WACCI

WACCI HQ

97

WACCI HQ has moved once more. But to where?

WACCI

the world's best CPC magazine and premier user group

The Club

Chairman: Doug Webb, 4, Lindsay Drive, Chorley, Lancashire PR7 2QL
.... Tel: 01257 411421

Treasurer: Paul Dwerryhouse, 7, Brunswood Green, Hawarden, Flintshire CH5 3JA .... Tel: 01244 534942

Publicity Officer: Brian Watson, Harrowden, 39, High Street, Sutton, Ely, Cambs CB6 2RA .... Tel: 01353 7770741

The Magazine

Editor: John Bowley, 97, Tirrington, Bretton, Peterborough, PE3 9XT,
.... Tel: 01733 702158

Editors Assistant: Ron Izett, c/o 97 Tirrington, Bretton, Peterborough.

Fair Comment: Philip DiRichleau, c/o Frank Neatherway, 3, Glebe Close, Rayleigh, Essex, SS6 9HL .... Tel: 01522 511608

Market Stall: Angie Hardwick, 23 Station Road, Bloxwich, Walsall, West Midlands, WS3 2PH .... Tel: 01922 449730

Roving Reporter: Angela Cook, Brympton Cottage, Brunswick Road, Worthing, West Sussex, BN11 3NQ .... Tel: 01903 206739

Wish List: Ernie Ruddick, 26 Spitalfields, Yarm, Cleveland, TS15 9HJ

Front Cover: by John Bowley

Benefits of Membership

* The best magazine for serious CPC users.
* Index covering issues 1-104.
* Telephone helpline (indispensible)
* Bargain buys/wanted list from Market Stall.
* Discount off goods from advertisers.
* List of PD discs, tapes, library books and services.
* Above all the advice, assistance and friendship from other WACCI members. *Benefit List: by Ernie Ruddick*

WACCI ON WEB	CLUB EMAIL
Matthew Phillips. The URL, is: HTTP://USERS.OX.AC.UK/ ~CHRI0264/WOWWW.HTML	Paul Dwerryhouse The post room is: DWERRYPF@AOL.COM

Copyright: WACCI 1997

Production Method

WACCI is created using Protext and Promerge on a CPC 6128+ and laid out using a CPC and with lots of help from a *PC*, and printed on a Epson Stylus 200. WACCI is printed and collated by ProntaPrint! 134 Foregate Street, Chester CH1 1HB. Tele: 01244 313222. WACCI is distributed by the Dwerryhouse family who don't lick the stamps anymore!

Contents

Hi everyone and welcome to my first effort as the editor of our great magazine. I've worked hard and I feel I've done a reasonable job, however if you feel that I should change anything then please let me know, but ONLY constructive remarks please. I would like to say thanks to all those who have contributed to this issue. Happy Reading. John

THANKS
If I was to thank everyone it would fill all the pages in WACCI which would make a very boring read, so I'm going to pick a few and they are: Paul Dwerryhouse, Doug Webb, Angie Hardwick, Frank Neatherway, Dave Stitson, Angela *(bunny killer)* Cook, Philip *(tigger)* DiRichleau, Brian Watson and Richard Fairhurst, but my special thanks must go to my wife Carol, without her help I couldn't manage, so "thanks luv".

WACCI'S FUTURE
For WACCI to continue in its present form is simple, we need more members; Brian Watson is our Publicity Officer and from what I hear he is doing a great job. Paul is also getting enquiries via the internet, so the future's looking up.

But it cannot stop there, our strength is you the Membership and we can all help by advertising in our local newspapers and placing adverts in shop windows, so what are you waiting for?

TARGET
By December I would like to report that we have **300 members**, but of course if we can get more than that, so much the better.

BUILDING BRIDGES
If any member has contacts with any other CPC related magazine or disczine either in this country or overseas then please get in touch with me. We all need each other and this would be a benefit to us all.

ARTICLES
I know that in the past Philip has asked for articles, well I'm asking now because if I don't get any how can I produce a magazine? I do not have the time to write them myself: since I go to work, have a family and do other work for WACCI, it would be impossible. I would have more chance of getting a big fat pay rise, so please get writing. Articles can be on anything so long as they are CPC concerned and I would also welcome some funny stories.

DID YOU KNOW
Angela Cook, in the past has written loads of articles, many of them she didn't even get credit for doing, this was done at Angela's request as she didn't want members saying its becoming an Angela Cook show.

I for one don't agree with this way of thinking and as far as I'm concerned if

she good enough to write anything for WACCI, then she **SHOULD** and **WILL** get full credit for her work. Angela writes articles for Wacci simply because she enjoys writing and for no other reason.

CONVENTION
Have you bought your ticket for the convention yet? If not, why not? Please send a cheque or Postal Order for £4.00 payable to WACCI to Angie Hardwick and you will find Angie's address and telephone number on page 2.

WHO DOES WHAT
Doug Webb is now our Chairman and I wish him all the best in his new role, Doug also deals with mixed PD orders.

As for myself I deal with Editing WACCI, Book Library, problems with PD discs and I also deal with any new PD, so if you got any software that is not in the PD Library then please send it to me.

FAIR COMMENT
I'm pleased to say Philip will be returning to the job he liked doing best and that's Fair Comment, so I welcome him with open arms and wish him the best of luck.

Frank Neatherway has asked me to ask you to please put your letters on either a 3" or 3.5 disc, this would help Frank and save him lots of time in re-typing your letters.

If you would like to have your disc back it would help greatly and keep WACCI's costs down plus save time if you were to enclose a SAE for their return.

DEBATES

Over the last few months there's been talk about including other computers within the pages of WACCI, be it PCW or PC.

You've read what Paul had to say about this matter and he even suggested that he would be prepared to start another magazine for the PC if enough members would want it.

For my part, I want to keep WACCI has it is and that's catering for the Amstrad CPC computer.

COVERS

What Richard Fairhurst did in issue 111 *(April)* in regard to the inside covers, I thought they were really good, so I've reproduced them to a fashion.

Page 30 now gives you a full listing of the WACCI PD Library and the Help-Line is there too.

The main reason for doing this is to save money, please don't get me wrong the club is in good shape, but we must plan ahead and make changes now.

One problem I can see by doing this is the Tape, Book and Software Library and not forgetting the WACCI Magazine Index which will not be printed anymore.

What we can do is to up-date PD Disc 100, which is the Magazine Index every 6 months and members wanting this disc can send their own disc with a SAE to Doug or myself and pay **NO** copying charges. I will inform you all once this disc is ready for use.

NEW PD

In issue 111 under the heading PCB Plus by Dave Teague. He stated that two PCB *(Printed Circuit Boards)* drawing programs were available. This is true, the only reason that I've not included it in the PD Library is that I haven't filled both sides of the disc yet, however if you would like a copy then please send me your own disc includung a SAE and it will be done.

OFFERS OF HELP

Dave Stitson and James Coupe have both offered to do a magazine during the year if I feel that I need a rest.

This is very welcoming and I might even take them up on their offer.

A QUESTION OF COPYRIGHT

As you all know WACCI is the best and most formidable CPC club which is envied by many. To aid WACCI's expansion both here and on the International scene, I would like to send our brilliant, good quality articles to other magazines and disczines. This will gain us some good quality articles in return.

When an article is submitted to WACCI, the copyright belongs to its author. Therefore WACCI cannot re-distribute articles without obtaining the authors permission first.

So there you have it, if you agree to allow WACCI to send your articles to other magazines or disczines I will need this in writing. Of course! You will be fully credited for your work and WACCI will also be mentioned as to where the article was first published. This also applies to our past authors. You have given WACCI some brilliant articles over the years and many would be perfect for this so could I have your permission too.

WHY

Why I want to get the ball rolling on this is because I have been in contact with a few members who subscribe to other CPC magazines and they have told me of the appeals made by these magazines for other contacts, for instance, Rundschlag is a German magazine and is crying out for articles from England.

CONTACTS

They have contacts in France, Greece, Austria and Australia and their contact for England is our very own Peter Curgenven. His address is as follows: *The Hollyar, Bay Road, Trevone, Cornwall. PL28 8QZ.* In my opinion we would benefit greatly if we were to supply them with our good quality articles and in return we could get articles, new PD, but much more important, we would get new members and this would ensure WACCI's future.

TRANSLATORS

We have a team of translators standing by for the flood of articles I am sure you will want to read as well as for the translation of your own work that I am sure you will want the world to see. So come on you writers out there, get your fingers to the keyboard and send me your articles, not forgetting the permission if you want to become an Internationally acclaimed writer!

ANSWERPHONE SERVICE

As much as I like talking to you I've to go to work at times *(boo hiss)*, so if you do get the dreaded answerphone message please leave your name and telephone number with a brief message and I will try to get back to you as soon as possible.

MEMBERSHIP DATABASE

Some time a go there was a mention of members wanting to contact other members in their own area, but nothing was done about it, so lets see if anyone is still interested in this idea: please write to Fair Comment with your comments.

I would like to take this idea one step further and that is to compile a list of members who share a common interest and pass that information on to others and perhaps this could encourage new software and hardware which I'm sure some of our members are very capable in producing, again please write to Fair Comment.

REMEBER A PROBLEM SHARED IS A PROBLEM HALVED

Fair Comment is the voice of the membership and within these pages we try to answer all of your letters in regarding any problems that you may have, so get writing.

WISH LIST

If you want to join a merry band of wish list writers or if you would like to see a review about anything that's not been printed before in WACCI or even if you want to see a re-print of past articles then please contact Ernie Ruddick, his address is on page 2.

THAT'S ABOUT IT

Before I finally shut up and let you get on reading your magazine there are a few unjustified rumours going about and hurtful remarks towards other members.

This could be some of the reasons why WACCI has been losing some members of late, so I strongly suggest that it stops here and now and let's get back to what we all enjoy and that is reading, writing and simply enjoy ourselves once more and put all this silly gossip to rest once and for all.

Once again I hope that you will enjoy this month's issue.

Seeya all next month.

Fair Comment

Philip DiRichleau
c/o Frank Neatherway
3, Glebe Close
Rayleigh
Essex, SS6 9HL

Sorry Philip I couldn't wait any longer. By the way everyone Philip has now moved into a new house so don't send anything to his old address. Hopefully Philip will be back next month until then I afraid you're stuck with me doing Fair Comment as well as editing WACCI.

ZIP TO CPC

Hi Richard, This is my first letter to Fair Comment <gasp!>, all though I've been a long standing member *(I've got almost every issue from 30 in an archive box under my desk)*. Anyway, I'm digressing, the reason I'm writing this is to offer some information into the discussion about the iomega ZIP drive. Now, I've got one of these beasts hooked up to my Linux / WinNT box, and a very useful device it is.

As to connecting one up to the CPC goes, I don't see any reason why It shouldn't be possible, but it will require a hefty bit of programming to implement, plus some simple additional hardware.

The hardware part is the requirement for a bi-directional parallel port, either an 8 bit port, with four lines configured for output, and four for input, or a full 16 bit port with 8 out and 8 in. This shouldn't be too hard to implement, in fact, I think the IO card design published in WACCI would do the job nicely. Now comes the nasty part, the software drivers.

The parallel port ZIP device is in fact a SCSI *("scuzzy")* drive, with a parallel port adapter, or PPA attached to it. So, to implement this on a CPC, a programmer would need to produce a general SCSI driver to control the drive, and code to drive it via the PPA.

I'm not a programmer so I can't say exactly how to do this. If anyone fancies trying this, I can supply the C code for the Linux driver for the PPA, which may give some pointers as to its operation.

Michael Quin
michael@starblade.almac.co.uk

<<Many thanks Michael for all that nfo. If anyone does manage to connect a ZIP drive to their CPC and get it to work: then please let us all know. WACCIs in a box! Why don't you buy some WACCI binders and give them pride of place on your bookshelf price £3.99. -John>>

CHECK YOUR DIAGRAM

Dear Richard, Concerning the STS Copymod article in issue 111, the IC's are shown the wrong way around. From the drawing it looks as though the wire link should go to pin 5 of IC203, whereas *(as the text says)* it must go to pin 15. Also, the unused inputs of the copymod chip *(the 74LS32)* shouldn't really be left unconnected, they should be taken to one of the power rails. The easiest way to do this is to carefully bend the unused inputs **(pins 4, 5, 9, 10 ,12 and 13)** back flat across the top of the chip, then solder a length of wire to these pins *(thus joining them together)* and then to either pin 7 or 14 *(it doesn't matter which)*.

This is really only a matter of good practice *(basically, it just prevents the unused gates from oscillating)* but we might as well do it properly, eh? If I get Xexor, will the copymod allow me to convert my own programs from the normal Data format to the 6K per sector format, and if so, do I need any additional software to get them to run? Also in issue 111, I had an advert for my new Freescape game **"The Bomb Room"**, but, in his infinite wisdom, Philip *(I presume)* didn't include Derby in the address. So, if anyone wants a copy, my address is: **11 Colwell Drive, Brookside, Alvaston, Derby DE24 0UP** Cheque/PO payable to M.J. Bela. The 3" disc version is £6.99, and the 3.5" disc version is £6.49. Or, you can send your own 3" disc for £5.99. Overseas please add £1.00. Finally, I would agree with the **"ten issues per year"** brigade, it's only fair to have a break occasionally, isn't it?

Martin Bela
Alvaston. Derby

<<I can't help regarding the copymod, question, but I'm sure someone out there can. Your advert will be in next months issue. - John>>

PROBLEMS WITH PRINTING

Dear Richard, Well done to all the people at WACCI for producing such a great magazine, it is a pleasure to read each month. I hope someone at WACCI HQ can help me out. I am having problems with my printer, a Cannon BJ-10sx. Instead of printing `abcdefg.1234' it prints `acceegg!133s'. Does anyone else have this problem? Could you tell me what the DIP switches should be set at and how to overcome this problem? I hope someone can help soon before I smash the printer to bits! Also, while I'm writing, could you tell me which Word Processor you would recommend? I know this could spark up a few arguments! I want it cheap, *(i.e., I have no money)*, easy to use but lots of functions. I hope to buy this when I finally get my printer to work. I am also thinking of buying a Rombox so could you advise me as to which you would recommend? I would use it for DES and a W.P. *(taking into account I haven't got any money)*. I hope to see everyone at WACCI at the Convention. Until then, thanks for all your help.

Lee Braggindon
Walsall

<<The dip switch you need to have ON is number 11: this is the Epson emulation setting, but remember to turn your printer off first. If you've haven't got a manual for the BJ10 then I suggest that you order Past WACCIs no. 53, 54 and 55 from Frank Neatherway and at 50p per issue you can't go far wrong can you? I use Protext on Rom which I personally prefer. Romboxes are available from Comsoft. -John>>

BUYING ANOTHER PRINTER

Dear Richard & Frank, I must first say how much I liked the new look of WACCI, 111 issue, congratulations to all concerned. I have been using my Amstrad DMP 2000 printer for the last eleven years and it is getting a little past it, *(like me)*. I'm thinking of hanging it, but have come to realize that it is not a case of just picking a printer and away I go. I found a

store selling new Hewlett Packard 400 series bubble jet coloured printers for £99. Seemed to me a reasonable offer, then I read on the box "minimum requirements". DOS windows, x Mb, all very disconcerting. There was also a Olivetti at the same price, that had two 3.5 disc print drivers. Although I have a 3.5 disc drive I felt sure it would not be a compatible format. Could these printers be made to work with Arnold?. So before I get even more confused perhaps some one can offer me some advice on availability of printers suitable for the CPC6128, what to look for and what to avoid. Yours sincerely

Jack Butler
Grays

<<*Dear Jack, These printer driver disks supplied with the printer are so that a PC can use all the extra features that many printers of to-day have. The club uses an Epson Stylus 200 and these printers also comes with a disk for the PC, but they work alright with the CPC. Just make sure that the printer you decide to buy is Epson compatible. -John>>*

PC OR NOT PC

Dear Philip, So, WACCI has now reached the situation where we have to seriously consider the future of the club. WACCI is not the only group in this situation - the United Amstrad User Group *(UAUG)* recently underwent a radical restructuring, which will hopefully prolong the group's usefulness *(whether it'll be successful is not yet certain)*.

Like WACCI, the UAUG's committee thought about including a PC section in the magazine. The consensus was that it would not be a Bad Thing. In fact, I argued that it would be a positive move to provide limited coverage of other machines, provided that the article had some link to the CPC world.

Unfortunately, it seems that this change in policy opened the floodgates for a mass of PC articles, whilst the number of CPC articles submitted to the editor continued to fall. The PC articles have, almost without exception, been inaccurate and have, if they mentioned CPCs at all, done just that - merely mentioned them in passing! In my not-so-humble opinion, it would be a sad day if WACCI were to follow that route. It would very quickly degenerate to a PC magazine which just happened to bow occasionally at the altar of Arnold out of tradition.

I can see that there may be a place for

(just as a for instance) an occasional supplement covering PC/Mac/Unix issues which may be only of peripheral interest to the majority of the membership. The supplement should *(could?)* follow broadly the same format as the current mag does, with an editor's column, letters, type-ins, tutorials, and contact info, and try to have some relevance to the CPC community - although avoiding page after page of CPC emulator reviews!

If there is enough interest, it could become a regular thing, or a new user group could be formed, which would at first draw upon the expertise *(and goodwill!)* of the current WACCI organisational team, but being financially and editorially self-sufficient.

As to the future the current, CPC only WACCI, a sure-fire way of increasing membership would be to bring PCW people into the fold. Yes, they are very different machines, but there is a great deal of common ground between the people who own them. We share many of the same interests and obsessions. In any case, whatever happens, I would rather WACCI were to *(<insert the mythological being of your choice> forbid!)* die gracefully, rather than pathetically squirm its way to an extended and undignified end around like AA did.

If we have to go, let's make sure we go out with a bang! And finally, hot off the Internet: it seems that some clever chaps in Germany are working on an interface whatsit to let CPC users use IDE hard disks *(like what's used in PCs)*. I'll send in any further details as I find them. <<Yes please. -John>> Yours, bravely clinging to the trailing edge of technology,

David Cantrell
Chelmsford

<< WACCI is a magazine for the CPC and that's how we all want to keep it, before WACCI - that's the membership decides on anything like including other computers you will all be given a choice and it will be decided by the majority on what the direction WACCI will take.

For the time being, membership is stable and hopefully will be rising in the near future. Things can be done right now, which would help the CPC community in general and that is by stopping these silly and needless digs at each other. If we all started to be nice to each other the CPC would still have a long future. Sorry David I got carried away, but at least you all now know what my views are. -John>>

Dear Philip, The news of a 'double whammy', as mentioned by Paul in the editorial of WACCI issue 112, came to me, a very ordinary member of WACCI, as a rather shattering blow, as I'm sure it did to all of our members. With the previous recent re-organisation involving you, Paul, Richard, Frank and John, performing so very well, I, for one, thought that we were sure of a very rosy future! First I'd like to thank all you chaps for all you have done/are doing for the club. The most important thing now, as I see it, is to find a way to preserve our mag as it is today. It needs (a) sufficient funds to produce it, and (b) a plentiful supply of articles/letters to fill it.

As far as (a) is concerned, could not the subscription be raised to replace funds lost by the drop of 100 members over the last year? The mag is first class, and I, for one, would be prepared to pay £3.00pm.

If one thinks back, the last issue of AA for June 1995 cost a massive £3.25 - for a very inferior magazine! I wonder what it would cost now if it were still in production! Our mag is the lifeblood of the club, and is the only channel through which members can communicate with each other, receive and give advice to other members, and enjoy all the other benefits that WACCI has to offer. I would think that £3 would be a very reasonable price to pay. Such an increase would probably take care of the future, but would not help the present situation.

To take care of this one could consider a small one-off levy by all members to cover the missing revenue for the next few months. have just renewed my membership for another year, and if the increase were to be approved I would gladly send in further funds to cover it.

On the question of a sufficient supply of articles/letters for the mag, why not dig out the past. WACCI has been going for 10 years now and I'm sure that during the 'formative years' of CPC computing, say 1987-1991, there were many very excellent articles/series published in WACCI *(and elsewhere)* on CPC computing that many of the present membership have never seen.

Why not swell the material for publication by setting aside a few pages each month for re-producing those gems for the benefit of the newish members of 0-5 years standing. What a pity that UAUG and WACCI, the two remaining CPC clubs are competing for the limited membership available at this time. A

merger would give the 'merged' organisation a larger membership base which would help, but I cannot see it ever happening. One last thought - I've always found that computing needs continuing interaction between people to survive and prosper, and the loss of WACCI as we know and love it would undoubtedly accelerate the demise of the CPC, something to be avoided at all cost.

Dick Hornsby
London

<<Dear Dick, Please don't call yourself an ordinary member (there's no such thing). I like to think that we are not just members of a club, but also friends. If funds become a problem then WACCI would look at cheaper ways of production. I agree with you we do have a lot of good articles gathered together over the years, but would members really want to have them repeated? Don't forget we have already re-produced a lot of the earlier articles in a a series called Great WACCI series of YGB, however if you would like to see some more then drop me a line at WACCI HQ. Many thanks for the offer of a levy all donations are welcome, make cheques payable to J. E. Bowley, seriously there's no need we are doing fine. -John>>

WE ALL NEED WACCI

Dear WACCI, I, for one, cannot see WACCI going down the drain ... I mean, where would anyone sell their wares? As far as I know, Amstrad don't make computers any more do they???

There is always someone wanting to sell and there are always some wanting to buy; and there is always someone to help, if any problems arise, via the `Helpline'.

Of all the folk who have tapes, discs, machines and the like for sale, who can they sell to without WACCI? They are up the stream without a paddle! So to my mind it's up to them to make sure that they have a platform; it's up to them to keep writing articles; it's up to them to keep me entertained every month! Yes, like a lot of you out there, I am waiting every month for WACCI to drop through my letter box. I am glad that there are those folk at the other end of my phone line that I can talk to at almost any time night and day. But, at the end of the day, it's the folk with a vested interest in WACCI that should be worried and it's because of them that WACCI will live on, for many, many years to come.

Nora Lees, Birmingham

PCW TO PC

Dear Frank, Philip and WACCI, Hi there to all. This may be a long letter, as I hope to put my views forward after reading last months WACCI. Thank you Paul for stepping in at short notice, you did a good job. I hope members will come forward with their comments. Paul, you have given us plenty to think about.

First let me congratulate our new team: I wish you all well and a long and happy term. Thanks John for taking the Editor's job *<<Your welcome -John>>*. John will need all the help of the members with reviews topic's and articles. We look forward to our magazine each month. Lets make sure John has enough to keep us going. I hope Doug Webb enjoys his new post, the best of luck Doug.

I hope Philip's personal reasons, will be solved. I hope you will be happy back in Fair Comment. Thank you for all the work you did as Editor and the help you give to so many of us. I was sorry Richard Fairhurst has left, but hopefully he will keep on helping with the techie side of things. Last but not least to Brian Watson our new Publicity Officer, I know Brian will enjoy doing this job, so thanks Brian. Now on to other points from last months Fair Comment. Sajad Hussain's letter, about the part on PD libraries. It would be nice if the PD discs from Sheepsoft and Sleepwalker were in the WACCI library. They were two very good PD libraries. I used both of them in their day. Paul Fairman's Sheepsoft had 245 discs in his in September 1994. Joe Moulding's Sleepwalker PDs had 116 in his in July 1994. I say that is some collection.

That brings me to this debate: I would not like to see WACCI like BTL. Now I must say all that serve, the CPC has its place. They all do a good job and help someone somewhere, *(and that's good for the CPC.)* so in their own way all have a place in what is left of the CPC world. Many of us would have been at a loss without them. Now to the PC in our Time. Yes I own a PC. I agree with Paul, PC WACCI would be great; to have the same type of help in a club for PC as WACCI is for the CPC would be wonderful. Here I must say thanks to Angie Hardwick who first suggested we should include a few pages in WACCI.

I know there are many magazines for the PC, I have bought and read them. All the ones now seem to talk Windows 95 and the Internet, neither of which I have.

This leaves room for something in between. Now that brings me to what I myself am trying to do. I picked up 300 3" disc's for £25. I split them with my husband Chris. We are loath to clear them off as they have all got PCW stuff on and a lot of it is PD. I don't have a PCW but I have a PPC 640 which has two 3.5 disc drives. The problem is getting the files over on to 3.5" discs in MSDOS format. I have Doscopy and Discology. John Bowley tried to explain what I had to do, but I am not getting there. If anyone could help me with some instructions I'd be grateful.

The other thing I would like to try to do is translate some of the disczines and instruction files in the PD library. Antony Jordon has written two programmes for me that extract the ASCII text files.

I hope then to be able to put them on 3.5" discs MSDOS format so I can then load them into PC Protext, and then I can use my translator to turn them into English. I know I could do this. The trouble is I keep forgetting how it is done.

I hope someone could put this into an article or some notes that I could refer to when in trouble. This is where I see the PC, PCW and CPC could work together. I really would like to have the chance to try it. This debate on PC in our Time made me think this is one way that these machines may all be used to serve one purpose. Maybe this will open another feature to this debate.

I don't know if there is a way to connect the computers together by means of RS232 interface. I have two of these working I believe. If it could be done I would need help on how to do the job as I have no knowledge how it's done. I hope this will bring a feature for WACCI and the answers I am looking for. All the best to all in there new posts. Anyone wishing to contact me on the above are welcome. Also as penpals on computer related stuff.

Christine Raisin
117 Tilbury Rise
Cinderhill
Nottingham
NG8 6DE
0115 9133181

<<Hiya Christine, some of the questions you've asked, I'm not sure about, I would have to spend a lot of time researching to be able to answer them correctly and since at present I'm a bit busy editing WACCI I'll leave it to someone else to answer Yes I know I'm taking the cowards way out but if it gets an article out of it then so much the better.-John>>

MISUNDERSTANDING

Dear Philip, I am sorry if I have upset anyone about sending my opinions to Fair Comment. This is my last letter to Fair Comment. in future

I will keep my opinions to myself, after I wrote my letter and had sent it off, I was in conversation with Jonty Jones and he was telling me about how busy he was and it was only then that I realised my misunderstanding.

As I was only going by the photos that were published in WACCI, only showing a few of the people *(why didn't the person who took the photos also take pictures of the crowds?)* and why did the pictures look so dark? Was it the fault of the photographer or the process of printing the picture in WACCI?

Nora Lees
Birmingham

<<*Hi Nora, since Carol was the person who took the photographs at the WACCI convention of 95 and 96 I'll hand you over to Carol for your reply -John*>>

<<*Dear Nora, In reply to your enquiry regarding the darkness of the photos. I'm not sure to which set you are referring, but on the whole I thought they were all very good. Only The Blast From The Past set reproduced badly for some reason. Unfortunately the room is quite dark for photo taking with a lot of bright lights which interfere with camera lighting. I'm not a professional photographer and I only have my personal camera but I think I did a great job under the circumstances.*

I did take a vast assortment of photos and it can be difficult to choose which ones would be best to print. I am unable to speak for Paul's (Philip's) choice but I would imagine that he chose people whose names are recognised within WACCI to give members a face to look at when they call. With regard to your not sending your opinions to FC don't be too hasty Nora. Most letters are very welcome and even a bit of stiff criticism opens up a good reason for members to write to FC for whatever reason - after all we are always asking for articles are we not? And don't these letters count as articles. -Carol>>

I LIKE MY CPC

Dear Philip, Welcome back to Fair Comment. What a well argued article ITGA came up with in issue 112. The one about PCs, that is, and what our attitude and coverage as a club should be. She put her finger on it, of course, as you'd expect her to do. WACCI is a CPC magazine and that's where it began back in the far reaches of history and where it will finish one day. Its job as a club will be done.

The CPC will be a museum piece and we'll all look back with fond memories of its peculiar little ways.

Membership figures might be dropping and interest waning, but don't let's bury the beast yet awhile. My 6128 and 664 both have hearts that beat and screens that light up, bless them. And don't let's expect too much of them, either.

They're not in the same family as the modern PC and were never intended to do a tenth of what PCs regularly do. But that doesn't make them useless, does it?

As regular readers will know, I use mine predominantly for word processing. And here's what happens. I tap a key and a letter appears on the screen. Instantly. I type a sentence or two and barring personal frailties of coordination, the words appear on the screen with no delay. If I should inadvertently reverse two letters in my haste a quick tap of CONTROL-A puts things right. Should I accidentally tap the shift lock key and find myself typing a few lines in capitals when I didn't want to, then an equally effective remedy lies in CONTROL-\. I can search and replace, reformat, insert, move blocks, do all sorts of things, everything I really want to do for my words to make sense. If I was sitting before a Pentium jobbie with so much memory you lose count of all those noughts and a top of the range piece of word processing software I would hardly expect to need more features than I already use.

I don't even want as-you-type spell checking because of the interruptions to my mental processes such a facility would generate. Let me find my errors later, most of them merely by reading what I have written. But if I wanted DTP facilities *(the Powerpage spoof in issue 111 springs to mind, with its many impossible little extras)* then my CPC isn't the machine to use.

It was built in the infancy of DTPing and nobody envisaged just how far the home computer would go in that direction. We can dabble, make the odd impressive little page, but I shouldn't think there's one of us who seriously thinks our machines will ever produce a document of the quality today's public expects. I'll upgrade one day, when the need for spiderism draws me towards the World Wide Web, I'll no doubt start by insisting my CPC will be reserved for my own pet hobby and let the new fangled plastic device do what it's good at while we *(my CPC and me)* huddle together in a darkened room.

Then, one finger at a time, and slowly, I'll no doubt commit the most horrific of sins and start exploring the PC and its software, at first so that I can sneer at how feeble it is and then, after a few personal shocks when truth and bigotry meet face to face, announce that it's clear that the CPC influenced its design, and wasn't that a good thing?

And if I ever do become a PC freak I'll consign my CPC to that drawer in my mind where all the best things lurk amidst the dust and detritus of a busy life: my first day at school almost fifty years ago, that first love affair and the way my heart sang every morning when I remembered the day before, the tenderness of a winter night's embrace in our first home with snow lying on the ground outside, the birth of a first child, all the good stuff of life, including my CPC. And WACCI will go there too to keep it company at that ending, to be treasured for ever, untainted, I hope, by too much diversity, for diversity is the unintentional sin committed by those who merely want to preserve what they love rather than consign it to a special drawer in their minds. And all in all, what better ending can anything have than that?

Peter Rogerson
Mansfield Woodhouse

<<*Gosh Peter what a touching story. I didn't know if I should either cry or laugh I think you're the only other person I know who can masterfully write pages and pages without saying anything incidently the other person I referring to is Angela Cook.*

The program you are referring to is Protext I believe and you're right it's very easy to use. -John>>

APRIL FOOL

Dear Richard, Frank and WACCI. I just had to hit the keyboard. It may have been an April fool. Powerpage Professional I'd love it to be possible, but I don't think so. I must admit how much I enjoyed April Magazine. It was Brilliant. The cover caught my imagination. My reaction: **"Oh what."** Then the penny dropped. April Fool! I always glance through first. No Market Stall, No Comp page.

Then I started to read. I had work to

do. It was the hardest thing, I had to put it down until I had finished the work. I can assure you the work was soon done. I picked up my copy of WACCI and read from cover to cover. Congratulations on the presentation, it was terrific. Very easy on the eyes. Every article was a pleasure to read, and so many. Lovely to see different writers.

It goes to show it can be done. OK, it was done on an Apple Mac, I hope I'm right there. That does not matter, it was excellently done. Congratulations again. All the articles were CPC related and very enjoyable, that is what counts. I can only say thanks, it was great. Keep it CPC.

Christine Raisin
Nottingham

<<*Yes I agree Christine issue 111 was very good, it fact Richard says it can be done on a CPC and you can read all about this in next months issue. -John*>>

WACCI IS FOR THE CPC
Dear Fair Comment, I feel I must write and make a few comments on my observations made from the last few issues of WACCI. In the last issue *(112)* Paul asked for comment on the possible inclusion of PC related subjects being *(on occasions)* included in WACCI.

I feel if this was the case then the call could come from other members to include other machines, i.e.; PCWs, Speccies, Sams etc; as per the 8BIT publication. I find that if I want to know anything about a particular machine I consult a specialist mag for that machine, or group of machines.

I do feel that if WACCI were to broaden its horizons with coverage of other machines it would be poaching on other publications such as 8BIT, PCWTODAY and the DISC DRIVE to name a few. To cut a long story short, **NO THANK YOU!** it wouldn't be for me. I like my fix of WACCI as it is.

Just to put another point across, Colin Hazell suggests bi-monthly issues, could the membership wait that long from issue to issue? *(I believe most Wacci subscribers could also subscribe to other clubs that are already bi-monthly e.g.: 8BIT, CPCSW, UAUG)*

The latter now covering PC's I think so if that is the situation, why not go bi-monthly for a trial period to assess the mood of the membership? The editorial staff at least should be given a rest at Christmas and the main holiday period

(August) in my opinion.

The suggestion of a holiday editor would I think, cause more problems than it would solve. I read with interest Steve Denson's article in PCMART recently, about the history of the Amstrad CPC/PCW and PC. For those who have not read it I have put into motion *(copyright permitting)* the possibility of publishing it in Wacci. I should know more by the time this letter goes into FC.

Can I say that I like the new layout of Wacci *(much easier to read)* even if it is done on a PC!. I particularly appreciate the INDEX. One further thought! Could a telephone HELPLINE serve the members that want to see PC/PCW articles/tips etc;? I'm sure this would be of some benefit to new PC owners. I hope the above comments have helped in some way.

Ernie Ruddick
Yarm

<<*Hello Ernie I hope that you're well and working hard with the Wish List reviews. First your concern about including other computers within WACCI, yes you have a point. I also feel that if we start including other computers where will it stop. I fear if we started to include other computers the CPC would end up playing second fiddle, however no plans have been made, so no cause for alarm. At present we are not even thinking about going bi-monthly, the only concern at present is articles which are steadily coming in, so its business as usual. The holiday editor was only thought about to give me or whoever was editing WACCI a break now and then, but I've noted what you have said about the idea.*

HELPLINE for a PC, what a good idea, I can see no reason why we can't do this at all, any volunteers to draw up a PC HELP-LINE? But couldn't that amount to the same thing Ernie the members who own other computers may ask for a help-line too, but of course something could be worked out. to satisfy all members.-John>>

WACCI SERVICES DEBATE
First I would like to say `Thank you' to all the dedicated people who keep WACCI going. Perhaps I may enter into the PC debate, no, I don't own one; well not yet anyway maybe one day.

Angie Hardwick's letter in issue 111, `PCs in our time' made sense, to me at least! Paul's comment to Angela Cook in

112, again PCs in our time, I agree with.

A page for PCs in WACCI, why not? As has been said, most people if they are going to upgrade will change to a PC, and would no doubt welcome any tips on the pitfalls of such an expensive move.

In my opinion, instead of driving people away from the Club they would be more likely to stay, knowing they could have the best of both worlds.

Friendship of WACCI members and helpful information, what more could anyone want? Having read Angela's article re WACCI Services, and knowing myself to be one of the people who just sit back and let everyone else write in, thought I'd better mention which I have found useful.

The Book and Tape Library I have never used: tapes because I have a disc drive; books, they would probably baffle me with technicality, so they wouldn't be something I'd need. The Disc Library, PD and Homegrown I have found very good, it would be a shame if that were to go. The ex-software discs, another service I've purchased from.

Pat Whitmarsh
Dovercourt

PS. Sorry this is not on disc, having trouble with my PSU on 3.5" drive.

<<*Angela Cooks article in issue 112 about WACCI SERVICES was to draw to your attention that if these services are not used then what is the point of having them! In my opinion no service that WACCI has to offer should be closed down, so please write to me or to Doug Webb with your thoughts.*

In a few months time we shall be balloting the membership to see what steps we should take regarding closing down any services that are not being used.

The only exception to this rule is the software library which at present I will keep going any donations are always welcome. Lastly I hope that by now you've got your PSU fixed. -John>>

CONVERTING PICTURES
Dear all, Can anyone write an article for WACCI on how to transfer Art Studio screens, MicroDesign *.DR files and *.CUT files so that they can be used on a PC?

John Bowley
Peterborough

ParaDos on Cartridge

by Angela Cook

I'm not sure if Rob Scott is used to being referred to as a brain, but he is the said organ behind a project making Parados available on cartridge for Plus owners. The pulsating walnut look-a-like has completed the project details and is now keen to find out what support there is.

I'LL REMEMBER

ParaDos is an excellent operating system for large format 3.5" discs which is vaguely like RomDos on acid. A plus machine is a CPC with wings *(or even a GX400)* and if you don't know who Rob Scott is you'd better go and look at old issues of CPC Attack, all six of them.

WHAT'S NEW PUSSYCAT?

What Rob wants to do is supply ParaDos *(what will actually be Parados+)* on cartridge for Plus owners. This proposal saves a rom slot because having ParaDos+ in your cartridge means you don't need it in your rombox, otherwise it's a bit like using both your brakes and hand brake on the car *(unless it's my Dentmobile where it's essential - that's why it's called the Dentmobile).*

This means that you can put your ParaDos rom in another machine if you're lucky enough to have two; perhaps sell or give it away; or throw it in a draw never to be seen again. It also means you can put an extra rom in you're box if you were already full up. That all sounds pretty snazzy.

ONE GOOD REASON

So what is one of these things then and how do they work? Well, I have one plugged in to my Plus at this very moment and it acts just as a usual cartridge does. For anybody without a Plus, the bits to load BASIC *(the chip I guess)* are on the cartridge instead of in the computer. This means that without the BASIC cartridge sticking out the side of the keyboard, the machine won't work - this was designed by AMSTRAD remember. Alternatively you can put

games cartridges in the machine and upon switching on the computer *(that's the bit I can handle)* your game loads up just like on a MegaDrive or various other games machine that people seem to pay horrendous amounts of money for.

With the BASIC cartridge comes a game called Burnin' Rubber *(love or hate it)* and you have an annoying message when you turn on the computer asking you to select BASIC or Burnin' Rubber. With ParaDos+ on the cartridge you loose this message, courtesy of His Scottship. Of course you also loose Burnin' Rubber, but I don't think I'd clarify that as a loss.

So with the ParaDos+ cartridge in the machine you go straight to BASIC, no more annoying messages and no more annoying game. All that comes up on your monitor is a message saying **"PARADOS V1.0+ (C) 1995 STS Software"** just as a rom signs on or if you had soldered the chip internally to a 6128. Simple.

ALL FIRED UP

So how does Rob conjure this electronic alchemy then? Well, he takes your cartridge, takes the chip out and puts it in his expensive American technical thing, a special type of rom-blower I believe. This puts the program on the chip and he solders it back in to the cartridge.

Apparently the soldering is the most horrible part of the whole job because the tracks are so close together. People enjoy some of the most strange things.

Then you receive a cartridge with ParaDos+ in. It's only the **BASIC** cartridge that can be upgraded. *(This is*

not really true, most game cartridges can also be modified, but for marketing purposes is easier to up-grade the Basic cartridge.)

I've been using mine for a few weeks now and I think it's great, if Rob thinks he's getting it back, he's got a fight on his hands.

NEW SENSATION

This was to be just an upgrade for current ParaDos owners only but Rob is now offering this service to people who don't currently have the program either. If you are interested and currently have ParaDos all you have to do is send your cartridge *(BASIC)* and your original ParaDos rom, together with a cheque for £15 to Brian Watson. *(Brian Watson will be doing the marketing for this product.)*

The reason for sending the Parados rom is so that Brian can check it's an original.

Rob will then do the business and send back your cartridge and rom minus your £15 and you will have a cartridge with Parados+ on it.

If you don't already have ParaDos, just send your cartridge and £25 and the deed will be done.

RETURN TO SENDER

Please send parcels to: Harrowden, 39 High Street, Sutton-in-the-Isle, Ely, Cambridgeshire CB6 2RA.

Please make any cheques out to **"Brian Watson"**. I think it's all pretty simple, but any queries can be e-mailed to Rob on:

robscott @ tecres.co.uk

I think in a few issues time John will be taking a look-proper at the cartridge and letting you know what he thinks *(about the cartridge that is, as opposed to anything else John claims he thinks)* about it. <<*Yes, I'll be having a closer look and I will let you all know what I think (yes! Angela I do think) soon - John*>>

Programmers' Patch

by Matthew and Stephen Phillips

We find finely grated Parmesan cheese sprinkled generously over a good plateful of spaghetti produces a plain, nutritious, but stringy meal. A popular alternative from the Orient is egg noodles, but we would recommend the following article, which is equally stringy and requires plenty of black pepper.

STRINGING ALONG

Last month we finished off with an example of changing a BASIC string from machine code.

Here it is again in Figure 2.71. The program reads a character from the screen and puts it into the string of our choice.

Just to recap, unlike with numeric variables, where @a% gives the actual address where the number held in a% is stored, for a string, @a$ gives the address of the string descriptor block for a$.

This block is three bytes long. The first byte is the length of the string, and the next two bytes give the address at which the actual characters in the string can be found.

```
100  MEMORY &8FFF:a=&9000:FOR
     x=0 TO 14:READ a$:POKE a+x,
     VAL ("&"+a$):NEXT
110  MODE 2:PRINT"Silly string"
120  a$=" ":LOCATE 1,1:CALL &9000,
     @ a$
130  PRINT:PRINT"The letter at the top
     left of the screen is ";a$
190  DATA DD, 66, 01, DD, 6E, 00, 23,
     5E, 23, 56 ,CD,60,BB,12,C9
```

```
DD 66 01      LD H,(IX+1)
DD 6E 00      LD L,(IX+0)
23            INC HL
5E            LD E,(HL)
23            INC HL
56            LD D,(HL)
CD 60 BB      CALL 0BB60h
12            LD (DE),A
C9            RET
```

Figure 2.71

When passing the address of a string variable to machine code, we must make sure that the variable already exists, and that it is long enough to hold what we want the machine code to store in it. Line 120 takes care of this by setting a$ to be a space.

The machine code first loads the address of the string descriptor block into HL, then the address of the string itself is loaded into DE. The character returned in register A by the firmware call is then put into the start of the string.

It would have been more responsible to check that the string was the right length before altering it, but that would make for a rather complicated example.

When you run the program, as well as changing a$ to "S" and printing this on screen in line 130, if you list it again afterwards you will see that line 120 has changed and now says a$="S" at the start.

This is probably not quite what you would expect. All that the machine code did was place a byte into the memory address pointed to by DE, and the DE register has been loaded with the address of the first character in the string.

Normally this address would point to somewhere in the "string area", the memory just below HIMEM where the characters in the strings are kept.

But BASIC can be quite economical in its own way, and if your program defines a string by saying a$="'", it sets up the string descriptor block so that the address pointing to the characters just points back to the line in BASIC where you defined the string! The address is changed to point to somewhere in the string area as soon as you alter the string with a command like a$=a$+"extra", or similar constructions. Before this happens though, any machine code altering the contents of a$ would also change the BASIC program line as a side effect.

This does not really matter in our little example. All we wanted to do was to make sure that a$ was one character long, and a$="S" does just as well as a$=" ". Often though, it could produce undesirable consequences *(bugs)*. The machine code cannot tell whether the characters of the string are part of the BASIC program or stored in the string area. What we need is a way of forcing BASIC to store the string in the string area, rather than pointing back to the BASIC program.

If you just want to define a string of a certain length, say ten letters, just use:

10 a$=SPACE$(10)

If you wanted it to contain particular characters, then 10 a$=""+"This string" does the trick quite nicely. BASIC doesn't spot that the final value of a$ is contained in that line, and just shoves the result off into the string area without further ado.

HOW LONG IS A PIECE OF STRING?

Machine code can look at the first byte in the string descriptor block to find out the length of the string. You are not supposed to alter this byte, which means that you cannot change the length of any string parameter passed to machine code.

On the 464 it is possible to make a string shorter by simply poking a smaller value into the first byte of the string descriptor, but if you try this trick with other versions of the CPC you will find that the memory is not reused properly. It is better to stick to altering the contents of the string alone.

POP IT ON A STRING

At long last we will have a good look at the machine code from the disc menu

program in the February article. The assembly listing is given in Figure 2.718, followed by a BASIC program to poke it into memory and demonstrate its use.

Line 20 shows how the machine code can be called. The job of the machine code is to read characters from the screen, starting at the current cursor position.

The results are placed in the string passed from BASIC. The machine code looks to see how long this string is, and then reads this many characters from the screen and places them in the string.

There are plenty of comments in the listing to make it easier to follow, but the three firmware calls need more explanation:

TXT GET CURSOR
Returns thecurrent text cursor position. The x-coordinate is returned in H, and register L holds the y-coordinate. All other registers apart from AF are preserved.

&BB60 TXT RD CHAR
Looks at the current cursor position to see if a character is present and identifiable. The pen and paper that the character was printed in have to be the same as the current paper and pen for it to be recognized.

If there is a character there, Carry is true, and Awill hold the character number. Otherwise Carry is false and A is zero. All the other registers are preserved.

&BB6F TXT SET COLUMN
Sets just x-coordinate of the text cursor to a new position, held in A. Registers AF and HL are corrupted, and all others preserved.

NO STRINGS ATTACHED
Well, two articles to explain just 34 bytes of machine code must be a bit of a record. Although it is quite simple code, it demonstrates some useful techniques.

A lot of people who start learning machine code do not really end up making much use of it, as it is so much easier to program in BASIC.

BASIC AND MACHINE TOGETHER
Learning how to get BASIC and machine code working together means you can have the best of both worlds:

BASIC which is quick to write and easy to debug, and machine code for extra speed where you need it most.

Some of you may be wondering why there was any machine code at all. It would have been much easier to use the COPYCHR$ function. The whole of our example program could be rewritten like this:

```
20  MODE 2: CAT :v=VPOS( #0): f$ =
    " ": LOCATE 1,4:FOR x=1 TO 12 :
    f$ = f$+COPYCHR$(#0):NEXT
    :LOCATE 1,v
30  PRINT"The first file on this disc is f$
```

The reason is that the disc menu was written on a CPC'464, which does not have the COPYCHR$ function, so we had to use some machine code.

Even if you have a 664, 6128 or a Plus machine, it is worth knowing how to avoid using the COPYCHR$ function so that you can write programs that work on all of the CPCs.

Of course the machine code runs faster than the BASIC alternative as well.

WRAPPING UP
Next month we will be returning to BASIC for a last look at a few more of the tricks used in February's disc menu program. After that, who knows? Perhaps we could have a go at another language such as C, if there is enough interest, or even see how to control a MIDI interface.

Then again, there is a lot more BASIC for us to explore.

;initialisation - find cursor location and find address and length of string

CD 78 BB	CALL 0BB78h	;get current cursor position into HL
4C	LD C,H	;put x-coordinate into the C register
DD 6E 00	LD L,(IX+0)	;load HL with string descriptor block address
DD 66 01	LD H,(IX+1)	
46	LD B,(HL)	;load B with the length of the string
78	LD A,B	
B7	OR A	;check if the length is zero
C8	RET Z	;if so, exit...
23	INC HL	;point HL at the low byte of the string address
5E	LD E,(HL)	;load it into E
23	INC HL	;move on to the high byte of the string address
66	LD H,(HL)	;load it into H
6B	LD L,E	;copy low byte to L (so HL holds string address)

;main loop - transfers B characters from screen into string at HL

CD 60 BB	loop: CALL 0BB60h	;get character from screen
77	LD (HL),A	;put it into string storage space
23	INC HL	;move on to next character in string
0C	INC C	;C holds cursor x-coordinate - increase it
79	LD A,C	
E5	PUSH HL	;save HL to the stack (next routine corrupts HL)
CD 6F BB	CALL 0BB6Fh	;set text cursor x-coordinate to value in A
E1	POP HL	;restore HL from the stack
10 F2	DJNZ loop	;decrease B, and if not zero jump back to loop
C9	RET	;return whence we came (to BASIC)

```
10  DEFINT a-z:MEMORY HIMEM-34:a=UNT(HIMEM+1):FOR x=0 TO 33:
    READ a$:POKE a+x,VAL("&"+a$):NEXT:DATA CD, 78, BB, 4C, DD,
    6E, 0, DD, 66, 1, 46, 78, B7, C8, 23, 5E, 23, 66, 6B, CD, 60, BB, 77, 23, C,
    79, E5,CD,6F,BB,E1,10,F2,C9
20  MODE 2:CAT:v=VPOS(#0):f$=SPACE$(12):LOCATE 1,4:CALL a,@f$:
    LOCATE 1,v
30  PRINT"The first file on this disc is "f$
```

Figure 2.718

The DDI-1 Disk Drive Interface
Gets a ABBA Switch
by David Godfree

A few days ago I decided to connect a 3.5" Drive to my Amstrad 464 Plus with DDI-1 Interface, I decided on a Sony PC Drive from my local PC shop, it cost a mere £18.00.....

THE STORY CONTINUES

When I got home, I started to panic on how to connect it without blowing away my beloved Amstrad.

I telephoned Nigel Callcutt but could not get hold of him and I apologize to his family for any inconvenience.

I then telephoned Philip DiRichleau to see if he could help me, and what a lovely chap he is.

We had a long chat on how I should go about it and a couple of days later I phoned Philip to tell him how I connected an ABBA switch to the DDI-1 Interface.

Philip asked me if I would write a article on how I did it, so here it is, the article or tutorial, as requested and I hope it is an enjoyable read because this is my first go at writing anything for WACCI.

PLEASE NOTE:
THAT YOU DON'T HAVE TO DO THIS!
Before we start note that in **Fig.2** wires 15 to 30 are not connected together they are all individual and the diagram has been drawn this way so hopefully not to take up too much room, also whether this article is the same for all drives I'm not sure, because I don't want to blow up WACCI reader's computers.

```
WIRING THE ABBA SWITCH

1 = Interface. 2 = Disk Drive:-
----------------------------------

2A. Drive 0 Select(2):
1A. Drive 0 Select(1):

2B. Drive 1 Select(2):
1B. Drive 1 Select(1):
        Fig.1.
```
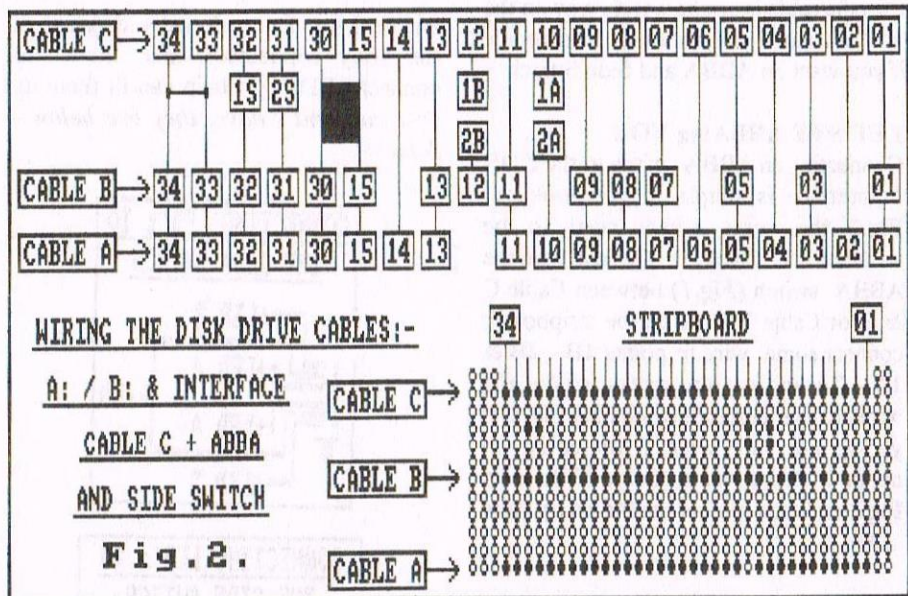
thought indicated wire 1 actually indicated wire 34 so they are numbered 34-1 as shown in Fig.3, they might be different on your version.

Now I will tell you how to connect the DDI-1 to a 464 Plus which Philip ask for

Fig.2. — WIRING THE DISK DRIVE CABLES:- A: / B: & INTERFACE CABLE C + ABBA AND SIDE SWITCH
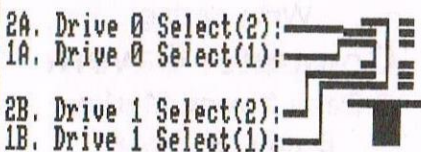
GET IT CONNECTED

We start off first by connecting the Disk Drive to the DDI-1 Interface the interface cable **B** would not fit the drive so this is why I had to use stripboard to connect both the 3" A: Drive & the 3.5" B: Drive, so I started by cutting off the old interface connectors, I then stripped the wires, twisted the strands together and soldered all the wires to the stripboard *(CABLE C)* as shown.

In **Fig.2**, I then had to work out which wires connected to Drive B:, I then connected the appropriate connector and cable to stripboard position *(CABLE B)*, the holes which are not filled in are the ones that should not be connected, this also applies to *(CABLE A)* if you follow **Fig.2** then you should not have any problems.

Now take a look at **Fig.3** on my DDI-1 Interface the wires are numbered 1-34 which, makes connecting anything a bit confusing because the blue strip that I

or did I get confused *(Sorry if I got it wrong)*, Unsolder the diode *(D101)* as shown by a 2 in **Fig.3**, the 1 represents the ROM Chip 40015, prise out the chip with a flat headed screwdriver.

Once I have my old CPC464 up and running I will try and make up a P.C.B so that I can switch between the use off it on the 464 Plus or CPC464. The way it is done is by disconnecting the power supply to the chip which the 1 in Fig.3 also represents and using a switch to connect and

DDI-1 CABLE Fig.3.
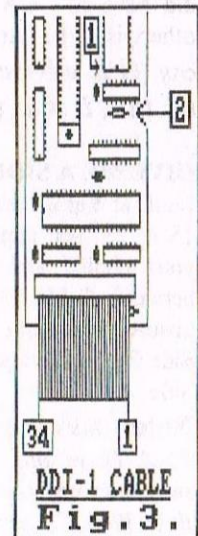
disconnect the Diode and power. (*Note: this might also work for other ROMs by finding the power line to the chip.*)

When I wired up the drive it did not detect whether there was a disc in the drive so by soldering pins 34 & 33 together the problem was solved.

When cables A, B & C are connected to the stripboard and they are correct, connect up the drives, make sure the cables are connected as if the connectors were on the DDI-1 Interface flat and not twisted, if the 3.5" Drive motor turns on as soon as you turn on the DDI-1 Drive, then the cable is up the wrong way on the 3.5", if unsure give me a call, then decide if you want an ABBA and Side Switch.

LET'S BE ABBAing YOU
Connecting an ABBA switch to the DDI-1 Interface is simple, if you look at **Fig.2** the wires which need to be switched are 12 and 10. You can wire the ABBA switch (*Fig.1*) between Cable C & B or Cable B & A on the stripboard, connect some wire to points 1B - 2B & 1A - 2A and cut the tracks, solder the wires to the correct switch pins **Fig.1**; if you're not sure what I am going on about look between Cable C & B in **Fig.2** and then look at the blown up view in **Fig.2**.

HOW IT ALL WORKS
I will now tell you how it works: leaving the switch out selects Drive A as A and Drive B as B, switching it in selects Drive A as B and Drive B as A. Now, as a point of interest I used the ABBA switch while the computer was still on: this did not harm the computer, but I did have to **CAT** before doing so otherwise the drive goes into crunch city. (*I'll advise you that, if you try this, it is at your own RISK!*)

GIVE ME A SIDE SWITCH
Look at **Fig.2**. Connect wire to points 1S & 2S then connect to a switch of your choice and this is also placed between Cable C & B see **Fig.2**; if unsure, switching in selects Side 1 or Side B and leaving out selects Side 0 or Side A.

Note: *This works fine with my setup of 3" A Drive and 3.5" B Drive and switched using the ABBA. Why do I say this? Well I'm unsure how you connect it with two 3.5" drives!*
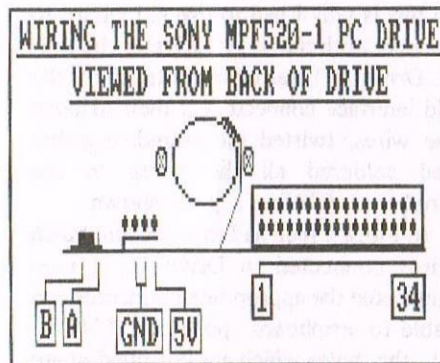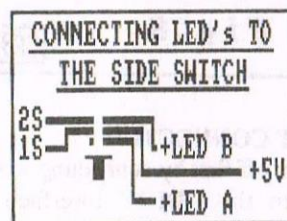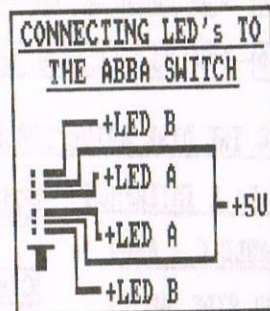
THAT'S ALL FOLKS
You now have a DDI-1 Interface with a ABBA switch connected and if you still haven't got a 3.5" then get hold of a Sony PC Drive Model: MPF520-1.

I hope that you have been able to follow this article and look forward to hearing any comments in future WACCIs.

If you would like help with this article then telephone me on: *(01705) 786110* and I will try to answer your questions and any new information on connecting disk drives.

Now all I need is a IDE 1GB Hard Drive and a IDE CD-ROM: any takers?

Before I go, I've included a diagram of the Sony connectors, and how to connect LEDs, if Philip can fit them in. *<<I can and I have, they are below - John>>*

CONNECTING LED's TO THE ABBA SWITCH

CONNECTING LED's TO THE SIDE SWITCH

WIRING THE SONY MPF520-1 PC DRIVE VIEWED FROM BACK OF DRIVE

NEED SOME PARTS
1 Drive **A** cable (*Use piece left over from DDI-1 Interface Cable*).

1 Drive **B** cable (*34 way ribbon cable + 34 way IDC connector "Maplins"*)
1 ABBA switch (*Latchswitch 4-pole +*

Cable for points 1A ,2A & 1B, 2B I used 7/0.2 wire, 1A,2A=GREEN, B, 2B = YELLOW "Maplin").

1 Side switch (*Switch of your choice + Cable for points 1S, 2S I used 7/0.2 wire, 1S, 2S=WHITE and a Latchswitch 2-pole "Maplin"*).

One last thing if the ABBA switch was invented in the stoneage would Fred Flintstone have gone *ABBA YABBA DOOO?*
                                    David Godfree

The Puzzle Page

with Carol Bowley

Welcome once again to your new style puzzle page. As you can see I've renamed it and put my own name at the top. Boy do I feel important! John has designed me a template so I don't have to keep bothering him to use the CPC - thanks John. Now on with the puzzles.

ANSWERS ISSUE 111

I hope you had some fun searching through the magazine for the answers to this puzzle. The answers were:

1) Norman Woodbridge (pg5).
2) A £10,000 duplicating machine (pg 9).
3) 74LS32 (pg10).
4) Digital Dreams (last page but 1).

WINNERS

Thank you to all of you who entered. The winners are:

1st Keith Bull
2nd Ian Anderson
3rd Colin Hazell

Well done. Your vouchers are on the way.

PRIZE VOUCHERS

As mentioned before on our last puzzle page, your prizes will now be sent in the form of a voucher.

They can be redeemed through any PD librarian or through Doug for multiple orders. However, they are not valid as payment for your subscriptions.

Vouchers will be to the value of:

1st = £8.00 voucher.
2nd = £5.00 voucher.
3rd = £2.50 voucher.

THE RULES OF THE GAME

I have changed the rules of puzzle entry just a teensy bit. Instead of trying to solve all the puzzles in a relatively short time, you now only need to enter one. This will be the Prize Puzzle. If you get the answers correct then your name goes in the winners hat. Still enter even if you don't know all the answers as you never know your luck! The other puzzles are just for fun and to be done at your leisure!

I WANT YOUR ENTRIES

Please keep your entries flooding in 'cos you never know when it could be **YOU!!**

Right then all you eager lads and lasses out there, here's the next set of puzzles to entice your grey cells to get working.

PUZZLE ONE
* * PRIZE PUZZLE * *

As issue 111 was such a brill issue I am going to set the rest of the questions I had to miss out. Answers are to be found in said issue.

1) Which famous 'sister' appeared on the front page?

2) Who was 'smart' enough to type a lengthy manual?

3) What is a PCB?

4) Colin Harris, Carl Surry, Martin Cossins and ....?

5) In Martin Cushs' Music Makers article, what musical sound does 14 give you?

6) Who is Mr 8-Bit? *(or as I affectionately know him - The 8-Bit Kid!)*
Well there you have it. not too taxing I'm sure but at least it will give you an excuse to re-read all the articles you enjoyed in this great issue.

Well there it is then folks. Your answer is to be with me by *Saturday 21st June*. Now on to the just for fun puzzles.

PUZZLE TWO - UP WE GO

Can you tell me how many steps there are to climb before you reach the top of the Blackpool Tower?

PUZZLE THREE - DINGBATS

Find the familiar phrase, saying or name in this arrangement of letters.

IputtingyourfootinT

I think that one was pretty easy to start off with. They will get harder I assure you.

PUZZLE FOUR - GUESS WHERE

This is a place found somewhere around England. Hopefully it is easily recognised.

Where can you: Find freshwater you cannot drink, needles you cannot thread, ryde where you have to walk, lake in which you drive, newport you cannot bottle and cowes you cannot milk?

THAT'S ALL FOLKS

Well thats all for the puzzles this month. I hope you enjoy doing them.

TECHIE BODS

I would like to include a few technical puzzles in future issues for those of you who like them. If there is anyone who would like to set a techie puzzle *(not too long though)* please send it to me. Oh yes, please remember to include the answers!

My address is:

Carol Bowley
The Puzzle Page
97 Tirrington
Bretton
Peterborough
PE3 9XT
Tel: 01733 702158

TO SPEAK OR NOT TO SPEAK

If you call only to find the answerphone is on, feel free just to say Hi and your name. I also enjoy funny messages but please remember who might be listening!

Good luck with the puzzles.

Bye for now.

Carol

Amstrad Disc Formats

by John Hudson

All the Amstrad disc formats are based on CP/M and reflect its development. The earliest versions of CP/M were intended for use with IBM 8" discs, a format which IBM had invented as a temporary storage medium but which hobbyists took up as the standard for the new-fangled micro-computers. These discs stored 128 bytes in each sector and at heart CP/M believes these are the only type of disc.

DISC PARAMETER BLOCK

However, with the introduction of 5.25" discs, a way of accommodating new disc formats had to be found. This was done by adding a Disc Parameter Block which holds the definitions of the disc format being used. Whenever CP/M wants to read from or write to a disc, the data it receives or sends is converted according to the definitions held in the Disc Parameter Block or DPB.

RAM

With CP/M 2.2 the DPB is held in RAM but with CP/M Plus it is held in the extra memory, or banked RAM, available on the 6128 and PCW computers. When CP/M Plus needs to use a disc drive it swaps the banked RAM which holds the DPB with a portion of the main RAM for long enough to read the essential information.

Programs like REJOYCE , 8256 and RAMDOS+ *(which are all COM files)* change what is in banked RAM.

On the 64K computers, an alternative disc format, even if it is held on ROM, has to take a few bytes to announce its presence and ensure it can overwrite the standard DPB. It also has to grab a larger share of RAM in which to sort the disc directory before displaying it in response to **CAT**. To accommodate this under CP/M 2.2, it is necessary to reduce the amount of RAM available to CP/M as described in the RAMDOS instruction book.

BASIC PRINCIPLES

Having said that, the basic principles of CP/M 2.2, that you can have any disc format you want as long as you define it in the Disc Parameter Block, hold true for AMSDOS and have opened the way

for all the high capacity formats now available, some of which were listed in WACCI December 1995.

NEED TO KNOW

So, what do you need to know to alter the disc format? Well, not all the information listed in WACCI because some of that related to fairly obscure and, in some case, fairly old types of disc drive. But you do need some other information.

Firstly, you need to know about the DPB; this is 15 bytes long in CP/M 2.2 and 17 bytes long in CP/M Plus *(Table 1)*. Secondly, you need to know that Locomotive Software added an eXtended Disc Parameter Block (or *XDPB*); this is different for CP/M Plus and CP/M 2.2/AMSDOS *(Tables 2 and 3)*. Thirdly, you need to know the values used on the various Amstrad machines *(Tables 4 & 5)* or for the other formats. Fourthly, you need to know where to put these values.

With AMSDOS, there is probably little point in reinventing the wheel unless you want to do something like read PCW double sided double density discs for which there is currently no suitable program. Buy RAMDOS or PARADOS.

CP/M PLUS

With CP/M Plus, you can amend C10CPM.EMS so that CP/M boots ready to read higher capacity discs as described in the RAMDOS instruction booklet. Or you can run a program like RAMDOS+.COM which alters the values held in banked RAM. While RAMDOS.BAS will not run under AMSDOS on the 464+ or 6128+

machines, RAMDOS+.COM runs happily under CP/M Plus on any 128K machine.

CP/M 2.2

With CP/M 2.2 you need to alter the system disc as described in the RAMDOS instruction booklet. Bear in mind that CP/M can only handle 128 directory entries at a time; if you use high capacity discs you are expected to split files across user areas so that you never reach the 128 limit. If you ask CP/M to display more than 128 files at a time, it will simply stop at 128. The remaining files will still be there but will not be shown on the screen.

Table 1: Disc Parameter Block (DPB)
The CP/M 2.2 DPB consists of 15 bytes; the CP/M Plus DPB has 17:

SPT 2 bytes ; *originally* **Sectors Per track** *but now refers to 128 byte records.*
BSH 1 byte ; **Block SHift** - *log 2 bytes / block-7.*
BLM 1 byte ; **BLock Mask** - *add 1 to this figure to get the number of 128 byte records in a block* *
EXM 1 byte ; **EXtent Mask** - *how many K can be listed in one directory entry - 0 = 16K, 1 = 32K, etc.*
DSM 2 bytes ; **Data Storage Maximum** - *add 1 to this figure to get the number of data blocks on the disc* *
DRM 2 bytes ; **DiRectory Maximum** - *add 1 to this figure to get the maximum number of directory entries* *
AL0 1 byte ; **ALlocation bit map** *0*) *binary 1000000 = 80 hex = 1 block; binary 11000000 = C0 hex = 2 blocks etc.*
AL1 1 byte ; **ALlocation bit map** *1* - *always 00 in Amstrad formats.*
CKS 2 bytes ; **ChecKSum** *vector - normally (DRM+1)/4.*
OFF 2 bytes ; **OFFset** *for reserved tracks.*
PSH 1 byte ; **Physical sector SHift**) *CP/M Plus only.*
PHM 1 byte ; **PHysical sector Mask**) *CP/M Plus only.*

* These figures are all the last number in a block, on a disc, in a directory etc. so, as 0 is always the first number in the sequence, the total is always 1 more than last number.

Table 2: The CP/M 2.2/AMSDOS eXtended Disc Parameter Block XDPB) *The XDPB consists of a further 10 bytes:*

1 byte ; first sector number
1 byte ; sectors per track
1 byte ; gap length (read/write)
1 byte ; gap length (format)
1 byte ; filler byte for formating
1 byte ; log2(sector size)-7 - 'N' for
 mPD765A disc controller
1 byte ; sector size/128
1 byte ; reserved: current track - always
 initialised to 00
1 byte ; reserved: 00 = not aligned; FF =
 aligned
1 byte ; freeze flag - 0FFH = don't auto
 select format

Table 3: The CP/M Plus eXtended Disc Parameter Block (XDPB)

The CP/M Plus XDPB also consists of a further 10 bytes:

1 byte ; sidedness - 0=> single sided; 1=>
 double sided flipsides
1 byte ; tracks per side
1 byte ; sectors per track
1 byte ; first sector number
2 bytes; bytes per sector
1 byte ; gap length (read/write)
1 byte ; gap length (format)
1 byte ; mode
1 byte ; freeze flag - 0FFH = don't auto
 select format

NOTES:

* **(1)** 720K on the PCW 9512 format is too much to handle as 1K blocks; so 2K blocks are used giving 360 blocks in total; on hard discs, 4K blocks are normal.
 Bear in mind that a 5K file takes 5 blocks (5K) on a CPC disc, 3 blocks (6K) on a RAMDOS format disc and 2 blocks (8K) on a hard disc.

* **(2)** where two bytes are used, the 'units' come before the 'tens' so to speak and I have translated the second byte into its decimal equivalent in which 01 = 256 and 02 = 512, etc. So, for example, the PCW 9512 format has 256+100=356 blocks each of 16 records or (16 x 128 bytes =) 2 Kbytes length giving 712K storage.

* **(3)** the CPC System format retains 2 reserved tracks for compatibility with CP/M 2.2; the vendor format is identical to the system format except that the first two tracks are left empty for games programmers to insert their own code.

* **(4)** Amstrad and KDS use the first sector number to identify disc formats easily; KDS uses 01, 11, 21, 31, 51 and 71 so ROMDOS (and thus PARADOS) can identify all the Amstrad single-sided and KDS formats by reading the first sector number.
 Unfortunately, as RAMDOS format D1 has the same first sector number as PCW double sided discs, RAMDOS cannot detect PCW format double sided discs.

* **(5)** The gap length and mode figures should not be altered.

* **(6)** If you alter your CP/M disc, you can use 00 for the last byte though KDS recommends you use FF;
 If you use a program like REJOYCE.COM, 8256.COM or RAMDOS+.COM, this byte should normally be FF.

Table 4: DPB and XDPB *entries for the four main Amstrad formats under CP/M Plus:* These are the figures in hexadecimal *(and decimal where not obvious)* for the four main Amstrad formats; Table 5 gives the figures for the CP/M 2.2/AMSDOS XDPB starting from byte 15 *(i.e. after 0FF)*. See notes below for explanation of the asterisked points.

	CPC System	CPC Data	PCW 8256	PCW 9512
SPT	24 (36)	24 (36)	24 (36)	24 (36)
	00	00	00	00
BSH	03	03	03	04
BLM	07	07	07	0F (15) *
EXM	00	00	00	00
DSM	AA (170)	B3 (179)	AE (174)	64 (100)
	00	00	00	00
DRM	3F (63)	3F (63)	3F (63)	FF (255)
	00	00	00	01 (256) *
ALO	C0	C0	C0	F0
ALI	00	00	00	00
CKS	10 (16)	10 (16)	10 (16)	40 (64)
	00	00	00	00
OFF	02 *	00	01	01
	00	00	00	00
PSH	02	02	02	02
PHM	03	03	03	03
sidedness	00	00	00	01
tracks per side	28 (40)	28 (40)	28 (40)	50 (80)
sectors per track	09	09	09	09
first sector number	41 (65)	C1 (193)	01	01 *
bytes per sector	00	00	00	00
	02 (512)	02 (512)	02 (512)	02 (512) *
gap length (r/w)	2A (42)	2A (42)	2A (42)	2A (42) *
gap length (format)	52 (82)	52 (82)	52 (82)	52 (82) *
mode	60 (96)	60 (96)	60 (96)	60 (96) *
freeze flag	00	00	00	00 *

Table 5: XDPB entries from byte 15 *(after both bytes of 0FF)* for the two CPC formats under CP/M 2.2/AMSDOS.

	CPC
	Sys/Data
first sector no.	41/C1
sectors per track	09/09
gap length (r/w)	2A/2A (42)*
gap length (format)	52/52 (82)*
filler gap for formatting	E9/E9 (233)
log2(sector size)-7	02/02
sector size/128	04/04
current track	00/00*
alignment	00/00*
freeze flag	00/00*

* see notes (5) and (6) above. Note (5) also applies to current track and alignment.

Past WACCIs On Disc

by Christine Raisin

There has for some time been a missing element in our club. No there's no complaint! I'm talking about back issues of the WACCI magazine, which no longer exist. Well they do NOW, so read on and find out how you can obtain your copies on disc. John Bowley gave me the chance to see if I could re-arrange the text so it would be presentable and to put them on a disc.

ISSUES
I have managed to do eight issues so far, these discs contain the magazine text only. I've tried to keep to the WACCI style, but in two columns where possible.

They have been done on Protext and saved as ASCII files. Our aim was that they could be read on the screen through a word processor and printed out that way.

MANY THANKS
Here I must say our grateful thanks to Steve Williams, for donating his discs of the magazine files.

NOT AN EASY TASK
It has not been an easy task to achieve. I had to learn how to use Protext.

Once again my thanks go to John Bowley for his help and encouragement.

You must understand I still don't know all I should. I have to admit the print markers are not all they should be.

I can say, anyone who has them should be able to load the files on to the screen and the print them out if they wish, from within a word processor - I hope, anyway.

PICTURES AND DRAWINGS
Where in WACCI there was a picture or a drawing, these caused blank spaces that a lot of the text needed to be re-arranged.

Here I must say sorry if I have made any mistakes in the process of doing this work. There have been times when I've lost or erased some text by mistake and had to re-write it. It meant I have to admit it has been fun and frustrating, but worth it if we can get together the magazine on disc, for our members use. I know a few members who have shown interest. This has

encouraged me to continue. Now we are ready to say that these are available.

GETTING STARTED
I started at issue 18 and have done up to issue 25. I will continue upwards to issue 39, none of which are available as back issues from Frank Neatherway, these will be put on disc.

WE HAVEN'T GOT THEM
The earlier issues 4 to 17, WACCI does not have the discs for. This will make it more time consuming, since I hope in time to be able to get them typed up and put on disc.

This will be a long and slow job, so patience please. A little help in typing them out and putting the text on to disc as ASCII files would be very welcome, then I could edit them into an issue.

DO YOU WANT THEM
It would be nice to hear how much this service would be needed within the club. I feel it is a good idea and be of use to members.

WHAT ABOUT THE COST
As for the cost, it has been suggested that members send their own discs and include the return postage. I myself would like to see a small donation to WACCI for the contents of the text.

I ENJOYED THE CHALLENGE
It has been a privilege to have been given the chance to do this. I hope many of you will make use of them. *<<I'm sure you will be flooded with orders and help soon. Keep up the good work -John>>*

HELP AND ORDERING
If you can help Christine, or you want to order any of the disc(s) that she has done then please let her know, what issue that you would like and don't forget to enclosed your own 3" or 3.5" disc(s) with a SAE for their return.

> **Christine Raisin's address is:**
>
> 117, Tilbury Rise
> Cinderhill
> Nottingham
> NG8 6DE
>
> ☎ 0115 9133181

THANKS
A little while a go I tried to do what Christine has done and I gave up after only doing one issue then I was visited by Christine and hubby Chris. She asked if there was anything she could do to help, so I said *"YES"* and gave her a load of master discs of the magazine and said *"sort these out."*

I would like to say a big **thank-you** to Christine Raisin for all the hard work that she has done so far and I'm sure you will get offers of help in typing up the missing discs soon.   *<<John>>*

JUST TO REMIND YOU
You can still obtain past issues of Wacci from Frank Neatherway and I've listed them below.

If you want a photocopy from an issue that Frank has not got in stock he will be happy to fill your request.

ISSUES	COST	
1-3, 20	50p	inc p&p
40-42, 44, 46-49	50p	inc p&p
52-62, 65, 65-69	50p	inc p&p
70, 72-73, 75-79	£1	inc p&p
80, 83, 88-98	£1.50	inc p&p
99-112	£2.00	inc p&p

These are available from Frank and his address is: *3 Glebe Close, Rayleigh, Essex, SS6 9HL. Tel: 01268 784742.*

Wop's Up, Doc? by Peter Rogerson

There have been a few WIMP interfaces produced for Arnold since the good old days when Alan Sugar dreamed and mysterious things happened to plastic and silicon, and I've been given a copy of WOPS (Window Operating System) from 1987 to review.

KING OF THE WIMPS

DES might be king, King Des of Comsoft, long live the King, and Worktop might be dead and buried, so what about WOPS? To start with let me say that it comes on disc and all interfaces like this should really be on ROM because there's no real point in having continuously to load software. But at least WOPS does that little bit more than the Worktops of this world, which isn't difficult.

MAIN SCREEN

The main screen is divided into a display area for files and a set of icons designed to help you do anything to the disc(s) in your drive(s) that you might want to do. The icons are: Drive Select, Wastebin, and below these: Screen, Printer, File, Cassette, Unerase *(imaginatively displayed as a bin with a loose lid)*, Disc, Control Panel and Out. Quite a comprehensive crew.

LETS HAVE A CLOSER LOOK

Let's look at them, and being me I'll start with Control Panel because it's in the middle. Choose this *(joystick or keyboard - or joypad which is what I use)* and you can enter RSX commands at the bottom of the screen.

RSX COMMANDS

You have the usual bunch plus a handful provided for your entertainment by **WOPS:** |**Print** *(sends codes to the printer)*, |**Key,** like the basic KEY command, |KEYDEF, |**INK n1,n2** sets ink n1 to colour n2, |**SPEED n1** *(sets cassette speed)*, |USER n1 selects user n1, |TRACKS n1, sets number of tracks for both drives up to 42, and |**MEMORY** n1 allows up to 256k expansion to be used in WOPS utilities. n1 is the number of 16k blocks you have over and above the basic 64k. **Out** means out *(of course)*, either to BASIC or CP/M.

LOADS OF UTILITIES

The Disc window is exciting. Click on it and you can copy discs *(an effective copier that seems to be stumped by very few protected discs)*, format them, edit their sectors and produce a nice hot cup of tea. A veritable cornucopia of utilities, and they really work. Except the tea maker, that is. I had trouble there.

FILE ICON

The File icon took a bit of struggling with. In the end I discovered that if I carried an ASCII file to the disc icon I could then either edit a file from the disc or create a new document. But be warned, Protext it ain't, with just the most rudimentary of editing tools available *(in editing mode CONTROL-H lists them)*.

The whole thing's quite cumbersome, though, and as I inferred I experienced some problems actually getting into the mode and even more problems editing a document when I was in it. There's no on-screen word-wrap or justification, just plain text. But I suppose it has its uses or it wouldn't be there. Personally, I prefer a fully-featured text editor complete with perforations. In truth, I can't really imagine anything you could do with this one, but maybe I'm being blind and there's something obvious in the tea-leaves. Oh, and I had trouble with it printing my three-lined masterpiece properly. It's really all too fiddly to be useful.

THE CASSETTE ICON

The Cassette icon is used to dump the contents of a disc onto tape. I haven't tried this one because I'm suffering from a shortage of cassette recorders, but I'm sure it's very useful to those who like to back-up their sacred files in this way. Click on the cassette icon and you'll be treated to a display telling you what speed the cassette is set at and the size of tape required to dump a discload of files.

SCREEN ICON

Take a file to the screen icon and it lists it. ASCII files are easy enough to recognise, of course, but the rest are much more fascinating. I'm not capable of making any kind of sense from the smiley faces and squiggles, but some folks are and I'm sure they will find this feature Really Useful.

PRINTER ICON

The Printer icon - wait for it - allows you to print, which is what some of us want to do some of the time. You can carry an ASCII file to the printer icon, using your pointer, or click on the bottom right corner of the main display *(thoughtfully set out in the form of a huge P)* and dump the screen to paper. Producing hard copies of disc catalogues without really trying must be a Very Good Thing.

MAIN DISPLAY

Talking about the bottom right corner of the main display brings me to the top right corner and a scrolling icon which lets you ... guess what? And it works, too, up and down rather than side-to-side.

PARCEL OF UTILITIES

It's a great deal more than a WIMP interface for the loading of software but a whole parcel of utilities which you've probably got already in half a dozen PD forms *(you know, formatting, disc copying, archiving to tape, sector editing, infusing tea leaves in boiling water and so on and so forth.)*

I like it and having got hold of a copy I'll probably use it ... though I'm not so sure when. I like to format using CORFORM *(which sorts out those bad sectors which elderly 3 inch discs seem to get increasingly prone to attracting to their magnetic souls)*, copy any discs I need copying using DISCLONE from the Oddjob suite of programs and edit sectors on the rare occasion when I need to via DMON, and I'm a devil for sticking with the familiar. I may use it for erasing, unerasing and renaming files because they're three functions I get my underwear in a twist when contemplating.

Or I may see sense and dump the whole lot in favour of a decent ROM-based set of utilities because, truth is, ROMS is where utilities properly belong. *Peter*

The Case For CP/M Protext

by Brian Watson

Your honour! In the past there have been debates on which word processor you should buy for the CPC computer. Right here and now I want to put forward my defendants case. Which is, ALL owners of a CPC computer should purchase CP/M Protext. Brian Watson take the stand please.........

IN THE BEGINNING
I came to computers very 'green' in October 1987. Two years previously I had started working as a self-employed small (5'5") businessman, and was feeling that I needed to produce more professional-looking statistical presentations and business letters than the handwritten ones my customers, employers and bankers were having to put up with from me.

With all the other startup costs *(own car rather than one supplied by an employer, business insurances, etc, etc)* either paid for, partly paid for, or committed for the future, my funds were quite limited.

TAKE THE PLUNGE
However, I really needed to take the plunge so I bought and read two months' issues of each computer magazine I could get from our local newsagents. There was still quite a wide range of new-ish computer systems vying for position then, none of which seemed to be very compatible with any other in terms of the type of discs or the programs used.

I couldn't face using tapes with their inherent slowness for most purposes, although I did add a tape recorder for loading cheap games, which only came that way.

PROPER COMPUTER
Because I wanted the computer to be fun as well as functional, I eventually settled on a CPC 6128 for its apparent versatility. The three(!) magazines available for it then made it clear that it was very much a 'proper' computer with business packages already available as well as a lot of leisure software, with more promised for later. I liked the fact that it came complete with a colour monitor too, and the keyboard looked sufficiently like a typewriter to fool

me into thinking that I could probably manage it. I was and am a reasonably quick four finger typist.

MINI-OFFICE 2
The first 'business' program I bought was Mini-Office 2, but by Easter 1988 I was already finding its Word Processor and Database modules rather awkward and restricting.

The printed output to my Amstrad DMP 2160 9-pin printer was very dotty and angular too so I began researching the available alternatives by reference to advertisements and reviews in the CPC magazines I had been buying and everything pointed towards Protext.

MODULES
I found that it was possible to buy Protext, Promerge and Prospell in separate modules on disc or rom, but it was slow to load from several discs and a rather expensive full system if built up that way, and I felt I **WOULD** need the lot. If the rom versions were used, it could cost over £80 if bought in stages, although that did have the advantage of virtually instant loading upon switch-on after running a 'start-up' program to select the printer driver etc.

CP/M PROTEXT
There was one disc version which I discovered, called CP/M Protext to distinguish it from the 'Amsdos' options, which had the lot *(spell-checking, mail-merging, utilities et al)* on one disc for just £39.99. It seemed to be just what I needed, and at a sensible price.

WORTH THE MONEY
Having an eye for a bargain, I found one being sold second-hand for £20 and, by

chance, it was possible to pick it up at the start of our holiday in Cornwall.

I spent most of the week away with my nose in the **HUGE** manual *(it is much bigger than the Amsdos versions because of the greater sophistication of the program)* but without my computer.

Despite that initial handicap, because the manual was so clear and the controls were so logical I found that I was up and running with CP/M Protext within 15 minutes of my return home. The car was unloaded the next morning.

PROTEXT v's MINI-OFFICE 2
I soon found Protext beat Mini-Office 2 hands down, and even an ordinary user like me was soon creating a wide range of standard letters and mail-merging with ease. Protext uses ordinary text files for its databases so it is fast, almost infinitely flexible, and very economic with disc space for even quite sophisticated mail-merging tasks.

256k SILICON DISC
I have long since added a 256k silicon disc drive C: for even higher speed of operation and a D20-format 3.5" drive B: with a dictionary on each B: drive disc, but I managed very happily for several years a 3" 178k drive B:. My CP/M has been patched by manufacturers' utilities to cope with each enhancement.

ALL FROM ONE DISC
But one of the best things is that the whole of CP/M Protext, including Spell Checking, Mail Merging and most of the integral disc handling utilities which are included *(apart from the dictionary)* all load off **ONE** 'working copy' disc. Like other versions, part of the start-up run configures keys, drives and the printer.

NEW PRINTER
When I got fed up with my original printer's toytown output I had bought a Star LC-10 colour printer and I wrote a new printer driver for it, including the ability to use the printer's in-built fonts

and its colour options to the full, following the simple instructions in the manual. Even as a complete technoramous, I found it easy to do and naturally assumed every word processor was 'open' enough to let you do things like that.

UAUG

As a sideline to my main business, I have also been a professional writer of plays and factual articles for about twenty years and in 1989 I was asked to write a regular monthly column on Protext for the **UAUG** club magazine. Being able to count the words in, say, a 20k file in under three seconds and moving from the top to the bottom of such a file in less time than that was very handy.

PD UTILITIES

Also I found my actors, publishers, and commissioning editors were happy with the printed output of Protext too until I added Doscopy, a *(free)* PD utility to transfer the files to PC-format discs for them. Incidentally, I had also added a few other CP/M programs *(Maxam, Newsweep, Desk, DU, NULU)* to my working-copy disc and was soon swapping from one to the other and back again effortlessly.

This is another of the CP/M version's advantages; CP/M itself may be a monster, but it appears virtually un-crashable and many of the utility programs available for it are pretty user-friendly. Or have I just been lucky?

The sheer common sense operation of CP/M Protext kept me using it rather than consider 'upgrading' to a PC. I had heard that the PC version of Protext included many additional features but the CP/M version has everything I have ever found I need, so that is still the one I mainly use.

AMSDOS VERSION

When I later bought the various Amsdos versions and tried them, I was quite surprised how it was necessary to have Promerge Plus and Utopia in place to duplicate some of what I took to be normal keystroke and utility functions.

EXFILES

Along the way I had discovered an *(almost)* unique feature of CP/M Protext called Exfiles; this was years before Mulder and Scully came along.

Exfiles are little mini-programs of text which you write using Protext and then run from within the program. A kind of batch file, in fact. The Exfile feature **CAN** be added to the Amsdos versions by buying Protext Office, but, as I said, having the lot on one disc is **SO** easy to use.

As an example, say you want to print out four consecutive chapters called chap1, chap2, and so on, one after the other. First you create a file *(perhaps called 'princhap')* comprising just four lines of ordinary text; 'p chap1', 'p chap2', 'p chap3', 'p chap4' followed by a blank line. After you've saved it, you stay in command mode and type `x princhap' followed by a press of **RETURN**, and it does the job for you. Brilliant!

This Exfile system is extraordinarily powerful and useful and I am still evolving new uses for it, sometimes in conjunction with the Promerge language.

If I want to save the piece of work I am working on, archive all *(or some)* of my files to a backup disc across up to 16 user areas with on-screen prompts along the way, then return to the point I left in my original piece of work in Protext I can do it by running an Exfile I wrote some time ago. It almost makes safe working a pleasure. Dave the Disk Doctor would be proud of me.

I have written another short Exfile which prints out one or more pages *(to screen, file or printer)* in any order *(forwards or backwards)* starting at any page, ending at any other, with the option to pause between sheets. I don't use it much, but some might find it useful.

UPGRADE

Around 1990, I heard an upgrade was being offered which improved the spell-checking facilities still further, so I paid Protext's then publisher Arnor to register with them and get the latest version.

PROTEXT CLUB

Since the rescue, CP/M Protext now costs just £25 *(all in)* and user support is free. We even now run a 'free to join and belong' Protext Club to enable users to pool their experiences and configuration routines.

Even some people who prefer the rom versions of Protext for loading speed have mentioned that CP/M Protext is preferable for its fuller list of features and compatibility with other CP/M programs. It really **IS** the serious writer's version which is why we still sell so many to PCW users. Allegedly, **THEY** are the serious writers.

LOCOSCRIPT

Almost our only competitor for the PCW is the LocoScript system which, inevitably, starts with a broader user base and allegiance as it is the program PCW purchasers get free with the machine; it is the default program, if you will.

In terms of its font handling LocoScript knocks spots off Protext, no argument there. When we rescued Protext I bought a PCW 9512 to be able to handle PCW user support and it came with LocoScript 2.

Later, when receiving letters from former LocoScript users who had changed over to Protext, or those who used the two for different tasks, I started to hear tales of backward compatibility problems between the file types created by different versions, especially if using different PCWs, apparently. Once I started editing **8BIT** magazine I heard a lot more.

Needless to say, perhaps, Protext and its files are fully compatible between all versions. The files are also relatively easy to transfer between computers and their other programs and formats.

The ASCII files it can produce are ideal for use with Microdesign, the Maxam assembler, and any other program which requires text prepared elsewhere. Even **BASIC** listings can be written and edited with it quite simply.

ME BIAS NEVER

Of course I am the first to admit that I am biased. Not all computer users have my requirements of a Word Processor system. As a heavy user, I would prefer to have all the features I expect to be there already built in, or easily configurable. CP/M Protext delivers.

There is one later development which needs to be mentioned. When Arnor went down, a company offered to handle the PC, Atari and Amiga versions for the the original programmers who are still the copyright holders.

After a year, that company proved unable to do the job, so now Peter Campbell and I have formed a partnership with the copyright holders of those later versions. As a result we can now offer the Protext system continuity with PCs too. Protext will be around well into the next century, I am pleased to say. And who knows what modest developments to the CP/M version may follow later in **THIS** year...? More news when I have it. *I now rest my case your honour. Thank you Mr Watson.*

WACCI Backy
by Angela Cook

It has long been known that WACCI is a drug. For over ten years people have been addicted to WACCI and very few people can give it up without a fight. So we sent off a roving reporter totally immune to the lure of WACCI to investigate: haven't been seen since though...

IN THE BEGINNING
WACCI is a designer drug that hit the streets over ten years ago and has grown beyond all belief. Nobody knows the real name of the drug's creator, although over time he has simply come to be known as Jiffy. It is from Jiffy that the tradition began of WACCI suppliers never being referred to using their real names. Jiffy has been described as elf-like, possibly because of the reported beard.

After some time Jiffy passed the recipe for the drug on, maybe because of police investigations, maybe for the need to create a new drug for a captive audience. An insider told me that is was *"MARMALADE"* but *"JAM"* also rings a distinct bell.

AND THE WORD SPREAD FAR AND WIDE
From these humble beginnings the word about WACCI spread. One of the reasons for its popularity was the ease with which it could be spelt. *"Amphetamines are great"* is pretty hard to write on the loo wall half way through the monthly dose, but *"WACCI is wacky"* was swiftly scrawled on WOLI.

Over time WACCI's recipe has changed. Enhancements have been made by each distributer who took it on from the last. But the basic ingredients have always stayed the same, which is why people keep coming back for more.

The average user takes doses of WACCI about once a month, but would accept it more often if the supplier could cope with demand. Occasionally when the supplier has problems with sources of ingredients the user's dose is delayed. This can cause paranoia, bouts of depression and despair. No one has been directly linked to have committed suicide because of missing their regular dose of WACCI, but it can surely be only a matter of time.

DANGEROUS LIAISONS
The effect that WACCI has on its user's has not yet been fully investigated by scientists - the problem being people admitting their addiction.

Some users have shown such symptoms as hallucinations *(by far the most common is feeling that they are in the second world war)*, giggling fits *(though recently this has been less common)* and a heightened sense of understanding of the CPC and the world as a whole *(though this doesn't apply to Oxbridge boffins)*.

Whilst these effects usually only last a relatively short time the over-riding factor is the way in which WACCI is taken. If the month's dose is absorbed into the brain in one large blast *(by way of syringe is unpopular. Smoking WACCI is far less hassle and lasts longer than a 12 inch Havana)* it is potentially psychologically lethal. The users who preserve morsels of their WACCI to last them through the month find it so much easier to cope with the often irregular supplies.

These people also show far less withdrawal symptoms should they decide to try and quit WACCI at some point.

HELL FROM HERE ON IN
There have been many people that have quit taking WACCI, but none of them ever forget the effect it has on them, or if they do they have obviously been inhaling from the wrong end.

The problem with WACCI is that it's only about ten years old, a relatively young drug in scientific terms. Scientists have yet to make a complete study on the after affects of heavy use.

By far the heaviest users have been the suppliers themselves - they tested their own drug as it was processed and perfected and have been constantly in contact with WACCI.

All these previous suppliers still regularly take WACCI and are hooked far more than most. Scientists have only been able to study two of these suppliers.

WACCI & SCIENTIFIC RESEARCH?
W.A.C.C.I. *(WACCI Addictiveness Centre for Correctional Institutionalisation)* is the first Government funded group to investigate the addictive qualities of the drug WACCI. Mr. B. Offin, the head scientist at the institute, is examining Jiffy, who has been found to suffer from only borderline addiction to WACCI.

Offin has suggested that this is because he immediately went on to create a new drug, as mentioned above and would like to study these effects in time.

It was the second supplier that Offin was able to study next. This supplier was known as OMG, firstly because his larger intestine did not take to eating WACCI.

This is when the idea for rolling and smoking the drug came into effect. OMG was then so called just because he really was an old misery guts.

Effects of WACCI have been longer lasting on OMG because he took the drug far more often and far longer than anybody else Offin has been able to study.

However, WACCI is now being worked out of OMG's system and although he shall never make a full recovery, the outlook is good.

DON'T TRY THIS AT HOME
Ultimately, WACCI is a dangerous drug and can be highly addictive, although it has not been known to be directly connected to any rise, or fall, in crime levels.

Offin and his team are still investigating the long term effects of WACCI, which are thought to be memory loss along with greater and more stirring hallucinations.

Be careful if you do succumb to testing WACCI, mostly due to pier-pressure, as you never quite know where you're habit will lead you to.

Angela

CPC South West Reviewed

by Paul Dwerryhouse

Hello everyone, I thought it would be a good idea to revisit Dave Stitson and his CPC South West magazine and User Group. I know many WACCI members are members of CPCSW and not just in the south west either. But since the majority aren't then let's look at what Dave is doing...

CPC SOUTH WEST
The Amstrad Users Group

LET THE WIZZARD PUT A SPELL
ON YOU TO WIN THE COMPETITION

THANKS TO JOE FOR DONATING
THE PRIZES.

IF YOU DON'T ENTER,
THEN   YOU
CANT WIN .
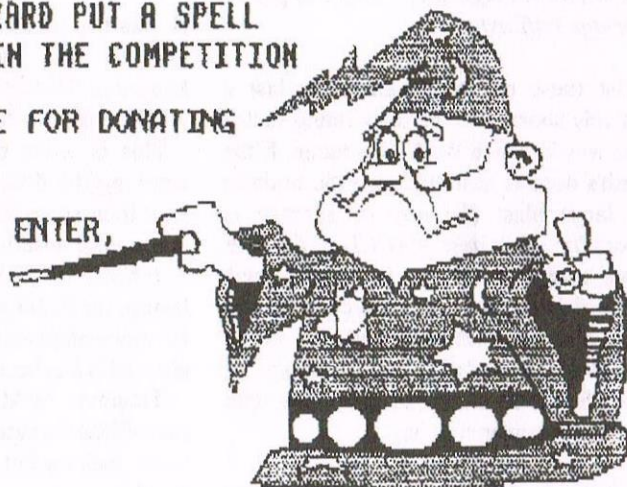
INTRO
Dave has been running CPC South West for some years now but the magazine has no number just, that it is the April 1997 issue. How many have you turned out Dave? So much for the background!
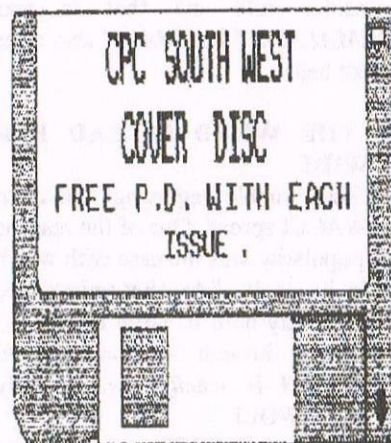
APPEARANCE
The magazine is A5 and contains 24 pages. That is 12 A4 double sided sheets, so its a wee bit smaller than WACCI.

The magazine is produced on Powerpage, by Richard Fairhurst, and, therefore, looks as good as a CPC DTP programme will allow. Dave is obviously now very experienced in Powerpage and is squeezing the most out of it.

Most of the articles are laid out in two column format, which works well with the A5 format.

Diagrams are included as well as art work. Overall I can't fault it.

CONTENT
So what's in the April '97 issue? First off is the members help line which contain six helpers covering a wide variety of subjects. Then comes the editor's bit with the news items for the group. This is swiftly followed by reader's letters for which Dave is also the editor.

Then comes a special news item about WACCI and its falling membership. Out of date now but that happens with news and publishing. The next two pages are tips pages covering tweaking the brightness on your monitor, obtaining manual files for Rembrant and fixing a dicky switch to turn on/off the ROMs in your Rombo Rombox. All good stuff.
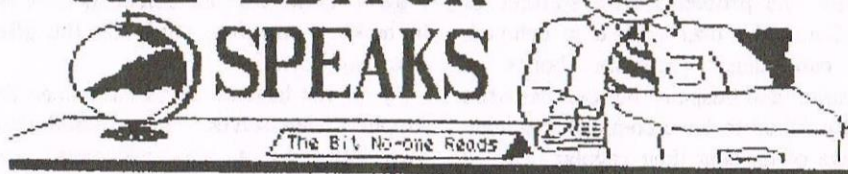
CPC SOUTH WEST
COVER DISC
FREE P.D. WITH EACH
ISSUE .

The next two pages review the latest version of Routeplanner (v1.2) and then comes an article about converting screen files from Multiface format.

THE EDITOR SPEAKS
The Bit No-one Reads

CPCSW also has an adverts section which takes up one page. A Mr Fixit page answers the question of how to fit a DIY re-set switch on your CPC.

Games do appear in CPCSW, Pin Ball and Paper Boy have been reviewed.

The inside back cover lists the contents of the CPCSW PD library (or part of it) and the back page carries adverts. Oh I forgot the front page, yes it does have a page one which tells you what is in this issue.

sheer hard work. He started it from scratch and you can only do that by putting many hours in. It runs up your telephone bill and, like WACCI, the group does not pay for such items.

I have been involved with WACCI for some five and a half years now but I am part of a team. I know the amount of work involved in running a club let alone building one up from its foundations. Dave has had to do so much on his own but I bet he has derived much pleasure from it.

He also runs a PD library for CPCSW as well as for WACCI. Need I say any more.

What Dave needs is your support in terms of membership and material for inclusion in the magazine. In return you get the help and support that CPCSW offers. If you have not yet had a look at the group then now may be the time to do so.

CPC SW Public Domain
A PD LIBRARY RUN JUST 4 YOU

We then get two competition pages containing two competitions would you believe. The prizes aren't bad either - Xexor and Routeplanner.

Three pages are devoted to CPCSW CODERS FORUM, you know all the hard machine code stuff. The next looks at the Internet and it looks like CPCSW will be joining us up on the Net soon.

Inside this issue:

Software Reviews
PD Reviews
Routeplanner Review
Competitions
Tutorials
Tips
Readers Letters

I look forward to seeing their page. Next comes an article on speeding up spell checking on Protext and finally Dave tells you how he lays pages out on Powerpage.

IN CONCLUSION
So that's a quick run down of CPCSW. How much to join, well I can't find the price anywhere with in the magazine. It's a good job I know it's £1.00 and it comes out bi-monthly.

Of all the magazines I've seen over the years, this is second best to WACCI. Okay, its not got the volume of the content as WACCI and it only appears six times a year but remember it serves a smaller group than WACCI. Dave has approx 85 members at the time of publication of this issue. I'm sure he wouldn't mind a few more dipping in, you never know what an increase in membership could do for his user group.

AND FINALLY...
Back in issue 104, Ernie Wishlist felt that CPC South West was a smaller version of WACCI, well I tend to agree but, again, I find that no problem at all. Some would say if it works then don't fix it.

What I would really like to say about CPCSW concerns Dave Stitson. Dave built the group up to what it is now by

Contact Dave at:

4 Connaught Avenue
Mutley
Plymouth PL4 7BX
Tel: 01752 254404

☎ MEMBERS HELPLINES ☎

Clishmaclaver

- That's Scots for gossip in case you didn't know!

Every good magazine has one - a gossip column that is. Well here's a little page filler I thought we might have some fun with. If there is anything you would like to see on this page i.e a bit of silly information or a Birthday, Anniversary etc then please let me know and I will try to oblige. Carol.

TWINKLETOES
Firstly I'll kick off with a bit of info I've got on our very own Frank Neatherway. Frank recently had an operation on his feet. He has left the hospital with his toes encased in these wire contraptions that are apparently quite dangerous to his sheets. Well Frank tells me that he has corks stuck on the end of each wire to prevent this damage, or at least that's what he's telling everybody!

So now that Frank no longer has his hammer toes will he be in the market for a chisel chin?

MOVE OVER LOIS LANE
I have just heard that the lovely Angela Cook has successfully passed the appropriate exams and been accepted on a journalism course. Well done Angela and commiseration's to the rest of us eh!

NEWSFLASH
Hot off the press - well probably lukewarm is more like it. Philip DiRichleau has once again become the Fair Comment editor although he does not wish to remain as a WACCI officer.

Philip feels he would prefer to write for WACCI on a freelance basis only.

His heart apparently now lies with a more prominent role within the pages of BTL. *This is where the plot thickens folks.*

BTL says that WACCI is for the more mature CPCers and that they are writing more for the young whizzkids.

Philip sees himself as one of these whizzkids with emphasis on the young. But. Is Philip keeping his fingers in the WACCI pie because he is worried that he too will be seen as one of us more mature CPCers before too long?

The BTL crew have made it almost their life's ambition to slate WACCI whenever possible. The way I see it they are insanely jealous of WACCI's brilliance, stamina and reputation and hope that one day they too will have a worthwhile magazine and club just like ours when they grow up!!

WHERE'S MY CAR
Do you remember last year when we told you about the theft of my moped. Well folks the thieves are going up-market now, as they stole our lovely car last week.

We had gone out for a drink while the weather was good and ended up at a seaside town called Hunstanton in Norfolk.

There we were a couple of hours later without a car. It was the usual story, no-one saw anything. The worst part of it all was trying to get home with the children and finding there was no train station and the last bus to Kings Lynn was not for another hour. When we finally got to Kings Lynn the last train had gone.

Cold and down-hearted we turned to face a night on a park bench *(altogether now - ahhhhh!)* when a very nice man *(no he wasn't with the AA)* offered to drive us all the way home. I could have kissed him but thought better of it as John was present.

So Clive *(our knight in shining armour)* if you should happen to be a WACCI member and are reading this article **THANK YOU.**

BTL REVISITED
Returning to BTL for a moment. I happened to see BTL 3 just recently *(I was curious to see what all the fuss was about)* and I must say that I was impressed by the article that explained the meaning of internet URLs. I found it very interesting and give it a big thumbs up!

CHEERIO
That's all for now folks. I hope I've given you all an idea of the sort of thing that can be included on this page so send your clishmaclaver to me and I will tell the world!

If you are sending me a special occasion announcement ,then could you send to me by at least one months issue prior to the occasion so I can include it in time.

My address is:

97 Tirrington
Bretton
Peterborough
PE3 9XT
Tel: 01733 702158

PHOTO FINISH
Just to remind those of you out there who were at last years WACCI convention. I understand that a few of you still want copies of the photos taken at the convention. Could you let me know who you are - in writing please as I seem to be taking so many messages for the Editor these days - and which photos you would like then I will get them priced up and let you know how much they are.

Seeya next month. *Carol*

Plotting The Screen

by Stuart Gascoigne

A little while ago, I was busy updating my masterwork, Flags of the World (PD disk 14, highly recommended). I was trying to find a way of plotting to the screen, such that only pixels of one ink were affected. That set me thinking about screen plotting modes in general, and here's what I came up with.

PLOTTING THE WAY

Let me first review what the different screen plotting modes are, and how they work. The plotting mode *(not to confused with the screen mode)* controls the way that the ink you use in a PLOT or DRAW command interacts with the ink that is already on the screen.

PLOTTING MODES

There are four plotting modes on the CPC. The first and commonest is **FORCE.** Here the ink that you plot with is always used regardless on what is already on the screen. So a PLOT 0,0,2 will put an ink 2 pixel in position 0,0 *(the bottom left of the screen unless you have reset the origin).* The effect is to overwrite whatever is already on the screen.

The other three modes use bitwise logical operations; taking the ink that's already there, and ORing, ANDing or XORing it with the ink you specify to give a resultant ink which is the one that finds its way onto the screen.

The following table shows the way pixels change under all the standard plotting modes, for screen mode 1. As an example, to find the effect of plotting with ink 3 in XOR mode, look across the line XOR 3, which shows that a pixel in ink 2 is changed to one of ink 1.

One thing to note is that the table for screen mode 0 is similar being just a straight-forward extension of adding another 12 columns for inks 4 to 15, and corresponding extra rows.

current ink no.	0	1	2	3
(FORCE) 0	0	0	0	0
(FORCE) 1	1	1	1	1
(FORCE) 2	2	2	2	2
(FORCE) 3	3	3	3	3
AND 0	0	0	0	0
AND 1	0	1	0	1
AND 2	0	0	2	2
AND 3	0	1	2	3
OR 0	0	1	2	3
OR 1	1	1	3	3
OR 2	2	3	2	3
OR 3	3	3	3	3
XOR 0	0	1	2	3
XOR 1	1	0	3	2
XOR 2	2	3	0	1
XOR 3	3	2	1	0

OPTIONS

Dispite the fact that the different plotting modes can get confusing and seem to present a vast array of possibilities, the table above sums them up totally. There are no other options for converting a pixel from one ink to another. It is easy to work out the number of ways that changing inks could be done. For each of the four possible inks to start with, there are four possible inks that they could be changed to. This gives us a total of 4 x 4 x 4 x 4 combinations = 256

Of the 16 options that Amstrad give us, only 12 are really different, so can we get at those other 244 options? The answer is yes, which you probably guessed by the way that this article doesn't stop here.

One answer is to plot with one mode than plot again with another, so for instance, if you were to plot XOR 2 and then OR 2 the result you would get

$$current\ ink\ no\quad 0\quad 1\quad 2\quad 3$$
$$OR\ 2\ (XOR\ 2)\quad 3\quad 2\quad 3\quad 2$$

but this won't get us very far.

The one thing that these modes have in common is that they all change a minimum of two inks at once; so no combination of them can ever change just one ink.

BUT WHY?

To prove this, consider that they are all bitwise operations; in screen modes 0 and 1 the pixels are multi-bit units; therefore any bit always belongs to an even number of inks and the operations always change an even number of inks.

Parity considerations, ensure that the same always applies to any combination of them as well.

SO HOW CAN WE DO BETTER?

The **"total-control"** solution would be a routine that accepted 4 parameters *(or 16 in screen mode 0),* which would specify the ink values to change each current screen ink into. With this option there would be no need to specify an ink to draw with.

The option that I will describe is a bit simpler, but is very flexible and can be repeatedly applied to get the general solution I've just outlined.

Its also simpler to understand when you are in the middle of a program. I think of it as a mask that protects all the screen inks but one.

Called by a RSX something like |PLOTOVER,2 will only allow ink 2 to be changed in subsequent operations until its switched off by calling it again .

INK PATTERN

The resultant ink pattern in this case is

current ink no	0	1	2	3
PLOT 0	0	1	0	3
PLOT 1	0	1	1	3
PLOT 2	0	1	2	3
PLOT 3	0	1	3	3

FIRMWARE

The RSX works by intercepting the firmware indirection **SCR_WRITE** at &BDE8. The manual *(SOFT 968)* says that Locomotive built in this indirection to allow users access to the lowest level of point plotting, **"perhaps to add yet another plotting mode"**. So the idea is even government approved, what more can you ask for?

One thing that we have to be aware of is that when the indirection is called by the firmware, and our substitute plotting routine can whizz into action, it may be asked to deal with several pixels at once.

The general strategy is:

1) Take the screen byte given and apply the pixel mask to get the pixel that we need to deal with.
2) Mangle the pixels as we wish.
3) Invert the mask and use it to extract the pixels that we must leave alone.
4) Put the two halves back together.
5) Throw it at the screen and return.

TWO PARTS

The code to add the new plotting mode comes in two parts, first the code to switch it on and off, that handles the parameter saying which ink to overwrite.

Second is the code to actually do the plotting. This part is never called directly by the user, but the firmware will call it whenever we PLOT or DRAW etc. So lets start by looking at the code to set up things.

RSX

I've made my routine a RSX that runs from a fixed address, but you could just as well make it a called subroutine, so instead of |PLOTOVER,2 you would CALL &A500,2 where &A500 was your load address *(I haven't included the code to initialise the RSX here, because I want to concentrate on the indirection itself)*.

Fortunately the parameter passing mechanism remains just the same. It should also be fairly straightforward to make it relocatable if you wish.

```
Plotover:
;param checking is primitive - we ;always switch on/off ;if switching off we just
analyse junk
        org #A500,        ;or where ever else you wish to put it.
        cp 2
        jp  nc, error
        ld  a,e           ;ink param will be in de
        call #BC2C         ;scr ink encode
        ld  (savink+1),a  ;we determine mode now, ;not when indirection called
        call #BC11         ;scr_get_mode
        ld  a,0
        jr  c,prmod       ;carry true = mode 0
        ld  a,prmod1-prmodx-2
prmod0: ld  (prmodx+1),a  ;prmodx+1 is loaded with either 0 (no ;jump) or a jump
                          ; to prmod1 ;now swap jump block entry with ours
        ld  hl, (#BDE8)
        ld  de, (savejp)
        ld  (#BDE8),de
        ld  (savejp),hl
        ld  hl,(#BDE8+2)
        ld  a,(savejp+2)
        ld  (#BDE8+2),a
        ld  a,l
        ld  (savejp+2),a
        ret
savejp: jp  scrwrp         ;error: gives error message, terminated by 0
        ld  hl,message
errlp:  ld  a,(hl)
        or  a             ;set z flag
        ret z
        call #BB5A
        inc hl
        jr  errlp
messag: defm "Bad Parameters"
        defb 0
scrwrp: push de
        ld  a,(hl)        ;screen byte
savink: xor 0             ;encoded allowed ink
        cpl               ;allowed pix=11,others have 1+ zeroes
        ld  d,a
        rlca
        rlca
        rlca
        rlca
        and d             ;allowed pix=11 others=00
prmodx: jr  prmod1         ;if in mode 0, we rotate & and again
        ld  d,a
        rlca
        rlca
        and d
prmod1: and c             ;mask of pixels needed
        ld  d,a
        and b             ;ink to plot
        ld  e,a           ;allowed pix plotted
        ld  a,d
        cpl               ;do disallowed ones
        and (hl)
        or  e             ;put them together
        ld  (hl),a        ;throw at screen
        pop de
        ret
```

SCREEN MODE

To save time when the indirection is called (*remember it will be called once for every screen byte, or maybe every pixel*), we test the screen mode when the RSX is called and then modify the code.

Amongst other things, this means that changing screen mode while the routine is switched on will have some strange effects. **So don't.**

PARAMETERS

First we check the number of parameters which must be zero or one. I've used the fact that the firmware leaves the last parameter passed in DE which saves us some effort extracting it from its official location of *(IX)*.

We then call **SCR_INK_ENCODE** at &BC2C to turn the ink into its internal form and give us a byte full of pixels all set to that ink. Then call **SCR_GET_MODE** at &BC11 to get the screen mode.

With both the screen mode, and the allowed ink, I've chosen to use self-modifying code rather than testing and jumping etc. So the allowed encoded ink is stored embedded in the code where it is used to XOR the accumulator later.

This technique of self-modifying code can make code hard to understand(*!*) and maintain, but its also faster, so thats why I like it.

JUMPBLOCK STORE

Our jumpblock store contains a jump to the indirection routine itself. We take the contents of this and swap them with the contents of the jumpblock at &BDE8. So now, when the firmware calls the indirection, it will jump to our routine rather than the built in one. With everything now ready to go, we then return to the calling program.

HOW DOES IT WORK?

So how does the screen plotting routine itself work? First we need to know the entry and exit conditions. On entry, HL contains the screen address of the pixel(s), C contains a mask for the pixels, and B contains the encoded ink to plot with. On exit, all registers are expected to be preserved with the exception of AF.

First thing therefore is to save any registers that we may corrupt, by pushing them onto the stack. Then we need to select those pixels that match the ink we want to overwrite.

We could go through each screen byte, extracting each pixel, testing it and if its the value we want, doing something with it. But I didn't fancy all that looping and counting and jumping stuff, so I looked for another way.

PIXEL

First we XOR the screen byte with the encoded ink that we are looking for. Any pixels that match this ink will now be set to zero. Only trouble is, any pixels that half match (*i.e. where one bit matches, but not the other*) will be half set to zero.

We need to correlate the effect across all the bits of the pixel. We can do this by making use of the format of a screen pixel. If we rotate the byte by 4 bit positions, we will swap the high and low order bits of each pixel. If we AND this onto our unrotated byte, only those pixels that match on both the low and high order bits will get through. We then AND this to the mask of pixels we were asked to plot, and the resultant mask will do the job nicely.

An example might make this clearer. The following screen byte in mode 1 has pixels of the inks shown

```
bit position     = 7 6 5 4 3 2 1 0
                   1 0 1 0 1 1 0 0
leftmost  pixel = 1         1        = 3
2nd left  pixel =   0         1      = 2
2nd right pixel =     1         0    = 1
rightmost pixel =       0         0  = 0
```

(*Yes, thats right, the lower order bits are the most significant bits in the pixels, so you read then right to left in this case.*)

Now it we wished to select ink 2 only we need a byte full of ink 2 and we XOR it onto the screen byte.

```
4 * ink 2        = 0 0 0 0 1 1 1 1
XORed            = 1 0 1 0 0 0 1 1
CPL              = 0 1 0 1 1 1 0 0
rotate 4 bits    = 1 1 0 0 0 1 0 1
AND onto CPLed   = 0 1 0 0 0 1 0 0
```

As you can see, we now have a mask which ANDed onto our original screen byte, will select just those pixels that are ink 2.

If in mode 0, we have to get all 4 bits in a pixel correlated, we can do this by following the same procedure but rotating another two bits this time.

MASK

Using that screen mask we then follow the standard procedure I described earlier and presto, we update the screen, restore any corrupted registers and return. There is nothing complicated at this stage and I won't dwell on it.

One thing that we don't seem to have to worry about is the ROM state. All the reads and writes access the screen RAM and not the ROM. *Hurrah.*

THE END

Well that's pretty much it really. All you have to do now is find something to use it for. (*I already know what I want to use it for.*)

For example, if I have a screen with one colour as background, with some foreground design, I can select just the background ink to alter, leaving anything in the foreground untouched. <<*If you need any help or any have questions about this article I'm sure Stuart will only be too willing to help you -John*>>

Homegrown, PD Extra, Discs 1-18:

Dave Stitson, 4 Connaught Avenue, Mutley, Plymouth, PL4 7BX ☎ 01752 254404

H1	Aj's Concept Disc	X4	MS800, Bonzo Blitz	8	Comms
H2	Aj's Twilight Zone	X5	Big Batch, Pools Predictor	9	CP/M utilities
H3-5	Utilities 1-3	X6	Flash Pack	10	VDE, I-Spell
H6-9	Games 1-4	1	Forth Programming	11	Adventures
H10-14	Utilities 4-8	2	CP/M utilities	12	Cobol
H15	Pagesetter 64	3	MBasic	13	Demos 1
H16	Family Tree	4	PowerPage, RAMbase,	14	Amiga Graphics 1
H17	Family History		PD Planner, RAMdisc	15	Flags, Animator Demo
X1	Maxidos, Procopy	5	CP/M Games	16	PPC Pascal, ZBasic
X2	Super Meddler, Hack Pack	6	Games	17-8	JRT Pascal
X3	Bonzo Doo Dah	7	CP/M+ utilities		

Discs 19-54:

Stuart Gascoigne, 24 Ketch Rd, Lower Knowle, Bristol, BS3 3DQ ☎ 0117 9831361

19-21	MicroDesign Art 1-3	35	Picture 4	43	Pictures 5
22-4	Pictures 1-3	36	Teach Yourself Pascal	44	Demos 2
25-6	MicroDesign Art 4-5	37	Adventures 2	45	Paradise Demo (Paradox)
27	Mini Print Shop	38	Games 2	46	The Demo (Logon)
28-9	MicroDesign Art 6-7	39	Logos, Women & pics	47	Utilities 1
30	GPaint, RSXlib	40	MicroDesign Art 11	48	Adventures 4
31	Amiga Graphics 2	41	Eve of Shadows & advs	49-53	Pictures 6-10
32-4	MicroDesign Art 8-10	42	22disk/22nice for PC	54	Parrotry demo & clip art

Discs 55-84:

Ian Parker, 24 Oxford Drive, West Meads, Bognor Regis, West Sussex, PO21 5QU

55	Utilities 2	65	Games 3	75	Utilities 5
56	Star Trek pics, music	66	Overscan demo (18+)	76	Megaparty Demo
57	ZDE & CP/M utilities	67	Demos 7	77	Computext, pictures
58	Overscan Pictures	68	Utilities 3	78	Games 4
59	Demos 5, Face Hugger	69	CCC 4 fanzine	79	Games 5
60	Digital Dreams	70	Disc Full 6 fanzine	80	Small C & Interpreter
61-62	Word Games 1-2	71	Disc Full 7 fanzine	81	Printmaster
63	Adventures 5	72-3	Demos 8-9	82	CP/M utilities
64	Demos 6	74	Epic, utilities 4	83-84	Printmaster Graphics

Discs 85- and mixed PD orders:

Doug Webb, 4 Linsay Drive, Chorley, Lancashire, PR7 2QL ☎ 01257 411421

85	MicroDesign fonts	99	Crossword Compiler	117	Bankbase
86	DOScopy, DLan etc.	100	WACCI index	118	Games 7
87	Scrivener	101	Promerge tutor, RAMbase 4	119	Cribbage, Blackjack
88	Rundschlag PD disc	102	Utilities 9	120	Adventures 6
89	Pictures 11	103	Clip art 1	121	Soundhakker v2
90	Voyage 1993 demo	104-8	AMS music discs	122	Soundhakker modules
91	Protracker, Discomagic etc.	109	AMS-MIDI, MusicPack	123	Otto 1-2 fanzine
92	Games 6	110	Word games	124	Mr Men slideshow
93	Utilities 8	111	Pictures 12	125	CPC Guide
94	Demos 12	112	Demo-makers, Basic tutor	126	Street Warriors
95	Print Enhancer	113	CPC Emulator for PC	127	PowerPage support
96	CP/M PrintIt	114	B-ASIC for CPC plus	128	BTL 1 fanzine
97	Des demo	115	Animal Quiz, Francis	129	BTL 2 fanzine
98	CPC Emulator for PC.	116	Smart+, Fluff for CPC Plus	130	Ghoul's Writer

How to order PD:

PD discs cost £2.50 (3") or £1. (3.5") each, or you can borrow a 3" copy for £1..50.
Please make cheques payable to WACCI and send them to the relevant librarian.

Other WACCI services:

Tapes: Arthur Cook, Brympton Cottage, Brunswick Road, Worthing 01903 206739
Books: John Bowley, 97 Tirrington, Bretton, Peterbrough, PE3 9XT 01733 702158
Past WACCI: Frank Neatherway, 3 Glebe Close, Rayleigh 01268 784742
Market Stall: Angie Hardwick, 23 Station Place, Bloxwich, WS3 2PH .. 01922 449730
Discs: Frank Frost, 4 Rectory Close, Wootton, Ryde, IoW, PO33 4QB ... 01983 882197
£1.50 for 3", 35p for 3.5": minimum order two. Alternative Firmware Guide, £3.99.

BOB MOFFATT *01454 329875*
Weekends only please. Masterfile III, Mastercalc, Qualitas and Protext.

FRANK FROST *01983 882197*
4pm-10pm, VDE, CP/M Protext and WACCI Services.

JONTY JONES *01670 852835*
5pm-8pm, SATURDAYS MicroDesign, OCP Art Studio and PowerPage.

MALCOLM BRABBIN *01502 716344*
8pm-11pm, but not Saturdays. Basic Programming.

IAN NEIL *01926 337708*
6pm-10pm, Eprom Blowing, Hardware, Electronics and more.

MARK STEWART *01773 822599*
8pm-10pm, PAW Adventure Creator, Basic and General help.

NIGEL MELLS *01784 211734*
Tape to Disc problems, Basic Programming and a general natter.

MIKE LYONS *01942 259942*
Basic, Stop Press, Dk'tronics Speech Synth.

STUART GASCOIGNE *0117 9831361*
Basic, Machine Code, PD Discs 19 to 36.

JOHN HUDSON *01484 423252*
MOII, CP/M, Wordstar, Newword, dBase, CP/M PD, CPC-PCW-PC.

JOHN BOWLEY *01733 702158*
Book Library, PD problems, Binders, Puzzle Page and WACCI. Answer phone service when out, leave your name and message please.

CLIVE JACKSON ....
Cobol, Basic, Bankman, Sorting, File Handling and Applications programming, 37 Essex Road, Stamford, Lincs, PE9 1LG.

RICHARD AVERY ....
Tasword 464 GPaint, Another World, 35, Marlborough View, Cove, Farnborough, GU14 9YA.

NIC RAYNER .... *Mobile: 0850 992747*
CPC Emulators for the PC.

ARTHUR/ANGELA COOK *01903 206739*
All day till 10pm, Tape Library, Repairs, General CPC.

Do you want to be a Help-Liner? If YES then give me a call and this space could be yours.

PLEASE NOTE:
This help-line is provided on a voluntary basis by club members to assist other members. Please call between 7pm and 9pm, unless stated otherwise.

SUBSCRIPTION FORM (113)

UK _____ issues @ £2.00 each (12 for £22)

EUROPE _____ issues @ £2.50 each (12 for £27.50)

OVERSEAS _____ issues @ £3.00 each (12 for £33.00)

Name _____

Address _____

_____ Postcode _____

From   To:

Please send your cheque or Postal Order to:

WACCI
7 Brunswood Green, Hawarden
Flintshire CH5 3JA

SAE needed for receipt.
Subscription includes membership.

Seeya all next month. Bye for now. John

A LOT OF NONSENSE FOR CPC USERS

NOTHING NEW FOR THE CPC USER? NONSENSE!

<u>**Parados on Cartridge:**</u> The new discreet plug-in solution to using large drive B: formats for users Plus' range. It uses the very latest version of **Parados** with many built-in utilities. £20 (this `exchange` price requires your **Burnin' Rubber** cartridge).

<u>**The WACCO Software Range for the CPC:**</u> **Protext, Promerge, Prospell, Protext Office, Protype** (available again, at last), the **Protext Help** rom, **Utopia** utilities rom, **Montrac,** the **Maxam** assemble, the **C** and **BCPL** languages, **Model Universe** 3-D design program. Most can be supplied on disc or rom. Some special deals on joint purchases. Catalogue available.

<u>**Robot Software:**</u> A huge range of high quality, low-cost, CPC software written by Richard Fairhurst, one of the CPC's most capable programmers. Catalogue available.

<u>**Second-hand Software:**</u> A fairly lengthy list of second-hand CPC software, hardware, magazine, and books. Also virtually every **Amstrad Action** covertape. All at *very* sensible prices.

NO USER SUPPORT FOR EXISTING USERS? NONSENSE!

<u>**Pipeline Tutorials:**</u> The definitive series of lie-flat Tutorials and Hardware Guides to develop your computer use. Easy to read, with *free* files on disc in many cases. £5 each. Catalogue available.

<u>**8BIT Magazine:**</u> The quarterly magazine for CPC owners who want to know what users of similar computers get up to! Includes features on file transfers, E-mail, Home Publishing with a small system. Writing for profit, etc etc... **8BIT** also is the Amstrad-authorised source for *free* upgrades to the PcW16's operating system. £3 for a single (sample) copy, or £20 for a subscription to issues 16-25.

<u>**The Independant Eight Bit Association (IEBA):**</u> The cross-format Association for the promotion of 8-Bit computing. Membership benefits include the latest edition of the **IEBA's Directory Of 8-Bit Services** - an essential compendium of sourse of support for you and your computer, including, hardware, software, spares, PD Libraries, internet sites, magazines, clubs, low-cost repairers etc etc. £5 life membership.

NO `HIGH-TECH' ALONGSIDE `MEDIUM-TECH'? NONSENSE!

<u>**Protext Software:**</u> For the latest PC, Amiga, and Atari versions of **Protext**. Use the program you're used to in its enhanced version. Also, a special version for PCs with limited memory (e.g. Amstrad's 1512 and 1610). Just reissued; **Prodata v1.23,** the powerful high-speed database for the PC with the same `look and feel' as **Protext**. All **Protexts** - £49.99, **Prodata** - £20.

Send all orders, or an **A4 SAE,** to
"Harrowden", 39, High Street, Sutton-in the Isle, ELY, Cambs CB6 2RA.
Tel: 01353 777006. E-mail: brian@spheroid.demon.co.uk.
Cheques to **BA Watson** please.