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WACCI

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WACCI

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Developed and expanded by
Steve Williams
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Paul Dwerryhouse

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So what do you think of this issue then? Not bad, huh! Now don't get into a mad panic over everything: things aren't quite what they seem. But then, what is...?

This month's WACCI hasn't taken that much work, but then I have been given a lot of help with it - and the program that's been doing all the laying out for me does make my life a whole lot easier.

Here is the news

I've received a news from Brian Watson this week. He's just managed to get the rights to the Pipeline Tutorials. These are a series of tutorials which teach various aspects of the CPC, from BASIC programming to machine code. They've been around for a while and I've heard good things about them. More on this matter when I've seen them properly.

More news

As of next month, WACCI will start to look a little different in places. The changes won't be that stark, but there will be a few updates to the general style. The layout won't change (that much) but certain aspects of the magazine will be adjusted. You'll see what I mean next month.

As part of this, I'll be running a new questionnaire next month. The

future direction of WACCI rests on the answers I receive, so I'll look forward to reading the responses.

The unholy alliance

There have been a few disquieting mutterings over the last couple of months about the growing links between WACCI and the, shall we say, somewhat radical disczine, Better Than Life. It is true that I count Richard Fairhurst, Richard Wildey and Rob Scott, all major BTL characters, as friends of mine and it is also true that I do listen to any comments they may make about WACCI. However, the growing friendship between the two different organisations can do nothing but good for the CPC scene. Moreover, we are all well capable of keeping them both as separate entities. We are not merging (regardless of rumour), nor shall we ever: we are just growing a little closer together. Is there anything wrong with that, I ask?

The visitation

Talking of BTL, I had the, urm, pleasure of being visited by Richard,

Richard and Rob over the last weekend. Surprisingly, you know, they actually looked human, could talk sensibly and uttered very few swear words (BTL itself would be ashamed). However, I have now become aware of the source of McDonalds' huge profits. The Bunny seems to live off burgers, donuts and copious amount of a certain brewed beverage made from apples. A bizarre mix if ever I heard of one.

The convention

Yup, it is coming up very rapidly. The word on the street, so to speak, is that this could well be the last of the major CPC gatherings, the final swansong of the Amstrad. So, if you want to be part of it, get a ticket, get one fast and turn up on the day. A lot of work is going into this year's gathering, and there are going to be a few one-off offers and new releases that you're going to find hard to believe.

Professional

That's it for this month. Now to watch PowerPage Professional (reviewed in this issue) take this stream of text and lay it out in a scant few seconds. It's fun to watch.

Final thought

Can dragons fly backwards?

Fair Comment

Richard 'Bunny' Fairhurst and Frank Neatherway,
3 Glebe Close, Rayleigh, Essex SS6 9HL

Mr Central Heating

Thought it was about time I wrote a letter to WACCI to let you know I'm still about. The last time I surfaced was at the Convention, which incidentally, I enjoyed very much. After all the years that I've been subscribing to WACCI it was nice to be able to add faces to the names that I knew only as letter and telephone entities. However, I seem to have a problem that perhaps some technically minded member out there can help me with.

As Philip has probably found out by now my 3.5" disc drive has died of an unnamed malady. Philip had sent me some work to lay out, as is my wont from time to time, and there was my poor old drive laying on its back with its feet in the air, so to speak, defunct and useless. So I had to rapidly return the disc hoping Philip would be kind and put it all on a 3" disc for me. Part of the problem was the side switch which fell apart internally, but unfortunately that was not the main problem as it just refused to read any files at all.

The problem I need a bit of help with is that I have acquired a brand new 3.5" drive, which to all intents and purposes is identical mechanically, except that it is ex-PC and refuses to work on my poor old 464. I am advised, as they say, that there is a method of coupling one of these to an Amstrad but quite frankly I don't know how to go about it, or even where to look for the information.

So, is it possible, and if so, what do I do? All suggestions, rude or otherwise would be most gratefully received, as being as how I'm a poor old pensioner (sob), buying a new one is out of the question at the moment, the new kitchen, roof, garden, workshop, central

heating et al. (not necessarily in that order!) taking priority.

I live in hope.

Ron Izett
Aberystwyth

Using a PC drive on your CPC should be dead easy, particularly because you can recycle the power supply, casing and cables from your old 3.5" drive. There's only one modification you need to make. Find either a small jumper – no, not the woolly sort – or a solder pad labelled DC (Disc Check). Change this so that it's set to RY (Ready), either by moving the jumper or by breaking and making the relevant solder connections, and you can go ahead and connect your new drive into the old casing. (Another Rob Scott hardware special.)

Hope this helps, and that we'll see you at this year's Convention. I'm not sure that asking the BTL editor for rude suggestions is a very wise idea, mind you...

Richard

Friday 13th part 2

Sorry to hear about Ray Powell's tragedies in January's WACCI. Was he born on Friday 13th?

No doubt letters from other WACCI readers will be pouring in offering sympathy and advice, but if not, may I offer mine. I can only help with the last thing that went wrong for him as I had the same trouble. Changing the drive belt was the right thing to do when you get the "Disc Missing" message. The slipping belt does not spin the disc at the correct speed and so the disc cannot be read, so you will get the error message.

Now unfortunately, when you changed the belt you may have lost a little part of the drive. It looks something

like the tip of a ball-point pen but smaller. When you write-protect a disc it leaves a hole in the disc when the tab is moved. Putting the disc in the drive allows this (I don't know what to call it) 'tip' to protrude through the hole. If the disc was not write-protected it would not protrude through the hole: instead, it would get pushed down and operate a switch which would then allow you to write to the disc. So look at the position in the disc drive where the tab is and you will see the switch, it's only two metal strips. You may find the 'tip' inside the drive. This may help other readers who need to change belt drives. I hope I have made things clear but it is difficult to explain.

Now, can anyone help here? I have got the North and South game from, I think, AA's last magazine. Doesn't work of course, so I was pleased when I saw the one-liner on the WACCI page from Richard. Well, I can still only get the first screen and then crash when loading the next file. Has anyone got it to work on 6128?

I am enclosing a 3.5" disc containing items for use in the disc library. Can you please pass it on to the right person? The items are not my work and are offered by Ron Rose who is a close friend.

Derek Osborn
London

I really don't understand all this North & South business, you know. It seems like the patch in WACCI 109 really doesn't work – sorry chaps. But I'm at a loss to explain why, since I can't discern any difference between that and the working version in BTL 3. It'll have to wait until the Convention, I'm afraid,

where I'll try and nab someone's 6128 to find out what's going on...

Thanks for the disc, which I understand Frank has passed on to John. And thank you for the drive belt suggestions. Steak and kidney pie, anyone?
Richard

Posture posturing

Please thank everyone concerned with WACCI. I look forward to each issue with anticipation that I'm going to be entertained, amused, annoyed and, above all, informed.

Nora Lees' letter in WACCI 109 is about a subject that concerns me too. I have a back problem so have studied the way I use my CPC. A desk that's the right height, a chair that supports the back properly, the monitor at the correct height and distance for the individual user, all help. I also get up at regular intervals, walk about, stretch, talk to my plants - myself etc. I believe the best way is not to sit too long in one position. The elastic band routine is something I've not tried but the time may come...

May I put a word in about Nirvana? An excellent program and one I found easy to use from the start. Thanks for the Comsoft article, as it's made me even more determined to save hard for MicroDesign Plus. I've got Stop Press, Advanced Art Studio and PowerPage, all of which I enjoy using but MicroDesign seems to offer that little something extra. The Model Universe package seems very interesting too.

I enjoyed the articles on Basic, appreciate the Tappers and would like to see more if possible. Coming late to computers, I learned a lot by typing 10-Liners and any other programs I could find at the start. It's terrific when one actually works no matter how trivial the final result. One of the first produced a crazy scrambled set of lines and I felt a real sense of accomplishment.

Protext is my WP of choice as I do lots of writing, but I have one problem which I hope can be solved. It's with the printer control codes - I can't get them to work. I've followed the instructions in the manual. I use an Amstrad DMP 3160 printer most of the time, and also a Citizen 120D now and then. (I've got

two 6128's). It's obviously something I'm not doing correctly. Hope someone can help.

Isobel Swade
Warrington

Hi Isobel. I'm afraid I can't help straight off with your Protext problem: many people use it with a DMP3160, so there's certainly no incompatibility between the two. Could you be a bit more specific? I trust you're inputting the codes properly with CTRL-X, and that they're showing up on-screen: but have you checked the DIP switch settings (those awkward little things at the back of the printer) against their explanations in the manual? It's usually a good place to start.

I find Nirvana hopelessly underpowered compared to Xexor, which is a super program - capable of even the most esoteric disc operations (producing the BTL disc loader, for example). But each to their own, and Nirvana's keypress interface is

arguably easier to learn than Xexor's menu/command-line operation. Incidentally, I heard a while back that a new version of Nirvana (v6?) had been released by its author Down Under - as PD. Sadly, I never received a copy: perhaps one of our Antipodean readers can help...

Similarly, MicroDesign Plus never quite hit it off for me: it's a lovely MODE 2 art package, but for anything other than the most rudimentary text layouts, Stop Press (and friends) are infinitely superior. Again, each to their own. And isn't swapping opinions like this the whole point of Fair Comment? Richard

Service area

First may I express through these pages the appreciation no doubt felt by many for all the hard work that goes into producing such a fine publication. Amusing at times and every issue an education. A lifeline to all CPC users.

I am appealing to club members, and whoever else may be reading, for help

ROMbobulations

I was tickled pink by Ray Powell's "Am I jinxed?" in the last WACCI. You see, I now have a Rombo ROMbox which after trial and tribulation now decides it will only work with its legs in the air.

Let me explain:

- 1 Purchased ROMbox from Doug Webb.
- 2 Purchased ParaDOS from OJ Software (very nice man).
- 3 Put ROM in slot 7, plug in - nothing happens.
- 4 Try ROM in slots 6,5,4,3,2, etc.
- 5 Exasperated, break leg off ROM.
- 6 Purchase another ROM.
- 7 Discover link pins, but no connector.
- 8 Find identical pin on an old peripheral card from Apple II, complete with connector (amazing).
- 9 Plug in - nothing happens.
- 10 Almost give up. Ring Nigel Mells, who tells me his box when right way up has the ribbon cable curled underneath. Try that, which means that rombox now sits on top of keyboard (short cable). Uncurl it. Box now in right place. Try again, nothing happens. Box now has its legs in the air. (Doesn't seem right.)
- 11 Now for the best bit. I now discover that to use slot 6, for example, you don't switch on no 6. You switch on slot no 5. Who the hell thought that up?
- 12 It works upside down (I now have Protext as well).

Ray Powell has my condolences. I know how he feels.

Norman Woodbridge
Nantwich

with a certain disc of test software. I had the fortune recently to come into the possession of a copy of the FD1 and DDI1 service manual. I have sent this to John to see if he wishes to include it in the club library. The manual gives very good info on circuit layouts and outputs from the drive itself. You need the Amstrad test disc in order to read these into an oscilloscope. I am hoping that a reader can assist with this disc as Amstrad seem reluctant with any info on it. If somebody knows where I can get my hands on this please let me know. It would be extremely useful.

The other advice I am seeking is on the Dart scanner for the DMP range of printers. I would like to hear from anyone who has used one or has one for sale. It occurred to me that such a device could be quite useful in my production of newsletters for a local youth organisation – using the CPC, of course. If any one can help then please let me

know. I would appreciate an honest evaluation of its use and if it is worth trying to obtain one.

I have recently been in communication with a CPC user from Down Under. The CPC scene seems pretty desperate with things being rare and overpriced in Australia. If any one would care to write with any offers of help to a lonely CPC user thousands of miles away, please 'phone me for his address.

Thanks again to all for a most supportive club. You do meet the nicest of people through WACCI. I can be contacted on 01296 433404 for a chat about anything mentioned above: any help would be made most welcome.

Anthony Taylor
Aylesbury

CPC Spares in Preston are the most likely people to stock the test disc: you can give them a ring on 01772

654477, or consult a copy of their catalogue at your local electronics repair shop. Alternatively, if anyone at Amstrad will know, it'll be Cliff Lawson (resident computer whiz since the CPC464): you can e-mail him as cliffi@amstrad.com, or write c/o Amstrad in Brentwood.

While on the subject of test discs, Nigel 'Freddy Drive' Calcutt has reportedly been working on a general CPC6128 tester. It's not available at present, but watch out in the next few months for details of this and several other new Freddy products.

I've never used a Dart Scanner, but repute has it that they were fine for line drawings and two-tone illustrations: so good that owners of Stars, Citizens and the like have been known to buy the things and Blu-Tak them onto their print heads. For grey-scale scanning, on the other hand, you're better off borrowing someone's PC scanning setup, and converting the resulting .BMP file into a 16k screen with DOS-Copy and a .BMP reader. But if you see a Dart for £10– £20, go for it. Anyone got one they'd like to sell? Richard

Sock-free zones

I would just like to add my support for the "movement" which seems to be advocating that there should only be 10 issues of WACCI per year. Our editor and all the erstwhile people who work their socks off every month – for no payment – ought to have a break around the Christmas period and also around August so they can at least look forward to a holiday and, where relevant, spend some time with their children over the long school summer holiday break without constantly feeling worried, or worse still, guilty that their WACCI work is falling behind schedule. Christmas and summer holiday times should be deadline-free zones.

May I also ask, is Nora Lees making a takeover bid for the Fair Comment columns? First she threatens to end her membership if there are no more type-ins, then she complains in the March issue that her "rubber band" letter seems to have been disregarded – when it transpires it had appeared in the February issue. And as for her com-

Let's be nice too

In Ernie Ruddick's list of benefits of WACCI membership featured on page 2 of last issue, 'the advice, assistance and friendship from other WACCI members' is singled out as the most valuable of all. And quite true it is, too – as anyone who's spent a happy half-hour nattering to a Helpliner, had their question answered by a member in *Fair Comment*, or enjoyed a day out at the WACCI Convention will testify.

On the other hand, two separate incidents over the last month have made me wonder whether there shouldn't be a disclaimer at the bottom of the list. One was the climax of a personal dispute between members which has been rumbling on and on for a year or so: the other was a piece of 'anonymous' hate mail received the other day, although the Southend-on-Sea postmark and Amstrad PCW printout made the author fairly easy to identify... (*Since I keep old Fair Comment letters and can analyse handwriting, we know whodunnit – Philip*)

Inevitably, any community as closely knit as the CPC in general, or

WACCI in particular, is going to lead to a certain amount of personal friction: no two people go about everything the same way, and some of us are less tractable than others. If you disagree with someone, it's a fair bet you'll say (at some stage) why you think your opinion is more accurate than theirs. But that's all. Very few such criticisms are meant *personally* – at least, not initially. It's only when they're left to fester behind closed doors that imaginations run riot and things start getting nasty, culminating in poisonous letters being sent to acquaintances of the 'accused', unfounded 'phone rumours pitting friend against friend, and vituperative unsigned notes.

So if you think that a program's no good, that someone's stolen your idea, even (heaven forbid) that I've been too combative in *Fair Comment*, then write in: it's what *FC*'s here for. The traditional WACCI right of reply is as alive as ever, and it has to be better than the alternative of back-stabbing and bitter sniping. Doesn't it? *Richard*

ments on the Convention, well, words almost fail me. Living in Birmingham she was only on the doorstep for Walsall but still didn't attend, yet Dave Stitson came up from Plymouth and Angela Cook & Co were there from Worthing. The photographs of the WACCI Convention in the November 1996 issue were clearly misleading if she gained the impression that very few people attended. The people watching the Protext Demo (one of whom was me) were crammed into one of the small hospitality suites at the Bescot Stadium (a football ground, Nora, if you didn't know) and the small room was so packed no more people could get in if they tried - and they did! Try, that is.

Our WACCI staff work very hard for us - voluntarily - so please, no more criticism from you and your kind Nora. First, get your facts right, and second, buy a ticket for the WACCI Convention on Sunday, 6th July 1997 at the Bescot Stadium, Walsall, and show your support for what they do.

*Margaret Schofield
Stockport*

Slowburn

It's about time I wrote to you wonderful people at WACCI HQ again. It's been a long time. WACCI is still an excellent read and I really look forward to it dropping through the letter box each month. Which brings me onto the point of this letter.

Is it time for WACCI to become bi-monthly? (Stands back out of the line of fire!). I seem to be reading between the lines just how much effort is put into producing the magazine on a monthly basis, and sometimes a hint of frustration seems to appear, what with ever-looming deadlines and the chasing up of articles etc. You guys and gals have your own lives to lead as well haven't you? None of the members want to see you burn out. Talking of burn out, have I fuelled a discussion here? Let's see what other members think.

Finally, a techy question for Richard, can I run an Amstrad MP3 TV Tuner with the original 464 colour monitor (CTM640) or do I have to have a 6128

monitor (CTM644)?

*Colin Hazell
Thame*

You have to own a CTM644, I'm afraid. The MP3 needs the 12V line for power, which rules out the CTM640, and full RGB capability, which rules out the GT64/65. If you do own a 644, the picture quality is remarkably good for such a device.

Believe it or not, I think the suggestion that we go bi-monthly is just as valuable as such an action itself would be. I really can't speak for anyone else on this matter, but I think that the WACCI workload is just about manageable right now for all concerned. A few tweaks maybe (such as using a PC or Mac, or the suggestion that we issue ten WACCI's per year), but I don't think we need to go bi-monthly yet.

No, the work we can cope with - whether it's editing, copying PD, or outside WACCI, designing and programming new software. But there's been a certain degree of CPC-related aggro recently (see this month's 'Let's be nice too' boxout and Brian's article a few issues ago) and it's this backstabbing, plus the associated software piracy, which is truly wearing up on WACCI or the CPC in general.

So it's wonderfully reassuring to see that WACCI's work isn't always taken for granted, that some people care enough to make suggestions like this: it gives us the reason we need to carry on. Sure, all criticism is 'fair comment', but I think it's got a bit out of hand recently: witness Philip's final thoughts in the last ITGA interview, and Brian's frustrations in a similar but related field. (And BTL welcomes letters from those who think it's all our fault, although obviously, I'd disagree.)

So thanks, both of you. Richard

Vodkafone

In response to the letter from Peter Curgenvin (WACCI 110), the easiest way to make a 5V and 12V power supply would be to use a 12 or 15 volt transformer, and (after rectification and smoothing) feed the output of this into

two regulators - a 5V and a 12V one. This way, only a single output winding is needed on the transformer: such a transformer is then easily obtainable.

Alternatively, a Spectrum +3 power supply has 5V and 12V outputs, and would probably be cheaper than buying new components to make your own. I'm not sure what the current rating of it is, though: this would have to be checked out first. I would definitely *not* recommend using a transformer taken from a CPC monitor, as this is not designed to be connected directly to the mains.

One last thing, Richard: have you managed to finish off all that brandy butter yet? Ever tried vodka margarine?

*Martin Bela
Akeston*

I can't say I have, but since I'm off on a narrow boat (traditionally a well-lubricated affair) for a fortnight from this Saturday with a dozen culinarily adventurous types, it may well happen. So thank you for the suggestion, as well as for the decidedly more sensible power supply hints. You know, if Paul can get away with a gardening article, I'm sure we can manage one about vodka margarine.

To think that I was under the illusion that AA stood for Amstrad Action. Anyway, please excuse me, I'm off to finish my final Christmas pudding for the year... Richard

And finally...

Is anyone out there hoarding a RAM-ROM that they never use? I'm working on a ROM-based program for release at the Convention, but without a RAM-ROM (aka sideways RAM), it will never get past the initial test stage. Which would be a shame, because it's shaping up to be something quite unique.

£10 would seem sensible - and I'll throw in a free copy of the ROM when it's finished - but I'm open to persuasion. Alternatively, if no-one's willing to part with theirs, could I borrow one for a couple of months? Pretty please? (I can be contacted at Tea Cottage, Bottom Lane, Bisbrooke, Rutland LE15 9EJ. And it *is* Rutland again now.)

Thank you very much! *Richard*

PCs in our time?

(ackn. OMG)

Think about the future

I have been thinking quite hard recently about the future of our club and have come up with the following ideas which I would like members to respond to.

How many of our members have left the club because they have bought a PC, and how many of our current members are considering buying a PC, or already have one? I know I am.

Our club has always been run for the benefit of our members, and when they have requested information about a particular package, we have done our best to help. It seems to me that the same should apply to members considering a PC purchase. I would like to see information available on the pitfalls and pleasures of PCs, what software is good, and what not so good. I don't want this advice from a commercial magazine: the beauty of WACCI is that it's not biased. (*You reckon?* – Richard) Those members that have a PC could, I feel, offer a valuable service to us.

I'm not saying we should not go on with the CPCs as a major part of our magazine, but what I'm saying is that I feel it's time we looked to the future. Our club has given me and many others considerable help and pleasure over the years: I want this to continue. I can't find anything like WACCI in the PC world, so please let's go for it.

*Angie Hardwick
Bloxwich*

No surrender

I have been hearing disquieting rumours recently that WACCI intends to start publishing articles on the PCW and the PC. Whilst I can accept, and may even find interesting, articles on the PCW, I think that involving the PC would be a death-blow for the magazine as it stands.

There really is nothing similar between the CPC and the PC; I use both computers regularly and have never found any compatibility

between them. The CPC is an 8-bit computer: the PC is anything from 16-bit to 32-bit. Also, how can anyone talk of a certain amount of compatibility between the CPC and the PC (which some do), when there is, quite often, only limited compatibility between two different PC machines? We can transfer text files between the two machines, if we have the programs to do it. We can also transfer small bitmap files. That's about as far as it goes. The whole situation is, to be honest, bordering on the ridiculous.

Also, I would like to point out that there are a huge number of commercial magazines for the PC, as well as quite literally hundreds of fanzines – some of them well up to, and dare I say it, beyond the level of WACCI. These cover the PC in a multitude of ways and, as such, WACCI would only be covering and competing in a market that is already saturated.

If we were to cover the PC, then those articles that do so will be of little or no interest to the CPC members and could well alienate them against WACCI – regardless of how fond we all are of the magazine. How long would it be before we fell down the slippery slope that some other CPC magazines have gone down, and end up covering more PC than CPC material?

I suspect that those WACCI members with PC machines will actively fight for PC coverage, while those with PCW machines will fight for PCW coverage. Tell you what, how about covering the Mac, the Amiga, or the ST? We can do just as much with those and the CPC as we can with the PC and the CPC. Admittedly the PCW does belong to the same family as the CPC, and there really aren't that many differences (especially with the new PCW16) – but it's one of those matters that needs careful thought.

Finally, a comment for Philip. I know, from the many conversations we have, that you frequently ask your edi-

torial team for their opinions of such matters and do go with the majority. This could well be one of those occasions when the majority could be wrong and you need to make an editorial decision – as OMG did all those years ago about the PCW. This is a dangerous policy, I know, but I have the horrifying suspicion that this whole situation could make or break the future of the club. The magazine is in your hands and, so far, I have to admit you've done very well.

*Jack Hughes
Cornwall*

Thank you Angie, thank you Jack. I have a feeling this one is going to provoke quite a reaction, so I'll reserve comment for the time being. But here are two thoughts to get you going.

There are undoubtedly members who own or are saving for a PC. But there are also those who can't stand the things (Peter Curgenvin: "I've no desire to buy, use or borrow a PC"), many who don't see the need to upgrade (Brian Watson: "I am still unpersuaded that I need to 'upgrade'"... John R Hudson: "I don't have to downgrade to a PC for my day-to-day work"), some who can't afford a PC system, and some who have found something better suited to their needs (Matthew Phillips owns an Acorn Archimedes, while I won't be parted from my Apple Mac). If you're one of these people, would you be offended by PC or by PCW content – bearing in mind that most PCW software can either be run on a CPC or purchased in a compatible version?

Secondly: if you'd like to see PC articles, would you be prepared to write some – every month? Or (dare I say it) edit Fair Comment or even the whole magazine, should the incumbents decide that PCs are not for them? What about a separate 'PC WACCI' magazine?

Whatever your views, please write into Fair Comment.

Richard

Sweet 6k

Rob Scott

the STS copymod

Speedlock Associates said it'd take a £10,000 duplicating machine to copy their 6k protection. STS's Rob Scott and Richard Wilson discovered how to do it for under a fiver...

Since the dawn of time – well, the CPC, anyway – people have wanted to copy software. Some for legitimate backup purposes, and some because they were out and out pirates. Necessity being the mother of invention, protection systems soon followed, most of which were cracked sooner or later by hackers.

One system, devised around 1988, was the so-called 8k Speedlock. This ingenious protection system was devised by David Looker and his then partner in crime Dave Aubrey-Jones. It relied on a simple but fiendish fact which was that although a CPC could happily read sector sizes of &1800 bytes (6k to you and me), it couldn't actually write them because the end of the track actually overwrites the beginning (due to the motor and ready circuitry on the CPC motherboard). Cunning, eh?

A small elite group of hackers had been working on the 8k problem for some years, such as Jason Brooks, Colin Harris, Kevin McCaughy and HE Haxwell. Despite their combined talents, no one could devise a program to copy the disk.

We even resorted to wiring up a 3" drive to an Amiga to copy them - hardly a satisfactory arrangement.

The breakthrough

The first breakthrough came in 1992 when I wrote to Speedlock Associates and assumed the role of a large software publisher wishing to protect his games. They kindly sent me a disk with 8k protection on it and a brief letter explaining what it was and why it worked.

Apparently they weren't too happy to receive, by return of post, their demo disc copied onto 3", 3.5" and 5.25" discs... but these were still produced using the unsatisfactory Amiga method.

The subject was then laid to rest for a number of years until a chance meeting with Richard Wilson, author of ParaDOS and programmer extraordinaire.

While discussing various programming projects I brought up the subject of the 8k discs, my conversations with Speedlock, and what I had already discovered about the 8k system. After a few collective days' thought and experiment, the first 8k copymod was born. Truly archaic, it used a single pole double throw switch which you activated when you wanted to copy an 8k disc. Since the copymod simply relies on a very basic switching principle, it was only a matter of time before we discovered a chip suitable for providing fully automatic operation for the copymod.

How does it work?

The copymod works by altering the circuitry that switches the motor on and off. In effect, it actually stops the disk drive from overwriting the track header by slamming on the brakes (so to speak) as soon as the drive become ready. What could be simpler?

The following article appeared in CPC Challenge disczine – the challenge being staying awake until you'd finished reading it. As it appears to be so accurate and as the author has blatantly copied our mod, we are copying his article!

At this point we'd like to extend our thanks to Kevin Thacker for publishing details on how to do a copymod when we did one free of charge for him and specifically asked him not to tell anyone how to do it! Thanks mate. *(I think I may recall that name from somewhere – Philip)*

Background information

This describes how to build a modification to make your FDC able to copy disk protections that use the 8k sectors.

These sectors are identified by their sector IDs. There is usually only one

The disclaimer

WACCI would like to point out that, although the modification has been extensively tested, we cannot be held responsible for damage caused by performing this piece of surgery.

If you're queasy about opening up your machine, Merline-Serve (in association with STS Software) now have exclusive rights to fit copymods into both CPC6128 and 6128 Plus machines. The cost is £25 including

postage, and requires your machine to be sent to Merline-Serve (obviously).

STS Software would like to make it clear that the copyright for these modifications is held by Richard Wilson and Rob Scott of STS, and is licensed to WACCI for this issue. This means that any individual or fanzine publishing details concerning the copymod design will be infringing said copyright. You have been warned!

► sector on the disc, which has a N value of 6.

Although this means 8k of data (hence the name), in reality no more than &1800 (6k) bytes can be used safely. However, this still gives an increased storage capacity compared to other formats. *(Although, obviously, you can't use it in the same way as the standard AMSDOS formats – Rob)*

It is perfectly simple to read the data and format the track, but when data is written, it overwrites the GAP and sector ID information and so corrupts the data on the track. It has been found that the disc drive motor remains rotating even after the motor has been switched off with an OUT command, and so extra data is written in this time.

This hardware modification forces the disc motor to be stopped at once: although this will cause the FDC to report errors, all the data can be written.

To work correctly, this hardware modification needs a software copier which already knows of the modification. One such program is Xexor by STS. *(Odd that! – Rob)* If you have a good knowledge of programming the FDC, then you can write a copier yourself.

In order for the FDC to format the track, you specify a sector size of &05, and 1 sector per track. In the execution phase of the format command you transfer the following data:

- track number
- side number
- sector id
- &06

You will find that this has formatted the track. *(Interestingly enough, if you try to use a sector size of &06, the track becomes "unformatted" due to the header and GAP information becoming overwritten - which is*

where some of the old disc copiers fell down with 8k protection. – Rob)

In the execution phase of the write data command, which outputs the sector data, you force out &1802 bytes (the extra 2 bytes are needed otherwise the FDC will not write the last word), and then perform the OUT command to stop the motor. Now, the FDC will think an error has occurred, and it will halt the execution phase immediately (so it will not write out the final gap information), and then start the result phase.

The mod: CPC6128

This modification has been done on a CPC6128 only. The modification may not work on a CPC Plus or a DDI-1 interface. *(Now if the author had discovered the mod through his own initiative, as we did, then he would be able to modify a Plus to utilise the Mod. In fact the Plus modification article appears immediately after this one. – Rob)*

What you need

- A CPC6128 *(obviously)*
- 74LS32 chip (order from any electronics catalogue, e.g. Maplin)
- 3 pieces of wire

What you do

Open up your CPC6128, undoing all the screws on the underside. Remove the keyboard lead into the main board.

Take the 74LS32 and bend all the pins so that the chip lies flat on a table.

Solder the three wires to pins labelled "Ready", "Motor On", and "Pin15 of IC203" shown on the diagram below.

Find another LS chip on the CPC motherboard, and align the chip so that the notch at the end is the same end as

the notch on the LS chip.

Now, solder the GND pin onto the GND pin of the chip on the PCB, and the +5V pin onto the +5V pin on the chip on the motherboard.

Locate IC203 (should be near the top-right of the motherboard), and solder the wire from the chip to pin 15 of IC203.

Locate the Ready pin of the 2nd drive connector and solder a wire from the pad to the pin labelled "Ready" on the diagram below.

Locate the Motor pin of the 2nd drive connector and solder a wire from the pad to the pin labelled "Motor on" on the diagram below.

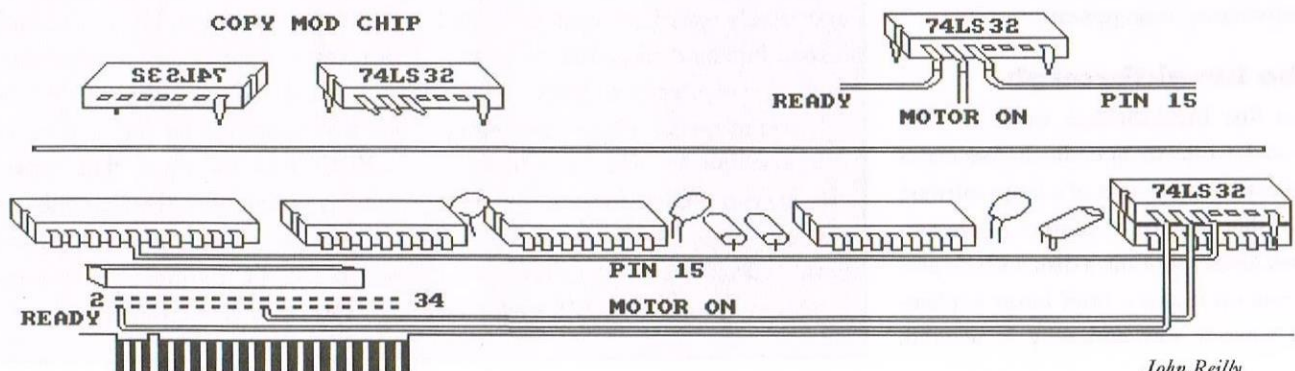
Locate pin 15 of the IC203, and cut the solder track running from this pin to the 2nd drive connector

The procedure is then complete. Put your CPC together, and connect the keyboard. Turn it on, and insert a disk. If the disk is catalogued correctly, then the procedure has been successful, but if it reports "Drive A: disc missing" then open it up and check the wiring.

The mod: 6128 Plus

Rob here again. It should be stressed that if you are in any way wary of performing this sort of procedure, then don't. If you screw up your CPC, don't come blubbing to us! Also I'm crap at doing diagrams so we have included just the one to help you locate the relevant components on the motherboard. The procedure is very simple so the text should more than adequately describe how it's done.

Special software is required to utilise this mod. At the time of writing, Xexor and a custom STS utility are the only programs that make use of this mod.



You will need

- 1 74LS32 chip ('copymod chip')
- 3 short lengths of wire
- 1 soldering iron and solder
- 1 Philips/Pozi screwdriver

How to do it

Remove all the screws from the Plus casing, undo the clips securing the case and dismantle unit. Disconnect the power and LED connectors from the board and make sure the unit is facing towards you as normal.

Find pin 9 on IC7 (7414) and cut the track going to it on the computer PCB. This is the drive READY output line. The easiest way to do this is to use a fine pair of cutters and cut the leg where it goes onto the PCB. The idea is to have enough of the leg remaining after cutting to solder a wire from our copymod chip to.

Take the copymod chip and snap off all the pins except for 1,2,3,7 and 14.

"Piggyback" the copymod chip onto IC7, noting the correct polarity - i.e. the notch at the top of the copymod chip will match the notch at the top of IC7 - and solder pins 7 and 14 onto the corresponding pins on IC7. This provides the 5v power required by the mod chip.

Connect the wire from pin 9 of IC7 (previously disconnected from the main PCB) to pin 3 of copymod.

With the keyboard facing you, locate the 2nd disk drive connector at the back of the machine.

Solder a wire from pin 1 of copymod chip to the 17th (motor on) contact from the left of the 2nd disk drive connector port.

Solder a wire from pin 2 of copymod chip to the 8th (ready) contact from the left of the 2nd disk drive connector port.

Reassemble machine, and test that the drive works, and that when a disk is ejected that you get "disc missing" errors. This indicates that the copymod is working ok. And that's all there is to it, really! ●

the great piracy debate

round two

Peter Rogerson

In issue 109, Brian Watson asked if it was piracy that was preventing commercial CPC software from becoming viable once again. One of Fair Comment's regular contributors doesn't think so...

Having received and digested issue 109 I feel I must make a few comments, largely in response to Mr Spheroid Demon's opinions of the CPC community and his interests in the Protex suite of programs as well as anything new that may (or, as is more likely the case, may not) be released on the fragile remnants of the commercial market. He feels (and I hope I'm summarising his views accurately) that we are fiscally challenged pirates who are unlikely to ever line his coffers if he produces anything remotely resembling new products.

I believe that there is a natural law amongst humankind, call it the Law of Mediocrity, the Law of Superiority, even the Law of Priorities, give it any name you choose, that establishes huge groupings of apparently different peoples according to almost random mappings of the smallest influences on their lives, and I'm in one conglomerate that has as its first principal the notion that the individual members (that are its only constituents) have discovered something that does what they want it to do, that can't really be bettered with alternatives elsewhere on the planet, that works well enough for them want to keep it for as many unguessed tomorrows as they both might survive - and don't, therefore, need to use their resources (cash? time?) on renewing it.

For me it is that happy marriage between my CPC and the software I've

had for years. I sit here tapping away (using Protex to be sure, but it might equally have been Brunword if I'd bought it first and got to love it) and maybe, one day, I'll make as much hard cash from my tapping as Mr Watson appears to make from his. I bought my first (disc) version of Protex quite legitimately from MJC Supplies when they existed (and I still mourn their peerless service) and my ROM version from Merline-Serve, again a legitimate transaction even though it wasn't a virgin piece of software. Not a pirate in sight! And the second-hand market is so vital these days, keeping alive that which may have withered and died without it, even though it may dent sales of new Protex ROMs when so many appear in the columns of Market Stall each month.

Ah, Protex! There's very little that it doesn't do, and it's so simple a child can use it (mine have over the years, for school homework, sixth-form projects and, latterly, University essays). I know it well, and can sit here creating worlds and civilizations with the ease of a deity via my CPC keyboard because its use is so in tune with my brain and fingers that I don't have to think about it. And what's more there's precious little I'd have a programmer do to improve it, not enough to make the purchase of a replacement upgraded ROM the kind of thing I'm likely to spend my money

► on. Not unless that programmer thinks of a few neat little routines I suddenly discover I can't live without. (*We're working on it!* - Richard)

Mr Watson, in his interview with the one and only Angela, also mentions his Protext User's Club and wonders why it has few members. Coincidentally, in passing, he mentions such things as the Labour and Conservative Parties. Let's keep the political references going - there's going to be a General Election soon. I knew about his User's club from WACCI and thought of enquiring but in the end decided against it because it must surely be like joining a single-issue political party, say the Referendum Party, and like in politics I think any sensible debate (and I can't see any debate being over-long when it's Protext we're talking about, much as I love the program) is best raised in a wider constituency than one dedicated to a single 16k ROM and its miracles.

I may typify CPC and Protext users in some respects, we may be part of the same sub-group of humanity that is actually *contented* with something. We may have found a combination of hard and software that so satisfies our

requirements that there is absolutely no point in up-grading to anything else. The reams of paper my printer churns out may read exactly the same as they would if I had a modern PC with a top-of-the-range WP package. Maybe, and here's a thought, the words on those reams of paper read better because they're written via a machine that I am so familiar with I can apportion all of my mind to the words rather than some of it to the mechanics of producing those words. And I have used a PC with a top WP package and know what I'm talking about!

Selling point

The whole point of this is I'm not likely to do what Brian wants and prove the CPC market is alive and well BY SALES (his capitals) until my attention is drawn to something so much better than what I have already that old sweet habits can be happily broken. And it's not poverty (again, his word) that drives this statement but cold logical beautiful facts. And it's not piracy (I don't know another CPC user in this neck of the woods to exchange illegal copies of anything with, and it I did I wouldn't want

to add another nail in the CPCs coffin by actually doing it), it's none of the things he blames. It's success. The things I've wittered on about since I first pressed IP to write this letter.

Of course, it's more than a two-man team, my CPC and Protext have their chums. MicroDesign, PowerPage, a few games like Thrust and even Steve Davis Snooker, loads of utilities from the PD library, clip art to make you drool... loads of stuff, really.

So that's me: at one with my machine, contented, not keen on using it too much to run a great deal of leisure software (to me Protext is a chunk of leisure code!), and unlikely to upgrade unless I come upon a beast that will fulfill my requirements any better. Maybe Brian's Millenium creation will do just that, but now it seems it's going to be based on something other than CPC circuitry I'm not holding my breath. If I upgrade ever in my life I'd like what I upgrade to to be as backwards compatible as is reasonable.

I hope this puts a different slant on disappointing software sales and shines a holier and more truthful light on CPC owners, wherever they may be! ●

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the **Bonzo Cat** **doo-dah scrapyard**

Angela Cook

PD Extra discs 2-3

The names Colin Harris, Carl Surry, Martin Cossins and Dave Caleno are all bizarrely linked with each other. This is due to the reincarnations of Bonzo the cat. But who was Bonzo? Read on to hear about his first four lives...

In the beginning, Colin Harris wrote a suite of programs and named them after his cat Bonzo. These were written to backup programs from tape (or disc) to disc. The programs were given strange names such as Hackpack, Super Meddler and Doo Dah. Even the loaders were pretty funny in themselves. A cat flying an aeroplane, or having the words "Hi-ho screen dump!" emblazoned on your monitor. These programs were extremely popular and are still used to a great extent today.

Colin produced newsletters to support these programs, called "Bonzo Bulletin". The newsletter detailed news and information about "busts" – that's when a program has been transferred, nothing smutty, though some of the pictures in the newsletter were a little on the *risqué* side.

These newsletters would appear on some different colour paper each issue, which made a lovely rainbow (all together now: "ahhhh"). Bonzo Bulletin ran for many issues and the entire collection piled together would be over three inches thick. Sadly Bonzo Bulletin came to an end when Colin moved to Canada, where he currently still resides. What I want to know, though, is did Bonzo go with him?

The second incarnation

Playmates was a fanzine edited by Carl Surry. I looked on my copies for dates or frequency, but the information wasn't there. There were twelve issues in total and I think it came out bi-monthly – no doubt somebody can confirm this. Playmates was not directly related to the Bonzo programs, but there was a section in the games orientated fanzine called "Bonzo's Litter Tray". This section contained updates and information on Bonzo programs and busts for people that didn't get Colin's newsletters.

When Colin Harris closed Bonzo Bulletin it was generally accepted that Bonzo would live on within the pages of Playmates. And so it did, until the time came that Carl decided to move on to another machine (*Philistine – Philip*).

Third time lucky

After Carl departed, Bonzo's Scrap Yard was born. Notice the spelling, "Scrap Yard" being two words. This was how it was written in the first issues. For some unknown reason Martin Cossins had the brainwave (or brainstorm?) of joining the two words together at a later date and it has stuck ever since.

Martin continued the good work of Colin Harris, writing about new busts that readers had been working on and compiling the lists of games and programs that transferred with each of the options within the Bonzo programs. It's not as technical as it sounds, honest; CPC South West front man Dave Stitson did a series of three or four articles for us a while ago.

Alas, Scrapyard was not meant to be. After ten issues, Bonzo once again closed his eyes, or rather was "put to sleep", Dave Caleno reliably informs me. Martin was very reluctant to close the Scrapyard and I remember him dithering about it for some time. But with the problem of less and less material to print, each issue became few and far between (a lesson to us all, I feel...). Martin eventually sold most or all of his CPC equipment – I remember buying some "broken keyboards" from him which were well ▶



► and truly defeated. Death by screwdriver, I think.

The cat's fourth life

Dave Caleno, amongst many others, had been involved with Scrapyard and thought it a shame to let Bonzo end his reign there. After all, he had six more perfectly good lives to play around with.

Dave took on Scrapyard and after a few months we had a new, revised, fresh looking newsletter coming to us every quarter (or when Dave feels like doing something). There is a master list of games that are trans-

ferrable using the Bonzo suite of programs, containing some 1400 or so, according to Dave. I didn't know there were that many about.

Scrapyard is now a lovely read. I don't use the Bonzo programs myself ("Please dad, please will you transfer it?" rings a rather loud bell) but I always enjoy Scrapyard, usually because Dave has some smart comment in there about me. I'll get my own back one day, you wait and see.

A new burst of energy

Recently, the Bonzo suite of programs was made public domain by

the copyright holder Phil Craven (Mike Lyons suddenly needs an urgent manicure due to plaster under the nails), and they are available from all good PD libraries - you'll find them on WACCI PD Extra discs 2 and 3, for example. There's also Rob Scott's Soft-Lok, a bit like Bonzo on acid, which is available from Peter Campbell at ComSoft.

The current Bonzo Scrapyard is available from Dave Caleno at 29 Chapter Road, Strood, Rochester, Kent, ME2 3PX. I think it's a few stamps and an SSAE roughly every quarter. Happy reading. ●

Top Tips

Richard Fairhurst with a suggestion for PowerPage 128 users...

The headlines in this issue were created using a PowerPage Professional font called Rondeau ExtraBold, and the shadow added using an automatic feature called 'Modify block' to be found in the Item menu. As Philip's (hopefully) explained, PPP isn't available to the general public *quite* yet. The shadow effect, however, is

something that the current version of PowerPage is perfectly capable of.

Firstly, draw your headline, graphic, or whatever, and save it out as clip art (.CUT file). Now select the grey fill pattern, and carefully fill in all the areas which are currently black - using CTRL-TAB, not CTRL-F. You should now have a greyed-out version

of the graphic.

Now just import your original .CUT file, positioning it slightly up and to the left of the greyed-out art. Since PowerPage doesn't wipe out the background when importing clip art, it will neatly overlay itself onto the shadow. And that's all there is to it... ●

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you might have used Clarkie Cats...
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you may even be the bozzbozz...
but are you Derek Hyland's pretentious cheese wog?



the *abc* of PD

Mark Johnson



Hello and welcome to another thrilling instalment of the ABC of PD. Apologies for not sending one in for what seems like a lifetime. This is because I have now got a job, which means that I hardly have any spare time any more. Anyway, on with the show, and a belated happy and prosperous New Year to everyone...

This month I am going to review PD disc 119 – Blackjack and Cribbage. Both of these two are ex-commercial games, first available from Sentinel Software and then Radical Software at a price of £14.99. But they have now been kindly released into the Public Domain by Barrie Snell, and are available from our good friend Doug Webb (address under Who's Who) at a fraction of that price. They are both card games and can be played to various rules and options. One point worth noting is that when the instructions are printed out for both games, they take a total of nine double-sided sheets of paper. Anyway, on with this month's review.

Blackjack

The game loads in three parts. The first part lets you tailor the rules to create the playing conditions of any casino in the world, and to save these to disc for easy use when you play again. Because the rules are standard throughout Britain you can select them with a single key-press. There is also a set of typical American rules on the disc. Also you set other things, such as how many players there are, their names whether you want keyboard or joystick control etc. Once you have chosen the options, the second part is loaded in and you can now play the main game.

The object of the game is similar to

Pontoon or Twenty-One, where you must try to score up to 21 points without going over 21, and beat the score of the dealer's hand. There the similarity ends because Blackjack rules have a much greater depth than Pontoon, and the player must be much more skilful. In a casino game, up to seven people can play, but in this computer version only up to three people can play at any one time. If you are the only player you have a choice of playing one, two or three hands, and if you choose only to play one hand you can let the computer be a player too.

You then decide how much money that you want to start with and how much money that you want to bet each time. The game will end when you have run out of money - or you get bored with playing it.

Cribbage

This is a two player game, one of which is the computer. It can be played on a 6128 or an upgraded 464. It is recommended that, if you are a beginner, you start in "practice" mode. This is because the computer is a sharp player and it will give you a chance to learn the game without being continually thrashed.

The game loads in two parts. In the first part you set up your own rules. From this you can choose whether you

want to play the 5, 6, 7 or 8-card game. You can also choose if you want to allow straight or mixed runs during play, and if you want to play single games or best-of-3 games, what the winning total will be, and so on. The second part then loads in and plays the game according to your rules.

The object of Cribbage, no matter what form of it you play, is to score points. In this computerised version the computer keeps score. The points are usually scored on a special board by putting pegs into rows of holes, but paper and pencil will suffice just as well. The target score depends upon the type of game and the number of players. It may be 61 (once round the board), 121 (twice round the board), 181 (three times around the board), and so on. It is not necessary to count to exactly 61 to win. If you have 58 and score two then you have not won, but if you have 58 and score three or more, the peg goes in the "game" hole to win.

The verdict

Graphics..... 65%
These are excellent and the cards actually look like the real thing.

Sound..... 20%
There's hardly any to speak of.

Grab factor 70%
Quite easy to get into once you know the rules.

Staying power 68%
Both will keep you amused for a while, although I played Blackjack more.

Overall..... 72%
Very good games and well worth buying, especially at the PD price! ●

the Professional touch

Philip DiRichleau

It was with massive surprise that, when I opened this morning's post, I found a 3.5" disc in it and read those two words that I've been awaiting for so long. PowerPage Professional had arrived.

I was aware that Richard Fairhurst (I know that name from somewhere) had been working on this for some time, but I had no idea how far he had taken it.

This is a little like the old PowerPage 128 that we all know so well, except that it has been massively reprogrammed and improved, to such an extent that, for once, we are able to perform pure Desktop Publishing on the CPC. To make the point, and with a little help from Richard himself, this month's WACCI has been produced purely on PowerPage Professional.

What can it do?

Upon loading there are a few striking things that occur. The first thing you become aware of is that 'Professional' detects if you have any memory expansions, and makes very good use of them. It informs you, if you have one, that it's loading in 20 separate text fonts and 10 headline versions. If you don't have the 256k expansion, then it still loads nine text and five headlines - more than enough to create a standard WACCI page.

After it has done this, the screen wobbles a bit and then expands into glorious overscan, increasing the screen size to 95 characters across instead of 80. Did I say 95? I was in for a surprise. The characters looked oddly smaller, yet still the same. What, I asked myself, was going on?

The impossible by breakfast

Time to input some text I thought. Gone are the old style Text Editor commands. This is a fully glorified word-processor I have in front of me, I realised - maybe not quite up to Protex standards, but pretty

good anyway. It was only at this point that I realised that I had 128 characters across the screen and not the 95 that are normal for overscan. Now 128 is a lot of characters but they're all perfectly formed and perfectly visible, even without my glasses on.

I decided, at this point, that there was some trickery going on. So using the zoom mode (there are four levels to be selected), I enlarged an area. Each character was made up out of the normal 8x8 block of text, and yet there were 128 of them. That, I decided just isn't possible.

"Anything's possible," Richard told me bluntly when I called him. He has a habit of saying things like that.

"What have you done?" I demanded.

"I just made the pixels smaller than normal so that I've got more across the screen. It was the only way to improve resolution."

Now for the non-technically minded of you, the Amstrad has, or rather had, a maximum of 640 dots across the screen. Richard had managed to increase this to a massive 1024 using something which he termed Resolution Overscan Expansion. A buzzword if ever I heard one. How he did it? He won't tell me. I'll just have to disassemble the program.

WACCI pages

I began to build the WACCI pages (this is the last bit of this WACCI being written incidentally - I've even finished Thanx and Stuff). To my astonishment, I was able to store 20 WACCI pages in memory. Admittedly, I do have a 256k expansion: but without it, I was still able to store five. It's all to do with the massively

improved LZW compression technique, based on his PD utility Columbia, that Richard has built into Professional. When I turned this option on with the 256k on the back I was able to store the entire magazine in memory at once.

This is most useful for my purposes, since I can now flick between pages as I wish, laying out more interesting mags in the process. Each page appears with only a half second time delay for decompression and then I can continue to work once more.

Graphics

'Professional' is able to import almost anything, from Stop Press files, to Art Studio windows, to MicroDesign .DR files. There is even a built in capacity to access 720k PC discs so that you can load in the BitMaP files that PC graphic programs love so much.

As well as all this, 'Professional' has an art package that is up to Advanced Art Studio standard, able to do almost anything that that program can do. I was very impressed by this part of the program. So far, every part of WACCI could be done in a single program.

The little touches

I loaded in a file a member sent, and realised that I need to spell-check it. I was just about to exit and enter Protex when I spotted a little icon that looked just like a dictionary. I keyed onto it and the spell checker fired in. This involved turning over the disc - the first time in three hours that I'd had to touch the drive or that the program had even needed to look at it.

This is because 'Professional' has a very large dictionary on the B Side, almost 97 000 words to be precise. The file started to check. Not only did it catch every mistake, but it also offered corrections as well, and, amazingly, almost always the

right one. Richard informs me that this is because he's used a parser system that's based on the one that the Oxford University Press use for producing the Oxford English Dictionary. That part of the program also contains a simple, but very effective, context checker.

Saving files

This is the good part. You select save and the entire machine seems to hang up for a while – and then the drive goes into action. Then it hangs up for a while, then the drive goes into action. After six minutes, I gained control back again. The end result is a 240k file on the A drive. Just a moment, I thought... 240k on a 3 inch drive only able to take 178k normally. Basically, Richard (with the help of Rob Scott) has designed a special 6k sector format for 'Professional'. Everyone of my 32 pages were now stored in a single file. Far easier than the four discs, using both sides, that a month's WACCI usually requires.

Being difficult

Now I decided to test the system. The massive 240k file was created with the 256k expansion on the back. What if I loaded it into a machine with only the standard 128k built in? 'Professional' didn't object. It just loaded in the first 20 pages and let me edit them. I switched to the other 12 and then back out to disc one more. I still had a pretty little 240k file on disc. Perfect Random Access Handling. A very nice touch.

Printout

PowerPage 128 had terrible A4 printout,

but a decent A5 version. Just by looking at the WACCI pages, printed direct from the 6128 using only an Epson Stylus 800, you can see the quality. Professional is able to get almost laser quality from the Stylus, and inkjet quality from a 24-pin dot matrix. It takes roughly two minutes to print a page (that is very fast) and the quality is exceptional.

A final touch

Coming with PowerPage Professional is a 20 page manual (on disc) complete with instructions on how to make a very odd widget. This involves just two diodes, two edge connectors and a length of fifty way ribbon cable. With this, you can connect two CPCs together and they can then work in unison, one editing the text (or spell-checking it) whilst the other is on the graphics. Professional has a built in feature which permits the two computers talk to each other quite happily down the short line.

It was rather strange to edit text on my screen whilst a friend of mine created a graphic using his 6128 which was being updated on my screen at the same time. Talk about having a ghost in the machine: it made Mother appear to be positively possessed.

Customising

There is another program on the disc which permits you to customize how Professional works, from which fonts and headlines to load in at the start, down to how fast you type, how hard you strike the keys (just like a typewriter has) and even which colours everything appears in. There is one section I was a little

dubious about, though. There is a facility you can turn on in the customising which allows you to turn your VDU on its side and work on the entire page, using the same resolution. Richard claims it's based on an Apple Mac monitor called the Radius Pivot, but I found it very strange and probably a waste of programing time and space.

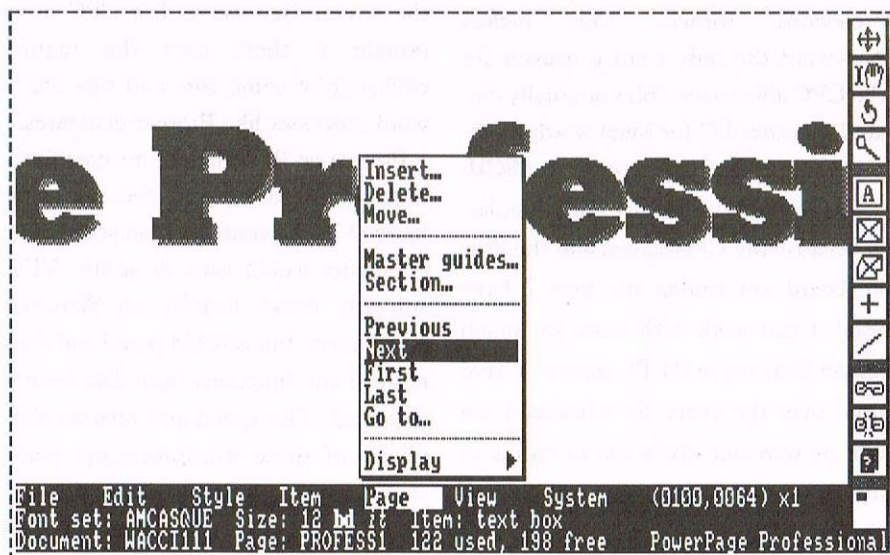
There is also a facility here which Richard and Peter Campell worked on together, which allows Professional to actually take the MicroDesign paging features from the MicroDesign Plus disc and, if required, to overlay the MicroDesign Graphics facility on top of Professional's own Art Package, giving the best of both packages in one. That must have taken some effort to work out.

Outro

PowerPage Professional was well worth the long wait. I have to admit that I'm tempted to use it permanently to edit WACCI. It's an excellent program and, as you can see from this month's magazine, the output is magnificent. All of this in one package, loading solidly into a 6128 without expansion without a need to constantly load from disc. That is quite an achievement.

Where do I get it?

You can't. Since it's not *quite* polished enough for release right now, PowerPage Professional is currently only available to those who are editing magazines. Richard has informed me, however, that it will be released publically very soon in the future. We look forward to the time when that happens. ●



Technical bits

- Screen resolution: 1024x440 pixels
- Print resolution: user-selectable (150, 200, or 300 dots per inch)
- Loading time: 20s (128k), 34s (256k)
- Typing speed: 55 words per minute
- File formats: .MAG (group of pages), .PPP (single pages); .CHR, .FNT (fonts); .CUT, .DR, .BMP, .JPG (art)
- Features: word-processor, spell editor, art package, what month is it, context checker, graphics library

a New Word

in your ear...

John R Hudson

WACCI takes a long-overdue look at the other other wordprocessor. No, not the B word, nor even the T word, but Newword, the second wordprocessor after Tasword to appear for the CPC – albeit only the 128k machines.

Newword was written by the authors of WordStar after they fell out with the company over the future direction of WordStar. WordStar was the second microcomputer wordprocessor - the Electric Pencil was the first - and, by the time I came across WordStar in 1980, it was being compared favourably with leading minicomputer wordprocessors.

These were largely used in typing pools where an IBM golfball typewriter was considered state of the art. So WordStar was written with such typists in mind as well as the limitations of early microcomputer keyboards - just a typewriter keyboard plus control, escape and line feed.

I used WordStar for over six years on an RML 380Z with two 8" double-sided disc drives - each side being treated as a separate 128K drive.

WordStar overcame the memory and disc drive limitations of the early microcomputers in several ways. It only loaded the core functions into RAM, calling the remaining ones from disc as needed, and, as soon as a document became too long to be held in RAM, it used a technique now called 'virtual RAM', saving parts of the file to disc. You could alternate saves between drives, which made it appear I was using a 256K drive, and you could chain long documents across discs.

In an attempt to break away from the limitations of classic WordStar on PCs, the company launched WordStar 2000 which sank almost without trace but

caused the original authors to leave and produce Newword. They got as far as Newword 2 for CP/M and Newword 3 for 16-bit machines before being bought back to develop WordStar 4.

WordStar 4 is more Newword than WordStar 3 and when WordStar changed their file format in Version 5 to accommodate fancy fonts, they retained a facility to convert files back to WordStar

"It comes with printer drivers to support virtually every available printer, including sideways printing on the Hewlett Packards"

4 format. So, as long as you can convert files from other word processors into one of the WordStar formats, you can always convert it back to WordStar 4, or Newword, format. This makes Newword the only word processor for the CPC able to read files originally created on other PC (or Mac) wordprocessors without needing to resort to ASCII.

I have used this facility fairly regularly because the CPC screen and the Plus keyboard are among the best I have used. I can work with them for much longer than any of the PC screens I have used over the years. So whether I am editing someone else's text or typing in my own, the Plus is my machine of choice.

Silicon city

So, what are the disadvantages of Newword? Well, being disc based, it is slow unless you are using a silicon disc though you can speed things up by lowering the standard response times and the help level (there are four) at installation and by using typeahead to give a whole command and thus suppress the prompts.

There is a long learning curve - I took 18 months to get the hang of WordStar 2 and Newword is two to three times more sophisticated than that. Not everything is in the manual because some facilities retained for compatibility with earlier versions are not documented.

Newword 2 can only handle fixed space fonts; it cannot handle graphics or maths and it doesn't have room for on-line spell-checking. Some of these disadvantages would probably have been remedied if Newword had lasted longer as a separate company.

It does not come installed for the CPC; you are expected to use the standard CP/M Plus programs on your system disc to set up the function and arrow keys or show foreign languages on the screen. Because so few CPC users bought it there isn't the regular exchange of comments and tips that a word processor like Protex generates.

Protex on ROM has all the core functions of WordStar and follows many more of its conventions than some of its adherents would care to admit. VDE similarly draws heavily on WordStar conventions but is RAM based and does not call any functions from disc once it is loaded. The speed and relative simplicity of these wordprocessors made them more attractive to those who did not need all the facilities of

WordStar/Newword and Arnor gradually produced the spell-checker, comprehensive mail-merge facilities and printer drivers for those who wanted them. This was cheaper for those who did not want all the extra facilities but more expensive than buying Newword for those who did. (*Especially when you consider the ridiculously low prices that Newword has been seen going for at All Formats Computer Fairs - Philip*)

Chain of command

So what extra does Newword offer? Well, like VDE, it can edit ASCII files as easily as WordStar files. It can handle very long files if needed though, inevitably, this slows things down and I

“Protex follows many more of WordStar’s conventions than its adherents might care to admit”

normally split and chain very long files I receive from others.

Like VDE, help is always at hand but is generally more comprehensive and, even if you install a lower help level to gain speed, you can still access any of the help screens without changing the help level.

Like Hewlett-Packard printers, WordStar/Newword does not throw a wobbler if it comes across an instruction it does not understand. This means you can leave most WordStar 4, 5, 6 or 7 instructions in a file and all Newword will do is put up a polite question mark and leave it at that.

It comes with printer drivers to suit virtually every available printer, including landscape (or sideways) printing on the Hewlett Packard printers, and it can access the printer’s 8-bit character sets if the CPC has an 8-bit printer port. In addition it can send escape codes not included in the standard printer drivers even in the middle of a line, allowing you to change to French or German and back for a single word or use colour to

highlight individual words.

Comma...

It uses the standard Comma Separated Values format for mail-merge - so you can use BASIC data files as well as data files from many other programs without alteration - and it includes a small number of database management facilities so that you can create new data files from an existing one.

Chaining and nesting files (up to eight levels) can be independent of or dependent on mail-merge commands and a nested or chained document can be reformatted at printout so that all the nested or chained files match the layout of the main file. This is a great help when you need to produce several versions of the same document with minor differences to suit different groups. Newword will also produce a page image ASCII file of a merged, chained or nested document allowing you to preview the layout or create a single ASCII file for use with another word-processor.

Newword has an excellent spell-checker which includes a facility to mark the text so that, if it picks up an error which cannot easily be sorted with a simple change of spelling, you can mark the error and get back to it easily.

Glory days

But, though the 6128 and the PCW series computers were the best CP/M computers that Newword ever ran on, they were never intended to be typists’ workhorses and so a wordprocessor for typists was never likely to become the wordprocessor of choice on these machines. Protex took over on the CPC and LocoScript on the PCW. In the PC world, a wordprocessor that had started on minicomputers, WordPerfect, eventually dethroned WordStar only to be dethroned in turn by one which had had its biggest break on the Apple Macintosh, Word!

Thanks to Newword I don’t have to down-grade to a PC for my day to day work, though the PC serves as a useful bridge to and from my customers. ●

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it's got to be...

Word Perfect

author unknown (blame Philip's filing system)

In the second of this month's 'obscure word-processor' features, we decided to take a new look at one of the dinosaurs of CPC word-processing – just in case a member comes across a copy at a car boot sale and wonders whether it's worth the 50p asking price.

The whole program consists of a 1k loader and 8k of main code, so it's a small beast and leaves a huge amount of the computer's memory for text files. So what do we get for our 8k?

On loading, we are presented with a simple screen announcing that it's "Word Perfect by John Twiddy, © Supersoft 1985" – all economically presented, no frills. Tap the space bar, and we get our first chance to influence things by setting line length, page length and skip lines. Very good. Press ENTER after setting that lot and we have the main screen, with a line at the top giving details of where we are, line, column, lines used, and lines to go.

That last one's interesting. The mem-

ory of Word Perfect seems to be divided into a fixed number of lines according to the length that the user chooses for his lines. If you have lines of up to 117 characters in length, Word Perfect decides that you're entitled to 232 lines altogether, or about eight pages of double-spaced A4 – not bad. Longer lines and you get fewer of them. Shorter lines, and you lose out.

Home of the brave

It has one unusual function, and that has to do with deleting a line. CTRL and up cursor send that line to the bottom of the text area, way down where the brave never tread, and that can be retrieved if you discover you've ban-

ished it in error by using CTRL-down cursor. After a while the user may find that he's sent a whole mess of lines down there, and there they sit until the end of time, the CPC is reset, or they are overwritten by other text. They're never printed in error, though, because the printing option prints from the cursor position to the top of the document, ignoring anything below the cursor.

It beats Mini Office

Word Perfect is pretty good, though not in the Protex league. I used it once, long ago, for its relatively large text area. (I only had Mini Office II in those distant days, and that has the smallest text area of any WP I know, made worse by its insistence that every line is 80 characters long.) It's been a pleasant exercise digging the dinosaur out – not really the right word when you remember that it first saw the light of day in 1985, the same year as Protex itself! ●

Take control of your life

Here follows a brief synopsis of the control functions as there's nothing special about most of them.

CTRL-X toggles between mode 1 and mode 2. In mode 1 the screen scrolls left to right on lines above 40 characters in length. It does this in mode 2 also, for lines above 80 characters in length.

CTRL-W permits you to alter your original line, page, skip settings.

CTRL-A permits you to alter line length only.

CTRL-I sets screen colours.

CTRL-[and CTRL-] permit you to change left and right margins any-

where in the text – useful for insets etc. CTRL-E returns to normal.

CTRL-left and right cursors scroll the text to the left and right, eerie because ends of lines appear at the beginnings.

CTRL-S saves text.

CTRL-D searches for a string.

CTRL-L loads a text file.

CTRL-C catalogues the disc.

CTRL-V sets up printer options, underline character, and pound sign.

CTRL-O outputs as many bytes as you like to control the printer

CTRL-P is, you've guessed it, print – and you have options for single sheet or continuous paper.

CTRL-U underlines. This is indicated by the ruler at the top of the screen changing from [———] to [=====] The really useful thing about this, though, is the on-screen underlining: much better than Protex's CTRL-X codes.

CTRL-^ appears in the top left-hand corner of the screen and toggles automatic line advance on and off. Useful if you haven't had your printer cable doctored.

CTRL-B returns to BASIC: WP is re-entered with RUN. Text is not lost.

CTRL-J justifies the text from the cursor point to the bottom of the paragraph. Lightning fast.

Embarrassing Bunny

Colin Matthews

Any program that describes itself as 'fault-free' in the first paragraph of its .DOC file is asking for trouble, really. Especially when said program, on running, displays a pretty loading screen and then grinds to a halt with 'Syntax error in 64000'...

Or to be precise, 'Synt-funny squiggle-x error'. Lesson One: Worktop doesn't like ROMs.

Either that, or ROMs don't like Worktop. I know the feeling. I don't either. For those of you in blissful ignorance of this coding non-masterpiece, it's a WIMP system – in other words, windows, icons, menus, pointer, hours of frustration, disc reformat. A bit like DES, but since you can't get Worktop on ROM, there's no chance of it being the first thing you see when you switch on your CPC. This is a good thing, otherwise no-one would ever use their CPC again.

Oh yes, one other thing. (Ho ho.) Worktop was written by our very own Richard 'Bunny' Fairhurst, writer for WACCI, BTL, and years ago, Amstrad Action. However, don't think that it's in the same league as RoutePlanner, ChaRleyTraCker, BTL, or other such renowned programs. Worktop, in fact, dates from Richard's little-known Rubbish Period, circa 1990-91 (see also CRTC demos 1-4).

Worktop in 'action'

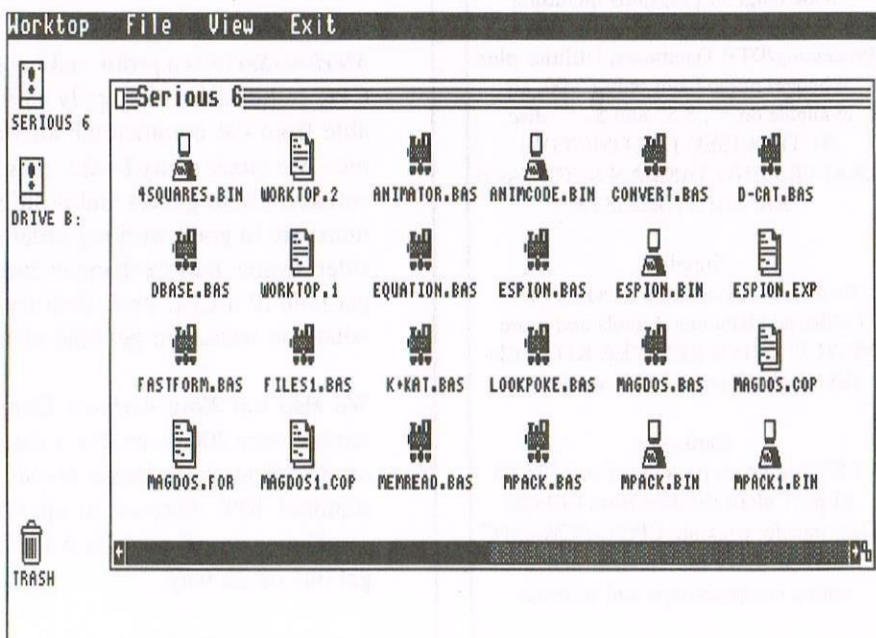
So, a quick fumble around the back of the Rombo and away we go. Move the pointer around the screen for a minute or two, and a few things emerge. First of all, Worktop isn't very good at the W of WIMP - the windows. Sure, you can call

up a 'window' showing icons relating to all the files on the current disc, and you can (just about) resize it or move it around the screen. However, since you can't open more than one window at once, all it really does is act as a pretty-ish border around the icons. Point, please?

As for the icons, they're ok, but they take such a long time appearing that I'd far rather just have a CAT display. In a tacit admission that the file window isn't any good, one of the menus (the Worktop one) actually includes this as an option, under the heading 'Directory'. The Worktop menu also includes a pointless Control Panel

(which lets you move the screen around the monitor – great), an About Worktop box (unlike my friend Nicholas Campbell, I don't mind this one), and a | command interpreter. Just like Protex, this lets you type | commands straight into the program. However, since Worktop doesn't like ROMs, you don't actually have any | commands to access – save IBASIC (good idea) and IDRIVE (to exit into ParaDOS). Oh, Worktop doesn't like ParaDOS formats, either.

Unlike the speedy, user-friendly ones in the latest PowerPage 128, Worktop's menus are slow and clumsy. The best bit about them is that one of the four is devoted entirely to exiting the program. I reckon that most of the screen should have been dedicated to this task – a big button saying 'Go away and never darken these disc drive doors again' would do. And to complete the quartet, there's



► the pointer. This is really horrible. I would rather spend an hour in the company of David Mellor, Michael Portillo and Philip DiRicicleau than five minutes steering this ugly little arrow around the screen. It features the infamous inertia system which was later 'popularised' by RoutePlanner, but adds a ghastly flicker, XORing (so the pointer doesn't display properly unless it's on top of a white background), and an unbearable sluggishness.

The good bits

Believe it or not, Worktop has a few redeeming features. Not many, mind, but a few. Like Camel Micros' WOPS, it cleverly scans the disc drive all the time, and so can automatically detect whenever you've inserted or removed a disc and display the icon for that drive accordingly. A nice idea, except that if you've write-protected the disc, Worktop doesn't notice when you insert it into the drive. Personally, I wouldn't entrust any *non*-write-protected data to

the jaws of Worktop, would you? By this reckoning, it's probably not such a bad thing that Worktop doesn't have any copy or format options.

Worktop also grafts a proper hierarchical sub-directory structure onto the user area feature of AMSDOS, so you can organise your files into folders within

"The best bit about the menus is that one of them is devoted entirely to exiting the program"

folders within folders. Another nice idea, but a bit unnecessary on low-capacity 178k discs (the only sort Worktop supports), and only suitable if you use Worktop for all your disc filing needs. This, I need hardly point out, is not a good idea.

Worktop stands accused

In its defence, it must be said of Worktop that some people like it:

Artificial Intelligence (of blessed memory) awarded it eight out of ten, and I've heard of people using it as a front-end for all their discs. It should also be pointed out that no-one has yet managed a competent WIMP system for the CPC: the best yet, DES, falls down in some fairly important areas, such as support for double-clicking files (something that Worktop provides).

But, as you'd expect of something based around the Atari ST's GEM desktop – the prevalent WIMP back in the late '80s/very early '90s – Worktop really isn't very good. File it under 'Embarrassing Juvenilia', or to borrow a BTL article title, file under water. My theory is that the only reason we get RoutePlanner, PowerPage 128 and things like that is because Mr Fairhurst has felt a subconscious urge to atone for his sin in writing Worktop. A silver lining to a rather nasty brute of a cloud.

One final thought. It's very easy to criticise. But how many of you have done even *this* much for the CPC? ●

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get **Smart**

PD disc 116

Ray Powell

with your **Plus**

For obvious reasons, Plus-specific programs are less than numerous. In fact, a good question for Compo-Splot might be "Name five" – so to have two on one WACCI PD disc can't be bad. Both are ex-commercial releases by Rob Buckley, and the one that concerns us here is the art package Smart Plus.

The other one, of course, is the platform game Fluff. Fluff doesn't need detailed instructions, but Smart Plus does: fortunately, John Bowley has typed a lengthy manual onto the disc, and I recommend the print out option for this.

Nurse! The screens!

On loading the program, one is presented with a mass of icons in a Control Panel at the bottom of the screen. These represent the usual functions found in most art packages, plus a few extras. Most of the panel stays on screen at all times. To allow for this, the 'working' screen is extended into the top border area. The same working screen area is used for both normal and overscan screens. On 128k machines, a backup or RAMsave of the screen may be made at any time. If a mistake is made later (we all make them!), then the pre-mistake screen can be restored, and all is not lost.

Explosion in a paint factory

The main difference between the Plus and 'ordinary' CPCs is its fabled ability to produce 4096 colours. While this is theoretically possible by allow-

ing 16 different shades of each CPC colour, only 16 colours can be on screen at one time (17 including the border). These could be 16 shades of one colour, or 16 non-standard shades of standard CPC colours, or a mixture of both standard and non-standard colours. (Er... I think!)

All this jiggery-pokery is brought about by altering the Red, Green, or

"A short animation demo is included on the disc – but this may leave you a bit flushed..."

Blue balance of each colour. With Smart Plus this is done with three slider bar icons, labelled R, G and B, which can each be set to any number between 0 and &F (15) to give a three figure number for each colour. Getting just the colour wanted can be a little tricky, and can give some surprising and interesting results. It is a good idea to make a note of a colour number before altering it, as getting it back is not easy. All colours can be foreground or background colours.

A moving experience

Having selected one of the sixteen

colours on offer, and maybe modified it, what can you do with it? Well, using the pen option, four different types of Line can be drawn. There are also the usual Box, Ellipse, Window, Fill, Spray, Text etc. to choose from. A useful addition is a window showing the X and Y coordinates of the cursor. Among the more unusual functions is the ability to work on two screens at the same time by storing one in RAM. The two may then be swapped at will.

Screens may be normal or overscan. When working on an overscan screen, only a normal screen size section is visible at any time: this is like a window that can be moved around the screen to access different areas. Since at no time is it possible to see the whole of an overscan screen, it is a good idea to draft the masterpiece onto graph paper first, and make use of the X, Y coordinates to find the way around.

Of great help is the 'Zoom' window which automatically replaces part of the control panel while the cursor is on the working screen. This gives an enlarged section of the screen, to show exactly what is happening at the cursor. Mega useful. Control of all functions except text is by joystick/pad and Fire button. The program also provides for up to 64 frames of animation, and there is a utility for designing sprites. A short animated demo is included on the disc. (This may leave you a bit flushed!) ▶

► Into print

Screens and blocks can be saved (hallelujah!!). Not much point if they couldn't I suppose. They can also be loaded (hic!); both normal and overscan screens can be saved with or without the palette. Saving and loading are done with the usual Save/Load "filename". Unfortunately the suffix .SCR is assumed. This loses some possible imports, notably GPaint. (You could always rename the file - Philip)

Overscan screens are saved in three separate files. Printing out can be done on 9-pin printers only, and is very simple. With a printer on-line, just click on the printer icon to print the current screen area. It is not possible to print out a full overscan screen. To me, the printout seems novel, beginning at the bottom left hand corner of the picture and working vertically left to right.

The opinion bit

So! Is it any good? Yes, very good, but flawed. Joystick-only control is limiting and clumsy, and never seeing a full overscan screen somehow defeats the whole object of the program. There must be a way to load a stand alone Smart+ screen, but there are no instructions for doing so, or loader on the disc, and I have been unable to find how it is done. Perhaps it's impossible! (I now expect there to be a deluge of letters to WACCI telling me how wrong I am. I hope.)

If you have a Plus machine then Smart+ is well worth having in your collection to play with. I like it... but somehow, I still prefer GPaint!

Postscript

Well, Philip, what else have you for me? How does one get a book published? I've got this idea for a sequel to "War and Peace"... ●

it's a plant!

Brian Key

Are you interested in gardening? Have you been looking for a database of plants? Well, look no further, because here is what you might have been looking for.

To use the database, the program Total Recall is needed. Not a very good start, because it isn't PD and not everyone has it. So why use it? Because it allows the length of the fields to be defined separately: this saves a lot of memory, meaning the number of entries can be greater. I will not go into the database and how it works, as it is easy to follow from the menus.

Green fields of England

Fifteen fields can be defined altogether, and it took a lot of thought in deciding what the names would be. What the fields contained also took a lot of thought. So how did I go about deciding what they would contain? Not very easily or quickly, I can tell you. I must have changed all of them at least five times, and some even more. The ones that I ended up with hopefully are what people most want to know: the name of the plant, the type of soil to grow it in, the amount of light it prefers, whether it is grown for flowers or its leaves, is it scented or not, and suggestions on where to grow it and what it can be used for.

Gardens-a-go-go

Several books that my wife has (yes, she's the gardener) were used and over 500 plants from them chosen and entered. In all, more than 700

entries have been made, because some of the plants have been listed more than once. Sorry, but for those of you that are into kitchen gardens, vegetables have been left out. Also left out are the more unusual plants.

The instructions that I have been written to go with the database have also had a lot of thought put into them, and although they're a bit long, are (I hope) easy to follow.

Come and get it

If you would like a copy of this listing, send me a disc and the return postage and I will send you one. The disc can be 3" or 3.5", formatted in any of the more common formats. Along with the database of plants I will send you an unfinished copy of another plant-related program I am working on, which will be fully PD, so you can make comments and suggestions on the shape you would like it to take. ●

Where to go

The database is available from:

Brian R Key,
87 Sweetmans Road,
Shaftesbury,
Dorset SP7 8EH

☎ 01747 851029

we are the

Music Makers



Martin Cush

the dreamers of dreams...

Reveal Computer Software's Music Maker is distinguished from other CPC music packages by the fact that notes are entered using standard musical notation, as contained in sheet music. A novel approach, certainly – but is it a Revelation?

As such, it's not a program for the complete musical beginner. Although the manual contains some assistance with regard to explaining notation, it is very useful to have some prior knowledge. (Try the *Essential Dictionary of Music Notation*, £8.95 from your local music shop – Philip)

Also, unless you have the ability of Beethoven, who instinctively knew what a piece of written music sounded like without hearing it (which, incidentally enabled him to continue composing when completely deaf), this is not really a program for composing music completely from scratch. The reason for this is that when I am writing a tune, I like to enter the notes and then play it straight back to see if I like it or whether it needs changing. This is not possible with Music Maker, because the part of the program which plays the music is completely separate from the stave editor where you enter the notes. To continually have to save the tune and load the player I find hinders my already limited artistic ability.

To be fair, Reveal Software pointed out in their reply to the Amstrad Action

review that this package is not primarily designed for musicians, but for programmers who wish to use existing music by obtaining the sheet music and entering it into the stave editor.

Stave the whale

The package itself consists of three parts: the stave editor, the player and the basic loader. The editor (see fig. 1) is easy to use. You select the type of note required and place it on the stave, with the choice of either treble clef for the higher notes or bass clef for the lower notes. Having entered all the notes in the melody line, you save that file and then proceed to enter the accompaniment.

Once you've saved your files, you then enter the player (fig. 2). Unfortunately, it's not possible just to load and play files of notes that you have created, as you must first perform a number of operations to convert them into sound. I'm afraid I did not find the manual very helpful in this task, and it took quite a lot of experimentation to get any sound: when you have finally worked out what to do, it is actually

quite straightforward.

Provided you have entered the music correctly, and made sure the bars of music in the melody and accompaniment are of the same length, you can play the melody and two accompaniment parts at the same time using the three available channels. There are fifteen instruments plus the normal tone; these cannot be altered.

Programmed music

Once you are happy with the result, you save a code file to disk and then run the loader program. With this you can load, relocate and install the code created in the player program, allowing you to run your tunes in BASIC or machine code. Once installed, the program provides 10 RSXs to control both music and sound effects. Using these it is possible to mix music and sound effects, with priority being given to effects. I am not a programmer, but the RSXs appear to be very comprehensive, and I am sure any games programmers among you would find them very useful. (They do rely on the firmware being present, and in games, it very often isn't – Philip)

Once you have worked out how to use them, this suite of programs successfully fulfils the programmer's stated objectives of simplifying the task of music creation for software developers. ●

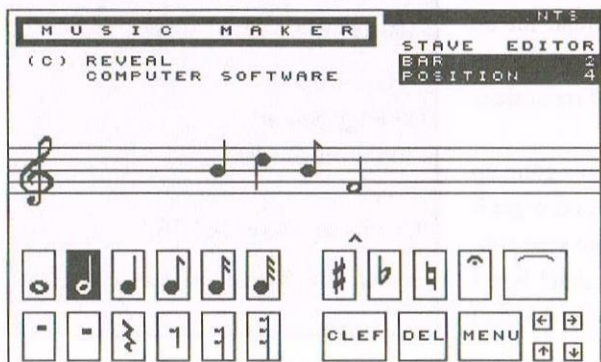


Fig 1
The stave editor



Fig 2
The music player

the

8-Bit Look

Paul Dwerryhouse

As no doubt you are all aware, 8-Bit is a magazine covering all 8-bit computers, of which the CPC is just one of many. The issue on test is number 15, covering the period January to March 1997.

Brian Watson (no introduction needed) is the founder and editor of the magazine. So let's look inside this issue and see what we can find.

Contents

The magazine has 26 A4 pages and is spiral bound so you can lay it down flat to read. The format of the pages is either one, two or three columns. The fonts used are in the order of six, yes six, and the character sizes vary as well. Brian does admit that the magazine is produced on four different computers, hence this variety. This clutter of font styles and sizes and the number of columns does spoil its appearance a little for me.

The magazine also carries a large number of adverts, seven pages full in fact, leaving only 19 pages for text. Out of this 19, five pages are for readers adverts, so only 12 are utilised for articles, news etc. Do not get me wrong here, 8BIT is designed this way intentionally and it is fulfilling its intended purpose. Full credit must go for the way 8BIT fills the gap left by just about everybody else.

In depth

After the first page editorial column (there is no front cover as we know in WACCiland) the next four pages are devoted to the SAM range of computers. If you do not know anything about the SAM then you will after these pages.

The next two pages are news items, followed by a regular – The Lawyers PCW Club, which is a page all about Locoscript, the PCW word-pro. The next two pages are devoted to the new PcW16 machine. A one page article on keeping your data safe with backups etc., is followed by three more newsy pages.

Overall

The contents are all very readable, regardless of which machine you own. The general advice as contained, for example in the backup side of computers, applies to us all. And where Brian gets all that news from is beyond me.

There are loads of adverts, contacts and magazines contained within 8BIT, so you are bound to find something of interest. You might even expand your CPC world by realising just what is out there.

I personally feel that Brian is doing a wonderful service to the eight bit computing world.

Down side

I am afraid there has to be one. It now only comes out four times a year. You do not really expect it, it just turns up out the blue. I wish Brian would reconsider the publication interval.

But there is worse: it has now gone up to three pounds per issue. You can get it cheaper if you take out a three year subscription but how many do that? No, I think the price is too high and I feel

Brian should reconsider that too. I do know the cost of producing, printing and posting out magazines so I do speak from authority here. However, if Brian needs to make that much from each issue to fund his various 8BIT activities then only he can be the judge of that. My hope is that the quarterly publication date, coupled with the three pound price tag, does not cause a drop in 8BIT's readership.

(Remember that Brian writes much of 8-Bit himself, in between laying it out, getting it printed, mailing it to a 500+ subscriber base, and organising nefarious IEBA-like schemes. Imagine the WACCI editor, chairman, treasurer, Market Stall co-ordinator, and contributors rolled into one, multiply by ten for all the computers that 8-Bit covers, and £12 per year suddenly seems eminently reasonable. – Richard)

And finally...

I know that many members of WACCI are already subscribers to 8BIT, but if you have not yet taken the plunge, why not send three smackers to Brian Watson and see what all the fuss is about. I am sure you will find something in there for you. ●

Where to go

You can catch Brian Watson at:

"Harrowden"

39 High Street

Sutton-in-the-Isle

Ely,

Cambridgeshire CB6 2RA

e-mail: 8bit@spheroid.demon.co.uk

PCB Plus

Dave Teague

homegrown disc 14

Grow your own printed circuit boards with three utilities available from the WACCI libraries – electronic design made easy.

I have dabbled for some years in making PCBs (Printed Circuit Boards), using a variety of techniques including enamel paint, rub-down transfers, and special etch-resist pens. Recently, I saw in the hobby electronics press a new method. You copy (via laser printer or photocopier) your layout onto special film, and iron it onto normal board – the track layout is supposed to stick, whence the board can be etched. This seemed too good to be true, so I thought I'd give it a go. But first, I needed something to produce a nice PCB layout. Hence the experiments with the designers reviewed here.

I looked in the WACCI PD library, and found (on homegrown disc 14) PCBdraft – just what I wanted. Or so I thought. I also found references in old ACUs to various other designers that used to be sold yonks ago. A quick phone call to Angela (Merline-Serve) Cook led to two other offerings arriving in the post.

My collection now ran as follows: PCBdraft v1.0 by RD Francis, on WACCI homegrown disc 14; Electronic Printed Circuit Board, aka. LT by Face Hugger; and Printed Circuit Board Drafting Utility v3.00, by Tony Dean of CADsoft Systems. The latter two programs are available from our beloved librarian, who hasn't issued them because he's unsure of the demand. (If anyone's read this far, maybe there will be a demand...)

My trials involved designing a layout to split a 50-way ribbon cable input (as 2

by 25 way IDC terminator on 0.1" pitch) into 0.1" pitch connections, suitable for soldering onto strip board. Of course, I also had to come up to speed on the packages by judicious reading of the documentation. I timed each of the trials, and tried to remember the good and bad points of each package, ready for reporting here.

Autoroute Express

What common features do the packages have? Well, firstly, none of them will autoroute – that's really beyond our humble machines. (*You mean you haven't bought RoutePlanner? – Richard*) They all work to a basic 0.05" grid (since 0.1" is a standard pitch for component pin-

“The programs are available from our beloved librarian, who hasn't issued them yet because he's unsure of the demand...”

outs). They all print out (either directly, or via a separately-loaded program) to 9-pin Epson-compatible printers. They all come with examples of layouts they have made, and they're all of acceptable quality.

One problem with using a standard printer is that the vertical spacing is in multiples of 1/216" – which is incommensurate with 0.1" – so there are small errors in the vertical scale. I have

checked 25 pin spacings on all the packages, and they were all but a few percent out – quite acceptable in practise.

PCBdraft

Uniquely for this package, you view the whole of the PCB area on the screen at once, so you never lose your place in the world. The largest PCB that can be accommodated therefore is 8" by 4.75". This fixed view also leads to the major disadvantage – it is almost impossible to see tracks at the level of detail to, say, route them between 0.1"-spaced pads. (The printout does do the routing properly, providing you got it right in the first place). Some other good features of the package: it has extensive 'block' operations (copying, moving, reflecting), which may make it useful for repetitive designs. There seems to be no control of track widths, which is a bit of a nuisance.

The (separate) printout routine is rather slow, and you need to try out a parameter to get the most accurate spacing on your particular printer. However the documentation is good, and there are some nice touches (for instance the ability to change the colours of some of the components of the design).

LT

LT is, as I have come to expect from Face Hugger, somewhat different. The program is essentially a character-based graphics designer: each 0.05" square can have one of 57 (I think!) different track graphics put in it. The screen shows the current area of interest in the PCB, to an extent of 32 by 32 0.05" square cells. Therefore you can write ▶

into the area normally associated with the border (overscan). When you need the screen to scroll, it does so, ever so smoothly.

The maximum size layout that can be prepared is approximately 3.8" by 6.1". The program is quite smart at moving your cursor position in a sensible way, enabling you to print straight track (in one of 3 thicknesses) very quickly. But 45 degree tracks are hell! (It was these that largely led to an extra 20 minutes in completing the test piece).

The printout is of excellent quality, and I really like this program - I hope I have some layouts to make that don't have too many 45 degree tracks. The main menu has three 'sizes' mentioned (at least in the semi-English version I acquired): 3", 6", 12". These in fact have nothing to do with size, and instead refer to the number of passes the print head should make. Even on 12 passes, the speed is acceptable, and the print is then very dense. The documen-

tation is (very) minimal - but perhaps it is the elegance of the program that makes such a small amount of documentation appear sufficient.

CADsoft

The CADsoft program comes with extensive documentation, and is the most professional product. It is capable of producing boards up to 25" square! It works with 4 planes: track, pads, text, and silk-screen. It is unique in that the track layout is worked on from the component side, and the printout automatically reverses the layout for you. The printout can also be made at double scale, which when photographically reduced (by your friendly - or expensive - local photocopier) will make a nice dense, clean image.

Tracks can be laid by using cursor keys, and there are 5 thicknesses. dual- and single-in-line pads are automated, and there are 8 styles of pad. Again, you work only on a small portion of the

board at once, this time a keypress redraws the board for you with your cursor at the centre. As with PCBdraft, a colour screen would seem to be necessary. Luckily, I have one. But LT only ever appears in black and white, so green-screen should be ok for that.

Conclusion

The times taken to become accustomed to the packages, and to draw the test piece were:

LT	1 hour
CADsoft	40 minutes
PCBdraft	1 hour+

The PCBdraft circuit remained unfinished: I just couldn't get the detailed routing correct.

CADsoft's program gets my vote, then. But as I said earlier, I hope to find an opportunity to use LT: and there may be some circumstances (maybe no 0.1" pitch components) where PCBdraft could be the choice. ●

DISCUS

James Coupe takes a look at SD Micros' ubiquitous freebie disc organiser

Are there those of you out there that have problems doing some of the simple things with your computer, like keeping all of your discs in order? Do you break into a cold sweat if you have to use IERA? Could you cope with viewing a file if you didn't have a word processor?

If your answers are 'No', then Discus could be for you. Discus is a little program that SD Microsystems supplies with most of its non-CP/M programs. It runs under BASIC and makes some of your simple tasks much easier.

It *won't* let you copy files, to prevent piracy, but it will let you do most of the other things you need to do - renaming files, erasing files, unerasing files, viewing files, running files and the like. It's very small (only 4k), so if you hate having to remember filenames, you can save a copy of Discus to each disc you have to provide a better way for you to

load the programs off it. Using Discus, you could rename this copy to something simple to remember so you need never remember a program name again!

The program instructions are supplied on disc. This reduces overheads (no printed manual) but could be, for the beginner, a little bewildering. All you have to do to operate it is use the cursor keys to select a file and then use a single key press (all shown at the bottom of the screen). To view a file, move to that file and hit "V".

Is the program any good? Well, yes it is actually, but if you've got ParaDOS or DES then you can probably live without it. However, for the absolute beginners out there it is a useful program.

Would I buy it? Well, maybe. I probably wouldn't buy it separately, but because it comes free with another quality SD Microsystems program, you can't lose. ●

on the right track?

Richard Fairhurst

WACCO's Montrac

I always get this dreadful sense of foreboding when an envelope addressed in Peter Campbell's immediately recognisable handwriting pops through the door. It's usually either a Windows-only development utility for the PCW16, a photocopied review of AutoRoute Express to remind me that I still haven't finished RoutePlanner PCW, or a request to change the colours...

It was a pleasant surprise, then, to open the latest jiffy bag and find Montrac, a programming utility which is WACCO's first original release.

Despite the name, Montrac does not track the flow of money in and out of your bank account. Neither is it a branch of the RAC catering for those eager beavers restoring the Montgomery Canal (aka the 'Mont'). It is, in fact, a Z80 monitor/tracing utility – a much more specialised market than the former, and probably more so than the latter. (You should see the problems the Waterway Recovery Group have with their vans...)

Quick step to the left

If you use Arnor's highly wonderful Maxam 1.5 (and if not, why not?), you might have typed IQWXCL out of curiosity at some point. This brings up a not-very-well hidden message, telling you that "There is no need to mention single-stepping. We know! If the reaction to this is good, we will find time to implement it soon." The reaction evidently wasn't, because Maxam 1.6 never appeared: but here are the spiritual successors to Arnor, WACCO, with a program that does exactly that.

Single-stepping means just what it says: stepping through a machine code program, a single instruction at a time. This lets you observe the effect that each part of a routine has on its variables and the Z80's registers, so if something's going wrong along the line, it'll narrow it down until you know where the bug's hiding. Monitoring shows

you exactly what's happening, line-by-line, whereas tracing gives you a general overview of the program's progress without affecting register contents.

As well as these two single-step modes, Montrac stuffs a couple of other goodies into its economical memory requirement of 9k. The best is IROM, which not only displays all the commands built into a sideways ROM (à la IHELP), but also tells you the address of the associated routine: a great time-saver, although it's a shame it won't tell you about the hidden commands in AMSDOS or Protext. Less useful are IMEM and IUNC, which edit memory and disassemble code respectively. Both are reasonable enough routines, with plus points in the forms of IMEM's extra decimal display and IUNC's ability to understand XH/YH and SLL instructions. However... since the memory editor is annoyingly slow and the disassembler doesn't interpret RST parameters according to standard firmware practice, you'll probably find yourself using the (near-perfect) equivalents in your Maxam ROM. Of course, you could buy a single-stepper without owning an assembler. But that would be silly.

Cryptic clues

About as silly as calling a disassemble command IUNC, in fact. This stands for 'uncode', apparently. All of the Montrac commands have these cryptic three-letter abbreviations, reaching their apogee in ILBF for Load Binary File. (And yes, it

does do the same as Maxam 1.5's ILOAD.) They doubtless make things a lot quicker once you're used to the program, but be prepared to be very confused at first.

Similarly, there are no helpful Multiface II-style menus in single-stepping mode. Options are set with single keypresses, with a response of one beep for 'off' and two for 'on'. There's a useful command summary in the back of the manual, which you'll need to keep close at hand for the first few weeks.

Milk monitor

Time to dig out a bugged program to test the program with. Where shall I look? I know, my AA covertape disc. Ho ho.

But seriously, I received a letter from Ray Powell the other day saying that he couldn't get my Plus 8-bit printer port patch to work. Now I'm pretty sure it's a ROM problem: I reckon anyone who has more than four ROMs is asking for trouble compatibility-wise. But just to check, let's run it through Montrac to see what happens. ▶

THE BOMB ROOM

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Cheques/POs payable to MJ Bela.

Martin Bela, 11 Colwell Drive,
Brookside, Alvaston DE24 0UP

First of all, it has to be relocated lower in memory, as its original location of &A000 conflicts with Montrac's file buffer. Since I'm going to locate it at &7000, I try to use Maxam 1.5's IMEM command to set HIMEM to &6FFF. Problem. Montrac's IMEM command, the memory editor, gets there first...

Anyway, half a minute later, the patch is assembled and happily sitting in memory. The interface to the Plus 8-bit routines is obviously that of the firmware routines, so we need to load the character to be printed in A. With no equivalent to Maxam 1.5's IAF command, Montrac will only let you pass BASIC-type IX-block parameters: fine if you're debugging an RSX, but you'll have to write a short loader otherwise. This accomplished, we can finally get down to typing IMON.

Inside looking out

Sure enough, the first line of code appears: press a key, and it's onto the second. Montrac is sort of clever here, recognising that CALL &BD2B is a firmware routine. Since programmers generally don't want to trace the convoluted internals of the firmware (as long as you're not using a 464, you can be fairly sure it's bug-free...), the monitor automatically executes this routine without monitoring it.

Fine. Except that it's not actually a firmware routine (yet), it's my patch. The manual suggests pressing C will get around

this, but it doesn't. Rewrite the calling routine to jump directly into the patch, reread the manual, fiddle around for half an hour and... it still won't monitor anything other than the top level of code, passing CALLs with nary a murmur. Indeed, since it doesn't understand RSTs properly, it crashes as soon as it comes across a RST 8.

Up to our hips

Try it with the Montrac demo program. It traces subroutines beautifully. It prints helpful lists of register contents when asked, it prints the top ten entries on the stack, and it will even do this after every line if asked. It's all a bit too much like a teletype, with no helpful use of windows for values, disassembly and output, but this does mean that you can use it on a printer and turn screen output off completely – possibly a good thing, since there's no trapping for destructive routines like &BC0E (mode setting).

Try again with a different piece of my code, assembled straight from Maxam. It's still not having any of it. I know it's 2am, but I don't smell that badly, do I?

Judge Fudge

Montrac's internal engine, with a couple of exceptions (notably RST handling), is an impressive piece of code and could prove to be an invaluable debugging aid – especially for beginners, who are less likely to write programs that take over the whole

computer, leaving no space for Montrac. Single-stepping is the one obvious feature missing from Maxam, and Montrac has the potential to fulfil the need well and with a couple of nice extra options.

Sadly, it's not quite there yet. Its human interface is too forbidding for beginners, while it doesn't seem to co-operate very happily with Maxam 1.5, at least – bizarre for a program which is being sold by WACCO. Functions such as loop stepping and subroutine tracing, although great in principle, seem rather erratic. It's equally possible that I haven't got the hang of them, of course, but the CPC Z80 programmers' market now is so tiny (hands up, chaps...) that the program can't afford to seem less than inviting if even double-figure sales are projected.

I suspect I'd love a version 2, with proper RST support, full Maxam 1.5 support, more meaningful command names, and perhaps a souped-up display. Version 1 shows a lot of promise, but asks too much of the user to be the miracle debugger we all wanted.

Elementary, my dear

And an apology to Mr Watson for the extremely long time that this review has been in the making: pressures of time, alas (in 10 hours I'll be on holiday at last). Asking one of the few remaining CPC commercial programmers to review one of the others' products has its drawbacks... ●

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57	ZDE & CP/M utilities	67	Demos 7	77	Computext, pictures
58	Oversean 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
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90	Voyage 1993 demo	104-8	AMS music discs	122	Soundhacker modules
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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, Francais	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.

The other wonderful WACCI services

Tapes: Arthur Cook, Brympton Cottage, Brunswick Road, Worthing ☎ 01903 206739

Books: John Bowley, 97 Tirington, Bretton, Peterboro' PE3 9ET ☎ 01733 702158

Discs: Frank Frost, 4 Rectory Close, Wootton, Ryde, IoW PO33 4QB ☎ 01983 882197

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Helpline

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Mike Lyons ☎ 01942 259942

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Stuart Gascoigne ... ☎ 0117 983 1361

Basic, machine code, PD discs 19-36. Bristol.

John Hudson ☎ 01484 423252

Mini Office II, Wordstar/Newword, CP/M and PD, CPC-PCW-PC, dBase. Huddersfield.

John Bowley ☎ 01733 702158

PD/book libraries, WACCI ombudsman.

Clive Jackson

Cobol, Basic, Bankman, sorting, file handling, application programming. 37 Essex Road, Stamford, Lincs PE9 1LG.

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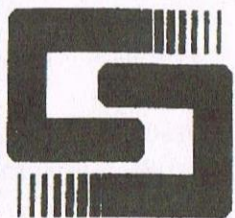
CPC Emulators on the PC.

Arthur/Angela Cook ☎ 01903 206739

Tape library, repairs, general CPC and natter. Worthing. All day until 10pm.

Please call between 7pm and 9pm (unless stated otherwise). The helpline is provided on a voluntary basis by club members to assist other members.

*"All is not all as it seems,
Thought the rest was just a dream..."*



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