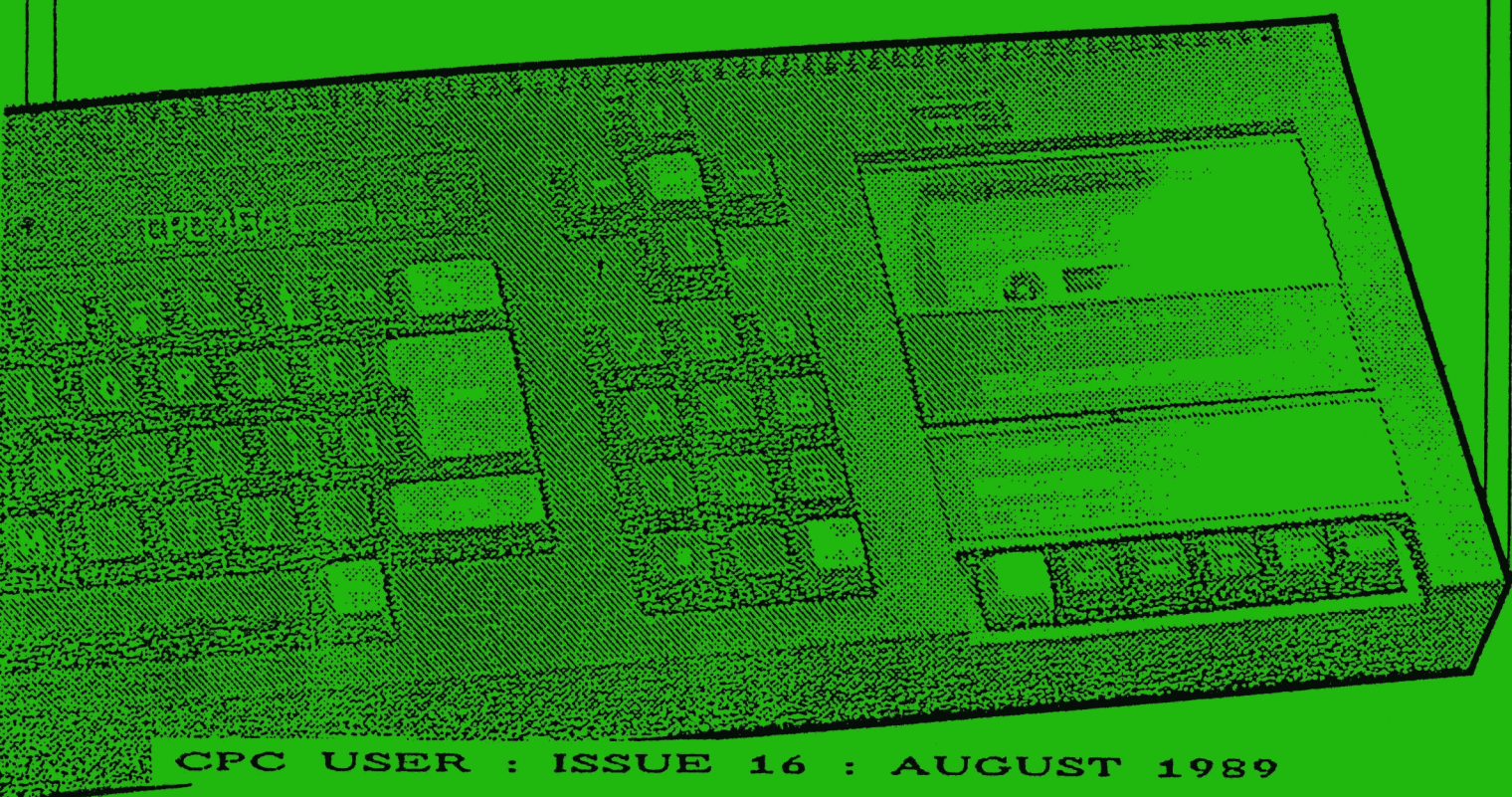


CPC

USER

THE BI-MONTHLY MAGAZINE
OF THE
UNITED AMSTRAD USER GROUP



CPC USER : ISSUE 16 : AUGUST 1989

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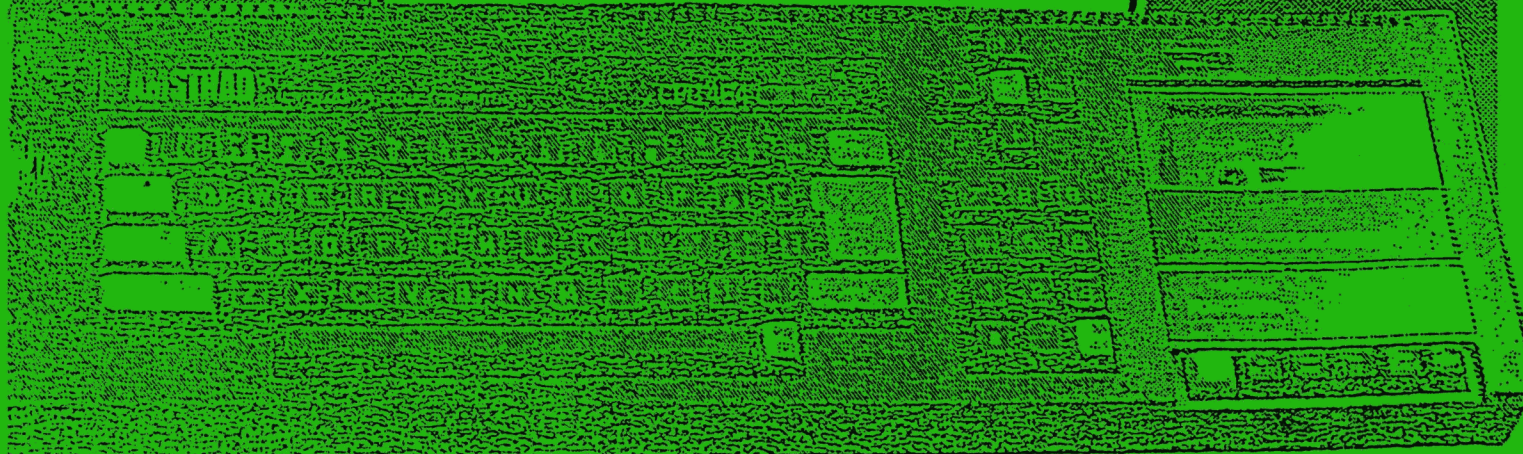
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UNITED AMSTRAD USER GROUP

EDITORIAL

WHEW!

Quite a rush to meet the advanced deadline this time. Our thanks to the printers for printing this issue before closing for their summer holidays.

There has been increased club activity recently with many more members taking an active part by offering services and submitting articles and letters. Keep it up! Some material has been held over to issue 17. We have a new tape PD librarian, Gordon Woolliscroft, who hopes to have this service up and running shortly thereby leaving Dave Cutts to concentrate on the disc software. We also have a Comms. Editor, Tony Walker, who is very keen to give members help and advice on this subject. We hope to publish an article by Tony in the next issue. So together with articles from our regular contributors (and a sincere thanks to them) we hope to bring you another well balanced issue next time.



IMPORTANT NOTICE.

Will members please note that until further notice **STEPHEN GENNARD'S** temporary address is as follows:

28 Milton Road,
Hoyland Nether,
BARNSELEY,
S. Yorkshire,
S74 9BD

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YOU CAN HELP....

by sending all letters and articles either on a disc or cassette in ASCII, PROTEXT or TASWORD format. This saves the Executive Editors considerable time in re-typing material for publication. Your media will of course be returned.

This month I will devote my section to telling you something about our overseas membership. I expect you will have seen letters in Mailbox from Portugal and Zimbabwe, but we also have members in Denmark, Germany, Greece, Saudi Arabia and the USSR.

Our Russian member is Neil Bukharayev and as he says in a recent letter to me, he is probably the only Amstrad CPC owner within a thousand miles so he relies on us to help solve his problems. Elsewhere in this issue you will read some of the advice we have been able to give. One of Neil's problems is that of currency conversion which means that he is often unable to buy software from this country. He has asked if any members are interested in swapping disc software for Soviet books, records, car models, souvenirs etc to an equal value. If anyone is interested let me know and I will forward your name and address to Neil who will contact you direct. Please remember that software should be originals with full instructions.

Finally a reminder that as the summer holiday season is with us now your UAUG Editors and Officers will not always be available to deal with telephoned enquiries. Letters will be answered as soon as possible, but please be prepared for delays of at least a week.

Regards - Tony Baker.

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a copy of LORDS OF MIDNIGHT

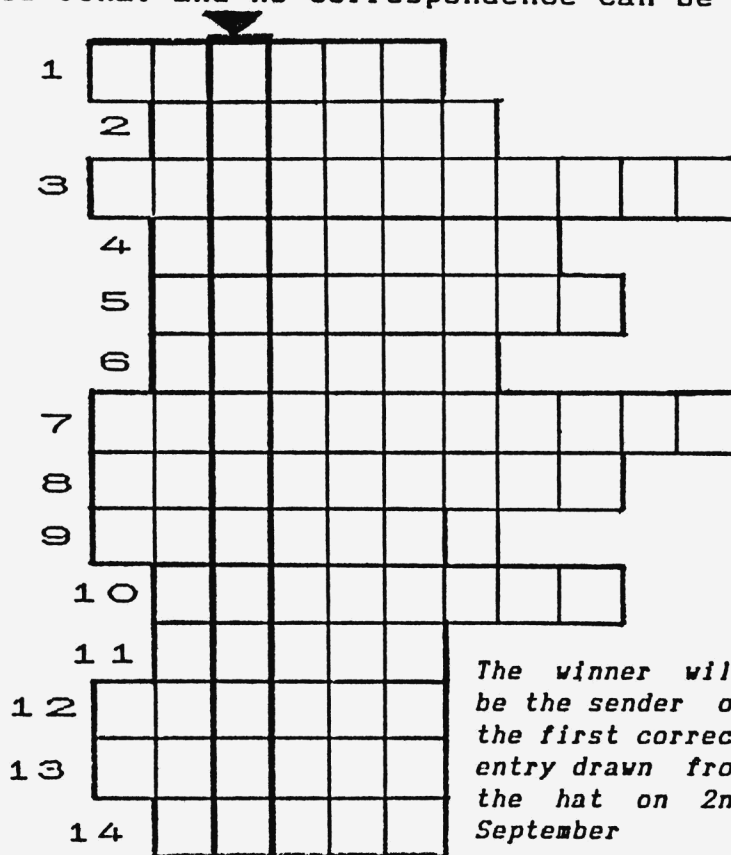
In this competition the idea is to solve the clues and enter the answers in the numbered grid. The correct answers will make another computer orientated word in the middle down column. WOW!

To enter just send the down word on a post card, envelope, piece of paper or a £5 note together with your name, address and membership number to Competition, 4 High Walk, FAREHAM, PO15 6BS to arrive not later than September 1st.

Sorry, the Editors' decision is final and no correspondence can be entered into.

CLUES ACROSS

- 1> Sometimes poor in old age.
- 2> Fast food perhaps?
- 3> It adds up to something.
- 4> But not as seen on television
- 5> Not to be confused with the hard variety.
- 6> A goblin? No, surely not!
- 7> Fits a double bed perhaps?
- 8> Useful for recording water useage
- 9> Could be the reverse.
- 10> Musicians use them too.
- 11> Well known computing mnemonic.
- 12> It's another language.
- 13> On time.
- 14> A human form of communication too.



The winner will be the sender of the first correct entry drawn from the hat on 2nd September

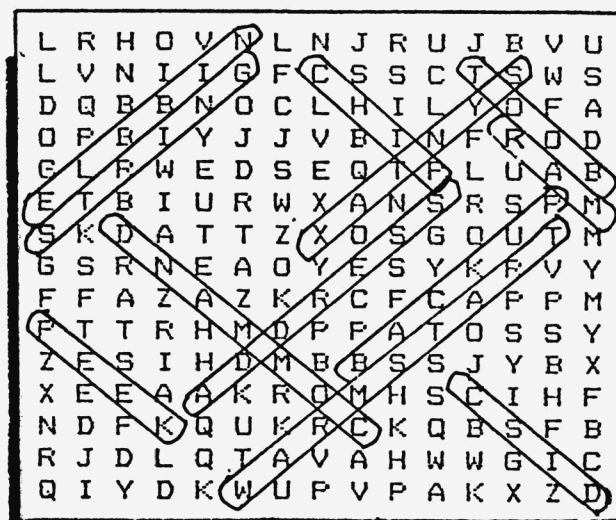
Competition set by John Stanford

ANSWERS TO COMPETITION (issue No. 15)

- | | |
|-------------|----------------|
| 1). Disc | 7). Nibble |
| 2). Address | 8). Peek |
| 3). Backup | 9). Ram |
| 4). Boot | 10). Warmstart |
| 5). Chip | 11). Syntax |
| 6). Command | 12). String |

THE CORRECT WORDSQUARE POSITIONS
ARE SHOWN AT RIGHT -->

The winners of both competitions will be announced in the next issue.



FIRMWARE : STACKPOINTER : PROGRAM : ASSEMBLER : REGISTER : AM : CHIPS
 MNEMONICS : PROCESSOR : ACCUMULATOR : EXECUTE : INCREMENT : SOFTWARE
 FIR Jargon BLER : REGISTER : PS
 MN' : INCREME : ARE
 FI : TER : IPS
 MNEMONICS : PROCESSOR : ACCUMULATOR : EXECUTE : INCREMENT : ARE

PART
FOUR

"LIVING WITH JARGON" by Andrew Sharp

Over the past few issues we have been looking at jargon's use and meaning. In part two I mentioned something called logic. This time I shall be explaining all about logic and its uses. Logic doesn't often come up in conversation, but it can be extremely useful to programmers. It is more difficult to grasp than much of what we have already learned but you will at least know what people are talking about when they mention it.

Logic takes two forms - that used in conditional commands and that used in calculations. The former, called Boolean, is the easier to grasp so I'll start with that.

Basic has a command 'IF...THEN...ELSE' which is used to decide what the computer should do in certain circumstances. Here's a rather unlikely example:

```
IF time > 10 O'clock THEN go to bed ELSE don't go to bed
```

The computer looks at the statement "time > 10 O'clock", checks to see whether 'time' really is greater than '10 O'clock' and if it is then it says to itself "That statement is TRUE so I must carry out the first command." If it is not, then the computer says to itself "That statement is FALSE so I must carry out the second command."

But where does logic come in? Suppose we wanted a command executed only if two statements were TRUE. The way we would do this is to say:

```
IF time=5 O'clock AND day is Friday THEN PRINT "Hooray!"
```

AND is what is called a logical operator (called a gate when in a circuit because it decides whether to let electricity through or not) because it puts the two statements together and if the first statement AND the second statement are TRUE then it tells the computer that the statement is TRUE. If, however, one of the statements is FALSE then the computer treats both statements as being FALSE and it would not carry out the command.

It's all very well being able to do something if both statements are TRUE but what if you want to tell the computer to do something if either one or the other or both of the statements are TRUE? To do this we use the logical operator OR. This is how it works:

```
IF day=Saturday OR day=Sunday THEN PRINT "Weekend" ELSE PRINT "Week"
```

A slight variation on this operator is XOR (which is short for eXclusive-OR - sometimes called EOR, but I think it's a rather asinine name). This operator works in a similar way to OR but this time if both statements are TRUE then the result is FALSE - it will only give TRUE if only one of the statements is TRUE.

The last of the logical operators is NOT. This is a bit like saying 'does-not-equal'. For example: IF NOT a=b is the same as saying IF a<>b. What it really means is if a certain statement is TRUE then it will give a result which is NOT TRUE - ie. FALSE, and vice-versa. So in summary this is what the operators require to return TRUE:

AND If both statements are TRUE then the result will be TRUE.

OR If either one, or the other, or both the statements are TRUE then the result will be TRUE.

XOR If either one, or the other, but not both the statements are TRUE then the result will be TRUE.

EOR Same as XOR - not used on the CPC.

NOT If the statement is FALSE then the result will be TRUE.

We can draw up a table of the results of trying different combinations of TRUE and FALSE on each operator in turn. These tables are called 'truth tables'.

<u>AND'S Truth table:-</u>		
Statement #1	Statement #2	Result of #1 AND #2
FALSE	FALSE	FALSE
FALSE	TRUE	FALSE
TRUE	FALSE	FALSE
TRUE	TRUE	TRUE
<u>OR's Truth table:-</u>		
Statement #1	Statement #2	Result of #1 OR #2
FALSE	FALSE	FALSE
FALSE	TRUE	TRUE
TRUE	FALSE	TRUE
TRUE	TRUE	TRUE
<u>XOR's Truth table:-</u>		
Statement #1	Statement #2	Result of #1 XOR #2
FALSE	FALSE	FALSE
FALSE	TRUE	TRUE
TRUE	FALSE	TRUE
TRUE	TRUE	FALSE
<u>NOT's Truth table:-</u>		
Statement	Result, which is NOT the statement	
FALSE	TRUE	
TRUE	FALSE	

As you know a computer only works in numbers, so the way it represents TRUE and FALSE is with 0 and -1 respectively. So if you type PRINT 1=1 then -1 will be printed on the screen (the reason for -1 rather than 1 should become apparent in part 5), and if you type PRINT 1=2 then the computer prints 0 because this statement is FALSE.

Hopefully you should now have grasped the basic idea as concerns this form of logic. If not, don't worry. As I said at the beginning, logic is not something you will hear most people talking about when trying to impress.

If you were to type PRINT 10 AND 8 what do you think the computer would print? 18? Wrong. It would actually print 8. Why is this do you think? The reason is because AND does not mean 'add'. The way it works is to look at the numbers in binary and look at each of the bits (binary digits) in turn. If bit 2 in the first number is 1 AND bit 2 in the second number is 1 then bit 2 in the result will be 1. Let me illustrate that more clearly:

AND	10	AND	1010	So you see, in this bit 3 is 1 in both numbers so bit 3 in the result is 1. Bit 1, however, is not the same in both numbers so the resulting bit 1 is zero.
	8		1000	
Result:	8		1000	

The same principal is applied when you do this with other logical operators. Let's do some more sums and I'll show you.

OR	10	1010	If one or the other or both bits are 1 then the resulting bit will be 1.
	8	1000	
Result:	10	1010	
XOR	10	1010	If one or the other of the bits is 1 then the resulting bit will be 1. If both bits are 1 then the resulting bit will be 0.
	8	1000	
Result:	2	0010	

NOT is slightly different to the others. Instead of working within the size of the number given it, it works within the number 65535 which has 16 bits to it. The way it works is to invert all the bits so that 1 becomes 0 and vice-versa. This is the same as XORing the number with 65535.

Continued in page 8

From absolute computer illiteracy...
to almost computer illiteracy!

THE FIRST YEAR

by BRIAN WATSON

Before I get into my stride here is a bit about myself which I hope will serve to explain the point of view from which I write. I am 40, married, and have a son aged 10 and daughter aged 8. I am a sales agent in the greeting cards and gifts business, which means that I represent several different companies, selling their products into shops and later, sometimes much later, I get paid a commission. I am self-employed so if I don't keep on top of the paperwork I don't eat!

Just before Christmas 1987 I was finding that business was getting so busy that I felt that a computer would help me keep track of things and make my letter writing more professional as well as more legible. So I started doing some research to see what could best suit the purpose. I started buying ALL the magazines available, it cost a lot at the time but ultimately I reckon it saved me money in the long run. I found the "Serious Business Micro User" - type magazines full of earnest men in suits, PC clones (whatever they are, perhaps it's the men in suits), and totally unintelligible articles about why I should spend more on a particular printer than some people earn in a year. Needless to say, I did not pursue enquiries in that direction. The vast majority of magazines seemed to feature "You're the Last Hope...etc" games on the covers; that's more like it, I thought, it'll save me a fortune on the machines when we take the children to the seaside. Not that THEY play them, you understand, I've been a fan of arcade games since that ping pong thing 100 years ago. Once past the covers, I found a reasonable mixture of game tips, type-ins (usually very long), and reviews of non-game software. I also found readers' letters and it was reading them which most affected my buying decisions.

I didn't buy a PC (any version) because they are overspecified for a business of my size and the games, such as there are, seemed to be tedious in the extreme as well as lacking any real atmosphere in their sound effects. I didn't buy a BBC, or similar, for much the same reasons, plus the fact that there did not seem many games available when compared with other machines. I didn't buy a Spectrum because the more serious side of software seemed sparse and despite all my rattling on about games my business account had to justify the final choice! There was a time when I considered one of the big 16-bit computers but although the blank discs were apparently quite cheap, a lot with demo programs were being given away on the covers of the relevant magazines,

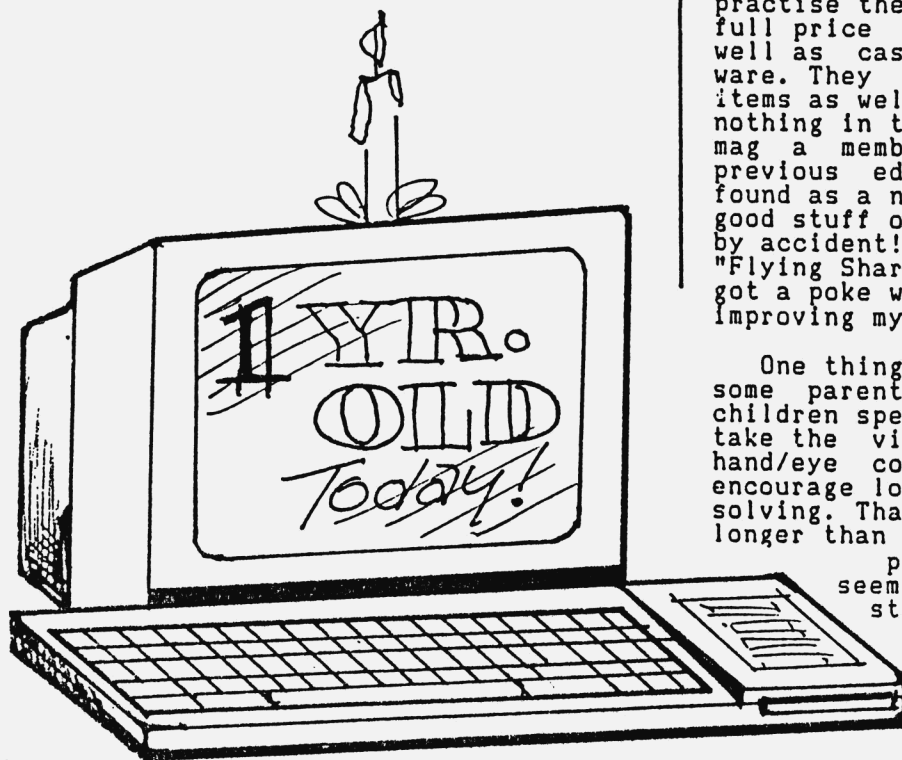
games and business software were incredibly expensive when compared with my final alternatives: the PCW and CPC ranges, both from Amstrad. I never did get to the bottom of the differences in the PCW versions but they seemed to be very sound business-orientated word processors with the additional benefit of a reasonable range of games available. Lord knows why they are called Joyces; if my good lady heard I'd been up half the night (as I was later to be on many occasions) running my fingers over my Joyce there would have to be a darn good explanation ready! You will by now have gathered what I bought (it wasn't very difficult). The argument was easy in the final analysis: the machine was within my price-range (I had budgeted for a maximum figure of £1000 including VAT to cover computer, printer and word processor, database, and spreadsheet programmes. I assumed it would be no problem to produce graphs (in full colour, of course!), and address labels. I soon learnt the Facts of Computer Owners Life. Also it seemed there were cassette games for £1.99 in every big shop in town.

As there seemed to be no price competition between shops that I could find, I purchased a CPC6128 from Robinsons of Huntingdon. I was quite impressed by the way the salesman repaired a joystick during our preliminary conversation; this could have been really irritating but he was so obviously enjoying his work I forgave him at once. I did not then buy a printer or any software. At the time there was a free pack of games supplied so I thought I'd find my way round that lot before spending any more money. So home then, open the manual and read a few pages to make sure I couldn't wreck it too easily and switch on. It soon became apparent that I needed to copy my CP/M discs to avoid an expensive replacement bill (or at least that was the implication) in the event of a mistake, however no blank discs were included so they went straight to the top of my shopping list and I moved on to the games discs.

The instructions for loading were downright useless; in each case the discs told me to type "RUN DISC" instead of run "DISC", not designed to inspire confidence in a beginner, and there were no instructions as to how to play most of the games. Anyone fancy an article on them, in particular "Shape & Sound" which I suspect could be really useful if I knew how it worked? Anyway, by reference to the manual (when all else fails...) I actually found what to do

and had a fair amount of fun joystick waggling to various degrees of success. My son was soon very proficient at the simple but fascinating "The Prize". One thing that really surprised me was the tiny display on the screen, and I still think that a lot of the criticism of computers causing eye-strain can be blamed on the small screen we put up with. Of course, the enormous border makes things worse. I also joined The Amstrad Owners' Club, even though the sole benefit seemed to be a subscription to Amstrad Computer User, a magazine which I was buying anyway and a newsletter of which the vast majority was adverts for games long forgotten by most discerning users. However, in time I found they were pretty efficient at processing orders and much more reasonable on prices than the Home Computer Club (of which more later).

Having got started, I returned to Robinsons a week later and was recommended to the DMP2160 printer, which I have used ever since. It has proved less reliable than the computer, although I suspect at least one fault was caused by giving it contradictory printer codes when trying to get different typefaces. To be fair to myself it would seem logical to have a fail-safe system in the event of some beginner doing as I did. A few days later I bought the Mini Office II suite from Dixons in Cambridge. It was not in stock but they got it in three days. Like a mug I paid full price, I had yet to learn the benefits of shopping around the mail order companies and the specialist shops. When I bought a pack of 10 blank discs, I also bought a lead to connect the family cassette deck so I could load all the cheap games starting with a cover mounted item from a magazine. From the outset it was very apparent that games software



advertisements bordered on the edge of the trades descriptions act in the hyperbole of their claims. Only in very few cases have games come anywhere near to the artwork of the pre-publicity hype. This is in no way to detract from the game play, which in most cases has been very satisfying in different ways. I am not a great fan of adventure games but in many ways they seem to use the home computer to great effect. I understand the limits of memory but I would rather have actual CPC screen shots on the packaging of the games I buy. I got into the Mini Office II suite gradually, rather than putting all my customers (200+) onto the database at once. In fact, for weeks I only used the word processor to tidy up my letter writing and filing of copies (saved to disc). I also made up a few standard letter formats and saved them to the back of the M.O. disc to minimise disc-swapping. A lot has been said about the problems which can occur with this word processor, but I have become used to its eccentricities and have only just acquired a copy of Protext (CP/M version) which to be honest I could do without. For anyone still having problems with the M.O.W.P. I can highly recommend the article in a back issue of this magazine, although like me you may find your version of the program is not exactly the same as the one reviewed.

So time passed and I joined, tempted by an insert in one of the magazines, the Home Computer Club run by W.H. Smith at Swindon. Like the Book Clubs which they also run, there is a magazine/catalogue sent from time to time from which one has to order something unless the default choice is wanted in which case one does nothing and waits. Of course they do not find it economic to offer the really cheap games, so in practise the choice is between reduced full price items, including books as well as cassette and disc-based software. They do have art and business items as well as games and if there is nothing in the current issue of their mag a member wants an item from a previous edition can be selected. I found as a newcomer I ordered some very good stuff over the first year (almost by accident!) including the excellent "Flying Shark" on disc for which I later got a poke which helped a bit as I was improving my skills.

One thing which seems to infuriate some parents is the amount of time children spend playing games. However I take the view that games do improve hand/eye co-ordination as well as encourage logical approaches to problem solving. That said, my son still spends longer than I would like on the computer playing games and doing what seem to me fairly well structured Basic programming. My daughter, however finds next to nothing which interests her despite having equal time and encouragement from the

THE FIRST YEAR

early days. Perhaps I should try the Fun School software to see if they appeal to her? I should point out they are both reasonably bright and fairly good achievers at school. As the year went on I started to keep track of my orders and income using the Spreadsheet part of Mini Office. Following the manual I did take time defining the box sizes for entering the figures and sorting out the number of columns which I would need before I started. This was done on graph paper and revised several times with a lot of trial and error "dry runs" before I would trust myself to SAVE the layout for use each month to record my business transactions. Everyone I have spoken to has told me how much better almost every other Spreadsheet program is, and they are probably right in respect of being able to change the layout and use the figures in more flexible ways, however I can confirm that a business can be run using even this cheap package on the CPC. My strong recommendation would be to only buy the disc based version, as I spend a lot of time nipping about from module to module and the loading time using tape must be horrendous! While I'm on Mini Office again I must mention the Graphics module, as this is something designed to be used as an option to the Spreadsheet module, displaying your rows and/or columns of figures in graph form. It is only of limited use in my experience as it is very difficult to display information with the clarity necessary to read it later with sufficient accuracy. Incidentally, I do not have a modem but would be pleased to hear from anyone who knows whether the Mini Office module is definitely out of date due to the modem for which it was designed having been taken out of the Amstrad range. That's the rumour I heard anyway. The only parts of the package I have not dealt with in this long and winding narrative is the Database and its complement the Label Printer. These were the last parts to be pressed into

business service and again have proved very serviceable as once again (!) I spent some time coming to grips with them. As yet I do not incorporate the Database details into my Wordprocessor letters but it can be done without much difficulty if I find a future need for mailshots. Since I resent getting them, I think it unlikely that I'll send them!

In time I became aware of Public Domain Software and wrote off to as many suppliers as I could find to see whether there was anything to help my wife record her researches into her family history as I had been unable to find anything commercially available. Considering the stuff is freely donated, there seem to be a lot of people making money out of it! One of the nice things about the UAUG is of course its fast expanding PD library and so cheap...! I have now been advised of a disc based family history program "Genny" and would welcome anyone's advice on its suitability before I part with the hard-earned. So here we are one year on. As well as the two remaining CPC mags I occasionally buy ACE, New Computer Express, and others depending on their CPC coverage; all of them good in their way. I also get Amstrad Enthusiast's Magazine, a very good newcomer allegedly for the "Serious User" but in fact a good read whatever your level of competence. I have no intention of moving on to another computer in the foreseeable future.

I recently bought a second disc drive to assist me in coming to grips with CP/M Protext, I just wish I could save my latest game position in "Elite" onto it! If anyone wants to chat one evening about any of the points raised feel free to give me a ring any evening but Friday; my number is 0353 777006. If you prefer write in to the CPC User and share your viewpoint with everyone else. I have!

☐ Should you prefer to write to Brian his address is 30 High St., Sutton, Ely, Cambs., CB6 2RA. He has given permission for this information to be published.

JARGON

Continued from page 5

```

NOT      10      0000000000001010
          10      111111111110101  ie 65525

```

is the same as saying

```

          10      0000000000001010
XOR      65535    1111111111111111
Result:  65525    111111111110101

```

You will notice, however, that if you type PRINT NOT 10 you will not get the answer 65525, but -11 instead.

Not-so-Quick Quiz: Why is this do you think? Notice that the result is negative and that 11 is not entirely unconnected with 10. To find out why you should get such a strange answer read the final part of this series in issue 17. If you have any comments or questions on this or any other article in the series, please contact either one of the team, or myself at this address:

Andrew Sharp, 2 Meadow Close, Farmoor, Oxfordshire, OX2 9NZ

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B1020P	The Amstrad Pentacle Adventure Creator	B1049P The Amstrad Games Book *
B1021P	Write Your Own Adventure Games For Your Micro-Computer	B1050P Easy Add-on projects for the Amstrad 464, 664, 6128 *
B1022P	Understanding Computer Graphics	B1051P A Z80 Workshop Manual *
B1023P	Amstrad CPC 664 Computing *	B1052P Computer Engineers Pocket Book *
B1024P	Introducing Logo *	B1053P Your First Amstrad Program
B1025P	Mysterious Adventures for your Amstrad	B1054P Mastering Machine Code on your Amstrad 464/664/6128 (2 copies)
B1026P	The Amazing Amstrad Omnibus *	
B1027P	The CP/M Bus *	
B1028P	Master Machine Code on your Amstrad 464, & 664	
B1029P	Assembly Language Programming for the Amstrad 464, 664 & 6128	
B1030P	100 Programs for the Amstrad 464, 664 & 6128	
B1031P	The Amstrad Disc Companion for the Amstrad 464, 664 & 6128 (2)	
B1032P	Amstrad Machine Language for the Absolute Beginner (2)	

Note: Books Marked * are on loan to the Library

As the book has not been returned to the library by the borrower, catalogue No. B1029P is not available for hire.



"POSSIBLY THE SOFTWARE BARGAIN OF THE DECADE..."

SAYS JOHN STANFORD

(Joint Editor CPC User)

"Probably the most useful program that any printer owner can buy.....no printer should be without this program..."

So says the Siren advert. Mainly out of curiosity, I purchased this utility about a year ago. My first impression was not good. The program comes on a 'cheapo' disc with a poorly produced manual (well one sheet of paper actually!). I later realised that these criticisms were of no consequence and I discovered that I had, in my opinion, bought possibly the software bargain of the decade!

Before starting to use Printmaster you are advised to copy your master disc. This copied easily albeit with disturbing clicking noises from the poor quality disc but I have not had occasion to use it since so this did not matter too much.

The main program on the disc is, I suppose, "ASCPRINT" which can print your input copy in a choice of nineteen typefaces ranging from the plain to the ornate, all of which can be produced in three basic sizes (0 - 2). On the disc are four demo files which when printed out using "ASCPRINT" ably demonstrate the program's potential; these demo files more than compensate for the poor manual. These files can also be loaded into your word processor and printed out to better understand the program's input requirements. These requirements are simple and self-explanatory and consist mainly of the commands !FONT followed by the font name (e.g. !fontcity) and !SIZE followed by a figure (e.g. !size2). The input files can be prepared on any word processor capable of producing an ASCII file. The commands must be on a line on

"CHICAGO" font, abcdefghijkl

"COUNTDOWN" font, abcdefghi

"CITY" font, abcdefghijklmA

"FLASH" font, abcdefghijklm

"GOTHIC" font, abcdefghijkl

HELVETIC" font,

"IMPRINT" font,

"PEIGNOT" font,

"STANDARD" font

"STENCIL" font,

"BUSINESS" font

"SEETHRU" font,

"TYPIST" font,

"FLOWING" font,

"FIGARO" font,

"BROADWAY" font

"OUTLINE" font,

"SHADOW" font,

```
!size 1
!FONT CHICAGO
"CHICAGO" font, abc
!FONT COUNTDOWN
"COUNTDOWN" font,
!FONT CITY
"CITY" font, abcdef
!FONT FLASH
"FLASH" font, abcde
!FONT GOTHIC
"GOTHIC" font, abc
!FONT HELVETIC
HELVETIC" font, abc
!FONT IMPRINT
"IMPRINT" font, ab
!FONT PEIGNOT
"PEIGNOT" font, ab
!FONT STANDARD
"STANDARD" font, ab
!FONT STENCIL
"STENCIL" font, ab
```

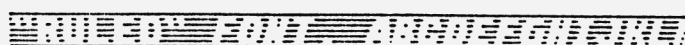
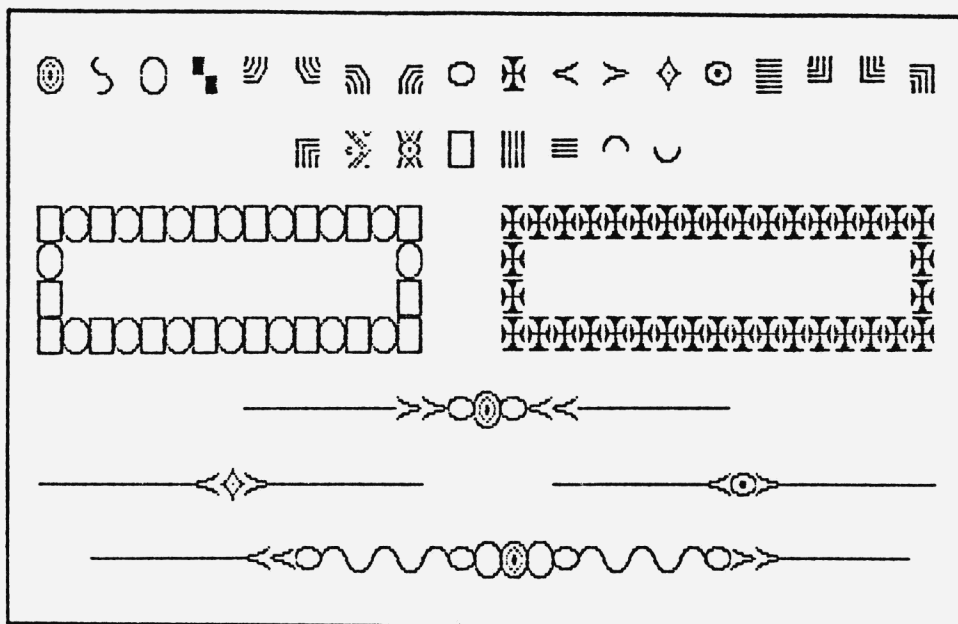


FIGURE ONE

FIGURE TWO



printed black. !CDUMP dumps any characters on the screen to the printer; !GDUMP dumps a mode 0 screen to the printer in sixteen shades of grey representing the sixteen colours available in this mode. The commands !BUFFON / !BUFFOFF provide a useful interrupt driven printer buffer.

As if this is not enough, also provided is a font program called "DESIGNER", which allows you to create and alter your own fonts. I have not tried

their own and start at the extreme left hand margin. Sample input and the resulting output from "ASCPrint" is shown in figure one. There is a further command word, !HEAD and this is followed by three parameters; the first is size (0,1,2 or 3 which is a heavier version of 1), the second is the width multiplier and the third is the height multiplier (e.g. !head323). This produces larger sized type and is suitable for headlines. As you will have noticed, I use this facility for some of the page headings in this magazine. It must be stated that this is rather a case of trial and error because some parameter combinations can produce grossly distorted results! There are three more available commands; !INVERT which inverts all text until another invert command, !ULINE underlines the text until cancelled with another underline command and !PAGE which throws to a new page.

There is also another font which I have not previously mentioned, "PATTERNS". This font consists of 26 basic graphic shapes which when printed together produce useful borders, rules etc. (see figure two). This font also contains a set of alpha characters in capitals only.

So much for "ASCPrint"; also on the disc is a customisation program which enables you to set up your printer codes if your printer is not Epson compatible. Another program called "UTIL" sets up some RSXs; !DUMP will dump a screen to the printer in any mode. Pixels in INKO will be left white but all others will be

using this program yet due to lack of spare time. Perhaps I'll get round to it when I retire or is that just wishful thinking?

There is one minor problem with the program suite and that is the lack of available free space on the disc for your input files. It means that you cannot store too many input files on that disc but of course you could delete some of the unwanted files from your copy. If you have two drives this is no problem as PrintMaster allows for drive B.

SIZE 0
THIS IS SIZE 1
AND THIS IS SIZE 2

In my opinion, PrintMaster is excellent value for money at only £14.99 (disc only). It is available direct from:

Siren Software,
2-4 Oxford Road,
Manchester, M1 5QA

and if you quote your UAUG membership number when you order you will probably get a discount too. I did!

Examples using !HEAD
EeEeEeEeEe

ELITE'S

Overlander

REVIEWED BY JOHN PACKHAM

DISC£14.99

TAPE£ 9.99

Version reviewed: TAPE

What happens when you remove the ozone layer from our lush green planet?

Answer....you end up with a desert and the only safe place to live is underground. The only ones who dare to leave this hole and travel above are OVERLANDERS. This they must do to get from city to city, and in this game, YOU are one of the Overlanders.

Once you start to load the game, don't be fooled by the screen going blank for some time. After a while, the title screen appears, which may be a little difficult for green screen users to see because it's in mode 1 and consists of just black and different shades of blue. This then clears and the screen goes blank again. If you're not used to it, you might wonder whether it's loading OK.

Once loaded, if you leave things for a while, you can listen to some excellent title music, but when you've had enough you can get on with the game.

Your first task is to select either Joystick or Keyboard control. Whichever you choose, use the definable key option. Here you can select the keys for use as PAUSE, QUIT, and Weapon Select.

Next, it's off to select the cargo that you intend to transport across country. You're given two choices on each run, one is legal, the other isn't. You're also paid an amount according to the cargo. Obviously, the illegal one pays more, but it also attracts more trouble on the way. You're given half the payment at the start, the rest is paid upon completing your journey along with any bonus. That's if you succeed!

You then have to fuel up, and like everything else, it costs money. I found that if you select the illegal cargo on the first run and fuel up so that you have \$4000 left, then this is sufficient to go on to the next selection. This is where you choose your weapons and armour and is also where the strategy comes into play. If you select a TURBOCHARGER and 3 lots of BULLETPROOFING then with any luck, you ought to get through. Of course, further runs incorporate different dangers. For instance, on the second run, you'll find barriers across the road. For this you'll probably need the battering rams.

Once your selection is made, then it's OFF and AWAY!!

The screen is divided into two, with about the top two thirds showing a 3D view of the approaching road and the view is from BEHIND your vehicle. The bottom third is taken up by a dashboard display showing such things as Fuel, Weapons, Armour, Lives (you start with 6) and two arrows indicating enemy closing. The top arrow indicates that trouble is ahead and the bottom one indicates trouble is behind.

The graphics are a bit bare, but then again, it IS a desert. The road scrolls smoothly and quickly towards you, and what other details there are (e.g. your car, the odd trees, wrecks, mountains) are adequately done. Sound is limited to skids, turbo, and shots and bangs, but is sufficient I suppose.

Once you start moving, look out for the enemy, especially the Kamikazee Motorcyclists. These little blighters come out of nowhere and head straight for you. If they make contact, then BOOOOOOMMM!!!

Other foes include Roadhogs who insist on trying to force you off the road, but if you drive alongside them, it's great fun pushing THEM into one of the many wrecks along the roadside. Snipers hide along the side of the road and this is where the bulletproofing comes in handy. They can be shot if you're quick enough in going from one side of the road to the next. Occasionally, you'll approach a heavily armoured truck. These need several hits to destroy them, but watch out for the grenades lobbed from the back. Slam on the brakes and stay well behind.

Along the top of the screen is your current score and also the highest score. Extra lives can be bought at the end of a run, but they cost you, so make your choice wisely. To sum up I'd say....

GRAPHICS.....	7
SOUND.....	8
(mainly for title music)	
PLAYABILITY.....	8
VALUE FOR MONEY...	8
OVERALL.....	8

It's a game which should have you coming back for just one more try!

May I appeal to all of you again and say that I welcome all articles relating to games software, whether it's a review, comments (good or bad), tips, solutions or anything to do with games. So start sending them in. It doesn't have to be typed or on tape/disc. I'll sort it out however it's sent. Without your support, our great mag won't survive, and while I'm waiting for some response from the software houses, if you feel that you'd like to contribute, but feel that you can't write anything useful, then how about sending me your latest games (or old ones), then I can write about them. I'd return them to you as soon as possible. Or perhaps you've written a game. It doesn't have to be a machine code masterpiece, a basic game will do. SO GET CRACKING! IT'S YOUR CPC USER!!

IN THIS ISSUE WE EXTEND A WARM WELCOME TO DAVE CUTTS WHOSE FIRST CONTRIBUTION AS PD LIBRARIAN APPEARS BELOW...

SEE ALSO PAGE 18

I have taken over the PD Librarianship from John Blessing and most sincerely trust that I shall be able to afford members as good a service as he did... and that task may not be easy by any means.

Firstly, I do not intend to alter the system, particularly as to disc numbering as that, for obvious reasons, would lead to confusion. The concept of there being but 5 sub-sections to each main number fits well into the idea of storing a complete PD# on a single 3 1/2" or 5 1/4" disc, should you possess such an appropriate drive.

It must once again be very clearly stated that any file/program etc., which may be submitted by you for inclusion in the Library MUST be of Public Domain origin, and, more importantly to the magazine, it is stressed that it is completely impractical to verify such a fact. Consequently, NO RESPONSIBILITY can be taken for any unintentional inclusion in the library of a program or programs which do not fall into the PD classification. So, please "take care out there"!

I am considering making a library disc which would contain a list of all PD discs and, as far as possible, a few details of each program. This would be updated every so often and available in the same way as are the PD discs. This is because the library has grown beyond the practicability of printing its contents in the magazine and, in future, only NEW discs will be so published. More of this later.

Should you have any queries on any particular program/programs, place such queries in the form of a WP program or just in the form of a simple Basic program on the disc you send me for PD software and I will, IF ABLE TO DO SO, give you an answer on the disc's return. Please DATA/CPM format (as appropriate) your discs before sending them to me. It saves me valuable time and you get your disc back sooner! ..Oh! yes, don't forget return postage and envelope suitable for returning your disc/s.

As to the PD TAPE Library, I understand that there is mention of this on another page as to having a separate librarian.

Happy computing,

DAVE CUTTS, Millstone, Church Road, Greenstead Green,
Halstead, Essex, C09 1QP Tel: (0787) 476706

V A H T Z E

PART TWO

A serialised type-in game for two players
by JOHN PACKHAM

If you've recovered from typing in the first part of this game, then we can continue with part two. This part isn't as long as far as the typing goes, so there are no excuses for you not to get on with it.

If you have any questions about any of the parts, then please feel free to write to me and enclosing an SAE, and I shall endeavour to answer. Anyway, let's get on with it.....

```
2500 REM INVERSE NAMES
2510 CLS#4:PRINT#4,CHR$(24)name$(1);:CLS#5:PRINT#5,CHR$(24)name$(2);
2520 RETURN
2530 REM
2540 REM
2550 REM
```

```
3000 REM SPIN ALL DICE
3010 FOR count%=1 TO 5
3020 FOR count2%=1 TO 20
3030 number%=INT(RND*(6)+1)
3040 SOUND 7,50,2,15,,1,31
3050 LOCATE 28+(count%*2),21:WRITE number%
3060 FOR delay=1 TO 50:NEXT
3070 NEXT count2%:dice%(count%)=number%
3080 NEXT count%
3090 RETURN
3100 REM
3110 REM
3120 REM
```

```
8000 REM SORT NUMBERS INTO ORDER
8010 a$=RIGHT$(STR$(dice%(1)),1) + RIGHT$(STR$(dice%(2)),1) +
    RIGHT$(STR$(dice%(3)),1) + RIGHT$(STR$(dice%(4)),1) +
    RIGHT$(STR$(dice%(5)),1)
8020 FOR a=1 TO (LEN(a$)-1)
8030 b=a+1:WHILE b<=LEN(a$)
8040 IF VAL(MID$(a$,a,1)) > VAL(MID$(a$,b,1)) THEN
    dummy$=MID$(a$,a,1):MID$(a$,a,1)=MID$(a$,b,1):
    MID$(a$,b,1)=dummy$
8050 b=b+1:WEND:NEXT a:dummy$="":RETURN
8060 REM
8070 REM
8080 REM
```

NOW FOR THE EXPLANATION (BUT I'M NO TEACHER SO STICK WITH ME!)

LINE 2510....Windows 4 & 5 are small windows above each score column. Going from left to right of the line we first of all CLEAR window number 4. Then we send CHR\$(24) to that window which has the effect of INVERSING the colours (like the negative of a photograph). This is followed by the name of player 1. The semicolon ';' is there to prevent the name from scrolling out of the window. The rest of the line does the same for window number 5 and player 2. This routine is used at the end of each players turn to highlight which players turn it is next.

LINE 3010....At the beginning of each players turn, all 5 dice are spun, so this line sets up a LOOP to run through 5 times, one for each die.

LINE 3020....This sets up another LOOP so that each die rolls around 20 times before coming to a stop.

LINE 3030....As we all know, a die contains numbers from 1 to 6, so this line selects one at random. The INT part ensures that the number is a whole one and not a fraction such as 2.5. The 1 is there to make sure that a zero doesn't turn up.

LINE 3040....This simply creates a small sound as each die is spinning. The 7 is to select all 3 sound channels in the computer. A 1 is for channel A, a 2 is for channel B and a 4 is for channel C. If we add these up, we get 7 which is all

channels. The 50 is for the PITCH of the note. The lower the number, the higher the pitch. The 2 is used to set how long each note will last in 100th's of a second. The 15 is for the VOLUME. This is the maximum number that can be used for volume. Next, two commas are used. This is because we're not using a VOLUME ENVELOPE. If we were, then the number of the envelope would go between these two commas. The 1 is the number of the TONE ENVELOPE defined in line 50 of part one. The last number 31 is for NOISE. Again, this is the maximum number allowed. As I said in the last part, I'm no musician, so you can always experiment by changing these figures.

LINE 3050....As you play the game, you'll notice where the numbers of the dice are printed, and this simply positions them correctly, 21 ROWS DOWN and the COLUMN across depends on which dice is being displayed. The WRITE command is used instead of PRINT so as not to include any leading spaces. You can see what I mean by this if you at some time clear the screen, type PRINT 5, notice where the number is printed. Now clear the screen again and type WRITE 5. Notice the difference?

LINE 3060....This is used to slow down the spinning of the numbers. Try removing it and see what happens.

LINE 3070....At the end of the 20 rolls for each die, the random number selected is put into the appropriate subscript of the dice% array.

LINE 3080....Back through the loop for the next die in the sequence.

LINE 8010....This takes each dice in turn and converts the value into a string with STR\$. It then takes the right hand character of this string with RIGHT\$ and the 1 at the end of each set of brackets. This is because as previously mentioned, each number has a leading space. These are then put into A\$. So, instead of ending up with 1 2 3 4 5, we get 12345.

ARE YOU ASLEEP YET?

LINE 8020....The LENGTH of a\$ will now equal 5 so this line sets up a count from 1 to the length minus 1 (in other words, from 1 to 4)

LINE 8030....When a=1, b will equal 2, when a=2, b will equal 3 and so on.

LINE 8040....Suppose a=1 and b=2. The first part checks the VALUE of the first character in a\$ (a) and compares it with the second character of a\$ (b). If it's greater '>' then the first character (a) is put into the variable dummy\$ temporarily. Then the first character (a) becomes the second character (b) which is then followed by the second character (b) becoming the temporary character in dummy\$. In other words, the two characters are swapped over.

LINE 8050....Back through the loop to compare all characters in a\$. Then instead of having 23541, you have 12345.
If you change the greater than symbol '>' in line 8040 to less than '<' then the numbers will be sorted into DESCENDING order, but that is no good at all for this game.

I hope I've explained things well enough for you. If I haven't, then I'll hand in my resignation (will I heck!!).
Happy typing. Tune in next issue for the next exciting instalment?

An important announcement for tape users

Further to John Blessing's plea on page 29 of issue 14 for the post of TAPE PD LIBRARIAN, I duly contacted him and was informed that he was passing over the PD library to Dave Cutts. I therefore contacted Dave with the offer and he is agreeable to me doing this. I feel that I could start this from 1st September 1989 provided that all the loose ends can be tied up (ie tape location/costs/list of members for checking purposes etc). In the first instance I feel that the scheme should remain as it is until I can review the members' needs and decide how best to meet them if this is all right with the Management Committee.

GORDON WOOLLISCROFT
2 WRENBECK DRIVE, OTLEY, WEST YORKSHIRE. LS21 2BR (0943 463718)

FEATURE

- ★ WHICH SIZE 3", 3.5" OR 5.25"?
- ★ WILL IT WORK ON A CPC?
- ★ WHAT IS THE CAPACITY?

SECOND-HAND DISC DRIVES

PHIL CRAVEN supplies all the answers

Second hand disc drives can be but will they work on the CPC? I hope, here, to answer all the relevant questions and point out the things to be aware of when delving into this market.

The first thing to make sure of is that the drive has a standard Shugart interface. This just means that certain signals are applied to certain pins and connecting our 34-way connector to the drive's 34-way connector matches them precisely. A few drives have a 26-way connector but still implement the same signals. The pin out diagrams and a bit of solder will overcome that difficulty.

It was written somewhere that any drive which works on the BBC will work on the CPC. This is not true. Pin 34 on the drive (pin 1 on the CPC) is the ready signal which the drive sends to the computer to say that it is 'ready'. The CPC needs this signal but the BBC doesn't. Some drives implement it and others don't. The other thing to check then is that pin 34 has a track leading from it and that it goes somewhere useful. There are drives which have a track but it just disappears into a hole and that's that. If you already have a 'readyless' drive, then connecting pin 34 to ground will solve the problem. However it means that the computer then thinks both drives are ready and no 'disc missing...' type prompts will appear on the screen, not even for drive A. If you can live without them then you're all right. Or you could put a switch in the line and just switch on when the drive is needed.

Double sided, single sided, 3", 3.5", 5.25", 40 tracks, 80 tracks, 1 meg (unformatted) and 1.2 meg etc. can be confusing but in fact it is all very simple.

STORAGE CAPACITY

Up to 200k can be stored on 40 tracks and 400k on 80 tracks. Double sided drives have, of course, twice the capacity. Since the CPC is unaware of any drives bigger than 40 track single sided, a different DOS is needed for the larger capacities. RODOS and ROMDOS, both on ROM, allow such drives to be used. RAMDOS is the disc version of ROMDOS and does the same.

To get more than 1 megabyte of storage out of any drive needs a different disc controller to the one

very cheap and plenty are available that we have so very big floppy disc capacities can be forgotten. The rest, however, can be used.

DISC SIZES

As there are no logical differences between 3", 3.5" and 5.25" disc drives, the CPC is blissfully ignorant of which size it has attached so, provided that a drive has a Shugart interface with 34 pin working, it can be used. The consideration here is the cost of the discs.

Single and double sided means that the drive has one read/write head or two, one for each side of the disc. Only 3" discs are made to turn over or 'flip' so that both sides can be used even on a single sided drive. The others can only use side B if the drive has two heads. The CPC doesn't expect to find two heads and no provision is made for such a thing in its software. ROMDOS etc. will operate double sided drives in two ways. Firstly, they will use both sides individually and, secondly, they will use both as 'one disc' with one directory so that the user sees only one huge 800k side.

FINALLY

All the connector's signals go to both drives. Two of them are DS0 and DS1 (drive select 0 and 1). When a drive is accessed the DS0 line goes to low voltage whilst DS1 stays high. This is how a disc drive knows that it is being used. In fact the Shugart interface has four select lines for four drives but the CPC uses only two. Of those two only DS1 reaches the outside world. Even so, the B drive must be set to respond when its line goes low. A set of links or switches can be found on its circuit board labelled DS0, DS1, DS2, DS3 or A, B, C, D or 1, 2, 3, 4 and they are not necessarily all in a row. The second link or switch in the series must be made and the rest left unmade.

I hope I haven't clouded the issue too much. A read or two should make things clearer.

Jargon update

MEMBERS' QUERIES ANSWERED

(well one member actually!)

After an absence of inquiries last issue, I received quite a number for this month - all from one person, it has to be said. If you have any questions concerning jargon, don't hesitate to write - my address can be found at the end of the main article. The following (somewhat shortened due to lack of space) letter came from Angela Macaulay.

"My current issue of 'Amstrad Action' contains a rather interesting article on the 5th birthday of the CPC. In it, there were a number of points I don't quite understand, so have enclosed a copy for you to look at."

The big problem for me is that I am entirely self-taught and don't live in England, which means I have no access to other users (until I joined UAUG) and no libraries to go to for help. So you see, for me, your column is a godsend."

While I try to squash my head back to its usual 72 inch circumference, here are the terms you mentioned:

"grey scales": This term refers to the shades of grey between black and white. A computer with no grey scales, therefore, would be almost useless for graphics applications, only text. The CPC still has only a limited range of grey scales available, and none in mode 2, which makes it unsuitable, as with other comparable micros, for many graphics applications, eg. serious desktop publishing. This limited range does, however, make it quite adequate for many business applications, games and other home uses.

"screen RAM": This is the area of memory where the computer holds the information necessary to build up a picture on the monitor. Try typing in this program:

```
10 FOR x=&C000 TO &FFFF
20 p=PEEK(x)
30 a=p XOR 255
40 POKE x,a
50 NEXT
RUN
```

Those who know a little about programming, see if you can work out how it does what it does. Bear in mind that screen RAM starts at the address &C000. Section 3 in the user instructions may be useful.

"ROMming of the operating system": The operating system (OS for short) of any computer is the software that controls all the hardware. It allows small but vital tasks such as the printing of characters on the screen, printing error messages, controlling peripherals. Without the operating system the computer would be a useless pile of circuitry. The process of ROMming is

simply putting that vital software onto a chip so that it can stay in the computer's memory all the time.

"pcb": This stands for Printed Circuit Board. It is the piece of green painted board inside most electronic appliances, on which are mounted most of the components which go to make up the machine.

And now the tricky bits...

"Gate Array (Simulator)": There is no one hardware component that will take two numbers, add them or take one from the other, and output the result. There are, however, special circuits which can be used to manipulate binary numbers in such a way as to carry out part of a calculation (adding is more complex for a computer than you might think!). Such a circuit is called a logic gate. (See main article for more on logic) Suffice it to say, quite a number of these is needed to carry out a single calculation. Therefore a circuit which is capable of calculations will contain an 'array' of logic gates.

In summary then: A gate array allows the computer to carry out calculations. (As to the 'simulator' part of it, I have no idea what they mean, since I would have thought that the only thing that could do the same as a gate array was a gate array! Ah well, that's computers for you!

"masks": In the context AA use this word at the bottom of p16, I'm not really sure exactly what they mean. However, a mask is anything which suppresses a signal to the processor, which therefore prevents a particular action being carried out. It is also used to describe the process of logical-ANDing, which is explained in the main article. So, referring to that, this is what happens:

00110100 = 52

00011111 = 31

00010100 = 20

AND =>

... So 52 masked with 31 equals 20.

I hope this has been of some use to you, and that my descriptions haven't added to your puzzlement. One book you may find helpful is Ian Sinclair's "Dictionary of Computing", published by Collins at £2.95, ISBN 0-00-434349-2. It is by no means all-encompassing and the definitions are usually fairly brief, but the language is easy to understand, and it incorporates most of the terms of jargon you are likely to come across, including many obscure words that computer buffs have come up with to explain or confuse, such as "megaflop" or "mugtrap".

ANDREW SHARP

TECHNICAL QUERIES

Answered by
our Technical
Advisor

PHIL CRAVEN

Neil Bukharayev writes
from the USSR:

1. I've purchased an Hitachi HFD305SX uncased 3" disc drive from Matmos Ltd to use as a second drive. It seems to be in order (or is it?). After connecting to the computer and power supply, the motor starts rotating, the light is flashing etc, but the CPM does not understand it has a second drive, showing "1 disc drive" when it is cold booted. Probably it takes both drives as drive 'A' because the lights on both drives flash in accordance when writing on drive A. My attempt to change the drive select link position makes the second drive dead and the attempt to invert the cable plug hangs the whole system. My friend, who is an electronics engineer, tested all the ins and outs of the drive and says everything is OK. What is wrong then?

2. I use a monochrome monitor. It is good for my work, but not enough for my children, who like to play games. Is it difficult to make an RGB-to-video converter? I know of the MP2 modulator, but cannot buy it because of currency conversion problems. Maybe someone will be interested to swap it for Soviet books, records, car models, souvenirs etc?

Phil's advice:

1. As far as I know the Hitachi drive should work with its drive select link on the second in the series, but I have not actually tried one and I have no data sheets on it. I do know it has a standard Shugart interface and I am quite sure that its pin 34 (ready) is actually implemented. The CPC needs this signal to be working. Neil mentions that the motor spins. It should do this but it should also stop spinning after about 10 seconds. If it does not stop, then it is possible that the connector is upside down (pin 1 on the Amstrad = pin 34 on the drive) even though the computer hangs up the other way. When a perfectly working drive is connected upside down the motor keeps on spinning. It does not harm anything though. That is as far as I can go without actually trying the drive myself, but it does sound as though the drive is faulty.

2. The RGB to video is a little easier. If Neil will let me know which video-in connector he has plus pin outs if possible and the make of recorder, then I will try to design a convertor for him.

Brian Sales of LEEK writes:

I would like to acquire an adapter that will let me download programs that are put out on BBC2 Ceefax and I hope someone can tell where I can purchase one and the cost. Also where and how to plug it in to my 464 and where on the television it plugs in.

Phil's advice:

The Teletext adapter is manufactured and sold by Microtext, 7, Birdlip Close, Horndean, Hants. PO8 9PW. (phone: 0705 595694). It has the facility to download programs to the CPC. At the present time only BBC2 are uploading programs and they are for the BBC and IBM computers, so whilst programs can be downloaded and stored on disc, they cannot, of course, be run on the CPC. Another problem exists. Previously the programs and text files were all 7 bit and the CPC version of the adapter can handle these, but lately they are including 8 bit software which our adapter cannot handle. It is probable that more and more 8 bit stuff will be included and less of the 7 bit. So the short answer is yes, some software can be downloaded at the moment but, since there is none for the CPC, what is done with it is another matter. The teletext adapter, which costs £74.95, was reviewed fully in the January 1989 issue of the Amstrad Computer User by someone whom modesty prevents me from naming! It requires some TV tuners either in the form of a video recorder or its own tuner unit which costs another £54.85. The cost and usefulness of second hand videos should be considered.

CONTACT

CONTACT

LOCAL CONTACT-for members wishing to meet others in their area:

- ☐ PETER BRECKIN, 161 Longsight Road, Holcombe Brook, Bury, Lancs., BL8 4DA.

- ☐ RICHARD BUTLER, 67 Durley Avenue, Cowplain, Portsmouth, Hants., PO8 8UZ. Tel: (0705) 256787.

- ☐ ALAN OGILVIE, Strathview, Roundyhill, By Forfar, Angus, Forfar, Scotland, DD8 1QT. Tel: (0575) 72960. Alan would like to meet any member in the Forfar, Kirrimuir or Dundee district.

OFFERS OF HELP

- ☐ General help and advice for choosing and using Word Processors: DON SNOAD, 85 Woolston Road, Butlocks Heath, Southampton, Hants, SO3 5FN. SAE appreciated, or "quickies" by 'phone (0329-283666) during office hours.

- ☐ Are you a bewildered beginner? So was I four years ago and still struggling. But if there are any questions you are afraid to ask, or any problems you think another head might help to solve, try me. No guarantees- but I promise to be sympathetic. I have Masterfile 464, Protext, Brainstorm, Mini-Office II, RODOS on ROM and am Basic literate, but useless at graphics. Contact: ANGELA MACAULAY, Fonte Fria, Alportel, Sao Bras de Alportel, Algarve, Portugal.

- ☐ Help with Basic and G.A.C. adventure creator. Contact: JOHN PACKHAM, 60 Hightown Towers, Warburton Road, Southampton, Hants. SO2 6HH.

- ☐ Help with problems on a varied subject list except hardware and assembly language (full details on request): contact COLIN EVANS, Windsor Crescent, Monk Bretton, Sth. Yorkshire, S71 2LU.

HELP WANTED

- ☐ Help desperately required to get satisfactory print from "Stop Press" and "Advanced Art Studio" from 6128 to Star DP510. If any member can help I will send details, printer codes etc. PETER BRECKIN, 161 Longsight Road, Holcombe Brook, Bury, Lancs. BL8 4DA.

- ☐ BRIAN SALES of 26 Portland Street, South Leek, Staff. ST13 6LA. would like help in learning machine code and advice on what books to read.

- ☐ I have a recently purchased NEC P2200 24-pin printer which I can thoroughly recommend. Can anyone please help with a graphics dump program for this printer? - J. STICKLEY, 7 Arthur Street, Derby, DE1 3EF.

- ☐ Does anyone have a disc copy of "THE REAL YOU" published by COLLINS/SOFT and developed by A.S.K of LONDON and sent out as an offer by THE HOME COMPUTER CLUB that they are prepared to sell at a reasonable price. Alternatively can anyone transfer the tape version to disc for me? (Collins have given permission for this to be done). Contact:- GORDON WOOLLISCROFT, 2 Wrenbeck Drive, OTLEY, LS21 2BR : Tel:- 0943 463718 (between 6pm and 7 pm please)

Please send all entries to:
The Chairman, 26 Uplands Crescent, Fareham, Hants., PO16 7JY.
All entries are published at The Chairman's discretion.

This month's batch of members' varied and interesting letters...

From our Russian correspondent!

Neil Bukharayev
from USSR writes:

Being probably the only Amstrad CPC owner in a thousand miles around, I'm greatly interested in contacting fellow users in the U.K. Thanks to my British friend, I've recently become a member of the UAUG and just received my first copy of the CPC User magazine. The contents look very nice, though it would be desirable to see more machine-specific details and listings. I have a CPC6128 and DMP-2000 printer and as one can imagine both don't speak Russian at all. With the computer (within AMSDOS) the language problem can be solved quite easily either directly from BASIC or with the help of special software. I use "Font 64" for this purpose; it works fine though it seems cumbersome to run the program each time you need to change the font. There should be an easier way to do it straightforward from BASIC. In order to redefine the whole character set, I've purchased the KDS 8-bit printer port and the Goldmark Systems buffer upgrade. I have written the BASIC program for printing out text files in Russian, but after running it the printer starts to work as needed, but then suddenly becomes mad and prints dotted nonsense.

Goldmark Systems suggests the use of their Character Font Designer. Can anyone suggest other ways of printing Russian characters? Please send any ideas to the Chairman who will pass them on to Neil. This will save him having to wait another two months for Issue 17.

Thanks for your help

A letter of thanks to other members from SOPHY HODSON of Clynderwen, Dyfed:

My thanks to all those who have provided solutions to the Arcsin problem - specifically William Lawson (Newport), R. I. Butler (Cowplain), John Packham (Southampton) and John Benzies (Bradford). For those interested, three of these provided solutions using ARCTAN which I had anticipated and one used the infinite series expansion. Regarding the book "Powerful Programming for Amstrads" I appear to have had no success so far but have an address in Oxford which is my last hope. (Watch this space for further news).

Referring to the health of my 464; after internal surgery it is now back in action. It went to Suredata (of Wembley) by post, after initial discussion on the phone. Anxious enquiry after about one week disclosed that repairs were dealt with in strict rotation and mine was due on the bench the next day. Further enquiry after the event revealed that the Z80 had to be replaced and they were very willing to discuss with me how the damage could have been caused (no, not coffee, cig ash or similar unproductive inputs). I can unreservedly recommend them to anyone in a similar quandary.

Further to my comments in my last letter, there was, a couple of months back, a programme on BBC2 about computer viruses. I was determined to watch and settled back at the appropriate time to mark, learn and inwardly digest. It was not to be as there was a regional variation in BBC2 for Wales which gave us highlights of the Welsh Youth Orchestra's last year concert in Birmingham!

□

Regarding the book search, I was in Hay-on-Wye a few weeks ago and of course, visited the "World's Largest Bookshop" but was surprised to find that in the computer section consisting of perhaps two hundred books, there was not one for the CPC. As most of the books are second-hand perhaps it shows the general satisfaction of CPC users with their machines in that they do not readily dispose of any books they may have.

Thank you for passing on your recommendation of Suredata. Good repairers are hard to find. -JS.

A mixed bag

A letter from GORDON WOOLLISCROFT who has just volunteered to take over the PD Tape Library:

Well I have finally got around to writing to Mailbox having intended to do so for some little time. First of all I am enjoying my membership of the Group and intend to renew same as it is excellent value for the money.

Just a brief note about myself - I am part retired working 3 days per week and am one of the "older" brigade who has found interest and enjoyment in computing. I have a CPC 6128 with 3" additional disc drive and a Citizen 120D printer. In furthering my interest in

MAILBOX

computing I have been an official in various capacities in a local Computer Club for the past 8 years.

Now for one or two comments on the items in the CPC User that come to mind. On receipt I usually read it through a few times then I remove the staples, remove any pages not required and then file the remainder in a ring binder with the Index at the front and with the PD section also separate. I retain the covers of the current User for details of the Officers and thus have comprehensive file of the User. Whilst not all articles are of interest I only discard them if I find there is no longer any call for them.

Some time ago there were letters and comments about the American publication "The Public Domain Software Handbook" and the difficulty in obtaining it. I asked my local Librarian who is also a computer user to find that it cost £40 and came with the programs on a 5.25 inch disc - as a result not many libraries are prepared to stock it because of cost and possible theft of the accompanying disc.

Finally a plea to those who say "I can't contribute to the User or Group". If you use a computer you can write and therefore say something to other members. Also if you can write even simple programs these can be of use to other members through the PD Library. I did with my program "FILERID" a file eraser which occupies only 1K and is to be found on almost all my discs. (Try 8/5).

I am also prepared to "put my money where my mouth is" and hope to take over the PD TAPE Library with effect from 1st September 1989 and thus relieve Dave Cutts of this area. So what are YOU (the members) going to do or contribute !!

In closing would it be possible to have one or two posters if available to advertise the Group.

□

Thank you Gordon for offering to take over the tape library. I am sure all the tape users will keep you busy!

Perhaps your remarks will also spur on other members to take an active part in the content of the magazine. Contributions, however small, are always welcomed and considered for publication. With reference to the posters, I have recently sent these to you so they should now be to hand and I hope attracting new members! -JS.

The Executive Editors reserve the right to edit and publish all letters received unless clearly marked "not for publication".

Identify that program!

From DAVID MITCHELL
of Clacton-on-Sea:

Can anyone say what the following listing is supposed to do. It answers to the filename of 'Disgust' but after 'running' I can get no response whatsoever nor can I make anything out of the listing.

I cannot say where it originated as it is on a disc that has been 'dead and buried for many moons' and has only recently come to light!

If you can give me any ideas I would much appreciate it as I am completely baffled.

The Listing:

```
10 ln=55
15 for adr=&8000 to 8100 step 13
20 read byte$:chk=0
25 for i=0 to 12
30 v=val("&" + mid$(byte$,i*2+1,2))
35 poke adr+i,v:chk=chk*v
40 next
45 if chk<>val("&" + right$(byte$,3))
then print"ERROR in line";ln:stop
50 ln=ln+5:next
55 data 00000000000000000000000000000000
60 data 00000000000000000000000000000000
65 data 00000000000000000000000000000000
70 data 00000000000000000000000000000000
75 data 00000000000000000000000000000000
80 data 00000000000000000000000000000000
85 data 00000000000000000000000000000000
90 data 00000000000000000000000000000000
95 data 00000000000000000000000000000000
100 data 00000000000000000000000000000000
105 data 00000000000000000000000000000000
110 data 00000000000000000000000000000000
115 data 00000000000000000000000000000000
120 data 00000000000000000000000000000000
125 data 00000000000000000000000000000000
130 data 00000000000000000000000000000000
135 data 00000000000000000000000000000000
140 data 00000000000000000000000000000000
145 data 00000000000000000000000000000000
150 data 00000000000000000000000000000000
```

□

Perhaps the clue is in the title and expresses the way one feels after running the program with no effect! With empty data statements I don't really see that one can expect too much. Maybe a member proficient in Basic can give us an informed opinion. Well, what is it supposed to do? -JS

Offers and Suggestions

A software review suggestion
from BRIAN WATSON of Ely:

I have in preparation an article on how I run my business as a self-employed sales agent using nothing more complicated than my CPC6128, a DMP2160 printer and MiniOffice II on disc. Actually, I have recently bought CPM Protext but as people seem to buy MO in vast numbers it could be of interest to members to be given actual examples to copy. I would be prepared to supply (free of course) the basic templates discussed in the article(s) to anyone sending me a disc on which to copy them.

The only potential snag as I see it is the possible copyright complication, although I would only be supplying files rather than anything copied from the disc and surely other people make their work available to use within operating systems of one sort or another. I look forward to your guidance.

An area in which I would be glad to help is that of reviewing business software. Although I am on the "supply side" now, I was previously employed at a fairly senior level in a publishing and retail company so understand the needs of those businesses. One idea which occurs to me is that if publishers are hesitant about supplying their "Masterworks" perhaps members would part with their programs for the time needed for me to compile a review. Obviously, not many people would hand over a new item, but I'd be prepared to bet there is a lot of software, still current, sitting on shelves unused either because the owner has moved on to a more powerful program or because he or she never figured it out!

☐ Thank you Brian. I look forward to receiving your next article for publication. Tony Baker and I agree that there should be no copyright problem in supplying your template files for MOII. Thanks also for the software review offer. Any member willing to loan a program long enough to enable Brian to review it? Brian's address is in page 8 if you wish to make direct contact with him. -JS.

Printer problems... and farewell!

From Helen Croom of Stapleton, Bristol, comes a goodbye letter:

I was interested to read David Mitchell's letter about the problems he

had experienced with his Amstrad DMP2160 printer. I have a Star LC24-10 printer which I am very happy with; it does everything I require, at a reasonable speed and most importantly, simply. However, recently my trusty Star developed a fault. As always, this happened at the worst possible moment and I had to hire a printer from a local store. The only 24-pin available was an Amstrad LQ3500. I considered myself lucky to get anything, but after an hour with the manual I wasn't so sure. Firstly I read that it was impossible to mix LQ and Elite pitch so as I had already formatted the 14,000 word study which I was typing in that pitch, it was necessary to go through it altering all the margins and reformatting. How silly of me to believe a mere manual; I later discovered that Elite/LQ was indeed possible. The single sheet paper feed mechanism appeared to work in the same way as the Star (which aligns the paper perfectly every time), that is until I tried it. It took several attempts to get the paper anything approaching straight and then there was only a 10 to 1 chance of the paper not snagging on the print head, causing, (if you were silly enough to leave it to its own devices), a whole page to be printed on one line. The print quality was excellent and I did indeed manage to print 30,000 words with it, but for ease of use I'm afraid the Amstrad must come well below the Star in my ratings.

Incidentally, a bouquet to Evesham Micros, who repaired and returned my machine in ten days.

Well this is farewell; I have read the "CPC User" magazines with great interest and enjoyed my PD software, but I regret to say that I shall not be renewing my membership as I have joined the growing ranks of defectors and no longer own the CPC. Good luck for the future.

☐ Thank you for your account of the unhappy experience with the LQ3500. The print quality of your letter (I assume produced on the Star) is superb. I am sorry to hear you are leaving us but thanks for your past support and good luck with your new micro. -JS.

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Using Overlay Techniques From BASIC

By Andrew Cope

There can come a time when your all singin' all dancin' mega program refuses to squeeze itself into your computer. At this point a lot of people will swear profusely and resort to chopping off bits of code. Such drastic action is frequently detrimental to the program.

One technique which is quite common is the system of overlaying. For those who don't know, overlaying is the system where sections of code are continually being swapped to and from disk as they are needed.

This technique is, surprisingly, very easy to implement. My own Centrox Operating system has around 120K of BASIC code to execute..in fact that is only what it comes with.. there is no limit to the amount of code it might handle!

The cornerstone of BASIC overlaying is the CHAIN MERGE command. I won't waste time describing this command in detail, as it can be looked up in the manual easily enough. The only point worth noting is that BASIC v1.0 (ie; 464 machines) suffer from the limitation that programs must have been saved as ASCII before they can be MERGED.

One problem with overlaying is that the GOSUB and FOR..NEXT stack is cleared. This does place limitations on the use of overlays. In practice this is not a problem since it is only the act of CHAIN MERGEing that clears the stacks. Providing the overlaying is performed while there are no open FOR..NEXT loops or while you are not in a subroutine (or while you are in a subroutine that you don't want to RETURN from) there will be no problem.

Firstly, you should set aside a range of line numbers that the overlayed code will use. Normally I would suggest that you allocate line numbers above 60000..but that would clash with Centrox, so I stick with numbers between 50000 and 59999..you don't have to, but I'm a creature of habit!

To load the overlay you want, use the following code:-

```
CHAIN MERGE "<file name>",<line number>,DELETE 50000-59999
```

The file name could, of course, be a string variable. The <line number> expression can be one of two things. Firstly it can reference the overlay itself. In that case it would be logical to give it a value of 50010. This allows 50000 to be a comment describing the overlay file.

The other possibility for <line number> is the next line after the one that contained the CHAIN MERGE command. This allows you to overlay a section of code IN ADVANCE OF WHEN YOU NEED IT. This can be useful if you need to overlay from within a FOR..NEXT loop.

If the program runs for long enough, it is possible that you might generate too many variables, or that you may want to reuse an array. The answer here is to dump all the important variables onto the disk, execute a CLEAR command and reload the variables. The overlay code may not want all its variables to be destroyed so it has to be given the chance to write to the disk as well.

The solution is to write a routine as follows:-

1. OPENOUT the dump file
2. WRITE or PRINT the data to the file
3. Pass control to the overlay file for it to dump some data.
4. CLOSEOUT the file.

The reverse of the above would be employed to read the data from the disk.

We still have a problem! We have three routines to call in the overlay file (RUN,DUMP and FETCH) and we have to assume what lines to GOTO or GOSUB. What happens if we need to RENUMBER the overlay file? Well, the solution I adopted with Centrox was to use a vectored entry system..in many ways this is similar to the CP/M BDOS functions.

All that we know is that the overlay routine starts at line 50000. The solution is to have the following line at the start of the overlay code (after the ID comment though if possible):-

```
50010 ON ov.num% GOTO <run>,<dump>,<fetch>
```

Where the items enclosed in angle brackets are the numbers of the routines for each of the functions that the overlay file offers.

To execute one of the functions, simply put the function number in the variable OV.NUM% and pass control to the overlay file. This system allows you to renumber the overlay code as often as you want.

Centrox has used this system for three years..and the only problem was when I changed from using real variables to integers on version 3!

Here are some uses for overlay files:-

Adventure Games - The overlay could hold SAVE, RESTORE, INITIALISE, QUIT etc. routines.

Arcade Games - The overlay file could contain HIGH SCORE, FRONT END and INITIALISE routines.

In writing Centrox I took overlaying to the extreme. As with CP/M, application programs are overlayed as and when they are required. Some of these programs (such as the compiler) then do their own overlaying! Other programs actually modify the original code as they are MERGED! Overlaying can be great fun and is very flexible..bear in mind, however, that overlaying from tape is a bit awkward.

It's worth noting that you can't use ON ERROR... to trap errors in CHAIN MERGE operations. The ON ERROR mechanism is disabled. Centrox suffers from this problem, and crashes if you try to execute a none BASIC text file.

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Centrox Re-visited

Some additional help for those
still in difficulty.

by ANDREW COPE

After exchanging letters with Richard Sargeant, I have accepted that the Centrox manual is not an adequate introduction to Centrox. I've decided to write this article in an attempt to make up for the manual.

To do Centrox justice, I think that several articles are needed. However, I already have a commitment to produce a programming article so I don't feel that it would be fair to submit additional articles. I'm also unsure how many members have Centrox. If anyone wants further Centrox articles, or better still can write some then please get in touch with me.

1. Using File Paths

1.1 Description

There are several subtle points to file paths and I suspect that some people are having difficulty using them, so here are a few hints.

File paths take the form:-

<directory path list>/<CP/M file name>

In the example "/fred/letters/mum.let" the file "mum.let" is being referred to. "fred" and "letters" are the names of directories. Centrox knows that "mum.let" is a file because it is the last item in the list. If the list was simply "mum.let" then Centrox would accept that no directories had been mentioned.

But so what? Why should Centrox allow us to give a list of directories? The reason is that the list is a description of the path that must be taken to get to the area of the disk that "mum.let" is stored in.

The above example means; first go into the "fred" directory. When you arrive, look for a directory called "letters" which branches off from "fred". When you find it, look in it for the file "mum.let".

This system allows you to organise your disks better than AMSDOS and CP/M. No longer will a letter to your mother be stored along with a program. Of course, CP/M and AMSDOS do allow you to separate your disks into sixteen areas, but these are all at the same "level". Centrox allows directories to branch off other directories.

The effect is like a family tree. If you think of your family tree, your name can be considered to branch off from your parent's names. In the same way, Centrox allows directories to branch.

1.2 Describing Paths To Centrox

I'm now going to ignore file paths and concentrate on directory paths. File paths are, after all, simply directory paths with a CP/M / AMSDOS file name appended.

Centrox evaluates directory paths by walking along the path "in its mind". The first step is for Centrox to choose a starting point on the directory "tree". If the path starts with a "/" then Centrox starts walking from the "top" of the tree, otherwise it starts from your current directory (more on that later).

For the sake of this discussion, I'll refer to the directory that Centrox starts walking from as the CWSD (Centrox Walk Start Directory!). The next step is to get the first directory name. Centrox then looks in the CWSD for a directory with that name. If it finds such a directory it "walks" into it, making it the new CWSD (yes, I know that it can't really be called the CWSD any longer, but so what..you wanna make something of it?!).

Centrox then fetches the next directory name and repeats the operation 'till all names have been dealt with. After finishing the list, the CWSD (!) is the target of the path.

REVIEW

The following directory names work differently:-

".." makes Centrox backtrack up the tree. In case this confuses you, note that, like humans, directories can only have one set of parents. Going back to the first example, ".." from "letters" takes us to "fred".

"-" causes Centrox to "teleport" into your home directory. This directory is the directory that you start from when you first log onto Centrox.

"." causes Centrox to teleport into the current directory. This directory is used to save time. Without it, you would have to give Centrox a complete directory path every time you wanted a file..imagine the tedium of typing "/fred/letters/mum.let" every time you want to write a letter!

By making "/fred/letters" the current directory, you can simply type "mum.let". If you go back to Centrox's little stroll, remember that without the "/" at the start of the path, Centrox starts looking from the current directory. Since only a file name has been given, Centrox doesn't actually "walk" anywhere, it just starts from "/fred/letters" and looks for the file immediately.

Some versions of Centrox use the name "/(TOP)" to refer to the root directory. This is for (stupid) historical reasons, I suggest that you ignore it. The path "/" ALWAYS refers to the root directory. Oddly enough, neither "/(TOP)" nor "(TOP)" can ever be given legally..they will always generate the error "No such directory"..try to work out why, then have a laugh at me..go on, I deserve it!

2. Using LF, CD and CAT

2.1 CD

To change your current directory, use the command CD. To make "/fred/letters" the current directory, just type the command "CD /fred/letters". Note that because the path starts with a "/", it doesn't matter where your current directory is, you will always end up in "/fred/letters".

To make "/fred" the current directory, after the "CD" command above, you can type either of the following; "CD /fred" (long winded) or "CD .." (preferred).

Note that CD can be replaced by "<directory path>:" eg; "/fred/letters:", "..." etc. Specifying a null directory path ("CD" or ":") moves you into your home directory.

2.2 LF

To look in a directory, just type "LF <directory path>" eg; to find what files are stored in the letters directory, just enter "LF /fred/letters". If you want to look at the Centrox command files, just type "LF /COM", yup..that's a lot of files!

2.3 CAT

Views the contents of files "CAT /fred/letters/mum.let" shows you your letter to mummy. Like the CP/M TYPE equivalent, CAT pauses after a screen of text has been shown.

3. The LOGIN.USR file.

This file is stored in your home directory. When Centrox has loaded, and before it gives you a chance to squeak, it looks in this file and runs any commands that it finds there. This allows you to customise the environment before you start work.

Well! I hope that has cleared up some problems. Do write to me if you want to request help, or even better, if you want to write an article. Of course, I could have written the manual like this article, but it's already 120k long and split across 11 files on my disk, I reckon that a decent manual would extend to 300K..thats both sides of a disk!

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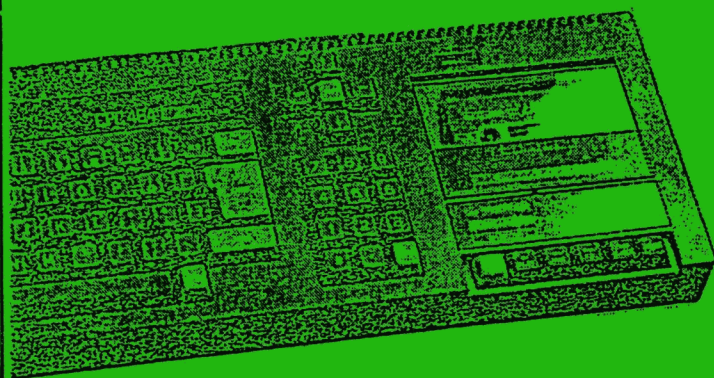
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(see page 18)

Our PD Software Librarian, Dave Cutts, has now finished compiling his PD index in two files. These can be ordered in the normal way. It is obvious that Dave has spent considerable time preparing this index with, in my opinion, excellent results, so I hope members will take full advantage of this extra service. -JS

