

The Aussie Mag
for Amstrad owners

THE AMSTRAD USER

Type-in
Special

PLUS

New Software Lists
for CPC, PCW and PC
See Pages
32 & 48

Issue No. 36 \$4.25

January 1988



- Seven Gallimaufry Type-ins, Blackout game and last part of Therapy adventure + new software listing for CPCs
- Reviews of Money Manager Plus, The Desktop Publisher, Pocket Protext and Fonts 'n' Graphics + four type-ins
- Compatibles Corner + "Tree of Knowledge" type-in

FOR THE NOVICE & EXPERIENCED USER

Why England's top selling PC is a better choice for your business.



A few years ago, Amstrad developed an idea which has made their Personal Computer the number one seller in the United Kingdom and Europe.

The idea, put simply, was to create the best value PC in the world. That's why every Amstrad PC comes complete with everything you need to make it useful.

Value for money. The essence of a great idea.

Operating software and a monitor, expensive extras on many PCs, are standard features of the Amstrad package. As are the mouse, keyboard, disc drive and an informative manual.

Added to this, Amstrad PCs are IBM* compatible. Thus, the capabilities of your system are virtually endless because you have access to thousands of excellent programs. You have the flexibility to perform the most advanced to the simplest of computing tasks.

All this for about half what you'd expect to pay. And fully backed by one of Australia's foremost electronics companies.

Distributed and guaranteed by Mitsubishi Electric AWA.

Amstrad is distributed through an Australia-wide dealer network and guaranteed for twelve months by Mitsubishi Electric AWA. Contact your Amstrad dealer today and see why Amstrad is a better choice for your business.

For the name of your nearest dealer, telephone: **Sydney** (02) 638 8444; **Melbourne** (03) 357 1688; **Brisbane** (07) 277 0100; **Perth** (09) 277 7788; **Adelaide** (08) 340 1033; **Hobart** (002) 72 4366.

*IBM is the trademark of International Business Machines Corp.

A total PC package from around \$1499.

<p>1.</p> <p>512K computer, expandable to 640K.</p>	<p>2.</p> <p>Informative, step by step operating manual.</p>	<p>3.</p> <p>"Mouse", the fastest way of selecting icon and menu options.</p>
<p>4.</p> <p>5 1/4 inch disc drive standard.</p>	<p>5.</p> <p>System software included.</p>	<p>6.</p> <p>Monochrome monitor standard.</p>

Double 5 1/4 inch disc drive, 20mb hard disc drive and colour monitor packages also available.



Built on a great idea.

THE AMSTRAD USER

Issue No. 36
January 1988

Letters - your views, advice and comments from the mailbag	2	Software for the PCW and PC - on Mail Order from The Amstrad User (while stocks last)	32
Nationwide User Groups - a monthly update on Amstrad User Groups plus Contact List	6	Look - no hands - Alec Rae gives some short cuts in CP/M Plus to save time and errors	33
News - what's new to our shores, rumours plus "Gossip from the UK"	8	Tip-Offs - Turbo-charged tips for your PCW	36
Firing-up CP/M - 4 - the fourth part of our CP/M series looking at housekeeping	10	Pick Pocket - Pocket Protext; a sawn-off version of Protext? Alex Rae investigates	39
Gallimaufry VIII - seven short Type-ins for CPCs from utilities to demos	12	Type-ins - turn your PCW into a digital clock or a shooting range plus two utilities	41
Converting MicroBee programs - some timely advice from Petr Lukes	14	Character Study - a review of Mirrorsoft's fonts and graphics package called, obviously, Fonts 'n' Graphics for Fleet Street Editor, the desktop publishing system	44
Type Mismatch - Philip Riley provides some clues to solving this error message	17	Planting Trees - a continuation of our series for Logo fans	45
Blackout - a game from Donald O'Connor calling for good eyes and fast reactions	18	Software for the CPC464, 664 and 6128 - an updated list with plenty of additions including a new Turbo Joystick and Starglider Pack	48
Classified Ads - the official order form to reach over 8000 readers of The Amstrad User	20	Adventurer's Attic - Philip Riley presents his thoughts on choosing an adventure	49
Cheat Mode - your monthly list of 'cheats'	21	Therapy - the second and final part of an unusual adventure from David Rich	52
Looking after the Dollars - a review by Alex Rae of Money Manager Plus for the CPC6128, the PCW and PC	22	Compatibles Corner - where Chris Collins ponders on behalf of PC owners	58
PCW Discs Guide - an explanation of what you can find on your master discs	24	Artificial Intelligence - a 'tree of knowledge' type-in for the PC1512	59
Top of the Desktops - a review by Rob Ainsley of The Desktop Publisher from Database	28	Books, Binders and Back Copies - plus Year Discs and tapes for CPCs	64
Family Life - a personal account by Jeanne Bunting on using a PCW for a family history chart	30		

ADVERTISER'S INDEX

Bunyip Software	5
Magnetic Data Storage	3
Mitsubishi Electric AWA	IFC
Pactronics	57
Public Package	9

For Tape Subscribers, CPC programs appearing in this month's magazine can be found at the following approximate positions:

Side 1: THERAPY	-9	DEGREES	-169	CHRYBYCHR	-182
VARICAT	-194	UNSCRAM	-209		
Side 2: XPANDOCF	-8	XPANDPIC	-19	POUND#	-28
WEAVING	-38	BLACK464	-50	BLACK128	-71

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.

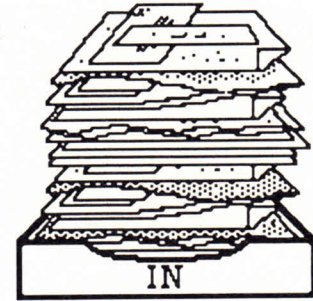
The Amstrad User is normally published on the first working day of each month. Reprinting of articles published in The Amstrad User is strictly forbidden without written permission. Copyright 1988 by Strategy Publications. The single copy price of \$4.25 is the recommended retail price only.

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 Mitsubishi Electric AWA Pty Ltd., or any other dealer in either software or hardware.

Letters



In reply to a letter from Mr. Goldman of Dandenong North (TAU Nov 87), re the drop in quality of ribbons for the 8256, I supply the following information.

The reason is that the original ribbon cassette was manufactured with the machine in Korea. The replacement cassettes are manufactured in the UK. Authority for the above is found on Page 17 of the September issue of "Putting you Amstrad to work".

As you are aware Ed, I have been replacing my own ribbons in the cassette for over twelve months. This (to date), has given me six ribbons for the Australian price of one cassette! I rotate three cassettes, and as you are aware also, I have published my Family History Book using an 8256.

For the benefit of TAU readers, this is how I do it.

I use "Columbia" universal spool typewriter ribbons, feeding the ribbon in by using the cassette mechanism, I do not put the twist in the ribbon - to allow free-flow of the join through the mechanism. I splice the ribbon on a 45 degree angle, using "Super Glue Gel" not "Super Glue". The latter will dry

too hard (and in a lump) preventing the ribbon from travelling through the mechanism. Be very sparing with the Gel, and use grease-paper (the cooking kind) to press and weld the join together, with 'gel and ribbon overlap' to form a joint of about 2mm.

Super Glue Gel will not adhere to grease-paper, (nor will Super Glue) and gives you more working time. If you use too much Gel, cut the ribbon and rejoin, otherwise the mechanism may not grip on the join although it will wind through by hand.

My experiences with RP7 and WD40 caused a malfunction with the tails of "p", "g" and "y" disappearing on a printout!

O.J. Muir, East Bentleigh, Vic.

I recently purchased an Amstrad printer ribbon (Soft 06441) for my father's PCW8256. I discovered that the ribbons are now made with a synthetic plastic ribbon, as they are cheaper to produce than the old cloth ones.'

After less than a week of normal use, the ribbon jammed and, as my father was unaware of this at the time, the print head continually passed over the same stretch of ribbon causing a hole to be worn completely through it. My father returned the printer ribbon to the place of purchase and he received a replacement. In less than a week, the new ribbon jammed repeatedly making it virtually unusable. The carbon itself also separated from its backing in a certain area, effectively ruining two or so lines of text when ever it passed over the print head. He managed to get another replacement, making it three ribbons in the space of two weeks. However, when the printer is in use, we have to stand over it just to make sure

nothing goes wrong. This is very inconvenient. Has anybody else encountered these problems? If so, perhaps there is a fault in the ribbon's design and something should be done about it.

David Boyle, Faulconbridge, NSW.

We have had a lot of correspondence (and phone calls) concerning the carbon ribbon and none of it, to say the least, was flattering. However, PCW owners will be pleased to know that this offending item has now been dropped and only the more reliable nylon ribbon will be available. While on the subject of ribbons, some users may have noticed a shortage of supply for the PCW and the DMP-2000 as well. We are reliably informed that this is no longer the case since the arrival of "plentiful supplies" very recently.

Letters about problems with printers hooked up to the CPCs appear in the magazine at frequent intervals, the latest being Messrs. Manning and Csendes in the November issue.

Most problems are caused by the fact that the CPC printer interface does not implement the bit seven of any character sent. If you send CHR\$(129) [binary 10000001] to the printer, the interface hardware ignores the high bit and the printer receives CHR\$(1) [binary

All letter for the Mailbag section should be addressed to:

The Editor

The Amstrad User

1/245 Springvale Road
Glen Waverley, Vic 3150

We regret that we cannot enter into any personal correspondence.

ON



**We're off to sunnier climes
on our one and only annual
holiday from 14th December
1987 to 8th January 1988
inclusive.**

**This means that by the time
you read this month's mag. we
will be consuming grape juice
on the banks of the Murray.
We'll be back in action on
Monday 11th January 1988.**

00000001]. This obviously will not produce the desired result.

An eight-bit parallel interface is available at a cost of some \$50, and it would be possible to implement the eighth bit by using the cassette interface (I have done it on the 464, but the 6128 would need some extra circuitry); however the owners of the Tandy printers have an easier solution available.

The Tandy DMP-105 has a 600/2400 baud serial interface (according to the catalogue) and very little software and external hardware is needed to convert the CPC printer port to a serial port. The circuit diagram and the software were published in the Queensland Amstrad User's Cassette Journal in February 1986. The journal is now continued by the Amstrad All-Australia Postal Group, PO Box 1084, Bendigo, 3550, who can supply back copies for a nominal fee plus the cost of the medium (tape or disc).

I have the DMP-105's grandfather (LP-VII) and I have used the serial interface to drive it. TAU (April 1986) had a routine for the LP-VII to print true descenders and to justify lines of text, using the graphic mode which requires the bit 7 set. Some of the control codes may be different on the newer printer, but a look at the printer manual should clarify them.

Petr Lukes, Toowoomba, Qld.

Petr is right. We do get a lot of mail concerning printers and more often than not it relates to control codes. For example, ESC @ normally resets a printer, but what does ESC Z + parameters do? In the case of the DMP-2000 and SP-1000A it will set quadruple density graphics but with a GP-

700A it sets the page length and requires only one parameter. ESC N and ESC G will set the printing mode of a GP-700A to either 10 or 13.3 character per inch but on the other two means "select skip perforation" and "select double strike". The point is, if you only have the control code and don't know the function, what do you do? It would seem that many write to us, but we don't know either! We are in the same boat as we do not have a list of printer control codes for every machine. This is where you come in. We would like to be inundated with control code tables for as many printers as possible. We will do the hard work and compile a list from those we receive over the next few months and publish it. Send your table direct to the Editor at the usual address.

We've bowed to pressure and will now take classified ads from readers. See page 20 for Booking form.

I have discovered a way of creating even more styles of large fancy text to use on title pages etc. You must first

WALLET FRIENDLY



XMAS



SPECIALS!!

WE DO SUPPORT OUR SALES WITH POST WARRANTY SERVICE

WE MAIL AUSTRALIA WIDE

TEAC
MITSUMI

Shugart



ASTEC

AMSTRAD

PCW 8256
8512

PC 1512

CPC 6128

Original Nashua 5.25" diskettes fully boxed in U.S.A. \$ 19.90 per box of 10.

FLOPPY DISK DRIVES, LATEST FROM TEAC

5.25" FD55, BR 40 tracks 360KB	\$ 179.00
5.25" FD55, GFR 80 tracks 1.2MB	\$ 199.00
3.5" D-357K-720K	\$ 199.00

5.25" SA460FH 80 Tracks 1MB	\$ 138.00
5.25" SA455 40 Tracks 1/2HT. Rec.	\$ 120.00

5.25" 52SAFH 360KB DSDD Reconditioned	\$ 85.00
---------------------------------------	-----------------

65 Watt Switch Mode Computer quality power supply unit	\$ 78.00
D.C. Cable loom to fit	\$ 14.00

DO IT YOURSELF UPGRADES

Memory upgrade kit 120ns to 512k	\$ 69.00
Second external! 720KB SA460FH New Ready to plug in and use MOONSTONE'S "MFU" for extra versatility	\$ 299.00
Memory upgrade kit 120ns to 640k	\$ 75.00
Second internal FD55BR 360KB 5 1/4"	
Including mounting hardware kit	\$ 199.00
External 5 1/4" 360KB DSDD52SAFH Rec. Ready to plug in and use both sides	\$ 247.50

All prices subject to change without notice. All new products 90 days warranty. Reconditioned units 60 days warranty. Cost of packing & postage extra-all prices include sales tax



**59a Boronia St, (P.O. Box 330)
Kensington N.S.W. 2033, Australia
Tel: (02) 662 4884 Fax: (02) 662 1339
Telex: AA121822 (SY2567)**

MAILBAG

load one of Alastair Scott's fonts in the October issue (page 58), then load in the Fancy Text Generator from Richard Turner in the November issue (page 15). You will get an enlarged form of italic, bold or thin characters.

Lee Drury, Jamboree Hts., Qld.

I was interested to see an article in a recent edition of TAU on drawing circles from within Basic on the CPC range of computers. At the time, I was writing a circle drawing routine in machine code, and since a faster routine was asked for I now send it to you for possible publication.

I have included a listing of the source code, and a Basic listing that will poke the code into memory. It is not relocatable, but of course it could be assembled in any free part of memory.

The code can be saved after running the Basic program by typing:

```
SAVE "CIRCLE", B, &A000, &128.
```

Instructions for use of the routine are included in both listings.

Geoff Camp, Lyndoch, SA.

We don't have enough space to print the source code listing. If anyone would like a copy, please send a stamped and self-addressed 4"x9" envelope and we will oblige.

I have just received my copy of the issue 33 tape and have found a number of errors in the programs. For example in "BOLDCHAR", "THINCHAR" and "ITALCHAR", your program typist seems to have confused HIMEM with a part of the female genitalia in line(s) 30. Also the "WEEKDAYS" program seems to think that today is a Friday (2/11/87) whereas I am quite certain it is a Monday.

If this is the standard of your tapes what is the point in subscribing to them? We might as well type in our own mistakes! I hope this does not happen again or I will be most displeased. Surely someone can check the accuracy of the tape program before they are distributed to subscribers.

I also have some excellent Amstrad programs but I think they are worth

```
1 'AMSTRAD CPC - CIRCLE
2 '  GEOFF CAMP, 1987
3 '
4 'To use:  CALL &A000,x,y,r
5 '          x and y are centre coords
6 '          r is radius
7 '
10 DEFINT a-z
20 PRINT"Poking Data"
30 MEMORY &9FFF
40 FOR addr=&A000 TO &A128
50 READ byte$:b=VAL("&" +byte$):c=c+b
60 POKE addr,b
70 NEXT
80 IF c<>31448 THEN PRINT"Data Error":END
90 PRINT"Finished":END
100 DATA FE,03,C0,DD,6E,00,DD,66
110 DATA 01,22,11,A1,E5,C1,21,00
120 DATA 00,22,13,A1,22,17,A1,AF
130 DATA ED,42,22,19,A1,22,15,A1
140 DATA CD,11,BC,FE,02,20,10,3E
150 DATA 00,32,01,A1,32,DC,A0,32
160 DATA 09,A1,32,D4,A0,18,10,3E
170 DATA 3C,32,09,A1,32,D4,A0,3E
180 DATA 3D,32,01,A1,32,DC,A0,CD
190 DATA CC,BB,ED,53,1B,A1,22,1D
200 DATA A1,DD,6E,02,DD,66,03,DD
210 DATA 5E,04,DD,56,05,CD,C9,BB
220 DATA 3A,11,A1,2A,13,A1,BD,DA
230 DATA 1F,A1,20,07,3A,12,A1,BC
240 DATA DA,1F,A1,ED,5B,11,A1,2A
250 DATA 13,A1,CD,EA,BB,ED,5B,11
260 DATA A1,2A,17,A1,CD,EA,BB,ED
270 DATA 5B,15,A1,2A,13,A1,CD,EA
280 DATA BB,ED,5B,15,A1,2A,17,A1
290 DATA CD,EA,BB,ED,5B,13,A1,2A
300 DATA 11,A1,CD,EA,BB,ED,5B,13
310 DATA A1,2A,15,A1,CD,EA,BB,ED
320 DATA 5B,17,A1,2A,11,A1,CD,EA
330 DATA BB,ED,5B,17,A1,2A,15,A1
340 DATA CD,EA,BB,2A,19,A1,E5,C1
350 DATA 2A,13,A1,29,09,23,22,19
360 DATA A1,2A,13,A1,23,23,22,13
370 DATA A1,2A,17,A1,2B,2B,22,17
380 DATA A1,2A,19,A1,7C,B5,CA,60
390 DATA A0,CB,7C,C2,60,A0,E5,2A
400 DATA 11,A1,29,E5,C1,E1,AF,ED
410 DATA 42,23,23,22,19,A1,2A,11
420 DATA A1,2B,2B,22,11,A1,2A,15
430 DATA A1,23,23,22,15,A1,C3,60
440 DATA A0,00,00,00,00,00,00,00
450 DATA 00,00,00,00,00,00,00,2A
460 DATA 1D,A1,ED,5B,1B,A1,C3,C9
470 DATA BB
```

more than \$10 per page of listing. Most computer magazines pay at least \$20 per page of listing - if you would like to look at them and decide they are worth \$20 per page I would be willing to submit them. Some examples are DRAW POKER, ROULETTE, I CHING and a graphics package using the Amstrad DRAW and FILL facilities. All are fully debugged and written to make full use of graphics. I can supply them in CPC tape format.

Robert Hancock, Port Elliot, SA.

Ok, let's take the points one at a time.

Yes, all references to HIMEN should read HIMEM. When you run them you will also find that BOLDCHAR and THINCHAR are reversed. Apologies, no excuses and a smack for us! (By the way, the area of the anatomy you are talking about is spelled HYMEN).

The WEEKDAY program requires the date to be entered in DD,MM,YYYY format as advised in the fourth paragraph of the text on page 11. You have obviously typed in 2,11,87 which will produce an incorrect day. A smack for you! However, line 180 has an entry [yy=yedar-1] which should read [yy=year-1]. As all our birthdays are after February, the first two months of the year were not checked and the results to the dates we keyed in were correct. Without the above correction both January and February will produce the wrong day. Another smack for us! (I think we need a holiday). For others who tried to run WEEKDAY on it's own and were puzzled

Please note that all program contributions must be submitted on 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 addresses padded bag.

DISPLAY ADVERTISING DEADLINES

Issue	Booking by	Copy by
FEB '88	11/12/87	05/01/88
MAR '88	15/01/88	29/01/88
APR '88	15/02/88	26/02/88

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

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

by the "DATA EXHAUSTED IN 120" message, we remind you that you must merge WEEKFIX to get a full working program.

Finally, with the publication of the November issue the rate for contributions was increased (see page 1). We have doubled the cartoon rate to \$10 and increased the program etc. rate to \$15 per page. While we are proud of our circulation, now up to 8000 copies each month, we are still a specialised computer magazine and cannot hope to compete with larger, more general computer magazines. The rate increase should encourage more readers to contribute and yes, we are happy to look at your programs for possible publication at the new rates.

Thanks to everyone else who wrote in pointing out the problems, especially Mrs. Y. Perry of Arncliffe who may find the above of particular interest.

I am replying to S.A. Mah's letter in the August 1987 issue of The Amstrad User. He said that all games could not exist without violence, but after months of searching I have found one. It is called "Holdfast" and is a simulation of non-violent resistance. The idea of the game is to get the government of Dictoria to build the village of Holdfast a school and a clinic. In order to do this you have to negotiate with the government to meet with your demands. The actual score is in weeks, in other words how many weeks it will take the government to build the school or clinic.

I am writing this letter to you using my Mini Office II, which is excellent, just like your magazine. Oh, by the way, I own a CPC464 which I enjoy using a lot.

Simon Muirhead, Prospect, SA.

By all accounts a week can range between two months and two years - it all depends in which State you live! Who was it who said "a week is a long time in politics"? Harold Wilson, I think.

Enough of this, perhaps you could send us more details Simon on the name of the software house/publisher, the price, where you bought it and so on so that we can pass the information on to other readers. Information from anyone else on non-violent games would be welcome.

I have two things that may be of interest to your readers (who use a PCW).

First, in Bounder, pressing [STOP]+[ALT] keys together will stop the game you are playing and return you to the introductory screen.

Second, it is possible to make an auto load disc using SID.COM, J14CPM3.EMS and a program of your choice, eg. BOUNDER.COM.

1. Using PIP, copy SID.COM, J14CPM3.EMS and BOUNDER.COM onto a new working disc.
2. Once you have done that, keep your work disc in the drive and at the A> prompt type SID J14CPM3.EMS [return]. This runs SID and loads J14CPM3.EMS into memory. Now at the # prompt type d59dc [return]. The first line is the one we want to change so now type s59dc [return] then "BOUNDER.COM [return]. The name of the program you are entering must be in upper case letters and if it is shorter than 9 characters then fill the rest with spaces.
3. To save the new version of J14CPM3.EMS type wJ14CPM3.EMS [return].
4. Now to test your new product, take the work disc out of the drive, reset the computer by pressing [SHIFT]+[EXTRA]+[ALT], put you work disc in the drive and sit back and have a frustrating game of Bounder. If it works you can erase SID.

Stephen Reid, Heyfield, Vic.

We received a similar use of SID on the 6128 from Wayne Clarke (Banbury, WA) but couldn't get it to work. Something is missing Wayne - could you check the details and send us your comments? Thanks.

For CPC Computers Bunyip Software's

Screen Graphics Package V.7

Has a versatile Drawing program using Mode 0 and 1 that can save, then merge with any sized picture. A 'U.D.' Character designer program, an Epson compatible Shaded and B/W screen dump program and Library of pictures for the drawing program. Included with each order is a FREE Disc Label Utility.

S.G. Pak (Disc) - \$54.99 including P. & P.
S.G.P. Library disc #2 - \$21.99

Bankcard and Visa card welcome.

BUNYIP SOFTWARE
Box 591, MURRAY BRIDGE, SA 5253
For more details write to the above address.

USER GROUP INFORMATION

Nationwide User Groups

Users in **The Gap** area in Queensland will be interested to know that Ric Allberry is close to arranging a meeting place for a new group. He suggests prospective members should contact him on (07) 252 9666 [B/H] or (07) 300 1675 [A/H] or write to 22 Weemala Street, The Gap, Qld 4061.

WESTERN AUSTRALIA

ALBANY AMSTRAD USER GROUP

President: Gerry Barr (098 41 6884)
Secretary: Steven Hands (098 44 7807)
Treasurer: Gavin Grose
Venue: Priess Street Centre, 14 Priess Street, Albany on the first and third Mondays of each month at 7.00 pm.
Mail: 20 Anuaka Road, Albany, WA 6330

AMSWEST (Perth)

President: Carl Hindle (09 419 1411)
Vice Pres: John Lansdown (09 342 3154)
Secretary: Saskia Quinn (09 444 8147)
Treasurer: Mario Ioppolo (09 444 7691)
Venue: Royal Institute for the Blind, cnr. Whately Cres. and Guildford Road, Maylands on the first and third Tuesdays of each month starting at 7.30.

AMSWEST (Blackwood) USERS GROUP

This small group is affiliated to AMSWEST (Perth). For more details contact George Muscat on (097) 61 1488.

ROCKINGHAM-KWINANA AMSTRAD USER GROUP

President: Bob Harwood
Vice-Pres: Keith Saw
Treasurer: Rob Macilroy
Secretary: Ben Hille (095 27 5246)
Venue: Cooalongup Primary School, Westerly Way, Cooalongup (Rockingham), every second Wednesday at 7.30 pm.
Mail: 29 Milgrove Ave., Cooalongup, WA 6168

SOUTHSIDE AMSTRAD USER CLUB

President: W. Van Der Kool (09 271 1085)
Secretary: Steve King (09 354 2068)
Treasurer: Eric Tytherleigh (09 390 8865)
Venue: Wandarrah Hall, Edgeware Street, Lynwood every 2nd and 4th Wednesday of each month from 7.00 pm.
Mail: The Sec., Southside Amstrad Users Club, 61 Keslake Way, Parkwood, WA 6110.

AMSTRAD COMPUTER CLUB TOM PRICE

President: Colin Smith (091 89 2074)
Secretary: John Eliot (091 98 1735)
Treasurers: P. & C. Montgomery (091 89 2398)
Venue: Primary School every 2nd Wednesday night. Contact the above for more details.

SOUTH AUSTRALIA

AMSMOUTH AMSTRAD USER'S GROUP

President: Drew Ames (085 371 0151)
Treasurer: Bob Bleachmore (085 56 2048)
Secretary: Ross Kennewell (08 386 2737)
Venue: Christies Beach High School, Western Section, Beach Road, Christies Downs (adjacent to Staff Car Park off Mander Road) every 2nd Wednesday of each month at 7.30.
Mail: PO Box 612, Noarlunga Centre, SA 5168

AMSNORTH AMSTRAD USER'S GROUP

Organisers: J.T. Clarkin (08 262 6342)
R. Britton (08 258 7861)

Venue: Lacrosse Hall, Terama Street, Gepps Cross every Wednesday at 7.00 p.m.

AMSTRAD COMPUTER CLUB INC. (SA)

President: Frank Matzka (08 382 2101)
Vice Pres: Andrew McDade (08 79 5414)
Treasurer: Les Jamieson (08 356 9612)
Secretary: Ross Barker
Venue: Church Hall, 15 Clayton Ave, Plympton between 6.30 and 9.00 each Tuesday.
Mail: PO Box 210, Parkholme, SA 5043

NORTHERN COMPUTING SOCIETY INC.

President: Grant Wilson (08 250 2760)
Treasurer: Percy Cook (08 248 1065)
Secretary: Judith Thamm (085 20 2377)
Venue: Salisbury North Primary School, cnr. Bagster & Woodyates Rds every Wednesday from 7.00.
Mail: PO Box 269, Two Wells, SA 5501

PORT LINCOLN AMSTRAD USERS GROUP

Contact: Rita Bascombe (086 82 1633)
Venue: Third Tuesday of each month from 8.00pm. Ring above number for address.

PORT PIRIE AMSTRAD USER GROUP

President: Doug Gowers (086 36 5206)
Treasurer: Dave Green (086 32 6834)
Secretary: Tim Eckert
Youth Rep: Mark Fusco (086 36 2452)
Venue: Education Ctr, 370 The Terrace, Port Pirie every 2nd and 4th Monday from 7.30 pm.
Mail: The Pt Pirie Amstrad User Group, c/o D.T. Green, 207 Senate Rd., Pt. Pirie, SA 5540.

SOUTH EAST AMSTRAD USER GROUP (SA)

Contact: Neil Taylor (087 25 8068)
Venue: Mount Gambier from 1.00p.m. to 4.00p.m. on the 3rd Sunday of each month. Ring above number for address.

NORTHERN TERRITORY

DARWIN AMSTRAD USER GROUP

President: Kevin Bateman (089 32 1463)
Treasurer: Jeff Powis (089 27 5557)
Secretary: Kiem Le (089 32 1828)
Venue: Meetings are held twice monthly. Contact any of the above for more details.
Mail: 45 Priest Circuit, Gray, Palmerston, NT 5787

VICTORIA

CENTRAL AMSTRAD USER SOCIETY

President: Fred Gillen (03 580 9839)
Vice-Pres: Dennis Whelan (03 367 8614)
Treasurer: Doug Jones (03 560 8663)
Secretary: Craig Tooke (03 359 3736)
Venue: Corner of Church and Somerses Sts, Richmond on the first Sunday of each month commencing at 1.00 and generally twelve days later on a Friday evening at 7.00.

EASTERN AMSTRAD USER GROUP INC.

President: J.L. Elkhorne
Secretary: Bob MacDonald (03 878 7783)

Treasurer: Ron Dunn (03 277 7868)
Venue: St. Ninian's Church Hall, cnr. McCracken Avenue and Orchard Grove, South Blackburn on the 1st Sunday of each month from 1.00pm.
Mail: R.D. MacDonald, 6 Ashwood Drive, Nunawading, Vic 3131

GEELONG AMSTRAD USER CLUB

President: Reg Morse (052 43 3239)
Vice-Pres: Arthur Pounsett (052 78 2160)
Secretary: Ron Butterfield (052 50 2251)
Venue: South Barwon Community Services Ctr, 33 Mount Pleasant Road, Belmont on the first Wednesday of each month, starting at 7.30p.m.

GOULBURN VALLEY AMSTRAD USERS CLUB

President: Shad Aitken (058 52 1001)
Sec/Treas: Bill Brown (058 21 7569) or (058 22 1011)
Venue: 98 Nixon Street, Shepparton on the first floor every third Wednesday from 7.30 pm.

LATROBE VALLEY AMSTRAD USER GROUP

President: Stan Hughes
Secretary: M.G. Donaldson (051 345 711)
Venue: Morwell Neighbourhood House, 17 Symons Crs., Morwell on the first Thursday of each month at 7.30pm.
Mail: PO Box 947, Morwell, Vic 3840

MARYBOROUGH AMSTRAD USER CLUB

President: Chad Banfield (054 68 1351)
Treasurer: Brendan Severino (054 61 3191)
Secretary: J. Fothergill (054 75 2667)
Venue: Maryborough CCC each week on Tuesday from 12.10 p.m. to 12.45 p.m.

MOUNTAIN DISTRICT AMSTRAD USER GROUP

President: Ian Poi (03 758 5282)
Treasurer: Lindsay Bell (03 758 9921)
Venue: Country Womens Association Hall, 4 Sundew Avenue, Boronia from 7.00 pm. every second Monday of the month.
Mail: PO Box 132, The Basin, Vic 3154

NORTHERN AMSTRAD USER GROUP

Contact: Brian Ellis (03 469 4425 A/H)
Venue: Every three weeks in Brunswick West for CPC owners with a sincere interest beyond games.

SOUTHERN AMSTRAD USER GROUP INC.

President: Noel Sheard (03 786 5469)
Secretary: Bob Patterson (03 786 6976)
Treasurer: Christine Donaghey
Venue: Senior Campus at John Paul College, Frankston every third Tuesday from 7.30p.m.
Mail: The Sec., PO Box 100, Seaford, Vic 3198.

SUNBURY MELTON AMSTRAD USER GROUP

Contacts: Wayne Urmston (03 744 2719)
Norma McEntee (03 743 7104)
Venue: Contact above for more details.

WENDOOREE AMSTRAD USER GROUP

Contact: Brad Maisey (053 44 8356)
Venue: Cnr. Charles and Appleby Drive, Cardigan Village on the first Sunday of the month at 3.00 pm.

WESTERN COMPUTER CLUB

Venue: Fairbairn Kindergarten, Fairbairn Road, Sunshine on alternate Tuesdays from 6.30 pm.
Mail: PO Box 161, Laverton 3028.

ACT

CANBERRA AMSTRAD USER'S GROUP

Convenor: Paul Kirby (062 86 5460)
Secretary: Michael Hickey (062 58 5719)
Treasurer: Rod MacKenzie (062 54 7551)
Venue: The Oliphant Building, ANU, Canberra on the first Wednesday of each month from 7.30 pm.
Mail: PO Box 1789, Canberra, ACT 2601.

NEW SOUTH WALES

AM-USER'S (North Ryde)

Contact: Lawrence Walters (02 888 1898)
Venue: Meeting Room at 2 Leisure Close, North Ryde from 7.30 p.m. on the first Tuesday of each month.

BLUE MOUNTAINS AMSTRAD USERS

President: Bob Chapman (047 39 1093)
Vice Pres: Dennis Shanahan (047 39 4568)
Treasurer: Peter Traish (047 53 6203)
Secretary: Christine Preston (047 51 4391)
Venue: Springwood Neighbourhood Centre, Macquarie Road, Springwood on the 4th Wednesday of each month at 8.00pm.

CENTRAL COAST AMSTRAD USERS CLUB

President: Lloyd Mitchell (043 88 2950)
Secretary: Ray Thompson (043 32 9095)
Venue: The Entrance Aquatic Club, Salt Water Reserve, Long Jetty every second Monday at 7.30 p.m. sharp.

COFFS HARBOUR AMSTRAD COMPUTER CLUB

President: Bruce Jones (066 52 8334)
Secretary: Don Donovan (066 52 6909)
Treasurer: Brian Claydon (066 49 4510)
Venue: Orara High School, Joyce Street from 7.00 on the first Friday of each month.

FAIRFIELD MICRO USER GROUP

Contact: Arthur Pittard (02 72 2881)
Venue: Room 65, Canley Vale High School, Prospect Road, Canley Vale every third Wed. from 7.00.

HAWKESBURY AMSTRAD USER GROUP

Contact: Terry Webb (045 76 5291)
Venue: Richmond Swimming Ctr, East Market St., Richmond every third Tuesday at 7.30 pm.

ILLAWARRA AMSTRAD USERS CLUB

President: Paul Simpson (042 27 1574)
Secretary: Ken Waegle (042 56 6105)
Publicity Off: Steve Parsons (042 96 3658)
Venue: AGA Gremania Club, Berkeley at 2.00 pm. every third Saturday.

LISMORE DISTRICT AMSTRAD COMPUTER CLUB

President: Max Muller (066 337 113)
Vice Pres: Nick Van Kempen (066 874 579)
Sec/Treas: Laurie Lewis (066 62 4542)
Venue: Goonellabah Public School, Ballina St. on the last Tuesday of each month from 6.30.
Mail: 20 Johnston Street, Casino, NSW 2470

S & W MILLER AMSTRAD USER'S CLUB

President: Wal Sellers (049 33 5459)
Secretary: Nikki Lee (049 33 5459)
Treasurer: Georgina Todd (049 66 2788)
Venue: Maitland Park Bowling Club, Maitland on the second Tuesday of each month at 7.30pm.

NAMOI AMSTRAD USERS GROUP

Contact: Martin P. Cift, JP (067 92 1333) B/H (067 92 3077) A/H
Venue: Narrabri Technical College, Barwan Street, Narrabri on the first Saturday of each month at 2.00 p.m.

NEWCASTLE AMSTRAD USER GROUP

President: John Harwood
Treasurer: Erica Harwood
Secretary: Janet Bowen
Venue: Kotara Public School, Park Avenue, Kotara on the first Tuesday of each month. Contact the above for meeting times.
Mail: PO Box 18, Charlestown, NSW 2290

PCW AUSTRALIA GROUP

President: David Springett (02 660 4515)
Secretary: David Chamberlain (047 77 4396)
Venue: Burwood RSL Club, 96 Shattsbury Road, Burwood every second Tuesday of the month at 7.30 pm.
Mail: PO Box 97, Annandale, NSW 2060.

PORT MACQUARIE AMSTRAD USERS GROUP

Mail: Craig Tollis, Box 584, Pt. Macquarie, 2444.

USER GROUP INFORMATION

SYDNEY AMSTRAD COMPUTER CLUB

President: Bob Knowles (02 810 7373)
 Secretary: Reed Walters (02 560 9487)
 Treasurer: Jim Chryst (02 327 7872)
 Venue: Newtown area on the 1st Saturday of every month for a normal club meeting and on the 3rd Saturday for the purposes of programming tutorials only. Both meetings commence at 2.00 p.m. For more details contact the Secretary or Treasurer between 6.00 p.m. and 9 p.m.

SYDNEY PC1512 USER GROUP

Contact: Geoff Craine (02 76 6467) A/H (02 412 9213) B/H
 Venue: To be arranged; meeting initially on the third Tuesday of each month at 7.00 pm.

QUEENSLAND

BRISBANE AMSTRAD COMPUTER CLUB

President: John O'Connor (07 271 3350)
 Vice Pres: John Digby (07 351 2553)
 Secretary: Bob Ashe (07 355 5699)
 Treasurer: Ivan Dowling (07 269 8795)
 Tech. Editor: Franz Hendrickx (07 356 0633)
 Tech. Lib.: Jonathon Wootton (07 816 1429)
 Venue: Main meetings at in Room 15a of Junction Park State School, Waldheim St., Annerley starting at 7.30 p.m. Another is held at Wynnum Central State School, Florence St., Wynnum Central on the first Saturday of each month at 1.00 p.m. The coordinator is Warren Kennedy (07 351 4232). A third is held at Newmarket State School, Banks St., Newmarket on the second Saturday of each month at 1.30 p.m. The coordinator is Cherry Shrier (07 351 6179).
 Mail: PO Box 167, Alderley, Qld. 4051

BUNDEBERG AMSTRAD USER'S GROUP

President: Ray Babbidge (071 72 1223)
 Secretary: Clive Barrett (071 71 3668)
 Treasurer: Sheila Cole (071 72 8884)
 Venue: The third Tuesday of the month. For more details contact the above.
 Mail: PO Box 865, Bundaberg, QLD 4670.

CABOULTURE AMSTRAD USER GROUP

President: John D'Archambaud (071 95 4860)
 Secretary: Stephen Yench
 Treasurer: Craig Deshon
 Venue: Contact above number for more details.

CAPRICORN AMSTRAD USERS GROUP

President: Graeme Annabell (079 27 4915)
 Sec/Treas: Anthony Trost (079 33 1951)
 Venue: Waraburra State School, Johnson Road, Gracemere on the first Friday of each month at 7.00 pm.
 Mail: 4 Sunrise Crescent, Gracemere, 4702

COMPUTER USER GROUPS OF AUSTRALIA

Pittsworth Branch
 President: David Siebuhr
 Contact: Ron Langton (076 931 690)
 Venue: Every first Tuesday of every month from 5 pm. at the St. Peter Lutheran Church Hall, Grand Street, Pittsworth.
 Mail: CUGA, PO Box 166, Pittsworth, 4356

GOLD COAST AMSTRAD USER GROUP

President: Mark Abbott (075 31 2114)
 Treasurer: Pam Scott
 Secretary: Mary MacLaren
 Venue: Benowa State High School, Mediteranean Drive, Benowa on the first Saturday of each month at 2.00 pm.
 Mail: 17 Ewan Street, Southport, Qld 4215

HERVEY BAY - MARYBOROUGH AMSTRAD

COMPUTER USER GROUP
 President: Ian Jardine (071 28 3688)
 Vice-Pres: Gerhard Schulze
 Sec/Treas: Les Patford (071 28 9737)
 Venue: The first Thursday of each month at 7.00 alternating between the Hervey Bay Senior College and Maryborough TAFE College.

Contact the above for more details.
 Mail: Les Patford, PO Box 24, Torquay, Q 4657

IPSWICH AMSTRAD USER GROUP

Contact: Peter Wighton (07 288 4571)
 Venue: Every second Wednesday from 7.15 p.m. at Bremer High School, Blackstone Rd, Raceview

MACKAY AMSTRAD USER GROUP

Contact: Des Mulrealey (551 409)
 Ron Coates (547 222)
 Venue: Meet every second Sunday morning.
 Contact the above for location and time.

PENINSULA AMSTRAD CLUB

(amalgamated with BACC)
 President: Ivan Dowling (07 269 8795)
 Treasurer: Keith Johnston (07 203 2339)
 Secretary: Tracie Payne (07 267 6645)
 Venue: Kippa-Ring State School Library, Elizabeth Avenue every third Tuesday of the month at 7.30 pm.

SOUTHSIDE AMSTRAD USER GROUP (QLD)

President: Michael Toussaint (07 200 5414)
 Vice-Pres: Peter Incoll (07 208 2332)
 Secretary: Mick Howe (07 209 1839)
 Treasurer: Wayne Stephens (07 287 2459)
 Librarian: Carol Watts (07 287 2882)
 Venue: Loganlea State High School (in the Communications Room) every third Saturday of the month starting at 2.00 p.m. A Basic programming course is held fortnightly.
 Mail: 10 Carramar St, Loganlea, 4204

TOOWOOMBA AMSTRAD USERS GROUP

President: Stephen Gale (076 35 5001)
 Vice-Pres: Priscilla Thompson (076 35 5092)
 Secretary: Adrian Dunsmore (076 91 1561)
 Treasurer: Edwin Gerlach (076 33 1054)
 Venue: Toowoomba Education Centre, Baker Street, Toowoomba on the 4th Monday of each month starting at 7.30 pm.

TOWNSVILLE AMSTRAD USER GROUP

President: Ian Wallace (077 73 1798)
 Vice Pres: Doug Selmes (077 79 6011 xt 252)
 Treasurer: Allan Maddison (077 79 2607)
 Secretary: S. Crawshaw (077 73 3933)
 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
 Venue: Warwick Education Centre on the first Saturday of each month from 3.00 p.m.

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: Frank Self (002 49 5499)
 Secretary: Peter Campbell
 Treasurer: Cindy Campbell
 Publ. Off: Danny Brittain (002 47 7070)
 Venue: Elizabeth Matriculation College on the first Wednesday of each month from 7.30 pm.

NORTHERN TASMANIA AMSTRAD COMPUTER CLUB

President: Russell Lockett (003 44 8972)
 Treasurer: Keith Chapple (003 26 4338)
 Secretary: Shane Crack (003 97 3298)
 Publicity: Michael Watts (003 31 1944)
 Librarian: Patrick Salter (003 97 3379)
 Junior Del: Bobby Lockett (003 44 8972)
 Venue: Launceston Community College (opposite Park Street) in Room 11 on the first Saturday of the month at 5.00 p.m.

N.W. COAST AMSTRAD USER'S CLUB

President: Rick Ferguson (004 31 6280)
 Treasurer: Robert Simpson
 Secretary: Karen Stevenson
 Venue: Burnie Technical College, Mooreville Road, Burnie on the third Friday of each month at 6.30 p.m.

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 Bishoptdale, Christchurch, NZ.

WELLINGTON AMSTRAD USER GROUP

Contact: Tony Tebbs 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	Inverell	(067) 22 1867
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
Sue Kelly	Manangatang	(050) 35 1402
R. Kernebone	Mildura	(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 Alberry	The Gap	(07) 300 1675
Neville Eriksen	Gladstone	(079) 78 2418
Kylie Telford	Goondiwindi	(076) 76 1746
D.F. Read	Ingham	(077) 77 8576

SA

Lindsay Allen	Murray Bridge	(085) 32 2340
Michael Spurrier	Murray Bridge	(085) 32 6984
Mrs. S. Engler	Penola	(087) 36 6029

WA

Graeme Worth	Scarborough	(09) 341 5211
P.M. Nuyens	Waroona	(095) 33 1179

TAS

Conal McClure	Scottsdale	(003) 52 2514
---------------	------------	---------------

NT

G.P. Heron	Tiwi	(089) 27 8814
------------	------	---------------

This revised list is based on information collected over the last four months. If your name appears and it shouldn't, please let us know. 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.

Gossip from the UK

Stop Press, it's Stop Press

After months of delay the debugged, rebadged, repackaged, rewritten version of AMX Pagemaker is ready. Desktop Publishing is once again a viable on the CPC. Advanced Memory Systems is desperately trying to shake off the bad publicity surrounding the original bug-ridden package.

AMS decided to keep the project going. Garry Allen, programmer of the original, was called in to fix the bugs and add routines previously missed out. After a debugging session involving Alex, Garry and AMS man John Simpson, the product was ready. During this time there was a problem over the use of the title Pagemaker, already being used by Aldus, authors of the Apple Macintosh Pagemaker and more recently PC Pagemaker. To avoid a court case AMS rebadged their wares Stop Press. Consequently new packaging and a new manual had to be designed. These are all finished..

Extra Extra which has also been on the board for some time has been completed. Over 25 new fonts and 300k of clip art are presented on one disc.

(Stop Press is available from PC Network/Amnet on 075-321465 for \$155.25 assuming the dollar doesn't drop any further - Ed).

RAM Expansion

Ram Electronics now own the DK'tronics brand name and the rights to manufacture its goods. After a story appeared in a trade paper stating that a peripheral manufacturer was up for sale, rumours pointed to DK'tronics.

Richard Sekula, Ram's sales director couldn't give a reason for DK'tronics sudden departure. But, as he put it, "we are delighted at having our product range doubles overnight." When asked

what figure was involved in the purchase of the name and products Richard, unsurprisingly, couldn't comment.

Games Bonanza

America's biggest entertainment software house, Electronic Arts, has set up a new UK subsidiary and promised a flood of games for the CPC. Most will be conversions from over 200 existing games found on other machines.

The first three titles due for release very shortly are Pegasus, a hydrofoil simulation; Arctic Fox, a shoot 'em up tank simulation and The Bard's Tale, a graphic adventure.

Gnome Ranger

Due for release soon is a new title from Level 9 for the CPCs entitled "Gnome Ranger". The game features Ingrid Bottomlow in an epic journey which has been split into three parts. We are promised plenty of puzzles and amusing text. Like "Lord of the Rings", the characters lead their own lives and can be commanded by players. A 48-page booklet will accompany the game.

Rumour Room

It was reported in the trade paper, Computer Trade Weekly, that Amstrad will be launching a portable PC called the LT-1 (presumably meaning Lap-Top) at the Comdex show in the States.

It appears that the LT-1 will feature a 3.5" drive, battery/mains option, 80 column LCD screen with lift-up top, word processing software bundled and a high-contrast Super Twist LCD screen.

It is also rumoured that a fax machine will also be launched at the same show.

Migent launches into PC DTP

Page-ability is the latest release from the Migent "Ability" stable. The Desktop Publishing package is described as 'a sophisticated, graphics based publishing tool that can link directly into Ability Plus'.

And while talking about Migent, they won the "Home/Small Business Software of the Year Award" for their Ability package (reviewed Issue 30 - July 87 - Ed). Other winners at the British Microcomputing Awards 1987 were Guild of Thieves from Rainbird for "Game of the Year" with a "Special Commendation" going to the Amstrad PC1512.

Fleet Street Editor upgrade for PC

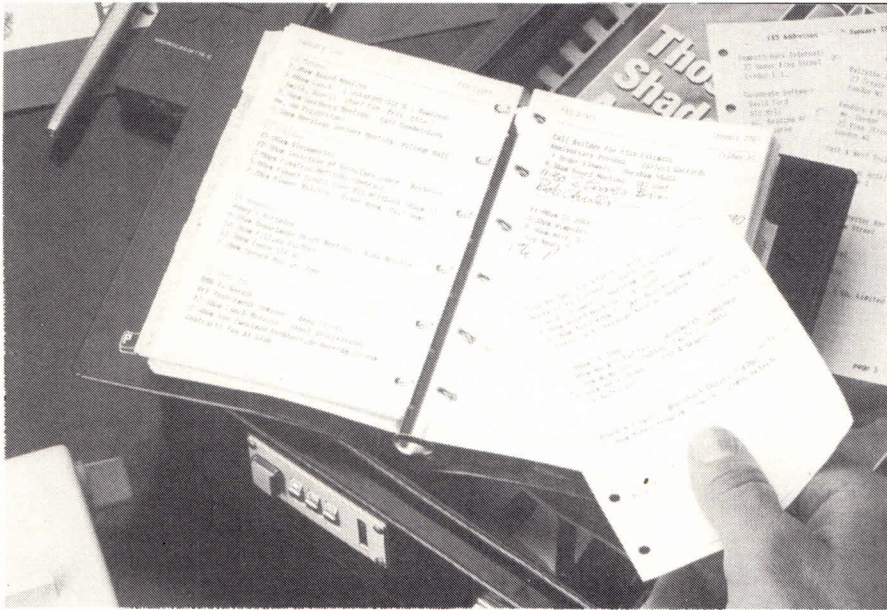
Version 2.0 of this package is now available for The Amstrad PC1512 and other IBM compatibles. This version is faster, supports EGA/CGA/Hercules cards and has 5 extra pages of graphics and more professional fonts (version 1.0 fonts are supported). A grid is included for more accurate movement across a page, pictures can be enlarged or reduced, areas of work magnified and 7 templates are included for Card, Newsletter etc. production.

It will cost \$40.00 to upgrade from version 1.0. Users should return their complete package of discs (after taking a back-up), manual and cheque by registered post to IQ Smart Business, 34 Wadhurst Drive, Boronia, Victoria 3155.

And . . .

For PCW Fleet Street Editor users, a new font editor called Fonts 'n' Graphics is now available. It provides an extra five fonts and some eighteen pages of graphics all of which can be modified to suit. The package includes a loose leaf instruction manual to insert into the existing FSE manual and costs \$69.99. More details can be obtained from IQ Smart Business on (03) 222 2288.

Yuppies rejoice - PORTEX is "IN"



If an article in The Australian recently is to be believed, then a computerised Filofax is the ultimate yuppie symbol. Portex is what you will need to maintain your image.

It is the first computerised loose-leaf organiser created on a PC for home or office. It comes complete with a leather pocket size ring binder including seven dividers, a handy function key template and a comprehensive user manual - graded from novice to expert.

It features a full suite of integrated

IBM PC compatible software: for diary organisation and production, for address book filing and output, and for word processing and selective mail-merging. There is a full 80,000 word spell checker, and at every stage, comprehensive help screens at the touch of a button.

Special reminders can nag at you until you have done the task, and appointments automatically fall into their date and time order. The address lists can be sorted automatically too, and just the

updated pages printed out whenever it is convenient. The unique Portex paper management system enables easy and swift double-sided diary and address book printing on the unique Portex stationery. This specialised stationery, pre-punched ready for your printer, can be separated simply by means of five tears = there is no need for gluing, stapling or folding. Every Portex user can order extra paper in a range of colours and styles, plus additional binders in fine Italian leather or hard wearing plastic.

Portex is designed as a serious business tool: one Secretary can hold a complete office's Portex diaries and contact lists, updating and distributing them daily or weekly. For Sales people, Portex is a valuable time management tool. For Service Engineers, Portex keeps track of visits and locations, while for Production Personnel it helps with demanding project management tasks. For the senior executive Portex keeps valuable information to hand, yet secure on the PC.

For the person who has everything, Portex could be the right gift. The software only (on 3.5" or 5.25" discs) costs \$259.99, and with a PVC binder will cost \$299.99. The software plus leather binder costs \$349.99.

A demo disc is available from IQ Smart Business for just \$4. More details can be obtained on (03) 222 2288.



The Amstrad User offices will be closed from 14th December 1987 to 8th January 1988 inclusive.

Dollar Dive

With the Stock Market crash came an equally spectacular dive in the value of the Australian dollar against most other currencies. In particular, the dollar has dropped over 15% at the time of writing against the English pound. While this may be good news for exporters whose products are now cheaper to overseas markets, it is bad news for importers and ultimately consumers who will now have to pay more for their imported goods.

As far as The Amstrad User is concerned, existing stock (ie. imported before the fall) will be supplied at the advertised prices, but new stock will probably be adjusted upwards by about 10%. If there is any doubt, we are happy to confirm any price before you order.

50 AMSTRAD PROGRAMS \$18.50

50 newly released Amstrad CPC programs ON DISK, 25 per side with reviews and instructions - all menu driven.

A private research byproduct, these programs were recently placed on the public domain by being sent to magazines so they are not copy protected.

The mass of utilities, games and hobby applications are fun, educational and useful, not junk. The package especially suits schools.

\$18.50 inc. tax/postage from:

PUBLIC PACKAGE

c/o M. Kostecki & P. Vermeer
PO Box 409, Elizabeth, SA 5112

Firing up CP/M - 4

Continuing our series on CP/M for CPC machines

If you have been following this series through from Part One, you will be pleased to hear that you are now in a position to make some practical use of your knowledge of CP/M - by doing some 'housekeeping'. This doesn't mean you have to get the Hoover out, but refers to the practice of keeping your discs in order and using them efficiently for storing programs and documents.

When you buy a program - a word-processor, a database or a computer language for example - what you are buying is a 'master' disc that contains the program files you need, and probably some sample files and maybe a tutorial to set you on your feet. It is good practice to make both a 'back-up' of the master disc (or discs), so that you don't corrupt it, and a 'work' disc which you use from day to day.

We have already touched on the subject of backups in Part Two of this series. We made a backup copy of your CP/M master disc so that you didn't have to keep using your only copy of the operating system. To recap briefly, we used the Disckit3 program (or Disckit2 if you have CP/M version 2.2 rather than CP/M Plus) to copy the contents of your master disc onto a blank disc.

The Disckit programs are ideal for making backup copies of master discs as they actually copy discs exactly: bit for bit as they appear on the master disc. To make a backup copy, first insert your CP/M master disc into the built-in drive and boot up CP/M. Then enter DISCKIT2 or DISCKIT3 according to which version you have. A menu appears on the screen which is fairly self-explanatory - except that the numbers for activating each option refer to the function keys and not the numerical keys along the top of your keyboard.

So press the f7 function key to copy a disc. A new menu appears asking you which drive contains the disc you wish to read from; this is the disc you will be copying from. So press f8 for the built-in drive. The next menu asks where the disc you wish to write to is to be found: the disc you wish to copy to. If you have only one drive then press f9, but if you have a second drive attached press f6.

The screen should clear, and ask you to insert the disc you wish to WRITE. Remove your CP/M master disc and insert

the program disc you want to copy, and then press any key. From then on just follow the instructions on the screen. If you have a single-drive system you have to keep swapping the two discs back and forth as Arnold reads chunks of data from the source disc into memory, and then copies it back out to the destination disc. If you have two drives you can sit back and watch the drive lights flash back and forth as Arnold reads from one disc and writes to the other.

In either case it is a good idea to make sure the protection tabs on your master disc are in before you start, in case you get muddled up between source and destination at some point, after all, Arnold doesn't know the difference.

Work Discs

You now have a backup disc, which is a direct copy of the master disc. Put your master disc away somewhere safe (if it's really important in a different building in case one burns down!). You won't have to use the master disc again unless something goes badly wrong with your backup.

Put your backup copy into your built-in disc drive and enter DIR to look at the disc's file directory. It will probably contain quite a number of files, many of which you are unlikely to use in day-to-day work and are really just taking up valuable disc space that could be better used.

In particular there may be various files labelled README or SAMPLE, or with .DOC or .TXT extensions, that are there to help the novice use the program; they are meant to be discarded once you know what you are doing. The idea of a 'work' disc is to prepare a disc that contains only the files you need from day to day, hopefully leaving you enough space on the disc to store documents and data you will be creating while you work.

The first thing to do is decide which files you are going to need. These may be listed in the documentation supplied with the package, but as a general rule of thumb you will probably need most of the files with a .COM extension.

For example, if you are working with WordStar you are going to need WS.COM as this contains the main program itself. You are also likely to need the 'overlay' files - those with an extension .OVR - as these are called by the main program when needed. There may well be a short file with the .SUB extension which should be on your work disc; we will look at Submit files later in this series. Don't be too concerned about missing any vital files out, as the program should throw up an error message if it finds a file missing: a message such as WSI.OVR missing makes its point quite clear.

It is also a good idea, if you have the space, to copy DIR.COM from side one of your CP/M system disc onto your work disc (or STAT.COM if you are running CP/M version 2.2). Having these files on your work disc lets you easily find out how much space you have left without the inconvenience of continually swapping discs. Having PIP.COM would be useful too, as you could copy files from disc to disc without too much aggravation.

Creating a working disc

The first stage in creating your work disc is to format a new, blank disc and copy the system tracks onto it so that it is a 'boot disc' - containing CP/M itself. This is done, again, with the help of the Diskit programs. Run DISCKIT2 or DISCKIT3, but this time press f4 to format a disc. Press f9 from the next menu, to format your work disc in 'system format'; and the f8 or f5 key according to the number of drives you have. Remember your built-in drive is A:, and your second drive, if you have one, is B:. Follow the instructions on the screen and sit back as your new disc is formatted.

You should now have a freshly formatted disc, pristine clean and ready for the files necessary to turn it into a fully-fledged work disc.

So how do you copy the files across? by using the PIP command of course, as we learnt in Part Three last month. Start by pipping across the PIP.COM file itself, and DIR.COM from your CP/M master disc. Insert your CP/M master disc into the built-in drive and enter:

```
A>pip
*b:=pip.com
*b:=dir.com
*
```

Now enter DIR B: and you should see these two files on the directory of your work disc. You've now got all you need to do the rest using just your work disc, and can put your CP/M master disc away as it won't be needed any more.

The next stage is to PIP the files you have decided you are going to need from your application program backup disc.

Problems with a CPC664

If you are the owner of a CPC664 you are unfortunately doubly disadvantaged - you have to live with CP/M 2.2 and you don't have a copy of DISCKIT2. However, your system discs do contain other programs that fulfill the same function.

FORMAT is used to format a blank disc in system format. The program is stored in a file called FORMAT.COM. If you wish to format your disc in Data Format - without the system tracks - then use the qualifier: FORMAT D.

DISCCOPY is used for copying discs if you have a single-drive system and, like DISCKIT, will format the disc too if this hasn't been done already. Its sister command is COPYDISC, which is used if you have two disc drives.

You should know enough about PIP to do this by yourself by now.

Remember to keep an eye on how much free space you've got left on your work disc: you want to leave enough space for the files you are going to create when you actually sit down to some real work, otherwise the whole exercise will be pointless! Remember too that you can always ERASE PIP.COM from your work disc when you've finished, and maybe DIR.COM (or STAT.COM) too; though this would be a shame as it would mean you wouldn't easily be able to check for free space later on.

By way of example here is the directory of one of the work discs we use:

```
A>dir
A: WS          COM : WSOVLY1  OVR : DUMRAVE  BOB : DUMORD  BOB
A: NEXOR       BAK : CPM      14 : NEXOR    14 : DAYIN    14
A: STUDIO     14 : ABSOLUTE  14 : PATCPM   12 : PAGEBOTS BAK
A: BOTGEN     BAK : PAGEBOTS  14 : BOTGEN   BAS : PAGEBOT BAK
A: DAYIN      BAK : PAGEBOT   : PRATTIC  14 : EDLINES  BAK
A: EDLINES   14 : REVOLUTE  BAK : REVOLUTE 14 : CHEAT   14
A: SPLIT     14 : TEMPEST  BAK : TEMPEST 14
```

It is a WordStar disc, containing CP/M as well so that we can 'boot' directly from the disc, but as you can see we don't put PIP.COM or STAT.COM on as well. This is partly to save space, and also because there is another, rather irregular, way of finding out how much free space there is on disc. First you reset Amstrad by pressing CONTROL, SHIFT and ESC at the same time, and then you enter the Amsdos command CAT (short for catalogue). Amsdos is the Amstrad disc operating system, considerably more basic than CP/M, that is built into your Arnold if you have a disc drive attached. Fortunately the Cat command lists the files on your disc together with their length in kilobytes and the amount of free space left on the disc. It is best to do this before you start work for the day, as you can then boot up CP/M afterwards by entering |CPM.

Making a library

Once you are actually using your work disc, you will find that it rapidly fills the document or data files that you create while using the word-processor, spreadsheet or whatever program you are running. Many programs, including WordStar, create backup files of your work every time you save a document. These are essentially your previously saved file renamed with the .BAK extension. The backup of the document you are working on at the time should be retained in case of problems but other files with their extension .BAK can be erased to make room on the disc.

However, even after you have erased surplus backup files a time will come when your work disc is totally full. At this point you have a choice: either make a new work disc or create a 'library' of older files that you might need to refer to again, or need just 'for the record'. Which choice you make depends on your work pattern. If you are a writer, for example, at any one time you really only need to work on your current document. Older documents can be filed away for reference. If you are running spreadsheets, on the other hand, you might constantly need to look at a variety of spreadsheets and so need several work discs.

A 'library' disc is created in much the same way as a work disc, only you don't bother to put the program files themselves on the disc. A copy of PIP.COM and DIR.COM are quite useful files to have on library discs, but not vital. So you could end up with nearly 170k space for your documents. If your work is easily divided into categories - a writer, for example, could have novels, short stories and correspondence - then it might be best to create several library discs, using one for each category.

So, with careful use of PIP and ERASE on your work discs and library discs you should always have enough room on your discs, and should always be able to find a file when you want it. There's nothing like an organised collection of discs for making your working life easier.

Next month we shall look at more of the wonderful things you can do with the PIP command, and at some of the other files to be found on your CP/M master disc. And yes, I know that is what we were supposed to be doing this month, but you'll just have to wait!

Copying Files with CP/M 2.2

As we mentioned in Part Three of this series, copying files from one disc to another using PIP under CP/M 2.2 is possible only if you actually have two disc drives. If you only have one drive you are a bit stuck, but thankfully Amstrad has supplied another program, FILECOPY.COM, specifically designed for this purpose. So to copy a file under CP/M 2.2 you use the command FILECOPY filename.

The filename can be ambiguous, so it is quite OK, for example, to say FILECOPY *.COM if you wish to copy all the command files from your source disc. The screen prompts you quite clearly when you must change discs but again, it is up to you to keep track of which is the SOURCE disc and which the DESTINATION. (It might be wise to use the write-protect tab on your source disc.)

Copy-protected Programs

Making working copies of your programs using PIP is straightforward unless the master disc is 'copy-protected'. This means that a clever bit of code on the master disc prevents you from copying the files - a system devised to hinder software pirates capitalising on other peoples' work.

It also makes it difficult for people like us, who want to make legitimate copies for backup and work discs. Unfortunately there is little that you can do about copy-protected programs, unless the protection is fairly basic. Try doing a DIRectory of the master disc. One easy form of protection is simply to label files *filename, which prevents others from using the *.* format for PIPing across all the files on a disc. This can be circumvented just as easily by renaming the appropriate files.

Gallimaufry VIII

A feast of utilities and demos to stretch your imagination and your CPC

Degrees conversion

A.E. Turner has sent in a program that converts between Fahrenheit and Centigrade temperatures. This useful routine can quite easily be incorporated into your own programs.

```

1 ' Degrees conversion
2 ' by A E Turner
3 ' The Amstrad User Jan '88
20 '
30 ' *scale selection*
40 CLS: INK 0,13: INK 1,0: PAPER 0: BORDER 13
50 LOCATE 7,2
60 PRINT "*thermal degrees conversion*"
70 LOCATE 7,6
80 PRINT "centigrade to fahrenheit...1"
90 LOCATE 7,9
100 PRINT "fahrenheit to centigrade...2"
110 LOCATE 10,14
120 PRINT " select conversion"; INPUT d
130 IF d=2 GOTO 260 ELSE IF d<>1 GOTO 40
140 ' *calculate degrees 'f' and select colours*
150 CLS: LOCATE 6,4
160 PRINT "enter degrees centigrade ";
170 INPUT c
180 a=c*9/5+32
190 IF c>=100 THEN INK 1,6,15 ELSE IF c<=0 THEN INK 1,11,
1
200 CLS: LOCATE 9,6: PRINT c;
210 PRINT " degrees centigrade "
220 LOCATE 20,10: PRINT "="
230 LOCATE 9,14: PRINT ROUND(a,2);
240 PRINT"degrees fahrenheit": GOTO 370
250 ' *calculate degrees 'c' and select colours*
260 CLS: LOCATE 6,4
270 PRINT "enter degrees fahrenheit ";
280 INPUT f
290 b=((f+40)*5/9)-40
300 IF f>=212 THEN INK 1,6,15 ELSE IF f<=32 THEN INK 1,11,
1
310 CLS: LOCATE 9,6
320 PRINT f " degrees fahrenheit"
330 LOCATE 20,10: PRINT "="
340 LOCATE 9,14: PRINT ROUND(b,2);

```

```

350 PRINT " degrees centigrade": GOTO 370
360 ' *choice of another entry*
370 LOCATE 2,18
380 PRINT " do you wish to make another entry? "
390 LOCATE 19,21: PRINT "y/n?"
400 e$=INKEY$: IF e$="" THEN 400
410 IF e$="y" OR e$="Y" THEN 40
420 IF e$="n" OR e$="N" THEN CLS: INK 1,0: END
430 IF e$("<" OR e$(">" THEN GOTO 400

```

Character-by-character print

Here's a handy routine from B. Naff. It lets you print characters to the screen at the speed you choose and makes a noise when a character appears - giving a typewriter effect.

It should be very simple to tailor the routine and incorporate it within your own programs: line 80 holds the delay between characters being printed - alter it to suit. Text that you wish to appear must be held in Data statements from lines 140 onwards. The final Data line must contain a single up-arrow (found on the same key as the pound sign).

```

1 ' Character printing
2 ' by B Naff
3 ' The Amstrad User Jan '88
10 ' *setup*
20 MODE 1: CLS: RESTORE: ENV 1,15,1,7
30 ' *read string and start*
40 READ a$
50 FOR t=1 TO LEN(a$)
60 PRINT MID$(a$,t,1);
70 ' *set delay and the sound-effect*
80 FOR delay=0 TO 50
90 NEXT delay
100 IF MID$(a$,t,1("<" OR e$(">" THEN SOUND 1,50,2,10,1,1,1
110 NEXT t
120 READ a$: WHILE a$("<" OR e$(">" THEN GOTO 50: WEND
130 ' *the text to be sent to the screen*
140 DATA-----You have now got character-by-character slow printing. Alter the line value held in line 80 to determine the rate at which characters are printed. Place the text you wish to appear in data starting from
150 DATA line 140. You must place an up-arrow (^) -- it shares a key with a pound sign -- in the last data line. ---
-----
160 DATA ^

```

Catalogue to variables

This program by Martin Packer will place the contents of a disc catalogue into Basic variables. Ideal for incorporating into your own programs so you can keep track of the disc's characteristics.

To get the hang of the routine, run it several times with a disc in the drive. After a few seconds, variable names and their contents, will appear on screen. Using it in your own listing shouldn't be too hard. Once you have the variables assigned, you can use them, say to build up a database containing all relevant information on your discs.

```

1 ' Catalogue to variables
2 ' by Martin Packer
3 ' The Amstrad User Jan '88
40 MEMORY &7FFF: MODE 0
50 'maximum number of files on disk is 64
60 DIM name$(63),type$(63),size$(63)
70 'install machine-code at &8000
80 FOR i%=&8000 TO &8038: READ code%:POKE i%,code%:NEXT i%
90 'get cas_catalog printout in store
100 CALL &8000
110 MODE 1
120 'start of file entries is at &884f
130 mem%=&884F
140 drive$=CHR$(PEEK(&8841)): 'get drive name
150 'get user number - 2 digits
160 user$=CHR$(PEEK(&8849))+CHR$(PEEK(&884A))
170 FOR i%=0 TO 63: 'process file names
180 'check for out of files
190 a%=PEEK(mem%): IF a%=&D THEN files%=i%: GOTO 340
200 'get name
210 FOR j%=mem% TO mem%+7
220 name$(i%)=name$(i%)+CHR$(PEEK(j%)): NEXT j%
230 'get type
240 FOR j%=mem%+9 TO mem%+11: type$(i%)=type$(i%)+CHR$(PEEK(j%))
250 NEXT j%: mem%=mem%+13
260 'get size
270 FOR j%=mem% TO mem%+3
280 size$(i%)=size$(i%)+CHR$(PEEK(j%)): NEXT j%
290 mem%=mem%+6
300 NEXT i%
310 'files = maximum
320 files%=64
330 'get free space on disk
340 mem%=mem%+2: FOR j%=mem% TO mem%+3
350 free$=free$+CHR$(PEEK(j%)): NEXT j%
360 'print values of variables
370 PRINT "user$ holds ";user$;" "
380 PRINT "drive$ holds ";drive$;" "
390 PRINT "number of files in files% is ";files%
400 FOR i%=0 TO files%-1
410 PRINT "name$(";i%;" ) holds ";name$(i%);" "
420 PRINT "type$(";i%;" ) holds ";type$(i%);" "
430 PRINT "size$(";i%;" ) holds ";size$(i%);" "
440 NEXT i%
450 PRINT "free$ holds ";free$;" "
460 DATA &21,&d9,&bd,&11,&28,&80,&01,&03
470 DATA &00,&ed,&b0,&21,&2b,&80,&11,&d9

```

```

480 DATA &bd,&01,&03,&00,&ed,&b0,&11,&39
490 DATA &80,&cd,&9b,&bc,&21,&28,&80,&11
500 DATA &d9,&bd,&01,&03,&00,&ed,&b0,&c9
510 DATA &00,&00,&00,&c3,&2e,&80,&2a,&37
520 DATA &80,&77,&23,&22,&37,&80,&c9,&39,&88

```

Mixing hash and pound

T. Lea has submitted a listing that solves the problem of printing pound (£) and hash(#). The two characters have to share Ascii code 35. If you send a listing to the printer containing both, either the hashes will come out as pounds or vice-versa, depending what country you're set for.

The listing uses standard Epsom codes and works with printers having a choice of US and UK character sets. Make sure you have the dip-switches set to the UK language set. The routine checks what is sent to the printer. If a hash sign needs printing then T's program will switch to the US character set, print the hash and revert to the UK set.

You can use this routine from within Tasword (and from Protex, but its Setprint function already takes care of the problem) - and of course from Basic.

```

1 ' Hash/pound printing cure
2 ' by T Lea
3 ' The Amstrad User Jan '88
10 h=himen-&98: MEMORY h: check=0
20 FOR addr=h+1 TO h+&99: READ byte$: byte=VAL("&"+byte$)
30 POKE addr,byte: check=check+byte: NEXT addr
40 IF check<>&33AC THEN PRINT"error in data" END
50 CALL h+1: FOR st=0 TO 8 STEP 8
60 PRINT#st,"print # and # symbol set": NEXT st
70 '
80 DATA 21,e1,e9,22,30,00,f7,44,4d,21,7b,00,09,5e,23,56
100 DATA 23,7a,b3,28,11,e5,eb,09,e5,5e,23,56,eb,09,eb,e1
120 DATA 73,23,72,e1,18,e7,3a,2b,bd,2a,2c,bd,32,51,00,22
140 DATA 52,00,3e,c3,21,4e,00,32,2b,bd,22,2c,bd,3a,f1,bd
160 DATA 2a,f2,bd,32,71,00,22,72,00,3e,c3,21,54,00,32,f1
180 DATA bd,22,f2,bd,c9,32,7b,00,00,00,00,f5,3a,7b,00,fe
200 DATA 23,20,14,f1,e5,21,74,00,06,07,c5,7e,cd,71,00,30
220 DATA fa,23,c1,10,f5,e1,c9,f1,00,00,00,1b,52,00,23,1b
240 DATA 52,03,4f,00,26,00,29,00,2e,00,3d,00,40,00,45,00
260 DATA 56,00,5f,00,66,00,00,00,00

```

Decompress pictures

If you have played with Rainbird's Advanced OCP Art Studio, you'll know that the picture can be compressed before saving. Unfortunately there is no way of decompressing these pictures from Basic - a pity as they take up less than half the ram-space of conventional screens.

Stuart Lockey has come up with the answer: a program to expand the compressed screens. There are two programs, the first, XPANDOC, writes and saves the code to do the expanding. Run the second listing which loads the code as high in memory as possible. It also stores the Call address in a

variable, expand. All you have to do is load the compressed picture at &4000 and CALL expand.

```

1 ' XPANDOC for pictures compressed using
2 ' Advanced OCP Art Studio
3 ' by Stuart Lockey
4 ' The Amstrad User Jan '88
10 FOR j=41000 TO 41186
20 READ a$
30 POKE j,VAL("&"+a$)
40 a=a+VAL("&"+a$)
50 NEXT
60 IF a=17679 THEN SAVE"coder.bin",b,41000,187 ELSE MODE 1
: PRINT"data error": STOP
70 MODE 1: PRINT"code saved"
80 END
90 DATA 21,b8,a1,36,0,23,36,c0,21,ba,a1,36,0,23,36,40
100 DATA 21,bc,a1,36,0,23,36,40,23,36,0,23,36,0,23,36
110 DATA 0,23,36,0,23,36,0,2a,bc,a1,56,3e,4d,ba,28,2d
120 DATA 3e,1,ba,28,51,2a,b8,a1,72,2a,b8,a1,23,22,b8,a1
130 DATA 2a,bc,a1,23,22,bc,a1,2a,ba,a1,2b,22,ba,a1,21,bb
140 DATA a1,3e,0,be,28,2,18,cf,2b,be,c8,18,ca,21,bc,a1
150 DATA 4e,23,46,21,c0,a1,71,23,70,3,a,57,3e,4a,ba,20
160 DATA c4,3,a,57,3e,48,ba,20,bc,2a,bc,a1,23,23,23,23
170 DATA 23,22,bc,a1,18,c8,2a,bc,a1,23,22,bc,a1,2a,bc,a1
180 DATA 7e,57,2a,bc,a1,23,22,bc,a1,2a,bc,a1,46,2a,bc,a1
190 DATA 23,22,bc,a1,2a,b8,a1,70,23,22,b8,a1,15,2a,ba,a1
200 DATA 2b,22,ba,a1,3e,0,ba,20,eb,18,93

```

```

1 ' Picture expander
2 ' using code produced with XPANDOC
3 ' Once run, the variable EXPAND will hold the address to
: call to expand a compressed picture loaded at &4000
4 ' by Stuart Lockey
5 ' The Amstrad User Jan '88
10 loc=HIMEM-200
20 IF loc<32968 THEN PRINT"memory too low": END
30 MEMORY loc-1
40 LOAD"coder.bin",loc
50 DATA a,1,b,9,c,17,c,40,a,54,a,58,a,62,c,65,c,69,b,72,b,
76,d,79,c,94,e,100,c,122,c,130,c,135,c,139,c,142,c,147,c,1
51,c,154,c,158,c,162,a,165,a,170,b,174,b,178
60 FOR j=1 TO 28
70 READ a$,r
80 IF a$="a" THEN v=loc+190
90 IF a$="b" THEN v=loc+192
100 IF a$="c" THEN v=loc+194
110 IF a$="d" THEN v=loc+193
120 IF a$="d" THEN v=loc+196
130 GOSUB 210
140 POKE loc+r,VAL(lo$)
150 POKE loc+r+1,VAL(hi$)
160 NEXT
170 MEMORY &3FFF

```



```

180 MODE 1
190 PRINT"to expand picture load compact screen at 4000,
then call ";loc
200 expand=loc
210 PRINT: PRINT: STOP
220 v$=HEX$(v)
230 IF LEN(v$)=3 THEN v$="0"+v$
240 hi$="&"+MID$(v$,1,2)
250 lo$="&"+MID$(v$,3,2)
260 RETURN

```

Weaving

Myrtle Green has sent in a program that will be handy for anyone intending to repair or create new designs on wicker chairs, baskets or even threads - the listing lets you design weave-patterns.

You are asked for the background and three foreground colours. The foreground colour represents different shades of twine. Pressing 1, 2 or 3 will display a length of 'twine' in the colour you selected - vertically first, then horizontally. Keep pressing keys until you have a satisfactory design.

```

1 ' Weaving
2 ' by Myrtle Green
3 ' The Amstrad User Jan '88
10 MODE 1: ON BREAK GOSUB 460
20 SYMBOL 248,0,255,255,255,255,255,0
30 SYMBOL 249,126,126,126,126,126,126,126,126
40 a$=CHR$(248)+CHR$(32): FOR n=1 TO 14
50 ac$=ac$+a$: NEXT n: DIM col(3)
60 CLS: INK 1,24: INK 0,0: LOCATE 2,2
70 PRINT"pick a background colour and 3 colours."
80 LOCATE 2,4: PRINT"enter their numbers: "
90 LOCATE 3,8: PRINT "background":LOCATE 12,10: PRINT "1"
100 LOCATE 12,12: PRINT "2": LOCATE 12,14: PRINT "3"
110 y=8: FOR a=0 TO 3: LOCATE 16,y: PRINT SPACE$(6)
120 LOCATE 15,y: INPUT ">",col(a)
130 IF col(a)>26 THEN GOTO 110
140 y=y+2: NEXT: FOR a=0 TO 3: INK a,col(a): NEXT
150 BORDER col(0): CLS: PRINT CHR$(22);CHR$(1);
160 x=23: FOR p=1 TO 3: PEN p: LOCATE x,23
170 PRINT STRING$(3,143)
180 x=x+6:NEXT p:PEN 0:LOCATE 23,23:PRINT" 1    2    3"
190 PEN 1:LOCATE 34,1: PRINT"."
200 LOCATE 5,23: PRINT "colour number "
210 REM print rows down
220 x=6: FOR n=1 TO 14
230 GOSUB 430:x=x+1:RESTORE 290:FOR y=1 TO 21:READ chr
240 LOCATE x,y: PEN col: PRINT CHR$(chr);: NEXT y
250 GOSUB 430: x=x+1:RESTORE 280:FOR y=1 TO 21:READ chr
260 LOCATE x,y: PEN col: PRINT CHR$(chr);: NEXT y,n
270 SOUND 1,238,15: SOUND 1,436,15
280 DATA 249
290 DATA 249,32,249,32,249,32,249

```

```

300 DATA 32,249,32,249,32,249,32,249
310 DATA 32,249,32,249,32,249
320 REM rows across
330 y=1: FOR n=1 TO 10: GOSUB 430: y=y+1: PEN col: x=7
340 LOCATE x,y: PRINT ac$: GOSUB 430: y=y+1: PEN col: x=8
350 LOCATE x,y: PRINT ac$: NEXT n
360 SOUND 1,238,15: SOUND 1,436,15
370 PRINT CHR$(22);CHR$(0);: PEN 2: LOCATE 4,25
380 PRINT"another? Same colours <s> new <n> "
390 c$=UPPER$(INKEY$): IF c$="" THEN 390
400 IF c$="S" THEN 150
410 IF c$="N" THEN 60
420 GOTO 390
430 REM select colour to print row
440 c$="": WHILE INSTR(" 123",c$)<2: c$=INKEY$: WEND
450 col=VAL(c$): RETURN
460 MODE 2: PEN 1: INK 1,24: INK 0,0: LIST

```

Unscramble

If you want to create an impressive title screen for your program then Paul James has the goods. His listing hides the contents of the screen, draws a picture and then displays the screen in an interesting fashion. You can use this or similar effects to spruce up your programs.

```

1 ' Unscramble
2 ' by Paul James
3 ' The Amstrad User Jan '88
10 MODE 0: SPEED INK 7,7: BORDER 0:INK 3,15,26:INK 4,26,15
20 ' hide screen
30 OUT &BC00,65: OUT &BD00,0
40 ' print screen may be omitted
50 ' or different routine inserted
60 st=1: en=12: s=2: flag=0
70 FOR p=st TO en STEP s: LOCATE p+1,p
80 IF flag=1 THEN LOCATE p,25-p
90 PEN 3: PRINT"Amstrad": LOCATE p+2,p+1
100 IF flag=1 THEN LOCATE p-1,(25-p)+1
110 PEN 4: PRINT"User": NEXT: st=12: en=1: s=-2
120 IF flag=0 THEN flag=1: GOTO 70
130 ' recover screen
140 FOR unsc=0 TO 40: CALL &BD19: OUT &BC00,65:
150 OUT &BD00,unsc: FOR w=1 TO 60: NEXT w,unsc
160 ' finish or place rest of program here
170 ' press key to end
180 WHILE INKEY$="": WEND
190 CALL &BC02: PEN 1: MODE 2: LIST

```

*Short type-ins are welcome for the Gallimaufrey section.
Please send on tape or disc (with instructions) to:*

*The Amstrad User, 1/245 Springvale Road,
Glen Waverely, Victoria 3150*

Converting MicroBee programs to Locomotive's BASIC.

by Petr Lukes

Nick Van Kempen gave good advice about converting programs written for other machines (letters TAU Oct 87). If it peeks and /or pokes, forget it. Conversion from straight BASIC is possible unless the program uses some of the unique features of the machine, such as high resolution graphics or sounds.

Apple, Commodore, Tandy and most of the Oriental computers use BASIC which is either a subset of Microsoft BASIC or compatible with it. Locomotive BASICs are generally Microsoft-compatible, so those languages may not present too many problems. BBC BASIC has some structures which can be simulated by subroutines and conditional jumps, and uses local variables which can be implemented as arrays local to each subroutine (see "Tower of HANOI", TAU Sept 87). But it would have to be a very good program to be worth all the work needed.

The MicroBee has a home-grown version of BASIC (MicroWorld), which has some unusual features likely to cause confusion. The display format first: it is 16 lines of 64 characters, and can be dealt with by opening WINDOW 1,64,1,16. The MB equivalent of our LOCATE is CURS, but it can have two formats: 'CURS column,line' (column 1-64, line 1-16), and 'CURS nn', where nn is in the range 0-1023. The latter format can be translated as 'LOCATE nn MOD 64 + 1,nn\64 + 1'. (The '\', our integer division sign, starts printing on the next line when included in an MB PRINT list). 'PRINT@nn,' of other BASICs can be handled in a similar way. NORMAL, INVERSE, and UNDERLINE determine how characters on the screen are displayed. The CPCs can toggle between NORMAL and INVERSE by 'PRINT CHR\$(24);'.

That was the easy part. The MB has the three usual types of variables: integer, real and string (including arrays), but

their type is implicitly determined by their name. Integers are identified by a one-letter name A-Z, so that only 26 are available. There are 26*8 real variables, named A0-A7 through to Z0-Z7. Strings are actually real variables with the dollar suffix: S0 and S0\$ is one variable which can be a number or a string but not at the same time. Any real array can have some elements typed as numeric and others as string. Other BASICs cannot do this, and such an array would have to be split into a numeric and a string array.

Mixed arithmetic is not allowed, so to add an integer to a real, the integer must be floated: R0=R0+FLT(I), and conversely: I=I+INT(R0). (Shades of FORTRAN!) These manipulations are not necessary in other BASICs, so they can be simply ignored. Real arithmetic is done in Binary Coded Decimal format with a choice of Significant Digits, set by the 'SD nn' command (default is 8). There is no equivalent in other BASICs, so omit this command.

Functions such as SIN and SQR work as expected. There is one we do not have: FRACT(5.7) returns 0.7, and can be implemented as (5.7)-INT(5.7). The syntax of user-defined functions differs from ours. So 'fnP2=6.28*#', 'RO=fnP2(3)' would appear as 'DEF FNp2(a)=6.28*a', 'RO=FNp2(3)' in our translation.

There is a provision for passing values to subroutines, in the form of '10 GOSUB [1,2] 50', '50 VAR (A,B)'. It simply means that the variables A and B assume the values 1 and 2 when line 50 is executed. The solution is to set up the variables in the calling line: '10 a=1:b=2:GOSUB 50', '50 REM'.

String handling commands are different but should present few problems. Their format is SO\$(;from,to), similar to ANSI (American National Standards Institute) and the Sinclair BASICs:

SO\$(;1,1) translates as LEFT\$(SO\$,1), SO\$(;LEN(SO\$),LEN(SO\$)) produces RIGHT\$(SO\$,1), and SO\$(;5,7) produces MID\$(SO\$,5,3). Memory must set apart for strings, as in Microsoft but not in Locomotive BASIC, by the command STRS(nn), which we ignore. SEARCH(S1\$,S2\$) is equivalent to INSTR(S1\$,S2\$) for a single search starting at the beginning of S1\$; a number within the brackets in the MB version signifies multiple search and would have to be implemented as a loop in Locomotive. KEY\$ is the same as our INKEY\$.

There are print formatting commands in the form 'PRINT [15 V]', roughly equivalent to PRINT USING. These should be left out during the initial stages of conversion (just 'PRINT V' will do) and implemented only when everything is working smoothly.

Output and input can be redirected to different ports by the OUT# and IN# commands. Port 1 is the parallel port (our Centronics printer port for output), 2 and 3 are tape, 4 and 5 are RS232 ports. LPRINT translates to PRINT#8.

PLOT is a combination of our PLOT and DRAW command and will draw a line between specified points. In HIRES the screen resolution is 512 horizontal by 256 vertical pixels. PCG stands for Programmable Character Generator and is roughly similar to the CPC SYMBOL. USED is connected with the HIRES mode. Other graphics commands are POINT (CPC TEST), SET, RESET and LORES. Generally speaking, it would be futile to try to translate programs using these commands and the PLAY command. If they are not essential, leave them out; if they are essential, forget it.

This list should explain the strange commands which appear in MicroBee programs. It is based on my experience with MicroWorld BASIC v. 5.22 on a tape-based monochrome machine. There could be some commands which were added later, but I cannot help with them because I abandoned my MicroBee when I was faced with having to replace most of the key switches.

Bibliography:

User's Manual. Hornsby, NSW: MICROWORLD, 1982.
Lukes, Petr and Tim Hartnell. Getting started on your Microbee. Melbourne: Pitman Publishing 1984

Type Mismatch

Some tips on how to overcome the dreaded error message - and a sorry tale!

by Philip Riley

Well now - for those of you who can still face your computer (even though you now know that it laughs at you) we have another look at errors (sorry I mean errors) and this time - TYPE MISMATCH.

It's pretty simple really. You have MISMATCHED TWO TYPES OF VARIABLES. What? That hasn't helped you? Well let's look at it more closely. When programming your computer you use two types of variables. These are string and numeric (the string variables have the dollar sign after them).

Numeric variables as the name implies handle only numbers. String variables handle only words, well this is not exactly true they do in fact handle characters. What is the difference? Well, you can have a\$="PHILIP" or you can have a\$="1234567" or even a\$="!""#\$%&'". But if you have numbers within a\$ (or any other string for that matter) they are not looked upon as numbers by the computer but as characters. So if you tried the following little proggy:

```
a$="12":b$="8":c$=a$+b$:PRINT c$
```

The result will be "128" not "12". Now onto finding those elusive bugs and stomping on them. The TYPE MISMATCH error means you are trying to put the contents of a numeric variable into a string variable (or vice versa). Try doing a\$=b and you will get a TYPE MISMATCH simply because you cannot do this sort of thing.

You will normally make this error in programs using commands such as RIGHTS, LEFTS, MIDS, LEN, CHRS and ASC although they can appear anywhere you are using numeric and

string variables. You may especially get this error if you are using two or more of these commands in one statement, for instance can you spot the error in the line below:

```
a$="PHILIP":a=asc(left$(a$,len(a)-5)):PRINT a
```

If you have not found the error look again, pay particular attention to places where only one type of variable is used in conjunction with a command. For those of you who still have not found it I will tell you. Look at the LEN(a). The len command is used to set or check the length of a string variable but we have got a numeric variable within its brackets not a string variable. You see you should have looked a little closer.

As with SYNTAX ERRORS if you have a long line, put a STOP command somewhere in the line, if the error rears it's ugly head then you know that it is before the STOP, if not then you take out the STOP and insert it further on in the line. In this way you can track down just where the bug is and stomp it before it sends you crazy.

Afterthought

Picture this if you can. A recent visit to the shops by the hero of this story (who wishes to remain anonymous for obvious reasons) has seen the purchase of his very first home computer. In no time at all bits of box and polystyrene packing are scattered all over the floor and the computer is set up and ready to go.

Our hero learns the basics of basic and is off and running on the first program. He runs the program and all goes well for about 10 seconds then a strange message appears on the screen. TYPE MISMATCH IN 200.

"Bit strange that, I wonder what it

means?", our hero thinks.

Two days later a letter arrives on the desk of a well known computer mags editor. On opening he reads:

Dear Sir,
Having recently purchased an Amstrad computer I was very eager to start programming. I have just tested my very first program and it does not seem to want to work. When I first ran it, all went well for 10 seconds then I got the message TYPE MISMATCH IN 200. I did what it said and typed the word MISMATCH into line 200 and now I get a SYNTAX ERROR IN 200. Please help me.

SIGNED Confused.

The Reply

Dear Confused,
Your computer is laughing at you.

SIGNED Editor of a well known computer mag.



"IT'S A GREAT GAME BUT RATHER TOO MANY HAZARDS"

Blackout

A game of quick observation and reaction

from Donald O'Connor

464 Version

This is a simple game in concept, but can leave your head spinning in an effort to beat the computer.

Two grids, 5 x 5 squares each, containing unusual symbols are presented on the screen - one labelled ME (that's the computer) and the other labelled YOU. A choice of speed is given, 1 being the hardest (fastest) down to 9.

The object of the game is to match the symbol shown on the bottom line with one in any square on your grid. When you get a match just hit the space bar and the correct symbol will be removed. The player of the first grid to be cleared is the winner. But don't cheat - if you press the space bar by "mistake" the computer will declare itself the winner.

Donald O'Connor has provided both a 464 and a 6128 version, the latter "filling" a matching square with black. In practice you will find that the 464 version will also run on the 6128.

Tape subscribers will find both versions on this month's tape.

```

10 '
20 ' *****
30 ' * *
40 ' * BLACKOUT for 464 *
50 ' * by Donald F. O'Connor *
60 ' *The Amstrad User Jan88 *
70 ' * *
80 ' *****
90 '
100 DIM c(24),p(24),n(41)
110 GOSUB 930
120 GRAPHICS PEN 2
130 PEN 3
140 TAGOFF
150 LOCATE 1,21
160 PRINT "What speed would you like (
170 i$=INKEY$
180 IF i$="" THEN 170
190 s=VAL(i$)
200 IF s>9 OR s<1 THEN 150
210 LOCATE 1,21
220 PRINT STRING$(80," ");
230 '
240 ' select number
250 '
260 LOCATE 9,21
270 PRINT "Press Space if you have"
280 FOR i=1 TO 41
290 FOR j=1 TO 5
300 n(i)=INT(RND(TIME)*41)+1
310 LOCATE 33,21
320 PRINT CHR$(n(i)+152)
330 NEXT
340 n(i)=INT(RND(TIME)*41)+1
350 LOCATE 33,21
360 PRINT CHR$(n(i)+152)
370 k=0
380 FOR j=1 TO i-1
390 IF n(i)=n(j) THEN k=i:j=i-1
400 NEXT
410 IF k=1 THEN 340
420 LOCATE 33,21
430 PRINT CHR$(7);CHR$(n(i)+152)
440 '
450 ' has key been pressed ?
460 '
470 k=0
480 FOR j=1 TO 500+s*100
490 i$=INKEY$
500 IF i$<>" " THEN NEXT ELSE k=1
510 j=1000
520 IF k=0 THEN 670
530 '
540 ' yes
550 '
560 FOR j=0 TO 24
570 IF p(j)=n(i) THEN k=0:l=j
580 NEXT
590 IF k=1 THEN 800
600 sp=sp+1
601 GRAPHICS PEN 0
602 MOVE (1-(INT(1/5)*5))*50+368,INT(
603 TAG
604 PRINT CHR$(n(i)+152);
605 TAGOFF
606 GRAPHICS PEN 2
610 MOVE (1-(INT(1/5)*5))*50+350,INT(
620 DRAW (1-(INT(1/5)*5))*50+400,INT(
621 MOVE (1-(INT(1/5)*5))*50+350,INT(
622 DRAW (1-(INT(1/5)*5))*50+400,INT(
630 IF sp=25 THEN 830
640 '
650 ' does computer have number
660 '
670 k=1
680 FOR j=0 TO 24

```

```

690 IF c(j)=n(i) THEN k=0:l=j
700 NEXT
710 IF k=1 THEN 760
720 sc=sc+1
721 GRAPHICS PEN 0
722 MOVE (1-(INT(1/5)*5))*50+68,INT(1/5)*50+160
723 TAG
724 PRINT CHR$(n(i)+152);
725 TAGOFF
726 GRAPHICS PEN 2
730 MOVE (1-(INT(1/5)*5))*50+50,INT(1/5)*50+130
740 DRAW (1-(INT(1/5)*5))*50+100,INT(1/5)*50+180
741 MOVE (1-(INT(1/5)*5))*50+50,INT(1/5)*50+180
742 DRAW (1-(INT(1/5)*5))*50+100,INT(1/5)*50+130
750 IF sc=25 THEN 850
760 NEXT
770 '
780 ' game over
790 '
800 PRINT"You do not have the "CHR$(n(i)+152)" character."
810 PRINT"You have tried to cheat the computer, therefore you lose."
820 GOTO 860
830 PRINT"You Win. Well Done."
840 GOTO 860
850 PRINT"I Win. Bad Luck."
860 PRINT"Do you want to play again ?"
'
870 i$=UPPER$(INKEY$)
880 IF i$="" THEN 870
890 IF i$<>"N" THEN RUN ELSE MODE 1:END
900 '
910 ' draw board
920 '
930 MODE 1
940 INK 0,1
950 INK 1,16
960 INK 2,24
970 INK 3,26
980 PAPER 0
990 GRAPHICS PEN 2
1000 LOCATE 14,12
1010 PRINT"*****"
1020 LOCATE 14,13
1030 PRINT"* BLACKOUT *"
1040 LOCATE 14,14
1050 PRINT"*****"

```

```

1060 FOR i=0 TO 24
1070 p(i)=INT(RND(TIME)*41)+1
1080 k=0
1090 FOR j=0 TO i-1
1100 IF p(i)=p(j) THEN k=1:j=i-1
1110 NEXT
1120 IF k=1 THEN 1070
1130 c(i)=INT(RND(TIME)*41)+1
1140 k=0
1150 FOR j=0 TO i-1
1160 IF c(i)=c(j) THEN k=1:j=i-1
1170 NEXT
1180 IF k=1 THEN 1130
1190 NEXT
1200 CLS
1210 FOR i=0 TO 250 STEP 50
1220 PLOT 50,i+130
1230 DRAW 300,i+130
1240 PLOT 350,i+130
1250 DRAW 600,i+130
1260 NEXT
1270 FOR i=50 TO 600 STEP 50
1280 PLOT i,130
1290 DRAW i,380
1300 NEXT
1310 GRAPHICS PEN 1
1320 TAG
1330 MOVE 160,120
1340 PRINT"ME";
1350 MOVE 452,120
1360 PRINT"YOU";
1370 FOR i=0 TO 24
1380 MOVE (i-(INT(i/5)*5))*50+68,INT(i/5)*50+160
1390 j#=CHR$(c(i)+152)
1400 PRINT j#;
1410 MOVE (i-(INT(i/5)*5))*50+368,INT(i/5)*50+160
1420 j#=CHR$(p(i)+152)
1430 PRINT j#;
1440 NEXT
1450 RETURN

```

6128 Version

```

10 '
20 ' *****
30 ' *
40 ' * BLACKOUT for 6128 *
50 ' * by Donald F. O'Connor *
60 ' *The Amstrad User Jan88 *
70 ' *
80 ' *****

```

```

90 '
100 DIM c(24),p(24),n(41)
110 GOSUB 930
120 GRAPHICS PEN 2
130 PEN 3
140 TAGOFF
150 LOCATE 1,21
160 PRINT"What speed would you like (1-9) ? "
170 i$=INKEY$
180 IF i$="" THEN 170
190 s=VAL(i$)
200 IF s>9 OR s<1 THEN 150
210 LOCATE 1,21
220 PRINT STRING$(80," ");
230 '
240 ' select number
250 '
260 LOCATE 9,21
270 PRINT "Press Space if you have"
280 FOR i=1 TO 41
290 FOR j=1 TO 5
300 n(i)=INT(RND(TIME)*41)+1
310 LOCATE 33,21
320 PRINT CHR$(n(i)+152)
330 NEXT
340 n(i)=INT(RND(TIME)*41)+1
350 LOCATE 33,21
360 PRINT CHR$(n(i)+152)
370 k=0
380 FOR j=1 TO i-1
390 IF n(i)=n(j) THEN k=1:j=i-1
400 NEXT
410 IF k=1 THEN 340
420 LOCATE 33,21
430 PRINT CHR$(7);CHR$(n(i)+152)
440 '
450 ' has key been pressed ?
460 '
470 k=0
480 FOR j=1 TO 500+s*100
490 i$=INKEY$
500 IF i$<>" " THEN NEXT ELSE k=1
510 j=1000
520 IF k=0 THEN 670
530 '
540 ' yes
550 '
560 FOR j=0 TO 24
570 IF p(j)=n(i) THEN k=0:l=j
580 NEXT
590 IF k=1 THEN 800
600 sp=sp+1
610 MOVE (1-(INT(1/5)*5))*50+375,INT(

```

```

1/5)*50+155
620 FILL 2
630 IF sp=25 THEN 830
640 '
650 ' does computer have number
660 '
670 k=1
680 FOR j=0 TO 24
690 IF c(j)=n(i) THEN k=0:l=j
700 NEXT
710 IF k=1 THEN 760
720 sc=sc+1
730 MOVE (1-(INT(1/5)*5))*50+75,INT(1
/5)*50+155
740 FILL 2
750 IF sc=25 THEN 850
760 NEXT
770 '
780 ' game over
790 '
800 PRINT"You do not have the "CHR$(n
(i)+152)" character."
810 PRINT"You have tried to cheat the
computer, therefore you lose."
820 GOTO 860
830 PRINT"You Win. Well Done."
840 GOTO 860
850 PRINT"I Win. Bad Luck."
860 PRINT"Do you want to play again ?
"
870 i#=UPPER$(INKEY$)
    
```

```

880 IF i#="" THEN 870
890 IF i#<>"N" THEN RUN ELSE MODE 1:E
ND
900 '
910 ' draw board
920 '
930 MODE 1
940 INK 0,1
950 INK 1,16
960 INK 2,0
970 INK 3,26
980 PAPER 0
990 GRAPHICS PEN 2
1000 LOCATE 14,12
1010 PRINT"*****"
1020 LOCATE 14,13
1030 PRINT"* BLACKOUT *"
1040 LOCATE 14,14
1050 PRINT"*****"
1060 FOR i=0 TO 24
1070 p(i)=INT(RND(TIME)*41)+1
1080 k=0
1090 FOR j=0 TO i-1
1100 IF p(i)=p(j) THEN k=1:j=i-1
1110 NEXT
1120 IF k=1 THEN 1070
1130 c(i)=INT(RND(TIME)*41)+1
1140 k=0
1150 FOR j=0 TO i-1
1160 IF c(i)=c(j) THEN k=1:j=i-1
1170 NEXT
    
```

```

1180 IF k=1 THEN 1130
1190 NEXT
1200 CLS
1210 FOR i=0 TO 250 STEP 50
1220 PLOT 50,i+130
1230 DRAW 300,i+130
1240 PLOT 350,i+130
1250 DRAW 600,i+130
1260 NEXT
1270 FOR i=50 TO 600 STEP 50
1280 PLOT i,130
1290 DRAW i,380
1300 NEXT
1310 GRAPHICS PEN 1
1320 TAG
1330 MOVE 160,120
1340 PRINT"ME";
1350 MOVE 452,120
1360 PRINT"YOU";
1370 FOR i=0 TO 24
1380 MOVE (i-(INT(i/5)*5))*50+68,INT(
i/5)*50+160
1390 j#=CHR$(c(i)+152)
1400 PRINT j#;
1410 MOVE (i-(INT(i/5)*5))*50+368,INT
(i/5)*50+160
1420 j#=CHR$(p(i)+152)
1430 PRINT j#;
1440 NEXT
1450 RETURN
    
```

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 Other

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

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.

Cheat Mode

This month's cheats are a bit short - just one page - but we will make up for it next month. More importantly, you may have had trouble with a couple of cheats in October's mag. Sorry, but the following should put them right.

Super Cycle (page 18): add

21 b=0 to eliminate "error in data" message.

Arkanoïd (Page 21): add

255 b=0 to eliminate "error in data" messages.

Glider Rider (Page 20): Jan-Mirko Maczewski's pokes were chopped at the end. Add

70 CALL &400

The Sacred Armour of Antiriad

Stephen Stokes has poked Palace's game giving you invulnerability. Enter it using Method 1, but take care: the radiation can still get you.

```
1 \ Antiriad-tape
2 \ by Stephen Stokes
3 \ The Amstrad User Jan 1988
10 FOR a=&2000 TO &2023
20 READ v$: POKE a, VAL("&" + v$)
30 NEXT a: FOR a=&BF00 TO &BF1A
40 READ v$: POKE a, VAL("&" + v$)
50 NEXT a: CALL &2000
60 DATA 01, 00, 00, cd, 38, bc, 21, 40
70 DATA 00, 11, 64, 00, 3e, 31, cd, a1
80 DATA bc, d2, 00, 00, f5, 3e, c3, 32
90 DATA 94, 00, 21, 00, bf, 22, 95, 00
100 DATA f1, c3, 40, 00, 3e, 00, 32, be
110 DATA 5b, 32, c2, 5b, 2a, a8, 00, f3
120 DATA d9, 06, 7f, 0e, 8c, 3a, aa, 00
130 DATA e6, 03, b1, ed, 49, d9, e9
```

Fly Spy

Richard Aplin, the author of Mastertronic's Fly Spy has let everyone in on the cheat mode he wrote into the game. All you have to do is pause the game and type in a number between 1 and 7 to get the following cheats:

- 1 You can fly through walls.
- 2 Infinite fuel.
- 3 You can pick up any object.
- 4 Infinite laser shots.
- 5 Infinite lives.
- 6 Infinite shield.
- 7 Gives you the teleport code if you press Control with the T key.
- 0 Takes you back to the game.

Asphalt

Tips on the Ubisoft car-wrecking game come from George Britton.

General: learn the general wave patterns.

You're hitting the enemy when you see circular flashes on their sides and front.

Motorbikes: can be mined or shot. The yellow biker should always be mined.

Sidecars: At first they seem tricky but they always come on the side of the road.

Move close to the edge so that they can't get past you, then you can easily destroy them.

Cars: because of their size they're more vulnerable to mines and the same tactics as the sidecars. The big problem is the car with the burner on the back. Try to attack him from an angle and beware when it's destroyed from crashing into it.

Machine-gun: there's an unfortunate pause when the ammo is being replenished. So after a wave if there's less than 10 shots quickly waste them so you're ready for the next attack.

Mines: must be dropped quickly and accurately. Too late and the target will drop away.

Fireburners: not as impressive as they first seem. Avoid using them.

Protection: the rear is by far the most vulnerable and is difficult to protect. The sides can be guarded by shielding against the side of the road.

BMX Simulator

Phil Howard has once more had a heavy poking session. Code Master's cheapie is the first to fall. Phil supplies you with a Method 1 poke that gives you infinite time to complete each circuit.

```
1 \ BMX Simulator - tape
2 \ by Phil Howard
3 \ The Amstrad User Jan 1988
10 DATA 21, 35, bf, 36, cd, 23
20 DATA 36, 34, 23, 36, be, c3
30 DATA 00, bf, 21, e2, 39, 36
40 DATA c3, 23, 36, 24, 23, 36
50 DATA be, 21, 40, 00, e5, 21
60 DATA 00, bb, e5, c3, b7, 39
```

```
70 DATA e5, 21, 91, 01, 36, 8c
80 DATA 23, 36, 43, 23, 36, f9
90 DATA e1, f1, f3, c9, 21, 59
100 DATA dc, 36, 00, 21, 00, c0
110 DATA c9
120 y=0: MEMORY &2000
130 FOR x=&BE00 TO &BE3C
140 READ a$: a=VAL("&" + a$)
150 POKE x, a: y=y+a: NEXT
160 DATA if y<>&18cd then 190
170 LOAD "BMX SIMULATOR"
180 CALL &BE0E
190 PRINT "DATA ERROR"
```

Football Manager

Lee Gatiss has an excellent cheat for this game of pensionable age - which has some of the worst graphics I've ever seen.

This, is what, you doooooooo!

Save the game data, or take your existing saved game data, and load it into a word-processor. It should present you with a nice neat file which you can fiddle.

The first line of data contains the following information:

First number: the number of team (team numbers are listed later in the data).

Second: how much money you've got.

Third: how much you owe.

Fourth: number of games played this season.

Eighth: number of seasons played so far.

Ninth: the division you're in.

Eleventh: number of FA Cup matches played so far.

Thirteenth: skill level.

Fourteenth: team morale.

Last: the manager's name.

The next 64 lines of data are the team names. You can change them quickly from here rather than in the game as a whole. The two numbers following the team name refer to their playing strip and change strip.

Next are the player details, made up of the following information which you can alter how you like.

First comes the player's name.

Second figure will be 0, 1, 2 or 3.

0 means the player isn't in your squad, 1 means in the squad but not selected, 2 means selected to play, 3 means injured.

Third figure: value of player.

Fourth: energy rating.

Fifth figure: skill rating.

The last set of data refers to the division who's top and who's bottom. The middle two numbers refer to goals for and against.

Looking after the Dollars

Alex Rae looks at Money Manager Plus to help him control his lavish lifestyle

As the name suggests, Money Manager Plus is an enhanced version of Connect Systems' best selling Money Manager program - 6,500 sold to date, they claim. This sold well because it was a simple yet effective way of keeping track of where the cents were going. Some small companies even found they could run their books using Money Manager. If you already own the original Money Manager you will be pleased to know that your existing files are quite compatible with the new version.

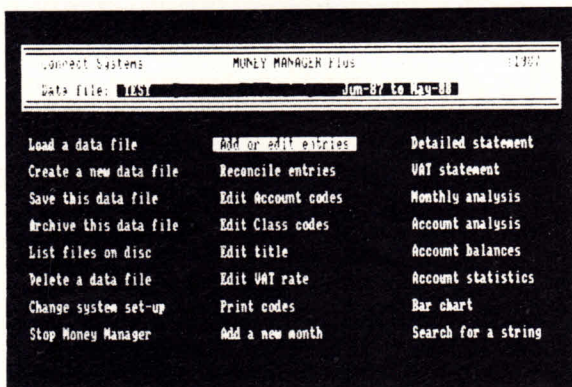
Now, with the advent of their new souped-up version, the program's aspirations to be a fully fledged business accounts package must be taken more seriously. Instead of a limit of 100 entries per month it can now handle 300 entries and it is claimed that it runs four times faster than the old package. But is this enough to tackle 'the books'?

Powerful but still humble

Even in its new enhanced incarnation Money Manager Plus has not forgotten its humble origins. There is obviously a fair amount of overlapping in the functions of personal accounts and simple business accounts packages, but software manufacturers in general have not attacked the personal side of the market with the fervour that Connect Systems have.

Manufacturers will often claim that their accounts package can be used to sort out your own finances but they seldom go to the trouble of showing in detail how this should be done.

While the program does have a perfectly adequate manual the makers were clever enough to realise that the easiest way of learning how to use a program is working with a practical example. To this end they include a couple of examples of yearly accounts which the users can take as a model or adapt for their needs. The two examples are of a typical set of business accounts and a set of personal accounts.



Keeping options open

Once you have chosen your first option from the opening menu, the program uses the 'pester you with questions until I have the answers' method for tasks like setting up a new data file. While this could be regarded as slightly condescending it does ensure that it is virtually idiot-proof - a reasonable aim for this kind of program.

The data file covers a year - 300 entries a month for 12 months - although you can extend this by a month at the end. This loses the first month's figures so it's an idea to commit them to archive by saving details to disc (separately from your current data file) so you can look back over your finances over many years.

Business users would need to consider carefully if this number of entries was large enough and flexible enough to cover their needs although even The Amstrad User writers would be pushed to exceed 3600 entries in a year for personal finances.

At this point you can choose to use or amend the same Account Codes and Class Codes as another file. Account codes are numbers used to automatically attribute spending to one of nine available accounts. This keeps track of activity in your various bank and building society accounts and credit cards. Business users can also keep track of petty cash and it can also be used to handle credit purchases from a small number of suppliers although it is limited for this purpose. It is the limitation in handling unpaid bills that would cause the major problems for business use.

Class codes are a combination of letters and numbers that allows you to keep track of where the money is going. If you spend a lot of money on drink for instance you can create a special DRINK account which you would call 'd0'. You can then decide on having subsections - d1 for Beer, d2 for Wine, d3 for Whiskey and d4 for Gin. You might regard this only useful to journalists but remember you can decide for yourself what the classes are up to a total of 50.

Breaking down's not hard to do

The main advantage of this is that you can use these accounts and classes to break down your expenditure in a variety of ways, so it is wise to choose your accounts and classes carefully to allow you to get at the information that you will want.

Having said that, it is relatively simple to adapt the set up even when it is in use since it is possible to change the title of accounts or classes if they don't suit you. It does suggest sensibly enough that you don't try to erase a classification

from an existing file if it already has entries against it although with the ability to delete and amend your entries or insert new ones you should be able to get round most problems if you change your mind late.

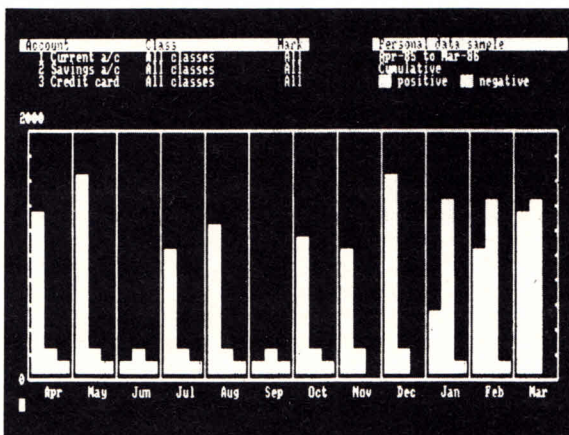
This ability to change, amend or insert entries at any time will, of course, upset the purists in business accountancy. Standard practice is that any mistake must be carried round like the Mark of Cain presumably to give your accountant something to snigger at. This program does not follow this, so business users would have to decide whether that worried them or not.

What goes in, must come out

Then you have the fun of getting this information out again and using it to the best effect. There is plenty of scope in Money Manager Plus to do this. The 'Detailed Statement' option asks you a series of questions to discover what you want. You can pick the months, the accounts, the marks and the classes you want.

You can choose a Monthly Analysis (the figures for classes from month to month) or Account Analysis (the figures for class in each account). You can easily find out Account Balances and discover various Account Statistics including the number of entries, the starting and ending balances, maximum and minimum balances, average balances, total and income and expenditure and cash flow for the month. Just see if your bank manager will argue with you then.

There is even a facility to produce Bar Charts from your figures. The real practicality of this, especially for personal finances, could be questioned, but it does allow you to be unbearably smug.



The last and most invaluable method of getting information out of the program is the 'Search for a String' option - the faithful old 'find' facility. This checks for any string (a group of words or figures) so that you can find that lost payment the company are questioning you about 18 months after it was supposed to have been paid.

The other feature that really is useful for both business and private users will be the bank reconciliation facility - a very simple method of keeping track how much money you actually have in the bank. This is a facility most people will find of real worth and is surprisingly lacking in a number of accounts programs.

To complete this pleasing little package it comes with a simple Install program to help you create your own self-booting disc.

```

Reconcile entries:  reconcile  un-reconcile  up  exit
All accounts together: Mar-86
Unreconciled entries in previous months

Reconciled starting balance on 1-Mar-86 3,404.92

```

Day	Ac	Ref	Cl	Description	Mk	Rec	Debit	Credit	Reconciled Balance
1	1	1	h1	Mortgage	y	y	132.50		3,352.42
1	1	1	h3	Gas		y	25.00		3,297.42
1	1	1	h12	Petrol	h	y	23.46		
1	1	1	h11	Food	h	y	42.50		3,254.92
1	1	1	h17	Alison	h	y	58.50		3,196.42
1	1	1	h18	MISCELLAN.	h	y	8.40		
14	1	1	s1	Gross sal.				1,604.00	
14	1	1	s2	Income tax			535.65		
14	1	1	s3	Superann.			84.20		
14	1	1	s4	Mat. ins.			77.38		
14	1	1	s5	Health ins.			16.50		
14	1	1	t0	to 1			970.27		
14	1	1	t0	to 6				970.27	
15	1	1	h119	Food	h	y	66.99		
15	1	1	h14	Cash (card)	h	y	50.00		
18	1	1	t0	to 3			100.00		100.00
18	1	1	t0	to 1					
18	1	1	h126	Electricity			90.18		
18	1	1	s1	Gross sal.				600.91	
18	1	1	s2	Income tax			141.60		
18	1	1	s3	Superann.			46.85		
18	1	1	s4	Mat. ins.			49.81		

Verdict

The program works well within the limits it has set itself. It is more than adequate to handle personal finances and will provide a simple and easy to use solution for a small business that is simply wanting to keep track of its finances.

Costs

Money Manager Plus is available for almost the entire range of Amstrad computers. For the CPC6128 it will cost \$59.95, and for the PCW or PC you will need to find \$99.00.

More information can be obtained from your local dealer or Pactronics on (02) 407 0261.

Family ruin

Once you start putting the information into your data file you have another option - the 'mark' - which can be put against a specific item and which will allow all items with that mark to be called up. For instance a particularly brave married couple might put an 'h' against hubby's spending and a 'w' against that of the wife. Another good way to start a major family row is to make uncomplimentary comments about your in-laws.

The actual method of inputting information could be regarded as a little tortuous. When you want to enter a piece of information a small arrow appears below the place where the entry will go. When you have decided that your entry is correct you press [ENTER] and the entry appears in the correct place. This is useful when you are amending an entry but could get irksome when you have a lot of new details to enter.

Where it does make life easier for you is when you want to enter your Standing Orders. A special file is kept with all your Standing Order details for the year which you can call up at the correct time of the month with the minimum of effort.

Once the entries are in you can still shift them around the page and you can sort them by date. It also thoughtfully tells you how many entries you have made in a month.

PCW Discs :

the Guide at your side

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

How to use this guide

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

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

Files that do not end in .COM have special uses. They are usually needed to make a .COM file do its job properly - see individual entries for details.

A book that may provide further enlightenment is: **CP/M The Software Bus** by A. Clarke, JM Eaton & D Powys-Lybbe (Sigma/John Wiley. Available from The Amstrad User at \$32.25 plus postage or cheaper if you are a subscriber).

FOR NORMAL PEOPLE
Files you might use every
day

J14CPM3.EMS 40k (Side 2)

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

DIR.COM 15k (Side 2)

Extends the power of the ordinary DIR command to display directories of your discs. You need to have DIR.COM on your current disc if you want to use DIR with any of the options

below.

[DATE] Lists files with their creation date & time, if you have used INITDIR to set up special directory entries.

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

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

[FULL] Gives extra information about each file.

[SIZE] Gives the size of each file as it lists them.

[SORT] Displays the directory in alphabetical order.

[SYS] Only displays files previously defined as 'system' files with the SET command.

[USER=ALL] Lists files for all 16 user areas.

ERASE.COM 4k (Side 2)

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

RENAME.COM 3k (Side 2)

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

TYPE.COM 3k (Side 2)

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

MAIL232.COM 4k (Side 1)

Allows you to send files to printers or other computers, if you own a serial interface for your PCW. It's used in a similar way to LocoScript, by selecting from menus with the function keys.

RPED.BAS 7k (Side 2)

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

RPED.SUB 1k (Side 2)

Runs the RPED editor for you. Make sure you have the files SUBMIT.COM, BASIC.COM and RPED.BAS on the same disc, then type SUBMIT RPED [RETURN] to start RPED.

PROFILE.ENG 1k (Side 2)

Contains the necessary instructions to make the PCW automatically copy useful files like PIP.COM and DIR.COM from your startup disc to the M drive.

These utilities are then always available even if you have an 8256 and have changed your work disc. To make use of PROFILE.ENG, you must rename it to PROFILE.SUB on your CP/M startup disc.

BASIC.COM 28k (Side 2)

Contains Locomotive's Mallard BASIC. To run it type BASIC [RETURN] and the prompt will change from 'A>' to 'OK'. Unfortunately the BASIC manual is no longer supplied with PCWs, so you must either read the programming articles in this magazine, or get hold of a book on the subject.

DISCKIT.COM 7k (Side 2)

Formats and copies whole discs. You should be familiar with this by now, so 'nuff said.

PIP.COM 9k (Side 2)

Is one of the most useful programs supplied with a PCW. 'PIP' stands for 'Peripheral Interchange Program', which means it transfers files from one place to another. Normally this is from one disc to another, but it also works with any CP/M 'device', eg. the printer or serial interface.

For example, PIP B:=A:WOMBAT.123 copies the file WOMBAT.123 from drive A to drive B. PIP B:SNARK.456=A:WOMBAT.123 copies WOMBAT.123 from drive A to drive B but renames it SNARK.456 for the new version. PIP LST:=STOAT.789 sends the file STOAT.789 from the correct disc drive to the printer (the LiST device). PIP AUX:=GERBIL.012 sends GERBIL.012 to the serial interface, if you have one. Finally, an interesting one is PIP LST:=CON:, which converts your PCW into a typewriter by sending everything you type to the printer.

You can add options to a PIP command in the same way as with other CP/M utilities. Some of the more useful ones are:

[A] Only transfers files changed since the last copying session.

[C] Asks for confirmation of the transfer of each file as PIP goes.

[E] Prints the file on the screen as it transfers it.

[Gn] (where 'n' is a number from 0 to 15) tells PIP to look in user area number n for the file.

[L] Converts all upper-case characters to lower-case

during the transfer.

[N] Adds a line number to each line in the new file.

[O] Should be used when copying non-ASCII files, to stop PIP getting confused.

[R] Tells PIP that the original file (the 'source' file) might be a system file.

[U] Converts all lower-case characters to upper-case during the transfer.

[V] Verified that the copy is identical to the original.

LANGUAGE.COM 1k (Side 2)

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

PALETTE.COM 1k (Side 2)

Converts the screen to reverse video and back PALETTE 10 changes the screen to black text on a green background, and PALETTE 01 reverts to normal.

PAPER.COM 2k (Side 2)

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

SET24X80.COM 1k (Side 2)

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

SHOW.COM 9k (Side 2)

Shows you the free space on each drive, amongst other things. SHOW [RETURN] lists the space left on all the drives, and SHOW M: etc lists only the space for the M drive.

SUBMIT.COM 6k (Side 2)

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

KEYS.WP 1k (Side 2)

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

KEYS.DRL 1k (Side 4)

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

LOGO.SUB 1k (Side 4)

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

LOGO.COM 50k (Side 4)

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

HELP.COM 7k (Side 4)

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

HELP.HLP 75k (Side 4)

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

GETTING HARDER

Files you might use once in a blue moon

SETDEF.COM 4k (Side 2)

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

SET.COM 11k (Side 2)

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

SETKEYS.COM 2k (Side 2)

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

SETLST.COM 2k (Side 2)

Controls the printer. If you understand how to send 'Escape

Codes' to printers, you can look up the relevant code in the manual to make the printer produce italics, for example, and then set the printer up with SETLST. Some printer functions like the page length can be set with the PAPER command, and others like using High Quality text are done using the [PTR] key, so you may never need to use SETLST.

SETSI0.COM 2k (Side 2)

Sets up the serial interface, if you have one, so that the speed, parity etc. match those needed by your intended receiver.

DATE.COM 3k (Side 3)

Sets the clock on the PCW to register the date and time that you specify. For example, DATE 12/17/87 10.30.00 [RETURN] sets the clock to be 10.30 on the 17th of December 1987. Subsequently, typing DATE [RETURN] gives the current time and date.

DEVICE.COM 8k (Side 3)

Allows you to kid the PCW that the serial interface port is actually the display screen, and other useful things.

INITDIR.COM 32k (Side 3)

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

PUT.COM 7k (Side 3)

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

ASSIGN.SYS 1k (Side 4)

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

GSX.SYS 2k (Side 4)

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

GENGRAF.COM 2k (Side 4)

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

DDHP7470.PRL 11k (Side 3)

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

DDFXHR8.PRL 15k (Side 4)

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

DDFXLR8.PRL 12k (Side 4)

Another file for ASSIGN.SYS, which is also used in other

circumstances to describe the PCW printer to GSX.

DDSCREEN.PRL 4k (Side 4)

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

HACKERS ONLY Strictly for machine code freaks

DUMP.COM 1.k (Side 3)

The command `DUMP filename` prints out a hexadecimal dump of the named file on the screen, together with its ASCII equivalent.

ED.COM 10K (Side 2)

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

GENCOM.COM 15k (Side 3)

Attaches or removes a given Resident System Extension (RSX) to the specified file, so that it is automatically available whenever the program is run.

HEXCOM.COM 2k (Side 3)

Converts a hexadecimal dump of a file, as you might transmit over a comms link, into a kosher CP/M.COM file.

HIST.UTL 2k (Side 3)

A debugging aid for use with RMAC.

LIB.COM 7k (Side 3)

Used to combine several assembly language modules produced by RMAC into a library, for ease of use later on.

LINK.COM 16k (Side 3)

Used to convert a program assembled with RMAC into a .COM file that can be run directly from CP/M.

MAC.COM 12k (Side 3)

A machine-code assembler which produces absolute object code.

PATCH.COM 3k (Side 3)

An obscure program intended to allow digital Research to distribute software updates to CP/M.

RMAC.COM 14k (Side 3)

A souped-up version of MAC which converts Z80 assembler text files into a special form, '.REL' files. These .REL files can

then be used with LIB, LINK etc. to produce .COM files.

SID.COM 8k (Side 3)

The 'Symbolic Instruction Debugger'. Allows you to inspect .COM files, and other types too, and alter them. You can use it to set breakpoints and otherwise debug machine-code programs.

TRACE.UTL 2K (SIDE 3)

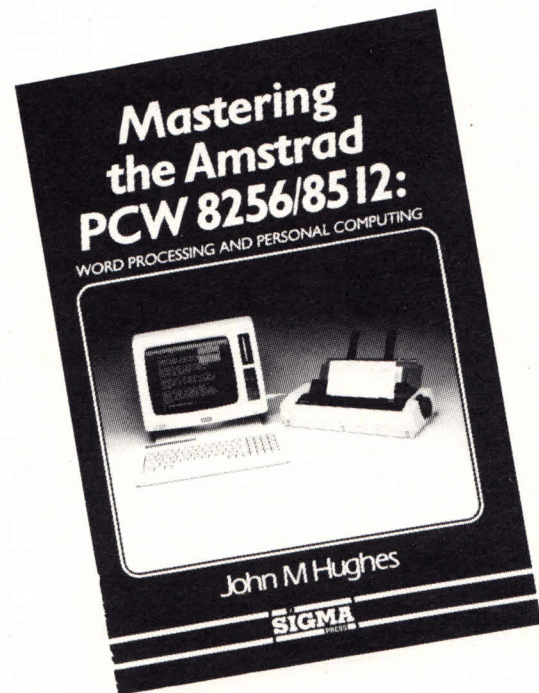
Used to trace the execution of a machine-code file.

XREF.COM 16k (Side 3)

Produces a cross reference listing of variables used in an assembler file, for ease of debugging and documentation.

SAVE.COM 2k (Side 3)

Allows you to save a snapshot of the PCW's memory after a program has finished running.



Written in a very easy-to-understand style, Mastering the Amstrad PCW 8256/8512 opens the doors to more effective use of LocoScript, covering the essentials, document layout and presentation and using templates. It also covers CP/M and using CP/M programs, and looks specifically at SuperCalc2, The Cracker, Cambase, Sage Popular accounts and NewWord.

Normal Price \$32.25+pp Sub. Price \$29.50+pp

See Page 64 for ordering details.

Top of the Desktops

Another desktop publishing package? Rob Ainsley investigates Database's offering, and finds that last is not always least.

Designer stubble, baseball caps, Filofaxes, compact discs, desktop publishing.... they're all IN. In addition to running off your business letters, keeping catalogues of your priceless collection of Henry IV hammered silver codpieces on a database, running your laundry accounts on a spreadsheet and playing Return from the Planet Tharg, you can use your PCW to produce your club magazine, community newspaper and information broadsheets as well, using one of the various desktop publishers now available.

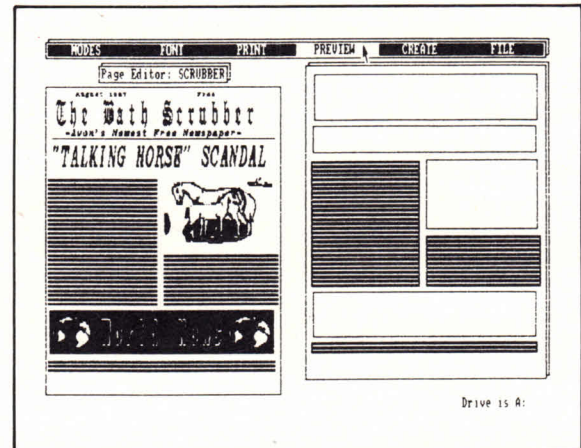
The newest contribution to DTP is from Database. With a title like "The Desk Top Publisher" and a reasonable price you might be forgiven for thinking it is a cut-price version of some of the more expensive packages. In fact, it is an extremely well thought out and versatile program with just about every feature you might need for newsletter and broadsheet page-making, and it performs just as well as many of its pricier cousins.

The package comes with one disc (the program on one side and some clip art and alternative fonts on the other) and a compact wirebound manual. The examples on the cover of the pack are attractively and realistically laid out and avoid the every-typeface-except-italic-kitchen-sink approach which can look rather messy. The disc takes the best part of two minutes to load and indeed requires an empty M: drive to work with - if there's anything already lurking in there you get a screen instruction to erase it all and reload.

The system works by drop-down menus and a cursor pointer, and is designed very much with the mouse user in mind; there is an option, available any time by pressing [PASTE], on using the AMX, Kempston or Electric Studio mice, and the manual talks gaily of 'clicking' where hand-jobbers would say 'press [RETURN]'. Working exclusively with the cursor keys though really isn't much of a disadvantage, unless you're manipulating graphics or, in the extreme case, drawing freehand.

The first screen you see after the title shots is the main menu, showing graphics, text, page, font, filing and EXIT options. This is the base to which you return in between your jaunts into each area, the most important one being Page Editor. Here

your page is displayed full-size on the right hand half of the screen holding all your graphics blocks (displayed as empty boxes) and your text blocks (shown as boxes filled with lines). You can move these blocks around at will, remove them (though they stay in the memory), map out new ones, or add ones from the memory. To get an idea of what the final page will look like, you can display the full page on the left hand half of the screen with the contents of each graphics block printed out, using the 'preview' option.



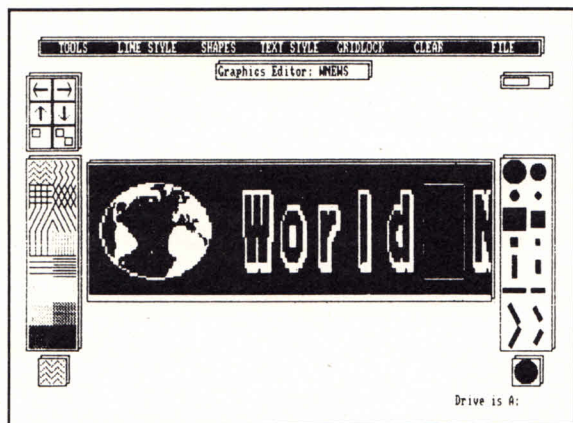
This Page Editor is probably the best and most distinctive feature of the Desktop Publisher and, unlike some systems it is intuitively obvious to use. The various boxes can be rearranged quickly, and the most likely combinations selected and saved. The short tutorial section in the manual takes you through these processes with some demonstration blocks and gives you a feel for the structure of the package very nicely. Any work on the boxes themselves is done in the Text Editor or Graphics Editor areas.

It's a snip

In the graphics editor you can select symbols and small pictures from the well stocked cutouts page on the reverse of the program disc and incorporate them into your page - the manual only shows three-quarters of the selection, rather irritatingly. The complete range includes a telephone, several price tag borders, a gaggle of pointers, cars, lorries, animals, a complete PCW keyboard, the dove of peace and a lavatory.

Headlines are treated as graphics boxes and the text is inserted in a rather idiosyncratic way. You choose the font required in the graphics editor but have no choice as to the

size; the dimensions of the character are determined on selection of 'text' from the tools option by marking out a rectangle to the size of letter desired. This inevitably ends up with the headline running out of box, so rather than find the optimum letter size by trial and error it's better to write a small headline and then paste it (stretching it automatically to fit in the process) into the appropriate box. Unfortunately the paste option is not very clearly described in the manual and a bit of trial and error may be necessary to get it right.



A slight drawback of this feature is that large letters (being small ones blown up) are rather jagged and 'blocky' and look a bit ugly in large headlines. But in recompense there is a wide variety of fonts to choose from - fifteen in all, including a stencil effect, a copperplate-like script and a typeface called intriguingly 'hobbit', as well as the standbys of Olde Englishe and the conventional serifed and unserified typefaces.

Getting the write style

By moving to the text editor you can get to work on the writing and it is an easy matter to insert material either directly from the keyboard, from a previously prepared ASCII file, or a combination of the two by reading in and then editing. Your source file must end in .ASC though or it won't be recognised and won't appear on the list of files to choose from.

Unfortunately to fill those tightly demarked boxes of text with all your zappy prose is all too easy. The boxes are ulti-

Graphic details

The facilities available on the graphics editor are much the same as on other desk top packages and offer the facilities of drawing circles, boxes, lines etc etc, filling with various textures, moving and copying shapes, stretching and compressing them, reversing colours and so on, that will be familiar to users of other DTPs.

These appear in a 'tools' option in the graphics menu. A slight grouse about this package might be that you can't always work over the whole area of your graphics box at once - if you're trying to reverse a page-wide headline to white on black you will need at least two goes and risk some ugly seams as the working area can reach neither the full width nor quite the depth of the graphics box. You'd have to reduce your box size by pasting, work on it, and re-paste to the desired size.

mately elastic and if the text you are funnelling in exceeds the limits of the box, the ever-accommodating text editor expands it in a flash with a message.

There seems to be no way of confining the inflowing text to the size you marked out back in the page editor. This makes spreading out a long article brought in from another file into three columns rather laborious - the only way to do it would appear to be reading the entire article into each column box and editing out from top and/or bottom until the 'window extended' message disappears. It's nice being able to edit prepared text so easily but it seems odd to have to use it for this purpose.

There is a 'lock' function but this only works for cases where the incoming text is too short for the box, which otherwise shrinks like a sweater washed at the wrong setting.

There is a splendid choice of typefaces and styles for the actual body text of the document. Unlike the other DTPs on the market, The Desktop Publisher prints text using the ordinary printer fonts that LocoScript and CP/M use, rather than the coarser 'screen dump' type lettering. You can select 10, 12 or 17 pitch type and any of their double width options as your default, and within any piece of text you can toss in italics, bolds, centrings and underlinings. Although these can be selected via the menus it is easier to use the sequences familiar to LocoScribes involving the plus keys, +I and -B and so on. The codes don't appear on screen (they're stuck on to the first letter of the sequence so that erasing that letter will erase the style for the block as well) but the effects do - bold letters come out bold, underlined words underlined and italic letters are more or less italic on screen as well as on paper.

Whenever an action is to be taken, the appropriate menu (a list of graphics files when in graphics modes, text files in text modes, fonts available in font modes etc) flashes up and the required item can be chosen by moving the pointer and clicking.

When your blocks are all edited to your satisfaction, and moved around to the optimum arrangement on the preview page, you can print out - though you may find that some of those elastic text boxes are now overlapping madly, which will mean a trip back to the text editor and some juggling of words.

Overall this is a very good package, easy to use and to find your way round. It links up effectively with accessories like mice and digitisers. The pasting up process quickly becomes intuitive and it's easy to keep tabs on what is going where and how the page is coming along. Apart from the laborious way in which text has to be fitted into blocks if it comes in from external files, and the lowish quality of headlines, this is a package to be thoroughly recommended, and at the price is tremendous value for money.

The size of it

The way the The Desktop Publisher stores all its data is quite efficient, and one page seems to take up around 25-40k depending on how many graphics boxes there are - text takes up a negligible amount of memory. The only time you need to swap discs is when you change fonts - otherwise the disc used to store the publication stays happily in the A: drive.

Family Life

Spurred on by typewriters and family history, UK housewife Jeanne Bunting has breached the computer age's technology barrier.

I can't say in all honesty that my PCW has revolutionised my life, or even traumatised it - just taken it over completely. At present, if it can't be done on the computer, it doesn't get done. I have tried typing IRON [RETURN], but the shirts stay creased in the basket; neither has it any effect on the washing machine, dishwasher or microwave (more the reverse in the latter case, I suspect) but the family are surviving. As you may have gathered, I am a more-than-middle-aged Mum having a passionate affair with a PCW!

In my O-level days we didn't have calculators, let alone computers, so although my algebra was fairly good, I didn't know a byte from a poke. My introduction was via a ZX81 and using the excellent manual I had in no time programmed it to draw a dog that wagged its tail when a bone appeared - then it ran out of memory. One whole k it had. I did serious things on it, including printing out all sorts of sine waves when my son had to design jewellery based on them for his A-level work. From that I progressed to a Spectrum but found the promised software was sparse so I lost interest and didn't progress very far with my programming. I did manage to put my accounts into it (I do casual work at home) and bought a Brother EP44 typewriter which, through an interface, produced good quality print.

Last year I started investigating my Family History. It is a fascinating subject but you collect masses of names, dates and places. These take hours to copy out neatly and sort into some kind of order from which families can be extracted. I knew a computer was the answer and just as I was thinking of dusting down the Spectrum, I was offered a few days work. The 'few days' became three months and I had enough money for a

'real' computer. After a lot of looking, absolutely no help from anybody, and with a deep sense of foreboding I went to buy an Amstrad CPC6128. They didn't have one in stock (I now look upon this as an omen!) and as I suffer from the 'I want it now' syndrome, I bought my second choice - the 8512, and what an excellent choice it proved.

Dear LocoScript...

I have always brought up my children to believe that if you can read, you can do anything, but the LocoScript manual soon put paid to that theory. It was very good at telling you what to do but not at how to get back where you were before you did it. I mastered it eventually only to go through the process again when LocoScript 2 appeared. However, the effort was worth it as a number of my petty annoyances have disappeared from the new version. I would still like to see an 'Exchange lower-case for upper-case' (and vice-versa) for those occasions when I have typed a whole paragraph having forgotten to turn the shift-lock off (or on) and be able to use the word-processing codes in 'Find and Exchange'. I would also like an indexing facility.

I get very easily side-tracked. I have these brilliant, time-saving ideas which always take longer to implement than the job would have taken to start with (I once spent ten minutes trying to get an egg into a milk bottle so I could shake it up with the milk to save washing up a whisk and a basin). I have just 'Finished editing' and spent an hour typing in a 'Wordcount' program, correcting the errors, getting it to run, making an ASCII file to find I have typed six hundred and forty-three words which I could have counted in two minutes.

The latest idea was to buy the RS232 interface to down-load the contents of

the EP44 typewriter memory into the PCW, then I could take the typewriter to the Record Office and save the laborious hand-writing in between. I bought the interface from a local supplier who, in common with most suppliers of hardware and software, didn't know much about his products, least of all the correct cable to use, so I bought the parts elsewhere and using the wiring instructions in the interface instruction book, made my own up (at a quarter of the price of a ready-made) and at last I was ready to go.

Interface about face

I carefully read the not too explicit instructions on using MAIL232, told it to receive EP44.TXT and - hey presto - nothing. Not so much as a squiggle. I went through each option changing one thing at a time without success and as it was four o'clock in the afternoon and everyone was screaming for lunch, I temporarily gave up. Having re-read the book, I changed the baud rate and to my great joy my text suddenly appeared - complete and unadulterated. Admittedly each line overprinted the previous one, but changing the relevant option on the typewriter from 'CR' to 'CR+LF' solved that, so I was ready for real records.

I was investigating the Merchant Service Records from the 1850s of my great-great-grandfather. I found records of his voyages, the crews and who owned shares in his schooner. I was delighted to be able to come home with half a day's records (only 4k of memory in the typewriter) and empty it straight into a text file which could be inserted into LocoScript documents and tidied up.

My second attempt, four pages of Births, Marriages and Deaths, was not so successful. Having by now made an auto-start MAIL232 disc I confidently went through the routine, and was greeted by two peculiar graphics characters and nothing else. I tried again, and again and again. Sometimes the printer did strange things, sometimes the whole system crashed, sometimes I even had to do the unthinkable and remove a disc from its drive while the light was on. Once it said 'Directory full', which on investigation was filled with files in various combina-

tions of Zs.

To eliminate the typewriter, my husband borrowed a similar model but the result was the same. I checked the lead with a meter and eventually phoned the interface supplier. He couldn't help, but did offer to change the interface, saying, "If it is the interface, it will be the first of all the ones I've sold." Well, it was, and it was. The second one works perfectly and although there are certain incompatibilities - I get a '#' where I typed a '£' - I am conducting further experiments.

Computerised ancestors

I bought Datagem for my Family History data and apart from its inability to sort a list of surnames and christian names into alphabetical order unless they are in the same field with the second name always starting in the same position within the field, and not accepting dates outside one century, it was adequate. It was extremely easy to set up user-friendly wasn't the word - it was positively amorous compared to LocoScript. Within an hour or two I had fairly complicated files to take my various kinds of records and I even configured it to produce a chronological list of ancestors listing in order my four grandparents, eight great-grand-parents, sixteen great-great-grand-parents etc, etc (not that I've got much further than that).

Considerable exchange of information goes on between family Historians. With the combination of LocoScript (I have learned to live with its sloth) and Datagem I can extract relevant information to send to enquirers, together with an appropriate Family Tree (labouriously produced in LocoScript). Last Christmas, LocoScript wrote to all my cousins for information - one letter with subtle changes for each cousin, and other letters I normally write individually to friends were done by 'copying', 'cutting', 'pasting' and 'inserting'. I slipped up occasionally and left bits in which should have been left out, but nothing serious. I had already put my address book into Datagem and marked those to whom I send Christmas cards and

simply printed labels for the envelopes which also serve as a list for who to send them to.

Datagem wasn't perfect and had a couple of bugs which I wrote to Gemini about but had no reply. Digita International (who now market it as Datastore) offered to look into the problems provided I paid £20 to join their software support scheme. In view of Datagem's limitations, I decided the money would be better spent on a different database.

I am now Editor of the West Surrey Family History Society's quarterly journal. I have also bought a 'mouse' and 'The Desktop Publisher' program,

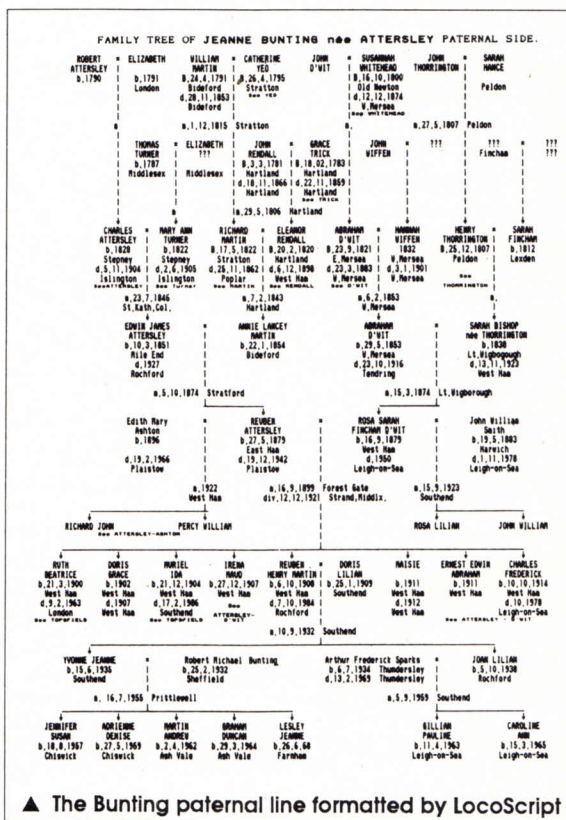
Yesterday my son asked me if the PCW could do graphics "Yes," I said and in the middle of trying to lose 667 words from this article, found the Dr. Logo disc and instruction manual. We drew several squares, spent half an hour looking for the equation of a circle in our algebra books...but that's another story.

Try before you buy

As an early subscriber to a particular computer magazine I was sent a free disc with, among other goodies, a demonstration version of NewStar's 'Cracker 2' spreadsheet. I managed to take screen dumps of all the 'Help' menus except the 'Coordinate Reference Adjustment' and 'Label' which, when I dumped the file with CP/M's DUMP utility had a glitch in it anyway. I eventually set up a Cracker file, put some information in and sorted it. This may not sound much of an achievement, but considering my advanced years and lack of experience it did to me. I also managed to get some of my EP44 output into it, before running out of memory, but having tried it and seen its possibilities, I bought the full version and use it for my accounts and invoices.

I recently saw a demonstration of 'Database Manager (At Last)', was able to play with it and found it much more suitable for Family History - dates from any century, full alphabetical sort over three fields, many ways of printing the information (only two in Datagem), fields within fields and 'constant' fields. Only calculations were missing. I discovered I could take data from LocoScript via an ASCII file into 'At Last' which meant that not only could I put my EP44 information into it, but could also process my Datagem files and put them in. I decided to cut my losses and buy 'At Last'. Its biggest drawback as far as I was concerned was that it printed in pitch 10. However, I soon managed to use CP/M's SETLST command to make it print in pitch 17 and although there are a few minor irritations, I much prefer it to Datagem.

Jeanne Bunting



▲ The Bunting paternal line formatted by LocoScript

so the ironing has piled higher. Not being a typist, I like to receive the journal's contributions on disc wherever possible and have successfully loaded text files from different word-processing programs into LocoScript.

Hey, I've just had an idea, (groans from the family.) There's this Uni 2 interface and 51/2" 40/80 switchable disc drive and with the software which claims to read 'most' 51/2" disc formats I could transfer text files from other computers...more experiments and even bigger piles of ironing.

PCW 8256/8512 & PC Software

GAMES for PCWs

Title	Price
Air Combat Emulator	39.99
'Colossus' Bridge + book	49.95
'Cyrus' Chess	44.50
Distractions - three games	59.95
Graham Gooch Cricket	94.95
Guild of Thieves	79.99
Knight Orc	69.99
Monsters of Murdac	69.95
The Pawn	89.95
Silicon Dreams	59.99
Starglider	69.99
Strike Force Harrier	69.95
Tomahawk	57.95

SPREADSHEET

Scratchpad Plus	149.99
-----------------	--------

DATABASES

Cardbox	179.99
Condor One	199.99
Database Manager	99.95

DESKTOP PUBLISHING

Fleet Street Editor	249.95
Font 'n' Graphics for FSE	69.99

Newsdesk International PLUS Light Pen pack

Newsdesk International is an extremely powerful program controlled normally by cursor keys but now comes with an Electric Studio Light Pen. Newsdesk International can be used as a stand-alone system with its own word processing editor or accept input from a word processor such as LocoScript, or even digitized input from the Electric Studio Video Digitizer.

This pack will give you the ability to mix the text files created on the word processor with the graphics created using Newsdesk International.

Headlines and text can be sized easily according to your requirements.

NDI + E/S Light Pen	249.95
---------------------	--------

Fonts for Newsdesk	49.99
Snip Art for Newsdesk	49.99

GENNY - Genealogical Database on a 3" disc (PCW)	\$119.00
--	----------

GRAPHICS & PRESENTATION

Title	Price
DR Draw	169.95
DR Graph	169.95
Font Module (to use with Elec. Studio light pen)	69.96
Rotate	89.99
Snip Art (to use with Elec. Studio light pen)	54.95
Super Type	89.99

DIGITIZER

Input from standard video camera to Newsdesk Int. or Fleet Street Editor.	349.95
---	--------

UTILITIES

Catalogue (HiSoft)	39.95
C-Basic Compiler	169.95
Devpac 80	125.00
Disc Mate	94.95
The Knife (HiSoft)	39.95
The Torch (HiSoft)	39.95

<i>Catalogue, Knife and Torch pack</i>	99.99
--	-------

Typing Crash Course	79.50
---------------------	-------

WORD PROCESSORS

LocoScript 2	72.95
NewWord2	275.00
Tasword 8000	79.95
Wordstar PCW	199.00

LANGUAGES

Pascal MT/+	149.00
Nevada Pilot	125.00

TASMAN PRODUCTS

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

Please note that items on this page are Mail Order only. Prices may change without notice - check first!

GAMES for PCs

Title	Price
Air Combat Emulator	34.99
Beyond Wolfenstein	19.99
Casino Parlour Games	19.99
Crossfire	19.99
Factactics Trivia	19.99
Games Pack 1 (13 games)	29.99
Games Pack 2 (4 games)	29.99
Gamma Games	49.99
Guild of Thieves	79.99
Jewels of Darkness	74.99
Knight Orc	69.99
The Pawn	79.99
Saboteur II	29.99
Silicon Dreams	69.99
Skyrunner	34.99
Starglider	69.99
Tracker	69.99

BUSINESS

ABC Business Pack	499.99
Ability Plus	450.00
Ability	225.00
Brainstorm	149.99
Cardbox	179.00
Condor 1 Jnr	199.99
Delta 4	399.99
In-House Accountant	339.99
Money Manager	139.99
Portex (with PVC binder)	299.99
Portex (with leather binder)	349.99
Scratchpad Plus	149.99

GEM SERIES

Business Library	149.99
GEM First Word Plus	299.99
Fonts and Drivers	139.99
GEM Font Editor	349.99
GEM Wordchart	349.99

GENNY - Genealogical Database on one 5.25" disc (PC) \$119.00

Mail your orders to:
THE AMSTRAD USER
 1/245 Springvale Road
 Glen Waverley, Vic 3150

Phone your firm orders to:
(03) 233 9661

Bankcard, Mastercard or Visa accepted.

Available from The Amstrad User while stocks last

Look - no hands

In which Dr. Alec Rae prescribes some cures for PCW Typist's Finger (6128 owners should be interested too)

The essence of a computer is to save time and effort. So how would you like to be able to do virtually anything you do in CP/M without even touching the keyboard? For this you have to come to terms with a couple of commands called SUBMIT and SETDEF.

When you have these under your belt you can carry out multiple command operations like moving files around, renaming them, erasing them or even running programs and inputting information with only a single command at the keyboard.

One of the main joys of computers is making them do more and more with less and less key strokes. That is why anyone really keen on their PCW has to get control of the SUBMIT command. The idea is that you can carry out a number of commands (ones that you will want to use regularly) by grouping them in special files called 'submit' files. Then when you 'run' this file all the commands in it will be carried out without having to be keyed in separately.

To do this you first need the RPED text editor or a word processor that can produce files in ASCII (LocoScript's ASCII file option will do). Then you write in your list of commands exactly as you would type them after the A> prompt, each on a new line. Save the file under any filename you choose, but make sure it ends with the extension .SUB'.

On the CP/M master disc is a file called SUBMIT.COM - you will need to have this on the same disc as the .SUB file you have just created. When you type

SUBMIT filename

all the commands are carried out automatically. For example, suppose

you use the B disc as your work disc, and at the end of each day you back it up by copying all .DOC files (or whatever you call your documents) from drive B to drive A. Then you tidy up by erasing all .BAK files that your word processor has created without asking you, and finally you see how much space there is left on the discs. If you create a file called BACKUP.SUB containing the lines:

```
PIP A:=B:* .DOC
ERA B:* .BAK
SHOW
```

then as long as you have SUBMIT.COM, PIP.COM and SHOW.COM on your disc, when you type SUBMIT BACKUP these three commands will run automatically. So now you have no excuse not to make backups!

```
B>submit backup
B>PIP A:=B:* .DOC
COPYING -
CHAP1 .DOC
CHAP2 .DOC
CHAP3 .DOC
b>ERA *.BAK
ERASE *.BAK (Y/N)? y
B>SHOW
A: RW, Space: 25k
B: RW, Space 372k
M: RW, Space: 270k
B>
```

▲ Running the example Submit file BACKUP.SUB. All you type are the parts in lower case - the rest is done automatically by CP/M

And so much more

One of the most useful features of Submit files is that you can make them provide the answers to prompts that programs give you when they expect you to type things at the keyboard. If the first character on a line is '<', then the Submit file assumes this is a reply to a question rather than a command to CP/M.

Say you regularly use a database called HEAP to store details of your collection of fossils in a file called FOSSILS.DAT. To run HEAP, you always run SETKEYS with a file HEAP.KYS to set the keyboard up, move the various files into M drive and load the program. The program has devilishly cunning protection which insists you type the easily remembered password 'XZ12Q**' every time you start up so you add this in a < line which actually inputs this information at the right moment.

Since the only file you ever use is the FOSSILS, you always reply FOSSILS [RETURN] when the database prompts you for a filename. If you set up HEAP.SUB to be

```
SETKEYS HEAP.KYS
PIP M:=HEAP.*
M:
HEAP
<XZ12Q!**
<FOSSILS
```

Now instead of sitting waiting for the machine to whizz and whirl its tortuous way through the loading procedure to input information every five minutes you just run type SUBMIT HEAP [RETURN] and then go off to make a coffee.

You have to be sure to answer the right prompts of course. If it expects you to write Load File Fossils, I f Fossils

or l [RETURN] f [RETURN] Fossils, you have to give it what it wants. If there's a [RETURN] needed after a command you should start a new line in the Submit file. If there isn't one needed, don't.

Variable delights

But say there are two files you use regularly: FOSSILS for the fossils collection, and DISCOS for the directory of local night spots. Then you can take advantage of SUBMIT's ability to use variables. In the place where you wrote FOSSILS in your Submit file you write \$1 instead. This means when you type

```
SUBMIT HEAP FOSSILS or
SUBMIT HEAP DISCOS
```

the file loads HEAP as before and where it sees \$1 it substitutes the first word after HEAP on the command line, so opening the correct file automatically. You can use up to nine 'variables' in this way, not unreasonably called \$1 to \$9. So if you list the discos visited in July and August in files called DISCOS.JUL and DISCOS.AUG, then if you make the last line of HEAP.SUB

```
B>setdef [order=(sub,com) ]
```

```
Search Order - SUB, COM
```

```
B>backup
```

```
B>PIP A:=B:* .DOC
```

```
COPYING -
CHAP1 .DOC
CHAP2 .DOC
CHAP3 .DOC
```

```
b>ERA *.BAK
ERASE *.BAK (Y/N)? y
B>SHOW
```

```
A: RW, Space: 25k
B: RW, Space 372k
M: RW, Space: 270k
```

```
B>
```

▲ BACKUP.SUB revisited . . after using the SETDEF commands as explained, you can run the Submit file just by typing BACKUP (Return).

```
<$1 . $2
```

you can type

```
SUBMIT HEAP DISCOS JUL or
SUBMIT HEAP DISCOS AUG
```

to open the correct file.

At the end of the day the only person who can decide what .SUB files you could sensibly use is yourself. Any commands you find yourself repeatedly typing are candidates for Submit files. Remember - once it's keyed in you may never need to touch the keyboard again.

When the Sub comes on first

You can make Submit files even easier with the aid of the SETDEF command - a cunningly disguised form of SET DEFAULTS.

If you've been experimenting with Submit files, you are probably getting fed up with typing 'SUBMIT...' to run things. After all, with real programs you just type the name alone and it runs. What you do is give CP/M the command:

```
SETDEF [ORDER=(SUB,COM) ]
```

You must have the file SETDEF.COM on your current disc. This makes the PCW look for and run a .SUB file before it looks for a .COM file (a program). Once you have done this, all you need to type to run a Submit file like the HEAP.SUB example used before is

```
HEAP [RETURN]
```

Even though you aren't typing SUBMIT HEAP, you still need to have SUBMIT.

COM on the disc, since it is used behind the scenes.

One problem crops up if you have a SUB file and a COM file of the same name. This often crops up if you are using the Logo programming language on the PCW, where there is a LOGO.SUB file and a LOGO.COM file. If you want to run the program directly without using the SUB file, you must type

```
LOGO.COM [RETURN]
```

otherwise the PCW would run the SUB file.

You know where to look

Hands up anyone who has typed PROGRAM [RETURN] to run a program and got that really annoying piece of CP/M sarcasm 'PROGRAM?' You know it's there. You've just been working with it for the last three hours. Then after cursing for five minutes you suddenly note the little prompt says M> or B>, when PROGRAM.COM is drive A. The problem was you didn't tell the PCW where to look.

For instance, as you get to grips with PROFILE.SUB files you will probably find it a good idea to whip your favourite programs or utilities into the M drive, and may well find it worthwhile telling the PCW to look there first for any program.

You can alter the 'Search Order' with a command such as

```
SETDEF M:,*.
```

This tells CP/M that whenever you ask to run a command, it should look on the M drive for the file first of all,

```
setdef m:,* [order = (sub,com) temporary = m:]
pip
<m:=basic.com[o]
<m:=dir.com[o]
<m:=erase.com[o]
<m:=paper.com[o]
<m:=pip.com[o]
<m:=rename.com[o]
<m:=setkeys.com[o]
<m:=show.com[o]
<m:=submit.com[o]
<m:=type.com[o]
```

▲ The contents of PROFILE.ENG, supplied on the CP/M master disc. You could rename this PROFILE.SUB to copy useful utilities to the M drive

and then if it doesn't find it there to look on the current drive - the asterisk stands for 'whatever the current drive is'. So, if you are working on drive B, you can type SHOW[RETURN], and (assuming you have copied SHOW.COM onto the M drive) the command will work even though SHOW.COM is not on the current disc. Without using SETDEF to define the search order, you would have had to think which drive it was on and type M:SHOW instead.

If you have a two drive machine you can even tell it to look in all three drives in a certain order with the command

```
SETDEF M: , A: , B:
```

for it to quickly flick through all three in its search.

Oven Ready

As well as PROFILE.ENG on your CP/M discs there are a couple of examples of .SUB files already on your CP/M discs. LOGO.SUB (on side 4 of the CP/M utilities) for instance runs "KEYS.DRL" the LOGO SETKEYS file before it loads Logo and RPED.SUB for the BASIC text editor calls up BASIC before it loads RPED.

Where do they come from

To help you understand what the machine is doing when it is running a Submit file or how it looks through all the drives with a SETDEF search order an interesting trick is to use the command SETDEF[DISPLAY]. The PCW then tells you where it is getting the program from. For example if you want Disckit from the M drive it will say 'M:DISCKIT.COM' as it begins to load. Very interesting for a while but when you get fed up (after about five minutes) you type in SETDEF [DISPLAY=OFF] to get back to normal.

Start the Day the Profile Way

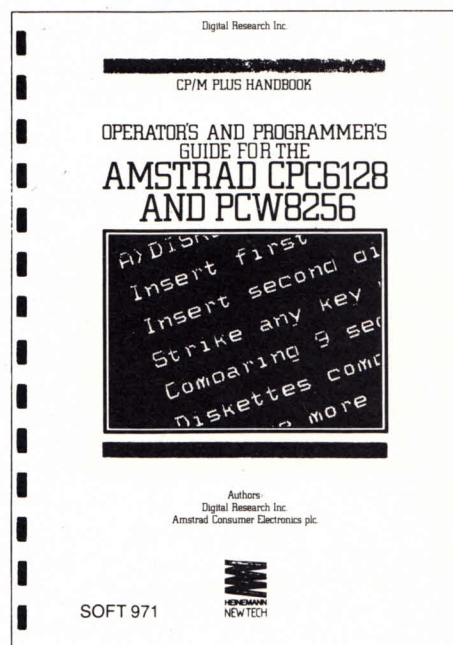
You may not know it but you already have a few .SUB files on disc. Best known is the PROFILE.ENG file on side 2 of your CP/M utility discs. This one is set up to be easily converted into a PROFILE.SUB that invaluable aid of the PCW owner. What happens is that every time you start up your PCW it automatically looks for a file called PROFILE.SUB. If it finds one it will carry out the commands in that file before it does anything else and without you touching the keyboard.

PROFILE.ENG is one suggestion of how this could be set up. It transfers virtually every utility you would normally need on to M drive and makes M the default drive. So if at any time during the day you want to use BASIC, DISCKIT, SHOW, TYPE or PIP it is sitting waiting for you without you needing to swap discs. If you want to make use of this useful setup just change the name of PROFILE.ENG to PROFILE.SUB with `REN PROFILE.SUB=PROFILE.ENG` although you need to remember

that with an 8256 without an expanded memory it does take up virtually all the space available and if you want to run a program that makes use of the M-drive you may find there is no room.

It is probably better to adapt PROFILE.ENG to your own needs by editing it so that it only copies the utilities you need - maybe just PIP and DIR. Notice how SUBMIT's < feature is used to run PIP with: PIP on a line by itself runs PIP and gives you the * prompt, then each line beginning with < give PIP a new file to copy. Finally, < on a line by itself exits from PIP.

Your PROFILE.SUB doesn't have to be an adaptation of PROFILE.ENG - you could rename the HEAP.SUB example file from this article PROFILE.SUB, and your HEAP database would start automatically when you start the PCW up. You must however have the file J14CPM3.EMS on the disc too, otherwise the PCW can't use that disc to start from.



CP/M PLUS HANDBOOK

A review in The Amstrad User (October 1986) said "quite simply, it's the only book you'll ever need on the technical side of CP/M Plus".

If you are a beginner, it's not for you - it is very technical.

If you are more advanced, you may want to take advantage of the new price. Don't pay \$89 when you can now get it from The Amstrad User for just \$49.95 plus postage.

For ordering details
turn to page 64.

TIP-OFFS

Turbo-charged tips for your PCW

Easy as A>,B>,C>

Users of the 8256 are already familiar with the need to change discs between a so-called B drive and the A drive even though they only have one drive. CP/M beeps and displays a message to 'insert disc for B' (into the A drive) and to press any key when ready. For example if you type

```
PIP B:=A:ZAP.BAS
and follow the prompts treating the disc to copy from as the 'A' disc and the disc to copy to as the 'B' disc then you will copy the file FRED.TXT from the one disc to the other without the need to go via the M drive as temporary storage. However, on an 8512, the addition of the second drive, the real B drive, loses this facility (although there are now easier ways to PIP files from one single density floppy to another).
```

```
A>sid
CP/M 3 SID - Version 3.0
#a
0100 lxi h,BD2E
0103 shld FE67
0106 jmp 0
0109
#WA:CDRIVE.COM
0001h record(s) written.
#↑C
a>cdrive

A>pip
CP/M 3 PIP VERSION 3.0
*c:=a:profile.sub
```

Put the disc for C: into the drive then press any key

However with this very short program you can reinstate this extra drive on an 8512 - your machine now has two drives in the top right hand corner like an 8256 but called A & C. Load CP/M and at the a> prompt insert side 3 of your systems discs (the Programming Utilities disc) and type SID. Then at the # prompt type a - you'll see 0100 followed by two spaces appear. Type lxi h,BD2E [RETURN] and after the next number (0103) enter shld FE67 [RETURN]. After 0106 type jmp 0 [RETURN] and after 0109 press [RETURN] only. The # reappears: insert your working copy of the CP/M disc and type WA:CDRIVE.COM and after the message 0001h record(s) written the # shows up again; press [STOP] to return to CP/M's A> prompt. On your working disc you now have a file called CDRIVE.COM; from now on you can add the extra drive to your 8512 by the command CDRIVE. If you now type C: you will be asked to insert the disc for drive C and the prompt will change to C>.

Having this phantom drive can be a real boon if you are running a SUBMIT file written for an 8256 which relies on the old B drive trick to work properly.

Ron Touw.

Locoscript does ordinary characters too!

You can get normal QWERTY characters in LocoScript 2's 'Super Shift' mode without leaving your Cyrillic or Greek modes by entering them as [ALT] or [SHIFT][ALT] plus the characters.

Eric Kowal.

Saving on paper

Large quantities of single sheet paper can often be found at rock bottom prices - usually damaged paper whose edges you can trim off, firm's headed paper with deep headers already removed, or old and weird sizes. Trying to make a TEMPLATE.STD for each size can occupy too many groups on a Start of Day disc, but LocoScript 2 has the answer. Sort your paper into groups of similar length, create a new TEMPLATE.STD and set up your layout in f1=Actions (Document setup) for the shortest one. You'll have to specify the paper size of that sheet in SETTINGS.STD too. Now edit the stock layouts (f2=Layout) and make a layout for each of the other paper widths by altering the margin size, giving each a suitable name at the same time (f7). Having saved the document and the new paper settings to SETTINGS.STD on group 0 too, you will have a base layout in the shortest of the paper sizes chosen; to write on paper of another size,

having created your new document merely key f2, enter a new layout, and copy the appropriate stock layout. In this way you can hold a variety of paper sizes in just a few groups.

John Lloyd.

Box clever

Cardbox database files can consume quite large quantities of disc space, especially if you back them up like you're supposed to. In addition to the actual data you see on the screen, Cardbox maintains an index of all the words which are highlighted, and this can easily account for up to half of the space. In use, this is worthwhile, but in a backup file it's just so much wasted space

Cardbox can 'export' data, ie write it out to a file in various ways for use with other programs such as mailmergers. Such files do not have a separate index, although all indexing information is retained, and the data is held in a more compact form than when it is in a database. So, to produce a slimmed-down backup:

1. select 'Use Database' from the startup menu
 2. give a CLear command to select all the records
 3. Give a WRite command
 4. press O and enter a name for the backup file
 5. press S until the message 'Start=beginning' is displayed
 6. press M until the message 'Mode=internal' is displayed
 7. press [EXIT] then G and your disc will burst into life. Remember to back up the format file too.
- Should your precious database be killed in action, you can rebuild it from the backup as follows:
1. copy the format file onto a new disc, and the backup onto drive M for speed.

2. select 'Create database' from the startup menu.
3. give a REAd command
4. press F and enter the name of your backup file
5. press [EXIT] then G and sit back as Cardbox reads in each record and recreates the index.

This method can be expected to save 35%-50% on space over a straight copy of the database.

Chris Lilley

Famous last words

Users of LocoSpell have a quick way to search for any of a group of words simultaneously (normally of course you can only use the [FIND] command to look for one specific word at a time, not 'Find Fred or Bill or Joe'). Set up a user dictionary with all the words, names etc that you use. If you temporarily erase the names or words you want to search for from your dictionary and then spell-check, LocoSpell will stop at the next occurrence of a word in the erased set.

Unfortunately you can't get at the main system dictionary, so you can only use this method to search for words that aren't in there - proper names and so on.

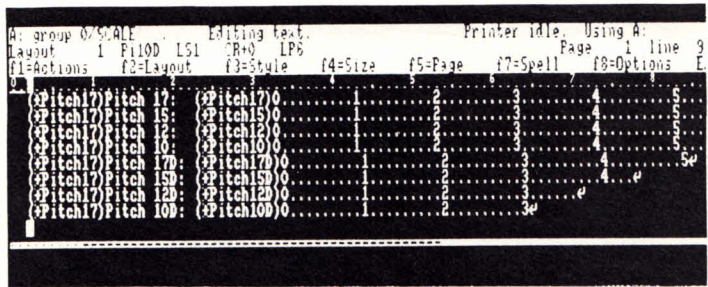
Ken Dunn

Measure for Measure

If you normally use 12 pitch text for your letters, you will know that the ruler on the screen doesn't correspond to that on the bail bar, which assumes 10 pitch text.

To avoid confusion you might like to print out a document such as the one here, and tape it to the front flap of the printer. It's an idea pinched from the "office typewriter" (remember them?).

Derek Holcroft.



Pitch 17:	0	1	2	3	4	5	6	7
Pitch 15:	0	1	2	3	4	5	6	
Pitch 12:	0	1	2	3	4			
Pitch 10:	0	1	2	3	4			
Pitch 170:	0	1	2	3				
Pitch 150:	0	1	2	3				
Pitch 120:	0	1	2					
Pitch 100:	0	1	2					

Sage advice

Using the labelling routine on the Sagesoft database is not obvious, so for anyone having difficulties here is the procedure.

Insert the CP/M disc, and at the prompt A> type

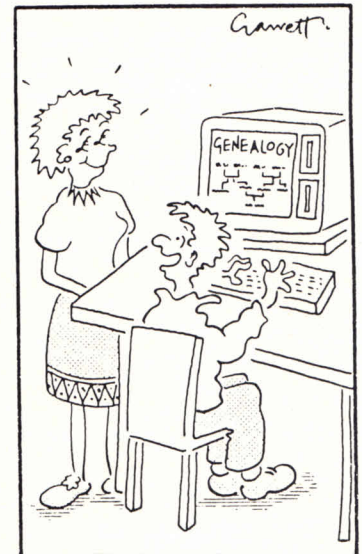
PAPER 11

Remove the disc and insert the database disc, typing DATABASE. Enter the date, type 3 when the three-line menu appears and then, when 'ready' shows, enter your

labelling instructions, eg list contacts show 2 3 4 5 on mailing.wp. Follow the onscreen prompts and when 'ready' reappears type MENU. At the three-line menu type END and remove the database disc, reinserting the UTILITIES side.

Type DATABASE, enter the date, at the four-line menu type 4 and enter the filename MAILING.WP. Then follow the screen prompts.

C.M. Moir.

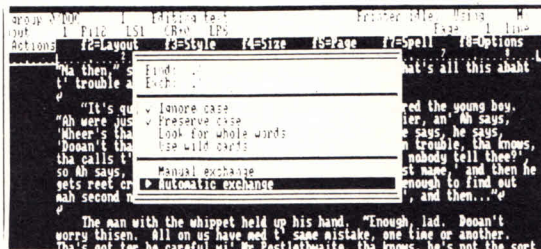


"HEY - I'VE FOUND OUT I'M RELATED TO ALAN SUGAR!"

Quote, unquote

LocoScript 2 now has proper opening and closing quotes and apostrophes, as used in properly typeset books and so on. The pair "" is [ALT]2 followed by [SHIFT][ALT]2, while " is [ALT]6 then [SHIFT][ALT]6. (They aren't hard to remember, since " is on the 2 key and ' on the 6 key anyway.)

It can be a real pain remembering to get each one as you're typing them in - you



may prefer to enter normal straight quotes and then do an Exchange after editing. Using LocoScript's [EXCH] key, replace: (space)" by

(space)" [RETURN]" by [RETURN]" [TAB]" by [TAB]" and then all remaining " to ". You then do the same for single quotes.

LocoScript 2

There have already been more versions of LocoScript 2 than Rocky films, all for the best reasons. Locomotive have been busy ironing out some of the kinks that lurk in the far recesses of the program. An earlier update (version 2.04) should have killed all known bugs (all the ones below have been fixed). Incidentally, the version available through The Amstrad User is designated

2.06 which can only mean an even cleaner version. Meanwhile, if you have one of the earlier versions you may have had a spot of bother with some of the following:

Down in the dumps

Screen dumps on version 2.00 won't work - if you try pressing [EXTRA] and [PTR] everything crashes. If you want a printout dump of the disc manager directory screen you can get it by running Loco 1.

Two into one won't go.

If you attempt to create a new document with the same name as an existing one, you will have the option of cancelling or overwriting the new file over the old one. Unfortunately, on early versions of Loco 2, when you come to save the new file, you find your only option is to cancel and lose the entire new file. Moral: don't try to overwrite, create a new one and rename it afterwards.

It's a setup

In Document Setup ('f1=Actions' in Edit Mode), the f5 (Page) option has a couple of mixups in early versions. "Final page number" in the "set pages" option should read "Total pages" (as in 'f5=Document' option on the disc manager screen) and in the "Header/footer options" menu "First page

footer enabled" and "Last page header enabled" have been transposed.

Turn of phrase

There are various idiosyncrasies with the Show Phrases option, and depending on the version you have, you may find Phrase S only appears if there's a Phrase R, and Phrase T appearing where empty or not. Phrases also have been known to unaccountably change letters between saving and restarting again. Some of these may be due to having the sequence (+Pitch 10)W(-Pitch) stored as Phrase W (!), some not. Be reassured that from 2.03 onwards Phrases should work without a hitch, even if you have (+Pitch 10)W(-Pitch) in Phrase W.

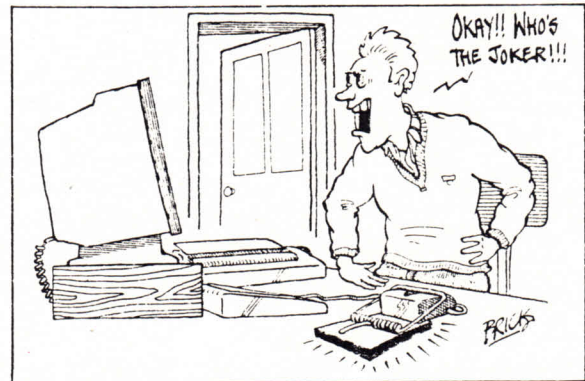
Prevention better than CR

The "Prevent widows & orphans" option (Document setup, then f5) may appear not to work on Loco 2. This isn't a bug but is the result of a new definition on 'paragraph' adopted by the new manual, concealed on page 63 in the 'Textual Movement Key' section. Loco 2 only treats paragraphs as separate if there's either a blank line, or an extra spacing produced under CR+, between them. If it seems that widows and orphans are appearing you'll have to introduce extra CR spaces or hard returns between the offending paragraphs.

Marginally faster

To insert tab codes when editing layouts in LocoScript 2 place the cursor in position and press the [+] key one to four times, depending on the type of tab you want. To clear individual tabs, place the [-] key with the cursor over the tab you want to delete.

To alter the margins, place the cursor on the left hand margin and press [+] or [-] repeatedly. The margin moves with the cursor. Then press the space bar. The cursor jumps over to the right hand margin which you can shift similarly. Surprisingly, none of this is in the manual!



LocoScript 2

The quicker, better, easier version

QUICKER USE - fast movement around documents, jump direct to a page, save and continue from last position

BETTER RESULTS - choice of printers, improved characters on the built-in printer, new characters (including Greek/Cyrillic), specialised scientific characters, use accents with any character

EASIER OPERATION - multiple printed copies, disc copying direct from LocoScript, new user guide with glossary and quick reference, improved FIND and EXCHANGE

COMPATIBILITY - familiar feel of LocoScript menus, use existing LocoScript documents.

\$72.95
(incl. postage)

The Amstrad User
1/245 Springvale Road, Glen Waverley,
Vic 3150. Tel: (03) 233 9661

Bankcard, Mastercard or Visa accepted

All Tip-Offs, no matter how insignificant or unbelievably simple to you, may well solve a problem for another user. The Tip-Offs section has proved popular up to now and thrives on your input. Please send your revelations to:

The Amstrad User
1/245 Springvale Road
Glen Waverley, Vic 3150

NOW!!

Pick Pocket

A cheap version of Prottext - Alex Rae, who has processed a few words in his time, has a look.

PCW Prottext appeared on the market in January as the word processor for the person who wants everything. It had all the sophisticated extras you could think of built in - a mail merger, spell checker and a host of fancy little features that made for faster word processing.

Now Arnor have decided to put out a cut-down version, minus the frills. Has the fat just been trimmed off, or has the baby been thrown out with the bathwater? Can we think of any more metaphors to mix? It seems like a good time to take another look at the pros and cons of the Prottext philosophy.

The first thing to say is that if you are serious about word processing you should, at least, have a look at Pocket Prottext. If you only knock out an occasional letter then it is probably not worth while thinking about it, but if you do write a lot and are prepared to make the effort to get to know Pocket Prottext it should repay the investment.

But remember Prottext is an investment in time as well as money. The more time you spend learning the system the more time you can save. And the savings in time can be considerable - for there is no doubt that it is the fastest word-processor available for the PCW in virtually every department.

Don't be fooled into thinking that because it is missing a couple of features (see the box) pocket prottext has lost any sophistication. It is the same fast, powerful program with many features that have proved popular with PCW Prottext users. But these have to be learnt.

You don't have the homely LocoScript menu system to fall back on. In Prottext you learn the codes and use them. With a little regular use they become second nature but it does require a period with the help prompts showing on the screen or the manual open beside you before you feel really confident.

Spoilt for choice

Another complication comes from the fact of Arnor being almost too helpful. LocoScript users, for instance, are delighted to find that many of the keys like [FIND], [COPY], [PASTE] etc have similar uses in Prottext. But if you are more used to Word Star-type commands and your finger constantly strays to the [ALT] key you will find many similarities here too.

This does mean that there is a profusion of choices that can be confusing to the beginner. At the end of the day you find that whether you type DIR (a la CP/M), press [f1] (LocoScript) or even type CAT (to make Amstrad CPC owners feel at home) you will get a directory of files. You just have to decide which one suits you best and then stick to it.

Most non-Prottext users will probably think that the speed of any package depends on the actual speed that you can move the cursor round the screen and there is no doubt that in this area

Top of the format

For historical reasons Prottext allows you to format discs in Amstrad CPC format. This may not sound useful, but in fact PCWs can read and write to them quite happily, and you get an extra 5k of space per disc. The only thing you cannot do with a CPCs format is use it for a Start of Day disc.

Prottext is outstanding. At times it can move so fast that it is difficult to control - for instance if you let your finger dally on the 'move a word to the right' key you can find yourself several paragraphs down the page. The lightning speed with which you can move from one page to another will also be a pleasant surprise to someone who has grown up with LocoScript scrolling.

And yet you probably save as much time from the little touches that Prottext gives you. There is a full variety of 'Delete' commands (delete line or block, delete to end of line, delete from beginning of line) allowing you to cut as much or as little as you want and just as important it often allows you to Undelete when you have got too enthusiastic.

But what about the simple occasion when you get two letters out of order? Instead of tortuously deleting one and replacing it in the right place you press [ALT]-A and the two are swapped for you. It is a trick that you can become so unconsciously reliant on after typing a page of 'hte' and 'nad' that you will start trying to use it in other programs and cause total havoc, usually ending up with a line of Greek characters!

Just as simple is the ability to change a lower case letter to upper case and vice versa in one simple keypress. Super-accurate typists might disdain such touches but finger weary journalists find them a god-send. And brain weary journalists have been known to weep with gratitude at the word count which is so simple and quick to use that you can find out in seconds whether you have written enough words to fill the review.

"Take two letters..."

It might sound a bit vague to say that you can edit two files at once, but when

you discover that you can switch from one document to another at the press of a key and move text from one to another in seconds you soon begin to think of uses for it - for example a jotter and doodling pad for your brainwaves.

There are time saving features beyond the obvious area of getting words into files. The file handling facilities are well organised and slick; Prottext doesn't have LocoScript's 'groups' idea to as large an extent, but you can partition files into 16 user areas which gives you the same effect. Prottext also has simple and effective Copy and Erase facilities that you soon find yourself forgetting about PIP and organising all your discs with Prottext. You can format discs in Prottext too.

Anything wrong?

Sounds wonderful. So what are the disadvantages? Well for a start Prottext doesn't mollycoddle you the way LocoScript does. You can learn LocoScript by logically working your way through the menus. That doesn't apply with Prottext and you really have to open the manual (gasp!).

Admittedly there have been some improvements to the manual since Prottext was first unleashed, most notably the addition of an invaluable index, but it is still not really written with the beginner in mind. Computer buffs may be quite at home with the concept of the 'ambiguous filename' often mentioned but the beginner could be confused by this ambiguous wording (in case you're wondering it just means a filename using wildcards, like *.BAK).

There is no equivalent of LocoScript's templates, although you can simulate them with a bit of trickery. You can make up a number of different files which hold your standard Prottext commands to set up the margins and page dimensions for your paper, and

Moving fast

The delete and undelete commands give you a very snappy way of moving or duplicating lines of text. To move a line, delete it then move the cursor to the destination, and use the undelete command. You could press undelete ten more times and get ten more copies of the line.

What's missing?

Just in case you've read reviews of the full Prottext and you want to check whether a specific feature is in the Pocket version, here is what Pocket Prottext doesn't have (owners of the full Prottext can sit back and feel smug here):

The mail merge and spell checker have been omitted. You can buy Prospell which is of course tailor made for Prottext. Another major absence is the calculator - you might not think of buying a word processor to get a calculator but it is surprising how often you tot up little sums and transfer the results to a letter if you can.

Box Mode, the fancy feature that allows you to print out in two columns, is missing, as is the Typewriter feature which corresponds to

the Direct Printing of LocoScript (so handy for envelopes).

Background Printing has gone, which allowed you to carry on editing while a long document was printing. In practice, since the printer has a buffer which can easily hold normal sized documents there seems to be little time wasted waiting for the document to print.

It does appear that you can use the EXEC files feature - files which can be read as though they were keyboard inputs like SUBMIT files in CP/M - although this does not appear to be documented in the manual. Should you discover that after buying Pocket Prottext you can't live without these fancy features you can upgrade to full PCW Prottext.

merge them with your text to control the printing format - admittedly not too painful a solution.

But the problems are more apparent when it comes to actually printing something out. It is not difficult to get something printed out in draft form, but if you are the sort of person who likes to use exotic character spacings and margin styles it can take a few tries and a few yards of wasted paper. To make it worse it is not obvious at first how to abort printing when things go wrong - you can do it with a simple [PTR] reset but this doesn't seem to be mentioned in the manual.

There is a handy command PS which allows you to preview on the screen how the pages will look when they will be printed but even this doesn't pick up the quirks of the enlarged text embedded print command which can cause havoc. Trying to centre a line of enlarged text causes all sorts of strange effects, usually ending up with the printed result spread over several lines.

It is not that you can't do most of the fancy effects with headers and footers but it does seem a bit less obvious than LocoScript. There are also more serious problems like proportional printing causing total confusion which justifies

the text to both margins. None of these problems are fatal but they can be annoying.

Verdict

For anyone involved in bulk text processing, Pocket Prottext is just as powerful as the full Prottext and at a very attractive price. The missing spell checker and mail merger are nice in the full Prottext, but most people will be glad of the option of saving some money. It's a very welcome and well-pitched addition to the PCW word processing market.

Pocket Prottext is well worth the investment although it does take time to learn to use to its full capacity. It is also true that most of the bugs that plagued PCW Prottext in its early days are well and truly eradicated. If you need to use complex text printing commands, you may find Prottext a little frustrating at times.

Pocket Prottext retails at \$139.99. See your local dealer or ring IQ Smart Business on (03) 222 2288.

Next month we begin a short series on the ins and outs of the full version of Prottext.

Type-ins

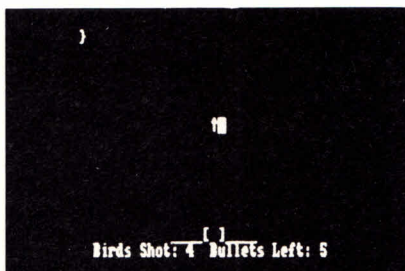
Four more short programs to amaze and debug!

DUCK - SHOOT by John Warland

Perhaps not a high quality graphics arcade game but this simple zap-em-up game courtesy of a young John Warland is still fun. The game involves you in a duck shoot. The ducks (well they're really just)s fly across the screen at varying heights. You fire an arrow (↑) at it by pressing the Space Bar. To get the ↓ on screen you have to use [EXTRA] and [U].

You know when you have hit the poor innocent bird because the screen flashes. The program also keeps track of the number of arrows you have fired and the number of direct hits.

It is not as easy as it looks and if you want to give yourself more arrows each game change the variable 'm' in line 20.



```

1 'Duck Shoot
2 'John Warland
3 'The Amstrad User Jan '88
10 DEF FNat$(x,y)=CHR$(27)+"Y"+CHR$(x+31)+CHR$(y+3
1)
20 end$="Overall Score..... Birds killed=":ba
se$="____[↑]____":m=20:yy=44
30 PRINT CHR$(27)+"E"+CHR$(27)+"H"
40 PRINT FNat$(29,29);"Birds shot:";d;" Bullets Le
ft:";m;" "
50 PRINT FNat$(28,39);base$;:xx=INT(RND*27):x=xx
60 FOR y=0 TO 89:PRINT FNat$(xx,y);" )":k$=INKEY$
70 IF k$=" " AND x=xx THEN x=28:m=m-1:PRINT FNat$(
27,57);m
80 IF m=-1 THEN PRINT FNat$(29,27);end$:d:END
90 IF x=xx THEN GOTO 130 ELSE PRINT FNat$(x,yy);"
";:x=x-1
100 PRINT FNat$(x,yy);"~"
110 IF x>xx THEN GOTO 130 ELSE PRINT FNat$(x,yy);"
";
120 IF (y=43 OR y=42) THEN OUT 247,240:PRINT CHR$(
7):d=d+1:GOTO 30
130 NEXT:PRINT FNat$(xx,y);" ";:IF x<2x THEN GOTO
60 ELSE GOTO 50

```

PAGE DISPLAY by Jim Wallman

If you aren't using your PCW 24 hours a day you may well want to fill in its idle hours by running one of those informative continuous display things they use in shops. This program allows you to display page after page of informative text at nice regular intervals so you have time to read what it says. You could put it in your window advertising back copies of The Amstrad User at inflated prices.

All you have to do is write the information in LocoScript, or any other word processor, saved in ASCII form. You decide where the page breaks come by putting a @ sign at the appropriate spot. Then save the document (using the page image option of the 'Create an ASCII file' in LocoScript).

Run the program and enter the filename when prompted. It will then ask you the period of time between pages. This will obviously depend on the amount of text you have on each page. It will then run until the end of time or until you stop it whichever comes first.

```

1 'Page Display
2 'Jim Wallman
3 'The Amstrad User Jan '88
10 esc$=CHR$(27) : cls$=esc$+"E"+esc$+"H"
20 PRINT cls$ : PRINT : FILES : PRINT
30 INPUT "Type in the name of the text file to dis
play >";t$
40 INPUT "How many seconds pause between pages";se
cs
50 OPEN "R",1,t$,1
60 FIELD 1,1 AS a$
70 PRINT cls$
80 n=n+1 : GET 1,n
90 IF a$="@" THEN GOSUB 140:GOTO 110
100 PRINT a$;
110 IF NOT EOF(1) THEN 80
120 GOSUB 140
130 n=0 : GOTO 80
140 FOR p=1 TO secs*1111 : NEXT
150 PRINT cls$; : RETURN

```

KEY FINDER by Ian Berry

One thing non-typists find about buying a computer is that even the most commonly used keys can disappear from the keyboard as soon as you are looking for them. Two fingers are more than enough to become a computer ace as long as those two fingers know where they are going.

These simple 13 lines can help concentrate the mind on finding the right key wonderfully. What the program does is print out a random letter repeatedly at a very high speed until you press the same letter - the faster your reactions, the fewer the number of letters on the screen.

One advantage is that it includes all the vague keys like '\$' and '#' that only computer buffs are interested in. The degree

of difficulty merely lengthens the time between the printings of the letter and so choosing 200 can make life quite comfortable. Choosing 1 usually means you are struggling to find the right letter by the time it has printed a whole line.

Perhaps not a fully fledged touch-typing tutor but more fun.

```
1 'keyfind
2 'Ian Berry
3 'The Amstrad User Jan '88
10 PRINT "After you have got a character right, enter 'c' for another",
20 PRINT "'d' to change the degree of difficulty,
```

```
or any other key to quit"
30 INPUT "Degree of difficulty? (1=hardest)",d
40 RANDOMIZE(PEEK(64504!))
50 a%=INT(127*RND)
60 IF a%<33 GOTO 40
70 PRINT CHR$(a%);
80 FOR i = 1 TO (d*10):NEXT i
90 IF INKEY$=CHR$(a%) GOTO 100 ELSE GOTO 70
100 INPUT "OK - what next";q$
110 IF q$="c" GOTO 50
120 IF q$="d" GOTO 30
130 END
```

THE BIG TIME by John Egging

Spend a few minutes to create the ultimate time-piece - the PCW alarm clock.

It may seem a little bit of an extravagance but it is possible to turn your PCW into an impressive digital alarm clock in BASIC. Mr Egging claims that the display can be read from 30 feet away but our office is not big enough to test this claim.

There are one or two little problems, like you can't use your PCW for anything else while it is being an alarm clock, a PCW doesn't work at its best strapped to your wrist and it is unlikely that the PCW chirrup would wake anyone up. But it does allow you to make use of your PCW 24 hours a day.

A word of warning. It is not the easiest program to type in. You may find lines 70 to 160 a bit of a problem but it is rather important to get it right. If not you will find the 'digital display' a little difficult to read as it is this combination of asterisks that makes up the numbers. You are given a bit of help from the REM line 60 which allows you to check the position of each star.

The other problem is to get the clock to show the correct time. Unless you happen to have a real time clock stuck in the back of your PCW, what will be shown on screen is how long it has been since you switched on the machine - not the most useful measurement of time.

So to use it properly you will have to look out your CP/M disc with DATE.COM on it (side three). While in CP/M (before you load BASIC) just type DATE it will tell you how

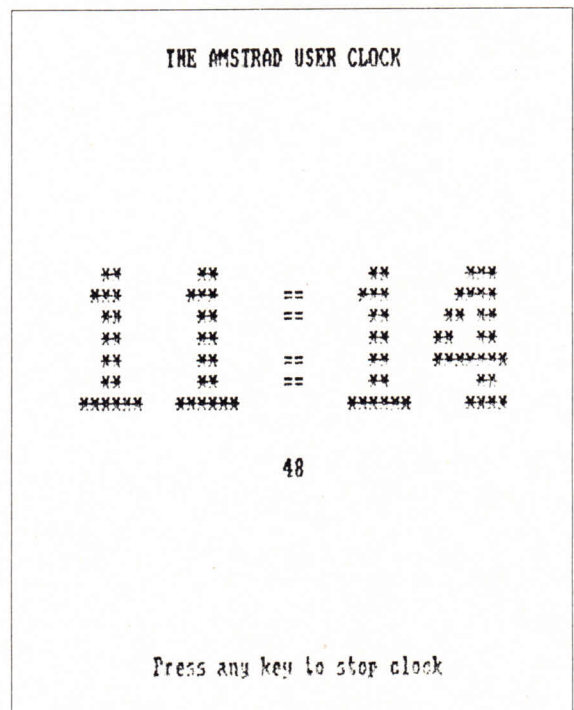
long it has been since midnight on the 15th December 1982 which the PCW seems convinced is the beginning of time.

To put the correct time in you write DATE and then the date and time. Having strange American ideas it likes the date with the month first in the form MM/DD/YY divided by a slash. The time is written HH:MM:SS divided by colons. Press [RETURN] and the machine asks you to press any key at that particular instant of time you have specified. So for 2.00 PM on the 1st of October 1987 type DATE 09/01/87 14:00:00 [RETURN]. (Remember it will use the 24 hour clock.)

Then when you run the program in BASIC it will automatically come up with the correct time. You can use it either as a clock (just press [RETURN]) or as an alarm (set it by putting the time in the form HHMMSS). Of course it only works as an alarm as long as you leave it on and don't leave the program.

Then just place your PCW on your mantelpiece or beside your bed and you have a thing of beauty which is practical at the same time.

We've spread the listing over the whole of the next page to help you line up the asterisks. Once debugged and running, the screen display should look something like the one below.



```
CP/M Plus Amstrad Consumer Electronics plc
v 1.4, 61K TPA, 2 disc drives, 368K drive M:

A>date
Wed 12/15/82 00:00:16
A>date 11/13/87 11:13:20

Strike key to set time

A>
```

▲ The above entry has set the date to 13th November 1987 and the time to 11.13 and 20 seconds.

```

1 'Big Time
2 'John Egging
3 'The Amstrad User Jan '88
10 DEF FNat$(x,y,a$)=CHR$(27)+"Y"+CHR$(31+y)+CHR$(31+x)+a$
20 skip$="": cls$=CHR$(27)+"E"+CHR$(27)+"H": PRINT cls$;
30 INPUT "Enter call time in form HHMMSS, or press return ";alarm$
40 PRINT cls$;CHR$(27);"f";FNat$(32,34,"Press any key to stop clock")
50 PRINT FNat$(33,2,"THE AMSTRAD USER CLOCK")
60 REM Check "1234567890123456789012345678901234567890123456"
70 num$(0) = "   ***   ** ** **   ** **   ** **   ** **   ** "
80 num$(1) = "   **   ***   **   **   **   **   **   ***** "
90 num$(2) = "   ****   ** **   **   ****   **   ** **   ***** "
100 num$(3) = "   ****   ** **   **   ****   **   ** **   ***** "
110 num$(4) = "   ***   ****   ** **   **   **   ****   **   **** "
120 num$(5) = "   *****   **   *   **   *****   **   **   **   **** "
130 num$(6) = "   ****   **   **   **   *****   **   **   **   **** "
140 num$(7) = "   *****   **   **   **   **   **   **   **   ** "
150 num$(8) = "   ****   **   **   **   **   ****   **   **   **   **** "
160 num$(9) = "   ****   **   **   **   **   *****   **   **   **   **** "
170 colon$ = "           ==           ==           ==           ==           "
180 :
190 WHILE INKEY$ = "" : time$ = ""
200 FOR i = 0 TO 2
210 t(i) = PEEK(64502! + i) : t(i)=1000+t(i) - INT(t(i)/16)*6
220 time$ = time$ + RIGHT$(STR$(t(i)),2)
230 NEXT
240 IF alarm$ = time$ THEN GOSUB 370
250 IF skip$ = LBFT$(time$,4) THEN GOTO 350
260 FOR L = 1 TO 7
270 line$(L) = "" : segment = 1 + (L - 1)*8
280 FOR D = 1 TO 4
290 digit = VAL(MID$(time$,D,1))
300 IF D = 2 THEN gap$ = MID$(colon$,segment,8) ELSE gap$ = " "
310 line$(L) = line$(L) + MID$(num$(digit),segment,8) + gap$
320 PRINT FNat$(24,11+L,line$(L))
330 NEXT
340 NEXT
350 skip$=LEFT$(time$,4) : PRINT FNat$(44,21,RIGHT$(time$,2))
360 WEND : PRINT cls$;CHR$(27);"e" : END
370 PRINT CHR$(27);"L" ; FNat$(32,31,"Press any key to stop alarm") ;
380 OUT 248,11 : WHILE INKEY$ = "" : WEND: OUT 248,12
390 PRINT FNat$(32,34,"Press any key to stop clock") ; : RETURN

```

How to type a listing in

The first thing is to load Mallard BASIC. Turn on your PCW, or reset it by pressing [SHIFT][EXTRA][EXIT], and put a copy of the CP/M master disc into drive A.

When the A> prompt appears, type BASIC and press [RETURN]. After a few seconds a message about Mallard BASIC will appear on the screen, ending with the prompt 'OK'.

Type in each line of the listing very carefully, starting with the line number and finishing with [RETURN]. Be careful not to mix up capital I with the number 1, capital O with number 0 and colons with semi-colons. During a long listing, it's important to save your work every 15 minutes or so, and you should always save any

listing before printing it. To do this, find a work disc with space on it, put it in the drive and type SAVE"PROGRAM"[RETURN]. Of course, you can choose any name of up to eight characters instead of 'PROGRAM'.

When you've finished, type LIST[RETURN] and the whole program will appear on the screen. Check it, and if any lines are wrong, correct them with the line editor. For example, if there's a mistake in line 100, type EDIT 100[RETURN]. Use the cursor and delete keys to correct the line and press [RETURN] when you've finished. You can delete a whole line by typing its number and pressing [RETURN].

To run the program, simply type RUN[RETURN] and yes, the program goes wrong.

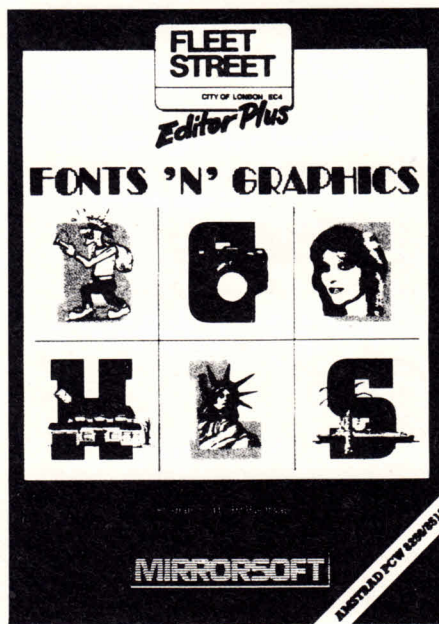
It's more than likely, no matter how carefully you typed in the listing, that it won't work properly the first time you run it. You may get an error message such as 'Syntax error in 100'. List the program out and check the screen against the original in the magazine.

Don't forget that the line number in the error message isn't necessarily where the error is - it's simply the point at which the PCW gets stuck. You may have to look elsewhere for the error.

When you find an error, either retype the complete line or use the line editor (described earlier) to correct it. Run the program again, and hopefully this time it will work. If it doesn't you have to go through the correction process again. Once the program is running correctly, save it again.

Character Study

Have you bought Mirrorsoft's Fleet Street Editor desktop publishing program? Now their Font Editor could revolutionise the look of your text.



This is an add-on for users of Fleet Street Editor Plus who feel that the quality and variety of their text is lacking something. Users of FSE Plus will not need telling that the design of individual letters of the alphabet is called the 'font', and FSE comes with five different fonts to start with.

The Font Editor provides you with five extra fonts and eighteen pages of graphics. Perhaps the most interesting feature is the facility to edit the fonts and modify the shapes to your taste, or even design your own completely individual typeface. Most of the package though is simply a bunch of accessories to the desk top publisher - even the supplied instruction manual is a set of loose punched pages to be inserted into your Fleet Street Editor manual.

The new fonts (Bold, Compact, Data, Freehand and Skeleton) have to be copied onto your original FSE program disc in place of other fonts if you wish

to use them. As with any DTP font, the headlines can be very jagged at large sizes and the fancier typefaces can look crude at small sizes, due to the restrictions of the 16-dot format.

Heading for success?

As for the extra graphics, most of the new selection look quite useful. They don't often print out on paper as well as they look in the manual though, and you may well be disappointed by the quality of the transfer to your publication. The collection of headings (Stop Press, Latest, Books, Notice etc) would be useful in any newsletter, and a few of the snip-art pictures such as the camera, wedding bells, postbox and fancy borders would also find suitable uses. Some of the more detailed pictures, such as a cartoon burglar or the upper half of a female model in a swimsuit, have a more dubious relevance.

The program can, however, be run *per se*, as a device to edit the shape of the letters in any of your FSE fonts, even to the extent of creating your own typeface. The main reason you'd want to alter the shapes of the letters might be for the headlines, which, being straight blow-ups of the basic letter pattern, look very awkward and jagged - you could devise a smoothed-off-version of one of the typefaces specially for this use.

On starting up the program you are faced with a blank screen and the options of loading, saving or editing a font. After loading the required font and selecting 'edit', a grid with all the characters in that font show up. You can

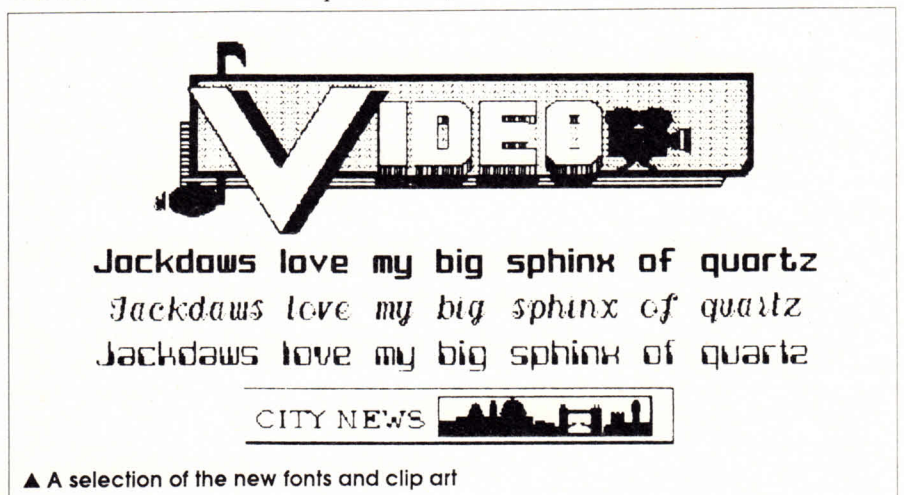
move the cursor over the letter you want to modify and paste it into a 16x16 grid at the top left of the screen; once here you can adjust the make-up of the letter pixel by pixel, totally redrawing it to save as a new font if you like. You can edit in three sizes, 18pt printer, 12pt printer, and 12pt screen, so those pedants among us who insist that the font designers have got the serifs all wrong have their chance to put it all right. You can also screen dump a test piece of text to gauge your new set.

Unsweet sixteen

Designing your own characters is fun but trickier than you'd think. The main problem is that sixteen dots simply doesn't give you much scope for designing anything at all, never mind a font which mimics the graceful curves of your own handwriting.

To be honest you're not getting a lot for the price. The graphics are nice but hardly indispensable, the extra fonts are unlikely to change your life and only the most dedicated hobbyists would be prepared to spend hours de-serifing the freehand font or constructing a set of runes to curse magazine subscriptions departments with. But, if you've had the patience to get Fleet Street Editor up and working, and your desk top publications are pushing the graphics and fonts library to their limits, you may well think that this little addition to your system is worthwhile.

Fonts 'n' Graphics will cost you \$69.99. See you local dealer for more details or ring IQ Smart Business on (03) 222 2288.



▲ A selection of the new fonts and clip art

Planting Trees

John Connell reveals some more tricks of the trade for Logo fans

Last month the Logo article looked at, amongst other things, the strange phenomenon of 'Recursion'. The idea of a procedure being able to call itself might not be all that difficult to cope with but, in a full implementation of recursion such as Dr LOGO's, things get just a little more complicated.

Probably the best way to understand something like recursion in Logo is to see it in action. To give you a flavour of one of the deeper aspects of recursion, why not try out these two short procedures - 'coming.down' and 'guess.what?' (dots and question marks can be used just like any other character in Logo names):

```
to coming.down :number
  make :number (:number - 10)
  pr :number
  if :number > 0 [coming.down :number]
end
```

```
to guess.what? :number
  make "number (:number - 10)
  if :number > 0 [guess.what? :number]
  pr :number
end
```

Type coming.down 100 and you will see the numbers 90 80 70 60 down to 0 printed out on the screen. Nothing strange about this. The procedure quite clearly decreases the input number by 10 each time it is called.

Now type guess.what? 100 and, lo and behold, you are presented with 0 10 20 30...90, despite the fact that the procedure quite clearly again decreases the number by ten with each call. So what is going on?

The crucial difference is in the switching of the third and fourth lines. In 'coming.down', the number is printed on-screen before the recursive call, while in 'guess.what?' the printing is done after the recursive call. It might help you to understand what is happening if you think of 'recursion' not so much as a circular process, as in a simple program loop, but more as a stacking or coiling process.

If you work your way through the instructions in guess.what? 100 you will see that the recursive call is made 10

times before anything is printed on-screen, which is why this procedure pauses for a second before you see anything happen.

Once the tenth call has been made (ie. once :number is equal to zero) the procedure has to unwind itself through all the calls it has already made. In other words, once the 'recursion' has ended the procedure, in a sense, goes into reverse and unwinds itself back to the beginning again.

In a procedure like 'coming.down', no instructions are present during this unwinding process, so it is invisible to us. But in 'guess.what?', the pr :number instruction is made during the unwinding process, so a value for :number is printed out for each of the 10 recursive calls that were made.

When I'm coiling you...

But what use is this process of coiling and uncoiling? If you look at the diagram you will see what is called a Binary Tree. If you try to understand the principles involved in programming Logo to draw a binary tree it will give you some appreciation of a structure which is of general importance to computer programming.

The binary tree has a structure which lends itself naturally to some form of recursion. You can see that it is composed of a Y-shaped tree. Each node (end-point) has two smaller subtrees, which themselves have yet-smaller sub-sub-trees... and so on. But a little bit more thought than this is required before you begin to build your program.

The procedure will have to deal with the fact that the tree has a right side and a left side, and each sub-tree also has a right and a left side. The final procedure will also have to have some way of stopping itself, either when a specified number of branchings have taken place or perhaps when the branches fall below a specified length. This stopping condition will also allow the unwinding process to occur so that, if you draw the left-hand branchings first you can go back to draw the right-hand branchings too.

It will also allow the turtle to end up where it started from and with the same heading - any procedure which does this is known as 'state-transparent' or 'state-invariant'.

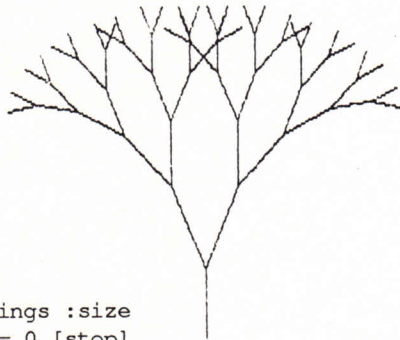
When is a stop not a stop

Type in Listing One. There are two ways of stopping this kind of procedure so that it doesn't carry on calling itself indefinitely. The procedure 'tree' stops after a specified number of branchings, but an alternative would be to drop the :branchings variable and change the first line to :if :size < 5 [stop]. This will cause the procedure to begin to unwind

each time a branch is drawn which is shorter than five units (you can, of course, replace 5 with a figure of your own choice).

However, the use of `:branchings` makes the procedure a bit more predictable in its outcome than `:size`. You should note too that the unwinding process within 'tree' is a little more complicated than in 'guess.what?' in that it occurs not just once but each time the if condition is met.

Listing One



```
to tree :branchings :size
  if :branchings = 0 [stop]
  fd :size lt 20
  tree (:branchings - 1) (:size * 0.75)
  rt 40
  tree (:branchings - 1) (:size * 0.75)
  lt 20 bk :size
end
```

If you type `tree` the procedure first sets up the 'Stopping Condition'. Whenever `:branchings` drops to zero, `stop` passes control back to the previous time the procedure was called. This is an important point to appreciate - `stop` does not halt a procedure altogether. It merely passes control back to the procedure that called it. Only if there is no calling procedure, the program is halted. If a procedure has called itself during recursion `stop` passes control back to itself.

If you try 'tree' without the stopping condition the turtle draws a line of 80 units and turns 20 degrees to the left. The first recursive call then draws successive lines of 60, 45 and so on (three quarters of the previous line-length), each followed by a turn to the left of 20 degrees. With each turn `:branchings` is decreased by one, until, when it reaches zero after five branchings, a very complicated unwinding process begins.

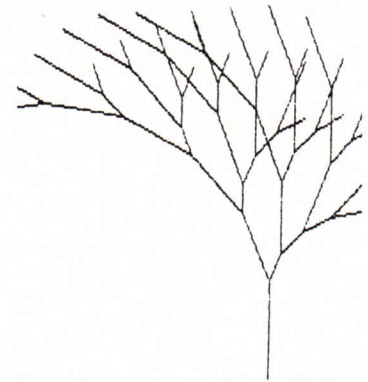
With each step, the turtle moves back down to the previous node, turns right 40 degrees, and draws the next set of right-hand branchings. Eventually, it reaches the stage where it draws the whole of the right side of the tree.

When you do this don't hide the turtle, since the visible turtle will slow down the drawing process and give you a clearer idea of what is happening. Once you have the idea, however, using `ht` will speed up the drawing of the tree by a considerable margin.

More interesting trees

Listing Two is a modified version of 'tree' which is intended to give a slightly more interesting and realistic drawing. You run it by typing in `willow.tree` without any inputs.

Listing Two



```
to draw.tree :branchings :angle :size
  if :branchings = 0 [stop]
  lt :angle
  fd (:size * 2.5)
  draw.tree (:branchings - 1) :angle :size
  bk (:size * 2.5)
  rt (2 * :angle)
  fd :size
  draw.tree (:branchings - 1) :angle :size
  bk :size
  lt :angle
end
```

```
to weeping.willow
  fc cs
  pu bk 100 pd
  draw.tree 5 20 30
  bk 100 ss
end
```

In 'weeping.willow' the angle of turning is specified by you when you start the procedure (some angles give fairly weird results). But more importantly, a bias to the left is provided by the fact that each of the left-hand branchings is two-and-a-half times the length of its corresponding right-hand branching. If you prefer your weeping willow to have a bias to the right (no accounting for taste), then adjust the procedure accordingly. Note that, while the `DRAW.TREE` procedure is state-transparent (the cursor ending up where it started), the program as a whole is not.

The binary tree is a classic example from a field known as Fractal Geometry, which, in simple terms, deals with recursively-defined shapes. To finish off this month's piece, you might like to try out the procedure contained in Listing Three. This allows you to draw another Fractal shape which here has been called 'snowflake'.

By increasing the value of the variable `:level` in 'snowflake', more and more complicated snowflake-outlines are drawn. In fact, `snowflake 0` simply draws an equilateral triangle. Thereafter the number of points on each successive snowflake equals the number of points plus the number of sides of the previous level's shape. For example the triangle has three

points and three sides so the next level is a six point star.

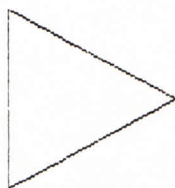
With the knowledge gained from 'tree', you can see how 'snowflake' works too. Begin by thinking of the equilateral triangle (since that is what the procedure starts with too) and then imagine each side of the triangle being divided into three equal sections with another equilateral triangle built into the middle section. With each succeeding level, the same thing happens. Each side is split into three with a triangle in the middle section.

You will find when you try the procedure that it becomes impractical to give :level anything other than a fairly low value, since the number of points in the snowflake increases sharply.

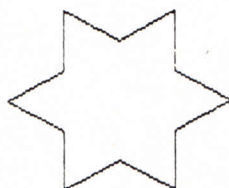
Listing Three

```
to snowflake :length :level
  fs cs
  repeat 3 [points :length :level rt 120]
end
```

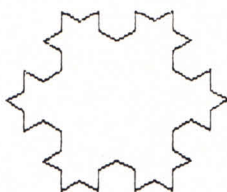
```
to points :length :level
  if :level = 0 [fd :length stop]
  points (:length/3) (:level - 1)
  lt 60
  points (:length/3) (:level - 1)
  rt 120
  points (:length/3) (:level - 1)
  lt 60
  points (:length/3) (:level - 1)
end
```



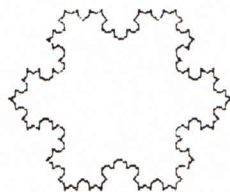
Snowflake - level 0



Snowflake - level 1



Snowflake - level 2



Snowflake - level 3

Killing the bugs

Dr. Logo provides you with two powerful tools to help you in the process of 'debugging' your Logo programs. Since Logo is a highly interactive language, in the sense that you 'converse' with the computer through Logo, it is crucial to be able to follow fairly precisely what you have asked the computer to do in your defined procedures.

First of all, trace (which takes no inputs) allows you to follow the changing values of the variables within a program, and also to follow the procedure calling sequence of the program. It numbers the procedure level you are at, so with a recursive procedure you can see how deeply you are coiled.

'trace' does not halt the execution of the program. This means that, with a long procedure, the information supplied by 'trace' will flash by too quickly for you to take it all in. The best way around this is simply to use the primitive copyon which will echo all screen text to the printer. With a hard copy of 'trace's' information about a procedure you can study it at your leisure. You can stop the printer echoing all the screen data with copyoff.

To end the 'trace' function, simply type notrace and things will return to normal.

watch (which also takes no input) simply and painstakingly works step-by-step through every instruction in a procedure and its sub-procedures. Like 'trace', it numbers the procedure-levels. It follows the level number with a copy of the whole of the first instruction-line in the procedure and waits for you to press [RETURN]. When you do this it proceeds to break each instruction-line down to each of its individual instructions. Again you have to press [RETURN] to take each step. Once it is finished with one instruction-line, it moves on to the next, and so on.

While this is happening, the effects of the procedure being evaluated are also being executed step-by-step so that you can see in minute detail what the procedure is doing. This allows you to find mistakes or simply to note where improvements can be made to the program. The primitive nowatch ends the effects of watch.

You can create a powerful debugging tool by combining the effects of 'trace' and 'watch'. Simply type each followed by [RETURN]. Incidentally, 'watch', unlike 'trace', also numbers the levels in a recursive procedure.

Next month, this LOGO series moves on from drawing pretty shapes to mastering some of the basic programming steps. Don't miss it!

CPC464, 664 and 6128 Software

GAMES DISCS for CPCs

Title	Usual \$	Our \$
Activator	49.50	39.95
Adventure 4-Pack	** -	32.95
American Football	** 36.95	16.95
Brian Bloodaxe	44.95	22.95
BMX Simulator	** 36.95	16.95
Contraption	49.95	29.95
Druid	49.95	39.95
Family Fun Pack 1	-	29.95
Future Knight	49.95	39.95
Glass	49.95	29.95
Handball Maradonna	** 36.95	16.95
Hive	49.99	29.95
Necris Dome	** 36.95	16.95
Nexus	49.95	29.95
Nick Faldo Open	** 36.95	16.95
Nodes of Yesod	57.50	29.95
Saboteur	57.50	29.95
Starglider (6128 only)	** -	59.99
<i>Special Pack - see column 3</i>		
Super Pipeline II	49.95	29.95
Tomahawk	-	49.95
Trailblazers	49.95	39.95
Vampire	** 36.95	16.95

DISC DOUBLES

Two games on one disc!

Big Top/ Killaped	** -	20.95
Cerberus/ Guzzler	** -	20.95
Magic Clock/ Magic Maths	** -	20.95
Riding Rapids/ Nuclear	** -	20.95
Space Ace/ Trollie Wally	** -	20.95

Non-GAMES DISCS for CPCs

GENNY - Genealogical Database (Disc only)	-	119.00
Junior Wordpro (Child's wordprocessor)	-	34.95
Mini Office II (Yes, it's cheaper!)	<< 79.95	59.00
Rampak - nearly fifty machine code subroutines	-	44.95
The Knife - disc sector editor	** 50.50	39.95
The Torch - CP/M 2.2 or CP/M plus tutorial	** 50.50	39.95
Catalogue - disc file organiser	** 50.50	39.95
Knife, Torch & Catalogue Pack	** 151.50	99.99

GAMES TAPES for CPCs

Title	Usual \$	Our \$
Action Pack	** 34.95	11.00
Activator	37.50	29.95
Adventure 4-Pack	** -	27.95
Aftershock	39.95	29.95
Amtix Accolades	** 34.95	11.00
The Animator	54.99	32.95
Avenger	** 34.95	11.00
Bomb Scare	9.98	8.95
Booty	9.98	8.95
Core	39.95	19.95
Dr. Who - Terror in Mines	34.95	29.95
Druid	29.95	25.95
Dynamite Dan II	<< 39.95	21.00
Eagles Nest	** 34.95	11.00
Family Fun Pack 1	-	19.95
Future Knight	<< 34.95	15.00
Grand Prix Simulator	** 11.98	10.95
Heartland	** 34.95	11.00
Hyperbowl	11.98	10.95
Infodroid	** 34.95	11.00
Inheritance	** 34.95	11.00
Jewels of Darkness	59.95	29.95
Kinetic	** 34.95	21.00
Krakout	** 34.95	21.00
Legions of Death	** 34.95	21.00
Mandradore	57.50	11.00
Max Headroom	39.95	19.95
Necris Dome	9.98	8.95
Nether Earth	** 34.95	11.00
One	** 34.95	11.00
Powerplay	** 34.95	11.00
President	** 34.95	11.00
Sentinel	<< 34.95	19.95
Shrinking Man	** 34.95	11.00
Sport of Kings	11.98	10.95
Star Watcher	49.95	22.95
Street Machine	** 34.95	11.00
Storm	9.98	8.95
Terra Cognita	9.98	8.95
Thai Boxing	** 34.95	11.00
Tornado Low Level	34.95	19.95
Trailblazers	34.95	29.95
Trap	** 34.95	11.00
Questor	37.50	19.95
Way of the Tiger	39.95	19.95
Westbank	** 19.95	11.00
Wibstars	** 34.95	11.00
50 Games (Cascade)	** 39.95	11.00

** - This means the title is new to our list.

<<- This means the price has been reduced from one originally advertised in a previous list.

Non-GAMES TAPES for CPCs

Title	Usual \$	Our \$
Junior Wordpro (Child's wordprocessor)	-	29.95
Mini Office II (Yes, it's cheaper!)	<< 69.95	49.00
Rampak - nearly fifty machine code subroutines	-	37.95

JOYSTICK

TURBO Joystick is a newly designed joystick compatible with all Amstrad CPCs (and PCWs with an interface) along with Commodore 64/128, Vic 20, Atari XE, XL and games consoles, MSX and Spectrum. It features six high performance micro-switches, 2 fire buttons with 'normal' or 'quick' speed selection, suction feet, a solid steel breakage resistant shaft, a very fast response trigger and a see-through base revealing the circuitry.
Price including postage \$34.99

Starglider 6128 Pack

Consisting of the new Starglider disc plus the Turbo Joystick \$89.99

Starglider disc only \$59.99

DISC DRIVES

Amstrad DDI-1 plus interface to suit a CPC464 499.00 399.00
Amstrad FD-1 second drive to suit 464/664 or 6128 449.00 349.00
CL-1: cable required for 664 or 6128 25.00

Mail your orders to:
THE AMSTRAD USER
1/245 Springvale Road
Glen Waverley, Vic 3150
Phone your firm orders to:
(03) 233 9661

Bankcard, Mastercard or Visa accepted.

Prices on some items may change due to fluctuations in the dollar value against sterling. Sorry, but it's out of our control!
You would be wise to check with us first on availability and price.

Available from The Amstrad User while stocks last

Adventurer's Attic

Where Philip Riley discusses the perplexing problem of choosing an adventure

Happy New Year from me in the Attic to all you out there - hope you had a great Christmas and its good to see you back again this year.

Looking through the letters that we have received over the months I have noticed that many of them are from people who are new to adventures. They appear to be having trouble due to the fact that they are playing a game that it is too far advanced for them. Many people are put off adventures for life because they cannot progress very far in their first program.

Adventures are not like arcade games. They require thought and time, not speed and fast reflexes. If you think you have what it takes to be an adventurer then your future as an adventurer rests on that first game. Buy a Level 9 game and you may be put off for life as they are generally difficult (although this is not always the case, you may just have the sort of mind that can work out the problems without too much trouble).

So what do you buy? Well you need to be broken in gently with a game that has problems that can be fairly easily solved. This will then start you off in the right direction and you will learn how to find hidden objects and how to use ordinary objects for not so ordinary purposes.

One game that always jumps to mind is Mordens Quest. It is a very good adventure that has problems that although they are not very hard they are not very easy either. I am playing this game at the moment and I'm not exactly a beginner - but I do find this game easy and would recommend it as a starter. Another advantage of this game (and reading this column) is that

many people have been stuck in various parts of it and looking back through the months you will find a wealth of questions and answers that will help you.

Another good game for the beginner is Gems of Stradus. I have not played this game on the Amstrad but have played it on another machine under a different name. Although the Amstrad version does seem to have a couple of differences from what I hear, it looks much the same. The game, although not having fantastic graphics or text, is none the less a good buy for the beginner.

Another oldy but goody is the various versions of Classic Adventure or Colossal Cave Adventure. These are based on the original Crowther and Woods adventure (this is the one that started it all). The problems again are not over the top and it is a very enjoyable game to play.

The Arnold Blackwood adventures are the next on the list. Very good adventures for the starter, they have everything that you will need to start you off with a bit of comedy too.

Seasoned adventurers may have noticed that all of these games have been around for a long time, but answer me one question, how many of you started out on one or other of these games two or three years ago? The games that are being produced today are far more complex. This is because the software houses are now catering for the more experienced adventurer who wants ever more challenging games to play.

But of course you don't *have* to go for the older games. Another line of thought to follow if you are out on the prowl for your first adventure is to think of games that are based on books and films.

Hitch-Hiker's Guide to the Galaxy, Never-ending Story, The Hobbit and Lord of the Rings are four that instantly jump to mind. You will find that although the game may not follow the book or film completely, you will be able to glean clues from reading or watching them and this can only help you in the long run. Again with these games you will find many questions and answers in back issues.

If you are looking at buying your first adventure I would also suggest the adventure pack that is sold exclusively by TAU (although believe me you don't have to be a beginner to play these games). You cannot really go wrong buying four games for that price.

Of course space does not permit me to mention all of the games that you can try but I hope that I have managed to point you in the right direction.

Now for the big finish except that this time it is a little finish from Troy Barnes over in the South Island, Tassie. He finished his letter SEEYA, short and to the point, that's what we like.

Questions and Answers

Firstly a couple of announcements. Karla Slack has asked if we want any maps and hint sheets of the games that she has completed. The answer is a definite YES, but it will have to be drawn very carefully and clearly if it is to be of any help. Secondly, an announcement to Scott Weaver. He has sent us some hint sheets but we were wondering if he could redo them for us. You see, the sheets he sent give ALL the answers to the problems. What we are

looking for are more for cryptic clues or hints. We only want to help people along the right path and not solve the whole adventure for them - after all, that would take all the fun out of it. Take a look at the Hint Sheets published so far to get an idea of how to put them together.

I just glanced over my copy of the November mag and a small mistake was made in the questions. The beginning of one was joined to the end of another and the bits inbetween went walkabouts so here are the two questions again. Michelle Wood has all of the numbers in the start room of 2112AD but does not know what to do with them and Dean Bailey wants to know how to get past the alien in Gems of Stradus.

QUESTIONS

We don't have much in the way of questions this month and we have no answers for you at all. I think the run up to Christmas has taken its toll on adventurers.

First one is an oldy but a goody. Jason Pavy would like to know how to get out of the quicksand in King Solomon's Mines.

Mrs G. Burrows would like to know how to renew her security pass in Seabase Delta.

Jason Pavy would also like to know how to open the gates of Moria in LOR and how to get past the black riders. He would also like any hints that anyone out there might have on Zork 3.

Sharryn Purss is playing Redhawk and has been told to get the gloves from the professor's house in Small Street but can find no such street. Can anyone tell her where it is?

Geoff Hornsby has managed to complete about 64% of Aftershock, but is now stuck at the South Way. A chasm is blocking his way and he cannot find a way around it.

Finally Steven Hall would like to know how to talk to the inhabitants of the dungeon in Swords and Sorcery and would like any hints on using some of the objects that are lying around.

Well that's it for this month and if you think you have got problems I would like to tell you that I have just been killed by the gladiator in Mordens Quest again.

Sensational Adventure 4-Pack on one disc or tape

(Assembled exclusively under licence for The Amstrad User)

1 - Colossal Cave Adventure

This is the original Crowther and Woods mainframe adventure. The game follows the original layout, complete with all the infuriating traps and bewildering mazes. You will need all your powers of concentration to outwit the Troll, the Dragon and the Pirate, and to overcome the many other problems that will be waiting for you. You can't call yourself an adventurer until you have conquered this mammoth quest. Not so much a game, more a way of death!

The game has a large vocabulary and as a concession to the faint-hearted, and provided you don't waste too much time, you will be given the opportunity to resurrect yourself twice.

2 - Mountain Palace Adventure

This devious adventure is set in a long-lost palace in a distant mythical land. The game starts on a mountain ledge close to the entrance of the palace. You have heard rumours of the vast wealth to be gained by anyone brave enough to enter the mysterious palace and have decided that it might as well be you. Unfortunately, this turns out to be a little more difficult than you imagined. The palace has some rather strange and sinister inhabitants, and even seems to have a mind of its own! There is an option to save your progress at any time.

3 - Time Search

There are time machines and there are time machines! Here at last is your chance to own one that works. If you can find it, that is. This traditional text-based adventure will take you from the safety and comfort of your own home and transport you to a weird and mysterious land where anything is possible. Can you survive the hazards and perils of a long trek through this world to achieve your aim? Danger and excitement await you, and in this land where almost anything can

happen you may rest assured that it probably will! Dare you accept the challenge of the search? Remember, there is no present like the time! The game includes an option to resurrect yourself, but only a limited number of times, so take care!

4 - Castle Dracula

Are you courageous? Do you have nerves of steel? Has your TV broken down? If the answer to any of these questions is 'Yes', then this adventure is for you! It starts in a deserted village which is overshadowed by the sinister castle inhabited by the Transylvanian Terror, Dracula, and other assorted nasties. Your mission (should you choose to accept it) is to enter the castle and serve His Putrescence a well prepared stake. Unfortunately, as you might expect, your progress depends on how well you cope with the various traps and obstacles you come across. However, there are many useful (and some not so useful) objects to be found along the way, and from time to time the program can be persuaded to give you hints, but you will have to rely mainly on your ingenuity. There are 100 locations to explore and you have the option to save your progress at any time.

This compilation of adventures is only available through The Amstrad User.

All four on Disc - \$32.95

All four on Tape - \$27.95

Ring (03) 233 9661 for credit card orders or mail to:

**The Amstrad User,
1/245 Springvale Road,
Glen Waverley,
Victoria 3150.**

Therapy

The second and final part of an unusual text adventure

by David Rich

The story so far - last month you were presented with less than half of Therapy, the adventure 'with a difference'.

Now, we all know that most of you will be taking things very easy during the break, so to keep your finger muscles in trim we decided to give you the rest in one go!

That doesn't mean that you have to type it in all in one go. The secret of handling long listings is the same as driving long distances - if you begin to get tired take a break otherwise you will make more than the normal mistakes.

Talking about mistakes, we've successfully tested the program on both a 464 and a 6128 and the listing is a direct print of that working version. So any Syntax errors, mismatches, data exhausted etc. messages occurring will most certainly be a result of a typing error on your part.

```

2340 IF P(j)=D THEN P(j)=0
2350 NEXT j
2360 IF A(R0,5)=0 THEN A(R0,5)=D:GOTO 2390
2370 IF A(R0,6)=0 THEN A(R0,6)=D:GOTO 2390
2380 IF A(R0,7)=0 THEN A(R0,7)=D
2390 PRINT"You have dropped the ";D$
2400 RETURN
2410 ' *****
2420 ' ENCOUNTER(FIGHT) ROUTINE
2430 'NEXT LINE CHECKS IF THERAPIST PRESENT TO FIGHT
2440 IF A(R0,8)<> 0 THEN 2500
2450 R=RND(1)
2460 IF R<0.5 THEN PRINT"HERE IS NOTHING HERE TO FIGHT-"
2470 IF R>0.5 THEN PRINT"YOU CANNOT OVERCOME THIN AIR!"
2480 RETURN
2490 ' set G4 TO NAME OF THERAPIST AND CREATE HIS ATTRIBUTES
2500 G$=M$(A(R0,8))
2510 S1=INT(RND(1)*6+RND(1)*6+RND(1)*6)+4
2520 H1=INT(RND(1)*6+RND(1)*6+RND(1)*6)+3
2530 D1=INT(RND(1)*6+RND(1)*6+RND(1)*6)+5
2540 I1=INT(RND(1)*6+RND(1)*6+RND(1)*6)+3
2550 W1=INT(RND(1)*6+RND(1)*6+RND(1)*6)+5
2560 C1=INT(RND(1)*6+RND(1)*6+RND(1)*6)+4

```

```

2570 PRINT"-----"
2580 PRINT"YOU FACE A ";G$
2590 MT=0:HT=0: 'THERAPIST TALLY,PATIENT TALLY
2600 FF=S1*(INT(RND(1)*6)+1)
2610 PRINT"-----"
2620 PRINT G$;"'S DANGER LEVEL IS ";FF
2630 PRINT"-----"
2640 FOR Z=1 TO 4500:NEXT Z
2650 ' CHECK IF CARRYING VOL/RULES
2660 FOR j=1 TO 5
2670 T(j)=0
2680 IF P(j)=6 THEN PRINT"A VOLUNTARY FORM IS HANDY!":PRINT:T(j)=6
2690 IF P(j)=5 THEN PRINT"A RULE BOOK STANDS YOU IN GOOD STEAD!":PRINT:T(j)=5
2700 NEXT j
2710 FLAG=0
2720 FOR j=1 TO 5
2730 IF T(j)<>0 THEN FLAG=FLAG+1
2740 NEXT J
2750 IF FLAG<>0 THEN 2770
2760 PRINT"You must encounter ";G$;" unaided!":GOTO 2910
2770 IF FLAG>1 THEN 2840
2780 FOR j=1 TO 5
2790 IF T(j)<>0 THEN FLAG=T(j)
2800 NEXT j
2810 PRINT:PRINT"HAVING A ";0$(FLAG);" INCREASES YOUR CHANCES"
2820 FF=INT(FF*2/FLAG)
2830 GOTO 2910
2840 PRINT"WHICH MAKES YOU STRONGER..."
2850 PRINT "1 - KNOWING THE RULES"
2860 PRINT "2 - BEING A VOLUNTARY PATIENT"
2870 INPUT "Enter the number of your choice:":j:J=J+4
2880 IF P(j-4)=0 THEN PRINT"You do not have the ";0$(j):GOTO 2870
2890 PRINT"RIGHT: SO YOU CHOOSE TO RELY ":PRINT"ON THE ";0$(j)
2900 FF=INT(FF*2/j)
2910 FOR Z=1 TO 2500:NEXT Z
2920 PRINT"=====
2930 PRINT"A ";G$;" has the following qualities:"
2940 PRINT"1-Mood      ";S1;" 2-Empathy      ";H1

```

```

2950 PRINT"3-Insight ";D1;" 4-Intelligence ";I1
2960 PRINT"5-Wisdom ";W1;" 6-Confidence ";C1
2970 PRINT:PRINT"Your qualities are:"
2980 PRINT"1-Mood ";S1;" 2-Empathy ";H1
2990 PRINT"3-Insight ";DE;" 4-Intelligence ";IT
3000 PRINT"5-Wisdom ";WI;" 6-Confidence ";CO
3010 PRINT:PRINT"Which TWO qualities will you use?":PRINT
"TYPE IN ANY TWO NUMBERS, 1 - 6 SEPARATED BY A COMMA"
3020 INPUT Z,Q
3030 IF Z>0 AND Z<7 AND Q>0 AND Q<7 THEN 3050
3040 PRINT"DON'T FOOL AROUND - THERE'S A ";G$;" IN THE ROOM WITH YOU!":GOTO 3020
3050 IF Z=1 OR Q=1 THEN MT=MT+S1:HT=HT+ST
3060 IF Z=2 OR Q=2 THEN MT=MT+H1:HT=HT+CH
3070 IF Z=3 OR Q=3 THEN MT=MT+D1:HT=HT+DE
3080 IF Z=4 OR Q=4 THEN MT=MT+I1:HT=HT+IT
3090 IF Z=5 OR Q=5 THEN MT=MT+W1:HT=HT+WI
3100 IF Z=6 OR Q=6 THEN MT=MT+C1:HT=HT+CO
3110 IF HT=MT THEN PRINT TAB(10);"YOU ARE EVENLY MATCHED."
:GOTO 3150
3120 PRINT"IT LOOKS LIKE THE ODDS ARE IN"
3130 IF HT>MT THEN PRINT"YOUR FAVOUR."
3140 IF HT<MT THEN PRINT" THE ";G$;"'S FAVOUR."
3150 PRINT"-----"
3160 '** NEXT LINES CONTROL ENCOUNTER **
3170 KK=0
3180 K=INT(RND(1)*7):IF K=KK THEN 3180
3190 KK=K
3200 FOR Z=1 TO 1700:NEXT Z
3210 PRINT MT;" TO THE ";G$
3220 PRINT HT;" TO YOU"
3230 PRINT"-----"
3240 IF K=0 THEN PRINT" YOU DISPLAY FAULTLESS LOGIC:";MT=MT-1:C1=C1+1
3250 IF K=1 THEN PRINT G$;" EXPOSES YOUR DENIAL!":HT=HT-1:CH=CH-2
3260 IF K=2 THEN PRINT G$;"'S NEUROSIS IS REVEALED":C1=C1-4:MT=MT-1
3270 IF K=3 THEN PRINT G$;" SEDATES YOU...":IT=IT-3:HT=HT-1
3280 IF K=4 THEN PRINT" THE ";G$;" IS CONFUSED!":D1=D1-6:S T=ST+8
3290 IF K=5 THEN PRINT" YOUR TRANSFERENCE IS SHOWING...":W I=WI-8:CO=CO-4
3300 IF K=6 THEN PRINT G$;" FOLLOWS YOUR RED HERRING.":MT=MT-1:CH=CH+2
3310 IF RND(1)>.25 AND HT>0 AND MT>0 THEN FOR T=1 TO 3000 :NEXT T:GOTO 3180
3320 IF HT<MT THEN 3350
3330 FOR Z=1 TO 1000:NEXT Z:PRINT:PRINT:PRINT" YOU HAVE OVERCOME THE ";G$:FOR Z=1 TO 1000:NEXT Z
3340 ST=ST+2:DE=DE+2:WI=WI+2:CH=CH+2:IT=IT+2:CO=CO+2:MK=MK+1:GOTO 3420
3350 FOR Z=1 TO 1000:NEXT:PRINT:PRINT:PRINT G$;" GOT THE B

```

```

ETTER OF YOU":PRINT"THAT TIME...":FOR PAUSE=1 TO 1000:NEXT PAUSE
3360 IF Z=1 OR Q=1 THEN ST=4*INT(ST/5)
3370 IF Z=2 OR Q=2 THEN CH=3*INT(CH/4)
3380 IF Z=3 OR Q=3 THEN DE=6*INT(DE/7)
3390 IF Z=4 OR Q=4 THEN IT=2*INT(IT/3)
3400 IF Z=5 OR Q=5 THEN WI=5*INT(WI/6)
3410 IF Z=6 OR Q=6 THEN CO=INT(CO/2)
3420 A(RO,8)=0
3430 FOR Z=1 TO 6500:NEXT Z
3440 RETURN
3450 '
3460 '*****
3470 ' ASK RESPONSES
3480 '
3490 IF RO=9 THEN PRINT"THEY ARE NURSES-THEY DON'T KNOW ANYTHING" ELSE IF RO=6 THEN PRINT"ASKING AN O.T. IS NOT A CONSTRUCTIVE USE OF TIME" ELSE IF RO=4 OR RO=5 THEN PRINT"ALL HE EVER SAYS IS HMMM" ELSE PRINT" NO-ONE HERE IS TALKING ."
3500 IF RO=5 THEN PRINT:PRINT"...BUT IF YOU CAN'T THINK FOR YOURSELF BY NOW IT'S BACK TO OBS. FOR YOU!":RO=9:FOR Z=1 TO 2000:NEXT
3510 RETURN
3520 ' TAKE RESPONSES
3530 IF RO=4 THEN 3540 ELSE IF RO=8 THEN PRINT"NOW THAT YOU HAVE HAD YOUR PILLS YOU CAN GO ON...":RETURN
3540 PRINT"THAT WAS NOT MEANT FOR YOU!!":PRINT:PRINT"YOU ARE ON CATEGORY B...":FOR Z=1 TO 3000:NEXT:RO=9:RETURN
3550 IF C$="DIR" OR C$="POS" THEN PRINT"YOU ARE A VOYEUR":PRINT"BACK TO THE OBS WARD!":RO=9:FOR PAUSE=1 TO 2000:NEXT :RETURN
3560 IF C$="SCR" OR C$="PAP" THEN PRINT"THERE IS ONLY ONE DOOR TO THE ROOM YOU":PRINT"CAN SEE TO THE NORTH.BE CAREFUL IN THERE!":RETURN
3570 IF C$="BOO"AND RO<>4 THEN PRINT"ARE YOU SURE OF WHAT THEY ARE?":RETURN
3580 IF C$="BOO" THEN PRINT"YOU CAN'T READ IT-IT'S A FAKE! !?":RETURN
3590 PRINT"THERE IS NO READING MATTER HERE":RETURN
3600 ' EAT RESPONSES
3610 IF RO<>11 THEN PRINT"THERE IS NOTHING SAFE TO EAT!":GOTO 3630
3620 IF MEAL=1 THEN PRINT"THERE IS NOTHING LEFT!" ELSE PRINT"A HEALTHY APETITE IS A GOOD SIGN.":MEAL$="The plate is empty .":ST=ST+3:CH=CH+2:MEAL=1
3630 RETURN
3640 ' FAMILY RESPONSE
3650 IF RO=2 THEN PRINT"YOU HAVE SHOWN":PRINT" APPROPRIATE SOCIAL SKILLS":PRINT"YOU MAY HAVE W/E LEAVE":LEAVE=1:GOTO 1420
3660 IF RO<>2 THEN PRINT"TRY A DIFFERENT APPROACH"
3670 FOR Z=1 TO 2000:NEXT Z:GOTO 1420
3680 ' BATHE

```

```

3690 IF RO=13 THEN PRINT"CLEANLINESS IS NEXT TO GODLINESS.
." :WI=WI+4:DIRT=0
3700 IF RO<>13 THEN PRINT"WHAT NONSENSE-NO WONDER YOU'RE I
N THIS PLACE.":WI=WI-4
3710 RETURN
3720 ' AT CLINIC
3730 IF A(RO,5)=3 THEN PRINT "AN ADDICT,EH!":PRINT "THAT W
ILL HOLD YOU BACK.":DE=DE-4:O$(A(RO,5))="AN EMPTY CUP":FOR
Z=1 TO 2000:NEXT Z:RETURN
3740 IF C$="TAB"OR C$="PIL"OR C$="MED" THEN PRINT"YOU MAY
CONTINUE" ELSE PRINT"DON'T TAKE WHAT IS NOT YOURS!!":PRINT
"I WILL HAVE TO PUT YOU ON CAT B":RO=9:PIL=0:FOR Z=1 TO 20
00:NEXT Z
3750 RETURN
3760 IF C$="TES" OR C$="EXA" THEN RO=16:RETURN
3770 IF C$="SAN" THEN RO=16
3780 RETURN
3790 IF RO<>4 THEN PRINT"WHAT A WASTE OF ENERGY":IT=IT-4:C
O=CO-3
3800 IF RO=4 THEN PRINT"YOU HAVE FOUND A HIDDEN DOOR TO TH
E EAST":WI=WI+2:CASH=(CASH+15)*2:CASE=1
3810 RETURN
3820 IF RO=5 THEN PRINT"I SUGGEST YOU GO NORTH" ELSE PRINT
"OUNDS A BIT SOON TO ME."
3830 RETURN
3840 RETURN
3850 ' *****
3860 ' END OF GAME
3870 PRINT
3880 SC=0:' SCORE
3890 IF QUK<>4 THEN 3920
3900 IF VLNTY=1 THEN PRINT" AS A VOLUNTARY PATIENT YOU
HAVE THAT RIGHT-":PRINT" WHAT A PITY YOU C
OULD NOT BE CURED!":GOTO 3940
3910 PRINT TAB(5)"SORRY-ONLY VOLUNTARY PATIENTS HAVE THAT
RIGHT.":FOR Z=1 TO 2000:NEXT Z:GOTO 120
3920 PRINT:PRINT TAB(10);"CONGRATULATIONS !":PRINT" You
have completed therapy."
3930 PRINT:PRINT" YOU ARE DISCHARGED TO YOUR OWN CARE":PR
INT:PRINT TAB (14);"QUITE CURED!"
3940 SC=100
3950 PRINT:PRINT
3960 SC=99*(SC+20*CASH+47*MK+ST+2*CH+3*DE+4*IT+5*WI+6*CO)/
QU
3970 IF MK>0 THEN PRINT TAB(11);"You gave ";MK;" therapist
s nervous breakdowns."
3980 PRINT:PRINT TAB(11);"You gained ";INT(CASH):PRINT"
units of self awareness":PRINT
3990 PRINT:PRINT"YOUR PERSONALITY GROWTH SCORE IS ";INT(SC
/100)
4000 END
4010 ' *****
4020 ' ROOM DESCRIPTIONS
4030 PRINT" You are in ";

```

```

4040 IF RO<9 THEN ON RO GOSUB 4070,4120,4170,4220,4270,432
0,4370,4420
4050 IF RO>8 THEN ON RO-8 GOSUB 4470,4520,4570,4620,4670,4
720,4770
4060 RETURN
4070 ' ROOM ONE
4080 BORDER 20:PRINT" a bare, clinical room. The walls h
ave medical aparatus attached to them."
4090 PRINT"An antiseptic smell hangs about the room"
4100 PRINT:PRINT" The doctor is waiting to give you ECT."
4110 RES=1:RETURN
4120 ' ROOM TWO
4130 BORDER 2:PRINT" a bright and cheerful place.":PRINT"
Your family is sitting around looking uncomfortable."
4140 PRINT:PRINT"They sit between you and an open door to
the east."
4150 '
4160 RETURN
4170 ' ROOM THREE
4180 BORDER 7:PRINT" a crowded office.":PRINT:PRINT"You a
re facing the discharge panel.":PRINT"You must satisfy the
panel if you are to be discharged. "
4190 TEZT=0:PRINT:PRINT:PRINT:PRINT"They want you to take
a test."
4200 '
4210 RETURN
4220 'ROOM FOUR
4230 BORDER 13:PRINT" an office":PRINT"A psychiatrist sits
behind a huge desk.":PRINT" There is a bottle of pills be
side him and a couch in the corner."
4240 PRINT" There is a case full of books against one wal
l.":PRINT:PRINT" You can see a door ahead of you to the no
rth."
4250 IF CASE=1 THEN PRINT"Another door is visible behind t
he bookcase."
4260 RETURN
4270 ' ROOM FIVE
4280 BORDER 6:PRINT" a room with eight other people."
4290 PRINT:PRINT"YOU HAVE BEEN ACCEPTED FOR GROUP THERAPY"
:PRINT"Someone suggests you should bring your famil
y into therapy.":PRINT"Maybe you need to learn to use your
time better or learn new skills."
4300 PRINT"You could ask the doctor for his opinion...."
4310 RETURN
4320 'ROOM SIX
4330 BORDER 5:PRINT" a cluttered room.":PRINT:PRINT"A pret
ty girl is standing in the middle of a room full of paint
pots,raffia,unfinished baskets and half-baked clay pots. "
4340 PRINT:PRINT" You have found your way into the
Occupational Therapy Department."
4350 '
4360 RETURN
4370 'ROOM SEVEN
4380 BORDER 26:PRINT" a stark white room":PRINT:PRINT" A

```

hard, cold floor. Shelves full of towels and sheets. There is a laundry basket and an ironing-board but you cannot see the iron."

```

4390 '
4400 '
4410 RETURN
4420 ' ROOM EIGHT
4430 BORDER 12:PRINT" the clinic.":PRINT"You have reached
the treatment room just in time for your medication!":PRIN
T"it always seems to be medication time..."
4440 ST=ST-2:IT=IT+1
4450 '
4460 RETURN
4470 'ROOM NINE
4480 BORDER 19:PRINT PYJ$:PRINT"Wide windows look out on t
he drab fields- There is a city on the horizon. To one sid
e is a sheet of glass through which you are being observ
ed by a group of white-clad men and women."
4490 PRINT:PRINT" There is a corridor to the south and a
nother room to the east."
4500 PRINT:PRINT"You feel uncertain and confused."
4510 RETURN
4520 'ROOM TEN
4530 BORDER 25:PRINT" a dormitory.":PRINT:PRINT"You see fo
ur hospital style beds, chairs and cupboards.The room seem
s to have no other door."
4540 '
4550 '
4560 RETURN
4570 'ROOM ELEVEN
4580 BORDER 14:PRINT" dining room.":PRINT"You are greeted
by the aroma of hospital cooking."
4590 PRINT"The tables hold knives, forks and spoons."
4600 PRINT"No-one else is here.":MEAL$
4610 RETURN
4620 'ROOM TWELVE
4630 BORDER 16:PRINT" a poorly lit hallway."
4640 PRINT:PRINT" A doorway leads off to the north.":PRI
NT:PRINT" An odd smell drifts in from the west."
4650 '
4660 RETURN
4670 'ROOM THIRTEEN
4680 BORDER 17:PRINT"a steam filled room":PRINT:PRINT" The
only other door leading from this room is to the north."
:PRINT:PRINT"In the centre of the room is a tub full of st
eaming water."
4690 '
4700 '
4710 RETURN
4720 'ROOM FOURTEEN
4730 BORDER 10:PRINT"A long, airy room containing a pool ta
ble a pack of cards and cigarettes.":PRINT:PRINT"All the b
alls are missing"
4740 PRINT:PRINT"There is a notice board on the wall."

```

```

4750 '
4760 RETURN
4770 'ROOM FIFTEEN
4780 BORDER 0:PRINT"a quiet room.":PRINT:PRINT:PRINT"The l
ights are dim- You hear soft music.":PRINT:PRINT"You are j
ust able to make out the shapes of people stretched out aro
und the room."
4790 PRINT:PRINT"You have come into a relaxation therapy r
oom."
4800 '
4810 RETURN
4820 ' *****
4830 ' DESCRIBE OBJECTS
4840 PRINT
4850 PRINT TAB(3);"You can see:-"
4860 IF A(R0,5)<>0 THEN PRINT TAB(4);0$(A(R0,5))
4870 IF A(R0,6)<>0 THEN PRINT TAB(4);0$(A(R0,6))
4880 IF A(R0,7)<>0 THEN PRINT TAB(4);0$(A(R0,7))
4890 FOR Z=1 TO 500:NEXT Z
4900 PRINT
4910 RETURN
4920 ' *****
4930 ' INITIALIZE
4940 MODE 1:PEN 3:INK 0,20
4950 DIM a(16,8),P(5),O$(8),V(20),M$(8),t(5):RES=0:PYJ$="p
yjamas.":MEAL$="There is a meal set.":MEAL=0:GON$="":PIL=0
:POINT=0:TIMES=0:CASE=0:TEZT=0:CARDS=0:PLATE=0:CANE=0:CLOT
HES=0:DIRT=0:VLNTRY=0:AUT=0:
4960 ' NEXT LINE DECIDES HUMAN ATTRIBUTES
4970 ST=INT(RND(1)*6+RND(1)*6+RND(1)*6)+3
4980 CH=INT(RND(1)*6+RND(1)*6+RND(1)*6)+3
4990 DE=INT(RND(1)*6+RND(1)*6+RND(1)*6)+3
5000 IT=INT(RND(1)*6+RND(1)*6+RND(1)*6)+3
5010 WI=INT(RND(1)*6+RND(1)*6+RND(1)*6)+3
5020 CO=INT(RND(1)*6+RND(1)*6+RND(1)*6)+3
5030 CASH=0:' TREASURE
5040 RO=9:' STARTING ROOM *****
5050 QU=1:' END OF GAME FLAG
5060 MK=0:' SUCCESSFUL ENCOUNTERS
5070 C$=""
5080 ' ** SET UP ROOMS
5090 FOR x=1 TO 16
5100 FOR y= 1 TO 4
5110 READ A(x,y)
5120 NEXT y
5130 NEXT x
5140 ' DISTRIBUTE OBJECTS
5150 FOR Z= 1 TO 8
5160 READ O$(Z),V(Z)
5170 NEXT Z
5180 FOR Q=1 TO 8
5190 z=INT(RND(1)*15+1)
5200 IF A(Z,5)<>0 THEN 5190
5210 A(Z,5)=Q:' object no.in room
5220 NEXT Q

```



```

5230 PRINT
5240 'DISTRIBUTE THERAPISTS
5250 FOR j= 1 TO 8
5260 READ M$(j)
5270 Z=INT(RND(1)*15+1)
5280 IF A(Z,5)<>0 THEN 5270
5290 A(Z,8)=j
5300 NEXT j
5310 CLS
5320 RETURN
5330 ' *****
5340 ' ROOM DATA
5350 REM Room One
5360 DATA 0,4,0,0
5370 REM Room Two
5380 DATA 0,5,3,0
5390 REM Room Three
5400 DATA 0,0,0,2
5410 REM Room Four
5420 DATA 1,8,5,0
5430 REM Room Five
5440 DATA 2,0,6,4
5450 REM Room Six
5460 DATA 0,0,0,5
5470 REM Room Seven
5480 DATA 0,13,0,0
5490 REM Room Eight
5500 DATA 4,11,0,0
5510 REM Room Nine
5520 DATA 0,12,10,0
5530 REM Room Ten
5540 DATA 0,0,0,9
5550 REM Room Eleven
5560 DATA 8,14,12,0
5570 REM Room Twelve
5580 DATA 9,0,13,11
5590 REM Room Thirteen
5600 DATA 7,0,0,12
5610 REM Room Fourteen
5620 DATA 11,0,15,0
5630 REM Room Fifteen
5640 DATA 0,0,0,14
5650 REM Room Sixteen
5660 DATA 0,3,0,0
5670 ' object data
5680 DATA RELAXATION TAPE,567
5690 DATA DOLE FORM,2
5700 DATA MUG OF COFFEE,15
5710 DATA WARM FUZZY,799
5720 DATA RULE BOOK,0,VOLUNTARY FORM,0
5730 DATA KEY,27
5740 DATA PACK OF CARDS,-35
5750 ' MONSTER NAMES
5760 DATA YOUNG EON

```

```

5770 DATA SOCIAL WALKER
5780 DATA TRICK CYCLIST
5790 DATA HIPPO-THERAPIST
5800 DATA SOCKO-ANALIST
5810 DATA GROPE THERAPIST
5820 DATA GOANN-ALIST
5830 DATA REALTY THERAPIST
5840 ' :*****
5850 ' DISCHARGE TEST
5860 TEZT=1:POINT=300:DIS=1:TIMES=0:PEN 2:INK 0,0:CLS:PRIN
T"Your test begins:":PRINT:PRINT" It consists of three p
arts and begins with a test of logic.":PRINT:PRINT" You
are required to guess the number which I am thinking of."

5870 PRINT:PRINT"You begin with 300 points and will lose 1
0 for each wrong guess.":PRINT"You must have at least 100
points left after all three tests to be discharged."
5880 PRINT:PRINT:PRINT:PEN 1:PRINT" press any key
to begin"
5890 WHILE INKEY$="" :WEND
5900 MODE 0:PEN 4
5910 LOCATE 1,10:PRINT" WHAT NUMBER":PRINT:PRINT"AM I TH
INKING OF":PRINT:PRINT"(BETWEEN 1 AND 100)":PRINT
5920 FOR Z=1 TO INT(RND*99)+1:NEXT
5930 INPUT GUESS
5940 IF GUESS=Z THEN 5980
5950 POINT=POINT-10:PRINT"wrong... try again":PRINT
5960 IF guess>z THEN PRINT"(you were too high)" ELSE PRINT
" (Not big enough)"
5970 GOTO 5930
5980 CLS:FOR Z=1 TO 2000:NEXT:PRINT" right":Times=times
+1:IF times=3 THEN 6000
5990 PRINT" Here is the next:":FOR p=1 TO 2000:NEXT:CLS:PE
N 2:GOTO 5910
6000 PEN 2:FOR z=1 TO 2000:NEXT:CLS:PRINT"YOU HAVE ";POINT
;" POINTS LEFT":PRINT:PRINT:FOR z= 1 TO 2000:NEXT
6010 IF point<100 THEN 6210
6020 PRINT"HERE IS":PRINT"YOUR NEXT TEST:":FOR Z=1 TO 3000
:NEXT Z
6030 MODE 1:PEN 1:TIMES=0
6040 PRINT"THIS IS A TEST OF MEMORY.":PRINT:PRINT"I WILL S
HOW YOU A GROUP OF LETTERS":PRINT"YOU MUST TYPE THE SAME
LETTERS ON THE KEYBOARD."
6050 PRINT"YOU WILL LOSE 5 POINTS FOR EACH MISTAKE.":PRINT
:PRINT"press any key to begin"
6060 WHILE INKEY$="" :WEND
6070 MODE 0
6080 PEN 7:NUM=5:TIMES=0
6090 FOR LETS=1 TO NUM
6100 WDSR$(LETS)=CHR$(INT(RND*25)+65)
6110 NEXT
6120 HID$=WDSR$(1)+WDSR$(2)+WDSR$(3)+WDSR$(4)+WDSR$(5)
6130 PRINT:PRINT:PRINT" ";HID$:FOR Z=1 TO 2000:NEXT:CL
S:PRINT:PRINT:PRINT
6140 PRINT"WHAT WERE THE":PRINT:INPUT"LETTERS: ";GUESS$

```

```

6150 times=times+1
6160 IF UPPER$(GUESS$)=HID$ THEN 6180
6170 FOR z=1 TO 1500:NEXT:POINT=POINT-5:PRINT" NOT RIGH
T!!!":FOR z=1 TO 2500:NEXT z
6180 FOR z=1 TO 1500:NEXT Z:CLS:IF TIMES<5 THEN 6090
6190 FOR Z=1 TO 1000:NEXT
6200 CLS:PRINT"THE SECOND TEST ";:PRINT"IS CONCLUDED.":PRI
NT:PRINT"YOU NOW HAVE ";:POINT;" LEFT":IF POINT>99 THEN 622
0
6210 PRINT:PRINT:PRINT"CLEARLY, YOU ARE":PRINT" NOT READY
TO GO HOME.":FOR Z=1 TO 3000:NEXT:CLEAR:GOTO 10
6220 :FOR Z=1 TO 2000:NEXT:CLS
6230 MODE 1:PEN 1
6240 PRINT"THIS IS YOUR FINAL TEST":PRINT:PRINT"OCCASSIONA
LLY SOMEONE PASSES, BUT WE DO HAVE TO EARN A LIVING, YOU K
NOW..."
6250 FOR Z=1 TO 1500:NEXT:PRINT:PRINT:PRINT"You are in a sm
all boat. I contains fresh water, a small piece of cheese
and a ball of string. There is a safety pin stuck in the
cheese,"
6260 PRINT:PRINT"The breeze is blowing from the south and
has a distinct chill to it. It carries the sound of grindin
g ice to you."
6270 PRINT"You are only wearing light clothing,and when yo
u put it on, you had every reason to think it would be eno
ugh."
6280 PRINT:PRINT"What are you doing now":A$=UPPER$(a$)
6290 TIMES=5
6300 PRINT"YOU HAVE";TIMES;" GUESSES":INPUT A$:A$=UPPER$(A
$)
6310 GOSUB 710
6320 TIMES=TIMES-1
6330 IF TIMES=0 THEN PRINT" Too bad:back you go!!!" ELSE P
RINT"WRONG ! THAT IS NOT WHAT YOU ARE DOING !":FOR z=1 TO
1500:NEXT
6340 IF TIMES>0 THEN 6300
6350 CLS:GOTO 6210
6360 CLS:MODE 1:PEN 1:GOTO 3850
6370 'TITLE
6380 '
6390 '
6400 MODE 0
6410 BORDER 1:INK 0,20:PEN 3
6420 LOCATE 7,4:PRINT" THERAPY ":LOCATE 10,6:PRINT"(";CHR$(
64);")"
6430 LOCATE 6,12:PRINT"DAVID RICH"
6440 LOCATE 9,15:PRINT"1986"
6450 FOR PAUSE= 1 TO 5000:NEXT
6460 RETURN
6470 MODE 1:INK 0,2:INK 1,21:PEN 1
6480 LOCATE 10,2:PRINT" NO WAY HOME?"
6490 PRINT
6500 PRINT" NO ONE IS WELL ALL THE TIME...NOT EVEN YOU..."
:PRINT"BUT SOMETIMES THE ILLNESS IS PREFERABLE TO THE CURE

```

```

!"
6510 PRINT:PRINT"YOU MIGHT ENCOUNTER SOME PRETTY UNUSUAL T
HERAPISTS AS YOU EXPLORE YOUR NEW HOME.":PRINT:PRINT:PRINT
"THEY MAY NOT ALL SEEM EXACTLY HELPFUL...BUT IF YOU COPE W
ITH THEM YOU WILL GROW STRONGER.IF NOT YOU WILL FADE AND F
AIL."
6520 PRINT:PRINT"TYPE IN ANY TWO WORD INSTRUCTION AND I
WILL DO MY BEST TO HELP YOU THROUGH."
6530 PRINT:PRINT
6540 PRINT
6550 PRINT:PRINT" Press any key to go on."
6560 k$=INKEY$:IF k$="" THEN 6560
6570 CLS:
6580 PRINT"I WILL ACT ON ANY TWO WORD COMMAND .":PRINT:PRI
NT"I ALSO KNOW A NUMBER OF WORDS WHICH MAY BE USEFUL (I DO
N'T PROMISE ANYTHING...)":PEN 2
6590 PRINT:PRINT"INV";:PEN 1:PRINT" LISTS YOUR POSSESSIONS
(INVENTORY)":PEN 2:PRINT"HELP";:PEN 1:PRINT" IS WORTH A T
RY":PEN 2:PRINT"LOOK";:PEN 1:PRINT" ALWAYS WORTHWHILE (So
is EXAMINE)":PEN 2:PRINT"QUI";:PEN 1:PRINT" IS QUIT IF YOU
GET TOO FRUSTRATED"
6600 PRINT:PRINT" YOU CAN SPEAK TO VARIOUS PEOPLE OR ASK T
HEM THINGS AND OF COURSE YOU CAN";:PEN 2:PRINT" GO N
, GO S, GO E";:PEN 1:PRINT" OR";:PEN 2:PRINT" GO W";:PEN 1
:PRINT"..PROVIDED THAT THERE IS AN UNOBSTRUCTED DOOR."
6610 PRINT:PRINT"YOU WILL FIND VARIOUS OBJECTS WHICH YOU
MAY COLLECT...SOME WILL INCREASE YOUR CHANCES,OTHERS ARE
A POSITIVE HINDERANCE TO GETTING WELL!"
6620 PRINT:PRINT" Press any key to begin."
6630 WHILE INKEY$="" :WEND
6640 RETURN

```

NEXT MONTH:

PEDIGREE PROGRAM

CPC Type-ins include a Pedigree Program from Lloyd Cherry which can be adapted to suit almost any breeder's needs. It will also give a three or four generation printout. Who knows? - it may be possible to use it as the basis of a genealogical program.

HAPPY NEW YEAR

with the new, even wider range of Pactronics products.

Here are just a few examples:

❶ PLANIT

(PCW 8256/512 CPC 6128)

The complete personal organiser. PLAN IT includes Budgets, Diary, Financial Diary, Loan Calculator, Mini Database and much more. If you need organising, you need PLAN IT!!!!

❷ MASTER SCAN

(PCW 8256/8512)

The ultimate accessory for your DESKTOP PUBLISHER. This device "reads" pictures that are fed into the PCW's printer, and then displays them on the screen. These graphics can then be saved in either of several formats, ready for inclusion in your next DTP masterpiece. It is VERY easy to instal, and the installation is not permanent, and can be easily removed. Graphics saved are suitable for DESKTOP PUBLISHER, FLEET STREET EDITOR, NEWSDESK or MASTER PAINT. MASTER PAINT is a FULL FEATURED graphics program included AS A BONUS with MASTER SCAN. It can be used to modify graphics scanned with MASTER SCAN.

❸ DESKTOP PUBLISHER

(PCW 8256/8512)

Unleash the graphics potential of your PCW. DESKTOP PUBLISHER is the latest way to COMBINE TEXT AND GRAPHICS into any form you need. Newsletters, brochures, advertising. It's uses are only limited by your imagination. DTP is the complete package, ready to use immediately. It

contains a graphics editor, text editor, page editor, FIFTEEN FONTS, clip arts, borders and more; all in one easy to use, menu driven program. It also supports the following mouse(s); AMX, ELECTRIC STUDIO and KEMPSTON.

PLUS, you can use SCANNED graphics produced by MASTER SCAN.

❹ PROTEXT

(PCW, PC, CPC)

Fully functional Word Processor. Unlimited File size. Tutorials and help files. Find and Place Routines. Instant Access whilst Editing. Auto Text reformatting. Merge Files etc. 35,000 Word Dictionary and fabulous Spelling Checker*. Mail Merge*.

*Available as separate programs on CPC and PCW.

❺ EVERYMAN'S ACCOUNTING (Tait)

(PCW and PC)

3 Ledgers using normal everyday Double Entry book-keeping methods. Cash and Credit separate if required. Invoices and Statements. Check balances on Screen. Very User Friendly with Screen Prompts.

❻ RAMJET EXECUTIVE

(1512 only)

Unparalleled speeds, unbeatable performance. Printout and Compute at the same time. Much faster than

costly hardware print buffers. Boosts floppy and hard disc speeds up to 20 times faster. Automatically preserves essential data in RAM. Screen Accelerator.

❼ CLASSIC QUEST ADVENTURE GAMES

These are probably the most fascinating and inventive adventure games you will ever find on the PCW, PC and 6128.

❽ TEST CRICKET

It is the right season to enjoy test cricket on your 464, 6128 or PCW.

❾ MONEY MANAGER PLUS

(PCW, PC, CPC)

The Definitive Cash Book. 9 user-defined Accounts and 50 user-defined Classes, 300 entries per month, Bank Reconciliation, Monthly and/or Annual Reports etc.

STOP PRESS

We are proud to inform you that we are now distributors for the excellent KEMPSTON GRAPHICS MOUSE AND SOFTWARE for the PCW.

Available from Grace Bros, Chandlers and computer retailers around Australia.

FOR THE NEAREST RETAILER IN YOUR STATE CONTACT

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

VICTORIA: Pactronics Pty. Ltd., 51-55 Johnston Street, Fitzroy. (03) 417 1022

QUEENSLAND: CSQ Electronics, 66 Abbotsford Road, Mayne. (07) 52 9633

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

WESTERN AUSTRALIA: Pactronics WA, 757 Canning H'way, Ardross. (09) 332 3807

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

 **Pactronics**

Reflections, predictions and Public Domain software

from Chris Collins

Hello out there, and welcome to the New Year! At this time they say that one is supposed to reflect on the past year, study it's effect and then to consider the future.

Well, if that is what one is supposed to do, we'd better get on with it. The past year has seen Amstrad go from strength to strength. I believe that the PC1512 is now the second best seller in the English market, beaten only by Big Blue (IBM). In recent months, the release of the new PC1640 only goes to prove that Amstrad appears to want to remain in the PC market and keep supporting present PC owners.

The only problem that I can see in the near future is that Amstrad (and especially Mitsubishi-AWA) appear to be pricing the Amstrads out of the market. Cheap AT clones offering better performance, and more value for your dollar are starting to appear. The only problem appears to be the lack of a well known brand name, but with computers being the way that they are, almost any good clone reseller can repair almost any other clone reseller's machine. Perhaps Amstrad has an AT clone in the pipeline?

What does the future have to offer us computer users? This is a very difficult thing to predict as the computer industry is always on the go. Most people at the moment appear to be waiting for a response to the new IBM PS/2 series of computers. Because of this, the market appears to be very unstable. Perhaps it will settle down in the next couple of months, but I doubt it.

As for the rest of the year in our own little world, what are we likely to see? Well, The Amstrad User appears to be getting better all the time, although as always you can't please all the people all of the time. Of direct interest to you

should be a greater number of articles relating to the PC. This will naturally occur as users become more familiar with their machines. As for the column, it will probably change it's format slightly so that it can be of even more help to you.

With the vast amount of PD software that is available, and the new stuff being released each month, I feel that if I continue to tell you about only one program a month we will never even touch on much of what is available. So from next month, I will attempt to checkout between 3 and 5 programs a month. This will necessarily mean that the reviews will be shorter (and probably less detailed) but by covering the most salient points I feel that everyone should be kept happy. And of course, the command explanations will continue. I hope that you will like the new format!!

No command explanation this month, because the little self indulgence above has taken up much more space than I realised. So we'll just get straight into it. The first thing that I'd like to look at this month is a little gem called HELPDOS. HELPDOS is a menu driven program to help you understand the commands necessary to operate your machine to the fullest. The program is written and distributed by Help Technologies.

Typing "HELP" at the DOS prompt brings you to the first of many menus. This menu allows you the choice of five further areas into which you can proceed. The first of the alphabetical options allows you access to the Advanced DOS commands such as ASSIGN, BREAK, COMMAND, FDISC and the like. Option B is for BATCH commands and is obviously designed to help you with your batch files. C is for the usual DOS COMMANDS that you

will encounter, and D is for keyboard. Well, D isn't really for KEYBOARD, but it is the next option letter. The last option on the list is E, and this will give you an overview of the DOS facilities. After choosing an area from the first menu, you will then be presented with another menu from which you can choose a more detailed topic. From this point you will usually proceed to the information sheet that you require.

As you move through the program, many options are available to you at all times. Pressing the F4 key will get you the hints menu. This is for those that know what they want to do, but don't know the what the correct command is. The hints menu will give you a list of things that you can do, you pick one and it then gives you a list of the commands necessary to do that job. Very useful for beginners.

This program, combined with PC Tutor from last month together provide a thorough beginning to understanding your PC1512 and how to get the best from it. PC Tutor gives you the understanding of computing and computers, whilst HELPDOS helps with the DOS commands. Now all we need to do is to figure out how to get the best from our application programs, but we will leave that for another day.

News has come to me that might interest all you games fans. One of the errors that Amstrad made when it designed the PC1512 was that it didn't design in a proper joystick port. Well that has finally been fixed by an enterprising Amstrad dealer. Giltronic Australia now has a card that will fit into one of your expansion slots that will accept two proper IBM type joysticks. Reports are that all the games that have been tried by Fred's testers have worked with the card. For the readers of The Amstrad User Fred is willing to supply the card and a joystick to suit the PC1512 as a package deal for \$69.00. As most joysticks seem to be priced at around \$45, this effectively means that the necessary card is only costing you a measly \$24. Very good value. It isn't necessary to turn up at the shop, as Fred also does mail orders. Give him a call on (03) 773-1244.

The second program disc that I would like to look at this month is called Hangman (Eng&For). This disc contains

a couple of versions of that old favourite game Hangman. The computer versions involve full colour and a great variety of ways to play the game. On this disc are two completely different versions. The first version is in English, and plays much the same as the original game with a few nice touches. Four types of the game are available in this version. First off is the BASIC version. This is simply where you guess a letter in a word, and the program puts it where it belongs. This is very easy. The next level up is the EDUCATIONAL version. In this one, the definition is shown on the screen and you must guess the letters. Would be very good for learning about words and their meanings. The third option is the LITERATE game. This is bloody difficult. The machine gives you a phrase to work out, and the only clue that it gives is the name of the author. Also you have to press the exact number of letters, eg. if there are 3 'S' in the phrase, you must press the 'S' key three times. The last version is the personalised game. In this one, between one and eight players try to guess a phrase put in by another player. Not bad at all.

Of course, all of this can be changed by using the other options properly.

There are two skill levels involved, Amateur and Expert. You can have a time limit involved in the game, or if you wish you don't have to. The sounds can be left on if you are playing during the day, and then at night you can turn them off so as not to disturb others. All in all, I am very impressed with this computer version of Hangman.

Also on this disc is a foreign language version of Hangman. Written by the same authors, the two programs are very similar. In the foreign language version, you can play four types of game. It is possible to have English words with Spanish clues, Spanish words with English clues and the same variation with phrases, English phrases with Spanish clues and Spanish phrases with English clues. Also available is the personalised game played with many players. Apart from these obvious changes, both games are very similar. Congratulations should go to Norland for producing such an educational game, and doing it so well. Both games are on the one disc and the disc is available for \$10 if required.

The column will be necessarily short this month, as being the holidays I don't feel much like writing a long column, and if the weather is fine you won't feel much like reading it. So I'll just finish

up here with a little bit of information. The response to the diskettes and programs has really overwhelmed me at times so if your discs don't turn up within 14 days, please be patient. I do my best to get them out as soon as I get the orders, but as I also have to work for a living, it isn't always possible to do them immediately.

As always any of the programs that I mention are available from me. There is a possibility of a slight price increase in the new year, so bear with me. If you require any of the discs that I have mentioned, please address your orders to:

C.J. Collins
C/- The Amstrad User
1/245 Springvale Road
Glen Waverley 3150.

One last thing. I do read all the letters that I get, but unfortunately I can't answer any of them personally. If you have a problem with your computer, chances are any queries will be answered in the column. Also any suggestions that you may have to improve the column will be taken into consideration. Finally may I say, enjoy your holidays, and have fun computing!!

Artificial Intelligence

Branch out into building a tree of knowledge for your PC

This is our first type-in (and probably last unless some kind person sends one in) for the PC1512 written in Basic2. It effectively builds a knowledge tree to a length only limited by your machine, which can be changed at will. Trees can be saved to disc and you can have them on any subject you wish.

STRUCTURE

An alphanumeric array TEXT\$ holds entries which may be questions or possible solutions. A two dimensional numeric array YN holds pointers to

further elements in TEXT\$ which correspond to 'Yes' and 'No' answers. These elements can be further questions (with their own pointers), or objects, with null pointers. When the program reaches an object it asks you if this is the answer. If you say 'No', it asks you for a new alternative object and question to distinguish between them, and updates the tree accordingly.

The program is written in GOTO-free structured style. The loop at the top repeatedly calls the subroutine MENU which in turn calls one of the main function subroutines. These make use of

further service subroutines, some of which are called by more than one function. Note that the routine QUESTION is recursive (it calls itself). New users to Basic2 will be interested in INITIALISE, CHECK and NO_DIR, where windows and subdirectories are handled. Tree files are always stored in the subdirectory TREEDAT which the program will create for you.

FURTHER DEVELOPMENT

There is plenty of scope to develop the program further, say, an option not to extend the tree when a search fails or perhaps backtrack to a previous level during a search (not for beginners).

BUG

During our testing, we managed to succeed with all the function key operations with the exception of F5. The listing on the next page is that program and we would like to hear from more cluey programmers on how to fix it.

```

REM A learning tree
REM Derek Moody 1986

limit=1000
DIM tex$(limit),yn(limit,1),stack(100)

GOSUB initialise

REPEAT
  REPEAT
    GOSUB menu
    UNTIL control=f1
    IF change THEN GOSUB check
  UNTIL change=0 OR ans$="A" OR ans$="a"
  GOSUB tidy_up
END
LABEL menu
PRINT
PRINT
PRINT COLOUR(1); "menu"
PRINT
PRINT "current tree is "+title$
PRINT
PRINT "F1 : Quit          F2 : New tree""
PRINT COLOUR(2+is_tree);"F3 : save tree          F4 : Edit tree""
PRINT COLOUR(1);"F5 : Load tree          F6 : Show files"
PRINT COLOUR(2+is_tree);"F7 : Show tree          F8 : Whole tree"
PRINT COLOUR(2+is_tree);"F9 : Search tree"
PRINT COLOUR(1);
REPEAT
  control=INKEY
UNTIL control>=f1 AND control<=f10
CLS
IF control=f2 THEN IF change THEN GOSUB check :IF ans$="A" OR ans$="a" THEN GOSU
B new_tree:ELSE:ELSE GOSUB new_tree
IF control=f3 THEN IF is_tree THEN GOSUB save_tree ELSE PRINT" *** No data to sa
ve ***"
IF control=f4 THEN IF is_tree THEN GOSUB edit_tree
IF control=f5 THEN IF change THEN GOSUB check:IF ans$="A" OR ans$="a" THEN GOSU
B load_tree :ELSE:ELSE GOSUB load_tree
IF control=f6 THEN GOSUB show_files
IF control=f7 THEN IF is_tree THEN GOSUB show_tree
IF control=f8 THEN IF is_tree THEN GOSUB whole_tree
IF control=f9 THEN IF is_tree THEN GOSUB search_tree
IF control=f10 THEN GOSUB not_me
RETURN
LABEL new_tree
PRINT "New Tree"
PRINT
PRINT
INPUT"Enter new title ";title$
PRINT
PRINT
INPUT"What is the first object ";temp$
tex$(1)=temp$
PRINT
INPUT"What is the second object ";temp$
tex$(2)=temp$
PRINT
PRINT"Tell me a question that will distinguish between "+tex$(1)+" and "+tex$(2)
+"."
LINE INPUT temp$
tex$(0)=temp$
PRINT"What would the answer be for ";
prompt$=tex$(1)
GOSUB yn
IF yn THEN yn(0,0)=1:yn(0,1)=2:ELSE yn(0,0)=2:yn(0,1)=1
free_space=3
is_tree=-1
change=-1
file$="No file."
RETURN
LABEL show_tree
PRINT "in "+title$+" I know "
PRINT
FOR t=0 TO free_space-1
  IF yn(t,0)=0 THEN PRINT tex$(t)+"
NEXT t
RETURN

LABEL show_files
FILES
IF control=f6 THEN GOSUB pause
RETURN
LABEL search_tree
pointer=0
found=0
GOSUB question
RETURN

```

```

LABEL question
prompt$=tex$(pointer)
GOSUB yn
last_question=pointer
last_yn=yn
IF yn THEN pointer=yn(pointer,0) ELSE pointer=yn(pointer,1)
IF yn(pointer,0) THEN GOSUB question
IF NOT found THEN GOSUB known
found=1
RETURN

LABEL known
prompt$="Is it "+tex$(pointer)
GOSUB yn
IF yn THEN PRINT "I thought so!" ELSE GOSUB xtend_tree
RETURN
LABEL xtend_tree
INPUT "What were you thinking of ";temp$
tex$(free_space)=temp$
PRINT"Tell me a question that will distinguish between "+tex$(pointer)+" and "+t
ex$(free_space)+".
LINE INPUT temp$
tex$(free_space+1)=temp$
prompt$="What would the answer be for "+tex$(free_space)
GOSUB yn
yn(free_space,0)=0
yn(free_space,1)=0
yn(free_space+1,0)=free_space
yn(free_space+1,1)=free_space
IF yn THEN yn(free_space+1,1)=pointer ELSE yn(free_space+1,0)=pointer yn(last_qu
estion,ABS(last_yn-1))-free_space+1
free_space=free_space+2
change=-1
RETURN
LABEL yn
PRINT prompt$+" (Y/N) ";
REPEAT
  ans$=INKEY$
UNTIL ans$="Y" OR ans$="y" OR ans$="N" OR ans$="n"
yn=0
IF ans$="Y" OR ans$="y" THEN yn=1:PRINT "Yes" ELSE PRINT "No"
RETURN
LABEL initialise
CLOSE WINDOW 1
CLOSE #1
OPEN #1 WINDOW 1
SCREEN #1 GRAPHICS 640 FIXED,180 FIXED
WINDOW #1 PLACE 0,0
WINDOW #1 TITLE "LEARNING PROGRAM"
WINDOW #1 OPEN
CLS
is_tree=0
change=0
pre_check=0
titles$=" *** No data ***"
files$="No file."
CLOSE #file :REM just in case
f1=315:f2=316:f3=317:f4=318:f5=319
f6=320:f7=321:f8=322:f9=323:f10=324
CLOSE WINDOW 2
CLOSE #2
OPEN 2 WINDOW 2
SCREEN #2 GRAPHICS 400 FIXED,65 FIXED
WINDOW #2 PLACE 100,80
WINDOW #2 TITLE "WARNING"
ON ERROR GOTO no_dir
CHDIR"treedat"
RETURN
LABEL tidy_up
CHDIR"..
RETURN

LABEL load_tree
CLS
COSUB show_files
PRINT
PRINT "load tree"
PRINT
REPEAT
  INPUT "filename ";file$
  file$=FIND$(file$)
  IF file$="" THEN PRINT"File not found: ";:prompt$="Retry ":GOSUB yn:IF yn=0 TH
EN file$="No file.
UNTIL file$<>""
IF file$<>"No file." THEN COSUB fetch_data
RETURN

LABEL fetch_data
OPEN #file INPUT file$
INPUT #file,titles$
INPUT #file,free_space
FOR pointer=0 TO free_space-1

```

```

LINE INPUT #file,tex$(pointer)
INPUT #file,yn(pointer,0)
INPUT #file,yn(pointer,1)
NEXT pointer
CLOSE #file
change=0
is_tree=-1
RETURN
LABEL save_tree
CLS
PRINT"save_tree
PRINT
PRINT
IF file$<>"No file." THEN PRINT"Save as ":prompt$=file$:GOSUB yn:IF yn THEN ELS
E REPEAT:INPUT "Filename ":file$:UNTIL file$<>"" ELSE:REPEAT:INPUT "Filename ":f
ile$:UNTIL file$<>""
OPEN #file OUTPUT file$
PRINT #file,title$
PRINT #file,free_space
FOR pointer=0 TO free_space-1
    PRINT #file,tex$(pointer)
    PRINT #file,yn(pointer,0)
    PRINT #file,yn(pointer,1)
NEXT pointer
CLOSE #file
change=0
RETURN
LABEL edit_tree
PRINT "Edit tree."
PRINT
prompt$="Do you know the number of the entry you wish to edit"
GOSUB yn
IF yn THEN ELSE PRINT"Find the number you require":GOSUB whole_tree
REPEAT
    INPUT "Number to edit ":pointer
    IF pointer >=free_space THEN PRINT"Too big"
UNTIL pointer<free_space AND pointer >-1
REPEAT
    PRINT
    PRINT tex$(pointer)
    IF yn(pointer,0) THEN PRINT" Yes, goto ":yn(pointer,0);" No, goto ":yn(pointer
,1)
    PRINT
    PRINT" T - change text"
    IF yn(pointer,0) THEN PRINT" Y - change yes/no"
    IF pointer THEN IF yn(pointer,0) THEN PRINT" D - delete"
    PRINT" F - finished edit"
    REPEAT
        ans$=INKEY$
    UNTIL ans$="T" OR ans$="t" OR ans$="Y" OR ans$="y" OR ans$="D" OR ans$="d" OR
ans$="F" OR ans$="f"
    IF ans$="T" OR ans$="t" THEN GOSUB texed
    IF ans$="Y" OR ans$="y" THEN IF yn(pointer,0) THEN GOSUB yned
    IF ans$="D" OR ans$="d" THEN IF pointer THEN IF yn(pointer,0) THEN GOSUB remov
e
UNTIL ans$="F" OR ans$="f"
change=-1
RETURN
LABEL texed
PRINT "Change text"
PRINT
PRINT "current text is : ";tex$(pointer)
PRINT
PRINT " Enter new text : ";
INPUT temp$
IF temp$<>"" THEN tex$(pointer)=temp$
RETURN

LABEL yned
PRINT"Change yes/no"
PRINT
temp=yn(pointer,0)
yn(pointer,0)=yn(pointer,1)
yn(pointer,1)=temp
RETURN
LABEL remove
PRINT"Delete"
PRINT
PRINT"One branch must be deleted, and one must be kept."
prompt$="Which branch shall I keep "
GOSUB yn
ans$="F"
temp=yn(pointer,1)
c=-1
REPEAT
    c=c+1
UNTIL yn(c,0)=pointer OR yn(c,1)=pointer
IF yn(c,0)=pointer THEN yn(c,0)=temp ELSE yn(c,1)=temp
RETURN

LABEL whole_tree
indent$=""

```



```

sp=1
stack(sp)=0
ty$="> "
lines=0
CLS
PRINT"whole tree"
GOSUB show_rest
IF lines>10 THEN GOSUB pause:CLS
RETURN
LABEL show_rest
lines=lines+1
IF lines>15 THEN GOSUB pause:lines=0:CLS
PRINT"Number : ";stack(sp),indent$;ty$;tex$(stack(sp))
IF yn(stack(sp),0) THEN GOSUB disp_y_n
RETURN

LABEL disp_y_n
sp=sp+1
stack(sp)=yn(stack(sp-1),0)
indent$=indent$+" : "
ty$="Y "
GOSUB show_rest
stack(sp)=yn(stack(sp-1),1)
ty$="N"
GOSUB show_rest
indent$=LEFT$(indent$,(LEN(indent$)-2))
sp=sp-1
RETURN
LABEL not_me
CLS
PRINT
PRINT
PRINT
PRINT"          Please don't press that button"
FOR temp=0 TO 2000
  REM delay
NEXT temp
CLS
RETURN

LABEL check
WINDOW #2 OPEN
IF NOT pre_check THEN CLS #2:pre_check=-1:GOSUB fill_w2
REPEAT
ans$=INKEY$
UNTIL ans$<>" "
WINDOW #2 CLOSE
RETURN
LABEL fill_w2
PRINT #2
PRINT #2,"          THIS TREE HAS NOT BEEN SAVED          "
PRINT #2,"          Press 'A' to abandon the tree."
PRINT #2,"          Any other key to return to the program.  ";
RETURN

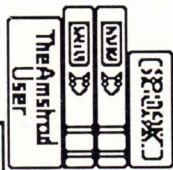
LABEL pause
PRINT
PRINT"Press a key"
REPEAT
ans$=INKEY$
UNTIL ans$<>" "
RETURN
LABEL no_dir
IF ERR<>133 THEN PRINT"Error number ";ERR:END
PRINT "I cannot find directory TREEDAT"
PRINT "current directory is:"
FILES
PRINT
PRINT "options are:"
PRINT "          I : Ignore, carry on regardless."
PRINT "          M : Make new directory."
PRINT "          Q : Quit."
PRINT
PRINT "Your choice ? ";
REPEAT
ans$=INKEY$
UNTIL ans$="I" OR ans$="i" OR ans$="M" OR ans$="m" OR ans$="Q" OR ans$="q"
IF ans$="m" OR ans$="M" THEN PRINT"Make directory":MKDIR"treedat":CHDIR"treedat"
IF ans$="q" OR ans$="Q" THEN PRINT"Quit":END
IF ans$="i" OR ans$="I" THEN PRINT"IGNORE"
RETURN

```

The Amstrad User

MAIL ORDER SHOPPING

Send orders to The Amstrad User
1/ 245 Springvale Road,
Glen Waverley, Victoria 3150
Tel: (03) 233 9661



BOOKS

CPC TITLES

	Subscriber Price	Normal Price
Advanced Amstrad Programming Techniques	\$22.95	\$24.95
Advanced User Guide	\$19.75	\$21.95
Adventure Games for the Amstrad CPC464	\$25.15	\$27.95
Amstrad Compendium	\$20.65	\$22.95
Basic BASIC - <i>New Ed.</i>	\$14.95	\$15.95
Childs' Guide to the Amstrad Micro	\$11.65	\$12.95
Disc System, The Amstrad CPC 464	\$25.15	\$27.95
Dynamic Games for the Amstrad	\$17.95	\$19.95
Filing Systems and Data Bases for the CPC464	\$27.95	\$29.95
Graphics Programming Techniques	\$22.45	\$24.95
High Energy Programs for the Amstrad	\$ 9.95	\$ 9.95
Ins and Outs of the Amstrad	\$20.65	\$22.95
Machine Code for Beginners	\$17.95	\$19.95
Machine Lang. for the Absolute Beginner	\$20.65	\$22.95
Making Music on the 464/664 (OK for 6128 too)	\$19.75	\$21.95
Master Machine Code on your 464/664	\$19.75	\$21.95
Pitman's First Book of Amstrad Games	\$11.65	\$12.95
Powerful Programming for Amstrad 464/664/6128	\$22.55	\$25.05
Practical "C"	\$25.80	\$28.65
Practical Programs for the 464	\$21.55	\$23.95
Ready made Machine Language routines	\$20.65	\$22.95
Structured Programming on 464/664/6128	\$26.95	\$29.95
Whole Memory Guide - 464	\$26.95	\$29.95
Working Amstrad	\$17.95	\$19.95
Writing Adventure Games on 464/664	\$20.65	\$22.95

PCW TITLES

Amstrad Companion	\$25.95	\$27.95
LocoScript Pocketbook	\$16.95	\$17.95
Mastering the Amstrad PCW 8256/8512	\$29.50	\$32.25
Program your PCW	\$29.95	\$32.95

CP/M TITLES

CP/M - The Software Bus: a programmer's companion: CP/M 2.2 and CP/M Plus	\$29.95	\$32.25
CP/M Plus Handbook - Operator's and Programmer's guide for the Amstrad CPC6128 and PCW 8256 and PCW 8512 (Soft 971) by Digital Research Inc.	\$49.95	

LOGO TITLES

LOGO Pocketbook	\$16.95	\$17.95
Practical Logo on the Amstrad (under CP/M+)	\$25.95	\$27.95
Using DR Logo on the Amstrad (under CP/M 2.2)	\$35.95	\$37.95

PC1512 TITLES

Basic2 - Bk. 2 (Soft 50012)	\$37.50	\$39.95
Business Presentation Graphics on the PC1512	\$50.00	\$55.00
Program your PC	\$29.95	\$32.95
Using DOS Plus on the Amstrad PC1512	\$37.95	\$39.95
Using GEM on the Amstrad PC1512	\$50.00	\$55.00

All book orders under \$20 are sent free of any postage or packing charges.

For all book orders over \$20 please add \$5.00 for postage and packing (regardless of quantity ordered).

As most of the above books are imported, the price and availability may change without notice.

BACK COPIES

THE AMSTRAD USER

Issues 1 to 9 each	\$4.00
Note: Mar '85, Jun '85 and Sep '85 are 'Out of Print'	
Issues 10 to 21 each	\$4.50
Issues 22 to 33 each	\$4.75
Issue 34 to 35 each	\$5.25

Tapes for any of the above including those issues Out of Print are available, each at \$5.00

Year Disc 1 - Issues 1 to 12	\$50.00
Year Disc 2 - Issues 13 to 16	\$22.50
Year Disc 3 - Issues 17 to 20	\$25.00
Year Disc 4 - Issues 21 to 24	\$25.00
Year Disc 5 - Issues 25 to 28	\$25.00
Year Disc 6 - Issues 29 to 32	\$25.00

Tapes or Discs not suitable for PCWs or PCs

THE AMSTRAD COMPUTER USER (English)

Jan/Feb '85 to June '85 each	\$5.00
Nov '85 to June 86 each	\$5.50
Aug '86 to May '87 each	\$6.00
Aug '87 each	\$6.00
Note: Jul '85 to Oct '85, Jul '86, Jun '87 and Jul '87 are not available.	

Prices include postage on all Back copies, discs and tapes.

Bankcard, Mastercard or Visa accepted on all orders over \$5.00

BINDERS

In white vinyl with silver logos of "THE AMSTRAD USER" on the front and the spine. Protect your collection of The Amstrad User. Each binder holds 12 issues.

Price, including postage, is \$13.95.

Whether your investment was \$500 or \$2500 ...

... you can't afford to be without The Amstrad User

The Amstrad User is the only Australian magazine which supports the Amstrad range of computers exclusively and has grown to become the leading national magazine for your computer.

It makes sense to keep up to date with what's happening on your doorstep, to learn with advice from other users and our regular articles, to have fun with the many published games or to have assistance in your business software decisions through our independent software reviews.

The Amstrad User is available through most newsagents (if not yours ask for it - it's distributed nationally by Gordon and Gotch) or take out a Subscription using the form below and ensure regular delivery to your home each month.



Please send me 12 monthly issues of The Amstrad User. I own/intend to own a _____

I would like: the Magazine only at \$42.50 Magazine plus cassette of programs appearing in that issue at \$80.00 (tapes are not suitable for PCW or PC owners)

I wish my subscription to start with the current issue or Please start at Issue No

I enclose a cheque or please charge my Bankcard, Mastercard or Visa for \$ _____

The number is _____ The card expires on _____

Name _____ Phone number _____

Address _____

State _____ Post Code _____

Return this form to: THE AMSTRAD USER, Suite 1, 245 Springvale Road, Glen Waverley, Victoria 3150 or ring (03) 233 9661 for further information.

For subscriptions to Papua New Guinea, New Zealand, Solomon Islands, Vanuatu or New Caledonia please add \$21 airmail. For Fiji, Brunei, French Polynesia, Indonesia, Kiribati, Malaysia, Nauru, Niue, Samoa, Singapore, Tokelau Islands or Tonga please add \$27 airmail.

MASTERFILE 8000

FOR ALL AMSTRAD PCW COMPUTERS

MASTERFILE 8000, the subject of so many enquiries, is now available through The Amstrad User from Campbell Systems in the UK.

MASTERFILE 8000 is a totally new database product. While drawing on the best features of the CPC versions, it has been designed specifically for the PCW range. The resulting combination of control and power is a delight to use.

Other products offer a choice between fast but limited capacity RAM files, and large capacity but cumbersome fixed-length, direct access disc files. MASTERFILE 8000 and the PCW RAM disc combine to offer high capacity with fast access to variable-length data. File capacity is limited only by the size of your RAM disc.

A MASTERFILE hallmark is the provision of multiple, user-designed display formats. This flexibility remains, but now it's even easier. With MASTERFILE 8000 you design your formats "live"; no more questionnaires, just move your format effects around the screen using the cursor keys!

Record updating is even easier than before - just steer your cursor to any field on the screen and then insert/erase/alter as required.

Special options are provided for handling dates and surnames, and column totals can be generated.

All screen work is done graphically - and hence we offer unique panel, box, and ruled line options. Choose the line spacing at pixel resolution - you will be amazed how much clearer 9-pixel lines are than the usual 8-pixels. (Study the picture.) And all this faster than CP/M normally lets you paint the screen! PCW printer functions, under menu control, are provided.

Any file can make RELATIONAL references to up to EIGHT read-only keyed files, the linkage being effected purely by the use of matching file and data names.

You can import/merge ASCII files (e.g. from MASTERFILE III), or export any data (e.g. to a word processor), and merge files. For keyed files this is a true merge, not just an append operation. By virtue of export and re-import you can make a copy of a file in another key sequence. New data fields can be added at any time.

File searches combine flexibility with speed. (MASTERFILE 8000 usually waits for you, not the other way around.) You can even assign subsets of a file into one or more of seven pigeon-holes for subsequent reference or further manipulation.

Megalomerate Ltd

Sales Contact : Martin McManic
Telephone : 0245 654321
Reference : MGL
Date of last order : 14 Aug 86
Value to date : £31,455.00

Mega House
143-145 London Road
Chelmsford
Essex CM12 5EG

Ref	Maker	Model	Specification	Price ex VAT	
CS001	Epson	FX85	180cps 40x12 80col	£310	
CS002	Epson	FX105	180cps 40x12 132col	£410	
CS003	Epson	FX100	180cps 32x12col	£195	
CS004	Epson	LX100	100cps 32x12col	£195	
CS005	Epson	LX1000	100cps 50x12 80col	£435	
CS006	Epson	EX1000	100cps 50x12 132col	£375	
CS007	Epson	850	100cps 50x12 80col	£275	
CS008	Canon	855	100cps 45x12 80col	£335	
CS009	Canon	5510	100cps 45x12 80col Colour	£240	
CS010	Juki	5520	15cps daisywheel	£410	
CS011	Juki	6100	30cps daisywheel	£630	
CS012	Juki	6300	35cps daisywheel	£390	
CS013	Juki	6300	280cps 50x12 132col	£1,795	
CS014	Fujitsu	DX	8 page min 84	£2,700	
CS015	Fujitsu	LIPSAL	8 page min 84 graphics	£2,500	
CS016	Canon	LIPSAL	8 page min 84	£2,500	
CS017	Canon	Laser	8 page min 84 graphics	£2,500	
CS018	HP	Laser	100cps 50x12 80col	£2,500	
CS019	HP	KP-810		£2,500	
CS020	Taxan			£285	
CS021					

Help on 03
Drive:A File:MASTERFILE Record:00021 Selected:00021 In:Ref Format:1

Customer Details and Invoices

British United Freight
493 Western Avenue
Gloucester
GL9 5JM

Tel: 0452 6...
Contact: Mike...
Ref: BUF

03: Display Options
Steer using *+/-
Alter data *
Erase data DEL
Assign to set A
First page B
Next page ENTER
Find key of F
Go to record number G
Print P
Print single record R
Erase record L
Insert new record I
Show re-sequenced N
Rotate format R
Go to search S
Exit to main menu X

Invoice	Tax point	Amount	Date paid	Comments
12044	20 Aug 87	£235.00	02 Oct 87	
12359	28 Aug 87	£98.00	02 Oct 87	
12450	01 Oct 87	£385.00		re
12453	21 Oct 87	£133.00		
12533	03 Nov 87	£1,004.50		
12598	10 Nov 87	£355.65		
12703	11 Nov 87	£200.00		
12782	11 Nov 87	£39.20		
12839	04 Dec 87	£883.55	04 Dec 87	Cash with order
Totals:		£3,253.90		

Date of invoice

Drive:A File:INVOICES Records:00017 Selected:00009 Key: Format:1

Keyed files are maintained automatically in key sequence, with never any need to sort. You can have unkeyed files too, where records can be inserted at any point in the file.

MASTERFILE 8000 is totally menu-driven, fully machine-coded, and comes with example files and a detailed manual. We claim (modestly) that you will not find another filing system with such power, flexibility, and friendliness.

MASTERFILE 8000 costs \$109.00 including postage and packing, and if you request air-mail within Australia, we'll do that at no extra charge too! (If you live outside Australia please add \$4.00 for air-mail cost.)

Bankcard, Mastercard or Visa orders are welcome, written or telephoned, quoting the card expiry date.

Send your order now to:
THE AMSTRAD USER
Suite 1/245 Springvale Road,
Glen Waverley,
Victoria 3150

Tel: (03) 233 9661