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WACCI: The club for Amstrad CPC computer owners.

FRONT COVER: by Stephen Phillips.

## THE TELEPHONE HELP-LINE

BOB MOFFATT, (0994) 453509, Pendine, Carmarthen.  
Masterfile III, MAsTercalc, Qualitas & Protex.

STEWART PEPIATT, (0245) 353903, Chelmsford, Basic,  
M/Code, DMP2000, VDE, Scrivener & general problems.

PETER CAMPBELL, (041) 554 4735, Glasgow, OCP Art  
Studio, Vidi, Basic, MicroDesign & Art Programs,  
ProPrint, CPC plus m/cs and VideoMaster.

FRANK FROST, (0983) 882197, Isle of Wight  
4pm to 10pm, VDE, CP/M and Protex.

IAN NEILL, Work (0926) 416157 9am to 5pm, Warwick  
Eprom blowing, Hardware, Electronics and more.

MARK STEWART, (0773) 822599, Belper, 5pm to 9pm.  
PAW Adventure Creator, Basic and general help.

VACANT To apply to fill this gap write in to WACCI  
with the details you wish for your entry.

LAURENCE SAUNDERS, Herts, (Work) 061 480 4900  
Maplins & technical help. Now at Stockport.

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

MIKE LYONS, (0942) 59942, Wigan, Basic, Stop Press,  
Dk,tronics Speech Synth, Rodos and general help.

STUART GASCOIGNE, (0272) 831361, Bristol, Basic,  
Machine code, PD Discs 19 to 36. \* New Tel Number

JOHN HUDSON, (01484) 423252, Huddersfield. MOLL,  
CP/M, Wordstar/Newword, dBASE, CP/M PD, CPC-PCW-PC.

JOHN BOWLEY, (0733) 260616, Peterborough.  
Help and advice about the Book Library.

MARTIN YOUNG, (0224) 480217, Aberdeen, M/c code,  
The audio/video chips, Page Setter 64, C and the  
(by special request) RAM Music Machine.

CHRIS GREEN, (0895) 633641, 5pm - 9pm, Middlesex,  
MS800, CP/M Protex, PowerPage, Art Studio, NC100  
and NC200 notepads, The Plus computers and DTP.

NIGEL CALLCUTT, (0664) 68738, Melton Mowbray.  
Technical advice, hardware and CPC repairs.

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

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

# WACCI

Edited by: *Paul Dwerryhouse*  
Owned by: *The Club Members*

Conceived and Founded  
By: *Jeff Walker*  
In: *October 1986*

Developed and Expanded  
By: *Steve Williams*  
And: *Clive Bellaby*

Membership: 293

Telephone: 0244 534942

Copy Date: 16th October 1994



# THANK & STUFF

*Welcome to what is I hope my best ever WACCI. Well, at least I hope that the problems Prontaprint had with toner quality, paper jams etc., are now behind us. I'm sorry that issue 81 suffered such problems (Prontaprint weren't all that happy either as it took 3 days to copy the magazine instead of one) but this issue will be printed so fingers crossed ..... (or famous last words!)*

As well as quality of print being an issue, did you also notice the paper quality - yep thicker than normal. This was to overcome the paper jams. It also meant that the postage costs went up from 29p to 36p. I already had 300 envelopes with a label and stamp on and this meant buying 300 7p stamps. Yes, guess what you can't buy, a 7p stamp. I had to buy 300 1p and 300 6p stamps. That was 600 extra stamps to lick and stick - gosh what a labour of love! This month will be different - PLEASE.

## ALL FORMATS SHOWS

I said last month that WACCI would not be attending these shows but I should have mentioned that Peter Campbell still attends the Glasgow show. Sorry Peter and I hope I didn't put off any members going to the September Glasgow show and enjoying themselves.

## FAIR COMMENT

Mike is still not able to receive your letters so send your letters to Angie Harkwick, her address is on page 14.

## CLUB NEWS

Things are beginning to settle down after the mad panic to get out issue 81 of the mag. I intend to remain

treasurer and continue to look after the subscription side of the club. Believe me, this is not a great task the way it is organised and it has certain advantages now that I'm your editor. What has to happen is that the Uncle Clive style editorship becomes a thing of the past.

Let me explain. From the two issues I've done it is very clear that being a "pure" editor is not such an onerous task. The layout of articles in this issue is 100% all me. When Mike Lyons gets back to health and my current team (Ron Izett, Richard Duggan and Doug Webb) feed into the magazine production then I'm happy that I can produce WACCI for a very long time to come. Hopefully Clive too will contribute sometime in the future but I haven't heard from him as yet and I'm certainly not going to push him.

I have had to give up the other items of work I did for the club, the provision of the Supplement and the magazine index are two examples. John Bowley has taken on this workload and has, accordingly, been set up with an Epson Stylus Printer. This now means that a duplicate of my workstation now exists at John's and that means cover for my setup. John will also receive a monthly statement of the clubs

accounts and will become a signature to the account in case I get run over by a bus!

Members will (might) remember that I asked for help in typing up articles for the current "Great Series" articles. Richard Duggan has taken over production of the remainder of these articles and there are quite a few in the pipeline.

There is only one area I wish to call for a volunteer. I would like an auditor for the accounts. Can you help, only once a year maybe, to look at the club's finances and report to club members via the magazine?

## THANKS JENNIE

I forgot to thank Jennie (my daughter) for typing up your letters in issue 81 and those sent to me for this issue. So taeverso love.

## VBB MISSING

I'm afraid that Alan Tilling hasn't been able to contribute his regular series this month as he appears to be rebuilding the staircase in his house. Now that must put you under some considerable pressure if you don't have a downstairs loo!

## LOAN DISCS

Doug Webb has asked me to remind you all to return loan PD discs asap. Ta.

## OUTRO

Please note the next WACCI will be out end October but called NOVEMBER 1994!

# COMPETITION

## WITH JOHN BOWLEY

# SPOT

*I asked Carol if she would write something witty! She said "yes." Carol was at the keyboard for about an hour and for once she was speechless she couldn't think of a bloomin' thing. So you've ended up with this lot of balderdash but one good thing came out of this and that is I finally got the last word! <<John>>*

### DISC OPTION....

I'm pleased to tell you a few more members have written to say that they wouldn't mind having their PD software on 3.5 discs. I would like to thank those who have given this option some thought and I'm sure our PD Librarians will be only too happy to give you your PD software on 3.5 discs if you ask.

The idea behind this option is to save the 3" discs for those members who have not got the choice. So please bear this in mind. <<Thanks>>

### UNRECEIVED PRIZES....

Due to the hot weather lately I think my poor old grey cells have turned red and I might have forgotten to send you your prizes if you are one of those, just give me a call or drop me a line to remind me. <<Sorry>>

### INTRODUCING....

From next month on I shall be using our members database to pick out at random one member per month who will receive a prize. So if you are that lucky winner please return the SAE as soon as possible.

### DON'T FORGET....

You can now have our HOMEGROWN and the massive collection of PD on 3", 3.5, 5.25 discs or even tape its up to you.

### JULY'S RESULTS....

Most of you had no problems with this compo except question 17 but first here's the winners :

\* 1st Richard Narain \*  
\* 2nd Andy Holdsworth \*  
\* 3rd Richard Basley \*

1. My FAVOURITE Martian.
2. No Hiding PLACE.
3. RAW Hide.
4. DR. Who.
5. Blakes SEVEN.
6. GET Smart.
7. Mission IMPOSSIBLE.
8. Peyton PLACE.
9. MORECOMBE & Wise.
10. Terry & JUNE.
11. Tom & JERRY.
12. FRED ASTAIRE & Ginger Rogers.
13. Punch & JUDY.
14. LAUREL & Hardy.
15. Bob Hope & BING CROSBY.
16. HALE & Pace.

Before I tell you the answer to number 17. Some of you might remember the full quote which was "The story you are about to see is true. Only the names have been changed to protect the innocent". The answer is: DRAGNET.

### SPECIAL THANKS....

My thanks to Jim Farrell of O. J. SOFTWARE who sponsored Julys compo and his address is: 273 Mossey Lea Road, Wrighton, Nr. Wigan, Lancashire, WN6 9RN. Tel no. 0257 421915. <<Ta! Jim>>

### SEPTEMBER COMPETITION....

A choice of ten tape games or you can have four Homegrown or PD software discs the choice is yours. If you choose the tape games I will send you a list from which you can pick any ten that you would like.

### SEND TO....

John Bowley, 97 Turrington, Bretton Peterborough, Cambs. PE3 9XT. Tele no. 0733 260616 between 6pm - 8pm. <<OK>>

### ONCE UPON A TIME....

All you've to do this month is to write a funny story including these words: WACCI, computer, monitor and discs. Then the rest is up to you.

Your story can be any length and will be printed in WACCI. You might find this a bit hard but have a go anyway.

If you are stuck for an idea, look at Isobel Swade's story in issue 80.

Or if you prefer you can design a cover for our mag. You can do both if you like. Good luck. Have a go!

### WACCI BOOK LIBRARY UPDATE....

We've got six more books for you to borrow and they are:

1) YOUR HOME COMPUTER by Jonathan Hilton. General computing, postage cost £2.00.

2) ILLUSTRATING BASIC by Donald Alcock, not Amstrad but BASIC in general. Postage cost £0.80p.

3) THE EFFECTIVE COMPUTER by Grindley and Humble, not Amstrad but might be of use to someone. Postage cost £1.50p

4) AMSTRAD CPC464 MACHINE CODE by Steve Webb. guide to machine code. Postage cost £1.00p.

5) THE AMSTRAD PROGRAM BOOK by Peter Goode, some of the basic listings are incorrect. Used to be book 4. Postage cost £1.00p

6) THE PERSONAL COMPUTER by Peter McWilliams, not Amstrad but a good read anyway. Postage cost £1.30p

More details of the above books in the next supplement due out soon.

# Fair Comment

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

## STRUCTURE PLAN

Paul, Sorry to learn that Mike is poorly, I don't know if he can hear me (Wigan is not far from Chorley) but I did shout 'Get well soon'.

I'm not going to say much about the resignation of Clive, Alan Tilling has said what all of us must think, and I fully endorse the proposition to make Clive a Life Member. As you know Clive has agreed to become the 'Master PD Librarian', a position that he had often requested a volunteer for. This will allow him to be an active member but in a less time demanding way.

I note your comments within your WHAT NOW paragraph and here I must voice my concern regarding your fulfilling the function of Editor and Treasurer. You are to be thanked for filling the need for an editor at such short notice, but as that person by the very nature of the job incurs the greatest expense within the running of club I do feel that one person to fill both positions is not good management. I have no misgivings whatsoever as to your integrity, but we must share the workload. Maybe this is a good time to look at the constitution of the club such as it is. My understanding of the financial control of the club is that it is somewhat restrictive in its provision for emergencies, illness etc need to be considered. You may consider whilst wearing your thinking cap that the club needs either a Secretary or a Chairman, or similar persons with some delegated authority from the members. It would seem from the response you received after Clive's notice that there is plenty of supporting help to keep WACCI going in the future. It is hopeful that your mailbag during these next few weeks will give the club some indication of the members' thoughts upon how this help should be used.

I found Bob Miller's account of his use of Parados both interesting and informative. In fact I considered it as good if not better than some write ups in AA. Must mention a few points regarding its contents.

- 1) I didn't like his 'thrilling grey'.
- 2) My findings when using MD+ were completely different, as follows: whenever I boot up MD+ be it from my 3.5" Drive A or the integral 3" drive of my Plus, the screen at first displays the Hogsoft MD picture, but after a few seconds the infamous error message .... 'DRIVE A: read fail' RETRY, IGNORE or CANCEL appears! However pressing CANCEL produces the following ...PRESS A KEY... after which MD+ loads correctly. Peter Campbell knows of this occurrence as he did send me his original Parados Rom to try out upon my Plus.

- 3) As you may remember I do not have the Romdos Rom as it dislikes my Plus, but MD+ does recognise D20 formatted discs produced with Parados, as well as MS800 formatted discs. In fact when a MS800 formatted disc is logged on it classifies it as S-DOS. This once again shows there exists subtle differences to be found using the same programs upon like machines. Nevertheless it was a first class review Bob, thanks, as yet my copy of the instructions have yet to arrive down in Chorley.

Doug Webb  
Lancashire

*<<Hello there Doug, I'm sure Mike will have heard your shout - I'm afraid that his position is no change so again I say "Get well soon Mike."*

*I hope things are settling down in Trafalgar Terrace and that the paint is drying. I hope to hear from our new Master Librarian soon, should be good news too.*

*Now to the sharing of the workload within the club. I have been very lucky so far with offers of help, I've had far too many but I have noted the names for when something wants doing. I can only delegate work to members that are willing to do the*

*particular task. It is very easy to say "...maybe this is a good time to look at the constitution of the club such as it is..." but the reality is somewhat different. WACCI exists purely on the efforts of volunteers and that is its real strength. Folks like Doug Webb just get on and do the business. Indeed I got a letter from a member who applauded the service and help Doug have recently given him. Yes there is an awful amount of work that goes on behind the scenes that gets no recognition but then that doesn't matter because we only do what we do because we enjoy doing it.*

*Things haven't settled down yet so watch Thanx and Stuff for the news as I've started answering your letters some two weeks before the magazine goes to the printers. If anybody, at any time, wishes to probe into club activities then please feel free to ask. I know I haven't answered Doug's questions fully and I'm not trying to duck the issues, it is that I can't just now. If they get ignored then please write back Doug as I do value your contributions and the sterling service you do for the club. For those who don't know Doug - he talks very plain and straight forward and says exactly what he is thinking - WACCI needs Doug Webb.*

*Thanks for the comments on Bob Miller's Parados review, my hair has gone a little grey and thrilling isn't the word that springs to mind when I think about it - Grecian seems a better thought! If any other users would wish to contribute to the world of Parados then please write. -Paul>>*

## FUTURE READING?

Dear Paul, Congratulations are in order for producing such a packed and wonderful issue 81 of WACCI and I really do mean that. You and everybody who contributed to that issue stand up and take a bow.

I was astonished by the news that Clive had retired from editorship.

**Pacific Software, 37 Trimmingham Drive  
Brandlesholme, Bury  
Greater Manchester BL8 1JW**

**GAMES**

**CRYSTAL X GAMES**

Cloaker	£2.00
Sector 5	£2.00
Pacifist	£2.00
General X	£2.00
P.Z.P.	£2.00
Mantis	£2.00
Justice (sold with part 2)	£3.00

Note: Each of the above games were reviewed by Amstrad Action in issue 99

**PUBLIC DOMAIN GAMES**

The Entertainment Disc 1 £1.00  
includes Zap 'T' Balls, Croco  
Magneto, Puzznix, Power Tetris and  
more...

The Entertainment Disc 2 £1.00  
includes Jumpmania, Battle Of The  
Planets, Les Mings and more...

**COMMERCIAL GAMES (CASSETTE)**

We only have limited stocks of the following games at unbeatable prices so it will be first come first served. Anybody buying three games or more can claim any one of the PD collections free of any copy charges. You will not find these games elsewhere at a cheaper price.

Quattro Adventure	£2.80
Quattro Combat	£2.80
Quattro Cartoon	£2.80
Pro Boxing Simulator	£2.80
Scooby Doo and Scrappy Doo	£2.80
Kwik Snax	£2.80
Fruit Machine 2	£2.80
Fantasy World Dizzy	£2.80
Paperboy	£2.80
Dragons Lair	£2.80
Escape From Singe's Castle	£2.80
Matchday Two	£2.80
Hong Kong Phooey	£2.80
Barbarian II	£2.80

**SERIOUS**

**PD SOFTWARE**

The Office Collection £1.00  
A Compilation of all the best PD utilities around such as word processors and spreadsheets. Very Popular.

Geoff Shorts Print Enhancer £1.00  
Brilliant program for improving your printer's output.

Print Master £1.00  
Create stunning stationary, calendars and cards with ease. (Please send a SYSTEM formatted disc (CP/M))

Ispell £1.00  
An amazing spell checker with a large dictionary.

**PD/COMMERCIAL UTILITY**

Powerpage Utilities £1.50  
Combines a side of fonts with clip art and, exclusively to Pacific Software, a collection of various label templates for designing tape inlays, disc labels etc.

**MISC.**

The Demo £1.00  
Logon System's highly acclaimed demo will show you exactly what your CPC is capable of.

**HOW TO ORDER**

1. State Clearly the name of the product in BLOCK CAPITALS.
2. Enclose a cheque/postal order for the correct amount made payable to DAVID.CROOKES.
3. Send a disc for each product. (We can fit four Crystal X games onto one disc)? [NB: you don't need to send a disc for the commercial games]
4. Please enclose a SAE of sufficient size for your order.

He's done such a marvelous job and I'm sure it won't take me to point out he's helped so many people and, if it were not for him, WACCI would probably not be around today. Who knows what would have happened?

So more congratulations are in order for Clive and I think making him an honorary member is more than justifiable. Yours sincerely,

David Crookes  
Lancashire

<<Hello David, thank you very much for your compliment and comments regarding Clive, you are so correct, where would WACCI be if not for Clive. -Paul>>

**ULTRA HELPFULL**

Dear Paul, I am just writing to ask you through the magazine to thank Doug Webb for me, I have myself thanked him by letter, but I think it is well worth putting it in print in your Fair Comment page.

Doug has helped me out no end, nothing is to much trouble and one or two other Help line members have been kind, thanks to WACCI I can begin to understand my 6128 a little better, being a complete novice it is really a joy to get help from such a friendly user group.

Thanks again Doug and to all the members who have given me good advice and sorted out my problems.

In issue 81 Dick Hornsby from London stated that he is having problems with ULTRA SOFTWARE, I also have.

I ordered some diso's from Ultra (before I joined WACCI), after 4 weeks I phoned AA from where I read their Advert and was told their had been problems, but they would try and sort it out on my behalf, more phone call's to Ultra, yet still no reply, eventually I sent them a letter, (six weeks had now passed), threatening County Court action against them, lo and behold, 2 days later the disc's that I ordered arrived, so it does pay to make County Court threats, remember with a judgement against them they would have difficulty in obtaining credit. So Dick Hornsby if I where you go for it, why should these people get away with conning people out of their money, and by the way, they never ever had the decency to apologise for the delay, (4 out of the 10 discs I ordered are faulty) I think

**\* FOR SALE \* FOR SALE \***

Ready Made Language Routines for the Amstrad CPC464/664 (J. Pritchard) .....	£2.50
The Working Amstrad (D. Lawrence & S. Lane) Library of Sub Routines and Programs .....	£2.00
Advanced Advanced Programming Techniques (David Lawrence) .....	£2.00
Using DR LOGO on the Amstrad. (Martin Sims) .....	£1.50
The Amstrad CPC464 Disc System Including CP/M & Printers. (Ian Sinclair) .....	£2.00
Master Machine Code on your Amstrad CPC464/664 (J Taylor & D. Rogers) .....	£2.00
An Introduction to Programming & Problem Solving with Pascal (G. M. Schneider, S. W. Weingart & D. M. Perlmon) .....	£3.00
CPC464 Firmware (Amstrad Soft 158) .....	£3.00
DDI-1 Firmware (Amstrad Soft 158A) .....	£2.50
Introducing "C" (Boris Allan) .....	£3.00
"C" At a Glance (Adam Denning) .....	£2.00
Forth for Micros (Steve Oakey) .....	£1.50
Manual only for Hisoft Forth .....	£0.50
Z Basic A Powerful Interactive Compiler Disc & Manual. Highly recommended. (E.P.) .....	£15.00
HiSoft Pascal 80 for CP/M with Manual .....	£15.00
HiSoft Pascal 4T on tape with Manual .....	£5.00
Spare Manual for above .....	£2.00
Microsoft "C" and Manual .....	£15.00
MIX "C" with large Manual .....	£15.00
HiSoft FTL Modula-2 Fast Interactive Compiler.(Unused) .....	£15.00
AMX Pagemaker and Manual (No Mouse) .....	£10.00
AMX Utilities and Manual .....	£4.00
Azimuth Head Alignment Tape for CPC464 with instructions .....	£3.00
32K RAMROM (Unused) with instructions .....	£12.00
<i>ORDERS TO Eric Priestley, 1 The Chase, Honiton, Devon EX14 8QB (0404 44154)</i>	
* Please note that you will need to add postage to the above prices *	

I will just write them off, but NEVER again will I deal with ULTRA and I will do my damned best to put off any one else who is thinking of dealing with them. Keep up the good work WACCI. Regards,

Dave Stitson  
Plymouth

*<<Hello Dave, I think Doug should be blushing right now. I rather like the description friendly group as I feel it sums up WACCI rather well.*

*Thanks for letting us know about your problems with ULTRA SOFTWARE, why does the CPC scene have to be plagued by these dreadful companies. I bet you received Magtron discs of the dubious kind and I know all about them. WAVE have not done anything regarding the clubs missing discs. I'll try the County Court routine but I bet they will ignore me. Oh why did WACCI buy from WAVE to start with but as it's no use crying over spilt milk I'll go and cry over something else. I noticed that the WAVE advert (always on the page page of AA) is missing from the September issue. Is this a bad sign for the clubs money. -Paul>>*

**AS NIGHT FOLLOWS DAY SO.....**

Dear WACCI, I was interested (amazed?) to see from your issue 81 that Norman Titley of prescot had actually managed to get satisfaction from Phil Craven. I have been trying to contact him for about 6 months as he owes me some money for goods supplied but was led to understand that he had left his Bradford address. I would be grateful if anyone could tell me his present address or, as mentioned in Mr Titley's letter that of Pamela Harris. Yours faithfully,

John Boon  
Peterborough

**WANTED**

Rombox with Prottext and Promerge Plus roms. Must be in good condition. Fair price paid. Telephone Mark on: 0375 677631 or write to:  
Mark Johnson  
13 Ashway, Corringham  
Stanford-le-Hope  
Essex SS17 9EB

<< Hello John, you know you shouldn't be amazed at anything connected with Phil Craven, with him anything is possible including paying his debts. However, as this action requires a monumental amount of work and a considerable amount of good luck then there must be hundreds of folk outstanding monies from Phil Craven.

If Norman would care to let me know the names, addresses and telephone numbers of all those he contacted during his search for satisfaction then I will print them next month for all to see. -Paul>>

#### ANOTHER RUBBER BAND MAN

Dear Paul, Further to Brian Barton's letter in fair comment in the August issue of WACCI magazine I had a disc drive that had a slipping belt drive some years ago. The disc drive in my case was type EME-150A. I wrote to the company called CPC who did not have what I needed but did send me a photocopied page of their catalogue of

their belts. There did not appear to be anything suitable. I then consulted a catalogue from a local firm which had a page of audio cassette and turntable belts.

After measuring the old belt I decided an audio cassette belt of 64mm by 0.6mm with a length of 201mm would do. This, at the time, cost 75p plus VAT. The part number for this belt is CB64F. The belt is manufactured by:

SEME Ltd  
Unit 2E, Sahby Road Industrial Estate,  
Melton Mowbray, Leics.

Phone: 0664 65392 or Buckingham 2704.

Sad that Clive had to give up the editor's position which he carried out with great success but I think that a very able successor has taken over so you have my very best wishes for the future. Yours faithfully,

James Gall  
Aberdeen

## WANTED

Video Digitiser VIDY CPC  
Please contact:  
Richard Duggan  
Flat 15, Hughenden Court  
Mount Pleasant Road  
Hastings  
East Sussex TN34 3ST  
Phone 01424 439583

<<Hello James, thanks very much for the information on how you cured your slipping drive belt problem. I wonder if Stuart Gascoigne (who raised the issue) will have any luck with this solution. Please let us know Stuart if you have solved your problem and by what means - exciting stuff this eh!

Thanks for your good wishes James, I shall certainly need them! -Paul>>

#### INTERESTING IDEAS

Dear Paul, As to not wearing out editors etc. Clive was "seen to be WACCI" because many members met him at all formats fairs and as such it was much easier to contact him "having a face in mind" if you see what I mean? Of course this meant he was inundated with letters and calls and general requests for help.

The bottom line is, to ease things for the editor, to hold conventions, and to man the all format shows etc. more members need to be involved/know each other, to this end I suggest you publish the membership list so that we can get together initially locally, my electronics club has done this with great success.

As for the all formats fairs they should be manned by local members 2 to 4 per show, my electronics club had also had a badge made up so members can find each other at shows! I would be happy to do the London shows if I could find others to help.

I wish you all success and good fortune in editing WACCI and thank you for taking it on for us. Yours,

Andre Howard  
Kent

<<Hiya Andre, I do agree with the sentiments of your letter and it is clear to me that the more members WACCI has actively involved in running

### 80,000 WORD PROSPELL COMPATIBLE DICTIONARY

Much larger than the dictionary supplied with Prospell this one spans three disc sides: SIDE ONE : A -HED  
SIDE TWO : HEE-SHI  
SIDE THREE : SHO-Z

Send two blank 3 inch discs, £1 towards copying and a stamped self-addressed envelope suitable for returning the discs in to M. Ruegg, 8 The Horse Park, Carrickfergus, Co. Antrim BT38 7ED

#### FOR SALE

All prices include P&P - Cheques / postal orders to  
M. Ruegg, 8 The Horse Park, Carrickfergus, Co. Antrim BT38 7ED

#### SERIOUS SOFTWARE

Proprint (Disc) - Protex print enhancer by Campursoft.....£7.50 (costs £15)

The next all cassette

O-Level Physics Revision.....£4.00  
O-Level Chemistry Revision... £4.00  
Project Planner.....£4.00  
Mastercalc Spreadsheet.....£4.00

#### FULL PRICE GAMES SOFTWARE

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#### + HIGHEST OFFER SECURES

Loads more software available - the above are only examples. Also CPC magazines - send a stamped self addressed envelope for details.



the club the better the long term survival of the club. However, there is a limit as there is only so much work to be done and some elements can't be split up easily and spread round thinly. Things are developing as I write so Thanx and Stuff should have a few answers as to how things have been going generally.

The idea of members getting to know each other is interesting. There are some areas of the country where members are spread very thinly but other areas seem densely populated by members. I don't feel it to be a good idea to publish the membership list in its entirety but maybe I could publish name and town/city/area and then leave it up to members to contact WACCI to arrange for details to be sent of members in their area.

I would, of course, need a volunteer to sort the membership list into just name and area and then work on layout for the magazine (yep - I don't do everything) but I'm sure someone will come forward. That member can then be known to all the world and if you don't fancy seeing your name on the lists then you can write/phone your instructions. Let's see what happens next - more exciting stuff eh!

If something becomes of the above then the possibility of WACCI back at the All Formats Show is a real possibility and who knows, maybe even the convention.

Incidentally, Bob Miller rang me to offer, if others could be found, to man a stall at Haydock Park. Bob, if Andre's idea works then I look forward to meeting you again at Haydock park soon. -Paul>>

#### A BBC MICRO?

Dear Clive, Thank you very much for sending me the printer ribbons. I am doubly grateful as I have several stories that need printing so that I can send them to my publisher.

Since poor little old Pyramid Micros closed (pushed out of business by the larger Calculus) I have had difficulty in finding ribbons. Rymans do them at a whopping £5.99 and a local office suppliers can order them at approx £5.00 excluding VAT. Another computer software suppliers stock them at a more reasonable price but it's quite a way from here and I'd have to walk!!! After all this rhetoric - which I'm

sure you must find as boring as watching certain printer ribbons disappear, a high new office suppliers opened up here and they stock DMP 2000. It's called Staples and my son works there. (Unfortunately he can't get any discounts for his poor old decrepit mater, but as the ribbons work out at about £3, I am not complaining. But, thanks to your generosity, I'm set up for a while.

I have been given a BBC Micro and I am looking for a disc drive. While I know it's not a CPC, nevertheless I like working with it and wondered if any one out there in WACCILAND had a disc drive hanging about in the attic?

I hope you and your family are well. Thanks again for the ribbons. Best Wishes,

Isobel Swade  
Cheshire

<<Dear Isobel, I'm glad your ribbons arrived safely. I've checked my local office suppliers and they quote £3.39 plus VAT so you are not getting a bad deal around the £3 mark.

As to a disc drive for a BBC micro, well maybe a member can help you, if not with a disc drive then where to start looking for one. -Paul>>

#### DRIVE YOU CRAZY

I brought a three and a half inch drive from a stall at a computer fair many moons back for a fiver. Bare workings and no cable. The first task was to strip it out of it's case and find out what went where and what is that little box of link pins for on the side. Thanks to the WACCI mag I now know. Well a little more than I did. The two articles say a lot but not enough. The two rows of seven pins on the Chinon FZ 353 drive I have which works (nearly) are different (course they are).

At one end we have the drive signature. DS0-DS3. That takes care of six pins. At the other end we have TTL-CMOS. So now we have drive 'b and TTL. There is also a RDY which links two pins. It works the same with or without. Centrally we have three pins with the choice of MD or MM. These are the format size directors.

From the fourteen pins I only need to connect TTL and 'b (DS1). I hooked up a power supply from a bell transformer and a voltage/current

regulator and a zenner diode to straighten out the pulses from the regulator and pushed the switch and waited for the bang! There was none so a cable was attached to 'b and the 6128 Magdos Al La PD 68 it was (I think) was inserted and run. A row of dots appeared across the screen. Yippee I think I said. Following the on screen prompts I had a file called Magdos.410 installed and a great wide open storage space that is absolutely of no use to man nor beast or me.

On this Magdos disc there is a copy prog and like all the other copy prog's it is a mirror copy and reformats the disc as it goes along. I had assumed that as it was in the same window as the formatting, it was a copy prog that would take what ever and put it neatly into one of the ten sectors with eighty two tracks each.

I can copy whatever on to it but as the dos file has been erased it will not load back. Sad innit! And I only have 178K of space. I now have 2 extra disk drives that are no better than one Amstrad fitted in the first place.

I shall set my Mill Stone to print and go and have a good cry. BOO HOO.

Tom Gordon  
Lancashire

PS. Should this Billy Doo go to print do not mention CP/M. It is one of my pet hates! I have read the formatting instructions and don't care.

Re: A Legend? No more shall we see his cheerful face at Haydock. No more can we phone the Oracle and get put back on the straight and narrow when proggies refuse to work because we the great unwashed will not read the instructions on the PD Discs or even disk's. There he stands in his old but never worn blue boiler suit painting the fence at last. No more excuses has he. But, he is a legend in his own life time. Like Sinatra or Clint Eastwood or Someone. Hey GOOD FRIEND. You take care. You hear???

PPS. I used my bestest paper for this letter. A whole sheet as well!!!

<<Hiya Tom, you can talk to me about pin names and numbers 'till you go blue in the face and they still won't do anything for me. Please, pretty please, can one of you lot who know how to build a disc drive from scratch

(and I know who you are) help me out here as I'm bound to miss the point somewhere in this answer.

To sum up your letter, you appear to be saying that the disc drive now works but only as a standard 180K drive and I assume no side switch. What you need is a large disc operating system and you have obtained Magic Dos from the PD library.

I have had a quick look at Magic Dos and tested if it worked. I formatted a 3.5 disc (which places on disc a file called -magdos-.410) and then I installed the operating system from the main menu and quit the program. I then typed ;p to jump into Prottext and changed the drive to B. A quick CAT showed me I had 406K free on B.

It looks like every time you wish to use the large capacity you need to first run Magic Dos and install its DOS system. It is compatible with Prottext and the Utopia COPY command also worked. I can't say, however, if it works with your software Tom but know doubt you will let us know.

Best bet is a Rombox with Romdos or Romdos XL. Parados might be worth a look at.

I loved the PS and I'm sure Uncle C did as will. -paul>>

#### ARE YOU DES COMPATIBLE?

Dear Paul, For members considering buying the wonderful DES package from Campursoft please be aware that if you wish to use the Big Format facilities you must have a big format ROM in your Rombox. Yours,

Angry Tortoise  
Wolverhampton

<<Hiya Angry, I guess you bought DES thinking it would do everything but found it couldn't. Well, I was aware that a large operating system was needed if you wished to talk with a big disc but have Campursoft mislead you in advertising. I have printed the DES advert on the back page and I think you will agree that is the only reference to large formats is the statement "Romdos compatible".

If anybody is considering DES then please note that Angry also calls it "the wonderful DES package". If you are in any doubt then ring or write to Campursoft as Peter Campbell is an awful helpful chap and he will sort out any queries you may have. -Paul>>

#### THANKS CLIVE

Such a shock to hear of your resignation dear Clive and a great feeling of loss, no more shall I see your smiling face at the All Format Fairs or pester you to death with silly questions. But I do appreciate how hard you have worked on our behalf so Clive just one more great big THANKYOU!!!

Angie Harwick  
Bloxwich

<<Hi Angie, nuff said. -Paul>>

#### DDT SPRAY

Dear Paul, First my thanks to Clive who was my first introduction to WACCI at an All Formats show. He will be hard to replace.

Next, a possible mistake in my DDT example on Page 11 of WACCI 77 where is says:-

-F100,pp00,FF<ret>

It might be better to say:-

-F100,p000,FF<ret>

This should now work reliably provided that the BIOS doesn't alter the RESTART at 038h which is used by DDT.

Finally in my original letter in WACCI 74, I bemoaned the lack of information on the internal workings of the eight bit Amstrads. Well, my software industry spies tell me that the EMINENCE GRISE behind this policy is none other than ..... Locomotive Software.

Consequently I have acquired yet another version of Logo, my third. It was ported onto a non Amstrad, non Locomotive machine and some data on ports, restarts &c IS available.

If anyone gets my DDT example to work, I'd like to hear about it but I think now that we can safely regard this topic as closed.

Thanks for printing my letters and keep up the good work.

Dennis McLaren  
Surrey

<<Hello Dennis, thanks for the update on your DDT example and for the reason behind the suppression of information on the CPCs. Why do they do it, can your spies find that out? What possible LOCOMotive is there? -Paul>>

#### PARADOS

As a new member I was glad to read Bob Miller's piece on Parados as I reviewed this for CPC Undercover, CPC Contact, UAUG and Scrapyard. I must agree it is a fine bit of gear but, however, there is a bug in it. It will not do a backup as in the instructions. It says that there was not enough space or time enough for the programmer to get it on to rom! Does Bob have a Rom that we others don't have!

Secondly Bob did not say what type of machine he had. My Parados Rom would not work in Slot 7 but worked fine in Slot 6. I have an expanded 464. I talked to Quantum (when they were available) and they told me DD1 users could remove their DOS Rom in the DD1 and replace it with Parados. This I have done. There is only one Rom in the DD1 interface and it is very easy to remove and replace with the Parados Rom.

I now don't need a Rombox as Parados remains hidden until I call !Drive. The DD1 interface works as normal so I would suggest that anyone who has Parados put it in their DD1 interface.

I now have on hand a whole DOS + File Management System without loading in a utilities disc or Rombox. I am not sure if Parados can be fitted inside a 6128 or 664, so it may be a case of 6128 & 664 owners eat your heart out. Cheers,

P Curgenven  
Cornwall

<<Dear P, a members first name is such a wonderful thing to have when doing FC that I urge all members to make sure you give us one.

It's over to you Bob - a bug - did you find it or not. We must know.

The tip about replacing the DOS Rom in a DD1 interface with Parados is a gem, thanks very much P -P>>

#### AN ODE TO CLIVE

Dear Clive, I was very sorry to read of your retirement from editing WACCI magazine. Although we met only a couple of times at the All Formats Computers Fairs in Bristol and spoke once on the telephone (you did most of the talking as I recall!), I feel as if I have lost a personal friend, somehow you managed to convey your helpfulness and warmth of character in

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*Spiral Bound DD1-1 Manual, Good Condition yours - for TEN First class postage stamps.*

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'Thanx and Stuff' and other pieces which you contributed to WACCI.

I do very much hope, therefore, that in due course you will feel able to begin writing articles for WACCI once again and not disappear from the scene altogether like Steve Williams and the delectable Joolz (she never did state exactly how many Mars bars it would have taken to persuade her to appear in a centre page spread).

Although I was taken aback at Paul's announcement, I am not really surprised at your decision to retire as editor. My work often involves knitting together contributions from other people towards internal reports and briefing notes, and I can appreciate how much effort went into each issue of WACCI. The wonder was that you managed to do so much for the club as well as keeping control of your job and domestic life.

Hoping to hear from you again in the not too distant future. Best Wishes,

Derek Adams  
Powys

*<<Hiya Derek, Angie here. Please don't apologise for sending a typed letter, it's my pleasure to type them out. Regards -Angie>>*

*<<Hello Derek, Paul here. Thanks for the letter, I sure Uncle C will appreciate your thoughts on his retirement. I'm not too sure how many Mars bars it would have taken to tempt Joolz but I'm sure if we would have asked for donations from members then any number could have been raised!*

*You must have apologised to Angie for causing her to lay fingers on her keyboard. I think she has enjoyed reading your letters before anybody else did, am I right Angie? -Paul>>*

#### NEW MEMBER

Dear Paul, Thank you for sending me the latest copy of WACCI. I must first apologise for inadvertently conning a free copy out of you by making the

cheque out the the wrong person; can I plead ignorance? I certainly enjoyed the read, my only complaint is that it was not long enough! I look forward to the next edition. Thank you for your attention. Kind Regards,

Ian Goulden  
Sussex

*<<Thank you for the subscription and letter Ian, I've entered you onto that great WACCI mailing list that will ensure you loads of reading. Can we help it if you can speed read?>>*

*As a general note, if I receive a cheque/postal order made out to myself then I complete the order but send the cheque/postal order back with the order. I have had people complain that I should have banked the money into my account and then pay WACCI. That's not the way I work. -Paul>>*

#### AA WHAT'S UP WITH ABLEX

Dear Paul, Like Isobel in the August Issue I too am hopping mad with Ablex Audio. I sent a cheque for £2 and AA token 106 for a disc on 24 June '94.

As I hadn't heard anything in July I wrote to remind them, and silly me I should have known better at my age (81). I sent them another £2 and token no.107 for a further disc. This was on 1st August '94.

No reply, not nothing. I wrote again on the 28th August '94 asking for my money, now £4, to be returned. To date complete silence!!

Many thanks for a smashing magazine and please keep up the good work. Best wishes to everyone, Yours sincerely,

Norman Shatford  
South Humberside

*<<Dear Norman, thanks for letting us know about the AA (that's Ablex Agro not Amstrad Action or even Ablex Action) you have been having.>>*

*Whilst it is true to say that this is less than one percent of the membership having problems, so there is no need to worry, the fact that two members are having problems concerns the club. If any more of you have had, or are still having problems, then let me know and I'll write to Dave Golder with the dossier of none happenings.*

*Isobel sent me the Ablex disc that she could not read. It was a dreaded Magtron of the dubious kind. My drive A read the disc (must be a good drive*

*belt) but failed to load the Menu program with a Drive A: Read Fail Retry, Ignore, Cancel?*

*I placed the disc in my second three inch drive and would you believe it, it managed to read it! So I've copied the disc so Isobel now has her copy of the Speech program. To make things worse, the Speech program is in the Homegrown Library anyway!*

*Let's hope Ablex come up with the goods for you Norman, some 10 ten weeks is way outside the 28 days mail order companies are allowed so please write to Amstrad Action as they do have a responsibility here.*

*Thanks you for your good wishes, everybody who contributes to the magazine please take a bow. -Paul>>*

#### STICKY LABEL REMOVAL

Anthony Jordan recommended last month the use of Scotch 3M Clean Art for removing old disc labels. I purchased a can (£1.39) from my local art shop and tried his method. Gosh it's sooooo good that I don't know how I survived without it. I can only recommend that you get a tin.

Paul Dwerryhouse  
CLWYD

*<<No I'm not going to answer myself.>>*

\*\*\*\*\* NEWS FLASH \* NEWS FLASH \*\*\*\*\*

#### THE ALTERNATIVE FIRMWARE GUIDE

*There is some very good news on this front. The stocks that WACCI had have now been exhausted but this still is an important document for CPC users. I wrote to Thomas Defoe (formerly of PRINTOUT) and asked if WACCI could copy the document for distribution to its members.*

*Kindly Thomas agreed providing that we do not actively market it and only fulfil orders from members. The guide must also remain unaltered.*

*That news was good news so now we need to plan the next step. WACCI only has one copy left and I feel we need a volunteer to type in the guide so we can print it ourselves. We would also need a proof reader as the document is of such importance.*

*If you feel you would like to help the club out on this venture then please get in touch with me and I'll set things in motion. Cheers, Paul.*

# ZEN

## ZEN AND THE ART OF SOFTWARE DOCUMENTATION

TRANSLATED FROM THE P'-U-T'UNG HUA DIALECT BY W.C. CARLSON

---

### ON PREPARING TO WRITE OF SOFTWARE

To prepare for the writing of Software, the writer must first become one with it, sometimes two. Software is untasteable, opalescent, transparent; the user sees not the software, so the writer must see through it. Spend long, quiet mornings in meditation. Do not sharpen the mind, but rather blunt it by doing Zen crosswords. <<note: Zen crosswords are done by consulting only the "Down" clues; and always in the mind, never on paper. -Paul>>

The mind should be rooted but flexible, as a long stemmed flower faces the Sun yet bends with the Wind. Think not of compound adjectives because they tend to wire the mind in two directions. Rather, consider the snowflake, which radiates in beauty in any and all directions. Partake of strong drink.

### -oOo- THE ART OF ZEN -oOo-

Do not study the Software; let it study you. Allow the Software admission to your mind, but keep in the cheap seats. Let it flow around you at its own pace. Do not disturb or dismay it, but keep it from your private parts because it tends to coalesce there.

When the Software is with you, you will know it. It will lead your mind where it should be, and prepare you for the narcolepsy that is certain to follow. You will know when the Software is with you, and so will others. You will smile with an inner smile. Typewriters will frighten you. You will fall down a lot.

The first exercise in writing Software documentation is the Haiku. Haiku are 17 syllable poem forms in which many ideas of a single concept are reduced, nay, distilled into a short, impressionistic poem.

By concentrating on the Softwares form and function in a concise, subliminal, truly meaningless Haiku verse, you have transcended the Software, and you can then write the true manual.

The following Haiku is from a Zen manual on Data Transmission:

*How swiftly whirls the disk;  
Data leaps to the floating head  
And is known.*

And this is on Hardware Maintenance:

*The smell of hot P.C. card,  
Blank screen, no bell,  
New parts will be needed.*

And another Haiku, this one on Debugging:

*All the lights are frozen;  
The cursor blinks blandly.  
Soon, I shall see the dump.*

Let the Haiku thoughts free your mind from your fingers. Your fingers will write what must be written. Soon you will be in Document Preparation.

### ON THE REVIEW CYCLE

This is the murkiest path. Storms gather and disperse around you many directions, none of which are in English. The path becomes unclear as many an idea compete for attention. Some of them are fatal.

But the writer of Zen Software documentation fears not the turbulence of review cycles. Let it storm around you and be dry, warm, and safe in the knowledge that you have written the pure manual. Anyway, you know the printer. You shall in the end have it your way. <<My thanks go to Andy Frame for providing the data on ZEN. I hope you enjoyed it -Paul>>

# THE DAY

## A DAY IN THE LIFE OF AN AMSTRAD CPC BY JOHN COURT

AMSTRAD CPC Users Group. of the N.Z. Microcomputer Club Inc. Box 6210. Auckland.

New Zealand. Convenor: John Court Ph. (09) 636-6143, 60 Campbell Rd., Onehunga, Auckland 1006

*The CPC 8 bit models may appear to be outdated, but when they are used to their full potential as a home computer, using the good word processors, databases, spreadsheets, and home accounts available, they will do all that the ordinary person requires. We certainly spend a great deal less for our software than the owners of 16 and 32 bit computers. Presented next is a picture of one day as seen through the eyes of an 8 bit CPC.*

### MORNING ALL

As soon as the morning newspaper was delivered, I was loaded up with the Sharemarket program and the prices of those stocks which my owner was following, were entered. I produced a line graph of one stock price with its moving average plotted at the end date. My owner got all excited when he saw the price line had passed through the moving average line.

Later in the morning, the Word Processor was loaded and 2 letters were produced. One was on an Aerogram in the Condensed font and had quite a few paragraphs of news loaded from another previous letter. I think that the second letter looked very elegant in Lectura font.

### MAIL MAN

Then the mail arrived and some bills were paid after being entered into "Money Manager" cash book. A bonus share certificate received, had its serial number recorded in Masterfile database and with other details, in Mastercalc spreadsheet.

### SING FOR YOUR SUPPER

A married daughter arrived and asked to use Advanced Music System. She

wished to produce a songsheet with music and lyrics for her group to perform at the school hall. I played the tune for her.

### NOW THAT'S WHAT I CALL A BANNER

The secretary of a club then phoned and asked for a banner and greeting card for a new life member to be appointed at the AGM. Both were produced using Printmaster Plus. The banner was 3 metres long and the card was made using choices from different borders and fonts and illustrations.

### EASY PEASY BIT

Then the Editor of the club's magazine arrived with the copy for the monthly magazine. Using Stop Press Desk Top Publishing program, there was a choice of 54 fonts, in variable sizes, and 550 drawings filed on disc, to make a classy front page. A coloured snapshot of the speaker at the next meeting was digitised from a video camera and loaded into a window on page 1. The next 2 pages were produced by the program, Page Publisher, as they were for text only. It is just so easy for me to make 2 or 3 column pages with this program. The columns can contain boxed text and headings can be

inverted to white-on-black. Then off went the Editor to his photocopier.

### NAUGHTY BITS

When school was over, my owner's grandson came and used French Mistress to practice his vocabulary as he was to visit New Caledonia. I have lots of educational programs available.

### LABELLED WITH LOVE

After tea, the club membership database was updated and printed out for in full for committee members, and address labels printed for the posting out of the magazine.

### OUTRO

Then, after putting my cover on, there was time for my owner to go down to the supermarket. There he met a man he knew, who had the very latest in gee whiz personal computers with all the bells, clocks and whistles plus a very noisy cooling fan. My owner, after saying that he was still using me, (a genuine quiet 128k Z-80 8 bit computer with no fan), was told that I should be traded in for something that would be really useful!!

*This article was extracted from the N Z Microcomputer Club Inc magazine. WACCI are grateful to John Court for contributing these articles to the magazine.*

# MARKET STALL

STALL HOLDER: ANGIE HARDWICK

Welcome to a new and regular page in WACCI. My thanks to Angie for taking on the role of looking after members requirements on the second hand scene. This page is to replace the service Clive gave to members and thus take that load off me. Instead of having adverts scattered about the magazine, which can make finding the one you want time consuming, all members adverts will be on one (or two?) pages. There aren't really any rules but here is the way Angie will run it.

## FOR SALE ITEMS

Simply send your item(s) to Angie and she will type them up ready for me to layout. The item(s) will then be placed in the next magazine. If an item doesn't sell then you will have to send to Angie (or phone) to ensure a repeat is inserted.

There, of course, is no charge for this service and, whilst trying to sell your car though the magazine would seem a little silly, there is no limit on whatever you wish to sell.

## WANTED ITEMS

Exactly the same as FOR SALE but Angie will keep a card index of all items

that come in under this heading. In this way she can match any incoming FOR SALE items with the WANTED index and, by use of a postcard, put members directly in touch.

This service will be run on a first come first served basis so if you want a ROMBOX then get writing now!

## OTHERS

If you require help in a certain area then a HELP section will be included. If you want to offer members a service then that too is okay.

If you would like to advertise another club that you might be in (for example see the letter from Andre

Howard on page 8 - you might be interested in an electronics club) then that too is okay.

## OUTRO

I think that should have given you the idea behind this regular column. It isn't meant for software/hardware companies but if they feel the need to advertise in WACCI then please get in touch with me. Provided you offer a discount to members then adverts are free too.

## Stall Holder:

Angie Hardwick  
23 Station Place  
Bloxwich, Walsall  
West Midlands  
WS3 2PH  
Tel: 01922 476293

## FOR SALE

AMSTRAD DWP-3000 printer c/w manual and plug. In good working order. Yours for £25.00 WACCI, 7 Brunwood Green etc Tel: 01244 534943.

CPC6128 keyboard in good nick c/w manual, CP/M discs. £50.00 WACCI, 7 Brunwood Green etc Tel: 01244 534943.

CPC Printer lead. One only. £3.00. WACCI, 7 Brunwood Green etc Tel: 01244 534943.

AMSTRAD 3 inch second disc drive for CPC6128, ex cond. £20.00 WACCI, 7 Brunwood Green etc Tel: 01244 534943.

CTM644 col monitor ex cond £50.00 WACCI, 7 Brunwood Green etc Tel: 01244 534943.

ADVANCED ART STUDIO inc man. £5.00 WACCI, 7 Brunwood Green etc Tel: 01244 534943.

MULTIFACE TWO but w/o manual £15.00 WACCI, 7 Brunwood Green etc Tel: 01244 534943.

CPC464 keyboard only c/w man £15.00 WACCI, 7 Brunwood Green etc Tel: 01244 534943.

AMSTRAD MP3 TV tuner ex cond £10.00 WACCI, 7 Brunwood Green etc Tel: 01244 534943.

Write to Angie with your ad!

GENIUS MOUSE, interface and mat. Not too sure it all works, yours for postage at £1.50. WACCI, 7 Brunwood Green etc Tel: 01244 534943. (If it works for you then please send £5.00 to WACCI).

AMSTRAD CPC464 Advanced User Guide by Mark Harrison. Good book for all learners. Only £2.00. WACCI, 7 Brunwood Green etc Tel: 01244 534943.

WANTED your advert here!

THE GAMES - a compendium of winter events on disc complete with Instructions. £2.00. WACCI, 7 Brunwood Green etc Tel: 01244 534943.

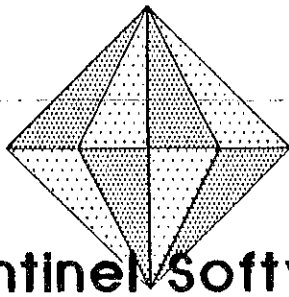
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CHICAGO 30's game on disc complete with instructions. £2.00. WACCI, 7 Brunwood Green etc Tel: 01244 534943.

THE EMPIRE STRIKES BACK game on disc c/w instructions. £2.00. WACCI, 7 Brunwood Green etc Tel: 01244 534943.

Lots more ads next month ...



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All prices include P&P. Cheques/PO's made payable to Sentinel Software. Please allow 28 days for delivery

### 10% Discount to WACII & UAUG Members

#### XEXOR.....£14.99

Edit discs, copy files, recover corrupt discs, create custom formats even. Guard software investment with the backup option. If you only ever buy one disc utility, you must make it this one. "Never before have I seen a piece of work so comprehensive" (AA 96)

#### SOUNDTRAKKER.....£24.99

The music package (AA 92 - 93%). Use your CPC as a piano, then add instruments and drums, and even transpose the melody. Arpeggio options give the unique effect of over three notes at once. Don't make do with inferior products use the soundtrakker the professionals use.

#### ZAP 't' BALLS - Advanced Edition.....£13.99

Addictive arcade action from the coder of Super Cauldron and Prehistorik II. Spectacular graphics and tons of levels. "It's stunning" (AA 89 - 84%) (128k only & joystick required: One - player only on CPC Plus).

#### PRO-EXT.....£14.99

Do you use Arnor's Protex word-processor? If so, buy the flexible package which gives you not only new (editable) fonts, but also ruled lines, powerful graphics and charts. Ideal for business applications, simple DTP, Headed paper...You name it. (128k required)

#### SOFTLOK V2.3.....£14.99

The most comprehensive Speedlock tape to disc transfer program available. This easy to use menu driven program will allow you to transfer many of your tape games to disc with minimum fuss. With over 100 verified transfers this has to be the utility to use. (CPC Attack 6 - 98%) (128k required)

#### SMART PLUS.....£14.99

At last an art program that lets you make full use of the Plus ranges extra colours. Create amazing overscan pictures with a palette of over 4000 colours to choose from. What's the point of a super Plus machine if you can't stretch it to its limits? (Also available on tape)

#### THE ULTIMATE SPRITE SEARCHER.....£7.99

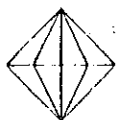
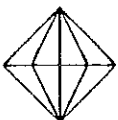
Extract graphics from games (not only CPC ones!), with this easy to use and fun program, save them on your CPC as screens, Z80 source code, or Art Studio windows. Even better with Hackit or Multiface. Comes with free machine code sprite routine. "A very valuable addition to the world of the CPCs" (CPC User 43) "This is an excellent program and I heartily recommend it." (WACCI 74)

#### BALL BEARING.....£5.99

Liked the PD game Croco Magneto? If so you'll love this scrolling puzzler, from the author of Eve of Shadows & Fluff, which combines the playability of Croco with super graphics and loads of extra features at a bargain price. (Also available on Tape at £3.99)

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Get your hands on "The best machine code guides so far" (AA 91-95%) or our BASIC tutorials which "From a beginners point of view these guides are excellent" (AA 98) Please write for a full list



# MOII THE CODES

## USING PRINTER CODES IN MOII by John Hudson

*This contribution is prompted by Tom Gordon's letter in WACCI 81; so I'll throw in my suggestion about why his margins vary before going on to the main subject. The most likely reason for the problem he describes is that he is changing character widths somewhere in the document.*

### INTRO

Margins on all early printers and on early word-processors are defined in columns - each column being one character of the pitch currently in use. So an inch margin equals 10 columns in PICA, 12 columns in ELITE and 17 columns in CONDENSED, widths which were chosen on the basis of IBM's typewriters!

### GOD KNOWS

But, for reasons which I have never understood, MOII has a default margin of 4 columns; so to get an inch margin in PICA, you have to tell the printer to allow a 6 column margin.

### TWO VERSIONS

MOII comes in two main versions; you can tell the difference by pressing f1 in the word-processing module - if a carat (^) appears, you have the later version and you can begin to type in a printer code. To get the carat in the earlier version, press Shift-f1.

Though you can swap text between versions of MOII, several of the codes, including the carat produced with Shift-f1 or f1, will not work in the other version and you will have to replace them by hand to reproduce the correct effect on the other version.

### TWO METHODS

MOII has a printer options menu which also differs between the two versions in the defaults it offers; the menu seems to suggest that you can change the settings at any time but I have gained the impression that some

settings are saved with the document and cannot be changed. So I change the printer settings before starting an important document; or, to be sure with a saved document, I open a new document and merge the saved document into it.

Because MOII can send printer codes from within a document, it can theoretically do everything any other word-processor can do; in practice, while it sends the printer codes correctly, it also advances the printer with every character sent creating spaces of five or six characters length in the middle of the text. So the only practical place to put codes is in the 'blank' lines between paragraphs though it is possible with a tractor-feed printer to put a code at the start of a line followed by the roll-back command so that it applies for one line only.

### COMING UP...

What follows applies to any Epson 9 pin compatible printer even though it was originally written soon after the DMP2000 came out. It only applies to 80 column mode in MOII. You can get some interesting effects in 40 column and 20 column mode if you want to produce large print but, of course, there is no way to mix modes in the same document or, in most cases, swap text between modes.

Finally, if anyone wants a copy of the original document in MOII format showing all the codes in action - send a disc to me at Unit 17, Gatehouse Enterprise Centre, Albert Street,

Lockwood, Huddersfield HD1 3QD. Let me know whether your version of MOII uses Shift-f1 or f1 to produce the carat so that I can send you the correct version and save you having to alter the codes yourself.

*MINI-OFFICE II Print Control Codes for the Amstrad DMP2000 and DMP3000 series in Epson mode by John Hudson.*

### AN EMPHASISED POINT

Mini-Office II provides a number of print control codes which allow underlining, emphasised print and condensed print. However emphasised print is not available on the DMP 2000. Instead and in addition, by using Shift+f1 in earlier versions of MOII and f1 in later versions, it is possible to extend the range of control over your printer. If your version of MOII does not print a carat(^) when you press f1, use Shift-f1 instead.

### THE ONLY FONT THAT COUNTS

Near Letter Quality (NLQ) may be selected by:

f1 27,120,1

This is described in the Amstrad printer handbook as ESC x + 1 and appears on your screen as:

^27,120,1.

To turn off NLQ printing use:

f1 27,120,0



### IMPROVING IT

You can select proportional printing by using:

f1 27,112,1 and off with: f1 27,112,0

In proportional printing the characters are spaced out across the text and do not fall immediately below each other. It should NOT be used for tables or any text that depends on columns. You will also see that proportional printing can only be used with a ragged right.

You can also combine NLQ printing with proportional printing.

### MINI TIME

You can print in 12 characters to the inch (also called 'Elite' or 'Mini' in the Amstrad printer handbook). This is begun with:

f1 27,77 and ended with: f1 27,80

As it affects the size of the left margin this is best used for the whole of a document.

You can compensate for this by increasing the left margin with:

f1 27,108,n

where 'n' is the number of spaces you want less 4; Mini-Office provides four spaces as standard.

### MIND YOUR LANGUAGE

If your printer is not already set up for the English character set, you can select the English character set with:

f1 27,82,3

so that the pound (£) sign is printed out rather than the dollar sign. The final figure is the character set of the Amstrad language you want; so, for example, you can get French with:

f1 27,82,1

and so on. (Please see Chapter 7 Page 52 of the CPC 6128 handbook for further details).

### SLANT IT...

You can select italic script with the following:

f1 27,52 and cancel it with: f1 27,53

### TABLE OF PRINT CONTROL CODES FOR THE AMSTRAD DMP 3000

	SET	CANCEL
Pound (£) sign	f1 27,82,3	f1 27,82,0
NLQ print	f1 27,120,1	f1 27,120,0
Proportional	f1 27,112,1	f1 27,112,0
Mini or Elite	f1 27,77	f1 27,80
Set left margin	f1 27,108,n	f1 27,108,0
Italic print	f1 27,52	f1 27,53
Bold print	f1 27,69	f1 27,70
Double-strike	f1 27,71	f1 27,72
Print code on single line in paragraph	f1 27,106,36	after the codes to set and cancel
Reset	f1 27,64	

**NOTE:** for the standard commands to underline and condense text, see the Mini-Office handbook.

Please note the italic script is NOT available in NLQ print.

### BOLD IT...

You can select bold print with:

f1 27,69 and cancel it with: f1 27,70

However, bold is ONLY available with the standard typeface according to the Amstrad printer handbook.

### STRIKE IT...

You can select double-strike print with:

f1 27,71 and cancel it with: f1 27,72

Double-strike is NOT available in NLQ print. You can combine various of the above to give bold italic script or double strike proportional print for example.

### MIDDLE FOR DIDDLE

Though it is possible to use the normal Mini-Office commands in the

middle of a line, these additional control codes should only be used on complete lines and paragraphs. With paragraphs the control codes can go in the space between the paragraphs but a single line can also be affected by following the code with:

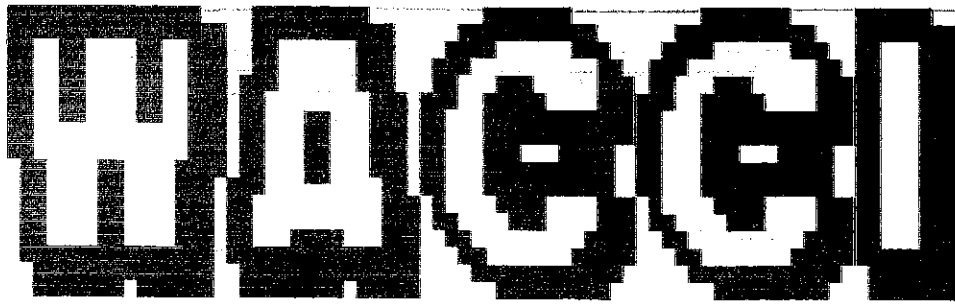
f1 27,106,36

so that you can print out a single line in, for example, bold print in the middle of a longer document. However, as this is fairly tricky to set up in a justified document, it is not recommended unless your normal practice is to print documents with a ragged right.

Finally one of the problems you may encounter after you have printed out a document is that you want another document printed in a different style. You can either switch off the printer to clear all the changes you have made or you can end the document with:

f1 27,64 which resets the printer.

# GREAT



# SERIES OF YEARS GONE BYECEE ...

## PLAYING WITH PROTEXT by Peter Ceresole

Last month Peter left us promising to show us how to arrange a macro to grab an address from a file and set it up to print onto an envelope with all the necessary margins set correctly ..... well here it is.

### ENVELOPE FORMAT

Actually it needs a little organising. All my letters have a standard format for A4, which is of course on my Protext utilities disc as a file called (aha.) "A4".

If I want another format below it, I just put in another ruler. This code extracts the address. It assumes the second file is empty. I assigned it to CTRL-f8, replacing the Utopia call to Maxam.

```
CHR$(7)+"11"+CHR$(13)+CHR$(228)+
CHR$(233)+CHR$(7)+"4"+CHR$(13)+
CHR$(233)+CHR$(219)+chr$(25)+
CHR$(21)+chr$(237)+">p1 10"+
CHR$(13)+">tm 0"+CHR$(13)+
">sm 20"+CHR$(25)+CHR$(219)+
CHR$(11)+CHR$(25)+CHR$(252)
```

The action goes like this:

```
CTRL-G : goto line 11
Shift-Tab : move to Tab
Shift-Copy : put in a marker
CTRL-G : goto line 4
Shift-Copy
CTRL-B : block mode on
CTRL-Y : goto the second file
CTRL-U : copy the block after you
CTRL-I : make a spare line
PL10 : page length 10
TMO : top margin 0
SM20 : side margin 20
CTRL-Y
CTRL-b : Block mode off
CTRL-K : cancel markers
CTRL-Y
ESC
```

At the end, you will be sitting in command mode in the second file, and either the address will be ready for printing, or maybe a couple of spare lines at the bottom will have come across because the address is shorter than the maximum. In this case some quick, mindless deletions will fix everything. The original file is unscathed. Obviously, you change the margins to suit your own printer and your envelopes.

I really use that macro a lot, both at home and at work on a PCW 9512. However, the CP/M version of Protext won't copy boxes from one file to the other, only blocks, so you have to box the address, copy it somewhere clear in the same file (I use the bottom of the file), cancel box mode, and then transfer the block to the second file. Before the end, you have to go back and delete the block.

### CRASH TEST DUMMY

This makes for a lot of jumping between files. I used the CPC to develop the CP/M macro. It was a million laughs watching it execute on a 2 drive CPC, because each file swap involves a save of one file and a loading of the other, it's like watching a car crash in slow motion. Especially when I could see something was wrong in the about the third code, and it would go on for another forty seconds saving the files as I watched. On the PCW, with the M drive, it takes about seven seconds, mostly writing the margins for the envelope.

In the exec file it looks like this:

Key I <ret>

```
^27^^7^I4^132
33^^7^19^13^^
7^c32^13^^233
^^2^^29^^13^^
234^^2^^25^>t
m5^13^>sm25^1
3^>p119^13^^1
5^^25^^232^^2
5^^252^
```

There has to be a return after "Key I", otherwise the phrase is too long. Discovering that was one of those fun moments; it's not overly clear in the manual, but Arnor helped over the phone. The other macros convert straight across to the PCW.

### ANOTHER BIT OF FUN

A whole new way of life opened up when I got a NEC P2200. It has the extended IBM character set, which I can reach with a KDS 8-bit printer port interface. The KDS port is deeply, deeply wonderful, especially now that it will work with CP/M (in my case I have the old interface. KDS do a CP/M patch for it). Then normal set-up program for the KDS interface clashes with promerge+, but Arnor wrote a new program for it when asked (over the phone, within a few hours; one of the best things about Protext is dealing with the fellows at Arnor)

### IT'S ON THE NEXT PAGE!

In case anybody else has had this problem, here is the program from Arnor to make the old kds 8-bit interface work with Promerge Plus.



# BOOT CP/M

## GIVING CP/M+ A BOOT UP THE B by TREVOR LAWRENCE

*When I proudly added a 3.5 inch disc drive to my 8128 I was a little irritated that I could not boot up CP/M+ from the new drive. In the main, of course, it did not matter - but it could be very frustrating if at any time my built-in drive was out of action and yet I had a perfectly sound drive which would not do the job. In any case I don't like to let a mere machine thwart me so I saw this as a great challenge.*

### CLOSE ENCOUNTERS OF THE CLIVE KIND

In my innocence I assumed that the "chip" which responded to the !CPM command must hold the key and so I got nowhere very slowly! Then I met Clive at one of the All Formats Fairs and chatted to him about the problem. He was immediately able to tell me that it was not the chip but the C10CPM3.EMS file which was responsible and then it was not so difficult.

If anyone else would like to use the same facility here is a blow-by-blow account of the task.

### NO HEAD FOR HEIGHTS

The C10CPM3.EMS file can not be "RUN" directly since, although it consists of machine code routines and data to be loaded by those routines it is not yet a proper binary file. The reason becomes clear with the help of SID. If you have not met him he is to be found on side 2 of the master disc. First boot up CP/M (from drive A of course), turn the master disc over so that side 2 is presented and type SID.

At the prompt, (L) enter ec10cpm3.ems (+ carriage return). Remember this file is on disc side 1. The initial "e" is the code which tells SID to load the file.

Now type d (+ carriage return) and Sid will display data. By default it will be the data stored at location &100 onwards - and this is the start

of the file. At this point we can see why the file can not be "RUN" in the normal way - it has no "header".

### CHARACTER BUILDING

There may be clever ways of providing a header for such files but I could only think of doing it by building it character by character. The header needs 128 locations immediately before the working code. My first idea was to make that space by using SID's facility to move a block of data.

Command m100,6500,180

The m is SID's code for move, 100 is the hexadecimal address of the start of the block to be moved and 6500 its end. 180 is the new start address.

I then built my new header in the space from 100 to 17F (details in a minute) and saved the whole lot with:

wcpm.bin,100,6580

w is for "write", filename is obvious and the addresses of the start and finish of the code to be saved. I copied this to a 3.5 inch disc which also held copies of the two other files necessary, as a minimum, for a boot disc, SUBMIT.COM and PROFILE.SUB. I placed this disc in drive B, selected drive B in the usual way and typed "run cpm.bin"

### ZERO'S AT ONE O'CLOCK

It looked as though it was going to work - but then suddenly hung up. It took me a long time to discover that two or three complete "pages" of the original program were all zeros in my CPM.BIN file! I still don't know whether this was just a gremlin in my system while SID was doing his removal operation or whether the file was too long for a successful shift. Anyway I started again, using plan B.

### EVER ONWARD

Having loaded C10CPM3.EMS as before I now built my header in the space immediately before the file i.e. &80 to &FF. Command:

s80

to SET memory values starting at &80. SID will display the address &80 and its contents. If you insert a new hex value followed by carriage return the new value will be stored, carriage return alone will leave the value unchanged. In either case the next address and contents will be displayed for similar treatment. The codes needed are :

00	43	50	4D	20	20	20	20
20	42	49	4E	00	00	00	00
00	00	02	00	00	00	0C	00
00	65	00	0C	00	00	00	00
00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00
00	65	00	3D	03	00	00	00

with 00 in the remaining 64 locations and as a check the final 03 is in location 00C4 .

#### AND...

After the last code enter X (+carriage return) to get back the normal prompt for SID. At this point I saved my file:

wcpm.bin,80,6500

This time, using drive B as before it worked! - up to a point!!

The crunch came because it still looked for the SUBMIT and PROFILE files on drive A . I could press the C for "cancel the disc search",select drive B and then enter SUBMIT so I could get round it - but if I keep a dog I don't expect to have to do the barking myself!

#### PATIENCE NEEDED

It took me nearly three weeks of searching through the file to identify

the data which was to form the system control block - and then about three minutes to make the changes. The addresses mentioned now assume that you did not save the file at the point mentioned above but still have it (under SID's control!) with its newly made header, in memory. If you did save it and reload the file cpm.bin into SID's care with the "e" command the first part stored is the header and every other item of data has &80 added to its address.

#### ALERT ALERT...

Be warned of one nasty little trick which SID played on me. If, to be on the safe side, you saved the file as above, but kept it in memory for the next steps - check on the header you so carefully typed into locations &80 onwards. I found that during the write operation these locations had all been reset - and my header had gone!

1daf 00 change to 01

1dda 00 change to 01

These change the current drive and default drive to drive B and with these changes the system works! - but there are more goodies available.

1de9 FF change to 01

This modifies the search chain - if you try to load a program now and it can't be found on the current drive it will look on the other.

#### BIG DISCS

This is also a good opportunity, if you are using RAMDOS and large format discs on the B drive to patch the file as instructed in the RAMDOS leaflet for immediate access to the format you have chosen. Don't forget if you have already saved cpm.bin and reload it into SID all the addresses in the leaflet must have &80 added.

Happy booting!

## WELCOME TO MOFFATT TELEVISION - NO SATELLITE DISC REQUIRED!



```

OMMMp  OMMMMMp-MMMMMMr  ~MMMMp  ?MMMMr  PMMMM,  MMMMMb  MMMMMMM
RMN~HME  MM~MM?MQ~MM  ~?MW.  ~7MQ.  {MM~?MM  MMi~MM  ~MM~
MM  MM  MM  ~?Mp  ':  ~MW  ?Mp  MMA  MM  MM  MM  MM
MMMMMMMM  MMMMMMr?Mp  ~MW  ?Mp  YMMMMp  MMMMMMMM  MMMMMMMM  MM
MM3333MM  '3333MM?Mp  ~MW  ?Mp  ~3333\  MMN333MM  MMHMMN3-  MM
MM  MM  Wp  MM?Mp  uW  ~MW  ?Mp  MMr  HM  MM  "MM.  MM
MM  MM  MMWWMM"MMWWMM  -WMMW  :WMMW  MMr  HM  MM  7MM  MM
NM  9N  ?MMMMM( 7MMMMM)  'MMMMMs  ~MMMM;  3M;  7M,9M,  7M  3M

```

## STEPHEN PHILLIPS SHOWS US HOW

Want to compress your screen files to an eighth of their size? Then read on... The technique I am going to describe is not actually much use for compression and was probably developed for filling up people's email boxes with rubbish, but it represented an interesting programming challenge and came at a time when I should have been revising so of course I took it on!

### GIVE US AN IDEA

The idea is that you get a MODE 2 screen file (that you might have scanned in for instance) and get the computer to represent that picture using just the normal character set. Not clear? Well look at the front cover to see the sort of effect you can get.

My program loads a normal 17K screen file into the screen memory and, one character position at a time, changes it into an ASCII representation. For each of the 80\*25 character positions you have in mode 2 it looks at the arrangement of pixels in that 8\*8 pixel square and decides (after thinking for some time) which of the characters looks most like that arrangement. It prints that character and goes onto the next.

### DECISIONS, DECISIONS...

How does it decide? This is the hardest part of the whole process, and after a couple of long nights experimenting on an Archimedes (where this program originated) I came up with the following:

\* each character in the character set is assigned two "distribution functions" (they measure how the pixels are distributed) which, for the purposes of this article, are called `chrdist1(n)` and `chrdist2(n)` where `n` is the ASCII code of the character

\* the computer calculates the distribution functions for the

character position it is looking at, these are called `scrdist1` and `scrdist2`

\* to find the best fit character the computer searches through the character set from `n=32` (space) to `126` (tilde) and chooses variable `n` such that:

$$(\text{chardist1}(n) - \text{scrdist1})^2 + (\text{chardist2}(n) - \text{scrdist2})^2$$

is minimised. Or, in other words it minimises the sum of the squares of the differences.

You might ask "Why is he using that horrendous expression?" and I could go on at length about how you use that sort of thing in statistics (eg calculating variance) but I won't. Suffice to say that it comes up with a decent result.

Of course that is not the whole story, the distribution functions have yet to be explained...

### CAPTAIN SENSIBLE

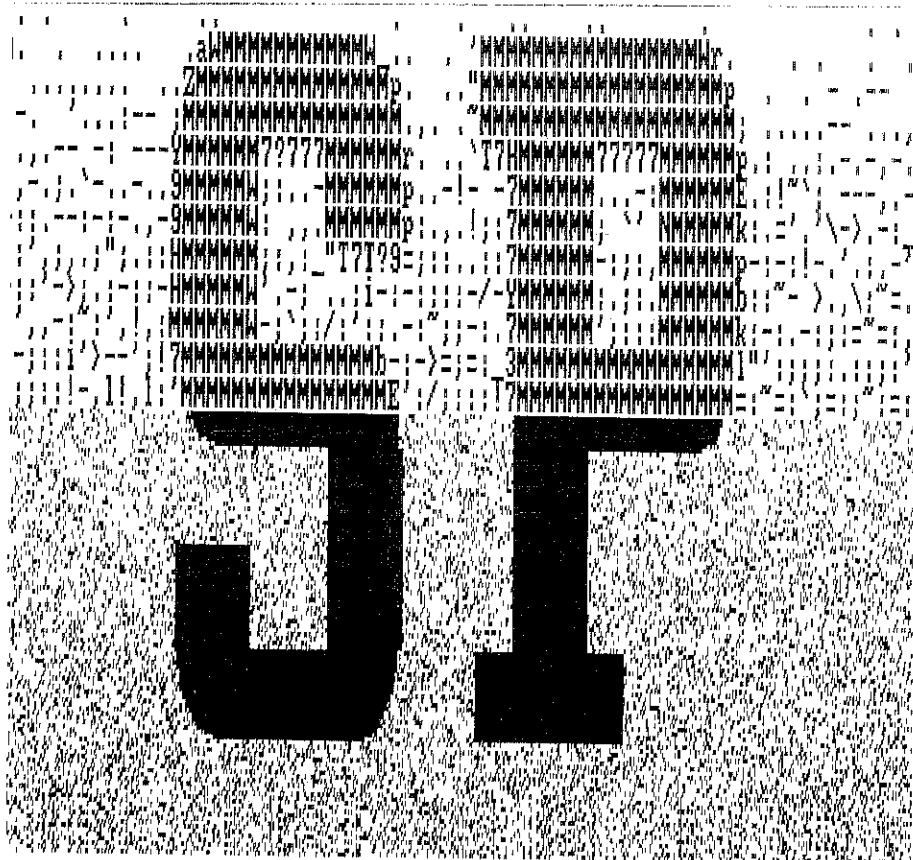
This is another part where a lot of experimentation was needed. I think that in the end I came up with a reasonably sensible way of doing it. The problem is to define the distribution of the pixels in the 8\*8 cell (ie whether they are all at the bottom or top or whether there is only one right in the middle) by just a few numbers, in such a way that if two

```

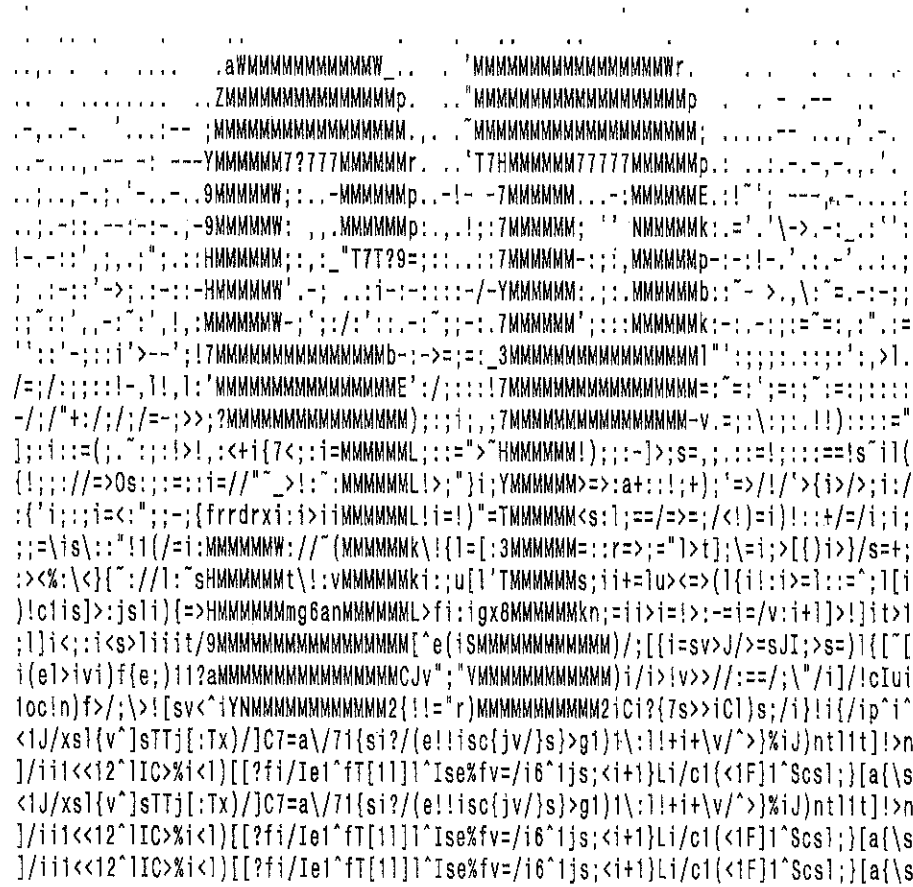
          :====_
          ;::::  '::::_
          .t:  _::::/sslHrrssl:
          te{/sss1{^ass1}{7^1}{{{_
          rrrs17S'?:'~ - :W_ kr  's.
          H_pa;_ E? "N .aWk_ 7_
          WMMRM7_ 3 - ~MMM W
          WMMMMMH 11
          -9MMMMMH r7
          79MMt9::  _ /:'sspWl=:'
          .a H 1{ {M
          "k :sM WUr
          '/:.. _ ?a^lsE^MH.
          3_ '=::= k^"M!MH"/
          .....:/u 9.H^k N
          '': H p g3"\ ^k:s_=/; /_ .;..... _==
          M W 11
          rMW.aH .6
          .: {YY M^ 9 :U'
          'J:'-:?: ~::7iir::_
          _/ib/r::arr; ;i.7: _ n ?r7p_&{a
          _

```

SNOOPY (as if you didn't know)

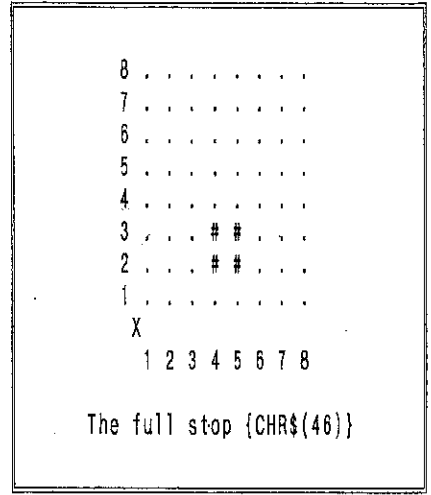


THE CONVERSION IN PROGRESS



THE FINAL RESULT

characters have a similar set of values for their distributions then those two characters also look very similar.



I will illustrate the calculation of the distribution functions for chr\$(46) - the full-stop. chrdist1(n) is the sum of the distances of all the pixels from the bottom-left corner of the cell (where the X is). For instance, the top-left pixel in the full-stop is four pixels along and three pixels up from the X. This means that its distance is five pixels (by good ol' Pythagoras' theorem). The value of chrdist1(46) is SQR(20)+SQR(29)+SQR(25)+SQR(34) which comes out as 4+5+6+6=20 because I take the rounded integer values to gain extra speed.

**A FINAL TEST**

The value of chrdist2(n) is calculated in a very similar way, it is the sum of the distances of the pixels from the top-right corner of the cell. If you want to test yourself, show that chrdist2(46)=32

**OUTRO**

Well that is how the method (if not the program) works, the program uses a few (one?) nifty tricks to speed up the calculation of the distribution functions but is still rather slow. If you want to see how slow then get it and have a play around!

Next month I shall be discussing how to change the pictures back to their original form in case you accidentally erase your masterpiece - well, maybe not... BTW IMHO TTFN is a good way of saying goodbye! *Stephen Phillips*

# PD SCENE

## DAVID CROOKES BRINGS THE WORLD OF PD INTO YOUR HOME

*"It's all free, free I tell you," says the software house monster after pouring his eyes over a few PD lists and quickly becoming a convert to PD. He enlists the help of David Crookes to show others around his new public domain.*

### FIRST THINGS FIRST

Public Domain software is copyrighted but freely distributable as long as the distributor does not make any profit from it. However you can charge a copy charge; but notice the words copy charge - you can't actually make people pay for the actual software itself. Don't mess about with the code and then copy it either because that too is illegal. So there you have it, nice and brief for all those who may have just joined WACCI and aren't too sure what all this PD lark is.

### THE MISSION

What I'll be doing (hopefully every month) is giving you a look at what there is out there in WACCI's PD library and, more to the point whether or not to splash out on it. But I'm not going to do it all by myself. I think it would a good idea for the members of WACCI to contribute PD reviews as well so drag out your word processors and type in some legible words about some PD software that you have and send it on a disc to: PD Scene, 37 Trimmingham Drive, Bury, Lancs. BL8 1JW. You needn't go overboard - about three hundred words would do.

### CATEDIT

Disc management programs are ten a penny in the public domain and obviously while some are great, some are also absolutely naff and deserve little more than a good erasing. So it's quite refreshing to see that Catedit is one of the former - a good all round package.

It'll suit your needs if all you want is a quick way of sorting out your collection of floppies. It has the facilities to cope with erasing, copying, formatting, renaming and cataloging your discs and it does it in the easiest possible way. You just mess about with the cursor keys and the COPY key to select the options and then progress to the harder work of selecting the files (with the same keys) that you want to sort out. You do the same for recovering deleted files and setting files ex-directory or directory or make them writable or read only.

Cataloging the disc gives you a full catalogue, right from user 0 to user 15, and also shows you which files you have deleted from the disc.

But while it's fast and uses the screen memory to create a larger buffer for copying discs and files, there are some limitations. First of all you need 128k of memory and obviously a disc drive so unexpanded 464 owners should jump out of the window now. Secondly, because it is quite old, the authors didn't feel the need to add facilities for second drives. It is a bit disappointing because it somewhat limits itself to owners of two drives. The third downpoint is the worst though. It has a tendency to corrupt copied files. I've copied a fair few discs with it and discovered that about 10% of the files were corrupted and needed re-copying. Be wary of this if you decide to get hold of a copy.

But it looks professional and it's well put together. Bugged it may be,

but that aside, Catedit is a program worth getting hold of. SCORE 82%

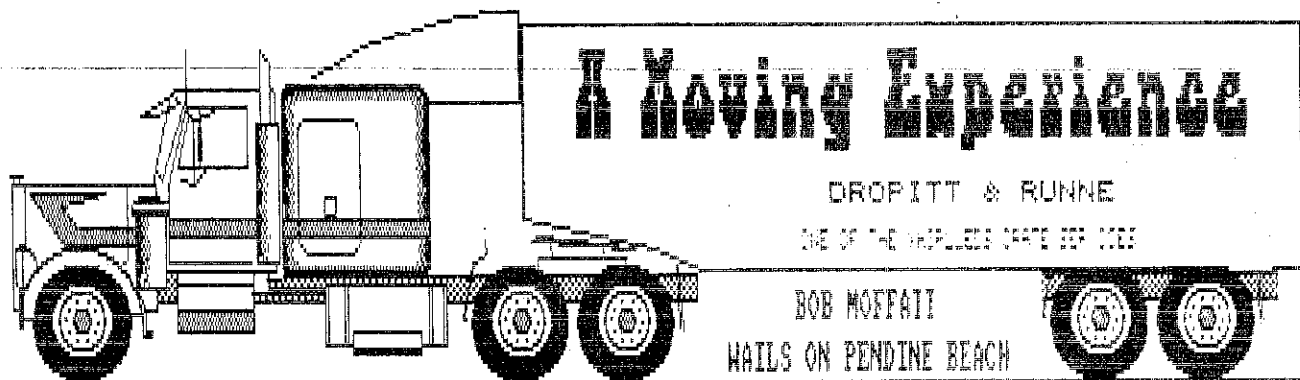
### PROTEXT DEMO

Demo's are quite controversial. You either love 'em or hate 'em. Demo writers love them, Amstrad Action journalists hate them, myself included. Boring text and useless routines (although I must hold my hand up and say that some of the graphics are outstanding) would work better elsewhere. But hang about, the Protext Demo has nothing to do with unreadable writing and pretty pictures. It's a carbon copy of the original thing. Or is it. Well, almost a carbon copy. It certainly looks the same but the problems come when you want to print your document out and when you want to save it. Try typing PRINT or SAVE and nothing happens. Another useless program. Damn demos. It only really serves to show you what the full version can do.

Or at least that was the idea before Richard Fairhurst got his hands on it. He patched on a little save routine which means you can actually save your files as Protext ones. But what about printing? Taken care of too, even though you have to exit Protext and load up an independant file. Everything else, though, is identical to the commercial version so I can only advise that you get hold of a copy. SCORE 90%

<<WACCI has just obtained a copy of the Protext Demo thanks to John (he of the books) Bowley. John has checked it to make sure the save and print commands are disabled. Until we find out if Arnor have given permission for the changes then we assume that Richard Fairhurst has infringed copyright. -Paul>>





In The July WACCI I asked whether readers had seen the May 20 'Tomorrow's World' Programme - that's because I had to get the copy to Uncle C in Time. In the event the programme was shown in June. I couldn't say what the programme was about because there was a Press Embargo. It showed how we at Pendine are supporting Richard Noble's attempt to retain (Yes! the UK, Richard specifically, holds it) the World Land Speed Record with a supersonic car - THRUST SSC. Richard's models have had several runs down our Test Track - but never at the Mach 3+ speeds we can reach.

#### EX DIRECTORY

The first week at my new job was a bit of an eye opener. The PC at work had a strange mixture of programmes. Word Perfect was the standard WP and was more or less intact although the printer files had been ravaged. The directories showed that a variety of programmes - Super Project, Word Star, and windows had been installed and then removed - incompletely. There was no spread sheet or database and no utilities. No one knew when copies would be available. At least I had Masterfile and Mastercalc on the CPC at home if the need arose.

#### MATCH BOXES

The time had come to get to grips with the sick ROMBO my son had left behind. In between hanging pictures and moving unpacked boxes into the garage, I examined the ROMs in the box. Apart from the absence of UTOPIA it appeared to be set up the same way as mine - it just wouldn't work. Then closer examination with a magnifying glass revealed the problem - one of the ROMs wasn't inserted correctly. The left hand row of pins were in the socket - the right hand ones were sitting in the gap between adjacent DIL holders. One minute later I was back on the road - except for UTOPIA and the KDS 8 bit port.

#### NO RED PORT LEFT

It took some time for me to realise that since acquiring the BJ 10ex I had not been using the 8 bit port. The port initialisation programme was embedded in a subroutine on my start up disc and was only used when I

selected the "Qualitas" option from the menu something I hadn't done since I had the new printer. This didn't explain why I wasn't getting double line feeds but if it isn't bust don't fix it.

#### A TOKEN GESTURE

Some of the routines on the start up disc called up UTOPIA functions, !TOKEN to set up the function keys to give ";user,n + chr\$(13)" for instance. These would have to be patched out until I got another UTOPIA ROM. That would also present a problem. I had stopped subscribing to AA and had no recent adverts. The irony was that I knew AVATAR had stocks but a little bird had warned me .... I made a note to ring Uncle Clive to see if he could help.

#### BRUNNING RUBBER

The house was beginning to settle down. With all the children away the CPC 664 could be deployed in a spare bedroom for She who Must be Obeyed to use. She started bashing out CVs to try and find a job. This in itself kept me in trim. I would be downstairs trying to write an article for WACCI when I would be summoned. "Darling! How do I underline in BRUNWORD?" Dash upstairs, thump a few function keys, dash down again. "Darling! It won't stay indented, what do I do?" Dash upstairs, thump a few keys, give up. The hallmark of my life has been the complete avoidance of exercise. This new house layout is endangering the habits of a lifetime. Now don't get me wrong. BRUNWORD is a brilliant word processor but it has a

vocabulary all of its own, weaving, tearing and killing for example and a disconcerting way of building up thousands of MEM files which seem to want to be GETted or KILLED. I bought it because I thought She who Must be Obeyed would need the rather friendly spell checker.

#### LADY'S PRINT

I've only got one printer and that's on my 6128 downstairs. A drole ritual developed. She who Must be Obeyed types her documents upstairs in BRUNWORD. No tabs or indents, no underlining. The document is saved as an ASCII file. The disc arrives downstairs. I crash out of 'Lords of Chaos' - "Hard day at work, darling. Must beat up something." The ASCII file is loaded into PROTEXT, turned into a document and She who Must be Obeyed stands behind me - "Indent that bit." "Underline that." "Bold that." Save new document on her disc with a .PTX extension and print out. There must be a better way.

#### MACHINE CODE

Do the machines in your house communicate? Mine do. I may have mentioned that Pendine sees a little rain from time to time. We have survived 25 years of marriage and a family of six without a tumble drier. Now two of us are generating washing at a rate which the local climate cannot dry in time. The solution is to dash off and get a tumble drier. The pristine drier is installed next to the washing machine. With great ceremony the first load of washing destined to be tumble dried is loaded into the trusty washing machine. Water floods into the machine then ... nothing. The !ERA,"\*.\*" washing machine is sulking. Out with the Dolly bags and bring the copper to the boil. "Knacker's Yard for you!" I cry. Squawks from upstairs. "No, not you, Dearest, the !ERA,"\*.\*" washing machine."

# OUT OF SORTS

## WHAT'S IT ALL ABOUT - STUART GASCOIGNE SORTS IT OUT

*This month we're going to look at two more sorting algorithms - the selection sort, and the shell sort. So without further ado, let's go.*

The selection sort works in very much the way you might put a pack of cards in order. Starting at one end, go through looking for the largest item. When you get to the end, put the largest item found at the end, and then go through again looking for the next largest and so on.

There are two main ways to program this idea. One involves keeping track of the largest item we've found on a particular pass through the array by using flags and markers, and then doing a swap when we've finished. The other involves doing a swap whenever we find a larger item, putting the current largest in the right position assuming that it doesn't get beaten. The second method is the one I'm going to concentrate on - it does more swaps, but needs no extra variables, and is very easy to program. Program 1 does the trick.

### PROGRAM 1

```
200 'selection sort
220 FOR i=size TO 1 STEP -1
230 c=a(i)
240 FOR j=1 TO i-1
250 IF a(j)>c THEN b=c:c=a(j):a(j)=b
260 NEXT
265 a(i)=c
270 NEXT
```

This can be merged with the skeleton program given last time. Note a little speed increasing trick - because we test against the currently largest item "a(i)", "i" times for each i, we can save time by using a non-subscripted variable "c" instead of "a(i)", swapping back when we've finished. If you run this version you'll find that it takes about 2.1 seconds to sort 30 numbers.

Unfortunately, despite being slightly faster than the bubble sort,

it suffers from the same problems, and with a large array still takes forever and ever and ever.... Why do they take so long?

One of the reasons that bubble and selection sorts are so slow can be seen by thinking about how a large number which starts at the low end of the array finds its way to its proper place at the high end. First it gets swapped with its neighbour and moves up one place, then with its new neighbour and moves up another place, and so on.... After an awful lot of comparisons and swaps it gets to where it should be.

We might be able to cut down the time, if we could get it to approximately the right place in one swap instead of 300. This is the idea behind the shell sort. We start by comparing numbers which are far apart, and swapping them if necessary. This rapidly imposes some long range order on our data. We then steadily reduce the distance over which we make the comparisons until we get to the point where we are comparing neighbours, just like the standard bubble sort. The difference is that by the time we get to comparing neighbours, we know that near neighbours contain the only out of sequence parts of our array.

Program 2 is a fragment that you can merge with the skeleton program from last month.

### PROGRAM 2

```
200 'shell sort
210 k=size\2:WHILE k>0
220 FOR i=k TO size
230 j=i-k:r=-1:WHILE j>0 AND r
240 IF a(j)>a(j+k) THEN b=a(j+k):a(j+k)=a(j):a(j)=b ELSE r=0
250 j=j-k:WEND
260 NEXT
270 k=k\2:WEND
```

You may recognise the essentials of the bubble sort encased in the middle of this proglet. On the outside we have a loop that controls the distance between which we compare items. We start with this distance being half the size of the array and we halve it on every cycle (rounding down). This loop can differ in details from the one we have here. For instance we can divide the distance by 3 every cycle. If we do that, then we have to make sure that the last cycle will compare immediate neighbours. The easiest way is to start at a power of 3. Program 3 gives replacement lines for this.

### PROGRAM 3

```
210 k=3^INT(LOG(size)/LOG(3)):WHILE k>0
270 k=k\3:WEND
```

Another sequence of distances which is commonly used is.... 384, 121, 40, 13, 4, 1, where each number is 3 times the next plus 1, and we start at the highest one which is smaller than the size of our array. Program 4 will do this.

### PROGRAM 4

```
210 k=(3^INT((LOG(size)/LOG(3))+1)-1)/
2:WHILE k>0
270 k=k\3:WEND
```

If you run these programs you'll find that the shell sort processes 30 items in about 2.6 seconds. The version in program 3 seems to have the edge in speed. The advantage that the shell sort enjoys compared to the bubble sort is only really apparent when sorting larger arrays. With a size of 1000, it takes about 210 seconds. Wow, barely time to put the kettle on.

This routine seems to sort "size" numbers in a time proportional to (size)<sup>1.25</sup>.

That's it for this month, next we'll look at a really fast sort. TTFN.

# WACCI

DECEMBER 1989

## REVISITED

### LOVING THE MACHINE BY PETER CERESOLE

*"DU is or DU ain't my baby" sang Peter Ceresole way back in December 1989. Peter was, of course, deeply in love with DU and he sang its praises whenever he got the chance. This is Peter's definitive article on DU, the CP/M disc utility, and there are no prizes for guessing what DU stands for. DU is not for the faint hearted but if you want to understand all things DISCish then jump in and have a go, you will find it on PD Disc Nine.*

#### INTRO

Do you remember your first drive, after using tape? The sheer relief at the speed but even more at the reliability; the CPC's three inch discs are just about bullet proof and for a while it all seems magic.

Jump into disc management, erase and move files with gay abandon; and then one day all that carefree energy overflows and you erase the wrong file. It will happen one day, for sure. Now what?

Of course you could get an "unerase" utility. *BO-RING*. Life's about more than that.

It's time to get familiar with the disc. Wrestle with bytes and, with great care, alter them.

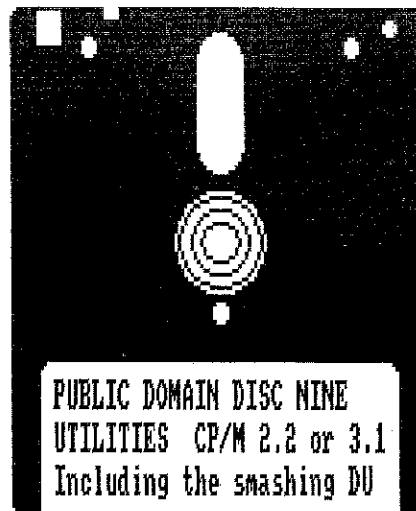
This goes far beyond unerasing files, it's a quest for knowledge and a change in your relationship with the machine. Oddly, things you can't see in your mind's eye never work as well as the things you can.

It's like cars. If you've never had one apart, they all go in a kind of stupid way. Smooth maybe but quite without soul. Discs are the same.

#### A. METHOD OR TWO

Now there are several ways you can get into the disc. If you're using Amsdos, there's WACCI's very own Disc Menagerie. If you have a ROM box, then you ought to have Utopia anyway, for 46 other reasons and you can frolic through both disc and the CPC's memory. The only drawback is that you

actually have to pay money for it. The best things in life aren't always free. However, one of the best runs under CP/M and it's in the PD library. I love it. It's DU.



#### NOTHING COMPARES DU

To be more precise, it's DU.COM and it's 8K big and it comes with a 12K DOC file.

As it comes on disc, it's called DU-V87.COM because it's version 8.9. What? Yup. Seemed odd to me too. I must say I'm glad I never tried v1.0 but in my experience the present version is rock solid. That's the advantage of coming late to the CP/M scene. Anyway, the first thing is to rename it "DU.COM" and then a short friendly "DU" runs it.

DU is strictly CP/M but of course it

will do whatever you want to an Amsdos disc too. In Fig 1. there's a list of what it does, grouped by category.

Most of the things you could reasonably want to do are there and several that you may never need but they're free, so ....

Particularly wonderful is the Map command. It doesn't give a graphic representation of the files scattered across the disc (*this is pretty but useless.*) Rather, it shows the allocation of the files to the groups.

#### DUMP THE CLUTTER

There are all the erased files, in brackets. And if the file has been over-written, like "DG1.BAK", it has an asterisk by it. Any other, you can restore by going to the directory and altering the entry.

If you just want to see the current files, you can suppress the clutter with an input of < ( >. You see why the maps so good. It means you don't have to know about groups and tracks and so forth - you just look where the file is, then go to it.

When you get there, you can dump the sector <d>. If you want to meander through the file, you can string commands together with a <> separator. <d;+;/> is a useful sequence; it dumps the sector, moves on one and repeats forever. This walks you through the code, in HEX and ASCII. If you want to pause the process you go <Ctrl-S>. Any key to restart. <Ctrl-C> to abort (*what a surprise, eh?*)

Now there are plenty of utilities that will do this, a file called DUMP.COM is one. But with DU you can get at what you want to see. So if you reach a system message that you always wanted to zap, now's your chance.

Using DU, I changed all the flaky, neo-sixties messages in B29.COM like "X= Exit outta here!" to terse Thatcherite statements for the eighties. "X= Exit." Then go <w> to write it permanently to the disc. Now there is no alternative.

#### SLOW SLOW DISK DISK SLOW

If you already know the phrase you want, then you can find it. <=outta> would get you to that message in B29. <=outta;d> would get you there and then dump the sector automatically.

The search itself is slow, slower

than in Disc Menagerie; after all CP/M is slower than Amsdos but I like DU because it doesn't have menus. It all feels nicely spanner like. A Birmingham disc editor. (*In fact, it was launched onto Micronet by the West Midlands Amstrad User Group.*) Also, it can do such a lot and once you're use to it, it's simple, fool-proof (*yup*) and so far bug-proof.

FIGURE 1.

#### HELP:

? displays the help guide (*very complete, hard to go wrong*)

#### POSITIONING:

Gnn to allocation group nn

Snn to sector

Tnn to track

+nn go ahead nn sectors

-nn go back nn sectors

#### INPUT/OUTPUT: (I/O)

< puts current sector "away" into a buffer

> recalls previously saved sector

K writes "yanked" sectors to a file

R reads sectors from disc

W writes currently displayed sector to disc

Y "yanks" current sector into sequential memory

#### DISPLAYING:

# shows disk parameters

A dump sector in ASCII only

D dump the sector (*HEX + ASCII*)

G shows current group, track and sector

H dump sector in HEX only

M maps the disc. Mxx maps from group xx

Vnn views (*like CP/M type*) nn sectors

#### CHANGING:

CAnn,(data) change data in ASCII, from address nn

CHnn,(data) change data in HEX

#### SEARCHING:

=stuff scan for "stuff" (*in ASCII*) from current sector onwards

Fzappo find file "zappo" in the directory

F find next occurrence (*extent*) of same name

#### MISC:

( toggles the map display to show/not show erased files

/nn repeat previous command nn times (*indefinitely if nn omitted*)

Bnn boot nn sectors per track

Ld Log onto disc in drive d:

P printer toggle

Q before a command executes it without displaying progress

X exit to CP/M

Znn sleep (*nn tenths of a second*) to allow viewing data before it scrolls off

#### IT'S MY PARTY

I use Du as my disc sector editor of choice. Apart from garage work like fixing directories, I've mucked about with a lot of programs, changing details of their presentation (*changing the code is strictly for SID*) and a program with sensible messages and log-on screen is that much more pleasant to use.

It's also fun to wander through the code. There are occasionally little messages in there. Disc Menagerie will do it too but DU's combination of a practical map and instant moves from function to function make it my favourite.



#### AND I'LL WORK IF I WANT TOO

I've taken it to work too and there it lives on the CP/M utilities disc of my PCW 9512. It copes very nicely with 720K discs, although the map for a full disc gets pretty big. The file finding function, which isn't much called for with tiny CPC discs, gets useful. using the PCW, before I had DU, I began to realise how used I had become to thinking of discs as accessible and fixable. Knowledge is power all right - and more.

#### GOD KNOWS

There's an old Christian saying that, as we know the saints, so we shall love them. Okay. Get DU. Learn to love the machine.

# The Index Story

## THE MAKING OF AN INDEX

### THE FINAL INSTALLMENT by FRANK NEATHERWAY

---

*Making an index for one's use is possibly something that most of us have done at some time or another to a greater or lesser degree. When it is done for your own use its compilation is easy because you know exactly what you mean. After all it is only necessary to list what you see and so it is when compiling an index of the contents of magazines, right? Wrong!*

#### TASK ONE

The first task was to decide what the index headings would be, how much space each field would require and then to set up a file on Masterfile III. The headings would be easy, viz., article name, author, what it was about, the type of article, magazine issue number, issue date and page number. The space available would be no problem - until it came to laying out the format in an 80-column page.

#### WIDTH COUNTS

The original ideas left the article content with only about eighteen characters available and that amount isn't much. I finished up with the article name, the subject, type of article, issue number and page number. Wouldn't it be nice if (haven't I seen that phrase in one of John Bowley's competitions?) the article name actually reflected the content but unfortunately very few of them did and therefore the name had to stay.

So space was allocated on a fixed character amount for headings such as Type (one space), Issue (three spaces) which allow for up to 999 issues but I'll probably not be too interested by then, Page (two spaces) which allow for 99 pages <<I'm not planning a magazine that large yet but what will the future bring? -Paul>> and field breaks of two spaces. The remaining 64 spaces were shared between Name and Subject.

#### EASY PEASY

Now I came to the easy part, a little laborious but simple. I thought. First of all I tried typing details directly from the first magazine but before I had finished doing it I found that because attention had to be shared between magazine and keyboard the results were sometimes hilarious. So I abandoned that system.

#### NOT SO EASY PEASY

There had to be an easier method. There was. I expected that all I needed to do was to get pencil and paper and abstract the details from each magazine in turn, the principle being that it would be easier to type from lists rather than from the magazines. As I said earlier the article name seldom reflected the article content so a great deal of time was spent reading the latter which were without exception very interesting. The problem was how to describe single or multi-page articles in a maximum of 34 characters. It was this need to read in detail each article which accounted for the bulk of compilation time.

#### THE SYSTEM

Paul Dwerryhouse and John Bowley kept me supplied with batches of WACCI magazines and it was thus convenient to keep the index in separate files to be merged into one file at completion. The system I finally operated was to

abstract details from a batch to paper, type from the paper to the file, save and print it.

#### CHECKING TIME

Next check the printout against the magazines, correct the entries as there are always a few errors in typing, save the file and then deal with the next batch. Although this method does seem a little cumbersome it also has the benefit of ease of checking and it really worked quite well. There was of course another problem which reared its ugly head.

#### OH BOTHER

Many of the articles included quite long program listings but when I was re-checking the last few magazines from the last batch I spotted a listing which seemed a bit familiar. It was. The listing was one which I had typed in from another magazine some years ago. This fact wasn't important at all but what was important was that it was juxtapositioned with other listings which actually were part of the article. At that discovery I distinctly remember saying to myself:

*"Goodness, how that does surprise me"*

or words to that effect. A good idea to fill vacant space with extra listings but such were easily missed. This meant a re-check of every magazine for such listings which were not part of an article. Those listings I named as 'orphans', after all they had no parent article.

### REMEMBER REMEMBER

The first article of the Index Story showed how the M/F III binary file was converted to an ascii file whilst the above has dealt with the building of the M/F III Index file itself. This next section is concerned with the splitting of the main file into three smaller ones: the filling in the sandwich as it were.

### THINK OF A NUMBER

My assessment of only about 600-700 records for the index was based on the sample of twenty-nine magazines that I had and was hopelessly wrong. At the final count there were no less than 915 records and these required 52k as a binary file.

However, when converted to pure ASCII they would need nearly half as much memory again and with Protex's limitation of 38k or thereabouts on a 6128 it would be necessary to split the file into two smaller ones. I expected that these would be easy for Protex to handle. I had kept the file column 80 free in case it was wanted and it would now be invaluable to allow the file to be split into two parts.

### DOUBLE TROUBLE

I loaded the index file into Masterfile III, copied the format, including a new data-name 'X' and created the new data record at col 80, letting the format insert a '1' as the default content of the new field. When

displayed the entire file had '1' in that field. By dividing the total records in two and making the actual split at the nearest Subject start letter (it's not a good idea to split a letter group) this gave the two parts as A-H, 452 records, and I-Z, 463 records.

I thought that this would be satisfactory as 26k even when increased should have been handled by Protex. All that needed to be done now was to change the '1' in col 80 to '2' for the second group and this had to be done manually.

This took about seven or eight seconds per record and over an hour's continuous key work. Now by selecting and saving all records with a '2' in col 80 a new file was created for the copied records; then by inverting the selections all those records with a '1' in col 80 were copied into their own file leaving the main file intact. All that was needed now was to produce a pure ASCII file for each half of the index wasn't it? No it was not. I knew that the ASCII file would require more memory than the binary file but I was amazed that even the half file was far too large.

### BACK TO THE FUTURE PART THREE

Back to stage one to make a three-part file. This time with a notional average of about 300 records per group the split would be A-E = 316 records with a '1' in col 80, F-O = 277 with a '2' and P-Z = 322 with a '3'. This

meant that nearly 140 '1's would have to be changed to a '2' and about 270 of the '2's to a '3', more than four hundred changes to be made each requiring seven separate key presses. Fun for over an hour's continuous work as by this time my fingers were beginning to slow down.

### ALMOST THERE

Now for the final stage which was to split the main file into three smaller files. This was done by using the M/F III facility to select particular records. By selecting and then saving the '2's and '3's in turn this left the '1's as 'unselected'. By inverting the 'selected' to 'unselected' this automatically changed the 'unselected' to 'selected' and the '1's were then saved to their own file. I finished up with the three binary files I wanted ready to be converted to ASCII files.

### SUNRISE

The uncounted hours at the keyboard building the index had now ended, there was light at the end of the tunnel and a figurative dawn breaking. This time the production of the ascii files went well, each having plenty of room to include records from some four years' future magazines.

### OUTRO

So that is the end of the Index Story and I hope that you enjoyed it. Below is an example section from the index to wet your appetite. *Have fun, Frank.*

TYPE : A = Article; E = Entertainment; L = Letter; R = Review;  
T = Tutorial; U = Useful

ARTICLE	SUBJECT	TYP	ISS	PGE
LETTER	ASSIGN command: usage	L	51	5
X-PRESS	Add-on to STOP PRESS DTP	R	51	13
LETTER	Address labels on file	L	77	7
GRADUATION DAY	Adlan: ADventure LANguage	R	45	10
BASIC MACHINE CODE	Adressing: Absolute and Relative	T	39	24
LETTER	Advanced Art Studio : password	L	66	5
LETTER	Advanced Art Studio : password	L	68	5
UTILISING UTILITIES	Advanced Art Studio screens: to use	A	13	39
MUSIC IV	Advanced Music System	R	24	24
GENESIS	Adventure writing using Genesis	R	9	18
ALEX AIRD SAYS ...	Adventure writing: create using GAC	A	8	34
WACCI REVISITED JUL '89	Algorithms - origins and use	A	66	25
A PASSING THOUGHT	Algorithms and their use	A	33	13
THE SHOW REPORT	All Formats Show, Glasgow Dec 1993	A	74	18
LETTER	Amstrad MP3 TV Tuner: improvements	L	40	10

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