

THE UK'S ONLY SERIOUS CPC MAGAZINE

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June 1992

WACCI PROBE:

Computer viruses and nasty

Program bugs

Spot the real ones ...



IN THIS ISSUE:

Beginners Basic, The ABC of PD, Letters, BJ10 Printer, Comms, Help-Line, Spell Checkers, Forth, Competition, Discounts, Machine Code, Adverts, Probase+, StarDump, Public Domain and Homegrown Software and much more....

WACCI

CONTENTS

4 Discounts Page	<i>Buy now ! Pay less !</i>
5 Fair Comments	<i>Your letters answered</i>
8 The Competition Page	<i>Win MicroDesign Plus</i>
9 The ABC of PD	<i>Mini Print Shop</i>
11 Very basic Basic	<i>Beginners basic Basic</i>
13 Forth	<i>The alternative language</i>
15 Spell Checkers	<i>SPELL & ISPELL reviewed</i>
18 The BJ10ex Printer	<i>Final gripping instalment</i>
19 Treading The Bauds	<i>Comms and protocols</i>
21 StarDump Review	<i>Stamper takes a look</i>
23 ProBase+ Review	<i>Thumbs down from Mike Lyons</i>
25 Inspiration	<i>Basic machine code</i>
27 Poking in the library	<i>Loads of reviews and news</i>
28 RSX-LIB reviewed	<i>It'S now a PD Program</i>
29 The Discs Libraries	<i>Now with extra discs...</i>

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WACCI : is the computer club for the Amstrad CPC and PCW computers. The Club magazine is distributed monthly.

The Telephone Help-Line

Tony Walker, (0772) 651698, Preston, 10.00am to 10.00pm, Comms, Protext, Prospell, Tape to disc, CP/M on ROM.

Brian Norris, (0832) 73973, Peterborough, a specialist on MasterFile III (no less) plus general advice.

Norman Buxton, (0260) 223257, Macclesfield, Basic and farming? <<Control codes a speciality -Ed.>>

Stewart Peppiatt, (0245) 353903, Chelmsford, Basic and Machine Code, DMP2000, VDE, Scrivener and general problems. <<A Tech-Head -Ed.>>

Peter Campbell, (041) 554 4735, Glasgow, OCP Art Studio, Vidi, Basic, Micro Design & Art Programs, CPC plus machines. <<A Comms Guru as well -Ed.>>

Frank Frost, (0983) 882197, Isle of Wight, 4.00 to 10pm, VDE, CP/M and Protext. <<He LOVES a chat but nobody seems to call him up -Ed.>>

Peter Ceresole, (081) 878 0391, London, Protext, Promerge, Utopia and Nukes (amateur status) <<Total nutter to be avoided at all costs -Ed.>>

Paul Graves, (0304) 812342, Ash, All varieties of Pascal (inc Turbo, JRT & Standard). Phone between 5.00pm and 9.00pm Weekdays.

Paul Dwerryhouse, (0244) 534942, Deeside, Clwyd, Basic, Bank Manager, WACCIWORD, WACCI SPELL (ISPELL), and a sympathetic ear. <<He's pretty good at accounts. -Ed.>>

Rob Scott, (081) 552 8900, East Ham, any & all hardware problems plus tape to disc, disc to disc etc. << An electronics genius, -Ed.>> Now with extra Bonzo.

Nigel Mells, (0784) 250763, Ashford, Tape to disc problems, Basic programming and a general natter.

Mike Lyons, (0942) 59942, Nr Wigan, Basic, Stop Press, Dk,tronics Speech Synth, rods and general help.

Clive Bellaby, (0602) 725108, Nottingham, 8.00pm to 9.00pm, Basic, Cobol, Forth, VDE CP/M, Protext, Promerge. <<Dominoes a speciality. -Me.>>

Chris Smith, (0252) 24721, Aldershot, Comms, 8B's, Protext, Promerge, Prospell, Utopia, Brunword and general programming problems.

Please Note: This help-line is provided on a voluntary basis by club members to assist other club members. This service is provided to help you. Please call help-liners between 7pm and 9pm (unless stated otherwise.)

If I receive reports of this service being abused by software pirates I will close it immediately.

W A C C I

Edited by 'The Management'

0602 725108

Owned By

The Club Members

Conceived and Founded by

JEFF WALKER

Developed and Expanded by

STEVE WILLIAMS



THANK & STUFF

Hello everybody, 'Tis I, Yes, it's me, Alan Tilling ... Clive is very busy so he me to take over for a while Excuse me, there's someone at the door Oh, Hi Clive, It's you Oh ... You're back all ready Ok it's back to you for the rest of the page.

THE STORY SO FAR.....

Hi there, this is Clive back at the helm of the good ship WACCI. This is the sixth magazine I've (or is that we've) produced. We started with that very traumatic, WACCI 50 which gently explained what had happened and we have gradually developed from there to here.

THE NEXT CHAPTER

Where next? That's the question that's at the back of my mind, it never leaves me, I'm haunted by the future. That's enough of the dramatic prose back to reality. I posed the question last month of "What happens, if and when I stop editing the magazine".

The answer I received was a loud and clear, "we don't know .. why ask us.." and "why not train several sort of deputy editors, then in an emergency they would take over production of the different parts of the magazine and it would continue".

To me (and others) this makes sense provided there is an overall sort of 'deputy editor' who brings the whole thing together, thus ensuring that the same high standards continue. To make this work we need volunteers to do the work (and learn the job.) So it's back

to you folks, it's your WACCI. Do you want to be involved? Do you want to make WACCI grow? Do you want admiring looks from your friends as you show them your latest work? It's upto you.

WANT TO TRY YOUR HAND AT EDITING

If you're interested in becoming a deputy editor, or just interested in finding out if you could do the job, then drop me a line or pick up the phone and speak to me on, 0602 725108 between 8 pm and 9 pm most evenings.

HOMEGROWN AND PD SOFTWARE LIBRARIES

Last month we appealed for help in running these two important functions. We have someone who wants to run the homegrown library. We have written saying 'Yes, please', however, we need to agree all the details.

Chris Smith still needs help to run the PD Software Library, he is swamped by orders and is struggling to cope.

Because of this orders are being delayed and club members are becoming frustrated and annoyed

Can you help Chris, either by acting as an assistant or by taking over a section of the library (say a block of 20 PD discs.) If you can, then please contact Chris on 0252 24721 or myself on 0602 725108.

Whilst on the subject on PD library discs, some time ago, I estimated that we would end up with 40'ish quality PD Discs. This proved to be somewhat of an under-estimate. We have reached disc number 36 ... and the final total will be nearer 80 discs

ALL FORMATS FAIRS

We will be attending these All Formats fairs, so why not come along and say "Hello, I'm" and have a chat.

Haydock Park 14th June
Birmingham 19th July

LOST LETTERS SECTION

Poor old Mike Lyons is in hospital, so the letters section is much shorter this month, it's down to about three pages, however, don't panic, we'll catch up with the mail next month.

THE 1992 WACCI SURVEY

It's your last chance to send in your survey form and win the right to have a say in WACCI's future.

DISCOUNTS

Stamper list is on page four, if in doubt, or you want something that's not on the list, then give him a ring or drop him a line, he'll try to help.

THE 'WACCI' AMSTRAD ACTION PAGE

Have you seen it? No! Why not? It's well laid out and it's brought in lots of enquiries about membership. If you want to have a go at writing something for this page then give me a ring on 0602 725108, please!

THE WACCI COMPETITION

Is on page 8, along with last months competition winners

OUTRO

No room, have a good day, bye for now!

*** DISCOUNTS ** SAVINGS ** DISCOUNTS ** SAVINGS ** DISCOUNTS ***

Following representations made on behalf of WACCI members we are pleased to let you know that replies have been forthcoming from the following firms:-

SIREN SOFTWARE of Wilton House, Bury Road, Radcliffe, Manchester, M26 9UR (Tel: 061 724 7572)
They are pleased to offer all WACCI members 10% discount on all their products for the CPC, including 3.5" disc drives, software and blank discs. They will also supply a copy of their 3.5" disc drive utility FREE with each disc drive ordered. Phil Craven wrote a very favourable review on Siren's 3.5" second drive in WACCI issue 28. As far as after sales service is concerned I, personally, have found them to be very helpful and they will be only too willing to help.

Siren's SONY disk drive is fully compatible with the CPC range and will format not only to 178K but has no difficulty with the addition of Ramdos or Romdos to format to 800K. The drive operates very quietly (so much so that you think it is not working.) It has a slimline housing, with its own power supply, has a twelve months guarantee, and includes disk utility software. Normal price is £69.99 + £4.00 Postage & packing but WACCI members get a 10% discount.

BRUNNING SOFTWARE of 138 The Street, Little Clacton, Essex, CO16 9LS (Tel: 0255 862308)
Peter Brunning, the author the Brunword suite of programs is willing to allow a generous discount on Brunning products. Members placing an order and using Access or Visa cards are allowed 10% discount but those of you who order by post enclosing a cheque are allowed 14% discount. The programs supplied on 3" discs for use on both the 6128 & 6128 plus are:-

Brunword 6128 with Brunspell & Datafile... £ 30 - less 10%	9 Pin Brunword Elite with Info-Script..... £ 92 - less 10%
Info-Script with Brunword 6128 & BrunSpell £ 50 - less 10%	24 Pin BrunWord Elite with info-Script.... £ 90 - less 10%
9 Pin Brunword Elite..... £ 55 - less 10%	Elite Font Editor with 'Chelmer' & 'Clacton' £ 25 - less 10%

CAMPURSOFT of 16 Slatefield Street, Gallowgate, Glasgow, G31 1UA (Tel: 041 554 4735)
Peter Campbell and Jess Harpur run this outfit - So it must be good. Campursoft discount both MicroDesign and MicroDesign plus for WACCI members. Save £3.00 on Micro design plus, yours for only £11.99. Or you can buy both packages for only £27.99 (saving over £6.00 on the individual prices.)

SD MICROSYSTEMS of PO Box 24, Holbeach, Lincs, PE12 7JF (Tel: 0406 32252)
They will allow us a discount of 10% off all Software and Consumables in their extensive range. However this EXCLUDES any Hardware items but they are prepared to send such items post free. Examples of their software programs include PC-CPC Transfer software @ £24.95, Home Finance @ £14.95, Kwikfile @ £12.50 and a suite of programs for the small trader which includes General Ledger £29.95, Stock Accounting £39.95, Small Trader's pack £29.95, Payroll program £52.50 and Graph-Master @ £14.95. Phone them on 0406-32252 for further information.

DATEL ELECTRONICS have agreed to supply WACCI direct with their goods at trade prices, and more details of these items will be appearing in a later issue when we know exactly what savings we can offer you.

MJC COMPUTER SUPPLIES of 2 The Arches, Icknield Way, Letchworth, Herts, SG6 1UJ (Tel: 0462 670301)
Mike Cooper the big white chief of MJC has always been a keen follower of CPC users and is only too pleased to help out with any problem anyone may encounter. He is still a computer buff at heart. Since branching out in business he has to some extent succeeded because he is one of those who still thinks that the customer is number ONE. MJC are one of the few commercial mail order firms still supporting the Amstrad CPC market, covering as wide a range of Software & Hardware as they can get their hands on. I may be a bit biased but I believe this is the type of firm to encourage to ensure a steady supply of CPC goods. We can expect "Special Offers" on certain items in the form of an "on-going" list of discounted products. More news on this when details have been worked out.

GOLDMARK SYSTEMS of 51 Comet Road, Hatfield, Hertfordshire, AL10 0SY (Tel: 0707 271529)
Specialist software for the CPC's. Willing to give members of WACCI 10% discount off all Software and Hardware (But NOT off special offers or on disc prices). There should be an insert in this issue from GOLDMARK and please refer to same.

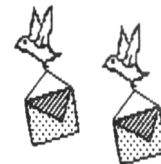
PROPAC COMPUTER GROUP of 153 Pickhurst Rise, West Wickham, Kent, BR4 0AG (Tel: 081 777 6241)
They are specialists in Citizen Printers and are able to offer an extra £20.00 off their discounted prices. If you are in need of a new printer and fancy a Citizen then I suggest you give Alex Kinch a ring. We await their new catalogue, which we are told will be issued in July.

That's all for now, still awaiting replies from other suppliers. Members may like to know that we had one reply that stated that they had heard of "WAXY" !!! but were unable to offer members any discount in exchange for free advertising.

Fair Comment



Mike Lyons
85, Leigh Road
Hindley Green
Near Wigan
WN2 4XF



DOUBLE DUTCH OR DOUBLE VISION

Hi Mike, In response to the letter from Basil Dennis in issue 54, you stated that when you created a second column in TASWORD you ended up with spaces between the lines in the first column. As you suggested this is due to being in insert mode.

Further to the double column printing idea by Basil, may I suggest another means to a similar end if your printer supports reverse feed. The following relates to the Amstrad DMP2000 but may well relate to others. Set printer control codes for the following functions.

Function Codes

Left margin 1	27 108 1	m
Left margin 42	27 108 42	M
Reverse feed 36/216"	27 106 36	R
Form feed	12	F

Choose the margins on screen to suit your column width (eg. 1 and 38) and type your document. Once you have finished (or as you go along if you prefer) insert a line at the end of each column length. Into this line enter these printer control codes.

At the end of a left hand column enter code M followed by as many code R as necessary to reverse to start of page (eg if the codes you are entering are on line 60, then enter m followed by 60 Rs). At the end of a right hand column enter codes m and F. This should result in printing two columns of text on a page followed by a form feed to begin printing a column 1 on the next page.

This idea can be extended to print as many columns as required. The important thing to remember is that at the end of a COLUMN you need one code to set the margin for the next column and as many codes as necessary to return the printer to line one. At the end of a PAGE (ie end of last column), you need a code to set the margin to one (for the first column on the next page) and a code for form feed (for the first line on the next page.) To reduce the number of control codes to be manually typed in at the end of a

column, you could set the reverse code for multiple lines. 36/216" is 1/62 (ie the usual line spacing) so by setting code R to be 27 106 180, each reverse code will move the print head back by 5 lines. This would mean that reversing 60 lines would take 12 codes instead of 60 but wouldn't be much use for 58 lines!

Another advantage of the reduced number of codes is that a function key can be set up to reproduce the sequence. For example, in the loader program:

```
30 KEY 1,CHR$(185)+"M"+CHR$(185)+"R"  
+CHR$(185)+"R"+CHR$(185)+"R"  
+CHR$(185)+"R"+CHR$(185)+"R"  
+CHR$(185)+"R"+CHR$(185)+"R"  
+CHR$(185)+"R"+CHR$(185)+"R"  
+CHR$(185)+"R"+CHR$(185)+"R"  
+CHR$(185)+"R"
```

will produce a line with one code M and 12 code Rs. 185 is the code generated by TASWORD on pressing CONTROL and SPACE together and is documented along with all the other codes in the TASWORD README file.

A logical code for reversing would be 27 106 216 which would reverse by 1" or 6 lines. This would be suitable for 60 or 66 lines. Unfortunately, my DMP2000 refuses to work with this figure although it will work with other figures. Anyone out there have any ideas why? I hope this all makes sense. It started off as a fairly simple idea. Indeed, it is much easier to do than to explain. Best Wishes.

Ian coates
Warrington

<<Hi Ian, Clive here, ('cos Mike's in hospital having his throat cut - sorry I mean a neck operation.) I understand what you're doing and why - so now's a good time to panic. Thanks for the information. On now, to your printer control code problem, I assume you do not have a 8 bit printer port fitted - Ahah, I thought not - to send control codes above 127 you need the 8 bit printer port. You could try sending 27 106 108 twice. TTFN. -Clive.>>

OH NO. IT'S HIM AGAIN

Dear Mike, I was delighted to receive my issue 53 on the 14th of April. I was amazed to see the reference to the control of Concorde by a CPC on the front cover. Intrigued, I plunged into the magazine to find the article, only to discover that some wag had played an April fool joke on us. Most disappointing. I had always known that the CPC was capable of great things, but that was a bit much to expect. I should have known better, for only last month, we had a picture of the NASA shuttle craft on our front page. Ah well.....

I read in the WACCI PD software page that Disc Sixteen contains PPC Pascal, which seems to ring a bell. I have seen a copy of a Pascal program with this name from UAUG, but it was not as good as the JRT version from WACCI. I do not remember any reference to stand alone .COM files from the UAUG version and I would like to find out if this is a better implementation. I will be sending £1.00 and a SAE Jiffy bag to Chris Smith to borrow the disc and make myself a copy. This is a very handy facility for those of us with limited finances.

I don't have a modem, the phone bill is too big already, but I read in the latest WOLI, which I read just the same, about using radio instead. That might be an idea. I wonder what would be involved in getting such a system off the ground? Has anybody got experience of that? Could we use the Citizen band?

A final plea from the heart. Could you put the next Copy date somewhere in the magazine, so that we will all know how long we have to ponder over our small contributions? God Bless.

AL "The L Plate" Cooper
County Antrim

<<Hello, Al. I enjoy reading your letters. They are often a bit like a paper chase. Anyway, the man you might like to get in touch with about Pascal is Paul Graves who is well into Pascal of various denominations. His number on the help-line list. CPC's running

Concorde? Now would we really say that? Would we attempt to mislead our intelligent and aware membership about such things. <<In reality the article was pulled at the last minute after a visit from MIS.>>

I actually saw a CPC controlling a thermonuclear reactor at Sellafield the other week while at the same time sending satellite information about world exchange rates to the stock market. Multi-tasking CPCs is very easy really. -Mike>>

<<Hi Al, PPC Pascal does produce, stand-alone .COM files, I know, I've done it. UAUG have the same version in their library. However we have tried out the program and added some extra documentation and examples.

It's not easy setting a copy date for WACCI, it varies depending on work schedules etc. The best guide I can offer is, I need articles by the 20th and Mike needs letters by the 25th, if they are going to be in the next issue. Having said that, if all the articles arrived on the 20th then I would not have sufficient time to check and lay them out, and get the magazine to the printers by the 3rd of the following month. TTFN. -Clive.>>



AL'S FAULTY JOIN?

Dear Mike, Al Cooper writes in issue 54 that he has had problems with his computer crashing and that he lost his Romdos rom. I have had crashes on my computer over the years due to various causes, perhaps my experiences will give him some ideas where to start looking for the problem.

Initially, I had a problem with bad connections on the 5 volt and 12 volt connectors on the computer and monitor respectively. I overcame this by:

1. Removing the phone plugs and sockets.
2. Soldering the 12 volt lead directly into the monitor.
3. Soldering wires to the computer for the 5 volts.
4. Fitting a 4 pin computer power plug and socket between the wires from the monitor and computer.

This cured one problem, but then I began to get a lot of read fail errors on the disc drive which I tracked down to a bad connection to a miniature plug inside the computer that takes power off to the disc drive.

Since there is a plug on the disc drive end anyway, I decided to cut off the plug at the computer end and solder the wires directly onto the computer's PCB. Since then, no more crashes due to bad power connections.

I have also had crashes due to radio interference. A typical one was due to a gas board truck parking outside. I had the window open because it was warm and I heard the engineer speak over his R/T and at the same time my monitor developed a zebra pattern and the computer locked up. I could not reset it until he had finished.

Another source of radio interference could be mobile telephones. The type of car alarm that produces a short blip to acknowledge that it is armed can also generate interference - this caused lines in the monitor (*very briefly*.) I have even heard a crackle on my hi-fi speakers at the same time as someone has set their car alarm. Other sources of interference that can cause problems are: fridges, freezers and gas central heating ignition.

As to Al's dead Romdos, you are correct in that you cannot write to a Rom (*unless it's being programmed*.) However, if two devices are trying to output data onto the bus at the same time then one of them might expire.

This situation could arise due to a crash caused by radio interference. I hope this is of some help to Allen.

Dave Tyacke
Bristol

<<Hi there Dave, Uncle Clive here, Ta very much for the information, I am sure that big Al will find it very useful. I had never thought the radio interference could become a problem, it just shows how wrong I can be.

Nobody around here owns a car alarm (*or a car for that matter*) so I cannot try out the theory

I can remember a young lad called Steve Williams having a power supply problem - this was fixed by wiring a commodore power supply unit into the CPC. Untidy, but it works. Allen feels that he probably has a power supply problem. Ta for the help. -Clive.>>

COBOL KEN STRIKES AGAIN

Hi there Mike, Help, Please Help, I need some help, please help me....

To All WACCI members (and non-members) who have completed the "COMPUTEACH" Cobol correspondence course. I have recently purchased a 6128 and would like to hear any advice which will help me speed up the process of completing stage 4. This involves compiling a suite of programs for my City & Guilds project. I need loads of help with Books, software, any and all information, and did anybody get a job after completing the course.

I think that I am spending far too much time driving a bus, and too little time driving my 6128.... Thanks in advance,

Ken Spence
47 Rosemount
South Hylton
Sunderland
Tyne and Wear SR4 0LD

<<Hi there Ken, this is Uncle Clive. I know that one or more members have undertaken the Computeach course in the past, and we have used it in our Open Learning Centre at work.

Trying to learn a computer language using a correspondence course is about the hardest way of learning

The COMPUTEACH teach course uses the MS-DOS version of Cobol - This is not compatible with the NPS Public Domain Cobol program. Nevada Cobol is similar but it's not the same. You really need access to an MS-DOS based computer. Or you need to be able to transfer your programs onto an MS-DOS disc to send them down to COMPUTEACH.

"2 in 1" will happily transfer programs and data from and to, MS-DOS discs. However, you'll not be able to test the programs, the CP/M version of Cobol will not run on an MS-DOS based machine (and vice versa.) -Clive.>>

THANKS, WANTED, FOR SALE and MORE

Hi there Clive, thanks for the sample copy of WACCI, I have sent a six month subscription off to Paul Derryhouse.

Meanwhile, here is a MS800 800k disc stuffed full of PD Software which you can include in your PD library. As you

know I also run a PD Library - rather than sell each other software, can I suggest that we trade software on a one for one basis - it makes keeping records a lot easier.

MS800 format discs, just stick it in drive B, log onto drive B, and then enter MS800 and press return. this will reveal a hidden directory and all the files - NSWP will cope happily with MS800 format discs.

Do you know of any PD software that will read and write to MS-DOS discs? If you do, can the program also format a 720k MS-DOS disc?

Finally, can you please include the following advert for me? Thanks.

Matt Gullam
Cornwall

FOR SALE

RAM Music Machine/Midi Interface
with software on tape.
(it'll easily transfer to disc)

£ 25 or £ 28 with Midi leads

WANTED

8 bit printer port
- will pay up to £ 5
Mouse (AMX or Genius) ...
- will pay up to £ 12
RS232 port - will pay up to £ 8
Modem, 2400 - will pay up to £ 25
Dart Scanner - will pay up to £ 30
Rombo Vidi Digitiser
- will pay up to £ 30
Stop Press - will pay up to £ 10
2in1 or MFU - will pay up to £ 10
Advanced Art Studio
- will pay up to £ 7

Contact : Matt Gullam
Phone (0726) 813084
or write to
1 Pembroke Close, The Mount,
Par, Cornwall, PL24 2BT

<<Hi there Matt, Clive here, thanks for the software, I'll have a look at it and then sort some of our software out and do a swap with you.

The only program I know that'll both format MS-DOS discs and copy files between the CPC and IBM compatibles is "2 in 1" (now available from WACCI for only £ 20). MFU will happily transfer

programs and files, however, it will not format discs. None of the PD programs I have tried actually works, and we only include programs in the library that work correctly. So we have no CPC to MSDOS programs in the PD library. Cheers. -Clive.>>

DISSATISFIED OF OUNDLE

The last time I wrote to WACCI you not only printed my letter, you printed it twice - is that a record or were you just short of copy? <<We must have been desperate>> The heading above the letter on the second occasion was 'What a nice man'. All I can say is "not this time sunshine"!

In March I sent you an order for seven discs. Its now May and three phone calls later and I'm still without the discs. I even sent £2 for postage out of generosity, fool that I story with which I was fobbed off was along the lines that since it was a big order, the smaller orders had been satisfied first to save more people waiting for their orders. The idea being, I suppose that you get fewer complaints this way? <<yep>> May I make a few suggestions?

- 1) Bigger orders are just as important as smaller orders and should be dealt with in turn
- 2) If a delay has to be incurred, advise the orderer, especially if he sends £2 towards postage.
- 3) Having promised twice that the full order would be in the post by the weekend, for goodness sake make sure that it is. In other words don't make promises you can't keep.
- 4) If the order is too big to handle in one go, send it off in separate lots. Goodness knows, I can't handle seven discs all at once anyway, but one or two a month might have kept me from chewing my keyboard, <<Have you tried it with jam?>> especially if accompanied with a little note saying that the rest would follow i.d.c. <<IDC? In due course? -Clive.>>
- 5) Are you looking for someone to take over this service? If so, ring me, Nottingham isn't that far away.

On to some other matters:- <<Phew, I thought you were never going to stop>>

PRINTING PROBLEMS. I had a problem, I tried the help-line numbers. Those that were in were very interested in my problem but unfortunately had no suggestions as to how to solve it. <<Life can be like that, at times>>.

In brief, I needed to print out a stationery order in a specific format on a pre-printed form. The problem being that the spaces for the five digit catalogue number were wider apart than my Epson RX-80F/T+ will normally print.

I had tried every combination of pica, enlarged, condensed etc that there is, to no avail. There was no apparent solution. Spreading the lines vertically is no problem - ESC 3 allows this to the nearest 216th of an inch, but spreading the characters on a line was not possible, until now that is. <<I kind of thought that you might just have found the answer>>.

The answer <<what did I say>> lay in going into bit mode and printing the required number of blank bits thus moving the head along to the right place, coming out of bit mode, printing the next number and so on.

The data was taken from a datafile produced from Masterfile III and read by a simple basic program - Protex for once letting me down. <<Surely not>> Anyway thanks to all who tried to help, particularly Frank Frost.

COMMS. I was pleased to see an article on comms in issue 54. One flaw though seems to be that Geoff Holmes assumes that everyone already has all the kit needed to get on line. I haven't. I guess like everything else it depends on what I can afford but how about some info on what's needed, (Modem, Interface, Software etc), who are the suppliers and an idea of cost.

Brian R Norris
Oundle

<<Hi there Brian, by the time you read this you'll have all the software you ordered from Chris. Sorry about the delay - We did put out an appeal for help for Chris last month - no offers yet though. The real problem is the library is expanding at such a rate that it is to much for one person to cope with ... Cheers. -Clive.>>

THE TOMATO PYRAMIDS COMPETITION FROM WACCI 54

Dear Clive, As you know, I was on holiday when WACCI 54 went out so I don't know exactly when my incoming mail arrived. My wife puts each day's post on top of the previous day's, and a card from Frank Ellis of Botley was next on top of the WACCI 54. Rarely is there a day with no post, so Frank must have been quick off the mark.

It was a few days before another entry arrived, and another week before any more. Disappointingly there were only six entries, but a card from Steve Lee of Huntingdon cheered me up. He wrote that although he'd been unable to solve the problem, he enjoyed trying and looked forward to a further brainteaser. Thank you Steve. I would like to help, but I cannot, myself, think of another.

The original problem from long ago used cricket balls, and just asked for the smallest square number which would build the pyramid. I changed to softer building materials so as to make a more interesting puzzle.

THE ANSWERS

Question A: 1240 and 1785

Question B: The Program

```
1 DEFINT a-z:DIM v(90):FOR p=1 TO 99
:v=v+p*p:v(p)=v:FOR s=5 TO 90
:IF s*s<>v THEN NEXT s,p ELSE
FOR s=180 TO 5 STEP -1:PRINT s
:FOR k=1 TO p-1:FOR l=1 TO p-1
:IF s*s<>v(k)+v(l) THEN NEXT l,k,s
ELSE PRINT v(p)"tomatoes fell. "
v(k)"with"v(l)"stay up."
```

Join those 7 lines of text together to make one line of BASIC program. It is worth mentioning here that a line of

BASIC could become longer, or shorter, when it is installed. You could get the error message, 'Line too long' when you try to enter a long line.

THE PROGRAM EXPLAINED

Variables:

p=side of pyramid base
s=side of square
v=volume (number of tomatoes)

k and l are counters in the FOR ... NEXT loops.

The first part of the program has two nested FOR...NEXT loops: s and p. The outer loop builds pyramids, layer by layer, of increasing size - v=v+p*p - and records each size in an array - v(p)=v. The inner loop considers squares of increasing size. This continues if the square number is not equal to a pyramid number - IF s*s<>v. If the numbers are equal the pyramid is fully built. (That's the one which collapsed).

The next part of the program has three nested FOR...NEXT loops: s,k and l. The outer loop considers squares of decreasing size, starting with a large number. The inner loops add together the sizes of all combinations of two pyramids from the array. This continues if the square number is not equal to the two pyramids combined number - IF s*s<>v(k)+v(l). If the numbers are equal the answers are printed.

Program execution (especially loops) is faster if numeric values are integers, so 'DEFINT a-z'. The second part of the program still takes time, so, 'PRINT s' to let you know that the

program is still running. Why count to 90? The long story, which I didn't tell you, gave clues about Albert's reach. It was certainly less than 90 layers of tomatoes. Why count from 5? The question says that 4 didn't work.

Why count down from 180? Albert might have thought that for two pyramids he should try twice as many tomatoes. Well, I did tell you that you didn't have to be good at sums!

If you want to try the program, use 60 instead of 180, and save time.

MY COMMENTS

Jumping out of loops, as this program does, is frowned on but it is one way of winning a competition. It can be risky relying on the value of a loop count variable outside the loop. This program relies on 'p' in 'PRINT v(p)'

THE WINNERS

No one gave all correct answers. The first three cards out of the hat with correct answers to the numbers all showed that computers had been used to help find them.

It would be appropriate to divide the prize, and give one WACCI disc of the winner's choice to each.

THE WINNERS ARE:

Pete Dunlop of Locking
Frank Ellis of Botley
J. Shaw of Wargrave-on-Thames

They should let Clive Bellaby know which disc they would like from the the library. Yours, Tom Betts.

THIS MONTHS COMPO - READ ON & BLAME (OR PRAISE) PETER CAMPBELL

Why blame (or for that matter) praise Peter Campbell and Campursoft? That is the easy bit, Peter has donated the prize, a copy of MicroDesign Plus. So we have set you a relevant sort of competition. If you cast your mind

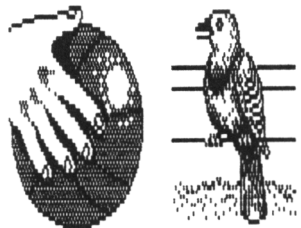
back an Issue or so we asked for ideas for front covers - well we're taking that a stage further - design a front cover for WACCI and if your's is the winner - You win a copy of MicroDesign Plus supplied by Campursoft.

MicroDesign Plus is an upgrade for the original MicroDesign art program -- If you don't own a copy, don't panic, we will supply you with one. Oh yes, the closing date - completed drawing must arrive at WACCI HQ by the 20th July.

THE ABC OF PD

Chris Carter-Bown goes German and reviews Mini-Print-Shop.

Clip Art Examples



Clip Art Examples

INTRO

This time around I'm looking at a superb program from Germany called Mini-Print-Shop. It landed on my lap via Robot PD library, who did the importing and translating. Well done chaps. This utility provides about 200 pieces of clip art, a couple of large fonts and the environment in which they can be placed anywhere on the screen. I would imagine that it would find a place in most PD collections.

WHERE IS IT?

Mini Print Shop, takes up a whole disc, it is on WACCI PD DISC 27. It consists of 12 files, the document file being P-SHOP.DOC, which you ought to print out as soon as possible.

WHAT NOW?

Insert side A of the disc in and after typing Run "P-Shop" <cr> the program will load. At the prompt, turn over the disc and then your off. Leaving the program disc in allows you to load other clip art or font files at the push of a few keys. The program doesn't check if it's the correct disc, it just stops!

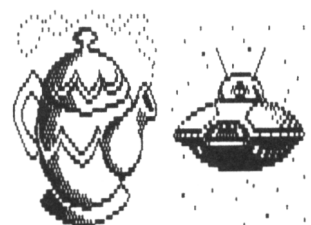
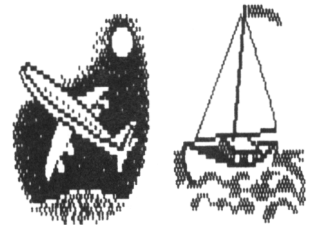
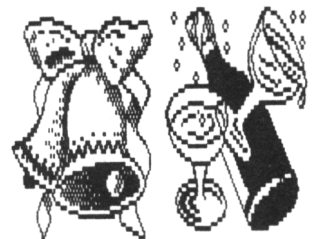
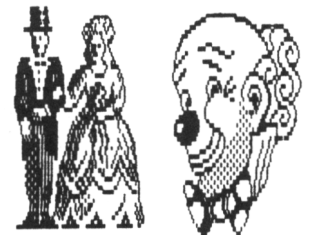
HINT'S AND TIPS

1. Depending on which Art or DTP package you have, you will need to ensure your designs will fit the screen size of your package.
2. If you are using the fonts and pics, it may be to your advantage to lay the text first, and then fit in the artwork. However, be careful, the screen is cleared under the area of the cursor.
3. The major problem with this program is it only loads and saves screen files with the name "PICTO.PIC". That means one file per disc! Well, there are ways around this, this one is not elegant, nor is it good programming practice etc. but it works!

When you have completed the design, swap the disc, (to your picture disc) and save it. Pressing ESC ESC breaks into the basic program, CAT is obvious, then RENAME the pic file to "Name.EXT" where EXT is whichever ext. your ART or DTP package will like to find. CONT will restart the program. You will need to clear the screen because it's corrupt! Well, I did say it wasn't elegant!!

I dare say if you had a mind you could do something with defining function keys to produce sequential names (thus allowing both saving and loading of screens) which would be a lot nicer.

Clip Art Examples



Clip Art Examples

PROTYPE – THE RETURN OF ARNOR!

Did you think Arnor had developed their last CPC product?

We must admit, it was starting to look that way. But now we are pleased to announce a stunning new arrival - *Protype*. This provides *Protexit* with the improved printing features that many of you have requested.

We honestly believe that it is not possible to achieve better quality output from a 9 pin printer than with *Protype*. Just look at the examples below - all printed on an elderly Amstrad DMP 2000!

Protype costs just £30 and is available on disc only. It works with *Protexit* ROM and disc versions and may also be used as a stand alone program.

5 years after its original release *Protexit* remains indisputably the leading CPC word processor. In the February 1991 issue, AMSTRAD ACTION said:

"Without doubt the most complete word processor available for the CPC ... Protexit is very much a professional quality program."

AMSTRAD ACTION speed tests show *Protype* to be many times faster than other programs, for example:

Replace operation	Delete 17k block
Program A - 94 secs	Program A - 17 secs
Program B - 74 secs	Program B - 15 secs
<i>Protype</i> - 5 secs	<i>Protype</i> - 1 sec

Prices

<i>Protype</i>	£30	(disc, <i>Protexit</i> not required)
<i>Protexit</i> + <i>Protype</i>	£45	(disc)
Rombo ROM box	£20	(when at least one ROM is purchased)

ROM prices

<i>Protexit</i>	£25	Promerge Plus	£20
Maxam	£25	Utopia	£20
Prospell	£20	Maxam 1½	£20
		BCPL	£20

Protype is a typesetting print enhancer designed to squeeze maximum quality from low-cost 9 and 24-pin dot matrix printers. This paragraph shows how **Protype** can work to a right-hand margin.

Liquid ^{293K}	$c_p / J \text{ kg}^{-1} \text{ K}^{-1}$
① Acetic acid ($C_2H_4O_2$)	1.96×10^3
② Acetone (C_3H_6O)	2.21×10^3
③ Water _{sea} (H_2O , salts)	3.90×10^3

supports over 40 European languages including:

Anglo-Saxon þ ð æ œ ā ē ī ō ū æ œ
 Czech á č ď é ě í ň ó ř š ť ú ů ý ž
 Latvian ā č ē ģ ī ķ ļ ņ š ū ž
 Polish ą ć ę ł ń ó ś ź ż
 Turkish â â ç ğ ı î ö ş ü

This paragraph shows how **Protype** can work to a right-hand margin.

A Ganga común, «*Pterocles alchata*», 38cm
 ♀ con tres bandas en el pecho †
 ♂ faja pectoral castaña ‡

B just some of the non-ASCII symbols:
 « » „ “ ” ¡ ¢ 1^o 2^a ¶ §
 © £ ¥ ¤ ¨ ± ÷ × ↓ °
 ← → # ¢ ß ð Ð þ Þ ø Ø
 å Å æ Æ œ Œ † ‡ † ‡ H
 ←line graphics too→

This actual-size printout was produced in one operation on a 9-pin printer using Arnor's *Protexit* and *Protype*.

Protype (disc only) works on:

- Amstrad CPC6128 [+]
 - CPC664 & 64K expansion
 - CPC464 & 64K expansion & disc drive
- Uses less than 350 bytes of the main 64K.

Fæder ure, þū þe eart on heofonum (Old English)
 Ár n-atheir, atá ar nèamh (Irish Gaelic)
 Fader vår som är i himmelen (Swedish)
 Svargayehi vādasiṭina apagē piyāṇeni (Sinhalese)
 Teve mūsų, kurs es danguje (Lithuanian)
 Pater noster, qui es in cælis (Latin)

PROTYPE IS VERSATILE:

- multiple diacritics (accents) with any letter (ê ñ ÿ Å)
- tabulates proportional text / micro-justifies spaces
- 240 DPI = 216 DPI resolution on a 9-pin printer!
- works with all 9-pin or 24-pin Epson-compatible printers
- use from *Protexit*, Basic or machine code
- includes the seven fonts used in this demonstration
- choice of character designs within a font (page or page)
- !x91 70 9nil 0 70 9ri9omi 707riim
- superscript, sub script, underline, [b] box, (e) encircle
- kerning (spacing of 'difficult' character pairs (AV))

Releasing your micro's potential...



VERY BASIC

basic

Written by
Alan Tilling

Letters to:-
Very Basic Basic
65 Lawrence Rd
Altrincham
Cheshire
WA14 4EL

All the latest news and some basic Basic programming as well.

Hello everyone, 'Tis I.

Right straight on from last issue's diatribe. We have talked through the loading routines etc and now it's....

THE GAMES MISTRESS

The heart of the program is what I have called the games section and it starts out with line number 520 which Clears the Screen. If you find that you have difficulty in remembering CLS try to think that it Clears the Screen and not CLS=clear screen. Line 530 is the start of the FOR.. TO.. NEXT loop that points to the relevant value of x for sim\$(x).

-{VbBVbB}-

The variable called length is made equal to the LENgth of sim\$(1) (first time around) as is the variable "l" (also for length). A counter called "c" is cleared at the end of the line.

Notice that whilst the lines are within a FOR/NEXT loop they are indented by a space. This makes it a little easier to read.

THE COUNTING HOUSE

I had better explain why there are so many counters. Length is used as the length of the whole sentence and initially so is l, whilst c is zero.

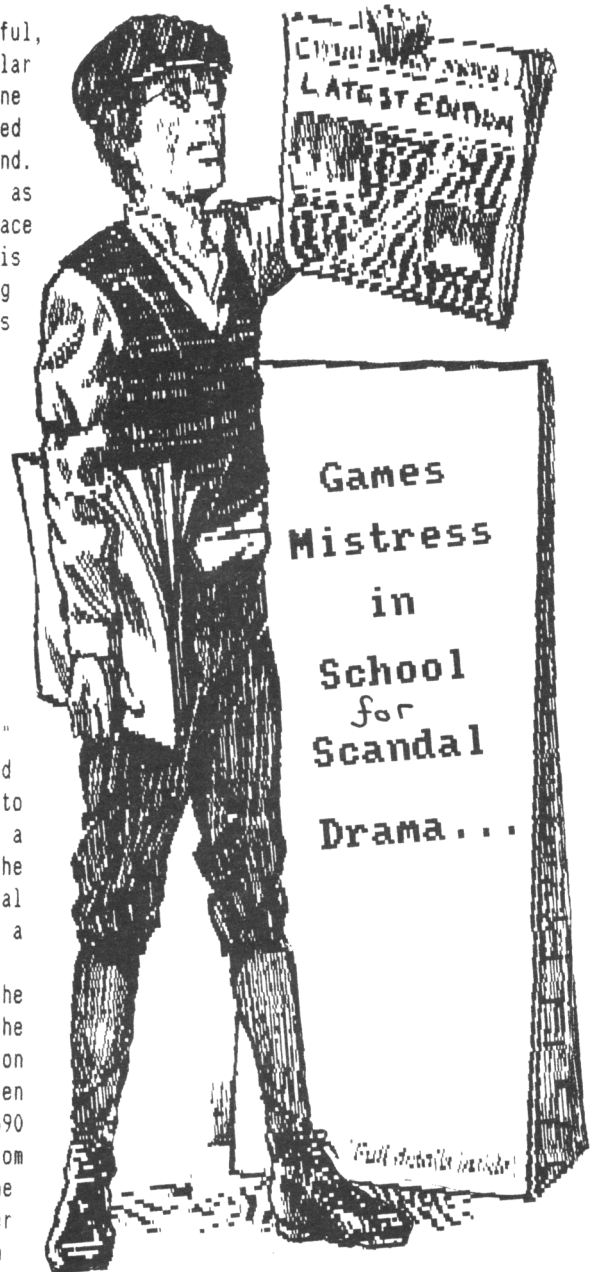
MID\$(sim\$(x),l,c) means look at 1 character in the MIDDle of sim\$(say 1) l characters from the left. Find your ASCII table in your manual and you will find that 32 is a space. So line 550 means IF the target character is a space THEN goto line 580. If the test

fails, l is taken off 1, be careful, l (one) and l (el) look very similar and l is added to c. The next line causes the next line to be repeated and repeated until a space is found. This means that l and c are used as counters and enable the first space to be found. Why a space? This is because the first space, counting from the right hand end signifies the start of the last word which is what we are trying to isolate.

-{VbBVbB}-

Nothing too mind bending so far. Notice that 550 is exited via a goto 580. Since control is still within the same loop, the method of 190 would not be appropriate here. Line 580 is another of those lines that look harder than it really is. It says that "c" characters from the RIGHT hand end of sim\$(x) are to be converted to UPPER case and then located as a new variable called target\$. The reason it is converted to capital letters is that it makes a comparison (in 630 later) easier.

Now if the right hand end of the sentence is the answer then the left hand end must be the question and this is printed on the screen by 600. To find the question, 590 puts a quantity of characters from the LEFT of sim\$(x) into the variable quest(ion)\$. The number of characters is the total length less the quantity of characters in the last word (c). On to line 610 where the computer stops and



The Daily Rag in
"It's a real time program scandal"

waits for you to INPUT your idea of the last word. Your attempt is stored in a variable called t\$ and converted to capitals by 620. In 630 the actual last word (target\$) is compared with your attempted last word (t\$).

Both are in upper case so the comparison is just like for like. IF the comparison fails THEN Basic is sent back to 600 for you to have another try but IF they are the same then 640 sends Basic back to get the next simile and the proglet is repeated. The last line 650 RETURNS Basic to the menu when all twelve similes have been completed.

TIDYING UP

As I always say things will look better if they are tidied up so let's see what can be done to the program as it stands. The menu is a scrunched up so have a look at figure 2 (figure 1 was last month).

Lines 52 to 105 space out the menu just to make it prettier and more readable. It does this by adding a title in line 1 then spacing all the menu entries out at lines 4, 8, 12 etc and lining them all up in column No.7. Line 285 puts the brakes on the program and allows the screen to be read and 286 tell you how to get going again.

CAT ('O' NINE TAILS)

The save input routine asks you to name the (new) file at 320 so 315 flings up the CATalogue so you can see

what filenames you have used. Lines 425 does a similar thing whereas 395 and 495 insert a delay to enable the screen to be read comfortably. If you get the answer or rather *when* you get the answer right 635 makes a nice noise to give you a pat on the back. If you want the program to blow a raspberry if you get it wrong then work out the sound command you want, go on, it's not difficult and alter 630 like so. Replace 600 with the new sound command followed by:

```
:goto 600
```

SIMILES

If you are any thing like me, you will be able to think of any number of similes until you're at the key board and your mind will go blank. (Mine is all the time, but that's another story) so figure 3 is included for your delectation. By the way you can always use a word processor to make the file if you want. Just make the first one using options 1 and 3 then load the resultant file into a word processor to see what form it should take.

-{VbVbB}-

Well that's all for this month. Don't forget if you're stuck you can always write to me at Tilling Towers and I'll do my best to confuse you completely. Bye for now, Alan.

```
11 'More of the Similes Program
52 LOCATE 12,1:PRINT"Simple Similes"
55 LOCATE 7,4
65 LOCATE 7,7
75 LOCATE 7,10
85 LOCATE 7,13
95 LOCATE 7,16
105 LOCATE 7,20
285 CALL &BB18
286 PRINT:PRINT:PRINT "Press any key
      when ready"
315 PRINT:CAT
395 FOR t=0 TO 1000:NEXT t
425 CAT
426 PRINT:PRINT
495 FOR t=0 TO 1000:NEXT t
```

fig 2

Loads of Similes

As pleased as punch
 As poor as a church mouse
 As proud as a peacock
 As quiet as a mouse
 As slippery as an eel
 As strong as an ox
 As thick as thieves
 As wise as an owl
 As black as soot
 As mad as a March hare
 As bold as brass
 As hard as nails

fig 3

* Adverts * * Adverts * * Adverts * * Adverts * * Adverts *

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By The Welsh Wizard, Gwynn Hopkins

26 Assorted disc games, including,

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RoboCop - Tape - £ 2.50

Pictionary - Tape - £ 3.50

Rainbow Islands - Tape - £ 3.00

Gazza's Super Soccer - Tape - £ 2.00

FORTH

Not so much a program,
more a way of life....

How to survive the nineties by Alan Tilling and Clive Bellaby.

Clive and Alan answer loads of questions about Forth.

You thought you were safe, but you're in for a surprise, the sun decides to shine and her indoors decides it time you stopped playing with that stupid computer and did something useful like gardening or painting

It could have been worse, you could be made to watch: Tennis from wimbers, or Show Jumping (Bobbo bashing) from somewhere else However, this story cannot be true 'cos you're now reading your WACCI. So all must be well with the world, the birds are singing, the sun is shining

INTRO

This month we're going to answer loads of questions that have been posed over the past two months by the young (and famous) Allen Cooper. Allen's been getting stuck into Forth (and stuck in Forth) and has encountered one or two or three or more questions and he now wants some answers.

HOW MANY FILES

When using the new version of Forth the lowest screen number you should start entering your program on is screen 50 (on the old version you started at screen 40.)

The reason for this is simple, we need to reserve space on the disc for the operating system and for the Forth language program. If we don't use screens 0 - 49 inclusive, then we have reserved 50k of disc space for these programs. The operating system takes up 9k of disc space and the directory tracks take up another 2k. So with the new version of Forth we have 39k of space available, and with the old version we have 29k available.

Now Allen sent me a disc, with the new version of Forth on it, on which he had saved three 14k programs. Now as explained, there is only 39k of space available, and Allen had saved 42k worth of programs to the disc. By

doing this, Allen have overwritten and lost the contents of screens 50 to 53 inclusive. Be warned, you should not exceed the maximum amount of space, if you do, you'll corrupt the screens.

MORE ABOUT ROM BOXES

Allen was having a few problem with his Rom box last month, originally he thought the Forth was clashing with the programs. However, having talked to the experts, they assured us that it was almost probably a hardware fault, and probably a faulty connection.

Allen has checked his power supply, and feels he has a below par monitor power supply which he is trying to get fixed. Meanwhile if you know anything about power supplies and the CPC can you drop Allen a line. (You can send it to WACCI and we'll pass it on.)

STANDALONE PROGRAMS

If you use the new version of Forth to create a standalone program, then as Allen suggested, the program and Forth are saved as one completed file (in effect the standalone program sits on the back of Forth.) This is why most standalone programs take up 14k of disc space. However, you can (and should) drop the screen editor part of Forth (use Forget etc to do so) prior to saving the new program to disc. Let me (or us) demonstrate this with an example program.

Please note, this example will only work with the fully updated version of Forth, that's version 1.21 (This is on the new Forth disc, WACCI PD DISC 1.)

All you must do is enter and compile the example, then follow the on-screen instructions to create a new program.

CREATING A STANDALONE PROGRAM IN FORTH

This program demonstrates how to remove the screen editor from Forth, prior to saving a standalone program to disc. This reduces the program size by 6k and increases the operating speed of the program.

```
FORTH DEFINITIONS DECIMAL      ( Select a vocabulary and a number base )
' FORGET-ME FENCE !             ( Deprotect the words you wish to forget )
FORGET FORGET-ME                ( Forget [drop] the dictionary words )
: NEW-PROGRAM                   ( A simple program that demonstrates how )
  10 0 DO                       ( the option works. This example program )
    CR ." Hello Sailor "        ( just displays a silly message on the )
    CR ." Press Any Key " CR    ( VDU screen - 10 times - You must press )
    KEY DROP                    ( a key after the message has been )
    LOOP                        ( displayed. )
ZAP                              ( Create a standalone program on the disc )
```

After you have entered the program onto a screen, load the screen, then follow the on-screen prompts to create a standalone program. For this example only, please call the new program TEMP.COM.

The new program will be around 9k in size, the original program was 14k, so by dropping the screen editor from completed programs we saved around 5k of expensive disc space. The shorter program will also run faster than the original program.

You could also arrange to drop all of the new words in Forth that are not required for your standalone program as this will save more space. However, this will only save a maximum of 3k so it may not be worth the effort.

CONTROL CODES AND THINGS

The two versions (CP/M 2.2 & CP/M 3.1) use different control codes so what do you do in order to cope? This problem is not unique to Forth, it's common to all those programs (and programmers) who wish to end up with programs that operates under both systems.

Cast your mind back a year or so, to the Cobol programming series, the same problem was faced by those wishing to write programs that operated correctly under CP/M 3.2 and CP/M 3.1 (plus.)

Any program that operates under both CP/M 2.2 and CP/M 3.1 must follow one of three distinct paths in order to overcome the problems These three methods have been used since time began by all programmers.

1. You can stick to scrolling text only. The scrolling text method runs happily (and naff'ily under) either system. This is the most popular solution.
2. You could build both sets of control codes into the program.. Then ask the user which version of CP/M they were using Then select the correct control codes. We used this this method in the Cobol programming series.
3. You start by using basic scrolling text and then modify the program to suit the environment it's in. In short, the user picks and enters their own control codes. This is the method used by VDE and many leading programs.

HERE WE GO, HERE WE GO

Again, rather than go on and on about what you should do, we've written this short example program to demonstrate one of the methods you can use. All

CHOOSING THE CORRECT CP/M CONTROL CODES

CP/M 2.2 and CP/M 3.1 (plus) use different control codes. Clearing the screen using CP/M 2.2 is CHR\$(12), whilst CP/M 3.1 (plus) uses ESC "E" ESC "H". This sort of problem must be overcome, if you're going to write program that run under both operating system. This problem is not limited to Forth, it affects all the languages and program that wish to use both operating systems.

FORTH DEFINITIONS DECIMAL

```

0 VARIABLE CPM?          ( store the CP/M system number in here )

: GET-CP/M               ( ---, store the current CP/M operating )
CR ." Press (2) for CP/M 2.2 " ( system number in the variable CPM?. )
CR ." Press (3) for CP/M 3.1 " ( if CPM? = 50 then it's CP/M 2.2 )
CR KEY CPM? !           ( if not, then it's CP/M 3.1 )
;

: CLEAR-SCREEN           ( ---, clear the vdu screen )
CPM? @ 50 =              ( recall CP/M value, is it 50 ? )
IF 12 EMIT               ( if CP/M 2.2, use CHR$ 12 )
ELSE 27 EMIT 69 EMIT 27 EMIT 72 EMIT ( if CP/M 3.1, use ESC "E" ESC "H" )
ENDIF
:

```

The easiest way around this problem would be to stick to the naff scrolling text, this runs under both systems without a problem. Compatibility problems or not restricted to CP/M 2.2 and CP/M 3.1, you'll find similar problems when coping with 464's, 664's and 6128's (even if you exclude the plus series.)

If you use this method, then you'll need to do one of these for control code that's varies between CP/M 2.2 and CP/M 3.1.

you need to do is: enter, compile and test the example (that's not to much to ask is it?) When you're happy with the definition, save a new version of Forth called TEMP-CPM.COM on the work disc. Quit Forth and then load the new version by entering TEMP-CPM at the A> prompt of either CP/M 2.2 or CP/M 3.1.

When the program has loaded, enter GET-CPM, press Return, and then select the correct version of CP/M. When you have selected the correct version, enter CLEAR-SCREEN, and the screen will clear. The CLEAR-SCREEN command checks which version of CP/M is running and selects the control codes needed for that version.

ADAPTING FORTH v 1.21

If you want to adapt Forth121 to match your own needs, (such as changing the SAVE message to one you prefer) then you really need the original Forth source code and screens. So we've put them on a disc, just for you. WACCI PD DISC 38 'ish contains the source code

for both updated version of Forth, so you'll be able to adapt Forth at your leisure. All you need to do is copy the CP/M 2.2 System tracks onto the discs and you're ready to go

MINUS, NOT AND BITS

Many versions of Forth exist, the two most popular are FigForth (the one we're using) and Forth-79. I (that's a Clive I) have a version of FigForth that runs on the PC under MS-DOS.

Both versions of the language are similar, but they do have differences. MINUS becomes NEGATE and 0= becomes NOT. If you're using program listing not specifically designed for FigForth then you'll need to adapt the program.

OUTRO

Well once again the sun sinks slowly in the west and we're forced to call it a day. Again leaving you to pick up the pieces of your shattered life So it's a *good night* from me and *sleep tight* from him. *Byeeeeeeee*

SPELL CHECKERS

John Fairlie Investigates SPELL.COM and ISPELL.BAS

The weather is fine, the beer cool and the soft breeze is rustling the trees in the garden. So, what on earth am I doing sitting here writing the second part of the Spell Checkers series?

In this instalment I'm taking a look at two good public domain programs, SPELL.COM (CP/M) and ISPELL (Amsdos) so without a typo in sight, we're onto the spell checking.....

REVIEW of SPELL.COM

CP/M's SPELL.COM is very different to Prospell. It works only in CP/M and it can only check ASCII files. This means that you will have to save your text file (or a version of it) in ASCII to be able to spell check it.

SPELL consists of three files, you start with SPELL.COM and there's also SPELL-ED.COM and MASTER.LEX to contend with. The latter is your dictionary and is merely an ASCII text file of a list of words.

HOW TO USE SPELL.COM

Wind up CP/M and at the A> prompt you should enter the following:

```
SPELL <filename> [F]
```

The program will then load itself and a the ascii textfile. Internally, it sorts out your text file into a list of different words. It will then prompt for the name of the dictionary. You type in MASTER and the program then masks the words used in your text file against the list of words in MASTER.LEX. SPELL will then only address those words not found in MASTER.LEX. It again prompts for any other dictionary name. If you have no other dictionary files, you press enter. You are not told how many words were found or not found.

The list of words not found in the dictionary will then be displayed on the screen, and will also be copied to

a file called SPELL.LEX. The latter will not happen if you did not include the [F] in the original command line.



Gun



Horse

THE NEXT STEP

You can now proceed onto the next phase. Here you enter the command SPELL-ED <filename> again entering the name of your text file. SPELL-ED will take each word in SPELL.LEX and present it to you on screen. You then say whether you want to Ignore it, (press <I>), Add it to the dictionary (press <A>), or Mark it in the text file (press <M>).

On completion, all the words to which you answered <A>dd, will be put in a file called NEW.LEX. Your text file will be amended to add a double hash (##) by each word you opted to <M>ark. (Your original version is still available but as a .BAK file). This will allow you to find the words later and amend them as you wish with your word processor. SPELL.LEX will be erased, and NEW.LEX will be generated. SPELL-ED exits to AMSDOS, it's a known bug but files are not corrupted.

CREATING A NEW FILE

You then have to combine MASTER.LEX and NEW.LEX manually before the next spell check. (So you will have to boot up CP/M again!). Combining these files can be done using PIP. At the A> prompt you enter:

```
PIP MASTER.LEX=MASTER.LEX,NEW.LEX
```

You must also remember to delete NEW.LEX. You can put the dictionary in order with SORT.COM, or count the words in it with WCOUNT.COM, however, this is not essential. This is rather a palava. If you were using a CP/M

text editor, ie, VDE then it might not be so bad, but if you are using an AMSDOS word processor or text editor, ie, PROTEXT, MINI OFFICE or TASWORD or BRUNWORD, then you are in for even more hassle. Not only do you have to create an ASCII file for checking, but then boot up CP/M for the Spell check, and finally boot up your Word Processor again afterwards for the editing of your document.

IT'S DOCUMENTED

For documentation, you get a short DOC file explaining the procedures, and I have to say that this is perfectly adequate for its purpose.

THE MAIN DISADVANTAGE

The main disadvantage is SPELL comes with only about 2000 words in its dictionary and this means that most of the words it throws up as not found will be perfectly acceptable words.

It does include Presbyterian and ecliiesiastical, and also americanisms like color, but not many of the basic words you use every day.



Idiot



Jive

By using this program extensively and by combining dictionaries from users, I have built up a dictionary of 9500 words, all different and all verified by Prospell. If you start with a 2000 word dictionary, then spell checking becomes more of a dictionary building exercise! By the time I got to 5200 words, I gave up and bought Prospell with over 30,000 words already there and have never regretted it.

THE CONCLUSION

In conclusion, this program does work, and is probably one of the more useful programs in the PD library. By this, I

mean it does quite a useful job. It converted me to the idea that spell checkers were a must. Its big plus point is that it's compact. SPELL is only 3k in size whilst SPELL-ED.COM is 9k. The starter dictionary of 2000 words takes 17k of disk space. It is on the new WACCI PD DISC 37, which is due to be released soon.



Knife



Lucky?

REVIEW OF ISPELL

As soon as I tell you that ISPELL is by the same author as PD Planner, (and that the same person is the WACCI Subscription Manager!) you are likely to assume, as I did, that you are in for one of the best PD programs in its field. Well, you're not going to be disappointed. ISPELL was originally known as WACCISPELL but it has now been moved to the Public Domain under the new name of ISPELL. (Short for Interactive Spell.)

When I first got hold of a review copy, it was version 4, and it so captivated me, that I looked at how Paul had done things, and suggested a few improvements. That is why you will see my name in the accompanying document file, and the fact that this review now refers to version 5! ISPELL is on the new WACCI PD DISC TEN. (This disc also contains VDE266, the quality Public Domain Word Processor.)

PAUL'S AN EXPERT BANKER

Paul is an expert in using the CPC (including the second 64k of the 6128) to the full. His spreadsheet program PD Planner was unique in its field.

No-one else to my knowledge has even attempted to write a good quality spreadsheet. His Spell Checker is the same. He has again tackled an area of programming most steer well clear of. His product is very different to both CP/M SPELL and Prospell.

Pauls approach is to use the second 64k to hold the dictionary and the first 64k to hold the program and the text file to be checked. The program checks ASCII files only and it uses the standard Bankmanager commands. You

need a 128k machine, and BANKMAN.BIN (from your CPC Master System discs) on your working ISPELL disk.

STARTING ISPELL

You start by running ISPELL.BAS, a 5k program that does the main business. First it checks if BANKMAN is loaded (and if not, it loads it.) It then asks if the dictionary is loaded, and loads that if you answer 'N'.

The second 64k acts as a standard string storage system, Paul chose 12 characters as the optimum word length. This gives a dictionary size of 5461 (64k/12) words, but all must be 12 characters long or less. The current dictionary fills the RAM.

The method of loading the dictionary is somewhat novel. Paul says that to use the conventional method, ie, reading each of these 5461 words from disk and 'BANKWRITE'ing them is too slow. He has therefore supplied the RAM ready loaded as four 16k files which are loaded as screen files, and 'SCREENCOPY'd into the RAM. This takes some twenty seconds or less.

THE OPENING SCREEN

You are presented with the main screen and I was instantly impressed. You get a very nice presentation complete with 3D effect title. The program prompts for the data disk, and catalogues it before prompting for the name of the text file to be checked. The file is then loaded into memory, and the checking process begins.

You then see the text file scroll in the central part of the screen with the commands available listed below. A word counter reports progress as you go. When a word is found that is not in the dictionary, it is highlighted in the text and the program awaits your instruction.

THE FOUR COMMANDS

Four commands are available, f1 to ignore this word and move on, f2 to ignore it on this and any further occurrence within the document, f3 to edit the word within the document, and f9 to quit the spell check program and return to BASIC.

THE MAIN LIMITATION

It is here that the limitations of the program become apparent. 5200 words is not a large dictionary and most of

the words thrown up will be perfectly acceptable spellings, but which have not been included in the dictionary.

Version 4 was slow, but I can no longer make this criticism! The spell check proceeds at a very respectable pace. You generally expect programs in BASIC to be slow, but Paul has gone some way to turbo charge the checking procedure. The fact that the program will stop every so often with non dictionary words is now more relevant than the speed in full flight.

At the end of the spell check process, you will be prompted to save the amended file if you have edited any words in the process. You may still answer N at this point to which it will prompt for any further files to check. If you answer N, the program then exits to BASIC, but resets colours and windows - another nice touch I warmly approve of.



Music



Nut?

CHANGE THAT DICTIONARY

Dictionary editing is carried out from a separate program supplied. You run LEXED.BAS and the program again checks for BANKMAN and asks whether the dictionary is present. This again shows that Paul knows his onions. As he says in the help file, if you reset the computer with CONTROL, SHIFT and ESCAPE, the second 64k will keep the dictionary intact. There is no need to load it again!

You can then cursor up (or down) the 5461 words, but only one is shown in a small window at any one time. You can also find words by typing in to a search option, or going directly to a particular number word by entering its number if known.

The current word can then be edited. Finally, the program gives the option of saving the four 16k dictionary files needed by ISPELL.

The problem here is that for any word you want to add, you are going to have to find a word to delete.

Version 4 had some errors and slang words, but by masking the dictionary against Prospell, I can now report that version 5 contains a near perfect set of 5461 words. Who said perfection was hard to achieve? They were right.

I SPY THE ISPELL DOCUMENTATION

The documentation consists of a four page file which contains all that is necessary to both operate the program and understand how it works. One thing Paul has included of which I warmly approve, is his name, address and telephone number so you can contact him if you have any further queries.

CONCLUSION

All in all I was pleased to receive ISPELL. For the way Paul has chosen to do things, it's about as good as it's possible to be. The presentation is nothing short of immaculate (if only Prospell was like this!) but the limitation of the dictionary is the big draw back. It will, of course, find all your typing errors. If you don't have a spell checker, this is certainly going to fill a gap. Get it!

IT'S NOT SIZE THAT COUNTS

Too much emphasis should not be placed on the size of the dictionary. It has been calculated (by the experts) that most people have about 10,000 to 15,000 words in their vocabulary.

This means that if you built up your own dictionary, by the time you got to, say, 10,000 words, you would have a fair coverage of the words you actually used in everyday situations.

Someone else's vocabulary may also consist of a similar number of words, but not necessarily the same words.



Therefore, when you buy a dictionary, it is trying to cover not only the words you use in everyday life, nor is it trying to cover the words that everybody uses in everyday life. A dictionary tries to cover all the words you'll ever likely to come in contact with, and I can assure you, that's some task.

HOW MANY WORDS

This article contains some 2150 words, however, it only contains some 580 different words. It's a reasonably clear and concise piece of work, so we

should perhaps think about how many different words a dictionary will need to contain if it is to be usable?

A new Prospell dictionary contains some 33,000 words, and has space for an extra 6,000 spellings to be added.


For most applications this is to many, a dictionary that contains all the words you are likely to use in everyday situations will probably only need to contain some 5-6000 words. You should always remember that there are many hundreds of words that you can spell without help (Cat, Dog, Mat...)

WORDSTAR AT WORK

In comparison, WordStar on the PC has a dictionary of some 100,000 words. In all my use of this over the last three years, I have only had a handful of words added. The coverage here is therefore virtually 100%.

OUTRO

Well that's about it for this month, next month I hope to be able to include a review of Taspell, now that I have received a review copy from Tasword. Have a good month!




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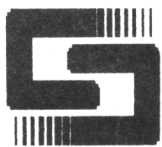
This individual has just realised that he doesn't have a copy of MicroDesign Plus. Don't be like this poor unfortunate.

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... AND THERE'S MORE YET TO COME...



BJ - 10 EX



Bob Moffatt Completes His BJ10ex Revelations !

Hi there Bob, this is Uncle Clive, you may be wondering what I'm doing on your page? Well I'll tell you, I had this idea, I thought that you could write the page, I could lay it out and then you could print it on the BJ10. Do you think this is a good idea?

Hi there Clive, Bob here, Yep it's a good idea, now get off my page, get on your horse and get out of town.

INTRODUCTION

And there you have it, the simplest ideas are the best. I've got this BJ10 printer sussed out now, it now does

what I want, when I want it and the finished article don't half look good (I hope it prints Okay.)

THE PRINTED EXAMPLES

Rather than just print out examples, I have included the printer control codes in the example, like so

([K[q1 [K[q0) There was an old man

The printer control codes are in the brackets, the first group switches the feature on, the second group switches the feature off. I used the left-hand

square bracket to represent the ESC code (ascii code 27) in the examples. This should be a lot easier for you to follow than the standard, ESC Q 'n' example. You know the one? Where 'n' is a value between 0 and 127, or, where 'n' is a bird that lays eggs.

OUTRO

I met Clive at the All Formats Show in London, I recognised him instantly, he was just as blurred as his AA photo. Well that's about it, unless there's something else you want me to cover, I'll say goodbye for now.

EXAMPLES OF TEXT PRINTED USING THE BJ10ex BUBBLE JET PRINTER

This example is 'economy' - light on the ink, (Don't know why. Uncle C what printer codes did you use?)

([64) Our hero resets his printer to default pica - ggg.

(15 [k1 [k0 18) 'no twiddles', sans serif condensed type, as used by WACCI (I hope, Uncle Clive left me here alone!)

([k1[@ [k0[) Back into pica typeface - but with Omar - ggg.

([q2 [q0) Shadow - Uncle, *how do I get back to WACCI?*

([w1[W1[q1 [w0[W0[q0) Hi Al 'L' - *Vufoils?*

([q1 [q0) Sorry, that last bit was double high & wide **OUTLINE**.

([M) Elite, - but Uncle C please listen, *what codes for WACCI?*

([q1 [q0) Could be Elite outline - but who wants that?

([w1[W1 [w0[W0) **Double high and wide - filled.**

([S0 [ST) Now we are alone Clive, *please tell me how to get back to WACCI script.*

([S1 [ST) I need *more* space - combined 'outline' and 'shadow' are not covered and, frankly, I resent being given just one page to tell members that the BJ 10 ex is a PDG - (Pretty Damned Good) machine. You've stopped a full and frank.....

([!!! [!!!) (Silence Bufoon! Get back in your box. Ed)

TREADING THE BAUDS



BY **GEOFF HOLMES**

In days of yore, when communication skills were at a minimum, it would have been very foolish to leave your cave without a club. Your club was a signal to others that you were ready for business. Just imagine two cave-persons rounding a corner from opposite directions. They bump into each other. One says "Ugh!" the other says "Urghh!" Nostrils flare, eyes glare and they begin walloping each with their clubs. Now what do you think might have happened, if one of them didn't have a club. What a mess, yeuk! perish the thought. Of course if the one with club were a gentleman cave-person, he might just give the clubless one a tap on his noggin, muttering "Gotcha!" Meaning you better go and get your club mate, you look decidedly undressed.

Where is this taking us? Protocol.... If you don't know your protocol for comms, you won't rise above the cave-person clubbing technique. You don't greet someone with, "The rain in Spain falls mainly in the plain." "Hello..." is the accepted norm.

And so it is with computers, modems and the rest of the world. You have to be aware of what the protocol signals are and what they do.

GOVERNMENT HEALTH WARNING

Understanding protocols can seriously improve your comms skills. Put very simply: 'a protocol is a set of rules of operation agreed to by a group of users'. Everyone knows what to expect and communication runs smoothly, hopefully

THE PROTOCOL

All right, lets look at the protocol for your comms modem. So, what is the first signal sent to your modem via the RS232 interface? When you first run your comms program, or by default when you power on your computer, a signal 'Data Terminal Ready' (DTR) is sent to your modem. This is analagous to your computer saying "Hi Modem, how are you?"

Your modem replies, "Hello Computer, I'm fine" by returning a 'Data Set Ready' (DSR) signal. Your computer carries on by asking "Modem, are you

ready to send a byte?" by raising the 'Request To Send' (RTS) line.

The modem replies "I'm free" by raising its 'Clear To Send' (CTS) line to the RS232 interface and thence to the computer.

HOWS THAT AGAIN

You dial out the BB phone number, the On Line (OL) light comes on. After a few ring tones, you receive a carrier. (You push the switch if it's a manual modem.) On hearing the carrier your modem says "I'm through to the BB's modem" by raising the 'Data Carrier Detected' (DCD) signal.

In the mean while, the BB's modem would have sent a 'Ring Indicator' (RI) signal to the BB Computer on receipt of your telephone call. Note, not all modems have this signal line, the modem may send this protocol signal as a short text such as "RING" instead of raising the RI line. The BB would be in answer-back mode, that's why it responds with carrier to your telephone call. Again not all modems have this auto-answer back feature. The BB is now in a position to send you its welcoming banner and logon prompt, you're almost in there ...

Now back to your end. You have established a comms link connection between you and the BB. Data and file transfers may now be exchanged. You can observe this by looking at the TXD

and RXD lights on your modem. They twitch nervously as bytes whizzes to and fro.

NO LOOSE ENDS

If your modem gets tied up with something while you try to send data, it will drop the CTS signal until it is free again. This is known as hardware flow control.

Hardware flow control is a local to each end only. All the signals mentioned so far are separate lines between your interface and modem.

There are 25 lines available but not all are used. The RS232 specification is a standard, defining the pin-out arrangement on the 25-way plug/socket and voltage levels, whereas V23, V22bis and so on, define the baud-rates and frequencies for a logic one and zero, for example.

SOME LOOSE WIRES

Between your modem and the BB's modem is just a pair of BT wires. This means that flow control can only be exercised by sending special reserved characters for this purpose. There being no extra wires for hardware flow control signals. XOFF/XON is used and is known as Software Flow control.

LOADS OF FLOW CONTROL

The chars used for XOFF is 19hex, or key [CTRL-S] to tell the BB, "whoaaa!" Don't send me any more data for the time being." The BB will wait until it sees XON. When your computer is ready for data again, it sends XON which is 17 hex or key [CTRL-Q].

When you go into a menu selection on your comms program, XOFF/XON is used. That is, it sends an XOFF to the BB then brings up a menu of options on your screen. After all you wouldn't want to return to terminal mode and

find the BB was halfway through a message to you. When you come out of the menu option screen and return to terminal mode, the program sends an XON char to the BB. Normal comms is then resumed.

WHAT IS IT (THAT IT IS?)

Without flow control, data may be corrupted. You could be sending data when the BB isn't ready and it just gets ignored. There isn't any harm done to your equipment if flow control isn't used. Just data corruption which may be serious if the data means a lot to you though. In general, the DTR, RTS, DCD and OL (On-Line) lights will remain set on, ie. lit, during your logon session. The CTS may blink too fast for you to notice, or it may even remain set all the time. Only the TXD and RXD lights will flicker as data is exchanged.

OUTRO

Well after all is said and done, the final protocol exchange is to say "Byee..." This should be done by your computer dropping the DTR and RTS signals. I notice that my DTR stays high, unless I use !CCLOSE from the HoneyTerm program. Also CTS stays high. Anyway time for me to say !CCLOSE until the next article. Don't forget your protocols now."

A SUMMARY OF THE HARDWARE SIGNALS

(diagramatically in chronological order from top to bottom)

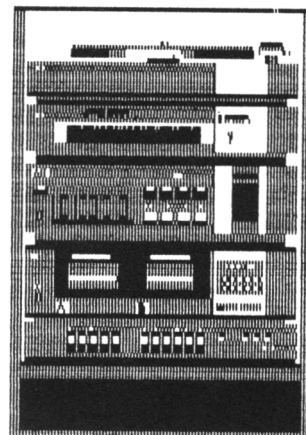
Computer ~~~~~	Modem ~~~~~	Comments ~~~~~
DTR --->		Computer says "Hi"
	<--- DSR	Modem replies "Hi"
RTS --->		Computer says "You free?"
	<--- CTS	Modem says "Yep - I'm free" or it remains silent. (in which case you can't continue.)
dial number --->	OL	Online light turns on.
	<--- DCD	Modem says "I've got a carrier on the BT line"
	<--- data RXD	led flashes as data is received.
data --->	TXD	led flashes as data is sent.
	<--- DCD dropped	Carrier dropped. Logged off from BB.
DTR, RTS dropped --->		Bye bye.
	<--- DSR dropped	Bye bye.

In some modems, full hardware handshaking isn't implemented. The modem doesn't have DSR for example. Further it ties CTS and DCD together as one signal.

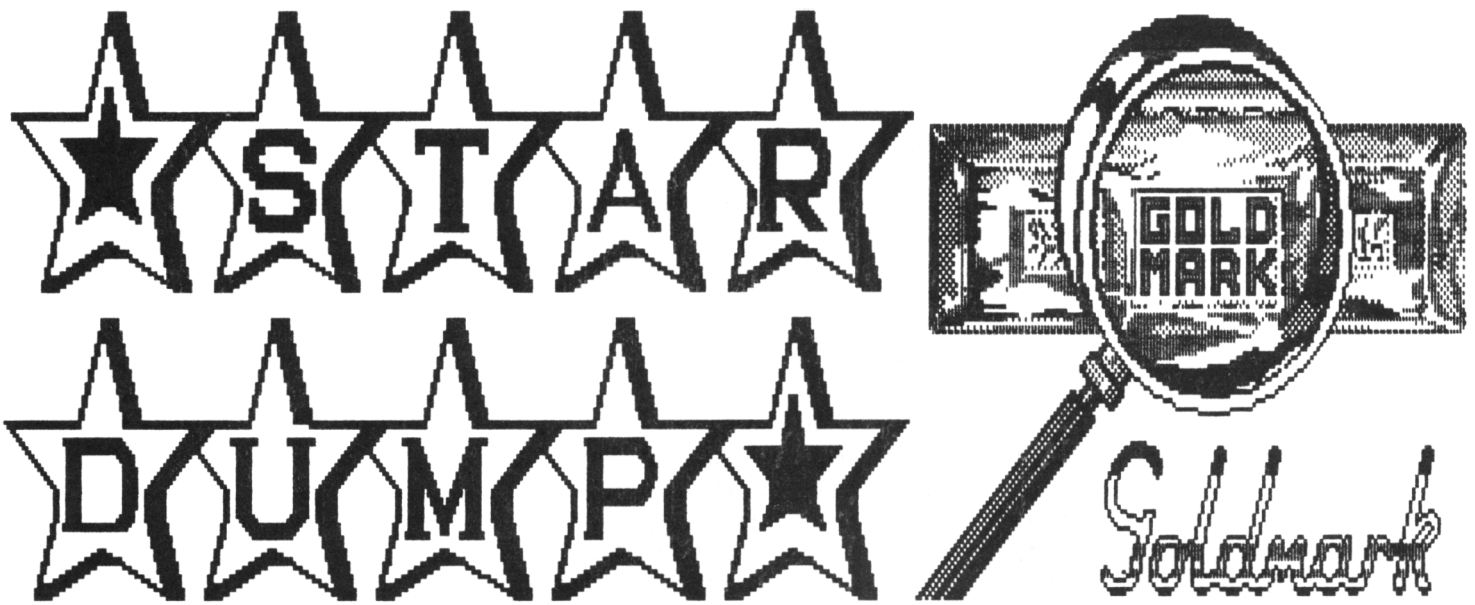
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NewsFlash



We have loads of MicroDesign Pictures and Clip Art - Only £ 3.00 per disc (See the PD library list for full details)



STAMPER METCALFE INVESTIGATES

Ever since the introduction of 24 pin printers, one of the main snags has been the problems we have encountered when printing out graphics. Pictures grew in length as they were printed, sometimes by a much as 20 percent.

WHERE CAN I BEGIN

One of the major obstacles arose when it was required to print out circles and the like. I myself had become so disappointed that I was beginning to think that I had made a severe mistake in the purchase of a STAR 24-200.

It was much quicker and quieter (Yes it certainly is) but when I tried to print out my first attempts of both Stop-press and OCP Advanced Art Studio screens, I found that they took up a sheet and a fifth of listing paper (11" by 8.5".) Frantic phone calls to Peter Campbell and Tony Walker helped somewhat and many thanks to them.

Changing the switches to IBM mode helped in some cases, but difficulties continued to arise whatever method I used, especially with the print out of Art studio screens.

HERE IT COMES

Now it looks as though I have cracked it! Ringing Goldmark to enquire about discounts for our members Brian asked whether I would like to review his new screen dump programme and the man from Sheffield, he said yes!

Stardump from Goldmark is certainly very useful, and does what it claims to do. Those of you who have a 24 pin printer and need to print out a

picture file whether it be a Standard CPC 17K file, an Advanced Art Studio file, or a Multiface Screen file or even a Goldmark compressed screen file (usually about 9K) then Stardump is the answer.

IT'S EASY TO USE

You will find it very easy to use as most of the items are Menu selected by using the cursor keys. (I have not tried it with a joystick, but it will work with one). The highlighted bar is moved around the screen to your choice and then press <enter>, <return key> or <fire button>.

Stardump will run from either "A" or "B" drive, but the picture will only load from drive "A".

To run Stardump run "disc" and press return. The program will also run on CPC Plus series but I haven't tried this option. It will only work on 24 pin printers which can emulate the Epson standard graphics commands. 24 pin printers from Star, Panasonic, Canon, NEC, Fujitsu, Amstrad and, of course Epson.

THE GRAND OPENING

On booting up, the main screen is displayed with the Goldmark logo etc and the instruction is then given to press <Fire> or <Return> to continue or "Q" to quit. Pressing return then asks you whether you have an 8-bit printer port fitted or not.

As supplied all CPC models have a 7-bit printer port One of the effects of 7-bit output is graphic printing on

a 24 pin printer is slow because only one screen line can be printed at a time-and there are 200 lines on a standard CPC screen. With an 8-bit port up to eight screen lines can be printed at once thereby increasing the speed considerably.

ALL PORTS OF CALL

STARDUMP also contains code for the six types of add-on 8 bit printer port that we have seen so far -- these are the KDS marks 1,2 and 3 ports, the Electric Studio port, the GOLDMARK port as well as the DIY project which was published in the ACU magazine.

Stardump will initialise the printer port for you - all you need to do is answer Y (for yes) when prompted and then select your printer port from the list supplied.

PRINTER PORTS AND ROMS.....

If you ask Stardump to initialise the printer port (as I did) with your Roms switched on the disc drive makes lots of funny noises so either initialise the Roms yourself or switch the Roms off before loading Stardump.

PICK A PICTURE

After you have decided about the 8 bit port, you are asked to insert your picture disc in drive "A" and press any key. This produces a white screen with the picture files displayed. A second keypress then lists the picture files and the desired file can be highlighted by using the cursor keys. When the picture file has been

selected pressing another key will ask whether this is the screen you wish to have printed. Pressing the return key again you are then given the choice of four screen sizes. These are:-

7.11" by 4.44" CPC Screen
8.00" by 5.55" CPC Screen
10.60" by 6.66" CPC Screen
and "Spectrum Screen"

After highlighting your choice by moving the highlighting bar over the size of your choice and pressing <return> the next screen asks you for the type of picture file you wish to print out. Once again the highlight bar is moved to select either:-

Standard CPC 17K File
Advanced Art Studio File
Goldmark compressed File
Multiface Screen File

Pressing the return key will then ask you as to whether the screen to print is mode 0, 1, or 2.

Choosing mode 0 gives you the largest screen print and is printed down the page sideways, and is offered with an optional border around the picture. As this print-out is 10.7" long it is unlikely that you can print it on cut sheet paper because not many printers will feed paper right to the end.

The smallest and the largest options both give a perfect aspect ratio of 8:5 so round objects will appear *truly round* on paper although they are not quite so on the screen.

Choosing the 8" by 5.55" printout gives a slightly elongated

printout but is, apparently, included because it is the widest possible print across the page with most printers. When you have chosen the mode of the picture, you are then

asked for the ink values to use. In mode 1 you are asked to choose four ink values, in mode 2 you are asked for 2 ink values and on choosing mode 0 you have to enter 16 ink values. I must say that this was the part of the program that had me foxed until a phone call to Goldmark put me on the right track.

CURSES, FOXED AGAIN!

When entering ink colours you must enter the value, with or without a leading zero for single digit numbers. It is impossible to enter an invalid number and any number over 26 just disappears on pressing <enter>.

COMPRESSED SCREENS

A Goldmark compressed screen means a screen saved with the GOLDMARK Screen Compressor, and as with the Multiface screens, then Stardump contains all the mode and colour information as well as the physical size of the screen used in the game. The Standard

printer holding down the <escape> key for a full line of printing, will cause the dump to be abandoned and you are returned to the opening screen.

HOW FAST IS IT

Average times for printing screens (using a 7-bit printer port) are:-

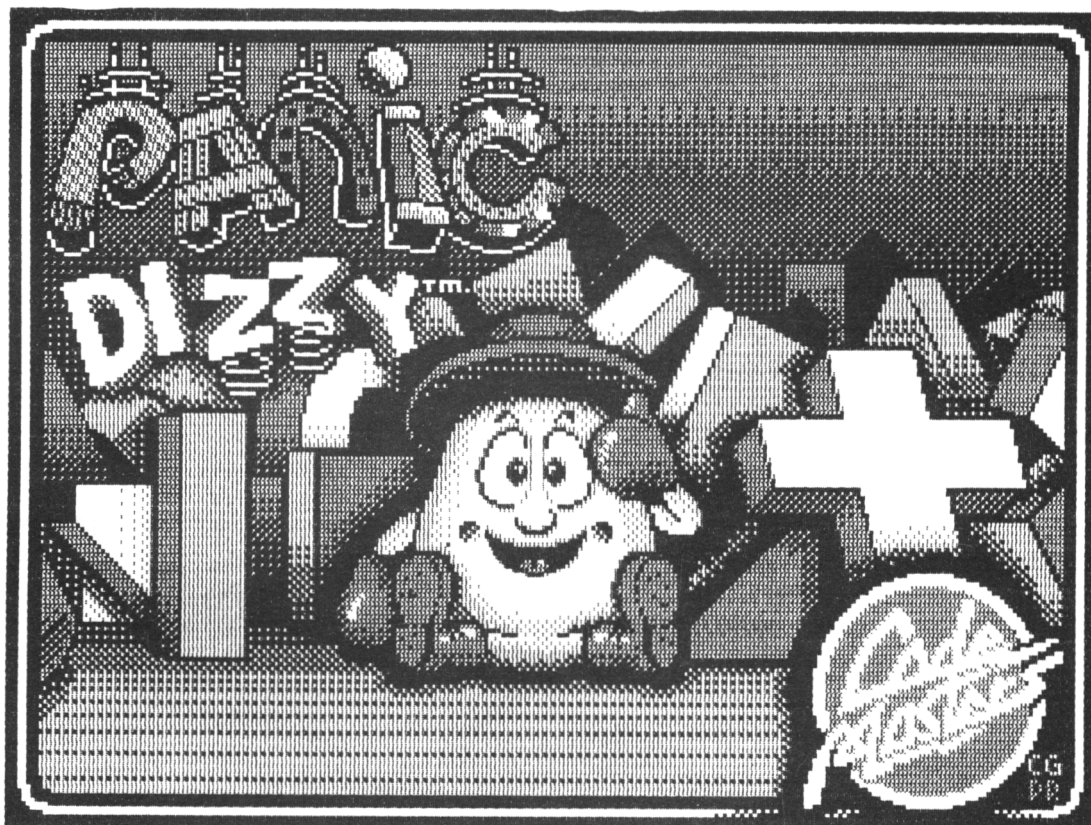
Size 7.11" * 4.44" - 3mins 22 secs.
Size 8.00" * 5.55" - 4mins 28 secs
Size 10.60" * 6.66" - 6mins 42 secs

and the Spectrum screen (an example screen is provided with the program) only took 2 mins 6 secs.

HOW MUCH DO IT COST, WELL

The price of Stardump is £14.99, but is offered as a discount price to WACCI members at £13.50.

The 8-bit printer port retails at £24.95, WACCI members can purchase it for just £22.45. The compactor program disc is £8.50 (to WACCI members the price is £7.65)



Example Printout : 'Panic Dizzy' by Code Masters, a 32 column, 'Spectrum size' screen.

screen width is 40 characters but many games use a 32 character, 'Spectrum screen size' format. If after starting to print-out you find you have made a mistake or the paper is jammed in the

AND FINALLY

I understand there is no extra charge for credit cards users. This is now becoming a thorny issue, as some firms now charge extra.

PROBASE+

ProBASE+ A PLUS or a MINUS? Mike Lyons tells all ...

Well, chaps. Here it is. A small brown parcel drops through my door one day, (I'll kill that postman's blasted cat), and when I dig through it I find it contains a message from Uncle Clive and a parcel.

INTRO

The parcel consists of a 3" disc and a cardboard case containing a rather blotchily printed manual and a letter, (both printed on a DMP2000 I suspect), asking for a review of their new product:- The All-singing, All-Dancing fanfare Drum roll PROBASE+..... I quote...

"...This database is designed to be very simple to use, our main selling point, we think is that although it is very simple to use, it has all the functions of more expensive databases and all the power and versatility of the others but with much less hassle..... 'proBASE+' is available at £16.99 from: AOKsoft"

IT'S NO PRO

Please don't think that because the program has pro in its name that it has anything to do with Arnor. It is not a member of the very professional software suite produced by that company. Now I hate to demolish a debut product from a young company, but...pro is definitely not.

Before you go out and buy this program ask yourself this question... Do I use large format discs under ROMdos? If the answer is yes, then avoid this program like the plague.

GIVE ME NO ROMS

There is a warning in the manual about turning ROMs off - especially ROMdos as serious damage can happen to your disc drive - the 'A' drive. Like any

normal person, (and I use the term advisedly), I read the manual first, didn't I? No I didn't. Like any normal person I bunged the disc in and did a RUN"DISC. Wonderful. I didn't know a disc drive *could* make noises like that. In fact I thought it was my brother drilling holes in the wall. In fact, this is not strictly true. I ran it as RUN"PROBASE" first and it started up OK. Then I saw RUN"DISC printed on the disc label, so I reset and did a proper start.

That's when the sound effects started. My drive still hasn't recovered and I daren't send it away yet so I'm hoping that those bits of cable sticking out the front will just wind themselves back inside after a while. Nothing's rattling anyway.

The warning should be in 6' tall letters at the front of the manual, Chaps, not stuck away on the last page under set-up details.

FASTER DRIVES?

Why does it do this? The reason is that the chaps at AOKSoft have decided to try to speed the disc drive(s) up a little. There is absolutely no need for them to do this as the program only accesses the drive to save and load files. There is no other access during a run of the program.

I could understand a need for speed if the program worked like DBase and produced random access files which were loaded part-way through the program or for automatic updates but this is not the case.

HOW DO IT HANDLE

What is it like to use? To be brutally honest the program is very BASIC. The screen presentation is an unattractive black on grey and the few graphic lines drawn do not do anything to

enhance the program's running. The layout of both the records and files is fairly standard fodder for old-fashioned databases and there is no way to enhance the display a la Masterfile III.

The facilities available are simple searches and ordering of records, disc file operations, viewing, printing and amending data. All the records are displayed in the same dull format. Although you can add extra fields to records and extra records to the file this is nothing unusual. Sorting is purely alphabetical and there is no numeric sort.

HOW DO IT DO ON PRINTING?

You can make printed output a little more interesting by printing in bold, italic or proportional - assuming your printer will support these. you are warned that if there is no printer attached the machine will 'lock-up'. This could be sorted out by having the program check the printer port with a very small amount of code.

A CALCULATED EFFORT

The program does - supposedly - allow calculation of numeric values in the file using + * - and /. However it is quite complicated to use and I haven't been able to get it to work successfully yet after several tries and even following the example given in the manual.

RUDE REMARKS

I have examined the BASIC listing of the program and I'm not impressed with the rude remarks contained in REM statements. These should have been removed. Almost anyone can de-protect a BASIC listing these days - even me - and childish comments in the code are not really very impressive. Some

of the code is quite unnecessarily convoluted as well. This is not what one might expect in a professionally priced program.

CONCLUSIONS

I know I seem to have been very negative about proBASE+ but I am a convicted Masterfile user. If you are aiming to produce a new program which will sell commercially then you must aim to improve on an existing program, (very difficult, I know), or produce a program which has something new or fulfils a need which is not catered for by the software already on the market. This program does none of these things.

This is my final criticism. At £16.99 I think this program is over-priced and under-powered. Masterfile III is currently on sale for about £29.95, MOII for £13.95, (including a database, spreadsheet, communications software and graphics.) Promerge owners already have a very usable database language at their disposal, RAMBASE 3 from our very own PD library is much cheaper and has better facilities. There are many other, more powerful pieces of software available at reasonable prices and with more features and less hassles.

SUGGESTIONS

Get the program to turn any ROMS off which might conflict - surely not that difficult. Make the front end more pleasant to look at.

Add a routine to test the printer for not connected/off-line condition. Give the user a choice of display formats. Allow the user to include control codes in the records/fields. Sorry guys, This is a no-no.

ProBASE - The Second Chance

It will never qualify as the best CPC program of all time. In fact if they don't do a fair amount of work it will disappear without leaving a mark on the CPC scene.

There are several PD programs that are as good (if not better) than this offering. -Ed.

BLANK THREE INCH DISCS

Only £14.80 per 10 inc p&p. All discs are quality branded Amsoft or Maxel discs (depending upon availability.) Probably the cheapest price anywhere. This offer is available to WACCI members only.

Send your order to WACCI. Please allow 7/10 days for delivery. The discs are sent out in their original boxes so you'll need to be in when they arrive or be prepared for a trip down to the post office to collect them.

THE NEW ALTERNATIVE FIRMWARE GUIDE

Here at WACCI we have long mourned the passing of the good old Soft968, known to many as the Firmware Guide. Finally there's a worthwhile alternative that that's almost as good

You get 80 full A4 pages, in a slide binder with card covers. The pages are crammed full of Z80 instructions, all the standard firmware jumpblocks, maths routines, the full set of CPC memory maps, output port addresses, 464-6128 conversion addresses, Bios and Amsdos calls and much more..... You also get a 3 inch that's been crammed with useful machine codes routines (and includes a monitor and machine code assembler.)

This is what you have been waiting for..... Written by Thomas Defoe who used to run Print-Out, this great new CPC product can be yours..... It's not £30, not even £20, It won't cost cost a tenner, no it's yours for only:

£7.95 including post & packing. (Send your order to WACCI.)

Got a 464, don't panic, there's going a tape version. Oh, Hang on, these is going to be a copy of the tape in the tape library. Please note the tape will only be available to those who have purchased the firmware guide.

2 IN 1 - THE CPC TO MS-DOS TO CPC FILE TRANSFER PROGRAM

Two into one will go with this super PC to CPC file transfer program. You can easily transfer files between CPC and MS-DOS discs. The program has been selling for £25 to £30, however, to club members, the price is £20 inc p&p.

These are brand new copies of the program, purchased by WACCI directly from the suppliers to keep the price down. A complete review of the program will/should be in WACCI 56 (July 92).

PCW 9512 Printer Ribbons Ref 2476MS

£2.00 each including p&p. We have 12 in stock. Send your orders to WACCI.

LOOSE THREE INCH DISCS

Do you need some new three inch CF2 or CF2D discs, but don't want to splash out £14.80 buying ten. We have a supply of new three inch magtron (who?) discs. Magtron <<Who??>>. Magtron are new to the CPC market place, they sell a good quality 3 inch disc (similar to the old Panasonic discs), the discs are uncased (no plastic or paper sleeves) and cost £1.50 each.

These are dual size discs, they should (and will) happily format to Data, System, or the PCW second drive large format. They are supplied with a plain white label. We at WACCI have tried a batch and they work Okay. There's a minimum order quantity of two discs (it keeps postal costs down) and they are dispatched in Jiffy bags, so you will get a free Jiffy bag as well (worth 20p).

Send your orders to: WACCI, 12 Trafalgar Terrace, Long Eaton, Nottm, NG10 1G

(Please ensure all cheques sent to WACCI, are made payable to WACCI)



Inspiration

George Ho-Yow converts Basic commands into machine code routines.

Over the last month or so I have been very careful with the soap and I have not had any further accidents. Duh!

Here we are again with a lot more for you to learn. This time I'm going to convert some file handling from Basic into machine code routines. With a flash, my old Amstrad springs into life and my fingers dart across the keyboard at the speed of sound. (Well, it beeps at me when I make a mistook.)

UNPROTECTED ASCII FILES

We'll start with the easiest of the file handling routines, saving plain old unprotected ascii file to disc. Basic and machine code follow the same steps: open a file, define the data we wish to store in the file, store the data and then close the file.

At first glance the machine code commands appear to be more complex, however as you hone your coding skills the instructions become second nature. The apparent complexity is caused by our needing to setup the file handling variables, including the file buffer memory location, instructing the program where to find the file name and so on..... all this does have one great advantage, it allows us to control the actions, so programs can be much more flexible.

THE BASIC PROGRAM

In Basic we use the tried, trusty and easy to follow commands of:

```
10 OPENOUT "outfile.asc"
20 b$ = "Hello!"
30 WRITE #9,b$
40 CLOSEOUT
```

..to write data to a file. The machine code equivalent is shown in Fig 1 (on the right hand side of this page.) The

Fig 1. Writing unprotected ascii files to disc.

Mnemonic	Description
ld b,11	;length of filename 'outfile.asc'
ld hl,fname	;the address where the filename resides in memory
ld de,&C400	;the address of a 2048 byte (2k) file buffer area, ;this is used for holding the data characters.
call &BC8C	;open the output file
jp c,openok	;if carry flag set then the file was opened okay,
jp error	;if not, the open failed, so we exit the routine.
openok: ld hl,bstring	;the address of string to be written up (b\$)
loop2: push hl	;keep register pair
ld a,(hl)	;fetch char to accumulator
cp 0	;compare with 0, our end of data marker
jp z,finil	;if we have run out of data then end.
call &BC95	;else write the character to file buffer
pop hl	;recall the register pair
inc hl	;ready for next char
jp loop2	;loop back for more chars
finil: call &BC8F	;write up buffer and close out-file
ret	;end of routine
fname: DB "outfile.asc"+80h	
bstring: DB "Hello!",0	

Some Important Notes:

I suspect that the working buffer of 2048 bytes reserved, is split in half so that when one buffer (of 1024 bytes) is full it will be written to disc, and the other buffer will then be filled whenever the instruction: call &BC95 is invoked. When the file is closed the current buffer will be written to disc and an End of File (EOF) char (&21) appended. The header will then be written if this was specified. If an error occurred while attempting to open the file, the carry flag will be set False, and the accumulator (A-register) will contain an error number relevant to the problem.

The filename is terminated with the most significant bit (msb) of the last char set to a logical one. Notice the +80h appended to "outfile.asc".

If you wish to use this machine code routine, then you would need to code the error options, or the routine will not correctly compile.

program is fully documented and it can quickly and easily be adapted to suit your own needs. Meanwhile.....

CREATING A FILE WITH A HEADER

If the file was correctly opened and you wish to create a file with a header, then the HL-register must contain the address of the header. You then alter the relevant bits and bytes corresponding to:

Address	Description
(HL+&12)	= file type
(HL+&18,HL+&19)	= logical length in
(HL+&1A,HL+&1B)	= the entry point
(HL+&1C to HL+&3F)	= are free for you to use as reqd.

The file type must be set before you start to write to the output file and it must not be altered once writing has commenced. If you do not change the header settings, then the default is that all user fields are zeroed, the file type is set to unprotected ASCII Version 1, ie. &16, which also turns out to be a headerless file.

CREATING A BINARY FILE

The alternative method of writing the file to disc is to save it as a binary file. Standard machine code programs and pictures screen are saved to disc using this method. In Basic we use:

```
SAVE <filename.bin>,B,<start_address>,<file_length>,<entry_point>
```

The machine code equivalent is shown in Fig 2.

READING ASCII FILES

To read data from an unprotected ascii file, we use:

```
OPENIN <file>
INPUT #9,char
CLOSEIN
```

Whilst Fig 4 demonstrates how machine code is used to do the same task.

OUTRO

So fellow enthusiasts you have seen a few Firmware calls for your keyboard and VDU together with Disc/Cassette files to experiment with. Don't use a disc or cassette that has vital data while experimenting, mind you!

Fig 2. Creating a binary file on disc.

```
ld b,length ;of filename
ld hl,fname ;address where filename lives
ld de, &8000 ;buffer address
call &BC8C ;to open the file
jp c,ok3 ;if all right then press on
jp error3 ;else see what's wrong

ok3: ld hl,address ;start address of where the data to be written
ld de,length ;resides in memory.
ld bc,entrypoint
ld a,02 ;the filetype (unprotected binary) and the other
;three parameters will go into the header.
call &BC98 ;call DIRECT write to the file in one go.
jp c,ok4 ;if good press on
jp error4 ;else process error

ok4: call &BC95 ;close out file
ret
```

Fig 3. Description of the file type byte.

- bit 0 - Protection bit. File is protected if this bit set to logical 1.
- bits 1 to 3 - Data type as follows:
 - (0 Basic, 1 Binary, 2 Screen Image, 3 ASCII, 4 to 7 not used.)
- bits 4 to 7 - Version Number, 1 for ASCII, all other types must be zero.
- Bit 7 - is the Most Significant Bit (MSB).

Fig 4. Read data from an ascii disc file

In Code the instructions are very similar to the preceding ones for writing in Fig 1. Change the call instructions to:

```
call &BC77 ;open file for reading
call &BC80 ;read a char from disc
jp nc,test ;could be end of file
```

(code as in previous routine)

```
pop hl
inc hl
ld (hl),a ;store char in buffer
```

(code as in previous routine)

```
call &BC7A ;close infile
```

Note 1: You can apply these instructions to Cassettes as well. There are more Firmware calls available to Cassette users than Disc users.

Note 2: When reading or writing in DIRECT Mode, equivalent to LOAD and SAVE in BASIC, you must not attempt a subsequent DIRECT call while the file is still open else you will corrupt the original file. So in your error processing you have to close the file, before attempting another read or write. The 2048-buffer can start anywhere in memory where free space is available, even screen memory can be used, but of course in doing so your vdu display will get corrupted.



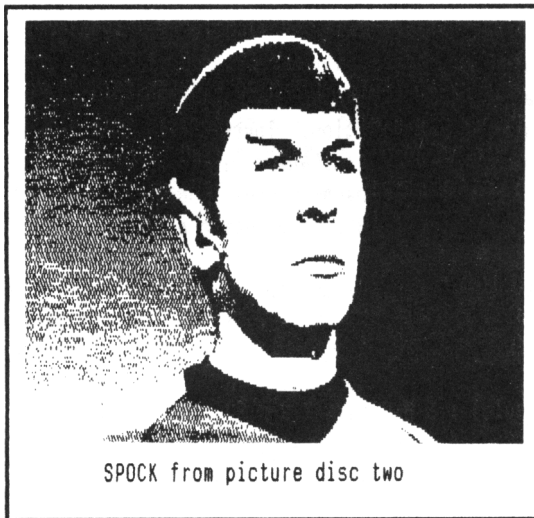
Poking in the Library

With Gwynn 'The Welsh Wizard' Hopkins

G'day, welcome back to my humble pages. For this session I've got two piccy discs, a word processor, a spell checker and a print shop to look at.

PICTURE DISC TWO

I like pretty piccies so let us begin with WACCI piccy disc number 2. On side A we find 20 tastefully arranged pictures of varying origins. There are screen shots from loading screens like AJ's dripzone (*remember her, him or whatever?*), a few article captions dotted here and there.... there's even Terry Wogan. Well that's a pretty good reason not to buy the disc but apart from him everything's sushi.



SPOCK from picture disc two

Side B has 29 pictures, the majority are made up of satellites, the others are pretty mixed and there are some darn obscure ones in there too. Take the first picture shown on this side, a triangle and a dot. What is the meaning of such a mysterious symbol?

PICTURE DISC ONE

Moving on (sort of) numerically we find ourselves conveniently at WACCI piccy disc number 1. Side A has 24

piccies of old article headers amongst others. Does any one remember Foul Play, Last Laugh and Moondog? Now their banners are now immortalised on disc.

Side B is much of the same. I think that there are 22 pictures on this disc but I lost count while pondering the Ambrosia sequence.

WACCI PD DISC TEN

Moving away from pictures takes us straight to the word processor. VDE266 is pretty infamous. Humungous doesn't begin to describe it. Perhaps

on reflection it might be a little too big. VDE266 comes with its own installation and document files. It runs under CP/M 2.2 or CP/M 3.1 (plus.)

Since no-one has exactly the same requirements from a word processor there is a pretty nifty customiser. Your file size is limited to 55K but that's plenty for most things you'll want to do.

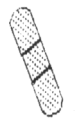
There is an on screen help facility but I found it best to go through the instructions and copy out the commands. The instructions claim that if you are familiar with WordStar you

should be able to "wade in". Well that's rubbish, I've known WordStar for years and it still took me ages to figure out what I was doing. <<I've also used Wordstar (since 1978) and I think it's compatible. -Clive.>>

On side B you will find lurking an improved version of SPELL called ISPELL. This (in case you can't tell) is a spell checker. It's pretty good, it doesn't quite contain the entire Oxford English dictionary but none the



Mini Print Shop



An example of what Mini-Print Shop can do.

less it's effective. ISPELL used to be called WACCISPELL, but it has now been fully upgraded and released as a PD program by Paul Dwerryhouse.

WACCI PD DISC TWENTY SEVEN

Finally for this month it's the Mini-Print Shop. Actually the name is just a tad misleading. You don't do any printing and there are no shops. It's a kind of Advanced Art Studio. Judging by the loading screen I'd say it originated somewhere like Germany. For your money you get 4 "packs" of clip art (200 pieces) and two text fonts.

This program is actually more suited to letter head designing than anything else. You can save your design to disc as standard 17k screen files or print them straight out. The text fonts are decent, I like using the Old English, and they go well with the pictures.

There are pictures for (almost) all occasions, ranging from Christenings, Weddings and even elasto-plast.

OUTRO

Well that's it, there's no more (for this month.) See you next time for some more Poking in the Library.

RSX-LIB

Robert Heaton Investigates RSX-LIB

The Liberation of Smog

The Liberation of Smog

The Liberation of Smog

The original version of the utility RSX-LIB by Smogware Systems has been released into the Public Domain. This was done partly due to its age and the possibility of an enhanced version in the future. Now, enter your all singing, all dancing reviewer for the Wacci PD library. Sitting down in front of the small flickering VDU screen on my computer in the tiny back room, the first question that came to mind was, "Is there enough room to swing Smog the cat in here?"

WHAT DOES IT DO?

The idea of RSX-LIB is to provide a utility to make up modules of bar commands (Resident System extensions) from a library of BINARY machine code files. For Basic programmers the RSX is a very useful tool. Basic error checks the command name. Another advantage over the CALL &XXXX,<list of parameters> instruction is increased readability of programs. eg. !WAIT,10 (wait 10 seconds before continuing.)

If an RSX needs relocation in the memory the program will do so before you can say, "General Election." There are a number of relocation options, which I have no information on, so I can't tell you what they are. What I know is that RSX-LIB can automatically alter most absolute addresses without effecting the routine.

FIRST IMPRESSIONS

My first impression (first impressions count) is the program looks well laid out and presented. Provided you know exactly what you are doing and you put in the right information you are well away. However, as always, there is a plenty to get wrong. I don't like making criticisms but here's a few I prepared earlier:

FIRST IMPRESSIONS

- (1) You cannot Catalogue a disc within the program.
- (2) You need to know exactly how long a file is in bytes.
- (3) Each machine code chunk to be made into an RSX must have its own separate BINARY file.
- (4) It looks good and it's quick and easy to use.

IMPROVEMENTS

Now, since this is now a PD program it shouldn't be too difficult to add a Catalogue at the right point and it should be fairly easy to read in the length of the BINARY file in bytes off the disc as each particular RSX is added to the module.

It might be harder to handle multiple routines in BINARY files, but splitting up routines isn't too fiddly provided you have a good machine code development utility, like Maxam or Pyradev. If you want to create your own RSXs having a good Assembler cum Disassembler is a must.

THE VERDICT

"Mr Smog, the charges brought before you are of a very serious nature. After much deliberation and bribery, a completely fair verdict has been reached. You have been found guilty of littering houses and bringing the name of the Elephant into disrepute. How do you plead? Oops, sorry wrong bit! You've been sentenced to be swung vigorously about the head and flung at a distance of 100m into a steel bin."

THE REAL VERDICT

Will the real verdict please stand up. In general, RSX-LIB is easy to use, if maybe a trifle slow. Its takes the grind out of creating RSXs for machine coders and eases the mind during Basic programming.

Provided you know all about the file you are adding to the library, you can remember the parameters required by each routine. (if any) You will also need to know which disc the BINARY file is on before running the program.

Despite this, RSX-LIB is a very useful program, converting unforgiving machine code into easily accessible modules of RSXs selected specifically for each application by the user.

I'll testify that this program will be a more than useful addition to your collection. There have often been occasions where I've had difficulty with machine code and have liked to add RSXs to my Basic programs.

AWAY YA GO LADS

However, being at Durham University means there is little time for WACCI pursuits, since I'm too busy drinking, romancing and playing cricket with "Beefy" Botham and his performing elephants. (They're doing Ali Baba and the 40 elephants next week!)

There might also be the odd bit of studying to get involved with (now and again), but I might consider writing a little something on writing machine code routines of the right sort, so that RSX-LIB can wave its magic wand and turn them into RSXs. Anyway, I must go and read the latest WACCI, so Tarra fer now et Au Revoir.

Cheers, Robert Heaton.

RSX-LIB is on the new WACCI PD Disc 30 and includes basic instructions.

*** FSW * The WACCI Public Domain Software Library * FSW ***

All the programs in this library have been fully tested on an Amstrad 6128. The programs are supplied on an as-is basis. Please advise WACCI of any problems, we will do our best to rectify the problem and provide any assistance you need.

WACCI PD DISC ONE - CP/M 2.2 ONLY

The FORTH language disc. Includes two versions of Forth and an introduction to the Forth programming language.

WACCI PD DISC TWO - CP/M 2.2 and CP/M 3.1 (plus)

Utilities disc containing: NSWP, Bincalc, Print, Look, BD04, Unload, Compare, Print, Unload, NDDT, SD, ED, Rasmb, Rasmta, Lohd, Lasm, XIZI, Z80asm, Zmac, Zlink, D, WC, Display, MDir, DS, XDir, Eraql6 and LU.

WACCI PD DISC THREE - CP/M 2.2 and CP/M 3.1 (plus)

The complete MBASIC disc. Includes MBasic, MBasic compiler, full instructions and example programs.

WACCI PD DISC FOUR - Amsdos (128k CPC's only)

Amsdos utilities disc, containing: PD PLANNER (Spreadsheet), POWERPAGE (The DTP program), RAMBASE3 (Database) & RAMDISC.

WACCI PD DISC FIVE - CP/M 2.2 and CP/M 3.1 (plus)

The CP/M games and adventure disc. Contains three very good adventures: Base, Island and Colossal Caves. Plus several good games: Golf, Pressup, Cube, Othello and Mastermind.

WACCI PD DISC SIX - Amsdos

Games disc - 37 assorted games for the CPC including, Splat, Gin, Spring, Trench, Patience, Piquet, Hangman and many more

WACCI PD DISC SEVEN - CP/M 3.1 (plus) ONLY

The CP/M plus Utilities disc, containing: Superzap, Mikedit, Form3, Zdebug17, Unzip099, Newccp, Crunch/Uncr, Ark11, UN33, WCount, Andybase, Dc-cpc, Dcalc, Arc24, Unarc, Adrive, Menu, Assign, Extdisc, Format and Qtext21.

WACCI PD DISC EIGHT - Amsdos and CP/M 3.1 (plus)

The Comms disc: contains, ZMP (CP/M, Zmodem file transfers), TERM504B (Amsdos, XModem-1k) and loads of useful help files.

WACCI PD DISC NINE - CP/M 2.2 and CP/M 3.1 (plus)

CP/M Utilities disc containing: Cleanup, Acopy21a, Filechop, Dirchk, Display, Lrun23, LT29, NC, Nulu15, Unzip, MFT, Grep, Du, List, Lookat, Rescue, Rpip, Sort, Vlist and Wsclean.

WACCI PD DISC TEN - CP/M and Amsdos

Word processor and spell checker. VDE266, probably the best CP/M PD word processor and ISPELL the best PD spell checker.

WACCI PD DISC ELEVEN - Amsdos

Adventures. Two full adventures, Journey to Geno and Orkon Mission plus an animated demo of the crazy mill by Escher.

WACCI PD DISC TWELVE - CP/M 2.2 and CP/M 3.1 (plus)

The complete COBOL disc. Includes, NPS MicroCobol compiler, a full Cobol programming series and 23 example programs.

WACCI PD DISC THIRTEEN - Amsdos

The Demo's disc. Containing lots of graphically superb demo programs. Please Note: This is now the cleaned up version, although one of the demos contains bad language.

WACCI PD DISC FOURTEEN - Amsdos

David Carter's super collection of 49 screen pictures. These pictures have been transferred from an Amiga to the CPC.

WACCI PD DISC FIFTEEN - Amsdos

Contains 'Flags of the World', by Andre Coutanche and Stuart Gascoigne (Superb pictures of world flags) and 'The Animator Demo', four interesting graphics demos by David Carter.

WACCI PD DISC SIXTEEN - CP/M 2.2 & 3.1 (plus)

PPC PASCAL, superb compiler, produces standalone .COM files. ZBASIC Basic is a demonstration version of the language.

WACCI PD DISC SEVENTEEN & EIGHTEEN - CP/M 3.1 only

This twin disc set contains JRT Pascal, which used to be a full price (\$450 'ish) program but now released as PD.

WACCI PD DISC 19, 20 and 21 - Amsdos

Three discs full of MicroDesign format pictures and clip art

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Each disc holds 49 pictures, for Art Studio, Basic, P-Shop

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Contains 46 pictures, suitable for Art Studio, Basic, Etc

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Mini Paint Shop: Page header & screen design program, comes with 200 pieces of clip art and two superb large fonts.

WACCI PD DISC 28, 29 - Amsdos

Another two discs full of MicroDesign pictures & clip art

WACCI PD DISC 30 - Amsdos

G-Paint, a good art program and RSX-LIB.

List Continued at the bottom of page 30.

Send your orders for WACCI Public Domain Software discs to: Chris Smith, 16 Ayling lane, Aldershot, Hants, GU11 3LZ

Prices: £3.00 includes a disc, post & packing or £1.00 to borrow the disc and copy it yourself.

** THE WACCI HOMEGROWN DISCS **

(These discs are copyright (c)WACCI and their authors. They must not be distributed to non-club members)

AJ's CONCEPT DISC (128k required)
Green's strip pontoon, Dripzone plus, Beetlemania, Saucer attack, 3D Maze, Englebert, Globe and Juggle.

MAGAZINE DISC ONE

The first two WACCI'ies produced. Now available in their original format (on disc or tape.) The magazines easily transfer onto paper.

MAGAZINE DISC TWO

The third WACCI magazine. Bundled with loads of early WACCI screen pictures plus screen printer program and screen picture squeeze program.

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WACCI DISC TWO

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WACCI DISC THREE

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* The DEMO disc is in the PD library *

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WACCI DISC FIVE

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WACCI DISC SIX

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WACCI DISC SEVEN

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WACCI DISC EIGHT

The kirk Editor, Dwerrybase and the Football pools predictor.

WACCI DISC NINE

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WACCI DISC TEN

Ascii-To-Mini Office II, Xword, Xdraw, MCPgraph, Fruitrun, K1, K2, K3, loot, Keycard, Cassdisc.DR, Example1, Frame, General.DR, PCBdraft and Progdoc-V4.

WACCI DISC ELEVEN

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WACCI DISC TWELVE

Hex-to-bas, Hex-to-bin, HP, OHM, OSKD, Resid, Draughts, Example2, Forth Demo, Machine code tutorial, Print, Dotman, Mastercomposer and PDP1.

WACCI DISC THIRTEEN

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WACCI DISC FOURTEEN

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Discs cost £3.00 each.

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Who's Who

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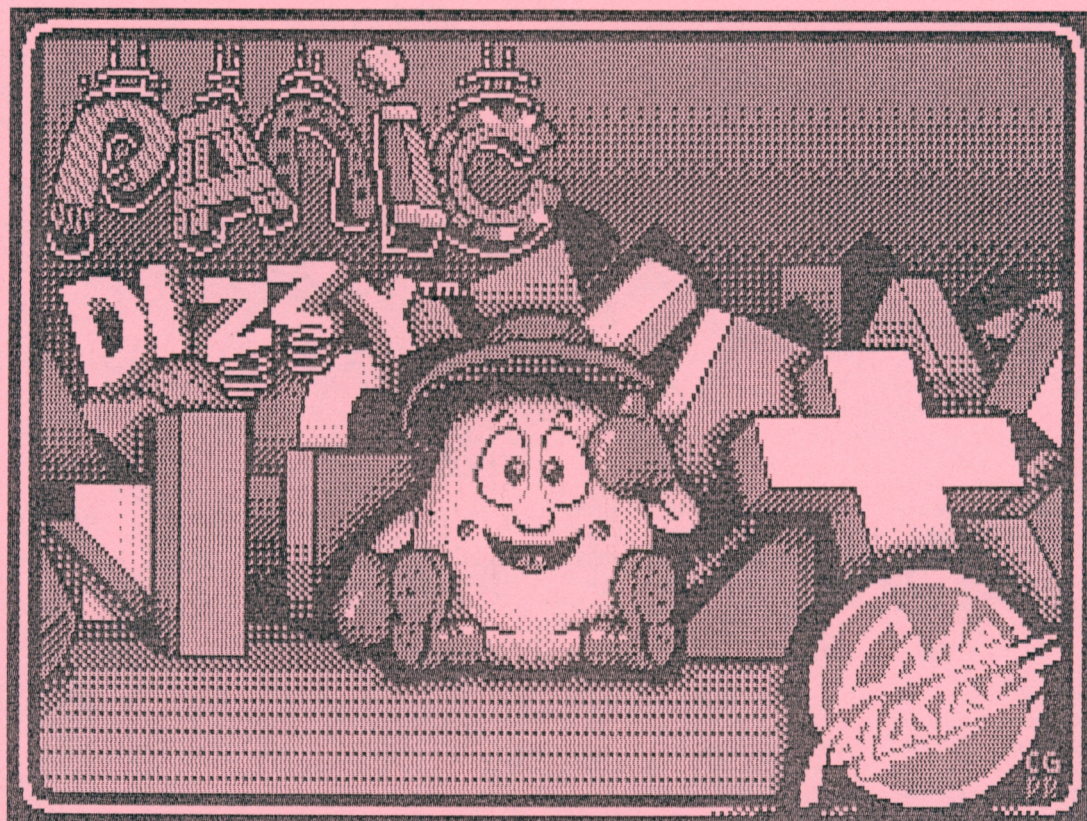
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