns/tabs	y	y	-	-	-

FEATURES	Protex	Loco-script	Tasword 8000	Newword	Pocket Wordstar Deluxe
On screen underlining	-	y	-	-	-
Built in Foreign characters	y	y	-	-	-
Separate accents	y	y	-	-	-
Catalogue files	y	y	y	y	y
Delete file	y	y	y	y	y
Rename file	y	y	y	y	y
Copy file	y	y	-	y	y
Format disc	y	-	-	-	-
Type disc file	y	-	y	-	-
Auto file backup	y	y	y	y	y
Find/replace - wildcards	y	-	-	y	y
- selective or all	y	y	y	y	y
- ignore case or not	y	-	y	y	y
- search for any string	y	-	-	y	y
- search for control codes	y	-	-	y	y
- find nth occurrence	y	-	-	-	y
Mail merge - data from file	y	-	y	y	y
- data from keyboard	y	-	y	y	y
- re-usable variables	y	-	-	y	y
- string/substring expressions	y	-	-	-	-
- numeric arithmetic	y	-	-	y	-
- polymorphic operators	y	-	-	-	-
- multiple data files	-	-	-	-	-
Conditional printing	y	-	y	y	y
- nested	y	-	-	y	y
Repeat/until loops	y	-	-	-	-
Insert file whilst printing	y	-	-	y	y
Format whilst printing	y	-	-	y	y
Auto widow/orphan elimination	-	y	-	-	-
Keep lines together	-	y	-	-	-
Microspacing	y	y	-	y	y
Proportional spacing	y	y	-	-	-
Built in word count	y	-	y	-	-
Character count	y	-	y	-	y
Place markers	y	y	y	-	y
Comments within text	y	-	-	y	y
Program editing mode	y	-	-	y	y
Create ASCII file	-	y	y	y	y
File conversion utility	y	-	-	-	-
User definable keys/phrases	y	y	y	-	-

Arnor Ltd. September 1986

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**GUARANTEE EXPIRED? Now is the time to  
Upgrade your PCW 8256 to 8512 specification**

The specialist PCW magazine, "8000 Plus" selected our Upgrades as

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THEY SAID: "For many users an upgrade will make a huge difference." "You can make your working life a good deal easier at minimal cost by increasing the size of your M-drive RAM-disc to that of 8512." (112K to 368K). "A low cost memory upgrade...will immediately reduce disc copying to a simple two-stage process." "You'll also find it easier running big CP/M programs like Wordstar and SuperCalc...much faster."

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"If you go a stage further and add a second disc drive, you won't need to swap discs at all." There will be a significant increase in data storage capacity, for example text files when word processing and data files when running CP/M data processing programs.

Suites of programs for the 8512 can be loaded onto and accessed from both sides of a high density disc

Fitting the second drive is simple enough...Everything other than the ddrives already there in your machine: cables are ready wired and both LocoScript and CP/M software will recognise it immediately once it's fitted...you'll have to try pretty hard to get it wrong."

Internal PCW 82546 DS/DD Second Disc Drive

1 Megabyte unformatted (720K formatted) **£139**

Memory Upgrade plus Second Disc Drive **£159**

Supplied with simple, comprehensive fitting instructions. NB You will require CP/M version 1.4 to format high density discs. Amstrad will exchange earlier versions free of charge.

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# THE GOOD SOFTWARE FILE

SPREADSHEETS UTILITIES

## PlannerCalc

£39.00 • Comshare/NewStar • 0277 220573

PlannerCalc does for spreadsheets what Cobol does for programming languages. It is verbose and inflexible to use, but this does make you think very carefully about your application before entering data. Commands are all entered by pseudo-English phrases, rather than terse abbreviations. All work is done on a command line, not by moving the cursor around the screen.

### PLUSES • MINUSES

- English-style commands are understandable by non-experts
- On-screen help available at any point
- Documentation is fairly well indexed
- Verbose commands are awkward to type in
- Editing and inserting data is restricted
- Grouping cells into ranges for copying etc. is difficult
- Control of sheet printouts is limited

## MasterPlanner

£69.95 • Comshare/NewStar • 0277 220573

MasterPlanner is essentially a souped up version of PlannerCalc. For double the money, what you get is a slicker manual, better formatting options, a bigger workspace and the same basic inflexibility. Files from PlannerCalc can be used with MasterPlanner.

### PLUSES • MINUSES

- Same pluses as PlannerCalc
- Spreadsheet stored in virtual memory, i.e. can be as big as your disk
- Can read files from PlannerCalc
- Same minuses as PlannerCalc
- Apart from size and speed, no real extra power over PlannerCalc

## Cracker 2

£49.00 • Software Technology/Newstar • 0277 220573

**BOFFINS'  
BEST BUY**

A spreadsheet designed with advanced calculating power firmly in mind, including statistical functions. The screen layout is totally defined by the user, and cell value calculations can almost be full programs, e.g DO ... WHILE. It might prove too complex if all you want is simple spreadsheet operations. The screen messages are very helpful though.

### PLUSES • MINUSES

- Can cope with very complex formulae
- Flexible screen format defined by the user
- On-screen prompts are very clear
- Documentation is big with plenty of examples and a good reference section
- Graphs/charts can be automatically produced
- You've got to do a lot of work just to get started
- Very complex for quick, simple applications
- Needs some programming skills to get the most out of it
- Spreadsheet space is on the small side (17K) although memory is used efficiently

## ScratchPad Plus

£59.99 • Caxton Software • 01-379 6502

**GOOD VALUE!**

If you want a traditional spreadsheet, ScratchPad Plus has most of the features you could want and more. Using "virtual memory" means you can have a huge data area, and the screen can be divided into windows to view different parts at the same time. Many of the commands bear a remarkable similarity to the big business spreadsheet Lotus 1-2-3.

### PLUSES • MINUSES

- Virtual memory means you can have large spreadsheets
- Multiple windows mean you can see all the parts you want at once
- Good control over formatting
- Vast range of calculations possible
- Documentation sorely needs an index
- Screen prompts are cryptic; you need the manual to hand
- No provision for automatic execution from files

## Job Estimating • Product Costing

£49.95 each • Cornix Software • 0462 682989

**SIMPLE  
TO USE**

Both these programs aim to provide help to small businesses by keeping track of costs. You break down the job/product you are doing into small units and specify the cost of each basic component. The programs then analyse your profit margins and can produce printed quotes to convince customers you are superb value.

### PLUSES • MINUSES

- Well written manual aimed at businessmen not programmers

- Simple and robust to use
- Changes in material cost instantly reflected in all products/jobs
- Job Estimating* page headers make a neat way of doing on-the-spot quotes
- Can't add new components to a description after it has been set up
- Cost of one component can't be dependent on another
- Inflexible design of printed quotes might be inconvenient
- Generally only suited to smallish businesses

## UTILITIES

### Oxstat

£113.85 • Medstat Ltd • 0602 411120

*This is a specialised statistical analysis package for the PCW. Functions from calculations of means to multiple linear regression are covered, and it can do some rudimentary graphics for results. You can read data from spreadsheets or external devices.*

#### PLUSES • MINUSES

- Comprehensive range of statistical functions implemented
- Good screen editing facilities for entry of data
- The speed seems acceptable, even though it is written in BASIC
- Even complex analyses are easily entered by simple menus
- Weak on graphical presentation of results

### BrainStorm

£49.95 • Caxton Software • 01-379 6502

*An "ideas processor", BrainStorm is a computerised doodling pad. You can jot phrases down randomly, then organise them into a hierarchical plan, then expand each phrase into a finished idea, and finally print them out as a coherent document. If you find it easier to work at a keyboard than with a pencil and paper, this will really help you think.*

#### PLUSES • MINUSES

- No limit to the number of sub-levels of plan you can have
- You can output the rough text, for a wordprocessor to polish
- Good documentation, including some neat ideas for applications
- Provides a unique service, which should be useful to you
- Needs better graphics (like GEM ?) to let you browse the structure easily
- The command keystrokes are unnatural — you can't use the cursor keys to move around the screen
- As a word processor, it is very primitive
- A notepad and a pencil would cost you £1 or less

### Pertmaster

£69.00 • Abtex Software/NewStar • 0277 220573

*Pertmaster is a project planning aid. You specify the events, sequencing and durations of the component tasks of a project, and Pertmaster will analyse the job by Critical Path Analysis. It can detect errors in the plan, produce reports and crude graphical summaries.*

#### PLUSES • MINUSES

- PERT charts and Critical Path Analysis are established planning methods
- Up to 500 activities may be considered at once
- Plans can be altered to see "what if ..." results
- The PCW isn't really powerful enough to do it justice; it certainly needs a PCW8512
- Screen graphics are very weak; you can't get a graphical overview of the whole network
- It doesn't have simple default settings for a rough-and-ready plan

### Disc Mate

£24.99 • Siren Software • 061 848 9233

*Disc Mate is a set of CP/M utility programs which bring complex disc recovery operations within the scope of CP/M novices. Facilities include recovering erased files and making files "read only" (i.e. unerasable).*

#### PLUSES • MINUSES

- Simple on-screen instructions once you've got started,
- Allows easy recovery of accidentally erased files
- "ZIPDISC" program speeds up disc access by 10 to 20%
- Friendly file copying program in case you find CP/M's PIP incomprehensible
- Can read both single and double density discs
- The instruction sheet is very brief, so you'll need to understand CP/M basics

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TOOL!

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## SIREN SOFTWARE

**PCW  
8256  
8512**

### DISC MATE

Can you afford to be without this program?  
Have you ever erased a file that you did not want to?  
Have you ever lost a program whilst copying?  
DISC MATE allows to:

- Recover erased files**
- Protect files from accidental erasure**
- Hide files from the directory**
- Show hidden files**
- Etc.**

As well as the above mentioned features, DISC MATE contains FILECOPY program that allows you to easily and quickly copy files/programs from one disc to another. FILECOPY is extremely user friendly easy to operate.

Also on the disc is ZIPDISC which will speed up your disc drive by upto 20%. ZIPDISC uses no memory and is compatible with all software.

ALL THIS ON ONE DISC. DISC MATE is available for the Amstrad PCW8256, 8512 and also the CPC6128.

Available directly from SIREN SOFTWARE at only **£24.99** inc VAT.

#### SIREN SOFTWARE

Trafford Technology Centre, 43 Elsinore Road  
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Tel: 061 848 9233



## SIREN SOFTWARE

## ADD A 5 1/4" DRIVE TO YOUR 8256

The uniface allows you to use any standard 5 1/4" disc drive as a second drive on your 8256.

This easy to fit device comes complete with full easy to follow clear instructions and Utility Software on disc.

Available now at only **£49.95**  
or **£199.95** with an 80 track  
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M16 0WG TEL: 061 848 8959**

# THE GOOD SOFTWARE FILE

UTILITIES EDUCATIONAL

### Write Hand Man

£29.95 • Hisoft • 0525 718181

*This is a program which sits in the background whatever you are doing, and at the press of a command key a menu pops up in a 'window'. For example, if you are word processing, press the key and up pops a calculator, a notepad, a diary. Designed to eliminate paper, but the more advanced functions (notepad) are so cumbersome they fail to be at all useful. Better to buy a £4.95 Casio calculator and a pencil & paper.*

#### PLUSES • MINUSES

- Results from the calculator can be 'pasted' directly into documents
- You can define the PCW keys to produce whatever strings you want
- Manual is technical and incomprehensible
- Notepad functions are slow and cumbersome to use
- Takes up a lot of disc space and CP/M workspace
- Costs much more than an HB pencil with notepad

### Rotate

£24.95 • Proteus Computing/Trinity Business Systems • 01-748 2302

*Rotate is a simple utility program to print out text files rotated through 90 degrees on the paper. This gives you more columns per page which will be needed for some programs, like large spreadsheets.*

#### PLUSES • MINUSES

- Simple menu-driven program does just what it says
- Choice of four print fonts, which can be used to print unrotated files too
- The quality is nothing like NLQ (e.g. the ordinary "high quality" print option)
- Only prints plain text, no subscripts, underlining etc.
- No specific support for non-Amstrad printers

### Landscape

£19.95 • Systembuild • 0778 344388

*This is a utility to print out ASCII files rotated on the printer page, so as to make full use of the extra page width. It provides page dimensions of up to 255x96 characters, in a fairly condensed typeface. Runs as a BASIC program.*

#### PLUSES • MINUSES

- Readable, condensed draft quality typeface
- Simple and effective to use
- It's an undesirable hassle to have to run it from BASIC
- It's simple, but really needs more than its 200 words of documentation.
- No choice of fonts or text quality.

### ExBasic

£11.45 • Nabitchi Computing • 051-708 8775

**EXCELLENT  
VALUE!**

*A utility program which augments Mallard BASIC's commands, allowing you to use quite sophisticated graphics functions. You can draw or erase lines, circles or dots, save and load screenfuls of data, pause, beep ... all with commands like PRINT ";DRAW.";100;200;. Guaranteed no machine code or POKEs needed!*

#### PLUSES • MINUSES

- All functions done by simple BASIC PRINT statements
- No machine code knowledge needed
- Good range of simple drawing commands available
- Can save and load images once you've got them right
- Very cheap!
- Not quite fast enough for proper animations/games programs

### SuperType (née FontGem)

£19.95 • Digita Group • 03954 5059

**USEFUL  
AND FUN!**

*A program for users of LocoScript and CP/M programs, which modifies the fonts (ie. the look of the characters) used by the PCW printer. SuperType has 4 'business' fonts and 4 'novelty' fonts, like Olde English. It works by directly altering the .EMS files for LocoScript or CP/M, so you only need run it once -- after that, the new chosen font is automatically available.*

#### PLUSES • MINUSES

- Once installed, you can totally forget it's there
- Genuinely useful range of fonts available
- Works with LocoScript as well as CP/M
- All LocoScript's print size and style options still work with SuperType
- Doesn't take up any extra disc space
- You can't mix different fonts in the same document
- You have to have different work discs for each font you want to use
- Won't currently work with LocoMail or LocoSpell -- but check with Digita for news

# Saxon Computing

## The VICAR

£29.95 • lansyst • 01-607 5844

A programming tool for serious programmers. If you have a several-hundred line program held in several files on a disc, you can lose track of which variables are used where. The VICAR produces a concordance listing and other diagnostics, to help you find bugs and maintain the program.

### PLUSES • MINUSES

- Easy to use but still flexible through use of options
- Amstrad versions all at a special low price
- Good manual
- Only of value on large programs
- Limited value to most PCW users (except BASIC buffs)

# EDUCATIONAL

## Touch 'n' Go

£24.95 • Caxton Software • 01-379 6502

A very traditional typing tutor, with no attempt at interesting screen presentation. Letter drills are rigorously pursued, making for good typing practice if you can stick to it. Also has number keypad tuition for data entry operations.

### PLUSES • MINUSES

- Methodical letter drills enforce good practice.
- Provides number keypad tuition as well as letters.
- Instruction screens are optional, so can be cut out for speed.
- Gives a flattering error rate, since it allows you unlimited use of the delete key.
- Doesn't tell you how to make the number keypad actually work on the PCW!
- Boring use of the screen. You need to really want to learn.

## Better Spelling

£12.95 • School Software Ltd • 010 353 61 27994

This is a spelling course aimed at the 8 to adult age group. It consists of a series of well organised, short lessons each dealing with one topic, like plurals or which version of there/their/they're to use in a sentence. The use of the PCW screen is rather unimaginative, and doesn't hold your attention.

### PLUSES • MINUSES

- Well thought out lessons to emphasise particular points
- Teaches words in a sentence context as well as in isolation
- Lessons can be picked in any order from a menu
- Seems to be proof against mischievous key pressing
- Boring use of the screen doesn't grab interest
- No instructions come as to how to use the program.

## Typing Tutor

£24.95 • Computer One • 0223 862616

**BEGINNERS' BEST BUY**

A superior typing tutor which makes very good use of the PCW screen and graphics facilities. Traditional typing exercises starting from basics are covered in full, and if they get too boring then there is an addictive "Hangman" game. Recommended.

### PLUSES • MINUSES

- Good use of graphics to make typing interesting
- All the traditional typing exercises covered fully
- All instructions appear on the screen as you go
- Robust user interface makes it easy to use
- Addictive "Hangman" game gives fruitful light relief
- No way of cutting longwinded text when you get used to it.

## Iankey Two Fingers to touch typing course

£24.95 • lansyst • 01-607 0187

**IMPROVERS' BEST BUY**

Despite its provocative name, a useful typing tutor in that it specifically caters for people who can already get by on keyboards with two fingers. You are gradually introduced to touch typing, so your speed doesn't drop while you learn. Fills a necessary slot in the Typing Tutor market.

### PLUSES • MINUSES

- Suitable for improving two-finger typists without much drop in speed
- Full on-screen instructions
- Exercise text is interesting paragraphs, not letter drills
- Explanation text is annoyingly verbose in some lessons
- It doesn't always ensure that the cursor is properly aligned with the exercise text

## Flexi Collection

for PC 1512 & IBM

**FlexiFile** - one of only two databases rated as good value by 8000 Plus magazine, this is a fast database offering calculations, reports, filtering, indexing, rebuild, macros & context sensitive help. All new manual includes full tutorial which is also on disk.

**FlexiWrite** - a Wordstar work alike with a friendly face. Easy to use, has mailmerge and can IMPORT GRAPHICS into your documents. Full manual included.

**FlexiLabel** - total control over mailing & goods labels up to 5 across. Can use data from FlexiFile, FlexiWrite & other databases.

**FlexiCalc** - a spreadsheet with graphics.

**Lock-It** protects your files using sophisticated encryption and passwords.

## Micro Collection

for PCW8256/8512

Micro Collection comprises Microfile, MicroWord, Flexilabel, MicroSpread and Lock-It. Similar specification to Flexi programs but for CPM Plus.

Flexi Collection or Micro Collection are just £49.95 for all five programs. Send for full brochure.

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Brainstorm (Caxton)	£49.99	£39.95
Cardbox (Caxton)	£99.99	£79.95
Touch 'n' Go (Caxton)	£24.95	£20.95
Scratchpad Plus (Caxton)	£69.99	£59.95
Popular Accounts (Sage)	£99.99	£79.95
Pocket Wordstar (Microprol)	£49.95	£45.95
Accounts (Compact)	£199.99	£185.95
Nucleus (requires FD 2) (Compact)	£99.99	£85.95
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Newword	£69.95	£65.95
Multipan	£69.95	£65.95
DataGem	£39.95	£35.95
ProspeII	£29.95	£25.50
Electric Studio Light Pen 8256/8512	£79.95	£69.95
TELEADD the electronic telephone address book		£21.95
INSTOCK a true stock control & Order processing package		£59.95

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**ROTATE** RRP 24.95 — It turns printing problems around.

If you have ever wished that the Amstrad 8256/8512 printer was 132 columns wide, because your print-outs won't fit across the page. Rotate prints files sideways down the page. So, all those wide spreadsheet models can now be printed in one go. Rotate prints any ASCII file, so it will work with Spreadsheets, Wordprocessors, databases and some Accounts packages on the Amstrad. Rotate also has additional fonts to choose from. Files can be printed out in the normal way as well.

**PRINTER STAND** RRP 14.95 — specially designed for 8256/8512.

The printer stand is 3.5"/7.5 cm high. You can store fanfold paper neatly under the printer. It's business-like and made of strong light metal with 'non-slip' rubber feet. The colour matches the Amstrad printer flap.

Proteus are exclusive distributors for Logicom products, as well as distributors for several other publishers of 8256/8512 software. Our range includes: Amsoft, Amnor, Caxton, Compact, CP Software, Digital Research, Hisoft, MicroPro, Microcal, Sage and Tasman.

For further information telephone John Fontana, on 748-2302. Telex: 957485 ROBINC G. Trade & Export enquiries are welcome.

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# THE GOOD SOFTWARE FILE

EDUCATIONAL

## Iankey Crash Course

£24.95 • lansyst • 01-607 0187

A fairly traditional typing tutor, taking you through basic keyboard exercises. There's a lot of explanatory text, which gets in the way second time around. Definitely competent, but a bit boring.

### PLUSES • MINUSES

- Mostly avoids boring letter drills
- Very full on-screen information guides you along
- "Fast" option cuts out some text if it gets repetitive
- Unimaginative use of graphics, compared to Computer One 's tutor.
- It doesn't always ensure that the cursor is properly aligned with the exercise text

## Chemistry • Biology

£12.95 • School Software • 010 353 61 27994

These two are fairly traditional question-and-answer tests. You are faced with a choice of 10 topics, and then asked 10 or so questions each, where you have to fill in the blank in a statement. There are preamble notes beforehand, and if you get it wrong you are given a clue. Aimed at 12-16 year olds.

### PLUSES • MINUSES

- High standard of questions for O-level students
- Preamble notes introduce topics
- The fill-in-the blank questioning style has little flexibility for different answers
- No option to add questions for a specialised syllabus
- Screen Chemistry formulae are difficult to read

## Micro Maths

£24.95 • LCL • 0491 579345

WELL  
DESIGNED

Supposedly covering 8 to adult ages, this seems an O-level type program, covering topics from calculus to tables. A good implementation on the PCW with proper use of the screen. Questions are picked at random from a pool, so may repeat but never run out. Replies to questions are typed in mathematical notation, like  $X^2+3$

### PLUSES • MINUSES

- You can pause to use BASIC as a calculator while you think
- 'Unlimited' question set
- Comes with a 'free' book of AEB O-level questions
- Good hints and explanations when you get an answer wrong
- Questions in a topic repeat occasionally
- Some frills, like the clock and beeper, are annoying
- No flexibility to add questions for a particular syllabus

## Animal Vegetable Mineral • World Wise

£14.95 each • Bourne Educational • 0794 523301

Aimed at the younger market, 7-15 year olds. Both these programs work by learning as the child uses them. Think of an object and the computer tries to guess it. If it is wrong, the child is asked for a question which would allow the PCW to be right next time, and it learns.

### PLUSES • MINUSES

- Can be used as many times as the child's imagination holds out
- Performance can be analysed by a teacher after a session
- As you build up a base of objects and questions, they can be saved for reuse
- It needs a lot of typing, hence a lot of supervision
- The PCW starts with only two objects known, so it takes time to get going
- Documentation has hardly been altered from cassette-based versions
- Since it is for young children, more imaginative use of the screen would be nice

## NEXT MONTH

The guide continues next month with the categories of WORD PROCESSORS (including spelling checkers and mail mergers), GAMES and ACCOUNTS (including payrolls). The month after will cover DATABASES, COMMUNICATIONS and GRAPHICS, and the month after that it's back to this month's topics.

Our intention is to keep publishing the three parts of the guide in rotation, updating it each month to include all new products. If you would like to see other sections of the guide, back issues of 8000 Plus are available at £1.50 each.

Meanwhile, if you are aware of any significant omissions or errors in the File as published, please let us know. We intend to maintain it as THE authoritative guide to PCW software.

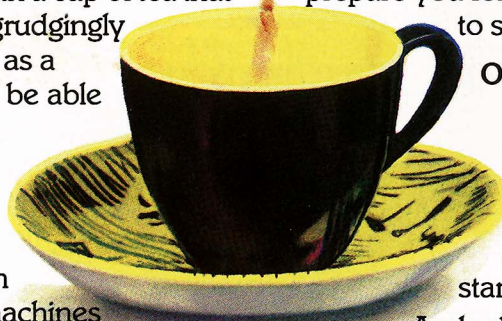


# To boldly drink where no man has drunk before.

If you've ever been served with a cup of tea that resembles canal water. Or begrudgingly sipped a brew with as much taste as a gold lamé string vest, you should be able to sympathize with Arthur Dent.

Star of Infocom's™ hilarious new software extravaganza. The Hitchhiker's Guide to the Galaxy.™

Now programmed for use on the AMSTRAD and a host of other machines "Hitchhikers" gives you the chance to slip into Arthur Dent's shoes and scour the length and breadth of the universe for a decent cuppa.



prepare you for a few dangers that are a little harder to swallow.

## ONE LUMP OR TWO

A journey throughout the universe can be a pretty nervewracking business. Especially when there's a whole host of perilous flying saucers, black holes and burning stars to deal with.

And when the Ravenous Buggblatter Beast of Traal asks "Would you like one lump or two?" He's not referring to sugar!

If you sense trouble is brewing you can just zap into another solar system and continue your voyage. But don't forget your towel.

The Hitchhiker's Guide to the Galaxy is available on Earth from your local Softsel dealer. Along with over 2,600 other titles from over 250 publishers.

So don't just sit there stewing — Go and cause a stir in the galaxy.

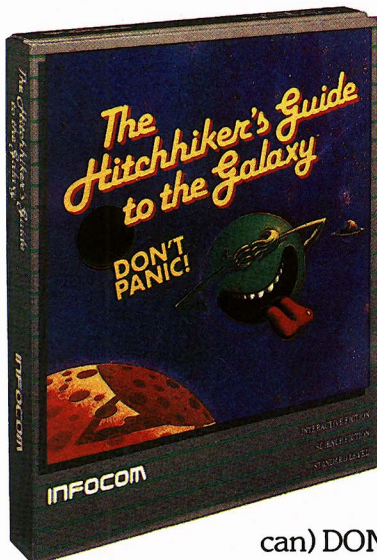
The Hitchhiker's Guide to the Galaxy — It's out of this world.

## DON'T PANIC

Gulp with excitement when your planet is demolished by ruthless galactic hyper-space planners.

And split your sides as your home is bulldozed by the local council. You'll laugh so much, it'll bring the house down.

Whatever happens (and just about anything can) DON'T PANIC! For all this will



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# AMAZING LOCOSPELL

Buy it from us and you'll also receive a tempting gift worth over £8!

LocoSpell is here at last, the long-awaited spell-checker from Locomotive Software, authors of LocoScript. Operating from *within* LocoScript, the program allows you to spot all your typing errors and spelling mistakes before you've even had to save your document!

In fact the program does more than spot errors – it offers a list of suggestions of the word you really intended to type allowing virtually instant correction.

The software package comes with two separate dictionaries – a 32,000 word version for super-fast check or a massive 77,000 word dictionary. And you can create further dictionaries containing specialist words and names which you use regularly.

The program package costs £39.95, but if you order from us using the form overleaf you can also select one of three fantastic gifts worth £8-15! It's got to be the best way of buying one of the year's most significant releases.

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**CHOOSE YOUR GIFT!**  
You can have any of these three valuable gifts when you order LocoSpell.

## OFFER!

### GIFT 1 – worth £8.95!

A copy of the best-selling book *Mastering the Amstrad PCW 8256/8512* by John Hughes, author of our series on Basic programming. It's packed with useful information on LocoScript, CP/M and other topics. Far easier to understand than the manual.

### GIFT 2 – worth around £8!

Two blank 3" discs for use with your PCW (use in either drive if you have an 8512). As soon as you receive LocoSpell you'll be able to back it up with two working discs.

### GIFT 3 – worth £14.95!

A copy of the remarkable Ocean Software game *Batman* as described elsewhere on these pages. Superb light relief from the demands of word-processing. If your fun-loving neighbours aren't yet impressed with your PCW, *Batman* could just make their eyes pop out of their heads!

SPECIAL OFFERS  
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## COMPUTER SCRABBLE

Only £17.95 - save £2!

Writers, wordsmiths, LocoScript users all, this is the program you've been waiting for.

The much-loved, much-played word game has arrived on the PCW courtesy of Leisure Genius, and presents you with a new challenge: Can you beat your word-processor at word processing?

Be warned, the program, backed up by a huge built-in vocabulary, plays a very mean game. It knows all the rules and will use every trick in the book to build up mind-boggling scores.

The full Scrabble board is displayed on screen with all the squares in their usual places. More than one player can take on the computer, and you can set the program's level from super-fast to super-smart. There are plenty of other options, including the facility to watch the program 'think'.

If you bought your PCW for word processing, what are you waiting for?



# UNIFACE UPGRADE

Here's an add-on which gives you a really powerful way of expanding your 8256. It's an interface which fits into the space for a second three-inch drive but which allows you to connect to a five-inch drive. For example, any drive used with the BBC micro can plug straight into the interface.

This offers the immediate advantage of far cheaper disc costs – you can save over £2 per disc! And with the interface come three software routines which allow easier formatting of discs and copying of files in both A and B drives.

The interface, produced by Silicon Systems, comes with clear fitting instructions, but you will need to remove the back of your 8256 to do this.

We're offering Uniface either by itself for just £49.95 or together with a high-quality 80-track double-sided drive for £199.95. The latter package contains all you need for a complete upgrade, bar the mains plug for the drive. The drive will format discs to 720K, making it identical in operation to the 8512 second drive. And the price compares very favourably with other upgrades.

Interface just £49.95

Packaged with 720K 5" drive just £199.95



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## SPECIAL OFFERS WANT A THING?

*Yours for just £5.95 – save £2!*

What's white, dangles papers next to your computer screen, and costs two pounds less than in the shops? Yes, a Thingi bought through 8000 Plus.

This remarkable computer accessory – an idea so simple it's ingenious – could dramatically ease your word-processing hours. All it is is a cleverly shaped piece of plastic that attaches via Velcro to the top of your micro. But with a Thingi on your PCW you can have documents, letters, or program listings clipped right next to the screen in perfect reading position.

Any task involving copying off paper is thereby made much easier and faster. In fact the clip supplied is sturdy enough to support an issue of 8000 Plus open, say, at the TipOffs section.

The Thingi can be positioned either to the left or right of the screen and can easily be removed and replaced if necessary.

A really sensible, cost-effective add-on for your PCW.

## SPECIAL OFFERS SPECIAL OFFERS

## BATMAN

Only £9.95 – save £5

Holy smoke, this offer is HOT! The best arcade game yet to appear on the PCW machines and you can have it for under a tenner.

Batman is *superb* – the game's challenge, sophistication and sheer high quality belies its comic strip roots. Until you've seen it onscreen you simply won't believe what your PCW is capable of graphically.

The idea is to explore a vast network of rooms in search of various objects required to assemble your Batmobile. But numerous devious puzzles and opponents are put in your way, so much so that you hardly have time to admire the astounding animation and detailed background scenery.

It may not be useful, but it's certainly great fun and a bargain even at the normal asking price.



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#### LOCOSPELL OFFER £39.95

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Mastering the 8256/8512

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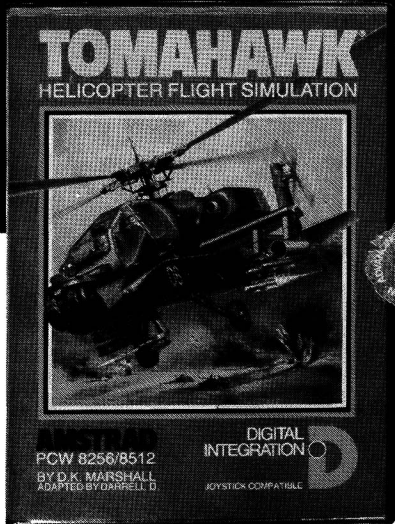
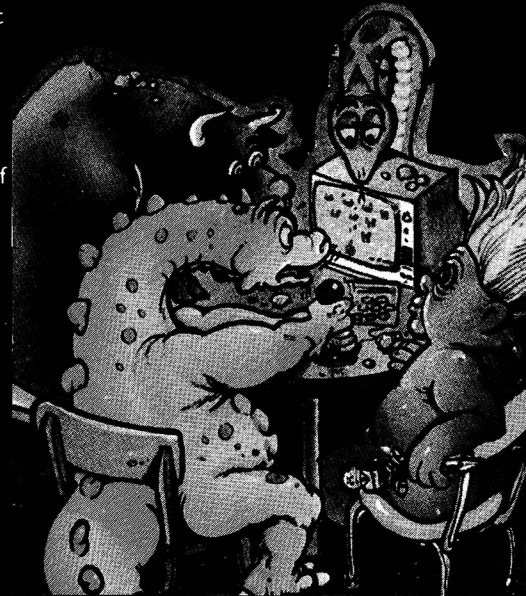
## THE VERY BIG CAVE ADVENTURE

Available EXCLUSIVELY through 8000 Plus. Only £9.95!

This is a classic spoof of a classic adventure. Packed with awful puns and silly puzzles (with even sillier solutions), it provides the perfect antidote to taking your computing too seriously.

The program is large – you get to play two separately loaded parts, the events in part two depending on your performance in part one. December's 8000 Plus awarded the game 4/5 on value at the recommended retail price of £14.95. But now CRL, the software house marketing the game have agreed to make it available through 8000 Plus and we've lopped no less than five pounds off the original asking price.

Roll up, adventurers all.



## TOMAHAWK

Only £17.95 – save £2!

If you've seen the review in this issue you probably won't need further persuasion over the quality of this program. It's a superb buy both as an impressively life-like simulator and a challenging piece of entertainment.

Try it and be amazed at what your PCW is capable of. Offer extended to February 16th 1987.

## SUPERTYPE

Only £16.95 – save £3!

This is the program that was known as *Fontgem* until its marketing was transferred recently from Gemini to Digita. Whatever the name, the software is gorgeous.

What it does is to offer you EIGHT new, radically different typefaces. And each of them has its own distinctive, professional appeal, giving your documents an original facelift.

So, if you want your printed output to look a bit different from all the other LocoScripted letters around, SuperType is what you need. The ingenious thing about the program is that once you've installed your favourite font on a disc, you won't even notice the program working. You can run LocoScript in the normal way and everything will be the same except that when you print out, the results are exciting. The software is compatible with CP/M too.

Great value at its full recommended retail price of £19.95, at just £16.95 it's another remarkable bargain from 8000 Plus.

This is Business 1 font  
This is Business 2 font  
**This is Business 3 font**  
THIS IS BUSINESS 4 FONT  
This is Outline font  
**This is Vaudeville font**  
This is Olde English font  
**This is Stencil font**

# SOUND CONTROLLER

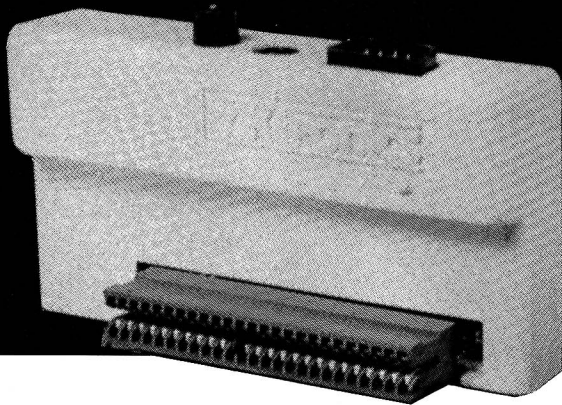
Only £34.95 – save £5! Includes programmable joystick interface

Beep, beep, move over. A new era in PCW sound production is here. This delightful little widget from widget pro's DK'Tronics will allow your Amstrad to produce glorious three-channel sound over eight octaves!

Using the same chip that's fitted to the Amstrad CPC computers, it offers the power of producing all manner of sound effects, with full control of tone, volume and 'envelope shape' on all three channels.

Also built in is a standard joystick port – its programmable interface can emulate any set of five keys used in a game, say, for left, right, up, down and fire. The unit itself plugs straight into your PCW expansion port.

Sounds good? It will.



# 8000 PLUS DUST COVERS

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Ever wondered why you see so many computers dust covers advertised? It's because computers don't like dust. Over a period of time it can make them very ill indeed: keyboards stick, disk drives become less reliable, printers smudge.

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The specially-commissioned 8000 Plus covers are made from high-quality anti-static nylon fabric. The covers themselves are a soft grey colour with those for the monitor and printer piped in red. The keyboard cover bears the 8000 Plus logo in red.

It adds up to a good argument for a cover up.

## HOW TO ORDER

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We hope you're convinced by now that 8000 Plus is a magazine worth having around for the next year. If so, why not avoid the rush for the newsagents, the frustration of an empty shelf? One decision now and issues will drop comfortably onto your doormat for the next 12 months.

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Loyal readers, roll up.

# BACK ISSUES

£1.50 each inclusive of P&P

Missed our earlier issues? Now you can catch up.

## ISSUE 1

LocoScript wallchart, Type in Wordcounter program, Four Accounts Packages compared, 8256 upgrade options, Mail-mergers compared, Good Software guide all sections bar Comms and Accounts, numerous TipOffs.

## ISSUE 2

Bumper TipOffs issue, Phone Call Calculator, Software reviews: education, video, graphics, printing, accounting, Amstrad, Windows, Commodore, Atari, LocoScript headers/footers and on customising keys, reviews of books and comms packages.

## ISSUE 3

LocoSpell review, LocoScript tabs and rulers, printing in CP/M, Launch of Basic programming series, drawing with mice, hard discs compared, reviews of Qmail, Fontgem (now SuperType), DK'Tronics sound unit, Uniface, Chibase, The Vicar, Saxon collection, plus how to access the free game of Life on the LocoScript disc.

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# POSTSCRIPT

The postbag rumaged, ruminated over and regurgitated with ribald replies from the ed.

Each month now we think we've got it sussed, only to be proved wrong again by the sackfuls of mail telling us how things are really done, or appealing for help with some obscure aspect of the PCW. We love reading comments on any aspects of the 8000, this magazine or the micro industry in general.

Please join the contributors to these pages by giving us your opinions, or try us out with any questions or problems you have. So long as they might be of interest to others we'll do our best to print answers in the magazine (but no personal replies, I'm afraid). The address to write to is:

*PostScript, 8000 Plus, The Old Barn, Somerton, Somerset TA11 5AH*

## Cutting up a disc

In reply to your letter from David McGettigan, he can recover his disc using the excellent utility, 'THE KNIFE', which no serious PCW user should be without. Examine the disc, go to Track 1, Sector 0 and step through the Directories. He will find one directory entry full of rubbish. Using the 'C' (Change) mode, fill this entry with 'E5', then 'W' (Write) this change off to disc.

**Freddie Nicholls**  
**Optronics Ltd**

*The Knife is available from HiSoft Ltd. Tel 0525 718181*

## Foreign accents

The December issue of 8000 Plus was (as I have now come to expect) an excellent read from beginning to end. However, I would like to correct the answer given in the letters column to the question about LocoScript and accents.

LocoScript only allows you to type in the 224 letters in its

78 8000 PLUS

character set. This includes some (but not all) accent-letter combinations. If you look carefully at the printed form of an accented character and its unaccented equivalent you'll see that they are slightly different to improve readability. This means that it doesn't matter what nationality of PCW you're using, the characters will always be the same. For this reason we chose to limit LocoScript to the common European languages (those of the countries in which the machine will be sold officially). Unfortunately, this meant that certain languages cannot be fully represented Czech for example, and Welsh!

It is relatively easy to change the printer characters, but the screen characters are held in highly compressed form which cannot be changed simply.

As a postscript, did you realise that LocoScript is available in English, German, French, Spanish, Danish, Swedish, Norwegian, Finish, Italian, Dutch and...American - each equivalent PCW with the appropriate keyboard.

**Howard Fisher**  
**Locomotive Software Ltd**

*We've had several letters explaining how to add the supplied accents to any character. Set the line spacing to zero on each line with accented characters and print the required accents on the line below, at the same column positions. This is only a partial solution, of course.*

*I'm sure I've heard of one or two official dealers in Wales, Howard.*

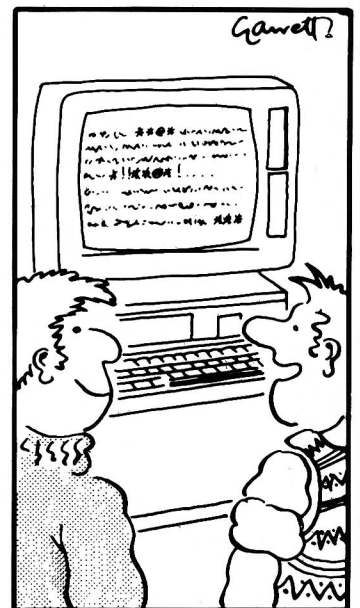
## Czech no problem

Hidden away in the wastes of the frozen North, we are a young but rapidly growing translation business. One of the areas in which we work is computing, and we thought you may be interested in the services we offer. Our team includes experts in the fields of advertising, computer software and user manuals - and we have been known to translate magazine articles!

We also have a keen interest in the use of Amstrads for foreign language typing. Many professional translators are now using the 8256, often with electronic mail facilities (where the use of accents and foreign characters is still causing a few headaches).

**Nick Rosenthal**  
**Salford Translation Consultants**

*Nick lists 15 different languages which Salford can translate, but again, alas, no Welsh...*



"-IT'S CALLED WHITEHOUSCRIPT - CONTAINS NO 4-LETTER WORDS"

## PD Source

I read a let about public domain software but do not know how to avail myself of this service. Perhaps you could let me know via your postscript pages.

**Julia Howe**  
**Horsham, W. Sussex**

*Two addresses you might try are PD Software, Winscombe House, Beacon Road, Crowborough, East Sussex TN6 1UL, and The CP/M User Group, 72 Mill Road, Hawley, Dartford, Kent DA2 7RZ. In both cases, please send a stamped, addressed envelope for details.*

In the December issue of 8000 Plus it was stated that Prospell for the PCW 'doesn't offer you a suggested correction for the word in question.'

Well, not correct I'm afraid, as you must well know. Prospell does offer a LOOKUP option for all unrecognised words not found in the dictionary. Pressing 'L' for LOOKUP, will present a list of words that are considered to be the nearest match to the mis-spelt word in question. For example the word 'RIJE' will present the alternatives of RIDE, RISE, RIFE, etc. (Did you know that DROOL comes up with DROOP as a suggested word...hmm). Anyway, fair comments otherwise. We liked the 'PROSPELL clone' phrase!

Regarding PCW PROTEXT, you mentioned the publicity

**An alternative view**



photographs were very similar to the PROSPELL pictures. Yes very true, and we have included a photo of the same lady (from a different angle), for your readers to droop over. If you could please return the enclosed photo as we are planning to use MODEL UNIVERSE in attempt to rotate her through 180 degrees.

Keep it up!

**David Mendes  
Arnor Ltd**

*Sorry for the mistake over Prospell, and thanks for the photograph of Ms Simmonds, which certainly shows her in a different light. I can't see why you'd want to turn her round, though.*

**I'm losing my memory**

May I enquire, through your letters section, if any of your readers has encountered a similar problem to mine since fitting a memory upgrade to a PCW8256. My machine is one of the earlier models and since it involved some soldering I got a friendly Electronics Engineer to do the actual fitting.

It works beautifully when first switched on, '368k drive M:' every time, but if I clear the machine with [SHIFT][EXTRA][EXIT] it reverts to the old '112k drive M:'. In both cases the statement is correct. If I need the extra memory for a particular purpose then instead of clearing I have to switch off and then on again. Neither the supplier of the chips (Silicon City) nor Amstrad have any words of wisdom to offer on the matter so I am wondering if any of your readers might have any suggestions.

**B J L Smailes  
Gravesend, Kent**

*The only thing we can think of is the setting of the links on the main circuit board of old PCWs. If these aren't set correctly, they might produce the problems you describe. Has anyone any other suggestions?*

**Screen shots**

I am particularly interested in the TipOffs section, and read with great interest the tips for Mallard Basic. I wonder if any PCW owners out there could possibly let me

know how to clear the screen and 'home' the cursor?, as there is no 'CLS' command as on CPC machines. Also is there a way of doing a clear screen command in CP/M as with the IBM PC, i.e. 'CLS'?

**Andrew Sweetenham  
Beaconsfield, Bucks**

*You have to send 'Escape sequences' to the screen in order to clear it or home the cursor. The commands are PRINT CHR\$(27); "E" and PRINT CHR\$(27); "H", respectively. Note that the clear screen command doesn't automatically home the cursor. The other escape codes can be found on pages 139 to 149 of the manual.*

You can clear the screen from CP/M by pressing [EXIT]E ([EXIT] being the equivalent of Escape).

**The Cheap Solution?**

I wonder if you know of anyone who does a cassette interface for the PCW8256. I do have the memory upgrade to the 8512 and as my son would like to use it for games it occurred to me that they come much cheaper on cassette!!

I realise they will load much slower but once loaded presumably they will run as fast as from any other medium.

**Bob Woodhouse  
Nottingham**

*I'm afraid it isn't as simple as that. Even if you could get a cassette interface for the PCW, it wouldn't help you to run games. There are very few games available for the PCW series yet, and none of them are available on cassette.*

*Cassette games for other machines, of course, won't run on the 8000s.*

**Join the gang**

This is written on a fat Joyce, perhaps it will increase my chances of getting published? I wonder what percentage of your correspondence comes courtesy of Locoscript?

**Ken Dunn  
Southampton**

*No, it has no effect at all. About 90%.*

**Sandpiper replies**

I must protest against your factually inaccurate and editorially biased reviews of SANDPIPER SOFTWARE products in the November 1986 issue of 8000 Plus. Get your FACTS STRAIGHT before you print.

**SANDPIPER PAYROLL:**

1. Accommodates up to 399 departments - not 100 as stated.
2. DOES provide on screen review of payslip.
3. DOES allow amendments after payslips have been printed.
4. DOES print P45's.

That is 4 FALSE STATEMENTS made. Additionally, you forgot to mention the following pluses that SANDPIPER PAYROLL provides - you mentioned them as pluses for other software so we deserve the same treatment:

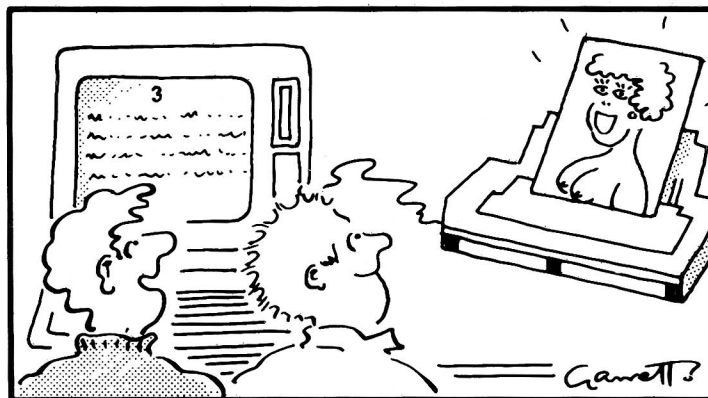
1. Cash analysis is broken down into departments.
2. System prevents re-use or amendment of leavers.
3. Same program available for PC machines and data transportable.

'The Good Software File' was another example of editorial bias. Several accounts packages were reviewed but what were found to be plus features on other packages were ignored when it came to SANDPIPER ACCOUNTS. Again, if features are pluses for other software then we deserve the same treatment.

**Donna MacKeith  
Sandpiper Software Ltd**

*Our apologies for the factual errors in the review of the Sandpiper Payroll package. In defence of our freelance reviewer, the demonstration disc supplied with the package was corrupted, and he didn't have time within the period of the review to obtain a replacement.*

*There is only limited space for details of each package in 'The Good Software File', and we try to highlight the most important points, both good and bad. As for editorial bias, we can't see what we would hope to gain by running biased reviews.*



"IT ALWAYS HAPPENS WHEN I PRINT OUT THE THIRD PAGE"

## Cop out

I have an Amstrad PCW8512 and am frustrated at the utilities mentioned partially by the manual accompanying the machine, which usually states: 'this utility is not covered any further in this manual', or 'further forms exist... but these are outside the scope of this manual'.

I would be very grateful if you could advise me of the best book to buy which will instruct me on the workings of CP/M Plus. I am as yet a novice, having started with the above machine, and all the information I have so far, I have obtained from the manuals and one or two magazines. I purchased a book called "Mastering the Amstrad", which was merely a synopsis of the manuals and added nothing to my knowledge of CP/M. I have seen other books on CP/M advertised, but am reluctant to buy one for fear of the same experience.

**M F G Walford**  
Isle of Skye

*One book which received a favourable review in our recent survey was 'An Introduction to CP/M Plus on Amstrad Computers' by P.K. McBride, published by Glentop. Modesty prevents me from recommending 'The Amstrad Disc Companion' from Sigma Press, which although not PCW specific, does cover most of the utilities in which you seem interested.*

## BASIC problems

I wonder if someone could help with the following:

(1) Is it possible to renumber line numbers when compiling a BASIC program (without editing each individual program line, that is)? A problem arose while copying a lengthy program from a book and finding that the first module had been numbered out of sequence with the rest of the program. The AUTO command is a great time saver, but if you edit a program while AUTO is running you have to reset it and can sometimes miss a cypher or two which completely scrambles entire sections of the program (does this make sense?).

(2) When typing in a program one often hits RETURN only to find that there is an error in the previous line. How can you edit this without going through the laborious task of cancelling AUTO and using the EDIT command (ie. is there any way of moving the cursor up a line or two to use the

## Accounting Society Accounts

Our society, which comprises approximately 400 students allocated across 70 or so firms, has a PCW 8256 which we presently use for letters and little else; we are looking for software which can perform the following:

1. Maintain the membership records, allowing easy update of new students and removal of students whose training contracts have expired. Thus we need to file, by firm, details of students names and training contract start/finish dates; also the address of each firm.

2. Produce annual invoices to each firm based on a fixed rate per student. Their invoices should list students by name and calculate the total amount payable by each firm.

3. If possible we would also like a sticky labels facility to assist our regular mail-outs to firms.

From various discussions which we have had, it would seem that a database could keep the records and perform the calculations, and one that has been suggested is 'Condor 1'. We have been advised that we would also need Pocket Wordstar, as Locoscript 'will not read ASCII files'.

Can you explain what exactly is an ASCII file, whether Condor 1 plus Pocket Wordstar is suitable, whether there are any other alternatives, and whether we will need to upgrade to two disc drives.

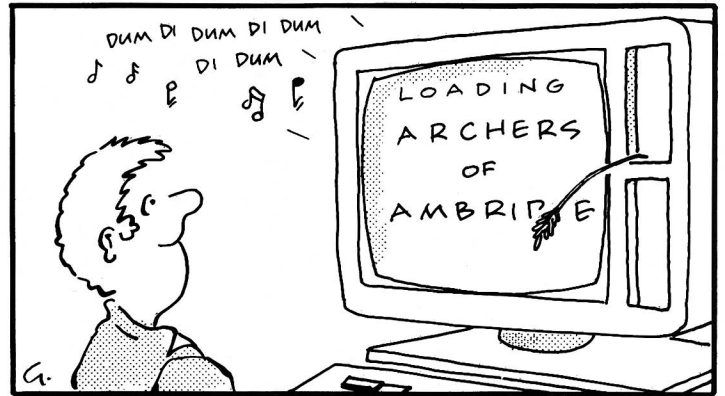
**David Eley**  
Southern Chartered  
Accountants Students' Society

DELETE keys etc.)?

(3) Where could one obtain a comprehensive guide to Mallard Basic? In the past I have used a ZX Spectrum etc. and find it a little confusing coming to terms with the different BASIC's!

**Paul Barrey**  
Brighton, Sussex

*The renumber command in Mallard BASIC takes the form RENUM new line number, old line number, increment, so RENUM 500, 100, 10 takes all the lines from 100 onwards and renumbers them 500, 510, 520 etc. I'm afraid there's no way out of the AUTO, EDIT, AUTO cycle. It looks like you are one of the unfortunate people who didn't get a BASIC manual with your PCW (a change of policy at Amstrad). I strongly recommend that you send £9.95 for a copy to Locomotive Software, 1 South Street, Dorking, Surrey RH4 2DY*



*An ASCII file is one without any of the special commands often used by word processors or other application programs. It can be thought of as a 'straight text' file. Pocket WordStar, which comes complete with the MailMerge program, could handle your mail shots, and labelling requirements. Condor 1 is a good database, but if your files are not too big you could try Cardbox or even First Base, which are quite a bit cheaper.*

## Whizz Kid

I write to tell you that I think your mag is brilliant. So good is your magazine that I am writing this lengthy letter. Yet I am not forty no, no I haven't reached that stage of maturing into adolescence. No I am afraid to say I am only twelve. So all those matured adolescents in 8000 Plus will not listen to my letter.

I know you are sitting at your Joyces trying very patiently to use them. I also sit at my Joyce but sometimes I stand and very maturely punch it. Though my temper is over-powering I'm still a complete genius (I get it from being modest). So far I've had two joys in life and they are 8000 Plus No 1 and 8000 Plus No 2 and they are superb. Could you imagine the joy when I read that the PC supplement will be gone by the third issue because quite frankly it was really beginning to annoy me.

Yes I am a very arrogant child but my parents cope very well. I looked very carefully at the good software file when I spotted a MISTAKE – yes it's true. Even I was shocked. The MISTAKE was that on one page in the games file it had Infocom games then further down it was Graham Gooch's Test Cricket. Then I read the same things which had been printed in last months issue and to my great surprise I found Infocom games then Graham Gooch's Test Cricket on the opposite page. Trying to sell

them quickly are we? (Twice is too much!) Please, please keep the Editorial rambling I love it! One last thing when will the information on advertisements arrive? We sent them off last month. Mind you my father rather stupidly ticked all boxes.

**George Donoghue Junior**  
Cumbernauld, Glasgow

*Editorial rambling! – what do you mean? It's a fair cop about 'The Good Software File'. This section of the magazine is produced using our beloved Macintosh (he says in a whisper) and someone inadvertently left old copy in the file. We don't have to plug Infocom games that hard, they tend to sell themselves.*

## Hear And There On You're Word Processor

These spelling cheque programs are awl very well but what sum people don't seem to realise is that if a word is mis-spelt for the meaning intended, butt is still a word with another meaning, the spell check device will knot detect an error.

Eye mean, you can't expect the computer to no, or even to now, what you are trying to say. Awl it can due is to sea weather the word you have typed is inn its dictionary and if it is, it clears it for publication without sew much as a bleep.

Sow, if you don't happen to now the difference between its and it's (and maw than half the population must be inn this category), you can bee assured your spell-check program knows know better.

Its knot that eye am against these programs. I'm shore they have some value in preventing typists from righting separte instead of separate and from committing other similar, frequently scene howlers. Their all so useful in signalling those many occasions when you transpose



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HiSoft also sells **Pascal80**, a standard Pascal compiler with GSX and interactive editing, **Devpac80**, a full Z80 assembler, monitor and editor and **HiSoft C**, a full K&R C except no floats or longs. These three packages are **£39.95** each. **Write Hand Man**, a pop-up desk accessory with a calculator, diary, notepad, phonebook and more, is **£29.95** and **The Knife** disc sector editor is **£12.95**.

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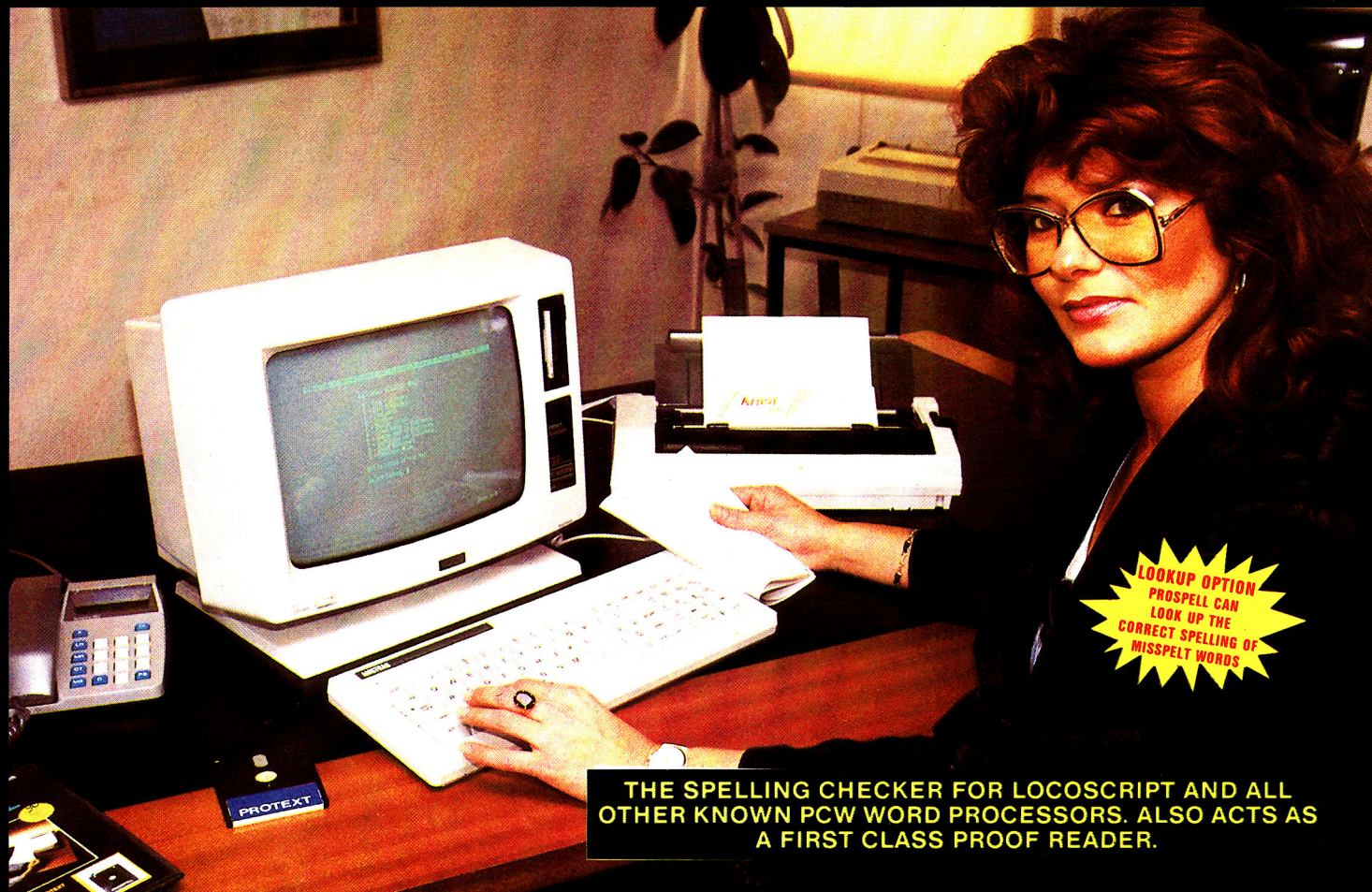
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