

# CPC

## USER

THE BI-MONTHLY MAGAZINE

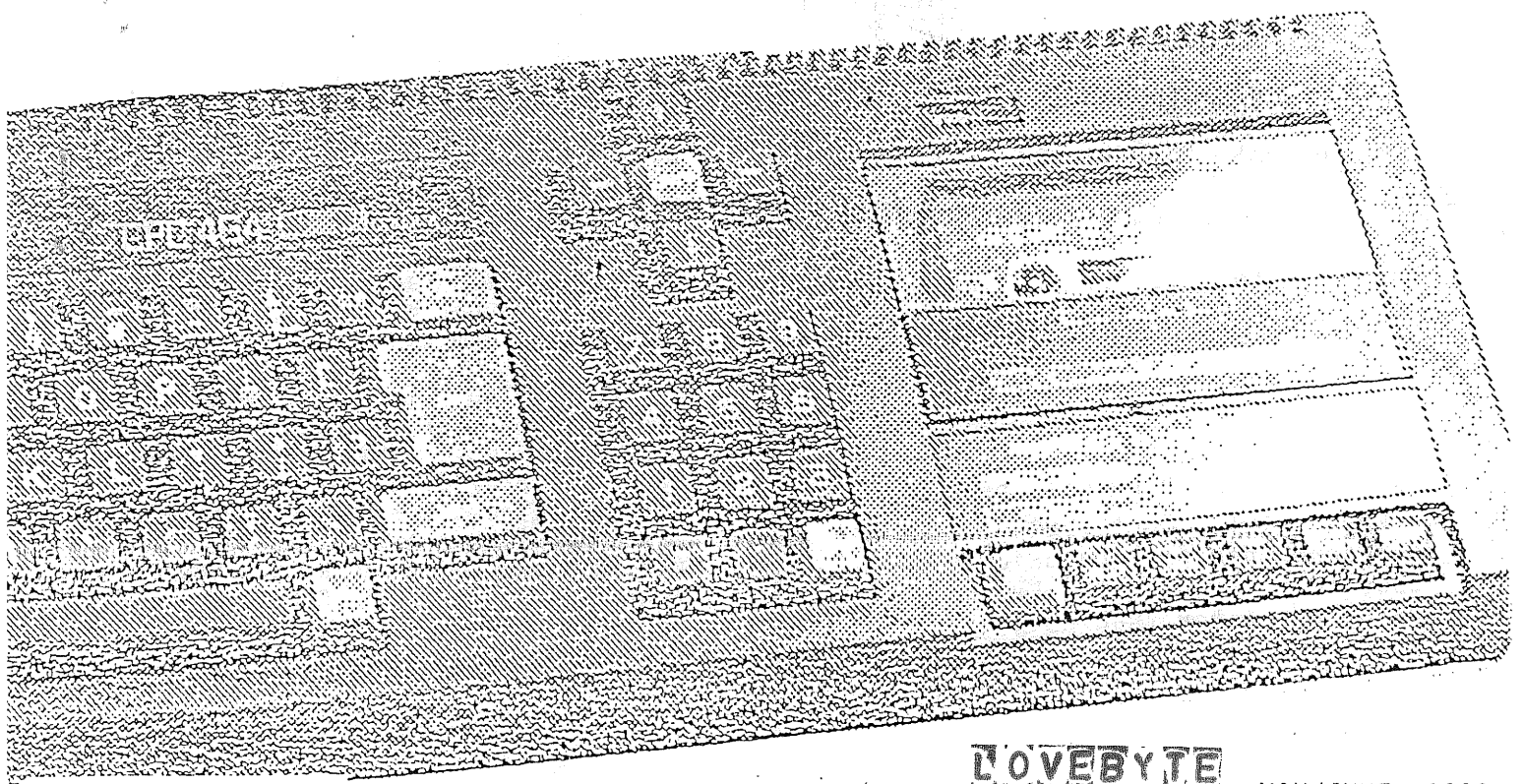
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OF THE

UNITED AMSTRAD USER GROUP



LOVEBYTE

MAY/JUNE, 1988

# UNITED AMSTRAD USER GROUP

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Issue 10 of CPC USER will be published on August 1st. Contributions and correspondence for inclusion in Issue 10 must reach the Executive Editor not later than July 1st.

## E D I T O R I A L

FIRST THE BAD NEWS. Until we are able to appoint a Programming Languages Editor, articles on that subject can be published only as and when they are submitted. Our pleas for a Communications Editor and an Advertising Manager also seem to have fallen upon deaf ears and, regretfully, the MONITOR and KEYBOARD features are equally in jeopardy due to lack of support.

The census carried out last autumn showed that 93% of the membership were actively involved in programming, 84% also expressed an interest in hardware add-ons and business software and 72% owned a printer. Yet, a glance at the last three editions of CPC USER will show how many of those members have submitted articles for publication. The UAUG is supposed to be a self-help Group, so it's up to everyone to make an effort.

As at April 30, the membership stood at 138, so when are we going to hear from the other 130 ?

NOW FOR THE GOOD NEWS. We have two new Editors. The new Business Software Editor is Brian Bristow and the new Games Software Editor is Clive Bentham; their addresses are given on the inside front cover. Thank you Brian and Clive for stepping into the breach and I welcome you both to the team. Brian has wasted no time in putting pen to paper (or rather finger to keyboard) and his first contributions are published in this edition. Clive's appointment was made just as we went to Press, so he hasn't yet had time to recover from the shock !

I would also like to express my appreciation of the continuing support of those stalwarts who never fail to provide material for CPC USER. Without the active support of members such as John Blessing, Brian McKiddie and Terry Roberts, the bi-monthly production of CPC USER would be very difficult if not impossible.

Don Snoad

# CHAIRMAN'S SBIT

Dear Members,

Welcome to the 9th edition of the UAUG Magazine. It seems like only yesterday that we were looking forward to Christmas, but here we are halfway through 1988 already.

Business has been pretty quiet lately as is often the case around this time of year, but we are all looking forward to the summer which sees the second birthday of the UAUG.

During the next few months we are really going to push our membership drive, hopefully doubling membership figures (well you never know !). I will ask you all to help with this drive by persuading a friend, relative or colleague to join. Remember it is only £5 per year ! If you can also think of anywhere to stick one of our pretty publicity posters (practical places only !), please contact me and I will send you some.

I'm sure you have all seen the pleas in the previous issue, requesting your contributions for the Magazines. Well, to date we have still received nothing, although it is probably a little early to rule out some response. I really can't stress enough how important it is for the membership to express their views and opinions. A small club like ours really does require the help and support of the membership, and many members enjoy reading the views of others.

I really don't like to keep on pushing for contributions so all I shall is any contributions in the form of Articles, Reviews, Letters, Hints & Tips etc will be much appreciated!

If however you would like to help out on a more regular basis then we are still looking for editors. See the club news for full details.

Now onto a more interesting subject. We have managed to obtain a special discount for members from Electr-music Research. They have agreed to offer their "CPC MIDI Interface" together with their "MIDITRACK Performer" for only £99.85 which is a reduction of £30.00 ! Interested members should contact EMR directly. Please see the enclosed Discount Voucher for full details.

I think I may have mentioned this before, we now keep all membership information on computer but as we are a User Group we do not need to register under the Data Protection Act. However if you would genuinely like to see what information we are holding on you, please send a written request to the Membership Secretary (Paul Owen) together with an SAE.

I am currently undertaking some private research on the effects of using VDU's on your health. I would be interested to hear from anyone who has suffered any discomfort from using their computer. An article may appear in the next issue summarising my findings.

Well I will draw my page to a close for this issue, please do try to send in some contribution before next time.

Gary Carter  
Chairman

## PRESS DATES...

There still seems to be misunderstanding about the meaning of Press Dates. We have received more mail from members in the two weeks following the May 1st Press Date than we received throughout the entire preceding two months.

It would be mutually beneficial if members could bear in mind that Press Dates are the CLOSING DATES. Editorially, we prepare material continuously - not only at or immediately following a Press Date - and it would be helpful if correspondence and material for publication could be submitted as early as possible. There is a tendency to regard Press Dates as target dates for writing letters, etc, with the result that the majority of correspondence is received after a Press Date. This creates editorial peaks which invariably cause production delays and late distribution of CPC USER. Disappointment may also result if material has to be held over for a later edition; this is not in your best interests, especially if you are using CPC USER as an advertising medium.

The Press Date for the next edition of CPC USER is July 1st. Any correspondence or material for publication received after July 1st will most definitely be excluded from the July/August Edition.

## MEMBERSHIP CENSUS...

We are always on the look-out for ways and means of making UAUG membership more worthwhile. When we changed the UAUG Journal from a newsletter to a magazine, we genuinely believed that the new style and content would attract more contributions, advertisers, etc. Unfortunately, it would seem that we were wrong. There has been no substantial increase in the submission of material for publication, we have had little success in attracting trade advertisers and an unacceptably large number of members have failed to renew their subscription. We therefore need to find out, as a matter of urgency,

the reasons for this apparent disinterest. Where are we going wrong? What needs to be done? Such questions cannot be answered without some form of referendum. Accordingly, a questionnaire is provided with this edition of CPC USER and every member is urged to complete and return the proforma to the address below.

We can improve UAUG services in general and CPC USER in particular only with your co-operation, so PLEASE PLEASE PLEASE complete and return the questionnaire without delay to: The Executive Editor, CPC User, 85 Woolston Road, Butlocks Heath, Netley Abbey, Southampton SO3.5FN.

## CONTRIBUTORS v. EDITORS...

Hopefully, members will be aware of our constant pleas for positive help in the form of volunteers for the various vacancies such as Programming Software and Communications Editors and an Advertising Manager. We have succeeded in filling the Games and Business Software editorial posts, yet our team is still incomplete. Even so, one is left to ponder whether we have been putting the emphasis in the wrong place by urging members to fill all these posts; after all, what's the point in having all these editors when there's nothing to edit! It's contributions we need, and we're not getting them. So, whilst we would certainly like to expand the editorial team, let us not lose sight of the fact that the real need is for material to publish. What we're really saying is that we urgently need contributions and you don't have to make an on-going commitment unless you want to. The occasional contribution will be just as welcome. It's worth mentioning that if only a quarter of the membership each submitted one article, we would have sufficient material to keep CPC USER going for a whole year! It also has to be said that if there is no increase in the number of contributors, we shall have no alternative but to discontinue CPC USER in its present format.

DS

# ADVENTURE

## THE ADVENTURE PAGE

BY TERRY ROBERTS

### NEWS AND VIEWS

There have been some changes on the specialist magazine front recently, the most important event being the demise of H & D Services who used to produce WHAT NOW and WHAT POKE magazines. This is a great pity because the quality of WHAT NOW was excellent. Fortunately, the well established ADVENTURE PROBE and SOOTHSAYER are still going strong and will no doubt collect support from many of the ex WHAT NOW subscribers. In fact, John Barnsley who used to write for WHAT NOW is now the editor of SOOTHSAYER and he has broadened the mag to include more than just solutions and maps. The sister mag. (PROBE) has, of course, been the result of Sandra Sharkey's efforts but this too will soon have a new editor.

Sandra will continue to produce both mags. from 78 Merton Road, Wigan, WN8 6AT and you can enquire further from there.

### RECENT SOFTWARE RELEASES

The infamous Pilgrim who writes for Amstrad Action has listed those software houses, who are still supporting the CPC with adventures so I will leave you to consult his column on this.

The situation remains, however, that some of the majors are not going overboard with new CPC adventures. Infocoms are very scarce apart from a few titles and despite all the reviews in the CPC glossies JINXTER is still not out for the CPC. When I last wrote for CPC USER in February JINXTER was due out any day but at the time of writing this it is not in the shops although the PCW version has been around for a while.

New releases worth a mention are the third compilation of LEVEL 9 games under the title TIME AND MAGIK. This is produced by Mandarin, which represents a new marketing arrangement for LEVEL 9, and comprises RED MOON, LORDS OF TIME and PRICE OF MAGIK. All three have been enhanced with improved graphics and the compilation represents good value. I have not seen a copy yet. I wrote to LEVEL 9 to ask about forthcoming releases but they seem very slow in replying.... My sources tell me that a new game entitled LANCELOT (GUESS WHAT IT'S ABOUT!) will appear in early summer so time will tell.

Firebird have just brought out DARK SCEPTRE for the Amstrad. This is a graphic adventure boasting 4000 locations with "superb scrolling animation". The inlay tells the tale of the forging of the Dark Sceptre and your role in the game is to command a company of warriors seeking the sceptre to destroy it. Of course you need to be wary of its dark powers that may destroy you if you fail to take the proper precautions. If you can destroy it then you win the game. To make life difficult the computer controls other companies of warriors most being neutral towards you in the early stages of the game but the situation can change as each game develops. There are 8 different types of warrior each with its own strengths and weaknesses and a wide range of commands including interesting ones such as HARASS, CURSE and PETRIFY!

DARK SCEPTRE is not really my cup of tea but it is selling well so it should be worth a look.

### TOPOLOGICA SOFTWARE

TOPOLOGICA is a software house run by Brian Kerslake, the ex-Director of Chalksoft, and they have recently issued CPC versions of some well established

adventures originally on BBC format. The four games available are COUNTDOWN TO DOOM, PHILOSOPHER'S QUEST, KINGDOM OF HAMIL and ACHETON. The authors are mostly from the Cambridge University environment, so Brian modestly describes the games as "quality through and through". You may have seen reviews in the CPC mags already and the major criticism has been that they are rather old and the quality of adventure writing has improved a lot since they were originally produced. The price was also criticised. This was fair comment but TOPOLOGICA have now reduced prices to £9.95 for one game, £8.95 each when buying two, £7.95 each when buying three or £6.95 each when buying four. This has to be good value! As we go to press, RETURN TO DOOM (the sequel to COUNTDOWN) has been released at £12.95. Each game is on disc only and comes in a neat package with a little background information on the game and a booklet on how to play adventure games if you are new to the scene. There is also a HelpSheet which is used in a novel way. If you are stuck you consult the sheet which has keywords and sentences separated from each other. By choosing the appropriate keyword and slotting it into the sentence you then end up with a hint number to type into the computer. This sounds elaborate but avoids giving you a full list of hints which is tempting to read through before you need to. The resulting hints on screen do not give too much away although if you persevere you will eventually be given the solution to that problem.

So, what are the games about? In COUNTDOWN which is a sci. fi. game you find yourself orbiting the treasure-rich planet of Doomawangara with all sorts of trouble just visible through the swirling clouds when your spaceship faces a sudden attack and crash-lands on Doom. Can you cannibalise enough spares to repair it before the highly corrosive atmosphere rots you and your ship? So far, I have died more times than I can remember but now that I am doing the sensible thing and saving my position to disc very frequently I am making progress! This is described as medium size and standard difficulty. I would describe it as BIG.

PHILOSOPHER'S QUEST is probably the most well known of the four to BBC owners. It is an "Advanced" level game with magic and stuff and just dealing with the opening sequence is, I understand, quite a challenge in itself. (I do not have the game). KINGDOM OF HAMIL is billed as a tale of sorcery and romance and a kingdom that should be yours. Do you have the stamina and intellect to win it back? In ACHETON, the Ruling Council issues the following telex to life forms everywhere: "We hereby challenge you the greatest adventurers around to uncover the secrets of the realm. Deeds of heroic valour will be required etc.....". This is described as an expansive game and probably the biggest micro-adventure ever written. So if you want something to get your teeth into, look no further.

TOPOLOGICA has also very kindly agreed to give 10% discount to UAUG members AND to donate an additional 10% to UAUG funds. Details of all TOPOLOGICA software (including the educational GIANT KILLER aimed at the 9-14 age range and called a mathematics adventure, and YES CHANCELLOR, an economics simulation game) can be obtained from: TOPOLOGICA, Freepost, PO Box 39, Stilton, PETERBOROUGH PE7.3BR

Although TOPOLOGICA's first four releases for the Amstrad are not new, they are well worth considering especially in view of the discounts available to members and donations to the UAUG. They are not in the same league as the recent new releases or of the older Infocoms, but you can buy four adventures on four discs for less than the price of one Infocom. They also have a significant advantage over Infocoms in that they are available NOW and new titles are also being produced!

## UNSQEEZING THE SQUEEZED....

Almost all public domain CP/M software libraries use a storage technique whereby a larger volume of data is stored on a disk than would otherwise be possible. This technique is known as SQUEEZING, COMPRESSING or COMPACTING and is used not only to make the best use of library disk space but also to ensure that recipients receive the highest possible volume of data on any one disk. However, for recipients who have not previously used public domain CP/M software, a disk full of compacted files can pose initial problems of how to gain access to the data.

Most of us are aware that PD software is usually supplied in compacted form but not everyone knows how to unsqueeze the data. In most instances, a warning statement is made by the supplying library to the effect that the data can be accessed only by using an unsqueezing utility (which, itself, is not always on every disk) but unless you know how to use such a utility you may not even get started. It's rather like the classic chicken-and-egg question, especially since any user documentation is invariably in squeezed form on the same PD disk.

There are a number of unsqueezing utilities available for use in CP/M, the most common being part of a more comprehensive file management program known as SWEEP; alternative names for slightly different versions of the same program are NEWSWEEP, NSWEEP, NSWP and SWEEP3. There are also other unsqueezing utilities (such as UNSQUEEZE and POWERSWEEP) but, for the purpose of this article, I will use NSWP because it is included on Disk PD1/1 available from the UAUG PD Software Library.

NSWP is more than just an unsqueezing utility. The program, which occupies 11k on disk, provides 19 options; these are:

SPACEBAR	-	Forward one file
A	-	Retag files
B	-	Back one file
C	-	Copy file
D	-	Delete file
E	-	Erase file
F	-	Find file
L	-	Log new disk/user
M	-	Mass file copy
P	-	Print file
Q	-	Squeeze/Unsqueeze file
R	-	Rename file
S	-	Check disk space
T	-	Tag file
U	-	Untag file
V	-	View file
W	-	Wildcard tag of files
X	-	Exit to CP/M
Y	-	Set file status
?	-	Invoke help display

The correct use of these options is explained in an accompanying disk file called NSWP.DQC, which itself is a squeezed file (indicated by the Q as the central character of the filename extension) and will need to be converted to NSWP.DOC by using the unsqueeze option provided by NSWP. Clearly, this file should be the first to be unsqueezed.

It must, of course, be borne in mind that the process of unsqueezing a squeezed file will result in a much larger file (the increase will be between 50 and 60%), so it is important to ensure that there is sufficient free space on a disk to receive the unsqueezed file. Because most disks from PD software libraries are already full, the first task is to

format a fresh disk in DATA format.

The unsqueezing procedure is simplified for user having two disk drives but, for the purpose of this exercise, I will assume that you are a CPC612 single-drive user. Assuming, too, that you already have a freshly formatted DATA disk (or not less than 50k free space on an existing data disk), proceed as follows:

1. Load CP/M+ and, at the A> prompt, enter PIP then press RETURN.
2. At the \*> prompt, replace the system disk with the PD library disk, then enter B:=A:NSWP.DQC then press RETURN.
3. When the scrolling prompt appears at the foot of the screen, replace the PD library disk with your DATA disk then press any key.
4. Repeat the foregoing procedure to PIP the NSWP.COM file across from the PD library disk to your DATA disk.
5. When the \*> prompt re-appears, press RETURN then any other key to revert to the drive A> prompt. Enter DIR and check that NSWP.COM and NSWP.DQC are present on your DATA disk.
6. With the DATA disk in the drive, enter NSWP and press RETURN. The program will load within a few seconds.
7. Press the SPACEBAR until the last line on-screen reads nn:A0:NSWP.DQC 15K: then press T then B then Q, allowing the program to respond between each command.
8. Press U then A then press RETURN. The NSWP.DQC file will be automatically unsqueezed and saved to disk as NSWP.DOC - this will take about 20 seconds. When the £ prompt appears, press X to exit to CP/M.
9. The file can now be read either by entering TYPE NSWP.DOC at the A> prompt, or by loading it directly into a word processor such as Protext (Amdos or CP/M versions) or Wordstar, etc. Note that by unsqueezing the file, its size has increased from 15k to 24k.

Having succeeded in unsqueezing NSWP.DQC, you should experience no difficulty in unsqueezing other PD software so long as you remember always to transfer the required file from the PD disk to a data disk and to check that there is sufficient free space on your data disk to store the unsqueezed file. The free disk space available can easily be checked using the S option from within NSWP.COM or by using any suitable utility such as SD.COM, DS.COM, INDEX.COM, etc.

The PD disk should be used only as a databank from which files are transferred to a data disk for unsqueezing. Once a squeezed file has been unsqueezed, the squeezed version can be erased from the data disk. The PD disk should be retained intact as a master disk.

Three final points. First, NSWP.COM can be used in either the CP/M 2.2 or the CP/M Plus environment. Second, some users find it beneficial to obtain a print-out of NSWP.DOC for reference purposes. Third, the procedure detailed above resulted in a readable text file; the same procedure applies for unsqueezing program files which can then be loaded and run in the conventional manner.

DS

# P D L I B R A R Y

## PUBLIC DOMAIN SOFTWARE LIBRARY UPDATE

BY JOHN BLESSING

### THE VIRUS \*\*\*\*\*

Much has been written recently of the dreaded virus programs which threaten to corrupt your software collection. To some extent it obviously makes for a very good story in the papers, but it is a serious and worrying development which is sure to cause many computer owners a sleepless night or two.

CPC owners have nothing to fear from the virus. The fact there is no battery backed storage means that the virus would die when you switch off. There is no need to worry about your computer contracting the virus from this or any other (which I'm sure you wouldn't use) PD library.

So spare a thought for our friends with Amigas, PCs and STs, worried sick that they may be 'infected' and try not to look too smug !

### NEW SOFTWARE \*\*\*\*\*

There has been a major addition to the PD library from Don Snode (our beloved editor). Don has very kindly donated a very comprehensive listing of British Telecom STD dialling codes (over 100k) in both Protext and ASCII format, which can be found on PD4/2 and PD4/3. These can be loaded into your favourite word processor and then you can search for a code or a place.

This will be very useful for finding the location when all you have is the code - a task which is otherwise notoriously difficult.

Don has also sent a couple of programs which he is describing in this edition. I won't steal his thunder but will say that they can be found on PD4/1.

I have also included on PD3/5 the FCAT RSX programs which are described in a separate article.

The response from non-editorial staff to my request for home-grown software or PD donations has been less than prolific (ie. none).

Don't be embarrassed  
Don't be shy  
Send them in or I'll want to know why!

Ugh! Unless you want more examples of my poetry (?) then please help to fill the library.

On a brighter note - I've been particularly pleased with the way requests for software from the library have followed the guidelines on SAEs etc. It has made the running of the library a lot easier than would otherwise be the case. Thanks for the co-operation and keep those discs coming !

### \*\*\*\*\* PUBLIC DOMAIN LIBRARY \*\*\*\*\*

#### PD1/1 (CPM) \*\*\*\*\*

CAT3	Single entry per line directory
CLEANUP	File eraser
COMPARE	Compares two files
CRCK44	Produces checksum
DISK76	Multiple file utility (like NSWP)
DISPLAY	Like TYPE
DU	Disc editor
MCAT41	Catalogues disc collection
FIND	Search files for specified string
HELP	Prints help files
IDUMP	Hex dump of files
INDEX	Sorted directory with file lengths and pseudo-wildcard feature.
LDIR	? (any ideas on this one?)
LISTT	Sends file to printer
LRUN	Run a no. of commands from a library, as if separate .COM files were being run
NSWP	Multiple file utility
NI	Same as Index
SD	Directory utility with 11 options (Enter 'SD //' for help)
PASSWORD	Used with SCRAMBLE
RENAME	Rename with wild-cards
RPIP	PIP with quick repeat
SCRAMBLE	File encryption
SORTV	Alphabetical sort of file
SQUEEZE	Compress file
SUPERSUB	Interactive version of SUBMIT
TYPEL	Like TYPE
UNERA190	File unerase
UNSQUEEZE	Expand compressed file
VLIST	TYPE with variable scroll speed
WHATSNW	Lists newest files (needs date-stamping I think)

#### PD1/2 (CPM) \*\*\*\*\*

COBOL COMPILER With 32k documentation

#### PD1/3 (CPM) \*\*\*\*\*

Z80ASMUK	Assembler
ZMAC	Assembler
ZLINK	Linkage editor for ZMAC

#### PD1/4 (CPM) \*\*\*\*\*

Z8EAMS	Z80 monitor and assembler
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## PD1/5 (CPM) \*\*\*\*\*

SECRETARY Text Editor/Word processor

## PD2/1 (CPM) \*\*\*\*\*

SMODEM Smart modem utility

## PD2/2 (CPM) \*\*\*\*\*

AMSMOD7 Modem utility  
MEX Modem utility (type 'MEX' then  
'HELP' for help)  
SMARTMEX Smart modem version of MEX  
UKM1275 Modem utility

## PD2/3 (CPM) \*\*\*\*\*

BANNER Notice printer  
GOTHIC Sideways banner printer  
COLLOSAL ?  
CAVE ADVENT The original adventure game  
BIO Biorhythm generator  
BISHOW ? (any ideas?)  
CAL Calendar generator

## PD2/4 (CPM) \*\*\*\*\*

CHESS Text version  
OTHELLO Text board game  
CUBE Simulation of 5x5 Rubik type cube  
GOLF Text simulation of golf game  
LIFE Classic game of life  
MASTMIND Guess the computer's word  
MAZE Generates mazes  
NEWPUZ Wordsearch puzzle generator  
PINGPONG Graphic pingpong game (CPM+ only)  
PRESSUP Board game  
STONE African stone game  
TICTACTO Noughts and crosses

## PD2/5 (AMSDOS) \*\*\*\*\*

25-SQUARE Rubik cube game  
BIOCHART Biorhythm generator  
BLCKJACK Blackjack card game  
BREAK Snooker quiz game (6128 only)  
F4SQUARE Puzzle game  
FAMILY Family history (no instructions;  
any ideas ?)  
FLAG-1 Draws Australian flag  
FLAG-2 as Flag-1 using FILL command  
HIGHLOW Guess the hidden number  
HOROSCOP Horoscope generator  
JACKPOT Simple fruit machine  
KEYS Redefine keyboard to give keyword  
command entry  
LIFE-10 Life game  
MEMGRAPH Screen designer (6128 only - needs  
BANKMAN)  
MERCHANT Space trading game

## PD3/1 (AMSDOS) \*\*\*\*\*

AMSDIR Tape cataloguer  
CAT Sends CAT to printer  
HOME Home budget  
ICON2 Ascii/Prestel converter  
INPUT1 General input sub-routines  
LABELS Label printer  
PAPERMAN Management simulation exercise  
PENNYTEN Pingpong game  
PJBOMBER Bomber game  
POLAR Plots polar equations  
QUEST Text adventure  
RAFFLES Maze game  
SCOSAVER Game - not working - anyone like  
to fix it?  
SPELLING Spelling game  
SPORTMAN Sport management game  
SURFACES Graphic demo  
TODAY Calculates day names from dates  
and Easter dates  
TYPTUTOR Typing tutor  
USEOFMIN Graphic demo  
WUMPUS Text adventure

## PD3/2 (AMSDOS) \*\*\*\*\*

A comprehensive subject index in  
MASTERFILE format

AMSMAG85  
AMSMAG86  
AMSMAG87  
ODDMAGS

## PD3/3 (AMSDOS) \*\*\*\*\*

AS PD3/2 BUT IN ASCII FORMAT

## PD3/4 (AMSDOS) \*\*\*\*\*

BLUE RAIDER Two part text adventure

## PD3/5 (AMSDOS) \*\*\*\*\*

ROLL Binary and BASIC versions of  
scroll RSX  
SCRSWAP Binary and BASIC versions of  
screen swapping RSX  
ROLL.DEM Demo for ROLL RSX  
SCRSWAP.DEM Demo for SCRSWAP RSX  
FCAT Binary and BASIC versions of  
directory to ascii file RSX  
RSX-ART ASCII file with instructions for  
above programs

## PD4/1 (CPM) \*\*\*\*\*

DS Sorted and extended directory  
(gives more status info than SD)  
MDIR Sorted and extended directory  
with six options (includes .DOC  
file on disc)



# P D L I B R A R Y

PD4/2 (PROTEXT - CPM or AMSDOS)  
\*\*\*\*\*

STD dialling codes - very comprehensive. Find code or location using word pro search routine.

PD4/3 (ASCII version of PD4/2)  
\*\*\*\*\*

STD dialling codes - as for PD4/2

## HOW TO ORDER:

1. Each of the sections above will fit on one side of a disc, so send enough discs ! eg if you want all the PD library then send 9 discs.
2. Please make sure the discs are blank and in VENDOR format.
3. Use a padded envelope and enclose correct stamps for return postage otherwise I cannot return your discs !
4. Enclose your address and telephone number (in case you've forgotten point 3 !)
5. State which software you require, eg PD1/1 and PD3/2. I cannot supply individual files.
6. If you haven't got a disc drive then you can still order software (but not CPM please !) by sending a long enough tape.

For members who, for one reason or another, are unable to forward discs, we can supply software for £3.50 per disc; this charge covers the cost of a CF2 disc, jiffy bag and postage. Cheques and Postal Orders should be made out to the UAUG and crossed. Please do not send cash through the post.

Most of the documentation files have been compressed to save disc space. This is indicated by a "Q" as the second letter of the filetype, eg READ-ME.DQC would be a SQUEEZED version of READ-ME.DOC.

These can easily be converted into normal ASCII with either UNSQUEEZE or NSWP on PD1/1 so you should order this section of the library first.

\*\*\*\*\*

## SEND ORDERS TO:

John Blessing  
26 Chichester Close  
West Wellow  
Nr Romsey  
Hants  
SO51 6EY

## THE CALCULATOR

A PROGRAM IN BASIC

BY BRIAN BRISTOW

This program draws a calculator on the screen, then acts like one. The following table explains the use of the symbols displayed on-screen by the program.

Symbol	Function	Press
S√	Square root	S
P%	Percent	P
Off	Exit from program	O
C	Clear all except Memory	C
Rcm	Recall Memory	R (Press a second time to clear Memory)
Dm	Deduct from Memory	D
M+	Add to Memory	M
cE	Clear last entry	E
RET	Display the result	RETURN or ENTER

The other keys are self explanatory. For speed of operation, the shift key need never be used, eg. for + just press the +/- key alone. The obvious problem of the =/- key is solved by using RETURN or ENTER instead of =, just as you would do after a direct command.

The program could easily be incorporated into a larger program as a sub-routine. Just change line 280 to '280 RETURN'; RENUMBER so that line numbers are higher than any in the larger program, making a note of the new number of the first line; add a GOSUB to that first line at an appropriate place in the larger program; then MERGE the programs together.



```

10 'CALCULATOR
20 'by B.Bristow
30 'Dec., '87
40 MODE 2:left=30:top=2
50 WINDOW left,left+21,top,top+22
60 GOSUB 660'Draw screen
70 WINDOW left+3,left+15,top+2,top+2:WINDOW#
  1,left+18,left+18,top+2,top+2:CLS#1
80 ik$="":sign$="":ik=0:numb=0:total=0:point=
  0:GOSUB 600:IF mem<>0 THEN PRINT#1,"M";
90 '*** MAIN LOOP ***
100 WHILE UPPER$(ik$)<>"0":ik$=UPPER$(INKEY$)
110 IF ik$="." OR ik$=">" THEN point=10:ik$=""
120 IF ik$>="0" AND ik$<="9" THEN GOSUB 290
130 IF ik$="+" OR ik$=";" THEN GOSUB 330:
  sign$="+"
140 IF ik$="-" OR ik$="=" THEN GOSUB 330:
  sign$="-"
150 IF ik$="*" OR ik$=":" THEN GOSUB 330:
  sign$="*"
160 IF ik$="/" OR ik$="?" THEN GOSUB 330:
  sign$="/"
170 IF ik$=CHR$(13) THEN GOSUB 330:sign$=""
180 IF ik$="S" THEN GOSUB 510
190 IF ik$="P" THEN GOSUB 620
200 IF ik$="C" THEN GOTO 80
210 IF ik$="R" THEN GOTO 450
220 IF ik$="D" THEN GOSUB 540
230 IF ik$="M" THEN GOSUB 570
240 IF ik$="E" THEN GOSUB 420
250 WEND
260 '*** SUB-ROUTINES ***
270 '*** 0 pressed ***
280 MODE 2:END
290 '*** 0-9 pressed ***
300 ik=VAL(ik$):IF point=0 THEN numb=numb*
  10+ik
310 IF point<>0 THEN numb=numb+ik/point:
  point=point*10
320 GOSUB 600:RETURN
330 '*** +,-,*,/ pressed ***
340 point=0:IF numb=0 THEN 415
350 IF sign$="" THEN total=numb
360 IF sign$="+" THEN total=total+numb
370 IF sign$="-" THEN total=total-numb
380 IF sign$="*" THEN total=total*numb
390 IF sign$="/" THEN total=total/numb
400 numb=0
410 CLS:LOCATE 13-LEN(STR$(total)),1:PRINT
  total;:RETURN
415 IF sign$="*" THEN total=0
416 IF sign$="/" AND total<>0 THEN PRINT CHR$
  (7)+" Div.by Zero!";:FOR del=0 TO 1000
  :NEXT:total=0
417 GOTO 410
420 '*** E pressed ***
430 IF numb<>0 THEN numb=0:GOSUB 600:RETURN
440 GOTO 80
450 '*** R pressed ***
460 numb=mem:GOSUB 600
470 ik$="":WHILE ik$="":ik$=UPPER$(INKEY$):
  WEND
480 IF ik$="R" THEN ik$="":mem=0:numb=0:
  GOSUB 600:CLS#1
490 IF (ik$>="0" AND ik$<="9") OR ik$="."
  THEN numb=0

```

```

500 GOTO 110
510 '*** S pressed ***
520 IF numb<>0 THEN numb=SQR(numb) ELSE
  numb=SQR(total)
530 GOSUB 600:RETURN
540 '*** D pressed ***
550 IF numb=0 THEN mem=mem-total ELSE
  mem=mem-numb
560 GOTO 590
570 '*** M pressed ***
580 IF numb=0 THEN mem=mem+total ELSE
  mem=mem+numb
590 PRINT#1,"M";:RETURN
600 '*** print number ***
610 CLS:LOCATE 13-LEN(STR$(numb)),1:PRINT
  numb;:RETURN
620 '*** P pressed ***
630 IF sign$="+" OR sign$="-" THEN
  numb=total*numb/100:GOTO 650
640 IF sign$="*" OR sign$="/" THEN
  numb=numb/100
650 GOSUB 330:sign$="":RETURN
660 '*** DRAW SCREEN ***
670 SYMBOL AFTER 243
680 SYMBOL 255,0,0,0,255,0,0,0,0
690 SYMBOL 254,0,0,0,255,255,0,0,0
700 SYMBOL 253,16,16,16,16,16,16,16,16
710 SYMBOL 252,60,60,60,60,60,60,60,60
720 SYMBOL 251,16,16,16,31,15,0,0,0
730 SYMBOL 250,0,0,0,224,48,56,60,60
740 SYMBOL 249,0,0,0,31,16,16,16,16
750 SYMBOL 248,60,60,60,252,252,0,0,0
760 SYMBOL 247,60,60,60,63,63,0,0,0
770 SYMBOL 246,0,0,0,63,63,60,60,60
780 SYMBOL 245,0,0,0,252,252,60,60,60
790 SYMBOL 244,63,127,192,128,0,0,0,0
800 SYMBOL 243,0,0,32,113,219,142,4,0
810 PRINT CHR$(246)STRING$(20,CHR$(254))
  CHR$(245);
820 FOR y=2 TO 22:FOR x=1 TO 22 STEP 21:LOCATE
  x,y:PRINT CHR$(252);:NEXT x,y
830 LOCATE 1,23:PRINT CHR$(247)STRING$(20,CHR$
  (254))CHR$(248);
840 LOCATE 3,2:PRINT CHR$(246)STRING$(13,CHR$
  (254))CHR$(245)CHR$(246)CHR$(254)CHR$(24
  5)
850 LOCATE 3,3:PRINT CHR$(252):LOCATE 17,3:
  PRINT CHR$(252):LOCATE 18,3:PRINT CHR$
  (252):LOCATE 20,3:PRINT CHR$(252)
860 LOCATE 3,4:PRINT CHR$(247)STRING$(13,CHR$
  (254))CHR$(248)CHR$(247)CHR$(254)CHR$(24
  5)
870 FOR y=5 TO 20 STEP 3:FOR x=2 TO 21 STEP
  3:LOCATE x,y
880 PRINT CHR$(249)STRING$(3,CHR$(255))CHR$
  (250)STRING$(5,CHR$(8))CHR$(10)CHR$(253)
  CHR$(8)CHR$(10)CHR$(251)STRING$(3,CHR$
  (254))CHR$(248)CHR$(11)CHR$(8)CHR$(252)
890 NEXT x,y
900 RESTORE 930:FOR x=3 TO 21 STEP 5:FOR y=6
  TO 21 STEP 3:READ ik$
910 IF LEN(ik$)=1 THEN LOCATE x+1,y ELSE
  LOCATE x,y
920 PRINT ik$:NEXT y,x
930 DATA "S ",Rcm,7,4,1,0,P%,Dm,8,5,2,..,Off,
  M+,9,6,3,RET,C,cE,/,*,,-,+
940 LOCATE 4,6:PRINT CHR$(243)CHR$(244)
950 RETURN

```

# MAILBOX

P.F.Cooper of Pontefract writes:

"DISC CASES. I recently bought 10 cheap 3" discs from a mail order company who advertised in AMSTRAD ACTION. They arrived 40 days and a reminder letter later. The price was good but they were all in small card wallets and not in the usual clear plastic cases. Have you any idea where I might be able to buy some ?

DISC LABELS. CPC USER, Issue 7, was, for me, most interesting. On page 15 I came across a listing for the CATalogue of a disc to be dumped to a printer, giving all the disc files in compacted print. This is done through our friend CPM. Given that the disc has been formatted in a straightforward way, i.e. Data, System, Vendor, etc, then the process works alright, but should a format like BIG BONZO under BONZO D00 DAH be used then CPM won't look at it ! Is there any way around this problem ? Is it feasible to get similar results under Amsdos - What do you think?

MINI OFFICE II. Despite its shortcomings this is a super value software package which I use a great deal and can recommend to all those who have yet to dabble in the dark arts of IT? For example, I am using the word processor to help write this, and other letters. I am finding the spreadsheet very handy for recording, displaying and manipulating mathematics test results. This, coupled with the graphics option has proved to be an invaluable tool in assessing the performance of my pupils.

The database has been utilised to record the details of my many serious chess encounters, which incidentally I have stored in the Colossus 4 chess program. This chess program is strong and very flexible but unfortunately does not include a means of recording the details such as names of opponent, time, place, opening, etc, etc. It can only file under a location number, e.g. G22.

The only options I have not fully explored in Mini Office II so far, include the Label Printer, which I feel sure will prove to be a useful tool in conjunction with the Word Processor, and the Communications package (I don't have a modem and the prospect of substantially higher telephone charges makes me pause to "ponder, at my liesure").

I for one would enthusiastically welcome a regular and comprehensive feature on the application of the many features of Mini Office II. Though one of the most irksome problems that I have encountered with Mini Office II, and one I am most anxious to receive the CPC USER editorial advice on follows...

I created a working disc copy using BONZO D00 DAH and explored. Most of the files were "sys" and "read only", the files named Kholrabi are disc fillers (kind regards to a fellow CPC USER subscriber for that information !) so I erased them, releasing 96k of space on the Mini Office II disc. Up to this point all has gone to plan, then I find that I am unable to use the space created. I cannot get ANY files saved. I have tried reformatting a new disc with those "normal" formats presented on the BONZO D00 DAH menu thinking that perhaps the BIG BONZO format might be the culprit. Nothing seems to work. It would be great if I could use this space for Mini Office II data files rather than the tedious swapping/turning of discs (Why the hell didn't Database Software include a double disc drive option in the package ?) Any help with this one will earn a hearty mucho gracias

PD SOFTWARE. One final query. I recall CPC USER of 3-4 months ago offering a number of interesting PD programs using both CPM and Amsdos. Those interested were asked to send a number of blank discs and indicate which of the particular programs they wanted. Unfortunately, I have mislaid that Issue and was hoping that I could belatedly ask your office to confirm if all those PD programs are still available and the number of discs required. Incidentally, have you any idea how I can obtain CPM+ without having to shell out £20 ?

Well, that's it I think. I'll now experiment with my latest, and most pleasing acquisition, the Amstrad DMP2000. I snapped it up post haste when I saw it advertised in the April edition of Amstrad Action for £50. That must be a bargain !

Best wishes to you and your colleagues at CPC USER"

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DISK CASES seem to be in short supply at the moment (unless you buy disks with cases !); this shortage occurs fairly regularly but doesn't last for long. It seems to be particularly bad this time; advertisers in Micro Mart are offering 50p per case. The alternative is to buy a disk box; the AMS-20L disk box will hold about 40 uncased CF2 disks and is a lot cheaper than buying individual cases. The AMS-20L is available from numerous suppliers and costs anything between £10 and £30. The cheapest we've seen them is £9.95 from Techno Trade.

DISK LABELLING cannot be achieved using the one-line program published in CPC USER if the

disks have been formatted by BIG BONZO. The labelling program runs under CP/M which, on the Amstrad, will not recognise a non-standard format without special software. A number of independent manufacturers are marketing high-density disk drives for the CPC which will work in CP/M but they are all supplied complete with special software for this purpose. So far as we know, there is no easy way round this problem other than to revert to standard formatting. If this doesn't work, you have another problem.

MINI OFFICE II is intended to be run in the Amsdos environment, meaning that it too reacts adversely to non-standard formatting; it is very format sensitive and is unlikely to function correctly in any environment other than that for which it was supplied. Presumably you have talked to Database Software and Nemesis about the problem; if you haven't, I suggest that you do so. Dare I ask whether you've checked that your copydisk is not write protected?

The PD software you enquire about is available from the UAUG PD Software Librarian; updated library details are included in this Issue.

I cannot help you with a cheap source of CPM+. Best of luck with the DMP2000 - Ed.

L.Likishi of Milton Keynes writes:

"I need your advice to the following questions on Juki6000P daisy-wheel printer. Your suggestions will be appreciated.

1. Is £120 a good buy?
2. Would I be able to use it on my 6128?
3. What sort of interface would I need, how much would it cost and where would I be able to get it?
4. Would you kindly list the comparisons between it and the Panasonic KX-P1081 and according to you which one will be more suitable for my 6128?

Thanks for your help"

The Juki6000P is bi-directional logic seeking and produces 10cps from a 100-character daisy-wheel; it has a platen width of 12 inches and a printing width of 9 inches, allowing 90 characters in 10 cpi, 108 characters in 12 cpi or 135 characters in 15 cpi. The daisy-wheels are Triumph-Adler compatible and the ribbons are Olivetti compatible. The 6000P was introduced in 1985 and does not use the same ribbons as the current 6100 model.

The Panasonic KX-P1081 is an impact dot matrix printer and is therefore not comparable with any daisy-wheel printer. The KX-P1081 is also bi-directional logic seeking but uses a 9-pin head to produce a character structure of 9x9 in draft mode or 9x18 in NLQ mode; the NLQ mode is usable in all pitches. Print speed is stated to be 120 cps draft or 24 cps NLQ but, as with all printers, the speed will vary according to the character pitch selected. The machine is equipped with a 1k text buffer as standard but can optionally be fitted with a 4k buffer.

Bearing in mind the big difference in print quality between the two types of printer, plus the fact that a daisy-wheel printer is a text producing machine whereas a dot matrix printer will produce graphics as well as text (and will allow you to print alternative character sets or user-defined characters), you must make up your own mind whether the computing tasks you intend to undertake will require a dot matrix or a daisy-wheel printer. It is not so much a question of which printer is better suited to the 6128, but more a matter of which type of printer you need.

Both the Juki and the Panasonic are fitted with parallel printer ports, so no special interface is required for the 6128. However, to utilise all the features of the KX-P1081, an 8-bit printer port converter (available from KDS Electronics) is recommended - Ed.

#### FOR SALE

Amstrad Pace V21/23 Modem complete with Interface. £70

Rombo Vidi-Video Digitiser  
As new hardware and disc. £50

Rombo Rombox, Protext (disc and ROM versions), Prospell (disc and ROM versions). Offers invited.

Simon Linssen, 13 Furzedown Road,  
Highfield, Southampton, Hants SO2.1PN

#### WANTED

Copy of Amstrad Manual, Soft 968.

Also, SCRABBLE on disc.

Prices please to: John Stanford,

4 High Walk, Fareham, Hants PO15.6BS

or 'phone Fareham (0329) 283274

## MATRIX PLUS

BY BRIAN BRISTOW

Matrix Plus is a spreadsheet program that runs on all CPC's. Data is held in memory along with the program; this limits data to about 20K. The program, which is marketed in the usual large plastic box, is supported by an excellent 32-page manual with an index.

The program is machine coded and includes all the usual spreadsheet properties. Column widths may be varied independently, at any time. Number of columns and rows is limited to 255 and 1023 respectively, although 2500 filled cells is about the most that can be held in memory at any one time. Calculations can be automatic, as data is entered, or manual on command, which will speed data entry. Options are accessed by pull-down menu's and Mode 2 (80 columns) is used exclusively. Cells can display, on screen or printer, either formulae or the results of the formulae. Calculations can make relative or absolute reference to other cells and include any of a long list of functions, some of the more obscure being EXP, TAN and RND (Exponent, Tangent, and Random). Random, on a spreadsheet indeed!

The program offers several features; these are:

The Calculator displays input and result in a window on the screen, and can make reference to cell locations in the calculations.

The Paperweight is a variable sized area of memory that can store groups of cells, which can then be cut, copied, pasted, saved, loaded, printed or viewed.

The Notebook can be used for various tasks, from simple note recording (e.g. date of last update) to mail merging standard letters with the facility for incorporating data pulled in from the spreadsheet by reference to cell locations.

The Paperweight and the Notebook share the same area of memory as the spreadsheet data.

The data can be sorted alphabetically, numerically, ascending, descending, by row or column, and affecting any number of rows and columns. The data can be displayed graphically, on screen or printer; either singly or up to four graphs together. Bars, Cumulative Bars, Lines, or Sectors. Text can - and will need to - be added. A Legend and Grid can be added to aid clarity. Legend gives a key to help identify the lines or bars, Grid adds a squared matrix behind the graphs.

When the data is saved, screen colours, notebook contents, and graphical and various other details will also be saved. Loading this saved data into your favourite word processor will produce mumbo-jumbo (machine code), but the Paperweight and the Notebook can be saved to disc as normal ASCII files.

The program can also be used as an effective database. You can import data from your old ASCII saving database eg. Amfile, via the Paperweight into the spreadsheet. Then adjust column widths and add headings to suit. You can then perform just about any tricks that you might wish to on the data, except Search and Replace. But you could export the data, again via the Paperweight, to Protext/Promerge, etc, for that or more advanced mail merging than Matrix can handle. Matrix will hold about 200 names, phone numbers and full addresses.

Minor gripes: 1- The Grid for the graphical display is always a square matrix, proportional to the number of cells displayed, so vertical spacing will not relate to round numbers of sums displayed. 2- The automatic 'save-on-close' feature can cause grief - to avoid problems always go via 'New' to 'Open' when loading data to replace data already in memory. 3- Disc handling is rudimentary.

Most dealers offer Matrix at £29.95 on disc, and about £3.00 less for the tape version. At these prices, it is a fair buy, particularly for use on 64k machines lacking CPM+. I found no bugs or spelling errors.

## QUALITAS PLUS SEVEN STARS PUBLISHING (06284 3445) PRICE £14.95 DISC

REVIEW BY JOHN BLESSING

Qualitas Plus is just what you need if your printer produces boring and listless letters - it certainly will pep up your 9 pin printer, without going to the expense of buying Stop Press. It won't produce graphics but it will enable you to produce different fonts while still using your favourite word-processor.

I decided to buy Qualitas Plus after talking to a visitor at the last Amstrad Show, he was very enthusiastic about it and the help given by Seven Stars. This gentleman had first used Qualitas on the Spectrum and had bought the Amstrad version when he upgraded. That was a good enough recommendation for me.

Qualitas Plus works by diverting all printer output to its own routines. Normally the text is sent straight on to be printed out in the normal fonts available from your printer. However, if the text contains the special Qualitas Plus control codes then the printer is switched into graphics mode and further text is printed in the selected Qualitas Plus font. Of course this does take longer, rather like a screen dump. There are 5 fonts supplied (with further font packs available) and a font editor, so if you have the patience you can create your own.

As you can see from the example below, it is also possible to mix in things like double width and underlining if your printer supports them. You will also notice that you can print in double height - great for headings.

Normally with printer utilities, you realise that "Epson compatible" is not the same as "exactly like an Epson". Qualitas Plus scores heavily on this point by providing support for a wide variety of printers, including my Shinwa CPA80+ which is "Epson compatible".

The manual supplied is a 16 page A5 booklet and provides details of using Qualitas Plus within Protex, Tasword, Advanced Amsword,

Mini-Office II, Masterfile III and your own programs. It also gives plenty of good advice on font design.

In use, Qualitas Plus can take a little while to get to grips with, but the results are well worth it. I have used it regularly with Protex for letters and CVs and find that it adds class and makes the text much more attractive. Up to three fonts can be present (on the 6128 these are stored in the extra memory), so you should have plenty of variety available. It is not possible to have more than one Qualitas font on one line, but in use I have not found this a problem. It probably wouldn't look too good anyway.

The manual suggests that you assign the Qualitas Plus control codes to a number of control letters for use in your word-processor. I found that it was easier with Protex to use the >OC command to output the relevant control codes directly. I did have some difficulty at first in producing right justified text with the proportional fonts, but a letter to Mr Eckersley produced a quick reply and a simple explanation. This is typical of the helpful reputation that Seven Stars have gained.

If you look closely at the sample fonts below then you will see that there are no true descenders, this is because of Amstrad's famous cost-cutting exercise with the 7-bit printer port. If you have an 8-bit port (from KDS Electronics) then you will get true descenders. I believe the output is even better if you have an "exactly like an Epson" printer, which will give greater definition due to the higher density graphics mode available. My Shinwa has quite a reasonable NLQ mode but I am more than happy with the quality of the Qualitas Plus fonts on this machine.

If your printer does not produce NLQ then Qualitas Plus is a must. For anyone else I would still recommend it, as the extra fonts (particularly double height) really do add style.

Normal Shinwa NLQ font and double width  
Mercury font and double width  
Elite font and double width  
Piazza font and double width

Clarion font and double width  
Pica font and double width  
You can also do double height in most fonts  
including double width

# REVIEW

## PEN DOWN

Don Snoad tries out a word processor, originally intended as a teaching aid, and is not impressed

PenDown, the brainchild of Peter Hunter, was originally marketed as an educational word processor for children aged 6 and upward using a BBC computer. The program was re-written for the Amstrad CPC computers by Stephen Grand and re-marketed by Logotron Ltd early in 1987. PenDown is supplied on disc and costs £20.

The PenDown disc comprises 14 files totalling 94K; the 3 program files amount to only 20K and are 'protected', whereas the remaining 11 files, mostly utilities, are unprotected and can be copied to another disc or to Side B of the program disc. The program is not memory resident, so the program disc must remain in drive A whilst PenDown is being used.

The PenDown disc, like many programs not originally designed for the Amstrad, will not run with an external ROMboard, silicon disc or memory expansion fitted; in fact, such peripherals need to be physically disconnected to enable PenDown to load. Once loaded, the text entry screen is displayed; on mono monitors, the display is black text on a green background but on colour monitors the text is blue on a white background. There is no provision for changing the screen colours.

The screen, which can be switched between 40 and 80 column display, presents a usable text window of 80 columns by 18 lines plus a status line at the top and a block of 10 icon-type options at the bottom. The status line shows the page width and length settings, the cursor column and line number, the page number and the 'storage bin' auto-empty status; the current filename, tab position or margin column numbers are not shown.

The word processor is entirely menu driven via the icon blocks at the foot of the screen. The concept of icons is unique in a word processor and an ideal concept for teaching children the fundamentals of word processing; however, I think it optimistic to expect a child of 6 to recognise the symbols in some of PenDown's icons, or to associate them with the options offered by the drop-down menus. The 10 icons each show a symbol and a function key number; thus:



Function keys 0 to 5 and 9, when selected, display drop-down menus on which a very limited number of options are offered. Three of the remaining 4 icons (i.e. f6, f7 and f8) are direct commands (i.e. cut and paste, centralise text and case change) and have no drop-down menus; the remaining icon (f9) is an ideas planner enabling the user to tree-structure his/her thoughts in 4 levels of notation with further options for either saving the plan to disc or of transferring it to text already held in memory.

PenDown also provides a number of utilities including a help file, a dictionary editor and a font designer. The help file capacity is 10 subjects and is deliberately incomplete so that it can be developed by the user as prompted by the menu. The 'starter' dictionary provided by PenDown is very small (only 800 words) and is also intended to be edited/developed by the user; the handbook gives no indication as to dictionary capacity. The utilities also include a font editor and other file conversion facilities, all of which have to be loaded and updated independently of the word processor. As each feature is altered and re-saved, it becomes accessible from within the word processor. The dictionary file, once developed, is merely for reference; there is no spell-check feature.

The PenDown disc also includes 6 extra fonts (each one a 10K file); these are: Jumbo, Jumcom, Chunky, Horizon, Gothic and Moderna. However, due to the total absence of any clue as to the character pitch of these fonts, considerable experimentation will be necessary before they can be used successfully.

Although the user handbook has been supposedly revamped

for the Amstrad CPC computers, there are a large number of errors which are obviously throwbacks to the BBC version of the program; even so, having purchased an Amstrad version one is entitled to expect the documentation to be relevant (the references to red function keys, to the use of CTRL Q because there is no tab key, to the RML480Z and to disc copying and working discs, to name but a few, are very misleading to say the least, and particularly so if the program is being used in its intended role as a teaching aid).

The disc CAtalog facility of PenDown is intended to take account of PenDown's unique file attributes and to list all the disc files under 4 headings; namely: text, fonts, dictionaries and plans. Unfortunately, a hic-cup or bug in the program inhibits this feature to some extent and a true listing of all the files on disc in the selected drive is not available; PenDown behaves erratically regarding the files it will list, and there is often no logic in its selection. For example, a disc with a number of files with the same name but with different file attributes seems to confuse PenDown, which may well list a different file of the same name each time the CAT command is invoked. It is likely that this file management problem is related to the fact that although PenDown displays a catalog of its disc files under 4 headings (which are in fact based upon the 4 file attributes: DOC, FNT, DCT and PLN), it incongruously allocates 7 different attributes to its files (i.e. those already mentioned plus: ASC, KBD and HLP). Ergo, there's no way the CAtalog command can possibly win!

The screen display is quite good but some of the features are unnecessarily limiting; for example, the left-hand margin cannot be inset by more than 5 columns and only one tab stop is permitted. The maximum page width is 80 columns, within which caution must be exercised in reformatting a document in memory; when the page width is set to less than 80 columns, it is possible to reformat to a wider width but impossible to reformat to a narrower width.

PenDown has no overwrite mode and editing is made more difficult by the program's inability to auto reformat when words have been altered or deleted; this problem can be partially overcome by much tapping of the DEL key and SPACEBAR to restore the desired page format, but this is a frustrating and tedious exercise requiring much patience.

In general, text manipulation was found to be very difficult and unreliable. The range of cursor commands is also fairly limiting and the response time to certain keystrokes is painfully slow. In some instances, words disappear completely from the screen only to re-appear some seconds later; sometimes words disappear altogether or may subsequently re-appear at the end of the document.

There is no provision for headers or footers other than whatever can be typed on the screen, and page numbering also has to be embedded manually page by page.

The Edit Start-up Information facility on the utilities section of the program is supposed to configure PenDown and auto-boot at the next start-up, but it doesn't do so. The maximum file size is claimed to be 350 lines which, in theory, should be sufficient for a document of about 28K; however, in practice, with parameters set for the normal 66-line page length, the maximum file capacity will be reached within 3 pages. Another unnecessary restriction is the fact that the program disc cannot be copied, so it is impossible to obtain a working copy to safeguard the master disc. The supplier's say this restraint is deliberate to avoid piracy - but in all honesty, who in their right mind would bother!

PenDown was originally marketed as an introduction to word processing for young children. It is no more than that today. For teaching purposes, your £20 would be better spent on Mini-Office II.

## CITIZEN PRINTERS

BY M. CATTON

A year or so ago I bought a Citizen 120D, which I have recently replaced by a Citizen MSP10E. This article summarises my experience of the Citizen and comments on other printers that I considered before deciding on the MSP.

The 120D is very small and light, and is also very cheap. Several advertisements in WHAT MICRO and PERSONAL COMPUTER WORLD quoted prices from £155 to £160, including carriage and VAT. Its main virtues are its versatility, freedom from restrictions and ease of use. The 120D has codes for several functions that some other printers I looked at didn't have - such as reverse print, double-height characters and the capability, using control codes, of switching from Epson to IBM. Of particular concern to CPC users, is its ability to print the high-order characters despite the CPC's 7-bit interface. ESC> sets the 8th bit to a 1 and ESC# restores normal printing (ESC= is supposed to set the 8th bit to 0 but doesn't do so, so I use ESC# instead). With this and the Epson/IBM switch I can, for instance, insert a family tree in the middle of text by using the IBM box characters.

The 120D is quite fast, having an actual speed over a 4300-character text page in NLQ mode of 19 cps in Pica and 21 cps in Elite. In comparison, the Star NL10 prints at only 17 cps in Pica despite a claimed speed of 30 against the 120D's 25 cps. With the exception of reverse print, all the various print modes will function in NLQ whereas, again by comparison, the Epson LX800 data sheet states that Elite, italics, double-strike and subscripts and superscripts do not (in fact, Elite can be printed in NLQ but I didn't check the other features when I looked at the Epson). The Star NL10 will print only in Pica when in NLQ mode which, apart from other considerations, ruled it out for me since I do all my printing in Elite because it enables me to get 80 characters on a line with ample margins.

Switching between draft and near-letter quality can be effected from the control panel although, irritatingly, there is no visual indication of the mode selected; an

auto feed feature for single sheets avoids the need for cranking in and aligning the paper, typewriter fashion. In NLQ mode, the characters are well formed and free from dottiness but are rather thin and feint; it is best described as acceptable letter quality rather than NLQ.

The handbook is very good with the functions clearly described and well indexed; its only significant defect is its rather modest print quality!

If you are not overconcerned about print quality, the 120D is perhaps the best and cheapest printer available.

Recently, Citizen introduced the LSP100, for which I have a data sheet. It appears to be very similar to the 120D in appearance, size and functions, although it has more facilities and the claimed speeds are a little faster. The LSP100 is advertised at around £195. I wasn't able to find one in the shops, so cannot comment on its print quality; if it's up to the standard of most others, I would say that it's the best of the low-budget printers; if not, I doubt whether it's worth the extra cost over the 120D.

The MSP10E is faster than the 120D and has better print quality, but at the £230 (including carriage and VAT) that I paid, it costs a fair bit more. In Elite NLQ mode it prints at 26 cps, compared with the 120D's 21 cps, and the print quality compares well with that of the Star NL10 and the Epson LX800. It has the same versatility and freedom from restrictions as the 120D, but it is not quite so easy to use. Some of the codes are not so convenient as the 120D and it lacks the single-sheet auto-feed feature. Its main defect is that it is very noisy in NLQ mode

A printer I didn't look at but which may be worth considering is the Panasonic KPX1081. It's about the same size as the 120D, sells at around the same price and has the 120D's ability to print IBM graphics characters. If its print quality is significantly better than Citizen's, it would be a serious contender.



# FEATURE

## SIMPLE ROMBOARD SURGERY

BY JOHN BLESSING

The following article describes two simple and very useful modifications which can be made to a ROMboard. No special skills are needed; even I can cope and giving me a soldering iron is like giving a carving knife to a psychopath! However, it does pay to be careful and of course we have to say that we cannot be responsible for any damage caused.

That said, I have been using these modifications for about 6 months and have not had any problems. During this time I have found them to be very useful and well worth the effort.

### Switching off ROMs

\*\*\*\*\*

Many CPC owners have ROMboards and so enjoy the benefits of instant program loading and (particularly with Protext on ROM) more free memory. The problem is that some commercial programs crash when ROMs are present so you have to remove the ROMboard to continue. This can cause excessive wear on the expansion connector and possibly cause problems in the long term, not to mention the annoyance. However, this is a simple problem which anyone with a soldering iron can overcome.

All ROMboards (so far as I know) have at least 2 sets of pins which are used to set up whether the ROMs are in the range 0-7 or 8-15. Normally, a link is push-fitted between a pair of pins to select the required bank.

Now, if you don't put the link on, then the computer refuses to accept that all those lovely (and expensive) ROMs are there! So, if a small switch is connected across the pins, you can switch them on or off at will, without all the bother of actually unplugging the board from the computer.

All you will need is a soldering iron, two short lengths of thin wire and a miniature switch (from Maplins or Tandy). If your ROMboard has a case then you should be able to mount the switch in a convenient place. Proceed as follows:

First switch off your computer!

1. Remove the ROMboard from its case if it has one.
2. Choose a suitable place to mount the switch and drill a small hole for it (the point of a sharp Stanley blade is good for drilling holes in the plastic case).
3. Strip the ends of the two lengths of wire and

solder one to each terminal of the switch.

4. Decide whether you will be using 0-7 or 8-15 and identify the correct pair of pins you need to link.

5. Solder the other end of each wire to each pin. It looks neater if this is done on the underside of the board, but you can solder directly to the pins if you prefer.

6. You should now have the switch connected so that in the ON position there is a complete circuit between the 2 pins you selected at stage 4 above. In the OFF position there should be no such circuit.

7. Check that there are no blobs of solder shorting any of the circuit board tracks and that everything else has remained undisturbed.

8. Replace the board, plug into the computer and power up. If you left the switch in the ON position, you should get the normal ROM sign-on messages when you power up the computer. If not then switch off, flick the switch the other way and power up again. If in any doubt then switch off and check the ROMboard again.

### Reset button

\*\*\*\*\*

If you have never crashed your computer then I'm very surprised! Sometimes all you can do to restore control is to switch off the power. Apart from being a source of undue wear on the switch you also have to remove any discs. If you don't they could be corrupted by the voltage spike from power-off.

This poses a problem if you have a disc which is busy making horrible noises and you don't know whether to risk the disc by removing it whilst the drive light is on or to switch off and hope for the best.

It is possible to make a simple modification so that the computer can be reset without fear of damaging a disc in the drive. I have my reset button attached to the ROMboard, but there is no reason why it cannot be fitted to any expansion (eg silicon disc).

On the back of your CPC is an expansion connector (see your manual). Pin 41 is labelled RESET in the CPC6128 manual and if this is connected to earth (also called GND for short) momentarily then the computer will be reset - what a surprise! The full pin-out details are

shown at the foot of this page. The procedure for fitting the reset button is as follows:

1. Buy a momentary-action, sub-miniature, push-to-make, switch (available from Tandy or Maplins). With this sort of switch the circuit is completed only whilst the push-button is held down.

2. Switch off your computer and remove your ROMboard.

3. Locate the tracks on the ROMboard which are connected to pins 41 and 49. Follow each track to a suitable pin on the ROMboard.

4. Strip the ends of two short lengths of wire and solder one end of each wire to each of these two pins.

5. Mount the switch in a convenient place, choosing somewhere it won't be pressed accidentally.

6. Take the other ends of the two wires and connect them to the switch.

7. When the switch is pushed you should have a complete circuit between the RESET and GND pins. When you release the switch, there should be no connection between them.

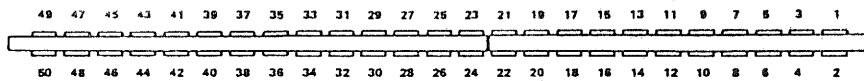
8. Check that there are no blobs of solder shorting across any of the circuit board tracks and that everything else has remained undisturbed.

9. Replace the ROMboard and switch on the computer. If anything looks odd then switch off immediately and check stage 8 again.

Assuming everything is OK, then, whenever you want to reset the computer, just momentarily push the button and you'll be back in control. Unfortunately, all your data in memory will be lost, but of course you always save any work to disc regularly don't you?

## Expansion Socket

VIEWED FROM REAR



PIN 1	SOUND	PIN 18	A0	PIN 35	INT
PIN 2	GND	PIN 19	D7	PIN 36	NMI
PIN 3	A15	PIN 20	D6	PIN 37	BUSR2
PIN 4	A14	PIN 21	D5	PIN 38	BUSAK
PIN 5	A13	PIN 22	D4	PIN 39	READY
PIN 6	A12	PIN 23	D3	PIN 40	BUS RESET
PIN 7	A11	PIN 24	D2	PIN 41	RESET
PIN 8	A10	PIN 25	D1	PIN 42	ROMEN
PIN 9	A9	PIN 26	D0	PIN 43	ROMDIS
PIN 10	A8	PIN 27	+5v	PIN 44	RAMRD
PIN 11	A7	PIN 28	MREQ	PIN 45	RAMDIS
PIN 12	A6	PIN 29	M1	PIN 46	CURSOR
PIN 13	A5	PIN 30	RFSH	PIN 47	L. PEN
PIN 14	A4	PIN 31	IORQ	PIN 48	EXP
PIN 15	A3	PIN 32	RD	PIN 49	GND
PIN 16	A2	PIN 33	WR	PIN 50	φ
PIN 17	A1	PIN 34	HALT		

\*\*\* WARNING \*\*\*

This information relates to the CPC6128 - please check if you are attempting this modification to a CPC464/664; they may have different pin numbers.

# PROGRAMMING

## THE HISTORY OF ADA

by Gary Carter

ADA is a relatively new language, completed in the early 1980's, and yet is making a big impact on the computing industry. Although it may not yet as well known as COBOL or FORTRAN, it is rapidly gaining popularity with all sectors of the industry.

ADA is a high level language originally sponsored by the US Department of Defence (DOD) for use in their 'embedded system' applications. An embedded system is a system in which the computer is an integral part of a larger system, such as in a power station or a missile or even in a washing machine.

The history of ADA goes back to 1974 when the United States Department of Defence realised that it was spending far too much money on software. After lengthy and detailed analysis it realised that over half of its costs were for embedded systems.

Further analysis showed COBOL to be the main language used for Data Processing and FORTRAN for scientific and engineering calculations. However, the situation with embedded systems was quite different. The number of languages in use was enormous. Each of the three armed services had their own favourite high level languages as well as many assemblers.

It was therefore realised that language standardisation was called for; obviously a single language would be the ultimate goal. In the short term, whilst the ultimate language was being developed, the DOD issued a list of 'approved' languages, which consisted of CMS-2Y, CMS-2M, SPL/1, TACPOL, JOVIAL J3, JOVIAL J73 and COBOL and FORTRAN for the other areas.

The first step towards the single language was to write a report outlining the requirements. The report was published in 1975 and was known as 'Strawman'. After receiving many comments this was refined and become 'Woodenman'. A further refinement produced 'Tinman' in 1976.

At this stage many existing languages were evaluated against 'Tinman', partly to see if one of them could be used as the ultimate language and partly to invoke detailed evaluation of the requirements.

The existing languages were grouped into three categories:-

**Not Appropriate** - These were the languages not to be considered further for one reason or another. They included COBAL 66 and FORTRAN.

**Not Inappropriate** - These languages could not be used as they were but had some interesting features. They included LIS and RTL/2.

**Recommended Base** - These languages (Pascal, PL/1 and Algol 68, were seen as possible starting points for the new language.

At this stage the 'Tinman' report was reorganised and revised to give 'Ironman'. Proposals were then invited from companies to develop a possible language starting from one of the bases. Out of seventeen proposals received, the DOD chose four to go head in competition. The four contractors were given colour codings so that their work could be evaluated without bias; they were Softech (blue), SRI International (yellow), Inter-metrics (red) and CII Honeywell Bull (green).

The initial designs were delivered in 1978 and these were given to many groups around the world for evaluation. It was finally decided that the red and green designs showed more promise than the yellow and blue, and should be allowed a further year to refine their designs.

The requirements were also revised after the initial designs had been submitted and 'Steelman' was produced, which turned out to be the final document.

The final choice was made in May 1979 and the green language developed by CII Honeywell Bull was declared the winner. The DOD then announced that the language would be called ADA, named after Augusta Ada Byron, Countess of Lovelace (1815-1852) who was thought to be the very first programmer.

ADA was then given to a cross section of users so they may comment on its design and suitability for their needs. Eighty general reports and almost one thousand technical language reports were received and the general conclusion was that ADA was generally quite good but a few areas needed improvement.

After considering all the reports a few changes were made and the first version of the language was published in July 1980. The American National Standards Institute (ANSI) standardisation process took over two years and resulted in further changes to ADA. The ANSI standard Language Reference Manual (LRM) was published in 1983.

# PROGRAMMING

It was also realised that additional benefit would be derived if a programming environment could be established. And so, in parallel with the language design, a series of requirement documents for an ADA Support Programming Environment (APSE) were developed. These were entitled 'Sandman', 'Pebbleman' and finally 'Stoneman'. These documents were less detailed than the corresponding language documents.

So what are the Advantages of ADA over conventional languages?

ADA has many advantages over other high level languages, many of them have come about from the time and effort which has gone into developing the language. Some of the main advantages are:-

WELL DESIGNED - Millions of dollars and years of work have gone into the development of ADA.

MODERN SOFTWARE ENGINEERING CONCEPT - ADA uses structured modular programming rather than 'top down' programming which is claimed to have 89% higher efficiency in modular projects.

RELIABLE - ADA has been developed with reliability as a chief priority.

PORTABLE - This was also one of the main design objectives which ensures an ADA program is portable.

READABLE - ADA is based on Pascal and inherits Pascal's readability making the source program readable to any programmer.

STRONG TYPING - This ensures that each object has a clearly defined set of values and helps to prevent confusion. As a result, many errors are picked out by the compiler whereas, with other languages, code would have been produced but it would lead to logical errors.

STRONG PROGRAM DESIGN - As all types have to be clearly defined it encourages more time spent designing the program and less time spent coding it.

NEW - Most other languages were designed a long time ago. As ADA is fairly new it has been designed to use

all the features of modern hardware, etc.

There must be disadvantages as well ?

ADA also has some disadvantages although they do not outweigh the advantages by any means, they are:-

STRONG PROGRAM DESIGN & STRONG TYPING -

These can also be disadvantages. If only a short program is required it is still necessary to enter all the data types etc, which requires a lot of time and design.

NEW - ADA is still a relatively new language and has not been tried and tested as much as COBOL for example.

COST - ADA compilers are still fairly expensive.

MACHINES - ADA compilers are still not that common, although they are starting to be developed for business micro's.

DIFFICULT TO LEARN - ADA is a difficult and complex language and can be difficult to learn.

It is just beginning to be realised that ADA can be used equally well for commercial applications as it can for military ones. The main use in military applications is for programming embedded systems, for which the language was originally designed.

ADA is a real-time language and provides features such as multi-tasking, synchronising with real-time and programming low level device hardware directly. It is therefore ideal for programming any real-time system.

However, it is not restricted to real-time applications, its 'non-real' time facilities far exceed those offered by most existing languages in common use.

ADA is suited to a wide variety of applications in such diverse areas as systems programming, commercial software, numerical analysis and teleprocessing, as well as in conventional real-time areas such as industrial control, communications and other military systems.

ADA is a very complicated new language which is suited to all types of applications. The language appears to be a language for tomorrow and ideally suited to military and large complicated commercial applications.

# PROGRAMMING

## PROGRAMMING RSXs

BY JOHN BLESSING

### INTRODUCTION

This month I had hoped to cover the use of the extra 64k for storing screens, unfortunately, I will not be able to do so. Instead, I will be showing you a program which I hope you will find useful. The program is small enough to type in or you can order it on disc PD3/5 of the Public Domain library.

The RSX I wish to describe demonstrates how to pass a string parameter from BASIC to machine code. FCAT writes the contents of the directory to disc as an ASCII file. This file could then be used by a database to keep a catalogue of all your files, or you could use it in a disc menu program.

As in the previous article, I have provided two versions; Program 1 is an assembler listing which I shall discuss in more detail later in the article. Remember, this cannot be typed directly into the CPC without an assembler. Program 2 will load the code produced by your assembler and initialise the RSX.

If you don't have an assembler, then Program 2 is a BASIC loader which will set up the RSX for you.

The syntax for using this RSX is:

```
|fcat,filename
```

The filename can be any valid filename as described in the user manual, eg |fcat,"discla.dir"

### THE ASSEMBLER LISTING

Now to describe how the program works. I'll refer to the listing in Program 1, which has line numbers added to make it easy for me to refer to various sections.

Lines 50-290 initialise the RSX as described in the Jan/Feb edition (you have kept it haven't you?). Again, there is nothing special about the address I have written the code at, it's just that I find &8000 an easy address to remember! The main part of the program is on lines 300-620.

310-320

Checks that one parameter has been supplied, if not make a jump to a routine which 'beeps' at you.

330

On entry, IX holds the address of the parameter supplied, so this line stores this temporarily by pushing it on to the stack while ...

340-350

cas\_catalog simply reads and displays to the screen the disc directory. It must be supplied with an address to store the information and this address is passed in register DE. You can see that at lines 730-740 I have reserved 2k of memory for this purpose.

360-440

Now that we have the directory in memory, and before writing it to disc, we must find the name to give the ASCII file ("discla.dir" in our example). First thing then is to get the correct address back into register IX by POPping it off the stack. The next part I find a little difficult, so bear with me please.

In the case of a string parameter, the actual string is not at the address held by IX. Instead, at this address will be found three bytes. The first is the length of the string, the second and third are the address of the string itself. An example will probably help. Let's say that you typed |fcat,"discla.dir". On entry the situation might well be this:

LOCATION

CONTENTS

IX	&B000
&B000	&0A (length of string)
&B001	&00 (low byte of string address)
&B002	&B1 (high byte of string address)
&B100	
to &B109	"discla.dir"

That sounds straightforward doesn't it? I have to admit the coding started to make my brain spin! Instead, I have shamelessly pinched lines 370-440 from the firmware manual. Basically this section ends up with register HL holding the address of the filename.

450-460

This opens an output file with the supplied

# PROGRAMMING

filename. HL holds the filename address, B the length of the filename and DE the address of a 2k area of memory as a buffer (cat\_buffer).

470-600

This section writes the directory to the buffer. First, HL is set to point to the start of the buffer and BC contains its length. BC is used as a loop counter (BASIC equivalent: FOR n=&800 to 1 step -1).

Lines 500 to 540 load a byte from the buffer and first check to see if it is a printable character. If not, then it is converted into a SPACE character by set\_space. Directory entries are separated by an &FF byte, so lines 530-540 convert this into a carriage return by calling set\_cr.

The byte is now in a state to be written to the buffer and this is done with a firmware routine; cas\_out\_char.

Lines 560-600 are the remainder of the loop. First, HL is moved on to the next address of the buffer and then BC (our counter) is tested to see if it is now zero. If it is, then the loop is exited and ...

610-620

The buffer is emptied by writing it to disc with the filename originally supplied. Again, a firmware routine is used; cas\_out\_close, which does not require any entry conditions to be set.

## THE PROGRAMS

### PROG 1

```

10
20 ;*****
30 ; FCAT ASSEMBLER LISTING
40 ;*****
50          ORG #8000
60 k1_log_ext:
70          EQU #BCD1
80 cas_catalog:
90          EQU #BC9B
100 cas_out_open:
110         EQU #BC8C
120 cas_out_close:
130         EQU #BC8F
140 cas_out_char:
150         EQU #BC95
160
170 start:
180         LD HL,work_space
190         LD BC,rsx_table
200         JP k1_log_ext
210 work_space:
220         DEFS 4
230 rsx_table:
240         DEFW name_table
250         JP main
260 name_table:
270         DEFB "FCA"
280         DEFB "T"+#80
290         DEFB 0
300 main:
310         CP 1

```

```

320
330
340
350
360
370
380
390
400
410
420
430
440
450
460
470
480
490 loop:
500         LD A,(HL)
510         CP #20
520         CALL C,set_space
530         CP #FF
540         CALL Z,set_cr
550         CALL cas_out_char
560         INC HL
570         DEC BC
580         LD A,C
590         OR B
600         JR NZ,loop
610         CALL cas_out_close
620         RET
630 error:
640         LD A,7
650         CALL #BB5A
660         RET
670 set_space:
680         LD A,#20
690         RET
700 set_cr:
710         LD A,#0D
720         RET
730 cat_buffer:
740         DEFS #800
750 file_buffer:
760         DEFS #800

```

### PROG 2

```

10 MEMORY &7FFF
20 LOAD "FCAT.BIN",&8000
30 CALL &8000

```

### PROG 3

```

100 ln=190
110 FOR adr=&8000 TO &8062 STEP 13
120 READ byte$:chk=0
130 FOR i=0 TO 12
140 v=VAL("&"+MID$(byte$,i*2+1,2))
150 POKE adr+i,v:chk=chk+v
160 NEXT
170 IF chk<>VAL("&"+RIGHT$(byte$,3)) THEN
    PRINT"ERROR in LINE";ln:STOP
180 ln=ln+10:NEXT
185 CALL &8000
190 DATA 210980010D80C3D1BC00000000388
200 DATA 1280C31780464341D400FE01C254B
210 DATA 5680DDE5116280CD9B8CDDDE1DD84A
220 DATA 6E00DD660146235E2356EB1162450
230 DATA 88CD8CBC0100082162807EFE20545
240 DATA DC5C80FEFFCC5F80CD958C230B7AC
250 DATA 79B020ECCD8FBCC93E07CD5ABB73D
260 DATA C93E20C93E0DC9000000000000304

```

# FEATURE

## DISK AND FILE CATALOGUING

BY DON SNOAD

Because the Amstrad CPC computers cannot support more than two disk drives, disk storage space needs to be used as efficiently as possible. Disk and file management systems are essential but the disk space they occupy can become critical, especially when maximum disk space is demanded by the larger programs. Amsdos provides little alternative to the CAT command, although the USER command offers a little more scope. By contrast, there are a variety of options available in the CP/M environment. This article summarises some of those options.

The most commonly-used disk/file directory is DIR, of which there is both a built-in and a transient version. The optional parameters of the built-in version of DIR are as follows:

Assuming the default drive to be A, a list of files on the disk in drive A will be displayed by entering DIR<CR>. A list of the files on drive B can be displayed by entering DIR B:<CR> or B:<CR> followed by DIR<CR>. A specific file on drive B can be confirmed by entering DIR B:FILENAME.EXT<CR>. The display may also be confined to groups of files by their filename extension; for example, the command DIR \*.TXT<CR> will display only those files carrying the extension TXT.

A transient extension to DIR (known as DIR.COM) provides a number of additional options including a display of files in alphabetical order and showing the size of each file.

The optional parameters to DIR.COM, of which there are eighteen, must be enclosed in square ([ ]) brackets; if two or more options are to be included, each option must be separated by a comma or a space.

A few other rules must be obeyed when entering optionalised DIR commands, but I don't propose to give them all here (for full details, refer to a suitable reference book such as CP/M THE SOFTWARE BUS by Clarke, Eaton and Powys-Lybbe). The optional parameters are:

[ATT] : Display user defined file attributes.  
[DATE] : List files with date and time (if activated).  
[DIR] : List non-system files.

[DRIVE=ALL] : List files for all logged-in drives.  
[DRIVE=A] : List files for specified drive.  
[DRIVE=(A,B)] : List files for specified drives.  
[EXCLUDE] : List files that do not match filename.  
[FF] : Insert form feed character at start of listing.  
[LENGTH=N] : Place heading after n lines.  
[MESSAGE] : Display names of disks and user areas.  
[NOPAGE] : Display continuous listing.  
[NOSORT] : Do not sort listing in alphabetical order.  
[RO] : List only READ ONLY files.  
[RW] : List only READ/WRITE files.  
[SIZE] : Show size of each file.  
[SYS] : List only SYSTEM files.  
[USER=ALL] : List files for all user areas.  
[USER=2] : List files for User 2.  
[USER=(2,3)] : List files for User 2 & 3.

The transient version of DIR will be implemented whenever the appropriate optional parameters are included with the command and provided the DIR.COM program is resident on the accessed disk. Whenever the built-in DIR command is given without a transient extension parameter, the on-screen listing will be limited to non-system unsorted filenames. Whenever a transient extension parameter is included with the DIR command, filenames will automatically be sorted and displayed in alphabetical order (unless the [NOSORT] option is added); thus the option DIR[SIZE] will give an on-screen display similar to that given by SD.COM explained later.

Two additional programs associated with DIR.COM are STAT.COM and SHOW.COM.

STAT.COM occupies 6k on disk and can be run only in the CP/M 2.2 environment; it provides some of the basic functions of SET.COM and SHOW.COM.

STAT.COM can be used to obtain confirmation of disk status and free space, or it can be used to obtain information about a specific file. It can also be used to set a file status to "read only" or "write only", or to "system" so that it will not appear on directory listings and will thus be invisible to file copying utilities.

# FEATURE

SHOW.COM occupies a further 9k of disk space and displays the characteristics of an entire disk, as distinct from DIR.COM which displays the statistics of individual files.

SHOW.COM may be used to display the disk space free, unused directory entries, active user area numbers and the label (i.e. the symbolic name) assigned to the disk; SHOW.COM will also confirm drive characteristics such as disk capacity, block size, sector size and sectors per track. The SHOW option commands must also be included in square brackets and use the following form: [DIR], [DRIVE], [LABEL] and [USER]. The command form may be abbreviated, thus: SHOW B:[U]

The disadvantages of the DIR.COM and associated programs are that they tend to be cumbersome to use and, more importantly, they occupy unacceptably large chunks of disk space (i.e. 15k for DIR.COM plus a further 15k for the two associated programs; a total of 30k).

Many users also regard the suite of programs as being too comprehensive and prefer to use less complex programs which occupy far less disk space. In this regard, there are a number of alternatives to DIR.COM some of which are summarised below.

## SD.COM

SD.COM occupies only 4k of disk space; it not only lists all files in alphabetical order but also shows the identification letter of the current drive, the user number, the number of files on disk and the disk space used and free. The list of files are displayed on-screen in four columns.

SD.COM also provides a number of options; these are:

- [A] : All users
- [D] : All disks
- [F] : Make file
- [L] : Library
- [N] : No paging
- [P] : Printer
- [R] : Reset
- [S] : System
- [T] : Sort by Type
- [Un] : User number
- [V] : Version

Wildcards \* and ? are allowed.

The form of usage is:

SD dr:filename.ext [option,option]  
(drive and/or filespec are optional)

Entering SD // shows a help display.

## DS.COM

DS.COM occupies only 2k of disk space and provides a display similar to that given by SD.COM. However, DS.COM provides more disk status information than SD.COM (but none of the latter's optional facilities) and will also give disk update-since-last-entry status information, without a file directory, by entering DS then a space followed by any letter or number key. These differences between SD.COM and DS.COM are not at all obvious until you use and compare both programs.

## MDIR.COM

MDIR.COM occupies 4k of disk space and gives an on-screen directory of filenames in alphabetical order in four columns. The size of each file is displayed, as is the disk capacity, the number of files and the total space they occupy on the disk; also shown is the number of directory entries and the unused disk space. A range of optional parameters may be used in conjunction with MDIR.COM; these are:

- F: Produce fast listing (no file sizes).
- N: Negate sense of following switch.
- P: Enable display page break mode.
- S: List files with system attribute set.
- U: List files in all other user areas.
- V: Produce listing giving user numbers and file attributes.

Usage: d <filename.ext> \$<parameter>

The \$ at the beginning of the optional parameter is required only if the filename field is empty. The memory requirements of the program are determined by the number of files in the directory. Each file control block requires an additional 16 bytes of storage.

## INDEX.COM

INDEX.COM occupies 4k of disk space and provides an on-screen directory of files in three columns. The display is given in alphabetical order of filenames and includes file sizes. Also shown is the number of files on the disk and the used and unused disk space.

INDEX.COM has a pseudo-wildcard feature in that by adding a space followed by a qm (?) symbol, a listing will be given only of those filenames having the same maximum number of characters as the number of qm symbols appended to the INDEX command. For example, entering



# FEATURE

INDEX ??? will list all files on the disk with names comprising three or less characters.

## NI.COM

NI.COM appears to be identical to INDEX.COM and may have crept on to the public domain software libraries merely as someone's abbreviation of INDEX.COM.

## LDIR.COM

LDIR.COM is, I admit, something of an unknown quantity as I have yet to learn its exact purpose. LDIR.COM seems to be a directory command for use with library files; it should be used in conjunction with LRUN.COM, etc.

All the alternatives to DIR.COM, summarised in this article, are available free of charge from the UAUG Public Domain Software Library.

In conclusion, three other disk/file management utilities are worth considering. These are FIDO, CATALOG and MCAT41.COM.

## FIDO

FIDO is a database-type utility which runs in the Amsdos environment and enables a library of disks to be indexed. The program, which can index up to 2150 filenames, requires a minimum of 3k of space on every disk and includes file select/deselect facilities for either indexing or loading/running. A password feature is provided, together with a number of housekeeping facilities including renaming, erasing, changing the default drive/user area, etc, and echoing the database to a printer. The program is menu-driven and is operated entirely from the keyboard function keys. FIDO was produced and marketed by Pride Utilities of Luton who, unfortunately, ceased trading during 1987. There are a few copies still in stock with some local distributors.

## CATALOG

CATALOG is a self-contained, self-booting, database-type utility which runs under CP/M. The program and resultant database are retained on a separate disk and do not require space

on the disks being catalogued. To obtain maximum benefit from CATALOG, it is prudent to allocate a unique serial number to each disk in your library and it is worth spending an hour or so devising a suitable disk numbering system for this purpose. The program is entirely command-driven, supplemented by an on-screen command list, and provides nine index and search options, plus the usual rename/erase/echo-to-printer housekeeping facilities; it also provides for date and time stamping which are displayed on-screen at the next boot-up.

As with FIDO, CATALOG may be a little difficult to obtain because it is now out of production and HiSoft have no stock available. Again as with FIDO, there are still copies to be had from some local suppliers and it is well worth hunting around for. If you really want a copy of CATALOG and cannot obtain one, write to the UAUG and if there is sufficient demand we may be able to persuade HiSoft to produce a few more copies. Both FIDO and CATALOG were available only on disk.

## MCAT41.COM

The final offering is a useful utility available from the UAUG PD library. It isn't as good as CATALOG, but is an acceptable alternative.

MCAT41.COM which occupies only 7k of disk space is a catalogue maintenance program. As it processes each disk, details are added to a MAST.CAT file which initially needs to be generated via a suitable text editor.

The program is a hybrid of the earlier FMAP, QCAT and UCAT programs and is part of the Compuserve (Micronet) network system.

MCAT41 can be enhanced by MCAT.SET to vary buffer lengths, etc, and can be used with both single- and double-density disks. A companion program, called XCAT, automatically generates a cross-referenced MAST.LST file which can be on disk or sent directly to a printer. The program is full-featured and allows the use of disk identification numbers as well as unique disk names. Full documentation is contained in a 7k file on the same disk as MCAT41.COM.

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BY BRIAN MCKIDDIE

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B1043P	Basic Programming on Amstad 464,664, & 6128

## THIS MONTH'S BOOK REVIEWS

Cat. No. B1031P

Title: The Amstrad Disc Companion

Amstrad users are fortunate in being able to use the power of disc drives, without the usual high price tag. Owners of the CPC 464 can buy a disc drive or make one (see last month's Mag.). 6128 and 664 owners, well you have one already.

Whether you use your Amstrad for business or pleasure, this book will provide both an introduction and an in depth reference guide. You'll see how to use the essential software packages for disc users word processors, spreadsheets and databases. After mastering these, you can progress to writing your own programs using Basic, Logo, Pascal or C. Separate sections describe these languages and their important disc-related features. You'll even find complete and useful programs ready to run on your Amstrad.

Finally, all aspects of CP/M and Amdos are covered in great depth. Every command that you'll need to use is carefully explained, giving you valuable insights and a reference manual all in one book.

Cat. No. B1013P

Title: Subroutines for the Amstrad 464 & 664

Throw away all those games, here's the book to show you how to put your Amstrad computer to serious use. More than fifty thoroughly tested subroutines covering a wide range of applications are listed, each with a short program to illustrate its use. You can use these routines as building blocks in your own programs in a wide variety of areas - including maths, graphics, music, data processing, etc.

An introductory section covering the Amstrad machine and associated system software is followed by a critical examination of structure and modular programming. Also included in the book are several major listings; e.g. a filing system with extensive search facilities, a 3-graph function plotter, an index preparation program, a 3-channel music sequencer and a program for calculating and displaying various combinations; these listings alone are worth reading the book for.

So, if you are fed up with playing games, hire this book.

### FOR SALE

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THE COMPUTER TUTOR. Published by Orbis; Edited by Maurice Geller. Hardback. 11½x8½ins, 300 pages: £10

CHOOSING & USING YOUR HOME COMPUTER Published by Orbis; Edited by Jon Hilton. Hardback. 11½x8½ins 154 pages: £7

Prices exclude postage and packing.  
Don Snod, 85 Woolston Road,  
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Southampton, Hants SO3 5FN

### FOR SALE

\* HARDWARE: DK Tronics 64k Silicon Disc O/S (464 Model)

TAPE SOFTWARE: They Sold a Million, 5 Star Games, Genesis, Bounder, Alien 8, Gyroscope, Spellbound, Harvey Headbanger, Spiky Harold, Rasterscan, The Wild Bunch, Codename Mat 2, Nova/Haunted House, Redhawk, Riding the Rapids, Message from Andromeda, Forest at the Worlds End.

DISC SOFTWARE: The Quill and The Illustrator (twin pack), They Sold a Million 2.

WANTED: Magnetic Scrolls Adventures, Infocom's, Mercenary disc.

Offers or swaps to David Oya,  
24 Kingsway, Banbury, Oxon OX16 9NY

## POCKET PROTEXT...AN OVERVIEW

by Don Snoad

Protext is the original word processing module in a suite of three inter-related programs marketed by Arnor Ltd for the Amstrad CPC range of computers. Versions are marketed for tape or disc machines, and there are also versions available on ROM or cartridge.

Early in 1987, all three programs (i.e. Protext, Promerge and Prospell) were released by Arnor in a new CP/M+ version for use with both the CPC and the PCW range of computers. This new CP/M+ version was followed by an abridged stand-alone edition of the word processing module, also for use in the CP/M+ environment on the CPC and PCW computers; this module is known as Pocket Protext.

The differences between Pocket Protext and the full implementation are that certain features have been omitted from the former; these are: no mail-merge or spell-check enhancements, no box mode for multi-columned text formatting, no background printing feature to enable editing of one document to be carried out whilst a different document is being printed, no typewriter mode or on-screen calculator feature, and no facilities for file protection or for redefining characters. And of course there's a big difference in price (£39.95 as distinct from £79.95).

For existing users of Protext in the Amsdos environment, there will be similar differences dependent upon which version of the Amsdos Protext was being used, and whether Amsdos Promerge was installed. The more recent your Amsdos versions, so the less will be the differences between the Amsdos and CP/M+ programs. Even so, the main advantages of Pocket Protext as compared with all the Amsdos versions are:

1. A larger data file capacity (increased from 38K to disc capacity).
2. A substantially extended command structure, offering:
  - (a) more edit mode commands (was 96, now 134),
  - (b) more command mode commands (was 35, now 42), and
  - (c) a new set of 6 commands for external utility programs.
3. A feature for storing and recalling text phrases or commands using a single key; provision is made for 31 phrase keys and 26 command-definable keys - each key can store up to 255 characters.
4. The help feature has been considerably improved. In addition to the normal on-screen help window (which can now be scrolled through the entire command structure), a menu can be called from which any one of 5 options can be selected. Each option produces a specific help display; the options cover printing, disc utilities, file handling, and miscellaneous and external commands.
5. External commands (choice of 6) can be used to select, load and run any one of a number of available utilities; when finished with the chosen utility, the original Protext document will be restored to the screen with no loss of data. The utilities available allow, amongst other things, discs to be formatted or copied.
6. The provision for transforming non-Protext files to Protext format and vice versa, thereby enabling files from other CP/M word processors to be utilised.
7. The space padding between words can now be microspaced to improve the appearance of justified text.
8. The previously-used Setprint feature has been considerably extended to provide a very comprehensive system of configuration which can be used to customise every facet of

Protext from printer codes to screen colours. Any number of configuration files can be prepared and loaded as required; one such file can be used as the default 'template' to be loaded automatically on start-up.

These advantages are gained from the use of Pocket Protext as a stand-alone program; the use of Prospell, if you already have it, will enhance the program in a similar manner to that provided in the Amsdos versions. There is also a useful degree of compatibility between the Amsdos and CP/M+ versions in that the text files from either program are inter-changeable; however, the additional commands and other features provided by Pocket Protext will not of course be recognised by the Amsdos versions.

Although Protext has always been an exceptionally good word processing package for the Amstrad computers, Arnor's new CP/M+ version has pushed Protext to the forefront and well ahead of all the competition. The configuration facilities and customisation features are extremely comprehensive, and the new program is on a par not just with other good business software but with the more professional programs used by specialist writers and some of the smaller publishing houses. Compared with the Amsdos version, which on ROM was crammed into no more than 16K, this new CP/M+ version is significantly larger; even Pocket Protext occupies a total of 266K, to which has to be added the CPM.EMS system file thereby increasing the total to a staggering 291K ! Although Pocket Protext will run quite happily on a single drive system (the largest single chunk of program is only 39K), the use of two drives will allow a data disc to be more easily accessed and avoid all that disc swapping hassle. An attractive alternative to a second drive would be a 256K silicon disc which, after pruning unwanted files from a working copy, would allow the entire program to be operated from memory.

The program should not be run from the master disc, but from a working disc from which some of the PCW-related files can be deleted (remember, the master disc is for both the CPC and the PCW computers). Obtaining a working copydisc is quite a lengthy task, requiring only 3 disc swaps if you have a two-drive system but an astonishing 125 disc swaps if you have a single drive system.

The program is accompanied by extensive documentation. The hard-back ring-bound A5-size user handbook is well-written and well-presented, and comprises 185 pages of text including a sensible contents list and a detailed index. The handbook is supplemented by seven tuition files amounting to 99K on disc, plus 13K of screen-accessible help files. There are also nine example files on disc and more than 20K of utilities. Arnor is to be congratulated for producing such excellent user support, and applauded for supplying it free of charge with software costing as little as £39.95. OTHER SOFTWARE SUPPLIERS PLEASE TAKE NOTE !

### POSTSCRIPT

Since writing this article, Arnor has announced price reductions as follows: the full implementation of CP/M Protext with ProSpell and Promerge is reduced by £20 from £79.95 to £59.95; the upgrade from Pocket Protext to the full implementation is reduced by £23 from £50 to £27. The price of Pocket Protext remains unchanged at £39.95

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The United Amstrad User Group was founded in 1986 by a handful of dedicated CPC enthusiasts. Membership now extends throughout Britain. The continuing success of the Group is due to the low membership subscription and five-star service; this includes:

- \* Bi-monthly magazine
- \* Computer Book Library
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The bi-monthly magazine is written by CPC users for CPC users and contains authoritative reviews and articles, as well as other regular features specific to the Amstrad CPC computers. The magazine also provides three help lines: Mailbox (for general correspondence, member-to-member contact, etc), Keyboard (for resolving members computing problems) and Monitor (a members' complaints bureau). The magazine carries trade and member advertisements; members ads are published free of charge.

The computer book library is operated by post and is open to all members. Books may be hired by the month for a nominal fee. Most of the books have been donated and are specific to CPC computers.

The public domain software library contains many programs covering games, business, educational, utilities and programming languages. The library is open to all members and is free of charge.

The discount service to members is extensive. Companies offering discounts to members include Durell Software, Siren Software, HSV Computer Services, Micro Prose, Timatic Systems and Alligata Software; discounts range from 5% to 35% or more, and include games/business software, hardware, discs, disc storage boxes, listing paper and printer ribbons. In addition to arrangements with traders, the UAUG also maintains a small stock of joysticks and games/business software at prices substantially lower than retail.

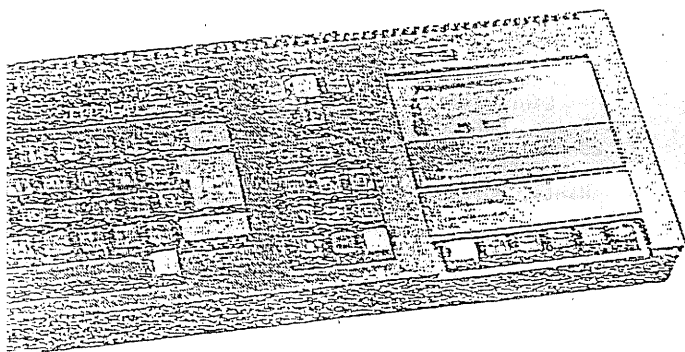
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THE BI-MONTHLY MAGAZINE  
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CPC USER is published on the first day of February, April, June, August, October and December.

Contributions and other material for publication should be sent to the Editor by the first day of the month preceding publication.

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Material for publication, including correspondence for Keyboard, Monitor, etc, should be sent to the Editor at 85, Woolston Road, Butlocks Heath, Netley Abbey, Southampton, Hampshire SO3.5FN.

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