ISSUE ● NOVEMBER 1986 ● £1.25

8000 PLUS

THE MAGAZINE FOR THE

AMSTRAD

PCW 8256 · 8512

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AMSTRAD PC 1512

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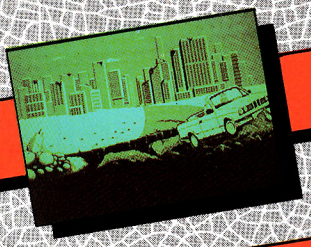

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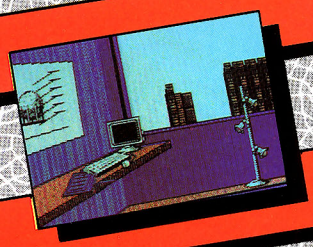

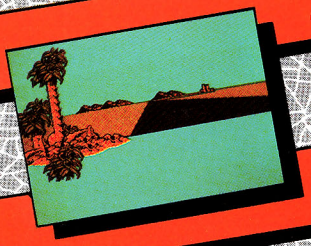

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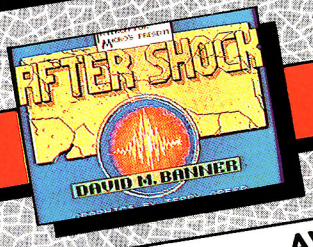



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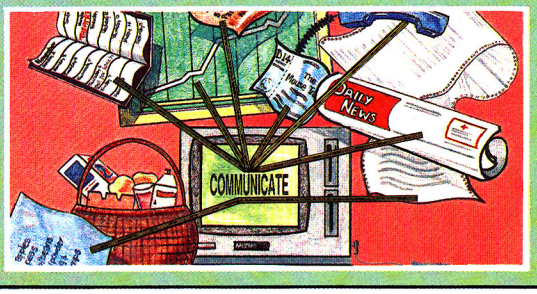

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63 PHONE CALL CALCULATOR
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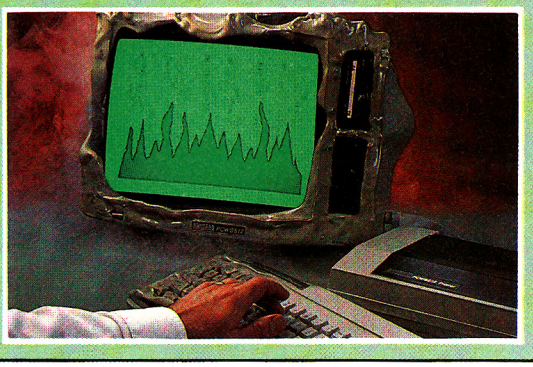

73 THE GOOD SOFTWARE FILE
This comprehensive guide to the growing range of software available for Amstrad PCWs provides a sharp, concise evaluation of the packages we consider most significant. Now split into three monthly sections, this issue's offering includes Accounts, Communications and Word Processors.

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We present remarkable bargain buys on the range of Caxton software. And ProSpell. And Electric Studio products. Not to mention Infocom adventures.

PC PLUS

AMSTRAD PC 1512

The most detailed review yet of 1986's most exciting new computer. Our special supplement starts on p43.

Create Superb Graphics On Your PCW 8256/8512

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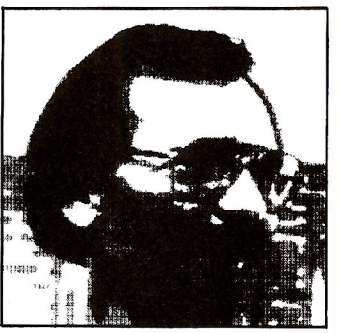

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The ultimate graphic input device which enables you to connect your Amstrad to a video recorder or video camera with a standard video outlet.

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We believe this is the first real time digitiser for a home micro that has an instant frame grab facility and certainly a product of this quality has never before been available at this low cost.

Choose from two models: PCW 8256/8512 (Model P8) CPC 6128 (Model C6).

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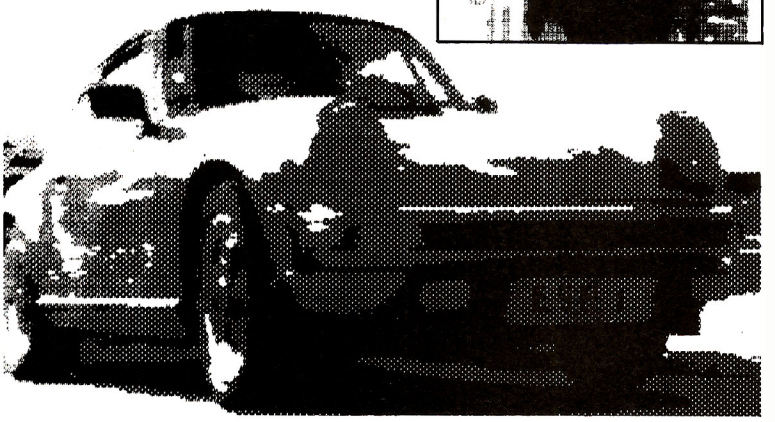

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WRONG, ALAN

At the launch of the PC1512, Alan Sugar was asked whether Amstrad could continue marketing the PCW range without a price cut. The answer was Yes, because the PCW was simply "a typewriter replacement", and therefore aimed at a completely different market.

In other words, Amstrad are now saying to the world, "If you just want a word processor, buy a PCW, but if you want a *computer* you'll need our new PC."

It's easy to see why Sugar has adopted this line – he wants to give his new baby every chance of success. And succeed it will. The baby is very, very beautiful.

But inspection of the facts suggests that the PCW may not abandon its computing (as opposed to word-processing) role quite as quickly as the new Amstrad marketing line would suggest. Examine the facts. Many people's computing requirements are straightforward. They don't need the latest technology or colour graphics or miraculous operating speeds or megabytes of memory. Just an established, proven piece of software running on a solid, reliable machine.

As thousands can testify, the PCW 8000 series can offer those users all they need, and for the same money as the equivalent 1512, you get a printer thrown in as well.

Sorry, Alan, but people are still going to buy PCWs for the reason you originally suggested. It's *more* than a word-processor.

The first week after a new magazine hits the newsstands is always a nervy time for the people who produce it. So we were pretty pleased when the mail started pouring in and early sales figures pointed to a virtual sellout of issue 1.

The questionnaires you returned made especially fascinating reading. You, our readers, would appear to be a pretty talented set of people – here, for example, are the occupations listed on a random handful: lecturer, civil servant, biology teacher, oil industry consultant, publicity manager, programmer, mathematician, surgeon, electronics engineer, company director, journalist, housewife, railway signal technician, research student, arms dealer, psychologist, priest, solicitor...and so it goes on. Haven't come across any of Alan Sugar's lorry drivers yet.

The impressive range of occupations is accompanied by the information that a large majority of you have both home and business uses for your computer. This encourages us. We have never liked the split some publishers have tried to impose between "user" magazines and "professional" magazines. And as far as PCW owners are concerned we would seem to be right. You want COMPLETE coverage of the machine in one magazine.

Among the other early questionnaire findings I can reveal that there are only slightly more 8256 than 8512 owners out there, that almost all of you are interested in doing more with your machine tham just LocoScript, that the suggestion of introducing a cartoon strip was greeted with horror (it won't happen) and, alas, that this page of editorial rambling was less popular than any other section.

So I'll shut up and let you get on with the issue.

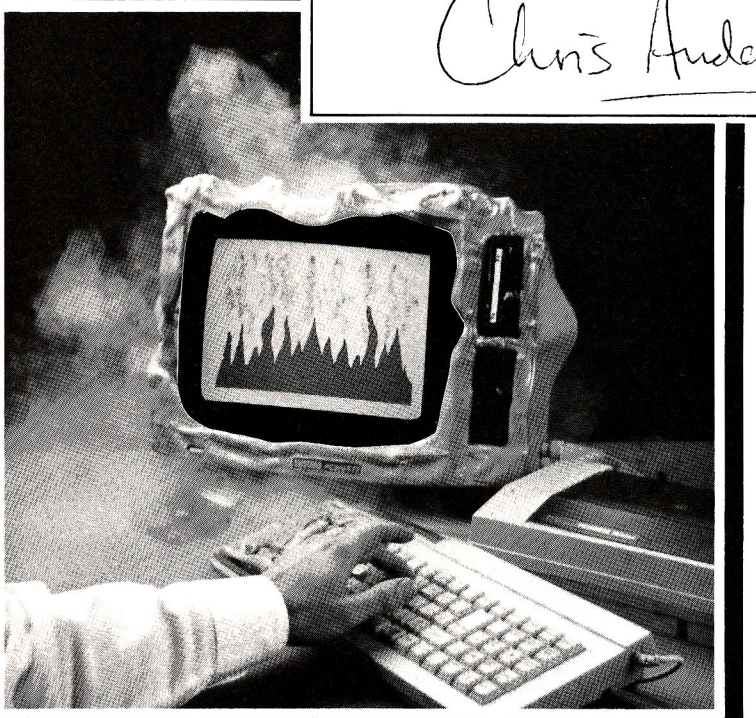
Chris Anderson

Melting Amstrad

This month's cover photo provides an interesting testament to the hardiness of the 8000 range. We picked up the machine during a visit to NewStar Software (thanks, boys), one of whose employees had managed to leave it behind in a house fire.

Imagine his surprise when, on plugging the thing in afterwards, it still worked! Well, the disc drives did seem rather ill, but the rest of the 8512 was quite happy. Were it not for the fact that a gaping hole at the back exposes one to risk of instant death by electrocution we might well still be using it. It matches the decor of The Old Barn rather well.

By the way, the flames on screen were produced using the Electric Studio Light Pen package.



◀ The machine in its original state at NewStar – used for testing hot software?

Robin, help!

Saturday 10am. Weekend work to try to finish writing issue 2. A call comes in from a reader. "Help! I bought *Batman* from you a week ago. I haven't stopped playing it. It's brilliant. But I'm stuck!"

It's the old story. The PCW bought for "word-processing only". A few months later, look what happens. It's turned itself into much more: business tool, entertainment machine, computer.

Never mind *Batman*, can anyone help *me* with Infocom's remarkable *Ballyhoo*? How do I stop the elephant squirting water at me? And what do I do with the cigarette packet?! Aaaargh!

£25 winners

The three people whose questionnaires from issue 1 came up lucky are housewife **Mrs C A Windmill** from Leeds, **Mr A J Withers**, self-employed, from Bury St Edmunds, and management student **Ross Maynard** from Hythe in Kent.

£25 vouchers are on the way to all three.

The DECEMBER issue of 8000 Plus is due in the shops on THURSDAY, NOVEMBER 20th. Why not ask your newsagent to reserve a copy!

Disc drive deluge

Suddenly expansion mania has gripped the PCW market. Last issue we carried a survey of expansion options for the 8256/8512, and since then even more products have emerged.

Silicon Systems (061 848 8959) have announced the UNIFACE, an interface for the 8256 that allows it to read any type of external disc drive, 5¼", 3½" or 3". It costs £49.95, and "anybody who can fit a mains plug will be able to fit the UNIFACE in less than 15 minutes," says their MD Tim Kay.

Coming soon will be a "mark II" UNIFACE, which will allow 8512 users to fit a 5¼" third drive. Also available will be a suitable disc drive unit, at £149.99, and murmurs of a cheap hard disc are in the air too.

Kintech Computers (0208 850176) are getting in on the act with a complete 8256 to 8512 upgrade kit at £159.99. For an extra £20 they will actually fit the upgrade for you by post – the turnaround time from arrival to despatch should be around 7 days. Prices include VAT, carriage and insurance.

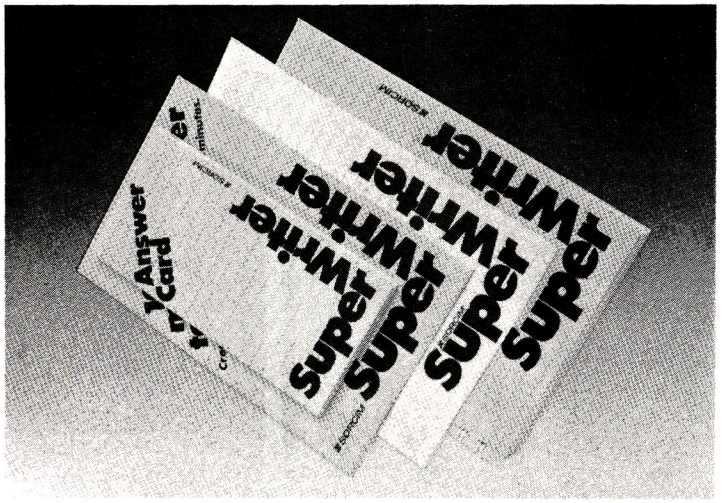
The hard disc front too is seeing a boom. After the Timatic WEB system last month, there is now a choice of two 10 or 20 Mb systems from ASD Peripherals.

A 10 Mb hard disc gives your PCW the storage capacity of around 60 ordinary floppy discs, which amounts to some 3000 pages of information. It cuts out the need to have lots of different discs floating around, and is just the same to use as a floppy disc except runs a good deal faster.

The prices of the two versions are £449 + VAT for the 10Mb, and £599 + VAT for the 20Mb. Details from ASD on 03224 49235/6.



▲ The UNIFACE interface and 5¼" drive from Silicon Systems



SuperWriter comes to a sticky end

The heavyweight wordprocessor *SuperWriter* has been withdrawn from the Amstrad PCW market.

Although it has proved very successful on other machines, such as the Apricot, Sorcim's Tony Beken confirmed that there were problems with the package as implemented on the PCW. He said "We've taken a business decision to withdraw it", meaning that at £49.95 the profit margins were not sufficient to justify further development investment.

The problems seemed to be mainly with the printer control facilities – trying to get fancy effects and run the mailmerger produced nothing but frustration. Users who have already bought SuperWriter will continue to get support for any trouble they encounter, although many people do not seem to have found any serious problems. Contact Sorcim on 0753 77733 for help.

Meanwhile, dedicated SuperWriter afficionados may be interested to know that a lookalike wordprocessor called *DMS80Word* is to be made available by Optronics.

DMS80Word is a new packaging of the venerable Magic Wand processor (which in turn spawned SuperWriter), specially customised for the Amstrad. Selling at £49.95, Freddie Nicholls of Optronics claims that it has all the features that made SuperWriter successful and a good deal more. Optronics can be found at the end of 01-892 8455.

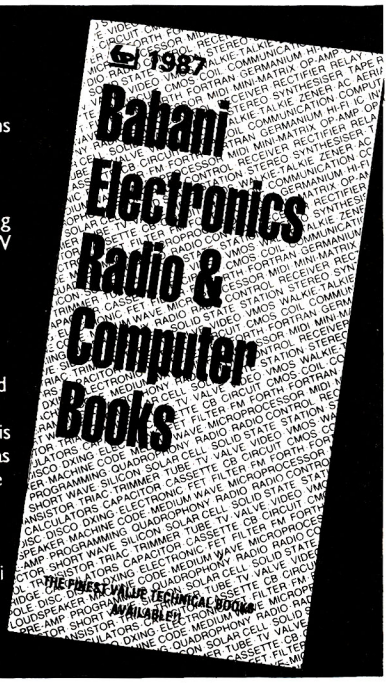
B-b-books-by-Babani

Prolific technical publishers Babani Books have just released their new catalogue, which contains some items of interest to PCW owners.

In addition to their established LocoScript primer "A Practical Reference Guide to Word Processing on the Amstrad PCW 8256 and PCW 8512", there is a new 256-page offering about Basic and Logo programming specifically on the PCWs.

"Getting Started with Basic and Logo on the Amstrad PCW 8256 and PCW 8512" by F.A. Wilson costs £6.95. Like the other PCW book, it is a large format publication, which was probably the only way to fit the title on the cover page.

Babani are offering to provide a free catalogue, for which send your name and address to Bernard Babani (Publishing) Ltd., The Grampians, Shepherds Bush Road, London W6 7NF (Tel. 01-603 2581/7296).



Vicarious pleasures

Iansyst have launched an intriguingly named program *The VICAR*, which they say will be an indispensable tool for programmers of all denominations. "Variables In Context Analyst and Reporter", to give it its full name, is a software maintenance and debugging utility for large programs.

If you've ever tried to write a program of several hundred lines, or even worse to modify someone else's program, you will know how necessary such a thing is. Look for a variable that you need to edit, and suddenly it has mysteriously vanished from the listing, even though it was definitely there 5 minutes before.

Aside from fire-fighting on programs that haven't stuck to the best principles of structured programming, the VICAR can also, it is claimed, help with writing maintenance documentation for all programs.

Another advertised feature is the ability to cross-reference program source files to list everywhere a variable is used, together with its context, so you can safely make changes that affect the variable. It is available for a variety of programming languages, including Basic, Pascal, dBase II and C.

Prices on the Amstrad PCWs are £29.95 for any of the language variants. Contact Iansyst on 01-607 0187 for details, plus hot news of versions upcoming for other languages.

PICTURE THIS!

Electric Studio have announced a price for their new digitizer which will allow you to put video pictures directly onto your computer screen. It's to cost £99.95 and should be available by November after being previewed at the October Amstrad show.

The digitizer plugs into your PCW's expansion port and has a standard video connector for linking up to a video camera or recorder.

Pictures from the source will then appear on your monitor, and you can use the digitizer to "grab" frames and store them. These can be edited by you at will, using for example the Electric Studio lightpen or mouse. Gives you unprecedented power over your favourite TV characters.



Produced using the Electric Studio ▶ digitizer.

Saxon offerings

The database and word processor package *Flexifile/Flexiwrite* from Saxon Computing (also marketed as *Microfile/Microword* by Amsoft) is to get a new look.

Saxon have announced the *Micro Collection*, which, conforming to Amsoft's naming policy, contains the programs *Microfile, Microword, Microcalc, Microlabel* and *Lock-it*. The whole bundle will sell for £49.95, which used to be the original price of *Microfile* and *Microword* alone.

As the individual program names suggest, the suite provides a database, a word processor specially designed for mail-merging and use with that database, a spreadsheet, and a label printing program. The final item, Lock-it, is an encryption utility to protect your valuable database files so that they are safe from your deadliest enemy's prying.

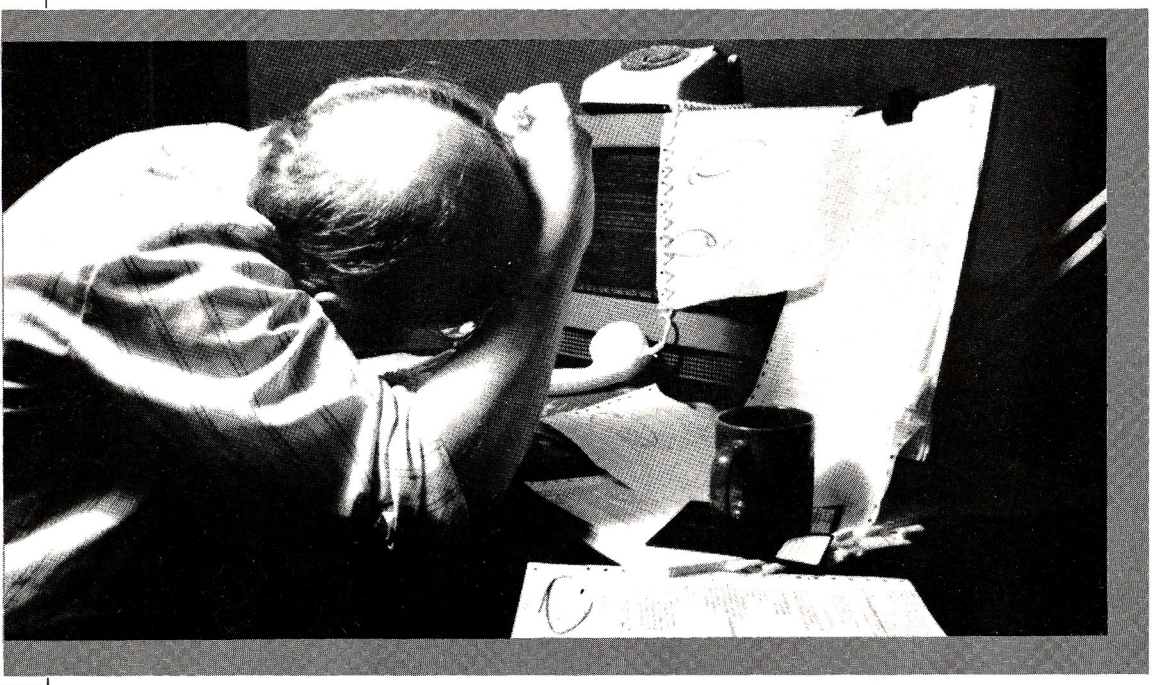
Saxon's David Robinson is aware that existing owners of Microfile/Microword who paid £49.95 for those two alone might feel a little miffed at missing out on the other three programs. For these users, the extra ones can be purchased "at a nominal cost" from Saxon – stake your claims on 0401 50697.

Telephone spy shock!

SC Telecom have developed a package for the PCW 8512 which they claim will cut telephone costs in an office by 15 or 20%.

The package comprises a suite of programs that constantly log all telephone traffic through a company's exchange, and generate a range of reports. For example, a list of calls made from any extension can be printed showing the date, time, cost and number dialled – quite a disincentive against making that illicit hour-long call to your Australian girlfriend. The program also includes options to cover the various electronic mail services available.

The phone call logger is available on rental terms, and costs from £13.95 for small exchanges. You can find out more about it from S.C. Telecom at 0245 87164.



Discs for the 8512

Amstrad have had a rethink on the kinds of discs that suit the two different disc drives on the PCW 8512.

Previously there have been two kinds of disc: "CF-2"s for the top drive, and slightly costlier "CF-2DD"s for the lower drive. Both discs were physically the same, with the CF-2DDs being in theory manufactured to a higher specification for the requirements of the double density B drive.

However, Amstrad now say they are satisfied that CF-2's are good enough to work in both drives, and the special CF-2DD's are redundant. Even CF-2's that were bought before the CF-2DD's were dropped are of a high enough quality to work in the PCW8512's B drive.

As ever though, once you have formatted a disc for one drive, you will not be able to use that disc in the other one.

Desktop Publishing

• The new Mirrorsoft package can combine text and graphics



Mirrorsoft are shortly to release their desktop publishing package *Fleet Street Publisher* for the Amstrad PCW computers. This is a new version of the package being developed on other micros called *Fleet Street Editor* – the change in name reflects its more sophisticated facilities with the ability to handle multi-page publications.

Desktop publishing was made famous by the Apple Macintosh, and allows users to lay out and print magazine-style pages directly on their microcomputers without going through the traditional typesetting and graphics design stages. Text from a wordprocessor and graphics diagrams can be intermixed and arranged in several columns on a page.

With Fleet Street Publisher, output can either go to the standard Amstrad printer, or for high quality results that will virtually match proper typeset text you can use a variety of laser printers, such as Hewlett Packard's. Mirrorsoft (Tel 01-377 4645) say that Fleet Street Publisher should be available by November but the price has yet to be fixed.

Getting personal

Proteus Computing have come up with *Qmail*, a new mailmerger package for LocoScript users which aims to provide a few facilities that LocoMail overlooks.

Mailmerging is the process of running off multiple copies of mailshots, each one personalised to "Dear Mr. Smith" or whoever according to your mailing list. In the last issue of 8000 Plus we looked at four such packages, and Qmail's claimed specificationcompares favourably, although it won't run actually from within *LocoScript* like *LocoMail* does.

Qmail is specifically aimed at LocoScript documents, and won't process ASCII files from other word processors. It can cope with most of LocoScript's range of print styles, and sells for £29.95.

Christian Allwood, Proteus' marketing man, said that its main advantage over *LocoMail* was in its database facility. "Databases are an essential part of a mailmerge operation, and while LocoMail is great for simple address lists, Qmail is much more flexible for advanced applications." Proteus are at 01-748 2302.

Accounting for taste

Elite Systems (0922 55852), best known for their games software, are distributing some sophisticated accounts software for PCW users from AXIS business systems. Axis is described as a multi-user integrated business system.

Revamped At Last

At Last, the database system from Rational Solutions, is to get a facelift as it starts a new life being distributed by Advance Software Promotions.

Previously selling for £49.95, the price has now been cut to £29.95. In addition to some software amendments, a specially written new manual will go out with all copies of the program, which is good news for all those who have struggled in the past.

Contact Robert Stallibrass at ASP on 0279 22846 for further info.

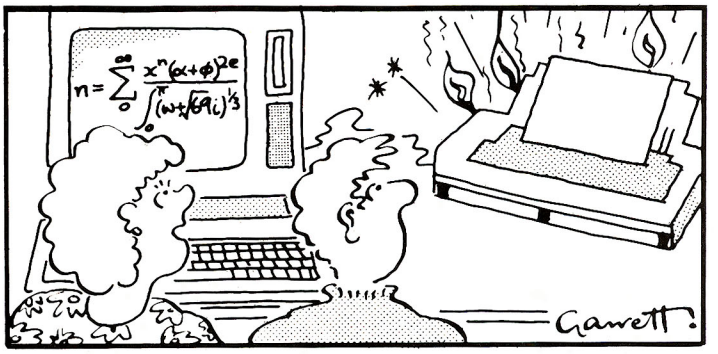
Jolly good adventure

St. Bride's Chronicle

St. Bride's software house, authorettes of those jolly text adventures like *The Secret of St. Bride's*, are girding their hockey sticks for an attack on the Amstrad PCW market.

Priscilla Langridge says that *The Secret of St. Bride's* itself is "a schoolgirl novel on a computer", and the PCW version is entirely rewritten and expanded from any that may have gone before. Audiogenic are doing the distribution.

Also looking set to join it, and distributed by CRL, is something called *The Very Big Cave Adventure*. Mmm, can't think what that one's about. If you want to find out, ring St. Bride's Schoolhouse on 010 353 75 42030 – it's an Ireland number.



"THE COMPUTERS MANAGED IT O.K. BUT I'M AFRAID THE PRINTER ....."

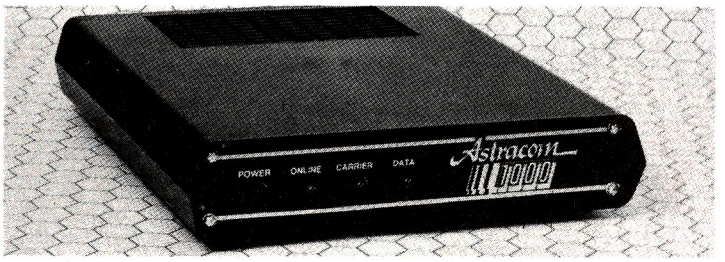
Mouse and Joystick

Kempston Microelectronics of Bedford have developed two products for the PCW machines, a mouse system and a joystick interface.

The mouse has two button and is optically controlled, and manages a pointer arrow on the screen. It comes complete with "desktop" software which allows the user to treat the PCW screen as if it were a drawing board, using the mouse to point to and manipulate items on the screen.

The mouse uses the same basic operating software as supported by Mirrorsoft's *Fleet Street Publisher* and Nabitchi Computing's *EXBASIC*, so it looks set to become a standard. the Kempston mouse costs £89.95.

Their joystick interface fits onto the expansion port at the back of the PCW, and incorporates a standard joystick D connector. It sells at £14.95, or £29.95 including a "high quality arcade-type joystick". All enquiries to 0234 219106.



▲ The Astracom 1000 Modem

Modem mania

Communications is a rapidly expanding area, as proved by the increasing number of products and services based around it. This month sees three new modems coming on the market, one from Astracom and two from Tandata.

For the technically minded, The Astracom 1000 is a V21/V23 Hayes compatible modem. It sells at £145 + VAT, and boasts auto-dial, auto-answer and centronics printer facilities, and the software is sold separately at around £25 + VAT. A low cost V22 upgrade at around £100 will be available later in the year. Astracom are on 0792 473697.

Tandata are offering two packages for PCW owners. Their Tm110 V23 modem, complete with Chit-Chat viewdata software sells for £172.50, while the Tm512 V21/V23/V25bis Hayes compatible modem with Chit-Chat Combo software goes for £299. Both prices include VAT. Contact Tandata on 06845 68421.

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PAYE ON A PCW

Amstrad-owning accountant DAVID ADAMS explains what to look for in a payroll package and compares the six programs available on the 8000s.

For a small company the payroll is often a source of aggravation, not only because it represents a lot of money being paid out of the business, but more because of the hassle over calculating tax, national insurance and the dreaded Statutory Sick Pay (SSP).

Putting your system onto an Amstrad will put an end to the calculations and can offer other benefits too: One very time-consuming element of a manual system which is often overlooked is the time spent in producing the annual returns and then even more time in balancing them. And when payroll is calculated manually it usually means that only one person has the necessary experience to do the work, but with a good computer system the actual operation is made simpler and is therefore more easily understudied.

Certainly, there are a number of bureaux who can take over the job but it is rather expensive and usually means that as well as being out of the business's control, the wages are prepared a week behind.

For these reasons payroll is often one of the first tasks considered for computerisation but like any other project it is very important that all requirements are studied first.

On the face of it, all that is needed is a simple program to calculate gross pay, work out the tax and insurance and print a payslip. In practice a lot of other items need considering: Will pay be weekly, fortnightly, monthly or 4 weekly or even a mixture of all these? How many overtime rates are paid? What is the maximum number of employees? Is there a need for departmental costing and if so over how many departments? Etc, etc...

MAP PAYROLL

Supplier: MAP Computer Systems (Tel: 061 624-5662)

PLUSES

- Can amend and rerun at any stage (even after printing payslips)
- Cash analysis is broken down into departments
- System prevents re-use or amendment of leavers
- Facility to hold up to 40 standard hourly and weekly wage rates

MINUSES

- No SSP calculation facility (although there is provision to record amounts paid)
- Programs necessitate a lot of disc swapping
- Automatic amendment of tax code changes does not print record of alterations made

RANGE OF FEATURES	■■■□□	DOCUMENTATION	■■■■■
EASE OF USE	■■■■□	AUDIT TRAIL	■■■■□
OVERALL SPEED	■■■■□	VALUE FOR MONEY	■■■■■

CAMSOFT PAYROLL

Supplier: Cambrian Software (Tel 0766-831878)

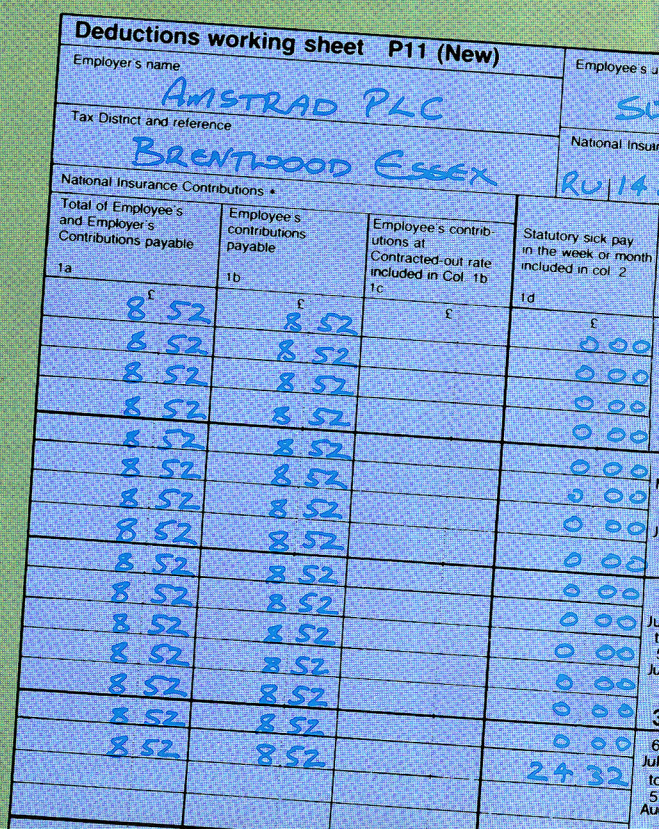
PLUSES

- Full payslip details displayed on screen and any item can be amended immediately – when accepted the payslip is printed at once with an optional file copy.
- Facility for free-hand narrative on any payslip
- Uses M drive for programs to speed operation
- Built in on-screen help facility
- Selective search and sort routine for output to screen, printer or disk
- Uses alphanumeric employee codes

MINUSES

- Screen menus somewhat untidy and sometimes difficult to follow
- No listing of cheques

RANGE OF FEATURES	■■■■□	DOCUMENTATION	■■■■■
EASE OF USE	■■■■□	AUDIT TRAIL	■■■■□
OVERALL SPEED	■■■□□	VALUE FOR MONEY	■■■■□



So in selecting a paroll program you must check its features carefully against your own requirements, bearing in mind the following:

When calculating the number of staff on the payroll it is important to remember that it is essential to keep records for each employee until the end of the tax year. You should therefore take into account the likely number of staff who will leave in the year as well as those who are already employed or will be engaged.

On a manual system all pay records are easily available for future reference. Because of the space considerations on small computer installations not all systems keep records on disk of the weekly pay history and if this is the case it is important to take and keep comprehensive print-outs for each pay period and for each employee.

Features to look out for

Some systems print the **payslips** on to plain paper and some require special preprinted stationery. While plain listing paper is very cheap and a typical cost of special stationery is £40 per thousand, it is necessary to take into account the extra time for the printer to fill in all the extra headings etc on plain paper. Certainly for the small payroll it can be quicker and cheaper to use plain paper but for the larger business the extra printing cost is likely to be quickly recovered by the reduction in printing time.

If a number of staff are paid a standard wage or salary some systems can be set to run these automatically with no need for any operator input. While running the payroll, mistakes can easily be made and where on a manual system silly net pay figures would be spotted this is not always the case when computerised. A system that **displays** the gross and net pay on screen before the point of no return or allows the pay to be rerun after printing payslips can save a lot of consequent embarassment as well as a lot of time. With some packages the only way to correct a major mistake once the payroll has been updated is to return to the last backup and run the payroll right through again.

Another option which can be very useful is that of **cash rounding**, where the net pay for all cash paid employees can be calculated to the nearest round figure (typically 10p, 50p or even £1) with the balance being carried forward to the following week. This not only

COMPACT PAYROLL

Supplier: Compact Software Ltd (0306 887373)

PLUSES
- Supplied with test data
- Good facility to change employees tax codes following budget
- Can run payroll for several companies
- Same programs available for PC machines and data transportable

MINUSES
- Must be run from original disks
- Programs spread over 2 sides of a disk and run in BASIC
- Needs use of data input form and calculation of a check digit for each employee processed
- Once payslips are printed there is no chance of changing anything
- Most expensive program tested

RANGE OF FEATURES	■■■■■	DOCUMENTATION	■■■■■
EASE OF USE	■■■■■	AUDIT TRAIL	■■■■■
OVERALL SPEED	■■■□□	VALUE FOR MONEY	■■■□□

SAGESOFT POPULAR PAYROLL

Supplier: Sagesoft (091-284-7077)

PLUSES
- Any or all employees payroll can be rerun at any stage up to final update
- Full pay history available for all employees and leavers
- Calculates average pay for holiday pay etc
- Very easy to install

MINUSES
- Limited number of additions/deductions
- Doesn't print a list of cheques
- No analysis of additions/deductions

RANGE OF FEATURES	■■■□□	DOCUMENTATION	■■■■■
EASE OF USE	■■■■■	AUDIT TRAIL	■■■■□
OVERALL SPEED	■■■□□	VALUE FOR MONEY	■■■□□

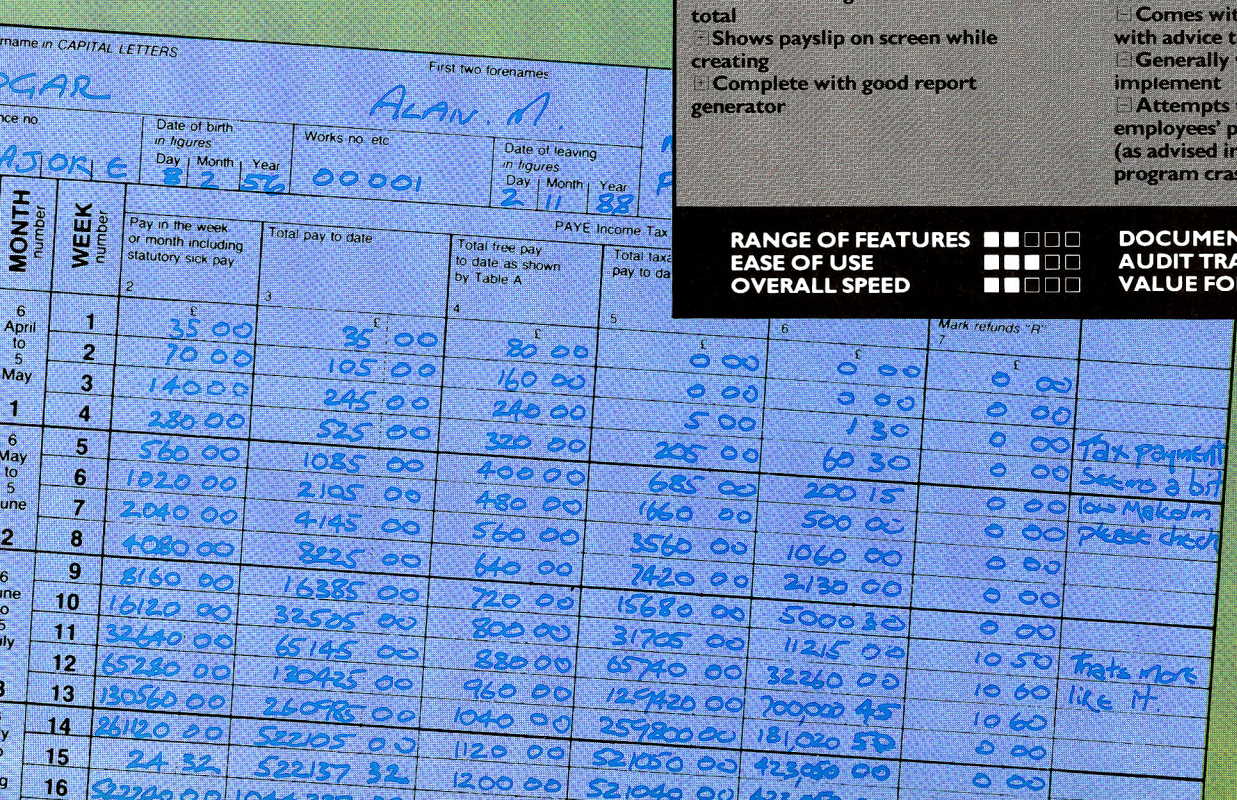
COLLEEN PAYROLL

Supplier: Colleen Ltd (Tel: 0443 434846)

PLUSES
- Comprehensive employee details
- Calculates wage rates from an annual total
- Shows payslip on screen while creating
- Complete with good report generator

MINUSES
- Runs in BASIC and menu selections involve a lot of responses
- Comes with Tax & NI details blank with advice to look up details!
- Generally very complicated to implement
- Attempts to amend individual employees' pay after an automatic run (as advised in the manual) caused a program crash

RANGE OF FEATURES	■■□□□	DOCUMENTATION	■■■□□
EASE OF USE	■■■□□	AUDIT TRAIL	■■□□□
OVERALL SPEED	■■□□□	VALUE FOR MONEY	■■□□□



saves a lot of time in counting cash but can also save the weight of cash to carry from the bank.

With the recent changes in legislation, **SSP** has been extended and in certain circumstances one Period of Incapacity for Work (PIW in civil service language) can now last as long as three years. It is therefore important that any payroll system can cater for SSP either complementary to a manual recording system or preferably to replace manual attendance records. It is essential that good records are available for audit purposes so payroll package should be able to provide good hard copy.

While most packages will happily cope with the normal range of National Insurance codes, none of those tested cater specifically for **directors** of a limited company for whom there are special methods of calculating deductions. In practice if a company pays its directors a regular modest salary there is no problem but if the salary is supplemented by large bonuses or varies widely over different periods it is necessary to adopt the special procedures and this should also be considered before buying.

A facility found on some programs is that for automatically **amending employees' tax codes** following budget changes. For example, following the last budget, the "L" and "H" codes were increased by 13 and 20 respectively and on some systems it would be necessary to amend each employee record manually, not only time consuming but also prone to error. On an automatic system the only requirement is to tell Joyce how much each code should be increased and go and make a cup of coffee while the job is done for you.

With successive Chancellors usually finding reason to make major changes in either tax or National Insurance at budget time it is also important to take a **support contract** with the software suppliers so that changes which might involve modifications to the program as well as the basic parameters can be implemented without problem.

SANDPIPER PAYROLL

(single-drive version)

Supplier: Sandpiper Software (Tel: 0978 358832)

PLUSES

- Simple to install
- Uses M drive to speed operation
- Holds comprehensive SSP records

MINUSES

- Can only process 1 department at a time
- Amendment routines very tedious
- To set up system it is necessary to phone Sandpiper with a set of check digits and obtain password to personalise disk
- Separate data discs for weekly & monthly employees

RANGE OF FEATURES	■■■□□	DOCUMENTATION	■■■□□
EASE OF USE	■■■□□	AUDIT TRAIL	■■■□□
OVERALL SPEED	■■□□□	VALUE FOR MONEY	■■□□□

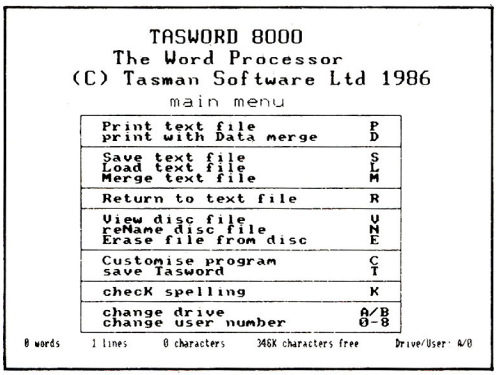
PAYROLL PACKAGES COMPARISON TABLE

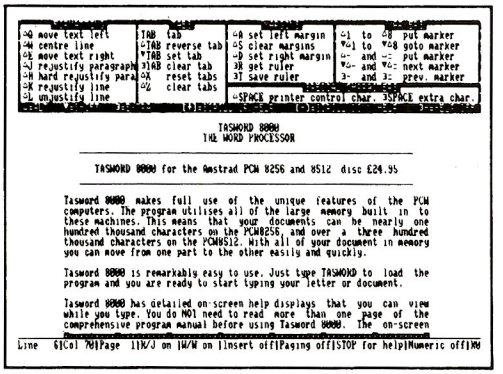
	COMPACT	SAGESOFT	COLLEEN	SANDPIPER	CAMSOFT	MAP
Price	£99.95	£69.95	£29.95	£79.95	£49.95	£49.00
Length of free support (days)	30	90	14	90	90	30
Cost of annual support	£56.93	£40.00	£29.95	£40.00	£39.95	£50
No. of companies	99	No limit	No limit	1	No limit	1
No. of employees/disc	1000[1]	300	100 (8256)	400	3953	940
Number of departments	99	9	10	100	20	99
Number of overtime rates	3	3	4	6(preset)	3	4
Maximum additions/deductions	18	8	2	13	15	16
Preprinted payslips required?	YES	YES	NO	NO	NO	YES
Copy payslips produced	YES	YES	NO	NO	YES	YES
Calculation of SSP	YES	YES	YES	YES	YES	NO
On screen review of payslip	NO	YES	YES	NO	YES	NO
Amendments after p'slip printed	NO	YES	NO	NO	N/A	YES
Cheque/Giro printing	YES	NO	NO	YES	NO	YES
Cash analysis print	YES	YES	YES	YES	YES	YES
Net pay rounding	YES	YES	NO	NO	NO	NO
Sickness attendance recording	YES[1]	YES	Manual	YES	NO	NO
Tax code changes in bulk	YES	NO	NO	NO	NO	YES[2]
Weekly pay history on file	YES[1]	YES	NO	NO	NO	NO
End of year summaries printed	YES	YES	YES	YES	YES	YES
P45 detail printed for leavers	NO	YES	YES	NO	NO	Scrn only
Contracted out N.I.	YES	YES	NO	YES	YES	YES
Directors Nat. Insurance	NO	NO	NO	NO	YES[3]	NO

1. Depending on the number of periods for which sickness and pay history is required. It is possible to keep them for all periods at the expense of number of employees held. If space is short it is possible to print the records for filing and then delete them from disc to release more space.
2. Can amend employee codes but – unlike Compact – does not produce a printed record of amendments
3. There is a manual over-ride facility on Tax and NI.

TASWORD 8000

THE WORD PROCESSOR FOR THE AMSTRAD PCW 8256 AND 8512





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TASWORD 8000 is fast! With all of your document held in memory at any one time, there is no need for the program to access the disc as you move through your text. Cursor commands allow the user to move through the text both easily and quickly, even with very long documents. TASWORD 8000 allows you to move rapidly to the start or end of your text and to ANY line or page number.

TASWORD 8000 is remarkably easy to use. You can view detailed help displays AT THE SAME TIME as you are typing. The detailed manual and the interactive TASWORD 8000 TUTOR supplied with the program mean you can be producing quality documents immediately – you only need to read one page of the comprehensive program manual before using TASWORD 8000!

TASWORD 8000 includes a sophisticated set of print options which allow you to print any part of your document, automatically number pages and print headers and footers. Printing multiple copies of a document is easy – just enter the number of copies required. TASWORD 8000 can be used to take full advantage of ANY printer connected to the PCW via the Amstrad parallel/serial interface.

DATA MERGE. TASWORD 8000 includes the powerful Tasword mail merge facility. You can store a list of names and addresses on disc and Tasword will print your letter, each individually addressed, to each of your intended recipients. The TASWORD mail merge is open-ended and flexible – storing names and addresses is just one application. Printing can be made conditional: just send a letter to addresses in London, for example.

TASWORD 8000 includes two of the unique TASPRINT 8000 fonts (Lectura Light and Median). This gives you two new unique typestyles on the PCW printer. The TASPRINT fonts give your printed documents a very special appearance and have great impact when used for headings within your text.

With these, and a host of other useful features such as a permanent word count, TASWORD 8000 is a fast and flexible approach to word processing on the Amstrad PCW 8256 and 8512.

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TASPRINT 8000 for the Amstrad PCW 8256 and 8512 disc £14.90

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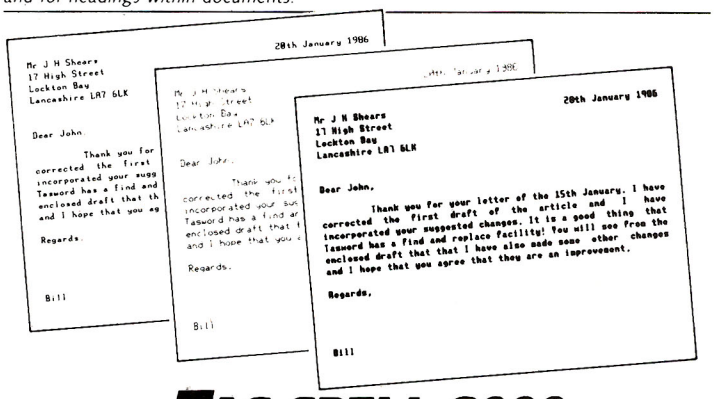

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All TASMAN 464 software is fully compatible with the 664 and 6128

All prices include VAT, postage and packaging.

EXAMINATION TIME

Educational software has been a controversial area in the past, often giving poor value for money to both suppliers and purchasers.

Many programs are just lists of questions. Computers are ideally suited to this, and can make taking tests fun. But when you compare the number of questions in a £20 program to the number of questions in a £5 text book, it's easy to see why schools are cautious about the value that such software provides.

The advent of the PCW has revolutionised software prices in most areas, so what's happening in education? This month sees three new programs out: two from School Software, and one from LCL. We take a look at these, and also at Bourne Educational Software's range available for the PCWs.

CHEMISTRY
BIOLOGY

£12.95 each ● School Software ● Target age: 12-16

Teacher! Teacher!

If you are a teacher and you use computers as aids, or if you don't because they just aren't suitable, write and tell us what it is you demand from a program. Tell us what particular packages you use, or which ones you've thrown away in disgust. We'll spread the word, and hopefully there'll soon be an improvement in the range and quality of educational software available.

Two programs that cover a range of O-level topics in 8 or 9 sections each, with 10 questions per section. Rather than being a multiple choice test, the questions are the fill-in-the-blank type. If you get the answer wrong at first, you are given a "clue", which is the first two letters of the correct answer.

In addition, before you start on a topic's questions you have the option of reading a screen or two of short notes about it. These are necessarily brief, but at least get you in the right frame of mind.

The questions are of a generally advanced standard, although *Chemistry* is hindered by the fact that all the numbers in formulae come out garbled on the PCW screen.

There are some problems over the basic design – Different examining boards have different syllabuses, and different teachers have their own styles, so the chances of a job lot of 100 questions being ideal is small. There ought to be some provision for adding in new questions to the program.

Secondly, fill-in-the-blank questions are error prone. There are frequently several "right" answers, for example do you type "reactant" or "reagent", and the chances of being marked correct by the program is then down to pot luck. This of course is on top of the issue of typing errors and spelling mistakes; unless students can be relied on to always spell "chromatography" and other technical terms correctly, their marks will be unfairly lowered.

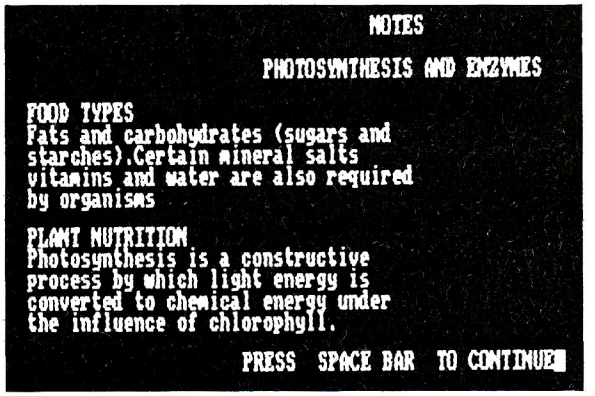
All in all, these two programs are very ambitious in terms of the range of topics they try to cover. If the questions covered suit your needs, you'll like them, otherwise not. They are supplied without any documentation other than loading instructions on the grounds that the programs are self-explanatory, and at £12.95 they are very reasonably priced.

Chemistry's version of formulae. ▶



PLUSES	MINUSES
⊟ High standard of questions for O-level	⊟ Poor method of posing the questions prone to errors
⊟ Preamble notes introduce a topic before the questions	⊟ No flexibility to add questions for a particular syllabus
	⊟ Formulae are garbled in *Chemistry*

RANGE OF FEATURES ■■■□□ OVERALL SPEED ■■■■□
EASE OF USE ■■□□□ DOCUMENTATION □□□□□
8000 PLUS VALUE VERDICT ■■■□□

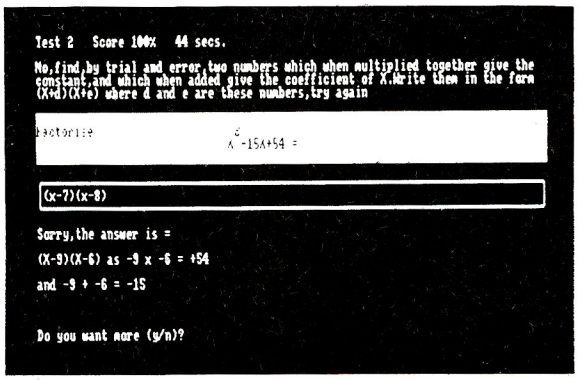


A sample of the preamble notes from *Biology*.

MICRO MATHS

£24.95 ● LCL ● Target age: 8-Adult

The help that *Micro Maths* provides after a wrong first attempt.
The answer appears after the second failure.▶



The recommended age range seems very wide – this is really an O-level maths package, covering 24 topics from Fractions to Differential Calculus. You'd be a precocious eight year old to get these questions right.

Within each topic, questions are picked at random from a pool, so although it never stops asking questions, you do get repeats sometimes (which maybe is no bad thing for the less able).

Replies to questions are typed in mathematical notation, using x↑2 to represent x-squared and so on. There is some flexibility in answering, for example if a reply was x+3, then 3+x would be equally acceptable. If you get a question wrong, you get a surprisingly well tailored reminder of the relevant basic principles, and a second chance.

One nice feature is that you can pause and use the PCW as a calculator while pondering an answer. In fact

this is a bit of a cheat, since it stops the program, dumps you in BASIC where you can type ?2+2 or whatever, and leaves you to type CONT when you want to resume.

LCL have built a few bells and whistles (literally) into Micro Maths to make it a bit more interesting. Some are nice, such as a tidy screen layout with reverse video text, but others like long piercing beeps when you get a question right, and a clock that runs 4 times too fast, are not.

Finally, as a palliative to the slightly high cost, you get a book thrown in free. "O Level Mathematics" by RH Evans contains 50 AEB syllabus questions with worked answers.

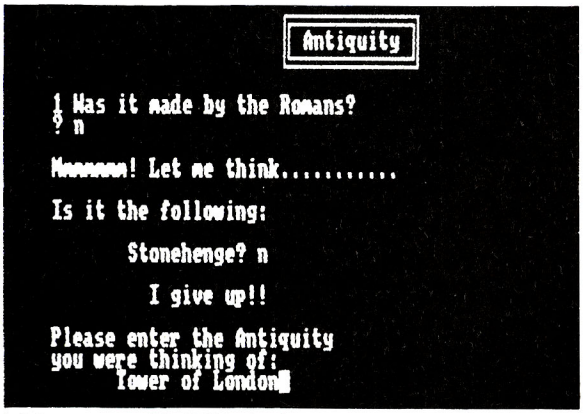
All in all, quite a professional program, although the price is higher than its competitors. Well worth looking at for O-level revision classes.

PLUSES
- Can pause to use Basic as a calculator while thinking
- "Unlimited" question set
- Comes with a good (but unrelated) book
- Good explanations act as hints after wrong answers

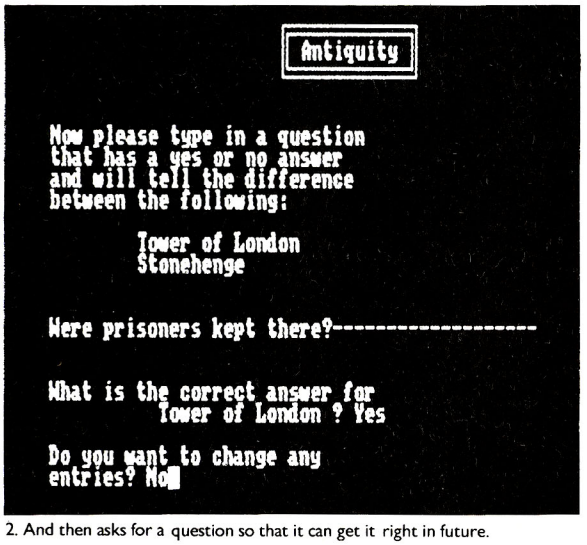
MINUSES
- Questions in a topic repeat occasionally
- Some frills (like clock and beeper) annoy
- No flexibility to add questions for a particular syllabus

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

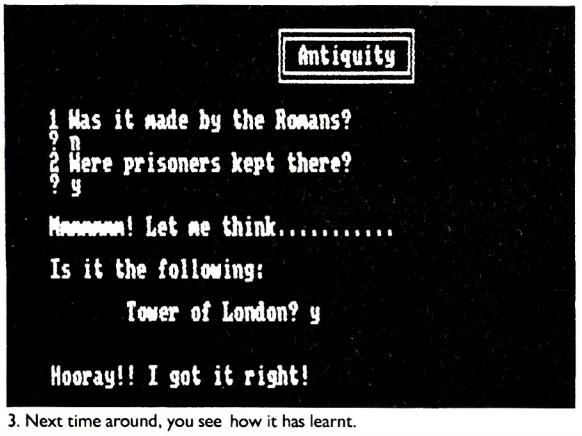
8000 PLUS VALUE VERDICT ■■■■□



1. When you stump World-Wise for the answer, it asks for the correct one.



2. And then asks for a question so that it can get it right in future.



3. Next time around, you see how it has learnt.

WORLD-WISE ANIMAL/VEGETABLE/MINERAL

£14.95 each ● Bourne Educational Software ● Recommended ages: 7-15

These two programs are based around the same central idea. The child thinks of an object and the program tries to guess what it is by asking a series of yes/no questions.

The programs begin with the bare minimum of stored objects and questions – but the idea is that the child can "teach" the program by typing in the correct answer when the program gets stuck and then adding a yes/no question which would have identified the object.

World-Wise is all about geography, and has a UK and a World section. The UK section has 10 general topics, such as counties, towns and antiquities, and the World section has 10 more topics including capitals, flags and countries. For each topic, World-Wise knows just two examples at the start, and one question to distinguish between each pair.

Animal/Vegetable/Mineral deals with, not surprisingly, its three eponymous categories, and again it begins knowing two examples of each and one question to separate them.

When the program runs, it asks for the child's name, and can record up to six sessions. "Recording" means that the teacher can sit down after the lesson and ask the programs for a breakdown of what new questions and objects each child has entered.

These two programs are robust but essentially unexciting versions of a simple idea – they really encourage the child to think clearly about the distinguishing features of topics in question. However, the scope for error typing in long questions is considerable, particularly for the lower end of the 7-15 age range, and both World-Wise and Animal/Vegetable/Mineral will require careful classroom supervision to get the most from.

PLUSES
- It can be used as many times as the child's imagination holds out
- Performance can be monitored after a session
- As you build up examples and questions, they can be saved for reuse later

MINUSES
- Lots of typing will need supervision
- With only 2 choices at first, it takes time to get going
- Documentation keeps talking of the cassette-based version
- Mundane screen layout

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

8000 PLUS VALUE VERDICT ■■■□□

INSTANT INDEXING

ANSIBLEINDEX

£49.50, Ansible Information

Anybody who has tried and failed to read a bad manual knows how important a good index is – be it for a computer program or a town tourist guide. *AnsibleIndeX* is a program which will read a LocoScript document and automatically produce a complete, paginated index for it, so now there's no excuse for any more impenetrable tomes.

Preparing for action

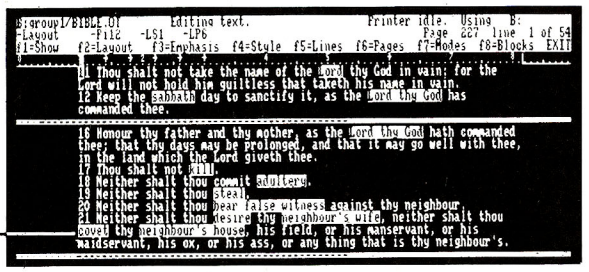
The manual is quite short but very well written – it covers all the facts in a very light, readable style that assumes no computer knowledge. But it does seem strange that a manual about an automatic indexing program does not iself have an index, although it is short enough that this isn't a real problem.

The indexing process starts while you are typing your document into LocoScript. Once you've decided that a part of the text is pretty much finalised, you go through it marking all the words and phrases that you want to appear in the index. Then, when the whole document is complete and page numbering won't change any more, you run the index program to pick up all the marked items with their page numbers.

Marking words is done within LocoScript as you type, by using its standard Reverse Video control code. This code is either picked from the *Emphasis* menu, [f3], or more quickly by typing [+]RV. It has absolutely no effect on the printing of a document, but conveniently shows all the words to be index highlighted on the screen when you edit.

Extra, extra
For the £49.50 asking price of AnsibleIndex, you also get two other utilities, AnsibleCheck and Grease. These are respectively a word counter/proof reader and a word use frequency analyser. They are available separately at £19.50 the pair, and we reviewed them in issue 1.

A page from some favourite ► bedtime reading ready for indexing



Highlit words are to be recorded in the index

```
adultery                    228

covet                       228

desire                      228

false witness, bear         228

God, Lord thy               227-228

house, neighbour's          228

kill                        228

Lord                        227

sabbath                     227
steal                       228

wife, neighbour's           228
```

The index for it produced by AnsibleIndeX

Index fingered

AnsibleIndex runs from CP/M and comes on a preprepared startup disc, so that when you've finished editing your document in LocoScript you just press [SHIFT]+[EXTRA]+[EXIT] and it automatically starts. Operation is very simple; you just put your LocoScript disc back in and enter the name of the document, regardless of what group it was in.

AnsibleIndeX then reads the document and produces a basic index file. Afterwards, you have the option to fine tune the index format, like specifying in which column the page numbers printed alongside your index entries are to start.

This leaves you with a new file in the first group of your LocoScript disc, containing the index. Although it is not a proper LocoScript document, converting it into that form is not too hard, and the manual explains fairly well how to do it. Once done, you can polish it up – delete unwanted entries, add special ones, and so on.

The finer points

AnsibleIndeX checks whether a word you index has been done before or not, and if so merges the entries. Multiple occurences on the same page are only recorded once. For example, if "Frinton-on-Sea" was marked several times on page 5, and again on pages 8, 9, 10 and 12, the index entry would be:

Frinton-on-Sea 5, 8-10, 12

Phrases can be "inverted", meaning that a phrase in the text like "Chicken with Mushroom Curry" can appear indexed as "Curry, Chicken with Mushroom", or even "Mushroom Curry, Chicken with".

If you are writing a long document with LocoScript you will probably be working with each chapter split into a separate file for speed. AnsibleIndeX can go through a series of files one after the other, and then produce a single index for the whole lot.

When submitting a manuscript for publication, knowing the LocoScript page numbers for the index is about as much use as a London bus pass in Monte Carlo. Instead, you can produce a dummy index with the actual page numbers left blank. When your proofs come back from the publisher, you can adjust your document and run AnsibleIndeX again to get the proper page numbers out.

On the negative side, the main drawback is that you can't index words that don't occur in the text. For example, if a number of pages talk generally about the Stone Age, but that actual phrase never appears as such (even in a heading), then you can't index it. You can however add it manually to the index after AnsibleIndeX has done its work.

Also, it would be nice when marking inverted phrases to be able to index them under both forms at once, eg. "different printers" and "printers, different", rather than *either* normal *or* inverted.

PLUSES

- ⊞ **Indexes ordinary LocoScript documents**
- ⊞ **Can invert index phrases – "Fred Smith" as "Smith, Fred"**
- ⊞ **Can produce a single index for several documents or chapters**
- ⊞ **Readable and comprehensive manual**
- ⊞ **Can produce a "dummy index" if the page numbers aren't finalised**
- ⊞ **Word counter and word usage analyser also in the price**

MINUSES

- ⊟ **The basic index file output is not a LocoScript document**
- ⊟ **You can't automatically index general topics (eg. "software") unless they specifically occur in the text.**
- ⊟ **The price will deter casual users.**

RANGE OF FEATURES ■■■■□ **OVERALL SPEED** ■■■■□
EASE OF USE ■■■■□ **DOCUMENTATION** ■■■■□
***8000 PLUS* VALUE VERDICT** ■■■□□

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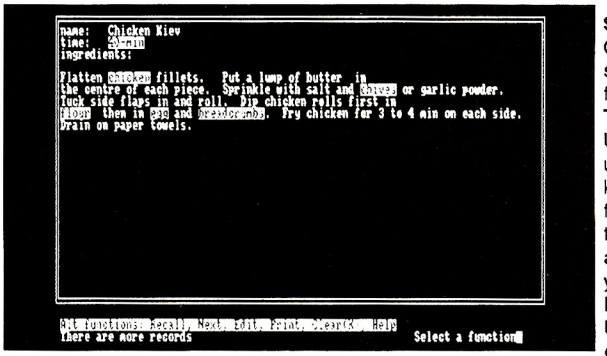

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Please note : recipe database not supplied; screen appearance may differ slightly from that shown here.

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- Reference, e.g. ABC123 for a cheque number or invoice reference.
- A class code, one of up to 50 defined by you to suit your circumstances e.g. h0=Household expenses, h1=Mortgage, h2=Rates or p0=Production, p1=Raw materials, p2=Assembly, p3=Packing, etc.
- A description so that you can see what each transaction was for, e.g. "New gearbox" or "Box of 10 discs".
- An optional single character mark which you may include for further classification, e.g. b=business, p=private, etc.
- The amount of the transaction, which may be plus or minus.
- A marker to indicate whether the entry is exempt, zero rated or taxable for VAT, or alternatively the actual VAT paid.

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VISA

CAD, SIR!

In which we investigate whether designers can benefit from taking a tablet

GRAFPAD 3
Grafsales, £149.50

Computer Aided Draughting (or "CAD") is the process of putting a draughtsman's board onto a computer – being able to draw straight lines, regular shapes such as circles and rectangles, and also being able to place simple text on the page. Grafpad 3 is a new improved version of Grafsales' CAD package, which comes with an impressive-looking specification.

Traditionally, CAD has involved expensive custom-built computers and plotters. But unless you need professional quality, the Amstrad PCW can produce some surprisingly good results which will be quite good enough for many purposes.

Who needs a CAD?

You might think that computer aided draughting is a specialist application that is of little real value, but in fact it can be useful in many areas.

One obvious application is for drawing electronic circuit diagrams, which typically consist of relatively few basic symbols used many times over. CAD packages can duplicate symbols easily, so it saves a lot of effort drawing out the same components over and over again. And of course it should be simple to change the draught if the design is altered.

But think how many other professions rely on using diagrams in some form. Electricians, plumbers, seamstresses, builders ... in all these trades, a CAD produced diagram is going to impress customers much more than the traditional jotting on the back of an envelope.

How Grafpad works

Existing CAD packages (like *DR Draw* and *Microdraft*) are operated by keyboard input, which isn't the most natural way to create a drawing. Uniquely, Grafpad 3 provides a "digitising tablet" and pen, to allow you to physically point to parts of the screen rather than using the keyboard arrow keys.

The tablet is roughly A4 size, plugs into the expansion port on the back of the PCW, and lies on a flat surface by the computer while the CAD program runs. A special pen is provided to point at the tablet; the central area corresponds to the PCW screen, so moving the pen causes a crosshair cursor to track around the screen in sympathy.

The outer edges of the tablet contain a series of menus, and it is these that really control the program. To perform an action, you point the pen at the menu item on the tablet and click a "select" button on the pen. The PCW can then work out which choice you had pointed to, and do it.

Grafpad's features

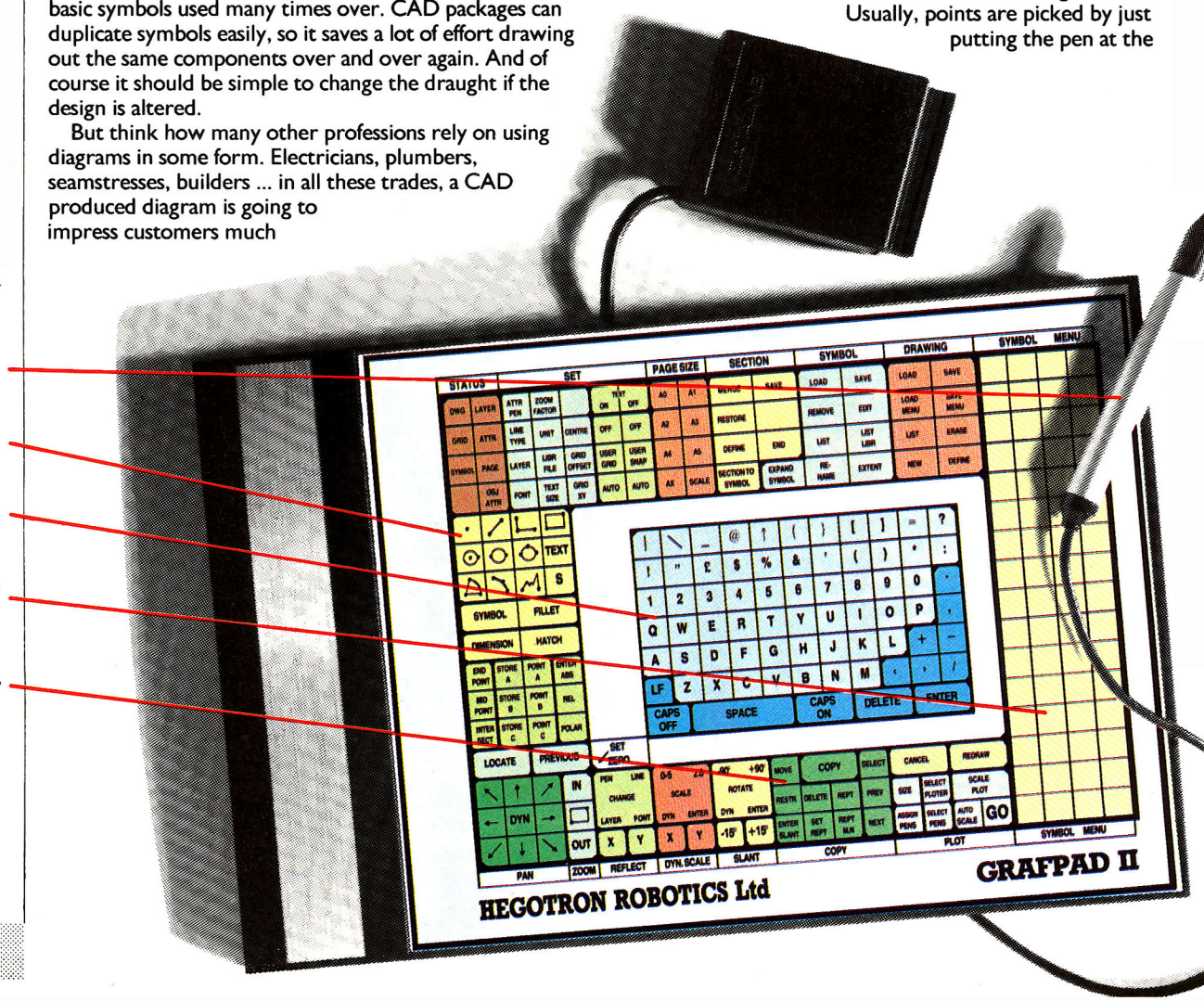
The standard objects that Grafpad can draw are points, lines, boxes, circles, arcs, text and freehand shapes. In freehand mode, you just move the pen normally on the tablet and the screen reflects this. However, you can't get very smooth lines this way, and it isn't as useful as it sounds.

Objects are drawn by defining their end points or corners. Straight lines can be forced to be orthogonal, i.e. strictly vertical or horizontal, and closed areas can be filled with hatched shading.

Usually, points are picked by just putting the pen at the

Screen resolution
Interestingly, the PCW screen resolution, at 720 x 256 dots, is better than most standard microcomputers on the market. The poor old IBM PC can only manage 640 x 200.

GRAFPAD'S DIGITISING TABLET ▶



appropriate place, but this isn't always very accurate. As an option you can type in the co-ordinates of a point from the keypad for extra precision – Grafpad can work with co-ordinates up to 7 significant figures.

Although the PCW printer can only print on A4 paper, Grafpad can work with sizes from A5 to A0. If the drawing is too large to print at once, it comes out on separate sheets that you then paste together afterwards.

Items, once drawn, can be copied, rotated, moved, slanted or reflected. For detailed work, you can zoom to arbitrarily large magnifications and position items to a high accuracy.

Finally, and most importantly, groups of objects can be clumped together and defined as a "symbol". These symbols can be saved in files and reused in other drawings. In fact, Grafpad comes with a library of predefined electronic circuit symbols such as capacitors and logic symbols.

Grafpad in action

The description above all sounds very impressive, so how does it work in practice?

The first point to make is that the current version of the manual is truly awful – essentially it just lists all the functions available. On a product of this type, what is really needed is a few worked examples and some tips on how to use the package efficiently. Grafsales say that a new version of the manual will be available in a matter of weeks, and will be supplied as a free update to anybody who has the current version.

Getting going is a little distressing, mainly due to the current manual's shortcomings. When you first start, the screen prompts you to calibrate the tablet. Nowhere is this explained, but it means you have to use the zeroing function so the program can fine tune the correspondance between the tablet and the screen. If you don't do this, then when you point to a menu choice the pen will probably get the wrong one.

Having said this, once you get into the swing of things, Grafpad is very simple to use and has obviously been designed with great care. For example, the number of different ways you can define a circle are all useful, and even complex operations like grouping or rotating objects take only a few pen clicks.

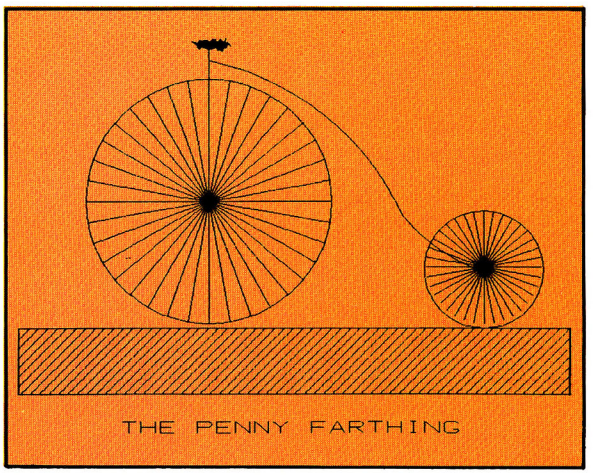
The tablet is fairly reliable in operation, although the way it works means that it is easily disturbed by being near metal surfaces. On the desk that was used for the review, some menu choices occasionally went wrong and the tablet had to be recalibrated. The pen, with its selection button, was convenient to use, and overall the system for pointing to tablet menus for operations is excellent.

The quality of print is quite good on the standard PCW printer, although output does take an awfully long time – between 5 and 20 minutes per page depending on complexity. The screen does weird things during printing, which might make the unwary think the program had crashed!

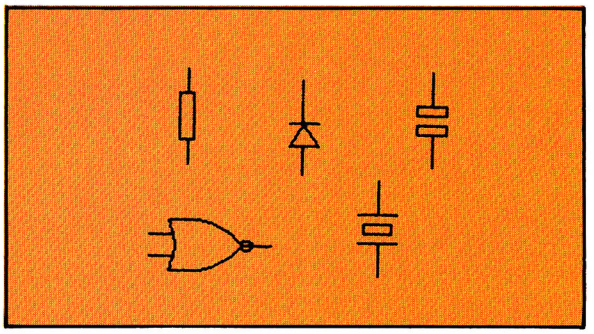
What more could you want?

The range of features that Grafpad provides for drawing is, on the whole, very comprehensive. The real test of a draughting package is not in how many different shapes you can create, but how easily you can change things once drawn.

Grafpad doesn't shine in this respect, but it is quite adequate. The key feature is that it can zoom in on a small area, fine tune the draught by eye, and then when you go back to normal size the items will all look to be perfectly placed.



◀ An accurate Grafpad draught of Ben Taylor's new 12-speed racing bike – about 15 minutes' work.



◀ Some of the standard electronic symbols that come with Grafpad

Objects can be aligned to the end or midpoint of a line, allowing you to construct properly closed polygons. However, there is no way to select a group of objects and, for example, make sure all their left sides line up. Also useful would be a simple way of resizing an object by eye to fit its surroundings, just by moving one corner of its bounding box to a new location, leaving the other anchored.

Finally, since printing is quite a slow process, it would be nice to have a way of doing a faster draft quality print.

Circles

Grafpad actually has three ways of drawing a circle. You can either specify the centre and any circumference point, or two opposite points on a diameter, or any three points on the circumference.

Verdict

Within the PCW's inherent limitations of screen resolution and processing speed, Grafpad provides an excellent CAD package. The specially designed digitising tablet makes the program easy to use, although occasionally it's quite hard to make the desired tablet contact.

The only reservation is that £150 is a lot to pay unless you really want the package. Most people could probably live without a CAD system fairly happily – but if you've got a PCW, and want a cheap, effective draughting program, then Grafpad 3 is highly recommended.

PLUSES	MINUSES
⊞ Specially designed digitising tablet for easy use	⊟ The manual is very unhelpful (although a new version is promised)
⊞ All simple geometric shapes can be drawn	⊟ The digitising tablet is a little temperamental at times
⊞ Groups of objects can be saved as symbols for later use	⊟ No simple way to align groups of objects to a common edge
⊞ Unlimited zoom feature allows detailed working	⊟ Printing is slow
⊞ Can snap objects to match the endpoints of lines etc.	
⊞ Full range of rotate, copy, move commands	

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

8000 PLUS VALUE VERDICT ■■■■□

AUTO ESTIMATOR

JOB ESTIMATING
PRODUCT COSTING

£49.95 each ● Cornix Software

Keeping track of costs and profit margins in a small business can be a major headache. Material prices can fluctuate wildly from day to day, and this means taking difficult decisions all too often about how to price products and services.

Cornix software have now produced two programs to help in just this situation. *Product Costing* aims to allow manufacturers to see an up-to-date breakdown of a product's costs, and *Job Estimating* does much the same for service industries.

The principles of operation

Both programs work by building up a database of the costs of "components" of a product or job. The components are either materials, like the cost of bricks, or they can be services such as labour costs.

For each component, you specify its basic unit such as reams (of paper) or hours (for labour), and also the current price per unit.

Having constructed the component database, you go on to specify how the components are combined to produce a product or job. The program then automatically calculates the costs and profits, and offers a suggested final price which you then have the option to override if your experience of the market tells you differently.

The virtue of this "database" style of operation becomes apparent when you have several different products or jobs being costed from the same basic components. Suppose you are a manufacturer of banana flavoured products, and suddenly the price of banana flavouring soars. By changing one entry in the program you can propagate this price change through your whole product range.

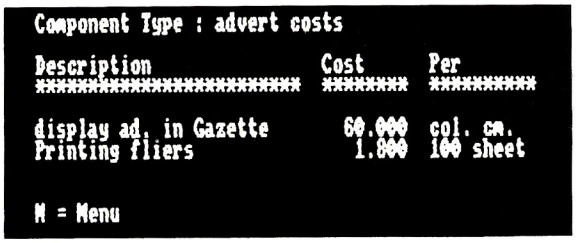
The documentation for both packages is excellent, written for businessmen and not for computer weirdos. In operation, the programs are fairly self-explanatory, running from simple screen menus.

Product Costing

In *Product Costing*, you build up the component database as described previously, specifying for each one the cost to you (either purchase price or wages paid).

The product description is entered, one component at a time, giving the quantity of each used. At the end, the program calculates the total cost, asks you for the mark-up to be applied (maximum 100%) and once you have fixed the final price it can print out a profitability statement for each product.

There is no allowance for VAT in prices, on the assumption that since you can reclaim it all it has no real effect.



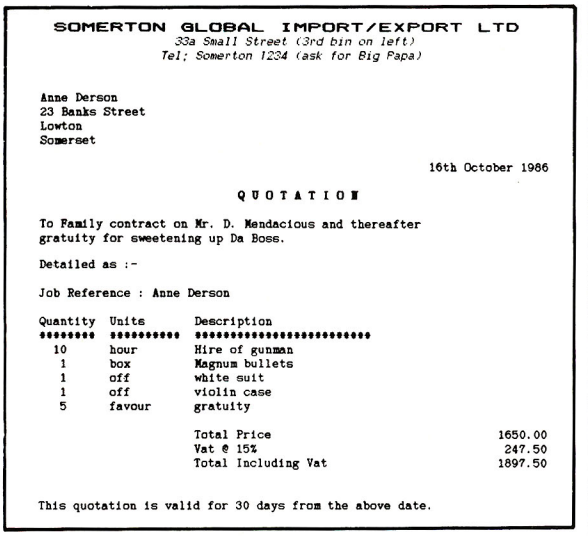
An example of components, from Product Costing

Job Estimating

Job estimates are built up in much the same way as product costs, by specifying the labour and material costs of the components. However, in this case the profits are worked out differently.

When defining a component, you are asked to give both the cost price and the selling price, effectively specifying the trade discount you get on each item. So rather than asking you to fix a mark-up, the profits are worked out from the individual component profits.

Job Estimating is designed to provide customers with an on-the-spot estimate or quote. To do this, you can print out a breakdown of the estimate, hiding all the profit figures and adding in VAT, with the customer's reference and details, headed by up to 10 lines of your own company details.



SOMERTON GLOBAL IMPORT/EXPORT LTD
33a Small Street (3rd bin on left)
Tel; Somerton 1234 (ask for Big Papa)

Anne Derson
23 Banks Street
Lowton
Somerset

16th October 1986

QUOTATION

To Family contract on Mr. D. Mendacious and thereafter gratuity for sweetening up Da Boss.

Detailed as :-

Job Reference : Anne Derson

Quantity	Units	Description	
10	hour	Hire of gunman	
1	box	Magnum bullets	
1	off	white suit	
1	off	violin case	
5	favour	gratuity	
		Total Price	1650.00
		Vat @ 15%	247.50
		Total Including Vat	1897.50

This quotation is valid for 30 days from the above date.

A quote for a customer as printed out by Job Estimating

Conclusions

If you run a small business, only you will know how much you need such programs to help you. Even if you can do costing in your head, these packages will be very useful in presenting your figures to clients or financiers – everyone believes computer printouts!

There are some annoying restrictions in both packages. First, you can't define the cost of one component to depend on another, for example to say that you always pay a skilled worker twice an unskilled worker; you have to enter each individually.

Second, once you have defined a product's components, you can't add new ones, like if a customer extends the job spec on a quote. Since you can edit components, the recommended process is to define some dummy ones for each costing, which can be edited into real ones later, but this is awkward.

Overall, these two packages will be a great help in small businesses (which is where the PCW has its main business market), but some inflexibility means they won't help GEC prepare international bids.

Spreadsheets

Any spreadsheet program should be able to perform similar functions to these packages. Indeed a good spreadsheet will offer much greater flexibility. However, it can be time-consuming and complicated getting the spreadsheet set up precisely to your requirements. That's where these packages score.

PLUSES	MINUSES
⊞ Well written manual aimed at businessmen not programmers	⊟ Cost of one component can't be dependent on another
⊞ Simple and robust to use	⊟ Can't add new components to a description after first definition
⊞ Changes in material cost instantly reflected in all products/jobs	⊟ Inflexible design of printed estimates/quotes
⊞ *Job Estimating* page headers provide a simple and neat way of producing on-the-spot quotes	⊟ Only really suitable for fairly simple applications

RANGE OF FEATURES ■■□□□ OVERALL SPEED ■■■■
EASE OF USE ■■■■■ DOCUMENTATION ■■■■■
8000 PLUS VALUE VERDICT ■■■□□

MIRRORSOFT

PUBLISH, PROGRAM, OR PLAY GAMES - ALL ON ONE MACHINE!

Our development team have been hard at work with Joyce for many months now, and the result of their labours is nothing short of amazing!

FLEET STREET Publisher

CITY OF LONDON EC4

Fleet Street Publisher is without doubt one of the most powerful and sophisticated products to be written for the PCW. It enables the user to produce multiple-page documents with editable layouts, left and right hand pagination, automatic page numbering, and sequential or non-sequential columns and pages.

Fleet Street Publisher is supplied in a slip-cased ring binder comprising comprehensive indexed manual and disks.

Using keyboard, mouse, or Electric Studio light pen, these are just some of the facilities at your disposal:

- Over 300K of ready-to-use graphics on a library disk
- 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
- Full-function page make-up with variable leading, columns and margins, page sizing, orientation and dummies, graphic scaling and basic graphics editing tools, hyphenation, justification, proportional spacing, text block movements, rules, and snap to guides.
- File management structure
- Enhanced print-out to dot matrix

Hardware requirements:

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

Optional extras:

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

£69.95 including VAT and intial user support

STRIKE FORCE HARRIER



Designed in co-operation with British Aerospace, Strike Force Harrier puts you in the pilot's seat of one of the world's most exciting fighter planes. With the most realistic instrument display (albeit just a little futuristic) and handling you're likely to see on an 8-bit simulator, the program combines accurate flying and strategic gameplay – with an element of shoot-em-up to keep you on your toes.

You must plot your way to enemy HQ, defending yourself from ground and air attack using all the sophisticated weaponry at your disposal – cannon, bombs, and Sidewinder heat-seeking missiles, as well as chaff and flares to put the enemy off your tail. But don't forget to keep moving up your landing sites and ground crew, or you'll find yourself stranded without fuel or arms!

£19.95 including pilot's manual and map

GRAPHICS OPERATING SYSTEM

The result of months of development work in creating the graphics side of Fleet Street Publisher, the Graphics Operating System is a complete set of graphics programmer's tools, providing the machine-code or high level programmer with a full graphics operating environment. All the routines are fully documented with input requirements and error messages.

Functions supported include:

- Drop-down menu construction
- Graphics filing
- Character drawing to any defined pixel position on the screen
- Line drawing
- Ellipses and circles
- Line weight and style
- Windowing
- Shape fills
- Sizing
- Block handling
- Rotation

£99.95 on disk, including user manual

For more information on these and other forthcoming Amstrad PCW titles, talk to your local retailer or contact us direct at:

The publishers reserve the right to alter prices and specifications without notice.

MIRRORSOFT

Maxwell House, 74 Worship Street, London EC2A 2EN
Tel: 01-377 4645 Fax: 01-377 0022 Telex: 886048 BPCC G

A COMPLETE COMMUNICATIONS SYSTEM FOR THE AMSTRAD PCW AND PC COMPUTERS

Astracom have developed a complete communications system (including comprehensive comms. software) for the Amstrad PCW and PC computers based upon the Astracom 1000 modem.

THE Astracom 1000

We could simply say that the Astracom 1000 is a multi-standard intelligent auto-dial auto-answer modem with centronics printer controller facilities. But we think that you would much rather know that it has just the three essential ingredients that you would want in your modem;

* Low Price
* High Performance
* Ease of use



BT Approval applied for: result imminent.

The Price

The Astracom 1000 is the **lowest price V21/V23 intelligent modem available in the U.K.** today.

The Performance.

The Astracom 1000 provides the **complete answer** to your communications requirements.
It has all the major international FSK modem modes;

300/300 baud CCITT V21 Originate
300/300 baud CCITT V21 Answer
1200/75 baud CCITT V23 Main channel
75/1200 baud CCITT V23 Back channel

- **enabling communication with all the major online services** such as Prestel, Micronet, Easylink, BT Gold, Microlink, One-to-One, etc.

It has its own **high efficiency command protocol** in addition to the conventional Hayes protocol.
It has **auto-dial and auto-answer** facilities for convenience and efficiency.
It has an inbuilt centronics **printer port** which enables the direct printout of incoming modem data.
It will have a **low-cost upgrade** route to the PSK modem modes **V22 and V22bis** (1200 and 2400 full duplex!)

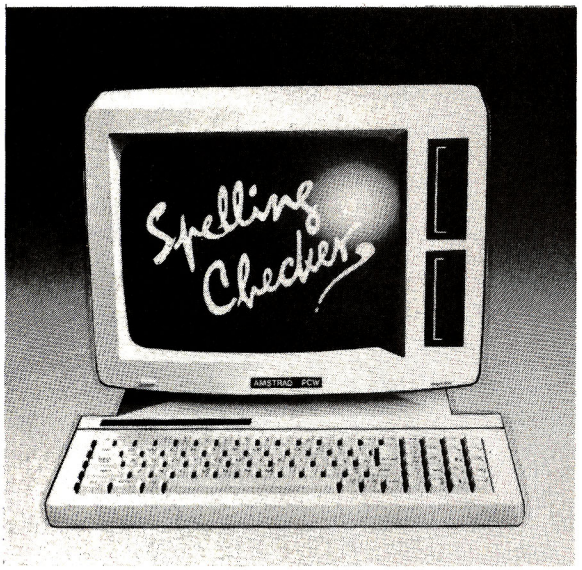
The Simplicity

The Astracom 1000s onboard microcomputer controls all modem and printer functions, under software commands from your computer. The Astracom 1000s **auto-scan** feature puts the modem into the correct mode to respond to the incoming carrier.
We also provide comms software packages that have been specifically tailored for use with the Astracom 1000. The use of this software, combined with the smart features of the Astracom 1000 (such as auto-scan) provides a complete and very easy to use 'plug-in-and-go' system.

Astracom 1000 = £145 + VAT
Serial cable = £8 + VAT
Amstrad PCW comms. software = £30 + VAT
Amstrad PC comms. software = various packs (please enquire by phone)
Low-cost s/p interface for PCW = Price TBA
Astracom 1000 V22 upgrade = £100 + VAT

Astracom Complete Communications Systems are also available for a wide range of modern computers e.g. Atari ST, BBC, QL etc.

Phone our 24hr hotline 0792 473697 anytime for a free datasheet or advice, or order now, cheques payable to Astracom, 13 Beechwood Road, Uplands, Swansea SA2 0HL for fast delivery.



TRAPPING TYPNIG ERRORS

SPELLING CHECKER
£34.95, Computer One

Suggest to serious writers that they use a spelling checker and you will get short shrift. Now give them a word processor, and ask again in a month's time. Using a spell checker is not an admission of illiteracy, it's a necessity for anybody who uses keyboards – fingers do weird things with keys when asked to type simple words like 'nad' and 'hte'.

Computer One have released a new version of their spelling checker program. It will work with files from most kinds of wordprocessor: *LocoScript, WordStar* and ordinary ASCII (like *Tasword*), and claims a dictionary size of 64,000 words.

The full story

Spelling Checker is a CP/M program, and even when checking LocoScript files you will have to leave LocoScript, start CP/M up, run the program and then restart LocoScript. Tedious, but unavoidable for now.

The file to be checked is sorted and compared against the dictionary. As each possible misspelling is found, the word is put on the screen and you then have three main choices: to alter it, to leave it as it is, or to add it to the dictionary so it won't be flagged as wrong in future.

One pleasant surprise is that the checker does not just spot the incorrect words, it allows you to actually modify the file and correct the error at the same time. At each mistake, it puts on the screen the word and its immediate context, and asks you for the correction, if any.

There are a few frills of the type that have become traditional now for spelling checkers. A "crossword solver" allows you to search for words that fit a certain template, and you can also generate all meaningful anagrams of given letters. Of course, you won't get proper names out of it, or real Call-My-Bluffisms like the name for a 17th century cucumber-skinning machine.

Dictionaries and documentation

The 64,000 words that Spelling Checker knows of are stored in about 20 different files, which makes searching rather slow as it opens and closes each file. If you have an 8512, you can speed it up by copying all the files over to the M drive where file handling is faster. Unfortunately, the dictionary is too big for an unexpanded 8256's M drive.

The range of words seems good, but it is strangely bad on compound words – hyphenated words are usually shown as errors, and contractions like can't and you'll are also not recognised.

The documentation is very good on the simple aspects of using the spell checker, but the sheer range of possibilites to search, update and maintain the dictionary makes it a little daunting later on.

Overall, a good professional program, and a worthy challenger to *Prospell*.

Computer One vs. Prospell

Computer One's Spelling Checker is very similar in specification to *Prospell* from Arnor. Both work in exactly the same way, and can actually modify spellings in files as they go.

One difference is that Prospell lists possible errors in alphabetical order, and Spelling Checker lists them in order of occurrence.

Our checklist summarises the main features of both. As you can see, Prospell is faster but has a smaller dictionary. Dictionary size is not too important if you are a good speller and only want to spot typing errors, but if you're a crossword fiend then big is beautiful. Prospell can't be copied to the M drive, and it processes files of greater than 3000 words or so in separate chunks.

What do you want: speed or a big dictionary?

	Prospell	Computer One Spelling Checker
Price	£29.95	£34.95
LocoScript files	√	√
WordStar files	√	√
Speed(wpm) †	4000	650
Dictionary size	30,000	64,000
Runs from M: (8512)	x	√
Large files	3000 words at a time	√
Crossword solver/ Anagrams	√	√

† "speed" in words per minute determines the time spent scanning before the action starts

▲ The main features of Prospell and Computer One's checker

Go Hang

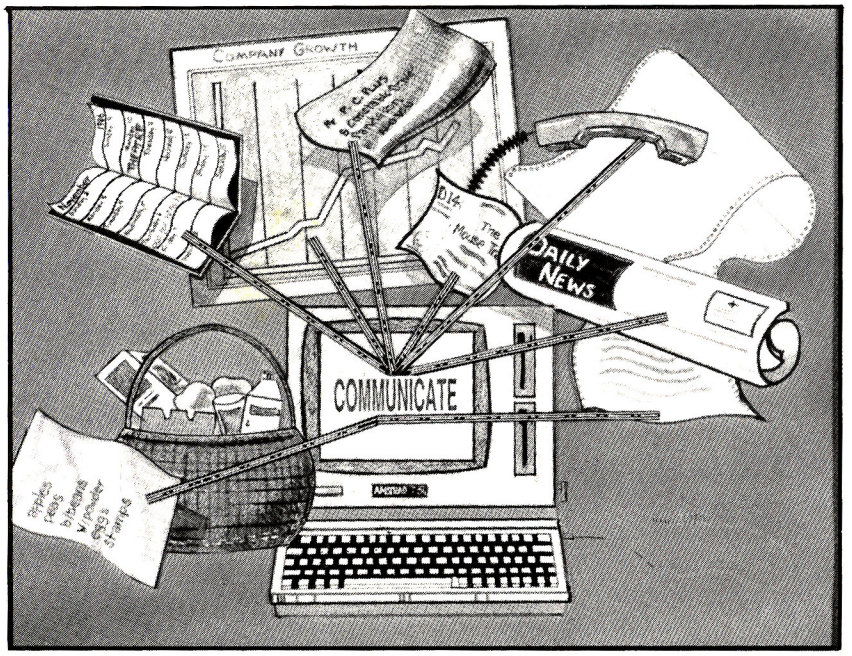
As a diversion, you also get a Hangman program for your money. It's a bit tacky, but all adds to the value if you like that sort of thing. The graphics bear a remarkable similarity to the hangman game used in Computer One's Typing Tutor package!

PLUSES
- ⊞ Reads LocoScript, WordStar and ASCII files
- ⊞ Massive 64,000 word dictionary
- ⊞ Can handle large files
- ⊞ Dictionary can be modified, and searched for anagrams etc

MINUSES
- ⊟ Not as fast as it could be
- ⊟ Flags up many hyphenations, contractions, etc as errors.

RANGE OF FEATURES ■■■■□ OVERALL SPEED ■■■□□
EASE OF USE ■■■■□ DOCUMENTATION ■■■□□
8000 PLUS VALUE VERDICT ■■■■□

GOING ON-LINE



The world of telecommunications splits computer users into three camps. Some believe it's the most powerful use their micro can be put to, offering access to vast quantities of information and almost instant communications through "electronic mail".

Others find the subject baffling, frightening even. Others understand the potential of comms, but are wary of the expense and suspicious of the technical hassles that can sometimes occur.

We asked enthusiast CHRIS LAING, a confirmed member of the first camp, to give an introduction to the services available and review a selection of the equipment you'll need.

One of the fastest expanding application areas is the world of computer communications – or "comms" at its fans know it. Traditionally, this has been the domain of the enthusiast who was to be found dialling his local bulletin board at 3 o'clock in the morning when the phone rates were cheapest.

Recently, however, there has been a substantial upturn in the number of people using the technology in the everyday running of their businesses.

What's on offer

So, what services are available within the wonderful world of comms that would entice you to part with your money and go "on-line"?

1. Electronic mail

The role of Electronic Mail systems, such as *Telecom Gold, One-to-One* and *Easylink* is primarily as a replacement for a telex machine. You dial-up the service, and then transmit the message you wish to send into the recipient's mail area (known as his mailbox). When the recipient then next logs on to the electronic mail system, he will be notified that there is a message waiting for him, which he may then read.

The difference between ordinary mail and electronic mail is that you don't get get the electronic variety delivered to you. In practice, you have to log on to your electronic mail system regularly to ensure a vital message isn't missed.

However, most mail services also offer what is known as a 'telex bureau', where you can send a telex to the system, specifying the number of the destination telex. The message will then be forwarded on by the service, to the correct number and actually printed out at the receivers' end in the normal way. Any telex returned will automatically be stored as a message on your mailbox.

There are often private services within electronic mail systems. One such is *Textnet*, which runs inside Telecom Gold. This offers its subscribers a variety of text-related services such as translations. For example, users who can translate may register as service suppliers, and those wanting translations done look them up in Textnet's register. Then you send your text by Telecom Gold mailbox, and receive the translated results in the same way.

2. Prestel and Micronet

The major viewdata system, Prestel, acts mainly as a source of information. From within Prestel you can examine the latest stock market figures, look at tomorrow's weather forecast, or see the football results. Much in the same way as teletext, there is an index of the information and services available and the appropriate item is selected by entering a 'page' number. There are however far more 'pages' of information available in Prestel – literally tens of thousands. Also, unlike Teletext, you can interact with the system. For example, you can book theatre tickets, order computer goods or run a bank account with the Bank of Scotland – the time may come when far more is possible and you can actually choose your week's groceries from the screen!

Within the Prestel system, there are areas which have restricted access – unless you've paid the right money to the right people, you won't be allowed to look at their pages. An example of this is the *Micronet* area, which is dedicated to microcomputer news, reviews and trivia and which are only available after you have paid a subscription. Within Micronet there's a section aimed specifically at Amstrad owners, although currently the few hundred people who use it are mainly owners of the CPC micros.

When you subscribe to Prestel, you are assigned a mailbox number which works in exactly the same way as the mailboxes described earlier. The messages are somewhat more fiddly to construct, but at least you can include pictures in them.

3. Bulletin boards

As well as the professional services, there are also what are known as bulletin boards. These are ASCII systems, which are operated by unpaid enthusiasts, usually as a forum for information exchange where messages are left for anyone who's interested enough to read them. The boards are split up into different areas, so that you can access those bits which you need with the minimum of messing about.

4. Linking to other computers

Once you've got a modem and the right software you can pass documents down the phone-line to other computer users. They don't have to own Amstrads – just any machine which is similarly 'online'.

This facility can be very useful. If you want to send a word-processed report fast to someone at the other end of the country, for example, a direct phone link is a lot quicker than posting a disc. Especially useful for slothful

freelance journalists who don't get their copy in on time.

So what do you need to do it?

Since the data transfer takes place down a phone line, the first thing that you need is something to suck in the data from your BT socket – this is the job of a *modem*. The next stage is getting the data from the modem to the computer; for this, you need a *serial interface*. Finally, when the data arrives at your PCW you will need a piece of comms software to make some sense of it – a *terminal emulation package*.

The rest of this feature is devoted to looking at the requirements for all three, and comparing the equipment available.

We shall start with the simplest element to define, which is the serial interface. This will plug into your PCW's expansion port and offer a 25-pin socket to take a standard serial lead for connection to a modem. The obvious contender is the official **Amstrad CPS8256** interface which comes with a parallel port on which you can connect an external printer. There are however several interface clones which offer the same facilities and seem to work just as well – or example from Pace (£59 + VAT) or Peartree (just £39 + VAT).

How to get onto the main services

Here are the contact numbers for the main services you can use. Ring and ask for registration information – a human will answer, so don't try to connect your modem to the line!

TELECOM GOLD (01 403 6777)
£40 registration plus £10 per month minimum. Heavy users will be charged more per month depending on usage.

PRESTEL (100, and ask for Freephone Prestel Sales)
For private users free registration, and £6.50 per quarter standing charge. Business users pay more.

For all users, a connection charge of 6p per minute is made during business hours (8am-6pm Mon-Fri, 8am-1pm Sat); it's free at other times. Some pages (eg. weather information or share prices) charge extra to be seen.

MICRONET (01 278 3143)
£10 per quarter, on top of Prestel charges. No connection charge.

Don't forget the cost of the phone call too. Many services are local calls from most places, which works out at about 50p per hour at cheap rate times.

COMMS SOFTWARE

COMM+

Bundled with Voyager modems from Modem House

This is undoubtedly the heavyweight in the communications world. The package supports both viewdata and ASCII, with several different terminal emulations available in the ASCII mode.

The package has a text editor for off-line message preparation, and comes with various file transfer protocols as standard.

The real power of COMM+ lies in the fact that it has an entire command language, offering complete control over the serial interface and data transference. The user can write a program that will automatically dial up Telecom Gold, log on with the correct identifier and then send a file to a specified mailbox, using a simple command structure.

Alternatively, an entire application can be developed as has been done in conjunction with the Voyager modem, which is examined in the modems section.

The potential of the package is limited only by the user's capabilities, and as such may be best left by those inexperienced in this field. However, for those looking to do something a little bit more advanced there can be no other choice.

CHIT-CHAT

£86.95+VAT (or bundled with Pace Nightingale modem for £173.90+VAT), Sagesoft

This software includes two different sections, ASCII only ("E-mail"), and Viewdata only ("Viewdata"). Operation of the packages is very friendly, with full use made of the PCW's f-keys to access menus and set up options. It is possible to construct a 'directory' of services, recording the telephone number, baud rate at which they operate, the serial interface setup and whether it is ASCII or viewdata. Recalling a service is simply a matter of,moving the cursor over the required entry, and selecting it. If your modem supports autodialling then Chit-Chat can be configured to dial out for you.

One of the most useful features of the package is its ability to define 'tasks'. These tasks are a predefined sequence of commands that may be given to the program to execute at a specified time. Used correctly, a task can be set up that will periodically examine your mailbox – an almost invaluable background task.

Chit-Chat is easy to use, and very powerful – probably the best all rounder of those reviewed. Its main drawback is that it will not support any of the more advanced error correcting file transfer protocols.

MAIL232

Supplied free with every PCW

This program is 'hidden' on the Locoscript disc that is distributed with every PCW. It can be run by typing MAIL232 from within CP/M. Only available for ASCII transfer, it represents communications software in its crudest form.

There are no facilities for autodialling, and precious little in the way of documentation. The only saving feature of this package is that it's free.

KIWICHAT

£45.94, Kiwisoft (or bundled with Astracom modem)

The next step-up from Mail232, Kiwichat supports both ASCII and Viewdata, which can be displayed either as one page over a full screen or two pages side by side. Configuration is achieved via a set of menus that are displayed along the bottom of the screen, as is switching between ascii and viewdata modes.

There is a simple file transfer option available, that doesn't use any handshaking or error correcting protocols. You can save the set up of baud rates and so on to disc, and then recall it at any time. This allows a different setup to be saved for various systems and then recalled as appropriate.

The Prestel emulation worked very well, and managed to keep up with moving screens (ie. crude animations). An option is available to save a page to disc and subsequently be reloaded and displayed.

Kiwichat is a very functional package. The version we saw had few (if any) bells and whistles, but Kiwisoft tell us an improved version is forthcoming offer features such as automatic logging onto Prestel, and customised function keys.

MODEMS

VOYAGER 7/VOYAGER 11

£129.95/£149.95 (includes COMM+ software), Modem House

The Voyager is a conventional type of modem which comes in two versions Voyager 7 and Voyager 11. They have similar specification, but the Voyager 11 according to Modem House "is recommended for professional use" and costs £20 more. The modem offers various choices of baud rates including those required for most available services: 1200/75, 75/1200 and 300/300. The unit is small and neat, although not very stylish, with a series of indicator LEDs on the front panel. There is no facility for connecting a phone into the modem for dialling – instead the modem plugs directly into a standard BT phone socket and you have to use the bundled COMM+ software to do the dialling or answering for you. This autodial/autoanswer facility is extremely useful, but the modem in fact does not yet have full approval for the autodial facility.

Nevertheless as a package this probably represents the best value for money.

MODEM FEATURES

There are several standard software protocols for driving modems, the most notable of which is the 'Hayes' protocol that was developed in America. If you buy a modem that does not recognise one of these protocols but comes with its own software, and then discover that the software has shortcomings, there is little you can do to recover the situation other than badger the company responsible for the development until they fix it.

Another useful feature is the ability to autodial and autoanswer. This means exactly what it says – you can plug an autodial modem directly into a phone line, issue it with a set of instructions from software and it will automatically call and log on to a bulletin board. Similarly, a modem set into auto answer mode can be made to automatically intercept an incoming data call.

One final consideration on the subject of modems is whether or not it has received approval from British Telecom. Although the lack of approval does not necessarily signify a fault or deficiency with the modem, there is a certain peace of mind if you know that it meets with their specifications which are fairly stringent.

More often than not, a modem is sold without approval simply because of the time involved in getting it – there is currently a delay of anything up to and over six months. However, it is in fact illegal to connect a non-approved modem to BT's system.

ASTRACOM 1000

£166.75 (includes Kiwichat software), Astracom

The Astracom is a new modem which has autodial and autoanswer, supports the Hayes software command protocol, and has automatic baud rate detection. In addition, the modem has its own internal printer driver, so that a centronics printer can be connected to record both incoming and outgoing phone calls.

The presentation of the hardware is good, but the manuals available at the time of review were only preliminary, though thorough. The modem has not yet had time to gain Telecom approval, but works reliably.

The Astracom is bundled with *Kiwichat* (see above) which in its current version does little to take advantage of the modem's 'automatic' features.

Overall the modem seemed to work well, but is the least featured of the 'switchless' modems.

WS 4000

£149.95, Miracle Technology

The Miracle is probably my favourite modem in terms of performance, value for money and appearance. It is Hayes compatible, with autodial and autoanswer and features, automatic baud rate detection and speed buffering. The speed buffering allows your terminal software to be operating at 1200/1200 even though the modem is in fact operating at 1200/75. This makes logging onto any database almost trivial – simply set your terminal for 1200/1200 and let the modem do the rest.

Options are available to install a battery backed memory and to take the data rate up to 2400/2400 although there are very few bulletin boards that currently support this high speed transfer.

The data reliability is good, and the manual well presented – it's difficult to find fault with.

PACE SERIES 4

Base mode £265 + VAT, Pace Micro Technology

This is the Rolls-Royce of the modems reviewed. Although similar in specification to the WS4000, it has several distinctive features. The first is that the modem has its own built in LCD display and control buttons, that allow direct control over the modem.

Like the Astracom, the modem has its own printer port – the Pace has a slight advantage, however in that it can be configured as a stand alone recorder for incoming messages. The modem will answer the phone and transmit a predefined message, and will then produce a hard copy of any text received.

The unit comes with a built in clock and battery backed RAM as standard that permits storage of up to 64 phone numbers, and there are several different models available covering various baud rates up to a maximum of 2400 baud.

There is no denying that this is the most elegant and sophisticated modem, but unfortunately it has a price tag to match.

DATAPHONE

£59.95 + VAT, Dataphone Ltd.

The Dataphone offers autodial/autoanswer in 1200/75, 75/1200 and 300/300 mode. It is controlled entirely via one of the handshake lines on the serial interface using a unique protocol, and consequently must be used either with the bundled software (*Kiwichat* again) or with custom written routines.

The modem is straightforward to connect, with all leads hard wired directly to it – the power supply is integrated into the mains plug.

Operation is entirely under software control, and once again the unfriendliness of the current version of Kiwichat lets it down, although it does have support for the autodial facility. When in use, the current mode is displayed by the LEDs, two pairs of which are labelled identically leading to some confusion.

The manual is brief, with only extremely short notes on the operation of the software – definitely room for improvement here.

The lasting impression given by the Dataphone, is that it is cheap and effective but lacks the finesse of the other modems reviewed.

CONCLUSION

Communications is one of those areas where things either work first time, or else take days or even weeks to sort out. For this reason, the combination of the Voyager modem and the adapted COMM+ software make an ideal starting point for those new to the game. Since the package is even supplied with an interface cable, it really is a case of plugging the thing in and starting up straight away (provided you already have a serial interface!)

Sage ChitChat is probably the best software for someone who already owns a modem, and simply requires the software for their PCW.

If you already have the software, then the Miracle WS4000 or the Pace Series 4 is probably the ultimate in terms of overall comms power, but these are not recommended for those of a nervous disposition or a weak wallet.

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for AMSTRAD PCW 8256/8512 £149.50

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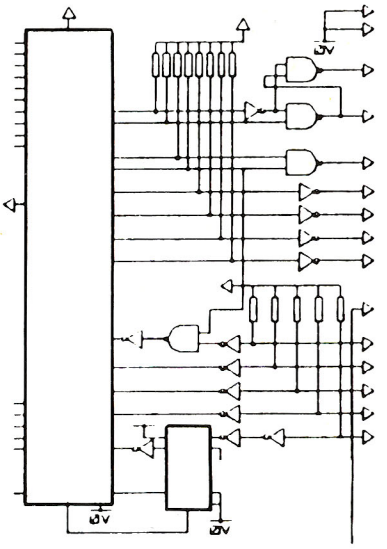

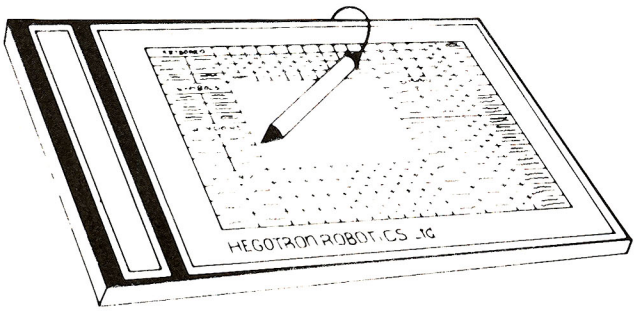

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To: Grafsales Ltd, Unit Q2, Penfold Works, Imperial Way, Watford WD2 4YY.

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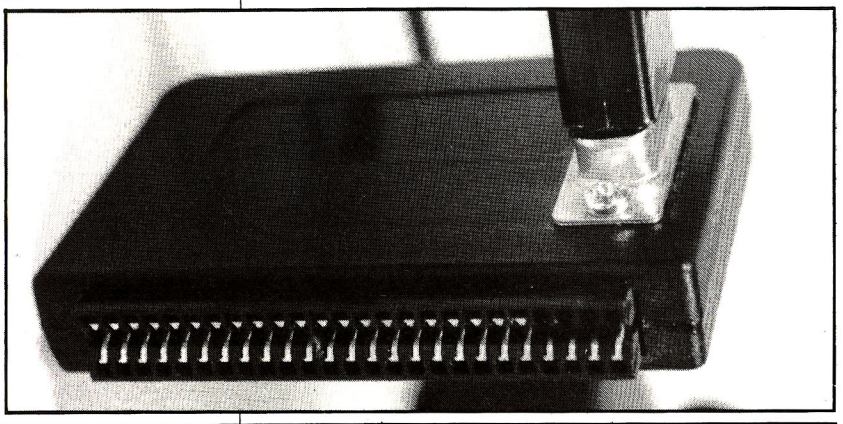
Card No: _____

QUICKIES!

JOYCESTICK
Cascade, £24.95

▼ The Joycestick interface for plugging into the back of the PCW, with its standard joystick.



An increasing number of arcade games are coming out for the PCW 8256 and 8512 which really come alive when controlled by a joystick rather than the keyboard – for example, Digital Integration's Tomahawk.

Cascade's Joycestick is a joystick interface for the PCW machines, complete with a suitable joystick. It slots onto the expansion port at the back, and requires no special tools or fiddling in the Amstrad's innards to fit.

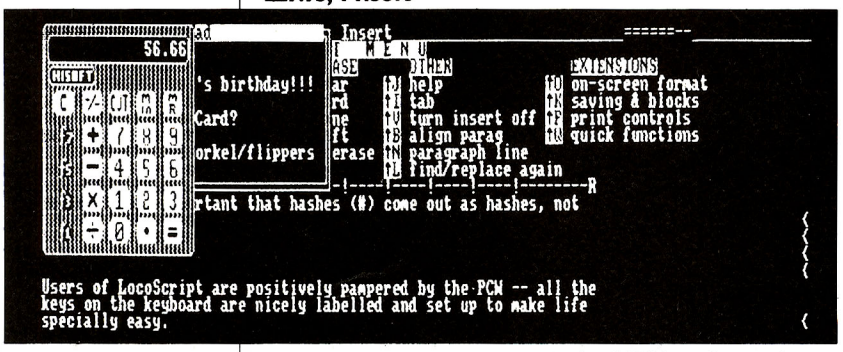
The joystick itself is a Spectravideo Quickshot 1, which has had a bad reliability record in the past. The contacts inside it are flimsy and the risk of failure is relatively high if you are the type who gets overwrought during a game. However, since the interface is standard, if you have an old favourite joystick from your previous games computer you can just as easily use that.

Joycestick also comes with a "free" game, Colossus 4 chess (normal cost £19.95). Chess may seem a strange choice for joystick use, but it's used to point to the pieces and squares for moves. In fact, Colossus 4 is probably the most powerful version around.

On balance, the package's value depends whether you are going to use the chess program or not. The package including Colossus 4 is great value, but for heavy alien zapping you may eventually need to shell out £10-15 more for a decent joystick.

8000 PLUS VALUE VERDICT ■■■□□

WRITE HAND MAN
£29.95, Hisoft



▲ Using Write Hand Man's calculator, while running NewWord.

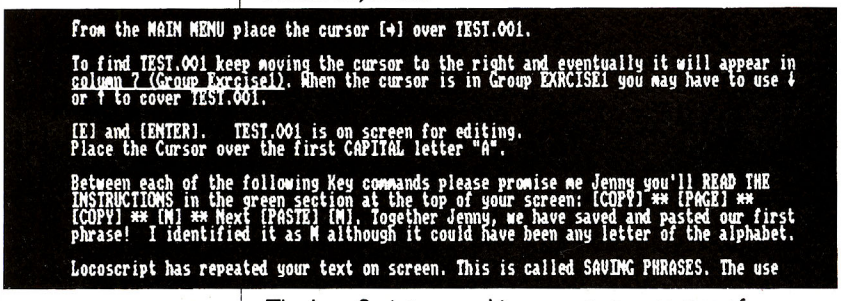
Now in a new version specially for PCW machines, the aim of this package is to provide you with an electronic notepad on your screen that can be called up at any point, no matter what program you are running at the time. Press the command key, and up in the top left corner of the screen, about 10 rows by 20 columns, you can type brief notes, use a calculator, do some simple edits to text files, see a calendar, define the f-keys or give CP/M commands. Unfortunately, the smallness of the work area is a real obstacle, and makes the file editor virtually useless.

The manual is particularly bad. First, it tells you the wrong command for starting up the package – it should be [ALT]+[, not [ALT]+]. Most of the manual is taken up with explaining how to configure the program for other machines, and how to write your own machine code additions.

If you're the kind of person who would spend an hour looking for your ACME shoelace-tier instead of doing it by hand, you'll love Write Hand Man. Frankly, even though the calculator feature is quite useful, anybody who uses the notepad or diary rather than a pencil and paper has just gotta be some kinda deviant. Good background utilities can be extremely useful, but when you have to load 20 files and read a bad manual to do it, that's another matter.

RANGE OF FEATURES ■■■■□ **OVERALL SPEED** ■■■□□
EASE OF USE ■□□□□ **DOCUMENTATION** ■□□□□
8000 PLUS VALUE VERDICT ■□□□□

LERNLOCO
Minerva, £16.95



▲A sample tutorial screen from LernLoco

The LocoScript manual is an evergreen source of frustration for newcomers, which explains the legion of companies selling tutorial packages of varying types – books, audio tapes, and now from Minerva a disc.

LernLoco is a set of files on a disc, which you read while running LocoScript. This seems to be a natural way to learn the program, so that you can fiddle around and try out the keys as you read about them. The files form a progression of lessons, each one ending with an instruction on where to go next.

It's good on the actual editing features of LocoScript, but weaker on the other parts (eg. Disc Management, when the screen it is talking about isn't part of the text itself). There are some nice tips on how to get special effects on the screen and printer. However, you've got to understand the bare basics of editing to get the most from it. Best to ignore the early lessons, and treat it as an improvers course.

How you get on with LernLoco depends on whether you like the writing style. The lessons are personalised to "Jenny", and the idea is that you change all the Jenny's in a file to your own name with the [EXCH] command. This personalisation is heavily overused, and ends up being excruciatingly painful. For a tutorial package, some of the writing and screen design is surprisingly inept too.

Overall, a good idea, but LernLoco needs some serious attention to the text to realise its potential. Still, at £16.95 it's fair value and has some useful tips for many people.

RANGE OF FEATURES ■■■□□ **OVERALL SPEED** ■■■□□
EASE OF USE ■■■□□ **DOCUMENTATION** ■■□□□
8000 PLUS VALUE VERDICT ■■■□□

PCW 8256/8512 COMMUNICATIONS

PRESTEL, TELECOM GOLD, BULLETIN BOARDS, EVEN TELEX FACILITIES ALL FROM YOUR OWN DESK!



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TOME SWEET TOME

Bookworm Simon Williams pores over a wealth of new titles for the 8000s

It seems an unwritten law of the micro industry that whenever a new computer hits the streets it is followed almost immediately by several dozen books on how to use it. Each seizes on some particular aspect of the new micro's operation and expounds in great detail on those facets not exhausted by the manual.

In most cases, it must be said, a new micro's manual can stand quite a bit of amplification, and that is certainly true of the PCW's. Thick it may be, but as my old English teacher used to say 'Quality before quantity; don't scribble' (he was full of these meaningless little phrases).

A year on from the PCW's launch, new books are still falling thick and fast through the Future Publishing letter box, so we thought it might help you decide between them if we passed a few comments on each. Most of the books we've received fall into three main categories: using Locoscript, understanding CP/M and PCW companions. Those that don't are covered in a separate section at the end.

Using LocoScript

The first book is a strong contender for the longest PCW title of 1986. **A Practical Reference Guide to Word Processing on the Amstrad PCW8256 and PCW8512** by F.A.Wilson is proud of the fact that it was produced on a PCW – in other words it's not typeset it's LocoScripted. While this shows laudable perseverance, the finished product from Bernard Babani Press looks less than professional. Even if you love that familiar LocoScript typeface, you won't like the patchy way it's been printed. This patchiness isn't helped by the quality of the paper it's printed on, which might charitably be likened to that used in the Beano.

The content of the book is similarly patchy. All the subject headings you might expect in a book on Locoscript are there, with chapters on text manipulation, templates and examples of the production of a restaurant menu, an address list and technical tables. There are also some useful 'follow-the-arrows' diagrams giving step-by-step instruction on specific operations.

Some of the advice within these chapters is a little suspect, however. For example, F.A.Wilson feels you will only need four discs to run your PCW satisfactorily in the home (two for backing up system discs and another two for data), with perhaps a few more if you're using it in a busy office!

The style of writing is a little odd in places, too. If I hadn't used a PCW before, I think I'd be rather bemused by: 'The technique which must be used to associate a particular template with an intended document is on a group basis, that is on the expectation that all documents in a particular group will have the same template.' This 'reference guide' is nearly all tutorial, and there are many better tutors.

Ian Sinclair has probably written more computer books than you have three inch discs (unless you've taken F.A.Wilson's advice). With such a proven track record you'd expect his **Amstrad Word Processing on the PCW 8256** from Collins to be a good solid text. So it is. It covers much the same ground as the previous book but shows an attention to detail often missing from computer books, which are nearly always written quickly to catch a rapidly shifting market.

For a start there are plenty of examples in this book. Everything from scientific formulae demonstrating the PCW's mathematical characters to sections from tongue-in-cheek novels showing cut and paste techniques. Throughout these examples there's a refreshing sense of humour which helps to keep the text light and readable.

There is a lot of information in this book, with perhaps twice the text content of the Wilson text, but because of Sinclair's balanced style, which doesn't talk down or dissolve into jargon, it holds your attention well.

The first forty pages are devoted to a basic word processing tutorial covering the writing and printing of a letter. After this, Sinclair starts to explore the other features of Locoscript, with chapters on templates, cutting and pasting, phrases and blocks, layouts and printer and disc management. At the end of all this, there are another thirty five pages devoted to a special Help section.

The Help chapter takes each Locoscript operation and details which menu to start from and what to do to achieve your desired result. This is a really useful reference and combined with the earlier tutorial chapters makes the whole book a very good supplement to Amstrad's manual.

Sunshine Books, whose offering is **Practical Amstrad Word Processing**, seem to buy their covers in job lots. This book and their Amstrad Companion, reviewed later, both have a PCW showing the same file management screen on the cover. You can tell them apart, though, as the Companion's is photographed on a piece of Formica, while this one is on a sheet of industrial duck-board.

David Lawrence and Mark England, the authors of both books, approach Locoscript in a very methodical way. The book is structured as a series of tutorials in the use of the program, and includes exercises at the end of each chapter to help you practise what they've taught. To make sure they know how your PCW is likely to behave, they start by telling you how to prepare a special disc for the course, giving instruction on the use of DISCKIT in the process.

The course is thorough and the text well written and presented. There are useful appendices at the end on the '+' and '-' menus and an action table, which does something similar to Ian Sinclair's Help chapter, but in much less detail. If you particularly want a tutorial guide, but are unhappy about the cost of a tape-based course, then **Practical Amstrad Word Processing** can be highly recommended.

The last two books in this section are both from Glentop. You might think it's pushing it for one publisher to release two books on the same subject, but they're aimed at slightly different markets and use very different formats.

Book numbers
The best way of tracking down any of these books is to quote their International Standard Book Numbers to your local book shop. We've printed the ISBNs alongside the value verdicts.



Word Processing with the Amstrad PCW8256 and PCW8512 by Stephen Morris is an instructional book which takes you through each of the operations you are likely to use in producing Locoscript documents.

Its main claim to fame is the copious use of dumps from Locosript screens which are used to illustrate the text. While these dumps are rather blurred (none of the books seem to be able to reproduce screen dumps clearly) they are a great help when sitting at the keyboard following the book through chapter-by- chapter.

The writing style throughout the book is clear but doesn't assume the reader is a fool. The chapter headings are much as with the other books,but there is a useful shortcuts chapter at the end.

There is a tendency in PCW books to tack the 8512 model number onto books written solely for the 8256. Although there is not a lot of difference in Locoscript's operation on the two micros, Morris makes no attempt to describe copying from one drive to another in his section on DISCKIT, and I assume therefore that the only reference to the twin drive machine is on the front cover.

Glentop's other offering is the **Locoscript Pocketbook**, a neat little reference work which is one in a series of low-cost books which will nearly fit in a large pocket.

The book is written by M.E.Thompson, who has divided his work into two sections: a short tutorial on the basics of editing and a more extended reference to particular operations and special keys.

I found the book very handy to use. It is well indexed, illustrated where necessary (and the screen dumps are a little sharper than the norm) and just the thing to keep by you on your desk when working with Locoscript. Perhaps not the best buy for the first time user, but a very good investment for the more seasoned writer.

8000 PLUS VALUE VERDICTS

A Practical Reference Guide ■□□□□
Price £5.95, ISBN 0-85934-161-5
Amstrad Word Processing on the PCW 8256 ■■■■□
Price £8.95 ISBN 0-00-383328-3
Practical Amstrad Word Processing ■■■■□
Price £7.95 ISBN 0-946408-94-7
Word Processing with the Amstrad PCW8256 and PCW8512 ■■■□□
Price £6.95 ISBN 1-85181-053-6
Locoscript Pocketbook ■■■■■
Price £3.95 ISBN 1-85181-079-X

Understanding CP/M

The four books in this section are far less comparable than those on Locoscript, so you may well feel you need two or more of them to provide all the information you need on CP/M. They range from the use of application programs, such as spreadsheets and databases, to Z80 machine-code for those who want to write programs under CP/M.

Ian Sinclair must have been busy over the last few months. His **Using Amstrad CP/M Business Software**, a companion to his Locoscript book, concentrates on other applications for your PCW. There are separate chapters on spreadsheets and databases, where he takes well known products as his examples (dBase II, Cardbox and SuperCalc 2 among others).

These chapters only occupy 30 out of 140 pages, however, and I do wonder who named the book, Mr Sinclair or Messrs Collins. That's not to say that the remainder of the book is of no use; far from it. There's a good description of the Amstrad disc system, most of the useful CP/M Plus utilities and a full chapter on ED, which must be the most over-described text editor on any micro. There are also good chapters on printer control and the use of printers other than Amstrad's own.

The book is useful, well written and reasonably illustrated. It's not primarily about business software though, and you should check its contents for yourself before buying.

A much more accurate title is P.K.McBride's **An Introduction to CP/M Plus on Amstrad Computers**. This Glentop book really covers all aspects of using CP/M, excluding machine-code programming. It deals with all the supplied CP/M utilities, including the compulsory chapter on ED, and also delves into GSX graphics. The chapter on languages uses DR's CBASIC as an example. McBride is keen to demonstrate the advantages of compiled languages, but it's still a peculiar choice considering Amstrad supply Locomotive BASICs with all their micros. There's even a brief chapter on commercial software, but products get mentions rather than reviews.

Among the most useful areas of this book are the appendices. There are six of them, and they all make good references for anyone wanting to get at CP/M functions from machine code or high level languages such as Pascal or C.

Appendix A is a cross-reference between 8080 and Z80 mnemonics, which is useful if you're updating old machine-code. Appendix Bis a list of control codes (although surprisingly for CP/M version 2.2), and appendix C is the obligatory hexadecimal conversion table. Appendix D is a very useful description of CP/M's BDOS functions and appendix E is a BDOS quick reference guide. The final appendix details the structure of CP/M's system control block and how to make use of it.

Overall, this is a very handy book if you're thinking of using CP/M for more than running application programs.

Introducing Amstrad CP/M Assembly Language is another of this year's Collins books by Ian Sinclair (I wonder what lager he drinks?) and takes us one step further down the road to Z80 machine-code using CP/M. This book, like McBride's, covers the CPC6128 as well as PCW range, but this is quite reasonable as the implementations of CP/M on both are very similar.

The book aims at the novice machine-code programmer, but one who is familiar with BASIC and is

keen to solve problems in assembly language. It starts with a very lucid explanation of bits and bytes, taking a series of simple lightbulb circuits to symbolise the 0s and 1s in a byte of memory.

It moves on at a steady pace to delve into the CPC and PCW architectures and their implementations of CP/M, and then describes in some detail the Z80 processor used in both micros. After this comes a chapter on handling the processor's registers, culminating in some short routines in Z80 assembly code. The process is comparatively painless as little mathematical or scientific knowledge is assumed (although you will need to be able to grasp new concepts fairly quickly).

After this introduction, the book starts to look at CP/M itself, builds more routines and describes the machine-code utilities supplied with CP/M Plus on the Amstrad machines. The next chapter details a series of handy disc utilities written in a mixture of BASIC and machine-code.

Handy, that is, if you have a CPC6128. The routines make use of AMSDOS and the BASIC built into the CPC machine, and will not run on a PCW. It's a shame that a version couldn't have been put together without the use of BASIC, although that would obviously have taken a good while longer to prepare. With this reservation, the book is recommended as a good introduction to machine-code programming under CP/M.

The final book in this section is another of Glentop's pocketbooks, this one by J.B.Vonk. As with the Locoscript pocketbook, this one lays out all its information in a very clear way. In this case of course, the information is of a much more technical nature, and there are plenty of tables and diagrams explaining just about anything you might want to know about the Z80 processor.

As well as a general description of the structure of the microprocessor, the majority of the book is devoted to an opcode-by-opcode guide to the instruction set of the Z80. The advantage of the book is not that the information is particularly new, but that it's all gathered together in one place and presented in a convenient form.

At the price, it represents very good value for money.

8000 Plus Value Verdicts

Using Amstrad CP/M Business Software ■■■■□
Price £8.95 ISBN 0-00-383309-7
A Introduction to CP/M Plus on Amstrad Computers ■■■□□
Price £7.95 ISBN 1-85181-054-4
Introducing Amstrad CP/M Assembly Language ■■■□□
Price £9.95 ISBN 0-00-383328-3
Z80 Pocketbook ■■■■□
Price £3.95 ISBN 1-85181-036-6

PCW Companions

These books try to be all things to all micro users by covering many aspects of the PCW, but in less detail than than the single-topic books.

Thus **The User's Guide to the Amstrad PCW 8256/8512** by Don Thomasson starts with a resume of Locoscript, in the form of an extended glossary. The glossary covers actions as well as items so, for instance, there are entries for 'Reverse Video' and for 'Right Justify', for 'Limbo' and for 'Line Feed'. All these entries are brief, but are probably adequate as prompts for the well-heeled user.

From here the book swings round to look at the printer and how to control it. It provides a useful table of control codes and describes the PAPER utility. CP/M is covered in seven and a half pages, with a further five and a half on 'Advanced CP/M', which comes down to a couple of handy tips like how to get at the terminal emulator through BASIC.

Following chapters are headed BASIC, file handling (which offers an explanation of Jetsam), and thirty five pages detailing an accounting program which may or may not be of use to you. The Guide stops short at 150 pages with a couple of blank pages for notes, and you may well agree with me that Melbourne's asking price is rather high for a book which tends to dabble rather than discuss.

The Amstrad Companion by David Lawrence and Mark England takes a different approach. By concentrating on four subjects it manages to cover each in

8000 Plus Value Verdicts

The User's Guide to the Amstrad PCW8256/8512 ■■□□□
Price £10.95 ISBN 0-86161-204-3
The Amstrad Companion ■■■■□
Price £7.95 ISBN 0-946408-95-5

Honourable Mentions

There's not room for more than a glance at the other two books received. The first is another in the Glentop Pocketbook series, this time on Logo. **The main part of Martin Sims' book describes each Logo primitive with the aid of simplified turtle diagrams or list examples. Towards the back are a series of projects in Logo, mostly concerned with the turtle side of things. Like each of the Pocketbooks, this is a good little reference work to have by you while trying things out. It covers six variants of the language, including Glentop's own Honeylogo.**

Dynamics of ProStar **from Dow Jones-Irwin is a big American book full of instruction on the wide range of MicroPro software, of which the best known is WordStar. There is tutorial material here for the rank beginner as well as the more experienced user, and plenty of hints and tips from the author, Jane Davis, who has spent her last four years setting up MicroPro systems in the States, lucky thing. If you've invested heavily in the likes of WordStar, InfoStar and CalcStar, you may well find this book worth the chunky asking price.**

8000 Plus Value Verdicts

Logo Pocketbook ■■■■□
Price £3.95 ISBN 1-85181-035-8
Dynamics of ProStar ■■■□□
Price £16.95 ISBN 0-87094-669-2

SUBMIT file. It finishes with a table of common CP/M operations and lists of file extensions and editing key sequences.

The next section, which forms the bulk of the book, is on BASIC. After a brief introduction to the Mallard variant, the two authors present six complete BASIC programs, ranging from a simple accounting routine to a a fair amount of detail. The first section, on CP/M, describes some of the less understood aspects of the operating system, such as user groups and creating a card index database. According to the back cover, these programs are in use in more than 20 countries. What it is to have friends worldwide! The section finishes with some useful routines for you to build into your own programs.

The final two sections of the book cover GSX graphics and Logo. The former is a good explanation and useful if you want to produce graphing programs for your PCW. The latter tries to take the language further than the spirograph pictures usually used to illustrate it. The book is valuable to anyone exploring the software supplied with the PCW. If you've bought your machine recently, you may well not have a copy of the Mallard BASIC manual. This book from Sunshine won't replace it, but will at least let you get some use out of the language. ●

HEADERS AND FOOTERS

Nothing to do with football, just the production of nicely labelled documents. Ben Taylor negotiates one of LocoScript's trickier features.

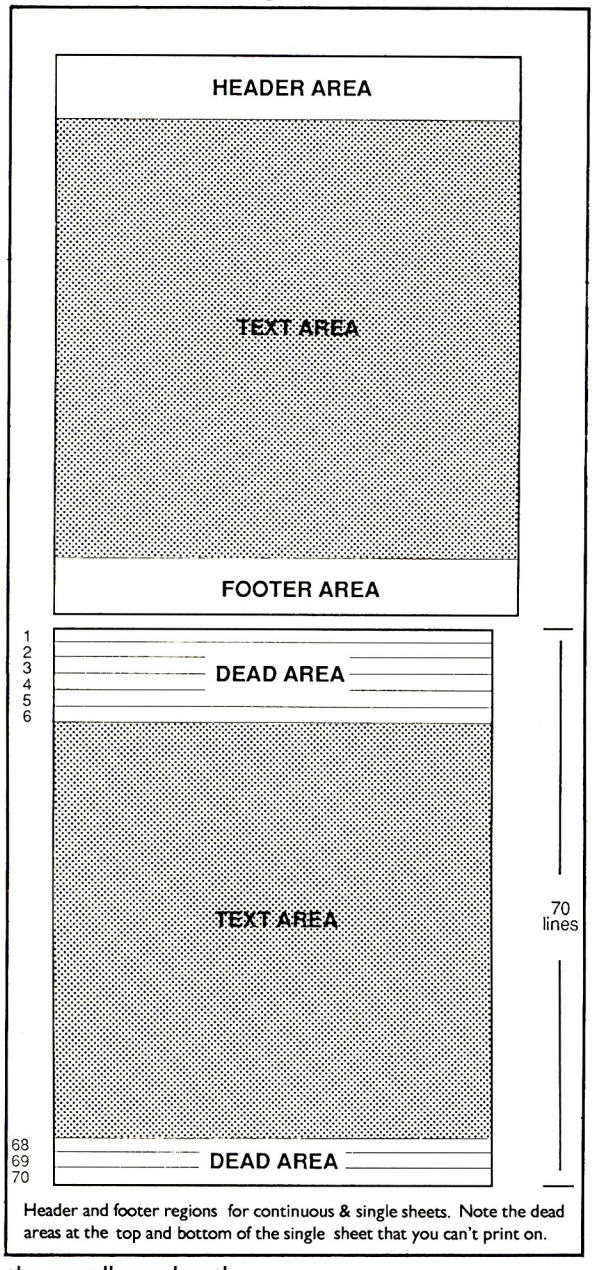
Most of the instructions in manuals and tutorials about LocoScript are aimed at producing simple letters of one page or so. However, LocoScript is capable of producing much more complex results, from esoteric professional documents to complete novels.

Once you progress beyond about two pages of text, it becomes important to make sure the page layout gives the document a consistent and attractive look – in particular, automatically numbering the pages is useful. This kind of thing is done using LocoScript's Headers, Footers and the Base Layout, and that's the area that we're looking at this month.

It really is well worth while taking the trouble to use headers and footers, although they have a justifiable reputation as one of LocoScript's more impenetrable areas. Early versions had bugs in, with the result that you couldn't actually do page numbering, but these have now mostly been ironed out.

Anatomy of a page

The key to using headers and footers is to understand how LocoScript splits up the page when printing. As shown in box 1, there are three areas: the header (top of the page), the text area called the page body, and the footer (at, you guessed, the foot of the page). You can set the number of lines allocated to each of these areas to be anything you want, as long as the total number matches the overall page length.



Header and footer regions for continuous & single sheets. Note the dead areas at the top and bottom of the single sheet that you can't print on.

Single sheet A4 paper has 70 lines per page. The perforated continuous stationery that is used with the tractor feed mechanism on the printer can print 66 lines per page – this size is known as American Quarto (although it is occasionally possible to buy continuous sheet A4 paper).

The PCW printer can put text on any line on continuous sheet paper, but can't print on the top 6 lines or bottom 3 lines of single sheet paper. This is simply because, as with an ordinary typewriter, the paper feed rollers have to have enough paper to be able to grip the sheet properly. For this reason, to use headers and footers it is best to try and buy some continuous sheet paper, or else you won't be able to print them at the very tops and bottoms of pages.

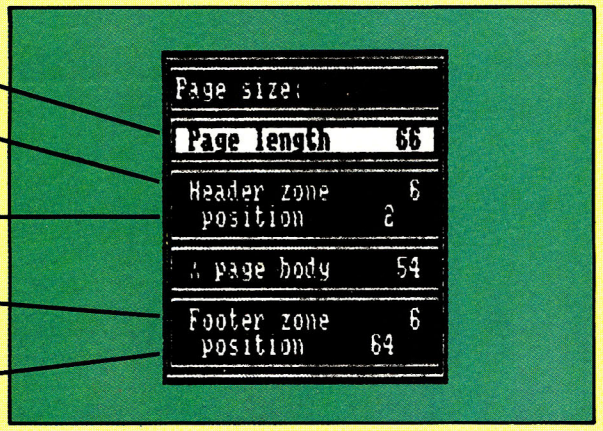
The page is 66 lines long (standard continuous paper)

Line numbers 1-6 (the top 6 lines) are reserved for header text

The header text actually starts on line 2 (so line 1 of the header text has been left blank)

Line numbers 61-66 (the bottom 6 lines) are reserved for footer text

The footer text actually starts on line 64 (so lines 61-63 are blank)



Defining the page layout

You can instruct LocoScript to format the page for any size of paper, but you have to tell it how many lines can fit on the sheet, even for standard sizes. This is done in the *Page size* menu of the "Editing header" screen:

Using this menu is just a matter of simple arithmetic. You can alter the page length and the header and footer zones and positions, but the "page body" is calculated by LocoScript and is not directly alterable.

The page body is the text area proper, which is the page length less the number of lines in the header and footer zones. In the example menu shown, lines 7 to 60 inclusive are the lines that the text you type into LocoScript will actually appear on. To alter this, you must juggle the page length and the header and footer zones appropriately.

Defining header and footer text

The header and footer texts themselves are just typed into the relevant slots in the "editing pagination" screen in just the same way as you do in the ordinary LocoScript screen.

You can use any LocoScript format command in headers and footers, like pitch changes, tabs or underlined text. The style commands are treated as separate from the ones used for the main page body, so if you set a header in bold type, it isn't necessary to turn bold off for fear that the whole of the page body will end up in bold too.

You will see there appear to be two sets of header and footer areas. This is because you can make certain pages special – for instance, you might not want to have a

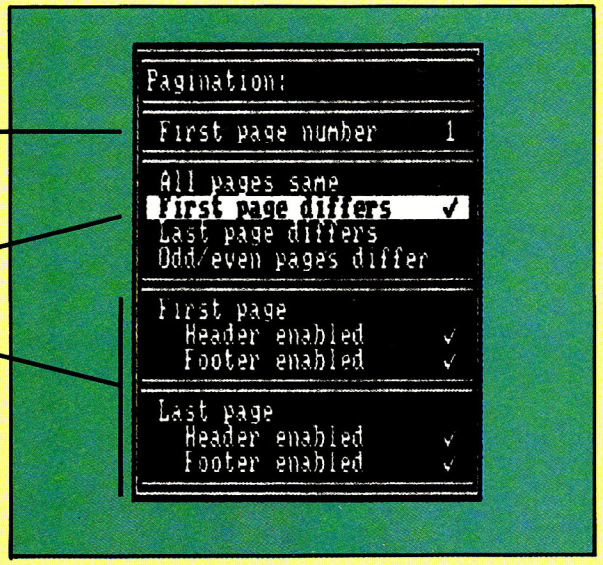
Trouble saver

Remember that headers and footers that you define in a TEMPLATE.STD file are carried over into documents that you create from that file. So you can do all your pagination once and for all in the template document, leaving you only to edit the actual title in the page headers for each new document.

Changing this starts page numbering from the specified number.
This is useful if you are storing and printing documents in separate chapters.

If you want to differentiate between types of pages (eg. odd and even numbered ones), set that up here.

Best to ignore these choices, and set them all to *enabled*

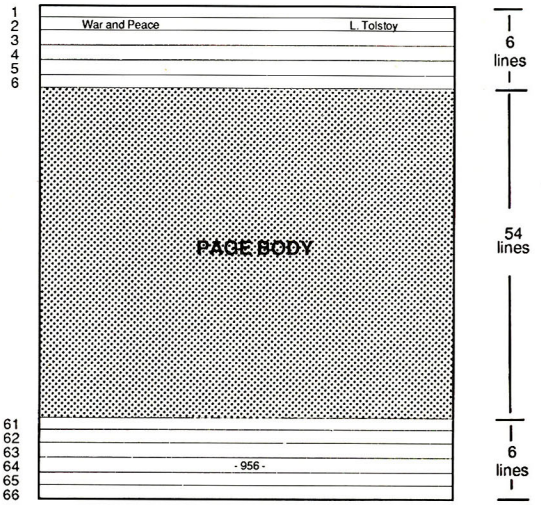


Novel layout step by step

As an example, we'll use LocoScript to create headers and footers for a straightforward document of several pages, like *War and Peace*.

First, think of the layout you want. The header text will say "War and Peace" on the left, and have the author "L. Tolstoy" on the right. The footer will be the page number, centred between hyphens like "- 23 -".

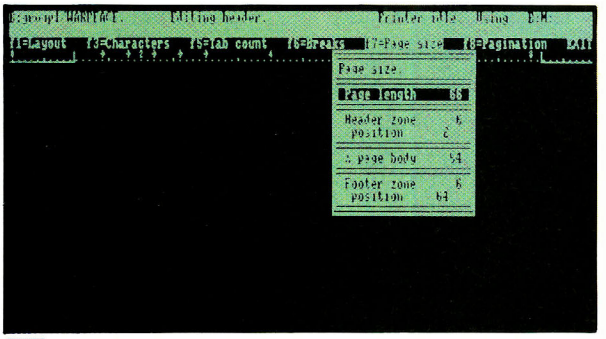
Suppose you want to print it on continuous paper (so the page is 66 lines long) with header and footer margins of 6 lines each, the actual header or footer text being on lines 2 and 64 of the page respectively. As a refinement, the header text should not appear on the very first page.



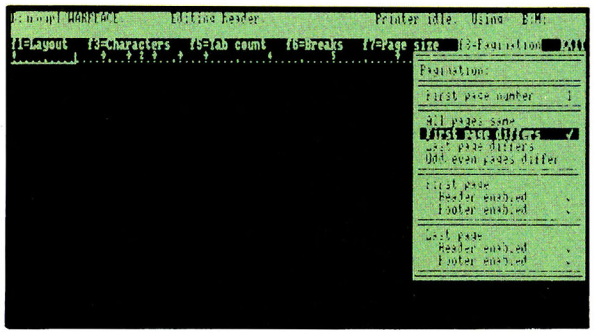
1 Produce a rough sketch showing which lines you want your headers and footers to appear on.



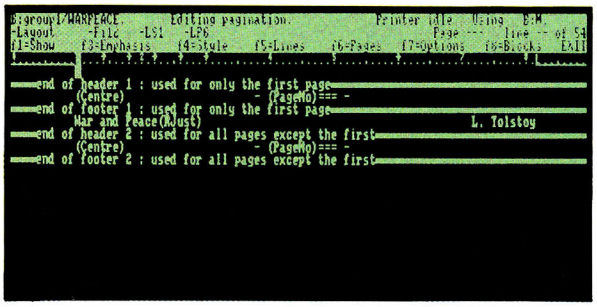
2 In LocoScript, create (or edit) the document that is going to contain your story. While editing, press [f7] to get the *Modes* menu and select the Edit Header menu option. Then pressing [f7] twice will take you to the *Page size* menu.



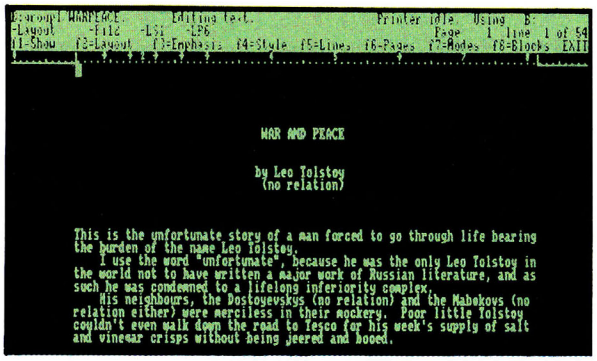
3 Now you fix which line numbers will carry the actual headers and footers: Following your page plan sketch, set the page length to 66, the header and footer zones both to 6, and the header and footer positions to 2 and 64 respectively.



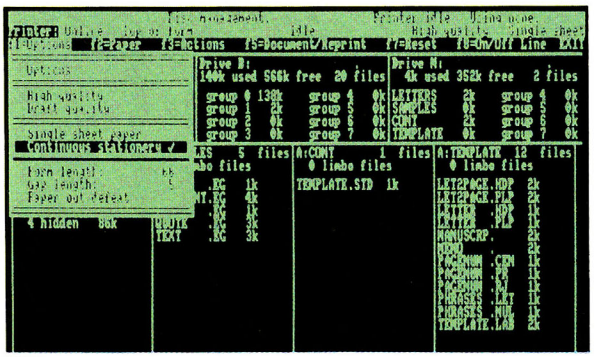
4 Press [ENTER], clear the Page size menu, and then press [f8] for the *Pagination* menu. Set the "First page differs" option (highlight it and press the [+] key). Then leave the menu, and return to the "Editing pagination" screen (use the [EXIT] key).



5 Type in the header and footer texts as needed. (Note: in the footer, - (PageNo) = = = - will cause the page number to be printed centred between the two dashes.) Then press [EXIT] and select "Use this pagination".



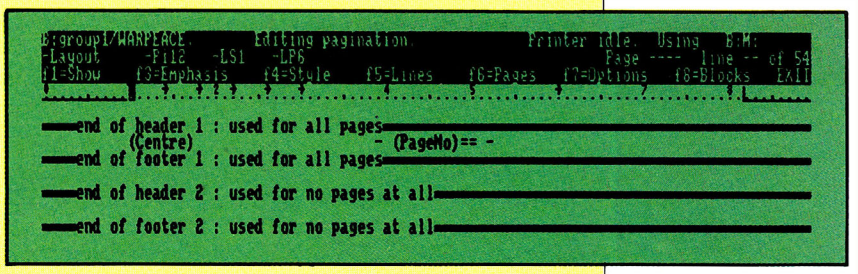
6 You're now back in the ordinary text editing screen, and can begin typing your masterpiece. The headers and footers will not be shown during the ordinary course of editing, but they will automatically appear when the document is printed.



7 When you come to print the document, press [PTR], and [f1] for the *Options* menu. Make sure the "Continuous stationery" option is ticked (use the ⊞ key to set it if not).

header on the very first page of a document, but only for the continuation pages. Or you might want to put the page number in different places for left and right hand pages.

To use this, you first open the *Pagination* menu from the "Editing header" screen and set it up as required – look at the labelled example for details. Then, back in the editing pagination menu, just type in the header and footers you want.



▲ The way to print page numbers in the form "- 42-" at the bottom of all pages

Page numbering

One of the most common uses of headers and footers is to print out page numbers automatically. This is done with the LocoScript *Page Number* command.

You have to tell LocoScript how many spaces to allow for the page number, and within the space you reserve the number can be left, right or centre justified.

Suppose you know your document will not run beyond 99 pages, that means you need two spaces for the number. The way to insert this in a header is to type as part of the header text where you want the number to appear, [+]PN which tells LocoScript to print the current page number – you will have to have the "show codes" edit option in effect to see anything on the screen.

Then immediately afterwards type = =. This centres the page number within those two spaces – note that the equals signs themselves will not be printed out. Alternatively, you could have used << to left justify, or >> to right justify. Any other text in the header is just reproduced as normal.



Printing out the document

There is a final trap for the unwary after you have bravely hacked your way through the jungle of LocoScript headers and footers, and this comes at the actual printing stage.

Confusingly, even though you have defined all the page lengths and stationery types in your document, the PCW printer has to be told them again separately, or else the page breaks will happen in the wrong place.

So before printing, go into the printer *Options* menu and check that the paper length specifications match the ones defined in the document itself.

TIME TO RELAX

Our verdicts on three new entertainment titles

TOMAHAWK
Digital Integration ● £19.95

This is the first flight simulator to appear on the 8000s, and it's a corker. The program puts you in the cockpit of an American AH-64A Apache helicopter which the program notes gleefully inform you is "the meanest, deadliest combat helicopter ever to rule the skies!" Down here in Westlands country they don't take kindly to that sort of talk, but we'll let it pass.

The disc loads remarkably quickly from a cold start (no need to boot up CP/M first). You then have four main options – three different combat missions and (thankfully) a training mode. You can also choose night or day flight, level of cloud cover and whether to have weather – cross-winds, turbulence and the like.

In flight, the program offers you the now standard split-screen view – cockpit indicators and controls coupled with a constantly changing view of the ground below. Ground features are drawn in outline and include trees, mountains, pylons and landing pads, as well as field guns, tanks and enemy helicopters.

The update of the external view happens only about once a second so the movement as objects draw closer is a little jerky, but overall the graphics are impressively detailed.

Your first task is to master the basic flying skills. Takeoff is a doddle, but learning to manoeuvre the helicopter accurately is another matter. A full range of flight controls are available – throttle, collective, cyclic control (for which you can use Cascade's "Joycestick"), and rudder – but to get any confidence in using them you'll need to keep a careful eye on the range of instruments which include altimeters, artificial horizon and a Doppler navigation compass. There's also a map which can be switched in to replace the external view to reveal the depressing progress being made by the enemy.

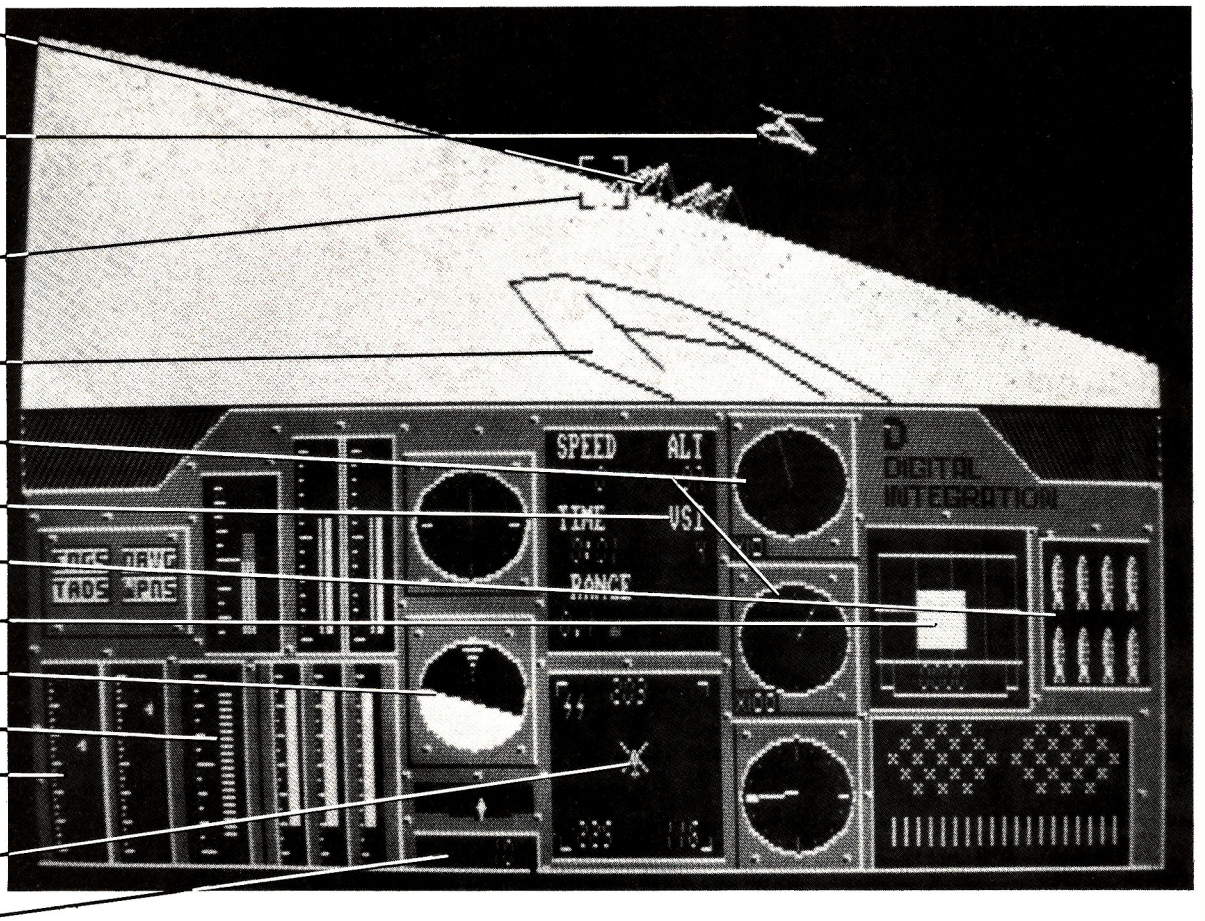
The real fun starts with the shooting. You can choose between missiles, rockets and machine gun, the first of which includes an automatic target tracking system.

In training mode the enemy don't shoot back, so you can pop off tank after tank with finesse. But once you're ready for one of the actual combat missions it's a different story. The world's deadliest flying machine will find itself shot to pieces time and again.

If you know nothing about piloting, you'll find *Tomahawk* a difficult program to get into. The instructions accompanying the package, although copious, are unclear on several points, and much trial and error is required.

That apart the program is wonderful. A sophisticated simulation offering many hours of intricate air combat. I bet they sell thousands.

GRAPHICS	■■■■□
ADDICTIVENESS	■■■■□
LASTING APPEAL	■■■■■
VALUE VERDICT	■■■■■



Distant mountains
An enemy helicopter
Missile sights
The landing pad you've just taken off from
Altimeter dials and digital readout
Vertical Speed indicator
Number of missiles remaining
Enemy targets shown here when system locked in
Artificial horizon
Fuel indicator
Collective lever – controls "lift"
Doppler compass shows position of enemy units
Score indicator!

AFTERSHOCK
Interceptor Micros ● £17.95

Interceptor have long been producing adventures backed up by graphics on other micros, some of them very good. In *Aftershock* you have an intriguing challenge: to make your way through an earthquake-devastated city to a nuclear reactor which must be repaired before it melts down.

Progress is controlled in the usual adventure way by typed keyboard commands, the only function of the graphics being to add atmosphere to the rather terse location descriptions. The latter aren't helped incidentally by the repeated misuse of the word "lay" as in "A radio lays here".

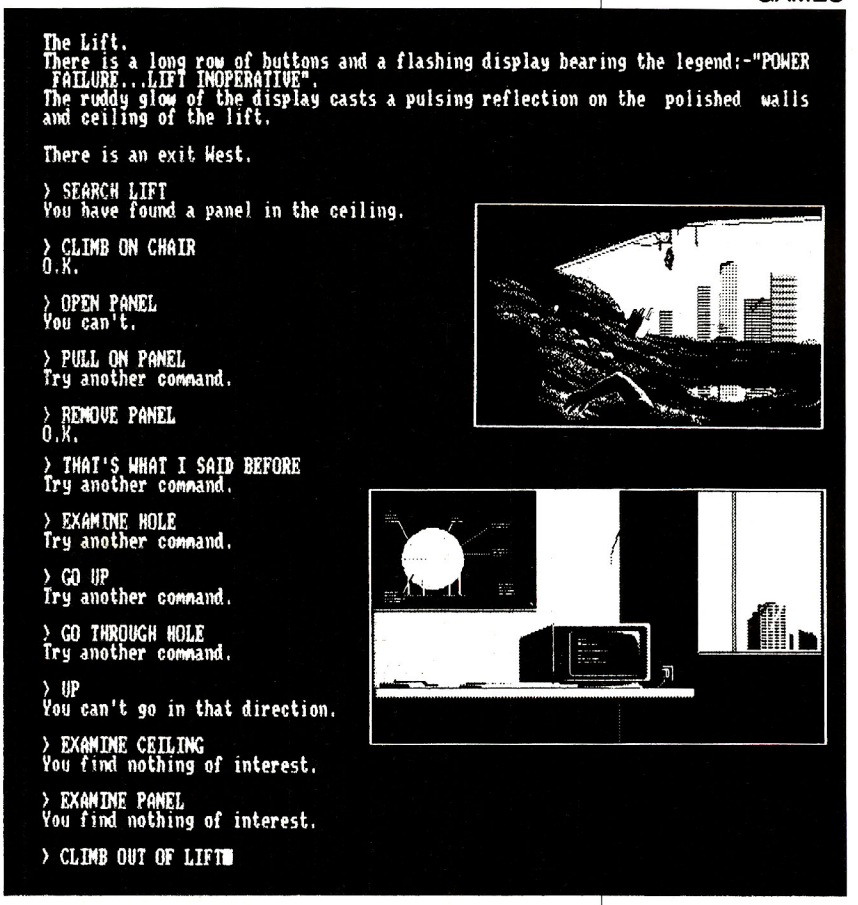
After solving the first problem of how to escape from your burning office block, you have a considerable number of locations to explore featuring such things as a zoo whose frightened inhabitants, including an alligator, seem to want feeding, a lorry leaking oil (hmmm...what to do with oil?), a flooded underground station, and a jewellery shop.

Potentially an excellent scenario, but the game nevertheless failed to grip me. This largely because of the baldness of the program's responses. To anything it doesn't understand the response is simply "Try another command" – no indication of which word it doesn't understand. The two other main responses are "Please rephrase that" and "You can't", equally unhelpful.

This means that your main difficulty in solving the various puzzles is not in thinking what to do, but simply in communicating properly with the program.

The graphics are pretty, to be sure, but I would have preferred more attention given to the game itself.

ATMOSPHERE	■■■□□
INTERACTION	■□□□□
CHALLENGE	■■■■□
VALUE VERDICT	■■□□□



▲ Part of the early action in After Shock (combining three screens of text). Inset are two of the graphic screens that appear later in the program.

HEROES OF KARN
Interceptor Micros ● £17.95

The location descriptions in this text adventure merit inclusion in the Guinness book of records. They are LONG.

This isn't entirely a good thing. Certainly there is plenty of detailed information to help create that all important atmosphere of mystery. But it could have been far better presented on screen.

Computer displays, unlike magazines, do not include any space between lines of text. So if you print 12 lines of solid text on screen, all in one paragraph, it requires considerable concentration to read.

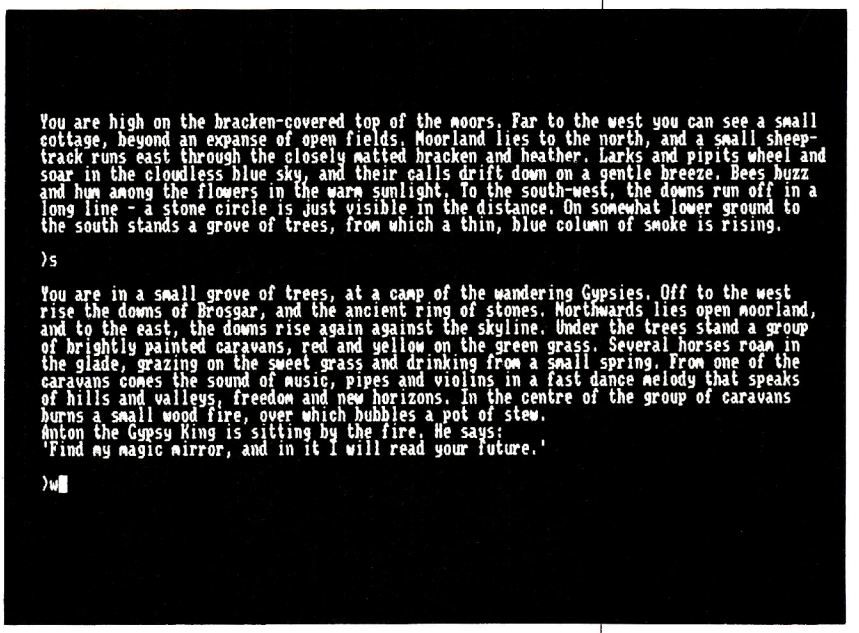
These lengthy descriptions appear to have been introduced as a replacement for the stunning graphics which featured in other computer versions of this title, but which have been dropped for the PCW, possibly because this version is written in Basic.

The game itself has a traditional scenario – you must rescue the four heroes of the title and make use of each of their special powers (swordsmanship, magic, etc).

On the way some testing puzzles must be solved, sometimes involving fairly complex commands. However, although the program can go beyond the traditional two-word command in certain instances (eg. ATTACK BALROG WITH BIBLE), its language handling is by no means brilliant.

If any one of the words you type in aren't in the program's (pretty limited) vocabulary it simply responds with 'I'm sorry I don't understand'. Frustrating. But dedicated adventurers will still find plenty to enjoy.

ATMOSPHERE	■■■□□
INTERACTION	■□□□□
CHALLENGE	■■■■□
VALUE VERDICT	■■■□□



Try one of these descriptions for size!

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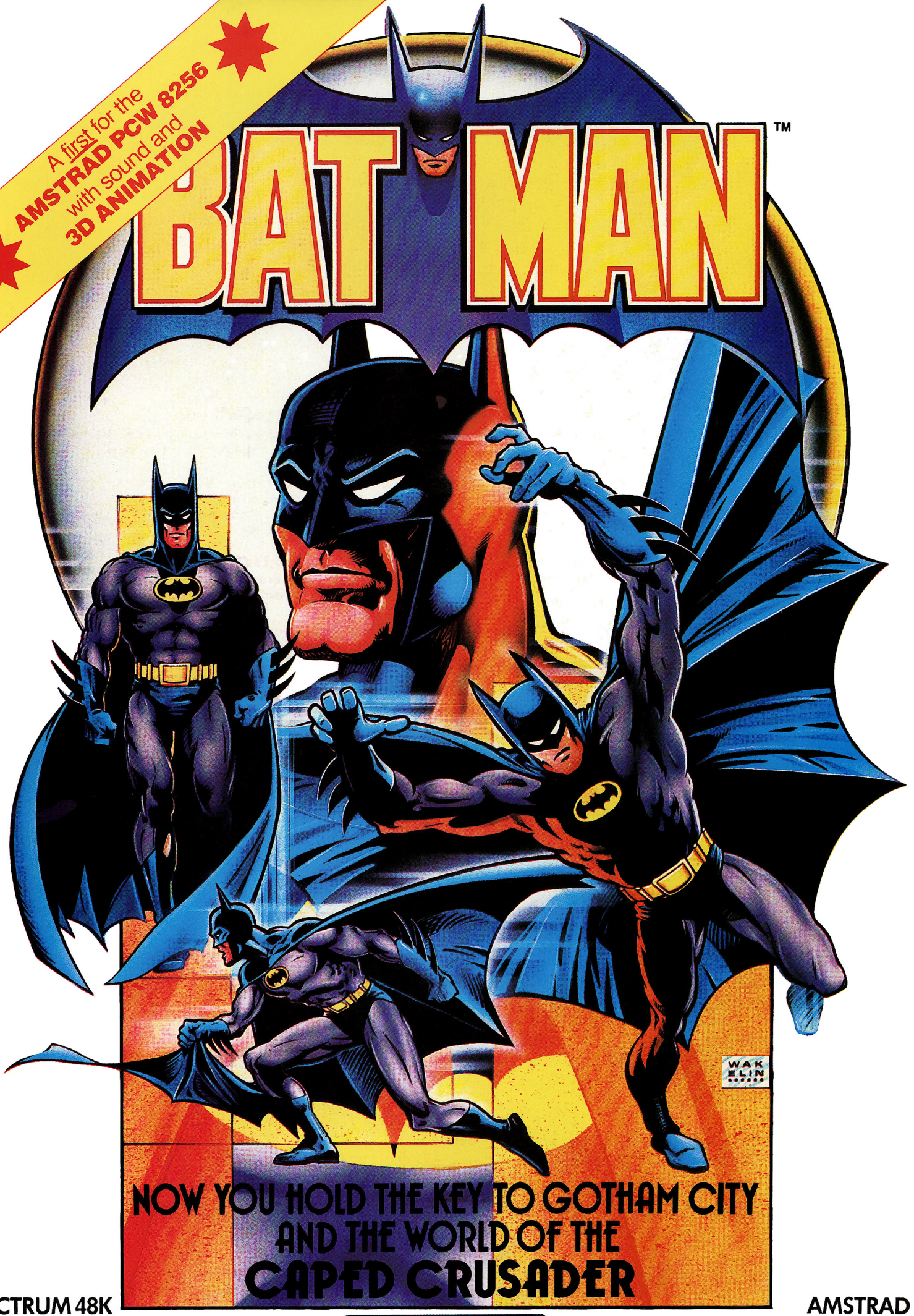

NOW YOU HOLD THE KEY TO GOTHAM CITY AND THE WORLD OF THE CAPED CRUSADER

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FRIENDLY KEYBOARDS

BEN TAYLOR explains how to customise individual keys to do your bidding.

Users of LocoScript are positively pampered by the PCW – all the keys on the keyboard are nicely labelled and set up to make life specially easy.

However, if you run programs using CP/M you know that things get a lot harder. In general, the f-keys and the arrow keys cannot be used, and at the same time many CP/M programs (like *WordStar*) use horrific choices of keys for commands, like [ALT]+KQ. Wouldn't it be nice to be able to use those spare keys to replace the complex multiple keystrokes?

Fortunately there is a way to do this on the PCW, which is to use the SETKEYS program that comes free on the CP/M master discs delivered with the machine. You can make all the unused keys on the keyboard do useful things, including automatically typing entire CP/M command lines.

The keys numbered

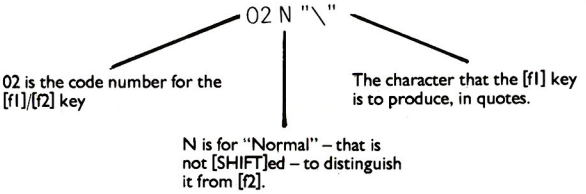
The principles behind altering the keyboard layout are quite simple really. Every key on the keyboard has a unique number associated with it, as shown in the diagram – so the space bar is key number 47, and so on. But the alphabet letter that the PCW links with each number can be altered, thereby changing the effect of pressing that key.

In fact, the most useful part of SETKEYS is that you can define a single keystroke to "expand" to more than one letter – it could represent an entire string of words or characters.

[EXTRA]+½. Let's fix the keys so that the unused key [f1] produces the backslash character.

So, checking on the number diagram, [f1] is key number 02. Note that the number, 02, identifies the actual physical key labelled [f1]/[f2], and so the key number for [f2] would also be 02. To distinguish [f1] from [f2] we have to tell SETKEYS a bit more, namely whether the [SHIFT] key is being pressed or not.

Without further ado, here's the command that sets up [f1] as we want:

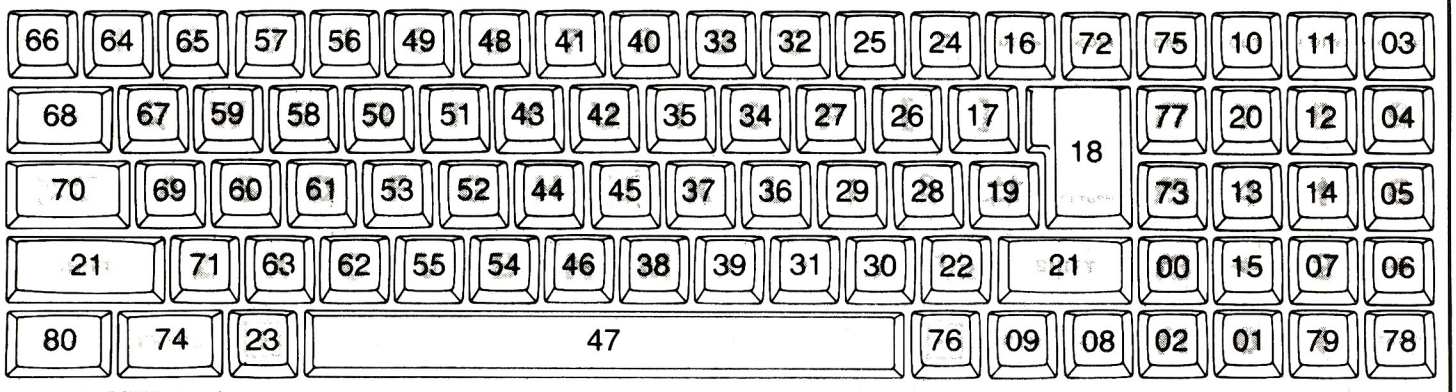


The next step is to get the SETKEYS program to read and act on this cryptic command. To do this, the command first has to be put into a CP/M text file (see box at end of feature), which for argument's sake will be called BSLASH.KEY.

Now for the exciting part. Find a disc with the file SETKEYS.COM on it (side 2 of the original master discs), and copy it onto the same disc as BSLASH.KEY is on. Type

```
SETKEYS BSLASH.KEY
```

Now if you press [f1], a backslash appears on the screen. [f1] will produce the backslash character from now on until you reset the machine (eg. to run LocoScript), and it can be used inside any program. Characters produced in this way can be deleted and edited like any normal keystrokes.



▲ The PCW keyboard, showing each key with the code that SETKEYS knows it by.

The key facts

The simplest way to explain is to go through a worked example. Suppose that a program you use often requires you to type a backslash, "\", as part of its commands. On the PCW, backslash is awkward to get, you have to type

You can of course set up many keys at the same time – you don't have to have a separate command file for each. Just put each command on a new line one after the other in the file that you give to SETKEYS.

Some final frills

Remember how you identify a key to SETKEYS by its number and its shift state – "02 N" means key code 02 (the [f1] key) used Normally (ie. unshifted). The "N" in there can be replaced by several things: "S" means [SHIFT], "A" means [ALT] and "E" means [EXTRA].

Here are a couple of example SETKEY commands, and by now hopefully you will be able to see where their translations come from:

1) 02 S "a" means: set the [f2] key (which is [SHIFT]+[f1]) to "a"
2) 78 A "b" means: set [ALT]+[ENTER] to be "b"

With a bit of effort you can convert your PCW keyboard to one that can enter all the commands you regularly use for your favourite programs at a single keystroke. You can of course put the SETKEYS command in your PROFILE.SUB command file to set the keys automatically when you start CP/M up.

It's a good idea to put sticky labels on the tops of your redefined keys, in case someone else unused to your conventions uses the machine.

Memory jogger
In fact, you can put any text you like on the end of the command line, and it is ignored by SETKEYS. This means you could type a comment to remind you what the command does:
02 N "\" (Set [f1] to \)

Boffin note 1
The full story is this: [RETURN] is ASCII code 13 (decimal), and M is the 13th letter of the alphabet, so we use ↑M to represent [RETURN]. All the ASCII code numbers 1 to 26 can be specified to SETKEYS in this way, offering the full range of control functions.

Boffin note 2
In fact, the # sign introduces a hex code, so rather than talking of codes between 80 and 99, really the codes are from hex 80 to hex 9E. 9F means "ignore this code".

SPECIAL KEYS

Some characters, such as the "per thousandth" sign, cannot be typed directly from the keyboard in CP/M, but nevertheless can be displayed on the screen. To get at them, you have to know their ASCII codes. These are listed on pages 113-118 of the PCW CP/M manual – for example, the per thousandth sign is code 181.

Using ASCII codes in SETKEYS is broadly similar to ordinary keys. When defining [f1] to be \, the command was:
02 N "\"
To define it to be a per thousandth sign, the command is just
02 N "↑'181'"
Note how the code, 181, is between single quotes and preceded by ↑, but otherwise placed exactly where the backslash was in the first example. So putting this new command in a file and running SETKEYS with it will now define [f1] to print out a per thousandth sign on the screen.

Another possible problem crops up if you want to specify to SETKEYS that a key is to represent [RETURN] (a useful thing to do as you'll see). How you would go about this? – to set the [f1] key to be [RETURN], you want to have a command something like
02 N "[RETURN]"
But you simply can't type this! If you press [RETURN] after the open-quote, the line will end and when you run SETKEYS it won't understand what
02 N "
"
means. So there is a special way to specify the [RETURN] key: you type ↑M instead ("↑" is [EXTRA]+[:] on the keyboard). To set [f1] to be [RETURN] then, you would type this line into your SETKEYS file:
02 N "↑M"
This mightn't sound too useful, since no-one would want to change the [RETURN] key's placing, but it does have an extremely powerful function in helping to create whole command lines (see separate box).

COMMAND LINES

Getting keys to produce special single characters is useful, but it is also possible to produce entire lines of text at a single keystroke, although this requires a little more effort.

Suppose that a command you use regularly is ERA *.BAK, **to delete your backup files and clear some disc space. You can do this using SETKEYS in a two stage process.**

First, pick a number between 80 and 99. This will be the special number that will identify the text to be produced by the appropriate keystroke. So, picking 80 as our chosen number, the first command to give SETKEYS is
E #80 "ERA *.BAK↑M"
This says to "expand" (hence the "E") the special code 80 into the letters ERA *.BAK followed by a [RETURN] character – as explained in the "special keystrokes" box, [RETURN] is represented by ↑M. Now all we have to do is tell SETKEYS which key will generate the special code 80, and this is done similarly to the backslash example. Suppose we want to use the keypad key "2" to do the file erasing for us, then put in the command file the line:

07 N "↑'#80'"

07 is the code for the "2" key (at the centre of the cursor keys)

N is for Normal use – no [SHIFT], [ALT] or [EXTRA]

80 is the special code to be generated. The quotes and arrows all have to be there – don't ask why!

So, bringing it all together, create a file (we'll call it ERABAK.KEY) containing the two lines:
E #80 "ERA *.BAK↑M"
07 N "↑'#80'"
Now, back at CP/M type SETKEYS ERABAK.KEY. **From now on, pressing the keypad key "2" will automatically type on the screen** ERA *.BAK **and, because of the final ↑M, execute the command as if you had typed it normally, ending with [RETURN].**

CREATING A FILE

In this article we've talked a lot about creating text files of a few lines. If you're using LocoScript and its "Make ASCII file" option, this is very time-consuming and frustrating.

If you don't have a special CP/M text editor like *WordStar*, there is a quick way to create short files using the CP/M command PIP, which everyone has on their master disc. Put your PIP.COM disc in the drive, and type
PIP filename=CON: [RETURN]
After the [RETURN], PIP waits for you to type the text to go into the file. Type each line, press [RETURN], and then hold down the [ALT] key and press J to get to the next line. After the last line of the file, type [ALT]+Z, **and you are returned to the familiar A> prompt.**

Creating the file ERABAK.KEY, as used elsewhere in the article, and checking it by TYPEing it afterwards. ▼

```
B>pip erabak.key=con:
E #80 "ERA *.BAK↑M"
07 N "↑'#80'"
B>type erabak.key
E #80 "ERA *.BAK↑M"
07 N "↑'#80'"
```

If you make a mistake typing the file, you can't edit it with PIP, so you'll have to retype the whole thing. This is why it's only useful for small files.

And using it – after the SETKEYS, pressing the single key '2' on the cursor key pad produces the rest of the text. ▼

```
B>
B>
B>setkeys erabak.key
B>ERA *.BAK
ERASE *.BAK (Y/N)? y
B>
```

LANGFORD'S PRINTOUT



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

Front page treatment

Wearing my other hat as a Science Fiction reviewer, I waste my days reading lots of allegedly imaginative new books featuring computers. The megacomputers of SF have several irritating points in common....

They all work, and never beep at you for failing to slot in the proper "start of day" disk with the hidden LocoScript program files. (By the way, you can save 4K on your LocoScript program disk by displaying – with f8 "Show Hidden" – and then erasing MAIL232.COM, a communications program which is no earthly use until you buy an interface. Keep the master copy....) They work fast, depriving you of the fun of racing trained snails along a measured 800 metres while LocoScript chugs to the end of a file. Most SF computers talk and take dictation, or can be plugged directly into so that your thoughts go straight to the screen: either way, there's no trouble with coarse, mundane keyboards.

Back in reality we have the PCW8256/512, which at least doesn't devour its users' brains (though my wife isn't so sure), take over the universe (even if they seem to be outbreeding mere humans) or precipitate nuclear holocaust (I know CND and Greenpeace people with Amstrads, but they're oddly rare in the Pentagon and Kremlin).

The worst SF threat that the beasties pose is the Creeping White Peril, subtitled The Paper That Ate Manhattan. You buy the gadgetry with thoughts of that fabulous high-tech catchphrase, "the paperless office". A week later you're surrounded by crumpled manuals and early drafts – all around the monitor are stuck reminders like "Press EXTRA 4 for ¢ sign" or "to alter page numbers don't press 'f6 = Pages', use f7 ENTER (long pause) f7 f8" – the floor is a sea of discarded sheets because brilliant on-screen sentences can lose their shine when printed, forcing you to redo page after page....

Dash it!

How do you type dashes? One isolated hyphen can get accidentally joined to an adjacent word: best to type a dash as two consecutive hyphens. (Some prefer three.) During relaying, two "ordinary" hyphens can break apart at a line-end and look silly. Hard hyphens stick together: it's worth making a pair of them a "standard phrase" to enter with "PASTE D-for-dash".

You need to cultivate an eye for the screen. Publishers' readers do this in a different way: they're the poor sods who first sift through submitted typescripts in search of some glimmer of literary virtue, and the task is complicated by the psychological fact that in typescript nothing looks as good as Real Print. On the screen we have the reverse problem, maybe because of all that SF about infallible super-machines: those neat green words look so convincing that your eye skips clean over the typpong errors and warped; punctuation. Learn to be distrustful!

Some good news on the monitor front: despite horror stories about deadly screen radiations which turn you into a low-budget special effect from Dr Who, researchers say computer monitors are somewhat less dangerously radioactive than houses or people. Must tell this to the software customer who's convinced his screen emits cosmic rays, making him nauseated whenever he sits down to work. I used to get the same sensation from pencils and paper – the problem wasn't so much the dread A4-radiation and HB-particles as working for the civil service. A letter of resignation produced a complete cure. Glory, glory.

There are two valid worries about the PCW monitor. One is very general: if you fret about evil effects of working with the green screen, the mere stress of worrying will be bad for you – so don't. (Take my elixir and you'll live forever, provided you never think of the word "hippopotamus".) Eyestrain is the more specific worry: you should try to stop staring at the screen for 10 minutes of each hour, which isn't difficult if you regularly save your files to disk so that LocoScript can do its famous simulation of an interglacial period.

Justification continued

Last month I was brutally censored, by accident, while trying to blow the gaff on the great LocoScript justification scandal. Here's the key fact: with right-justification set, every line of a LocoScript file becomes 6 bytes (about 1 word) longer... so you can squeeze fewer words onto a disk. Will the LocoMafia gag me this time? Who knows?

On my PCW the screen looks most readable with the brightness at absolute minimum, and I wouldn't mind turning it down further: maybe one day I'll invalidate my guarantee by soldering in a resistor. If anyone out there beats me to this bit of illicit tinkering, do ring from the intensive care ward and say how you got on.

Meanwhile, that horrid coughing is your editor reminding me to mention writing. Last month I revealed open secrets about LocoScripting submissions to publishers: more follows, but do remember one point. Every new writer has to confront the embarrassing fact that no matter how many tips on presentation you amass, you will eventually have to display some actual talent.

The virtue of word-processing is to mechanize the boring bits, so it's worth setting up a standardized front page for typescripts. Because the most tedious things to type are those known by heart, like your own address, it's horrifyingly easy to make off-putting mistakes right there on the covering sheet. Avoid existential Angst by using TEMPLATE.STD.

You can stick lots of boilerplate material into this LocoScript template. A header, for example, a base layout with double-spaced lines (LS2) and a starting page number: I usually specify no header at all for the first page, and the magical word "langford" plus a page number as a right-justified header for following pages. The number of the "first page" I set at zero: the cover sheet isn't really part of the MS, but carries information for the editor (it'll be ripped off before typesetting).

If you specify your cover sheet and part of Page 1 in TEMPLATE.STD for your "stories and articles" group, there's no need to lay it out each time: it'll be popped in automatically. A rough suggestion based on my own slovenly habits.... Start with ten or so Returns to help centre the text on the cover sheet (you can tinker with this later). Then enter something like the following, centred or spaced out as you see fit:

```
TITLE
Author (i.e. you)
x000 words
first English
serial rights offered
Address, line 1 (etc)
(Pagebreak)
(Several returns)
TITLE
Your Name
```

...and after a blank line, the text begins. As you start a new document you can add the appropriate title; as you finish, stick the word-count into its slot on the cover sheet.

Explanations: The "serial rights" bit is a formula which should cause no offence except to shifty characters who try to buy "all rights" (shock! horror!). Word-counts are vital for short pieces: round them to the nearest 10 or 50 words, since "exactly 5751 words" is regarded with suspicion as indicating an obsessive amateur. If you have a literary agent, his/her address can follow or replace yours. The point of the blank lines before the title on page 1 of the text is that editors like to have this space to scribble typesetters' directions (how the title is to appear, etc). Some people repeat their address on page 1, but the editor will only have to cross it out come typesetting time.

Your mission, should you choose to accept it, is to get your text into print and to have it bearing some resemblance to what you actually wrote. Zap those ambiguities! For example, liberal use of soft hyphens can tidy the right-hand margin – but your editor will hit you in the mouth, having stayed up all night deciding whether each hyphen is meant to be there or should be closed up when the text is rearranged. Safer to use hard hyphens throughout, though LocoScript makes them a bore to type.

Questions? Violent disagreements? Letter bombs? Send them in, c/o 8000 Plus....

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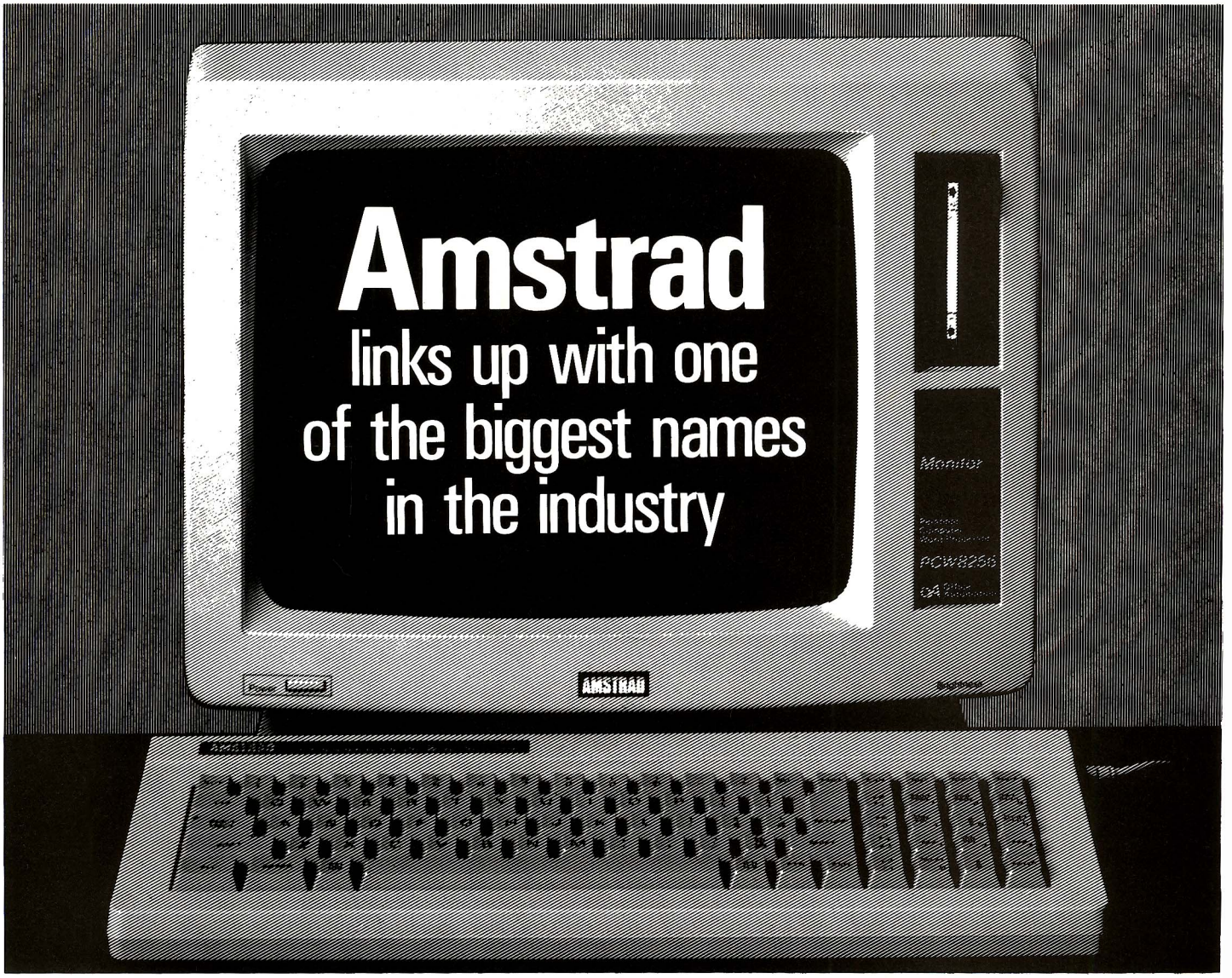

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FIRST SCREEN

DREAM MACHINE – THE FULL REVIEW 46

Massive six page review of the Amstrad PC1512 covering everything you are likely to want to know. Compatibility, speed, documentation, software, maintenance and more – it's all here.

SOFTWARE & SERVICES 53

Three pages covering GEM software, word processors, desktop publishing, accounting and games that are out for the PC – other areas to be covered next month.

GEM PAINT 58

Simon Williams takes a look at the colourful painting package that comes with your PC.

CROSSED LINES 60

We seem to be having slight problems with our phone system down here at the Old Barn, but perhaps Chris Hughes should explain...

PC PLUS GOES INDEPENDENT

Good news for all those PCW owners who are fed up with all these pages 'wasted' on the new PC; and good news for those who want to read about the PC but don't want to waste their money on all this PCW rubbish – *PC PLUS* will be a separate magazine on the bookstands from Issue Three, the December issue.

PC PLUS, the user magazine for owners of the Amstrad PC1512, was always intended to be a separate magazine: we were just waiting until there were some people around who actually owned the thing! But by the time issue three is out the machine will have been available for a month and, by all accounts, selling like hot cakes.

Although *PC PLUS* is aimed specifically at Amstrad owners, much of its content is applicable to any PC compatible. If you already own an Olivetti, Compaq, Tandy, Zenith, Walters... or even the IBM PC itself, then this is the mag for you, too. But what can we offer that you can't get anywhere else?

NEWS

Whatever your interest, we will be telling you about new hardware and software for the Amstrad PC as it comes out. As many of you will be coming to computing for the first time, we will be particularly interested in news of training centres, user groups, clubs and so forth – anything that helps you get to grips with your new machine. If you are selling a package or service that you think we ought to know about, then send details to the **News Editor** at the above address.

REVIEWS

Every issue will contain a major review section, which will look at every aspect of the hardware, software or service in question. Each product will be given a rating out of five on *range of features, ease of use, overall speed, documentation* and, most important, *value for money*; and the reviews will also be checking out software under MS-DOS, DOS PLUS and GEM, looking for any problems and the best way of using it on your PC.

Much like any other mag, I hear you say, but we regard product evaluation as an on-going process. We won't simply review a package and then forget about it for evermore – instead we will be continually telling you about new tricks or bugs that we discover as we work. *PC PLUS* is not only about the Amstrad PC, it will also be written on the Amstrad PC. We use these machines all the time.

But it's not all work, work, work at *PC PLUS*. We will be carrying extensive reviews of games, and even maps and pokes for the more popular titles. Art, music and programming languages will be covered on a regular basis too, with features written by specialists in each particular field.

FEATURES

On a more general level, *PC PLUS* will look at all aspects of computing with the PC at home and at work. From the problems of computerising your business to the joys of playing adventures – we will write about it whether it is serious, bizarre, unusual or just plain funny. And if you fancy putting digit to keyboard, feel free to send us your work – we pay good rates if it is published.

For the beginner we will be running regular series on making the best use of the MS-DOS and DOS PLUS operating systems, and on using GEM and programming in *BASIC 2*. So if you're baffled by the manual, turn to *PC PLUS*.

INTERACTION

We want you to contribute too. *PC PLUS* will have a hefty letters section, and plenty of room for your tips and problems. The magazine is here for readers at all stages on the learning curve, and we don't know everything, so tell us about your experiences, views, news, problems, criticisms and any useful tips you have discovered for improving your relationship with your PC. These pages are for you, and there will be plenty of prizes for the best letters and tips.

There will also be plenty of Special Offers on software and games, giving hefty discounts to readers and subscribers of *PC PLUS*. See you next month!

PC PLUS

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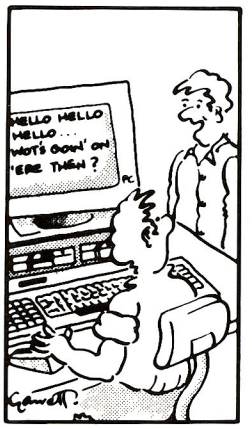


"ARE YOU SURE YOU'VE GOT THE RIGHT KIND OF PC THERE?"

POPPING THE STACK

If you want to keep up with the latest in computer jargon, and be a hit with your friends, then you ought to know about the phrase *'Let's pop the stack'*. It means simply to return to the previous topic of conversation, and refers to a 'stack' held in computer memory which acts rather like a spring-loaded stack of plates in a restaurant, in that the last bit of information put in to the stack is the first bit out – otherwise known as a 'last in first out' structure, or a LIFO.

This snippet of vital social information is brought to you thanks to *Microscope* magazine.

DREAM MACHINE

Everything you want to know about the AMSTRAD PC 1512



CENTRONICS AND RS232 INTERFACES

The PC1512 comes with both as standard – items that are optional extras on many compatibles. The Centronic is the standard parallel interface for communicating with the outside world, and is the usual connection to use for a printer. It is a 25-pin female D-type connector, needing standard PC cables.

The RS232 port is the same, but a male socket this time. RS232 is the standard serial interface, used mainly for communication between computers, but also for some printers. While Centronics is only able to send data out from the PC; the RS232 can receive as well. The PC's RS232 port can be set to speeds from 110 baud up to 9600 baud; with seven or eight data bits, one, 1.5 or two stop bits and hardware handshaking on or off. It uses a standard 8250 chip as found in many compatibles, for those who want to know such things.

JOYSTICK

On the left-hand side of the back of the keyboard is a nine-way D-connector that takes any standard joystick (told you it wasn't just a business machine!). Like the mouse, the characters sent by the joystick to the PC can be changed to suit the game you're running, and these values can be held permanently.

Launched only six weeks ago, the Amstrad PC1512 has already made considerable waves in the computer industry. Software houses are slashing their prices while hardware manufacturers quickly rethink their marketing strategies – and the machine has only just gone on sale in any quantity!

In many ways this is typical of Alan Sugar. He has a history of offering what appears to be incredible value for money – first in hi-fi and then in computers. In particular, the PCW range of word processors brought computer power to a whole range of people who could not have justified the cost of existing models.

At first sight the Amstrad PC does not look so revolutionary: after all, the base model is the same price as a PCW 8256 but doesn't include a printer. However, setting aside the higher power for a moment, the main selling point of the Amstrad is that it is compatible with IBM's own PC, and is the cheapest compatible on the market by a large margin.

Being compatible with the IBM gives a micro a huge advantage. The IBM PC is the nearest thing in this market to an 'industry standard' – which means that literally thousands of software packages and hardware add-ons are available for the Amstrad PC from Day One. It also means that Amstrad owners can take advantage of the support industry that has grown around IBM's PC: maintenance engineers, training specialists and programmers, for example, are already familiar with your machine. The Amstrad PC is guarunteed support from the moment you buy it.

BUT SHOULD YOU BUY ONE?

Of course you can only really answer that question yourself, but hopefully we can help you considerably in the pages of *PC PLUS*. The question really divides into two parts: first of all, do you need a computer at all? And secondly: if so, should it be the Amstrad PC?

The important thing is what you need a computer for – for work, for pleasure or for its own sake. As these pages show, the Amstrad PC is capable of fulfilling all these needs, and as an IBM PC-compatible is ideal for most purposes. The only proviso would be if you are really only interested in games, in which case a cheaper home computer might be more suitable – the Amstrad PC could be regarded as a little over the top for Space Invaders.

Having decided that you do need a computer, and that a PC-compatible might be a good idea – and affordable at ▶

GRAPHIC COMPATIBILITY

The Amstrad PC's display operates in several modes, both alphanumeric and graphic:

- ▶ **40 x 25 characters in 16 colours**
- ▶ **80 x 25 characters in 16 colours**
- ▶ **320 x 200 pixels in four colours**
- ▶ **640 x 200 pixels in two colours**
- ▶ **640 x 200 pixels in 16 colours**

▶ The four colour high resolution mode takes it's colours from any of three 'palettes'. The palettes are the same as those of IBM's CGA.

All except the 16 colour high resolution mode are compatible with IBM's standard CGA (Colour Graphics Adaptor). The final mode is simply an extension of the two colour mode, and was included so that GEM applications could run in full colour. This mode is not compatible with the equivalent mode of IBM's EGA (Enhanced Graphics Adaptor). Both the top two modes use up 64K of memory for the display.

Rumour has it that an EGA card, with its highest resolution of 640x350 pixels, cannot be used in the Amstrad PC because it senses the presence of a 'CGA', and because of the higher clock speed. However we have heard that with some clever jiggerypokery it can be made to work – should you want it.

A Hercules graphics card is supposed to be OK but, like the EGA, would not be able to drive the Amstrad's monitor. A Hercules colour card is also rumoured to work, but again you would need another monitor. As the power supply for the Amstrad PC is in its monitor this could pose problems, although some corporate suppliers are selling the PC1512 without monitor, presumably for this purpose.

We were unable to test any of these claims as we did not have access to the boards named above. We will be looking into this in a future issue, but the amount of software that requires an EGA or Hercules card is limited and specialised these days; and will probably be converted for use with the Amstrad's own graphic modes if the demand is there. The only area that might be affected is Computer Aided Design, which would probably need more expensive equipment in any case.

The five modes of the Amstrad PC are all available whether you have a colour or a mono monitor. If you are using a monochrome model then the 16 colour modes are displayed as 16 levels of grey – not so colourful but very handy. The monochrome monitor display is paper-white rather than the usual green, and as such is somewhat easier on the eye.

SOFTWARE AND MANUALS

Your PC1512 comes with a reasonably comprehensive manual; which covers the machine itself, GEM, MS-DOS and DOS-PLUS in some depth – but *BASIC 2* and GEM *Paint* fairly briefly. It is fairly well written as manuals go, and caters for the experienced user as well as the beginner. The more in-depth *Amstrad PC1512 Technical Reference* manual is available from Amstrad for £29.95, as is the *Locomotive BASIC 2 User Guide* for £9.95.

Also with your PC comes four 5¼-inch disks, providing you with MS-DOS, DOS-PLUS, GEM *Desktop*, GEM *Paint* and Locomotive's *BASIC 2*.

THE MOUSE

This handy gadget allows you to control your PC without touching the keyboard. It plugs in to the left-hand side of the main unit, and works by means of clever circuitry that detects the movement of a roller-ball under the mouse which tells the PC which way you're rolling it.

This is a 'two-button' mouse. The important button, used for 'clicking' and 'dragging', is the left-hand button – the right-hand button is the equivalent of the *[Shift]* key on the keyboard. Initially the mouse seems very sensitive, but this can be adjusted, and the setting permanently recorded in the battery-backed RAM. You can also change the characters sent to the PC by either of the mouse buttons, so that they perform specific functions with particular software. Again, these can be permanently set.



KEYBOARD

This sports 85 keys, and looks very similar to the IBM keyboard. It includes ten function keys which, again like the IBM, are arranged in two columns of five. This is a bonus as many PC-compatibles lay the function keys out in one row along the top of the keyboard – causing problems with the keyboard overlays that come with some PC software.

Both the *[Numlock]* and the *[Capslock]* keys have indicator lights showing when they are selected, and the keyboard features a couple of extra keys not found on the IBM PC. These are the *[DEL→]* key for deleting to the right (useful for word processing), and an extra *[ENTER]* key on the numeric keypad.

One nice feature is the ability to generate any ASCII character on screen by simply holding down the *[Alt]* key and tapping out the ASCII code on the numeric keypad – handy for the odd umlaut.

PROCESSORS
The processor is the 'controller' of the computer, taking its instructions from programs stored in the computer's memory, and controlling the output to screen, printer, disk or whatever. Processors are very simple-minded beasts, really only capable of shifting data from one memory address to another, and doing simple addition. Computers give the impression of being intelligent because the people who write the programs are, it is to be hoped, intelligent. Given long enough to work on a problem a computer will usually come up with the answer. Since a long time to a computer is a few millionths of a second – computers seem to be pretty smart.

Amstrad's prices – then another set of tests need to be applied:

- ▶ How compatible is it?
- ▶ How reliable is it?
- ▶ How powerful is it?
- ▶ Is it easy to use?
- ▶ What sort of support will I get if things go wrong?
- ▶ Will I understand the manual?
- ▶ How does it compare with the competition?

This review aims to answer all these questions, and more.

But first the specifications. Technical specifications are dangerous things, but unfortunately anyone buying anything technical these days – from washing machines to cameras – ends up comparing the specs (even if they don't understand them). So let's look at what the Amstrad PC's specs actually tell us.

THE TECHNICAL BIT

The heart of the Amstrad PC1512 is the **8MHz 8086 processor**. This means that the PC uses an Intel 8086 processor driven at a clock rate of 8MHz, or eight million pulses per second.

The Intel 8086 is not the most advanced processor around, but is probably to be found at the heart of more computer systems than any other. It was the first truly 16-bit processor, in the sense that it handles data in 16-bit chunks both internally and externally. It is the big brother to the 8088, the processor used by the IBM PC; which deals with data in 16-bits internally but has only an 8-bit data bus for handling memory and other peripherals. It is also possible to run the 8086 at clock speeds up to 8MHz, rather than the 4.77MHz used by the IBM, which means that the Amstrad can process data considerably faster.

There are more powerful chips around, such as the Motorola 68000 used by the Apple Macintosh and Atari's ST range; and Intel's 80286 which is to be found in IBM's more recent AT. These have 16-bit data busses, like the 8086, but operate with a 32-bit architecture internally. The PCW 8256 has a Z80 processor which deals eight bits both ways, and uses the older CP/M operating system.

It is important to remember that, like the brake horse power of a car, processor type and speed is a crude measurement of computer power. The actual speed at which a computer operates depends largely on other aspects such as the speed of the disk drives and the cleverness of the computer programmers – so don't attach to much importance to this specification. The important thing is that the Amstrad PC uses the same processor and clock rate as a number of other PC-compatibles, including the successful Olivetti range. If it is still not fast enough for you there is space on the motherboard for an **8087 Maths co-processor**. This is a separate processor that carries out the mathematical stuff, leaving the main processor to get on with running the computer. Adding an 8087 would cost around £150 plus VAT.

THANKS FOR THE MEMORY

The Amstrad PC comes with **512K memory** in all configurations, from the cheapest model up to the top-flight hard disk colour option. This is what is known as RAM (Random Access Memory), and is used for the temporary storage of programs and data files read from the disks. It is not used for permanent storage as its contents are lost when you turn the power off.

512K sounds like a lot of space to play with, but RAM is also taken up by the operating system, and by GEM *Desktop* if it is left resident in memory. Nevertheless, 512K is quite enough to run virtually every application program written for the IBM PC, and the Amstrad can be expanded to the maximum 640K that MS-DOS can handle for around £40, including VAT. The extra chips go into the motherboard too, so this expansion does not take up one of your precious slots.

In addition to this is a small area of memory, only about 50 bytes, that is permanently powered by four AA-sized batteries – called the **Battery-backed RAM**. This is used to hold the date and time, various parameters about the mouse, joystick and serial interfaces, and the amount of RAM that is set aside as a 'RAM disk'. This is a portion of RAM that is partitioned off to be used as though it is a disk drive. As such it is exceptionally fast, but all data is lost when the power is turned off. If you are operating under the GEM *Desktop* system the maximum size of your RAM disk is limited to 34K – but if you are prepared to forsake GEM then the RAM disk can be as large as your application program can stand. This battery-backed RAM is unique among PC-compatibles, and very useful indeed. As the Amstrad also features a **Real-time clock and calender** it also means the machine always knows the date and time without you having to reset it whenever you turn it on. The clock is quartz-locked, and so should be very accurate.

In terms of storage the Amstrad PC offers several options. On the basic level you can choose to have one or two **360K 5¼-inch floppy disk drives**. These are the standard format, compatible in every way with those of the IBM PC. 360K is enough to store approximately 50,000 English words on each side of a disk, which is something like the number of words in this magazine. In practice though you would probably allow space for the operating system and perhaps an application program too, so the capacity would be lower. They are not theoretically as reliable as three or 3.5 inch disks as the surface is not as well protected – but this is not really a

WHERE TO BUY

There should be no problem finding the Amstrad PC in your high street, indeed pretty well from launch Dixons have had one PC on demonstration in 250 outlets throughout the country. These were actually shipped over by Dixons itself, and its outlets will not be selling the 1512 until the main shipment arrives.

Other high street outlets that will be selling the PC include Laskys, who are also providing a telephone hotline service for £40 a year. John Lewis and WH Smith will be stocking it; together with Ryman and Softshop who specialise in computers and operate out of Ryman's Tottenham Court Road branch. Currys are planning to open 30 or more computer centres throughout the country, which will specialise in the Amstrad PC and low-cost software.

On the more specialised level there are a large number of distributors and dealers who have been supplying computers to business for some time. If you intend to use your PC primarily for business, and are looking for solid support from your dealer, it might be wise to buy from a specialised outlet as the staff will have a wealth of experience on installing computer systems, built up over the past – something not always true of high street shops. The danger here is that, as with any market, there are plenty of cowboys as well as bona-fide dealers. It is a good idea to ask for a couple of 'reference sites' – businesses that the dealer has sold to before – to get a second opinion. Also remember that the smaller specialist is more likely to go bust than a high-street name.

MAIN SPECIALISTS
Micro Business Systems
P&P Micro Distributors
IBL Network Systems
Norbain Micro
Computer Marketing PLC
First Software
Vistec Business Equipment
Advanced Data Technology
Wildings
City Business Systems
CPS Data Systems
Eltec Services Ltd.
Sandhurst Marketing
Office International

There has been much speculation as to exactly when you will be able to walk into a shop and actually come out with your new PC1512. At the time of writing Amstrad was quoting early October for the floppy-drive models, and mid-October for the hard disk variety. There have been rumours of delays on the hard disk models, perhaps even to after Christmas, but in any case we would advise waiting for these until we've had a chance to test them thoroughly. As we have already said – you can always add a hard disk card if you can't wait.

problem and they are a lot cheaper and easier to find.

The more expensive models in the range, the HD10 and HD20, come with built-in **10 or 20 Megabyte hard disk** as well as a single floppy drive. These offer storage capacity equivalent to 30 or 60 times that of the humble floppy disk, and much faster access to your program and data files. Hard disks are very delicate creatures and have to be very reliable – after all they are storing an awful lot of your precious data. Hard disk versions of the Amstrad PC are not available yet, so we on *PC PLUS* are unable to test them at this stage. You can always upgrade to a hard disk model at a later date (though this costs more), or indeed add one of the many third-party hard disk cards available for PC-compatibles; so we would advise you to wait before ordering an HD10 or HD20 at the moment. The 20M hard-disk card from Tandon works with the PC1512, so there is an option that is available now.

One of the things that made the IBM PC stand out in the early days was the provision of **expansion slots**. These are connectors mounted on the main circuit board that enable you to plug in extra circuitry for specialised purposes, and make the IBM standard very flexible. The trouble with the IBM PC was that very little was provided as standard: you had to add expansion boards for interfaces, graphics, colour and even disk drives.

The Amstrad PC comes with only three slots, which at first sight seems a little stingy in comparison to many compatibles available, until you realise that virtually everything you need is built in already. A second RS232 port could be added (as COM2), together with a networking board, and you would still have one slot free for something more esoteric. You could even plug in a hard-disk card – a nifty board that includes a full hard disk system which can be removed and plugged in to another PC for really portable data. The Amstrad's power supply is able to accomodate most such cards.

One noteable aspect of the Amstrad's expansion slots is how easy they are to get at. This is a by-product of having the power supply in the monitor and not in the main unit itself, as British safety standards are then not so stringent.

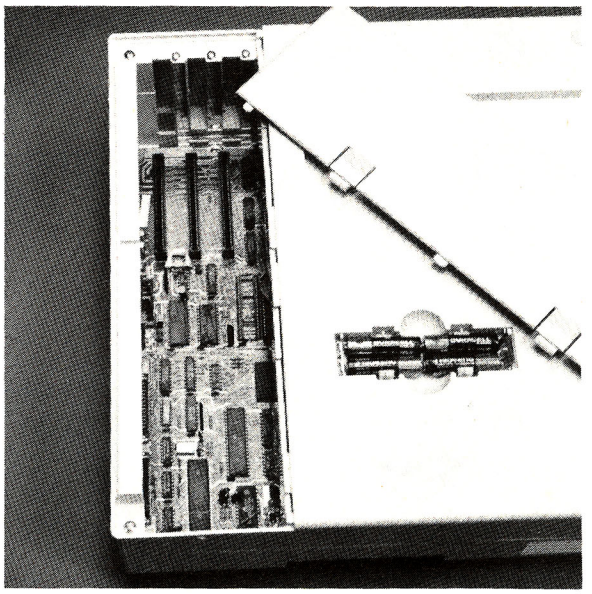
SOFTWARE

The Amstrad PC comes with four 5¼-inch disks, providing you with all you need to run the MS-DOS or DOS PLUS operating systems, GEM *Desktop* and *Paint*, and Locomotive's *BASIC 2*. Reviews of *Desktop* and *BASIC 2* were carried in issue One of *PC PLUS*, and if you want to know more about GEM *Paint*, then turn to page 56 of this issue.

All the GEM-based products, including *BASIC 2* and other third-party products, use the high resolution 640x200 in 16 colour mode of the PC. GEM's system files handle this non-standard display mode, and ensure that any software using the GEM system take full advantage of the display capabilities.

The Amstrad is unique in that it comes with not one but two disk operating systems – Microsoft's MS-DOS and DOS PLUS from Digital Research. Just how useful that is is open to question. The GEM operating system runs under DOS PLUS, but fortunately DOS PLUS is compatible with MS-DOS. Just how compatible is another matter, and *PC PLUS* reviews will point out possible problem areas.

The MS-DOS supplied is version 3.2, and it is this that ensures compatibility with the IBM PC, as it is very similar to IBM's own PC-DOS. It is supplied configured to make use of the function keys, making it very easy to edit your MS-DOS command lines on screen. It also comes with the horrendous text editor *EDLIN*, as do most versions, but Amstrad also supply *RPED*. This, like *EDLIN*, is not a full blown word processor but a simple



text editor suitable for writing batch files and the like – and it's considerably easier to use.

DOS PLUS is Digital Research's answer to Microsoft's successful MS-DOS (which stands for MicroSoft Disk Operating System). It looks on screen much like MS-DOS but is not as compatible with PC-DOS; it does however have the benefit of allowing you to run programs written for CP/M-86, though there are not many programs that use this operating system as MS-DOS rather rules the roost as far as 16-bit machines are concerned.

One feature that DOS PLUS offers which is not available under MS-DOS is the ability to run up to three background tasks in addition to the main 'foreground' program. There are two background programs supplied with the Amstrad: *PRINT* and *ALARM*. *PRINT* allows you to set up a list of up to 32 files to be printed out in succession while you carry on with your main program; *ALARM* lets you enter up to 32 messages, to 40 characters in length, that are to be displayed on the status line at preset times.

Another useful feature is the DOS PLUS status line, which uses the bottom line of the screen to tell you which programs are running, the nationality of the character set, the printer selected, whether [CapsLock] and [NumLock] are on or off, and the time. You can choose between seven or eight-bit, UK or US keyboards, or design your own using a special DOS PLUS program called simply *N*. Finally, DOS PLUS includes a VT52 Terminal Emulator to give your display the same characteristics as that of the IBM PC.

We will be looking at MS-DOS and DOS PLUS on a regular basis in the pages of *PC PLUS*, and will be looking to you to tell us what problems you have with them, and what short cuts and tips you would like to pass on.

COMPATIBILITY

All this technical stuff is very nice, but the important question is how compatible the beast is with IBM's own PC.

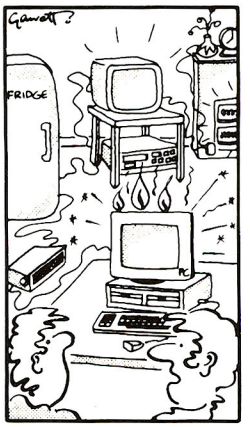
Graphic compatibility has already been covered in the panel-piece earlier on; suffice it to say that the only problem will be with the EGA card, though we have not been able to test any graphic cards with the PC as yet. Much the same goes for hard-disk cards, memory boards, modem cards and all the other weird and wonderful things that people plug in to their PCs, although we did try a 20M hard-disk card from Tandon, which worked without problem.

We understand that the Amstrad is pretty compatible

EXPANSION SLOTS

Three expansion slots are provided, which are very easy to get at for a change. These allow you to slot in additional circuitry such as modems, hard disk cards or networking interfaces – and are supposed to take most boards suitable for the IBM. Many compatibles come with a lot more, but you must remember that the Amstrad PC has most of the things you would want on the motherboard. There is no point plugging in most multi-function cards, memory expansion boards or things with built-in clock and calender as you've already got them.

We will be comparing expansion boards for value and compatibility in future issues of *PC PLUS*.



"WELL, I THOUGHT YOU COULD PLUG ANYTHING INTO THE EXPANSION PORT..."

USING GEM

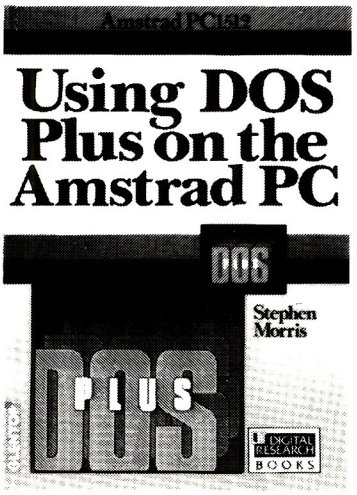
Digital Research's Graphic Environment Manager (GEM to you) is a sophisticated system for controlling your PC, and a lot prettier than MS-DOS. It is great for getting to know your computer, and indispensible when it comes to graphics packages such as GEM *Paint* or *Draw*, but it does have disadvantages.

For a start it takes up an awful lot of memory – a lot more than MS-DOS or DOS PLUS – which is why it can only cope with a 34K RAM disk. With MS-DOS or DOS PLUS you could probably have 256K, and certainly 128K with most applications. It is also a lot slower than a conventional operating system.

In its favour, GEM comes into its own on a hard disk system. The hard disk gives it speed and it's really handy for sorting out all those sub-directories.

THE OFFICIAL GEM AND AMSTRAD PC1512 BOOKS

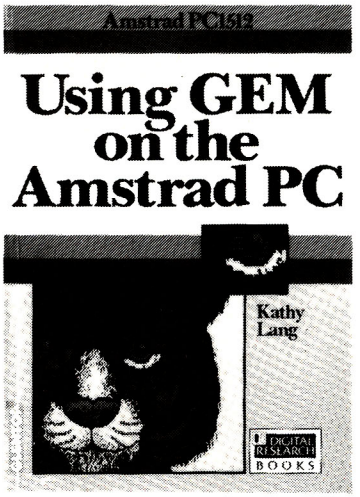
Glentop Publishers Ltd have joined forces with Digital Research Inc. to produce three exciting titles which fully explain the new Amstrad PC1512 and GEM applications programs. The books were produced with the full co-operation of Digital Research Inc. and herald the launch of a major new imprint, Digital Research Books.



The new Amstrad PC1512 uses Digital Research's DOS Plus operating system as well as MS-DOS and CP/M. As such it is one of the most sophisticated PCs available in the market with an ability to run an enormous number of software programs in addition to its IBM software compatibility. This book is an introduction to computer users who will be working with the operating system. It takes the reader through from the basics such as loading and copying the system disks, to creating, copying and deleting files and disks, renaming files, organisation of files, tree-structured directories, batch commands, print queuing and advanced DOS commands.

ISBN 1 85181 063 3 224 pages illustrated

215 x 155mm £9.95 paper £12.95 hardback



This book concentrates on using Digital Research's GEM (Graphics Environment Manager) graphics interface and the GEM applications programs which can be used with the new Amstrad PC1512. It assumes little or no knowledge of computers and expresses things very much in terms of users and their objectives, concentrating on explaining how to get things done using GEM. The text includes many informative diagrams, photographs and illustrations, plus helpful summaries and checklists throughout. The book will be of as much interest to the experienced user as to the newcomer.

ISBN 1 85181 065 X 240 pages illustrated

16 colour page section 225 x 155mm

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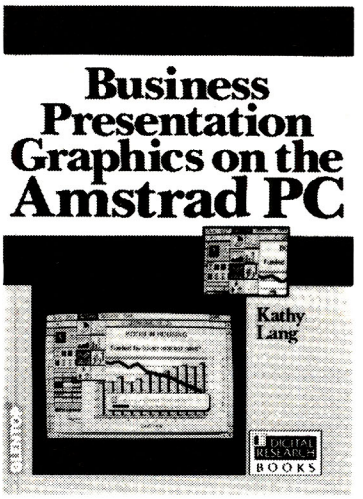

This book is an introduction to computer users who will be working with GEM and GEM-based products on the Amstrad 1512. The book describes how the GEM applications programs such as GEM Graph, GEM Draw, GEM Paint, GEM Write and GEM Word Chart can be used to produce visual business presenations quickly and effectively. The book includes worked examples together with many informative diagrams, charts, illustrations, photographs and screen dumps which have been produced directly from GEM applications programs. It will be essential reading for everyone in business who wishes to use the Amstrad PC for effective business presentations.

ISBN 1 85181 066 8 240 pages illustrated

16 page colour section 225 x 155mm

£12.95 paper £15.95 hardback

OTHER EXCITING AMSTRAD PC TITLES FROM GLENTOP

The DOS Plus Manual for the Amstrad PC
Digital Research Inc.

This manual consists of the original Digital Research documentation for DOS Plus which has been edited to be specific to the Amstrad PC1512. As such, this official handbook will be an essential investment for all those Amstrad PC owners who wish to get the best from their own computer.

ISBN 1 85181 094 3 200 pages

205 x 148mm spiral bound £17.50

Word Processing Using Gem Write on the Amstrad PC
Mike O'Reilly

This book covers the GEM Write program in great detail and assumes little or no knowledge of word processing or computers on the part of the reader. It has been specially written to show the capabilities of GEM Write when used on the Amstrad PC1512 and will be of interest to both the newcomer and the experienced computer user.

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225 x 155mm £9.95 paper £12.95 hardback

Introducing the Amstrad PC
Peter Rodwell

This book is aimed at those who plan to buy a business computer or who already own an Amstrad PC1512. It provides not only a full introductory description of the Amstrad but also the many and varied uses to which it can be applied. The book assumes no pre-knowledge of computers or computing and describes the operation and use of the Amstrad in a clear, jargon-free style.

ISBN 1 85181 116 8 208 pages illustrated

225 x 155mm £7.95

Also available from Glentop is a full range of books for the Amstrad CPC and PCW computers.

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All titles available from your local dealer or bookshop. However, in case of difficulties they can be obtained direct from Glentop – postage & packing £1 (UK) £2.50 (Overseas)

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as far as expansion goes, and will take most hard-disk cards for example, but we have yet to test the claims. *PC PLUS* will keep you posted, and would like to hear of any problems encountered in this area. One possible limitation is that the Amstrad's expansion slots are eight-bit only, and do not cater for the faster 16-bit cards that can be used with the Olivetti M24 and the IBM AT.

On the software front we tested the PC1512 with a variety of packages written for the IBM PC – including PC-DOS, the IBM's own operating system. The Amstrad ran PC-DOS without problem, and the conventional MS-DOS version 3.2 operating system. We also tried running *IBM Diagnostics*, a specialised program designed for isolating problems with IBM PC hardware and software. *Diagnostics* recognised the hardware correctly, including the presence of a CGA and the keys (except the two new one) but produced error messages on commencement of the tests. *Diagnostics* is a particularly exacting test for clones, so this does not mean the Amstrad is particularly incompatible.

On the applications side the Amstrad PC ran IBM versions of Microsoft's *Flight Simulator*, *Lotus 1-2-3 Version 2* and Borland's *Sidekick* without problems. *Sidekick* ran above *1-2-3* quite happily too. Overall it would appear that the PC1512 is pretty compatible as far as compatibles go, but again we would like to hear from anyone experiencing problems. We will be running a regular list of IBM-compatible software that has problems with the Amstrad PC.



HOW DOES IT FEEL?

For someone sitting down in front of an Amstrad PC for the first time – someone who is used to other compatibles that is – the first impression is of a comparatively small machine. Some compatibles, and indeed the IBM PC itself, are huge monsters that sit on your desk consuming the space around it. The Amstrad is not like that as the main unit is really quite dainty; the monitor is quite large but the overall 'footprint' is small, measuring 372mm wide by 384mm deep.

It is not built like a tank (or an IBM for that matter) but is solidly built. Some people may find the keyboard a little spongy, but you can't please everyone. It is positive and certainly better than that of the PCW range. It is also a fairly small keyboard as clones go, not taking up more space than it needs.

The monitor screen measures 26.5 x 19.5mm – and is a decent size to work with. The monochrome monitor, with its anti-glare black and white display, is very clear and I would be happy to work with it all day long. The colour display is not so clear, but is not bad. It is what is known in the trade as a 'medium resolution' display, probably with a dot pitch of 0.43mm.

It is certainly several magnitudes better than the average 'home' micro display, and is clear enough to read the text on a word processor without problem. However it might cause eye strain if you are intending to write 'War and Peace II'. If that is your aim we would suggest you went for the mono display unless you want to go cross-eyed playing games too. It is worth pointing out that the Amstrad's colour display is no worse than that of the IBM with a CGA and IBM's own colour monitor, so you're not getting a bad deal. It also tilts and swivels to get that perfect viewing angle.

HOW DOES IT COMPARE?

Comparing the Amstrad PC with the competition is a little tricky, for not only does it compete with the better 'home' micros such as the Amstrad CPC6128, the Acorn range of BBC machines and Atari's ST models; it also bears comparison to the vast number of IBM PC 'clones' which range in price from a few hundred to several thousand pounds, and of course with the IBM PC itself.

As we have already said, the PC1512 looks to be very compatible with the IBM, and is certainly considerably cheaper than any other compatible once you take in to consideration the amount of memory, the provision of both serial and centronics ports, full mono and colour graphics, and of course the bundled software. There are a few compatibles at comparable prices, but these do not offer anything like the same number of features.

Perhaps the most noteable of these is the new Tandy 1000EX. This features a single 5¼-inch drive, a printer port, 256K of RAM and comes with mono graphics display for £449 + VAT or colour display at £549 + VAT. On the software side it comes with Tandy's own *Personal Deskmate* software – a system rather like GEM – but

ASCII CODE

The ASCII code (standing for American Standard Code for Information Interchange) was introduced in 1963 and has become an (alomst) universal code for the translation of binary code to alphanumeric characters. It is a seven-bit code, allowing for 128 different characters. The first 32 codes (including zero) are used for the control of the terminal. Important codes here include *13*, meaning carriage return, and *27* for *Escape* – frequently used for the control of printers. The remaining codes are used for the alphabet (upper and lower-case), numerals and punctuation marks.

The IBM PC, and so the Amstrad too, makes use of an eight-bit code, giving 256 characters in all. IBM ASCII codes *128* to *175* are used to display a variety of international characters and graphic symbols, including umlauts, acutes and the other oddities to be found around the world. It also includes the symbols for a half and a quarter (as well as the inverted question and exclamation mark), which is very useful. ASCII codes above 175 are used for block graphic symbols.

MAINTENANCE

Buying a computer is not quite the same as buying a TV or hi-fi when it comes to repairs: when the TV goes wrong most of us accept that it has to go back to the shop to be fixed; but when your computer goes wrong you need it fixed fast, especially if it is running your business.

Amstrad has catered for your maintenance needs through an agreement with Dictaphone. Aside from making dictating machines, Dictaphone has been in the 'third party maintenance' business since 1985, and specialise in Amstrad machines.

The Service Agreement covers an unlimited number of emergency calls between nine and five Mondays to Fridays, excluding public holidays. Repairs will either be done on the spot, or at the company's workshops if necessary; and all labour, travelling expenses and spare parts are included – unless the damage has been caused by carelessness or misuse. The agreement does not, however, cover the software. Prices are as follows:

PC1512 SD (Mono)	£36 (£48)
PC1512 SD (Col)	£49.50 (£66)
PC1512 DD (Mono)	£45 (£60)
PC1512 DD (Col)	£58.50 (£78)
PC1512 HD10 (Mono)	£63 (£84)
PC1512 HD10 (Col)	£76.50 (£102)
PC1512 HD20 (Mono)	£72 (£96)
PC1512 HD20 (Col)	£85.50 (£114)
DMP3000	£14 (£18.50)

► First price is for the first year; price in brackets is for subsequent years. All prices exclude VAT. Cost for repairs not covered by the agreement is £23 per hour plus a £9.50 call-out charge.

It is worth bearing in mind that, apart perhaps from hard disk drives, it is usually the software that develops problems. It is absolutely vital that the first thing you should do after unpacking your computer is to make backup copies of the Master disks – the ones that come with the machine – and use the backups in day to day use, keeping your Masters in a safe place. We will be looking at how to do this, and how to make customised 'work' disks, in a later issue.

There are plenty of other companies who can maintain both the hardware and software, so it might be wise to shop around and perhaps find somewhere local. It is also important to insure your machine. There are insurance companies who specialise in the insurance of business micros, and will even insure you against data loss – at a price, of course!

ERIC BAGSHAW'S BENCHMARKS

These tests were designed several years ago by Eric Bagshaw of the NCC (National Computer Centre) for the purpose of providing a standard yardstick for comparing the speed of micro computers. They consist of 13 short programs, written in IBM BASIC, that are each automatically run several thousand times over, and the time taken measured with a stop watch. The tests are complicated because they are designed to provide seperate measurements of processor and disk drive speed, when in practice most operations depend on both.

The Benchmarks have become a standard of sorts, though there is much debate as to their overall meaning. They do not measure every aspect of a computer's operation, but in general machines that appear fast do measure fast, so they do provide a fairly accurate measurement of overall speed.

In practice though the apparent speed of an application program is more dependent on the efficiency of the programmer's code than any other factor.

does not have a serial port or mouse as standard. It also uses the less powerful Intel 8088 processor at 4.77MHz (same as the IBM) or at the faster speed of 7.16MHz.

But on the plus side Tandy are offering a year's free telephone hotline support to buyers of the 1000EX model. This is a real bonus as it means that you can get straight through to the manufacturers if you have problems with either your software or hardware. You are unlikely to get such support from your Amstrad dealer included in the price, but it must be remembered that the 1512 is basically an IBM compatible so there are already a large number of third parties willing and able to offer such a service for a nominal fee. In issue One of *PC PLUS* we looked at the *Small Business Support Group* who provide a hotline and much more for £40 a year. Laskys are offering a similar hotline service covering all software and hardware available from its 53 shops for the same price – so plenty of support will be available for Amstrad owners at a small additional cost. The low cost of these machines, and of much of the software, means that support is going to cost extra, but there is a whole industry out there with plenty of experience of IBM compatibles waiting to help you – for a small fee.

SPEEDY PC

When it comes to comparisons with compatibles in general, the other aspect that favours the Amstrad is its overall speed. It certainly feels very fast – faster than most clones I have ever used – but to get more authoritive figures we asked Bob Piper, who has probably tested more compatibles than you've had hot dinners, to run a series of tests designed to compare the speed of the machine with others. These indicated that the processor runs nearly two and a half times faster than the IBM PC, and around five percent faster than the high-speed Olivetti M24.

Although these differences will be large enough to be detectable in day-to-day use, of far more importance is the speed of the disk drives. As anyone familiar with a dual-floppy system will tell you, most of the time is spent waiting for the disk drives to catch up – not the processor. In this area the PC1512 proved to be over twice as fast as the IBM, the Compaq Portable and the Olivetti 24, which puts it at the top of the PC performance league by quite a significant margin. It is not as fast as an IBM PC AT, of course, but then it doesn't cost nearly £3000. We were not able to test hard disk speeds – that will have to wait for a later issue when we can get our hands on one.

So as an IBM compatible it stacks up very well – nothing gets near it at the same price and it bears comparison with machines costing three or four times as much. But what about other non-compatible machines?

The first comparison has to be with the other Amstrad models: the CPC6128, PCW8256 and 8512. These are cheaper – and the PCW range come with printer too – but offer nothing like the spec or speed. The PCW is a viable alternative if you are primarily concerned with word processing, and there are a variety of good accounting packages available for it as last month's *8000 PLUS* showed, but in both fields there are far more powerful packages around for the PC.

Acorn's new BBC range is another alternative, but this suffers on comparison of spec and price, and the range of software available.

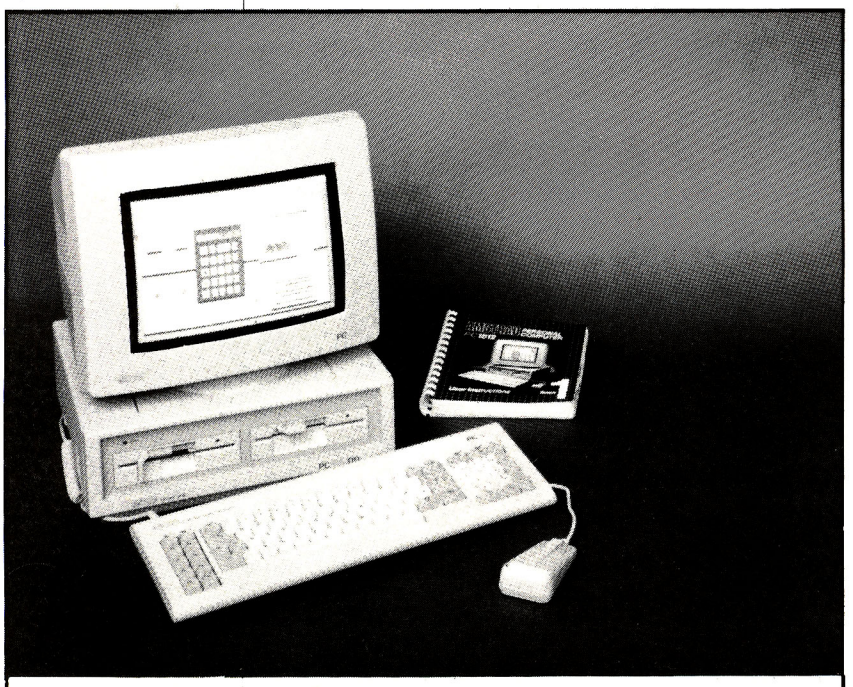
TECHNOLOGY

If you want the latest in technology then there is always the Atari 520 or 1040ST. These models are more expensive but use the more powerful 68000 processor dealt with above. They also come with 512K of RAM, or one megabyte in the case of the 1040, and with the GEM system in ROM. An attractive package – and you can add on such wonders as Transputers and 'blitters' should you have the urge. However, like any non-PC compatible, the Ataris cannot offer the range of software or anything like it.

It is all very well going for the latest in technology, but it does have its problems. The 68000 is a relatively new chip, and programmers have not had as long to play around with it as they have with PC technology. Software development takes place after hardware development, so a more advanced processor is lumbered with younger software tools. The older processor can take advantage of software tools that have stood the test of time.

The main thing against all these non-compatible alternatives is simply the vast range of software and support that is available to IBM compatibles, and to the Amstrad PC itself. And the software is tried and tested, by millions of PC owners throughout the world. Whether you are running a business or want to get your hands on the latest programming languages – the PC offers the widest and best choice. Even large corporations are looking at the 1512 as a possible terminal to large mainframe systems. Alan Sugar has estimated sales of up to 800,000 PCs in the first twelve months. We will certainly be among the first buyers, and suggest you are too. ●

Matt Nicholson & Bob Piper



PRICES

MONO MONITOR:

PC1512 SD
Single floppy drive:.....£399+VAT (£459)
PC1512 DD
Twin floppy drive:.....£499+VAT (£574)
PC1512 HD10
10M hard disk:.....£699+VAT (£804)
PC1512 HD20
20M hard disk:.....£799+VAT (£919)

COLOUR MONITOR:

PC1512 SD:.....£549+VAT (£632)
PC1512 DD:.....£649+VAT (£747)
PC1512 HD10:.....£849+VAT (£977)
PC1512 HD20:.....£949+VAT (£1092)

UPGRADES:

Second floppy drive:.....£149+VAT (£172)
10M Hard disk drive:...£400+VAT (£460)
20M Hard disk drive:...£500+VAT (£575)
8087 Maths co-processor:
£150+VAT (£173)
To 640K of RAM:.....£45+VAT (£52)

DMP3000 Printer:.....£155+VAT (£179)
●A4 dot matrix printer supporting the full character set.

●All upgrade prices include the cost of installing through Dictaphone. Remember that there is only space for two drives in the machine itself, unless you fit a third-party hard disk card to a PC1512DD.

SOFTWARE & SERVICES

Just some of the support you can expect for your PC – more next month!

GEM Write

Free with your Amstrad PC comes Digital Research's GEM *Desktop*, which forms the basis of a 'Graphic Environment Manager' allowing you to control your 1512 in a rather more friendly way than that of an ordinary operating system such as MS-DOS or DOS PLUS. *Desktop* is the 'overseer' under which applications can be run – some of which use the *Desktop* system while others don't. What *Desktop* is like was covered more fully in Issue One of *PC PLUS*.

Two applications that use the GEM *Desktop* system also come with your PC: GEM *Paint* and Locomotive *BASIC 2*. The first is covered more fully later in this issue, while we looked briefly at *BASIC 2* last month. Also in amongst the packing (unless you threw it all away!) is a special offer on seven out of nine other GEM-based products from Digital Research.

DIGITAL RESEARCH

The GEM 'suite' of packages is often referred to as 'presentation' software. This is because all the packages are, at present, geared towards presentation of one sort or another. The core of the suite is GEM *Write* and *Draw*: a word processor and a drawing package both priced at £99.95 (£69.95 if you take advantage of the special offer).

GEM *Write* is a WYSIWYG (What You See Is What You Get) word processor which, though not the most powerful around, is very easy to use. GEM *Draw* is a fairly sophisticated drawing package – rather more precise than *Paint* – and can be further enhanced by adding the GEM *Draw Business Library* for £39.95 (£29.95 special offer) which gives you four libraries of ready-made organisation, flow chart, control and electrical symbols; together with 46 different border designs.

Further enhancing your presentations are GEM *Graph* and *Word Chart*, again at £99.95 or £69.95 special offer. *Graph* allows you to present data, which could be imported from Lotus *1-2-3* or *dBase*, in a variety of graphic forms including line graphs, pie charts and maps – each in two or three dimensions. Graphs can be in full colour, and the package comes with a range of ready-made symbols too. *Word Chart* is a sort of simple word processor cum publishing package, but designed with presentations in mind. Like all the GEM packages, documents created in one package can be edited by another, so *Word Chart* could be used to provide those finishing touches.

For the more adventurous who want to use the GEM system for their own packages, there is the GEM *Programmer's Toolkit* at £179.95 (£129.95 special price). This enables you to design your own icons, menus and dialogue boxes and call up GEM functions via a high level language or directly from assembly language. Included is a special offer on the Lattice C Compiler.

Also on the more esoteric level is GEM *Font Editor* at £99.95 (not under special offer). This provides the tools for designing your own fonts and symbols on screen, and for using them in other GEM-based packages. And finally, coming down to a more basic level, there is GEM *Diary* at £39.95, again with no special offer price. This runs in the background and so is always available from the Desk Accessory menu, and provides you with a basic diary and calender for your appointments. It also gives you a basic card index system.

Other GEM packages are expected from Digital Research in the near future to fill gaps in the existing range. Coming soon we should see GEM *Comm*, a communications package based on AM Technology's *Vicom* package which is expected to sell for around £99.95. A database and a spreadsheet are also expected in the next few months.

A further development that we may see from Digital Research soon is a multi-tasking version of GEM. Multi-tasking is when the computer appears to be doing more than one thing at once, although in fact it is simply switching from one task to another very quickly. It has quite a few uses, particularly with networked PCs when the micro can be watching for messages from other machines while simultaneously printing out a document, calculating a large spreadsheet and waiting for you to type in another word on the word processor. Microsoft, developers of the MS-DOS operating system, have already taken the step with MS-DOS version 4.0 and Digital Research are sure to be close behind – though whether the PC1512 has the speed or capacity for such a system has yet to be seen.

GEM *Desktop* comes with the drivers needed to output to a dot matrix printer, but for high quality and colour this is not usually good enough. What is needed is the GEM *Fonts & Drivers Pack*, which allows you to drive a wide range of dot matrix or daisy wheel printers, colour plotters and even Laser printers (Hewlett Packard Laser Jet or Apple Laser Writer). *Fonts & Drivers Pack* is priced at £39.95, or £29.95 special offer.

SPI DATABASE

Software Products International, to give the company its full name, has launched a database package running under GEM, based on its popular integrated package *Open Access*. *G-Base* is an excellent, powerful database package reviewed in the first issue of *PC PLUS* by Peter Jackson. It is priced at £99.95, is being distributed by Centresoft and NewStar, and should be in most high street stores.

MICROSOFT WINDOWS

The main competitor amongst IBM compatibles for 'WIMP' software, as this sort of software is known in the trade, is Microsoft's *Windows* – though the battle is pretty well a foregone conclusion with the Amstrad as you get GEM for free. Should you wish to try *Windows*, and there are some packages that need it, it will cost you £85. Whether it runs on the 1512 we have yet to see, but it certainly won't use the top resolution of 640x200 with the full 16 colours – unless Microsoft decide to convert it.

WORD PROCESSORS

After accounting, word processing is probably the most common use of a computer. Almost every business, and most homes these days, use a typewriter and, with a printer, the computer becomes the ideal replacement. No longer do you have to use Tippex for corrections, or keep a large waste paper bin handy for those all-to-frequent mistakes: instead you can get it right on screen first before commiting it to paper. Most writers who have got used to a word processor wouldn't dream of going back to a typewriter.

However there are word processors and there are word processors. On the basic level most will allow you to 'cut and paste' blocks of text from one location to another, and automatically 'word wrap' so that you don't have to keep hitting the carriage return and the text always looks readable on the screen. Some are what is called 'WYSIWYG', or 'What You See Is What You Get', which means what it says: what you see on the screen is how it will look on paper. But there are a huge number of extra features that might or might not be useful.

One common feature is Mail Merging, which is ideally suited to large mail-outs. It enables you to write a single letter and then substitute the name, address and other variables from a long list. Also useful is a Spelling Checker, which is a built-in dictionary (often of 40-50,000 words) against which the word processor checks your document. More esoteric features include a Thesaurus, which suggests alternative words; and automatic Indexers which keep track of the location of key words. Whether you need these features is, of course, another matter.

There are a huge number of word processing packages already available for the IBM PC, most of which will run on the Amstrad. Mentioned here are just some of those that have been aimed specifically at this new machine, or have recently come down in price. We will be carrying a full comparison of the word processing options open to you in the near future.



WORDSTAR

To coincide with the launch of the PC1512, Amstrad itself has launched MicroPro International's own famous *WordStar* package in a new version at the low price of £69.95. Unlike the original, *WordStar 1512* (as it is called) uses 'pop-up' menus and is meant to be considerably easier to use. It comes with a built-in Spelling Checker with a claimed 85,000-word dictionary, and Mail Merging features. It supports over 200 models of printer too. However it also comes on six separate disks, and is rumoured to need a disk-swap even if you just want to print out a document – not so friendly.

Included with each copy of *WordStar 1512* is a voucher giving you £100 off the price of the more powerful *WordStar 2000* or *WordStar Professional*. The £69.95 purchase price will also be refunded if you return your *WordStar 1512* as well. *WordStar 2000* is considerably more powerful, but has a recommended retail price of £465.

NEWSTAR'S NEWWORDS

An alternative if you want something like *WordStar* but are not too keen on *WordStar 1512* is NewStar's 'workalike' *NewWord 2*. At £69 this is if anything more like the old *WordStar* than *WordStar 1512*, so old hands should really feel at home. It too includes mail merge and a 47,000 word dictionary for checking your spelling. It can handle files upto four megabytes in length, and features file-locking so it can manage multi-user and networked systems.

More powerful, and so more expensive at £249, is *NewWord 3*. In addition to the features of *NewWord 2* this offers mathematical calculations on tables within documents, a spelling checker that suggests alternatives, automatic index and contents tables, conditional merge printing and extensive use of keyboard 'macros' – the ability to set a single key to generate a whole string of functions. Like *NewWord 2* it can handle multi-user systems, and the price includes a license for unlimited working copies on site. Also like *NewWord 2*, *NewWord 3* comes on a single floppy disk.

NewStar offer a £69 trade in for owners of *NewWord 2* wishing to upgrade, and will give £69 'sympathy' payments to owners of any other £69 word processor – including *WordStar 1512!*

On special offer at (guess what!) £69 to owners of *NewWord 3* is 'the Ideas Machine' *PC Outline*. This is what is known as an ideas, or outline processor, which is used to aid your thinking by holding notes in a tree-like structure that can be manipulated as you wish. It sits in memory alongside *NewWord*, and you can move text between outlines or the *NewWord* document itself. It is a little like having a notepad next to your PC as you write, and is surprisingly useful.

Back to earth and a lower price, NewStar is also selling *Executive Writer* for £49.95. Part of the Paperback Software suite, this is a straight-forward word processor that doesn't provide many of the advanced features of *NewWord* that you might not need anyway. Even cheaper at £29.95 is *FlexiWrite*, a very slimmed-down version of *NewWord* that has the unusual ability to merge pictures created by Lotus *1-2-3* and the like.

MICROSOFT WORD

Although *WordStar* is the undoubted king of the word processor domain, Microsoft's *Word* is one of the key players. It is rather different to use, and people usually swear by one or the other. Now Microsoft has launched *Word Junior* at £69.95, so it is a viable alternative.

Word Junior is a full WYSIWYG word processor, showing bold, italic and underlined words on screen as you write. It features complex page formatting and conditional mail merge facilities – so you can choose to have one paragraph of a circular letter inserted into the letters addressed to certain people only. It is menu driven and can incorporate data from, for example, a *Multiplan Junior* spreadsheet. You can view several documents, or parts of the same document, in up to eight windows on the screen, and you can use the Amstrad mouse to select text or menu options. It works with most printers, including laser models.

SAGE PC WRITE

Sagesoft have adopted the previously 'shareware' package *PC Write* and enhanced it to version 2.7 for the UK market at a price of £113.85. Earlier versions came as two programs, one for editing text and the other for printing, and the printing program could be used on its own as a sort of glorified typewriter. The editing program allowed you to edit two documents at the same time, delete to left or right of the cursor position (surprisingly not that common!), to store frequently used phrases as single keystrokes, and to transpose letters or words.

How the new version has been enhanced we have yet to see, but we do know that Sagesoft has added a 45,000-word spelling checker, mail merging, nine pull-down help screens and extensive printer support including the Hewlett Packard Laserjet.

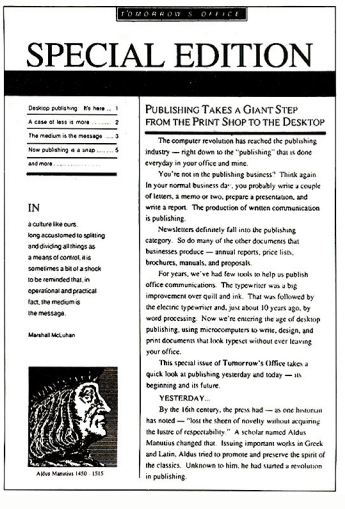
DESKTOP PUBLISHING

A relatively new concept in computer software; Desktop Publishing fills the gap between the output of an ordinary word processor and a printed page such as you see here; with pictures, column rules, tinted boxes and many different styles of type. The main problem has been achieving a high quality output and screen resolutions that are clear enough to see what you are doing. Laser printers have gone quite a way to solving the first problem – though the screen resolution of most micros still leaves something to be desired.

We still don't have the technology to store and manipulate photographic pictures on machines such as the Amstrad PC, though this will come. The other problem with much publishing software is that of 'H & J', or Hyphenation and Justification. The first of these concerns where words are to be broken, and the second the spacing out of words to give a neat appearance on the page. However there are now quite a few magazines produced on micro computers using Desktop Publishing techniques, so the software has come quite a way.

ALDUS PAGEMAKER

The Apple Macintosh has dominated the desktop publishing scene with Aldus's *Pagemaker*, however at long last it looks as though it is going to appear on the PC – through UK distributors McQueens. The package was demonstrated recently in San Francisco on the IBM PC, running under Microsoft's *Windows* and priced at $695. It is a powerful package on the Macintosh, with all the features you need for designing and laying out the finished page. The new version includes a 90,000 word hyphenation dictionary, the ability to work on 128-page documents and full kerning, but when it will appear here, and whether it will run on the Amstrad PC, is another question.


TOMORROW'S OFFICE

SPECIAL EDITION

Desktop publishing: It's here ... 1
A case of less is more ... 2
The medium is the message ... 3
Now publishing at a snap ... 5
and more ...

IN

a culture like ours, long accustomed to splitting and dividing all things as a means of control, it is sometimes a bit of a shock to be reminded that, in operational and practical fact, the medium is the message.

Marshall McLuhan

PUBLISHING TAKES A GIANT STEP FROM THE PRINT SHOP TO THE DESKTOP

The computer revolution has reached the publishing industry — right down to the "publishing" that is done everyday in your office and mine.

You're not in the publishing business? Think again. In your normal business day, you probably write a couple of letters, a memo or two, prepare a presentation, and write a report. The production of written communication is publishing.

Newsletters definitely fall into the publishing category. So do many of the other documents that businesses produce — annual reports, price lists, brochures, manuals, and proposals.

For years, we've had few tools to help us publish office communications. The typewriter was a big improvement over quill and ink. That was followed by the electric typewriter and, just about 10 years ago, by word processing. Now we're entering the age of desktop publishing, using microcomputers to write, design, and print documents that look typeset without ever leaving your office.

This special issue of Tomorrow's Office takes a quick look at publishing yesterday and today — its beginning and its future.

YESTERDAY...

By the 16th century, the press had — as one historian has noted — "lost the sheen of novelty without acquiring the lustre of respectability." A scholar named Aldus Manutius changed that. Issuing important works in Greek and Latin, Aldus tried to promote and preserve the spirit of the classics. Unknown to him, he had started a revolution in publishing.

Aldus Manutius 1450 - 1515

VENTURA PUBLISHER

Also shown in the States recently was *Ventura Publisher*, purchased by Xerox. This runs under GEM, so problems with the Amstrad should be few, and is rumoured to be very powerful – more powerful than the present version of *Pagemaker*. It features a hyphenation dictionary of over 90,000 words and true kerning, together with a price tag of $895.

THE NEWSROOM

On a more basic level and available very soon is Ariolasoft's *The Newsroom* at £39.95. This features a library of over 600 pieces of clip art that can be manipulated and combined to form new pictures. Copy can be laid in five different fonts and will automatically arrange itself around pictures, while banner headlines and borders can be added if desired. It also features the *Wire Service*, which allows you to gather text and pictures through a modem.

In the same vein is *Printmaster* at £44.95. This features 111 pre-designed graphics, eight font types and 11 borders; and is aimed at personalised stationary, greeting cards and the like.

SuperCalc2™ versus The Cracker2

Questions to ask youself 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!)

NewStar specializes in low cost software that provides the facilities and functions of the big name, big price alternatives. It isn't re-cylced versions of a discontinued product knocked out cheaply to cash in on a name, and it isn't new and untested product. There's plenty more where this came from, so call or write for our colour catalogues and dealer lists.

NEWSTAR

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How do we do it? Simple! We don't have fleets of executives in Porsches. We don't try and build a village in Olympia every time there's a show, and we don't have to keep recalling product that's riddled with bugs. We *do* have the most cost effective admin system in UK software distribution, and we *do* have close liason with authors, who tend to be individuals, not committees!

No one ever regretted buying the best

NewStar Software Limited publishes and distributes the best low cost PC software ranges. We started the trend in the UK with the PCW series, and we continue the theme on the PC. In fact, we're rather better prepared with a full range of exclusive products. We like to make our lives easy (and yours too) by selling only the best. We are supported in our view by the world's press. We challenge others to prove that they have better value to offer. We doubt if they'll want to take up the challenge, simply because there is no better product at the price. So if your dealer tries to tell you there is an alternative, tell him to call us, and we'll feed him the facts.

Wordprocessing:

NewWord2 is networkable and enhanced workalike of the WordStar Professional. Since MicroPro are offering Wordstar Professional™ as an upgrade to Wordstar 1512™ users at a cost of over £200, we are enormously flattered by this "recommendation". Don't mess around, buy the *real* thing in the first instance! **NewWord2** costs £69 inc..

NewWord3 is **"the product WordStar 2000™ should have been"** (*New York Times*), so at £249 inc versus £419, we don't believe you have much choice?

Spreadsheets:

VP Planner (£99 inc) is a generation ahead of SuperCalc3 release 1. With Lotus 1-2-3™ topping the charts for the last year, and **VP Planner** acknowledged as an advanced workalike of 1-2-3. **"VP-planner is more than a 1-2-3 clone"** - *PC Week*

Cracker3 (£69 inc) is an innovative optionally mouse-driven spreadsheet that runs totally **memory resident**, including the 16 colour high-res graphics of the Amstrad PC1512, and now also a ***sideways printout*** - all built-in. If you want to offer a choice, then you need look no further. NewStar has the best "standard" and the best innovative spreadsheet solutions.

Databases:

dBase3+ is the product 'everyone' knows as the leading PC database. Our **VP-info (£99 inc)** is a much extended workalike of dBase3+, plus a built-in compiler that increases speed from 3-15 times, depending on the functions involved.

Or the fabulous InfoCom **Cornerstone (£69.95)** as our entry-level *relational* database (**"Cornerstone is the best program I've ever used"** - *PC Week),* and also the fully memory resident **NewFile**, we know we have another complete range that cannot be beaten.

Call for our colour catalogues and nationwide list of dealers

Productivity

Homebase2 (£49.95) is **"..good enough to do to Sidekick what 1-2-3 did to VisiCalc"** - *PC News*. The next generation desk-top organiser is here.

Brown Bag Outline (£69.95 inc) is arguably the most innovative (optionally memory resident) piece of software of the year. It combines most features of a word processor with the ability to move and organise text in the environment of an outline processor. A great add-on to WP software, and works hand in glove with **NewWord** - *of course!*

Accounts:

Take 5 is an accomplished user-friendly accounting system that ranks with Pegasus™, Omicron™ et alia. We have brought the cost down to **£199 inclusive** and we know of no better value in pre-formatted accounting solutions.

For the second time user, we also offer the sheer power of **TAS**: a complete advanced accounting solution from the same programmer as Sensible Solution. It's very fast, very versatile and the accounts modules are supplied with the source code so that the soultion can be made to fit the user, not vice-versa. TAS works with more operating systems and networking systems than any other comparably priced accounting system.

Communications:

CSTAM is the ideal PCW to PC (and back) file transfer system. **StraightTalk at £69 inc** couldn't be simpler to use for electronic mail services.

No one ever regretted buying the best.

NewStar Software Limited
200 North Service Road
Brentwood CM14 4EF
Essex tel (0277) 220573
tlx 995143 fax 232637

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ACCOUNTING

For any business accounting is the corner stone of the operation, and computers are ideal for the purpose. However putting your accounts on to a micro is no easy business, both because of the immense choice of software and the need for absolute reliability – no business can afford to loose its accounts because of a software bug that only appears after six months use.

Accounting software can range in price from under a hundred to thousands of pounds, depending both on facilities and name. the bigger names in accounting software tend to be more reliable because they have been around for some time and their software has been well tested, but cheaper packages may cater for your needs.

You need to think particularly carefully before choosing an accounting package though, and it is worth listening to friends and other businesses in the same line of work before making a decision. *PC PLUS* will be looking for your recommendations, tips and problems with accounting software – so let us know what you think.

BUSINESS WISE

Sagesoft are well known for accounting software, and indeed are the second largest supplier of the stuff in Britain. The company has just slashed the price of its accounting packages, though maintaining both power and support.

Bottom of the range is the £114 *Sage Bookkeeper*, which is designed for the small business – especially those dealing mainly in cash. It offers facilities for up to 1000 customer and supplier accounts, password protection, ageing debt analysis and automatic updating of multiple ledgers. It can cope with VAT and print out a range of different reports. *Sagecover* costs £57.50 per year, and provides software maintenance and free updates after the 90 day warranty period.

Next up the line comes *Sage Accountant* which, at £171 including VAT, provides up to 5000 customer and supplier accounts. Other additional features include balance sheet and budgetary control, credit control facilities with statements and debt-chasing letters (as in 'we'll send the boys round' perhaps?), together with more advanced analysis. The package includes sales, purchase and nominal ledgers, and it all fits on one program disk.

Top of the range is *Sage Accountant Plus* at £229. Which adds automatic invoice generation and stock control, together with a full audit trail. *Sagecover* for these last two packages costs £69 and £86 per year respectively.

Lastly comes *Sage Payroll* which handles all UK tax codes, National Insurance and the Statutory Sick Pay scheme. All relevant formulas can be changed should it be necessary, and the package will generate P11, P45, P60 and P35 forms. *Sagecover* is £57.50 a year, and the package costs £114.

CAMSOFT

Camsoft's *Financial Manager* offers fully integrated sales, purchase and nominal ledger, stock control and invoicing in one package for £149.95 including 90 days free hotline support. It is designed to run on any configuration of PC, including single disk machines and RAM disks. Each element is available seperately for £49.95 per module, or the package can be bought in various stages of integration.

Camsoft *Payroll* is also available for the PC, enhanced but still priced at £49.95.

DACEASY

Technology Software are bringing *Daceasy*, described as the most popular low-cost accounting suite in the States, to the UK for £130. The package includes eight accounting modules, including budgeting and forecasting, on a single disk and over 150,000 packages are claimed to have been sold worldwide. The package is awaiting approval by Customs and Excise.

BUDGET SOFTWARE

A little more pricey is Budget Software's *PC-Soft*. This provides sales, stock, purchase and nominal ledgers, together with invoicing, job costing and payroll at £114 per module for single-user versions, or £224 for multi-user versions – which provide record locking to prevent two people trying to change the same entry at the same time. It is a full-feature package which can be built up into an integrated suite, and each module can be combined with any other as you desire. Five single-user modules can be bought for £285, or five multi-user modules for £569. Budget Software operates a maintenance and hotline service to users for £172.50 per year (at that price it better be good), and offers a 28-day money back guarantee. The company also offers training at any of its 12 regional centres for £172.50 per day.

On a more specialised level, Budget Software also have a range of packages designed for various vertical markets. cheapest of these is the *Central Heating Engineers Estimation Program* at £57.50 and *Licensed Trade Stocktaking* at £114. At £224 come *Bakers Package, Video Library Package, Property Management* and *Property Matching*, while a series of packages for Engineers come in at a hefty £569.

FREEWAY

At the other extreme, in terms of price at least, comes *Freeway* from the Public Domain Software Interest Group. For just £6, and three blank disks, the group will copy this accounting and payroll package for you. It has been approved for VAT and by the Inland Revenue, and includes documentation in text files on disk, or you can have a separate manual if you want to pay extra for it.

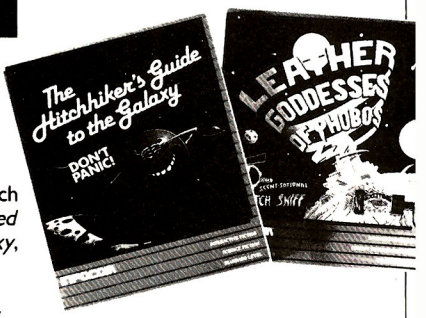
GAMES GALORE

Despite the above, the Amstrad PC is far from just a business machine. It can't compete with the likes of the Amstrad CPC or the Commodore 64 for quantity, but what games there are tend to be pretty good because of its relative power and capacity. The games that are around at the moment were mostly written with the IBM PC in mind, and though they should run on the 1512 without problem they won't take advantage of the high-res 16 colour graphic display. This will no doubt change as games are written with the 1512 in mind.

In issue one of *PC PLUS* we looked at Microsoft's *Flight Simulator* – perhaps the most successful game ever on the IBM PC – and game reviews will be a regular section of the magazine. Meanwhile, here are just a few of the titles around at the moment...

INFOCOM ADVENTURES

Infocom are the top publisher of adventure games, or 'interactive fiction' as the company prefer to classify its titles. 22 adventures are available from Infocom now, through its UK distributors Activision, including such classics as *Zork I, II* and *III, Suspended* and *Hitchhikers Guide to the Galaxy*, which was written in conjunction with Douglas Adams.



Infocom adventures are text only, but are as near to living fiction as you can get. The adventures tend to be large, humorous and well-written – and very addictive. Three new titles have been added to the list: *Trinity, Leather Goddesses of Phobos* and *Moomist*, the first at £34.99 and the other two at £29.99.

Trinity is a fairly serious matter, starting with a nuclear explosion over London and ending just minutes before the first atomic test explosion, codenamed TRINITY. *Leather Goddesses* is described as a 'pan galactic sex comedy' while *Moonmist* is a mystery set around the haunted Tresyllian Castle in Cornwall. *Moonmist* has the unique feature that you can define yourself as male or female at the start, and the adventure responds accordingly.

ACTIVISION

In addition to distributing Infocom adventures, Activision have a range of games and simulations for the PC. *Hacker II: The Doomsday Papers* is a sequel to (you guessed it) *Hacker* and involves manipulating droids through an 'impenetrable Soviet facility' to obtain the Doomsday Papers and 'preserve Western Civilisation'. Dubious politics aside, the game is joystick controlled and features multiple windows on screen. It costs £19.99.

On a more serious level is *Championship Golf*, one of a range of three sport simulations from American company Gamestar. This title lets you play the Pebble Beach course selecting club, foot position, direction and swing. You have to compensate for wind speed as you view the pitch from any direction. Price was undecided at the time of writing but will probably be £19.99.

MICROPROSE

Six 'simulation software' packages are on offer for the Amstrad PC from MicroProse. *Solo Flight, Spitfire Ace, Hellcat Ace* and *F-15 Strike Eagle* are flight simulators, combined with air combat in the case of the last three. *Silent Service* is a submarine simulation set in the Pacific during the II Word War, while *Crusade in Europe* is a battle-field simulation. Prices range from £17.95 to £24.95.

PC PLAYTIME

On a less violent theme, G & M Software have a package called *PC PlayTime* aimed at children aged three to seven. The package teaches counting, arithmetic, the alphabet, spelling and telling the time, as well as including music, art and games. It costs £14.95 and further details can be found on 031-331 1460.

PIXEL PAINTING

Simon Williams tries his hand with GEM PAINT

Along with GEM *Desktop* and Locomotive's *BASIC 2*, described in last month's *PC Plus*, a third piece of GEM software is supplied with the PC1512. GEM *Paint* is intended for any budding Mondrian or Matisse to take a hold of the new technology, but is just as suitable for drawing diagrams, logos or simple illustrations. It's a versatile program, although lacking some of the advanced features of its more expensive stablemate, GEM *Draw*.

Running the program on the Amstrad PC is not as easy as it could be: the main program – *PAINT.APP* and *PAINT.RSC* – is on Disk Four while other routines needed are on Disks One, Two and Three. One part of the manual shows you how to create your own GEM *Paint* disk by copying files from the various master disks; this is a laborious process which for some reason uses both GEM *Desktop* and raw DOS PLUS. It is fairly well described, but can cause problems if something goes wrong. However, hidden in one of the Appendices at the back of the manual is a somewhat simpler process by which the program can be run directly from backups of your Master Disks – a little bit confusing for the average user if you ask me.

You call the program by running GEM *Desktop*, inserting a copy (don't forget to make back-ups of all your master discs!) of your GEM *Paint* disc, and double-clicking on the GEM *Paint* icon which then appears in the directory of the disc.

The GEM *Paint* screen is divided into three main areas, with a menu bar along the top to provide extra control options. The largest area, which is initially blank, is the drawing window. Drawings don't have to fit completely in this window as you can move it over a larger drawing by 'dragging' the horizontal and vertical sliders which are around the edge of the screen.

THE PATTERN PALETTE

The area to the right of the drawing window is the pattern palette. You can select any of the 22 available patterns by moving the pointer with the mouse and clicking on the one required. The pattern then fills the large box at the top of the palette to show it's the current selection. This pattern will then be used whenever you select the paint or spray tools (more of which, later). If you have a colour PC1512 then some of

CLICKING

This is GEM jargon for moving the pointer over an icon and then pressing and releasing the mouse button to select it. **Double-clicking** means pressing the mouse button twice in quick succession, to select and execute the function represented by the icon.

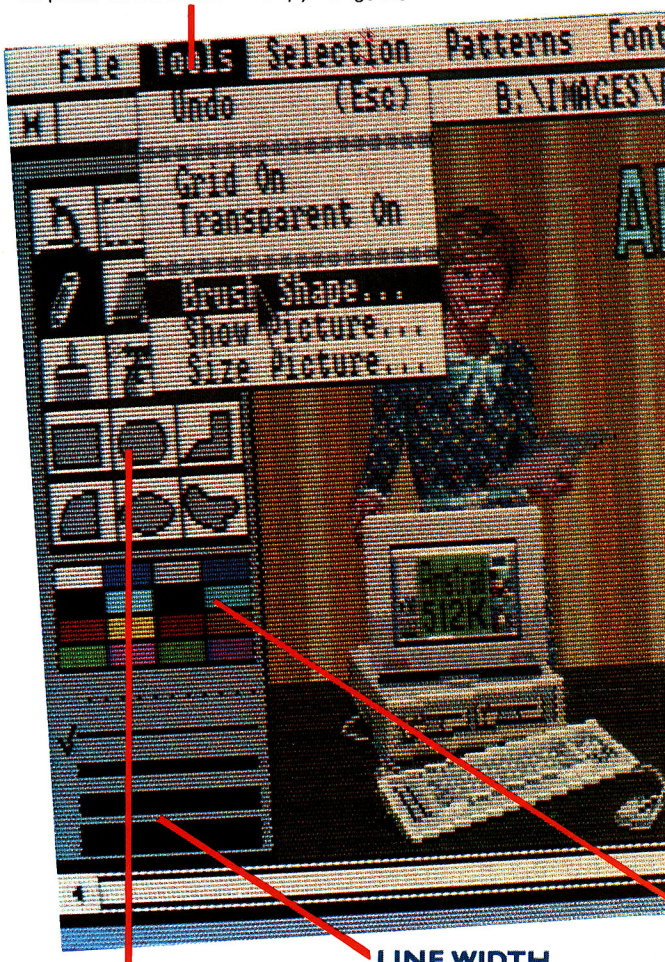
DRAGGING

This involves positioning the pointer over an icon and then moving the icon by holding down the left-hand mouse button while moving the mouse.

MENU BAR

Used for manipulating the program, setting type hieght and style, designing patterns, loading and saving pictures, and a variety of other functions. Each heading leads to a 'drop-down' menu: here **Tools** has been selected, and the pointer moved to *Brush Shape*.... Clicking this would generate a selector box for you to choose a brush shape (as you might expect!).

A useful item here is *Undo*, which allows you to change your mind if you don't like what you've just done. It can also be implemented by simply hitting *[ESC]*.



TOOLS PALETTE

These provide you with the tools of the trade. The bottom six icons allow you to draw a variety of shapes – squares, rectangles, speech bubbles and the like – with comparative ease. The top nine items give you the following: ▶

LINE WIDTH

Using the **Line** tool you can draw lines in four different widths; or shapes selected from the bottom six icons of the **Tools** palette. The top fifth option – the dotted line – creates an invisible line that you could then fill with the **Paint tap** to create a patch of colour with no visible boundary.



Eraser
For 'rubbing out' areas of screen. Just like Tippex but with a variety of shapes and size of brush.



Microscope
For enlarging an area of the picture and manipulating it pixel by pixel.



Selector box
For selecting a rectangular area of screen for manipulation.



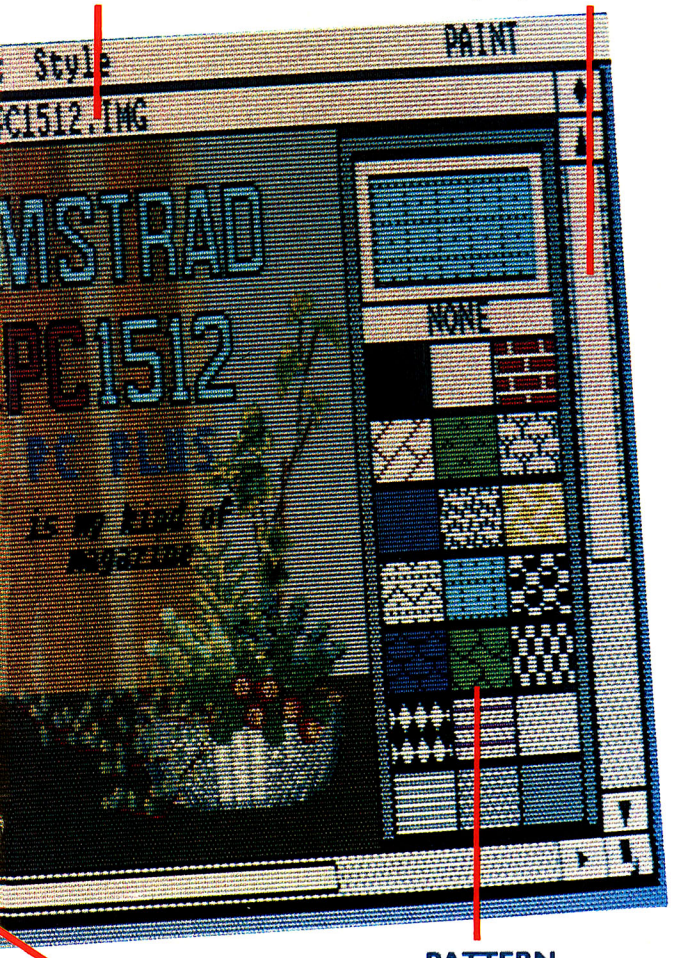
Text
For writing text onto your picture in a variety of sizes and styles.



Pencil
For freehand drawing – just like the variety you keep breaking.

TITLE BAR
Tells you the name of the picture you are editing. In this case we are editing the image PC1512.IMG, which is to be found on the disk in drive B in the subdirectory called IMAGES.

SCROLL BAR
Used for scrolling the picture 'under' the screen display. Imagine that your picture is much bigger, and that the screen is a window that you can move over the full picture – then you'll get the idea.



COLOUR PALETTE
Allows you to select from 16 colours, or 16 shades of grey if you are using a monochrome monitor.

PATTERN PALETTE
Allows you to select one of 22 fill patterns (including *NONE*) for filling shapes with the **Paint tap**, or with your **Paint** or **Spray** tools. The pattern selected at the moment is shown in the large box at the top of the palette.

Line
For drawing straight lines of various thicknesses selected from the **Line width** palette.

Paint
Just like a paint brush dipped in to the colour selected from the **Colour** palette. Again, you can select a variety of brush shapes and sizes, and a variety of **Patterns**.

Spray
More like a spray can, but otherwise similar to **Paint**.

Paint tap
An amazing gadget that will fill any enclosed space with the **Pattern** and **Colour** selected. The area must be enclosed otherwise the fill will leak – the *Undo* option comes in handy here!

the patterns in the pattern palette will be in colour.

You can give yourself more room on the screen by removing the pattern palette from the display. To do this, select the Patterns menu from the menu bar and click on the Hide Patterns option.

As well as the predefined patterns, you can design your own by selecting the Make Pattern option. This produces an inset window on top of the drawing screen and allows you to draw your design, pixel-by-pixel. As you draw on the enlarged display a section of the pattern is continuously displayed at actual size, so you can see what the finished fill will look like. Just the thing if you're fond of tesselating!

The equivalent strip down the left-hand side of the screen contains three palettes: tools, colours (or shades of grey on a monochrome machine, and line widths. Lets look at each palette in turn.

TOOLS PALETTE

There are 15 tools available in GEM *Paint*, each of which has a separate icon in the tools palette. The first of these tools is the **Microscope**, which as you might expect enlarges an area of your drawing so you can change individual pixels on the screen. This tool is very useful for 'tidying up' parts of a picture, when you can't get the results you need with the pencil or rubber.

The **Selector box**, which has a dashed rectangle as its icon, is used to define any rectangular area of your drawing. You can then manipulate the area using options from the Selection menu at the top of the screen. These options include horizontal and vertical reflection, clearing and complementing the picture (producing a 'negative' of everything within the selected rectangle).

The **Text** tool, inventively given the icon ABC, allows you to add words to your GEM *Paint* screen. You can type in two standard fonts – each of which can be emboldened, italicised and underlined, and displayed in a wide variety of sizes. You can position the text cursor with the pointer and type anywhere on the screen; or you can switch in an invisible 'grid' to line up pieces of text from different parts of the screen.

The **Pencil** tool is what you would expect. It allows you to draw freehand in the drawing window in any of the colours or gray shades available. The lines produced are one pixel wide.

The **Eraser** tool wipes any section of your drawing back to the current background colour. You can select a number of different sizes and shapes for this tool, which allows you to get into awkward corners of your designs.

The **Line** tool is not the same as the pencil as it allows you to 'rubber band'. To do this; fix one end of a line and then it stretches to wherever you move the cursor in the drawing window. A similar technique is used with several of the filled shape tools and with the selector box. You can draw in several line thicknesses which are selected using the line palette in the bottom left-hand corner of the screen.

The **Paint** tool acts like a thick pencil, but can also draw using any of the 22 fill patterns. You can adjust the shape and size of the 'paint head' by double-clicking on the Paint icon. This calls up a separate window, with the current paint head highlighted. You can select any of the other heads by clicking on them.

The **Spray** tool is similar in some ways to the paint tool, but as you might imagine, it gives a dottier covering. You can select a number of different heads for this tool too, using the paint head window in the same way as with the paint tool.

The **Paint tap** fills any enclosed area with the currently selected pattern. You position the cross-hair pointer anywhere within the area you want to fill and

PIXELS
A pixel is the smallest element that can be displayed on the screen, however it is not the same as a single dot on the monitor. In any GEM application the screen measures 640 pixels wide by 200 pixels deep, and any pixel can be one of 16 colours, or 16 shades of grey of you have a monochrome monitor. The monitor screen picture itself is made up of a different matrix of dots, on to which the display format is mapped. The word 'pixel' is an abbreviation for PICTure ELement (the 'x' being an Americanism!).

click the mouse button. You must take great care that the area you're filling is completely enclosed, otherwise the pattern will 'leak out' and cover areas of your drawing which you didn't intend it to.

If this happens, don't start removing handfuls of hair, as there is a fairly simple remedy. Assuming you've done nothing else since the mistaken fill, you can click on the Undo option from the **Tools** menu and the whole fill will be removed. In fact, Undo will reverse the last operation at any stage in GEM *Paint* – a very handy safety-line.

The bottom six tools in the tool palette offer easy ways of drawing a variety of different filled or unfilled shapes on the screen. In turn, these provide rectangles, rounded rectangles (useful for speech bubbles and other boxes enclosing text), polygons with any number of straight sides, segments of circles and ellipses, full circles and ellipses and completely irregular figures. When it comes to shape filling, there is really little more you could ask for.

COLOUR PALETTE

Directly beneath the tools palette on the left-hand side of the screen is the colour palette. This offers 16 colours on a colour monitor or 16 shades of gray on a monochrome one. You select a colour by pointing and clicking, exactly as you do to select a pattern from the pattern palette. All the lines in the line palette change to show the selected colour.

LINE PALETTE

You can use any of four different line widths for lines or filled shapes in GEM *Paint* by selecting them from the line palette. You select the line width by dragging the line cursor up and down the scale of widths.

Line width 0 allows you to draw filled shapes where the line bounding the shape is removed after the shape has been filled. In effect this leaves a shape made up of the fill pattern only.

PRINTING A PICTURE

The best way of learning to use GEM *Paint* is by experimentation. Play around with the various options, but don't forget to save any finished drawings to disc before leaving the program, or you'll lose all your handywork. The program prompts you if you forget.

There's bound to come a time when you want to print a picture you've produced with GEM *Paint* on paper. This is a bit more involved than with some drawing programs, as GEM uses the same utility program (called *OUTPUT*) to deal with all its graphical output, whether from GEM *Paint*, GEM *Draw*, GEM *Graph*, GEM *Write* or any of the other applications.

This means you first have to save your picture as a disc file, then leave your current application and call OUTPUT. From there you can build up a list of the files you want to print – and with a suitable printer the results can be quite impressive.

GEM *Paint* is a very useful tool for work and recreation, and once you've tried it you're quite likely to get hooked. This isn't the end of the story, though, as GEM is a whole family of programs. In future issues will be casting an eye over other areas of business in which Digital Research believe GEM and its many applications can help. ●

CROSSED LINES

We've been having a few problems with our telephone lines here at *PC PLUS*. We keep getting our lines crossed with some bunch called Techwallies (UK) Limited. We thought you might like to know what goes on there – not that we're eavesdroppers you understand, just impartial observers of lifes idiosyncracies...

MINOR QUIBBLES

Brrrring...brrrring...click! 'Ah, Crump? Glad I caught you in. What I want to talk to you about is the advertising copy you just sent us. Now let me say straight away that the board thinks you've done a splendid job, first class – but there are one or two minor points they want me to take up with you, minor quibbles really, but we really must make sure that everything is spot on when we launch the Basilisk PC, right down to the last punctuation mark. By the way, you do have commas and full stops on your typewriter, haven't you?

'Oh, I see, it's our new word processor is it? Well, not to worry. Anyway, we really liked the photo. Even if it was a shade risque. Er... who was she?

'Your secretary. Really? Rather an unusual angle, I thought. How did you persuade her to... ahem... well, never mind. Do you think we'll have any trouble with the Advertising Standards people? Or the Vice Squad?

'The board did happen to mention that they would have liked to have seen more... What? No! Not of her! I wouldn't have thought it possible... I meant of the computer. You know, the keyboard perhaps, or the monitor, or even a little bit of the main unit...

'Old hat, eh? Not what they're doing these days, you say? Maybe we can come back to that later. Now, there were one or two things about the text, just little things. The opening line for instance. Can we change that slightly? It is a strong opening I agree, but the board feels that "IBM sucks!" is just a little over the top. And the bit about "squinty-eyed foreigners go home and take your Basilisk look-a-likes with you".

'You don't think so. OK, let's leave that and go on to the specifications. Against the bit where it says "RAM" you put "Quite a bit". Well, the point is old chap that's not very technical, is it? Couldn't you phone the Development boys and get a more accurate...?

'Oh, you did phone them. And that's what they told you was it? I'll have to have a word with them. Of course you did get technical later on, where you say that the Basilisk PC has a "Fantastic multi-tasking real-time chronograph with incredible turbo Basic double-density dual-nationality MS-DOS compatible serial on-line local area network and 16 Gigabyte mouse-driven direct-dial swivel modem built in, U git face." Sounds really good. Er, what does it mean?

'The Development boys said that to you as well did they? Well, I'm sure they know what they're talking about. I think that just about covers it.... Super idea putting the price right at the top in two-inch high letters, by the way. And I can just about read the qualification at the bottom, where it says "Not including VAT, packaging, posting, software, cables, monitor, keyboard and £2,000". That should put the wind up Sugar's bunch.

'Well, that's it then. As I said they were only minor quibbles. I'll put your cheque in the post this afternoon. Oh, there was one other thing. A rather delicate matter, actually. You wouldn't happen to know if your secretary's free this evening would you?

'Oh. She's your wife. I see.' **Click!**

Chris Hughes

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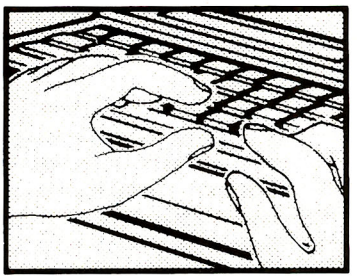

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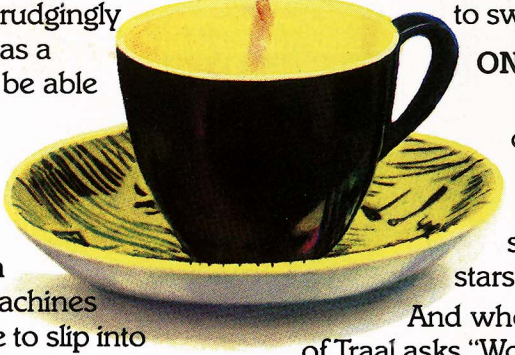

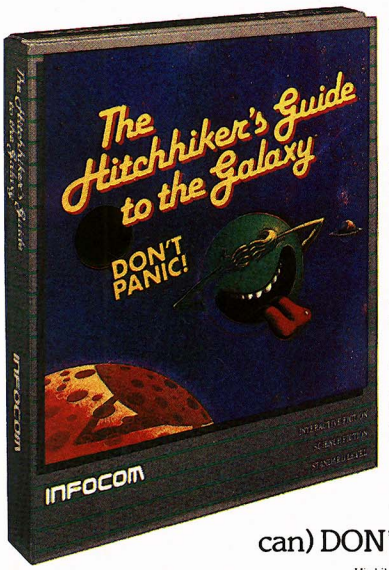

DON'T PANIC

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 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.

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PHONE CALL COSTER

A super-short type-in program to show you just how much money you're pouring down the line



Well, it's the autumn and everyone is returning from their holidays in Torquay, determinedly wearing their shorts despite the Arctic weather so that the neighbours will see their solar lamp suntanned knees.

And how many holiday romances are still hanging in the air? Are you having three hour long tearful midnight phonecalls to Lands End? If so, perhaps you'd better steel yourself for your next phone bill, and urgently type in our phone call coster listing to catch yourself next time.

BT's inner mysteries

First, a brief note on how your phone bill is calculated. How much you get charged for a phone call depends on three things: how long you spend on the line, how far away you are calling and what time of day it is.

As for distance, there are three charge bands. "Local" rate calls are listed in your area phone book, "A" rate is for other exchanges up to 56km away, and "B" rate is for over 56km away. On weekdays between 9am and 1pm

THE PROGRAM LISTING

```
10 PRINT CHR$(27)+"E"+CHR$(27)+"H"
20 FOR I=1 TO 9:READ C(I):NEXT
30 DATA 90,120,480,30,40,120,17.1,22.5,48
40 INPUT "Distance    -- 1) Local, 2) Area A  or  3) Area B ";DIST%
50 INPUT "Charge rate -- 1) Peak,  2) Standard or 3) Cheap  ";RATE%
60 PRINT:SPU=C((DIST%-1)*3+RATE%)
70 PRINT "The charge is 5.75p for each";SPU;"seconds or part thereof"
80 INPUT "Press [RETURN] when the phone is answered ...",X$
90 PRINT "... press any key when you finish the call":PRINT
100 SEC=SPU:CH=CH+5.75:BEEP%=-1
110 PRINT "Current charge:";CHR$(27);"K";CH;"p"
120 WHILE SEC>0
130 PRINT "Seconds left to next charge increase: ";
140 PRINT USING "&p###.#&q";CHR$(27),SEC,CHR$(27);
150 IF SEC<5 AND BEEP% THEN PRINT CHR$(7);:BEEP%=0
160 SEC=SEC-0.0751
170 PRINT CHR$(13);
180 IF INKEY$<>"" THEN PRINT:PRINT:END
190 WEND
200 PRINT CHR$(27)+"I";
210 GOTO 100
```

Charge increases

It's too much to hope that BT will keep their charges at the current rates for long, but even if they do change, the phone coster can cope.

Look at the table of charges, and compare this to line 30 of the program – it just lists the call times in seconds allowed per unit for Local, A and B areas at Peak, Standard and Cheap rates in that order.

Find out BT's new charges in terms of call seconds per unit, and retype line 30 of the program putting the new numbers in place of the old ones. Be sure to get the order right though!

Boffin note

If you're an experienced Basic programmer, then when you type in a listing from a magazine you probably alter it to suit your own tastes. A word of warning: the way that the 'clock' in this call timer works is by knowing exactly how long it takes for Mallard Basic to execute the loop of lines 120 to 190 – in fact, 0.0751 seconds. If you alter any of these lines, your clock may run at a strange speed.

How to type a listing in

The first thing is to load up Mallard Basic. To do this, turn on the PCW (or reset it with [SHIFT]+[EXTRA]+[EXIT]) and into the top drive put the CP/M startup disc, which is the other side of the LocoScript startup disc.

When you get the A> prompt, type BASIC, and after a few seconds a message about "Mallard-80 BASIC" appears and it says "Ok". Now copy out each line in the listing very carefully, including the line numbers, and press [RETURN] at the end of each line. Be careful to distinguish between capital I and the digit 1, O and 0, and colons and semicolons. During a long listing it's important to save your work every 15 minutes or so. And for all listings you must save them for attempting to run them. To do this, find a work disc you can write to, put it in the disc drive, and type SAVE "PROGRAM" [RETURN]. Or you can choose any other name instead of the word "program".

When you've finished, type LIST [RETURN] and the whole program will appear on the screen. Check it, and if any lines are wrong, you can correct them with the line editor. For example, if the mistake was in line 100, you would type EDIT 100 [RETURN], and use the cursor keys and delete keys to fix the line. Press [RETURN] when the line is correct.

If you have mistyped a line number, so that a line appears in the wrong sequence, just type the incorrect line number and the [RETURN], which effectively deletes the line, then retype the line with its correct number.

When you're satisfied the listing is correct, SAVE the finished version (see above) and now your program is ready to run. Just type RUN [RETURN]

And yes...it goes wrong

It's more than likely, no matter how meticulously you copied the listing out, that the first time you run the program it won't work properly. You may get some arcane message like "Syntax error in 100". List the program out (using LIST), and carefully check the screen against the original in the magazine.

Incidentally apart from Syntax errors, the line number mentioned in the error message isn't necessarily where the error is located – it's simply the point at which the computer gets stuck. You may have to look elsewhere for the error.

When you've found it, either retype the line wholesale, or correct it by using the line editor as described above. Type RUN again, and hopefully it works this time. If not, go on correcting and re-running until it does. Finally, don't forget to save the corrected version again.

When you've finally finished with the program, typing SYSTEM [RETURN] returns you to CP/M.

To run the phone coster another day, start BASIC up normally, put the disc you saved the program on in the drive and type LOAD "PROGRAM" [RETURN] or whatever name you gave the program when you saved it. Then as before, when it says Ok, type RUN [RETURN].

	Local	Area "A"	Area "B"
Peak	90	30	17.1
Standard	120	40	22.5
Cheap	480	120	48

BT's current phone charges, in terms of the number of seconds that you get for one unit (5.75p) ▶

Can YOU program?

If so, you could earn hard cash (£10-100) and instant fame by having your programs printed in this magazine. We're interested in SHORT programs of GENERAL INTEREST: Utilities, graphics, games and the like

Programs of 1-20 lines are particularly likely to be printed (because we can manage several in an issue) – those that are longer have to be really good, so don't get carried away with lots of lines devoted to "window-dressing" the program. Instructions can be given in accompanying documentation much more efficiently.

To submit a listing you must supply the following:

1. A printout of the listing.
2. A disc on which it is saved. 3. A stamped addressed jiffy bag for return of your disc.
4. An explanation of what the program does and how to use it.
5. A signed statement confirming that the program is your original work and hasn't been submitted to anyone else.

Send your submissions to: *Listings, 8000 Plus, The Old Barn, Somerton, Somerset, TA11 5AH.*

Please allow up to 40 days for return of your disc – the programs will be assessed all in one batch once a month!

you are charged "peak" rate for calls, and "standard" rate is 8-9am and 1-6pm. "Cheap" rate is 6pm-8am on weekdays, and all of weekends.

Now prepare to meet the dreaded "unit". A unit is the smallest charging period, and currently costs 5p + VAT (5.75p in all) for a normal home phone line. No matter how short the call you make, you are bound to be charged for at least one unit, and it goes up in steps.

For example, looking at the charge table, for a peak rate "B" distance call, one unit lasts 17.1 seconds. As soon as the call is connected (ie. it is answered) you are charged 5.75p, and that covers you to talk for 17.1 seconds. At the stroke of 17.2 seconds, your call cost jumps to two units, or 11.5p, and so on.

Every second counts

And so on to the program. Type in and save the listing (see the box if you aren't sure how to).

When you've got it running properly, the coster first asks you for the particulars of the call – distance and charge rate. In each case type the number of the choice you want (1, 2 or 3) followed by [RETURN]. It then shows the running total for the cost, together with a countdown of how many seconds are left until your charge is upped by another unit. It gives you a reminder beep when there are 5 seconds left.

In order to keep the listing simple, there are no checks that you've given proper answers to the questions, so it relies on careful, intelligent use. If you mistype things, press the [STOP] key, which gets you back to the "Ok" prompt, and then RUN again.

If the screen display is not like our example screen, you've probably mistyped a semicolon in lines 130, 140 or 200 If the program never stops, interrupt it by pressing the [STOP] key, and check line 180.

```
Distance    -- 1) Local, 2) Area A  or  3) Area B ? 3
Charge rate -- 1) Peak,  2) Standard or 3) Cheap  ? 1

The charge is 5.75p for each 17.1 seconds or part thereof
Press [RETURN] when the phone is answered ...
... press any key when you finish the call

Current charge: 34.5 p
Seconds left to next charge increase: 6

Ok
```

▲ The phone coster in action

```
CP/M Plus  Amstrad Consumer Electronics plc

v 1.4, 61K TPA, 2 disc drives, 368K drive M:

A)basic

Mallard-80  BASIC with Jetsam  Version 1.29
(c) Copyright 1984  Locomotive Software Ltd
All rights reserved

31597 free bytes

Ok
load "phone"
Ok
run
```

▲ Running the coster later on after you've SAVEd it

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The history of CP/M, the development of major software for CP/M. Turbodos, TPM, CDOS and MSDOS, the CP/M-lookalikes.

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Beginners guide to CP/M. How to use the CP/M commands. Reference pages on the CCP Built-In commands, and the CP/M Plus Transient utilities. Communications using the serial RS232 ports and Modem7 etc.

Section 3 — Writing CP/M software
How to interface with CP/M from a high level language. Detailed description of the CP/M Plus BDOS interface. Using and writing RSXs, The graphics standard GSX.

Section 4 — Languages, assemblers
Introduction to BDS-C, MBASIC and CBASIC, ALGOL, PASCAL MT+ and the assembler RMAC.

Section 5 — CP/M Users reference
The CP/M Assemblers, Basic-E. The Amstrad CP/M Plus implementation and utilities, the USERF interface and the firmware. The CCP.

TIP-OFFS

The pages which give you the lowdown on Locoscript, CP/M, life, the universe and avoiding the PCW hair-tear syndrome.

Your reaction to issue 1 left us in no doubt how much you like this section, so this month it's even bigger. And this time most of the ideas have come from you. We've been flooded out by high-quality tips, so stand by for some intriguing reading.

Special thanks to Philip Last of Louth in Lincolnshire who sent us so many snippets we considered installing his name and address as a permanent PHRASE we could call up at a single key-stroke. He picks up a £20 winners' voucher, as does Londoner Richard Cook another prolific and talented tipster. If you'd like to contribute to these pages, send your snippets to: *TipOffs, 8000 Plus, The Old Barn, Somerton, Somerset, TA11 5AH.*

Working with Basic

There are a couple of shortcuts you can use while typing in Mallard Basic programs, which require some dedicated ferreting to unearth from the depths of the manual.

Probably the most used command in Basic programs is PRINT. In most it has to be typed many times. However, you can type a question mark instead, with just the same effect. For instance, while in Basic type `?2+2`, and you will get 4. Now incorporate it into a program line, eg.

```
30?2+2
```

and then `LIST` it. you will find it now reads

```
 30 PRINT 2+2
```

You do not need a space either between the line number and the ?, or between the ? and what follows, so there is a saving of several keystrokes.

Another useful shorthand is to replace REM by a single quotation mark:

```
10'This is a comment
```

This has the same effect as REM, but unlike the PRINT/? case, it does not actually print out as REM when LISTed. It's often useful to create some breathing space in the middle of a long program, for example:

```
130 (End of one section)
140 '
150 (Start of next section)
```

(Rodney M Bennett, London W10.)

Saving Basic programs

If you save Basic programs that are not finished or still need work done on them at a later date, then you may end up with a file full of odds and ends. It's then you find you can't remember what MYFILE.BAS is.

If the program isn't in final form, a good idea is to save it using the form specifier A, ie. SAVE "MYFILE.BAS,A". This saves the program as an ASCII file, so you can use the CP/M command TYPE. This way you can check your Basic files easily without having to load each one just to see what it does.

Note that when you want to load a file later (with the LOAD command), it doesn't matter whether the file has been saved using ",A" or not. Also, if you do save a file with ",A", you can always change your mind and save it normally at a later date.

(Philip Last, Louth)

Feeding continuous paper

The back plate of the PCW printer is normally positioned with the ribs facing forwards and the back plate at a steep angle. This is the normal position for single sheet stationery, but can cause problems when using continuous stationery.

Just remove the back plate and turn it around, so that the ribs face backwards, and replace it on the printer. It will then lie at a flatter angle which is much better for separating incoming from outgoing continuous stationery.

One potential problem can occur with the tractor feed mechanism. Usually the paper bulges in the middle as it goes over the tractors, and this bulge then causes problems when the paper has to bend upwards to go up the back plate..

The cure for this is the latest 'High-Tech' accessory for Joyce – a 10 inch length of 1" dowel! This is placed as a roller across the paper in the dip behind the tractors, where it flattens the offending bulge and allows it to bend freely. This permits carefree printing of long documents unattended without fear of a paper jam.

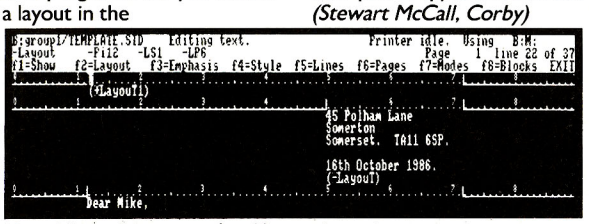
(Richard Cook, London SW5)

Economical addresses

As was pointed out in issue 1 of 8000 Plus, using the TAB key really takes up a lot of disc space. When writing letters that require your address to be in the top right corner you should set up a layout in the TEMPLATE.STD document so that the left margin is as far across the page as you need.

Then just revert to the base layout after you've typed the address.

(Stewart McCall, Corby)



Using different layouts to make address typing easier

Cracker of a tip

Here's advice that will be of interest to users of the spreadsheet program "The Cracker".

Making up an autostart disc

As always, first find a blank formatted single density disc, suitable for use in drive A, and using PIP copy onto it J14CPM3.EMS, PIP.COM and SUBMIT.COM. Also copy from the Cracker disc the files CRACKER.OVR, CRACKER.COM and, if you need the help messages while running Cracker, CRACKER.HLP.

In order to create a file to instruct CP/M what is expected of it, put your system disc back in A and type `BASIC RPED`. Follow the instructions on the screen to create a file called PROFILE.SUB, and type into it the lines

```
PIP M:=A:*.OVR
CRACKER
```

Make sure you save this file on your autostart disc. Now whenever you reset the machine and insert this disc in drive A, The Cracker will start automatically.

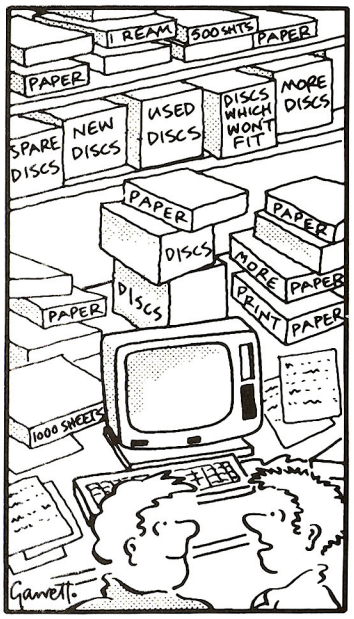
Printer instructions

The following instructions will allow you a much greater flexibility of form design within The Cracker. Select a text mode as normal and then use whichever of the following are best suited to your needs:-

`[ALT]+O [RETURN]` – shrink print (132 columns possible)
`[ALT]+R [RETURN]` – return to normal number of columns
`[ALT]+N [RETURN]` – enlarge print
`[ALT]+T [RETURN]` – return to normal print size
`[ALT]+P [RETURN]` – snapshot of screen
`[ALT]+Q [RETURN]` – emphasised print

Please note you cannot edit text in these modes, but in practice this is not restrictive.

(J S Smith, Dumfries)



"AT LEAST NOW WE'VE GOT THE PCW WE WON'T BE SNOWED UNDER WITH ALL THAT PAPERWORK . . . "

Editing ASCII files in LocoScript

Producing ASCII files in LocoScript is easy, simply involving use of [f7] (Make ASCII file) at the Main Menu stage. However, it is not immediately evident how you load an ASCII file in order to word process it. Trying to EDIT one directly produces the response "Not a LocoScript document".

Fortunately it is possible to do this. Simply CREATE an empty document and then press [f7] while editing it and select INSERT TEXT. Choose the ASCII file you wish to edit as the text to be inserted, and then use LocoScript to process it normally.

Note that when you save the document again it will be in normal LocoScript form, not ASCII. If you want to, you can use Make ASCII file to reconvert it.
(*Ross Maynard, Hythe.*)

Function keys in CP/M

Although the keys [f1] to [f8] are primarily designed for use with LocoScript, they also have specific meanings within CP/M. They are either useful while running programs like *WordStar*, or just at the ordinary "A>" prompt.

For example, if you read last month's tip-offs, you will know that [ALT] + P makes the PCW printer echo everything you type from then on until you type it again. The key marked f7/f8 will do this at a single keystroke.

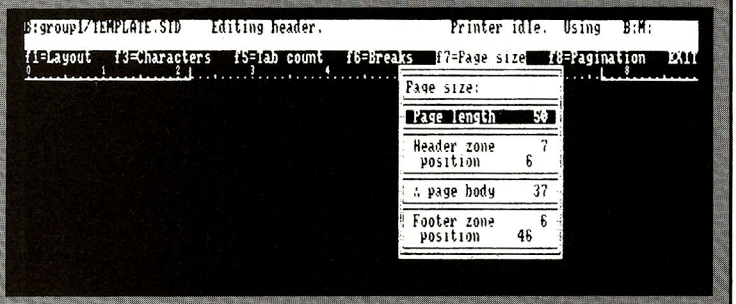
The full definitions are as follows:
f1/f2 is [ALT] + Z
f3/f4 is [ALT] + Q
f5/f6 is [ALT] + S
f7/f8 is [ALT] + P
(*Martin Evans, Cambridge*)

Using A5 paper

If you want to print using A5 paper then you will have to alter the margins and page length to suit the new size. Start editing the TEMPLATE.STD that you will use, and press 'f7 Modes', select "Edit Header", and finally 'f7 Options' to get to the "Editing Header" screen.

For a page done in Pitch 12 and Line Pitch 6, assuming 1 line headers and footers with a single line space between them and the document, the suggested page settings are as follows: To alter the margins, select 'f1 Layout', and set the left and right margins to 22 and 77 respectively. Then press [EXIT] to get back to the previous screen, and press 'f7 Page Size'. Set the options as shown below.

Finally, before printing an A5 document out, go into the Printer Control State by pressing [PTR], and select 'f1 Options'. Move the cursor down to Form Length, and change it to 50.(*Philip Last, Louth*)



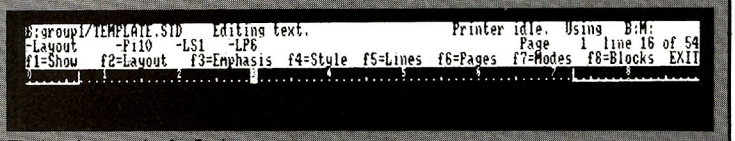
The page layout options set up for A5 paper

Margin settings

If you have ever tried setting up your own templates then you will no doubt have discovered by now that changing the pitch isn't enough – you need to change the margin settings as well.

This table shows suggested margin positions for the five pitch sizes on A4 paper. The settings give, as near as possible, a 20mm margin to left and right assuming Right Justification is on. If not, then the right hand margin can usually be a little wider. (*Philip Last, Louth*)

Pitch	Left Margin	Right Margin
10	07	73
12	09	89
PS	09	89
15	11	110
17	13	127

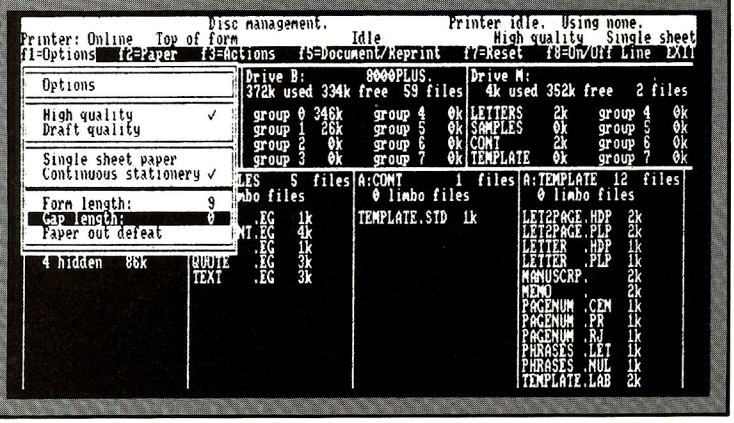


The base layout ruler for Pitch 10 text.

Label printing

When using LocoScript for printing labels you'll probably find that a lot of experimentation is required before you find correct settings for the printer. With the labels that are sold by most companies you'll find that the sizes are different to those that are recommended by Amstrad.

For labels 3½ by 1 7/16 inches on continuous stationery, you will need to set the following options before you print, by pressing [PTR] and using the 'f1 Options' menu:



Deleting LocoScript phrases

When preparing text for printing in 15 or 17 pitch, it is often a nuisance that lines of more than 90 characters run off the right hand edge of the screen.

If the margins for the base layout are set at say 0 and 80, and Layout 1 at the full width settings, then the text can be prepared in the base layout so that it is all visible. Then as the last thing, just insert Layout 1 at the top of the document, press [SHIFT] + [PAGE] to run to the end of it and everything will be relaid in the correct width for printing.
(*Margaret Rugg, Exeter*)

Long lines in LocoScript

Since there is a limit to the overall number of characters you can have stored as phrases, if you want to define some very long phrases you might have to delete some others to make room.

Unfortunately there is no "delete phrase" function directly available. What you have to do is store a new phrase with nothing in it in place of the old phrase. To do this, press [COPY] [COPY] and then the letter of the phrase you wish to delete.

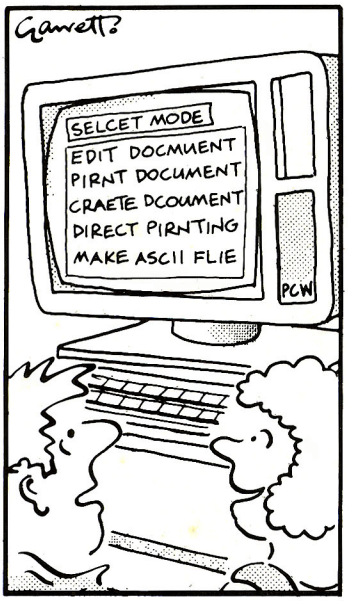
Don't forget that amending phrases is normally only effective for the current work session and you have to save the changes (or deletions) if you want to use them again. When you 'f8 Save All Phrases', LocoScript creates a new PHRASES.STD file in Group 0 of Drive M. This will have to be 'f3 Copy'd across to your Load-Up disc.
(*Richard Cook, London SW5*)

Overcoming LocoScript's sloth

LocoScript is often said to be very slow in handling long documents. One way round this is to split a long document into several short files, at most 10 or 12k long each. Editing each one is now relatively painless, since they are quite short.

Now when you've finished all the editing and want to print out the whole document, edit the first file and move to the end of it. Make sure it ends in [RETURN] and the special features like italic and bold are turned off. Then use [f7] and "Insert text" to insert the second file, which will run through ending conveniently at the place to insert text again. Now use [f7] to insert the third file, and so on.

This way LocoScript will easily handle a file of up to half the disc space in length – 360k on an 8512. Even Tolstoy would have been able to manage with that!
(*Margaret Rugg, Exeter*)



// TRUST ME TO GET THE DYSLEXIC VERSION... //

Gettting a bigger disc drive

There is a simple underhand way of upping the size of your disc drive by using CP/M's SETDEF utility. You can tell CP/M that if it doesn't find a file on a certain drive, to look on another one for it. Since it will then do this automatically, the second drive can be thought of as an expansion of the first. Here's how it works:

If you have an 8256 and your program is too big to fit in its M: drive, then copy over all the files that will fit anyway. Make up a work disc which contains only the files that wouldn't fit on M:, which hopefully leaves you with a generous space left to work with on the disc.

Now, with A as your default drive, type

```
SETDEF M:,*
```

Whenever you try to read a file while using A as the default drive, it will now look first on the M drive and then on the A drive without you having to specify which, just as though you had a single drive big enough to hold all the files at once. If you create a new file, it will go to the default drive, A, rather than M, so new files are safely stored on a real floppy rather than the more dangerous RAM disc.

(Robert Broome, Computer Training College)

Ribbon re-inking

Some PCWs used in businesses get very heavy use, doing non-stop printing every day. The printer ribbons only last for a few hundred pages or so, and if you have buy a new ribbon twice a week it can get pretty expensive.

Don't fork out £5.95 for a new ribbon without first rejuvenating the old one by spraying it with WD-40 – best take the ribbon out of the printer first though!

(Glenn Myers, Beaconsfield)

TipOffs editor adds: another solution to this is to reuse the ribbon by re-inking it. One company who will do this is Aladdink of 4 Hurkur Crescent, Byemouth, Berwickshire TD14 5AP. They charge around £1.80 per ribbon.

Scrolls of screens

One of the frustrations of the PCW is its inability to scroll the screen by a pageful at a time. Many people have been reading a long document on screen and pressed [PAGE], only to discover the top few lines of text disappearing off the top of the screen.

However, if you press [SHIFT] with the up or down cursor keys, you will see that this moves the cursor by approximately 2/3 of a screenful at one go.

Also, [SHIFT] plus the left or right cursor keys moves the cursor to either the end of the line or (better still) back to its starting point.

(Glenn Myers, Beaconsfield)

Basic hacking

Here's a challenge for all CP/M and Basic experts out there. The short listing shown below will allow you to look at any part of the PCW's memory, although since you are running Basic the TPA will necessarily always show Mallard Basic.

A couple of fun areas to look at are around 4500 (Basic error messages) and around 20000 (Basic keywords). But here's an oddity – the characters at and following 22466 say "Acorn computers". Can anyone explain why?

(Raymond Holroyde, Manchester)

```
10 INPUT "Start";st
20 INPUT "End";ed
30 FOR a=st TO ed
40 mem$=CHR$(PEEK(a))
50 IF ASC(mem$)>127 THEN mem$=CHR$(A
SC(mem$)-128)+CHR$(9)
60 IF ASC(mem$)<32 THEN mem$=CHR$(9)
70 PRINT mem$;
80 NEXT:END
```

To coin a phrase

LocoScript's phrases provide a convenient way of typing often used words into documents. Owing to covert pressure from the Estate Agents Mafia, the standard set of phrases you get includes such useful gems as "convenient for the M62" and "on frequent bus route".

However, there is a second set of phrases which are useful for letter writing hidden in the group named TEMPLATES of the LocoScript master disc, in the file PHRASES.LET. These are:

A: For the attention of
B: By return of post
C: With Compliments
D: Dear Sir/Madam
E: Please find enclosed
F: Yours faithfully
L: Thank you for your letter of
M: Please mark the envelope for the attention of
O: Our Ref:
P: Private and Confidential
R: We look forward to your reply
T: Thank you
V: R.S.V.P
W: With reference to your
Y: Your Ref:

To be able to use these, take your LocoScript startup disc and rename (f5) PHRASES.STD as PHRASES.OLD. Then move (f4) PHRASES.LET to the first group renaming it PHRASES.STD. The new phrases then come into effect the next time the computer is switched on. There is room for you to add a number of other phrases such as address and name, "Yours sincerely" etc.

(Jacquie Errington, Woodbridge)

Using PIP to avoid LocoScript...

The LocoScript 'f3 Copy' and 'f4 Move' commands only handle one file at a time, so it gets a little tedious when, for example, you want to move the contents of an entire group to a new disc. However, you can use CP/M's command PIP to sort out LocoScript discs.

The key point is that LocoScript and CP/M both use the same file and directory structure. CP/M has 16 "user areas" which are intended to keep different people's files separate, but on single user machines like the PCW this is redundant and you normally only use area 0.

Put your LocoScript disc in and type `DIR` – only the documents in group 0 are listed. If you type `DIR [USER=ALL]`, you see the documents in all the groups being listed. LocoScript groups 0 - 7 (as they are called before you give them names) occupy user areas 0 - 7, whilst Limbo files are in areas 8-15 – the Limbo files for group X are in area 8+X.

So using your CP/M expertise you can transfer whole groups of LocoScript documents to a new disc using PIP. Suppose you want to move group 4 of one disc to group 1 of a new disc, because the old disc is too full. Note how the group numbers 1 and 4 are used in steps 2 and 3, so you can change them to the numbers you actually want to use.

1. Put your CP/M disc in and type `PIP [RETURN]`
2. Put your old LocoScript disc in drive B and the new disc in drive A and type

```
B:[G1]=A:*.*[G4]
```

On single disc machines, do this in two parts via the M drive to avoid disc changes for every file. Type `[RETURN]` to leave PIP.

3. If you want to delete the files from the old disc, type

```
USER 4
ERA *.*
```

4. If you want to keep the limbo files too, copy across group 12 on the old disc to group 9 on the new disc in the same way.

(David G Smith, Paddock Wood)

...and using LocoScript to avoid PIP

On the other hand, you may be a CP/M user who finds PIP just too horrible to contemplate. If you cannot figure out the CP/M commands to PIP files around, use LocoScript as a tool.

Do this by starting up LocoScript, then insert the disc which you wish to copy a file FROM, and press the f1 key to get the directory. Copy (f3) the documents into the M drive, then remove the disc and insert the disc to copy the files TO. Press f1 again, and then use Move (f4) to complete the procedure by transporting the copies from the M drive to the A drive again.

It might sound long winded but really it is very simple, and it has the advantage that you can see exactly what is going on and the size of the files being moved.

(Matthew Tod, Stoke)

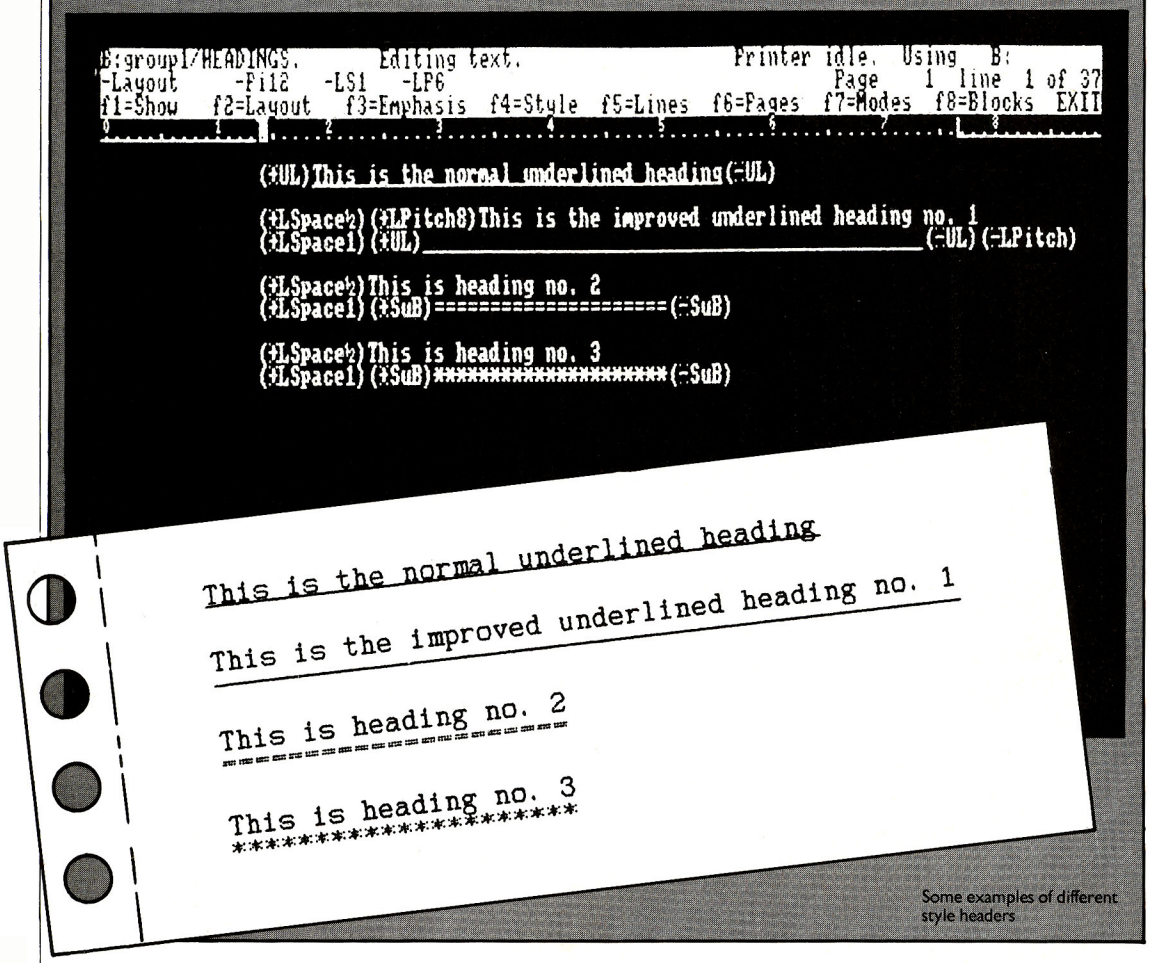
Improved underlining

When it comes to underlining a heading, LocoScript leaves something to be desired. The line is squashed up against the word and looks rather untidy. All is not lost however – it is possible to obtain far more stylish underlined headings by altering the line spacing and using other characters for the line. Here is how it is done:

1. At the start of a new line set the line spacing (with [f5]) to ½ and the line pitch to 8. You can't use proportional spacing, so if you are, change to Pitch 12 for a similar effect.
2. Type in the required heading and press [RETURN]
3. Reset the line pitch and spacing to what you were using before
4. Turn on full underlining (f3).
5. Turn off the codes display (f1) so that you can line up the columns accurately on the screen for the next stage
6. Type spaces until the underline line is as long as the heading. (If you type underline characters, although the screen looks OK they will print out as a broken line instead of continuous).
7. When you are happy, turn off underlining, press [RETURN] and carry on with your text. Remember to change back to proportional spacing if you want to.

To speed this up, you could store the basic control commands in a phrase on your startup disc. Other underline effects can be obtained with the use of superscript and characters such as = or *

(Simon Barrett, Cardiff
Peter Wall, Letchworth)



Some examples of different style headers

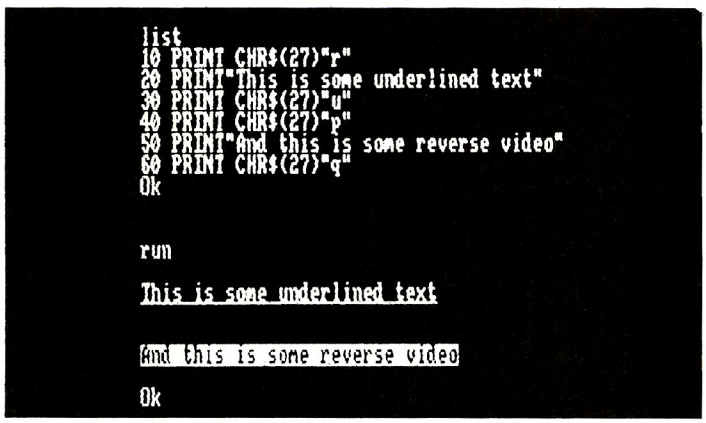
Jazzing up your screen

You've probably seen how LocoScript manages to underline characters on the screen, and print text in reverse video, and wondered how it is done. With a bit of trickery, you can add some spice to your boring screenfuls of text in just this way.

To underline some text, before you print it out, print the characters `CHR$(27)"r"`, and afterwards `CHR$(27)"u"` to turn underlining off.

Similarly, for reverse video, print `CHR$(27)"p"` beforehand and `CHR$(27)"q"` afterwards.

As a final frill, the command `PRINT CHR$(7)` causes the PCW to beep at you. One good idea is to put a beep command just before an INPUT statement, to remind users that they are expected to type something.



Underlined and reverse video text

Mathematicians' delight

If you use your PCW to type mathematical formulae, you may just have been frustrated by the lack of symbols for square and cube. Here's how to get them:

```
(+Pitch17)(+SupeR)2(-SupeR)(-Pitch)
(+Pitch17)(+SupeR)3(-SupeR)(-Pitch)
```

They are a little cumbersome but can be made simple to use by saving them as LocoScript phrases, under S and C respectively. Then they are always available as "[PASTE] S" or "[PASTE] C".

Because superscripted letters are half the height but with the same width as full size letters, they should be printed in pitch 17 to prevent them looking stretched.

$$a^2 \times a^3 = a^5$$

An example of squares, cubes and other powers

If you like decimal points that look like decimal points and not full stops, then use SupeRscript full stops – `(+SupeR).(-SupeR)`. Again, if you use it a lot, save it as a phrase.

Although the PCW can print most of the simple fractions (use the number keys on the top line, together with the [ALT] key), more complex fractions can also be got at for a little more effort. Put the numerator in superscript, and the denominator in subscript, and again use Pitch 17 to give the characters the correct look:

```
(+Pitch17)(+SupeR)x(-SupeR)/
(+SuB)y(-SuB)(-Pitch)
```

(Philip Last, Louth)

Screen contrast

Often it is easier to see the screen, particularly on a sunny day, if it is in reverse video. There is no way of doing this for LocoScript, but you can do it for CP/M programs.

When you are running CP/M and faced with the familiar "A>" prompt, put in your CP/M master disc with the file PALETTE.COM on it and type `PALETTE 1 0 [RETURN]`

Similarly, typing `PALETTE 0 1` returns you to normal green-on-black text screen.

If you know how to customise discs with a PROFILE.SUB file, you might like to make up special discs for yourself. Leave one side of the disc normal, and on the other side have exactly the same files but include a PROFILE.SUB file with the reverse video command.

Mark the side of the disc "Normal" and "Reverse Video" (or "Cloudy and "Sunny"), then depending on your mood or the strength of the sun your programs can be run in either screen mode.

(Justin Dennison, Guildford)

BASIC BONANZA

The Basic manual that Amstrad provides with the PCW machines is notable mainly for its total opacity. Some useful facts just aren't in there, and your chances of finding the ones that are printed are slightly less than the odds on Ronald Reagan joining the Communist Party.

GEOFFREY CHILDS of Winchcombe has written in with a hoard of invaluable tips to help programmers get the most from Mallard Basic. You will need to know the bare bones of Basic to be able to use these hints effectively ...

Direct command editing

If you are writing a line in Mallard for direct execution and you make a typing mistake, then you probably curse and retype the whole thing. This gets pretty annoying if it's a long line, like a complex calculation.

However, you don't have to go back and start again. Type [ALT]+A and you have your command line back for editing with the arrow and delete keys.

Looking at your program

If you are interested to find out how Mallard Basic works behind the scenes, you can see how it stores the text of your program. Using the PRINT and PEEK commands, take a look at the area of memory around 31382, and you will see part of your program stored there. The special Basic words like PRINT are not stored letter by letter, but you'll certainly see any charcters you've typed in between string quotes appearing.

If you know how to use it, you can modify your own program by the back door, using POKE to alter the lines directly. But be warned, ill-advised use of this can cause the PCW to crash.

```
list
10 a$="Zaphod Beeblebrox"
20 PRINT a$
Ok
for n=31382 to 31420:?chr$(peek(n));:next

êi"Zaphod Beeblebrox"
                    'é
Ok
for n=31382 to 31420:?peek(n),:next
 29    0    10    0     3     0
  0   225   236   34    90    97
 112  104   111   100   32    66
 101  101   98    108   101   98
 114  111   120   34    0     10
  0    20    0     179   3     0
  0   225    0
Ok
```

Two simple lines of Basic text, and a look at the way they are stored.

Cursory commands

If you have written a Basic program which moves the cursor around the screen a lot, it can be very annoying to see the wretched cursor bobbing up all over the place and wrecking your beautiful tidy screen. You can turn the cursor off by the command PRINT CHR$(27)"f".

When the program ends, you will need to turn the cursor back on again (have you ever tried editing without a cursor?), which you do by PRINT CHR$(27)"e".

Altering the TAB command

When you use the TAB command in Basic, the cursor moves to the column you specify and pads the previous columns with blanks. It would be nice to be able to use some character other than blank as the filler.

There is a way to do this in Mallard. Try typing

POKE 24348,42

PRINT TAB(50)

and you will see the effect. For the more technically minded, 42 is the ASCII code for "*".

Probably the most useful filler character is the full stop, for which the ASCII code is 46, so type that instead of 42 in the example. You can use any character you like, and the codes are listed on pages 113 to 118 of the PCW CP/M manual.

```
print "price:";tab(30)"£5"
price:                          £5
Ok
poke 24348,46
Ok
print "price:";tab(30)"£5"
price:.......................£5
Ok
```

The effect of altering the TAB command

Sending text to the printer

Have you ever writtten a program that normally prints to the screen, but that might need hard copy on occasions? The simplest way to achieve this is by changing PRINT to LPRINT. This could mean some hard work editing if you have a lot of lines. Instead you can do it by typing

POKE 18527,90

and from then on all PRINTs will appear on the printer, not the screen. You can reset this to normal by

POKE 18527,100

Telling the time

The PCW has a clock inside, although it counts the seconds in a rather eccentric way. The simplest way to explain how it can be used is to show a simple Basic program which reads the clock.

As you will see, the essential information is stored in three bytes, numbered 64502, 64503 and 64504. Not only can you read these, but you can also set them by POKE-ing them with 0 so you can "zero" your clock.

```
10 DEF FNT(X)=X-INT(X/16)*6
20 HRS=FNT(PEEK(64502!))
30 MINS=FNT(PEEK(64503!))
40 SECS=FNT(PEEK(64504!))
50 PRINT"Time is"HRS"hours"MINS"
mins"SECS"secs"
```

The program to read the time from the PCW memory

```
run
Time is 0 hrs 32 mins 56 secs
Ok

poke 64502,0:poke 64503,0:poke 64504,0
Ok

run
Time is 0 hrs 0 mins 5 secs
Ok
```

An example showing clock setting and reading

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We are introducing a new range of programs on disc for the Amstrad PC. All fully documented.

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NATIONAL & INTERNATIONAL USER GROUP
Join the leading independent user group supporting the Amstrad range of computers and receive monthly Newsletters, user support and the opportunity to share views, programs and ideas.
Members also benefit from substantial discounts on our continually increasing range of software - more than can be detailed in this advertisement.

The annual membership fee is £8.95 (UK) or £13.95 (Overseas).
CP/M, Unix, MSDOS, and Amstrad are all registered trade marks

THE GOOD SOFTWARE FILE

These pages provide a comprehensive guide to Amstrad PCW software published in three monthly parts. We've set out to cover every piece of software we could lay our hands on and give you enough information on each one to enable you to decide which titles are likely to be suitable.

As well as a brief summary of the programs, we've listed their main Plus and Minus points. Those we think are particularly good have an elliptical flash on the title bar saying why we recommend them.

Have fun window-shopping...



WORD-PROCESSORS

The PCW already comes bundled with a free word processor, LocoSript, so you might not think of buying another one as a priority. In fact, whatever you may have read in magazines, LocoScript is a pretty good word processor and you won't find many editing and layout functions that it doesn't have. Its principal disadvantage is speed – to move around a document of more than a couple of pages is like running through quick-setting cement.

So the main argument for change is to make life easier if you are regularly editing long documents (5 pages and over). Once you've decided to take the plunge you will find there are other advantages to be had. For one, you often get a spelling checker thrown in free – look for one which allows its dictionary to be modified so you can include non-American spellings.

Many other word processors have a built in "mail merger" program. This is a way of doing bulk mailshots; you store your address list in a data file, and write a letter with labelled gaps where you want the names and addresses to go. Then, when you print, the letter comes out once for each address, with the the information in its correct place.

One thing's for sure, whatever word processor you buy it will be totally different to operate from LocoScript. The PCW keyboard is custom built to run LocoScript, so if you change you will have to get used to some arcane choices of keys to do even simple operations. Also, you won't be able (very easily) to use all the printer styles that you can from LocoScript, although there will be enough to get by with.

LocoScript

bundled free with PCW machines • Locomotive Software

INCLUDED FOR COMPARISON

This is the standard PCW word processor. It makes by far the best use of the hardware of any word processor, and can do true proportional spaced printing, so why should you buy anything else? Well, the menu system is a little obscure at first, and you will need to use the manual a lot. Painfully slow with large documents, but if all you will ever do is 1 or 2 page letters, you would be silly to buy another word processor.

PLUSES • MINUSES

- ⊞ It's free!
- ⊞ Uses the printer and keyboard very well
- ⊞ Copes well with most editing functions, including block moves
- ⊞ Plenty of powerful features such as templates and phrases
- ⊟ Very slow with long (3 pages or more) documents
- ⊟ Bad at creating non-document files (e.g. program text), and interacting with CP/M
- ⊟ No mail merge, spell checker or word counter as standard
- ⊟ Documentation needs better organising

Pocket WordStar

£49.95 • MicroPro/Davis Rubin Associates.

To many business users, word processing means using WordStar. Almost every feature you could need in a text processor is here and despite the title this "Pocket" version has all the features of the original. It has also been customised to use the PCW's full screen width and some of the keypad keys. However the program can be difficult to learn and some of the margin and formatting commands are cumbersome. Efficient, and it has earned its colours in active combat, but it is now showing its age and there are alternatives unless you are committed to WordStar already. For £20 extra you can buy a version which includes the spell checker SpellStar.

PLUSES • MINUSES

- ⊞ Probably the world's most widely used word-processor
- ⊞ Documentation is complex but well structured
- ⊞ Includes a mail merge utility
- ⊞ The keystroke commands are fully described on on-screen menus
- ⊞ You can save your own favourite customised version
- ⊟ Doesn't make full use of the PCW keyboard and printer
- ⊟ Page and margin formatting commands are awkward to use
- ⊟ Complex and difficult to master thoroughly.

NewWord

£69.00 • NewStar Software

GOOD VALUE!

NewWord sets out to exploit the WordStar market by doing just the same job but better. It uses much the same key commands as WordStar, and will even edit WordStar document files. It comes with a spelling checker. On-screen help is much better than WordStar, but the commands, being restricted by compatibility, are still as obscure.

PLUSES • MINUSES

- ⊞ Can do everything WordStar can, and even edit WordStar files
- ⊞ Makes good use of the PCW screen — actually shows underlining and bold text.
- ⊞ Clearer help messages than WordStar and good tutorial manual.
- ⊞ Has full reformatting of text within its mail merge
- ⊞ Good spelling checker as part of the price
- ⊞ Can un-erase words and lines – useful for moving them rapidly
- ⊟ Weak on use of the keypad and printer support
- ⊟ Many of WordStar 's disadvantages too, like formatting troubles and obscure commands.

Gemini PROMOTING PERSONAL

InterGem



£99.95 inc.
or with 400K D/S drive ready to run £199.95 inc.

THE MULTI-STANDARD DISK INTERFACE FOR THE AMSTRAD PCW

INTRODUCTION The AMSTRAD DISK DRIVE ADAPTOR ('InterGem') will allow the fitting of any BBC Microcomputer compatible disk drive to the AMSTRAD PCW 8256, in place of the second disk drive. The drive(s) may be 5.25", 3.5" or 3"; 80, or 40/80 track; half-height and with or without power supply. 'InterGem', which should NOT be confused with other inferior products which it clearly out-performs, is easily fitted via the front panel which covers the slot for the second drive, and where the Amstrad label is affixed.

'InterGem' offers an additional 720 kilobytes of storage space, four times the amount offered in a single drive system. It allows a 5.25"/3.5" drive to mimic the AMSTRAD PCW 8256 second drive.

HARDWARE 'InterGem' is supplied in the form of a PCB, mounted on a replacement front panel. The PCB of 'InterGem' has the necessary connectors for linkage to the PCW 8256 second drive connectors. Connections are also available for the linkage of a BBC compatible disk drive WITHOUT POWER SUPPLY, via a socket on the 'InterGem' front panel.

SOFTWARE The software supplied is on 3" disk, and enables the user to configure a 5.25" or 3.5" BBC compatible drive to accept CP/M disks in double density format for nearly 80 other machines.

'InterGem' can also be used in the same way as the 3" PCW second drive, with LOCOSCRIPT and CP/M. Software is provided to enable the PCW, via 'InterGem', to READ FROM and WRITE TO machines running MS-DOS/PC-DOS, including the IBM PC/PC-XT formats and compatibles, (and APRICOT computers using 3.5" drives), and the BBC Microcomputer using a double density DFS (e.g. Watford DDFS, Solidisk DDFS, Acorn ADFS, OPUS D-DOS, etc.). In addition to this software a program is included which will allow the transfer of information on single density BBC disks to double density (using a BBC).

This package also comes complete with a comprehensive, user-friendly manual which explains the installation and use of 'InterGem' and accompanying software.

IMPORTANT ADVANTAGES OF 'InterGem' The cost of 'InterGem', plus a new 40/80 track, double side 5.25" disk without power supply, is comparable to the cost and installation of the Amstrad PCW 3" second drive.

One of the chief advantages is the cost and availability of the media, as double density 5.25" disks are at least a third of the cost of double density 3" disks (CF2-DD). In effect, a company using 50 or more disks would recover its outlay for 'InterGem' PLUS the drive, because of the swingeing price differential between 5.25" and 3" disks. (If you can get them!)

Importantly too, there, is a great deal of commercial software available in CP/M on 5.25" disks, which the installation of 'InterGem' would allow the user to take advantage of on his AMSTRAD PCW 8256, where that software is not available on 3" disk. Many companies and eductional establishments with information stored on 5.25"/3.5" disks, in CP/M, MS-DOS/PC-DOS, or ACORN 1770 DFS (or equilavent) formats, (with readily available 5.25" disk drives), would find the AMSTRAD DISK DRIVE ADAPTOR an invaluable asset if they wished to take advantage of the AMSTRAD PCW 8256 and its facilities.



FREE with InterGem comes the classic SPACE INVADERS, the FIRST arcade action game ever to be written for the Amstrad PCW

Are you frustrated with this print quality ? or indeed, even this ?

NEW for the PCW! £19.95 inc.

FontGem

8 ALTERNATIVE TYPEFACES IN NLQ!

'FontGem' for the PCW is a revolutionary piece of software that will enhance your printed Locoscript documents (and all other text files) beyond belief! Simply install 'FontGem' on your work disk, and choose which super business font you require from the menu. From then on, your PCW printer will use the font you have chosen, and will respond, automatically to style and emphasis changes marked in your text. Please note that 'FontGem' is a low level software patch to CP/M, and will therefore work with ALL your software.

PRODUCTIVITY FOR THE AMSTRAD PCW

DATA Gem

£39.95 inc.

THE DEFINITIVE DATA BASE FILING SYSTEM

OUTLINE In view of the incredible success of the Amstrad PCW8256, and now the PCW8512, the market for suitable serious software to complement the primary word processing function is expanding rapidly. The first reaction of most software houses in their anxiety to capture their slice of that market is to look to existing products and re-compile their source code on the Amstrad computer. Any software technician will agree that this cannot result in 'optimised' code, and in most cases, this procedure will not always allow the exploitation of the superb features of the Amstrad PCW, such as the RAM disk, the printer and the 2nd optional double-density disk drive if fitted (although standard on the PCW8512).

Gemini have written 'DataGem' *SPECIFICALLY* for the Amstrad. It uses *ALL* the features of the hardware, and uses advanced 'hashing' techniques to provide the *FASTEST* sorts and searches. It also boasts features that represent the state-of-art of today's databases, not those written years ago which were always an attempt just to replace the ubiquitous card index.

BBC ROM VERSION (£39.95 also)
Please enquire

'DataGem' SPECIFICATIONS

• Fully compatible with 'InterGem' • MENU DRIVEN with prompts – ideal for both novice and professional • Record CAPACITY up to 32,000 or even more with a hard disk • Up to 1498 chars per record • Uses RAM DISK and 1 or 2 other logical drives, e.g. :A and :B • Up to 32 FIELDS • Up to 8 KEY FIELDS, each with up to 31 chars indexed for FAST retrieval • CHARACTER fields (string) of up to 88 chars, using FULL WIDTH of PCW screen • NUMERIC fields up to 9 digits, 8 decimal places if required • DATE fields validated by internal calendar, and automatically sorted chronologically • MONEY fields allow automatic insertion of commas • 1 or 2 FILES OPEN at one time • Supplied PRINTER FULLY SUPPORTED with 2 user-definable REPORT templates for each file • FUNCTION KEYS are definable • PAINT on screen file LAYOUT • SEARCH on ANY field or fields with up to 32 criteria • LIGHTNING FAST searches using 'hashing' techiques • Perform MATHEMATICAL CALCULATIONS on numeric fields • Printer SUMMARIES of data include COLUMNS, TOTALS, AVERAGES, NUMBER OF RECORDS FOUND etc. • MERGE file option for EXPANDING files or exchanging information without tedious re-typing • Easy on-screen EDITING and DELETION • Professional MANUAL and auto-boot DISK – with simple installation procedure, no complex CP/M commands to master • Software FULLY SUPPORTED with NO CHARGE and NO TIME LIMIT • Available EX-STOCK – price sterling £39.95 includes VAT and P/P • Trade, export and licensing enquiries welcome,

CARE!!! GEMINI suggest that you check PRICE, PERFORMANCE and SPECIFICATION before you buy your Amstrad software. We shall be pleased to advise customers in respect of special database implementations, and use of 'DataGem' with hard disk systems. Gemini are also able to supply your HARDWARE requirements. Please telephone for details.

The Amstrad PCW made the typewriter obsolete...
DataGem will now make your Amstrad PCW absolute.

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0726 64463

Abacus Computers
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0422 45276

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Edgeware, Middx
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Alton Computers
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PCW

TITLE	RRP	Our Price
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Scratchpad Plus (Caxton)	£69.99	£59.95
Popular Accounts (Sage)	£99.99	£79.95
Pocket Wordstar (Micropro)	£49.95	£45.95
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Dr Graph (D.R.)	£49.95	£45.95
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dBase II	£119.00	£109.00
Cracker	£49.00	£45.00
Delta	£99.00	£85.00
Newword	£69.95	£65.95
Multiplan	£69.95	£65.95
DataGem	£39.95	£35.95
Prospell	£29.95	£25.50
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(unlike other programs which only record stock movement this package gives the operator full control of stock levels & ordering with profit/loss summaries, average cost price record etc using methodology found only on mainfram computers until now!)		
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THE PROTO 3" DISC Box Special summer offer (holds 10)	£6.99	£6.50

ALL PRICES INCLUDE P&P + VAT
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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
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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
Manchester M16 0WG
Tel: 061 848 9233

SIREN SOFTWARE

THE GOOD SOFTWARE FILE

WORD-PROCESSORS GAMES

Tasword 8000

£24.95 • Tasman Software

An established word processor that is well tried and tested on Amstrad's CPC machines. Tasword's strength is its printer handling — it provides a host of customisation options for different printers, and a variety of print fonts too. But if you enjoy moving blocks of text around to see how they look in different places, Tasword will let you down for speed.

PLUSES • MINUSES

- ⊞ Clear, well structured on-screen help menus
- ⊞ A variety of printer controls and fonts available
- ⊞ Includes a reasonable mail merge program
- ⊞ Moving around big files is fast
- ⊞ You can easily create and save a customised version of the program
- ⊟ Doesn't treat [RETURN] as a character — it can misunderstand where paragraph breaks are
- ⊟ Reformatting text blocks is quirky
- ⊟ Documentation is a bit brief
- ⊟ The search and replace function is limited and very slow

SuperWriter

£49.95 • Sorcim/Software City

RAW BUT POWERFUL!

A very comprehensive package, with spell checker and mail merge included, and the ability to execute commands from stored files. Full range of commands and formats, and on-screen help can be obtained. It's very fast at block operations and moving around, and reformats paragraphs in a flash. Very good value, but not much effort has gone into adapting it for the PCW.

PLUSES • MINUSES

WITHDRAWN FROM SALE!

- ⊞ Very fast at searching and moving around files
- ⊞ Sophisticated mail merge includes conditional print options
- ⊞ Spell checker can be easily customised
- ⊞ Complex commands can be executed from files
- ⊞ Excellent documentation, including a quick reference card and on-screen help menus
- ⊟ Can't edit files longer than 30K or so at once
- ⊟ Some of the documentation is only applicable to IBM PCs
- ⊟ No proportional spacing, and configuring the printer is difficult

LocoMail

£49.95 • Locomotive Software/Amstrad

BEST BUY!

As a mailmerger for LocoScript documents, it's difficult to see how anything could be much better than this. It runs directly from LocoScript, so you never have to use CP/M, and can process any LocoScript commands. Has many advanced features, and is highly recommended for all LocoScript users.

PLUSES • MINUSES

- ⊞ You don't have to boot CP/M to run it
- ⊞ Can print any LocoScript text formatting commands
- ⊞ Can automatically rejustify paragraphs after insertion
- ⊞ Can insert numeric calculations into letters
- ⊞ Can conditionally include or omit chunks of text
- ⊞ Large, clear manual, with example files on disc
- ⊟ No way to sort and filter addresses before a print run
- ⊟ Can't be used with non-LocoScript files

Dataflow III and Mailflow III

£49.95 • Micro Power

Designed as an integrated mailmerge package, it is awkward to use although can achieve good quality results. You have to convert LocoScript files to ASCII, which is annoying. The database section is not easy to use. It's worth a look if you want to mailmerge non-LocoScript files, but not otherwise.

PLUSES • MINUSES

- ⊞ Can put bold, underlining etc. into non-LocoScript files
- ⊞ Can presort and preselect records for merging
- ⊞ Automatically rejustifies text paragraphs
- ⊟ Doesn't read unconverted LocoScript documents
- ⊟ For an "integrated" program, it runs in several different stages.
- ⊟ The database section is longwinded to use
- ⊟ For the same money, you can buy LocoMail.

Prospell

£29.95 • Arnor

GOOD VALUE!

This is a stand-alone spelling checker suitable for use with almost all word processors that run on the PCW machines. It can read LocoScript, WordStar and plain ASCII files. It flags up each wrong word as it finds it, and allows you to alter it directly, view the context, change the dictionary etc. Speed is not startling, but acceptable. Good overall.

PLUSES • MINUSES

- ⊞ Can check LocoScript and WordStar documents directly
- ⊞ Can display the context of a word to remind you what it should be
- ⊞ Can edit misspellings directly from Prospell
- ⊞ Can update the dictionary interactively

⊞ It has anagram and crossword solver utilities too
⊟ It processes files of more than 15k or so in separate sections
⊟ You can't copy the dictionary to the M: drive for speed

BrainStorm
£49.95 • Caxton Software — *UNIQUE!*

An "ideas processor", BrainStorm is a computerised doodling pad. You can jot phrases down randomly, then organise them into a hierarchy, 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

GAMES

No one could have predicted the remarkable way in which games software has taken off on the PCWs. On the face of it, the machine is not ideally built for games, but software houses have proved that impressive results can be obtained on it, and not just with text-based games – your 8000 is capable of amazing animation!

The entertainment software available divides into three main categories, at least one of which may appeal to you, even if you don't think at present that computer games are your thing.

ADVENTURES are probably the most common on the PCW. These are defined (by us anyway) as games controlled by *typed keyboard commands*. The program describes a scenario and you, the player have to respond by typing things like: GET SWORD or POLISH ORB WITH THE VELVET CLOTH. These programs vary greatly in their ability to recognise and respond to your instructions, and at their best are Some of them include pictures of the various game locations, but these tend to play little part in actual game-play.

ARCADE GAMES are those in which an animated character is moved onscreen by *direct keyboard (or joystick) control*. You press a key for 'Left' and the character goes left. Arcade games with plenty of different locations are sometimes called ARCADE ADVENTURES.

Finally there are SIMULATIONS, a range of programs which covers anything from chess to flying and whose appeal will depend greatly on your interested in whatever is being simulated.

Batman
£14.95 • Ocean Software — *GREAT FUN!*

If you think the PCW screen is for text only, this game will make your jaw drop. Its animated 3D graphics are remarkable. The game too is surprisingly sophisticated. Despite the title, there's no fighting involved, just a good deal of brainwork and agile key control. While exploring the vast underground complex you have to negotiate a wide range of hazards and solve brain-twisting puzzles, often to do with manipulating obstacles and turning them to your advantage.. Superb entertainment – there's even a Batman 'tune'!

⊞ State-of-the-art 3D graphics.
⊞ You have the ability to push objects around a location offering scope for ingenious puzzles.
⊞ Conveyor belts, electrified floors and various creatures pose a severe challenge.
⊞ There's enormous variety and depth to the game. You won't get bored...
⊟ ...until you've finally solved it.

Hitch-hiker's Guide to the Galaxy
£28.70 • Infocom/Softsel — *HILARIOUS! SUPERB!*

In many people's view the best adventure program ever written. Based on the original book/radio show/TV program, it puts you in the same wacky situations forcing you to solve problems of mind-boggling improbability. The program is text only, but sophisticated enough to convince you that Douglas Adams himself is hiding inside your Amstrad.

PLUSES • MINUSES
⊞ Guaranteed more laughs than any other program.

LOGICOM

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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.

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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, Arnor, 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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PC 8000

The UPGRADE

PCW 8256 Upgrade to PCW 8512 specification

The new specialist PCW 8256/8512 magazine, "8000 Plus" has reviewed many upgrades for the PCW 8256. We are pleased to announce that our upgrades were selected as

"BEST VALUE D-I-Y MEMORY UPGRADE"
"BEST VALUE 3 INCH SECOND DRIVE"

THEY SAID: *" For many users an upgrade will make a huge difference." "Whether or not you need a second disc drive, 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 the 8512 (112k to 368k). At the very least you'll be able to do away with the chaos of single disc copying." "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."*

" Any upgrade...will involve... taking your machine apart... To some this is a daunting prospect but you will find it easier than you think."

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The simplest, most comprehensive step-by-step instructions available assume no prior knowledge, experience, or skill.

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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. Certain suites of programs, particularly those written for the PCW 8512, will not fit onto one, or even two sides of a standard disc but can usually be loaded onto one high density disc which can be accessed on both sides by the second drive.

"Fitting the second drive is simple enough...the only tools you should need are a screwdriver and a clear head. Everything other than the drive is already there in your machine: the cables are already wired and both LocoScript and CP/M software will recognise it automatically once it's fitted...you'll have to try pretty hard to get it wrong."

Amstrad PCW 8256 DS/DD Second Disc Drive

1 Megabyte unformatted (720K formatted) **£139**

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THE GOOD SOFTWARE FILE

GAMES

⊞ Solving some of the problems will have you gasping with glee.
⊞ Responses to your commands are almost always intelligent – and witty.
⊞ A very large program – many hours of challenge.
⊞ Better entertainment than the original radio show.
⊟ Liable to keep you from doing other things!

Infocom games

£28.70 or £22.95 • Infocom/Softsel

CHALLENGING!

Virtually the whole range of Infocom's famous text adventures are now available for the PCWs. From the original Zork series, now several years old, through to modern titles such as Spellbreaker, the programs all offer sophisticated, challenging entertainment of the highest order. If you're new to adventuring you should start with an 'introductory level' program such as Wishbringer. Old hands can tackle an 'expert level' title such as Starcross, Suspended or Spellbreaker.

PLUSES • MINUSES

⊞ Renowned for their sophistication in handling and responding to your typed commands.
⊞ Superb text descriptions give each game special atmosphere.
⊞ Great satisfaction to be had in overcoming numerous problems and deadends.
⊞ Lack of graphics means you can fool a casual observer into thinking you're word-processing!
⊟ They're not cheap.

Invaders

£19.95 (or free with InterGem disc interface) • Gemini

Are you an ageing hippy who toyed briefly with the original Space Invaders when video games first appeared (and then gave up playing because you were no good)? Then this is for you, it's pure nostalgia — simple space invaders. Go on, zap those database blues away.

PLUSES • MINUSES

⊞ Simple enough even for managers to play
⊞ Oozes nostalgia for all those 10p's you spent in the pub many years ago
⊟ The sound on the PCW really doesn't make any impact
⊟ The screen movements are not very fluid — firing on the move is erratic.
⊟ Games have moved on a long way since it was designed
⊟ £19.95 is a ridiculously high price

Graham Gooch's Test Cricket

£19.95 • Audiogenic

This is a fully animated game, allowing either 1 or 2 players to choose teams and compete in limited over or test cricket. You can control where the ball is bowled, and when the batsman strikes it. A good version, if you are a cricket fan.

PLUSES • MINUSES

⊞ Surprisingly good animated graphics (in cricket pitch green, of course)
⊞ Comes with up-to-date England and Australia squads preset, or pick your own sides
⊞ You can control the bowler's pace and batsman's timing
⊟ The 1-player game palls after a while — strictly for cricket fans
⊟ The PCW's sound doesn't generate any atmosphere

Colossus Chess 4.0

£15.95 • CDS Software

STRONGEST PLAY!

Tests conducted by 8000 PLUS appear to confirm this program's claim to be the strongest of the chess titles in actual play, although only by a small margin. It actually uses the time you're thinking to continue its planning! The program appears to have all conceivable features including such things as simulating "blindfold" games.

PLUSES • MINUSES

⊞ Probably the most powerful in play.
⊞ Includes openings library of 3000 moves.
⊞ Numerous features including proper tournament mode and "equality" mode in which the program matches your time.
⊞ Choice of algebraic or cursor key move entry.
⊞ Comes with file of 35 "pre-recorded" games and 19 chess problems.
⊟ Forget the 3D display – the 2D option is much clearer.

Cyrus II Chess

£15.95 • Amsoft

GREAT GRAPHICS!

This program's outstanding feature is its highly-detailed 3D display – it's stunning. So is the super-smooth (although slow) movement of the pieces. It has numerous other features, though not quite as many as Colossus. In our tests Colossus seemed to play better, but Cyrus II is still likely to beat you, and if you want a package to impress your friends it's probably the best to go for.

PLUSES • MINUSES

⊞ Gorgeous 3D view of board backed up by 2D option.
⊞ Very strong play.
⊞ Numerous frills and features such as the option of taking back a move.
⊞ Easy to use cursor key move entry.
⊟ Usually outplayed by Colossus.
⊟ No option for algebraic move entry.

3D Clock Chess
£15.95 • CP Software

The title refers to the fact that the program's 3D display includes a view of a chess clock complete with buttons and moving hands. A bit of a gimmick, really – both the other programs also keep a check of the time each player takes and include various time control options. The 3D display is prettier than Colossus, but not as nice as Cyrus.

PLUSES • MINUSES

⊞ Tough to beat, even at low levels.
⊞ Attractive 3D display.
⊞ Features include the ability to set any time limit per move for the computer.
⊟ Appears not quite as strong in play as Colossus.
⊟ Some features missing – eg. no option to take back a move after a blunder!
⊟ Move entry is only by algebraic coordinates (e.g. e2e4).
⊟ No 2D display option – the 3D can sometimes be confusing.

Bridge Player III
£19.95 • CP Software

Surprisingly, perhaps, good bridge programs appear to be much harder to create than good chess programs. Most suffer from erratic bidding, poor card play and numerous quirks. Bridge Player III can't entirely escape these criticisms, but as bridge programs on micros go, it's good. The human player plays South, with the computer running the other three hands. It claims not to cheat.

PLUSES • MINUSES

⊞ You can play bridge without first finding three like-minded people.
⊞ Program offers reasonably strong card-play.
⊞ You can specify the strength of your hand for bidding practice.
⊞ The computer keeps the score – no messy sheets of paper.
⊟ Bidding with the computer as both partner and opponent can be quriky and frustrating.
⊟ Overall strength of play is well below that of an average player.
⊟ The instruction leaflet could do with much more detail.

S.A.S. Raid
£14.95 • CRL

An atrocious game with nothing to recommend it. You're supposed to recover some plans from a castle by moving around a playing area represented by useless non-animated graphics and totally barren descriptions. Falls hopelessly between two feeble stools.

⊟ **Completely lacks atmosphere**
⊟ **And challenge**

Infocom games
£28.70 or £22.95 • Infocom/Softsel

CHALLENGING!

Virtually the whole range of Infocom's famous text adventures are now available for the PCWs. From the original Zork series, now several years old, through to modern titles such as Spellbreaker, the programs all offer sophisticated, challenging entertainment of the highest order. If you're new to adventuring you should start with an 'introductory level' program such as Wishbringer. Old hands can tackle an 'expert level' title such as Starcross, Suspended or Spellbreaker.

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⊞ Superb text descriptions give each game special atmosphere.
⊞ Great satisfaction to be had in overcoming numerous problems and deadends.
⊞ Lack of graphics means you can fool a casual observer into thinking you're word-processing!
⊟ They're not cheap.

Graham Gooch's Test Cricket
£19.95 • Audiogenic

The basic game screen shows a view down the wicket from above the bowler's head and features full animation of bowler, batsman and fielders. You can play limited over or full two innings matches, choosing your players from (editable) lists of England and Australia players. There are two playing modes: simulation and arcade – in the latter you have to time the batsman's shot and bowler's runup yourself.

⊞ A good simulation which incorporates most cricket rules including LBWs, run outs, declarations and follow ons.
⊞ Attractive animated graphics.
⊞ Choice of playing against the (hard-to-beat) computer or another player.
⊞ Action uninterrrupted by rain or winter.
⊟ Not too much variety in what you have to do.
⊟ Doesn't offer much to non-cricket fans.

Fairlight
£14.95 • The Edge

Another fine 3D graphic adventure with similar screen display to Batman. You must explore a castle prison in search of a book which will allow you to escape. Numerous enemies (helmeted guards, trolls, wraiths, etc) must be avoided and puzzles solved

THE **OFFICIAL** AMSTRAD CP/M PLUS HANDBOOK IS HERE!

CP/M PLUS HANDBOOK

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Digital Research Inc & Amstrad Consumer Electronics plc

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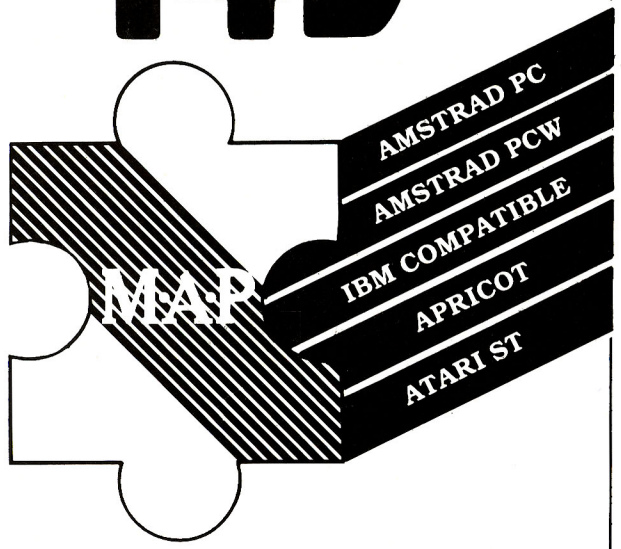

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SIMPLIFILE

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SIMPLIFILE is a database written for the Amstrad PCW 8256 and 8512, bearing in mind that many Amstrad users are working with their first computer.

Some features of SIMPLIFILE are:
- Calculation fields – adds, subtracts, multiplies and divides.
- You can find matching data in any selected field – eg. you could find Manchester by entering M, MAN, MANCH, etc.
- Conditional sort for data on any or multiple fields – eg. all dates later than a specified date.
- Conditional input fields – prevents incorrect entry.
- Easy editing of data on screen.
- Full editing of screen layout with cursor keys controlling the positioning of each field.
- Full editing of report layout using the same concept of cursor control.
- Report layouts allow totals of any numeric fields.
- Menu driven program design for ease of use.
- Window help screens – like LocoScript.
- No need to learn a new language. SIMPLIFILE is logic controlled.

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Telephone: 061 798 7307

THE GOOD SOFTWARE FILE

GAMES ACCOUNTS

by finding the right objects and using them in the right way.
- ⊞ Clear, detailed 3D graphics (but not quite up to *Batman* standards)
- ⊞ Good atmosphere generated by graphics and instructions
- ⊞ Large playing area to explore and map
- ⊞ Wide range of puzzles and objects to solve them
- ⊟ Action slows down considerably with more than one moving character on screen
- ⊟ May be hard to get into at first

Blackstar
£14.95 • CRL

A traditional text adventure with large playing area. Your aim is to enter and explore the mysterious Castle Blackstar and its vast underlying caverns in search of a 'power orb'.
- ⊞ Large number and variety of locations
- ⊞ Pleasing traditional fantasy scenario – gleaming swords, strange statues, etc
- ⊞ Plenty of objects to discover, problems to solve.
- ⊟ Program's text handling is not particularly sophisticated.
- ⊟ Unhelpful responses to your commands can become frustrating.

ACCOUNTS

Sandpiper Accounts
£129.95 single drive system • £149.95 dual drive • Sandpiper Software

This package is described as a 'simplified' integrated system and is aimed at inexperienced users. But although it offers a large number of features at a competitive price, it suffers from some serious drawbacks. In particular the limited audit and enquiry facilities will make it unsuitable for many businesses.

PLUSES • MINUSES
- ⊞ Comes ready installed to run from the M drive.
- ⊞ Price includes three months' telephone support.
- ⊟ Very poor audit trails and lack of detail on nominal ledger.
- ⊟ Analysis of sales and purchases very slow.
- ⊟ It would be easy to wipe off transactions by accident mid month.
- ⊟ The documentation is confusing.

Sagesoft Accounts
£99.00 • Sagesoft

An integrated accounts package consisting of purchase, sales and nominal ledgers. For another £50 you can buy Accounts Plus which also has invoicing and stock control. The package is aimed at small companies with the emphasis on ease of setting up. But there are a number of limitations — in particular the package cannot cope too easily with rapidly increasing numbers of customers and suppliers.

PLUSES • MINUSES
- ⊞ Clean, tidy and logical screen layouts and menus
- ⊞ Easy to set up and use with excellent documentation
- ⊞ Good audit trails and VAT reports
- ⊞ Can produce formatted trial balances
- ⊟ Restrictive account numbering system
- ⊟ Small batch sizes
- ⊟ Only single Nominal ledger and VAT analysis per item
- ⊟ Does not cater for settlement discounts
- ⊟ Won't print remittance advice slips

Money Manager
£24.95 • Connect Systems Ltd.

A personal accounts package, which might at a pinch serve a fledgeling small business. It acts as a daily diary, over 12 months, recording all incomings and outgoings between up to 9 accounts. Transactions can be given codes to group like ones together, and simple reports can be printed.

PLUSES • MINUSES
- ⊞ Fairly simple menu and screen entry of data
- ⊞ Standing orders can be added to each month
- ⊞ Detailed and summary statements can be produced
- ⊞ VAT reports can be separated out
- ⊟ The 24-page manual does not properly explain the package's features
- ⊟ The statement format is not very flexible
- ⊟ It's written in BASIC, and it's slow at statement preparation
- ⊟ Transfers between accounts are not cross-referenced

Camsoft PSIL

£149.95 • Cambrian Software

GOOD FOR SMALL Co.

Consists of five integrated packages: Sales, purchase and nominal ledgers, invoicing and stock control. In terms of sophistication it falls somewhere between the Sagesoft package and the larger systems from MAP and Compact. But it's easier to run than the larger packages since all the software can be squeezed into the M drive. Good package for a small company.

PLUSES • MINUSES

⊞ Comes installed for PCWs and can be run efficiently by 8256 or 8512.
⊞ No need for pre-printed stationery.
⊞ Excellent sort and search facilities.
⊞ Invoices shown on screen as you create them.
⊟ Constant need to input full five-digit account codes.
⊟ No final accounts reports available on nominal ledger.
⊟ No facility to run the ledgers in different accounting periods.
⊟ A couple of minor, but annoying, bugs.

M.A.P. Accounts

£149.00 • MAP Computer Systems

POWERFUL! GOOD VALUE!

This is a very powerful package moved onto the PCW at a fraction of its cost on larger micros. The size makes it a little cumbersome to use, but apart from that there are very few significant problems. The integrated suite includes the same five modules as Camsoft, but they are supplied on four sides of disc, making it effectively impossible for the software to be run as an integrated system on an unexpanded 8256.

PLUSES • MINUSES

⊞ A very comprehensive and professional package
⊞ Very good audit trails.
⊞ It's possible to run the sales and purchase ledgers over a different time period from the nominal.
⊞ Facility for handling prepayments and accruals
⊞ Able to print full management accounts.
⊟ The size of the programs means lots of disc swapping.
⊟ All normal responses need to be in upper case.

Compact Accounts

£199.99 • Compact Software Ltd

VERSATILE!

Another very large integrated package supplied on several discs and consisting of sales, purchase and nominal ledger together with invoicing. The package is available on much larger micros, and since the format in which data is produced is the same as on PCWs, the system is particularly suitable for users planning to upgrade their hardware at a later date. The programs' anti-piracy system means you have to use the original discs in the A drive. This means the system is not very suitable for use on an 8256.

PLUSES • MINUSES

⊞ Audit trails are an auditor's dream.
⊞ Includes a facility to allow data to be used in WordStar, Multiplan or SuperCalc 2.
⊞ Superb prepayment facility.
⊞ Can run a number of companies separately.
⊞ Easily transported to bigger computers.
⊟ Lots of disc swapping necessary.
⊟ Can be slow to use — it runs in Mallard Basic.
⊟ A couple of mildly annoying quirks in cash allocation routine and account code system.

NEXT MONTH

The guide continues next month with these categories: DATABASES, GRAPHICS, COMMUNICATIONS.. These will be followed the month after by surveys of SPREADSHEETS, UTILITIES, and EDUCATIONAL software.

Our intention is to keep publishing the three parts of the guide in rotation, updating it each month to include new products – but if you would like to see a complete copy of the guide (bar the Accounts and Comms sections), it's in issue one (cost of back issues: £1.50).

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.

RSC Ltd.

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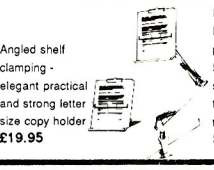

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GIFT 1 – worth £8.95!

A copy of the best-selling book *Mastering the Amstrad PCW 8256/8512* by John Hughes. It's packed with useful information on LocoScript, CP/M and other topics. Far easier to understand than the manual.

GIFT 2 – worth around £9!

Two blank single-density 3" discs. So as soon as you receive your program you can immediately make a backup copy and have another disc available for data.

FREE 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 databases and spreadsheets!

INFOCOM ADVENTURES

SAVE OVER £8!!

People in the know reckon you can divide game players into two camps: those who have played *Hitch-hikers Guide to the Galaxy* and those who haven't. If you're in the second camp you haven't lived.

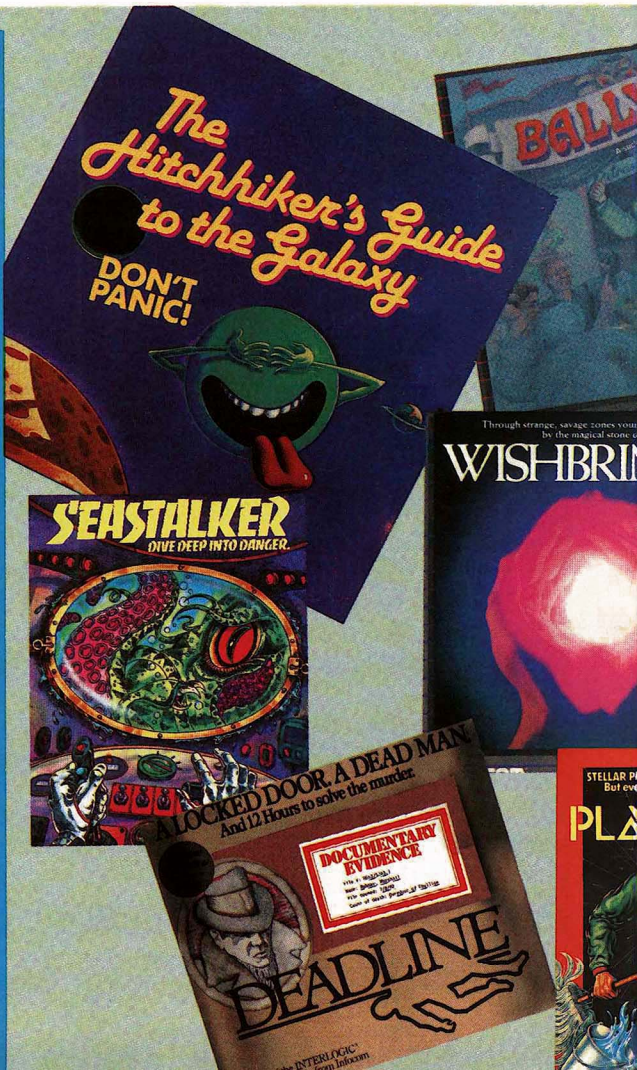
The game is phenomenal, there's no two ways about it. There are no graphics, no chasing around after little green blobs. Just a combination of the brilliant wit and imagination of Douglas Adams with the renowned programming sophistication of Infocom.

All you do is type verbal commands into the computer in response to the events it describes on screen. But after you've been playing for a bit you'll be convinced your machine is alive – the atmosphere it creates is that convincing.

It's the same with all Infocom games. Their depth, power and ingenuity are in a different league to most other adventures.

All the titles comes superbly packaged – for example, *Hitch-hikers* includes a pair of panic glasses and, of all things, a ball of fluff, as well as some very entertaining documentation. The four leading titles have a recommended (and fully justified) shop price of £24.95 plus VAT (that's £28.70). So our offer of them at just £19.95 is an absolute bargain.

Try one and you'll discover a whole new world of potential for your PCW.



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HOW TO ORDER

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CONDOR 1

Only £87.50 – save over £12!!

This is a heavy-weight piece of software described by Caxton as a database management and reporting system.

In addition to the normal search and sort routines of a database it offers you the ability to manipulate information in powerful ways. For example it can perform automatic calculations on numerical data that you type in. And by using its 35 built in commands you can create a database system tailor-made to your needs.

Condor 1 could be used, for example, to create and print invoices from a file of customers. VAT and the invoice totals could be automatically calculated, and the invoices themselves could be sorted in numerical or alphabetical order.

TOUCH 'n GO

Only £21.95 – save over £3!!

Caxton's typing tutor. Its aim is to turn you into a fast touch typist and to give you a good time in the process.

The program has been used widely on other computers at many times the cost and Caxton believe you can get outstanding results within 24 hours. They also say its fun to use, addictive even. Having seen the response to it of a couple of secretaries here at The Old Barn I think we'd agree.

BRAINSTORM

Only £43.75 – save over £6!!

This is the program which generated an entire new program category – it's an ideas processor.

Its function is to help you organise your thoughts. Say you're planning a complex function, like writing a detective novel or launching a new range of hand-sewn dolls. *Brainstorm* will allow you to link and structure your ideas in an extremely innovative way.

CARDBOX

Only £52.50 – save over £7!!

As its name suggests, this program offers a very slick replacement for card-filing systems.

You can use it to keep track of customer details, lists of products or even a fact-store for your stamp collection.

First you design the layout of your card – there's great flexibility here. Then, once you've entered the information, you can use the system to search very quickly for what you want to know. Unlike a normal card file you could search for any type of information – for example name, address, membership number, nature of enquiry, whatever.

Since the number of cards the program can handle runs into tens of thousands disc space permitting, and since it's fast and flexible, you should find it powerful enough for almost any indexing system.

If you bear in mind that in the summer Caxton were selling the program for £99.99, you can see that this offer is very special indeed.

SCRATCHPAD PLUS

Only £52.50 – save over £7!!

This is a superb spreadsheet program – many would say it's the best available on the PCW machines. Complex calculations ranging from simple financial planning to advanced mathematical analysis can be carried out very quickly. And once your spreadsheet model is created, you can instantly see the result of varying your original figures.

As well as all the usual spreadsheet functions, Scratchpad Plus boasts the ability to handle particularly big files – you're not limited by the working memory, only by the size of your disc.

In addition there's great flexibility over spreadsheet size, and the facility for opening windows on several parts of the spreadsheet simultaneously.

Those features, plus the fact that the spreadsheet is specially customised for the PCW keyboard and offers extensive onscreen help, make it a superb choice.







Any one of these titles for just £19.95 (inc VAT)!

HITCH-HIKER'S GUIDE TO THE GALAXY

The world's greatest, wittiest, wackiest adventure game. You take on the famous role of Arthur Dent who only stays alive by discovering ingenious solutions to problems such as that posed by the terrifying Bugblatter Beast, a creature so stupid it thinks that if you can't see it, it can't see you.

Can you work out what do with a pile of junk mail? Can you learn to understand Vagan poetry? Can you show an obstinate door a sign of intelligence? A game to delight you for months.

WISHBRINGER

A stunningly atmospheric game in the Infocom fantasy tradition. The game starts with you, the village postman of Festeron, discovering that a cat belonging to the keeper of the Magicke Shoppe has been stolen. Your only help in solving what rapidly becomes a dark mystery is Wishbringer, a small stone bestowing seven special powers.

Although this program is intended to appeal to relatively inexperienced adventurers, it also has masses to offer the expert.

SPELLBREAKER

This is a sequel to Wishbringer and is described by Infocom as "expert level" which for you and me means "nigh impossible"! As well as the challenge of tackling wicked puzzles, you have the potential for casting various spells, a power you'll need if you're to survive.

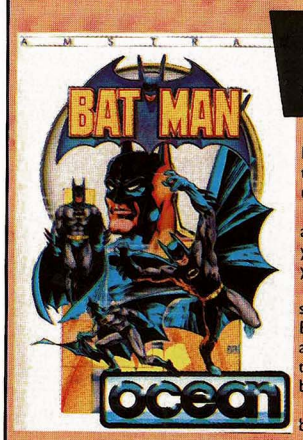
BALLYHOO

A brilliantly original scenario in this one. It's set in a strange, rather seedy circus where the owner's daughter has been kidnapped. You have to discover whodunnit, a quest that will have you stuck in the lion's cage, trying to climb over the Fat Lady and holding a bizarre conversation with a midget.

Or any of these Infocom titles for just £16.95

ZORK I
ZORK II
ZORK III
ENCHANTER
SORCEROR
STARCROSS
SUSPENDED, PLANETFALL
DEADLINE
SEASTALKER

These programs (all superb!) would normally cost £19.95 + VAT (that's £22.95). By buying them from us you save £6! Just tick the titles you require on the order form.



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.

8000 PLUS ORDER FORM

Use this form to order subscrip-tions and special offers (see previous pages and following page). Just tick the items you wish to order.

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☐ Scratchpad Plus £52.50
☐ Brainstorm £43.75
☐ Touch 'n Go £21.95

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☐ **PROSPELL** £22.95

☐ **TOMAHAWK** £17.95

☐ **ELEC. STUDIO MOUSE** £114.95

☐ **ELEC. STUDIO LIGHTPEN** £69.95

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☐ Batman ☐ Two blank discs

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We're sure you've enjoyed your first encounter with 8000 Plus. We're also confident you'd love to ensure that all of the next 12 issues drop comfortably onto your doormat each month.

But since it takes a couple minutes of your time to fill out a subscription form or pick up the telephone, here's a little extra incentive – a free disc containing software worth more than the cost of the subscription!

All you have to do is fill out the relevant part of the form on this page and send us the subscription fee of £17.95 – a sum which covers all postage and packing. We will then forward the disc and ensure you get a year's regular supply of 8000 Plus.

There's no catch. We're just eager for you to keep in touch.

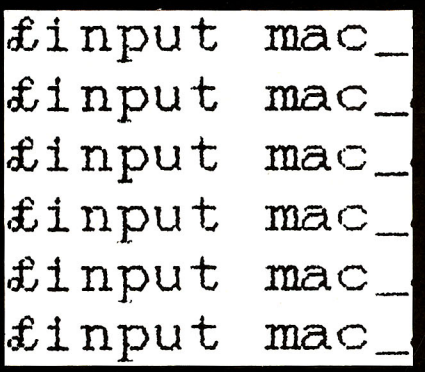
1. NewSpool

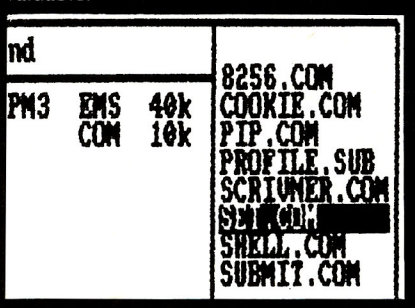
This invaluable utility alone is worth more than the entire cost of your subscription! It normally sells for £19.95. If you run programs from CP/M such as *WordStar*, *NewWord* or *Supercalc 2*, NewSpool will allow you to keep working at the keyboard at the same time as a file is being printed out.

You can queue print several jobs, and NewSpool will continue printing them even when you've exited the CP/M program. Could literally save you hours.

2. Scrivener

A massively powerful and original program created by programming talent Andrew Clarke. It offers an ingenious way of processing text files doing such things as carrying out calculations on figures. You can use it for some tasks a spreadsheet would do, but also for some a spreadsheet couldn't handle. Documents like delivery notes, statements, invoices and form letters can be generated with calculations automatically looked after. Andrew Clarke has decided against releasing the program commercially, and the 60 or so pages of documentation for the program are therefore provided on a file which you can print out. If you're willing to spend some time getting to know the program you could find it immensely valuable.





3. Shell

If you find yourself daunted by CP/M, *Shell* could be the program you need. It transforms CP/M's onscreen presentation, making it far easier to select commands and to see what options are available to you.

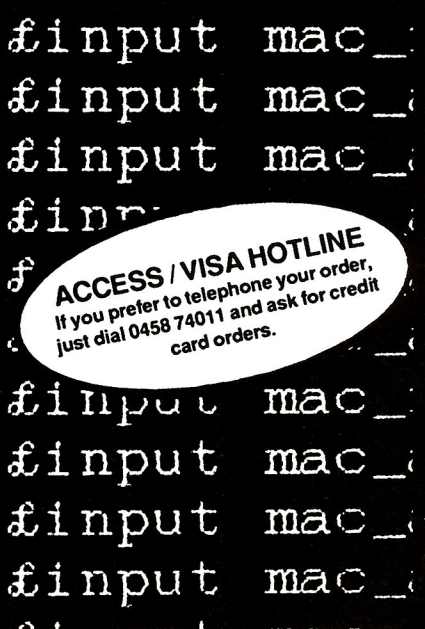
Basically it offers the range of commands via menus, so that instead of typing in a command you select it using the cursor keys – much as in LocoScript.

Very slick, and especially useful if you want CP/M programs to be run by someone who isn't very familiar with computers.

4. Cracker 2 demo

Cracker 2 is a power spreadsheet costing £49. That's a fair bit to spend if you're not sure whether it will do what you want from a spreadsheet. This demo program is your answer. It actually offers ALL of Cracker 2's facilities, with the one limitation that spreadsheets you can build up can be no bigger than 3K.

So you'll be able to check out one of the most powerful programs on the PCW market at your leisure. A great opportunity both for someone considering buying Cracker and for someone who just wants to learn more about spreadsheets.

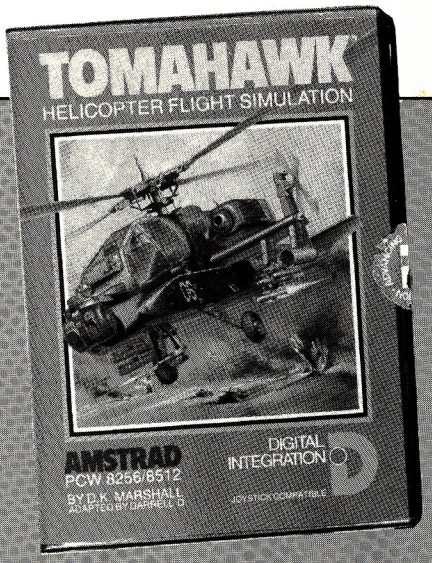


ACCESS / VISA HOTLINE
If you prefer to telephone your order, just dial 0458 74011 and ask for credit card orders.

Please note
The public domain software package *Scrivener* is being offered by permission of its author Andrew Clarke.

HOW TO ORDER

◀ Just fill in the form on left of page



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 closes December 16th, 1986.

ELECTRIC STUDIO LIGHTPEN

Only £69.95 until November 16 – save £10!

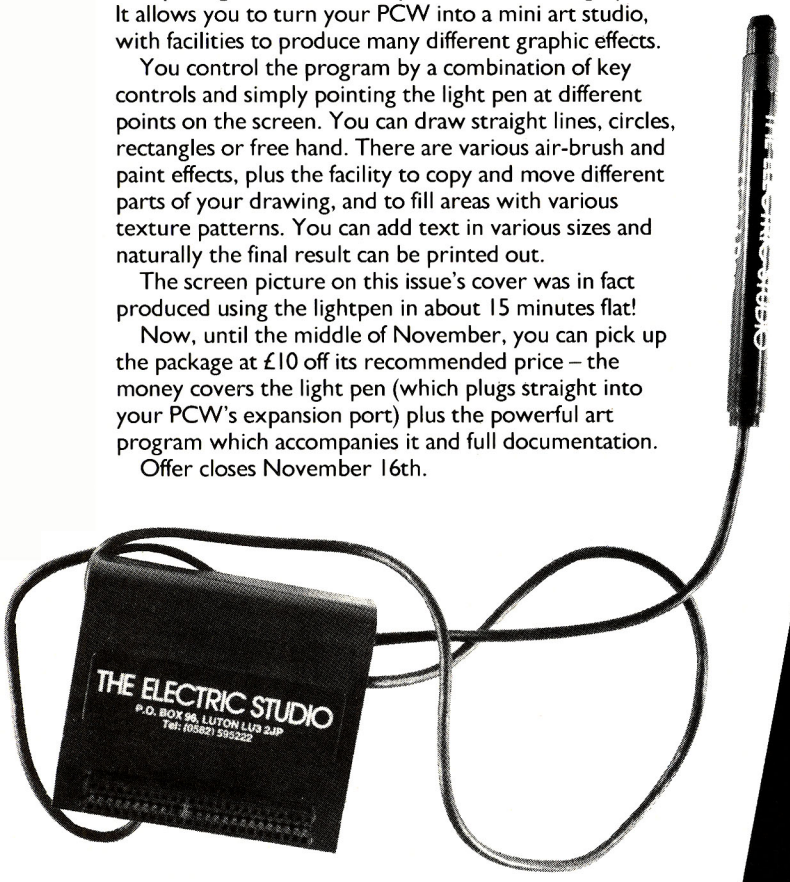
This package is terrific for anyone interested in graphics. It allows you to turn your PCW into a mini art studio, with facilities to produce many different graphic effects.

You control the program by a combination of key controls and simply pointing the light pen at different points on the screen. You can draw straight lines, circles, rectangles or free hand. There are various air-brush and paint effects, plus the facility to copy and move different parts of your drawing, and to fill areas with various texture patterns. You can add text in various sizes and naturally the final result can be printed out.

The screen picture on this issue's cover was in fact produced using the lightpen in about 15 minutes flat!

Now, until the middle of November, you can pick up the package at £10 off its recommended price – the money covers the light pen (which plugs straight into your PCW's expansion port) plus the powerful art program which accompanies it and full documentation.

Offer closes November 16th.



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PROSPELL

Until November 16th only £22.95 – save £7!

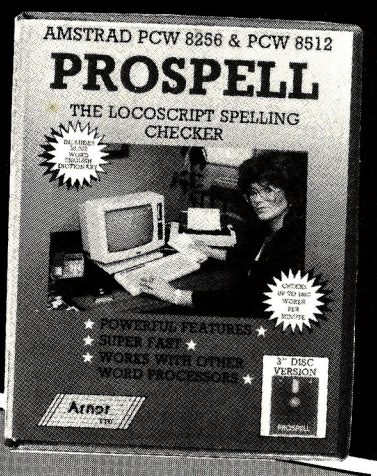
This program from Arnor Software has a justifiably high reputation. It's a spelling checker for use on LocoScript or other word-processors' files – and it's fast.

Think how often you've typed a letter or document where a spelling mistake or (more likely) typing error would be embarrassing. To use ProSpell you simply specify the document you want to check, and the program will whip through it, comparing every word against its built in 32,000 word dictionary.

Errors can be corrected as it finds them – or you can add words it doesn't recognise to the dictionary to customise it to your own requirements.

The program also offers a delightful facility whereby you can cheat at crosswords by asking it to find words which match a given pattern of letters. Alternatively it can do anagrams at high speed.

All in all, a bargain even at its recommended retail price of £29.95. Buy through us and you do even better. Offer closes on November 16th, 1986.



ELECTRIC STUDIO MOUSE

Only £114.95 until November 16 – save £15!

Here's a package which takes the success of the Electric Studio Lightpen one stage further. Instead of the pen you get a mouse, to allow still greater control of the cursor. Like the pen, the mouse just plugs into your PCW's expansion port and you can then control an onscreen cursor directly by rolling the mouse around a small space on your desktop.

The software too has some exciting extras. For example you have the really useful ability to Expand and Contract areas of the screen and to have screen coordinates displayed for extra precision – that's in addition to all the facilities on the Lightpen software.

Our £15 off makes the package a great bargain. And by buying it you can also claim some great free gifts (as detailed on the previous pages).

POSTSCRIPT

Four pages of your (entertaining, superbly-written) letters and the ed's (feeble, faltering) answers

One person who definitely does NOT approve of the launch of 8000 PLUS is Somerton's whistling postman – cycling to The Old Barn with sacks bulging with mail is apparently something of a strain. We, on the other hand, are delighted with your letters. And, this month at least, we've taken the liberty of including some of your extremely enthusiastic comments about issue 1. Thankyou, thankyou.

Please join the contributors to these pages by giving us your opinions on all things 8000, both machine and magazine. 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.

LocoMail price shock

I thoroughly enjoyed the first issue of 8000 Plus. It's a great magazine – not least because of the really good review you gave our new product "LocoMail".

You did however mark LocoMail down on two counts – the price and ASCII document handling. I'm glad to say that you were wrong on both! LocoMail is actually going out at £39.95 *(price changed after we'd printed – Ed)* and does handle ASCII documents. In fact part of its power is in the way it can handle documents produced by other programs. You can tell LocoMail what the data records look like and it will do the rest.

So please can we have another tick on your Features Checklist?
Howard Fisher, Director of Marketing
Locomotive Software Ltd, Dorking, Surrey

Yes, why not.

PC vs PCW

As a shareholder in Amstrad I looked forward eagerly to the 1512, but as an owner of the 8256 I did so with rather mixed feelings. Would it be the same old story – that like CPC 664 owners we all wished we had waited.

Thankfully I don't think so. The 1512 looks superb value for money, but I don't think it can be stressed too strongly that prospective purchasers should ask themselves the question whether the PCW or the PC is best for their needs. As far as I am concerned, to make a 1512 capable of doing what I now do on the 8256, I would have to spend about £250 extra at least, and there is little that I would do on the 1512 that I don't do on the 8256.

If you (or the member of your family) are avid games players, if you are a businessperson who has PCs at work, if you need lengthy or sophisticated business programs, then the PC is the one for you. But if you do a certain amount of writing, don't like computer or do enjoy messing about with a fairly standard Basic, the PCW will be the better buy. Locomotive 2 (*the Basic supplied with the PC*) is very clever, but I wonder how many people will make the effort to learn a virtually new language with no POKEs, CALLs or other machine access.
Geoffrey Childs
Winchcombe, Glos

Quite so – a theme we've echoed in this month's Key Words, although I don't think I agree with your comments about Basic. Never could master those Pokes in any case.

Congratulations on the Amstrad shares – but did you get in early enough?

Sorting out Cardbox

I wonder if anyone can help me with this problem. I purchased a copy of *Cardbox* (at summer prices – Sigh!), and began inputting a database of book authors and titles. I have now realised that having entered them in a random order, I am unable to sort them into alphabetical order by author, in the way I had originally envisaged. Is there any way of sorting a *Cardbox* file by author on the Amstrad PCW 8256? I do hope so!
Gwenda M Sippings
Carlton, Bedford

I hate to say this, but you bought the wrong program. Cardbox has powerful SEARCH facilities, but it won't SORT. Your only crumb of comfort is that if you choose a new software package carefully you won't have to retype all your data.

Cardbox has a facility for "exporting" its data for use by other applications. Buying Cardbox Plus *(which DOES have sorting) you'd be guaranteed compatibility, but cheaper databases with sort facilities such as* Atlast *should also be able to import the data (although taking that solution would be rather ironic in view of the last letter printed overleaf!)*

Address minus

Why is the postal address for TipOffs "PCW Plus"? I thought the magazine was called "8000 Plus". A last minute change of mind, perhaps...
Glenn Myers
Beaconsfield, Bucks

Bother, we were hoping no one would notice. At least no one noticed that the main cover line on last issue's cover was carefully positioned to overlay another slightly inaccurate rendition of our title which would otherwise have appeared onscreen.

Choosing magazine titles is a tiring and sometimes traumatic process. Amstrad, God bless 'em, don't like their name being used lightly, which is why so many Amstrad magazines have titles which are about one hundred words long. We reckon we ended up with the right name, even if it does take some people a moment or two to work out the link between 8000 Plus and the machine numbers 8256 and 8512.

User group plug

I am writing to inform you of the existence of the *PCW Users Group*, catering for users of the Amstrad PCW8256/8512. The users group has been set up to provide a means of communication between users in order to help them get the most out of their machies by benefiting from other users comments and experiences. the way in whihc this is achieved is by the production of a monthly newsletter consisting of:
a) News, information and developments regarding the PCW and both its software and hardware, including reviews.
b) Letters covering users comments, queries and complaints.
c) Software notes, giving hints and guidance on the use of software, including examples.
d) Firmware notes, giving details about the operating system and GSX graphics system etc.
e) Hardware notes, giving information on the use of hardware items such as the CPS8256 interface, the extra disc drive and the memory extension.
f) Public domain software discs available at a small copying/postage charge.

I would be most grateful if you could give the gorup a mention somewhere, and I look forward to future issues of 8000 Plus.
Robert Mobberley
PCW Users Group, 37 Clifford Bridge Road, Binley, Coventry, CV3 2DW.

Gosh, aren't you supposed to pay for this kind of publicity? Ad manager Tony won't be pleased at all.

You what?

I should be very glad for general but progressively deeper articles on the following in 8000 Plus and PC Plus:

MegaHertz clock speeds. How and where does this affect the big program?

Software printer drive heads for the DMP 3000. How restricted are they?

Should we not be able to expect around next September anAmstrad AT/XT running at a speed of 12 MHz and beating the 640K barrier? Such a machine would he hard disc



"WELL, AT LEAST HE'S GIVING US A BIT OF WARNING"

upgradeable to 150 Mbytes and would have capacity to enable a much higher pixel resolution. It would have double the parallel/serial ports and a laser printer port. Tell me, is it feasible?

The PC 1512 keyboard, can it be enhanced? Or can it be replaced by a 115 key keyboard from another system? Could it be a soft keyboard?

I am asking all this for a reason and that is I need to know all the answers in detail in order that I can buy another computer in two/three years time. Only a very powerful computer would be able to process the robotics programs I have in mind, and process *Finite Element Analysis* and complex statistical packages. In this context I bought my PCW 8256, and in two years I have finished my Psychology degree.

Glenn A Brown
East Putney, London

Sorry to edit your letter for length, Glenn, but I didn't understand the other bits either. I've never before met anyone who's trying to decide NOW what computer he'll get in 2-3 years' time. Perhaps I can recommend the forthcoming Amstrad Cray compatible bundled with voice-controlled robot and 200 giga-bytes of helium-cooled memory. Great for controlling satellites, if a bit clumsy on word-processing.

Hate the paper

You asked for contributions to your new magazine, so here goes. First of all congratulations on a magazine that isn't afriad to make comparisons between packages. That makes your magazine the best of the new crop for the PCW in my eyes. It also seems to be packed full of helpful suggestions. Two criticisms – couldn't you have managed a better-quality paper to print it on? The second – if you had to include a PC supplement, it needed to be on different-coloured paper or more clearly marked as being about the new machine. I was also disappointed that the supplement didn't include a critical review of it!

That said – your magazine is the only one for the PCW that gets my subscription!

Jacquie Errington
Woodbridge, Suffolk

The last issue went on the presses just four and a half hours after the launch of the PC, not quite enough time for a full critical review! – we were pleased just to get in a REPORT of the launch plus pictures biked down from London. The rest of last month's PC Plus was gained from (thankfully accurate) information gleaned before the launch.

I am deeply grieved that you don't like the paper we print on – it costs a fortune! Maybe you'll get used to it in a year...

Like the paper

First of all, an improvement over Amstrad Action, especially since you've changed from the paper used by Amstrad Action to the shiny paper that really makes the appearance look much better.

Why don't you list information about the CP/M operating system to allow people to create programs that could be of some use, for example a separate disk copier that could read the old Amstrad format and write using the CF2 format? This would be quicker than using PIP to copy programs separately from one format to another.

Whilst under CP/M it is possible to pause output to the screen. Under version 2.2 used on the CPC's any key would restart the output. Under Plus it is entirely different. As with the old versions you can use [ALT]S to stop screen output, but now you can only use [ALT]Q to restart output. And care must be taken when using [ALT]Q etc as it will sometimes crash CP/M, which happens regularly, especially from within SID etc.

Stewart McCall
Corby, Northants

Amstrad Action, for those who don't know, is a magazine published here at The Old Barn, and aimed at owners of the Amstrad CPC 464, 664 and 6128. End of plug.

dBase grief

I didn't like the idea of mutilating my copy of your wonderful magazine by ripping out the centre pages so I tried to photocopy them. I'm afraid that the green glossy surface is not conducive to good copying which is a great pity as I am of the opinion that the menu guide is so useful it needs to be pinned to the wall at the side of the monitor for all to use. So how about a copy that I can pin to the wall please.

I've been doing a lot of programming in dBase II, version 2.34 (Note: not the cheap version), and I've hit a snag. I've been attempting to control the printer by software control within a dBase program. I've mastered the various typefaces but I can't alter the form length and I would like to be able to do this for changing between address labels and statement/invoices without having to quit dBase II and reset the Form length using the Paper.Com program. So can anybody out there please help me.

C Eaton
Stanmore, Middlesex

To set the form length to just nine lines (for a label) you would just use the command

```
?CHR(27)+'C'+CHR(9)
```

Replacing the 9 at the end of the line with a 66 will set it back to normal continuous stationery length. Dreadfully sorry about the green, glossy surface, by the way.

Brainstorming Brainstorm

I recently bought *Brainstorm* and have been trying to use the blasted thing, but I cannot get any further than the title/sub-title screen. I assume from the instruction book, that ↑T means SHIFT + T to put the main title in the top section of the second screen. But each time I have tried to use ↑T or any of the other ↑ functions all I get is a representation of that letter on the sub-title section.

This is extremely irritating so could you please tell me what is at fault: the PCW? the program? the instruction book? me?

Nick Scarrow
Sawbridgeworth, Herts

You and the instruction book. ↑T is normally taken to mean CONTROL + T. On a PCW there's no CONTROL key – you use the ALT key instead. So try ALT + T and you'll be able to begin brainstorming. Naughty Caxton should have explained that better.

Saving on leather

Following an enforced "early retirement" a couple of years ago, I set off as a free-lance Marketing and PR Consultant (without even a typewriter!) and wore out more than one pair of shoes shuttling copy to and from my local word-processing agency. Then I bought my 8256 and,



"HE MAY BE SAVING ON SHOE LEATHER BUT HE'S WORN THE SEAT OUT OF THREE PAIRS OF PANTS"

to coin a phrase, I soon wondered how I ever did without it! From an absolutely cold start – I knew nothing about word processors and computers – I've now reached the point where my "mastery" of Locoscript, Supercalc 2 and Cambase is adequate for my needs.

A few words if I may, on each of these packages. Locoscript is fine, save for the manual, and has markedly increased my productivity – and saved on shoe leather! The fiver I spent on "The Clarity Guide" was a good investment. Supercalc 2 handles all my needs for bank accounts, invoice calculations, cashflow forecasts and the like. The manual is superb. I used Cambase for controlling the logistics of a large PR event I handled. Not the easiest package to master – the manual could certainly stand a re-think by Camsoft – but it did the job and taught me that File Specification really does need careful planning.

A tip – or maybe it's a question? I wanted to run WORDCOUNT and followed your instructions. Alas, "Syntax error in 40." Tried EDIT – nothing happened. Referred to the BASIC Manual – "Unavailable in RUN ONLY versions." So back to the drawing-board and start all over again, I suppose.

Finally, avid reading of magazines has helped significantly in getting me to where I am in mastering my Amstrad. I'm delighted to be able to add 8000 Plus to my reading list and I suspect that subscriptions for a couple of your competitors will lapse if you maintain the superb standard of your first issue.

Martin Hill
Henley-on-Thames, Oxon

The version of Basic you have is not "run only" so EDIT should work fine. You have to use it in the form EDIT 10 RETURN *where 10 is the number of the line you want to edit. The "run only" version of Mallard Basic is supplied only to software houses who want to market Basic software.*

Printing disc labels

You said on the 'Opening Menu' *(Issue 1)* that I'd adore the TipOffs; and I did. I also found Ben Taylor's piece on CP/M Plus informative and easy to read. I hope you have more articles about CP/M. It's a bit dumb having capabilities available but not knowing how to utilize them. (All the computers I've ever owned have always had very little in their manuals about CP/M.)

For instance: I know how to number (label) a disc with the Set utility. And how to print out a directory of CP/M files (using ALT + P DIR). But how do you get the computer to head that printed list of files with the disc number? I know I have actually labelled the disc because you can see it on the monitor if you insert the disc after loading Locoscript. I know I could show the files on a Locoscript Disc Management Screen and then do a screen dump (EXTRA + PTR) but I'd like to be able to make a 10 c.p.i. list of my directories.

Stephen H Wells
Clacton-on-Sea, Essex

It's not in the Amstrad manual, but these are the commands you should type from the CP/M A> prompt (in this instance you have to type in the square brackets and words they enclose as individual characters. ALT and RETURN are single keys)

```
ALT+p
show [label]RETURN
dir [sort]RETURN
```

This will give you a printout of your disc number followed by the files sorted into alphabetical order. The only catch is that you must first copy the CP/M files SHOW.COM and DIR.COM onto the relevant disc. Which makes the whole operation of dubious value.

Pass the Scrumpy

As a Somerset man and a former resident of Street it's good to see a spot of Hi-ish Tech-related activity going on in the Cider belt.

You ask for an indication of the uses to which 8000 series machines are put... I teach a lot of A-Level classes, and I've been putting my academic notes and papers on disk where they can easily be edited and developed. I can then run off a copy in draft mode to use with A-level classes, and as and where it is appropriate, I do a NLQ version to make a photocopies set for class use.

Because of the soft of things I write and in consequence of my increasing confidence with LocoScript as a creative tool, I have suffered increasing impatience with the time that it takes for Locoscript to get about a document of modest length. I am therefore very interested in getting hold of the Billy Whizz version of LocoScript that is lurking in the pipe-line, and if you feel a wild but profound urge to send me a copy to test and review on papers like Kant and the Ontological Argument or Theories of Moshka, then I'd be delighted to do the business!

Good luck with the publication!

S D Loxton
Salisbury

What a coincidence. We were just planning a feature series on Moshka, Kant and the Ontological Argument.

Rave reaction department

Disgraceful indulgence, this. A selection of comments from the first week's reaction to issue 1. Oh, you're so kind.

I've never been so delighted to come across a magazine as I was when I found 8000 Plus at my local W H Smith on Friday.

Since acquiring my PCW 8256, I've read a number of different computer magazines each month and found the odd snippet here and there that was of interest in general, or particular to my interests.

But 8000 Plus offers page after page of neat, nitty-gritty stuff. It's like having my own personal PCW 8256 consultant.

Stephen H Wells
Clacton-on-Sea, Essex

I enclose a cheque for £17.95 for one year's subscription to '8000 Plus'. You seem to have covered everything I want to know in the first issue. However even if the rest of the year's magazines comprise nothing but blank pages, it will still have been worth it!

J D Waters ARICS
London NW10

I particularly liked the Good Software File – very well thought out with just enough detail and easy to refer to. Also the Tipoffs section – everything in it was sensible, useful and simple. The Locoscript wallchart will be very useful and I am looking forward to trying out the Word Counter listing. And then there was the special offer on software and ... well, I could go on and on.

A couple of suggestions for future consideration. Could we have some more simple listings? And could we have a series on programming – sort of "Teach Yourself Mallard Basic"? And how about a problems page where readers could send in their computing problems and other readers could provide tipoffs in subsequent issues?

Margaret Rugg
Exeter

Hooray!! Three Cheers!! Woopee!! etc etc!! At long last a magazine which deals exclusively with the PCW 8000 series. As one of the first purchasers of an '8256' I have in the past like many others scoured through the various 'Amstrad' publications – sometimes in vain – searching for articles and material relevant to my particular machine. Imagine my joy on discovering your new publication. The first issue is superb, covering so many basic and important areas. My mouth is already watering at the prospects of issue 2.

Gordon Wiseman
Oldham, Lancs

I like your new magazine, although you will no doubt fine tune the layout in the next few months. I am not particularly interested in the PC series as I have no intention of buying this machine. I very much like the idea of a machine specific magazine.

I think you have got the right balance between serious and 'fun' articles. The magazine should have a bias towards serious users. However, everyone gets fed up with number crunching etc. and likes to relax with



"HMMM . . NOT AS GOOD AS IT USED TO BE . . . "

a bit of games playing. It would be handy to have a small column on games (adventures and arcade) giving tips and, hopefully, pokes.

Mr D R Halliwell
Birkenhead, Merseyside

FINDing problems

I like it! A friend told me about the new 8000 Plus and recommended it, so I was pleased to find one copy left at the village newsagents.

The Word Counter program (October issue, pp 38-39) works a treat, but the author should have cautioned that CP/M programs cannot normally access Locoscript files unless they are stored in the first group on a Locoscript disc. Therefore the ASCII files for Wordcounter must be saved in the LETTERS group, or whatever other name one has given to Group 1.

The FIND function on the PCW8256 can be very useful, but it can also be infuriating. The command FIND "bat", for instance, will also find battle, abattoir and acrobat, etc., unless you tell it to find " bat " with a space at each end. Does any hacker know how to get FIND to accept both upper and lower case letters in a search? Perhaps the new improved Locoscript will incorporate this option?

Martin H Evans
Cambridge

LocoScript 2 is still several months away, but we understand that the option of FINDing regardless of case is "on the wish list" of its final spec.

Problem with Wordcounter

We were most interested in the wordcount program (issue 1) – as we are currently typing a manuscript for a member of our family who is a budding author. I duly typed the program as shown in the magazine, saving it and running it as instructed. However, the program would not run.

It may be a quirk of our machine but whatever we did, a space kept appearing in lines 40, 60, and 80. After some time, we came up with a slightly amended program which runs perfectly. I am enclosing a copy of this revised program which other readers may be interested in if they have had the same problems as we did.

Having purchased a PCW8256 about five months ago, we have become avid readers of all magazines relating to the Amstrad. I am in full agreement with my husband when he says that '8000 Plus' magazine is the best of them all. We shall definitely be buying further issues.

C Matz
Harrow, Middlesex

Be assured there's no quirk in your machine, and nothing wrong with the program as printed. You, and millions of others judging from the calls, simply mistook the lower case L's printed in lines 40, 60 and 80 as numeral 1's – Mallard Basic automatically inserts a space after numerals which start a program line or fall immediately after a colon. There is a slight difference between the two characters if you examine your PCW's printout closely, and certainly mixing up the two will

Many thanks for the excellent first issue. I particularly like the presentation of your magazine and the style, which is user rather technician orientated. Thanks also for the word count software (already used for word counting the essays!)
Mr L C De Brunner
Esher, Surrey

WOW! You have created the Amstrad magazine that we have all been waiting for. I say this having just finished reviewing all the other current offerings. The first issue contains an exquisite melange of all things Joyce, it is neither too stuck up and pompous nor does it treat readers as inferior mortals...unlike one or two others. Keep it like this and you can count me in! I have to say that your summary of CAMBASE in the good software file is absolutely true... I wish I had read it before buying!
Mr M Tod
Coventry

I have had and 8256, now expanded, since they were first released through DIXONs and had become of late rather concerned about the growth in magazines catering for this machine and others. I was beginning to spend more on magazines keeping up with software reviews, offers, tips and corrections to the manuals than on discs and software! I therefore consider myself rather a connoisseur on them, but I am extremely impressed by your new magazine to the extent that I shall now stop buying all the others.
David G Smith
Paddock Wood, Kent

prevent a program running. In future we intend to print program listings in upper case wherever possible.

Ditto

Could we have a correct program listing for Wordcounter (p38-39 issue 1) please? The program listing given, after several corrections necessary even for the program to run, informs me that the word count for LocoScript READ.ME is 1 (one) word!
Mr C M D Edwards
London SW1

Piffle. You typed it in wrong. Perhaps the same mistake as above?

Pro Data Gem

Just a note to defend *Data Gem* and to point out features that make it a somewhat better database than one is led to believe in your Good Software File. It hardly warrants the phrase about '...storing anything more than your birthday reminder list.'

I am maintaining a private railway association's membership records using Data Gem, a purpose for which it is ideally suited. It will sort records (in my case surnames) in true alphabetical order from Aa to Zz which is excellent for membership listings and something that the standard Cardbox from Caxton will not do. Surely that should rate as a minus for Cardbox? D.G. also gives you an auto-print number option which is extremely useful for producing 0, 1 or more sticky labels for any address, a definite plus.

In fact I am seriously considering buying a Data Gem ROM for the BBC. Now that the 1512 has been launched, I have considerable reservations as to how long Amstrad will continue to produce and support the PCW, whereas the BBC series looks set to continue for a long while yet.

Having said the above, I must say that I like the style, content and format of the magazine and will subscribe to it! A minor point, there are several references to CF2-DD discs which even Amsoft do not sell now, the standard CF2 is officially used in both drives A and B.
J H Dare
London SW14

We don't mind being disagreed with on Data Gem or corrected on the CF2-DD disc matter, but I can't swallow your remarks about the PCW. Worse prospects than the Beeb?? Not if we have anything to do with it. The next writer has the right idea.

Beeb beater

I have been impressed by the power of the PCW8256 and by the vast amounts of software and hardware these humble machines have gathered. After all, as my BBC owning friends keep saying "It is ONLY a wordprocessor!". However, after showing your magazine at school I thought lock-jaw had set in!
J M Gurr
Tonbridge, Kent

A hack writes

As a hoary old journalist I'm not in the habit of praising publications I'm not being paid to write for – but this time I have to make an exception.

It's only three months since I bought my 8512 but it has already paid for itself several times over in increased productivity and improved presentation. As I was a complete beginner, of the age group which regards computers as dubious at best, and probably inventions of the devil, I bought copies of all the magazines that seemed to discuss the kind of machine I owned. After wading through reams of reviews of games which didn't even run on the 8000s, and thousands of programs designed to cheat on those games (what on earth is the point of buying a game and then cheating, I wonder?), there was precious little left for an ordinary, inexperienced word processing sort of person like me.

At last you have produced what I was looking for. You have pitched the level right for me, chosen many of the subjects that interest me, and added to my interest by introducing me to new ideas. It's not easy to write accurately, lightly and amusingly – but your editorial style just gets it right and makes the communication of complex ideas extremely user-friendly.

How I wish your first issue had been published a week earlier, and then I would not have tried to format the second side of a disc in Drive B when I had already almost filled the first side (and not taken a back-up). If I hadn't read 8000 Plus, I might even have done it again...

Next, a word of warning. As a result of my fiasco with the disc, I lost a lot of files, which I thought I somehow might be able to recover (after all, Joyce only told me that the address mark was missing). I therefore sent immediately for *Disc Mate*, which was sent by return of post. Only when I had spent a frustrating half hour trying to run the program did I finally come to the conclusion that it only works with CP/M and not LocoScript. Nowhere in the advertisement, nor in the – very limited – instructions with the disc is there any mention of this. I'm not asking for my money back, because I should have asked before I bought it, but it does seem strange to offer a program for a dedicated word processor that doesn't work on the word processing section.

Finally, I would like to confirm David Langford's comments about presentation of manuscripts for publication, but this time for magazines rather than books. In order to work out how much space a manuscript will fill, the production people need to calculate how many characters it represents. Justification and proportional spacing make this virtually impossible, so although the job looks fine, it wastes time at the publisher. However, double spacing, correct copy that isn't covered with little inky scribbles, clear typed material – all help to make an editor's life happier.
Nick Landon
Steyning, West Sussex

Hear, hear.

At last some criticism

I appreciate the difficulties of trying to review sixteen database programs at one go, particularly if you try to do the same with word-processors, accounts and spreadsheets at the same time, but your brief write-up on *Atlast I* shows that you did not spend very much time on it and probably never even experimented with example databases provided on the disc.

Atlast is most certainly not "a fairly simple card index type database" in the sense of *Cardbox*, to which you compare it. *Atlast* is a multi-file database program that allows 10 different mutually cross-referencing files (record-types) to Cardbox's 1 and 9 different data types compared to Cardbox's 1. *Atlast* allows you to list records in up to 6 different orders without having to do a sort, compared to Cardbox's 1 (the order you type the data in) and which doesn't allow any sorting at all. To say that "Cardbox does it better" might conceivably be true for some of the few things that Cardbox does, but would cause many of our end-users (and probably Caxton as well) to laugh their heads off.

A comparison to *dBasell* would be far more appropriate in terms of database power, yet even there *Atlast*, with its innovative features such as the Constant data type, comes off better in most respects. *Atlast* is fully menu-driven whilst *dBasell* requires you to learn a new language. Every time you edit an indexed field in dBasell you have to re-sort the entire file, unlike *Atlast* which updates the index file before you can say "Jack Robinson". Unlike nearly all other database programs on the market, *Atlast* will give a correct alphabetically ordered index on a mixed upper and lower case field. You might think this a fairly simple and obvious requirement, but there aren't many that can do it.

I appreciate that the early manual, which was intended as a reference manual for a program that is full of powerful facilities rather than a tutorial guide, is not very easy for beginers and for this reason you were notified that another manual was being written, which fact you seem to have forgotten.

I am pleased to inform you that by the time of your next issue, there should be a new edition, published through Advance Software Promotions, with a better manual at the ridiculously low price of £29.95. Surely a bargain by anyone's standards! Existing users can have a free upgrade if they return their original disc to Rational Solutions. A replacement manual will be £4 inclusive of postage.
Mike York
Rational Solutions
London SW18

Glad to hear confirmation of the new manual – all that power was hard to discover with the old one! We'll be printing a revised version of our Atlast review in the Software Guide next month.

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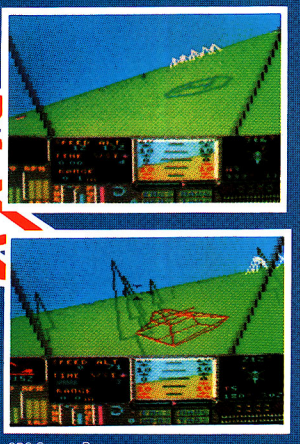

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