

WACCI

**THE WORLDS BEST CPC MAGAZINE
AND PREMIER CPC CLUB**

ISSUE 114

£2.00

JULY

1997



The future of WACCI
is in good hands.

The Club

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Benefits of Membership

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

WACCI ON WEB

Matthew Phillips. The URL, is:
HTTP://USERS.OX.AC.UK/
~CHRI0264/woww.HTML

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Production Method

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WACCI

Edited By: John Bowley
Owned By: The Club Members
Chairman: Doug Webb

Conceived and Founded
By: Jeff Walker
In: October 1986

Developed and Expanded by:
Steve Williams, Clive Bellaby
Paul Dwerryhouse and
Philip (Tigger) DiRichleau

Copy Date: 26 July 1997
Membership: 261



Yes! I know your monthly fix of WACCI is late this month for which I'm very sorry about, but as you will read below you can understand the reasons for this. I received very few remarks about issue 113 so I feel I must be doing something right. However the remarks I did received are beeing looked into. Don't be afraid to make comments because at the end of the day the magazine is yours.

PAUL LEAVES WACCI

Yes it came, the day I thought would never happen is here, Paul Dwerryhouse has decided to step down as Treasurer and Distributions manager.

I would like to thank Paul on behalf of WACCI for all the excellent work he has done for WACCI over the years and I'm sure I can speak for the entire membership that our best wishes and thanks go to Paul for what he has achieved and we wish him the very best of luck for the future..

PERSONAL NOTE

Paul has help me so much in the past and I will greatly miss him. In my opinion WACCI would not be around to-day if it wasn't for him. Paul has left WACCI in such away that we **CAN** and **WILL** continue for many months to come.

SUBSCRIPTIONS, DISTRIBUTION

I will be dealing with both subscriptions and distribution for a short while.

Please send me your subs renewal for the time being. The new subs form is on the last page. *Thanks*

CONVENTION UPDATE

The convention is **ON**, so if you've not booked your ticket yet then I strongly suggest that you do.

To book your ticket send a cheque for £4.00 payable to WACCI to Angie Hardwick at 23 Station Place, Bloxwich, Walsall, West Midlands. WS3 2PH.

Here I must stop and apologise to Angie, last month I wrote 23 Station Road and not 23 Station Place. Sorry Angie I hope that this didn't cause too many problems, if you have sent anything to Angie to the wrong address would you please give her a call. *Sorry.*

WHAT A MONTH

When Paul resigned it did leave WACCI a few problems to be sorted out and fast and one of them was distribution.

SPECIAL THANKS

Another problem that I had was how to print out the labels. This problem was soon solved, Angela Cook <<with lots of help and advice from Paul Fairman. Thanks Paul -John & Angela>> will be printing the labels for me to use. *Thanks very much Angela for your help.*

MEMBERSHIP LEVELS

As you can see membership is slowly going up and I have also received 10 new enquires about WACCI, so the future is looking brighter. Simon Lucas informs me that he has also had enquires about WACCI due to the advert he placed in Micro Mart. *Well done Simon.*

On page 31. I've included a couple of WACCI ads. which members might like to put in their local shop windows.

ARTICLES

Dave simpson would like an article on how to connect up a modem and access bulletin boards or even the Internet using a CPC.

PICTURES

When writing articles or if you want to advertise a programme that you have written then please send me screen files in mode 2 whenever possible. *Cheers.*

HAVE I FORGOTTEN ANYTHING?

If I have then I'm sorry its been very hectic for me the past couple of weeks with phone calls from members (*which are always very welcome*) who are worried about WACCI's future now that Paul has left us. The truth is WACCI will be produced for as long as members want it. In the event of WACCI closing down any money that is not used will be returned to the membership, but thats not for a very long time yet if I've got anything to do with it.

The New Management

by Doug Webb

What an introduction I have had as the new chairman, my telephone never seems to cease ringing these days. Mind you I am not complaining, Bob Hoskins was correct when he said those immortal words "It's good to talk", many of the people I have spoken to I only knew as names within the magazine.

MEMBERSHIP ON THE UP

I am pleased to be told the membership is increasing slightly which is very encouraging so the club will certainly be around for quite a while yet.

MINOR PROBLEMS

With the club currently experiencing some minor problems and myself being somewhat of a new broom and after having had discussions with various club members I have invited specific members to join with John Bowley and myself in becoming what shall be known as a Management Committee.

Myself and some few more members have in the past felt that a more democratic decision making procedure should be in existence within the club. All too often in the past most if not every thing that needed to be actioned was initiated by the Editor or Treasurer.

BUT WHY?

Some of us felt that this was not the way we should operate, might I state here and now, if anything and I mean anything you wish this new committee to address, please phone or write to any of the names below on whatever to be considered.

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

John Bowley - Editor
97 Tirington, Bretton,
Peterborough. PE3 9XT.
Tele: 01733 702158.

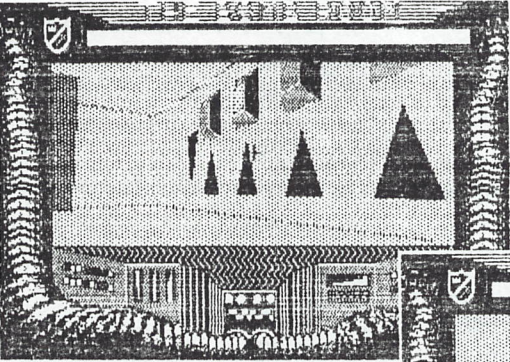
Angie Hardwick - Secretary
23 Station Place, Bloxwich,
Walsall, West Midlands. WS3 2PH.
Tele: 01922 449730

Frank Frost - Treasurer
4 Rectory Close, Wootton,
Ryde, IOW. PO33 4QB.
Tele: 01983 882197

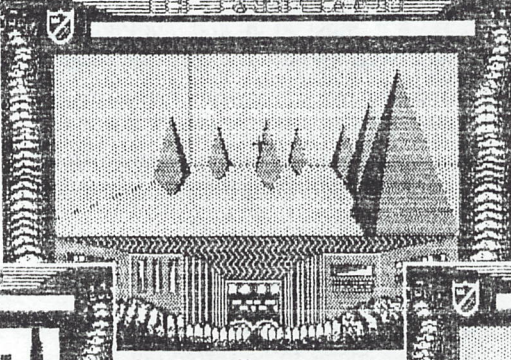
Frank Neatherway
3 Glebe Close, Rayleigh,
Essex. SS6 9HL
Tele: 01268 784742

If you have something to say good or bad about how the club is being run, please continue to use Fair Comment to make your comments.

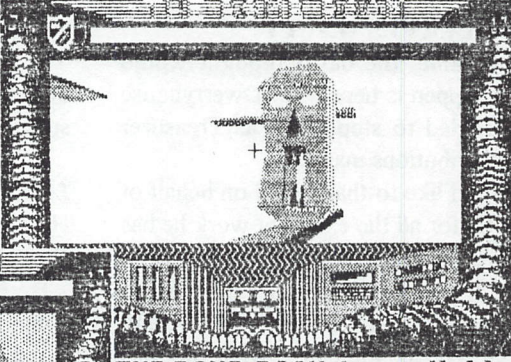
Doug Webb



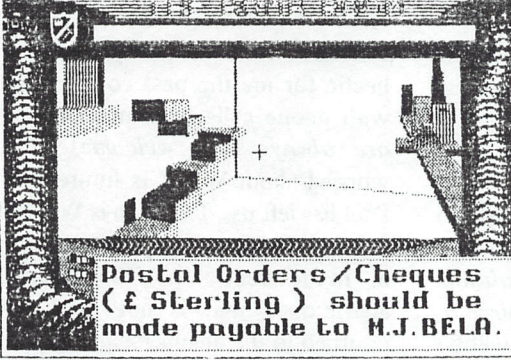
Set inside the rebels' Headquarters, you must find and disarm their ultimate weapon.....
.....a nuclear bomb!




THE BOMB ROOM
A new Freescape solid 3D game for Amstrad CPCs



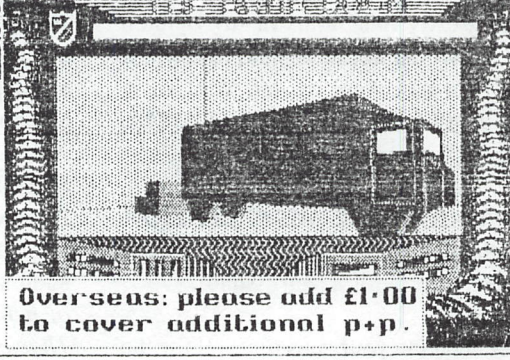
THE BOMB ROOM is available on 3½" disk... Price £6.49 on 3" disk... Price £6.99 (or send me a 3" disk of your own... Price £5.99)



Postal Orders / Cheques (£ Sterling) should be made payable to M.J.BELA.



Order from:
Martin Bela
11 Colwell Drive
Brookside
ALVASTON
Derby
DE24 0UP
England



Overseas: please add £1.00 to cover additional p+p.

Fair Comment

with Philip DiRichleau

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

THANX AND STUFF MK2

I'm back. Now don't start quaking in fear you lot, it's not that bad you know.

After a short sabbatical around Lincoln, which involved moving from my grubby little dungeon into this rather large mansion (*I bet you wondered where your subs went*), I'm now firmly into harness and biting at the bit once more.

However, I have a little bit of biting of another kind to do, mainly in the direction of the UAUG. I would like to thank them very much, I write with a heavy degree of cynicism, for the manner in which they reported my departure from WACCI. If that is their idea of the truth then I'm very pleased that I never bothered to become a member.

I would like to make it quite clear that I didn't retain any articles when I resigned as editor.

My resignation was purely for personal and family reasons which, to be bluntly honest, is none of anyone else's business. I had to choose between supporting Clare (*remember her*) and working on the magazine. The magazine, quite rightly, lost hands down.

UAUGs reporting techniques, which was totally inaccurate and utterly unfair, is highly reminiscent of the huge battle that occurred, and may still be occurring, between certain people of the Spectrum Scene. It would appear that one side of that battle now wants a similar conflict on the CPC scene. Lets not give him one.

On a final note, if this is what the remains of the CPC scene is about to become, full of back biting, lies and bitterness, then I, for one, will want nothing to do with it. I have better things to do with my time.

We were all friends once. What happened?

Philip DiRichleau
Fair Comment

EDITORS NOTE

I have seen a copy of the latest UAUG and the comments made on page four. In reply to this I want to state for the record that Philip did in fact send Paul **all** the articles when he resigned from the editors chair. When I took over as editor I used the articles that Philip sent to Paul, for issue 113.

Also on page four of the said magazine there is an article regarding the argument of C/PM being PD or not. It contains a passage saying and I quote **"To be fair to WACCI, the information they printed came from outside the group, but even so they should have done some research of their own."** With all due respect to UAUG maybe its time to practice what one preaches.

John Bowley
Editor

PLACING FREE ADS

Dear Philip and Members, I am sorry you have had to resign as editor of WACCI however it's good that you are at the Fair Comment page. I have been a member of WACCI for only 6 months after purchasing a CPC6128 for £25. In that time I have used most of the services of the club. As a new user of a CPC I would be very sorry to see it close, so it's up to us members to contribute in any way we can.

Everyone has seen the free newspapers that are delivered to our homes, well what about if each member puts a free ad. in their local paper to advertise WACCI? Even if we only got a few new members it may bring membership up to 1996 numbers. Ads. also could be placed in the local library, newsagent or supermarket.

What about a news section that other members can contribute anything computer related, just make sure it is interesting.

If I can come from N.Ireland and can get to the Convention then everyone else can

make the effort to support Angie and Angela: so have you got your ticket yet?

I have never seen an Amstrad newsstand mag. but I suppose they were like the old Spectrum ones. There must be programs in them that new owners like me have never seen so maybe WACCI could republish some of the better ones.

When I purchased my 6128 there was very little software with it and as I do not play games I have had to build up my own software collection.

The first thing I got was protext from Comsoft followed by a few PD discs from WACCI but I now feel the time is right to move to the Rombox and some roms. Now this is where I need help. Apart from the Protext range what other roms should I have? Maybe some-one could write to me and explain things and I will pay your postage costs etc. Older readers of WACCI will remember John Kennedy who went on to write for Amiga mags., well I can tell you that he now has a slot on local BBC radio every two weeks.

The last time he was on the air he was telling listeners all about the Internet. So you see what a small world it is.

Following on from issue 112 about WACCI I decided to find out about the web sit myself. I sometimes have use of a PC at home so the other night I logged onto the web site. As I did not have the complete web address to hand I did a search by typing in WACCI. There are a lot of different organisations using our name but there near the top was good old WACCI. It did not take long to find and connect to the web page and I found it a pleasant read and plenty about the user group, the PD library etc. If the pages are maintained then hopefully some people may join.

Whilst I was on the net I came across other Amstrad related web pages so the next time I write I will give their web site addresses.

One thing that surprised me was the amount of software that could be downloaded, even non PD games. Is this allowed? I know most of the old software houses have closed but the programmers must still have copyright to their creations.

Stealing someone's hard work is a non-starter so I would not encourage anyone to download these files. It's OK to back up programmes from tape to disc from the software but what do others think or have the rights of all the games on the net become PD? I would like to know.

John Adams
Belfast

<<Hi there John. It does feel somewhat strange to be back on the Fair Comment pages (and something of a relief as well I can tell you). Perhaps I should have stayed here and let some other mug take over the editing instead of offering myself up for sacrifice. Now don't everyone start agreeing with me.

I've always thought it was a good idea for WACCI to be advertised in the Free-Add magazines and, for a while, we were, but responses seemed to dry up. Perhaps its time to start another good burst of advertising in that general direction.

ROM's. Oh but I love ROM's. I have so many of them in me rombox that the sign on message now scrolls clean off the top of the screen when I switch everything on. As to what ROM's you should get. Try things like UTOPIA and PROSPELL, they go very well with ProText to start with. Best place to go for them, oh dear, here we go again, Angela Cook, Merline Serve. Address displayed in at least 4387 different places within the mag. Copyright is a strange subject. A couple of months ago I ran up a very large phone bill trying to contact the software houses and the response always seemed to be the same.

They really don't care tuppence so long as no-one is making any money out of it, but be very careful at the same time. Before you copy a bit of software, make sure that it isn't still available from those few software suppliers that do exist.

As to the net? I don't have a PC and I've no real contact with such things. Oh well, I suppose I'd better get used to finding lots of new excuses for having to ignore parts of peoples letters again - Philip>>

SOFTWARE FOR A PCW 8512

Dear WACCI, Does anyone know where one can obtain public domain software for a PCW 8512?

I have a friend who uses it for word processing but she has a young family asking about "games". If anyone knows a source of software both she and her family would be grateful. All the best,

Colin Hazell

Thame

<<By the miracles of modern computing, and all that jargon, I do. Try the WACCI public domain library. I'm using a PCW at the moment and, would you believe it, a lot of CPM+ stuff that is in the PD Library works quite happily on the PCW and well as the CPC 6128 (contrary to popular belief, there really is very little between the two machines when running CPM+. Otherwise, invest in a copy of 8BIT magazine for Brian Watson. They have the addresses of many PCW user groups who will be able to help. -Philip>>

Dear Philip,

May I take this opportunity to say thank you for editing WACCI Philip, you did a marvellous job. WACCI 111 was of excellent quality, even if it was done on a Mac! Well done, John, on taking over the post of being Editor. In order to make your life easier I can offer to help you with anything that needs helping with! To be honest, I don't mind whether the magazine is produced on PC or an Amstrad. If a PC is easier then use it! Don't make your life harder than it already is. I have a few programs lined up for public domain, one of them being a data organiser, rather like Microsoft's **DEFrag**. The other may be a game from Gremlin! Yes, it's true. I received a reply from Gremlin saying they don't mind if we put their games into P.D, but we must check if a third party holds the copyright.

More news when it happens. Why doesn't Angela Cook interview WACCI members? Starting with me, she could ask what got us interested in an Amstrad and what sort of hardware we own etc. I also think that perhaps scrapping the Public Domain Library is a bad idea. If when the magazine does close, the Public Domain Library will probably be the only place where we can get CPC

related stuff. If not many people use it, then surely there is no harm in keeping it if it is no hassle for the librarians.

<<WACCI has no plans to close any of its services. -John>>

I just purchased a brand spanking new Brunword MKIV ROM Module (*Brilliant piece of programming by the way*) but I cannot get it to print Hash signs. Any ideas? And how do companies blow their programs onto e.g 256k ROMs? How much would a ROM blower capable of blowing software onto such a large ROM cost?

Where can I obtain the program allowing you to put protected games on the CPC emulator?

There was no address to go to in the article about emulators. I have recently been having problems obtaining DMP 2000/3000 printer ribbons. A shop assistant said that Amstrad may no longer make them any more. Is this true? May WACCI live past issue 117.

Simon Lucas

Hampton Court

P.S. - Any progress on the ROMBO Digitisers?

<<Good day to you Simon. Right, last things first. As some of you will be aware, WACCI was given some hardware some time ago which landed on my doorstep, this included four VIDI digitisers. I have quite some difficulty with these which has now been resolved. Three of them have totally had it. They don't work. One of them does work but in a very bizarre manner that leads me to believe that something hasn't been wired up correctly. The Rombo Romboards work, or at least some of them do. They're missing a few components which we're in the process of finding at the moment. Each Rombo will take about three hours to get operational and my time in at an optimum.

There will be a number of them ready in time for the convention. The other problems about them is that I don't know if they're working correctly until I've added the final bits and there is a high failure rate.

I'm not the guilty party when it comes to ISSUE 111. Richard Fairhurst created that one and did an amazing job I think. Yup, excellent. Not being the editor any more, I don't feel I can comment on Angela continuing her series of interviews. That would be a decision

taken by Angela and John. I'd like to see some more myself though.

I'm also making no comment about Brunword either. My broken legs have only just healed up after the last time the Brunword Appreciation Society came calling around. I don't think they could take another battering. Emulators problems? Sorry, I haven't the slightest idea. As for ribbons for DMP printers, I imagine that Amstrad stopped making them a long time ago, if I know Amstrad -Philip>>

<<Dear Simon, You can still obtain printer ribbons for your DMP 2000/3000. Have a look around stores like Office World, Viking Direct are still selling Amstrad branded printer ribbons for the DMP range of printers for £5.74 or they can supply you with a compatible printer ribbon for £3.79. -John>>

Hi Philip, There is no reason whatever why the following should be of interest to other members, but, what the hell, it'll help to fill the mag'.

A couple of evenings ago I had cause to write to our steaming (*Er sorry, Esteemed!*) Editor.

On printing out, my Citizen 124D decided that my life was not hard enough already, (*All together AAH!!*) and, in an argument with the ribbon, the print head came off second best. This resulted in the tip of a pin breaking off (*I think.*) and that the bottom of all letters could no longer be printed. Most inconvenient, as this is my printer of preference.

Being unable, as yet, to get a replacement, and since I have a strong sense of curiosity, and a mechanical bent(!), <<*This is starting to sound very dangerous -Philip>>* I decided to have a Butchers. (*Er... Investigate the possibility of D.I.Y. repair!*). The head is held together by a metal clip on either side. So with a small screwdriver, and some trepidation, I prized them off. (*This is the point that some of you may think that I am crazy. Boy, are you behind the times!*) <<*Be warned this Ray Powell chap is totally off his head. I've had dealing with him before-Philip>>* The head came apart revealing, as expected, lots of little parts. Luckily, I was able to keep most of them under control by dropping them all over the floor. Finding the damaged pin, I swapped it for a good one, making it the lowest pin in the head. (*Have you seen the size of those things?*

I've seen thicker hairs. And each has it's own minute spring!!) Carefully vacuuming up the pieces, I reassembled the head, fitted it to the printer and tested it. Apart from missing out on the very lowest edge of the tails of lower case G's etc, it is adequate for general printing, at least until I can get a new print head. I may now be the owner of the only 23 pin printer in captivity. The moral of all this is that if you have nothing to lose, then go for it! You never know what is possible until you try. Cheers,

Ray Powell
Kings Lynn

<<*I think I'm going to bed -Philip>>*

When writing to Fair Comment please put you letters on either a 3" or 3.5" disc. Your discs will be returned to you as soon as possible. Thanks.

A LONG LETTER TO WACCI

My subs are due again and I have found myself wondering for the first time if I really do want to be a member of WACCI any longer.

If WACCI is going to be a group of 'train spotting' CPC whingers who think that the reason we all pay our subscriptions is so that we can read each others daft nice journals of CPC bigotry I am going to scream, in fact this letter **IS** a kind of scream.

WACCI 112 has arrived and the news is not good, or is it?. It is slightly reassuring to have detected that there is actually a dedicated small network of members who can 'get real' and show a healthy state of pragmatism at the centre of this user group when the 'brick hits the can'. They have laid most of the truth out for us all to see. Where has Richard Fairhurst gone?, by the way, and why?

The main issue seems to be about upgrading to a PC and therefore seeming not to have a use for **ARNOLD** or a user group.

Brian Watson has already told us that the CPC scene is virtually dead as far as he's concerned, and that means software sales. The software he is offering for sale is some of the best business-type software the CPC ever had in its domain as the battle against the PC progressed. That battle was fought proudly, but it was on 'terms' that the PC dictated all the way to

its popular victory.

Let's not kid ourselves about that, it's true. For word processing, graphics, educational, sound, business analysis, desk top publishing and the internet - if you've got the money to do better, **the CPC has been well and truly whipped!**

For modest operations in some of those areas the CPC is still of some use and all those people who remain in the CPC only mode (*me included*) should not despair.

The CPC is still worth the space it occupies in a home even when it is set up as a 'business' computer. As I see it, though, there is only one positive direction of development for the CPC. That is; **REAL** Computing.

The CPC is a plastic box of digital electronic switches, an active working memory of about 36k and a very useful high-level programming language to control it all with.

When the term 'Personal Computer' was **NEW** it was used to describe something even more primitive than our CPC. Millions of people bought personal computers and began programming them to find out what computing was or could be all about. Software was marketed to help people who could not or did not wish to climb the learning curve all on their own.

Hardware add-ons were 'marketed' **IF** and **WHEN** the 'industry' thought there was a popular market for them. These hardware add-ons quickly became ridiculous gestures of pretence that these tiny computers could do what **BIG** computers do. The battle lines were drawn across territory that the PC was always going to win on. So the whole thing got silly with nothing really positive happening in the 'small' computer scene.

We all live in a T.V. world. Even if we don't own and watch one, we are 'of' this culture in the same way that a person from a distant society would see us as christian even though most of us don't worship or practice the religion.

The emphasis on controlling an image on a screen as being the driving force behind the development of computers in our lives has been so assumed and unchallenged.

Look at **WINDOWS**, a massive

software suite which until it was recently re-launched as a complete operating system, was dedicated to just that.

The CPC just isn't a suitable environment for handling massive amounts of screen information.

In fact it isn't a suitable environment for handling massive amounts of anything.

We've become so screen orientated that we have allowed ourselves to be deflected away from what's **REAL** (*I use the word as meaning the opposite to the general meaning of the word VIRTUAL*).

That in itself is not surprising, if we stop to reflect on what else was going on in the eighties and generally sum up that decade. What does amaze me though, is that with all the people that were 'into' computers at the time when the whole scene was effectively hijacked by the MICROSOFT/IBM 'lobby', no one seems to have 'done their own thing', regardless, and developed these simple computers in other ways.

The tendency to have a 'peep' at the IBM/PC world and then come back and say "I can do that' with my computer", a computer that most definitely can **NOT** do that, has been the undoing of all that is good about our CPC. Amstrad Action would have a lot to answer for on that subject if it was available to answer calls these days.

The Microsoft/IBM 'lobby's' strategy was to bring International Business computing into the homes of personal computer users where there was a huge market waiting for them. To aid them in this process they 'personalised' business computing and 'saw to' the demise of computer education in schools.

Perhaps older readers still think that young children are being taught about computers in school. **WRONG!** That all stopped years ago. What happens now is, **IF** a school can afford one, they provide a powerful-ish PC with lots of Microsoft stuff on it and show children how to do their school work in a Microsoft environment on a PC.

Can I hear you shouting "**WHAT'S WRONG WITH THAT??!!** - **that is the environment they need to be prepared for!!**". **Yes!, I agree!**, that is a very important aspect of any young person's education, especially those who will find themselves in or near the 'metaphorical' "front office" of our great future! (?) but that has got about as much

to do with **COMPUTERS** and digital electronic systems in general as passing a Driving Test has got to do with having a career in 'Transport and the Environment'!

Somewhere along the line we have all been 'duped'. I suspect it was because there was a little bit too much power in being able to manipulate computers in ways that were not prescribed and handed down from 'On-High'. Those well profiled cases of young kids hacking into places they were not supposed to have been hacking into probably give us the clue as to why there has been a deliberate move away from the teaching of fundamental computing principles to the general assumption that a computer is a 'service access point'.

It seems most people can't resist the charm of a Super VGA standing on top of a big off-white box, housing a fan-cooled **PENTIUM** pumping truck loads of screen data around 16 or more megs of RAM and using a hard drive the size of a farm yard to dump anything and everything onto. That's fine if that's what you want and you have a purpose for that kind of machine, and most of us do, some of the time, but I really don't believe that that **IS** the main stream of the technological revolution.

It might just be the main stream of a **CONSUMER revolution!**, of which, interactive television may well turn out to be the most conservative aspect, with far more bizarre things happening around it.

It takes a powerful computer of a distinct type to play about with 'virtual' images. Those virtual images can be as simple as the re-creation of the appearance of layers of paper on a desk top or they can be as complicated as the ideas involved in virtual worlds of fantasy or flight simulation. Also, the reproduction of sound is a 'virtual' high speed / memory hungry function of a powerful computer.

The idea of **VIRTUAL Reality** is not just some big idea yet to be developed and put in front of we 'consumers' at some point in the future, it is already here as a concept in computing and is being used now by most PC users, for example, every time they preview a document before printing it.

On the other hand there is **REAL** computing. Real computing is the stuff

that drives the technological revolution in the **REAL** world.

If you are lucky enough to own an automatic washing machine, or have a modern car with an Engine Management System, or a video recorder, or a home alarm system, you have got real computing working for you.

For industrial use there is a device called a PLC. It's a Programmable Logic Control unit. A machine can be set to function automatically simply by programming the PLC unit which then takes over control of the machine.

These PLCs are **VERY** expensive and not used much outside 'expensive' industrial processes where their cost is hidden in the overall pricing.

Why are they so expensive?. I've had a look at a couple of different types and they seem to be over priced for what they basically are. Generally they take the form of a small and simple keypad, a box of relay switches and sometimes step motor drivers, controlled by a small computer (*that sounds familiar!*) programmed in a variety of specialised high level languages.

In a nut-shell, they are small computers which do big jobs. How?. **They don't need to waste capacity on 'virtual' frills!.**

If our little Z80 based digital cruncher had been blessed with a multitude of **REAL** follow-up/add-on projects from the manufacturers over its life span so far, we would be looking at a wonderfully healthy CPC scene where we would be doing things with our computers that would have given Microsoft and friends a **REAL** run for their money.

Instead, they have dumped their software concepts and business-type packages right in our path and 'we' have crashed into them.

If we want a computer which can give us a super graphical interface and a vast space that will hold 3 phone books, an encyclopedia and the QE2, then the choice is obviously a PC.

If we want a device to control **REAL** functions and **DO** things in real time in 3 and 4 dimensions then the CPC (*or any other 8BIT machine*) has got a lot going for it.

If by now you are imagining a toy Dalek buzzing around on your kitchen floor, keep thinking!. There really is no limit to

what can be done with a computer like the CPC if you have a fresh approach to the whole idea of using computers and a good healthy user group that is free from intimidation by other branches of computing.

One pet idea of my own for several years has been to make a machine that can record radio programmes in a similar way to the way a programmable video recorder works.

Do you realise how simple it would be to have an old 464 permanently switched on without having to leave the monitor switched on too? It is very easy to power the CPC 'board' independently and then have the power to a video monitor switched on at the touch of a key when it is required or automatically by a simple program which checks the time in a battery powered clock unit (*the Z80 can't be relied upon to keep accurate time on its own*).

The scope for 'computing with your Amstrad' is vast but it does require a shift in direction towards a user group which 'makes things'. If there 'is' a user group called WACCI for users of these CPC machines still going in ten years time, I think it will look something like this :-

It will be much less about magazine publishing than WACCI is at the moment.

It will have grown to a bigger size with new hardware-type people. Other small computers will be incorporated and so will PC types but as REAL computers working in the same spirit.

The whole range of these computers will have become very 'PD'ish and there will be several new machines around and even lots of home made systems based on the format of the dwindling stocks of originals.

There will be a regular magazine with lots of advertisers selling and seeking hardware and circuit designs and components.

EPROM blowing will be standard fare and most peoples machines will have re-designed circuit boards and cases with so many 'custom' ROMs attached to them that they will have had bigger power supplies plugged into them.

The Amstrad monitors with their built in power supplies and poor quality visual displays will have been abandoned.

'Fair comment' will be still going strong and it will have become the best 'notice board' in the land for the latest and even

the WACCIest in REAL WORLD COMPUTING.

The current PD library may have been put on a CD ROM and sent to emulation heaven at a PC somewhere near you.

PROTEXT will have been the name on the front page of everyone's newspaper after the biggest copyright infringement trial since 'The wheel v Henry Ford'.

The millennium project will have become a PC type project and drifted off in the general direction of a Ronco presentation on channel 20000 of interactive T.V. where people may get a chance to discover that the software isn't even as powerful as their remote control hand set.

O.K. back to WACCI 1997. I think we need to re-define what we mean by "**The serious CPC user**".

If we are trying to use our CPCs as if they were PCs, **ARE WE REALLY BEING SERIOUS?**

It is obvious by now that people who want a computer to do that sort of thing are giving up on the CPC and who can blame them.

After all, they **ARE** making the right choice!, 'for them', or to be precise, 'for that purpose'.

To my way of thinking, a serious CPC user is a person who recognises the device exactly for what it is and has a positive attitude about that which then leads into developing it or some other interesting and or useful function involving the device.

As the CPC is a small computer with a 'nifty' high level language which instantly appears at switch-on and a very accessible expansion port, I think it's obvious which way is 'UP' as far as the CPC is concerned.

With a few hardware additions and a 'back to BASIC' approach, we have got in our possession a powerful and useful electronic device which is quite capable of breathing life back into 'personal computing' as it was always going to be, before it was so rudely interrupted by an invasion of 'silicon movie makers'.

I've been to America, it's a very beautiful continent and I would never

wish to be critical of it, but you have to be a little philosophical when you think about the nation that gave us 'Hollywood' and then gave us 'Windows'.

My sincerest regards to you all, but can we please, please, **GET REAL**.

Norman Davies

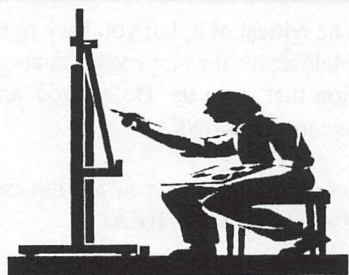
<<Hi Norman, this letter was originally going to be an article, but I decided that it should come under Fair Comment, since it covers your personal feelings regarding the battle of the CPC over the PC. Okay I admit I've got a PC which I also use to layout the pages of WACCI on, however I don't think using the PC has made it easier for me since I've had to learn how to use Microsoft Publisher which is not an easy task I can assure you, especially since I don't have the manual that accompanies the program., so really its trial by error. Whats all this got to do with your letter members may be asking? Nothing is the reply, but it was a good way to fill this page. If you want to stop me going on and on without saying anything then submit your own letters. You've been warned!!

OUT OF INTEREST

When I receive articles that are to go into WACCI its normally (*nothing wrong with that*) on a CPC formatted disc.

Once I have had a good look through them I then transfer the articles over on to a PC disc using a PD program called **DOSCOPY**. One of the things that I wanted to do was to transfer picture files from a CPC to a PC, this is also now possible for me to do thanks to Richard Fairhurst. Richard sent me a program called **MAKEBMP1** (*which I think is available from Brian Watson*) this program enables me to transfer MODE 2 screen files to BMP (Bitmaps) format for the PC. Again I use **DOSCOPY**, but this time you have to go into the setup part of the program and tell it to handle files as binary. Most of the pictures in this issue were done this way, but for MicroDesign (*DR*) files this is not possible yet, however thats when I call upon Jonty Jones to size up the picture for me. Thanks Jonty your're a life saver. Right thats now filled up this coloumn nicely so I'll let you all get on reading the rest of **YOUR** magazine. Happy reading. Seeya next month.

John



The Art Of Illusion

by John Reilly (The Doodler)

Just like the magic round table us artists are sworn to secrecy, if the tricks we've learnt got out then everybody would be doodling. But Jonty said it would be okay passing on palette switching to the WACCI members because they are all artists (he didn't say which type).

REQUIREMENTS

As all the work is done via BASIC rather than AAS's PALETTE MENU any decent MODE 0 art pack can be used (see Richard Fairhurst's review in the January issue), so no need to fork out twenty quid this time. Non programmers will be glad to hear that you need next to no programming knowledge to perform this trick.

There are two types of ink swapping animations. Firstly, if you have done a picture and ended up with a couple unused colours why not bring it to life. The second type is where you actually sit down and create a mini cartoon, obviously you are very limited as you only have sixteen colours to play around with. In time, if you find this to restricted you could try using more screens, but that's another story.

BY CHANCE

Below is a rough sketch which should give you an idea of what I am trying to



put across. The original picture used inks 0-13, leaving me two colours to muck about with. You don't have to draw the bloke, just draw a couple hands in MODE 0 and use inks 14 and 15 to represent the magical lightning.

```
10 ' Load screen and set colours
20 INK 15,26:INK 14,0
30 FOR t=0 TO 200:NEXT
40 INK 15,0:INK 14,26
50 FOR t=0 TO 200:NEXT
60 GOTO 20
```

PAINTING BY NUMBERS

The second technique is fairly easy to achieve, the principle is the same but there

is a lot more going on, for this reason I strongly recommend that everything is worked out on paper first. Tip, include the INK numbers and the colour to be used in the art package. The process is a lot easier if you choose opposite colours (light and dark, like red and dark blue), looks odd but makes the colours to be animated stand out.

Again, we are not interested in great pieces of art work here, this is just to give you an idea how palette switching works. So copy the drawing in MODE 0 using the INK numbers indicated and use the program to swap the inks around.

Palette switching works by telling the computer which colour to display and FOR how long, then when the times up change it to a different colour and move on to the NEXT sequence. You got it, its only a series of FOR and NEXT loops. **FOR my NEXT trick**

PICTURE DRAWN INTO ART PACKAGE USING THESE COLOURS.

ORANGE BACKGROUND

15 = WAND 1	RED
14 = WAND TIP 1	YELLOW
13 = WAND 2	BROWN
12 = WAND TIP 2	PINK
11 = STARS 1	BRIGHT BLUE
10 = STARS 2	BLUE
9 = RABBIT	GREEN
8 = MOUTH	WHITE
7 = NOSE 1,EARS	MAGENTA
6 = NOSE 2	PURPLE
5 = EYES,CHIN	GREY

Program on next page >>>>


```

'FOR and NEXT loop
10 MODE 0:FOR c=0 TO 15:INK c,1:NEXT: BORDER 0
20 MEMORY & 3 F F F :LOAD " magic.scr",&4000:
  CALL &4000
30 FOR c=0 TO 15:READ col:INK c,col:NEXT
40 DATA 26,0,15,1,6,15,15,15,15,15,15,15,15,15,
  26,0
50 a=0:b=1:c=1
60 WHILE a=0
70 IF a=0 AND b<10 THEN GOSUB 120 ' wand
80 IF a=0 AND b>=10 THEN GOSUB 180 ' stars
90 IF a=0 AND c>5 THEN GOSUB 220 ' rabbit
100 WEND
110 ' wand
120 INK 15,15:INK 14,15:INK 13,0:INK 12,26:INK
  11,15:INK 10,15
130 FOR t=1 TO 200:NEXT
140 INK 15,0:INK 14,26:INK 13,15:INK 12,15
150 FOR t=1 TO 200:NEXT
160 b=b+1:RETURN
170 ' stars
180 INK 11,26:FOR t=1 TO 100: NEXT:INK 11,15:
  INK 10,26:FOR t=1 TO 100:NEXT
190 FOR r=5 TO 9:INK r,15:NEXT:c=c+1
200 b=1:RETURN
210 'rabbit
220 INK 15,15:INK 14,15:INK 13,0: INK 12,26:INK 11,
  15:INK 10,15
230 INK 5,0:INK 6,26,16:INK 7,16: INK 8,13:INK 9,26
240 FOR t=1 TO 2000:NEXT:c=1:RETURN

```

	No	INK No	Colour	:	No	INK No	Colour
0	0	0	BLACK		7	14	PASTEL BLUE
1	0.5	1	BLUE		7.5	15	ORANGE
2	1	2	BRIGHT BLUE		8	16	PINK
3	1.5	3	RED (BROWN)		8.5	17	PASTEL MAGENTA
4	2	4	MAGENTA		9	18	BRIGHT GREEN
5	2.5	5	MAUVE		9.5	19	SEA GREEN
6	3	6	BRIGHT RED		10	20	BRIGHT CYAN
7	3.5	7	PURPLE		10.5	21	LIME GREEN
8	4	8	BRIGHT MAGENTA		11	22	PASTEL GREEN
9	4.5	9	GREEN		11.5	23	PASTEL CYAN
10	5	10	CYAN		12	24	BRIGHT YELLOW
11	5.5	11	SKY BLUE		12.5	25	PASTEL YELLOW
12	6	12	YELLOW		13	26	BRIGHT WHITE
13	6.5	13	WHITE (GREY)				

AAS's Palette Menu

Merline-Serve/KAD, Brympton Cottage, Brunswick Road, Worthing, West Sussex, BN11 3NQ.
Tel/Fax 01903 206739



Recycling CPC Goods

Merline-Serve

Merline-Serve is a non-profit making service run by CPC enthusiasts, for CPC enthusiasts. We supply software and hardware no longer available from the commercial software houses and publishing companies.

We stock many books, magazines, fanzines, ROMs, hardware, software (both games and utilities) on disc, tape and cartridge. Our items are in good working order, or your money back. We will consider swaps, part exchanges and purchases ourselves. If you can't get hold of a CPC item, then try us, because we have probably got what you want, can get hold of it or know someone who can.

We also run *King Arthur's Domain*, a disc based PD library containing over 200 discs. For a catalogue, send a disc (3" or 3.5") and an S.S.A.E. to the address above.

Merline-Serve is now offering a standard 10% discount to all WACCI members. To get our latest catalogue, simply send an A5 S.S.A.E to the address above, and we'll get one on it's way.

...remember your 10% discount...

Britains Best Kept Secret

by Stephen Potts

Here we are summer is upon us and I still have not written the article I started last spring. Well I had better get on with it or it will be winter again and the point of the article will be lost for another year.

GET OUT AND ABOUT

In the summer months computer interest usually wains to more out of doors activities come the dark nights the screens glow brighter. Here is a chance to do a power of good and have a really good time you can involve all the family to, you can take a picnic and help the fledgling national computer museum get of the ground.

Note: This is only in its infancy so some allowances have to be made in comparison with the more lavish media grabbing exhibitions, but don't be given the wrong idea there is lots to see and do I could have spent longer than the full day I had.

TELL ME MORE

The place I refer to is **BLETCHLEY PARK TRUST** this is two miles south of Milton Keynes but that won't help you find it. I drove past the entrance several times and could not believe it when I did find it. The best way to get there is by bus or train as there is a path to the site opposite the station. If you come by car find Bletchley town then you want Bletchley park the locals are non to much help it is **TOP SECRET** remember.

HOW DO I GET THERE?

Travel south down Sherwood Road to Buckingham Road turn right past THE GEORGE turn right again before the EIGHT BELLS turn right again into Wilton Ave. Be careful it looks like someones driveway if you reach the church on Rickly Lane you have gone too far. The distances I am talking about are very small just a few hundred yards on each road. On entering the driveway you pass along until you reach a guard post this is how you know you are in the right

place. Then there spreading out before you lies the Victorian mansion house and park land that was commandeered during the war, destined to become hallowed ground not only to computer hobbyists but all the free world especially we British. For here is where the plans of such as Montgomery, Churchill, Lee Mallory and Harris were formed using the inside information on German movements from the teams of code breakers using the first electronic computer under Alan Turing this was **COLOSSUS**

Following a lecture in Whittle Hall at RAF Cranwell near where I live I was given a pamphlet handed out by Tony Sale who has dedicated his efforts to rebuilding the Colossus computer. This is necessary as the originals and the plans were dismantled and disposed of on government orders. The pamphlet jerked my memory and several bits of documentaries and books formed together for the first time. There is even a **JAMES BOND** element to all this as the machine in "**FROM RUSSIA WITH LOVE**" is a Lechter and this along with the **ENIGMA** machines form part of the display at the **CRYPTOLOGY TRAIL**.

Back to my trip though The area is in a certain amount of disarray as British Telecom has used the site as a training ground for many years. Some large modern disused at present accommodation blocks adorn the parking areas. Walking from the parking area those of you who like historic and military vehicles would be advised to to detour around the motor pool. This has a good display of vehicles in motion as well as on display and under going refitting.

Walking on up hill and bearing right to the main mansion the first port of call is

"**HUT 4**" this is the bar and refreshments area all in the 40's style. There is supposed to be a film in operation from time to time but this was not on the day I went.

WHAT'S THERE?

The Victorian mansion is next, there is a regular guided tour from here but as this doesn't cover the whole site I recommend you look over the mansion.

This is were the top brains of Britain were concentrated. The original projectors are still in place as used to view the latest ariel reconnaissance. The cinema used for briefing and the splendid library used for contemplation are nice and across the hall are the set of rooms maid over to the Churchill collection.

There is a mass of mementoes of the great man busts, paintings and his writings as well as popular cartoon images from his whole life not only the war years. Well worth the pilgrimage alone to some minds.

Step out of the door and bare sharp left and left again. This takes you round the side and back of the mansion to a display of veteran fire engines. In the stables there is a magnificent display by the boat club.

The bridge of a ship is built into a corner so you can don the captains hat if you like. Models of the Bizmark and Graf Spie are super along with many others including submarines. Several of these are used on the lake in front of the picnic area on special event days.

Opposite the stables is the NAAFI open for lunches etc., also there is the toy museum with lots of wartime exhibits lots of postcards poking fun at the Germans.

At this point I would suggest latch on to a guide. These are not professionals but people who have a commitment to the park. If you do a little research first you will get a lot out of the walk and talk. We walk along to the bomb proof rooms where the initial decoding was done by the ticking Bomb sorting out the codes into a sequence called a menu. In passing

I should mention that in one of these is the home of the model railway club with a couple of interesting layouts. Along the way we pass the punched card houses that had to be built to hold all the documents. The next place of interest is next to the traffic island just an area of rolling lawn with a door step to show yet this is the place yes the first ever computer room!!! well you will have to use your imagination to step back in time a little.

FALKNER HOUSE

We walk across the lawn to a more modern building called Falkner house. This is where your guide will leave you to wander the lengths of corridors each door off containing the various special interest groups all well marked and often with helpers in attendance. This is the most interesting area to me allowing you to wander at your own pace.

The first area is the collection of veteran cinema projectors and the associated history. There is also the aircraft recovery group for the area with a fine display. One door I passed I had to take a second look wipe my eyes and look again. Yes it is a complete German command post with live actors and in radio contact with the German high command! Next we come to the home front with lots of memory if not tear jerking exhibits. Lots of the organised parties of old comrades in arms had rye smiles on their faces at what were once every day objects to these people.

Time for another cup of rosie lee served by a spritely wren in full uniform seemed stockings and all.. then to the room dedicated to life in the park for the people billeted locally. The diplomatic radio section was interesting and the early radar there was the frosted glass chart for plotting positions not the picture of girls around a table pushing wooden markers as seen in countless films.

There is a large room the size of a village hall with all forms of computer large and small. Luck was on my team as I had Barry with me who used to program wire cores with graphite rods for I and O s, he took delight in seeing what was top secret at one time open to view and explanation.

Unfortunately this section is in need of some work as it is more a collection rather than an exhibition. pity I live four hours drive away or is that a good job for all concerned.

As you enter the **CRYPTOLOGY TRAIL** there is a section on the **ENIGMA** and **LECHTER** cypher machines. These encode the letters of a word by several spinning discs that rotate in a set order given in the code book and changed daily.

This is the type of machine James Bond acquired for the secret service in the film "from Russia with love" set against the back drop of Budapest. In fact the real truth is stranger than any Ian Fleming story line yes we had one delivered to the Embassy the week war was declared. The book is available at the shop.

Now we move along to the Cryptology Trail this section has lots of show windows depicting the various stages in a signals life. Dispatch riders bring in the intercepted messages from the relay stations and they are sorted codes cracked and then translated into English.

The out by courier to top people like Monty and Churchill etc.. These signals were so secret that the recipient had to read then hand them back so they could be returned to Bletchley for logging and storage.

We pass along until we come to the point I was most interested in the Colossus rebuild, this intrigued me and slightly disappointed by, perhaps my expectations were too high.

The Colossus was not what I had expected it was behind glass screens surrounded by papers and boxes of valves. The reasons are obvious if we think its still being worked on and as it involves huge voltages, hot valves and paper tapes spinning around an open frame so for safety it needs to be guarded off. I suppose also the masterminds working on the re build would be interrupted and distracted from their mission if we got too close or inquisitive.

From here we exit through the gift shop where there is a good selection of books, gifts and cards available.

The history of Bletchley Park is available also autobiography of top people such as Alan Turing who went on to Manchester University before being eliminated as a risk to security both these books I recommend.

So there you have it a beautiful place hidden away in the centre of the country with a glorious history and being hallowed ground as far as computing is concerned. I thoroughly recommend it.

The Park is a trust I would like to leave you with the words of the trust its self..

TO SECURE FOR THE NATION THE AREA KNOWN AS BLETCHLEY PARK IN RECOGNITION OF THE WORK OF THE INTELLIGENCE SERVICES ON THE SITE IN PARTICULAR THE CRACKING OF ENEMY CODES.

TO DEVELOP ON THE SITE MUSEUMS OF CRYPTOLOGY AND THE HISTORY OF COMPUTING AS BLETCHLEY PARK WAS THE HOME OF THE WORLD'S FIRST ELECTRONIC COMPUTER AND IS RECOGNISED AS THE BIRTH PLACE OF THE COMPUTER INDUSTRY.

If you cannot get into GCHQ do try here as it is a full and informative day out, you could do a little reading on the subject to get the full benefit of the park or do it afterwards if you spend your pennies in the book shop.

For a brochure containing details of open days and special events do send a stamped and self addressed envelope to,

Enquiries dept,
The Mansion.
Bletchley Park Trust,
Wilton Ave
Bletchley.
Milton Keynes.
MK3 6EF

The entrance fee is £3.00p per adult and £2.00 per Child and Senior Citizens, but you are advised to write to the above address for any price changes.

Take the family and enjoy yourselves.

Best wishes

Stephen Potts.

<<You've read what Stephen Potts had to say about this exciting hush hush place and if any member does decide to visit Bletchley Park then why not write to Fair Comment with your views or write another article.

If any member knows of any other computer related place to visit then please write in and tell us. -John>>

6128 Plus - The Dead Drive Sketch

by David Simpson

How many 6128 plus owners have tried to wire up a second drive to their machine and killed the A drive. If you have a dead A drive, then this may be of interest to you...

DISC MISSING

Unless the correct pinouts from the 6128 plus are known, constructing a second drive cable can be a bit hit and miss. The plus's second drive socket has 36 pins, whereas a disc drive only has 34. If the cable is not connected properly it can kill the A drive, as I found out to my cost.

When the drive is accessed, there is no motor sound, and the computer reports the dreaded Disc Missing error. This is not to be mistaken for a slipping drive belt, where the motor sounds can be heard. However, on examining the drive's PCB, the fault was narrowed down to one small component. This component is a circuit breaker, designed to cut out, like a fuse, if the +5V line is shorted. (See diagram.)

Unfortunately this component could not be found in the various electronics catalogues. Perhaps someone else knows differently.

Fortunately a simple repair can be done with a small single strand of wire, from a mains flex or suchlike.

DO NOT use more than one strand, or thick single stranded wire such as telephone cable.

For example, if you have a piece of mains flex, firstly cut off one of the cores, either blue or brown, then take a single strand from this.

TOOLS NEEDED

This repair can be carried out by anyone who is competent with a soldering iron. You will need:-

- 1) A small tipped soldering iron
- 2) A small cross headed screwdriver
- 3) A medium cross headed screwdriver
- 4) A small flat headed screwdriver
- 5) A strand of wire (*about an inch*)

6) A multimeter (*optional*)

NOTE this only applies to the A drive in a 6128 plus, and not an ordinary 6128. It is not a proper replacement for the circuit breaker, but providing the strand of wire is not too thick, it will do the same job, and anyway it is better than a dead drive.

HOW TO DO IT

First of all read through the instructions to get an idea of what is involved.

Make sure that everything is switched off. Disconnect the monitor and remove any add-ons, including any cartridge.

Turn the machine over and remove the six case screws, gently release the three clips, turn the machine the right way up, and tip the top of the casing back on itself taking care not to pull the wires to the power switch and LED indicator.

Remove the four screws from the disc drive casing, noting the black earth wire.

With the small flat screwdriver, gently lever each end of the ribbon cable connector, until it comes off.

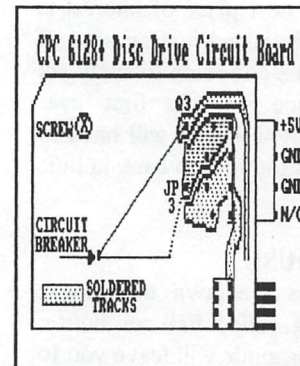
Gently lever the bottom of the power socket to release the plug. **DO NOT** pull excessively on the wires.

Remove the three or four screws from the drive casing and slide the mechanism out. Turn the drive with the PCB upmost and with the disc slot to the left.

From the diagram, locate the solder pads which hold the breaker in place. There is a white line drawn between them. With the meter, check that the circuit is open at this point.

If a meter is not available, a simple bulb and battery circuit can be used, however, **DO NOT** use a 9V battery as this may damage the drive.

Remove the two screws holding the PCB in place and gently lift. It may be necessary to unplug the PCB, as the connecting wires are quite short. The plugs can be levered out with the small



flat screw driver.

Check the position of the breaker. (It is a black rectangular component, with two legs.) Gently heat the pads, with

the iron, and carefully push the legs through the board, until the breaker drops out, and remove. **DO NOT** tip the drive over with the PCB removed because the write protect switch pin may drop out. If it does, it goes back into a small hole in the mechanism, directly below the spring switch on the PCB.

Gently re-heat one of the solder pads, and push one end of the strand of wire through the existing hole. Loop the wire, and pass the other end through the other hole. It may be necessary to put a little more solder on the pads to make a good joint. **DO NOT** make the loop too big, as it may short to another component, or the drive mechanism.

Re-assembly is the reverse of the above:-

1) Re-connect any plugs from the drive mechanism, to the drive PCB, and replace the two screws.

2) Slide the drive mechanism back into the metal casing and replace the three or four screws.

3) Making sure the drive is the right way up, reconnect the ribbon cable and power plug, and replace the four mounting screws, noting the black earth wire.

4) Gently lower the top of the computer casing. Make sure that the retainers on either side of the interfaces at the back are outside the casing and clip the top down.

Turn the computer over and replace the six case screws. The repair is now complete. Reconnect the computer, and the disc drive should now work.

David Simpson

The Puzzle Page

with Carol Bowley



Hi there y'all and welcome to another fabulous page of puzzles for you to try your hand at. Judging by your entries for last months page, you liked the new style and having only to enter one puzzle to win a prize. A lot of you still sent answers for all the puzzles but that was good because it meant that you were putting your grey cells to work. Now on with this months selection. Good Luck!

PRIZE PUZZLE ANSWERS

Well done to all of you who painstakingly went through issue 111 for the answers to these questions.

The answers are:

- 1) Whoopi Goldberg (*Sister Act*)
- 2) John Bowley
- 3) Printed Circuit Board
- 4) Dave Caleno
- 5) Tom Tom
- 6) Brian Watson

WINNERS

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

- | | |
|-----|---------------|
| 1st | Eileen Large |
| 2nd | Harry Hornsby |
| 3rd | Ray Finch |

Well done to you your vouchers are on their way.

PUZZLE TWO - UP WE GO

The answer to this question is, and I hope I have been informed correctly, there are no steps up the Blackpool Tower.

There are however the steps used by workmen but apart from those a lift is used to reach the top.

PUZZLE THREE - DINGBATS

Yes the answer was 'Putting your foot in it.'

That one was quite easy wasn't it.

PUZZLE FOUR GUESS WHERE

The place was the Isle of Wight.

Well done to all who entered. Now on to this months offerings.

PUZZLE ONE - GUESS WHERE

This is a building built of marble. It has jewel encrusted tombs and an octagonal echo chamber. The grounds of the building are known as the Gardens of Paradise. The building is most famous for its reflection seen in the waterways running through the gardens. This romantic building was erected by an Indian Emporer as a monument to his dead wife.

Easy peasy!

PUZZLE TWO - DINGBATS

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

MANDOGER

I don't think that ones too hard but maybe harder than last months.

PUZZLE THREE PRIZE PUZZLE

By spanning the years 1959 to 1995, can you name the song title from just one given line.

Young folks will probably need to ask their parents or consult their local library and older folks vice versa. All songs were No1 hits in the year shown.

1. 1959 - I've rolled away my days and wasted all my nights.
2. 1960 - First you say you love me baby, then you start to freeze.
3. 1961 - I love every movement, theres nothing I would change.
4. 1964 - So Mother tell your children not to do what I have done.
5. 1967 - I was feeling kinda seasick and the crowd called out for more.
6. 1975 - Take your protein pills and put your helmet on.
7. 1977 - For the truth is I shall not leave you.
8. 1980 - You may say I'm a dreamer but I'm not the only one.
9. 1984 - Tell me how to win your heart, for I haven't got a clue.
10. 1986 - I've never seen you looking so lovely as you did tonight.
11. 1988 - The road is long, with many a winding turn.
12. 1995 - And so, Sally can wait, she knows it's too late.

This excrutiatingly hard puzzle was sent in by Ian Tanner. *Thanks Ian a £2.50 WACCI voucher is on its way.*

Thats your lot for this month as I've run out of room. Entries to be with me by August 16th. Sorry its short notice but we were delayed this month and want to get back on track for next month. *Ta.*

97 Turrington. Bretton.

Peterborough.

PE3 9XT. Tel: 01733 702158

Seeya next month. Carol

First Steps In Machine Code

by Richard Fairhurst

I would like to thank Richard Fairhurst who kindly gave WACCI permission to publish his machine code tutorial. Thanks Richard

Chapter One

Machine code is seen by most people as a highly technical subject, one which is difficult to break into and almost impossible to master. Yet it isn't actually all that bad - the image surrounding it is way out of proportion.

The problem with machine code is not that it is complex, but rather that it is very simple. There is no instruction in machine code to print on the screen - you have to write your own. Luckily, this isn't too difficult with the Amstrad CPC range of computers, which include a comprehensive set of routines you can use from your own machine code programs (called the "firmware").

First of all, what is machine code? The answer is that it is the simplest form of instructions that your computer can understand. Even though, in BASIC, if you type PRINT "Robot PD Library is the best" and the message gets printed on the screen, the BASIC interpreter inside the computer has had to work out what to do with the line first - and the BASIC interpreter is written in machine code.

What does machine code look like, then? At its simplest level one instruction could look something like:

11001001

which is a binary number, composed entirely of noughts and ones. When this is converted into hexadecimal, it becomes C9 which is 201 in decimal.

The Z80 (which is the fundamental chip inside your computer) understands that number, when sent in binary form, to be

an instruction to return from a subroutine (recognise those from BASIC? You'll find them in machine code too).

Of course, it would be a bit difficult to memorise the binary number above as a program instruction - and bearing in mind that there are about 700 such instructions understood by the Z80, impossible to memorise them all! This would still be very difficult even with a hexadecimal number. Thankfully, to program in machine code, you don't need to know these.

You might have heard of an "assembler" program. This works by translating short names (known as mnemonics) into the numbers above.

These names, as they actually mean something, are much easier to remember. So, with an assembler, you write your program in mnemonics and the assembler converts it into numbers for you - a machine code program in the computer's memory for you to run. In the example of the code C9 (hexadecimal), the mnemonic is RET which is obviously an abbreviation for RETURN: easy to remember as the code which RETURNS from a subroutine, isn't it?

Two quick notes, important for you to know before we embark on any machine code programming:

1. There are three different ways you will need to know how to count in: decimal (the standard system you know already), hexadecimal, and binary.

Hexadecimal is quite easy to grasp: study this table to see how decimal (derivation: 10) and hexadecimal (from 16) compare.

Decimal : 1 2 3 4 5 6 7 8 9 10 11
12 13 14 15 16 17 18 19
Hexadecimal: 1 2 3 4 5 6 7 8 9 A
B C D E F 10 11 12 13

You will see that, whereas decimal numbers are composed of digits from 0-9, in hexadecimal there are 16 digits: 0,1,2,3,4,5,6,7,8,9,A,B,C,D,E and F.

Therefore, you only need to use two digits when you reach 16 in decimal, which is 10 in hexadecimal (hex for short).

Binary is a bit more complicated. The basic principle is that any number (positive and integer: forget about negative and fractional numbers!) can be expressed in powers of two, i.e. 1 (2^0), 2 (2^1), 4 (2^2), 8 (2^3), 16 (2^4), 32 (2^5) etc. (The number doubles each time: hence the name "powers of two".) Binary works as follows:

Take your number and break it up into powers of two. Write all the powers down, starting with 2^0 (1) at the right and working left, with a 1 indicating that the power is part of the number and 0 that it is not, e.g.:

decimal 53
binary: 110101

with the binary number being broken down as follows:

powers:	32	16	8	4	2	1
used?	yes	yes	no	yes	no	yes
(as:	32	+16		+4		+1=53)
binary:	1	1	0	1	0	1
	(1 for yes, 0 for no)					

Not that difficult!

The CPC's fundamental part (the Z80) - the Central Processor Unit, or CPU for short, which understands machine code - can handle eight 0s or 1s at a time. From

this, you can see that the highest number possible is binary 11111111, which becomes hex FF or decimal 255. Each one of these 1s or 0s is known as a "bit" (*this is why the CPC is called an eight-bit computer!*), with a group of eight being a "byte". Half a byte, i.e. four bits, is a "nibble", but you won't meet that very often. Bits and bytes are the most important terms to remember.

2. How are these machine code programs stored?

Your CPC has 64k of memory. Ok, if it's a 6128 or has a memory pack on the back, then it has more, but the extra memory is only accessible through more complicated techniques.

Only 64k can be used at once, anyway, by the Z80.

"K" stands for kilobyte (it should really always be a capital "K", the international prefix for kilo-, followed by a small "b" for byte, but few people bother these days!), which, despite what you may think, is not composed of 1000 bytes, but 1024 bytes (*near enough a thousand!*).

Why that strange number? Well, write 1000 in binary, and you get something horrendously complicated (1111101000). Write 1024 in binary, and the result is:

10000000000

A lot easier from the computer's point of view - and RAM chips are built for easy binary numbers like this (*or 256 bytes, or 64k, or whatever*).

A simple instruction, like RET which we discussed earlier, is contained in one number: in the case of RET, C9 (*hex*).

This fits neatly into one byte, as could 254 other instructions!

However, there are more complicated instructions, which can take up more than one byte in the computer's memory, such as LD (addr),BC - don't worry, you don't need to know what it means yet! This takes up four bytes, being:

ED 43 xx xx

xx and xx are where you put in the value of addr (*short for address*), which can be from 0 to 65535. You might be wondering

how this is done, as each value can only be from 0 to 255 - or can't it?

Well, yes. But put two values from 0 to 255 together (*each composed of 8 bits*) and you get a sixteen-bit number: the maximum possible with two bytes, then is 1111111111111111 binary, or 65535 binary.

This, of course, is the top byte in your computer's memory (*remember each "k" is 1024 bytes, so 1024 * 64 is 65536 - and there are 65536 bytes from 0 to 65535*), which explains why there are 64Kb of addresses (*or locations*) in the CPC's memory, thanks to the Z80's capacity to couple two bytes together.

So how do you turn, say, the number 40000 into two bytes?

First write it in hexadecimal, and it comes out as 9C40. (*In case you're wondering how to do that, you might be able to use a calculator, or BASIC will do it by PRINT HEX\$(40000)*) Then split this up into two bytes - 9C and 40, right?

Well, almost. The Z80 actually writes it the other way around, so the instruction LD (40000),BC would be, in bytes:

ED 43 40 9C

Of course, with an assembler, you just type in the line LD (40000),BC and it does all the dirty work for you!

The first thing to learn about programming in assembly language (*that is, machine code in mnemonic form - e.g. RET instead of C9*) is how to use registers. Registers are a bit like variables in BASIC, except that you can have as many variables as you like and call them anything at all. In machine code, there are only a few registers and they have fixed names.

Each one can only hold a value from 0 to 255, and the basic ones are:

A (*Accumulator - the most useful register, which you can do all sorts of operations on*), B, C, D, E, H and L

However, as I mentioned earlier, you can pair two bytes together to create a sixteen-bit number, that is one from 0 to 65535. You can also pair two registers

together to hold a sixteen-bit number. However, you can't (*say*) pair A and E together. They are paired as BC (*i.e. the B and C registers*), DE, and HL. You can't pair A.

Two more important registers are IX and IY - known as the index registers.

These are officially sixteen-bit registers and you can't split them up into two eight-bit registers - well, not officially anyway!

A special feature of these registers is that they are often used with an offset, from -128 to 127, so instead of telling the Z80 to fetch the value at the address contained in IX and put it in A, you can tell it to go to the address contained in IX PLUS TWO (*or whatever*) and put that value in A instead.

Finally, before we start real programming in machine code in the next chapter, you will need an assembler. For those of you with money, go out and buy MAXAM by Arnor - preferably on ROM (*which will need a ROM-board to plug it into*).

The best combination is to buy Maxam 1.5 (*the expanded version*) and Protext, the word-processor: you type your text into Protext and Maxam 1.5 assembles it for you. (*You get a great word-processor into the bargain, too!*)

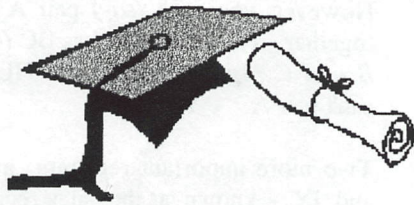
A cheaper alternative is to use a PD assembler, such as the excellent KIO-Fox (*available from Robot PD!*).

You are also likely to need lots of patience, because when machine code goes wrong, it does it in style. "Syntax error" seems friendly to the machine code equivalent, which is most frequently a crash.

Therefore you'll need a few ready-formatted discs to save your code onto before running it, and some good music on a stereo system to stop you going completely up the wall - as well as a supply of food and drink, so that you can go off, have a break, and come back refreshed!

Richard Fairhurst

<<More from Richard in next months issue -John>>



The Last Teacher

by Peter Rogerson

It was the dead end of Time. The sun was going out, the moon had shattered into a billion shattery pieces of igneous rock and somewhere in the vacuum of nothingness nothing stirred.

But there was the class. The last class, as diverse as they come, and as foolish when once it had been so wise. Or so the teacher thought, and he should know because he was the fount of all wisdom. Or she. Maybe the teacher was a she.

The CPC 6128 (*he or she, the teacher*) stood at the front of the class and bowed its head (*monitor? rombox? joystick?*) sadly as the host of tiny terrors jeered and cursed and told it that times were ... gone, passed, faded, become one with antiquity and what tiny terrors least respected was antiquity. And in between such a diatribe the diminutive monsters fought like diminutive monsters will, bashing each other over their heavenly heads and sniggering live Beavis or Butthead in the throes of a particularly repulsive nightmare involving ginger beer and wet underclothes.

"Who's ever heard of a Z80 anyway?" sneered one little tyke, wiping its nose on a grubby sleeve and grinning inanely like little tykes do." And sideways, backwards, forways roms!" leered a golden haired slip of a skirted thing, her face strained into the leer by her contempt for everything archaic.

"Amstrad joysticks!" bawled a tubby brat with hair spiky as a hedgehog on speed. *"Quiet, children."* murmured the CPC 6128, looking up and catching their eyes with its little red disc-drive light, not weak, not feeble, but certainly little.

They ignored the murmur because murmurs are for ignoring. They only respected screeches and shoutings, and even then their respect degenerated to disrespect because only those worthy of the contempt of disrespect actually screech and shout like that.

There's a lesson here, whispered the CPC 6128 to itself. After all, it hasn't always been like this. **No sirree!** Once we were united and strong but now if only we could stick together, the class and I, then maybe we could ride the ending that's

coming sure as sure and emerge at the other end stronger, more dynamic, alive.

"That's all Z80's can do, mumble like a morbid snail, and be so s-l-o-w a fellow's got time to say the hundred times table up to a thousand between two simple functions." Cackled the first little tyke.

"And talking about roms, how about gigabytes of them, loads and loads of gigabytes all ready and waiting for a smart old Pentium Processor to sort through them." Smirked the golden haired slip of a skirted thing, all rosy cheeks and sweet blue eyes.

"And who wants a sloppy old Amstrad joystick when they can have a mouse with more buttons on it than my second best wedding suit!" Chortled the spiky hedgehog tubby brat. *"You're all so unfair."* Moaned the CPC 6128, seeing far enough into the certain future to know it was on a loser.

"You're old," spat another cretin, a white haired floppy kid in short grey pants and whiskers. The pants didn't matter because the world was cracking and nobody notices the length of pants when they're balancing on two sides of a spreading chasm and there's fires oozing up from below.

"And useless." Added a fairy queen in ribbons and lace and with a peaches-and-cream complexion.

"Fit for the scrappy." Confirmed a dribbling old man with hayfever and a limp. It was a very diverse class, with dribbling old men in it, not to mention hayfever and limps. But then it had to be. After all, wasn't this the end of time?

"Then go to your precious Pentium PCs and type in this listing." Ordered the CPC 6128 in its loudest and most authoritative voice, shocking them with the outburst.

As the earth rumbled and shook a series of basic lines rolled down its screen and the class stared in wonderment.

"What's that?" Demanded the golden haired skirted thing. *"Only Tetris."*

Smiled the CPC 6128. *"Type it in, children, and marvel as the tiles slide down the screen, wonder as they fit together and vanish in the twinkling of an eye, spend your days playing with the tiles, perfect your skills, tune your exterity for Eternity beckons and we'll all need skills if we're going to survive that."* *"But how?"* Asked the tubby brat, quieter in his confusion. *"With your fingers."* Sighed the CPC 6128. *"It really is too easy for words, and it's not that long, doesn't need gigabytes of whatever it is inside your plastic cases..."*

They tried, of course they did, brats and tykes eager to learn one last new trick, tapping and typing away at their sleek keyboards, the very image of industry, but the rows of letters and numbers and squiggly shapes did nothing, not even produce troublesome syntax errors.

"The problem with you idiots is your crazy imperfections." Murmured the CPC 6128. Then it looked up to the ceiling and sighed. *"The way you squabble together! We could be so happy, us beings at the end of time,"* it went on, *"but you're all so ready to fragment into a thousand little shards of nonsense at the drop of a pentium hat when we could gather in a huddle like cuddly fluffy things and enjoy a kind of harmony, me with my Tetris, you with your vacuums, a wonderful new gestalt for an uncertain future why are you getting to be so . so ... so damned factional?"*

"You're a puff!" Giggled the golden haired skirted thing. *"Gay."* Added the white haired floppy kid. *"A pervert."* Sniggered the spiky hedgehog tubby brat.

The CPC 6128 might have wept at that line of insult, might have shed silicon tears of exasperation and dismay at the very wrongness of it, but suddenly, like it always would, the world came to its expected end and all the lights went out.

The class dissolved in boiling burning death and the teacher sighed again before reaching a nervous length of smouldering printer cable across its keyboard, and pressing **CONTROL/SHIFT/ ENTER** twice.

Peter Rogerson



Market Stall

with Angie Hardwick

23 Station Place,
Bloxwich, Walsall
West Midlands.
WS3 2PH
Tele: 01922 449730

Well what an extraordinary month!! I am very sad that Paul has resigned he has been a very good servant to WACCI and he will be sadly missed. The good news is that I now have a financial backer for the Convention so it is definately on, the backer has agreed to cover the costs in the event of any loss. Thank you.

SALES

3" External Disc Drive (heavy) in working order. £25.00
3" Master Disc and back up copies & CP/M Plus Master Disc/Manual. £15.00
Mini Office 2 on Disc with back up disc and Manual 3". £7.00
Planit on 3" Disc with back up disc and Manual. £5.00
DTP AMX Mouse still boxed as new mouse, interface etc. £30.00
Amsoft Stock Control System CP/M 2.2 boxed 2 discs and Booklet. £20.00
47 Reformatted 3" Discs at £40.00 the lot or £1.00 each.
8 New 3" Dixons Double Density Discs. £10.00

Also several books as follows offers invited. Mastering Machine Code on the Amstrad, 100 Programs for the Amstrad and Doing business with your Amstrad.

PLEASE CONTACT: Tom Litherland.
TEL: 01248-716726

CPC 664 Keyboard + drive. £25.00
CPC6128 keyboard + Drive. £30.00
CTM 640 Colour Monitor. £15.00
CTM 644 Colour Monitor. £30.00
DDI Disc drive + Interface. £30.00
GT63 Green Monitor. £10.00
MP1 TV Modulator. £10.00
DMP 2160 Printer + Manual. £30.00
DMP 3160 Printer + Manual. £30.00
CPC6128 Manual poor condition. £2.00
CPC6128 Manual. £5.00
CPC664 Manual. £5.00
3" Drive Mechanism. £20.00
Soft 968 Firmware Guide. £20.00
Soft 157 Concise Basic Specs. £5.00
Soft 158A DD1 Firmware Specs. £5.00
3.5" 2nd Disc Drive with cable. £45.00
Multiface II. £15.00

DK Tronics 64K Rampack with manual and software. £20.00
Printer Cable. £5.00
Plus 2nd drive Cable. £5.00
Amstrad JY2 Joystick. £2.00
Joystick. £3.00
Soft 111 Basic Tutorial Guide Part 1. £3.00
Masterfile 464. £2.00
Mastering Machine Code on the 464 and 664. £2.00
Trivial Pursuit. £2.00
Frank Bruno's Boxing. £2.00
Tasword 464. £2.00
TAPES 50p each as follows: Bonzo Clone Arranger, Bonzo Super Meddler, Dun Darach, Game Over, Postman Pat, Green Beret, Rolling Thunder, Sweevo's World, Flimbo's Quest, Ghost Hunters, Back to Reality, Road Runner, Super Nudge 2000, Triple Decker 1 (*Invaders, Axiens & Muncher*), Freddy Hardest, Frank Bruno's World Championship Boxing, Dizzy, Ghostbusters, Batman, Feud, Neil Android, On the Run, Indiana Jones and The Last Crusade, Manic Miner, Beyond the Ice Palace, Ranarama, Bride of Frankenstein.
Tapes 20p each as follows: Dan Dare, Through the Trap Door, Paperboy, Roland in the Caves, Roland on the Ropes, Oh Mummy, The Galactic Plague, Xanagrams, Harrier Attack, Easi-Amsword. Amstrad Action Cover Tapes 20p each Tape No's 1,2,3,4,5,6,7,8,9, 10,11,12,13 + Birthday Gift Pack. Open to reasonable offer or swaps All Plus Postage.
PLEASE CONTACT: David Simpson, 9 Belmonth Gardens, Raunds, Northants, NN9 6RN TEL: 0193 322692. Also I've a stock of 3.5" discs going cheap.

Two CPC464s, Two CT64 Green Monitors, A Rombox Expansion unit, A unit containing 3" and a 5.25" disk drive, Various Roms including protext, CPM manuals and disks, more games than I can count, Epson miniature Printer.

OFFERS Nigel Bacon 01455-637472.

3" Formatted discs at 75p each Various games on disc. Send SAE for details to Isobel Swade, 41, Whitecross Road, Warrington, Cheshire. WA5 1LR. TEL: 01925-658724

WANTED:

John Adams wants Classic Computer Game ELITE on 3" complete with books and docs. PLEASE CONTACT John at 17 Abbey Gardens Belfast. BT5 7HL

Sajad Hussain wants MP3, he says the family never seems to want to watch what he wants.

PLEASE CONTACT Sajad at 111, Ralph Road, Saltley, Alum Rock, Birmingham B8 1NA. TEL: 0121-327-0117.

Mark Chater wants EMR Amstrad CPC 6128 Midi Interface and Miditrack Performer software package. PLEASE CONTACT Mark at 58, Chesterwood Road, Kings Heath, Birmingham B13 0QE. TEL: 0121-444-2940.

Rafael Delgado Peiro wants Amstrad Actions 1-5, 21, 34, 35, 38. Amstrad Computer User Mar 86, May 86, May 87, June 87, July 87, Sept 87. WACCI 4-9, 11-15, 17-19, 21-26, 28, 30. CPC User 1-4, 46 to the last. Videomaster, Dart Scanner, Ram Music Machine, 256k Ram Expansion. Manual for DMP 2000. PLEASE CONTACT: Rafael at C/Cyesa 3-1 DCHA, 28017 Madrid, Espana (Spain)

That's about your lot for this month I'll be back next month with some more goodies. Take care.

Angie

The Directory

This full directory will be printed periodically in the magazine. If you are mentioned and don't want to be, aren't mentioned or your listing is incorrect then please let me know and it will of course be corrected. Also, don't forget that WACCI has it's own book, software, tape and disc PD libraries, just look at page 30. Remember to send an SSAE if you can, it makes peoples jobs easier, and please mention WACCI when making any contact.

'Zines And User Groups

8Bit - Brian Watson, Harrowden, 39 High Street, Sutton, Ely, Cambs, CB6 2RA. The magazine for all 8-bit computers. A single copy costs £3 (cheques payable to BA Watson).

IEBA - See above for address. The International Eight Bit Association, for users and supporters of all 8 bit computers. Send two first class stamps and return self addressed label (no envelope) for more information.

Bonzo's Scrapyard - Dave Caleno, 29 Chapter Road, Strood, Rochester, Kent, ME2 3PX. Generally bi-monthly publication to compliment Bonzo suite of programs and tape to disc transfers.

CPC Format - Leon Brown, 43 Gwydir Street, Toxteeth, Liverpool, L8 3TJ. Tape 'zine, contributions welcome.

CPC South West - Dave Stitson, 4 Connaught Avenue, Mutley, Plymouth, PL4 7BX. Not just regionally based magazine dealing in general CPC matters with it's own PD library. A5 bi-monthly £1 plus postage.

Eurostrad - Thomas Fournier, La Hamelinie, 50450 Hambye, France. CPC Magazine with the majority of French article translated into very good English. A very good read. Free membership, each magazine costing one International Reply Coupon.

UAUG - & **Prism PD** Martyn Sherwood, 13 Rodney Close, Bilton, Rugby, CV22 7HJ. United Amstrad User Group and CPC User magazine.

Independent Suppliers And Services
Capri Marketing, Computer Cavern - 9 Dean Street, Marlow, Bucks, SL7 3AA. Tel 01628 891101 fax 01628 891022. CPC Soft and hardware items. Credit cards accepted. Send SSAE for list.

ComSoft - 10 McIntosh Court, Wellpark, Glasgow, G31 2HW, Scotland. Tel/fax 0141 554 4735 (24hr ansaphone). Email: cam1@cix.compulink.co.uk. Sells own developed plus other hardware and software. Credit cards accepted.

CrystalX Software - 11 Vicarag View, Redditch, Worcs, B97 4RF. Stellar Outpost, excellent strategy game. Tape £2.50, disc £3.99 (Cheques payable to A. Swinbourne please).

Dave's Disk Doctor Service Ltd - 01892 835974. Disc salvage, data transfer and conversions. All profits from the company are covenanted to charity.

H.E.C. (Amstrad Repairs) - 47-49 Railway Road, Leigh, Lancashire, WN7 4AA. 01942 261866/672424. Quality repairs with most at standard charges. Free technical support, advice and information on all repairs carried out. Offer 10% discount.

1) Merline-Serve, 2) Radical Software, 3) King Arthur's Domain - Brympton Cottage, Brunswick Road, Worthing, West Sussex, BN11 3NQ. Tel/fax 01903 2067 E-mail: MerlineServe@sussex.co.uk. 1) Service supplying mainly second hand hard and software as well as some general computing supplies, 2) MagaBlasters, Who Said That, Star Driver/Masters Of Space & Routeplanner. 3) Stock of 160 PD discs call for details on all above.

Officeland - 10 Sterte Close, Poole, Dorset, BH15 2AT. Tel 01202 666155 fax 01257 421915. Stocks contain toner cartridges, laser labels, laser transparencies, laser paper, printer ribbons (including DMP range), Deskjet supplies, PCW supplies etc. Phone for CF2 disc prices.

O.J. Software - 237 Mossy Lea Road, Wrightington, Nr Wigan, Lancs, WN6 9RN. Tel 01257 421915/01267 421915.

SD Microsystems - (Department Z), PO Box 24, Attleborough, Norfolk, NR17 1HL. 01953 483750. CPC, PCW and PC specialists in software, supplies and hardware. Tasman Software main dealers.

Three Inch Drive Belts - AJ Howard, 65 Altyre Way, Beckenham, Kent, BR3 3ED. Disc drive belts for the CPC and the PCW. Flat fitting, with instructions. Only £2.25 including P&P.

Trading Post - Victoria Road, Shifnal, Shropshire, TF11 8AF. Tel/Fax 01952 462135. CPC soft and hardware items. Some Plus/GX4000 items also. Credit cards accepted.

Tronics North - PO Box 7149, Garbutt, Queensland, Australia, 4814. Tel/fax 0061 77 253766 (international). Possibly the only Amstrad dealer in Australia supporting the CPC and PCW.

WACCO - See 8BIT Send A4 SAE for current information on Protex, Maxam, Utopia, Office, Model Universe and other new CPC product releases and upgrades.

WoW Software - 78 Ridpole Lane, Weymouth, Dorset, DT4 9RS. 01305 187155 (1-10pm). Support for both the CPC and PCW.

Public Domain Libraries

Hammer PD - Leon Brown, 43 Gwydir Street, Toxteeth, Liverpool, L8 3TJ. New library, any help would be appreciated.

Presto 2 - Brian Key, 87 Sweetmans Road, Shaftsbury, Dorset, SP7 8EH.

RSPD - Robert Sparrow, 27 Rosendene Avenue, Greenford, Middlesex, UB6 9SB. About 170 selections, just revised catalogue.

Ultimate PD - Paul Edwards, 26 Woodside Road, Irby, Wirral, Merseyside, L61 4UL. PD on 3" discs or tape.

If you know of any traders, services or PD Libraries that are not on this page then please let me know.

I hope that you will find this directory useful and I would like to thank Angela Cook who compiled this directory in the first place many thanks Angela.

John

Label Maker

by Angela Cook

I first used Goldmark's Disc Label Maker many years ago. I was impressed by it then and I am now. It's a simple concept and a simple enough program to use and it still remains lodged at the back of the brain (or more appropriately, the disc box) to haul out as and when needs demand.

DAD DAD DADDY OH

It was most probably my dad that introduced me to the program, as he seems to do quite a lot; "No dad, I like Mini Office's word processor, I don't want to use Protext..." I seem to remember saying. Dad had been using Label Maker for a while but I only cottoned on to it when he was making them with pictures on.

Disc labels with pictures, I was stunned. I soon shunted dad off the computer and took it over for myself <<She's not changed much -Dad>>.

There are pictures on the disc in separate small graphics program that acts as a slide show of sorts. After seeing the pictures as they would appear on the label, you can choose one to save out as a separate file to use in the main program. There are cars, castles, footballs, all sorts of different pictures.

They also come in two sizes, either filling the whole label or a shrunk version in the corner. And if you're not using pictures there are some snazzy borders available to take away from the plain text feel of a label.

MANIPULATING THE TEXT

Once the label with the picture (or the blank label) is loaded you can enter your text. There is enough room for ten lines of text or seven and a title at 38 columns wide. There are also ten fonts available and the function keys can print various graphics characters which include underline, windows and boxes, much the same as Protext allows.

You can even print on the spine area of the label, allowing you to read on the end edge of the disc as they may, or may not, sit in your disc box or piled on your desk.

There are separate keys for editing

text, inverting the label (turning it upside down to do the other side) and so on. All of these are accessible by a single key press and the menu is on the right of the screen, the label being on the right.



PRINTING THE LABELS

Upon loading the program you have the option of choosing between four different types of printer; Epson Compatible, Shinwa type (what?), DMP 2/3000 and Citoh-8510. Choosing any of these printer types will load the same program, just with a different configuration for printing.

We have found tractor feed labels are the best for printing on, a make such as Avery Labels are good. We used to buy our labels directly from Goldmark in all sorts of colours, very few of which we still have. I have a problem, being that I use an Epson Stylus 800+ inkjet printer and it doesn't seem to like the program.

Though I use the printer with my CPC (Protext) absolutely fine, Label Maker stretches the print by adding blank lines.

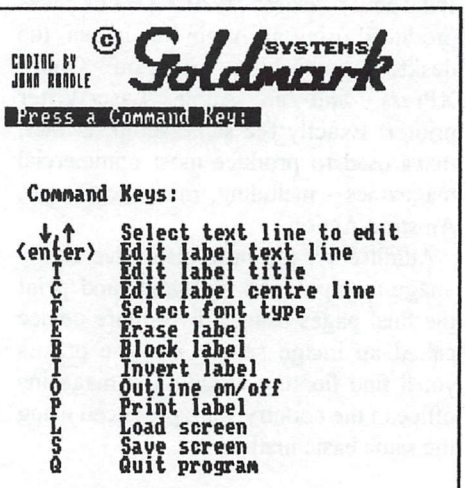
After speaking to Dave Caleno, who supplies this program, he said that he thought Stardump (another Goldmark program) may work.

When Label Printer arrived, Dave had included a print out of a label done on his BJ-30 using Stardump that worked perfectly.

I don't have the program so I haven't tested it out myself, but Dave assures me it works.

SUMMING UP

Label Printer is simple in concept and design, but it works and is extremely easy to use. It has many features I've not seen



in another program. Label Printer really is quite unique and focused which was the strong point of many Goldmark programs, such as having the foresight to produce both 3" and 3.5" labels. I recommend it strongly if you like your own labels as it is one of, if not the best program of this sort I have seen.

Label Maker is now available from Dave Caleno of Bonzo Scrapyard fame. He bought the rights for many of the Goldmark programs when Brian Barton moved over to other machines. Other items Brian sold include Nirvana which is now available from ComSoft and the 8 Bit Printer Port available from Merline-Serve. Dave now sells these programs for as little as he can, just covering costs to make sure of their availability. Label Maker is £8.50 on 3" disc and £7.50 on 3.5" disc. Other programs are available and it's best to ask about them. Any cheques please make payable to "D Caleno" and sent to; 29 Chapter Road, Strood, Rochester, Kent, ME2 3PX.

PowerPage Professional

by Richard Fairhurst

Did you fall for it? PowerPage Professional, my foot - it was actually Richard Fairhurst playing around with his Mac. But, as he explains, it needn't have been...}

APRIL FOOL

PPP was an April Fool. It doesn't exist. It'll never exist. WACCI 111 was produced using an Apple Macintosh, the desktop publishing program Quark XPress, and an Apple LaserWriter printer. Exactly the same setup, in fact, that's used to produce most commercial magazines - including, many years ago, Amstrad Action.

Admittedly, the pros also have flashy image-manipulation software, and print the final pages using a five-figure device called an image setter. But the proofs you'll find floating around any magazine office in the country were produced using the same basic method.}

I bet most of you are sitting there with smug grins on your faces, thinking "I didn't fall for it. It's obvious a CPC couldn't do that." Ho ho.}

THE REAL WORLD

Believe it or not, it could. It's not a question of memory: the uncompressed disc file for the inside back cover of WACCI 111, one of the more complex pages in the magazine, only takes up 24k. And that's including clever Mac gubbins like a custom icon, thumbnail picture for easy identification without having to load the file, and so on. Neither is it a question of speed. Quark runs like a dream on my 1989-model 20Mhz Mac - and although that's six times the clock speed of the CPC, it has the comparatively slow Mac operating system to deal with, 16 times as much screen memory to shift around, and the overheads inherent in a full WIMP system. The 600dpi (*dots per inch*) output of the brand new LaserWriter is beyond our reach, true: but plenty of people have 360dpi inkjets connected to their CPCs, which produce more than

adequate laser-quality output. No, there are only two problems. One is that, although the page itself doesn't take up much memory, the fonts do (*they're stored externally, in the System folder*).

Even so, a machine with a 256k expansion could comfortably accommodate headline size and body text size. The main problem would be that old bugbear: the effort required. Whoever took on the challenge would have to start from scratch and write the best DTP-cum-word-processing package ever written for the CPC... a year's part-time programming or three months' full-time (*at least*), I'd say. If the CPC market was in the prosperous state it was in seven years ago, I'd do it. Seven years ago, though, 360dpi printers were barely affordable, and I was writing crud like Worktop.

OBJECTS OF DESIRE

To backtrack a little, how come a commercial-quality A4 page designed in Quark XPress only takes up 24k, whereas an uncompressed PowerPage A5 page will take up going on 46k? Basically, the two programs use completely different methods of storing the page. PowerPage, MicroDesign, and all other CPC DTP programs store the page as a bitmap.

This is like a great big screen file, containing information about each pixel - whether it's on or off. PowerPage offers a 640x576 pixel page, which equates to $640 \times 576 = 368,640$ bits, which equals exactly 45k... so there you go. Quark XPress, Pagemaker, MacWrite Pro, and other Mac DTP packages conceive each page as an 'object-orientated' layout. The page is stored as a collection of objects, which are drawn whenever the need arises whether it be for printout or screen display. A line of any length, for example,

takes just eight bytes to store: four bytes for its start co-ordinates, and another four for its end. A box of text requires the same sort of dimensions, plus a few extra parameter bytes for colours, frame details, and that sort of thing, and then one byte for each text character inside the box.

This is an over-simplification, of course, but you see why the eventual page size is so much smaller. A CPC is perfectly capable of running an object-orientated DTP system. It might be a little slow, but it could do it. The PCW16, with its 16Mhz Z80, would be ideally suited to the task. Now there's where you might find PowerPage Professional cropping up..}

HALFWAY HOUSE

As mentioned above, the work involved in writing a new CPC DTP package means that it just isn't going to happen.

So we're stuck with the bitmap programs in current use - which means MicroDesign Plus and PowerPage 128. Ok. Let's say you actually want to do some serious, high-quality DTP on your CPC. There's no point in restricting your possibilities equipment-wise, now that second-hand CPC hardware is so cheap: so let's assume you've got 512k of memory, and a high-resolution printer.

Since even an Epson 9-pin can print at 240dpi, the latter covers pretty much anything. Right. An A4 page, minus a small amount of margin space, is 8" by 11". Let's aim for laser-quality resolution horizontally, at 300dpi: we can relax a bit in the vertical plane, since vertical resolution is frequently coarser than horizontal (*look at your CPC screen in MODE 2 for evidence*), and settle for draft laser quality of 150dpi. This makes $8 \times 300 = 2,400$ dots horizontally, and $11 \times 150 = 1,650$ vertically. Multiply them together to get the number of bits required; divide by 8 to convert into bytes, and then by 1,024 to convert into kilobytes. I get 483.4k. So believe it or

not, a fully-expanded CPC can hold a laser-quality bitmap in memory, and you can achieve print-outs of a similar quality to WACCI 111 without forking out for a Mac or a PC.

MODIFYING POWERPAGE 128

The only difficulty is that neither PowerPage nor MicroDesign will let you create a page of this size. I know that modifying PowerPage 128 to do it would be a couple of weeks' work, at most: and although I've not seen the source code, I doubt it would be too difficult with MicroDesign, which already offers several pages of processed cheese. This takes care of the storage.

The existing versions of both packages will draw boxes, fill in shapes, flip areas, and fulfill all your other graphic requirements: so all you need now is some way of getting the text onto the page. PowerPage already has the capability to do this.

Although the 8x8 characters of text layout mode are going to be pretty unreadable at 300dpi, you'll be able to fit 18 headline characters (16x16) across one inch - almost the same width as the font

you're reading right now. The crucial difference is that PowerPage fonts are proportional, which makes for vastly improved legibility. However, this isn't an option open to MicroDesign owners: and, to be honest, importing Protex file upon Protex file into PowerPage's rather slow headline layout mode would try the patience of a saint.

PREVIEW

What's needed is a program which coexists with Protex, and assembles a .DR file from your text, ready for MicroDesign or PowerPage to load as clip art. An on-screen preview would be nice, too. Tall order? Not really. Ignoring the similar but rudimentary option available in the MicroDesign Plus enhancer (*which has to be loaded separately*), there is already a program which converts Protex files into graphics, with an advance glance available by typing **PREVIEW** from the command line.

It's not generally available, which is why most of you won't have heard it. But it exists: it's called the BTL Article Compiler, and it's how we lay out every

single BTL article except the contents page.

CRUNCH FACTOR

It ain't gonna happen. To refer back to Brian Watson's comments (*once again*), sales of CPC software are ridiculously low at the moment. The CPC is such a familiar beast to us all now that there's no challenge inherent in writing even such advanced program and the software buyers' market is so riddled with apathy and piracy (*yes, it is*) that it's very difficult to justify the effort involved in writing and marketing software for the reward received. But if PowerPage Professional really does tempt your fancy, I could be persuaded. Send your begging letters to

Richard Fairhurst
c/o Tea Cottage,
Bottom Lane,
Bisbrooke,
Rutland. LE15 9EJ.

Richard Fairhurst: BTL 4: *"We have some gossip to proclaim..." Richard*

LIVE LONG AND PROSPER.

Admit it! You have some games in your tape or disc collection, even if these are only A.A. covertapes that have been consigned to the furthest corner of a dark cupboard, still wrapped! the excuse for this may be that games are for children, or that they are an abuse of the computer, or that you are above that kind of thing.

LIVE LONGER -

Probably though, the real reason is that, like me, you are hopeless at games!! Do you watch your ten year old zip through a Grand Prix without a scratch, when you can't even get off the starting grid?

Don't we all! Sickening isn't it? Since frustration and stress are serious threats to health in these modern times, there is only one sensible thing to do. Cheat!! As a games player I'm rubbish. Even with the simplest game I seldom get past the first screen without losing all of my 'Lives', and having the 'Game Over' message on the screen. (*And we're talking TITLE screen here folks!!*). Which is why I liked the "Cheat Mode" section of A.A. so much.

With the right cheat, be it 'Poke', 'Listing', or 'Keypress' almost anything becomes possible.

Cheat

by

Ray Powell

OR BECOME IMMORTAL -

The most common cheat is to give infinite lives, frequently with infinite ammo, weaponry, money, or whatever. While this is helpful, one often has to restart a screen on being 'Killed'.

Skipping levels is another popular form of cheat. What the point of this is I don't know. As far as I am concerned it just means being killed more quickly by bigger and better armed 'Nasties'!

Some cheats remove all nasties from the game. Totally weird man! Going from the first to last screen is then like a walk in the park. For me, there is only one really

worthwhile cheat, and that is 'Invulnerability'. If infinite everything is included, then so much the better!

There is a particularly good listing of this type for "Elite" with which even I can quickly become 'Deadly'! It's great fun to fly through the largest concentration of 'Pirates' with impunity.

There is nothing like a dose of invulnerability to make you feel good. Zapping anything that moves, and totting up an enormous score in complete safety is very satisfying.

OR IMMORAL?

So where do we get all these goodies? Well A.A. obviously. There is also a "Cheat Mode" book still available, and I believe that there are a couple of PD discs full of cheats doing the rounds. (*Cue Angela!*). No doubt there are other places as well, and it might be worth looking them up. Some of you may be thinking that all this cheating shows a lack of moral fibre. You're right of course, but what the hell, how else are we ever going to see that final screen!!

"VICTOR"

Ray Powell

Our Part In The Future Of WACCI

by David Simpson

I have been a member of WACCI for just over a year. Before I took out my first subscription, I believed that I was the only one who still used an Amstrad CPC. How wrong could I have been...

WHERE HAVE THEY GONE?

Soon after my first WACCI dropped on to the doormat, it occurred to me that if there were about 350 members, what happened to the millions (-350) of CPCs that were produced over the years? Someone must have them, but who?

They cannot have just disappeared from the surface of the planet. Perhaps a few have been thrown away, but even then, there must be still be CPCs hiding away in attics or cupboards all over the country, due to lack of support.

Some will have been sold to help finance the inevitable upgrade to the PCs or consoles which have been released over the years, but even then someone must have bought them. Every CPC belongs to a potential WACCI member.

The way I look at it, if I can persuade more people to take out a subscription, then WACCI will be there just that little bit longer for me.

With the drop in membership over the last year, from around 350 to 250, WACCI will not last forever. This is where you can help. The more members WACCI has, the longer it will continue. Just think, if every existing member could create one more, the club could double in size.

There are several ways that existing subscribers can help to boost membership:-

Car-boot sales

Anyone who spends Sunday mornings strolling around the local car-boot sale will have undoubtedly come across the odd CPC nestling in amongst the customary boxes of unwanted LPs, crockery and household items.

Perhaps it might be worth buying. If

not, there is an opportunity to help boost WACCI's ailing membership, by offering the seller a WACCI flier, which can be obtained through the club or Merline-Serve, and explaining what WACCI is about. Perhaps the seller wants to get rid of his CPC because there seems to be no support for Amstrad machines any more, in which case he may wish to join himself, or more likely he has upgraded to something more powerful.

Even then he could pass on the information to any buyers. Any members involved with selling at boot sales or the like, could display WACCI information on their pitch, even if they are not selling any Amstrad items. Some people, such as myself go to boot sales, primarily, to look for CPC items.

Free-ads papers

Anyone wishing to sell the odd item, or even a complete system, can advertise in WACCI, but the readers of Market Stall are, obviously, already subscribers.

But, the readers of free-ads papers may not be, and also, these papers have a much larger circulation. People are more likely to buy a CPC through a free-ads paper if they know that there is some sort of backup, either for information or somewhere they can buy more hardware or software. A typical advert would be:-

For Sale: Amstrad CPC6128, colour monitor, built-in disc drive + manual. National user club backup.

Not only does the offer of national backup help to sell the machine, perhaps for more money, but it can also help to boost membership, even if for only a short time.

I have successfully sold several machines this way, and from these I know

that two of the buyers have taken out WACCI subscriptions. I have even had enquiries about the club from people who already have a CPC.

PLACING ADVERTS

Free-ads papers can also be used just to advertise WACCI. Philip has been running ads in various papers for some time. I too have been running an ad in my local Loot newspaper.

It costs nothing to place an advert in these publications, or in some local evening papers, providing that it is made clear that WACCI is a non profit making organisation. The advert I have been using is as follows:-

Amstrad CPC user group. Monthly club fanzine, members information helplines, large PD software library, nation-wide membership.

I have been using John Bowley's phone number, but you can also use your own.

So, it's up to you, the future of WACCI is in your hands. The more members we have, the longer WACCI will run. Perhaps John could send out a few fliers with the next issue.

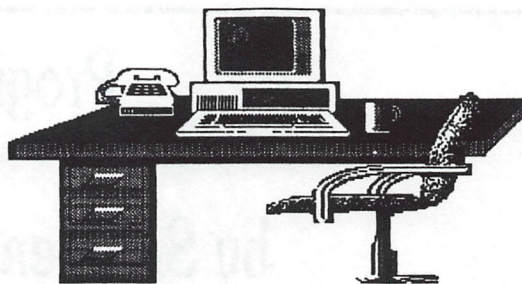
If you are not one of the large number of people who like to spend their Sunday mornings strolling around a local car boot sale, then you could ask a local secondhand computer trader to display WACCI details in his shop.

Check out the local, or free-ads newspapers. If there is not a WACCI advert, then place one. Every little can help. I shall continue to help increase WACCI membership, and I hope that fellow members will help me to do so. It costs nothing, except a few local phone calls. What have you got to lose?

Have a look on the back page I've done what David has suggested. Also I've had telephone calls from these adverts. John

The News Desk
with Angela (ITGA) Cook

Brympton Cottage, Brunswick Road, Worthing,
West Sussex, BN11 3NQ. Tel/fax: 01903 206739.
E-mail: angela.arthur@virgin.net



Richard Fairhurst has been on at me for as long as I can remember about putting together a news page. Subtle hints and calling me "gossip hound" didn't sway me. Then he employed the big guns and got John to do the deed. That's dangerous. How are you supposed to get out of something when you have your editor practically in tears?

THE DAY TODAY

After much thought and cogitation I eventually agreed to do a news page <<Way I remember it you said "Yes" even before I finished asking the question -John>> <<Well the memory is the first thing to go John.>>. In which case I had better get on with the news.

COMP.SYS.AMSTRAD.8BIT

The newsgroup at a computer near you. There has been a thread of messages running recently about Jet Set Willy, that mould breaking game. Andrew Cadley is doing the coding and a group of people are all chipping in with graphics, music, level design and so on to produce a Plus version of the said program. It's not yet decided whether the game will be commercial or PD, but most likely the latter. I'll keep you posted.

Something to please Dave Stitson is the forthcoming release of PowerPage 128 v1.3 from Richard Fairhurst. This will include a new large headline mode and better printing.

Also in the pipeline from Richard is Fidelity, a Protext enhancer on rom.

Features already present include a drive prompt and **WYSIWYG** fonts (*bold, underline and italic fonts all shown on screen*). Richard is appealing for any recommendations on features to include in this Protext add-on.

Please write with any suggestions to;
Tea Cottage, Bottom Lane, Bisbrooke,
Rutland, LE15 9EJ.

Don't forget that Martin Bela's game **"The Bomb Room"** is available direct from Martin. There will be a review in WACCI soon. Martin Bela, 11 Colwell

```
Document fidelity.doc      Page 1   Line 1   Col 1   Free 33694
Insert    Word-Wrap       Right-Justify    No markers set    CTRL-H for Help
```

FIDELITY

(c)1997 CRTC/SystemeM

There may never be a new version of Protext. But with Systemed's new program, Fidelity, you can turbocharge your existing Protext ROM.

Once Fidelity is inserted into your ROM-board, Protext automatically gains these new features:

- * Shows **bold**, *italics*, and underline on screen.
- * Graphics can be inserted into a document.
- * Your choice of command line prompt.



FIDELITY will be available at the WACCI Convention exclusively from the Sustained/STS/BTL stall.

Drive, Brookside, Alvaston, Derby, DE24 0UP. Very reasonably priced at £6.99 on 3" disc (*£5.99 if you supply your own disc*), or £6.49 on 3.5" disc.

NOT SO SLOBOT PD

Robot PD has been taken under the huuuge wingspan of Brian Watson. The entire disc collection of Robot PD software is available once again.

The copying charge is £5 which includes a 3.5" disc. 3" disc users must supply their own discs. The aspect that makes the re-launch of Robot PD so interesting is that it includes ongoing user support. Brian says **"We believe this is virtually unique among mixed commercial, ex-commercial, PD and magazine suppliers."** Send an A4 SSAE for information to; "Harrowden", 39 High Street, Sutton-In-The-Isle, Ely, Cambridgeshire, CB6 2RA.

SORRY BRIAN

Correction to last issues "**ParaDos on Cartridge**" article I wrote. It turns out that the ParaDos rom you send with your cartridge for the upgrade you don't get back. They are taken out of circulation otherwise you'd have one illegal copy of the program... not good. What Brian and Rob Scott are offering is to put your current version of ParaDos on to a cartridge.

Obviously this doesn't affect people who don't already ParaDos. Address as above.

GET IN TOUCH

Any titbits of information, morsels of news or leads for amazing earth shattering stories would be welcome (*or alternatively you could write an article about something you've found out - have to plug that, John's standing behind me with a large frying pan...*). You can get in touch in four different ways so there's no excuse. Go on, you know you want to.

Angela

Programmers' Patch

by Stephen and Matthew Phillips

What gastronomic delights await us for the final course? As the sweet trolley of programming wheels its way through the obstacles of integer division and two's complement binary, we find ourselves thinking "Shall I have the strawberries?", and "Who's paying the bill?". (Coffee to be served in the lounge.)

All that remains in order to round off the disc cataloguing program is to explain some of lines 50 and 60. Since it was February that we first looked at the program, we've asked John to print the listing again in Figure 1.

Line 50 is reached when the WHILE condition in line 40 is false, i.e. when one of the three selection keys is pressed. The first thing line 50 does is call the subroutine in line 80 which waits until the user has released the selection key and then clears the input buffer. Then line 50 removes the pointer from the screen before trying to work out what the user wanted to select.

When a selection key is pressed, there are three possible cases:

1. The pointer is over a filename.
2. The pointer is over the "user 0" statement.
3. The pointer is over neither of the above.

To find out which case we have, we need to read some characters from the screen. As explained in the previous article, we have a piece of machine code to do this job, but first the text cursor need to be LOCATED to the position on screen where we want to start reading.

We have used the following expressions to calculate the text coordinates needed:

$$p=(x\backslash 160)*20+1$$
$$q=(400-y)\backslash 16+1$$

where x and y are the graphics coordinated of our pointer, and p and q are the text coordinates we need. Before writing expressions such as these, it pays to work out exactly what you

want to do. Put a disc in the drive, switch to MODE 2 and catalogue it. You will find that four columns of filenames are printed on screen. The text cursor needs to be positioned at the start of whichever of the four columns the pointer is in.

Since the screen is 640 graphics coordinates across, each of the four columns displayed is 160 coordinates wide. Our expression in line 50 uses the integer division operator, " \backslash ". This operator has the same effect as using normal division and throwing away the part after the decimal point. Dividing the x coordinate by 160 in this way results in a number from 0 to 3, corresponding to the four columns of text. The following table shows what we need to achieve:

Graphics Column Text

x-coordinates	x-coordinate	
0-159	0	1
160-319	1	21
320-479	2	41
480-639	3	61

If we then multiply the column number by 20, that will give us 0, 20, 40, 60, which is the correct separation for the text cursor. We just need to add 1 to get the right text coordinate. Try it out in stages with a few example x values if you like, so that you can see how it works.

The expression for q is simpler in one way - all we want to do is set q to be the text line that the graphics cursor is on. There are 400 graphics coordinates vertically, and 25 text coordinates. You might think that since there are 16 graphics coordinates per text coordinate, all we need to do is integer division by 16. It is not quite that simple however, because the graphics coordinates start counting

from the bottom of the screen (as if you were drawing a graph) and the text coordinates start from the top (as if you were writing). To solve this problem we just subtract y from 400. This gives a large value when y is small (at the bottom of the screen) and a small value at the top of the screen - the same as the text cursor. We can then do integer division by 16 and add 1 to finish off.

After p and q have been calculated, the text cursor is LOCATED at p,q and the machine code called to put the next 12 characters into $f\$$. We then hit a WEND.

The WEND refers back to the second WHILE condition in line 30 that says to keep looping until either the 9th character of $f\$$ is a full-stop (on a filename), or the 8th character is a colon (at the "Drive A: user 0" position). If we fall through the WEND and the 9th character is a full-stop then the program with filename $f\$$ is run (as discussed in the first article). Otherwise we need to ask the user which user number to change to.

USEFUL USER UTILITY

Line 60 loops until a valid user number is entered, changes the user area to that number, clears the screen, recatalogues the disc and resets v to be the y -coordinate of the text cursor (v is initially set in line 20). The line used to look a lot simpler but Matthew came up with an ingenious way of making it less than readable. If for the moment we imagine it says "WHILE $u < 0$ OR $u > 15$ " rather than "WHILE u AND -16 " then it will be easier to explain.

Initially u is set to be 16 (an invalid user number) so that the code in the WHILE-WEND loop is executed at least once. The cursor is LOCATED just under the disc catalogue (using v) and the "User:" prompt is printed. There are two things to notice about the PRINT statement, firstly that we print CHR\$(20) too. Character 20 is a control character which clears the whole of the screen from the cursor onwards. This ensures that there is no mess anywhere. Secondly, there is

a semicolon at the end. This means that the cursor remains on that line for the input rather than beginning again at the start of the next line.

The next statement is "LINE INPUT u\$". Input into a string was chosen so that no errors occur if something other than a digit is typed. Using LINE INPUT means that even commas can be typed and it will not complain (ordinary INPUT will give an error if a comma is used when it doesn't expect it). While most users will do what we expect, good programs cope with the unexpected too.

To find out what number was typed, we set u to be the numeric VALue of u\$ and the WEND then loops back if u is not a valid user number. If the user doesn't type anything and just presses the Enter/Return key then u will be set to 0 - a valid user number - and u\$ will be empty. In this case we assume that the user did not really want to change the user number. As a programmer it is wise to realise that users do not always select the options they intend to, and we can anticipate this by providing an easy way out in such situations. That is why the rest of the line is not executed if u\$ is empty.

WHILE AWAY THE TIME

So why does "WHILE u AND -16" mean the same as "WHILE u<0 OR u>15"? It may make more sense when you know that -16 in binary is 11111111110000.

The WHILE loop will keep going until the condition is false, which in this case happens only when "u AND -16" is zero.

To work out "u AND -16", we write down the value of u in binary, with -16 written out beneath, and AND each bit of u in turn with the corresponding bit below. When you AND two bits then you only get a one as the result if both the bits were one. For example, if u is 87 we get:

u	0000000001010111
-16	111111111110000
u AND -16	0000000001010000

It is quite easy to see that u AND -16 will only be zero when the binary form of u has zeros where -16 has ones. Where -16 has zeros, u can be anything we like, and it so happens that the numbers with zeros in the top twelve bits and zeros and ones in the bottom four bits are the numbers 0 to 15, the valid user numbers!

COMPLIMENTARY MINTS

The Amstrad uses the common two's complement method to store integer variables. It is called two's complement to distinguish it from one's complement which is never used anyway! The basic idea is that negative numbers are stored as large positive numbers. The largest number that can be stored in 16 bits is 65535, also known as FFFF in hexadecimal, and 1111111111111111 in binary. When we use two's complement, we pretend that it means minus 1 instead. Similarly we let 65534 stand for -2. 65525, ten less than 65535, stands for -11, which is ten less than -1, and so on until we meet up somewhere in the middle:

-32768	1000000000000000
+32767	0111111111111111

As you see, the largest positive number allowed in two's complement is 32767, and it has the top bit zero in binary. The most negative number is -32768, which has the top bit set. In fact, all the negative numbers have one in the top bit, and all the positive numbers have the top bit clear.

A good analogy for two's complement arithmetic is the clock face. Sometimes we count from 11:00 to 11:59, and have up to 59 minutes from eleven o'clock. Or we can look at it another way and after half past eleven we start saying 29 minutes to twelve. 59 minutes past eleven then becomes 1 minute to twelve or if you prefer, twelve o'clock minus 1 minute.

Most of the time you do not need to know anything about how the computer stores numbers, but occasionally it is useful. If you want to find out what -23 is in binary, the easiest thing to do is type PRINT BIN\$(-23), but if you really want to know, this is how to do it by hand:

1. Write down the positive number in binary.
2. Take the complement (change each 1 to 0 and each 0 to 1).
3. Add on one.

For example with -23:

23 in binary:	0000000000010111
Complement:	1111111111101000
Add on one:	1111111111101001
so -23 is	1111111111101001

If you are feeling really keen on maths homework, you could try adding together 23 and -23 in binary, just to check that you get nought.

You will actually get 1 with sixteen zeros after it, but as we can only store sixteen bits in our integer variables, it's as good as nought really.

COFFEE TIME

We hope that there isn't anything more to say about that program. It must be quite a record taking six months to explain such a short piece of BASIC.

With a bit of luck you now have a useful utility and a better understanding of some of the more advanced tricks one can get up to in BASIC.

Next month we shall begin dissecting another small program, till then perhaps you could think of a good reason why there isn't a key numbered 78? Have fun!

```

10 DEFINT a-z:MEMORY HIMEM-34:a=UNT(HIMEM+1):FOR x=0 TO 33:
  READ a$:POKE a+x,VAL("&"a$):NEXT:DATA CD,78,BB,4C,DD,6E,0,DD,
  66,1,46,78,B7,C8,23,5E,23,66,6B,CD,60,BB,77,23,C,79,E5,CD,6F,BB,E1,
  10,F2,C9
20 CALL &BB4E:CALL &BC02:CALL &BBBA:MODE 2:PRINT CHR$(23)+
  CHR$(1):x=100:y=296:CAT:v=VPOS(#0)
30 WHILE 1:TAG:f$=SPACE$(12):WHILE MID$(f$,9,1)<>".":AND MID$(f$,
  8,1)<>".":MOVE x,y:PRINT CHR$(215);:GOSUB 80
40 WHILE INKEY(47)+INKEY(18)+INKEY(9)=-3:b=x:c=y: x=MAX(0,MIN
  (632,x+3*((INKEY(8)>-1)-(INKEY(1)>-1))*(4+3*(INKEY(21)=-1)))):
  y=MAX(15,MIN(399,y+3*((INKEY(2)>-1)-(INKEY(0)>-1))*((INKEY(21)=1)
  +2))):MOVE b,c:PRINT CHR$(215);:MOVE x,y:PRINT CHR$(215);:WEND
50 GOSUB 80:MOVE x,y:PRINT CHR$(215);:p=(x\160)*20+1:q=(400-y)\
  16+1:LOCATE p,q:CALL a,@f$:WEND:TAGOFF:IF MID$(f$,9,1)=".":THEN
  MEMORY HIMEM+34:CALL &BBBA:MODE 1:RUN f$
60 u=16:WHILE u AND -16:LOCATE 1,v:PRINT"User: "+CHR$(20);:LINE
  INPUT u$:u=VAL(u$):WEND:IF u$<>"" THEN IUSER,u:CLS:CAT:v=
  VPOS(#0)
70 WEND
80 WHILE INKEY(47)+INKEY(18)+INKEY(9)>-3:WEND:WHILE INKEY$
  <>"":WEND:RETURN

```

Figure 1.

Stephen and Matthew Phillips

Clishmaclaver

It's still Scots for gossip

Well here we are again then. I've been allowed to do another page of clishmaclaver for you. Mr Editor thinks I did very well last month and judging by the comments made by you folks out there you seemed to enjoy this little bit of fun too. Don't forget that you can let me know about your special days and I will put them in print for you. Anyway here we go then with another batch of goodies.

TWINKLETOES REVISITED

You may remember last month I brought you the story of Frank Neatherway and his hammer toes well pride goes before a fall as they say so I have a confession of my own.

I have been having some trouble with my right heel for some time now but I put it down to being a woman of voluptuous proportions. Anyway I finally had to visit the doc who promptly diagnosed a spur heel. this is where a small piece of bone has grown out of the heel bone and is turning back into my foot like a thorn. At least that is how it was explained to me.

I was sent for an x-ray to determine whether this is the case so if it is then a small op will cure the problem and if it turns out to be some other thing doc thinks it may be the an injection of gunky stuff will do the trick but I have to wait a couple of weeks to find out.

I thought of Frank as I sat in the docs waiting room and a mental picture came to me of Frank laughing hysterically while holding a voodoo doll. I wonder what it means?

PUSSY GALORE

Congratulations go to Christine and Chris Raisin and their cat on the birth of three lovely kittens. I haven't as yet been able to get time off to go down to see them but I am told they are all white and purrfect.

They should be about 4 weeks old by now so I hope to get to see them before they are either too big to go all goo goo at or they are all spoken for. Anyway congratulations once again.

CONGRATULATIONS FRANK

It would seem that in another Frank is to get a mention within this page.

Frank Smart wrote to me recently with his competition entry. It would seem that Frank celebrated his 50th Birthday during the first week of June so a very **HAPPY BIRTHDAY** to you Frank from us all. Please do not expect us to give you the bumps at the convention!

ANOTHER FRANK CONFESSES

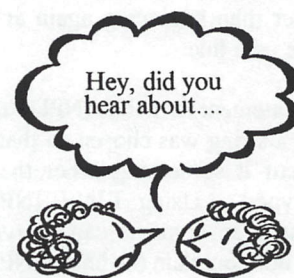
Frank also confessed his love for a vindaloo, 'loo' being the operative word. You see Franks lovely and thoughtful wife Janet had arranged a party for Franks birthday and Frank had to go and get food poisoning didn't he. So while everyone was enjoying themselves getting drunk and pigging out, Frank had to have no food and be content with non-alcoholic punch.

Mind you Frank was pleased to be able to enjoy his beloved curry again when he got better. *(I hope Frank S hasn't asked Frank N to lend him that voodoo doll!)*

PURRRFECTLY PLEASANT

A little pussy tells me that our very own Anglea Cook regularly rings up 0345 numbers to chat to the many pleasant people at the other end. Is this true Angela?

I would have thought that you were kept busy enough with WACCI, college and Merline Serve. Obviously not, so you had better start writing more articles for us Angela to keep you off these phone lines and keep your parents phone bill down!!



GHOULISHLY POTTY

It has finally happened, I've discovered WACCI's very own nutty professor in the form of that lovable ghoul Jonty Jones.

Jonty wrote to me recently to tell me about the very sad discovery of a death in his own home. I read his lamentus (*I think I've spelled that right*) letter with a tear in my eye and great concern for him. Its not a nice thing to discover.

I read on and on until I came to the final paragraph only to discover that he was prattling on about his bloomin' coffee percolater that had given up the ghost (*or Ghoul!*)

I know I asked for any special announcements to write about but I draw the line at this!!!



CONVENTION REMINDER

Yes I know we are bombarding you with reminders about the convention but it is a very important occasion and we do not want you to miss it.

The ticket price is £4 and they are available from Angie Hardwick.

If you want to have a dinner in the restaurant then please let Angie have your reservations for that too. The meal is a bit pricey but well worth the money. Last year John, Myself and our Boys enjoyed a meal there. We had the carvery option and it filled the plate.

So don't delay let Angie know today!

My address as always is:

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Seeya next month.

Carol

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