

The Aussie Mag
for Amstrad owners

THE AMSTRAD USER

CHANCE TO ENTER
A PRINTER OR
A DISC DRIVE
COMPETITION
SEE PAGE 24

Issue No. 45

\$4.25

October 1988

NEW PC Games



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- *Reviews of ten CPC Games + Printing special characters + more on Structured Programming*
- *Locochar explained + DIY Spreadsheet Type-in + using different printers with LocoScript2*
- *Review of PC Elite and Educational Software + Comms*

FOR THE NOVICE & EXPERIENCED USER

PACTRONICS ...

... the new POWER in Entertainment Software

Time and Magik

Time and Magik is a complete trilogy of Level Nine graphic adventures.

- Lords of Time
- Red Moon
- The Price of Magik

Each has been enhanced and enlarged with more text than ever before - 60,000 words, creating Magik and Mystery around every corner. There is a powerful new parser, and all disk versions feature stunning graphics.

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Somewhere in the centre of a huge forest lies an old abandoned castle. Legends and rumours abound, for it has been standing for many centuries, and there are said to be great riches hidden in the depths of the castle. Many have gone to search, but none have returned. Perhaps there is some truth in the legend of the hidden beast that guards the treasure of the castle.

Other titles in the Classic Quest series include:

- Forestland
- Witch Hunt
- Catacombs

Available for CPC (disk only), PCW and PC.

Starquake

There's 500 action packed screens and a gameplay that's second to none as you navigate BLOB (Biologically Operated Being) through underground caverns to re-stabilise the planet's core. Starquake is a classic arcade-style game with brilliantly animated graphics, exciting sound track and game play.

Available for PC only.

Magic Sword

This is a whole new world of educational software. Rather than being based on revision, or concentrating on one topic, Magic Sword is both educational and entertaining at the same time. The set comprises a disk with the program on it, and a full colour story book. First, your child must read the book to pick up the basis of the story line. Then he/she runs the program disk and completes the story that was started in the book. This requires concentration, logic, memory recall, planning and many other facets of learning. Magic Sword is a whole new way of presenting educational software; it's done the way the children like it.

Ask about Fun School, Fernleaf for the CPC

..... more great games from Pactronics.

NSW: Pactronics Pty. Ltd., 33-35 Alleyne Street, Chatswood. (02) 407 0261

VICTORIA: Pactronics Pty. Ltd., 51-55 Johnston Street, Fitzroy. (03) 419 4644

QUEENSLAND: Pactronics Pty. Ltd., 12 Stratton Street, Newstead. (07) 854 1982

SOUTH AUSTRALIA: Baringa Pty. Ltd., (08) 271 1066 ext. 6132

WESTERN AUSTRALIA: Pactronics WA, 113 (rear) High Road, Willetton, 6155. (09) 354 1122

MAIL ORDER: "Software To Go" - (02) 457 8289

NEW ZEALAND: Micro Dealer, 60 Terakau Drive, Palupanga, Auckland. (09) 274 9300



 **Pactronics**

THE AMSTRAD USER

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All enquiries and contacts concerning this Publication should be made in the first instance by writing to The Amstrad User, Suite 1, 245 Springvale Road, Glen Waverley, Victoria 3150, Australia. Urgent matters can be phoned through on (03) 233 9661.

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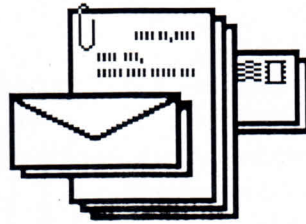
From time to time, some articles appearing in The Amstrad User will be reproductions from UK publications Amstrad Action and 8000 Plus. These are printed under an agreement between Strategy Publications and Future Publishing Ltd, Bath.

The subscription rate (for Australia) is \$42.50 for 12 issues of the magazine only, or \$80.00 for 12 issues of the magazine plus tape (for CPC range only) containing programs appearing in that issue. Postage is included in the above prices. For subscriptions to New Zealand, PNG, Solomon Islands or Vanuatu please add \$21 airmail. Other overseas prices available upon application.

Please note that whilst every effort is made to ensure the accuracy of all features and listings herein, we cannot accept any liability whatsoever for any mistakes or misprints. Contributions are welcome from readers or other interested parties. In most circumstances the following payments will apply to published material: Cartoons \$10.00 and a rate of \$15.00 per page for programs, articles etc. unless otherwise previously agreed. Contributions will not be returned unless specifically requested coupled with a suitable stamped and return addressed padded bag (for tapes or discs).

The Amstrad User is an independent Australian magazine and is not affiliated in any way with Amstrad or their Australian distributors or any other dealer in either software or hardware.

LETTERS TO THE EDITOR



A monthly selection of your comments, hints and tips, advice and news - all shared for the benefit of Australasian Amstrad users.



I'd like to reply to a couple of letters in the August issue.

For J.A. Heron's sticky key problem the answer may lie in a product called Electrolube. This is a silicon based lubricant especially designed for electrical switches. It comes in a pen-like dispenser for just over \$6.00 and is available from Dick Smith stores. I've also used it on my moving printer and disc parts and the power and video plugs which connect the keyboard to the monitor. The effect is magic. My old school used it on Microbee keyboards which I found notorious for sticky keys. The Microbees are still going.

Mike Perry is correct when he says that loading his RSXs and then using Bankman produces error messages. I found it produces a continuously scrolling error message in a nonexistent line. If there is a way to overcome this, some of my club members would be extremely grateful to hear of it.

My letter about the DMP-INK from Aussoft seems to have met with a very favourable reaction. I hope this following piece of news does also. The DMP2000 ribbon, after months of use, becomes very thin, crinkled and has a tendency to slip instead of being pulled along by the print head. For about \$6.50, Aussoft can supply a replacement ribbon, in my opinion, far better

than the original. You need to specify a 2000BS ribbon. After purchasing and using the first one I immediately went and bought another two spares. I don't know when I'll get to use them as the first one shows no sign of wear after four months of heavy use.

Anthony Trost, Gracemere, Qld.



In reply to Barry Farrell's letter regarding "don't buy from advertisements with only a box number",

perhaps he is not aware that some of us have little choice about whether we use a box number or not. In fact, having to pay for box in order to get our mail is a very sore point.

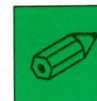
Two Wells is less than 50kms from the Adelaide GPO and we get no mail delivery; either we can have our mail made c/o Two Well PO and drive 3+kms each way to pick it up inside Post Office hours, or pay for a box number so that we can still drive to pick up our mail when it suits us. Would you be any less suspicious of an address care of a Post Office? Even if I did state the road I live on, Mallala Road is 18kms long and properties are not numbered. The "We Deliver" slogan of the PO is particularly galling when they won't!

You should be able to contact the Living Image people quite easily from their letter they sent you with

their names on it. They are in the Adelaide phone book. In fact I rang them in my capacity as club Secretary and had them come and demonstrate their first disc at the Northern Computing Society one club night. I can't remember their name now, but someone may have kept the letter that they sent out to the computer clubs, etc.

Not all of us who advertise from a Box number have a choice or set out to be dishonest. Perhaps if my phone number was included my advertisement would be more reassuring - I have had interstate people write and arrange to come out and buy my book, perhaps they thought I was will-o'-the-wisp too!

Judith Thamm, Two Wells, SA

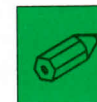


You published a letter from M.J. Harvey, New Lambton, NSW in the May issue where he said that SuperCalc 2 Primer was available from Angus and Robertson.

I am anxious to obtain a copy, however the book is not available in this State. Could you please assist me in this matter or forward this letter to Mr. Harvey.

F.D. Ralston, Midland, WA

Unfortunately, our petty cash doesn't run to paying interstate removal expenses. So our assistance is limited to telling you that we believe the book in question is called "SuperCalc Primer" by Waite, published by W.W. Sams and distributed in Australia by Pitman/Penguin. You can get them on (03) 871 2566. We have passed your letter on to Mr. Harvey anyway, just in case he has found a different book.



An attempt to back-up my first adventure (Forestland) on my 8256, using DISCKIT failed.

The message read:
'Disc is old data format
Cannot use this format of disc.'

This set me thinking!! and I came up with the following procedure:

1. Boot LoCoScript.
2. Change to 'Forestland' disc

and hit F1. Group 0 now holds all 29k of CQ.COM

3. Hit F3 (copy) and ENTER.

4. Copy CQ.COM to any of the M drive groups. I used

New Name: CQ.COM

Group: Letters

Drive: M

Then ENTER.

5. Change to a formatted disc and hit F1. Note that CQ.COM is still in the M drive.

6. Repeat steps three and four but

insert A for drive instead of M.

Hey presto! A backed up disc ready to store away with all your other discs which you have wisely backed up and keep well away from the area where you use your PCW, PC or whatever.

Has Karla (Slack) read the note and did she kill the ogre in 'Forestland'. It was my first adventure which I completed after 2233 moves, most of which were gained in the mass of tree roots.

Thanks for a great magazine, and

keep up the good work. I hope the page titles in the July issue are only a temporary arrangement. The machine categories were easier to flip to.

John Hall, Broadmeadows, Vic.



After playing Patience (TAU May/June 1988) for some weeks I have noticed that the sequence of cards being dealt in each game, after the computer is reset, are identical. The top cards of each of the 7 piles are as follows - 2D, 10S, 7D, 7C, AC, 4D, 4S and the face up card from the pack is the 5C. I could also give you the next 50 or more sequences. This happens because BASIC's random number generator produces a pseudo-random sequence in which each number depends on the previous number, commencing at a given number seed. The sequence is always the same.

Add the following line to the Patience game which will produce a

sequence that is difficult to repeat.

5 RANDOMIZE TIME

Randomize, sets a new initial value for the random number generator, depending on the value of the TIME variable. Note, it doesn't have to be TIME it can be any number or variable, but I used TIME because it is always changing therefore it is difficult to produce the same sequence of numbers.

James Gause, Newcastle, NSW.



Chris Wooton's prime number generator program in the July Issue of TAU checks each number by dividing odd numbers from 3 into it and rejecting it if a divider is found.

The dividers need to be only the odd prime numbers already found. Using these, the primes are generated at about three times the previous speed.

All Stamps & Services

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Fax: (03) 329 0292

Challenge Rubber Stamps
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Carlton, 3053
Tel: (03) 347 2800
Fax: (03) 347 2378

This program does it with primes as dividers.

```

10 'PRIME NUMBER GENERATOR
A.P. 8/7/88
20 DEFINT c,k,n:n=1:count=0:DIM
prime(500)
30 FOR k=2 TO count
40 IF n MOD prime(k)=0 THEN 90
50 IF prime(k)>count/2 THEN 70
60 NEXT k
70 count=count+1"prime(count)=n:
PRINT n
80 IF count=500 THEN PRINT(TIME-t)/
300:END
90 IF n>2 THEN n=n+2:GOTO 30
100 n=n+1:GOTO 30
    
```

Note that I have defined the integers to further speed up the process (which I did with Chris's program for speed comparisons) and written the program for 500 primes. Lines 20 and 80 can be changed if more are required or the ESC key used if less.

Arthur Pounsett, Norlane, Vic.



With reference to the letter published in the August 1988 "Mailbag" from Barry Farrell concerning the Public Package by Living Image, I would like to add my comments.

I also responded to the ad in The Amstrad User (Dec '87) stating 50 Amstrad programs on disc at \$18.50. I paid by cheque on or about the 11/12/87 also and received my disc (much to my surprise before Christmas '87). Most of the pro-

grams were good including the MENU which can be transferred to your own discs, while other programs were not as good I could not see any reason to complain.

The ad appeared again in TAU Jan '88, no ad in Feb, but in March '88 appeared a "Public Package II" on disc (60 programs) \$22.95 or Package I (50 programs) \$20.95 or both (110 programs) \$38.95. Also available (new release) Easy File \$24.95 on disc only. I ordered Public Package II and Easy File which I received in two weeks.

On running Public Package II, I found it to be full of 'bugs' as quite a few programs would not run. Also, I could not fully understand Easy File as the hard copy was not easy to follow. I immediately wrote to Living Image explaining the situation, and I received an immediate reply within 7 days admitting that they were aware of some problems in the software and if I returned Public Package II they would update my disc at no charge.

I forwarded my disc by certified mail and did not receive a reply for approximately 5 weeks or more. Eventually I received Gemstone 110, this is the update for Public Package II. This ad appears in the June TAU. Also a covering letter was sent apologising for any inconveniences caused. Gemstone 110 appeared to run OK this time. Living Image also advised that they could not find any reason why I could not obtain satisfaction with Easy File, however they did advise that they would update my Easy File to Easy File II if I returned my disc accompanied by an additional \$7.00, which I did, and promptly received my update in approximately two weeks.

Under the circumstances, I cannot speak highly enough of the prompt and courteous attention given to me by Living Image and would thoroughly recommend them to any mail order customer. (I can show all the correspondence received to substantiate the above statements).

I would appreciate if TAU could publish this letter as I sympathise

with Barry Farrell in his unfortunate situation with Living Image. There must be a simple explanation why his disc has not arrived and I hope Living Image will read this letter and rectify the situation, as in business there is nothing like a satisfied customer to promote sales, without customers a business will not survive. Also the name of Amstrad computers and software must be kept well respected to promote growth in the future.

Bob Olsen, Wishart, Qld.



I have recently purchased a 6128 and as a novice user I have a question the answer to which I am unable or dim enough not to find in the manual.

Is it possible to delete a program from the disc catalogue while leaving the rest of the programs on the disc intact? If so how?

I enjoy your magazine and have found it of great value following my introduction to computers.

Phil Smith, Baulkham Hills, NSW.

To delete a single file from your disc, merely type in direct mode (at the Ready prompt) |ERA, "filename.extension" (eg. |ERA, "fred.bas"). Voila, the file has gone! This applies to 664 owners too. 464 owners need to do something different. Set up a string first (a\$=filename.extension eg. a\$="fred.bas") then delete the file using |ERA,@a\$.

**All letters should be addressed to:
The Editor, The Amstrad User,
1/245 Springave Rd., Glen Waverley,
Victoria 3150. Sorry, but we cannot
answer any personal correspondence.**

CONTRIBUTIONS

We accept unsolicited articles or program contributions from readers with a view to possible publication, but in the case of programs we must insist that the coding is submitted on either tape or disc. We just do not have the time to key them all in. The tape or disc will be returned if originally accompanied with a stamped and return addressed padded bag.

DISPLAY ADVERTISING DEADLINES

Issue	Booking by	Copy by
DEC '88	07/10/88	20/10/88
JAN '89	04/11/88	11/11/88
FEB '89	01/12/88	09/12/88

Please refer all display advertising enquiries or bookings to DERRICK LEWIS & ASSOCIATES on (03) 51 9984.

Classified ads should be phoned or sent directly to The Amstrad User.

Q. What can't you do after Halloween?

A. Put an entry in our Programming Competition.

At 5.00 on Monday 31st October, the Competition closes and any entries received after that time will be excluded. Make sure your entry gets here in time for a chance to win a printer or a disc drive. Full details are on Page 24 of this issue.

CLASSIES

FOR SALE

Start Computing with the Amstrad CPC6128 - by Judith Thamm.
A Basic course for beginners, as reviewed TAU Dec 87. 112xA4 photocopied pages coil bound with over 50 programs. Ideal for computer clubs. Book \$20, 3" disc \$12, 5.25" disc \$3.
Ribbons re-inked \$4.50 plus return postage. Write to: Box 269, Two Wells, SA 5501

PCW8512 (with double disc drive and printer) plus original software and Cracker (Spreadsheet program). Some original games; Lord of the Rings, Tomahawk, Scrabble and Games Compendium. Plus a quantity of unused blank discs. Will sell for \$975 the lot. Ring after 7 pm (03) 288 4541

SERVICES

Ribbons Re-inked - Black, red, blue PCW \$5.50, DMPs \$3.50, Epson Lx80 \$4.50. Price includes return post. Windsor Software, Box 408, Lutwyche 4030. 07-3561759 for quotes.

Personalised Stationery - an ideal gift for any occasion. 100 sheets of high quality paper with address and phone number printed plus 50 matching envelopes. See page 42 or details.

USER GROUPS

Amstrad Eastern User Group Inc. (Victoria) - PC and PCW special interest groups have now been formed to support both these machines. For more information ring 890 3116.

GAMES for the PCW for use on PCW 8256/8512

- 1. **CRICKET** \$25.00
 - realistic simulation
 - 1 and 2 innings
 - calculates averages
 - packed with features
- 2. **SOCCER LEAGUE** \$20.00
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 - manage your own teams
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Send cheque/money order to:
BJH Software, 4 Dobson Road
Shepparton, Vic 3630

Just \$7.50 gets you a spot in our Classies to reach over 8000 readers each month!

Classified Ads Order Form

This new section of the magazine offers you the chance to speak directly to the huge waiting world of Amstrad owners - or would-be owners.

You can place an ad of up to 30 words for just \$7.50. So you could use it to sell a printer, launch a user group or publicize a piece of software you have written.

One thing you can't advertise is the sale or swap of software you've purchased. Such ads can be misused by software pirates.

Just fill in the application form and send it to us together with payment. We'll then place the ad in the next available issue (published 3 to 7 weeks after we receive your order.)

Classification: For Sale Wanted Services User Groups

Please place the following advertisement in the next available issue of The Amstrad User

I enclose payment of \$7.50 by Cheque/MO/Bankcard/ Visa/Mastercard (cheques payable to The Amstrad User).

Credit Card Number

Credit Card Expiry date

Name

Address

Telephone

Write your advertisement here, one word per box. If you want your phone number printed, it must be included in one of the boxes.

NEWS BREAK

Our monthly update on the gossip, news, releases and the general Amstrad scene from both home and abroad

AMSTRAD INCREASES SALES ...

Over 5.5 million dollars worth of Amstrad products were shipped to dealers during the month of July this year and was repeated again in August. This follows an aggressive media advertising campaign by Amstrad to get both their name and products across.

Independent sales monitoring company Compass Research reports that Amstrad have already moved into third position in retail sales of all personal computers by grabbing 10.3% of the market, on the tail of IBM (11.3%) and Apple (14.5%). In terms of small business personal computers, Amstrad has moved straight to the top.

When Amstrad first launched the CPC464 in the UK in 1984 they held just 2% of the market. This has since grown to over 40%.

... BUT INCREASES PRICES

Amstrad Pty Ltd announced in August an increase in the cost of the new PPC640. The single drive version moves from \$1399 to \$1599 and the double drive unit from \$1799 to \$1999. The PPC512 and other computers in the Amstrad range are not affected. The increases are unlikely to affect sales. A recent survey in the UK by Romtec shows that the PPC now has nearly 25% of the portable market. In second place is Cambridge Computer's Z88 with 21% and third the Toshiba T1200 with 11%.

The good news published in the August issue about the cost of

Amsoft discs falling to around \$6 retail was short lived. They too have been increased from \$59.90 to \$79.50 per box of ten.

NETWORK FOR AMSTRAD

Amstrad Plc (the UK parent company) has signed a major OEM deal with Corvus Systems (UK) Ltd to market a three-node network kit for the Amstrad PC range. The UK price is expected to be around £460. It comprises of three Omninet/1 interface cards with a modified version of PC/NOS (the Corvus network operating system) called AMSNOS. It will provide "full distributed resource sharing ... without the need for a dedicated file server", limited message facilities between machines and four print queues. It will be compatible with all applications using MS-DOS 3.n file and record locking facilities. A twisted-pair cable provides the connection and data is transferred at 1 Mbit per second.

Amstrad spokesman Peter Robak said, "We see this move as a natural progression of our software and peripheral range following our modem offerings".

FROM THE AMSTRAD RUMOUR ROOM

Rumours always abound concerning the next 'offering' from Amstrad. The latest rumour tells of a machine codenamed 'Ultimate', which is expected to be a 25MHz/80386-based machine costing around £1500 in the basic model configuration. The top of the range model is

rumoured to offer 4 Mbytes of RAM, over 100 Mbytes of hard disc storage and colour VGA screen at around £3000. As usual, Amstrad remain silent.

PRINTER PRICE RISE IN EUROPE

All Japanese printers imported into member countries of the European Community are now subject to a levy of 33%. Badly hit are Epson who have been forced to increase their prices accordingly - but have managed to keep the rises to an average of 10%. It remains to be seen whether the claim by UK Printer Business Manager Jenny Lynn-Jones that "when a customer chooses a printer price comes a distant fifth behind performance, reliability, service and range" will hold water.

On the other hand, Brother are probably smiling. They set up the manufacture of printers and components in the UK way back in 1984. Head of Brother's Office Equipment Division, John Carter, can justly boast that "Brother's foresight has been rewarded".

PC LOCOSCRIPT RUMOURS

There is a growing swell of opinion that next year could see the release of a version of LocoScript for the PC. Naturally, neither Amstrad or Locomotive (producers of LocoScript) will comment on the prospect.

The idea is an attractive one. It would allow home LocoScript users access to their favourite word processor on a PC at work without the need for learning a new system. It could possibly open up a new area of 'portable word processing' on the Amstrad PPC range, something which could be appealing to writers and journalists. Although the PPC uses 3.5" discs and the PCW 3", files could be transferred across and used directly on a PCW through a cable link without an ASCII conversion.

While on the subject of transferring files, NewStar Software apparently have a fast and efficient system called CSTAM/PCW to transfer files

from one machine to another where the disc formats may not be compatible. It will allow the transfer from a PCW 3" disc to any standard PC. Unfortunately it is not that cheap and could cost up to \$150 in Australia if imported.

MINI OFFICE PROFESSIONAL BOOK

Just released in the UK is a book written by John Hughes entitled "All in One Business Computing - Amstrad PCW and the Mini Office Professional". John Hughes is well known for his books on LocoScript and "Mastering the Amstrad PCW". He appears to have a knack in unravelling documentation and representing it in a clearer and more succinct manner.

The book is published by Sigma who report that the first print-run sold out very quickly. A reprint is currently being produced from which copies are likely to reach Australia soon.

PC COMMUNICATIONS BOOK

Yet another book has been written by prolific author Ian Sinclair. This one is called Communications with the Amstrad PC and is published by BSP. It is designed to clarify what is available in computer communications to the new modem owner and is supposed to be a user's guide to enable you to wade through adverts and information to obtain the results you need. With a little luck, we should have a copy for review before too long.

ARABIC/ENGLISH WORD PROCESSOR

Locomotive Systems have further extended the languages covered by LocoScript. They already have versions for all European languages (plus Welsh and Mathematics), and at a recent Multilingual Word Processing Conference in London an Arabic/English bilingual word processor was shown for the first time. Both English and Arabic characters can be mixed, so too can right-to-left and left-to-right text. Versions catering for Urdu and Farsi are also available. The next stage after Arabia, Iran and

Pakistan would be India. Howard Fisher of Locomotive admitted that they were looking at the possibility of other languages from that area. However, much is still in the planning stage.

The new Urdu, Arabic or Farsi word processors should be available shortly, but are expected to be more expensive than the standard LocoScript - somewhere around \$120.

CARD GAMES ON THE PCW

Thurston Techniques have just released a revised compilation of card games for the PCW called "Double T Patience". The games you get (we think) are Pairs, Kuala Lumpur, Foursome, Poker, Patience, One Foundation and Fourways. The first version ran under Basic but was found to be a little slow. The revised version runs under CP/M and by the time you read this, The Amstrad User should have a review copy.

PCW TEXT ANALYSER

A new text analyser and quantifier called TexAtrix from Scarabeus Software has been released for the PCW. It counts the number of words, blocks and sentences contained in an ASCII document. LocoScript documents can also be analysed but have to be converted first.

It has been written to calculate the FOG index of a document (translated that means the readability of a document). The index is a number which gives an idea of the degree of ease or otherwise with which a document can be read. For example, a tabloid newspaper may have an index of 1 to 2 and standard English prose 7 to 8. Anything around 18 to 20 will probably be the Mini Office Professional manual!

CPC UK BUDGET TAPE RELEASES

Star Trooper and Sword Slayer are two titles from Players. The first is set in the HQ of Jabba McGut and is an exploration type shoot 'em up. The second is a gladiatorial combat game for one or two players.

Beach Head has been re-released by Americana. It features different skill levels and stages in the control of a force ordered to attack and destroy a fortress deep inside enemy territory.

From Zeppelin come both new and re-released titles. Frontline is a game of blasting enemy troops with a machine gun and grenades. Code-name Mat is a 3-D shoot 'em up with a lot of strategy in a race around the galaxy destroying evil Myons.

Airwolf has been released on Elite's budget label, Encore. As Stringfellow Hawk, you have to rescue a team of five scientists held hostage somewhere beneath the Arizona desert.

On the Richochet label comes Ballblazer, the old Lucasfilm game. It consists of chasing a ball around a 3-D playing area trying to score goals against another player or the computer.

Finally, there are three new releases in the Silverbird range. Stunt Bike Simulator takes place on a motorbike and five different tasks have to be performed, European 5-a-side is a two player game of football viewed from above the pitch, and Ninja Scooter Simulator is a skateboarding game.

AUSTRALIAN GAMES+ COMPILATION

Nick Herrick, a name probably recognised by many CPC Type-in enthusiasts, has written and compiled a disc of some eight programs for the CPC6128. It consists of well known games such as Dominoes, 3-D Noughts and Crosses, Mah Jong and Snakes & Ladders.

It also includes two trading games Tycoon and Trucking. Tycoon involves trading in property and shares in a parallel universe in the Land of Oz. Trucking is a game in which you transport goods around Australia earning money to invest in more equipment and turning in a good profit. There is also a couple of utilities, a sprite designer and a graphics designer included on the disc.

All are well presented and

colourful and should keep many happy on a rainy day or non-homework night. TAU Games+ will be sold exclusively through The Amstrad User at \$32.95.

SWEET AND BITTER PILLS FROM DOLPHIN

Dolphin Computers, importers of the popular Tasman range of products, have recently announced some price reductions (yes, you read it correctly - reductions!) on some of their PC software. TasCopy PC, TasSign PC and TasSpell PC have been reduced from \$115 to \$110 each. Unfortunately, price increases by Tasman in the UK on some products have forced Dolphin to do the same thing in Australia. Consequently Tasprint PC moves to \$110 and Tasword PC a hefty \$45.05 to \$135.00. Despite the rise, Tasword PC still remains the best value around. All Tasman PC software is also available in 3.5" format.

More details from Dolphin on (02) 438 4933.

PC NEWS FROM RECKON

The integrated business system from Migent gives the user word processing, graphics, database and spreadsheet - all in the one easy-to-use package. Amstrad themselves were so impressed with Ability that, up to last month, they chose to bundle the package with all PC1512s. This, no doubt, brought a smile to Reckon Software's face being the distributors of Ability and Ability Plus.

Reckon can also increase the data storage capability of PC1512s and PC1640s with hardcards or disc drives. A 20mbs portable hardcard is available at \$899 and a larger 30mbs at \$949. Two types of 3.5" disc drives are available, either internal or external at a cost of \$450 and \$499 respectively.

Touch 'n' Go, the typing tutorial for the 6128s and PCWs, has now sold over 100,000 copies world wide. It is a carefully designed keyboard skills course consisting of 20 lessons, with a results program to monitor improvements. *More details from Reckon on (02) 371 9222*

PACTRONICS PERFORMERS

A number of new products have been added to the already impressive range of software from Pactronics. Boosting the power of Protex, the popular word processor for the entire range of Amstrad computers, are Protex Filer and Protex Office both supplied as "add-ins" to Protex.

Protex Filer has a datafile management section which can be used to make, store, retrieve and sort simple databases. It will check for duplicate entries, and can print all or part files using a specified field as a key. It also includes a file sorting function to sort fixed or variable length records, as well as sorting on a specific key or a group of keys and works with any Protex or ASCII file.

Protex Office is an extended version of Filer, containing the same facilities but with the added advantage of an invoice generator. The generator automatically calculates invoice and tax totals, numbers the invoices and will accept data from either a datafile or through the keyboard. Printing layout can be configured to specific stationery and the system will save

a copy of the invoice to disc.

Two other products of interest to PC owners are tutorials Easy DOS and Computerease - both quite different in their approach.

Once loaded, Easy DOS sits in the background and provides on-line help for a user having problems getting to grips with MS-DOS. It shows the correct way to format commands, functions and options when prompted by the user. For example, by merely typing "format" Easy DOS will show the correct way to enter the command plus all the options available to format a disc.

Computerease is an animated tutorial introduction to the PC. Aimed at the novice, it covers all aspects of running a PC by looking at the system hardware, CPU and answers questions concerning RAM. Clever graphics are used in a section covering what happens when a disc is inserted, how the disc is organised and what happens when a program is loaded. Printers and monitors are also covered along with common principles of using MS-DOS.

More details from Pactronics on (02) 407 0261

OZISOFT PRE-CHRISTMAS RELEASES

A string of new releases for CPCs on tape and disc (and some for PCs) is planned by Ozisoft prior to Christmas (just 12 weeks away!)

Salamander, a horizontal and vertically scrolling shoot 'em up, is an action packed space quest sequel to *Nemesis*.

Daley Thompson's Olympic Challenge starts in the Gym in an all action quest for gold.

The Vindicator is a multi-sectioned game of survival with state-of-the-art graphics.

Robocop moves from the silver screen and continues to meet out rough justice. (PCs also).

Guerilla Wars is a multi-level, vertically scrolling arcade thriller

converted from the coin-op hit.

Operation Wolf - voted No. 1 arcade game of 1988 - has been recreated with 6 levels of fast and accurate shooting. (PCs also).

Rambo III - he's back and taking no prisoners. Heaps of action negotiating minefields, laying booby traps and avoiding detection. (PCs also). *Typhoon* is a Konami coin-op conversion featuring fast scrolling and 3-D dog fighting over six levels with a vast array of deadly weapons. (PCs also).

Pupil: Please Miss, what's a biro?
Teacher: A word processor without a spell checker!

NEW NEW NEW NEW

PACTRONICS, the professionals in Amstrad software are pleased to announce the following new programs:

AT LAST!!

A graphics mouse with software for the CPC. This mouse, like the Kempston PCW mouse, is made in Switzerland and is of the highest possible quality. It comes complete with BLUE PRINT, a comprehensive graphics package way ahead of the rest.

INCREDIBLY!!

IMPACT one of the most popular games ever released (under various names) has now been up-graded and is available for the CPC. 80 levels to play through plus screen editor to build 20 of your own. A game for all seasons.

ADDITIONALLY!!

Two great add-ons for your PROTEXT Word Processor.

- (a) PROTEXT FILER is a data file, file sorting program which extends PROTEXT and makes mail merging a breeze.
- (b) PROTEXT OFFICE has data file, file sorting and a brilliant invoice generator. Automatically calculates invoice and tax totals and automatically numbers the invoices.

Both of these programs are available on the CPC, PCW and PC.

FINALLY!!

A 3" head cleaner. Yes, we have got a head cleaner to help prolong the life of your Amstrad Disk Drive. Comes complete with a bottle of liquid.

FOR THE NEW AMSTRAD PC USER the best two learning programs ever devised.

COMPUTEREASE - just insert disk into drive and get an animated look at the running of your new PC. You don't even have to hit a key to start. Printers, monitors and disk drives are also covered as is MS-DOS.

EASY DOS - designed to take the mystery out of your new PC. EASY DOS sits in the background ready for your first problem. If, for example, you do not know how to format a disk simply type in FORMAT and EASY DOS will show you the correct way and any other option at the same time.

SPECIALLY FOR AMSTRAD PC USERS some great new games based on your favourite TV programs.

WHEEL OF FORTUNE - The TV show game has come to your PC computer! Great graphics, sound and animation make this a thoroughly entertaining game for the whole family! All the features of the original game show are in this PC version.

JEOPARDY - Let's play JEOPARDY! Over 1,000 questions in this PC adaptation of the popular TV game show. Play against the computer or up to 2 other players. The computer supplies the correct answer, all you have to do is supply the correct question.

FAMILY FEUD - All the colour, drama and excitement of the TV game show original! It's a race against the clock as you try to answer the popular survey questions. Play FAST MONEY just like the TV original!

NSW: Pactronics Pty. Ltd., 33-35 Alleyne Street, Chatswood. (02) 407 0261

VICTORIA: Pactronics Pty. Ltd., 51-55 Johnston Street, Fitzroy. (03) 419 4644

QUEENSLAND: Pactronics Pty. Ltd., 12 Stratton Street, Newstead. (07) 854 1982

SOUTH AUSTRALIA: Baringa Pty. Ltd., (08) 271 1066 ext. 6132

WESTERN AUSTRALIA: Pactronics WA, 113 (rear) High Road, Willetton, 6155. (09) 354 1122

MAIL ORDER: "Software To Go" - (02) 457 8289

NEW ZEALAND: Micro Dealer, 60 Terakau Drive, Palupanga, Auckland. (09) 274 9300



SCREEN DESIGN AND MENUS

When writing programs, it is very important that all your menus and screens follow a neat and tidy approach. This month, Paul Gerard shows us exactly how to do that.

The Amstrad CPC has one of the most versatile screens. It has three different modes, with different character sizes - 27 different colours, the ability to redefine any character in the set, great graphics, and finally the ability to clear, write to, and generally manipulate several different defined areas of the screen as windows. These features were one of the main things that attracted me to the then very new CPC464, after years of hobby programming on very limited main-frame VDU displays. (Often without lower case letters!) It will obviously be a wicked waste of our machine's potential if our screens, that is the displays we present to the user, are poorly designed.

There are a number of general principles to remember: firstly, it is generally a good idea to use the largest characters (ie. the lowest MODE number) that will permit a clear, uncluttered display. Generally speaking, this means that most of the time we will be using MODE 1. On the other hand MODE 2 gives us the ability to display large amounts of text, or to present a screen that would seem cluttered or clumsy in MODE 1, while MODE 0 is great for simple but striking title pages. We can of course easily switch from one mode to another - you may even know some tricks for displaying different parts of the screen in different modes at the same time (the latter is beyond the scope of these articles). The important thing to remember is that the name of the game is clarity. If it is clear, then it works - and in design, you can't argue with that.

There are a number of important values connected with the mode we are currently in, such as `modewidth`, an integer reflecting the width of the screen in characters. This will be 20 in mode 0, 40 in mode 1, and 80 in mode 2. We need a routine that will ensure that this variable will be set at the right value at all times. Here is the first version of a mode change routine that does just that - whenever we need to use the MODE command we will now just call subroutine 600 instead. `Modewidth` will be useful (or essential) for centring headings, defining windows, and other setting out tasks as well. Another feature of the finished version of this routine will be a set of WINDOW commands - more

about this in a minute.

```
600 ' mode change (Version 1.0)
610 MODE mde
620 modewidth=(2^(mde+1))*10
630 RETURN
```

The second point is to remember that the user's eye falls first in the middle of the screen, and that the periphery (the bit around the edges) is generally a good place to avoid when at all possible. This is why we centre text whenever we can - quite apart from giving the screen a pleasant, balanced look it makes it much easier to read. It is probably also why the Amstrad screen is designed with a rather large border, just by the by. The lower intrusiveness of the periphery can actually be used to advantage - user instructions on the bottom line can be easily referred to, especially if they are nicely centred, but are sufficiently out of the main focus of attention not to be a distraction when they are not wanted.

The third main point is that colour is a useful tool in making a screen pleasant to look at and easy to read. O.K., I am writing this on a green screen, and yes there is such a thing as personal taste, but for general purposes (assuming a colour monitor) a soft, light blue screen, with black, dark blue, and mid blue writing is both pleasant to look at and easy on the eyes, as well as being quite legible in MODE 2, and clear on a green monitor. The INK commands for this favourite combination of mine will feature in a later article, but you ought to be able to work out what they would be. If your favourite combination is different, in particular if you are one of the blackboard brigade and like a light on dark display, then by all means use it - but watch for problems in eyestrain, legibility and so on.

The final consideration is KISS. Keep It Simple Stupid. If you are tempted to use a really fancy border or a novel font or even some snazzy graphics do consider first (especially for serious applications) if a simpler screen will be clearer to read, easier to use, and in the long run more satisfying. In particular, special effects should never be allowed to clutter the screen. Even for text this definitely applies - display only essential information on the screen, keep any on-screen instructions short and to the point, above all avoid clutter.

Before we leave this topic, you probably already know how to highlight text by putting it into **reverse video**. If you don't, or if you don't even know what reverse video is, then try the effect of PRINT "X THIS IS REVERSE VIDEO X". The "X" is one character (control x) and you get it by holding down the "ctrl" key while pressing the "X" key. Reverse video is a neat trick, and if not overdone can dress up a plain display without cluttering or otherwise spoiling it. It is essential for highlighting in mode 2, where we have only two colours. As you have probably gathered, it is toggled (turned on AND off) by ↑X.

WINDOWS

One drawback of the Amstrad screen is that it writes rather slowly. We can disguise this by avoiding complete re-writes of entire screens every time something needs to be changed (this may sound ridiculously obvious, but it is surprising how many otherwise quite clever amateur programs, especially adventures, miss it!) We can use the LOCATE command for this purpose (and sometimes have to) but it is a clumsy business - much better (where possible) is to take advantage of the WINDOW facility. This is unique among Basics for small micros (at least as far as I know). If you don't already use windows in your own programs then you are missing something rewarding and interesting.

The easiest way of thinking of a window is as a separate area of the screen that once defined can be cleared and written to independently of the rest of the display. Windows can overlap - super-windows can subsume several smaller windows, for example. One window we will definitely want (we will standardise it as WINDOW#1) is our user instructions window at the bottom of the screen. Another useful window (#2) is our first line - as a place for putting headings. A larger window (#3) will comprise all the lines in between. There are strong reasons for leaving window #0 in its default state as the whole screen - as for the remaining four, (#4, #5, #6, and #7), we will probably change these all the time, to perform some very specific task or other. One of the great things about windows is that they can be continually redefined, and in fact if we change mode we will have to redefine the window anyway. Subroutine 600 can be more or less completed by adding the following window redefinitions - note our use of modewidth to allow for the different definitions required in different modes.

```
600 ' mode change (Version 1.0)
610 MODE mde
620 modewidth=(2^(mde+1))*10
630 WINDOW#1,1,modewidth,25,25
640 WINDOW#2,1,modewidth,1,1
650 WINDOW#3,1,modewidth,2,24
690 RETURN
```

MENUS

Yes/No (which we looked at last month) is a common kind of decision, but if we want our user to be able to **drive** our program easily and with flexibility we will often want him (common gender, read him/her) to be able to make much more complicated choices. There are two ways of doing this, each one with its advantages. Fortunately it is possible to design our program to cater for both! One of these approaches is a command structure (we will have a look at this the month after next). Adventure games are mostly command driven, in fact working out the commands available is sometimes half the fun. The other, more friendly way is to make

our program menu driven. The basic logic of a menu, (in the computer as opposed to the culinary sense) is, of course, that our user is presented with a selection of possible courses for the program to take, and makes its choice. The fashionable way to do this nowadays is with pop-up or pull-down menus a La Macintosh - excellent examples of this kind of thing working well on our Arnold are the menus on The Music System by Rainbird (free plug). To manage this on the Amstrad CPC you really need to install some machine code however, and it also helps to have some spare memory to store those windows, which the 464 is lacking. Since this is about Basic programming and since we are trying to keep everything compatible with any CPC the following is restricted to plain old full screen menus - although if you are really into the WIMP environment you are welcome to adapt anything that might prove adaptable. What we will cover is two different ways of selecting our choice.

Here is a very Basic type of menu - this one is self contained, so you can test it without a test rig. On the other hand it is so very Basic that you may not think it is worth the bother to type in:

```
2000 ' menu routine (Version 1.0)
2010 MODE 1
2020 LOCATE 13,1:PRINT "Main Menu"
2030 LOCATE 7,7:PRINT "1. Instructions"
2040 LOCATE 7,9:PRINT "2. Open a new data file"
2050 LOCATE 7,11:PRINT"3. Access an old data file"
2060 LOCATE 7,13:PRINT"4. Catalogue this disc"
2070 LOCATE 7,15:PRINT"5. Leave this program"
2080 LOCATE 7,25:PRINT "Type in 1,2,3,4 or 5 ";
2090 a=0:WHILE a<1 OR a>5:a=VAL(INKEY#):WEND
2100 CLS:LOCATE 10,10:PRINT"Choice number "a
2110 RETURN
```

This might prove quite adequate for a very small program - (although the variable a should be choice!) for anything ambitious we are likely to have a number of different menus, and we will not want to fiddle around writing what is essentially the same routine over and over for each one of them. Since we will be using mode changing and heading printing routines for other aspects of our program we may as well use these here too. Finally, while the one digit number input at line 2080 is fine if we have 9 or fewer choices to our menu, we already have a much more flexible input routine sitting in the program and we may as well use that too.

Firstly - remember our heading routine from the first part of this series. Here are two slightly modified versions - the only real difference is that we have an array heading\$(n) in place of the simple variable heading\$. In the second version we use our heading window (#2) that we set up when we set the mode we are in. The routine is general enough to print any heading that

will fit, on a screen in any mode. By putting all the headings we will need into the array we can call up any of those headings and centre them with the simple integer variable head.

```
110 LOCATE (modewidth-LEN(heading$(head)))\2,1 ' centre
    heading
120 PRINT heading$(head)

100 ' Heading routine (Version 1.1)
110 CLS#2 ' Clear heading area
120 PRINT#2,TAB((modewidth-LEN(heading$(head)))\2)head
    ing$(head)
130 RETURN
```

We can now get our menu routine into some kind of shape - note that the following routine can theoretically handle almost any set of choices we might like to devise - good routines often have this kind of adaptability. Notice that the code is also shorter and more elegant. It is still not quite finished - we will be installing an even more generalised version in our final program (see if you can work out what will need changing!) - but the general shape is clear:

```
2000 ' menu routine (Version 1.1)
2010 mde=1:GOSUB 600 'set mode
2020 head=1:GOSUB 100 'print heading
2030 FOR i=1 TO 5
2040   LOCATE 7,5+(i*2):PRINT menu$(i)
2050 NEXT
2060 CLS#1:PRINT#1,TAB(7)"Type in 1,2,3,4 or 5 ";
2090 control=4:length=1:GOSUB 200 'User input
2900 RETURN
```

This addition to our initialisation routine, and these new DATA lines, will setup a set of variables that we can use to test out sub-routines 100 and 600, and of course our new menu routine. MERGE them (and the routines themselves) into TRIAL1, which you should have from last month and then add the following lines, which will produce a **super** testrig, to try out and debug all our routines so far! Once it is working nicely, save it as TRIAL2. The last listing this month is a copy of the final product. (TRIAL2)

```
13100 ' Menus
13110 DIM menu$(5)
13120 RESTORE 40100
13130 FOR i=1 TO 5:READ menu$(i):NEXT 'Menu values
13200 ' Headings
13210 DIM heading$(5)
13220 RESTORE 40200
13230 FOR i=1 TO 5:READ heading$(i):NEXT 'Heading values
13900 RETURN
40000 ' DATA for control$(n)
40010 DATA "YN","123","1234","12345","123456","1234567"
```

```
,"12345678","123456789","1234567890","ABCDEFGHIJK
LMNOPQRSTUVWXYZ"
```

```
40020 DATA "abcdefghij klmnopqrstuvwxyz ABCDEFGHIJKLMN
OPQRSTUVWXYZ","1234567890.,:;&'()abcdefghijklmnopqrstuvwxyz
rstuvwxyz ABCDEFGHIJKLMN OPQRSTUVWXYZ"
40100 ' DATA for menu$(n)
40110 DATA "1. Instructions","2. Open a new data file",
"3. Access an old data file","4. Catalogue this d
isc","5. Leave this program"
40200 ' DATA for heading$(n)
40210 DATA "Main Menu","Instructions","New Data File",
"Old Data File","Catalogue"
```

```
60 IF yes THEN 60
70 END
60000 ' Test of subroutines 100,600,2000
60010 GOSUB 2000 'menu routine
60020 choice=VAL(byte$)
60030 mde=0:GOSUB 600 'change mode
60040 LOCATE 3,10:PRINT"Choice "choice" made"
60050 LOCATE 5,15:PRINT "More ?";
60060 GOSUB 500 'get yes/no
60070 RETURN
```

The final version of our menu routine will appear next month, when we set out the design for our Database program, which is going to be menu-driven. We will also have a look at an alternative, and slightly more Mac-like method of selecting your choice from a menu.

```
1 ' Still another test rig !
2 ' Although this one is a little better structured !
10 mde=2:GOSUB 600
20 GOSUB 13000 ' initialise
30 GOSUB 50000 ' test 200,500
40 IF yes THEN 30
50 GOSUB 60000 ' test 100,600,2000
60 IF yes THEN 50
70 END
100 ' Heading routine
110 PRINT#2,TAB((modewidth-LEN(heading$(head)))\2)head
    ing$(head)
190 RETURN
200 ' User Input Routine (mark 1.3)
210 long=0:MID$(byte$,1)="#"
220 WHILE byte$(<>CHR$(13)) AND long<length 'CR or max
    length
230   MID$(byte$,1)="#"
240   WHILE byte$="#"
250     MID$(byte$,1)=INKEY$
255     PRINT CHR$(143);:PRINT CHR$(8); 'cursor
256     IF (byte$=CHR$(127)) AND (long>0) THEN PRINT CH
        R$(8);" ";CHR$(8);CHR$(8);:MID$(user.input$,lo
        ng,1)="#":long=long-1:MID$(byte$,1)="#"
256
```

```

260 WEND
265 IF byte$=" " THEN IF long=0 THEN 220 ELSE IF (MID
$(user.input$,long,1)=" ") THEN 220
267 IF caps THEN IF (ASC(byte$)>=97) AND (ASC(byte$)<
CHR$(ASC(byte$)-32)
270 IF INSTR(control$(control),byte$) AND long<length
THEN long=long+1:MID$(user.input$,long,1)=byte$:P
RINT byte$;
280 WEND
285 PRINT " " 'wipe cursor at end of line
290 RETURN
500 ' Yes/No
510 CLS#1:PRINT#1,TAB((modewidth-12)\2)"Press Y or N"
520 caps=true
530 control=1:length=1:GOSUB 200 ' User input
540 caps=false
550 IF byte$="Y" THEN yes=TRUE ELSE yes=FALSE
590 RETURN
600 ' mode change (Version 1.0)
610 MODE mde
620 modewidth=(2^(mde+1))*10
630 WINDOW#1,1,modewidth,25,25
640 WINDOW#2,1,modewidth,1,1
650 WINDOW#3,1,modewidth,2,24
690 RETURN
2000 ' menu routine (Version 1.1)
2010 mde=1:GOSUB 600 'set mode
2020 head=1:GOSUB 100 'print heading
2030 FOR i=1 TO 5
2040 LOCATE 7,5+(i*2):PRINT menu$(i)
2050 NEXT
2060 CLS#1:PRINT#1,TAB(7)"Type in 1,2,3,4 or 5 ";
2090 control=4:length=1:GOSUB 200 'User input
2900 RETURN
13000 ' initialise variables, dim arrays etc.
13010 ' Boolean operators
13020 TRUE=-1:FALSE=0 'Boolean operators
13030 ' User.input
13040 DIM control$(12)
13050 RESTORE 40000
13060 FOR i=1 TO 12:READ control$(i):NEXT 'User input
control
13070 user.input$=STRING$(254,"#")
13080 byte$="#"
13100 ' Menus
13110 DIM menu$(5)
13120 RESTORE 40100
13130 FOR i=1 TO 5:READ menu$(i):NEXT 'Menu values
13200 ' Headings
13210 DIM heading$(5)
13220 RESTORE 40200
13230 FOR i=1 TO 5:READ heading$(i):NEXT 'Heading valu
es
13900 RETURN
40000 ' DATA for control$(n)
40010 DATA "YN","123","1234","12345","123456","1234567"
,"12345678","123456789","1234567890","ABCDEFGHIJK
LMNOPQRSTUVWXYZ"
40020 DATA "abcdefghijklmnopqrstuvwxy ABCDEFGHIJKLMN
OPQRSTUVWXYZ","1234567890. ;;$% '()abcdefghijklmnopq
rstuvwxy ABCDEFGHIJKLMN OPQRSTUVWXYZ"
40100 ' DATA for menu$(n)
40110 DATA "1. Instructions","2. Open a new data file",
"3. Access an old data file","4. Catalogue this d
isc","5. Leave this program"
40200 ' DATA for heading$(n)
40210 DATA "Main Menu","Instructions","New Data File",
"Old Data File","Catalogue"
50000 ' Test of subroutines 200 & 500
50010 CLS:PRINT"How long is your input string ? ";
50020 control=9 'numeric characters only accepted
50030 length=3 '3 digit number maximum
50040 GOSUB 200 'accept user input
50050 ' error trapping
50060 length=VAL(LEFT$(user.input$,long))
50070 IF length=0 THEN 50010 'note: GOTO forms simple l
oop !
50080 IF length>254 THEN length=254 'prevents over fill
ing string!
50090 PRINT"Input your string at the prompt":PRINT:PRIN
T">";
50100 control=12 'allows most characters
50110 GOSUB 200 'input string
50120 PRINT:PRINT"Your string has "long"characters, and
has been evaluated as : "
50130 PRINT LEFT$(user.input$,long)
50140 PRINT"Do you want to have another try ? ";
50150 GOSUB 500 'get yes/no
50160 RETURN
60000 ' Test of subroutines 100,600,2000
60010 GOSUB 2000 'menu routine
60020 choice=VAL(byte$)
60030 mde=0:GOSUB 600 'change mode
60040 LOCATE 3,10:PRINT"Choice "choice" made"
60050 LOCATE 5,15:PRINT "More ?";
60060 GOSUB 500 'get yes/no
60070 RETURN

```

CPC464, 664 and 6128 Software

SOME OF THE TITLES ADDED TO THE LIST THIS MONTH

	Disc	Tape	
<i>Beyond the Ice Palace</i>	34.95	34.95	e
<i>Captain Blood</i>	44.95	29.95	o
<i>Daley Thompson's Olympic Challenge</i>	44.95	29.95	o
<i>Fury, The</i>	34.95	34.95	e
<i>Gnome Ranger</i>	44.95	29.95	u
<i>Guerilla Wars</i>	44.95	29.95	o
<i>Hot Shot</i>	37.95	29.95	y
<i>Ingrid's Back</i>	49.95	34.95	u
<i>Knight Orc</i>	49.95	34.95	u
<i>Lancelot</i>	49.95	29.95	u
<i>Marauder</i>	44.95	29.95	o
<i>Mickey Mouse</i>	44.95	29.95	o
<i>Salamander</i>	44.95	29.95	o
<i>Skate Crazy</i>	44.95	29.95	o
<i>Street Fighter</i>	44.95	29.95	o
<i>TAU Games+</i>	32.95	-	s
<i>Typhoon</i>	44.95	29.95	o
<i>Vindicator, The</i>	44.95	29.95	o
<i>Vixen, The</i>	34.95	34.95	e
<i>Western Games</i>	44.95	29.95	o
<i>Wizard Warz</i>	44.95	29.95	o

The list below is updated every month. Additions are shown in bold type.

GAMES

	Discs	Tapes	
720° (Skateboarding)	44.95	29.95	o
Academy	49.95	29.95	o
Ace of Aces	49.95	29.95	o
Activator	30.00	16.00	x
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Bad Cat	44.95	29.95	o
Ball Breaker	44.95	29.95	o
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Basket Master	44.95	29.95	o
Bedlam	-	29.95	x
Beyond the Ice Palace	34.95	34.95	e
Bionic Commando	44.95	29.95	o
Blood Brothers	44.95	29.95	o
Blue War	44.95	-	o
Bobby Bearing	22.00	11.00	o
Book of the Dead	44.95	-	o
Boulderdash	22.00	11.00	o
Boulderdash 3	49.95	29.95	o
Brainache	-	11.00	x
Brian Bloodaxe	20.00	-	x
Captain Blood	44.95	29.95	o
Charlie Chaplin	44.95	29.95	o
Classic Quest Adventures:			
Catacombs (hard)	49.95	-	p
Goblin Towers (mod.)	49.95	-	p
Forestland (hard)	49.95	-	p
Witch Hunt (very hard)	49.95	-	p
Cluedo	44.95	35.95	y
Combat School	44.95	29.95	o
Core	-	16.00	x
Contraption	25.00	-	x
Cybernoid	44.95	39.95	o
Daley Thompson's Olympic Challenge	44.95	29.95	o
Defcom	-	13.00	x
Deflektor	44.95	29.95	o
Desolator	44.95	29.95	o
Druid	-	20.00	x
Dynamite Dan II	-	16.00	x
Firelord	-	11.00	x

Flying Shark	39.00	29.00	q
Frankenstein	44.95	29.95	o
Fury, The	34.95	34.95	e
Future Knight	-	16.00	x
Game, Set and Match	44.95	39.95	o
Garfield	44.95	29.95	o
Gary Lineker's Soccer	44.95	29.95	o
Gauntlet II	44.95	29.95	o
Gee Bee Air Rally	39.95	29.95	q
Glass	25.00	-	x
Gnome Ranger	44.95	29.95	u
Gothik	39.95	29.95	q
Gm. Gooch's Cricket	29.95	-	p
Gryzor	44.95	29.95	o
Guerilla Wars	44.95	29.95	o
Gunsmoke	44.95	29.95	o
Handball Madonna	-	13.00	x
Head over Heels	44.95	29.95	x
Hot Shot	37.95	29.95	y
Hunt for Red October	39.99	39.99	x
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Indoor Sports	44.95	29.95	o
Ingrid's Back	49.95	34.95	u
Jetbike Simulator	-	29.99	x
Jinxter	69.95	-	q
Karnov	39.95	29.95	q
Knight Orc	49.95	34.95	u
Krypton Factor	49.95	27.95	e
Lancelot	49.95	34.95	u
Leader Board Golf	49.95	39.95	q
Living Daylights	49.95	32.95	e
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Necris Dome	-	11.00	x
Nigel Mansell's G.Prix	49.95	35.95	e
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Not a penny more...	49.95	39.95	e
Outrun	44.95	29.95	o
Plasmatron	44.95	29.95	o
Platoon	44.95	39.95	o
Ramparts	44.95	29.95	o
Rimrunner	47.95	32.95	y
Rocky Horror Show	22.00	11.00	o
Rolling Thunder	44.95	29.95	o
Rygar	44.95	29.95	o
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Baby Boomer edition	27.95	22.95	e
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Venom Strikes back	44.95	39.95	o
Vindicator, The	44.95	29.95	o
Vixen, The	34.95	34.95	e
Western Games	44.95	29.95	o
Wizard Wars	44.95	29.95	o
Wizball	44.95	29.95	o
Wolfman	44.95	29.95	o
Yes Prime Minister	49.95	39.95	e
Zynaps	44.95	29.95	o

DOUBLE GAMES

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Dizzy Dice/Joe Blade	22.00	-	x
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Riding Rapids/Nuclear	22.00	-	x
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ACTION TESTS ON CPC GAMES

Ten games come under the scrutiny of the "Joystick Wizard"

THE GAMES REVIEWED THIS MONTH

- 720 Degrees
- Captain Blood
- Clever and Smart
- International Karate+
- Pack Of Aces
- Pegasus Bridge
- Plasmatron
- Rolling Thunder

CLEVER and SMART Bad language damns these two detectives

TAPE \$29.95
DISC \$44.95

I wonder why it takes so long to get games released in Australia? Clever and Smart was released in the UK at the beginning of the year yet took some seven months to see the light of day here. Mind you, if I had my way it wouldn't be released at all. There is no logical reason for including potentially offensive language in a game, especially one destined for younger eyes and for that reason should not be stocked by The Amstrad User. It's a pity because the game is an intriguing adventure, arcade style, with a fair amount of humour.

Clever and Smart are two high powered secret service agents (based, I think, on a German cartoon series) whose task it is to find Dr. Bacterius a famous scientist. Clever is a master of disguise and leads the team, while Smart tends to help Clever out of disastrous situations. Solving the game is a little difficult as the instructions are less than adequate.

The game is basically split into two sections - above ground and below. Above are a number of buildings which need to be searched, but to enter some a disguise has to be worn. The disguises can be bought from the disguise shop (when you can find it). You start with a little money, but this can be increased by betting on snail races or forging cheques. Various obstacles abound to hinder the search such as thugs, policemen, a car and a mad bomber who keeps dropping his calling card at random moments.

Below the town is a network of sewers with energy

draining cats and rats. Stamping on them gains extra points. Within the system are telephone cables which apparently can be tapped for information.



A panel on the right of the screen indicates the bonus score, number of lives left, hunger rating, cash in hand and the time remaining to complete the game.

At street level the graphics are just adequate but colourful. The sewer graphics are larger and so more detailed. Once you have worked out what you are supposed to be doing, the game is reasonably addictive but once solved very quickly loses its attraction.

PEGASUS BRIDGE A carefully researched war game

TAPE \$29.95
DISC \$34.95

Rather like adventurers, war game players seem to be a special breed. Unlike adventures though, war games have failed to make major inroads into the general software market. That's a shame because there is some pretty clever software about. Pegasus Bridge may not convert everyone, but it is interesting enough

to maybe persuade a few.

Being a war game generally means that there is not too much action but plenty of strategy. The British 6th Airborne Division's objective was to capture the eastern flank of the D-Day beach-heads. This was achieved by capturing and holding the two bridges over the Caen

canal and river Ome and destroying the five bridges over the river Dives. Pegasus Bridge concentrates on the bridge over the Caen canal (later named Pegasus Bridge after the 6th Airborne's emblem). You can play either the allied or axis forces against the computer or with two players.

The game is played over 36 turns, each lasting 30 minutes of game time. Turns are split into the following phases: reinforcements, movement, support and combat. Play alternates between British and German turns. Troops have a certain movement allowance and some

terrain types cost more movement points than others. The support phase allows you to call for air strikes or naval bombardments on enemy emplacements. Combat allows each unit to attack once within range limitations.

To win the battle you must satisfy your victory conditions which are set out in the large instruction manual accompanying the game. The total victory points for each side is totted up at the end of the 36th turn.

Seasoned war game players will find Pegasus Bridge a competent offering and should be pleased with PSS's thorough approach to the historical research.

INTERNATIONAL KARATE +

Lively graphics but a dying theme

TAPE \$29.95
DISC \$39.95

IK+ is probably the best animated combat game you have ever seen on an Amstrad. All the moves flow well - in particular the backflip - there is a wide variety of moves, the background pictures are well designed and colourful and you now have the added difficulty of three fighters on the screen at the same time.

What kills the game stone dead is that most of it has been done before, perhaps a little more jerkily, but such a long time ago. People were getting tired of combat/martial arts games some eighteen months ago, yet the companies keep producing them.

There is little point in describing the scenario. The aim is as usual to pummle your opponent to death with

fists and feet. Most moves are controlled with a combination of one of eight joystick movements with or without the fire button depressed. I must admit the smooth backflip is impressive.

There are two stages to the game: fighting and ball dodging. Life is a little more difficult with two opponents, but the ball dodging segment is pretty easy once you get the hang of dealing with deflecting the balls. This is a bonus segment and occurs after two combat rounds. Unfortunately it tends to drag on a bit. If you are a combat freak, you will freak out with IK+, if not, you'll find it a yawn.

ROLLING THUNDER

A less than successful arcade conversion

TAPE \$29.95
DISC \$44.95

Unfortunately Rolling Thunder is yet another game which seasoned players would have seen in other guises before. For the benefit of newcomers though, you take on the role of Albatross in an attempt to penetrate ten levels of Geldra's evil and secret organisation.

Scrolling is horizontal and quite smooth too, rather than flicking from screen to screen. The scenes reveal balconies, doorways and many obstacles all guarded by Geldra's guards. You are armed with a pistol, a few bullets and an empty machine gun. Behind various doors, some accessed from the balconies, are further

supplies of ammunition. If you die on a level you have to go right back and tackle the obstacles again.

Further into the game you meet automatic lasers and Fire-men (not the guys with the red trucks) who live in a lava pool. The final confrontation is with Geldra if you manage to get that far. The music is pretty chronic, there are no facilities to redefine keys and no high score table. Reaction to joystick movement I found to be sluggish. Rolling Thunder is not a very successful conversion from the arcade original.

PLASMATRON

Insults the intelligence of a good game player

TAPE \$29.95
DISC \$44.95

Plasmatron is a shoot 'em up of chronic quality. It's based on the old format of heaps of aliens swarming towards you and you simply have to pick them off with a laser bolt or avoid hitting them. The screen is split into two sections - a very jerky horizontal scrolling area and a status panel showing shield energy, your ship damage report, time and laser power left. The sprite movements flicker to the point of annoyance, the

sound is a waste of time and the whole thing is almost invisible on a green screen.

Put simply, Plasmatron is a rip-off - don't buy it.

CAPTAIN BLOOD

Could this be the best game for 1988?

TAPE \$29.95
DISC \$44.95

This is one of the best games I have seen this year - it is to be thoroughly recommended (even if on graphics alone). The story is based around Captain Blood who is slowly degenerating and needs to find five clones of himself (previously scattered throughout the galaxy). When found he can extract vital essences from them and remain alive. The longer the clones remain alive, the less chance he has.

There are four main screen types displayed during the game. First, a view of the galaxy from which you would select your destination. Then there is a view of the planet around which you are currently orbiting. Third, a view from 'oorxx', a mini space vehicle used for exploring or destroying a planet. Finally, an alien communication screen.

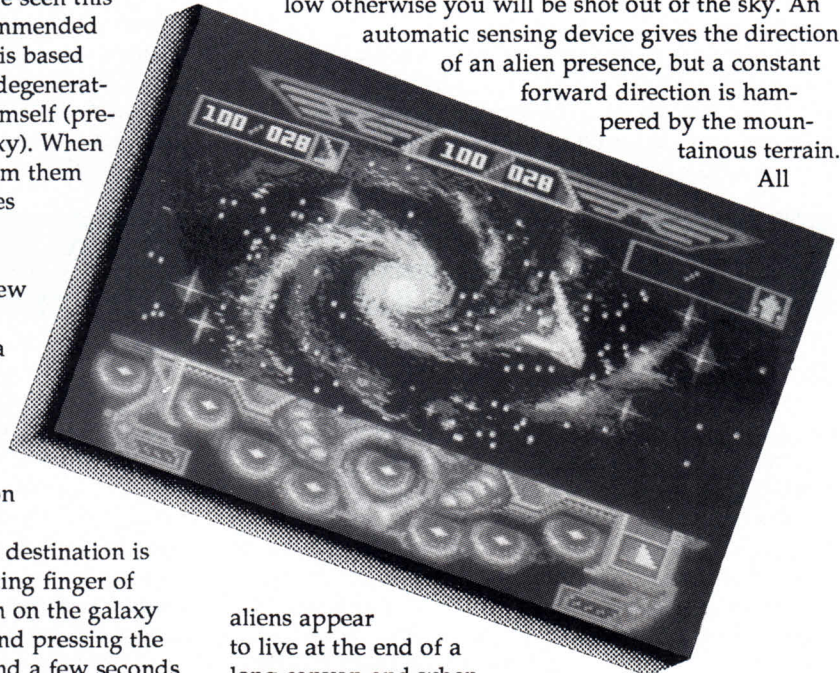
Back to the galaxy view. The initial destination is chosen by moving the hand and pointing finger of Captain Blood to the required position on the galaxy map (the coordinates are displayed) and pressing the fire button. You go into warp mode and a few seconds later are presented with the second screen, the view of a rotating planet. A facility is provided to zoom in on the planet's surface to ascertain whether or not it has any defences. These are shown by small flashing squares.

You really need information from the planet's inhabitants if you are to go very far in this game. I didn't realise this at first and assumed as the planet was defended it must be hostile, so launched oorxx on a destroying mission. The explosion was dramatic and something to see, but I appeared to have upset everyone in doing that as I couldn't find a soul to talk to.

Launching oorxx on an exploring mission moves the game to the third screen.

This is on the surface of the planet where, generally, you have to keep

low otherwise you will be shot out of the sky. An automatic sensing device gives the direction of an alien presence, but a constant forward direction is hampered by the mountainous terrain.
All



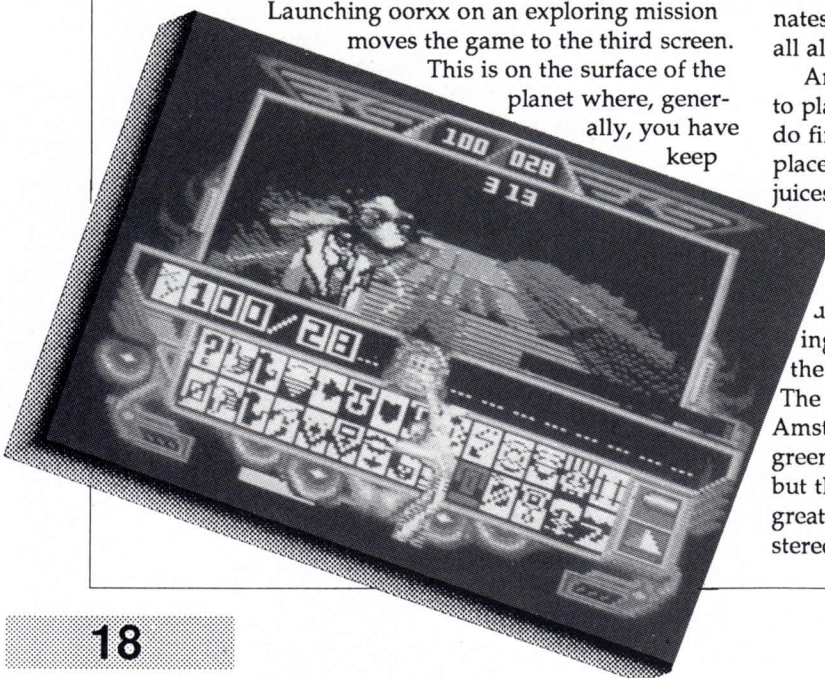
aliens appear to live at the end of a long canyon and when reached, the game switches to the communications screen showing a very clever graphical representation of the alien.

If the alien is at all helpful, it will provide some information (sometimes after you have performed a task). The language it speaks is foreign to you so needs to be put through the universal communicator. To do this you move Blood's finger over symbols which appear below the scene and reply using the same symbols. Some aliens can be teleported to the mother ship if they are willing, but the information in the form of coordinates is what you are really after. Be careful though, not all aliens are helpful.

And so the process continues, warping from planet to planet in search of the five Blood clones. When you do find one, it must be teleported to the mothership and placed in the fridgitorium to recover the life-giving juices. The longer your mission takes, the more degenerated Blood will become, and is illustrated by the hand becoming increasingly shaky.

Captain Blood is not an action-packed shoot 'em up. It's an original game where thinking and reasoning will pay dividends. Many will find it confusing at the start, but persevere - all will come clear in the end.

The graphics are some of the best to be seen on an Amstrad CPC colour monitor (but lose a little on a green screen). The sound during the game is average, but the opening tune written by Jean-Michel Jarre is great and a must for playing through an amplifier or stereo headphones.



720 DEGREES

You'll double-flip with this Skateboard offering from US Gold

TAPE \$29.95
DISC \$44.95

Now here's a game that will keep you on your toes but off crutches. It's the only Skateboard game for the small computer screen that I am aware of, and what fun it is too. The object is simple - to gain enough points by performing certain stunts to obtain tickets for the skate board parks where competitions are held for medals and cash prizes. The more money won the better as this is used to purchase more superior equipment such as a better board to give more speed or a protective helmet to allow you to make more hazardous stunts.

As the game commences on the journey to one of the parks in Skate City, you must keep your eyes peeled for various hazards such as pedestrians or swimming pools and pick up any cash found lying in the road. Extra points are awarded for passing over secret locations. A

time limit is imposed on your journey through the city and should you fail to reach a park within the time you are attacked by a swarm of killer bees (perish the thought!).

The park is the location where you can display your skills on the Slalom, Jump, Ramp and Downhill events. I found a joystick much easier to use when performing the extra twists and turns in the air which help to increase scores. There are twenty levels and each park may be visited only once on a particular level. At the end of each visit a score sheet is displayed. Graphics are smooth and control is positive and fast. There's a catchy tune at the beginning of the game but the rest of the sound is confined to some of the effects you perform. It took a while to prise the joystick out of the children's hands on this game.

PACK OF ACES

A four-game compilation from Prism

DISC only \$34.99

I thought it would be a good idea to have a look at one of the compilations currently on the market, not for seasoned players but more for the benefit of players new to Amstrad CPCs. Pack of Aces contains the following four games:

NEXUS

The screen is split into several areas showing the actual play area, communications from other characters, radar display of interesting objects or characters, a list of possible moves and so on. The idea is to search eight floor levels of a building for a lost friend and answer 32 questions. Each question is made up of four scrambled fragments (128 in all) which have to be re-arranged. Of course you will meet some tough baddies to fight past, but you can pick up extra fire-power as you progress. Good graphics and animation, but may take a while to get the hang of things.

INTERNATIONAL KARATE

One of the original better graphics combat games but is tough. One or two players can play against one of six mean computer opponents. Winning two bouts moves you on to the next opponent and getting past all six makes you the champion. The animation is good, but the action is fast and success can only be achieved with practised and skillful movements of the joystick.

WHO DARES WINS II

Basically a shoot 'em up in which you have to penetrate armed garrisons and release prisoners. You need to shoot everything in sight (except the prisoners of course) with your automatic rifle or use grenades which you can replenish as you proceed. Points are scored for killing the enemy or releasing prisoners. It's not all that

difficult but has the 'must have another go' element.

BOULDERDASH

Involves a cave search to collect as many jewels as possible in a prescribed time. As you move around the cave boulders drop either squashing you or blocking your path. A bit of strategy is needed to collect enough jewels and move to the next level. There are also some nasties around to avoid. A challenging game with good graphics.



BEYOND THE ICE PALACE

A gripping arcade adventure from Elite

TAPE &
DISC \$34.95

A familiar theme of the balance of good and evil having been upset and someone has to redress the balance sets the scene to Beyond the Ice Palace, an arcade adventure. Wood spirits hold a meeting resulting in an arrow blessed with special powers being shot into the air for the lucky person (you) to find it and embark upon a quest to save the land.

The first scene provides a choice of weapons to take on the trip. I found the mace (a spiked ball on the end of a chain) the most useful. Then you drop down a hole into the caverns below where the adventure really begins. It consists of a number of tunnels and shafts filled with nasties of various shapes and sizes. Be careful you don't touch any of the bats when you first jump down otherwise you will use one of your nine lives straight away. One hit with your mace will destroy a bat, but as you progress further into the complex and meet axe-throwing ogres and dragons, you will need more than one hit to pass them. In fact the dragons

appear to require hitting in many parts of their body before they disappear.

You have the power to summon help when in real difficulty, but this is restricted to just two calls within the immediate area. I found that the helping spirit is not all that powerful and will only despatch some of the lesser nasties. Bonus points can be gained by collecting jewels dotted around the screens. If you make into the palace itself, you must wend your way up through a system of ladders and platforms.

Ghost and Goblins owners may recognise the format, but will find the action extremely fast and furious. Some of the nasties are very difficult to pass and newcomers may find the level set a little too high. The scrolling is smooth and the graphics have well animated and colourful sprites. It's very addictive - one of those games where you must have another 'last' attempt. If you buy it on tape though, be prepared for a long wait while it loads.

TARGET RENEGADE

An action packed sequel from Imagine

TAPE \$29.95
DISC \$49.95

This game is the sequel to Renegade and is probably one of the best of the bunch being reviewed this month. There is one major difference to its predecessor though - it features optional simultaneous two player action. The motivation in TR is to revenge the murder of your brother with (alas) heaps of gore and violence.

The action takes place on a large flick-screen area with scores and status information at the bottom of the screen. You start with three lives and earn bonus lives on attaining 50,000 points and for each 100,000 after that. If time runs out on the clock you lose a life.

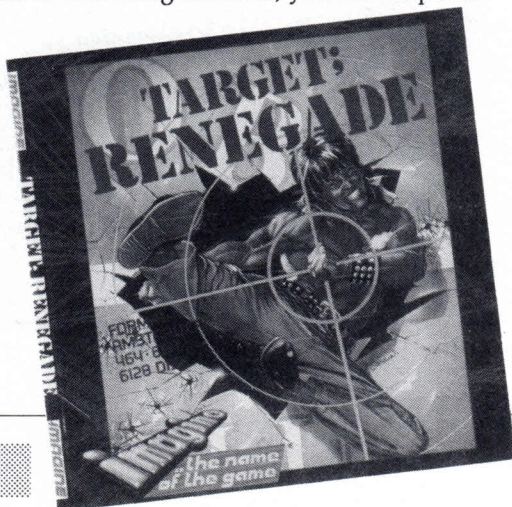
The first screen places you in a multi-storey car park with the aim of getting to the road level before the time runs out. Your opponents are either members of a motor cycle gang or pedestrians, all needing to be pulverised. If you can manage to relieve some gang members of their sledgehammer, you can despatch

them more quickly by crushing their skulls (yuk!).

The second scene takes place at night where you encounter some 'ladies of the night'. As they are also after your blood and money, they have to be treated in the same way as the bikies. Their boss carries a gun which if he manages to hit you will cause a life to be lost. The third screen moves you into a park where a gang of skinheads are on the rampage. Their weapons include clubs and head-to-head contact (head butts). Scene four brings the Beastie Boys and their dogs into play at a shopping mall. Yes, more beatings and gore until you finally meet up with Mr Big's bodyguards and then Mr Big himself. Fortunately for me, this sequel does not show spurting blood (an unnecessary cosmetic I thought in the original) when someone is being pulverised.

Controls have been simplified to one attack key rather than two handed movement in the original. The graphics are great, well thought out and in good colour. If you have a green screen you won't encounter any problems. Although it can be argued that the theme is not much different from the original Renegade, the two player option is new and means that you can join forces to defeat the baddies. You can also do heaps of damage to your friend too if you are not watching carefully! The facility to pick up discarded weapons adds to the game.

OK, I don't like the theme, the blood and violence and so on, but it is only a cartoon game on a screen, and as such is very well presented with tons of sweat inducing action.



Others who have bought Amstrad or Epson compatible printers rarely find problems if they want to print straight text work or graphics.

My first printer was a Seikosha GP 100, a splendid workhorse, which clattered its way through text at about 30cps without descenders.

When I went to look for graphics I came unstuck. It, of course, was an eight-bit printer, and the Amstrad wasn't interested in talking to it.

It was while I was investigating what to do next, buy a new printer or give up altogether, that I found a public domain program, written by James Tucker called Flashgen.

Flashgen was written to be used with Tucker's commercial programs for other computers.

Put simply, Flashgen is the answer to everyone's prayers. Instant codes for your designed character. That means access to sigma, pi, even special characters like arrows, boxes and circles.

Flashgen was written for an eight bit port, but after some rewriting, courtesy Frank Ellett at the Gold Coast, it was made Amstrad compatible and a very useful tool when combined with Tasword or Protex or even Basic.

Flashgen allows you to design a character on a grid and then sends it to the printer as the designed character, and the codes required to produce the character.

When you run Flashgen, you are asked the width of the character. The default at RETURN is 8 dots, standard, but this can be wider.

A grid will be drawn on the screen, 8 dots wide by 7 dots high. Movement around the grid is with the cursor keys, pressing 'X' to set a dot. PCW owners should use the combination of W, S, Z and A.

An arrow for example, would look like this:

```

. . . . X . . .
. . . . X X . .
X X X X X . X .
X . . . . . X
X X X X X . X .
. . . . X X . .
. . . . X . . .

```

That's the hard part (or at least one of them).

Pressing D sends the data to the printer. Then we see just how remarkable Flashgen is.

You get an exact printout of the design grid, then the designed character, then the Epson codes required.

```

CHARACTER: ⇐ EPSON BIT IMAGE CODE: 27 'K 8 0
+ DECIMAL: 28 20 20 20 119 34 20 8

```

Remember each character must be sent to the printer as a CHR\$ in which

27 = ESC

'K' = Code to select bit image

8 = Least significant byte for the number of dot positions to follow

PRINTING SPECIAL CHARACTERS

The trouble with eight-bit printers is that they won't talk graphically to your Amstrad - that is, until now. Flashgen has been converted to run on an Amstrad to provide character designing facilities.

0 = Most significant byte for the number of dot positions to follow

This is followed by the 8 values which represent the dot positions set for the 89 vertical rows of the character.

To see the arrow on the printer type the values in as follows:

for the CPC's

```
PRINT#8,CHR$(27)+CHR$("K")+CHR$(8)+CHR$(0)+CHR$(28)+CHR$(
20)+CHR$(20)+CHR$(20)+CHR$(119)+CHR$(34)+CHR$(20)+CHR$(8)
```

for the PCW's

```
LPRINT CHR$(27)+CHR$("K")+CHR$(8)+CHR$(0)+CHR$(28)+CHR$(
20)+CHR$(20)+CHR$(20)+CHR$(119)+CHR$(34)+CHR$(20)+CHR$(8)
```

Simple, isn't it? Convincing your wordprocessor to make use of this information can be difficult but as most allow you to redefine characters it should not prove too hard.

If you wish to make the worst tasting dish in the world, follow the below menu and then cook in microwave for 10¹⁴ mins..

1₂ Cup of flour

1₂ Cup of sugar

3₄ Cups of water

2₁₄ Tea spoons of egg white

▲ An example of printing special characters in Tasword. This particular printout came from Tasword PC.

most allow you to redefine characters it should not prove too hard.

PRINTING USER DEFINED GRAPHICS FROM TASWORD

It has been said in the past that to define special graphics characters in Tasword is next to impossible. No, it isn't impossible however depending on how many special printer control characters you use depends on the amount of characters you are able to create.

Let's use the forward pointing arrow as an example. From the Tasword menu move into the customize program section (by pressing C and then enter), and enter the 'Define Printer Control Characters' section.

The screen should appear with two columns of inverse characters followed by a string of numbers. At this point you must pick which characters you are going to set up as graphic. If you are using Tasword on the CPC or the PCW you are only allowed 5 characters for each letter, Tasword PC allows up to 12. (Just enough).

I am using Tasword on the CPC6128 so I have chosen the characters PQR to form an arrow. Press the key marked P and the computer asks you to type in the some printer characters. The first number must be 27 the second 71 (ASCII for the letter K) then 8 and then 0, pressing the return key after each number. When you have typed all four numbers in, press the return key again. At this point you will see the list of four numbers appearing after the inverse P. Now select the letter Q, type in the next 5 numbers, these being 28, 20, 20, 20 & 119. Select the letter R and type the remaining 3 numbers 34, 20 & 8.

You may now exit this section and return to the main menu, then back to the editor. To print the arrow on the printer press the space bar while holding down the control key and press an uppercase P. It should appear on the screen as an inverse P. Do the same again this time pressing the key marked Q and again pressing the key marked R. When you go to print your document, you will see the arrow appear in the text. If you are going to print several characters one above each other, you must be aware that the line spacing may need to be changed.

This may all sound long winded, however with a little experimenting you could set up Tasword to print boxes around text, add special math characters or anything for that matter, I calculate that you can use a maximum of 35 special characters in Tasword.

PCW MODIFICATIONS

For PCW owners, by changing and inserting the following lines, you may convert the program to work under Mallard Basic.

Delete line: 1125
 Change the following lines to;
 1170 ESC\$=CHR\$(27)
 1180 U\$=ESC\$+"A"
 1190 D\$=ESC\$+"D"

```

1200 C$=ESC$+"C"
1210 CLR$=ESC$+"E"+ESC$+"H"
1220 C$=CHR$(13)

1635 IF A$="" THEN 1630 ELSE A$=UPPER$(A$)
1651 IF A$="A" THEN A$=L$:GOTO 1790 ELSE IF A$="S" THEN
    A$=R$:GOTO 1790 ELSE IF A$="W" THEN A$=U$:GOTO 1790
    ELSE IF A$="Z" THEN A$=D$:GOTO 1790

2490 IF LPOS(0)>PW THEN LPRINT
2800 IF LPOS(0)>PW THEN LPRINT
2880 WHILE INKEY$="" :WEND
3020 PRINT " THE KEYS W, S, Z and A MOVE THE CURSOR TO
    THE REQUIRED DOT POSITION."
    
```

Everywhere that you see the command PRINT#8, change it to LPRINT. With all this in mind you have a working version of Flashgen. Have fun.....

```

1000 ' =====
=====
1010 '
1020 ' PROGRAM: FLASHGEN.BAS
1030 ' AUTHOR: JAMES TUCKER
1040 ' RELEASE: FOR FLASHPRINT!! RELEASE J OCTOBER 19
85
1060 '
1070 ' *** Please note that FLASHGEN is a public doma
in program but
1080 ' *** FLASHPRINT!! and FLASHKEY!! are trademarks
of JAMES TUCKER
1090 ' *** and FLASHLITE!! SOFTWARE, CA 94017
1110 ' =====
=====
1120 '
1125 MODE 2
1130 DEFINT X,Y: ' INTEGERS MAKE IT A BIT FASTER
1140 DIM R(64,8): ' ARRAY FOR DOTSON/DOTSOFF (0=NO DOT
1=DOT)
1150 ' X(64) IS HORIZONTAL Y(8) IS VERTICAL
1160 PW=76: ' PAPER WIDTH (YOUR PRINTER WIDTH-4)
1170 CLR$=CHR$(12): ' CLEAR SCREEN CHAR (CLS IN SOME B
ASICS)
1180 U$=CHR$(11): ' CP/M UP CURSOR CHARACTER
1190 D$=CHR$(10): ' CP/M DOWN CURSOR CHARACTER
1200 L$=CHR$(8): ' CP/M LEFT CURSOR CHARACTER
1210 R$=CHR$(9): ' CP/M RIGHT CURSOR CHARACTER
1220 ESC$=CHR$(27): ' ASCII ESCAPE
1230 CR$=CHR$(13): ' ASCII CARRIAGE RETURN
1240 ' =====
=====
1250 ' PRINT A HEADER ON SCREEN.
1260 PRINT CLR$
1270 PRINT " FLASHPRINT!! CHARACTER GENERATOR RELEASE
H"
    
```



```

1280 PRINT " DO YOU NEED INSTRUCTIONS (Y/N) ? ";
1290 A$=INKEY$:IF A$="" THEN 1290
1300 IF A$="Y" OR A$="y" THEN 2920 ELSE 1350
1310 ' =====
=====
1320 ' JUMP IF A PRINTER HAS ALREADY BEEN SPECIFIED.
IT IS UNLIKELY YOU
1330 ' WILL SPECIFY A DIFFERENT PRINTER IN THE SAME S
SESSION. YOU COULD
1340 ' EQUATE P$ TO "E" OR "C" FOR YOUR PRINTER AND D
DELETE PREVIOUS CODE
1350 PRINT CLR$
1360 PRINT " FLASHPRINT!! CHARACTER GENERATOR RELEASE
H"
1370 IF P$="E" OR P$="C" THEN 1460
1380 '
1390 PRINT " YOUR PRINTER TYPE: PRESS E FOR EPSON OR
C FOR CITOH: ";
1400 P$=INKEY$:IF P$="" THEN 1400
1410 IF P$="e" OR P$="E" THEN P$="E":PRINT "EPSON":GOTO
1460
1420 IF P$="c" OR P$="C" THEN P$="C":PRINT "CITOH":GOTO
1460
1430 GOTO 1400
1440 ' =====
=====
1450 ' HERE WE GET WIDTH OF CHARACTER FROM USER
1460 INPUT " WIDTH OF THIS CHARACTER: (RETURN=8 MAXIM
UM=64) ";W
1470 IF W<1 THEN W=8
1480 IF W>64 THEN W=64
1490 PRINT
1500 ' =====
=====
1510 ' WE MUST CLEAR THE ARRAY THE HARD WAY. NOTE THA
T BASCOM
1520 ' DOES NOT ALLOW USE .IF CLEAR STATEMENT NOR ALLO
W US TO REDIMENSION
1530 ' AN ARRAY. THIS ALSO PRINTS THE GRID PATTERN TH
EN MOVES UP CURSOR.
1540 FOR Y=1 TO 7:FOR X=1 TO W
1550 R(X,Y)=0:PRINT ". ";
1560 NEXT:PRINT:NEXT
1570 FOR Y=1 TO 7:PRINT U$;:NEXT
1580 ' =====
=====
1590 ' INITIALIZE X Y CO-ORDINATES
1600 X=1:Y=1
1610 ' =====
=====

```

That's all we can let you have this month - the rest of the coding will appear in the November issue of The Amstrad User.

Two new top quality joysticks

**ZIPSTICK
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\$39.95



Both quality joysticks moulded in high impact ABS with self-centring, steel sprung actuator. Eight way micro switches for greater sensitivity, precision, control and higher scores. Each has a 1.4m lead with a 9-pin 'D' pug to attach to your Amstrad. The Elite model has been specially designed for hand-held control.

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Phone: (03) 233 9661

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“Give me up to 300 lines
and I may give you one of
the best ...

... a printer, either a DMP
2160 or a DMP 3160, or a
5.25" disc drive”

Yup, The Amstrad User is offering any one of the above prizes in a Programming Competition starting this month. The choice of prizes is given to accommodate the winner of either a CPC, PCW or PC entry.

All you have to do is write a program in Basic for any of the Amstrad range of computers, but you mustn't let it go over 300 instruction lines (REMs are not included in the count). It can be as small as 10 lines if you like.

All entries will be assessed and awarded points on:

- a) Originality
- b) Clarity
- c) Speed
- d) Ease of use
- e) Documentation

You may enter as many times as you like as long as each entry is submitted separately. All entries will be returned if accompanied with a suitable self addressed and stamped padded bag.

Apart from the program itself, which must be submitted on tape or disc, all entries must include:

- a) An overview of the program, ie. what it is supposed to do.
- b) Full operating instructions

Entries can be on any subject - eg. game, utility, application, educational - the choice is yours. It can also be a team effort, in which case one person should be nominated on the entry to choose and accept the prize.

The Competition closes at 5.00 pm. on Monday 31st October 1988. Any entry received after that date will be excluded. The one winner will be announced in Issue 47 December 1988.

And here's the last bit. The judges decision will be final and there will be no post-mortems. All programs will become the property of The Amstrad User and may be published in later issues. Apart from documentation relating to the entry, no other correspondence will be entered into. The Editor reserves the right to cancel the competition if the number and quality of entries does not warrant the choice of prizes offered. *(That means if he gets ten crummy tattslotto checkers it's all off!)*

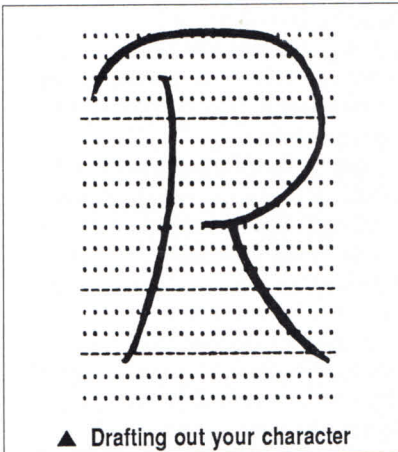
Mail your entries to:

Program Competition
The Amstrad User
1/245 Springvale Road
Glen Waverley
Victoria 3150

COMPETITION CLOSSES AT THE END OF THIS MONTH - DON'T MISS OUT

CHARACTER BUILDING

At last LocoScript can print any character you want.
Rob Ainsley investigates the possibilities.



▲ Drafting out your character

The ability to design your own characters is the most exciting part of LocoScript 2, (version 2.12 and above). On the LocoScript master disc is a file called LOCOCHAR.BAS, which is a Basic program. Using this program all you do is design the pattern of the character on a grid of dots for high and draft quality print, and for the screen.

The first thing to do is to design your new characters on paper. The screen displays characters on a grid of 8x8 dots, ie. 8 rows by 8 columns; draft quality print is on a 12x9 grid, and high quality on a 24 x18 grid. Using a pencil and paper you can draft out your characters on grids

until they look about right - you can see the kind of grids that LOCOCHAR works with illustrated on these pages. The grid appears on LOCOCHAR's editing screen much thinner than it actually prints out.

When designing your 8x8 screen character you can put a dot anywhere you like on the grid. However, there are two restrictions on how you can design printed characters: you can't use the right most column or the bottom two rows of dots on the printed characters, and also you can't put two dots next to each other in the same row. Even with an apparent space between them, two dots in the same row will overlap slightly on the final print-out.

Obviously the screen representa-

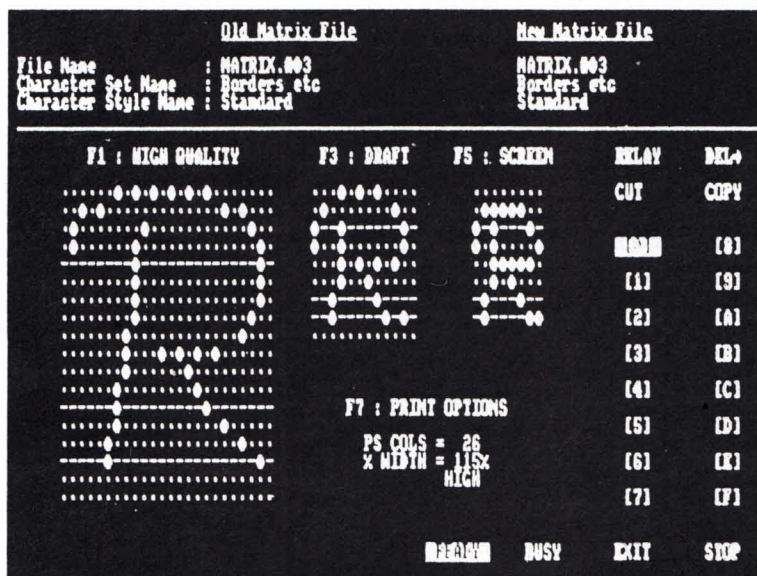
tion of a character, with its limited detail, will only be a rough approximation to your meticulously designed high quality pattern.

DOWN TO BUSINESS

Having designed the characters you can start work on modifying LocoScript's character set as you intend. You'll need a disc with LOCOCHAR.BAS, MATRIX.PRI, LOCOCHAR.2 and LOCOCHAR.3, and plenty of space (at least 16k) on it. All these files are on the LocoScript 2 master disc, so it's easiest to make up this work disc by formatting a new disc in LocoScript and using the [F8] 'Options' menu to 'Show hidden files' in order to copy MATRIX.PRI and the others onto it.

Reset the PCW with [SHIFT]+[EXTRA]+[EXIT], insert the CP/M disc and at the A> prompt type BASIC[RETURN]. At the 'OK' prompt, put your LOCOCHAR work disc in and type RUN "LOCOCHAR[RETURN].

The first piece of information you are asked for is the name of the file you're using as a base to alter, which will be MATRIX.PRI the first time. You are then asked for the name of the altered character set, which can be anything you like - so long as it's MATRIX followed by a dot, a hash sign (#) and two numbers or letters, eg. MATRIX.#01. Alternatively you can call the altered file MATRIX.PRI, in which case LocoScript will use it to replace the old standard set - convenient because it'll be automatically used whenever Loco starts up. The disadvantage is that you can't



▲ The character editing screen in LOCOCHAR

WHAT'S THE USE?

You can't use LOCOCHAR to make up a foreign alphabet; you're restricted to 16 characters and you can't mix different sets in a document. At the moment such things are only possible using font designer programs on the PCW using desktop publishers, where of course you don't have LocoScript's useful word processing facilities.

However, within the confines of 16 characters, you have a vast range of possibilities, and the 24x16 grid you have in high quality means quite detailed designs can be printed out. You could design a company logo (designing adjacent characters to join up in half-line spacing to make a larger one), make up the signs of the zodiac, or mimic your own signature.

You could create symbols to put in LocoScripted bar charts - for example, a mineral water company could make bottle symbols and make these into a simple graph to illustrate sales figures - all within a normal LocoScript document.

Borders are an ideal application for LOCOCHAR characters; you just need to design four corners, plus two vertical line and horizontal line units for each set. Invitations, posters and newsletters could use these very effectively.

Such is the definition available, you can design and print out Chinese characters quite effectively too (for restaurant menus, for example) but only having sixteen available per document doesn't give you much scope for expression.

It may yet prove possible to 'hack' the LOCOCHAR.BAS program to modify more than 16 of LocoScript's characters...does anyone out there know the secret?

recover your previous version of MATRIX.PRI, though of course you can copy the original from your master disc.

After a short delay the design process starts. You'll see 'Non-

Korean characters.

If you don't want to alter any of the names, just press [RETURN]. You then get a screen showing the three representations - high quality, draft and screen - of one of the LocoScript characters. You can only define up to 16 characters, and these replace the existing LocoScript ones listed on the right hand side of the screen. The characters LOCOCHAR knows as [0] to [9] are normally the characters 0 to 9, while the letters [A] to [F] are, respectively, the quotation marks ('') and (''), ('') and (''), and the single guillemets (<) and (>).

Pressing the appropriate number or letter brings the corresponding character up for editing, and

the function keys put you into edit mode for each representation - [f1] for high quality, [f3] for draft, and [f5] for screen. As you go into edit mode, you can adjust the shape already

there by laying down blobs or clearing existing blobs (using the space bar) or just delete the whole lot by the [DEL>] key and starting from scratch.

The blobs on the grid are laid down by pressing one of the keys [.] [/] or [1/2]. Note that when a dot is laid down it automatically clears anything on the same row either side of it, so you can't put two next to each other horizontally. The [1/2] key moves the cursor two to the right, and repeated presses will lay down a horizontal line, while the [.] doesn't move the cursor right and is used for vertical lines. [/] moves the cursor one right and is good for laying down diagonal lines.

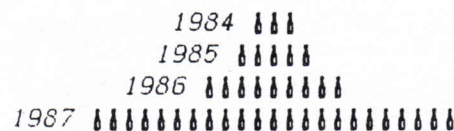
The three lines of hyphens drawn for you on the grids are useful guides to positioning your character. The top line of hyphens is the top of the 'body' of normal lower case letters, and the middle line is the baseline of the letter - so a letter 'o' would just fit between the two. The bottom line of hyphens is the lowest extent of a 'descender', for example, the tail of a 'g'. The [+] and [-] keys have the useful function of moving the whole lot of blobs one to the right or left.

In half-line spacing, a blob on the top line of hyphens on your high quality grid prints out immediately below a blob on the bottom line of hyphens in the line above. So if you are drawing shapes that are supposed to join up vertically, like borders, your character should be designed so it stretches from the top line of hyphens to the bottom. In the document, select half-line spacing, pile the vertical border characters on top of each other, and the resulting

A vertical border unit taking up exactly half a line, so in half line spacing the border is continuous.

standard' as the name of the set (MATRIX.PRI is called the 'Standard' character set); this is the name LocoScript will use to identify it when it shows you menus for selecting sets so you might care to change the name to something more informative - for example, 'Borders' if you are making a set of characters to frame invitations and posters, or 'Hanggul' if you're designing

Kintyre Spring Water Sales 1984-7



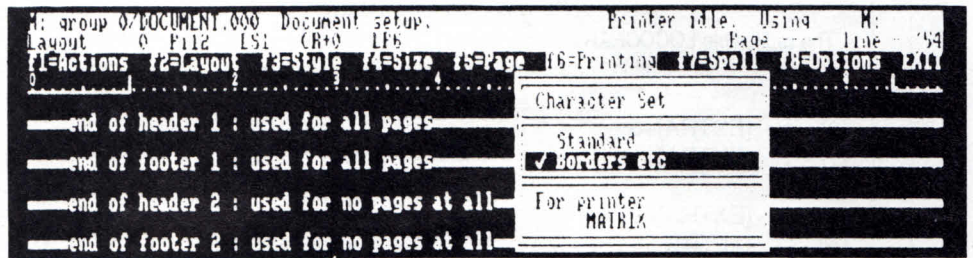
(1 bar = 100 000 units)

▲ LOCOCHAR symbols can be used to present data effectively

printout should be smooth and seamless.

For proportional spacing, LocoScript calculates the width each character should take up for you, basing its figures on the extremities of the pattern. You can manually alter this at the design stage using [f7] to any reasonable percentage you like of the character's width if you want to artificially space out the characters.

When you've successfully replicated that carefully constructed draft you pencilled out on paper, press [ENTER] and your new character is saved. [EXIT] takes you



▲ Setting up a document to use the new set

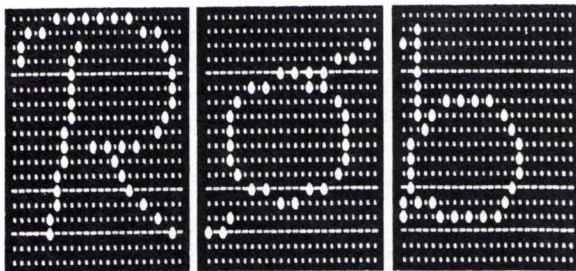
the appropriate keys - as listed in the box.

If your modified set was called, say, MATRIX.#01 you have to explicitly tell LocoScript it is there -

and move the cursor onto 'Write SETTINGS.STD'. Press [ENTER], then [EXIT] from that menu and accept the offer to 'Write SETTINGS.STD to disc in A'. What this does is store in LocoScript's memory the fact that all your new character sets are available for use later on in a document or on the printer. On startup next time, they will be recognised as available sets without you having to do anything special.

Note that you can't make any old MATRIX.### file into a MATRIX.PRI (so that it is automatically used on start-up) either by renaming it or by using LOCOCHAR on it - you can only make a new MATRIX.PRI from an original standard MATRIX.PRI using LOCOCHAR.

Now you are at last ready to actually use the new characters, so



Save the slog of writing you signature - make it up in chunks in Locochar, and store the whole thing as a phrase in LocoScript.

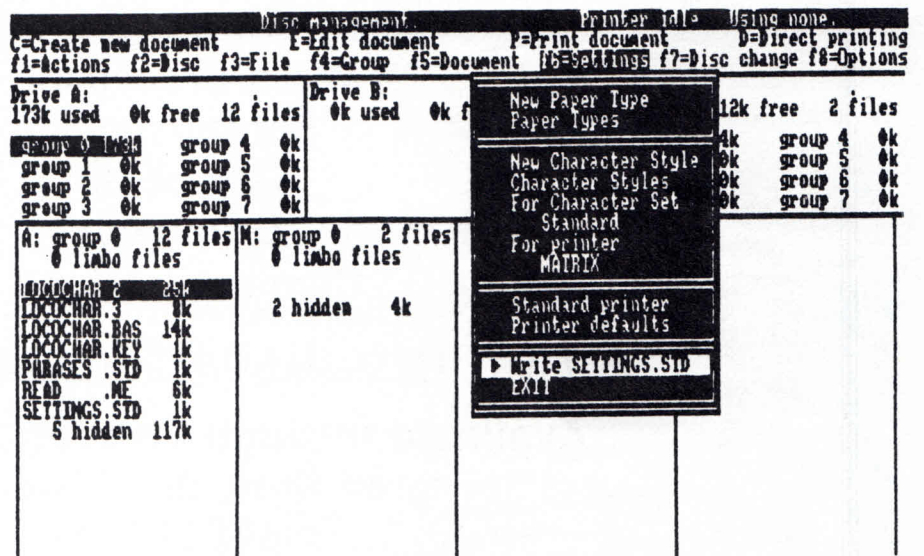
back to CP/M and saves the new character set to disc, taking a couple of minutes to do so.

GET IT IN WRITING

Now copy the MATRIX file you've just created (or modified) to group 0 of your LocoScript startup disc. The best way to do this is to start up LocoScript and use its copy commands; then press [SHIFT]+[EXTRA]+[EXIT] to start again. There must be a file called MATRIX.PRI - even if you don't intend to use the character set it contains - on the start up disc or else the printer won't work. Given that you have to have all your system files on the disc, and the LOCOCHAR 2 and 3 files as well, you'll only have enough space left for one extra character set.

If your modified set is called MATRIX.PRI, you can go straight into your document, and get your special characters just by pressing

you only need to do this once, the first time you use the new character set. When the disc management screen appears, press [f6] 'Settings'



Letting SETTINGS.STD know about your new set

THE SWEET SIXTEEN

The redefinable LOCOCHAR characters [0] to [F] are normally the following symbols, obtained in LocoScript by the respective key sequences:

[0] - a - [EXTRA]+0	[B] - ' - [ALT]+[SHIFT]+6
[1] - ① - [EXTRA]+1 (etc.)	[C] - " - [ALT]+2
[9] - ⑨ - [EXTRA]+9	[D] - " - [ALT]+[SHIFT]+2
[A] - ' - [ALT]+6	[E] - < - [ALT]+[SHIFT]+\$
	[F] - > - [ALT]+[SHIFT]+#

create or edit the document you want. To make Loco use a certain set in that document, while editing hit [f1] for 'Actions' and pick 'Document setup'. On the [f6] for 'Printing' menu select 'Character set' (which will probably be on 'Standard') and with the cursor over the set you require press [+]. When you go back to the document itself, your new characters are available just like

any others.

Whenever you create a document, the character set used in the group's TEMPLATE.STD is used, so if you have a set you want to use regularly make sure you edit the TEMPLATE.STD and change the character set as just described. When you print you'll be asked if you want to 'change to character set intended for document', because the

printer may expect the standard MATRIX.PRI set.

You can use any of LocoScript's well-loved effects without further effort. Italics and bold are worked out by LocoScript from the high quality or draft quality patterns you devised, the first by slanting (strictly 'shearing') the normal pattern, the second by effectively doubling the width of each blob. Double pitch is obtained by stretching out the pattern, and subscripts and superscripts by squashing the draft pattern up. Even in NLQ, LocoScript uses the draft patterns you designed for 15 and 17 pitch, and their double width, italic and bold variants - so, if you want your characters to be available in the full range of sizes, you'll have to produce 'draft' versions even if the output will be high quality.

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SPREADSHEET

by Dave Atkin

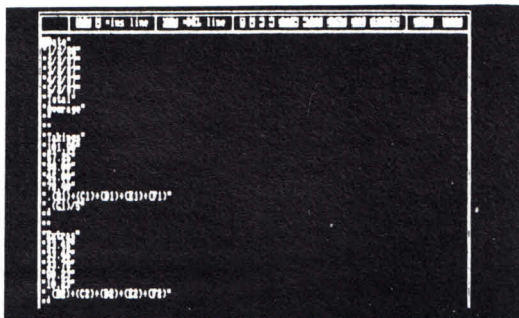
A spreadsheet is one of those pieces of software that everyone needs, but you only realise how much you need it after you've used it for a while. Here is a spreadsheet that does the essential basics that professional spreadsheets do - the main difference is you don't have to cough out any money for it.

The idea of a spreadsheet is that it acts just like a big sheet of paper on which you are working out complicated computations. It's made up of a grid of cells - each cell is an area of the screen where you can print a number, a heading or a formula. Cells are laid out in rows and columns so you can neatly lay out your data. You can add, subtract, multiply or divide the figures in any cell and add in the headings to make it all make sense.

The real joy of it is that all the arithmetic is worked out automatically and if you change any figure the new totals are worked out - ideal for anything where you might want to try a few 'what if' options.

The cells in this spreadsheet are numbered A to J across the top and 0 to 9 downwards - a 10 by 10 grid. For example cell A0 is in the top left hand corner and J9 is the bottom right.

There are two ways of entering information. You can choose option one (Amend) where you will be asked for the cell number (put the letter first, eg. A2) and then you are asked whether you want to enter 'data' or a 'formula'.



▲ Using RPED to create a data file

Data is easy. This is just a number or some text which you type. It is copied into the specified cell, and you move on to your next entry. The formula option is for those times when you want to carry out some arithmetic in a cell, like saying cell B3 should be B2 multiplied by 1.15. When you mention a cell name in a formula you should put it in brackets and use the symbols +(add), -(subtract), *(multiply) and /(divide). Don't leave any spaces in your formula.

For example to add a row of figures you might enter

TYPE-INS

Keep track of the figures with a DIY spreadsheet then sit down and try and solve the maze.

a formula in cell B4 which read (B0)+(B1)+(B2)+(B3). This would take the figures from B0 to B3 and add them together. The total will be printed in cell B4. Then put (B4)/4 in B5 and you have the average. If you lose track of whether you have data or a formula in a cell just choose option 4 on the menu ('Print cell contents'), put some paper in the printer and the program prints out a hard copy of what is really written in the cell.

Since the values of the cells are calculated in the order A0 to A9, then B0 to B9....J0 to J9, don't make any reference in a formula to cells beyond the current one. If you try to set cell A2 to be (H2)*5, you'll get a nonsense result because H2 isn't known when A2 is worked out.

DO IT THE EASY WAY

While you can fill up a spreadsheet by entering each cell individually from the 'Amend' menu choice, it is much quicker to type all the data into a file and load it in all at once. To understand this the best idea is to type some data into a spreadsheet and save it (option 3).

Quit the program and load RPED, the Basic text editor. (A brief guide on using RPED is in the CP/M manual.) Load the data file you saved your spreadsheet data in, and you will see a list of 100 pairs of double quotes. This represents every cell in the spreadsheet. By noting where the entries come you can see the lay-out - the first lines represent the first 10 cells across and so on. Once you have the hang of this you can just fill in the information here quickly and load the details in seconds. Press [EXIT], and your data is safely saved to the disc.

The spreadsheet's 'Fetch' option can be used to either read a previously stored spreadsheet, or to load a file of data you've prepared in RPED as just described.

You can of course then change the contents of any

cell and the computations will automatically change. And if you want to keep a permanent record of your spreadsheet press [EXTRA] and [PTR] for

```
Select 1)Data, 2)Formula 3
Enter formula (C1)+(C1)+(C1)+(C1)+(C1)

Date      1/2/88    2/2/87    3/2/87    4/2/87    5/2/87    Total    Average
Takings  101.50    57.25    90.00    45.00    70.00    363.75    72.75
Extras   23.45    33.45    33.70    50.25    10.25    151.10    30.22
                    631.25
```

▲ Entering a formula

a screen dump (PCW 8000 series only).

Those learning Basic might be interested in the way the screen is split in two. This is done using escape codes to set up windows on the screen in line 600, and set back to normal in line 590.

```

100 ' Spreadsheet
110 ' by Dave Atkin
120 ' The Amstrad User, Oct. 1988.
130 '
140 c1$=CHR$(27)+"E"+CHR$(27)+"H"
150 DEF FNat$(x,y)=CHR$(27)+"Y"+CHR$(x+
32)+CHR$(y+32):PRINT c1$
160 GOSUB 600:PRINT "1)Amend":PRINT"2)F
etch":PRINT"3)Store"
170 PRINT"4)Print Cell Contente":PRINT"
5)End"
180 INPUT"Enter Choice ",a:ON a GOTO 24
0,190,560,610,640
190 PRINT c1$:PRINT FNat$(1,5)"Enter na
me of data file ";:INPUT"",a$
200 GOSUB 590:PRINT c1$:a$=a$+SPACE$(8-
(LEN(a$)))
210 b$=LEFT$(FIND$(a$),8):IF b$=UPPER$(
a$) THEN GOTO 220 ELSE GOTO 160
220 OPEN "I",1,a$:FOR a=0 TO 9:FOR b=0
TO 9:INPUT #1,a$(a,b):NEXT:NEXT:CLOSE #
1
230 GOTO 310
240 GOSUB 600:INPUT "Enter Cell Number
(eg. B2) ",b$:b$=UPPER$(b$):GOSUB 590
250 x=VAL(RIGHT$(b$,1)):y=ASC(LEFT$(b$,
1))-65
260 a$(x,y)="":PRINT "Select 1)Data 2)E
nter More Data ";
270 INPUT "",a:ON a GOTO 280,300
280 INPUT "Enter Data ",a$(x,y)
290 INPUT "1) Finished 2)Enter More Dat
a ",a: ON a GOTO 310, 240
300 INPUT "Enter formula ",a$(x,y):a$(x
,y)=". "+UPPER$(a$(x,y)):GOTO 290
310 FOR y=0 TO 9: FOR x=0 TO 9
320 IF LEFT$(a$(x,y),1) <> "." THEN GOT
O 540 ELSE x$ = a$(x,y)
330 IF LEN(x$) < 2 THEN GOTO 520
340 sign = (ASC(x$)-41)
350 IF MID$(x$,2,1)="(" THEN GOTO 430
360 g=1
370 g=g+1:IF g> LEN(x$) THEN GOTO 410
380 h=ASC(MID$(x$,g,1))
390 IF h>47 THEN GOTO 370
400 IF h=46 THEN GOTO 370

```

```

410 a = VAL(MID$(x$,2, (g-2)))
420 x$=RIGHT$(x$, (LEN(x$)-(g-1))):GOTO
450
430 c=ASC(MID$(x$,3,1))-65:b=VAL(MID$(x
$,4,1)):x$=RIGHT$(x$, (LEN(x$)-5))
440 a=VAL(d$(b,c))
450 ON sign GOTO 460,470,480,500,490,51
0
460 d=ROUND(d*a,2):GOTO 330
470 d=d+a:GOTO 330
480 GOTO 330
490 d=a:GOTO 330
500 d=d-a:GOTO 330
510 d=ROUND(d/a,2):GOTO 330
520 d$(x,y)=STR$(d)
530 d$(x,y)=RIGHT$(d$(x,y),((LEN(d$(x,y
)))-1)):GOTO 550
540 d$(x,y)=LEFT$(a$(x,y),8)
550 z=x*2+10:w=y*9:PRINT FNat$(z,w)d$(x
,y) " ":NEXT:NEXT:GOTO 160
560 PRINT c1$:INPUT "Enter name of data
file ",a$
570 OPEN "O",#1,a$:FOR a=0 TO 9: FOR b=
0 TO 9:WRITE #1, a$(a,b):NEXT:NEXT
580 CLOSE #1:GOTO 160
590 PRINT c1$:PRINT CHR$(27)+"X"+CHR$(3
2)+CHR$(32)+CHR$(61)+CHR$(120):RETURN
600 PRINT CHR$(27)+"X"+CHR$(30)+CHR$(30
)+CHR$(37)+CHR$(120):PRINT c1$: RETURN
610 PRINT c1$:INPUT "cell number";c$
620 a=VAL(RIGHT$(c$,1)):b=ASC(UPPER$(LE
FT$(c$,1)))-65
630 LPRINT c$" "a$(a,b):GOTO 160
640 GOSUB 590:END

```

MAZE by Michael Gibbs

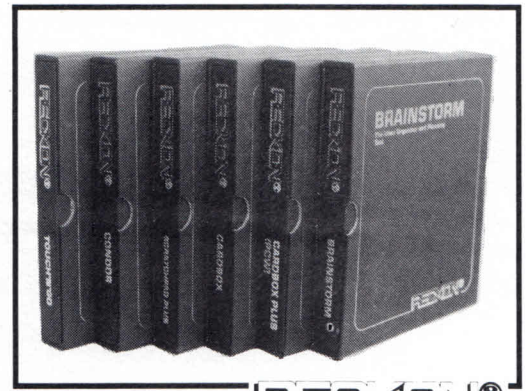
Thirty four lines of Basic may seem a lot for a game but, Maze is out of the ordinary for Basic listings. For a start it looks really impressive.

The program generates a random patterned maze which you have to cross from left to right. To do this you use the keys A and Z to move up and down and / and \ to move left and right. The first thing you do is choose whether you want to tackle the maze 'blind' or normal. For novices, pick the 'normal' option when you can see all of the maze. In 'blind' mode, for experts only, you can only see the parts you have already gone over!

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There is no other spreadsheet available for the Amstrad PCW range that has quite as many useful features as ScratchPad Plus.

Other than those features you would expect from any quality spreadsheet you can look forward to the following that puts the Plus into the product's name.

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All spreadsheets begin by building a model in memory, but unlike most spreadsheets, ScratchPad Plus does not stop when you have used all the available memory. It pretends that your disk drive is extra memory and uses the space to continue working for you. This means you can create larger spreadsheets.

Variable Spreadsheet Dimensions

With all other spreadsheets, the theoretical size of rows and columns is fixed. This means that you are forced to fit your application to the spreadsheet. Not so with ScratchPad Plus, you can decide how many rows and columns you want and not only save a lot of space but make the spreadsheet fit your application.

Multiple Windows

This feature is particularly useful if you are working with larger spreadsheets. It allows you to divide your spreadsheet into different sections called "windows", view them all together on the screen and jump between them as you wish.

Instant Help

ScratchPad Plus has a comprehensive "On-Line" help system available to you at all the time you are working with your spreadsheet.

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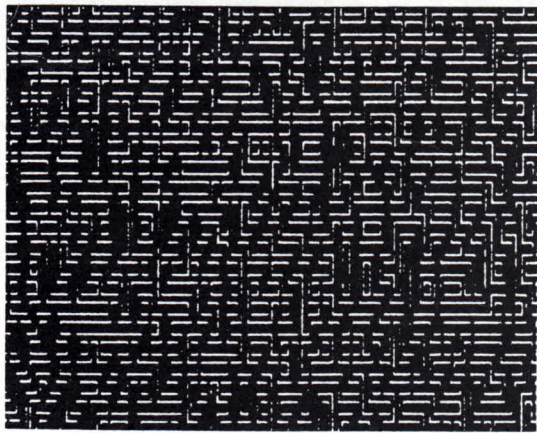
With Cardbox you can maintain instantly accessible records of customers, supplier, staff, books, journal extracts, club memberships, widgets and just about anything you can think of. You design the card layouts yourself and index the information as you put it in. You can have any number of keywords in a file, display or print cards in any format and exchange information with other programs.

You can have up to 65,000 cards in any one file (depending on disk capacity). Each card can have up to 1404 characters on it. There can be up to 26 fields on each card. The largest field you can have is 1404 characters (the size of the card). And there is absolutely NO LIMIT to the number of indexed words you can have on a card or in a file, if you require more power and size ask us about Cardbox-Plus.

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After you have chosen you will be asked to press the Space bar. The time you take to press the space is measured to provide a random factor in the choosing of the maze patterns. After this there is a long pause while the maze is calculated. When it finally appears, press one of the cursor keys A, Z, / and 1/2 to make the cursor appear.

You are given a time limit which counts down to zero. If it expires you are back to square one - if you succeed your prize is being allowed to tackle another maze, but in a shorter time. The program also notes how many moves you made to cross the maze.

Because it is more difficult you are given more time to complete the blind maze but one or two experiments at the normal maze quickly proves that it isn't much easier. In fact if you are having difficulty following the way the cursor moves round the maze then running the blind maze first may give you a better idea of how it works.

There are several details about listing in this program for programming fans. The program does do one or two things with the cursor, and when you leave the program you will find the screen in reverse video. Either reset the PCW, or type into Basic, PRINT CHR\$(27)+"e"+CHR\$(27)+"q" to get back to normal.

```

100 ' Maze
110 ' by Michael Gibbs
120 ' The Amstrad User, Oct. 1988.
130 '
140 DEFINT a-z:q=1:e$=CHR$(27)
150 DIM m(2,71,25):b$(1)="1":b$(2)="eee
iim":b$(3)="jjjfffn":b$(4)="cccckgo"
160 DEF FNat$(x,y)=e$+"Y"+CHR$(32+y)+CHR$(32+x):s=0:lv=1:w=70:b=1:z=1:v=1
170 h$=e$+"E":PRINT h$
180 PRINT FNat$(22,14);:INPUT"CHOOSE MAZE TYPE (0 blind maze/1 normal maze)",g$
190 d=VAL(g$):IF d>1 OR d<0 THEN 180 ELSE tt=1500-(1500*(d=0))

```

```

200 PRINT e$+"f";FNat$(33,16);" PRESS SPACE TO CONTINUE ";
210 WHILE INKEY$<>" ":u=1+(3*RND):WEND
220 PRINT FNat$(33,16);" PLEASE WAIT "
230 FOR y=1 TO 2:FOR x=1 TO 25:FOR j=1 TO u:NEXT
240 m(y,71,x)=ASC(MID$(b$(2),1+INT(RND*7),1))-96:NEXT:NEXT
250 GOSUB 450:IF done=0 THEN 250
260 done=0:t=tt-(150*lv):c=0:w=70:v=1:q=1:z=z+1
270 IF t>=700 AND z=3 THEN z=1:q=2
280 IF t<700 THEN t=700:IF z=3 THEN z=1:q=2
290 PRINT h$;e$+"p"
300 FOR y=1 TO 25:a$="":FOR x=0 TO 70:a$=a$+CHR$(32+(d*(96+(m(q,x,y))))):NEXT
310 PRINT FNat$(9,y+2);a$:NEXT:PRINT e$+"q":x=0:y=12
320 GOSUB 450:GOSUB 450:GOSUB 450:i$=INKEY$
330 PRINT e$+"q";FNat$(39,1);"TIME : ";t;FNat$(20,29);"MOVES : ";c;
340 PRINT FNat$(40,29);"LEVEL : ";lv;FNat$(60,29);"SCORE : ";s;e$+"p":t=t-1
350 IF t<1 THEN 410
360 IF i$="" THEN 320
370 c=c+1:p=m(q,x,y):k=ASC(i$)
380 PRINT FNat$(x+9,y+2);CHR$(128+p)
390 x=x+(k=169 AND ((p AND 2)/2))+((k=47 AND x>0 AND (p>8))
400 y=y-INT(k=97 AND y>1 AND (-1*(x=0) OR (p AND 1)))+(k=122 AND (-1*(x=0) OR (p AND 4)/4)AND y<25)
410 PRINT FNat$(x+9,y+2);e$+"q";CHR$(144+m(q,x,y)):t=t-1
420 IF t<1 THEN s=0:lv=1:w=70:b=1:v=1:PRINT FNat$(40,12);" GAME OVER ":GOTO 180
430 IF x=71 THEN s=s+INT((70/c)*1000):lv=lv+1:PRINT FNat$(40,12);" WELL DONE ":GOTO 200
440 GOTO 320
450 IF done<>0 THEN 490
460 a$=b$(1+((m(z,w,v-1)AND 4)/4)-(2*(m(z,w+1,v)>8)))
470 m(z,w,v)=ASC(MID$(a$,1+INT(RND*LEN(a$)),1))-96:v=v+1
480 IF v=26 THEN v=1:w=w-1:IF w=-1 THEN done=1
490 RETURN

```

There are obvious disadvantages in being the last company to launch a desktop publishing package. But as AMS prepare to launch Stop Press, the last in the expected line of major DTP packages, they must also agree that there are one or two advantages.

For a start they know what they are competing with. Software designers Tecnation certainly seem to have aimed at producing a program with a few differences over its rivals. While competitors have been thinking primarily of a system to produce news sheets in proper newspaper format, Stop Press aims to take a wider view of DTP.

Of course, you can still produce a newspaper page on Stop Press but it is a program that gives you greater control over the graphic elements of the page than the words. For example, it offers a freehand art package and a simple-to-use graph drawing package, as well as all the fancy fonts and text handling facilities normally associated with DTP.

GETTING IT RIGHT

Working within the limits of the PCW the designers admit that you can't do everything. In Stop Press there just wasn't room for a text editor. Whether this is a major disadvantage or not must depend on the user's own method of working. The theory is that you use LocoScript to get your text right and then place this text file onto the page. All the style commands, such as bold and italics will appear correctly, and you have the benefits of doing all your writing in a familiar environment.

Stop Press offers a choice of 18 text sizes between 10 and 192 point, and you can infinitely alter the width of and height of letters in each type-size. You can also adjust the 'kerning' (the space between the lines). This allows great opportunities to adjust the text to exactly fill the space available. There are 14 different fonts available to ring the changes with.

Stop Press steals a trick from

ADVANCE STOP PRESS

After a year of activity in the Desktop Publishing market is there room for another DTP package? Alec Rae provides a preview of Stop Press, the offering from Advanced Memory Systems.

LocoScript and runs on a two level system of menus or command keys. Instead of the familiar small pull-down menus, Stop Press has a large control panel which fills the whole screen. From this you can run any of the program's varied operations simply by pressing a couple of buttons on the mouse (coming from mouse champions AMS it naturally enough lays a strong emphasis on the use of a mouse).

The panel is set out in a grid with letter and number references, and you can call up any function at any time with a couple of key-strokes just by typing in these references - once you know the system well enough to remember the references.

All operations can be carried out by using the mouse to click on icons so there are no complicated commands to learn. Some of the icons are very strange, and you may need a good imagination to work out what all the pictures signify!

ICING ON THE CAKE

Stop Press has a few features that make it a bit different to the other DTP programs. You can produce graphics with all the features you would expect in a stand-alone free-hand drawing package. There are even some unusual ones such as the ability to design your own small

symbols and fill patterns.

If you don't have the artistic ability to create your own works of art you will still find the art editor facility useful when you want to try out some fancy design work on your pages. You can use it to touch up your headlines, for instance. Of course, the program comes with a full set of clip art examples and it will read graphics from digitisers and also MasterScan.

The business user may find the EasiGraph section invaluable. This is designed to allow you to present



▲ Stop Press can still produce the standard newspaper type format

information as line or bar graphs or pie charts just by typing in the data values.

• *Stop Press for the PCW8000's (and a CPC6128 version) is available from Amsnet International at \$138.00.*

CAN YOUR PCW THINK?

Artificial Intelligence is the buzzphrase of the moment, but can computers really think for themselves? Ben Taylor investigates two PCW A.I. programs and their background.

Here's a scenario which many PCW owners will find all too familiar. You are sitting at your keyboard doing a spot of databasing when you decide to print out some of your data. You go through a long series of menus to set the printer up, and finally the program asks you to type in the name of the file to print. In your haste you type RESULTS.DAT instead of RESULTS.DAT.

Whirr, whirr, the program solemnly reports that it couldn't find a file called RESULTS.DAT and you have to go through the whole process again from scratch. "Why", you ask not unreasonably, "couldn't

the stupid program have realised what I meant? It's obvious."

It is indeed obvious, and this is one reason why so many newcomers find computers impossible to deal with. Computers take everything so literally. But all that could soon change thanks to the exciting developments in the area of Artificial Intelligence, or 'AI' as it is called for short.

Anybody who has tried to write a program in Basic even to do something relatively simple will know that it is harder than it looks. Writing software which appears to show common sense is extraordinary-

ily hard, mainly because humans unconsciously use a vast amount of experience and background knowledge when making a decision. To the PCW, RESULTS and RESULTS are both just collections of letters - it can't tell that RESULTS is a proper English word and therefore what you really mean.

In general, the kinds of programs that AI practitioners are trying to write are ones to emulate the various human faculties. Programs to understand English (written or spoken), to recognise objects in a photograph, to plan courses of action and to learn by trial and error are all under development. As yet, the science fiction human-like robot is still a good 25 years away.

However, one area of AI that is already with us and providing tangible benefits is the so-called 'Expert System'. Expert Systems are computer programs which act as advisers or experts in specific areas.

One very common example is an expert system to diagnose medical complaints - tell it your symptoms and the program tells you what is wrong with you, applying the expertise of a doctor.

With the release of two Expert Systems - Wise One from Swallowsoft and Expert86 from Prospec - the potential of AI has arrived on the humble PCW.

WHAT IS INTELLIGENCE?

One of the most interesting things about artificial intelligence is the philosophical and ethical implications behind it. Many people (especially religious commentators) argue that it is impossible by definition for a machine to be intelligent because it has no 'soul'. The soul is taken to be an indefinable quality the humans have.

There is a famous yardstick called the 'Turing Test' (proposed by the English mathematician Alan Turing) to gauge whether a computer is intelligent or not. Sit someone down at a keyboard connected to something in another room, and let them type questions in and read replies on the screen. If the person cannot tell whether it is a computer or a human that is responding, then the computer (if it is a computer) is intelligent.

In other words, if a computer acts intelligently for all practical purposes then why not call it intelligent? This isn't a bad approach - after all, when you go to the doctor do you ask him what methods he was taught at medical school before accepting his opinion.

There are a couple of ethical points arising. How will all doctors feel about being replaced by computers? Do patients trust computers? And what happens if a computer makes a wrong diagnosis - do you sue the computer owner, the program distributor, the original programmer or the human expert whose opinions were used as the basis for the program? All good stuff for family arguments.

EXPERT SYSTEMS

The first thing you have to realise is that computers are just a bunch of wires and plastic and can't think creatively on their own. The purpose of the expert system program is to allow you to tell the computer how to make sensible decisions.

Properly speaking (you ought to learn a little pedantry; it makes a great put-down to bores who ask awkward questions when you casually mention your artificially intelligent computer) the two programs reviewed here are expert system 'shells'. This means that they are empty frameworks waiting for you to put knowledge into them - it isn't until you have done this and got the PCW answering questions



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LocoMail
Mail Merge for LocoScript 2



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LocoMail now comes with a completely revised 288 page User Guide – available separately for users of the PCW9512 and earlier versions of LocoMail.

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SECRET OF KNOWLEDGE

There are two kinds of expert system. With one kind you work out what rules you use to solve a problem, type them into a file and let the expert system apply the rules in the same way you would.

The second kind is more ambitious, instead of typing in the rules that you have worked out, you type in a set of examples. For instance, if you happen to know that the symptoms of measles are a high temperature and red spots, and for chicken pox are white spots (and so on), you just type in a list of the symptoms and diagnoses. The expert system then takes the examples and tries to work out for itself a pattern of what symptoms go with which diseases.

These two approaches are respectively 'deduction' and 'induction'. The deductive expert system takes the diseases it knows about, deduces what the symptoms ought to be and checks them against the actual symptoms until a match is found. The inductive system takes the known symptoms and tries to work out the diagnosis from past experience.

about your tax affairs that you have an expert system as such.

You can only get out of a computer what you put into it. If you yourself know nothing whatsoever about animal husbandry you can't expect to be able to write an expert system to advise yourself on how to breed llamas. In fact, to go further than that, in most circumstances an expert system which you set up

yourself will be of little use to you personally because by definition you must know everything it knows.

So why are expert systems useful at all? Well, the idea is that they are used by someone other than the person who set them up. Take an expert who knows everything there is to know about the rules for claiming social security benefits:

suppose you ask him to explain the rules he uses when he assesses a claim and you then put those rules into an expert system.

A typical rule might be something like: 'IF the claimant's assets are over \$4,000 THEN don't allow any supplementary benefit', or 'IF the claimant wants any money THEN refuse'.

What you now have, in theory, is the assessor's expertise captured in a program. You could now sell this program to various self-help organisations around the country. People who go to these agencies for help would then run their personal details through the expert system and get a quick preliminary decision on how much benefit they can claim. In this way the assessor's knowledge - which is highly skilled and scarce - has become widely available.

This is why people are getting excited about expert systems.

WISE ONE • Swallowsoft • All PCWs

The expert system programs just released for the PCW conveniently enough give examples of both the deductive and inductive methods (see the 'Secret of Knowledge' box). Wise One falls into the deductive category.

For your money you get a spiral bound manual and a disc packed with examples. Getting an effective expert system out of Wise One falls into three stages. First find an expert and type all the relevant rules he knows into text files. Then run the 'Knowledge Builder' program over this file of rules which checks them for consistency and converts them into an internal format that is more

convenient for the program to work with.

Once you have got this internal file (called the 'Knowledge Base' because it is a database of knowledge) you are ready to consult the oracle. Whenever you want advice on your health (or whatever area it was that you chose to write the rules about) you run Wise One's 'Consultant' section. This reads the knowledge base and applies the rules as best it can, eventually coming up with a conclusion depending on how you reply to the questions.

To write the rule file you will need to have some way of creating simple ASCII files. LocoScript is not really suitable, because of the problem of switching between CP/M and LocoScript but you can get by with the PCW's RPED Basic editor. This can only create files up to

200 lines long, and ideally you ought to use a programmer's editor such as Protex.

You only need to go through the process of writing the rules and running the Knowledge Builder once. Once everything works all you need to have a consultation session is the Knowledge Base file and the Consultant program.

DOCTOR, DOCTOR

As an example, here is how you might use Wise One to build a simple Expert System to diagnose common children's diseases - measles, chicken pox, mumps, colds and flu.

All the diseases involve a high temperature. Measles has red face spots, Chicken Pox white face spots, Mumps no spots but a swollen throat. A cold and flu have no spots, but flu is accompanied by a fever (say over 100°F) whereas with a cold the temperature is from normal up to 100.

FARMER NOTE

For those city dwellers who know a little of country matters be warned that 'AI' is the farmers abbreviation for Artificial Insemination. Bandy it about in conversation at your peril.

Joined up writing on a PCW8256? Yes, use LocoFont!

For just \$75.00, LocoFont gives you ten distinctive typestyles on the PCW's built-in matrix printer.

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To select a typestyle, simply pick the font you require from one LocoScript menu.

Of course, coming from Locomotive Software, all ten styles include all of LocoScript2's characters and accents. You'll even get better looking text in 15 and 17 pitch - the new fonts have twice the resolution of the old!



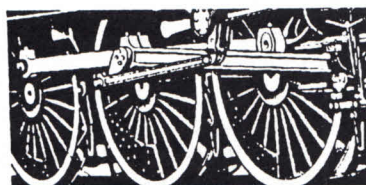
LocoScript2 - New Edition!

If you haven't already, now's the time to move up to LocoScript2 - the better word processor for the PCW.

Not only have we released LocoFont (which only works with LocoScript2), but for LocoScript2 itself now comes with two highly quality typestyles. And if you want to use a different printer, we now support over 250 matrix, daisywheel and laser printers - but for some, you may need the Printer Drivers Disc

The new edition of LocoScript2 costs \$87.00. Buy LocoScript2 together with our spelling checker LocoSpell for \$130.00 saving \$32 on the combined price. To complete the family, add LocoMail for \$105.00.

Note: An upgrade of LocoSpell1 and LocoMail1 is also available for \$18.50. For more information ring (03) 233 9661.



LOCOMOTIVE SOFTWARE

Dear Aunty Mary

Thank you for the wonderful socks you sent for Christmas. They fitted perfectly, and were right colour to go with my new suit.

I hope that you and Uncle Tom had as enjoyable Christmas as I did. I expect the weather will be rather warmer in Spain than it was back home.

Yours

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```
rule
disease is measles
if spots position is face
and colour of spots is red
and temperature is > 98
*
```

▲ An example 'rule' for Wise One

```
elem'colour of spots'
text'colour of the spots'
valo'red;white'
ques'What is the'
*
```

In fact, you have to make up two separate files which Wise One uses to get its rules. One contains all the questions that need to be asked as the program runs, and the other

contains the rules which work on the answers - these are called the 'element' and 'rule' files respectively (one of Wise One's faults is getting carried away giving important sounding names to everything it does).

Extracts from the two files are shown in the printouts. You can see that in the rule file, the English is a little stilted but the logic is pretty clear and simple to write. In the

element file the language is much more complex, and unnecessarily so. Essentially each chunk sets up something the system needs to know about (like the child's temperature) then defines how the user should be asked. For example, the 'colour of spots' entry makes the program print on the screen "What is the colour of the spots?" and only take red or white for an answer.

Once these definitions have been checked by Wise One you can get going with the consultation. This is straightforward. The idea is that someone totally unskilled with computers can just sit down and answer a string of questions and be presented with an answer.

Wise One has a range of special rules to do things like print out helpful information at strategic points, and to make sure that the questions are asked in the right order. For instance, there is no point asking what colour the spots are before asking whether there are spots there at all. You can even store screenfuls of text files on disc and pause to display the whole file in

the middle of a consultation.

Wise One's rules are really a mini programming language. You can arrange for simple arithmetic comparisons to be done, which is very useful. For example, if today's temperature is more than yesterday's, then do something special.

The user is allowed to ask 'Why?' whenever Wise One asks a question, just as you might ask your GP why he wanted you to stand on your head. This prints out the current rule it is thinking about with details of why that rule is being used.

Without doubt Wise One is a powerful expert system shell. It has a few faults. Its way of writing rules in is at times unnatural and over-complicated; you can't include quote marks in text messages you want to display; simple mistakes can result in a frightening avalanche of error messages; the manual takes a delight in referring you to other pages ('see section 4.3.2' etc) and in introducing jargon names as often as it can. You will need to have a programmer's instinct to get the best from Wise One.

EXPERT86 • Prospec • All PCWs

Whereas Wise One is a deductive expert system shell, Expert86 is inductive - it tries to work out its own way of getting the answer from a set of examples.

Prospec will sell you Expert86 without the manual - the disc contains several large documentation files anyway. Having said which, the manual is well written and definitely worth having unless you are really confident of your abilities.

This 'inductive' business sounds great, doesn't it? Just throw a load of facts at the system and it works out the rules for itself. Of course life isn't that easy, and it has to be said that although Expert86 is much easier to use than Wise One it is ultimately not as powerful.

To run the doctor example through Expert86, you need a

different approach. Again you need to create a text file of the questions to be asked when the program wants to find out the child's temperature and so on.

However, where Wise One needed a rule file, Expert86 wants a 'training set'. This is a file containing as many examples of diagnoses as you can think of. For the system to be infallible you need to type in every possible example it could ever come across, which is sometimes possible in small applications. If you generalise and go for a compact training set the system will work fine in most cases, but sometimes will not be able to find an answer. In the example shown, if a child has red spots in the throat there is no known diagnosis.

An asterisk in the training set means 'don't care'. This is useful if a

symptom doesn't affect a particular disease. For example, you aren't bothered what temperature the child has for chicken pox because it can be high or normal depending on what stage the disease is at.

ARTIFICIAL INTELLIGENCE

When you run Expert86 it looks over your training set and works out its decision process. It composes a decision tree which it writes to a file in English form, and it is often interesting to read this. If one symptom is actually totally irrelevant in the entire diagnosis (suppose you had set up a column for the colour of the patient's eyes) you will see that even though you religiously typed it into the training set file it doesn't appear in the decision tree. This tells you, the system designer, a lot about the

problem and can clarify your own thinking.

Expert86 automatically runs the consultation session after it has worked out its decision tree. This is a conventional question and answer session ending in some result (or the program giving up).

The user can ask 'Why?' at any stage, when Expert86 parrots back some text which you defined in the question file. This sounds unsophisticated, but if used carefully you can engineer some almost natural English conversations.

Expert86 has a good manual which explains well the basic principles and gives good examples. However, there are some problems. There is no way to do any arithmetic (eg. to say some result is true if one value is twice another one). You can use numbers if you are crafty in the way you phrase questions: when asking the child's temperature you can't ask for a number, you have to

99-100	face	red	*	*	measles
100+	face	red	*	*	measles
99-100	no_spots	no_spots	*	throat	mumps
100+	no_spots	no_spots	*	throat	mumps
*	face	white	*	*	chicken_pox
99-100	no_spots	no_spots	yes	no_swelling	common_cold
100+	no_spots	no_spots	yes	no_swelling	flu

temperature	position of spots	colour of spots	blocked nose	swelling	diagnosis
-------------	-------------------	-----------------	--------------	----------	-----------

▲ A 'training set' for Expert86, listing symptom and diagnosis examples.

allow a range of answers like 'normal', '99-100', '100+'.

A major problem in Expert86 is that there is no way to force a specific order of questioning. If you were writing a tax adviser you might find yourself being asked how much your spouse earned before being asked whether you wanted to be separately assessed or not. In practice this means that Expert86 is not suitable for situations where you want to be able to

follow specific lines of questioning depending on replies to earlier questions, which to be honest covers quite a lot of applications.

Wise One and Expert86 may not be available in Australia. Enquiries may be made direct to the UK; to Swallowsoft Publications, PO Box 107, Walton-on-Thames, Surrey KT12 5PQ; to Prospec, PO Box 28, Beeston, Nottingham NG9 1PH.

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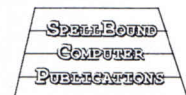
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USING DIFFERENT PRINTERS

LocoScript 2 can print on a wide range of printers, not just the PCW printer. What you need in order to use a particular printer depends on that printer. The information here should help you choose.

The information LocoScript 2 uses to control each printer is gathered together in a special file. This is called a printer driver. Each printer LocoScript supports has its own printer driver - or is similar enough to another printer to be able to use that printer's printer driver.

To get the best results from your printer you will need to identify the most suitable printer driver and copy it to your Start-of-Day disc. Many printers actually emulate several different 'standard' printers - you'll have to choose which emulation to use, then identify the printer driver for that emulation!

The LocoScript 2 disc contains printer drivers for most types of printer. However, some printers are only supported in a very basic way and may not be able to reproduce all of LocoScript 2's features (no bold text or changes of pitch, for example). To overcome these deficiencies Locomotive Software has produced a range of special printer drivers.

The table on the next page lists the printers known to be supported by LocoScript 2. There are special printer drivers available for those printers marked with a star (*) symbol. These special printer drivers are supplied on the Printer Drivers Disc.

PRINTER INTERFACE AND CABLES

Whichever extra printer you choose, you will need an "interface" to attach to the PCW - ie. a box to plug into the back of your PCW and into which you can plug your printer's

cable. Locomotive recommend the Amstrad CPS8256 interface (now imported into Australia by Amstrad Pty Ltd at a cost of \$145). This can be used with most printers.

You will also need a suitable cable. If one is not supplied with your printer, you should consult a good computer dealer or one of the many mail order computer supplies companies. They will need to know the printer you have and the kind of interface you are using.

PRINTING SPECIAL CHARACTERS

When you use an alternative printer, the characters you can print are those available on the printer. The range of characters will often be substantially smaller than you can print with the built-in printer. With a daisy wheel printer, the characters you can print will vary depending on which daisy wheel you have fitted.

Often, the printer files supplied as standard will be quite sufficient for you to use your printer simply and correctly - albeit with the occasional blank where you have used a character that your printer can't print. However, there can be times (particularly with daisy wheel printers) when the wrong characters will be printed. For example, you may type # and actually produce £ - or, to look at it another way, you may have to type # in order to produce £!

This occurs because your printer differs slightly from the standard expected. In these circumstances you will need to use the Printer

Character Sets Disc to "tell" LocoScript precisely which characters your printer can print, and how to print them.

THE PRINTER CHARACTER SETS DISC

The Printer Character Sets Disc contains a CP/M program called CHARKIT that will let you produce your own Character Sets - specifically tailored to the characters your printer can print. CHARKIT helps you produce extra printer files, which LocoScript can then use to print all the characters available on your printer correctly.

You provide CHARKIT with a list of the characters you can print, and how these are described to your printer. You can prepare this list using LocoScript. You can even specify which characters are accents, and LocoScript will then use these to print accented characters.

To make this a straightforward task, the Character Sets Disc also contains some sample lists of characters, and the manual explains how these can be used to create your own. There are also some extra programs to help you find out which characters are printable and which widths look best (in case your printer's manual is not so helpful!).

You can also get LocoScript to print characters which your printer doesn't have by superimposing characters that it does have (possible with small positioning adjustments too).

Many printers allow you to choose different sets of characters for printing - by choosing options or changing font cartridges on matrix and laser printers, or changing printwheels on daisywheel printers. For example, on an Amstrad DMP4000 you can select the FX80 character set or the IBM character set, and on the Diablo 630 you can choose, say, English or Bilingual printwheels.

You can exploit this flexibility fully with LocoScript 2. Use CHARKIT to create different Character Sets for the various sets of characters you can print, then you'll be able to choose which one to use

for any document simply by selecting it from a LocoScript menu. LocoScript will even check that the current setting of your printer matches what is required for each document.

KEYBOARDS DISC

The Keyboards Disc lets you mix and match the different versions of LocoScript and different keyboard layouts. With the Keyboards Disc you could, for example, use a French AZERTY keyboard with an English version of LocoScript 2.

ADAPT LOCO2 TO YOUR KEYBOARD

LocoScript 2 is normally supplied set up so that English versions of

LocoScript assume that you are using an English QWERTY keyboard, French versions assume that you are using a French AZERTY keyboard, etc.

However, LocoScript 2 actually holds the keyboard details separately. So you can mix and match versions of LocoScript with different nationalities of keyboard. All you need is the version of LocoScript with the messages in the language you want to use and the keyboard file for the nationality of PCW you have.

The Keyboards Disc contains keyboard files for American, Canadian, Danish, French, German, Italian, Norwegian, Spanish, Swed-

ish, and of course, English machines. To change to a different layout, just copy the appropriate file from the Keyboards Disc to a LocoScript 2 Start-of-Day disc, rename the file KEYBOARD.JOY and then load LocoScript 2 using this Start-of-Day disc.

The Keyboards Disc comes complete with keyboard files for all nationalities of PCW and diagrams of all the foreign keyboard layouts. So, if you prefer to use a French layout with your English PCW, you can - all you need is to relabel the keys from the French keyboard diagram. Note that different keyboards cannot be supplied, just the layouts!

PRINTERS SUPPORTED BY LOCOSCRIPT2

This list has been compiled from information supplied by the various printer manufacturers, and whilst Locomotive Software attempt to verify the information is correct, it is not possible to test all printers. Before basing a purchasing decision on this table, you should verify with your dealer that the printer you require is supported by LocoScript2. Few printers can reproduce all of LocoScript2's printing effects, so in addition you should verify with your dealer the particular effects you require are supported. The only printer which is capable of printing the entire LocoScript2 character set is the built-in dot matrix printer. Printers marked * may require printer drivers from the Printer Drivers Disc.

Amstrad DMP 2000 DMP 3000 DMP 4000* LQ 3500*	Busicom NX-90*	C.Itoh Super F+ C210 C310 XP C315 XP C715 F* C715Q* CI-3500* TPX-80 D10-40 F10-40* F10-55* FP1500-25* LIPS10	EX-800* EX-1000* FX-80/85 FX-105 FX-800* FX-1000* JX-80 RX-80 LQ-1500* LQ-500* LQ-800*/850* LQ-1000* LQ-1050* LQ-2500* GQ-3500*	Proprietary* 6746/7 Juki 5510 5520 2200* 6000* 6100* 6500 Kaga KP-810 Kyocera F-1010* F-2010* Facit 4565* Mannesmann MT80+ MT460 MT490 MT910 Gakken 2000*	MP165 MP200 MP201 NEC P5 series* P6 series* P7 series* P2200 series* 350* 360* 3510* 3515 3530* 3550* 8810* 8815 8830* 8850* Oki Microline 80 Microline 292* Microline 293* Microline 294* Laserline 6*	Mastertype I DX-86 NP80* DX-135/6 NP136* ESW103* Carrera* Panasonic KX-P1080* KX-P1081* KX-P1082* KX-P1083* KX-P1592* KX-P1595* KX-P3131 KX-P3131U KX-P3151U Quendata 1120 DWP* EX80*	Sanyo PR3000 PR5200 Schneider SD24* Seikosha SL-80AI* SP-1200AI Silver Reed EXP400/420 EXP500/550* EXP600 EXP770 EXP800 EX32 EX43/43N EX44 EX66/66IF/66FD EX200/300 EZ30/50 Remstar 202* Ricoh RP1600 Samieco DX-85	Star Gemini-10X* Delta 15* LC-10* NL-10* NB-15* NB24-10* NB24-15* ND-15* NR-15* NX-15* Power Type* Toshiba P321* P321 + Qume* P341e* P341e + Qume* P351/P351C* Triumph-Adler R.O.Master 2000 Uchida DWX-305* Walters International WM100 SX* Printmate 350*
Brother M-1109* M-1409* M-1509* 2024L* TWINRITER 5 HR-1 HR-10 HR-15 HR-15XL HR-20 IF-50/50KSR* <i>for typewriters</i> Executron 65 CE-50/51/60/61/70 EM-80/85/100/200 EM-250 IF-60* <i>for typewriters</i> AX-20/30 CE-500/550/650 IF-100 <i>for typewriters</i> EM-100/200/250 IF-300/300II <i>for typewriters</i> EM-501/511/721 EM-811/1000	Canon A-60/F AP-110 AP-160 AP-250 AP-360 AP-400* AP-510* AP-600 AP-610 AP-700 AP-800 TYPESTAR 7 LBP-8 LBP-8II Centronics GLP H80* H156* PP-8* Citizen LSP-10 MSP-10E MSP-15E MSP-20 MSP-25 120-D Overture 110* Premiere 35	Daisy M3001 M8001* M45-Q* M7001* Dataproducts DP20 Daiblo 630-SPI 630-API Dyneer DW-12 DW-16* Epson DX-100	Fujitsu DX2100* DX2200* SP830 Memotech DMX80 Hewlett packard Laserjet* Laserjet+* Laserjet500+* IBM 5152*	Merlin MP1881* Micro Peripherals MP26 MP40 MP135	Olivetti ET 109 Olympia RO* ESW-3000* ESW-1000C	Smith Corona EL4000* TP-1 L-1000		



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ADAPTING LOCOSCRIPT'S KEYS TO YOUR NEEDS WITH LOCOKEY

With the Keyboards Disc LocoScript 2 can adapt to any of the standard Amstrad keyboard layouts, but this won't always provide the most convenient layout for you.

You might, for example, use an English PCW, but often use é - typed on the English keyboard as the acute accent followed by the letter e. To get é as a single key press, you could swap to a French keyboard layout which includes é as a character in its own right, but this would be inconvenient as many other keys would no longer match the engraved legends!

LocoKey is the answer. This lets you redefine the meaning of any key (with or without Shift, extra or Alt and in any Super Shift) to suit your particular application. The French writer on an English machine could then choose a little used character (say &) and use LocoKey to make the & key produce é. The Danish user could make this key produce Ø.

LocoKey can also be used to change the keys to press for the special characters you create with LocoChar.

LocoKey runs under CP/M. It displays a picture of the keyboard underneath a list of all the charac-

ters LocoScript can use. To set a key to produce a character, you simply move one cursor to the key and another to the character, and press COPY to copy the character and PASTE to 'paste' it onto the key. LocoKey also lets you swap whole keyboards - the Alt keys and the Greek keys, say.

LOCOFONT

LocoFont lets you add extra style to your LocoScript letters and documents. LocoFont is a set of nine extra typestyles for the built-in matrix printer.

LocoFont consists of a disc including a "character set" file for each of the extra typestyles, together with full installation instructions. Briefly, all you need to do to access the fonts is to copy the files to your Start-of-Day disc and update the Settings file. To use one of the new typestyles, simply select the appropriate character style.

The Sans-serif style has been designed with the same character widths as the standard style. So Sans-serif documents lay out identically to the standard style. The other new styles have different character widths and documents using these may lay out in a slightly different way. Note that a document can only use a single style.

Various typestyles for the PCW8256/8512 printer.

Various typestyles for the PCW8256/8512 printer.

VARIOUS TYPESTYLES FOR THE PCW8256/8512 PRINTER.

Various typestyles for the PCW8256/8512 printer.

Various typestyles for the PCW8256/8512 printer.

Various typestyles for the PCW8256/8512 printer.

Various typestyles for the PCW8256/8512 printer.

▲ A sample of some of the fonts

PCW 8256, 8512 & 9512 SOFTWARE

Games for PCWs

Title	Price
<i>Classic Quest Adventures:</i>	
Goblin Towers (moderate)	49.95 p
Forestland (hard)	49.95 p
Witch Hunt (very hard)	49.95 p
<i>Distractions:</i>	
<i>3 graphics games compilation:</i>	
<i>On the Run, 2112 AD, & Nexor</i>	59.95 u
Graham Gooch Cricket (Limited Overs & Test Match)	59.95 p
Guild of Thieves	69.95 q
Gnome Ranger	<<NEW 59.95 u
Ingrid's back	<<NEW 59.95 u
Jinxter	69.95 q
Knight Orc	<<NEW 59.95 u
Lancelot	<<NEW 59.95 u
Living Daylights	49.95 e
The Pawn	69.95 q
Silicon Dreams	59.95 q
Starglider	69.95 q
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Tetris: mind game	59.95 u
Time and Magik Level 9 trilogy	
<i>Lords of Time, Red Moon and Price of Magik</i>	49.95 p
Tomahawk: helicopter sim.	57.95 u
Trivial Pursuit - Genus Edition	29.95 e

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Cardbox Plus	199.00 r
Condor One	149.00 r
Masterfile 8000	119.00 u

Desktop Publishing

Desk Top Publisher	99.00 p
Fleet Street Editor	185.00 x
Newsdesk International	125.00 x

Word Processing

LocoScript 2 (v. 2.16 - New Ed)	87.00 u
LocoScript 2 + LocoSpell	130.00 u
LocoMail2	105.00 u
LocoSpell2	75.00 u
Updates from Locomail1 to 2	18.50 s
Updates from LocoSpell1 to 2	18.50 s
Updates of Loco2 to v.2.16 NE	18.50 s

NewWord2 - only one available, was \$275.00 but now \$150.00 x

Miscellaneous

Brainstorm - a tool for structuring raw ideas in a logical manner	99.00 r
Mini Office Professional - the PCW version of the highly successful Mini Office II with Spreadsheet, Word-processor, database, graphics and communications all for just	129.00 p
Money Manager Plus - cash book/ personal accounting	99.00 p
Plan-it - desktop organiser, plan budgets, sort files etc.	49.95 p
Protect PCW - wordprocessor	199.99 p
Prospell PCW - spell checker for most current wordprocessors including WordStar and LocoScript	99.00 p
Tait Accounting System - small business accounting with Debtors, Creditors, Invoicing	129.00 p
Tait Database and Labeller - simple database plus label printer	59.95 p
Touch 'n' Go - the friendly approach to typing skills	69.00 r

Tasman Products

Tasword 8000	79.95 d
Tas-spell 8000	56.00 d
Tasprint 8000	52.00 d
Tas-sign 8000	89.95 d

Spreadsheet

Scratchpad Plus	99.00 r
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Peripherals

SCANNER - Master Pack - consisting of a scanning device which attaches to a PCW printer head to copy photos or other art work, Master Scan software to run it and Master Paint, a powerful graphics package. This pack is compatible with Desktop Publisher, Fleet Street Editor and Newsdesk International 279.00 p

SCREEN FILTER	29.95 p
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Coloured Nylon - Blue, Red, Green or Brown	24.95

PCW 9000s Printer Ribbons	
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Black Multistrike	15.95
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Prestige Pica 10; Prestige Elite 12; Courier 10; Cubic Pica 10; Mini Gothic 15/Micro; Orator 90% 10; Letter Gothic 10/12; Script 12 - each	24.95

3" disc drive cleaning kit	24.95
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Amsoft 3" discs each	7.00
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Locomotive Utilities

PCW 8000s (using LocoScript 2.12 and above)	
Printer Character Set Disc for defining new character sets	59.95 u
Extra Printer Drivers Disc containing a Printer File for every current LocoScript2 compatible printer	59.95 u
Keyboards Disc to configure LocoScript2 to use American, Canadian, Danish, English, French, German, Italian, Norwegian, Spanish or Swedish keyboard layouts with any nationality of LocoScript2.	59.95 u
LocoFont adds a set of nine extra typestyles for your matrix printer	75.00 u
LocoKey to customise your keyboard layout	59.95 u
Locomail Sorting Program	39.95 u
Locomail2 Examples disc	17.50 u
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PCW 9512s (using LocoScript 2.12 and above or CPM Plus 2.3 or later where relevant)

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Locomail Sorting Program	39.95 u
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Available from The Amstrad User while stocks last

MEET THE PC ELITE

A classic game, unprotected but with a clever piracy deterrent

It can be said that Elite 'made' the BBC micro when it first appeared on the Model B. It had an amazing impact on the games market and is having an equally electric effect on the Amstrad PC and compatibles. It can also be said that the plot is nothing to write home about - an interplanetary trading game and some Star Trek type combat - but the combination of both and the sheer size is what caught everyone's imagination. For a start there are nearly 2000 planets each with widely differing politics and economies and spread over eight galaxies. Then there are clever 3-D space graphic routines. In the final analysis, it is the feeling of authenticity during the game-play which makes Elite a classic.

The game commences with you in command of a Cobra 'trading and combat' space craft, with 'lightfast' motors, Irrikon Thru-Space drives, shield generators, SynPleasure relaxapads, a Pulse laser and a 20 tonne cargo bay. In your pocket you have a modest 100 Credits, the intergalactic currency.

The first aim is to earn some money for although you are already equipped with a laser, it really is small fry compared to what will be thrown at you later on, or even earlier if you are unlucky. More Credits are obtained through trading around the planets. Being conservative will will accumulate the money more slowly.

Each planet has either an agricultural or industrial base and can have either a rich or poor economy. They also come under a certain classification in terms of their politics. These can range from Corporate States, Dictatorships through to Anarchy. A combination of all these factors determines the price of goods traded and making money means you have to buy from the poor (at a low price) and sell to the rich (at a higher price).

When sufficient funds have been earned, you can equip yourself with a more powerful machine capable of providing better protection as you explore the galaxy and meet police in their Viper ships

will be rewarded with 1500 credits if they are successful. Around the solar system can be found other traders, bounty hunters and 18 different types of space ships, each with their individual characteristics. Of course, there are a number of 'nasties' which can catch you out, such as a Thargoid combateer.

Elite comes with a 64 page manual with very clear instructions despite the complexity of the game. You also have a choice of using either solid or wire-frame graphics and on the Amstrad, even in CGA mode, choosing solid graphics doesn't slow things down.

Although the game can be copied easily, the authors have a built-in check against piracy. Whenever the game is loaded, it is necessary to key in a word from the manual (it's different every time). So



or pirates and fugitives.

Beginners may take a while to master the art of docking with a rotating Coriolis Space Station but

unless you have all the documentation you're stumped.

You would have gathered by now that I am very enthusiastic about Elite - buy it and you will see why.

Elite PC is a Firebird Gold Edition product distributed in Australia by Questor. It is available through The Amstrad User on

5.25" disc for \$69.00.

When two people talk to each other they are communicating, and assuming they are speaking the same language, will generally understand what each other is saying. In very broad terms, the same applies to computers. However, for beginners to computer communications the process of understanding is cluttered up by much jargon such as 'parity', 'bauds', 'handshaking' and so on. And if that's not enough, an understanding of the kinds of transmission is important as well as the method by which it is achieved.

We should all know that a computer holds its information in the form of bits (binary digits) which are either set to '0' (off) or '1' (on) and that each character (such as the letter C) consists of eight of those bits, collectively called a byte. Thus, the process of moving a byte from one place to another through a 'comms' link results in a character being sent.

There are a couple of ways of transmitting data. The first is 'serial transmission' which consists of one wire connecting two devices and the 'bits' of data are sent down it one at a time until all eight have been sent resulting in transmission of the complete character. The second method is called 'parallel transmission' where eight wires are connected between the two devices and all eight 'bits' are sent at the same time, one through each wire in parallel. It doesn't take much to work out which is the faster method - one at a time or all together. It should come as no surprise therefore that the parallel method is used for transmitting data between disc drives from the keyboard or to the printer. Take a closer look at your computer, and you will see the wide cables used for this purpose.

Going a step further, you can also understand why it is virtually impossible to link two distant computers together using the same method. Just think of the cabling required! Pure economics (and reliability) dictate that communications between computers should be

through the 'serial transmission' method or link. In fact, because 99.9% of communications use telephone wires there is no choice in the matter since they do not have enough wire connections to support a parallel link.

MORE WIRES

Having convinced you now that serial transmissions or links consist of a single wire, I should reveal that this is not strictly true. Yes, one wire is needed to send the data down the 'line', but another is needed to receive any data back. Other wires are also needed to keep a check on what's going on. So you end up with a multi-core cable terminated with multi-pin plugs and sockets. To avoid any confusion a standard wiring of these plugs was agreed by the US Electronic Industries Association and labelled the RS232 standard. This clearly defines to which pin a particular wire will be connected so that, for example, the 'serial data output' wire is always connected to the same pin and any computer using the standard will know which one to use. It doesn't matter the size or shape of the plug so long as the pattern conforms to the standard.

THE LINK

Computers which are reasonably close to each other, say in the same building, can be linked directly (direct connection) by a cable from their respective RS232 ports. Longer distances require a 'remote link' through a telephone cable. To most of us, this means using our normal telephone for the purpose. But with large companies, such as banks, they cannot afford to discover 'engaged' lines when they are trying to transmit some important information. For their purposes they will usually rent a dedicated line used solely for the transmission of data.

THE MODEM

No matter who wants a link, you cannot just plug the cable into the RS232 port and hope for the best. You need to go through a modem

PC COMMS

There's a lot of jargon and mystique associated with communications (or 'comms'), but when you boil down to it, the process becomes no less complicated than merely sending data to a disc drive.

(MODulator-DEMODulator) which is connected between your computer and the telephone line. The job of a modem is to convert the digital pulses transmitted by your computer into audible tones suitable for sending down the telephone lines. Equally, the computer at the other end needs a modem to convert the signal back again suitable for the computer to digest.

There are two types of modems - internal or external. An external must be connected to the PC's RS232 port by a cable, but an internal modem is already mounted directly onto a card within the computer so removes the necessity for any cabling. Naturally enough, when a direct link is made between two computers, it follows that there is a certain amount of 'cross-over' in the wires. For example, the output (send) pin from the sender joins with the input (receive) pin at the other end. When links are established through a modem, the modem itself organises the 'cross-overs' for you.

THE SPEED

Imagine someone talking to you at four times their normal speed - you may be able to get the gist of what is being said but you'll be lucky to understand it all. I don't need to tell you that even one corrupted character will cause a computer to have a relapse so it is important that all the information is clearly sent and received. This is why it is necessary to agree before a link is established as to the speed at which

the data will be transferred This is measured in 'bits per second' or 'bps' for short. Naturally, the higher the 'bps' the faster the data will be sent, but unless the 'line' is free from 'noise' then corruption of data can easily occur. Direct connection (mentioned above) is normally free of any interference and so can reasonably handle speeds at over 100,000 bits per second. Telephone links very often have 'noises' of one description or another, so a lower speed of transmission is necessary. Most modems on the market will cater for 300 bps rising to 2400 bps. In practice, especially over long distances, a speed of 1200 bps is normally successful.

READY, STEADY, STOP, START

You've now got as far as agreeing which speed you will transmit the data, but there are some more aspects to look at first before you can start. These concern extra 'bits' called 'start', 'stop', 'data' and 'parity'.

Going back to the RS232, communications through this 'interface' are called 'asynchronous', and simply explained it means that the machines at either end of the link don't know when the other is going to transmit data.

Seasoned communicators will have experienced a situation where a line appears to go dead for a while then suddenly bursts into life again. When a character is transmitted it has a 'start' bit added to the front of it (a 'zero' or negative voltage) and

at the end of the character a 'stop' bit. This last 'bit' is a 'one' or positive voltage. You can see then that the off/on situation signals the next character.

As usual, there are some exceptions but these are restricted to the 'stop' bits where some systems send two consecutive bits at the end of each character. Again, the two computers have to agree on this before transmission begins.

Next are 'data' bits. I have already mentioned that characters are sent in 'eight bit' bytes because that is the way they are normally stored in a computer - but what about ASCII characters between 0 and 127, the alphabetic and punctuation characters - these can be represented by only seven bits. Again, so long as both ends agree, you can transmit seven-bit characters if straight ASCII text is all that will be sent. However, database files, text from a word processor (formatted text) or programs such as .EXE or .COM files must be sent as eight bits. If you are not sure, it is better to stick to eight bits each time.

The final bit for consideration is the 'parity' bit and is used as a checking device to make sure that the transmitted character is received correctly. Both ends of the link need to agree on whether the 'parity' checking will be 'even', 'odd' or 'no parity' - the latter becoming a trend on many bulletin boards recently. Let me illustrate by an example and assume that a decimal value of 17 is to be transmitted. This is represented by 00010001 (0+0+0+16+0+0+0+1). It consists of six 0s and two 1s. A 'parity' check counts the number of 1s in the character and will add an extra 'parity bit', setting it to either 0 or 1 depending upon whether an 'even' or 'odd' parity system is being used. In the above character a '1' will be added to the end to make the total number of 1s odd, ie. 000100011. The computer at the other end, knowing that an 'odd' system is being used, will check for the presence of the parity bit.

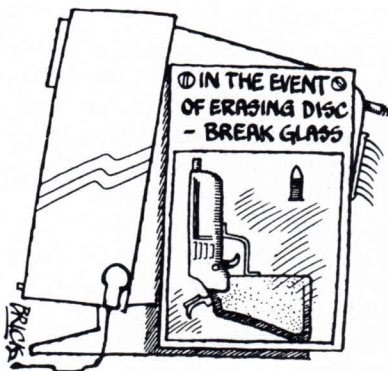
GETTING AN AGREEMENT

The question you must be burning to ask at this point will be "how does one get the two computers to agree the standards for successful communication?". Technically, the RS232 port can be set and the data sent using MS-DOS MODE command with some sharp redirection of output to the AUX port on the PC, then there's the modem to consider - but all this is a bit of a hassle. You'll be pleased to know that there is a 'standard' set of modem commands called 'Hayes Compatible' (after Hayes Inc. an American modem manufacturer) which takes the leg work out of the job. These are a set of strings which are sent to the modem as data by the operator but which are interpreted as commands for line speed, parity and everything else we have been covering above.

The other area where MS-DOS falls down (using standard commands) is in the control of the RS232 port and modem, and the actual transmission or receipt of data. It is so much easier using a communications manager (like Mirror II supplied with the new PPCs). Simple commands like SPEED 1200 will send the necessary commands to the RS232 port and the Hayes-compatible modem.

PROTOCOLS

No doubt you have seen this bit of jargon or terminology before. It simply means the method by which large files are transmitted in 'information' blocks with extra checking bytes added. It can also include more user friendly comments about invalid or unreadable data which can be reported back for re-transmission purposes. In Mirror for example, sending REPORT.TXT using XMODEM protocol will invoke a read to the file, grouping into blocks, calculating a check digit, taking action on an error and so on. A good manager program is important to a successful system which probably explains why Amstrad have bundled Mirror II with their PPC640 range.



THE SOFTWARE REVIEWED THIS MONTH

Lex - Wizard of Words

Number Fun 1

Word Fun 1

EDUCATIONAL SOFTWARE FOR PCs

A review by Simon Anthony of three new educational packages from Reckon Software

A couple of months ago, TAU made a brief mention of three pieces of Educational Software for PC users being marketed by Reckon Software. Samples from their Sydney office have taken a few months to reach me (they must be busy in Rose Bay), and when I told the children they were to be guinea pigs for testing some educational software you could have heard a pin drop. Unfortunately, that reaction is quite common amongst children, especially the younger ones, who get bored so very quickly with much of the unattractive

educational software available. The secret to effective products of this type is to retain the interest of the user. As you read the following reviews, you will find that, in the main, the new Reckon products go a long way to achieving this aim.

The three packages are presented in plastic wallets to keep out the dust, with a small instruction manual tucked in the clear front cover. A 5.25" disc is contained in the back pocket (coloured in the now familiar 'Reckon Burgundy').

NUMBER FUN 1

\$29.95

There are essentially four elements to this package. The first is Alien Creature and stars AC, a character who must be ET's brother. AC stands behind a wall with his "healing finger" pointing above to a box containing an arithmetic question and a choice of five possible answers. The degree of difficulty will depend upon the choice of level selected at the start. To give you some idea, level 1 will present something like

$$7 - 4 = 0 \quad 2 \quad 3 \quad 20 \quad 12$$

while level 4 may show

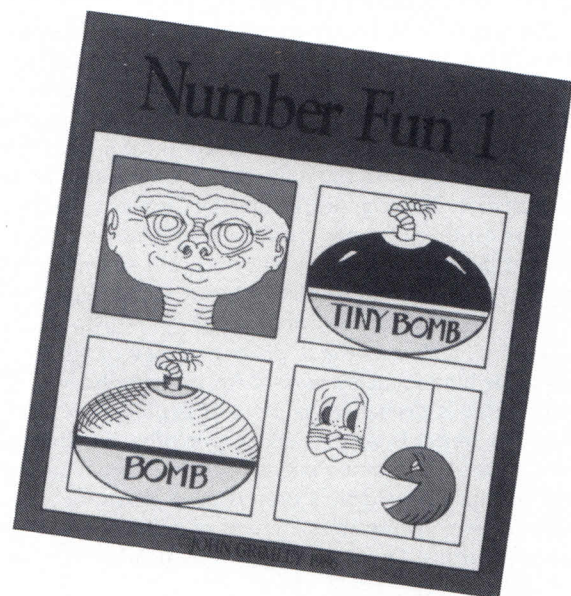
$$306 \div 17 = 14 \quad 19 \quad 18 \quad 16 \quad 17$$

Clearly the first level is aimed at straightforward calculations while the higher level may be better suited to improve estimating skills.

The answer deemed to be correct is chosen by moving AC left or right then moving his finger up to the number. This is all done through the cursor keys. A correct choice is heralded with a happy chirping and a bigger smile on AC's face, but an incorrect answer will give a low warble and AC will automatically point out the correct choice. While all this is going on a small plant on the left of the screen reacts to each answer given. It grows with correct answers and shrinks with

incorrect ones. It will also shrink if the player takes too long to answer.

The second element is called Tiny Bomb and consists of three question types - multiplication, addition and subtraction. Having made the selection, the next choice is the set (x2, x3 and so on up to x10) and a speed factor which determines the amount of time the player will be



given to answer the questions.

The main screen consists of 10 questions on the left and a time bomb with a long fuse on the right. The fuse will burn slowly if speed 1 was selected or very fast at speed 9 - in practice speed 9 is almost impossible to beat. Failure to answer all the questions before the fuse reaches the bomb has explosive results.

The third element is simply called Bomb. It is very similar in operation to Tiny Bomb but is suited to an older child (end-primary to early secondary). It covers the same three question types plus division and the sets run from x2 to x20.

The final element is Munch. Again, the four question types are tested for. The main screen consists of twelve boxes with the answers to the set currently being used. Alongside each answer is what can only be described as a hooded face with large eyes. At the bottom of the

screen appears the question and the answer is selected by moving a 'pac-man' style character into the correct box. As the character approaches the 'eyes' watch the movement and the pac-man will munch the number. If the answer is correct, the face disappears and is replaced by a random graphic (eg. a carrot, a telephone and so on.) If the answer is incorrect, the pac-man will spit out the numbers it has just consumed.

So how did the children react? The oldest (12) found them amusing to start with but the lower levels too easy. She found Bomb the most challenging it two respects - quick thinking and knowing where the numbers were on the keyboard. My 10 year old also found Bomb more exciting. The twins (8) were happy to plod on at the lower levels but Tiny Bomb was the overall winner in popularity. Obviously the race against the clock is where the attraction is.

WORD FUN 1

\$39.95

Three tasks are set in this package embracing antonyms (opposites), synonyms (same meaning) and alphabetical orders of words. The story is that the tasks have to be performed in order to rescue some word weary travellers lost in the Forest of Futhorc. To achieve this, Lord of Lex has allowed the use of any helicopter from his Semantic Squadron.

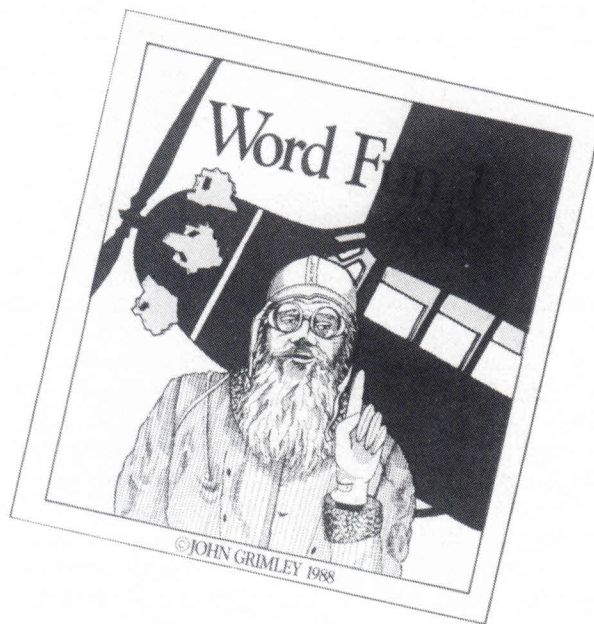
Choosing the Oppocopter takes the player to the first task. At the bottom of the screen appears a word. To the left appears four other words, one of which is the antonym. Selection of the opposite is made by guiding a mean looking helicopter up or down then firing a gun at it. Wasting time consumes fuel and if the tanks are emptied the task moves on to the next word after giving the correct answer. A score out of ten is kept at the top of the screen. There are four levels each with four speeds, the latter determining the rate of fuel consumption.

The second task is carried out using the Synocopter. This is a smaller craft which is moved onto one of three tree stumps (in the forest) which shows the word of similar meaning (synonym) to the one appearing at the bottom of the screen. Again, there are three speeds from which to choose with the highest consuming fuel at the quickest rate. There are three levels of word difficulty. Landing on the correct word exposes the lost traveller who happily climbs into the chopper, but setting down on the wrong stump reveals the traveller literally hopping mad on the correct stump.

The final task uses the Alphacopter, one of those twin rotor blade machines used for carrying heavy objects. This is probably the most difficult task of the three. The object is to rearrange a pile of words from the first of three tree stumps into alphabetical order on the third stump. The middle stump is used a temporary dumping area. There are six levels of difficulty. Level 1 may present just four words which to an adult can be

easily sorted out by merely referring to the first letter of each word (eg. Read, Stop, Today and Under). At the other end of the scale, level 6 could present something like Striped, Stringent, Stripe, Stripped, String, Strip and Strike for rearrangement. The words are hoisted, transported and dropped by using the cursor keys. The task is made more difficult with a reducing fuel level. Any failure will result in the Lord of Lex completing the test automatically.

The manual suggests that Word Fun 1 covers an age range of 5 to 15. I would suggest that this would be accurate for the first two tasks but the last one, certainly at the high levels, would defeat many adults in the time provided. My kids found their respective levels a challenge. The graphics have amusing touches which kept them smiling even if they chose the wrong answer.



LEX - WIZARD OF WORDS**\$39.95**

The quest is for the Land of Lex, the destination is the castle of the Lord of Lex. To reach it, the player/student needs to travel eight trails meeting one of four guardians who will present a word puzzle to complete. Each guardian has a theme - synonyms, antonyms or homophones (words sounding the same). The fourth guardian poses two types of problems, sometimes presenting a clue in a cryptic style or anagram. As it is unlikely that a younger player will get the right answer straight away, four assistants are displayed, each holding a placard. With each wrong answer, the placards will show the number of vowels in the word being sought, the number of letters, the first and the last letter.

A sinister looking serpent (Erlking of Errors) pops up at random with a misspelled word seeking correction. It also appears if the player fails to give the correct word to one of the guardians. As each trail is successfully completed the next becomes more difficult. We met a couple of inconsistencies in the spelling of some words - those ending in 'or' or 'our' and 'ise' as opposed to 'ize'. As an adult I found it a nuisance having to go through all the lower levels to get to the really testing ones every time I re-entered the game.

The first two trails kept the two older children occupied for some time but I forced them to take a break before they got too frustrated. It seems that some

help is needed, either in the shape of an adult or a good dictionary and thesaurus. Levels seven and eight have some pretty obscure words, and to make things even more difficult, the fourth guardian slaps a time limit on the answer he requires. If you fail, you get sent back to the beginning of the trail. I will admit that I could not complete the final trail, I'll leave that up to a lexical genius - but I will guarantee that not many people will.

SUMMARY

I intimated at the beginning of this review that while educational software is a valuable learning tool, its purpose is defeated if the user loses interest. The three Reckon products held my children's attention long enough for them to enjoy, practice and learn at the same time. However, I find it is wise not to overdo things when it comes to this type of software. Get them to quit while they are enjoying it and they will want more - let them get too frustrated and they won't want to use it again.

Lex: Wizard of Words and Word Fun 1 are both \$39.95. Number Fun 1 is \$29.95. They are available only on 5.25" discs for the PC from most dealers or by mail order though The Amstrad User.



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COMPATIBLE'S CORNER

Chris Collins explains how to copy files using XCOPY and takes a look at some dubious public domain software.

This month's Compatible's Corner is being written on a lousy wet Sunday afternoon. Now, you are probably all wondering why I told you that. Well, the reason is basically two-fold. Being wet and overcast, the weather makes me feel a bit depressed, so it can be difficult to write an article and still sound very positive.

The second reason is quite simple. It allows me to fill in a couple of paragraphs, without having to think too much.

Now let's get into this month's column. This month we take a look at XCOPY, and after that I will be telling all of you perverts out there about some discs that maybe of interest.

XCOPY is an external COPY utility with a lot of differences. It allows you to selectively copy groups of files, which can include lower level subdirectories. The command syntax can be as follows:

```
XCOPY [d:][path]filename[.ext][d:][path]
[filename[.ext]][/A]/D[/E]/M[/P]/S[/V]/W
```

or

```
XCOPY [d:]path[filename[.ext]][d:][path]
[filename[.ext]][/A]/D[/E]/M[/P]/S[/V]/W
```

or

```
XCOPY d:[path][[filename[.ext]][d:][path]
[filename[.ext]][/A]/D[/E]/M[/P]/S[/V]/W
```

As you can see, there are many different ways of using XCOPY. All of the above command lines are very similar, with one basic exception, the optional parameters (square brackets) are in different positions.

This could make it very difficult for us to decipher the command line, but if we break it down into more manageable pieces, we will find it much simpler.

The first set of optional parameters are as follows:

```
[d:][path][filename[.ext]]
```

These are used to specify the source drive, directory or file that you want XCOPY to start with. The source can be either a drive, a path, a filename,

or any combination of the three. The second set of optional parameters are also as follows:

```
[d:][path][filename[.ext]]
```

These specify the target drive, directory or file that you want XCOPY to copy to. The target drive and/or path are where XCOPY copies the file to. That sets up where from, and where to, but we still have all those switches to look at yet.

The first switch in the long list of them is /A. This can be used to copy only those files that have the archive bit of their attribute set to one. The attribute of the source file is not changed. Unfortunately, I don't know what that means, but I will try to find out.

The next switch in the list is /D. This is a very handy option as it allows you to copy only those files that were created either before or after a certain date. Depending on the country code that you have selected in your CONFIG.SYS file, the date format will need to be specified as one of the following:

```
/D:mm-dd-yy or /D:dd-mm-yy or /D:yy-mm-dd
```

/E is the next switch that we come across. This is used to create sub-directories on the target, even if they will end up being empty after all the copying is done. If /E is not specified, any empty directory on the source will not be created on the target.

After /E, we strike /M. This allows

XCOPY to be used as a backup program. What this switch does is to tell XCOPY to copy those files that have their archive bit set. This option also turns off the archive bit on the source file.

The fifth switch is /P. This tells XCOPY to prompt you before copying each file. You must answer to the (Y/N) prompt. XCOPY will then copy on a file by file basis, instead of a multiple file copy.

/S is probably the most powerful of the options available to us. This is the switch that allows XCOPY to copy whole directories and sub-directories across to the target. Empty directories will not be created, unless the /E option has been used. If used from the root directory of your disc, this will allow you to copy the whole disc, files and directories.

The second last switch is /V. This causes DOS to verify that the sectors written on the target disc are recorded correctly. This option will cause XCOPY to run more slowly, because of the extra overhead in the verification process.

The last switch available is /W. This instructs XCOPY to wait for you to insert discs, before beginning to search for the source files that you wish to copy.

A couple of little points. The default filename used by XCOPY is *.*. You can also rename files on the copy, if it is required. The last point is that XCOPY will not copy hidden or deny-read files from the source,

and cannot copy read-only or deny-write files on the target.

The following are all correct command lines for XCOPY:

```
XCOPY a: b:/E/S or XCOPY a:\test\*.doc b:/s/p
or XCOPY a: b:\backup/v
```

Any of the above are correct, and can be used as listed. The following explains what they mean:

```
XCOPY a: b:/E/S
```

Copy all files and directories from drive A: onto drive B: and create the directories as you go, even if they are empty.

```
XCOPY a:\test\*.doc b:/s/p
```

Copy all DOC files in the sub-directory called \test on drive A:, to drive B:. Create the necessary directory (if it doesn't already exist) and prompt for which files to copy from the source.

```
XCOPY a: b:\backup/s/e/v
```

This simply means copy all the files and directories from drive A: to a directory called backup in drive B:. While you are at it, create all then necessary directories, even if they are empty and verify that the lot has been copied correctly.

Now onto a bit of news. In my mail this week came an order from someone for a copy of PC File+. Now this unto itself didn't worry me. However, the person involved was trying to claim an upgrade on a disc that hadn't come from me. This is not on. I do know each disc that I send out. If you look at the labels on the discs you will find that they are unique. However, fortunately for this person, he had sent all but \$1 enough for a correct set of discs for PC File+, so he got what he was after.

Now that we have that out of the way, let's look at our dirty discs.

Just a word of warning before we start. All of the discs this month contain material that could be classed by some people as porno-

graphic. Therefore, if you are likely to be offended by such material, please DO NOT order these discs.

ADULT'S ONLY SHAREWARE

The pair of discs that we will look at first are labelled simply as SOFTPORN 1 and SOFTPORN 2.

SOFTPORN 1 is a collection of various types of pictures. There are three batch files on this disc that do all the work.

SHOW is the first of these, and will print to the screen pictures of women in various stages of undress. These pictures are made up of characters from the ASCII code, and as such we have probably all seen them before. To get any sort of perspective on them, you must stand at least five feet away, and squint.

PRINT is the second batch file, and is used to print the above files to your printer. This is the best way to view these pictures.

The last batch file is NUDES. This will display eight digitised pictures of naked women. You can use the arrow keys or PgDn and PgUp to navigate your way around the pictures. Pressing ESC will show you the next picture, until they have all been viewed.

SOFTPORN 2

SOFTPORN 2 is another collection of pictures, but with a major difference.

X1 is the first of the executable files. This is a simple animated screen of three women. However, they keep losing and gaining clothes, as well as changing colour.

X2 is a picture of a girl's face. Very nice.

X3 is a simple pornographic text adventure. You can use any two people that you know, and create an adventure with them. Quite good and instructions are included in the game itself.

X4, X5 and X8 are all a good use of digitised pictures. Hard to explain how they work, but they are good to watch.

X6 is a picture of a prone naked woman. This has been drawn on one of the paint programs. However, it appears that she has something

wrong with her breasts.

X7 and the last on this disc. This is the same picture as X6, but it has funny messages flying across the screen.

RUDE GAMES

This will be the last disc for this month. This disc contains 2 games, 2 cartoons and a calendar program.

ASTROTIT is the classic shoot-em-up. However, it does have a couple of major differences. The game includes condoms, bibles, pills and floating breasts. How they are used is up to your imagination to decide. Instructions are also included in the game.

PORNO.ARC is a series of animated cartoons from Germany. All of these animated cartoons relate to sex. Use the RUNME.BAT file to get the best effect.

GIRL.CAL.ARC is a program that prints a calendar for any year between 1901 and 1999. This is similar to many other programs of the same type, except that this one also prints a naked woman as the picture. The output from your printer will occupy three sheets of A4 paper.

PERVERT.ARC is another animated cartoon, involving two people in a sex act.

B-WARE.ARC (Bonzoware) is a collection of adult games for you to play. These include TRIVIA (for 1 or 2 players), TRIVIA X, POKER and POKER X. All of the games are pretty self-explanatory, and I had great fun playing them.

The two SOFTPORN discs are not archived. However, PORNO GAMES is, so remember to unarchive it.

Also, please remember that all of these three discs contain material that could be considered by some to be pornographic. If you are likely to be offended by such material, please do not order the discs as I will not be held responsible.

If you do decide to purchase the discs, please keep them away from young children. What and how you raise your children is your prerogative, but I do not want to be blamed

for corrupting young children's morals.

If, after all these warnings, you still want the discs, please send your orders, with cheque or money order (together with written confirmation that you are

over the age of 18 for this set of discs only), to the following address.

C.J. Collins
1 Woods Street, Newport, 3015

The discs are available at the follow-

ing rates, \$10 for the first disc ordered, and \$6.00 for any other disc in the same order. Please allow 14 days for delivery.

Until next month, TTFN (Ta Ta For Now!!).



A month later than expected, we continue our discussions on Random Access files

Random access files have major advantages over straight sequential files in that data can be retrieved much faster and altered without rewriting the whole file. As long as you know where to look, data can be accessed from any place at any time. Fortunately, when Basic2 first creates a record its length remains fixed, ie. all records in that particular file will be of the same length. Basic2 also sequentially numbers each record so it is relatively simple for the computer to work out where each record is. In addition it stores a variable which contains the current record number, so by reading or changing it, you can determine which record will be accessed.

Basic2 reads the contents of a record as a string which is defined as a separate statement when first setting up the file. To give you an example, we'll set up a random access file, but first we need to open a stream for the file.

```
OPEN #stream [qualifier] RANDOM filename
[LENGTH length]
```

Stream, qualifier and filename are used in the same way as sequential files (page 49, August 1988 issue). The word RANDOM determines that the file is to be random access and the 'length' following the keyword LENGTH sets up the fixed length of each record in the file. If this omitted, each record will default to 128 bytes long. So, your instruction could look something like this:

```
OPEN #5 NEW RANDOM "b:\myfile.rnd"
LENGTH 84
```

This will open a random access file called 'myfile.rnd' in the root directory of drive B. If you already have a file on disc with the same name, an error will occur. You will see that each record in the file will consume 84 bytes. Now you need to define the contents of every record - only once of course, as each record will have the same length and the same fields (remember?). The layout is:

```
RECORD rec_name; field [,field]
```

As we sometimes get accused of using examples containing non-existent 'widgets', for the purposes of this article we will pretend that we own a Music cassette business and wish to keep stock records for our shop. The defining record may look like this:

```
RECORD stock; title$ FIXED 35, perf$ FIXED
25, label$ FIXED 15, held UBYTE, price
```

Looking a little closer at this statement, you will notice that the title, performer and label are all fixed length strings. However 'held' (the stock currently held) is defined

as a single byte (using UBYTE) which will allow for any quantity up to 255. 'Price' defaults to a normal numeric variable and will take up 8 bytes. adding all the field lengths together you should come out with an answer of 84 - the same as in the OPEN statement above.

The next step is to start writing records to the new file. For this purpose data would normally be entered through the keyboard using the INPUT statement after having set up a dummy variable of the same length as the record like:

```
rec$=STRING$(84, " ")
```

Our fields within the record would be identified as :

```
rec$.stock.title$
rec$.stock.perf$
rec$.stock.label$
rec$.stock.held
rec$.stock.price
```

with the names consisting of the dummy variable name, the name given to the record in the RECORD statement and the field name. Once the data has been input, the whole record can be written to the file using the PUT statement:

```
PUT #5, rec$
```

This where the record pointer comes into play. After PUTting the first record, the pointer will be pointing to that record. To move it on to the next position to write another record you need

```
POSITION #5 NEXT
```

or to write the same record again in the next position

POSITION #5 NEXT
PUT #5, rec\$

To write a record to a particular position (record number) in the file you can use

POSITION #5 AT rec_num

Reading from the file is a similar process. For example, to extract the first record you need:

POSITION #5 AT 1
GET #5, look_rec\$

The variable look_rec\$ is specified in the same way as rec\$ above and to display the fields you would need something like this:

```
PRINT look_rec$.stock.title$
PRINT look_rec$.stock.perf$
PRINT look_rec$.stock.held
```

Always get in the habit of closing the file properly. It is easily done and can save problems

CLOSE #5

Of course, there are other keywords used with random files and the more common are shown in the box along with general files. The more obscure ones can be found in Locomotive's Basic2 manual.

TYPING IN INFO

Remember that if you are typing in the examples, some lines are too long for us to fit into the columns so we have broken them with large indents. You shouldn't break them - just keep typing !

MORE ON LOOPS

Back in the July '88 issue PC Help covered various aspects of looping in Basic2. A few examples were given, but nothing is more spectacular in its result than the graphics produced from a Mandelbrot set. It is a classic example for demonstrating the power of loop structures. CPC readers have already had a type-in on the subject, and now its

SOME GENERAL FILE COMMANDS

Did you know that Basic2 has some general file commands which are related to their counterparts in MS-DOS? These are in addition to commands relating to specific file types. There are two types, one for displaying in the dialogue window and the other for miscellaneous file handling. You can identify the first group of commands as they contain the argument 'rest-of-line'. The square brackets contain optional information.

Change/create/remove/view directory:

CD rest-of-line eg. CD a:\basic2
CHDIR string-exp eg. CHDIR "a:\basic2"

MD rest-of-line eg. MD a:\basic2
MKDIR string-exp eg. MKDIR "a:\basic2"

RD rest-of-line
RMDIR string-exp

DIR rest-of-line eg. DIR a:\msdos
FILES [#stream,] string-exp eg. FILES #0,"a:\"

Obtain current directory on specified drive:
result = CHDIR\$(drive_letter)

Set the default drive:
DRIVE string-exp

eg. DRIVE "C"

View/remove/rename/find files:
TYPE rest-of-line
DISPLAY [#stream,] string-exp

eg. TYPE a:autoexec.bat
eg. DISPLAY #2, "gem.bat"

DEL rest-of-line
KILL string-exp

eg. KILL "a:tempfile"

REN literal literal

eg. REN gem.bat gem.bak

NAME string-exp AS string-exp
"gem.bak"

eg. NAME "gem.bat" AS

result = FIND\$(string-exp [,n])

eg. FIND\$("*.*BAK",20)
(Searches the default disc for the 20th file matching the specification. If found, 'result' contains name of file, if not it is left empty.)

Miscellaneous
result = EOF(#stream)

eg. done = EOF(#5)
(Checks if current file position is beyond the end of file.)

result = LOC(#stream)

eg. where_now = LOC(#5)
(Determines current position in the file.)

result = LOF(#stream)

eg. how_long = LOF(#5)
(Determines length of file in bytes.)

the PC users turn. The Mandelbrot set is an area of mathematics which is above our heads concerning the behaviour of points near the origin of the complex number plane. If you don't understand anything about it, you will at least enjoy the colourful pictures, but be warned, the picture can take a few hours to complete.

Once you have entered the program below, debugged it and got it running, you can answer -2 (for the real part), -1.25 (for the imaginary part) and 2.5 (for size of square). These answers will give you the entire set.

```
REM Short PC Mandelbrot
WINDOW OPEN:CLS
USER SPACE 378
INPUT "Real Part ";rp
INPUT "Imaginary Part ";ip
INPUT "Size of Square ";side
PRINT "PRESS ANY KEY TO CONTINUE..."
WHILE INKEY=-1:WEND
gap=side/189
CLS
FOR n=1 TO 189
FOR n1 TO 189
rc=n*gap+rp:ic=m*gap+ip
```

Listing continues bottom of next page → →

WORD COUNTING MERGED FILES

A word of warning: if you use the 'Merge text files' function, don't expect the word count you're given to be accurate. It will usually be a gross overestimate. I merged two files which Tasword separately counted as 534 and 460 words respectively and it gave me a combined total of 1670 words - a 40% increase! If, however, you save the new file and then reload it, the word count will be more or less accurate (when I did this to the above file it came up with 991 words instead of 994).

SAVING FILES

When creating a file from scratch (or editing any file!) you should regularly save your work. The first time you do this, reload the file immediately. This will make no changes to your text, but the next time you go to save, you will be able to press the [COPY] key and resave the file without having to type the whole name.

Never try to save Tasword on a disc without sufficient space when you have valuable files in memory, since the program locks up inescapably (unless you reset the machine).

BLOCK MARKINGS

Don't have a start of block and beginning of block marker on the same line. You can't do this directly, but the justify function will sometimes move them onto the same section. If this happens and a block command is activated, the computer locks up.

```
rz=0:iz=0:count=0
REPEAT
  tempz=rz*rz-iz*iz+rc
  iz=2*rz*iz+ic:rz=tempz
  count=count+1
  siz=rz*rz+iz*iz
UNTIL siz>4 OR count>240
BOX 2*n;2*m,2,2 COLOUR count MOD 16
FILL ONLY
NEXT n
NEXT m
```

TEN TERRIFIC TASWORD TIPS

In place of Words Work this month, we turn to Angus Kidman who has supplied us with two pages of handy tips on using the popular word processor from Tasman Software.

A THIRD CHARACTER SET?

There are two characters in the 2nd character set which are not listed on the screen. The first is the inverse space, given by CTRL-\ [SPACE]. Note that to make use of this as a hard space (as suggested by Allan Webster, TAU 38) you may need to re-define this character (through the Customise program 'define 2nd character set print characters' option) as 32 (the ASCII code for a space). It came defined with my Tasword as character 12, which works with Tasprint (where it prints out as a solid block) but is a form feed code for my printer (the DMP2000). The second new character is an inverse 2, given by CTRL-\ £. This appears on the screen, but Tasprint will not print it.

UNDERLINING WITH TASPRINT

Unlike Tasword 464, Tasword 6128 does not come with the inverse T printer codes designated as Tasprint underline on and off. They must be defined as such from the printer control menu - capital T as 212 and lower case t as 244. However, when this is done, a space is automatically added to the printout, as with the other Tasprint codes.

ONE LONG PARAGRAPH

When using Tasword I do not leave blank lines between paragraphs. This causes problems if I inadvertently press CTRL-U (hard format), which turns my whole document

into a giant paragraph, which I then have to manually reformat.

To prevent this, enter BASIC and type the command:

```
KEY DEF 42,1,117,85,0
```

which disables the CTRL-U command. It can be re-enabled by typing the above command with a 21 in place of the 0.

If you incorporate this into the BASIC loader, say at line 115, and then save this with the command SAVE "TASWORD" the key will automatically disable itself. You could also consider assigning another command to this key instead. I have re-assigned my key to provide the CTRL-I command, which was what usually caused my finger to slip in the first place! To do this, replace the 0 with the ASCII code for the command. For CTRL-I, this is 9. A full list of keys and their ASCII codes is in the README file supplied on your delivery disc. The really ambitious could change the whole keyboard layout!

UN-DELETE, NOT ALWAYS GOOD

Be careful when using the CTRL-@ undelete command as a quick way of moving lines - it sometimes tags funny endings onto the line which will be outside the margin and your field of vision but will mess up your printout.

THAT'S NOT MY CURSOR

Another bug: if you are in a notepad and try and move down past its

end, the cursor changes to a block (character 4) no matter what you have it defined as, and remains as a block when you exit the notepad. To restore the cursor you must go to the main menu and then return to your file, or invoke the 'Tall Cursor' by wrapping a line - a better method if your file is large.

START AT LINE 1, NOT LINE 12

One more complaint: when printing large files (again!), the 'start at line' feature on the print menu doesn't work properly - it sometimes starts at an entirely different line. Also, if you receive a 'file full' message, many of the command keys become non-functional. The moral of this seems to be to use only small files (up to about 28k).

(Don't assume from all this that I don't like Tasword 6128: I think it is an excellent program, but like all large programs, it has it's faults.)

TASWORD CAUSING A RESET

I have occasionally found that Tasword resets the computer for no apparent reason, especially when using large files or the notepads. This can be very annoying if you have to re-create part of a file. Fortunately Tasword stores it's data in the second bank of memory, and this remains intact after a reset. The following short program (based on Anthony Trost's BANKCHK

program) will recreate any file which you are using when the computer resets. It should be typed in and saved on your work disc. It uses BANKMAN to access the second 64k; for this reason it may not work from within Tasword, which uses similar commands. To use the program:

- Run the BANKMAN program on side 1 of your master disc.
- Run this program.
- The program will ask for a new filename. If you already have most of the file saved on disc, it is best to use a different name for this new file - you can then merge the final section with your original file.
- You then need to enter the margin width - if you use strange settings, what the program wants is the actual number of characters across the screen. If you're unsure, enter 128 - you will then have to reformat the file by hand.
- Press the space bar once.
- Your file will begin to be re-displayed on the screen and sent to the disc. Some of the formatting may be lost, but this can be easily recreated from Tasword.
- At the end of each line, the program will pause. Press the space bar to continue. This facility is provided because if your file does not fill the whole memory, the program will start reading garbage/

old files from the memory. If you press S when your file has finished displaying, the file will be closed and the program will end.

- When the end of memory is reached, the file will close. In practice, you will usually press S to save the file before this happens.
- You can now run Tasword and edit/merge/alter your file.

```

100 ' Tasword 6128 File Re-Creator
110 ' Angus Kidman, 1988
120 ' The Amstrad User, Oct88
130 '
140 MODE 2:PRINT "TASWORD 6128 FILE
RE-CREATOR":PRINT
150 INPUT "Name to save file to ",f
$
160 INPUT "Width of margin ";width
170 h$=SPACE$(width)
180 r%=0;!BANKOPEN,width:OPENOUT f$
190 WHILE r%>-1:!BANKREAD,@r%,h$
200 FOR i=1 TO LEN(h$):a$=MID$(h$,i
,1)
210 IF a$=CHR$(0) THEN GOSUB 260
220 PRINT A$;PRINT#9,a$;
230 NEXT
240 WEND
250 CLOSEOUT:END
260 PRINT:PRINT#9
270 a$=UPPER$(INKEY$):IF a$="" THEN
270
280 IF a$="S" THEN CLOSEOUT:END ELS
E RETURN
    
```

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BCD3 (43) 4K	LIST1 (44) 1K	SPRTEDIT (41) 4K
BCD4 (44) 4K	NO-NAMEA (43) 2K	SPRTEX1 (42) 2K
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DATASAVE (43) 5K	PERFECT (42) 1K	

Reference to original magazines may provide more information on the above programs

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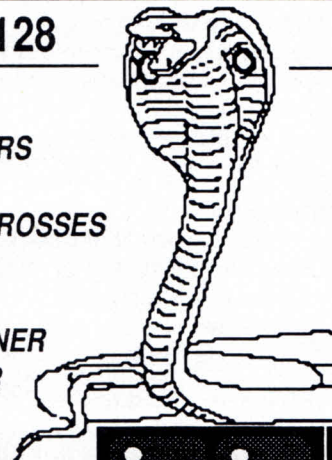
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USING AFTER AND EVERY

This month Philip hands over the reins to Angus Kidman who has a few ideas to share with the rest of the readers. Plus we have our usual questions and answers and our contact list.

I was thumbing through some old copies of TAU the other day when I came across your article on using the AFTER and EVERY commands. As I am writing a particularly sadistic adventure at the moment which uses the AFTER and EVERY commands in a slightly different way, I thought I would tell you about it.

Rather than merely setting a time limit on solving various puzzles, I place a time limit on every command the user types in. This means that you have to think quickly or the program unceremoniously kills you and you have to start all over again.

A simple version of the routine looks like this:

```
100 'user input
110 AFTER 500 GOSUB 1000 ' too slow
120 i$=UPPER$(INKEY$):IF i$="" THEN 120
.....rest of input routine
1000 CLS:PRINT"Too slow, fool!"
.....reset and start again
```

This is guaranteed to cause hours of frustration for the adventurer. If you have a simpler routine that uses the INPUT command, it's even nastier: the program will accept your command (INPUT is not affected by timer interrupts) but will then jump to the appropriate routine if you took too long.

One problem with this type of routine is that slow typists or people unfamiliar with adventuring will all

too frequently be killed on the first move. To overcome this you can allow the player to select a difficulty level at the beginning of the program (4=Easy, 3=Intermediate, 2=Difficult, 1=Suicidal). If you assign this to a variable called, say d then line 110 can be changed too:

```
110 AFTER 200*d GOSUB 1000
```

Easy eh? You can even allow the user to cancel this sort of timing altogether (not that I would) or sound a warning bell by using another timer (again I'd let you suffer) or use the difficulty factor in other sections but I'll leave those sorts of frills up to you.

Another trick I am incorporating into this program concerns mazes. You have suggested in the past that by moving the objects around in a maze will make it difficult to map. Another way of doing this is to prevent any objects being dropped whilst in a maze. This can be explained by a simple twist in the storyline (eg. your arms are temporarily removed, all you are carrying is transported to the other side of the maze) and is easy to program and SAVES MEMORY!

It is in fact much easier to write an adventure than many people think. My first adventure developed from a one line program (how's that for being concise). Your column is very useful for adventure-writers,

particularly as we start to write more complex programs. Keep it up and don't let the killer midgets get you down.

Thanks very much Angus it's always good to hear new ideas and maybe we could see a copy of the game that you are writing, you never know we might get the editor to publish it.

While you are talking about mazes what about not letting anyone take items into a maze at all, or if the maze is magical any item dropped may very well disappear forever, the list is endless when you think about it.

Here we go - I just had a thought concerning Angus' killer interrupt routine. What if you had a line that plotted the time left for you to type in your input? Can you imagine the panic as the line grows steadily shorter until finally it disappears and ZAP (rather like Mission Impossible isn't it). You have certainly got my mind working on this Angus.

And so on to the adventure contact list and the members of the public (that's you people out there who read this column) have all been writing to say how well it is coming along. Barry Hoole is certainly enjoying the fame, according to his last letter he has people writing to him all the time and has even had one request for a photograph of himself. Thanks to Barry and everyone else out there who have put their names forward for the list.

Well, Angus managed to get a finish in at the end of his letter (what a busy soul he is - especially with those Tasword tips this month as well) so this month we will give you value for money by giving you another finish now, and this month we have another one from Karla Slack. She did give us one very long finish but I have had to break it up into smaller ones for the simple reason that the editor does not like me taking up too much room. So here it is from Karla; may the demons and hell hounds forget your front door.

QUESTIONS

Well, here we go for another month and first off the list are some questions concerning Seabase Delta from Chris Maloney. He would like to know how do you get the air to go diving. How do you get the magnet from the loudspeaker and what are the video games machine used for? Chris would also like to know how to make a pancake on Seabase Delta. Well, Chris if you look in the Nov. 87 issue of the mag. you will find the answer.

Michael Fitzgerald would like to know how to open the door West of the East wall in Bastow Manor.

Michael also knows that you have to spread butter in the torpedo tube in Subsunk but he would like to know the exact wording for the command.

And while Michael is in the questioning mood, here is another one from him, this time concerning Knight Tyme. How do you get to

the Tyme Lords?

Now it's back to Chris with some questions concerning Necris Dome. What is the arrow for in Africa 10? How do you disable the mandroids on levels other than the reception level? What is the metal bar for? What is the acid for and finally where is the key to the power station and how do you get to it?

Now it's back across to Michael who will serve us with a question for Kentilla. (This is beginning to sound like a tennis match.) How do you get out of Tylons castle?

Now we have two questions concerning Ashkerin from (yes, you guessed it) Michael. How do you get the floating golden orb and how do you open the portcullis?

Finally a question from someone new. Darren Scott has a long question concerning Cholo, take it away Scott. The robots that I have in my control are hacker, rat, flying eye, doctor, ship and numerous guard robots. I haven't obtained gundron or autodoc. I have radar

prg, 1 hack/text, 2 hacker/text, readme/text. The information that I require is how does atmos/text work. Is autodoc the doctor robot or is it another robot, if the latter how do I obtain it. Also is gundron the guard robot protecting the manic mine. If not how do I obtain it? Last of all how do I rescue the bunker dwellers?

ANSWERS

This month's answers look a little sad, there is three. They all concern Castle Blackstar and all are from Barry Hoole. Play the Stradivarius at the nest of golden eggs but make sure you have the bow. Wear crown and take sword at excalibur. To find the power orb you must find the laboratory then find windy pit, find a way to keep the lamp lit. Then go U,N,D to orb room.

Well that's it with the questions and answers for this month, see you next time.

ADVENTURER'S CONTACT LIST

(Please don't abuse the help being offered)

Jason Pavy 105 Lyall St. Kalgoorlie W.A. 6430	The Hobbit, Forest at Worlds End	2 Searle Court Nth. Dandenong Vic 3175	Seabase Delta, Necris Dome
Rhondda Cook MS 231, Waidley Q.L.D. 4341	Arnold goes Somewhere Else Mountain Palace Adventure Time Search	Mark Nelson 128 Parkin Street Rockingham. WA 6168	Enchanter, Gremlins, Infidel, Midshadow, Message from Andromeda, Wishbringer, Heavy on the Magick.
Steve & Robyn Ballard 126 Lyndhurst Road Boondall, Q.L.D. 4034	Warload, The Experience, Escape Message from Andromeda Forest at Worlds End, Phoenix Mission Heroes of Karn, Jewels of Babylon	James Green 24 Rosemary Row Rathmines N.S.W. 2283	Adventure Quest, The Pawn, Mordens Quest, Mind Shadow, Sorceror, Return to Oz, Enchanter, Aftershock, The Neverending Story, Imagination, Message from Andromeda, Red Moon, Mural.
Karla Slack P.O. Box 201, Springwood N.S.W. 2777	Adventure Quest, The Hobbit, Zork II, The Neverending Story (1) Wishbringer	Barry Hoole 4 Dobson Road Shepparton Vic 3630	Acheton, Adventure Quest, Arnold goes Somewhere else, Aftershock, Ashkeron, Black Crystal, Brawn Free, Castle Advent., Castle Blackstar, Circus, Classic Adventure,
John McNeill 1 Hawkins St. Chatswood Hills, Qld 4127	Jewels of Babylon The Trials of Arnold Blackwood	Colossal Adventure, Countdown to Doom, Crystal Quest, Desert Island, Dun Darach, Dun-geon, Adventure, Emerald Isle, Enchanter, Espionage Island, Eye of Bain, Feasibility Experiment, Golden Apple, Golden Baton, Ground Zero, Guild of Thieves, Heavy on the Magick, The Hobbit, Inca's Curse, Infidel, Invincible Island, Jewels of Babylon, Kentilla, Last Will and Test-ament, Leather goddesses of Phobos, London Adventure, Lords of Time, Mansion Quest, Marsport, Mission X, Moonmist, Mordons Quest, Murder at the Manor, The Neverending Story, The Pawn, Pharoahs Tomb, Philosophers Quest, Planet of Death, Return to Eden, Return to Ithaca, Rifts of Time, Sherlock, Ship of Doom, Smugglers Cove, Snowball, Starcross, Subsunk, Ten Little Indians, Terrormolinos, Time Machine, Time Quest, Tir Na Nog, Traveller, Trials of Arnold Blackwood, Valhalla, Volcanic Dungeon, Warlord, Wise and Fool of Arnold Blackwood, Wishbringer, Worm in Paradise, Zork II, Zork III	
Dean Stibbe 25 South Esplanade Bribie Island Qld 4507	Seabase Delta, The Trials of Arnold Blackwood, Colossal Adventure, Dracula (parts 1&2)		
Michael Fitzgerald 54 View Road Burnie Tasmania 7320	The Hobbit, The Neverending Story		
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Hint Sheet

INFIDEL from Sam Jones

Infidel is a text adventure game from Infocom. It takes place in Egypt, starting at the Nile and finishing in a pyramid. You would be wise to carry your knapsack at all times in the journey to find the treasure of the pyramid. Beware of a few red herrings in the game, and don't bother digging until you reach the pyramid. The hieroglyphs throughout the game can provide useful clues, but are difficult to translate.

AT THE CAMP

Trunk: should be opened with something handy as it contains some useful items.

Water: check the knapsack.

Plane: don't let it fly away. You will need to attract the attention of the pilot. If you are successful then open the ...

Crate: contains a vital piece of equipment for navigational purposes - a ...

Black Box: try pushing the button. It will give you the coordinates of your current position. The pyramid is located at position ... no, that would spoil things to tell you, but from the Fire Pit it is just three moves away and a fair amount of digging.

AT THE PYRAMID

Opening: examine well and compare with the cube you should be carrying.

THE CHAMBER OF RA

Jar: contains some useful material

for shedding light on the subject.

Staircase: you will need a rope and attach it to the altar.

THE CIRCULAR ROOM

Statue: be a bit rough with it and it can perform an important balancing act to open the stone doors.

Panels: will provide some clues if you can translate the hieroglyphics.

Clusters: grab as many as you can

THE BARGE AND TEMPLE

Barge: it is immovable but flammable.

Beam: you'll need this later on.

Jewelled Ring: be careful!

Scroll: read it.

THE CUBE REGION

Walls: examine them well and search for a ...

Panel: refer to the information on the scroll which mentions something about the first, third and fifth brick.

Stairs: at the bottom, the plaster is hiding an exit.

Moving floor: I told you the beam would come in handy especially if you put it in the niches.

THE ANTECHAMBER

Inset doorway (S): you will need the beam again, but once through you cannot go back.

Annex: contains a stone slab with holes which appear to be the same size as the clusters you are carrying. Again the hieroglyphs you previously read will help to determine the correct positioning.

Spatula: can be used to gently open the ...

Book: take this as you will need it later
Doorway (N): I hope you have still got

the beam as it performs a supporting role here.

Seals: will need to be broken.

Scarab: another balancing act is required here using the chalices and something to fill one of them.

Sarcophagus: a tricky problem is here, but if you have all the necessary objects in their correct places, the statues can turn out to be useful. However, the order in which they are used is important, but you would already know that from previous examinations.

HIEROGLYPHS

Some of the simple one I've worked out are:

<.> means ONE, <.> means TWO, <.:> means THREE and so on. (@) means FIRST, (@@) means SECOND etc. # means THE, !!! means PLASTER, ! means SOUTH, - means EAST, and .- means WEST. !* means GOLD and *! means SILVER. Finally, ...> means GO, !=! means LINTEL, / means TO and (means OPEN.

This is our ninth Hint Sheet and earns Sam a cheque for \$25. Now that you know the format the sheet should take, why not cash in on your experience and send your solutions (don't give the whole game away) to:

*The Editor (Hint Sheets),
The Amstrad User,
1/245 Springvale Road,
Glen Waverley, Victoria. 3150.*

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shown below.
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Secretary: David Chamberlain (047 77 4396)
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Mail: PO Box 97, Annandale, NSW 2038.

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Venue: Camdensville Comm. Ctr., Newtown on the 1st Saturday of every month at 2.00 p.m. For more details contact the Secretary between 6.00 p.m. and 9 p.m.

Mail: PO Box 423, Matraville, 2036

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Mail: 10 Carramar St, Loganlea, 4204

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Treasurer: Chris Nisen (077 79 6299)
Secretary: Alistair Buckingham (077 73 3955)
Venue: Science Block of the Kirwan High School in Thuringowa Drive on the first and third Tuesdays each month at 7.30pm.

THE WARWICK AMSTRAD USER GROUP

President: Mrs. D. Christensen
Secretary: John Wode (076 61 5176)
Treasurer: Neville Christensen

WEIPA AMSTRAD USERS CLUB

President: Andrew Seaborn
Vice-Pres: Dave Wootton
Treasurer: Frances Casey
Secretary: Gary Chippendale (070 69 7448)
Venue: Noola Court in Weipa. Contact above for more details.
Mail: 15 Noola Court, Weipa, QLD 4874.

WESTERN SUBURBS AMSTRAD USERS GROUP

President: Peter Wighton (07 288 4571)
Secretary: Jimmy James (07 376 1137)
Contact: Keith Jarrot (07 376 3385)
Venue: The Jamboree Heights State Primary School, 35 Beanland Street, Jamboree Heights at 1.30 p.m. on the first Saturday in each month.

Mail: Jimmy James, 36 Penong Street, Westlake, Brisbane 4074.

TASMANIA

SOUTHERN TASMANIAN AMSTRAD USER CLUB

President: David Burt (002 44 3385)
Secretary: Lance Brown (002 28 2018)
Treasurer: Robin Johnson
Publ. Off: Danny Brittain (002 47 7070)
Venue: Northern Regional Library, Glenorchy on the forth Wednesday of each month from 7.30 pm.
Mail: PO Box 247, North Hobart, 7002

NORTHERN TASMANIA AMSTRAD COMPUTER CLUB

President: Keith Chapple (003 26 4338)
Treasurer: Shane Crack (003 97 3298)
Secretary: David Double (003 44 4243)
Publicity: Bobby Lockett (003 44 8972)
Tech. Off: Richard Wilson (003 93 1437)
Junior Del: Jay Donat (003 31 6597)
Venue: Launceston Community College (opposite Park Street) in Room 27 on the first Saturday of the month at 5.00 p.m.

N.W. COAST AMSTRAD USER'S CLUB

President: Peter Gibson (004 24 7586)
Treasurer: Robert Simpson
Secretary: Karen Stevenson
Venue: Hallyer College, Mooreville Rd, Burnie on the third Friday of each month at 6.30.
Mail: Secretary, 112 Payne St, Burnie 7320

NEW ZEALAND

THE AMSTRAD COMPUTER CLUB OF CANTERBURY

Contact: Christine Linfoot 897 413
Ian Orchard 524 064
Venue: Four Avenues School, cnr. Madras Street and Edgeware Road, Christchurch 1 on the fourth Wednesday of each month.
Mail: Box 23.082 Bishopdale, Christchurch, NZ.

WELLINGTON AMSTRAD USER GROUP

Contact: Tony Tebbis 791 072 (evgs)
Venue: Cafeteria, NZ Fisheries Research Division, Greta Point, on the first Monday of each month from 7.30 pm.
Mail: PO Box 2575, Wellington, New Zealand.

User Group Contact List

Please note that the following names are listed as contacts for new user groups and should NOT be viewed as a problem solving service.

NSW

Nick Rogers	Bogan Gate	(068) 64 1170
Chris Craven	Canowindra	(063) 44 1150
Trevor Farrell	Coolah/Mudgee area	(063) 77 1374
David Higgins	Cooma/Monaro	(064) 52 1531
Paul Wilson	Moruya	(044) 74 3160
Frank Humphreys	Mummulgum	(066) 64 7290
Reuben Carlsen	North Sydney	(02) 957 2505
Stephen Gribben	Singleton	(065) 72 2732
Ken Needs	St. Ives	(02) 449 5416
Chas Fletcher	Toongabbie	(02) 631 5037
Nick Bruin Snr.	Tweed Valley	(066) 79 3280

VIC

Brian Russell	Ballarat	(053) 31 2058
C. van de Winckel	Ballarat	(053) 313 983
Rod Anderson	Camperdown	(055) 93 2262
Paul Walker	Heathmont	(03) 729 8657
Terry Dovey	Horsham	(053) 82 3353
Andrew Portbury	Leongatha	(056) 62 3694
R. Kernebone	Milidura	(050) 23 3708
Angela Evans	Mt. Evelyn	(03) 736 1852

Keith McFadden	Numurkah	(058) 62 2069
Maureen Morgan	Warnambool	(055) 67 1140

QLD

Beryl Schramm	Boyne Island	(079) 73 8035
Steven Doyle	Caloundra	(071) 91 3147
Ric Allberry	The Gap	(07) 300 1675
Kylie Telford	Goondiwindi	(076) 76 1746
D.F. Read	Ingham	(077) 77 8576
Ian Jardine	Pialba	(071 28 3688)

SA

Lindsay Allen	Murray Bridge	(085) 32 2340
Mrs. S. Engler	Penola	(087) 36 6029

WA

Barry Kauler	Narrogin	(098) 83 1011
Graeme Worth	Scarborough	(09) 341 5211
P.M. Nuyens	Waroona	(095) 33 1179

TAS

Conal McClure	Scottsdale	(003) 52 2514
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NT

G.P. Heron	Tiwi	(089) 27 8814
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For new readers: if you want to start a group in your area just drop us a line with the relevant details and we will add you to the list.

BOOKS

CPC TITLES

	Subscriber Price	Normal Price
Advanced Amstrad Programming Techniques	\$23.95	\$25.95
Advanced User Guide	\$19.75	\$21.95
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Basic BASIC	Temp O/S - Due Nov	
Childs' Guide to the Amstrad Micro	\$12.65	\$13.95
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Machine Code for Beginners	\$18.95	\$21.95
Machine Lang. for the Absolute Beginner	\$21.65	\$23.95
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Advanced LocoScript on the Amstrad PCWs <<N E W>>	\$37.50	\$39.50
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Mastering the Amstrad PCW 8256/8512	\$29.50	\$32.25
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PC TITLES

Basic2 User Guide by Locomotive Software	\$37.50	\$39.95
Business Computing with the Amstrad PC1640	\$42.00	\$44.00
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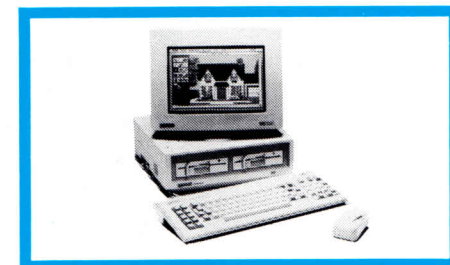
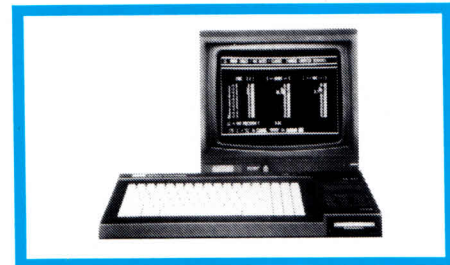
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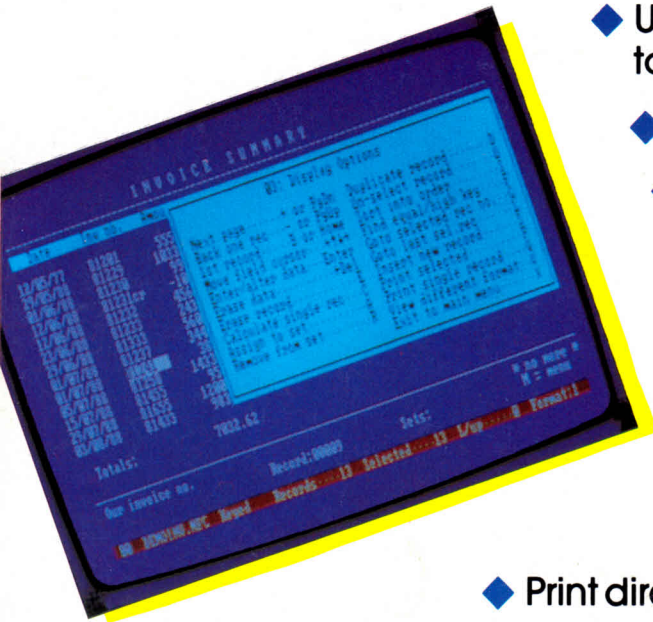
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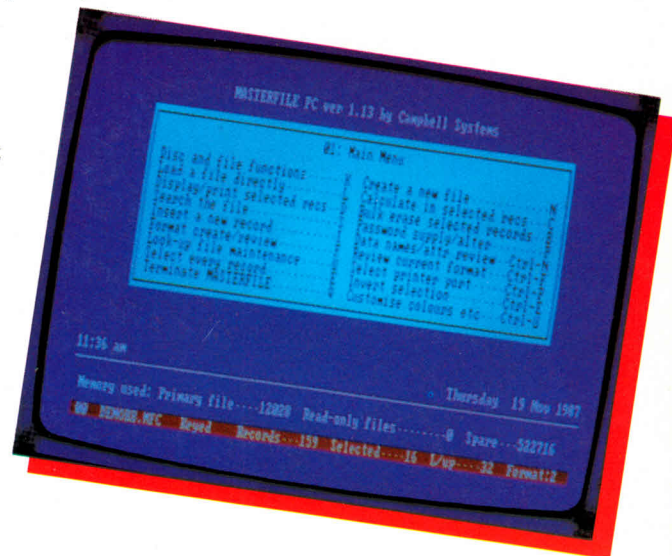


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